

LEGEND

- 500-Year Flood
- 100-Year Flood
- Floodway
- 22 — Distance in Feet Above Mouth
- C — C — Cross Section
- Corporate Limit
- RM2 X — Elevation Reference Mark
- Zone AE — Zone Designation
- 592 — Base Flood Elevation

N

FLOOD INSURANCE STUDY WORK MAP
CITY OF ALLEN PARK, MICHIGAN

ABRAMS
AERIAL SURVEY CORPORATION
PO Box 15068 LANSING, MI 48901-5068
124 NORTH CAPITOL LANSING, MI 48912

ACCURACIES NOT GUARANTEED IN OBSCURED AREAS SHOWN BY DASHED CONTOURS AND UNDERLINED ELEVATIONS

200 0 200 400 600

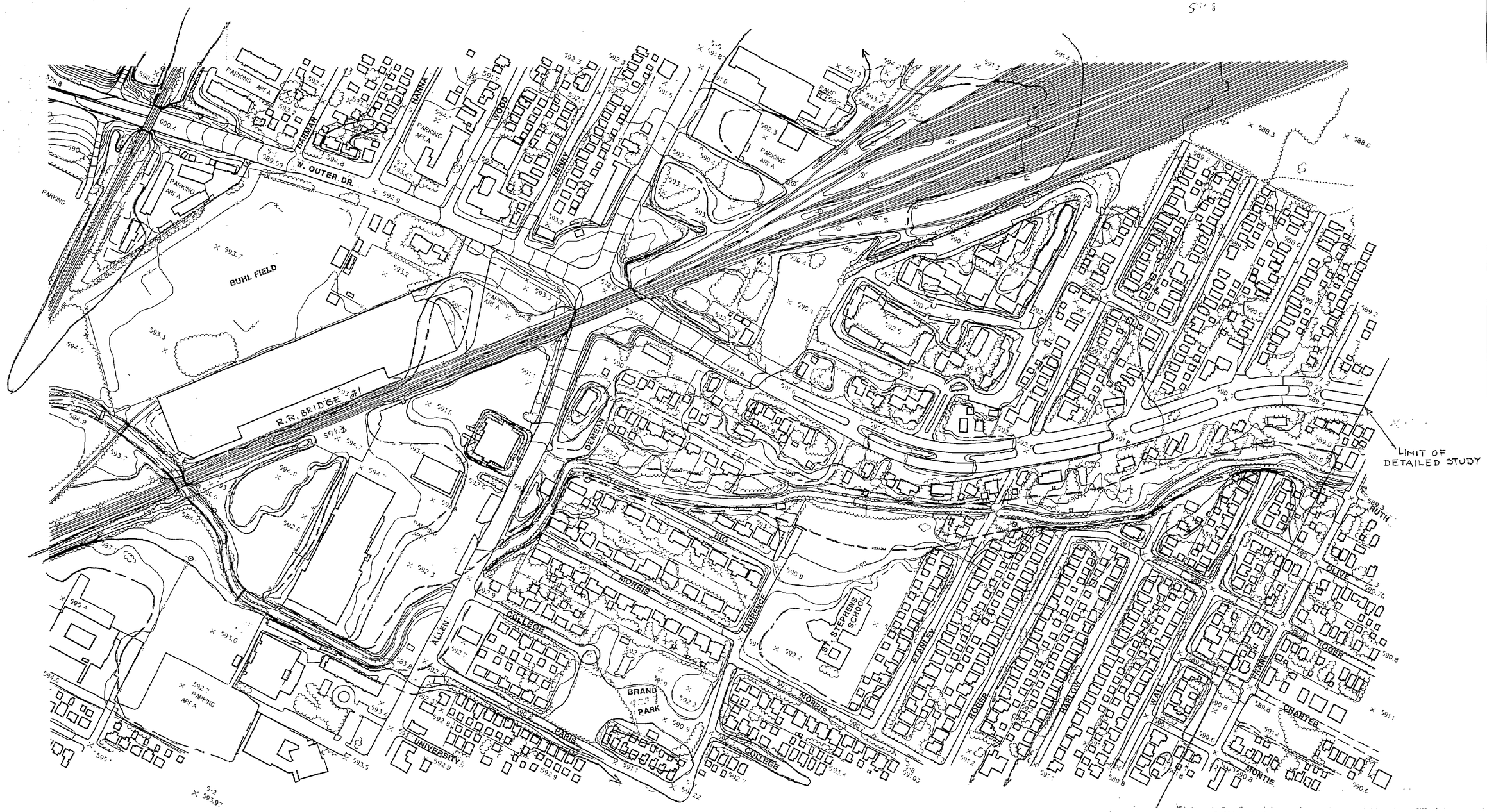
1" = 200'
CONTOUR INTERVAL 2
DATE OF PHOTOGRAPHY JANUARY 12,1992

G

200 0 200 400 600 800

SCALE
(Feet)

PANEL 2



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FLOOD INSURANCE STUDY WORK MAP
CITY OF ALLEN PARK, MICHIGAN

200 0 200 400 600 800

SCALE
(Feet)

200 0 200 400 600

1 inch = 200 feet
CONTOUR INTERVAL 2
DATE OF PHOTOGRAPHY JANUARY 12 1982

ACCURACIES NOT GUARANTEED IN OBSCURED AREAS SHOWN BY DASHED CONTOURS AND UNDERWATER ELEVATIONS

ABRAMS
AERIAL SURVEY CORPORATION
PO Box 15028 LANSING MI 48901-5028
124 NORTH LARCH LANSING MI 48912

PANEL 1



WORK MAP
CITY OF ALLEN PARK LMMP
---------- FLOODWAY
PANEL 12

TOPOGRAPHIC MAP
OF
ALLEN PARK PROJECT
WAYNE COUNTY, MICHIGAN
PREPARED FOR
GOSLING-CZUBAK ASSOCIATES, P.C.
TRAVERSE CITY, MICHIGAN

SHEET 1 OF 2

A.A.S.C. #24426

ABRAMS
AERIAL SURVEY CORPORATION
PO Box 15068 LANSING, MI 48901-5068
124 NORTH LAPEER LANSING, MI 48912

ACCURACIES NOT GUARANTEED IN OBSCURED AREAS SHOWN BY DASHED CONTOURS AND UNDERLINED ELEVATIONS

200 0 200 400 600
1" = 200'
CONTOUR INTERVAL 2'
DATE OF PHOTOGRAPHY JANUARY 12, 1992

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
RM 1	601.36	Arrow on fire hydrant at northwest corner of Pineridge Road and Larme Street
RM 2	596.83	Top of southwest corner of westbound I-94 bridge over North Branch Ecorse Creek
RM 3	597.23	Railroad spike in west side of Detroit Edison Pole at southwest corner of Shenandoah Street and Keppen Street
RM 4	595.14	Top of letter "C" on south rim of sanitary manhole at intersection of Keppen Street and Larme Street
RM 5	598.93	Arrow on fire hydrant at northeast corner of Watson Street and Russell Avenue.
RM 6	599.64	Arrow on fire hydrant on north side of Euclid Avenue, approximately 125 feet east of northbound Southfield Service Drive and approximately 50 feet east of North Branch Ecorse Creek.
RM 7	596.04	Centerline of intersection of Russell Avenue and Shenandoah Street
RM 8	598.40	Top of "A" in word "Traverse" on top of fire hydrant at southwest corner of Hamilton Avenue and Shenandoah Street.
RM 9	598.32	Chiseled "X" on north bolt on top of fire hydrant on south side of Hamilton Avenue, between Watson Street and Larme Street, approximately 250 feet east of Watson Street.
RM 10	592.37	Top southeast bolt of light pole #525-6547 on north side of Allen Road, 60 feet southwest of centerline Paris Street.

[1]National Geodetic Vertical Datum of 1929

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A — No base flood elevations determined.

ZONE AE — Base flood elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually shallow ponding); base flood elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V — Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X — Areas determined to be outside 500-year flood and protected by levee from 100-year flood.

ZONE D — Areas in which flood hazards are undetermined, but possible.

UNDEVELOPED COASTAL BARRIERS

1% annual chance — 0.2% annual chance — Otherwise protected area

Coastal barrier boundary — Floodway boundary — Zone D boundary — Boundary dividing Special Flood Hazard Zones and boundary dividing Special Flood Hazard Zones and Future Conditions Flood Hazard Zones — 513 Base Flood Elevation line and value; elevation in feet* — (D)—(D) Cross section line — EL 987 Base Flood Elevation in feet where uniform within zone* — RM7× Elevation Reference Mark — •M1.5 River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

NOTES

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all plan-metric features outside Special Flood Hazard Areas. For communities participating in the National Flood Insurance Program (NFIP), the most current FIRM should be used for all uses requiring the determination of the regulatory flood hazard and certain insurance premium zones applicable to each property, such as the purchase of flood insurance or the implementation of floodplain management regulations.

Coastal flood elevations are also shown for selected areas on this map. These elevations are controlled by wave height effects as well as by still-water elevations. Users should be aware that coastal flood elevations are also influenced by wave runup and overtopping effects.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. See Floodway Data tables in the Flood Insurance Study Report for exact locations of these floodways.

Floodway widths in some areas may be too narrow to show to scale. Refer to the Flood Insurance Study Report for information about these floodways.

Certain areas not in special flood hazard areas may be protected by flood control structures.

Elevation reference marks shown on this map are described in the Flood Insurance Study Report; some may not be shown due to scale limitations.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

SEE REPOSITORY

INITIAL IDENTIFICATION

FLOOD HAZARD BOUNDARY MAP REVISIONS

FLOOD INSURANCE RATE MAP EFFECTIVE

FLOOD INSURANCE RATE MAP REVISIONS

APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

ALLEN, MICHIGAN
WAYNE COUNTY

ONLY PANEL PRINTED

MAP LOCATOR DIAGRAM

PANELS NOT PRINTED — NO SPECIAL FLOOD HAZARD AREAS

COMMUNITY-PANEL NUMBER
260217 0002 C

MAP REVISED:
REVISED PRELIMINARY

Federal Emergency Management Agency

DEMBERRY & DAVIS E FRAME

Revised 27 June 94

FOLD

LEGEND

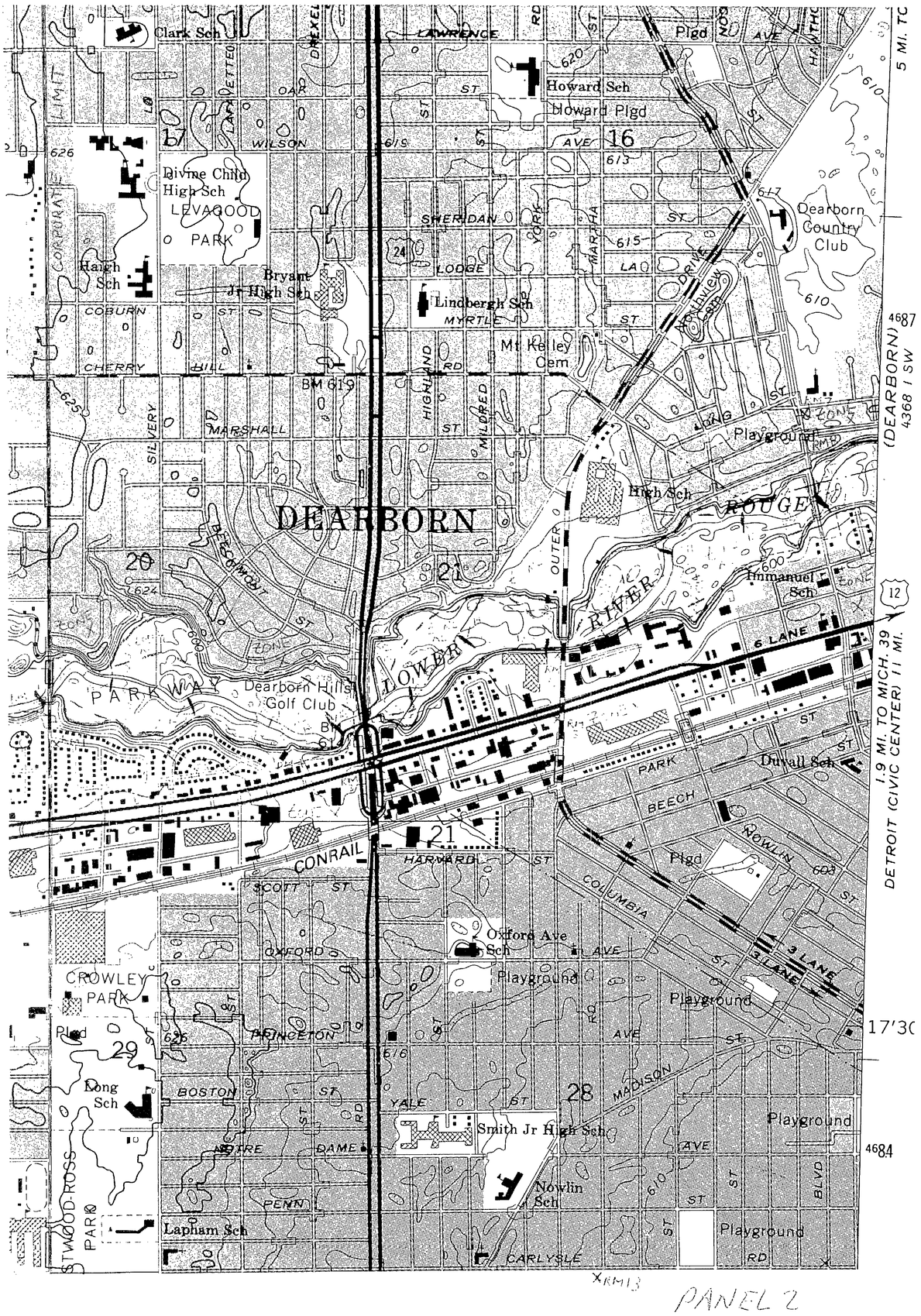
	500-Year Flood
	100-Year Flood
	Floodway
4	Distance in Thousands of Feet Above Study Limit
C	Cross Section
	Corporate Limit
RM2 X	Elevation Reference Mark
Zone AE	Zone Designation
592	Base Flood Elevation

N

FLOOD INSURANCE STUDY WORK MAP
CITY OF DEARBORN, MICHIGAN

1000 0 1000 2000 3000 4000

SCALE
(Feet)



PANEL 2

LEGEND

500-Year Flood

100-Year Flood

Floodway

Distance in Thousands of Feet Above Study Limit

Cross Section

Corporate Limit

RM2 X — Elevation Reference Mark

Zone AE — Zone Designation

592 — Base Flood Elevation

N

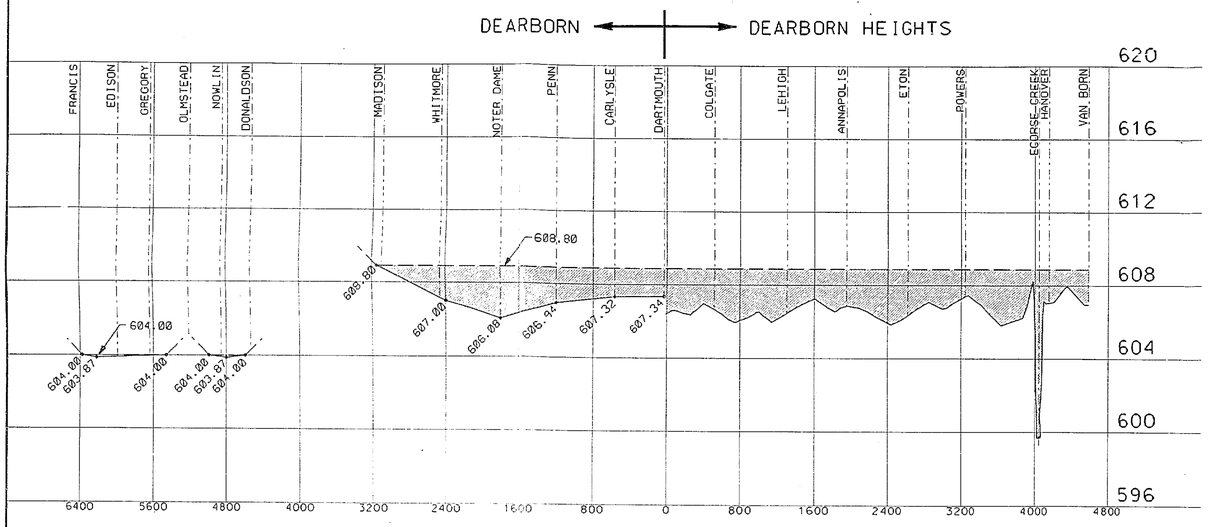
FLOOD INSURANCE STUDY WORK MAP
CITY OF DEARBORN, MICHIGAN

1000 0 1000 2000 3000 4000

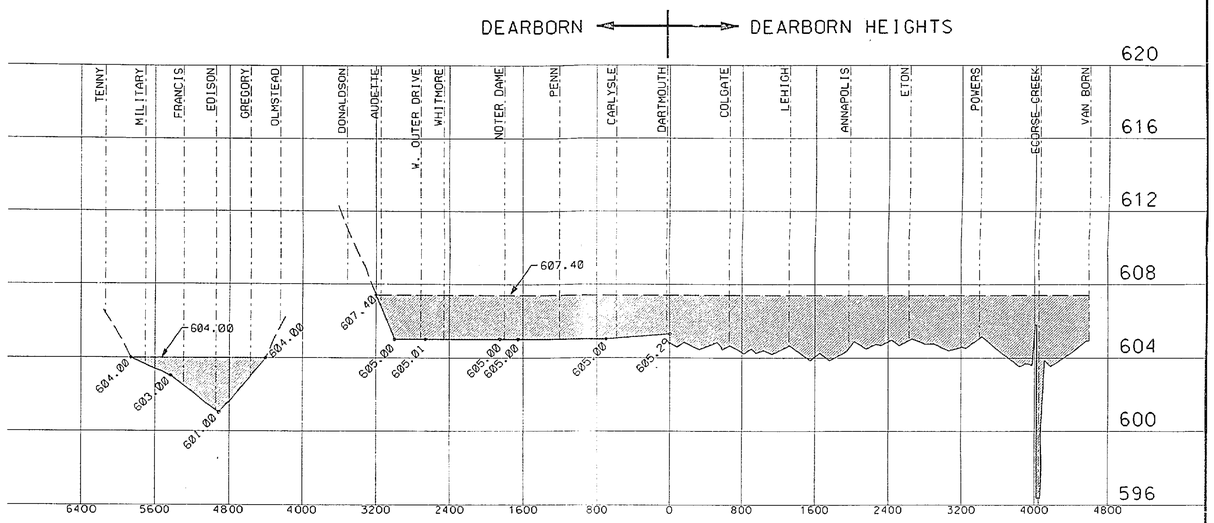
SCALE
(Feet)

RM14

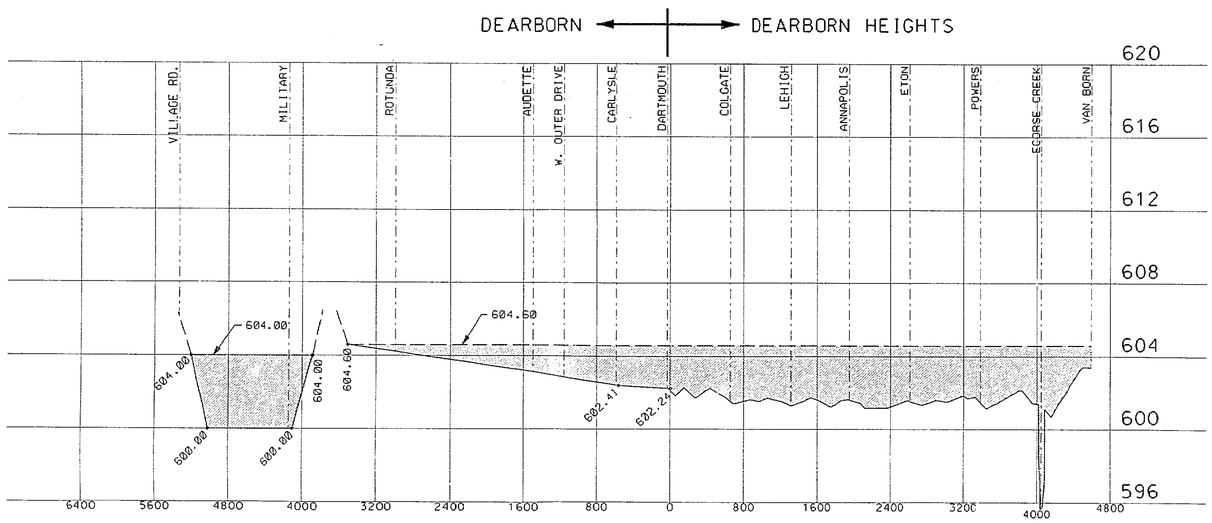
PANEL 1



X-SECTION 115
(MONROE AVE)



X-SECTION 116
(CAMPBELL AVE)



X-SECTION 117
(WEDDEL AVE)

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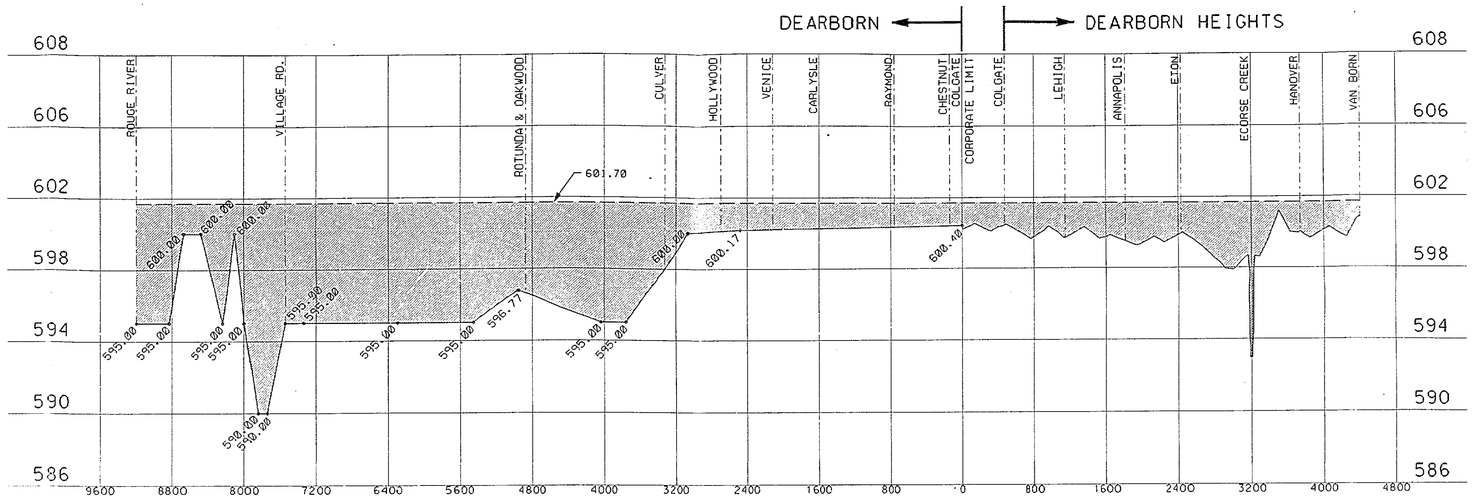
DESIGN GPN	ORIGINAL ISSUE	INITIALS	DATE	DATE	REVISION	BY	TOPO F.B.	TOPO PAGE	LEVELS F.B.	LEVELS PAGE	
DRAFTING GLK	ISSUED FOR BID										
CHECKED GPN	NOT VALID FOR CONST. UNLESS SIGNED AND DATED										
APPROVED ACI					FINAL MEASURE						

CLIENT
CITY OF DEARBORN

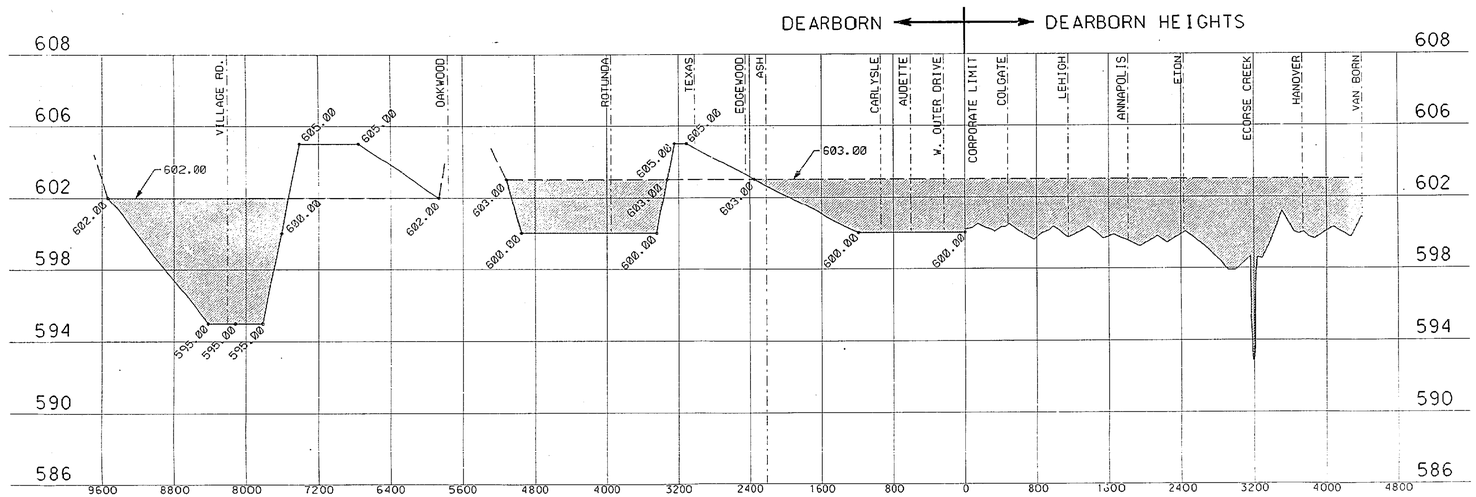
Wade-Trim/Associates
P.O. Box 10
25185 Goddard Road, Taylor, MI 48180
313-291-5400 / 800-482-2864
FAX No. 313-291-1566

TITLE
FLOOD INSURANCE STUDY APPEAL

SCALE 1"=800'
SHEET 1 OF 2
FILE NO.
JOB NO. ZZZ2400-01T



X-SECTION 118A
(EDGEWOOD AVE)



X-SECTION 118
(EDGEWOOD AVE)

DESIGN GPN	ORIGINAL ISSUE	INITIALS	DATE	DATE	REVISION	BY	TOPO F.B.	TOPO PAGE	LEVELS F.B.	LEVELS PAGE	CLIENT		TITLE	SCALE 1"=800'
DRAFTING GLK	ISSUED FOR BID										CITY OF DEARBORN	Wade-Trim/Associates P.O. Box 10 25185 Goddard Road, Taylor, MI 48180 313-291-5400 / 800-482-2864 FAX No. 313-291-1566	FLOOD INSURANCE STUDY APPEAL	SHEET 2 OF 2
CHECKED GPN	NOT VALID FOR CONST. UNLESS SIGNED AND DATED													FILE NO.
APPROVED ACI					FINAL MEASURE									JOB NO. ZZZ2400-01T

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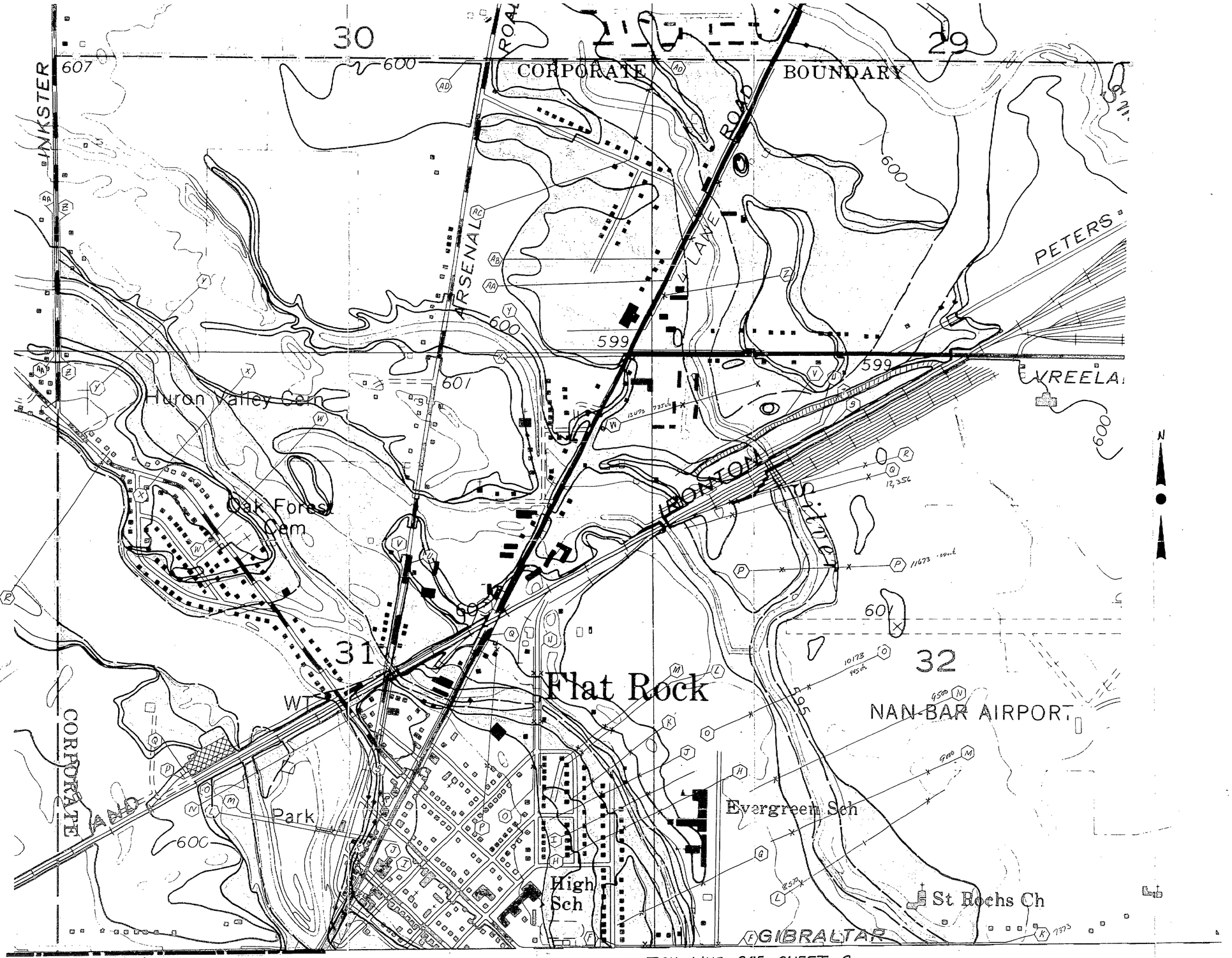
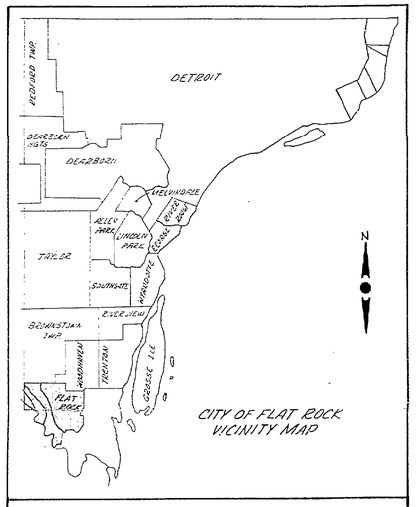
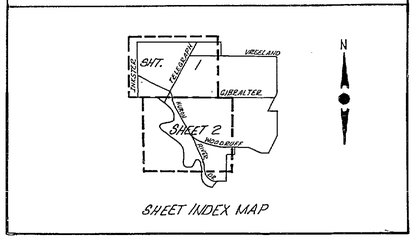






LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

CROSS SECTION

CORPORATE LIMIT

COUNTY BOUNDARY

MATCH LINE SEE SHEET 2

FLOOD MAP

5' contours

CITY OF FLAT ROCK

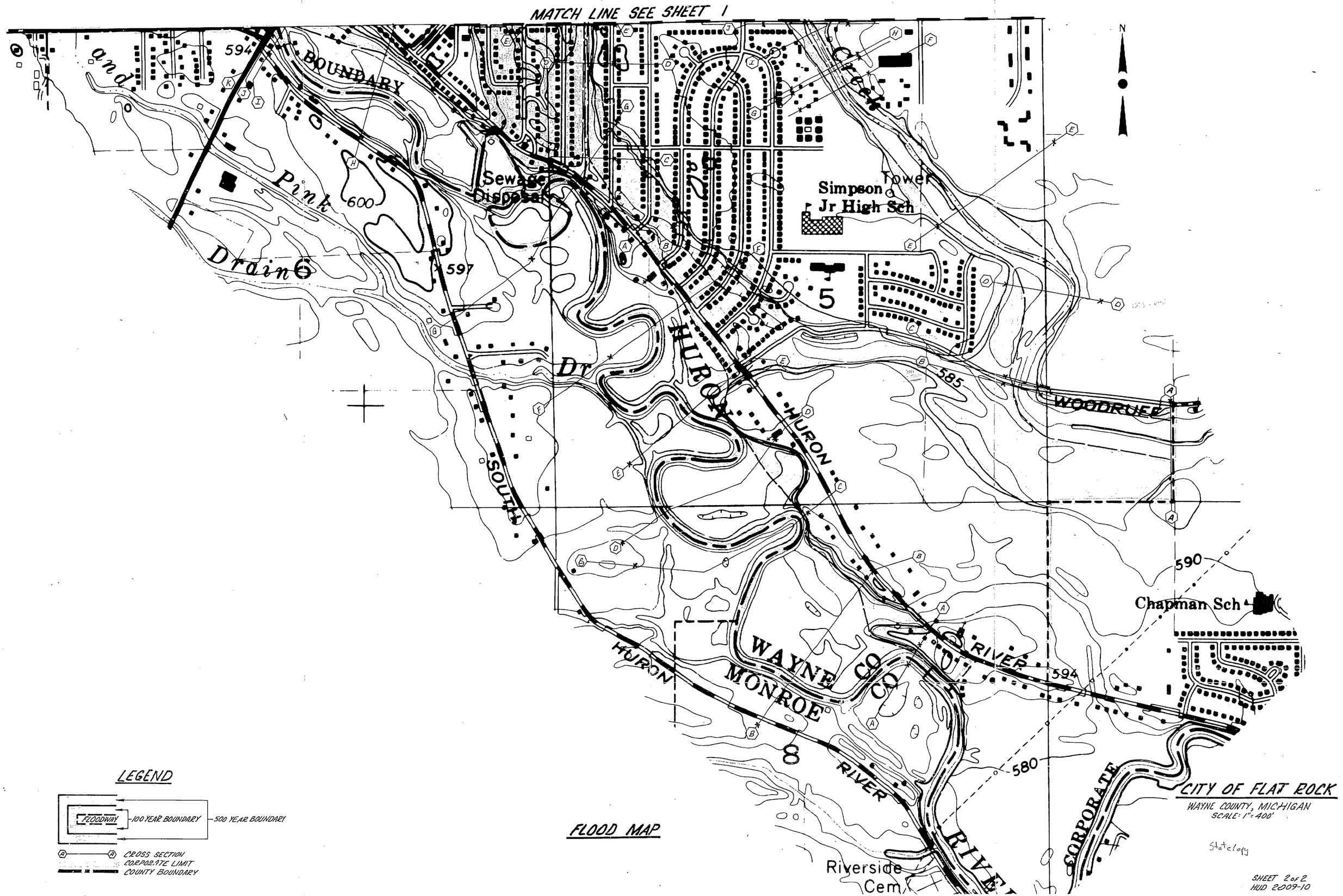
WAYNE COUNTY, MICHIGAN

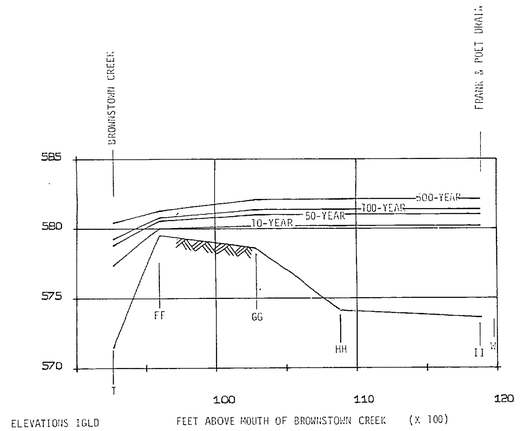
SCALE: 1" = 400'

State Copy

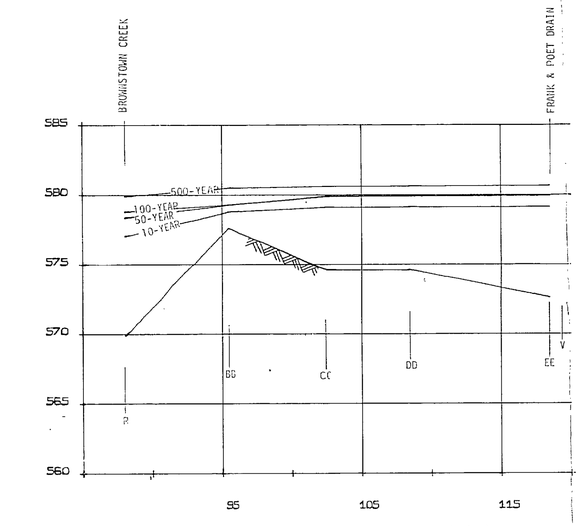
SHEET 1 of 2

HUD 2009-10


MATCH LINE SEE SHEET 1
N
BOUNDARY
Pink
Drain 6
Sewage Disposal
Simpson Jr High Sch
Tower
Creek
5
HURON
Dr
SOUTH
HURON
WOODRUFF
585
590
Chapman Sch
WAYNE CO
MONROE CO
RIVER
594
580
8
RIVER
CORPORATE
Riverside Cem
LEGEND
FLOODWAY
100 YEAR BOUNDARY
500 YEAR BOUNDARY
CROSS SECTION
CORPORATE LIMIT
COUNTY BOUNDARY
FLOOD MAP
CITY OF FLAT ROCK
WAYNE COUNTY, MICHIGAN
SCALE: 1"=400'
Statelogy
SHEET 2 of 2
HUD 2009-10



DIVISION B



DIVISION A

Rcd d.21-77

NOTE: THESE PROFILES REPRESENT FLOW DIVISIONS TRAVELING ALONG DTSL RR AND PENN CENTRAL RR #1.

DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

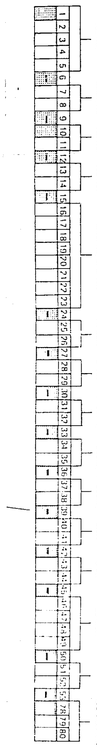
SCALE: VERT. 1" = 5' HORIZ. 1" = 500'

REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

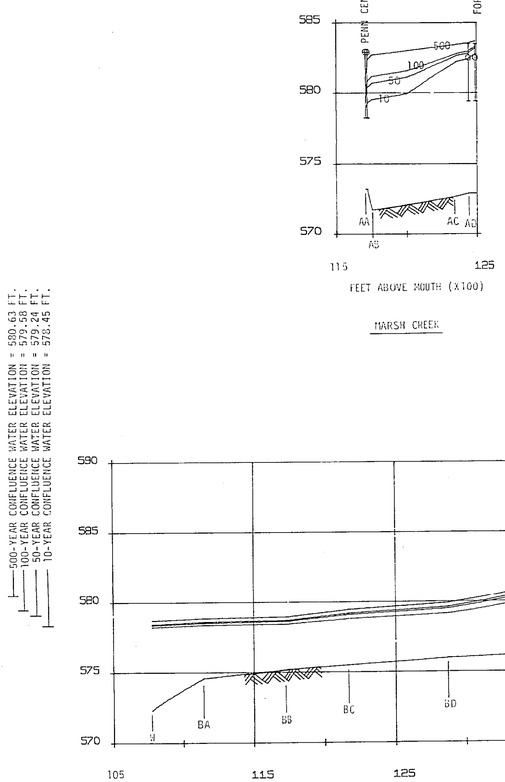
JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF GIBRALTAR, MI, FIS

JOB NO. 5555-23-1
DATE ISSUED
SHEET NO. 3 OF 3



500-YEAR CONFLUENCE WATER ELEVATION = 580.63 FT.
100-YEAR CONFLUENCE WATER ELEVATION = 579.58 FT.
50-YEAR CONFLUENCE WATER ELEVATION = 579.24 FT.
10-YEAR CONFLUENCE WATER ELEVATION = 578.45 FT.



BROWNSTOWN CREEK

MARSH CREEK

4-21-77

DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

VERT. 1" = 5'
SCALE:
HORIZ. 1" = 500'

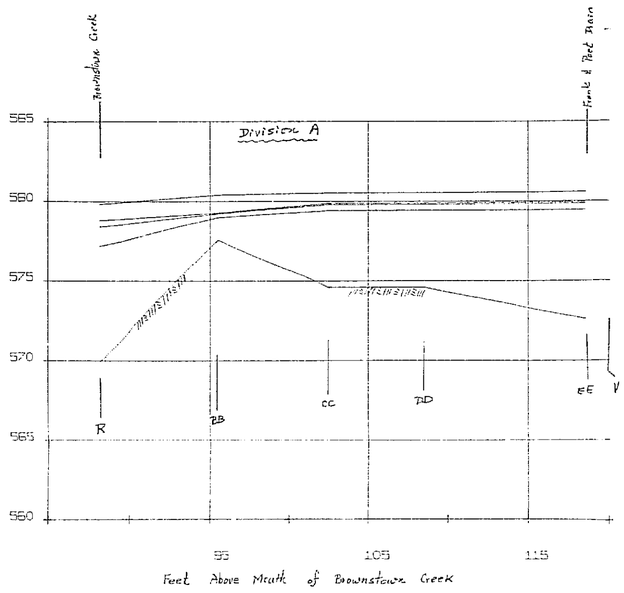
REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

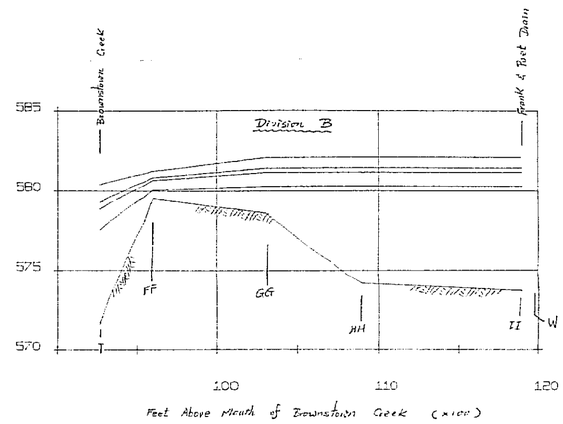
JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

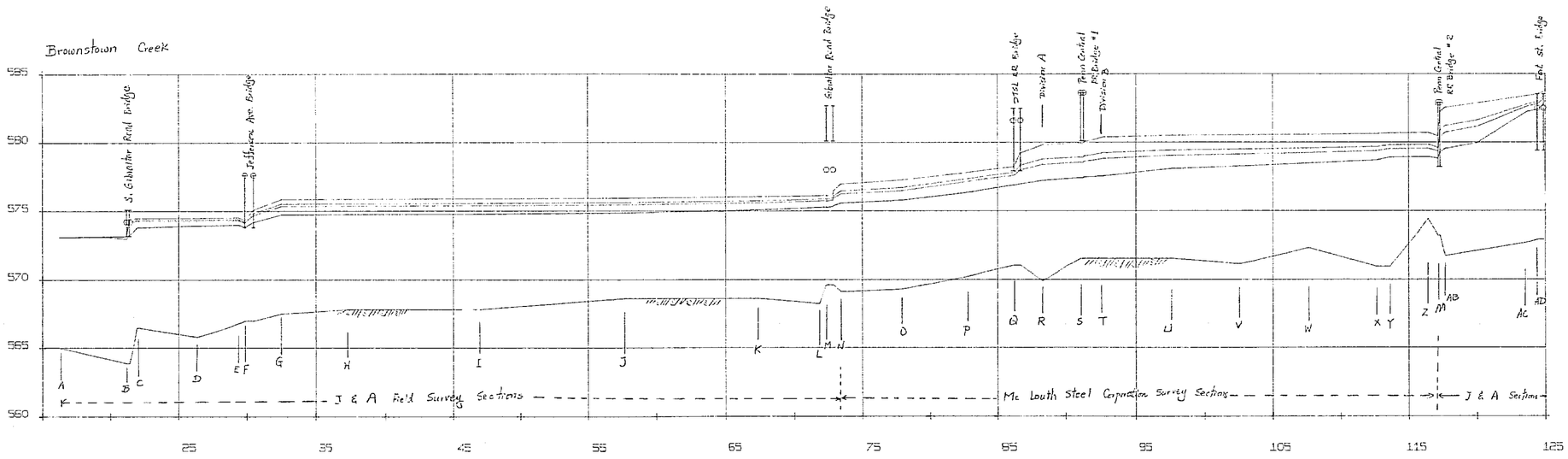
BROWNSTOWN CREEK
MARSH CREEK

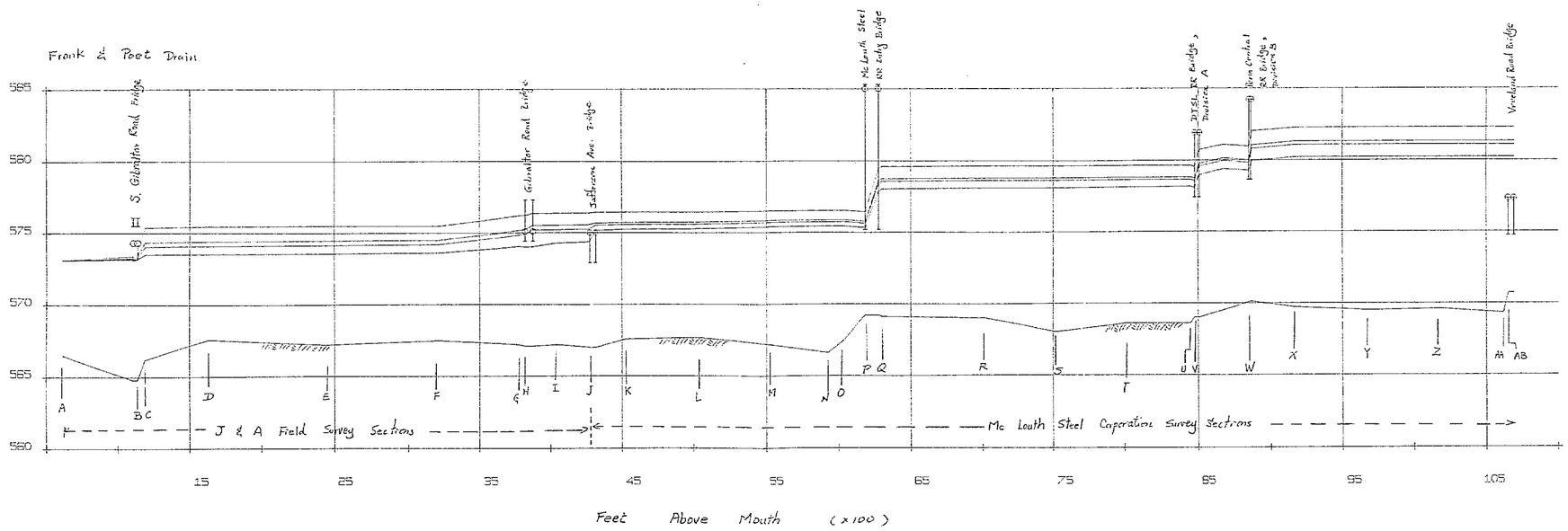
CITY OF GIBRALTAR, MI, FIS

JOB NO. 55 55-23-1
DATE ISSUED
SHEET NO. 4





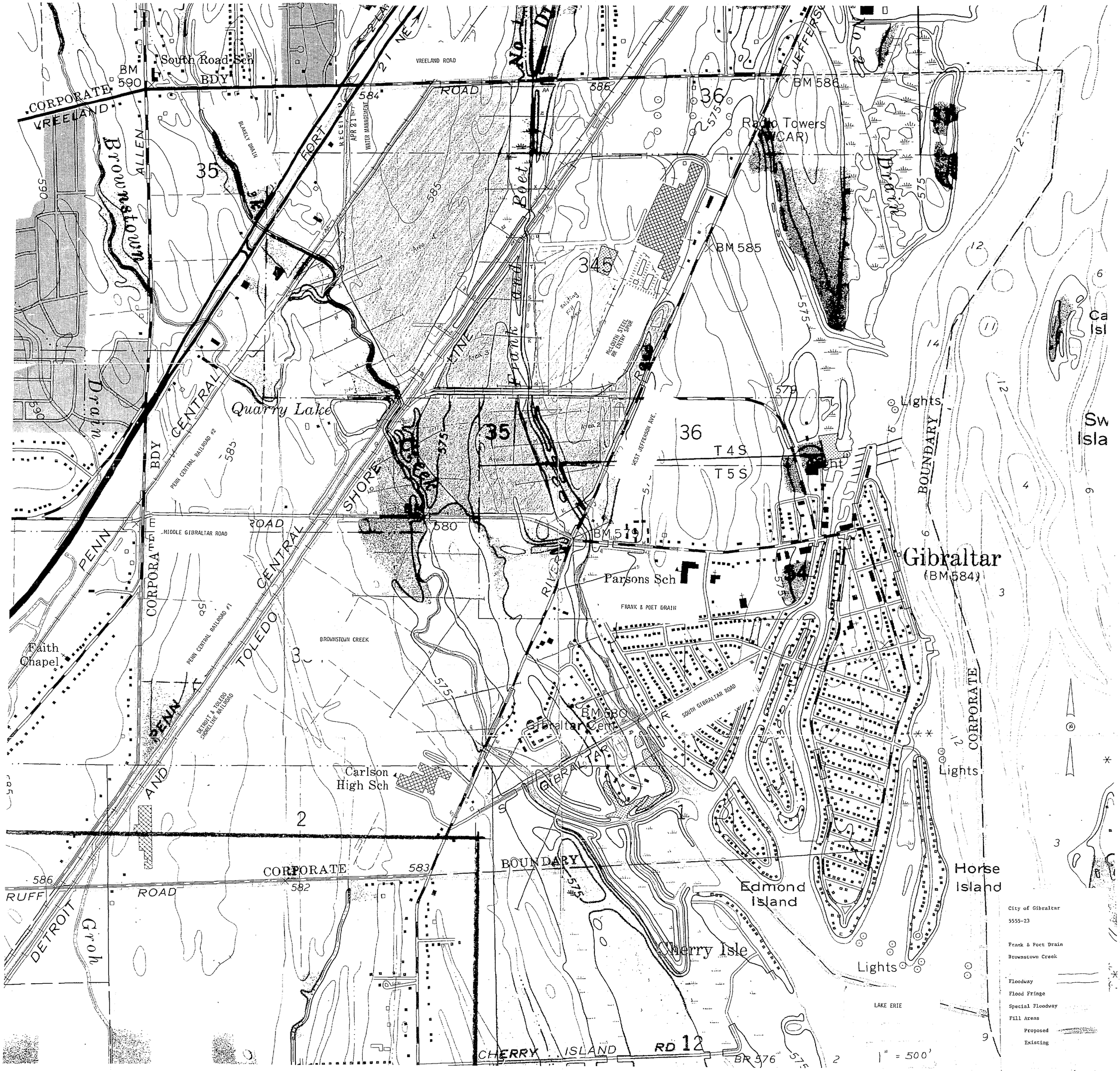




Gibraltar F/S



South Road Sch
BM 590
CORPORATE
VREELAND
BDY
ROAD
584
586
2 LANE
FORT
ALLEN
Brownstown
Creek
35
585
590
Drain
Radio Towers
(CAR)
36
BM 586
JEFFERSON
Boet
Frank and
LINE
345
BM 585
575
579
Quarry Lake
CENTRAL
355
SHORE
Creek
35
36
T 4 S
T 5 S
Lights
BOUNDARY
BM 588
ROAD
580
BM 579
Gibraltar
(BM 584)
Parsons Sch
RIVER
PENN
CORPORATE
CENTRAL
TOLEDO
354
Faith
Chapel
PENN
AND
BM 580
Gibraltar Cem
GIBRALTAR
RD
Carlson
High Sch
2
CORPORATE
BOUNDARY
583
582
586
RUFF
ROAD
DETROIT
Groh
Edmond
Island
Horse
Island
Cherry Isle
Lights
CHERRY ISLAND RD
12
BR 576

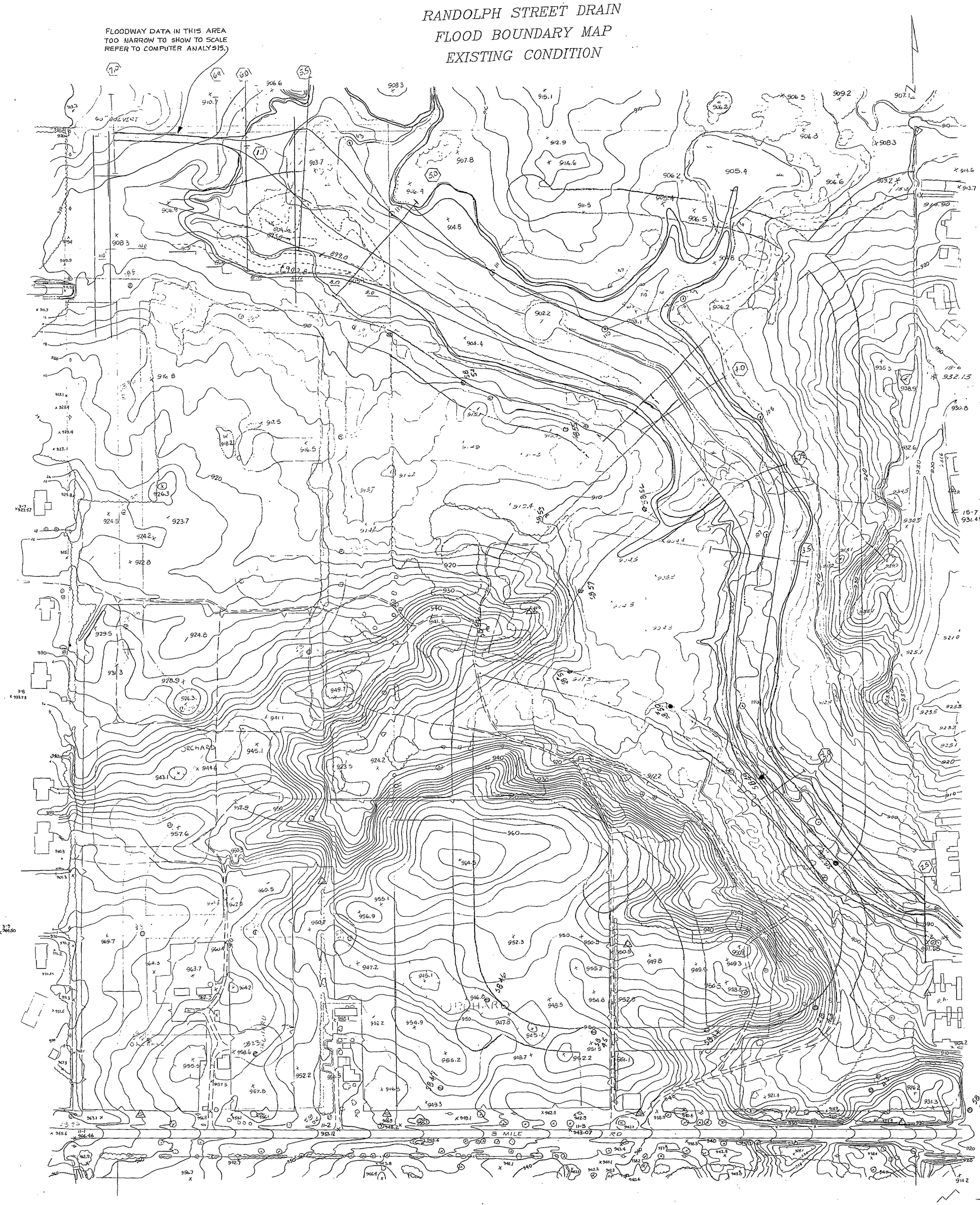


South Road Sch
BM 590
CORPORATE
VREELAND
BDY
ROAD
VREELAND ROAD
BLAKELY DRAIN
WATER MANAGEMENT
FORT
ALLEN
Brownstown
Drain
35
36
BM 586
Radio Towers
(WCAR)
JEFFERSON
Drain
BM 585
345
Frank and Poet
McLOUTH STEEL RR ENTRY SPUR
Quarry Lake
PENN CENTRAL RAILROAD #2
PENN CENTRAL
SHORE
LINE
WEST JEFFERSON AVE.
T 4 S
T 5 S
Lights
BOUNDARY
MIDDLE GIBRALTAR ROAD
ROAD
BM 579
Gibraltar
(BM 584)
Parsons Sch
FRANK & POET DRAIN
RIVER
BROWNSTOWN CREEK
Faith Chapel
PENN
TOLEDO
CENTRAL
DETROIT & TOLEDO SHORELINE RAILROAD
SOUTH GIBRALTAR ROAD
BM 580
Gibraltar Cem
GIBRALTAR
Carlson High Sch
CORPORATE
BOUNDARY
RUFF
ROAD
DETROIT
Groh
Edmond Island
Horse Island
Cherry Isle
LAKE ERIE
CHERRY ISLAND RD
BR 576
1" = 500'
City of Gibraltar
5555-23
Frank & Poet Drain
Brownstown Creek
Floodway
Flood Fringe
Special Floodway
Fill Areas
Proposed
Existing

RECEIVED
JAN 16 1992
NATURAL RESOURCES
LAND & WATER MGMT.

City of Northville
Randolph Dr.

CITY OF NORTHVILLE
RANDOLPH STREET DRAIN
FLOOD BOUNDARY MAP
EXISTING CONDITION



N

1"=100' 2' C I
SEC 33

DISK # FILENAME: 6800-50P

McNEELY&LINCOLN
Associates,Inc.
CIVIL ENGINEERING & LAND SURVEYING
(313) 349-4920
459 E. CADY, NORTHVILLE, MICHIGAN 48167

DATE: JAN. 1992 ORDER NO. 6800.50
SURVEY BY: FIELD BOOK
DRAWN BY: SHEET of

E 2,221,000 E 2,222,000 E 2,223,000 E 2,224,000 E 2,225,000 E 2,226,000

N 346,000 N 347,000 N 346,000 N 345,000 N 344,000 N 343,000

9 MILE ROAD

TO RANDOLPH B

AREA (1)

AREA (2)

BECK ROAD

HAFT RD.

2.72 AC

60.79 AC

114.51 AC

91.97 AC

60.79 AC

CITY LINE

RANDOLPH JUNCTION

STORMWATER DETENTION POND

LEXINGTON GREEN SUBDIVISION

CITY OF NOVI

CITY OF NORTHVILLE

3-35"x24" CMAP LOW POINT AT ROAD ℄ IS NOW ELEV. 930.2

APPROACH BASIN FOR 60" CULVERT

60" DIA. RCP CULVERT

NOVI CORP. BDY.

RANDOLPH STREET DRAIN

NORTHVILLE ESTATES SUBDIVISION

ABBEY KNOLL ESTATES SUBDIVISION

PHEASANT RIDGE SUBDIVISION

CITY OF NOVI

CITY OF NORTHVILLE

LEGEND

- DRAINAGE DISTRICT BOUNDARY
- FLOW PATH USED TO DETERMINE TIME OF CONCENTRATION
- "RANDOLPH DRAIN DIVERSION" PER CITY OF NORTHVILLE FIS.
- 60.79 AC — DRAINAGE DISTRICT AREA
- HEC 2 ANALYSIS COMPLETED BY CITY OF NORTHVILLE

LEGEND

PRIMARY ROADS		GUARDRAIL	
SECONDARY ROADS		TRANSMISSION TOWER	
RAILROAD		TREELINE	
BUILDINGS		SPOT ELEVATION	
STREAM		TRAVERSE STATION	
FENCE		VERTICAL CONTROL POINT	

SCALE: 1"=200'

700 0 200 400 600 800 1000

DATE OF PHOTOGRAPHY MAY 3, 1970 CONTOUR INTERVAL 2'

GRIDS BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE

VERTICAL DATA TIED TO 1927 NORTH AMERICAN SEA LEVEL DATUM

			4	3	2	1
			9	10	11	12
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	

SECTION INDEX

TOPOGRAPHIC MAPS PREPARED BY
KUCERA & ASSOCIATES, INC.
PHOTOGRAMMETRIC ENGINEERS
MENTOR, OHIO

PREPARED FOR THE
CITY OF NOVI,
MICHIGAN

SECTION NO. 33

McNEELY & LINCOLN ASSOC., INC.
P.O. Box 66
[illegible], MI 48152

E. 2,216,000

E. 2,220,000

E. 2,224,000

N 353,000

N 352,000

N 351,000

N 350,000

N 349,000

N 348,000

10 MILE RD.

BECK RD.

9 MILE RD.

9 MILE RD.

GARFIELD RD.

960

970

5.2 ACRES

NORTH HALF

RANDOLPH B

59.06 AC.

TOPOGRAPHIC MAPS
PREPARED BY
KUCERA & ASSOCIATES, INC.
PHOTOGRAMMETRIC ENGINEERS
UTICA, MICH.

LEGEND

PRIMARY ROADS — GUARDRAIL
SECONDARY ROADS — TRANSMISSION TOWER
WATER MAIN — TREELINE
CULVERTS — SPOT ELEVATION
STREAM — TRAVERSE STATION
RAILROAD — VERTICAL CONTROL POINT

SCALE 1"=200'

0 200 400 600 800 1000

DATE OF PHOTOGRAPHY MAY 3 1970
CONTOUR INTERVAL 2'
DATUM IS MEAN SEA LEVEL
COORDINATE SYSTEM IS MICHIGAN STATE PLANE SOUTH ZONE
NOT NORTH AMERICAN 1983 DATUM

N

SECTION INDEX

	4	3	2	1		
	9	10	11	12		
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	

PREPARED FOR THE
CITY OF NOVI.
MICHIGAN

SECTION NO. 29

McNEELY & LINCOLN ASSOC., INC.
P.O. Box 66
Northville, MI 48167

EAST LINE SECTION 35 + CENTERLINE OF NOVI ROAD

NOVI ROAD

EXISTING OLD NOVI ROAD BRIDGE TO BE REMOVED

OLD NOVI ROAD

EXISTING ROAD

TIE INTO EXISTING ROAD AT STATION 0+00

PROPOSED BRIDGE

CENTERLINE OF C AND O RAILROAD

ESTATE STORAGE

N-347,000.00
E-232,000.00

1987 RESTUDY HEC-2 MODEL STOPS HERE STATION 1560

EXISTING CONCRETE CHANNEL

STATION 2150

100 YEAR FLOW WITH LEXINGTON GREEN DETENTION BASIN ON LINE EQUALS 290 cfs.

STATION 1300

1520

1790

2140

1250

1070

STA. 630

STA. 612

STA. 532
E-827.97
P-828.15

N-345,526.00
E-232,936.00

17.39 CFS SPLIT FLOW

Roosevelt Court

Windchase Court

Ashgate Drive

457

397

850

700

332

PROPOSED BRIDGE

100' RAILROAD R.O.W.

N-347,000
E-233,500

WALLED LAKE BRANCH OF THE MIDDLE ROUGE RIVER

D.N.R. FILE #290-14-003
APPROXIMATE LOCATION FOR FUTURE WALLED LAKE SCHOOLS WETLAND MITIGATION (4ACRES)

EXISTING 100 YEAR FLOOD STAGE BASED ON 1987 CITY OF NOVI FIS RESTUDY

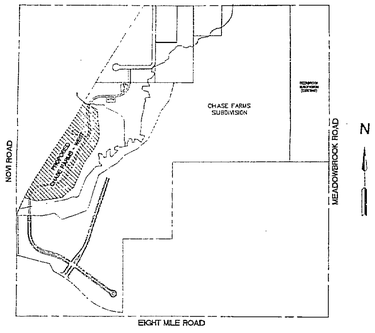
TIE PROPOSED ROAD INTO EXISTING ROETHEL DRIVE

EXISTING ROETHEL DRIVE

EXISTING SANITARY STORAGE TANK

THORNTON CREEK

3788
3864
3970
4076
4119
4270
4525
4984
5058
6108
7195
7415
7635
7835
8065
8135
8283



SITE LOCATION MAP

LEGEND

E-XXX.XX	EXISTING B.F.E.
P-XXX.XX	PROPOSED B.F.E.
	EXISTING 100 YR. STAGE
	PROPOSED 100 YR. STAGE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	CROSS SECTIONS
	WETLAND BOUNDARY

JCK & ASSOCIATES, INC.
CONSULTING ENGINEERS
NOVI, MICH. PH. NO. (313) 348-2620

JGK

SITE PLAN

RIVERBRIDGE FLOODPLAIN STUDY

PART OF SECTION 35, T1N, R.8E
CITY OF NOVI
OAKLAND COUNTY MICHIGAN

Revisions	ROUGE FLOODPLAN	ROAD RELOCATION	ADJ. FLOODPLAINS
	1-14-91	1-25-91	2-5-91

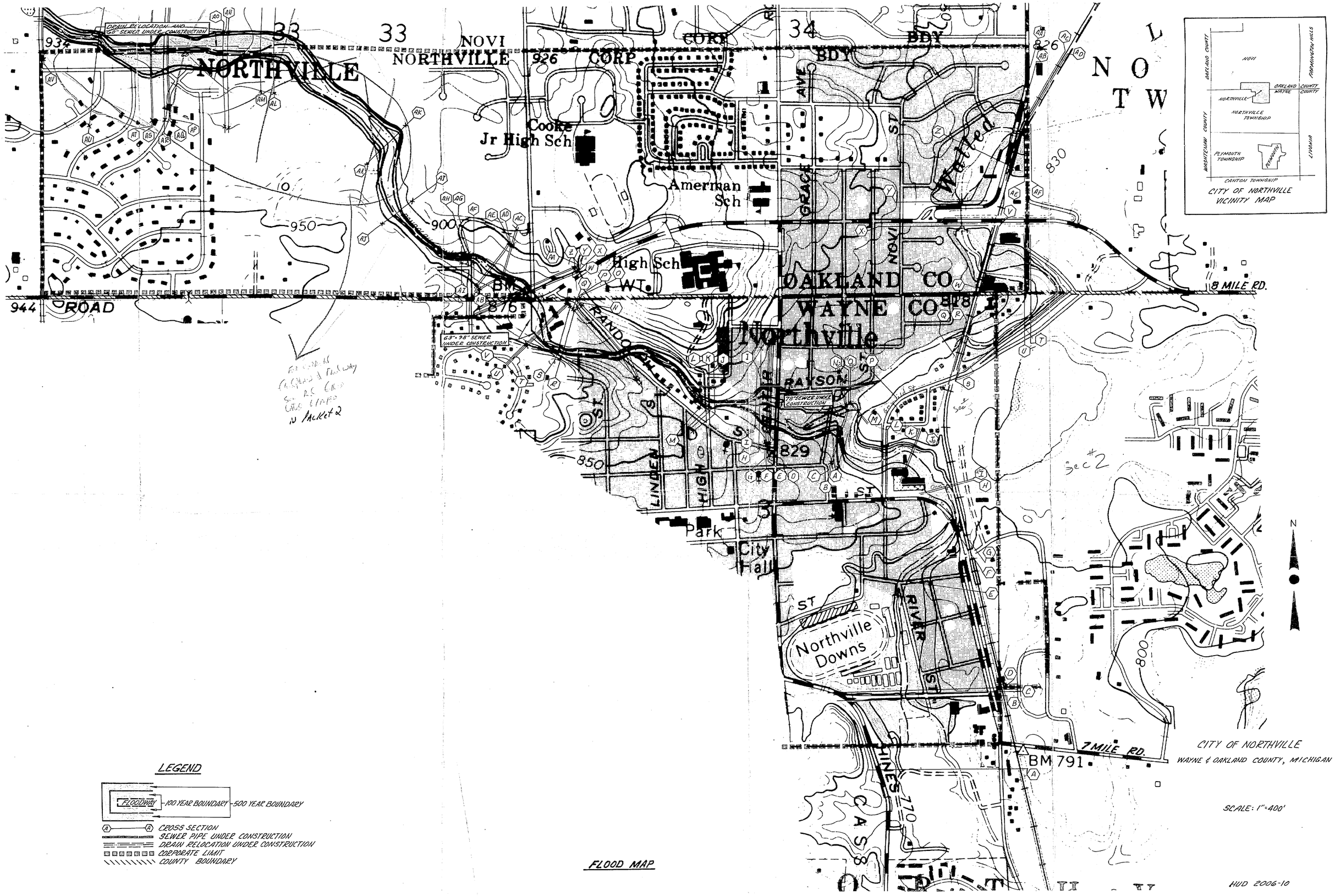
Drawn	J.A.W.
Designed	J.A.W.
Checked	G.W.F.
Scale	1"=100'
Date	11-19-90
Job No.	290-90-14-1226
	N-1815-2
Sht. No.	1A.

D:\ESTATE\CANUP.DWG, 11-19-90.

STATE OF MICHIGAN
REGISTERED PROFESSIONAL ENGINEER
CASEY WAYNE FOTT
ENGINEER
No. 33095
2-8-91

REVISED PLANS

RECEIVED
FEB 11 1991
NATURAL RESOURCES
LAND & WATER MGMT.



LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — B CROSS SECTION

SEWER PIPE UNDER CONSTRUCTION

DRAIN RELOCATION UNDER CONSTRUCTION

CORPORATE LIMIT

COUNTY BOUNDARY

FLOOD MAP

LEXINGTON GREEN NO. 1

ZONE A

LEXINGTON GREEN NO. 2

SCALE: 1"=100'

GROUP B

GROUP B

8.53 ACRES
GROUP B
CN = 75, t = 0.17 hrs

18.28 ACRES
CN = 74, t = 0.24 hrs

GROUP C

CN = 85, t = 0.16 hrs

2.74 ACRES

GALWAY DRIVE

CN = 75, t = 0.1 hrs
5.59 ACRES

GROUP C
1.50 ACRES

CN = 80, t = 0.1 hrs

1.78 ACRES
CN = 75, t = 0.1 hrs

GROUP B

DETENTION POND
0.40 ACRES

GROUP A
1.33 ACRES
CN = 57, t = 0.12 hrs

WETLAND AREA
3.81 ACRES
CN = 81, t = 0.1 hrs

SPRINGFIELD DRIVE

MILL POND COURT

2.58 ACRES
CN = 58, t = 0.1 hrs

GROUP A
9.39 ACRES
CN = 55, t = 0.16 hrs

RANDOLPH STREET DRAIN

PHEASANT HILLS NO. 2

LEXINGTON COMMONS NORTH

DRAINAGE & ELEVATION DATA

DISK # ——— FILENAME: ———

McNEELY&LINCOLN
Associates,Inc.

CIVIL ENGINEERING & LAND SURVEYING
(313) 349-4920
459 E. CADY, NORTHVILLE, MICHIGAN 48167

DATE: ———
SURVEY BY: ———
DRAWN BY: ———
ORDER NO. 6600-145
FIELD BOOK ———
SHEET — of —

LEXINGTON GREEN NO. 1

TAFT ROAD

ZONE A

FLOOD HAZARD AREA
(CITY of NOVI FIS)

LEXINGTON GREEN NO. 2

GALWAY DRIVE

47

LORENZO RESIDENCE

REAR YARD LOT DRAINAGE

REAR YARD LOT DRAINAGE

DETENTION POND

POND OVERFLOW

E. 1/4 COR. SEC. 34

CITY OF NOVI

CITY OF NORTHVILLE

ZONE A

FLOOD HAZARD AREA
(CITY of NORTHVILLE FIS)

WETLAND AREA

SPRINGFIELD DRIVE

MILL POND COURT

103

104

TRIBUTARY TO THE RANDOLPH STREET DRAIN

RANDOLPH STREET DRAIN

McDONALD DRIVE

NOTE: FLOOD HAZARD AREA FOR RANDOLPH STREET DRAIN NOT SHOWN.

PHEASANT HILLS NO. 2

LEXINGTON COMMONS NORTH

DRAINAGE STUDY
BASE MAP

SECTION 34
City of Northville
City of Novi
Oakland County

DISK # FILENAME: 6800-145.DWG

McNEELY&LINCOLN
Associates,Inc.

CIVIL ENGINEERING & LAND SURVEYING
(313) 349-4920
459 E. CADY, NORTHVILLE, MICHIGAN 48167

DATE: APRIL 11,1991 ORDER NO. 6800-145
SURVEY BY: FIELD BOOK
DRAWN BY: RMW SHEET 1 of 1

AREA TRIBUTARY TO
RANDOLPH STREET DRAIN

BECK ROAD

WEST EIGHT MILE ROAD

NORTHVILLE ESTATES
CITY OF NORTHVILLE

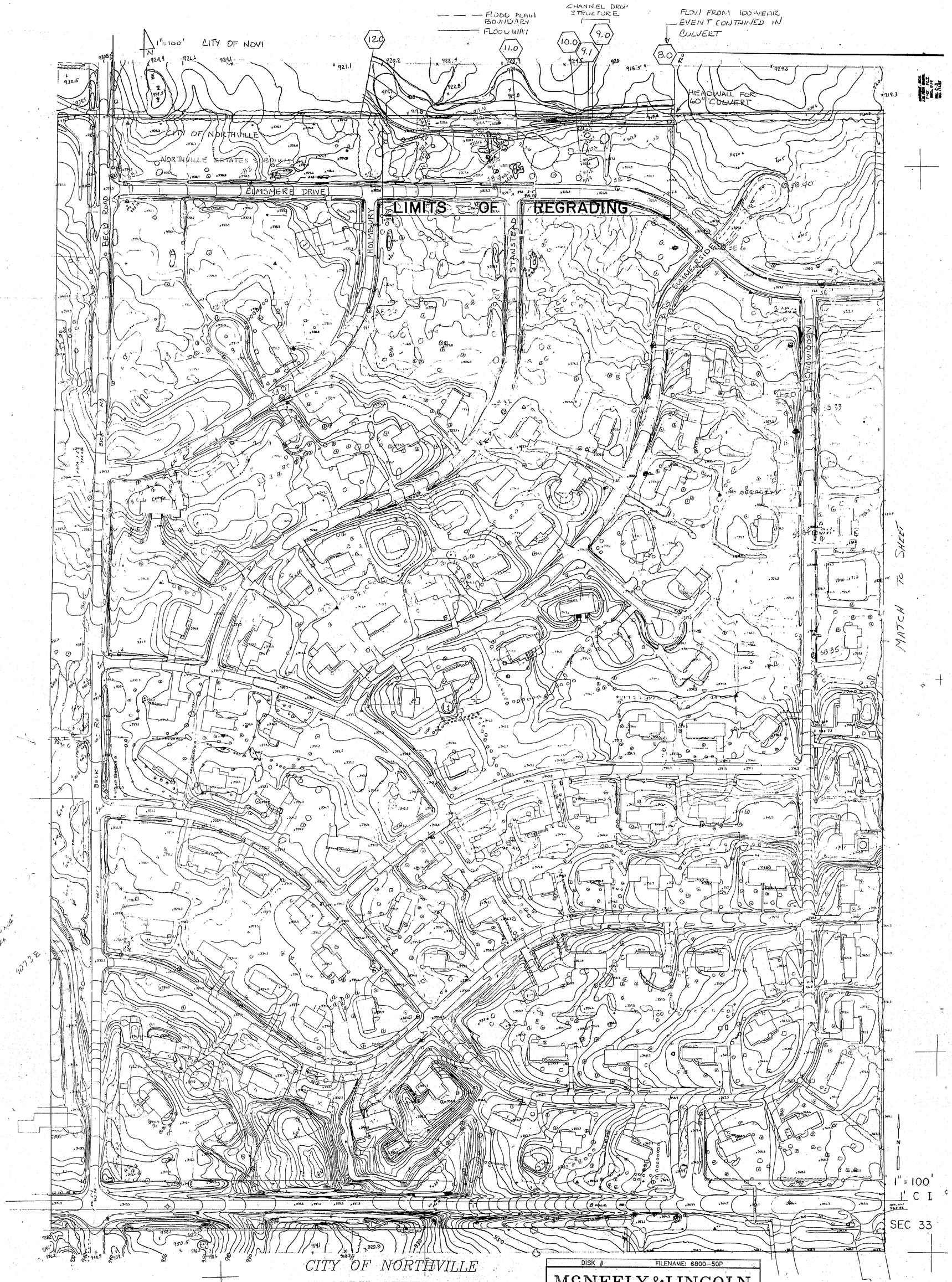
DRAINAGE AREA DIVIDE

MATCH TO SHEET

1" = 100'

SEC 33

NORTHVILLE TWP 20011



CITY OF NORTHVILLE
RANDOLPH STREET DRAIN
FLOOD BOUNDARY MAP
EXISTING CONDITION

DISK # FILENAME: 6800-50P

McNEELY & LINCOLN
Associates, Inc.

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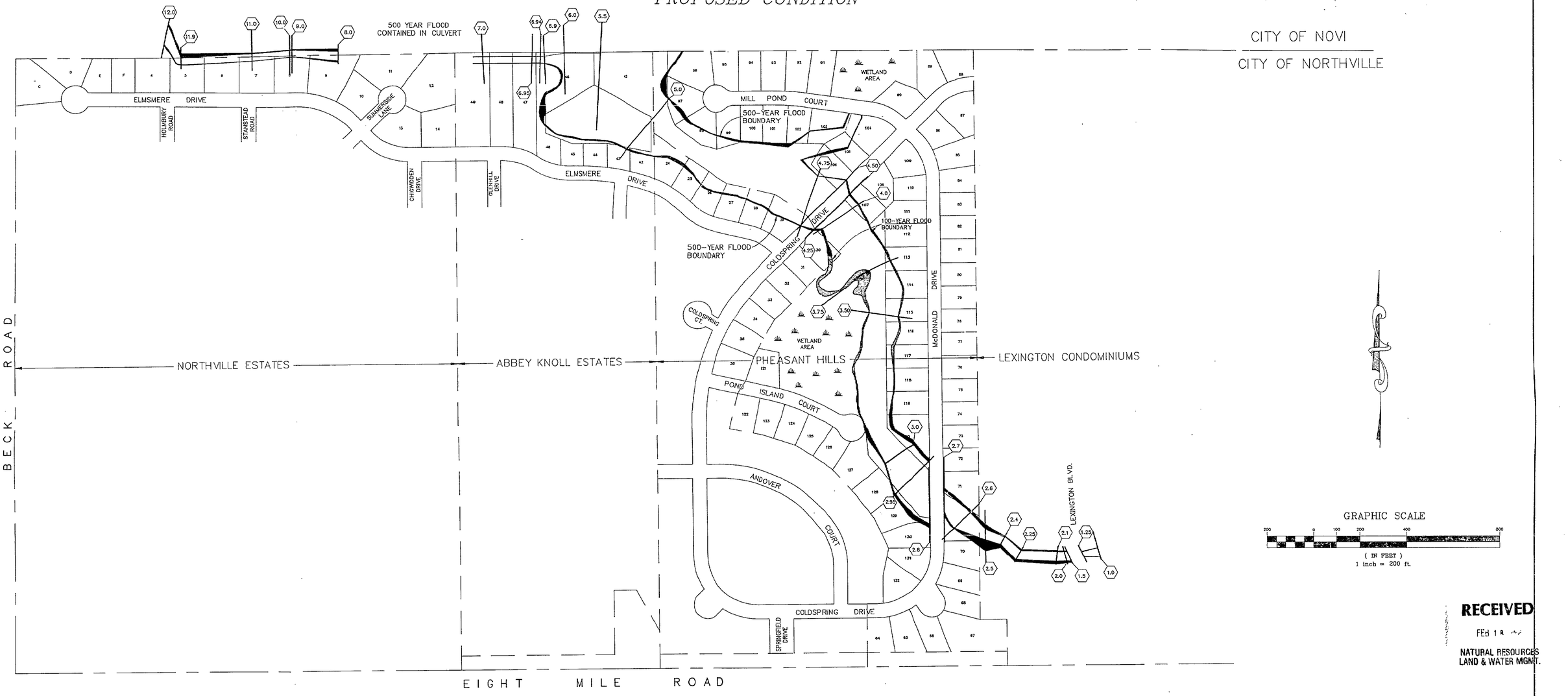
459 E. CADY, NORTHVILLE, MICHIGAN 48167

CITY OF NORTHVILLE
RANDOLPH STREET DRAIN
FLOOD BOUNDARY MAP
PROPOSED CONDITION



RECEIVED
FEB 18
NATURAL RESOURCES
LAND & WATER MGMT.

REV.	DATE	DESCRIPTION	BY
F			
E			
D			
C			
B			
A	01/30/92	PER MICHIGAN DNR'S LETTER	DP

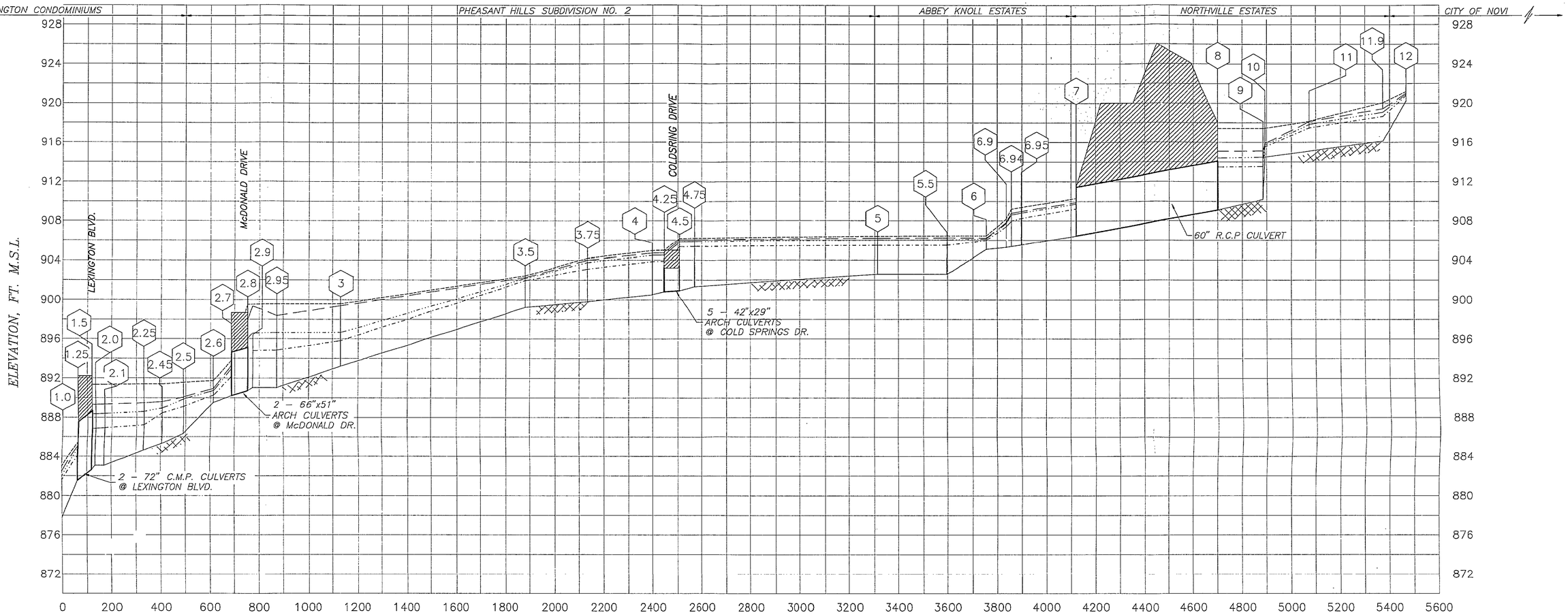
DISK # FILENAME: 6800-50P

McNEELY&LINCOLN
Associates,Inc.

CIVIL ENGINEERING & LAND SURVEYING
(313) 349-4920
459 E. CADY, NORTHVILLE, MICHIGAN 48167

DATE: JAN. 1992 ORDER NO. 6800.50
SURVEY BY: FIELD BOOK 193
DRAWN BY: DP SHEET 1 of 3

CITY OF NORTHVILLE
RANDOLPH STREET DRAIN
FLOOD PROFILE
BETWEEN LEXINGTON BLVD. & BECK ROAD



DISTANCE IN FEET

LEGEND

- 500–YEAR FLOOD
- 100–YEAR FLOOD
- 50–YEAR FLOOD
- 10–YEAR FLOOD
- STREAM BED
- (1) PROPOSED CROSS SECTION LOCATION (1991)

SCALE

HORIZONTAL 1" = 200'
VERTICAL 1" = 5'

NO.	DATE	DESCRIPTION	BY
1	01/30/92	REVISED PER MICHIGAN DNR LETTER	D.P.

DISK # FILENAME: GRAPH91.DWG

McNEELY&LINCOLN
Associates,Inc.
CIVIL ENGINEERING & LAND SURVEYING
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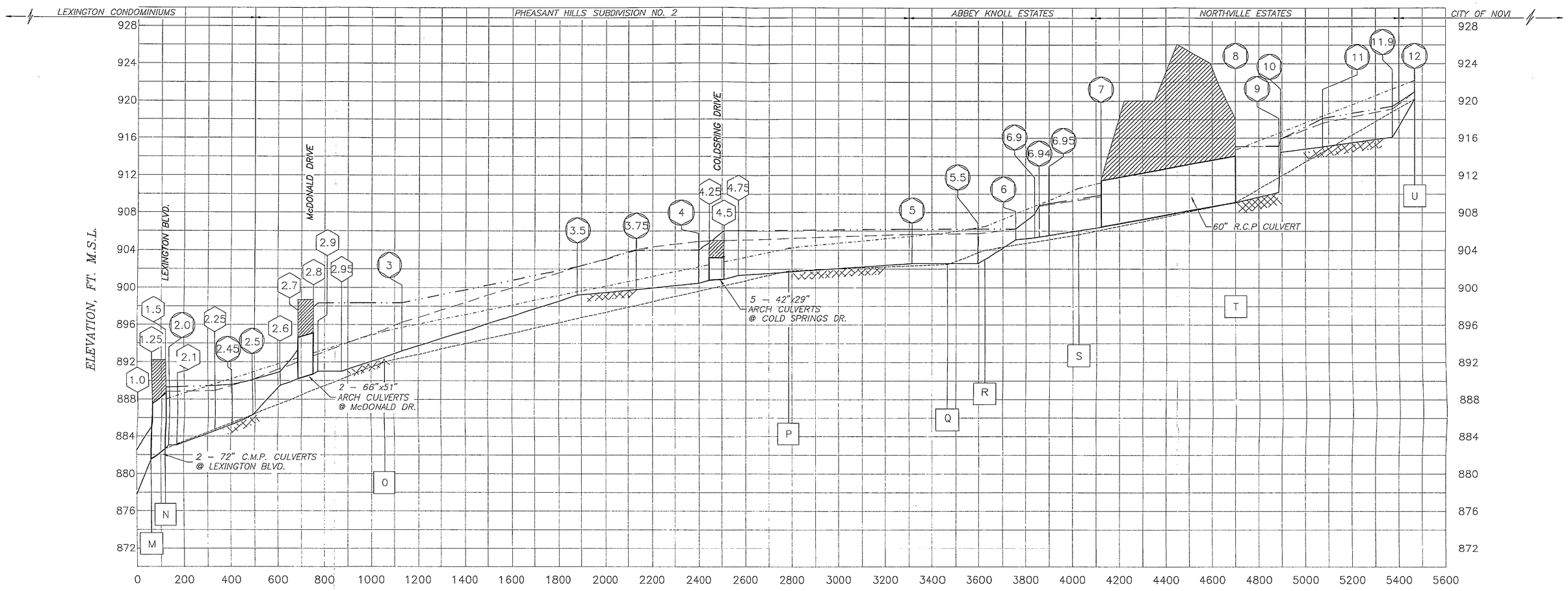
459 E. CADY, NORTHVILLE, MICHIGAN 48167

DATE: 01/02/92 ORDER NO. 6800–50
SURVEY BY: FIELD BOOK 193
DRAWN BY: DP SHEET 2 of 3

CITY OF NORTHVILLE
RANDOLPH STREET DRAIN 100 YEAR FLOOD PROFILES – COMPARISON
BETWEEN LEXINGTON BLVD. & BECK ROAD



LEGEND

- STREAM BED
- STREAM BED (FEMA)
- FEMA – WATER SURFACE PROFILE
- PROPOSED WATER SURFACE PROFILE (1991 STUDY)
- EXISTING WATER SURFACE PROFILE (1987 STUDY)
- (1) EXISTING CROSS SECTION LOCATION (1987)
- (1) PROPOSED CROSS SECTION LOCATION (1991)
- [M] CROSS SECTION LOCATION (FEMA)

SCALE
HORIZONTAL 1" = 200'
VERTICAL 1" = 5'

NO.	DATE	DESCRIPTION	BY
1	01/30/92	REVISED PER MICHIGAN DNR LETTER	D.P.

DISK # FILENAME: GRAPHNEW.DWG

McNEELY&LINCOLN
Associates,Inc.
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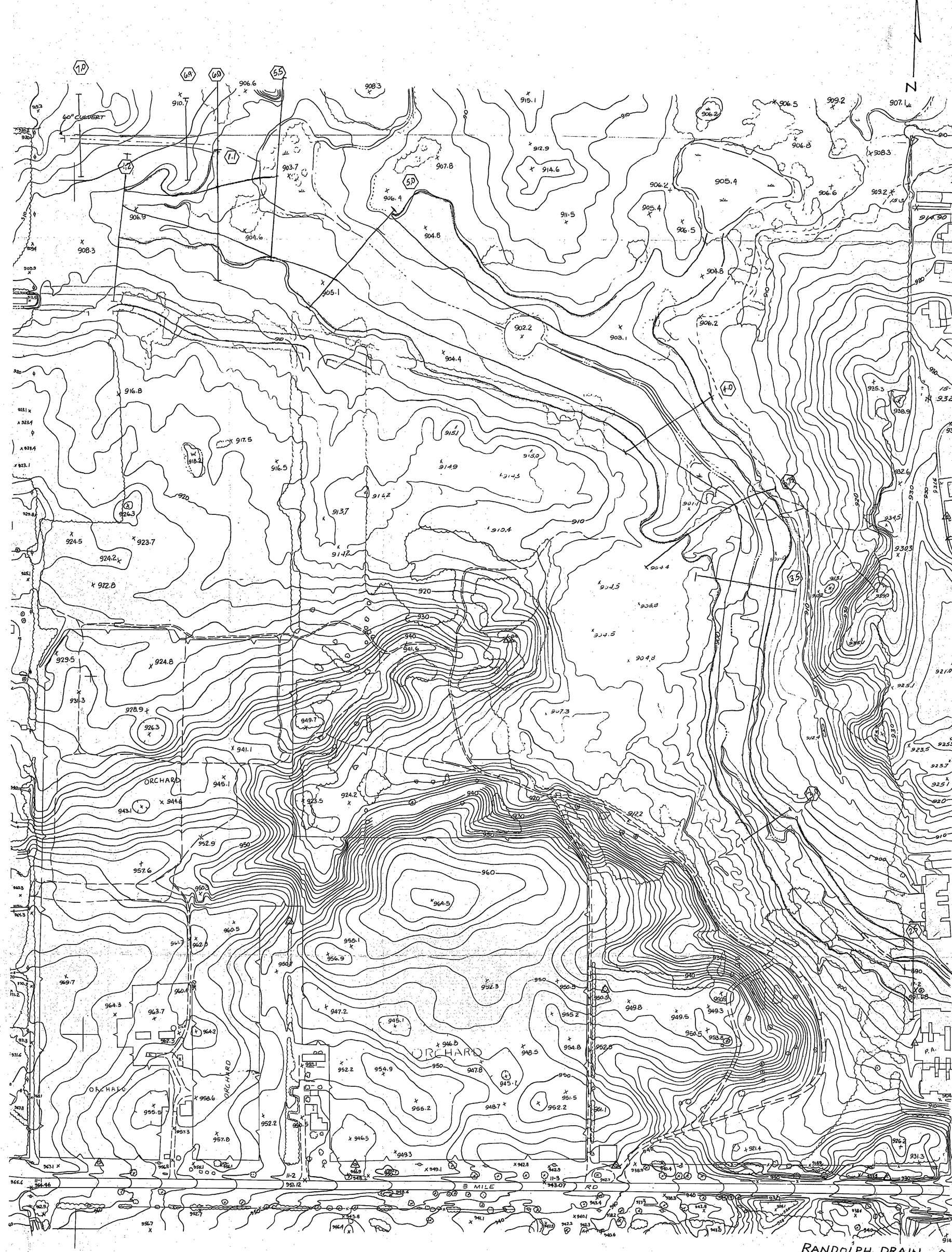
(313) 349-4920
459 E. CADY, NORTHVILLE, MICHIGAN 48167

DATE: 01/02/92 ORDER NO. 6800-50
SURVEY BY: FIELD BOOK 193
DRAWN BY: DP SHEET 3 of 3


N
60" CULVERT
ORCHARD
ORCHARD
ORCHARD
ORCHARD
B MILE RD
CROSS SECTION
FLOODWAY BOUNDARY*
FLOOD FRINGE*
* FOR 100 YEAR STORM
RANDOLPH DRAIN
CITY OF NORTHVILLE
SCALE: 1" = 100'
CONTOUR INTERVAL: 2'
MCNEELY & LINDLEY ASSOC
PROJ. NO. 6800-24

E 2,216,000 | E 2,217,000 | E 2,218,000 | E 2,219,000 | E 2,220,000 | E 2,221,000

9 MILE RD.

SOUTH HALF RANDOLPH B

47.1A

DIVERSION TO RANDOLPH A

69.32 AC

RANDOLPH A

15" Outlet w/ meter @ DS end

TO CITY L

GARFIELD RD.

BECK RD

N 347,000

N 346,000

N 345,000

N 344,000

N 343,000

CITY OF NOVI

CITY OF NORTHVILLE

8 MILE RD. NORTHVILLE CORP. BDY. NOVI CORP. BDY. NORTHVILLE TOWNSHIP

TOPOGRAPHIC MAPS
PREPARED BY
KUCERA & ASSOCIATES, INC.
PHOTOGRAMMETRIC ENGINEERS
MENTOR, OHIO

LEGEND

PRIMARY ROADS
SECONDARY ROADS
RAILROAD
BUILDINGS
STREAM
FENCE
GUARDRAIL
TRANSMISSION TOWER
TREELINE
SPOT ELEVATION
TRAVERSE STATION
VERTICAL CONTROL POINT

SCALE: 1" = 200'

200 0 200 400 600 800 1000

DATE OF PHOTOGRAPHY MAY 3, 1970 CONTOUR INTERVAL 2'
GRIDS BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
VERTICAL DATA TIED TO 1927 NORTH AMERICAN SEA LEVEL DATUM

			4	3	2	1
			9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
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31	32	33	34	35	36

SECTION INDEX

PREPARED FOR THE
CITY OF NOVI.
MICHIGAN

SECTION NO. 32

McNEELY & LINCOLN ASSOC., INC.
P.O. Box 66
Northville, MI 48167

TOWNSHIP OF PLYMOUTH, MICHIGAN
ELEVATION REFERENCE MARKS

REFERENCE MARKS	ELEVATION FEET (NGVD)	DESCRIPTION OF LOCATION
RM 1T	696.26	Bronze disk on top of concrete post located at northwest corner of intersection of Lilley Road and Joy Road, 41.2 feet northwest from monument box, 48.4 feet from northwest corner of house, 32.9 feet north of a catch basin.
RM 2T	700.96	"X" on "Volte" on gate well casting located on driveway of house No.900 Horizon Streets, 23 Feet west of centerline of Martian Streets, 7 feet south of the southerly end of house No.908.
RM 3T	705.57	Top bolt of southwest corner of brass planter box with electric yard light located at house No. 8800 Sheldon Road, 25 feet west of centerline of Plymouth Street in line with the southwest end of house No.9004.
RM 4T	755.91	"X" on "Volte" on gate well casting located 71 Feet south of North Territorial Road between concrete markers at Pineridge Drive.
RM 5T	782.49	"X" on "Volte" on gate well casting located 25 feet south of North Territorial Road, +3 Feet west of centerline of Beacon Hill Drive.
RM 6T	765.58	A chiseled cross scored on top of sanitary manhole casting located about 100 Feet south of North Territorial Road, 25 Feet west of centerline of Beacon Hill Drive, 42 feet north of Tonquish Creek.
RM 7T	724.45	Punch mark on north rim of storm sewer manhole casting located 17 feet south of centerline of Shoemaker Drive, 18 feet east of centerline of Jo Ann Lane.
RM 8T	736.22	Punch mark on north rim of sanitary manhole casting located 25 Feet north of centerline of Greenwood Circle, 47 feet north and 3 Feet east of the northeastern corner of Lot 260 Tracklwood Subdivision No.2.
RM 9T	739.58	Chiseled cross in centerline of concrete abutment over excisting concrete culvert for South Branch Tonquish Creek, 57 feet east of centerline of Canton Center Road.
RM 10T	761.24	Chiseled cross located at centerline of south abutment of box culvert for South Branch Tonquish Creek under Ann Arbor Trail, 26 Feet south of centerline of the Ann Arbor Trail, 130 feet west of centerline of McClumpha Road.
RM 11T	792.63	Chiseled cross located in centerline of west abutment of box culvert for South Branch Tonquish Creek under Beck Road, 25 Feet west of centerline of Beck Road.
RM 12T	862.61	Paint on low south side of Michigan Bell telephone pole located 32 Feet north of North Territorial Road, in front of No.32930 North Territorial Road.
RM 13T	845.43	Top of boulder located on the south side of pine behind house No.32928 North Territorial Road, just west of small elm tree.
RM 14T	838.76	Paint on south side of sixteenth Entarch Edison Pole east of Nasser Road, about 2700 Feet east of Napier Road, 58 Feet north of Five Mile Road.
RM 15T	835.03	Paint on south side of First Detroit Edison pole west of Dresser System, about 200 Feet west of Dresser System, 50 Feet north of Five Mile Road on west berm of Johnson Drain.

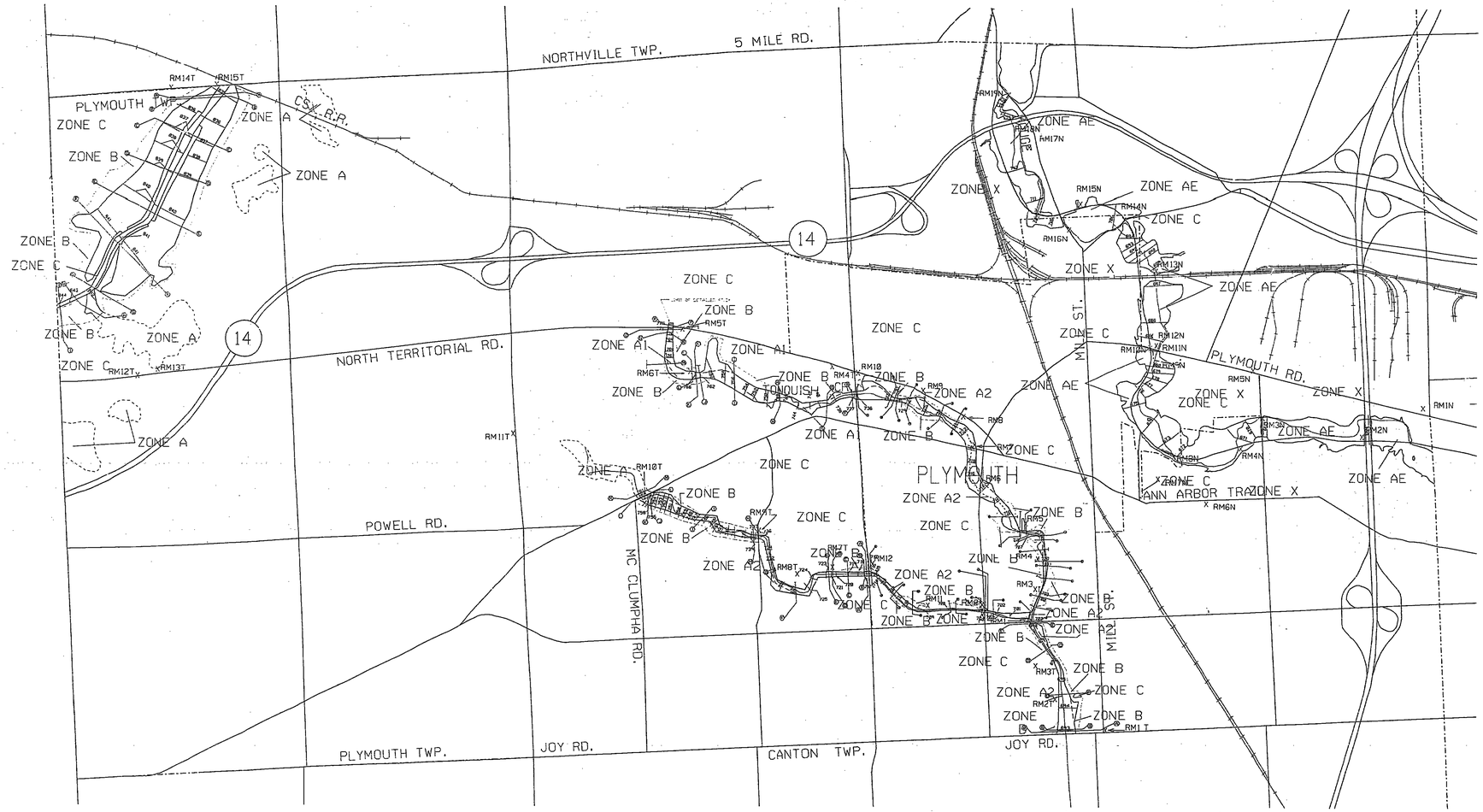
CITY OF PLYMOUTH, MICHIGAN
ELEVATION REFERENCE MARKS

REFERENCE MARKS	ELEVATION FEET (NGVD)	DESCRIPTION OF LOCATION
RM 1C	703.37	Chiseled cross on top of southwest bolt on light pole base located 64 Feet north of centerline of Ann Arbor Road, 40 Feet west of center of Tonquish Creek.
RM 2C	705.10	"X" on water on gatewell casting located 6 Feet north of centerline of Byron Avenue, 33 Feet west of centerline of Main Streets.
RM 3C	703.51	Punch mark on north rim of manhole casting located 3 Feet east of centerline of Byron Avenue, 5 Feet north of centerline of Ford Road.
RM 4C	705.13	Punch mark on north rim of manhole casting located 14 Feet north of centerline of Hanbaugh Streets, 11 Feet west of centerline of Dodridge Street extended.
RM 5C	711.14	"X" on water or gate well casting located 6 Feet east of centerline of Harding Street, 12 feet south of the northerly end of house No.780.
RM 6C	717.23	Chiseled cross on top of southwest bolt on steel light pole base located on northeast corner of Wing and Main Streets, 29 Feet east of centerline of Main Street, 28 Feet north of centerline of Wing Street.
RM 7C	721.84	Chiseled cross in southwest bolt on steel light pole located 30 Feet north of centerline of Ann Arbor Road, and 24 Feet east of centerline of Forest Street extended.
RM 8C	728.65	Chiseled cross in north rim of telephone manhole casting 21 Feet south of centerline of Penniman Road, on line extended with the westerly end of house No.100.
RM 9C	734.63	Chiseled cross in north rim of manhole casting, located 36 Feet north of centerline of Penniman Road, 7 feet east of centerline of Arthur Streets.
RM 10C	745.62	Bronze disk on top of concrete post in hand hole in sidewalk at southwest corner of intersection of Sheldon and Penniman Roads.
RM 11C	709.14	"X" on water on gate well casting located 7 Feet south of centerline of Byron Avenue, 25 Feet east of centerline of McKinley Street extended.
RM 12C	722.17	"X" on water on gatewell casting located 22 feet south of centerline of Hanbaugh Streets, 66 Feet east of centerline of Sheldon Road.

CITY OF PLYMOUTH & PLYMOUTH TOWNSHIP, MICHIGAN (NEW REFERENCE MARKS)
ELEVATION REFERENCE MARKS

REFERENCE MARKS	ELEVATION FEET (NGVD)	DESCRIPTION OF LOCATION
RM 1N	704.82	Bronze disc on top of concrete post at NW corner of intersection of Eckles Road and Plymouth Road.
RM 2N	685.50	Found Brass disc on top of concrete wall, 4.5 south of the north end of the S.Bound I-275 bridge over the Middle Rouge River (west Side).
RM 3N	677.84	Chiseled square on top of SW corner of concrete wall at the south end of the Haggerty Road bridge over the Middle Rouge River.
RM 4N	674.76	Chiseled square on top of the NE corner of the south concrete wall of Hines Dr. bridge over the Middle Rouge River. Bridge located 400' W. of Haggerty Road.
RM 5N	718.42	Bronze disc on top of concrete post SW of the intersection of Plymouth Road and southbound Haggerty Road.
RM 6N	716.81	Top of iron post with sign "Warning Petroleum Pipe" located at SE corner of Ann Arbor Trail and South Martin Road.
RM 7N	708.48	Northwest corner of catchbasin grate located in the SE corner of the intersection of Lonley Drive and Sussex Drive.
RM 8N	674.22	Chiseled square on NE end of concrete side walk on the south side of Hines Drive at bridge over the Middle Rouge River, 300 Feet east of Riverside Dr.
RM 9N	680.09	Chiseled "X" on the NE bolt for guard rail at the NE end of bridge over the Middle Rouge River, Feet 300' South of Plymouth Road and 100' East of Ed. Hines Dr.
RM 10N	693.78	Chiseled "X" in southerly sidewalk of Plymouth Road bridge over Hines Dr.
RM 11N	696.47	Chiseled square on top of concrete wall at the NW end of the Plymouth Rd. bridge over the Middle Rouge River on the north side of road.
RM 12N	709.84	60d nail in the W side of telepraph pole located on the E. side of Hines Dr., 68' Feet north of the centerline of C&O Railroad viaduct, N. of Plymouth Rd.
RM 13N	703.85	Chiseled square on the W. end of N. railroad bridge abutment over the Middle Rouge River, East of Ed Hines Dr. and South of Wilcox Road.
RM 14N	706.48	Chiseled square on the NW end of wingwall at Wilcox Gate, NW of the intersection of Ed Hines Dr. and Wilcox Road.
RM 15N	708.83	PK Nail on top of first guard rail post on E. side of west entrance to parking area on N. side of Hines Drive 1850 Feet east of Northville Road.
RM 16N	716.39	Chiseled square on the S. end of concrete wall on the W. side of bridge on Northville Road, 250' S. of Ed. Hines Dr., Wilcox Lake Area.
RM 17N	742.38	Chiseled "O" on 5¢ Flange bolt of fire hydrant at SE corner of the Plymouth Hilton Inn, also on the W. side of Northville Rd. S. of expressway, Mich.
RM 18N	729.42	Bronze disc on top of concrete wall, 4' W. of the east end of the N-14 bridge over the Middle Rouge River, North side of W. bound N-14.
RM 19N	733.22	Chiseled square on top of N. end of concrete wall on E. side of bridge. Bridge is located on Northville Road over the Middle Rouge River, S. of the intersection of Northville Road and Hines Drive, N. of the WCRC Phoenix Yard.

FLOOD INSURANCE STUDY WORK MAP
CITY OF PLYMOUTH AND PLYMOUTH TOWNSHIP, MICHIGAN



MAP SCALE
(FEET)

2 2500 5000

N

LEGEND

- 500-Year Flood
- 100-Year Flood
- Floodway
- Distance in Thousands of Feet Above Study Limit
- C — C Cross Section
- Corporate Limit
- RM2 X Elevation Reference Mark
- Zone AE Zone Designation
- 592 Base Flood Elevation

FLOOD INSURANCE STUDY WORK MAP
CITY OF PLYMOUTH AND PLYMOUTH TOWNSHIP,
MICHIGAN

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Canton Twp.

3) WATERCOURSE: Rich Drain

4) DOCUMENT TYPE: Report

00BREAK00

BY _____ DATE _____ FILE NO. _____

WATERCOURSE _____ COUNTY _____

DRAINAGE AREA _____ RECURRENCE INTERVAL _____

FLOW TYPE	LENGTH	ELE (FT)	SLOPE	VEL(fps)	tc(hrs)
V=16.134S	1500	5.5	.0037	.977	.43
V=16.134S	3400	5	.0015	.619	1.53
Open channel	6000	5 R_h=2.74		1.68	.99
Open channel	2100	10 R_h=2.74		4.02	.15

Total tc, hrs. = 3.1 hrs.

SOILS GROUP	%	sq.mi.	LAND USE Type	%	sq.mi.	CN	Hr. RF= Adj RF= R.O.	Hr. RF= Adj RF= sq.mi.-in.	24 Hr. RF= Adj RF= R.O.	24 Hr. RF= Adj RF= sq.mi.-in.
A										
B										
C										
D										
						Total sq.mi.-in.		.917		
						Avg. R.O., in.				
						Comp. CN	79			
						Qp, cfs/sq.mi-in.	158			
						Q (R.O. x Qp)	145			
						Adj factor				
						Q _____				

I_a = .564

P = 4.7

I_a/P = .12

Figure 7.8 - **SCS Methodology Form**

TR-55

Ultimate Development

BY _____ DATE _____ FILE NO. _____

WATERCOURSE _____ COUNTY _____

DRAINAGE AREA .36 RECURRENCE INTERVAL _____

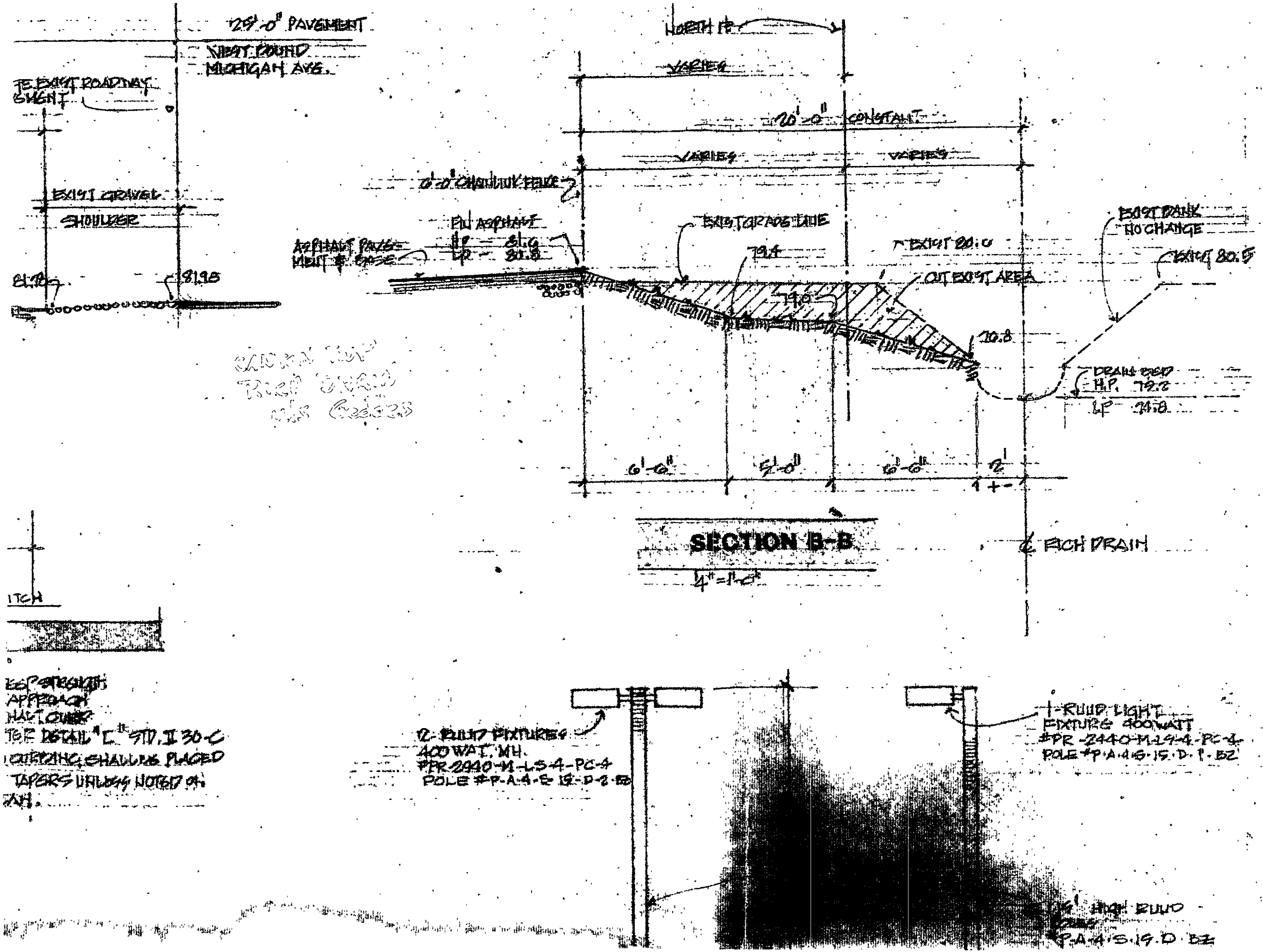
FLOW TYPE	LENGTH	ELE (FT)	SLOPE(%)	VEL(fps)	tc(hrs)

Total tc, hrs. = 3.1

SOILS GROUP	%	sq.mi.	LAND USE Type	%	sq.mi.	CN	24 Hr. RF= 4.7 Adj RF= R.O.	24 Hr. sq.mi.-in.	24 Hr. RF= Adj RF= R.O.	24 Hr. sq.mi.-in.
A										
B			RES	.025		75	2.46	.062		
C			RES	.255		83	2.90	.740		
			IND	.05		91	3.69	.185		
			ROADS	.03		98	4.46	.134		
D										
			Total sq.mi.-in.					1.12		
			Avg. R.O., in.							
			Comp. CN				85			
			Qp, cfs/sq.mi-in.				160			
			Q (R.O. x Qp)				179			
			Adj factor							
			Q _____				180			

I = .353
P = 4.7
Ia/P = .075

Figure 7.8 - **SCS Methodology Form**



REVISION C.T. APRIL 17, 1989
16 MAY 89 - C.T. REVIEW

revisions:

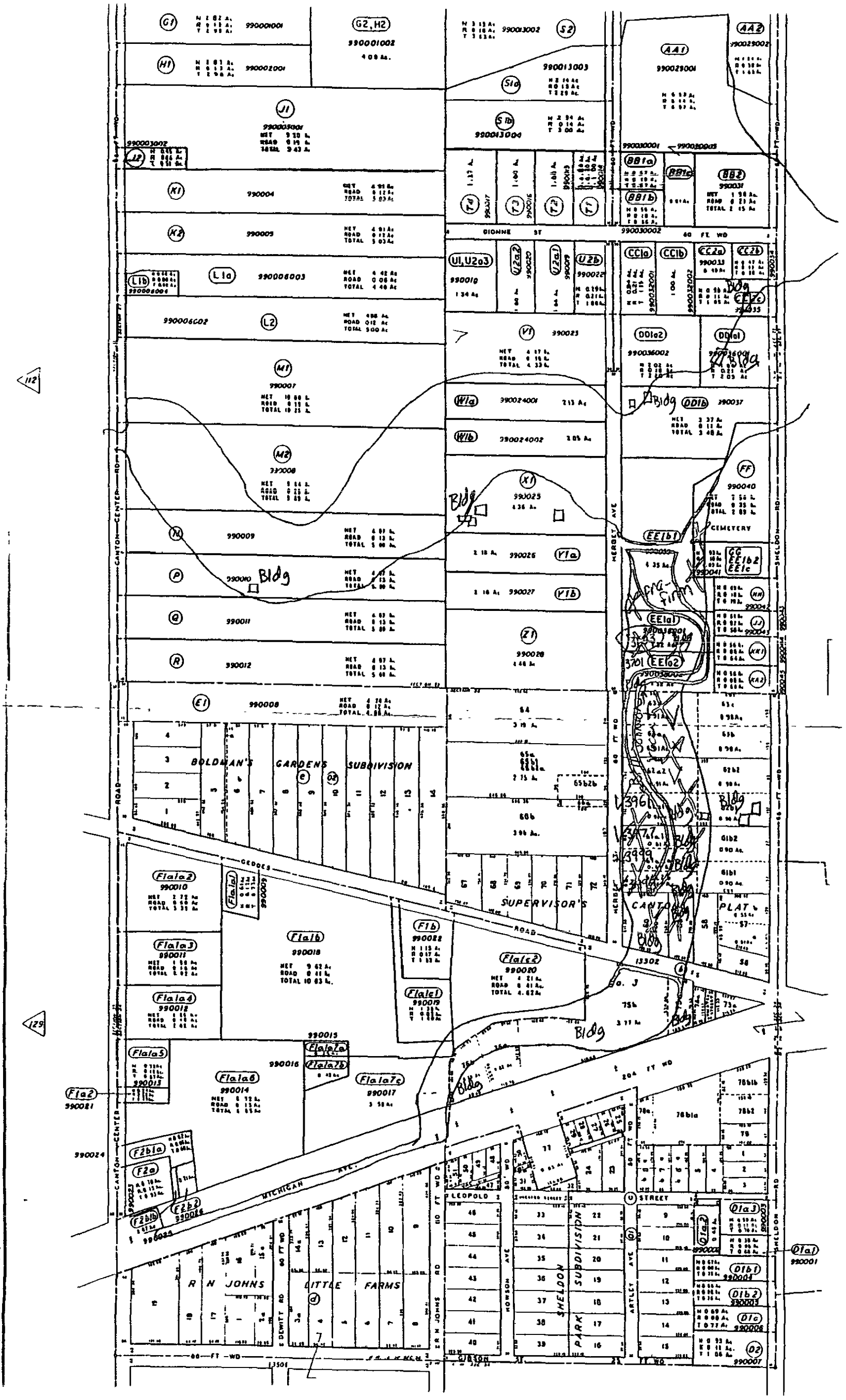
FACILITIES PROGRAM

MARINE AFFILIATES

MR. T. DI DARIO

MICHIGAN AVENUE

CHICAGO



BOLDMAN'S GARDENS SUBDIVISION
SUPERVISOR'S CANTON PLAT
R N JOHNS LITTLE FARMS
SHELDON PARK SUBDIVISION
CANTON CENTER RD
HERBERT AVE
SHELDON RD
GEDDES ROAD
MICHIGAN AVE
LEOPOLD STREET
DIONNE ST
CEMETERY
Bldg

Hydraulic Analysis
Rich Drain
Canton Township, Wayne County
December 1992

Introduction
The hydraulic analysis for the Rich Drain was prepared to estimate the 100-year flood profile along Herby Road.

The analysis was done for Rich Drain from the Cemetary path crossing, upstream of Michigan Avenue (U.S. 12), within Canton Township, Wayne County.

Background
In August 1992, a Community Assistance Visit (CAV) conducted by the Michigan Department of Natural Resources (MDNR) indicated a potential problem with the floodplain delineation on Rich Drain. A part of the delineation problem included five residential structures that had been constructed within the special flood hazard area in an apparent violation of the Township's flood damage prevention ordinance.

In an effort to correct the delineation problem, a 100-year flood profile was needed along Rich Drain.

Hydrology
The 100-year discharge for Rich Drain was estimated using the SCS Methodology as adapted to Michigan. Following are the parameters used to estimate the peak flow.

Drainage Area	=	.36 square miles
100-year rainfall	=	4.7 inches
Runoff Curve number	=	78 (based on land use & soil type)
Average Runoff	=	2.55 inches
Time of Concentration	=	4.65 hours

100-year discharge = 80 cfs

As a check, the peak discharge was also estimated using the TR-55 methodology. This method indicated a 100-year discharge of about 145 cfs.

However, at Michigan Avenue there is a restrictive culvert and floodplain storage that will reduce the peak flows. This was confirmed by a hydrologic routing which indicated that a discharge of 145 cfs would be reduced to about 60 cfs. Thus, it appears that 145 cfs could not be reasonably expected to occur.

Based on the two methods, a discharge of 80 cfs appears to be the most reasonable.

Method of Computation
The U.S. Army Corps of Engineers HEC-2 computer program was used to develop the 100-year flood profile.

Cross sections
A typical channel configuration was obtained by our office in September 1992, during a site inspection. Canton Township provided elevation information along the Drain, and on the five lots in question.

Starting Conditions
The flood profile was started by the slope-area method downstream of the crossing near the Cemetary. The slope was estimated to be equal to slope to the drain bottom (.009ft/ft).

Coefficients
Mannings roughness coefficients were estimated to be .06 for the channel and .1 for the overbanks. The estimates were based on a site inspection.

The expansion and contraction coefficients of .5 and .3 were used. In the vicinity of the culvert modeled as normal bridge, the coefficients were increased to .8 and .6, respectively.

Culvert Losses
The culvert at cross section 6.26 was modeled using the normal bridge routine. The remainder of the culverts were modeled using the special bridge routine. Following are the coefficients that were used in the analysis.

Location XSEC	size	area sq. ft.	XKOR
.5 - 0.75	Twin 2.5 ft RCCP	9.8	1.73
9.0 - 9.25	One 4.5 ft RCCP	15.9	1.61
15.5 - 20.0	One 4.0 ft RCCP	12.57	3.22

Results

Attached is a suggested floodplain delineation for Canton Township along Rich Drain. This delineation would revise panel 8 of the Flood Insurance Rate Map for the Township. For the area in question, the 100-year flood will be contained within the banks of the drain.

Following are the 100-year floodplain elevations for Rich Drain computed at the given cross sections.

Cross Section	100-year Elevation ft. NGVD of 1929 (Q = 80 cfs)	(Q = 150 cfs)
0.75	670.7 *	673.3
3.75	671.3 *	673.4
5.75	671.9 *	673.7
7.75	672.8 *	674.3
10.25	674.3	675.7
10.70	675.5	677.5
12.50	676.1	678.0
13.00	676.6	678.6
14.00	677.2	678.9
16.00	678.3	679.8
17.50	679.0	680.2
19.50	679.2	680.4

* 100-year floodplain elevation on the River Rouge/Sines Drain is about 673.

100-year floodplain elevation along Herby Road

Address	Elevation, ft, NGVD of 1929 100-year floodplain	Grade at House	First Floor
3623 Herby	673 *	676.5	682.37
3701 Herby	674.2	680.0	681.99
3961 Herby	678.3	680.9	681.67
3977 Herby	678.8	680.3	682.73
3999 Herby	679.1	680.6	682.68

* 100-year floodplain elevation on the River Rouge/Sines Drain is about 673.

From the information available, it appears that the five houses that have been constructed, are not within the 100-year floodplain of Rich Drain.

BY BEM DATE 8/28/92 FILE NO.

WATERCOURSE Rich Drain COUNTY WAYNE

DRAINAGE AREA .36mi² (230A) RECURRENCE INTERVAL 100-YR

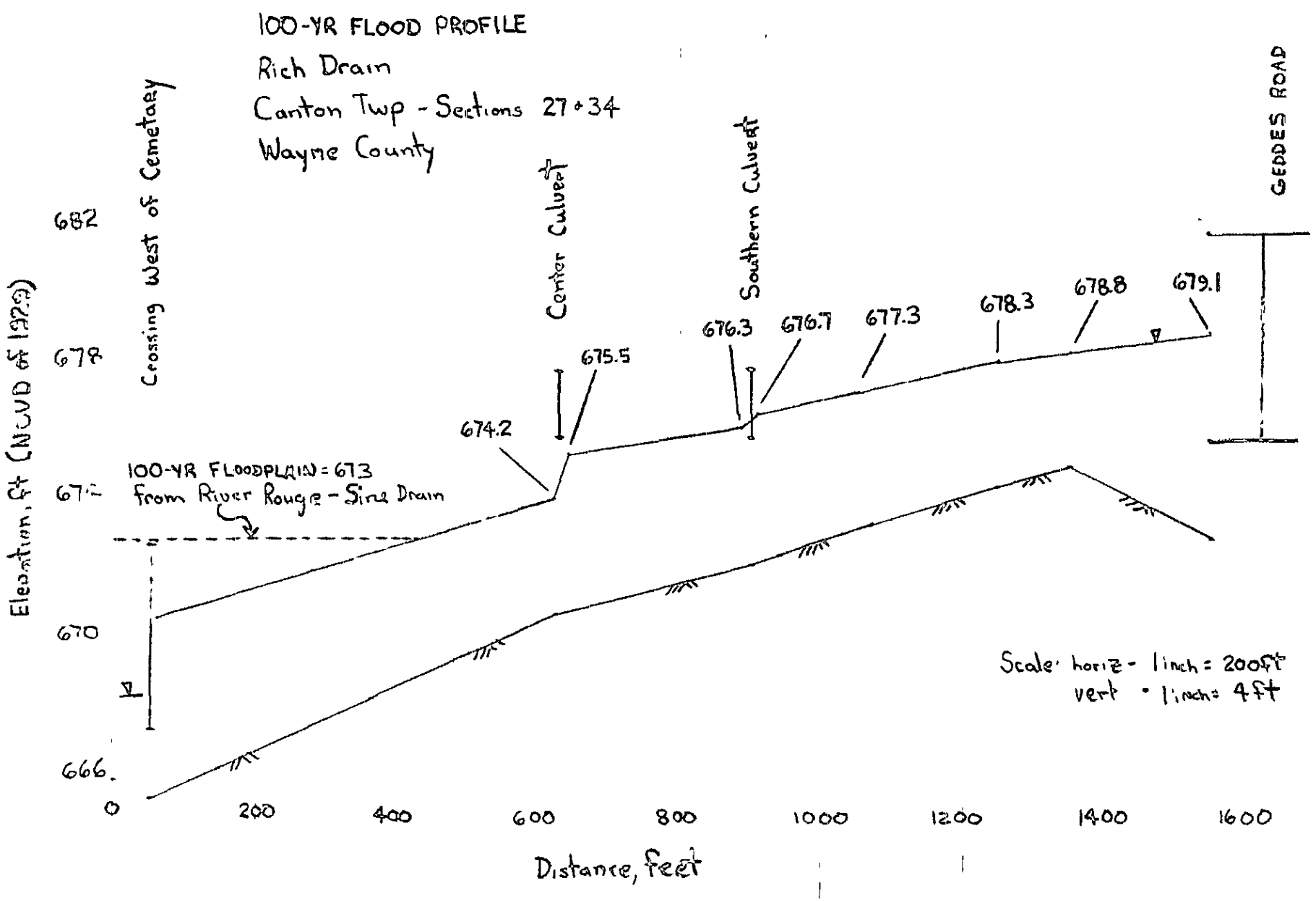
FLOW TYPE	LENGTH	ELE (FT)	SLOPE(%)	VEL(fps)	tc(hrs)
	1500	55	2.1		.33
	3400	5		.81	1.17
	6000	5		.61	2.75
	2100	10		1.45	.40

Total tc, hrs. = 4.65 hrs

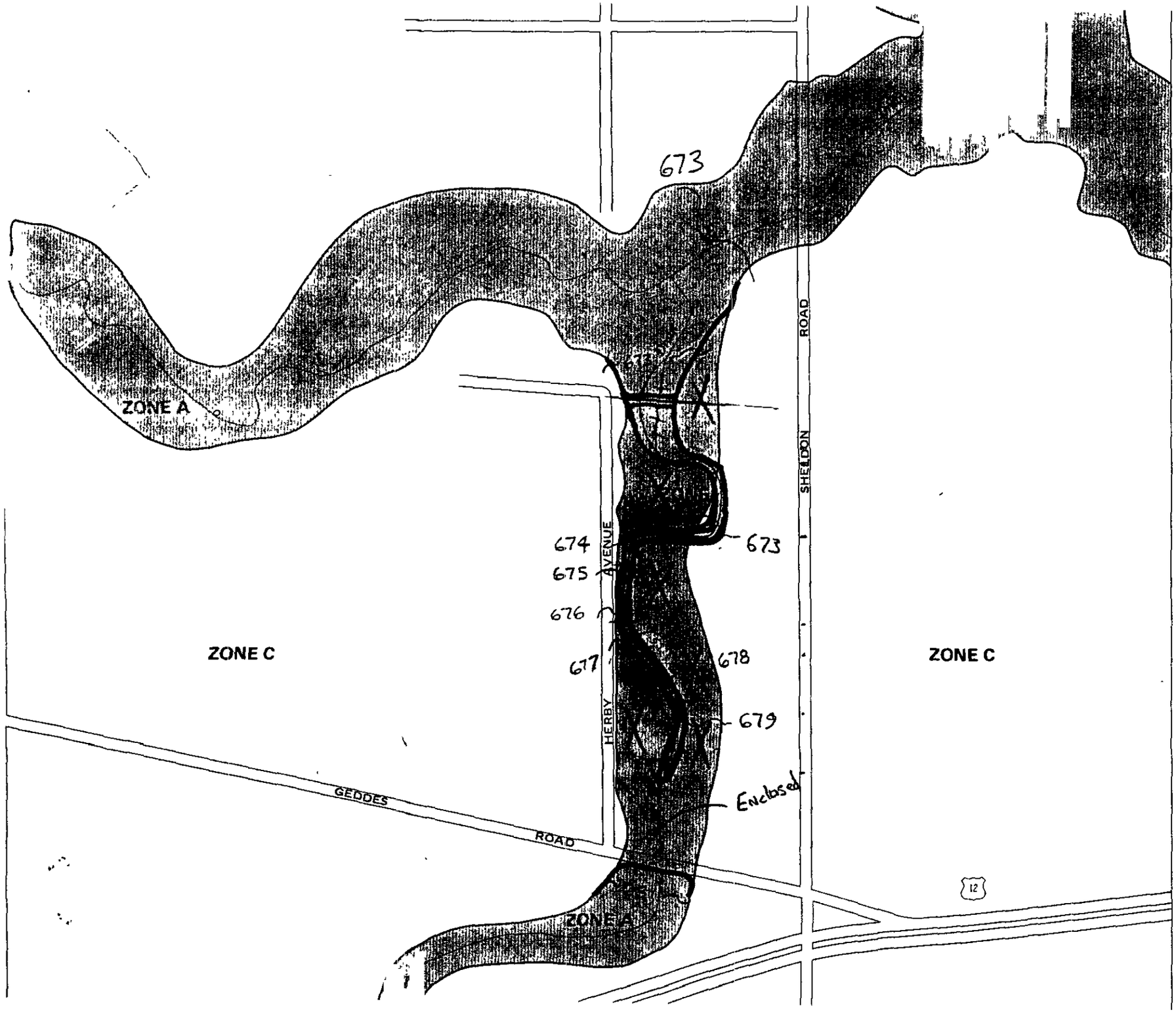
SOILS GROUP	%	sq.mi.	LAND USE Type	%	sq.mi.	CN	Hr. RF= 4.7 Adj RF= R.O.	Hr. sq.mi.-in.	24 Hr. RF= Adj RF= R.O.	24 Hr. sq.mi.-in.
A										
B	7	.025	Res.		.015	75	2.46	.037		
			Open		.01	69	1.74	.017		
C	93	.335	RES		.065	83	2.90	.189		
			IND		.02	91	3.69	.074		
			WOODS		.15	73	2.05	.308		
			PASTURE/RANGE		.08	79	2.55	.204		
D			ROADS		.02	98	4.46	.089		
			Total sq.mi.-in.					.917		
			Avg. R.O., in.							
			Comp. CN		78					
			Qp, cfs/sq.mi-in.				78.0			
			Q (R.O. x Qp)				72			
			Adj factor				-			
			Q				72			

Use 80 cfs

Figure 7.8 - **SCS Methodology Form**


100-YR FLOOD PROFILE
Rich Drain
Canton Twp - Sections 27 & 34
Wayne County
Crossing West of Cemetary
Center Culvert
Southern Culvert
GEDDES ROAD
682
678
674
670
666
Elevation, ft (NGVD of 1929)
674.2
675.5
676.3
676.7
677.3
678.3
678.8
679.1
100-YR FLOODPLAIN = 673
from River Rouge - Sims Drain
Scale: horiz - 1 inch = 200ft
vert - 1 inch = 4ft
0
200
400
600
800
1000
1200
1400
1600
Distance, feet

12/7/92



400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

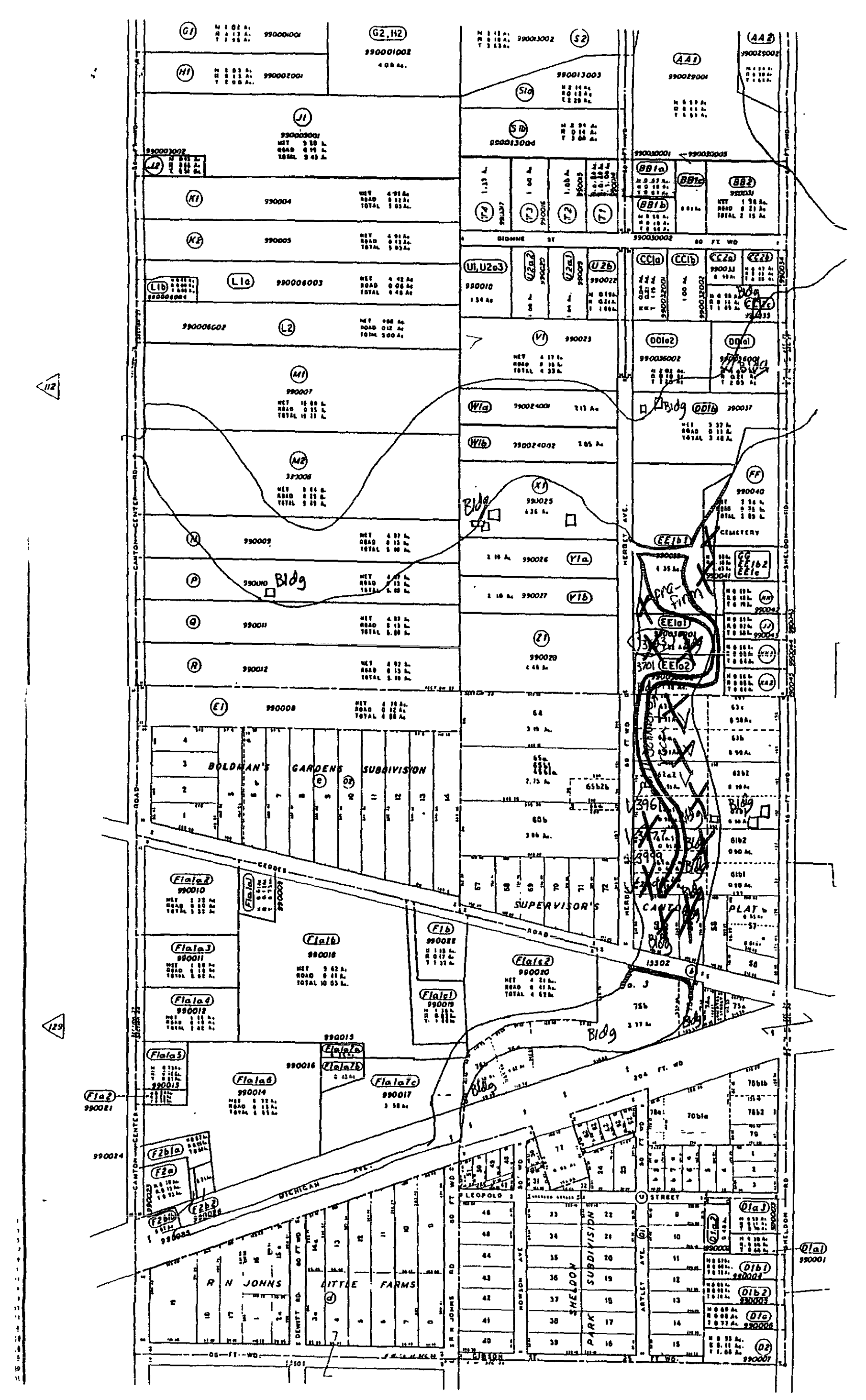
TOWNSHIP OF
CANTON,
MICHIGAN
WAYNE COUNTY

PANEL 8 OF 12
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
260219 0008 B

EFFECTIVE DATE:
SEPT 2, 1981

feder agency
ion


CANTON CENTER RD
HERBERT AVE.
SHELDON RD
GEDDES ROAD
MICHIGAN AVE.
DEWITT RD
WILSON
BOLDMAN'S GARDENS SUBDIVISION
SUPERVISOR'S PLAT
R N JOHNS LITTLE FARMS
SHELDON PARK SUBDIVISION
PLEOPOLD STREET
CEMETERY
BIDWELL ST
990001002
990002001
990003001
990004
990005
990006003
990006002
990007
990008
990009
990010
990011
990012
990013003
990013004
990014001
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990027
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990029001
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990079

THIS RUN EXECUTED 12/02/92 16:03:40

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  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
  IBM-PC-XT VERSION 1.1
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T1      CANTON TOWNSHIP  FLOODPLAIN INFORMATION
T2
T3      RICH DRAIN                      RICH1.FPI

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

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J2  NPROF     IFLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      .000      .000    -1.000      .000      .000      .000      .000      .000      .000      .000


NC      .100      .100      .060      .300      .500      .000      .000      .000      .000      .000
X1      .000     8.000    54.500    59.500      .000      .000      .000      .000    -9.500      .000
GR   680.000      .000   680.000    50.000   676.000    54.000   675.000    54.500   675.000    59.500
GR   676.000    60.000   680.000    64.000   680.000   100.000      .000      .000      .000      .000

X1      .500      .000      .000      .000    50.000    50.000    50.000      .000      .000      .000

SB      .000     1.730     2.600      .000     1.000      .000     9.800      .000   665.600   665.500
X1      .750      .000      .000      .000    25.000    25.000    25.000      .000      .100      .000
X2      .000      .000     1.000   667.500   672.900      .000      .000      .000      .000      .000
BT     2.000      .000   672.900      .000    60.000   672.900      .000      .000      .000      .000

X1     1.750      .000      .000      .000   100.000   100.000   100.000      .000      .400      .000

X1     3.750      .000      .000      .000   200.000   200.000   200.000      .000     1.000      .000

X1     5.750      .000      .000      .000   200.000   200.000   200.000      .000     1.000      .000

X1     7.750      .000      .000      .000   200.000   200.000   200.000      .000     1.000      .000

NC      .000      .000      .000      .600      .800      .000      .000      .000      .000      .000
X1    10.250      .000      .000      .000   250.000   250.000   250.000      .000     1.900      .000

NC      .000      .000      .032      .000      .000      .000      .000      .000      .000      .000
X1    10.260    11.000    53.500    58.500     1.000     1.000     1.000      .000      .000      .000
BT    10.000      .000   677.900      .000    46.000   677.900      .000    53.500   677.900   673.500
BT    54.400   677.900   675.400    56.000   677.900   676.000    56.900   677.900   675.900    58.100
BT   677.900   674.900    58.500   677.900   673.500    60.000   677.900      .000   100.000   677.900
BT      .000      .000      .000      .000      .000      .000      .000      .000      .000      .000
GR   677.900      .000   677.900    46.000   673.500    53.500   671.600    54.400   671.000    56.000
GR   671.200    56.900   672.200    58.100   673.500    58.500   677.900    60.000   677.900   100.000
GR   677.900   200.000      .000      .000      .000      .000      .000      .000      .000      .000
```

```
NC      .000      .000      .032      .000      .000      .000      .000      .000      .000      .000
X1    10.460      .000      .000      .000    20.000    20.000    20.000      .000      .000      .000
X2      .000      .000      .000      .000      .000      .000     1.000      .000      .000      .000

NC      .000      .000      .060      .000      .000      .000      .000      .000      .000      .000
X1    10.470     8.000   106.000   111.000     1.000     1.000     1.000      .000      .000      .000
GR   678.000      .000   678.000   100.000   673.000   105.000   671.000   106.000   671.000   111.000
GR   673.000   112.000   678.000   117.000   678.000   200.000      .000      .000      .000      .000

X1    10.700      .000      .000      .000    23.000    23.000    23.000      .000      .000      .000

NC      .000      .000      .000      .300      .500      .000      .000      .000      .000      .000
X1    12.500      .000      .000      .000   180.000   180.000   180.000      .000     1.300      .000

SB      .000     1.610     2.800      .000     4.500      .000    15.900      .000   672.300   672.300
X1    12.750      .000      .000      .000    25.000    25.000    25.000      .000      .500      .000
X2      .000      .000     1.000   676.000   678.000      .000      .000      .000      .000      .000
BT     2.000      .000   678.000      .000    60.000   678.000      .000      .000      .000      .000

X1    13.000      .000      .000      .000    25.000    25.000    25.000      .000      .000      .000

X1    14.000     8.000   105.000   110.000   100.000   100.000   100.000      .000      .000      .000
GR   679.000      .000   679.000   100.000   674.000   105.000   673.500   105.000   673.500   110.000
GR   674.000   110.000   679.000   115.000   679.000   200.000      .000      .000      .000      .000

X1    16.000     8.000   105.000   110.000   200.000   200.000   200.000      .000      .000      .000
GR   680.000      .000   679.000   100.000   675.000   105.000   674.600   105.000   674.600   110.000
GR   675.000   110.000   679.000   115.000   680.000   200.000      .000      .000      .000      .000

X1    17.500     6.000   104.000   109.000   150.000   150.000   150.000      .000      .000      .000
GR   680.000      .000   679.000   100.000   675.200   104.000   675.200   109.000   679.000   113.000
GR   680.000   200.000      .000      .000      .000      .000      .000      .000      .000      .000

X1    19.500     6.000   108.000   113.000   200.000   200.000   200.000      .000      .000      .000
GR   681.000      .000   681.000   100.000   673.100   108.000   673.100   113.000   681.000   121.000
GR   681.000   200.000      .000      .000      .000      .000      .000      .000      .000      .000

SB      .000     2.730     2.800      .000     4.000      .000    12.570      .000   675.000   675.000
X1    20.000      .000      .000      .000   250.000   250.000   250.000      .000      .000      .000
X2      .000      .000     1.000   676.000   682.000      .000      .000      .000      .000      .000
BT     2.000      .000   682.000      .000   150.000   682.000      .000      .000      .000      .000
EJ      .000      .000      .000      .000      .000      .000      .000      .000      .000      .000
*PROF 1
i
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   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       QLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST



 CCHV=    .300 CEHV=    .500
 *SECNO  .000
      .00     2.97   668.47      .00   672.00   668.80      .33      .00      .00   665.50
     80.       4.     72.       4.       3.      15.       3.       0.       0.   665.50
      .00     1.26     4.85     1.26     .100     .060     .100     .000   665.50    52.03
  .008992       0.       0.       0.        0        0        6      .00     9.94    61.97
0
 *SECNO  .500
      .50     3.44   668.94      .00      .00   669.17      .23      .34      .03   665.50
     80.       5.     70.       5.       4.      17.       4.       0.       0.   665.50
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   .005330      50.      50.      50.       1        0        0      .00    10.85    62.43
0

 SPECIAL BRIDGE

 SB  XK        XKOR      COFQ      RDLEN     BHC       BWP       BAREA     SS        ELCHU     ELCHD
       .00      1.73      2.60       .00      1.00       .00      9.80       .00    665.60    665.50

 #SECNO  .750
 3280 CROSS SECTION       .75 EXTENDED       .04 FEET

 PRESSURE FLOW


  EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD
                                                                 AREA
     670.73    669.27       .00         0.        80.       10.        2.    667.50    672.90


       .75      5.04   670.64       .00       .00   670.73       .08     1.56       .00   665.60
       80.         8.      65.       7.       13.      25.       12.       0.        0.   665.60
       .01       .60     2.58       .63      .100     .060      .100     .000   665.60       .00
   .001253       25.      25.       25.         2        0         0      .00   100.00    100.00
0
 #SECNO 1.750
      1.75      4.77   670.77       .00       .00   670.87       .10      .14       .01   666.00
       80.         7.      66.       7.        9.      24.        9.       0.        0.   666.00
       .02       .75     2.77       .75      .100     .060      .100     .000   666.00    50.23
   .001553      100.     100.      100.         2        0         0      .00    13.55    63.77
0
1
  12/02/92    16:03:40                                                                    PAGE    4


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 #SECNO 3.750
      3.75      4.15   671.15       .00       .00   671.29       .14       .40       .02   667.00
       80.         6.      68.       6.        7.      21.        7.       0.        0.   667.00
       .04       .88     3.28       .88      .100     .060      .100     .000   667.00    50.85
   .002631      200.     200.      200.         2        0         0      .00    12.30    63.15
0
 #SECNO 5.750
      5.75      3.76   671.76       .00       .00   671.94       .19       .63       .02   668.00
       80.         5.      69.       5.        5.      19.        5.       0.        0.   668.00
       .05       .98     3.69       .98      .100     .060      .100     .000   668.00    51.25
   .003809      200.     200.      200.         2        0         0      .00    11.51    62.75
0
 #SECNO 7.750
      7.75      3.58   672.58       .00       .00   672.79       .21       .83       .01   669.00
       80.         5.      70.       5.        5.      18.        5.       1.        0.   669.00
       .07      1.04     3.91      1.04      .100     .060      .100     .000   669.00    51.43
   .004565      200.     200.      200.         2        0         0      .00    11.15    62.57
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 #SECNO 10.250
     10.25      3.11   674.01       .00       .00   674.31       .30      1.45       .07   670.90
       80.         4.      72.       4.        4.      16.        4.       1.        0.   670.90
       .09      1.20     4.60      1.20      .100     .060      .100     .000   670.90    51.89
   .007626      250.     250.      250.         2        0         0      .00    10.21    62.11
0
 #SECNO 10.760
```

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 677.90 MAX ELLC= 676.00

10.26	2.91	673.91	.00	.00	674.74	.83	.01	.42	673.50
80.	0.	80.	0.	0.	11.	0.	1.	0.	673.50
.09	.00	7.30	.00	.100	.032	.100	.000	671.00	52.79
.017709	1.	1.	1.	2	0	0	-.24	5.85	58.64

0
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

#SECNO 10.460

3370 NORMAL BRIDGE,NRD= 10 MIN ELTRD= 677.90 MAX ELLC= 676.00

10.46	3.73	674.73	.00	.00	675.20	.47	.24	.21	673.50
80.	0.	80.	0.	0.	15.	0.	1.	0.	673.50
.09	.00	5.51	.00	.100	.032	.100	.000	671.00	51.41
.008907	20.	20.	20.	4	0	0	-2.11	7.51	58.92

0
#SECNO 10.470

10.47	4.24	675.24	.00	.00	675.39	.15	.00	.19	671.00
80.	5.	70.	5.	6.	21.	6.	1.	0.	671.00
.09	.83	3.32	.83	.100	.060	.100	.000	671.00	102.76
.002616	1.	1.	1.	3	0	0	.00	11.48	114.24

0
#SECNO 10.700

10.70	4.31	675.31	.00	.00	675.46	.15	.06	.00	671.00
80.	5.	70.	5.	6.	22.	6.	1.	0.	671.00
.09	.82	3.26	.82	.100	.060	.100	.000	671.00	102.69
.002466	23.	23.	23.	2	0	0	.00	11.62	114.31

0
CCHV= .300 CEHV= .500
#SECNO 12.500

12.50	3.57	675.87	.00	.00	676.11	.23	.61	.04	672.30
80.	4.	72.	4.	4.	18.	4.	1.	0.	672.30
.10	1.00	4.05	1.00	.100	.060	.100	.000	672.30	103.43
.004892	180.	180.	180.	2	0	0	.00	10.15	113.57

0

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWF	BAREA	SS	ELCHU	ELCHD
.00	1.61	2.80	.00	4.50	.00	15.90	.00	672.30	672.30

#SECNO 12.750
PRESSURE FLOW

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
676.51	676.21	.00	0.	80.	16.	17.	676.00	678.00

	12.75	3.46	676.26	.00	.00	676.51	.25	.40	.00	672.80
	80.	4.	73.	4.	4.	17.	4.	1.	0.	672.80
	.10	1.03	4.20	1.03	.100	.060	.100	.000	672.80	103.54
	.005509	25.	25.	25.	2	0	0	.00	9.92	113.46

0

*SECNO 13.000

	13.00	3.62	676.42	.00	.00	676.64	.23	.13	.01	672.80
	80.	4.	72.	4.	4.	18.	4.	1.	0.	672.80
	.11	.99	4.00	.99	.100	.060	.100	.000	672.80	103.38
	.004688	25.	25.	25.	2	0	0	.00	10.23	113.62

0

*SECNO 14.000

	14.00	3.47	676.97	.00	.00	677.19	.22	.54	.00	674.00
	80.	5.	69.	5.	4.	17.	4.	1.	0.	674.00
	.11	1.22	3.99	1.22	.100	.060	.100	.000	673.50	102.03
	.006317	100.	100.	100.	2	0	0	.00	10.94	112.97

0

*SECNO 16.000

	16.00	3.54	678.14	.00	.00	678.32	.18	1.12	.01	675.00
	80.	7.	65.	7.	6.	18.	6.	1.	1.	675.00
	.13	1.20	3.68	1.20	.100	.060	.100	.000	674.60	101.07
	.004988	200.	200.	200.	2	0	0	.00	12.65	113.93

0

*SECNO 17.500

	17.50	3.60	678.80	.00	.00	678.97	.17	.65	.00	675.20
	80.	8.	65.	8.	7.	18.	7.	1.	1.	675.20
	.14	1.10	3.60	1.10	.100	.060	.100	.000	675.20	100.21
	.003833	150.	150.	150.	2	0	0	.00	12.59	112.79

0

*SECNO 19.500

	19.50	6.09	679.19	.00	.00	679.24	.04	.23	.04	673.10
	80.	11.	58.	11.	19.	30.	19.	1.	1.	673.10
	.18	.58	1.91	.58	.100	.060	.100	.000	673.10	101.83
	.000537	200.	200.	200.	2	0	0	.00	17.34	119.17

0

1

SECNO	DEPTH	CWSEL	CRIWS	WSELV	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XX	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.00	2.73	2.80	.00	4.00	.00	12.57	.00	675.00	675.00

*SECNO 20.000

FRESS FLOW BECAUSE EGLWC OF 681.11 EXCEEDS 1.5 DEPTH

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD

680.91	681.11	.00	0.	80.	13.	4.	676.00	682.00

20.00	7.79	680.89	.00	.00	680.91	.02	1.67	.00	673.10
80.	13.	54.	13.	31.	39.	31.	2.	1.	673.10
.24	.42	1.39	.42	.100	.060	.100	.000	673.10	100.11
.000205	250.	250.	250.	2	0	0	.00	20.78	120.89

0

1

THIS RUN EXECUTED 12/02/92 16:03:44

****

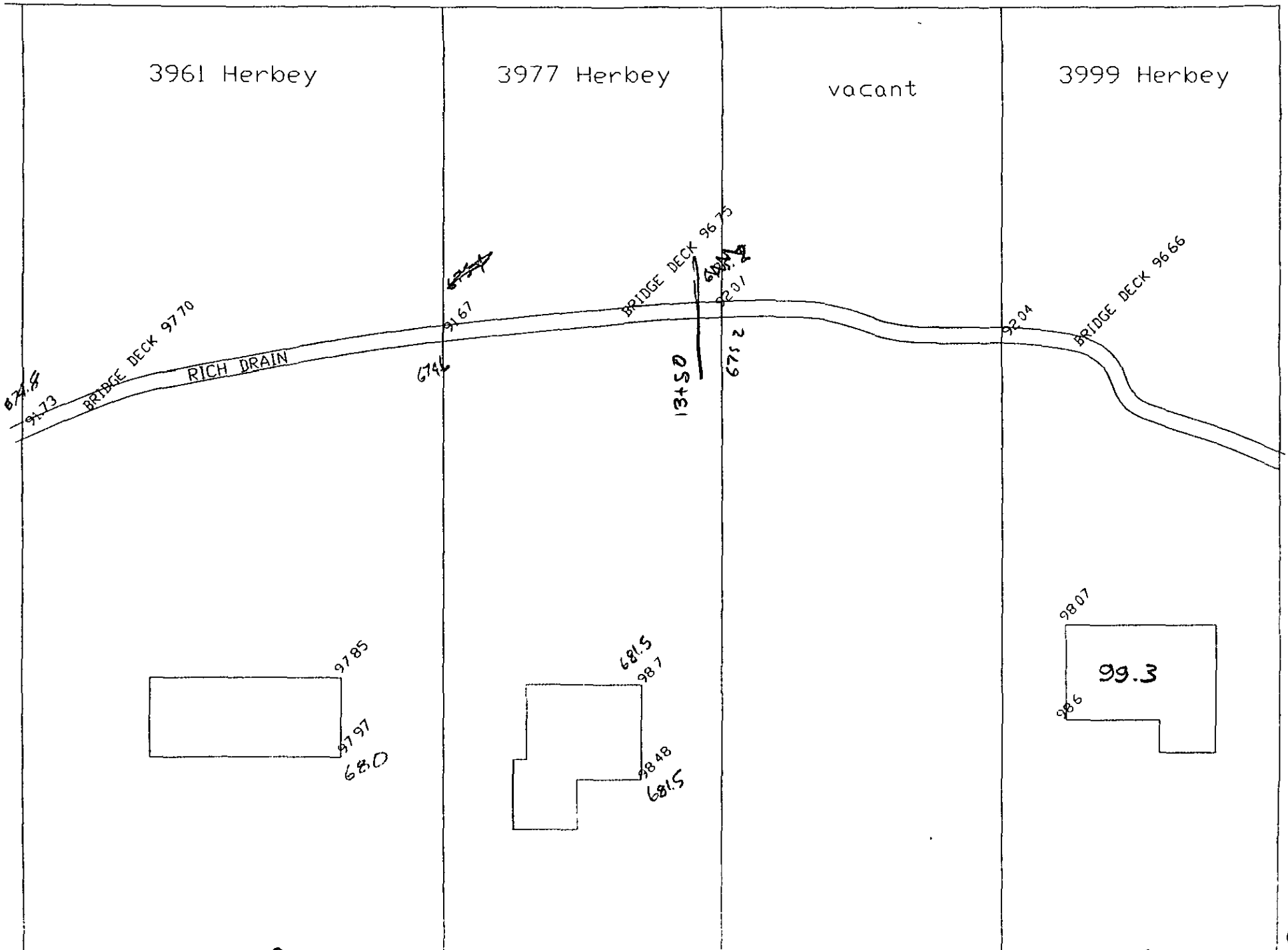
HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984

ERROR CORR - 01,02,03,04,05,06

MODIFICATION - 50,51,52,53,54,55,56

IBM-PC-XT VERSION 1.1

****



we surveyed these 3 homes. Is this what you need? Jim

December 7, 1992

Ms. Susan Folsom, Engineer
Canton Charter Township
1150 South Canton Center
Canton, Michigan 48188-1699

Re: Flood Insurance Rate Map
Proposed Revision
Rich Drain
Canton Township
Wayne County

Dear Ms. Folsom:

In August 1992, a Community Assistance Visit, conducted by the Michigan Department of Natural Resources, indicated a potential problem with the floodplain delineation for Rich Drain, as shown on panel 08 of the Township's Flood Insurance Rate Map (FIRM).

Based on the elevation information that the Township has provided, we have been able to make an estimate of the 100-year flood profile for Rich Drain.

For your review, I have included the following information:

1. 100-year flood profile for Rich Drain.

2. A proposed revision to panel 08 of the Township's FIRM.

3. The 100-year floodplain drawn on the Township map showing the property boundaries.

Once the Township has had an opportunity to review and comment on the map revision, I will forward the map with revisions, to the Federal Emergency Management Agency to be used to amend the current FIRM.

For the area in question along Herby Road, the 100-year flood will be contained within the banks of the drain. Following is the 100-year floodplain elevations for the five lots along Herby Road.

100-year floodplain elevation along Herby Road

Elevation, ft, NGVD of 1929

Address	100-year floodplain	Grade at House	First Floor
3623 Herby	673 *	676.5	682.27
3701 Herby	674.2	680.0	681.99
3961 Herby	678.3	680.9	681.67
3977 Herby	678.8	680.3	682.73
3999 Herby	679.1	680.6	682.68

* 100-year floodplain elevation is controlled by the River Rouge/Sines Drain, and is estimated to be about 673.

From the information available, the five houses that have been constructed, are not within the 100-year floodplain of Rich Drain.

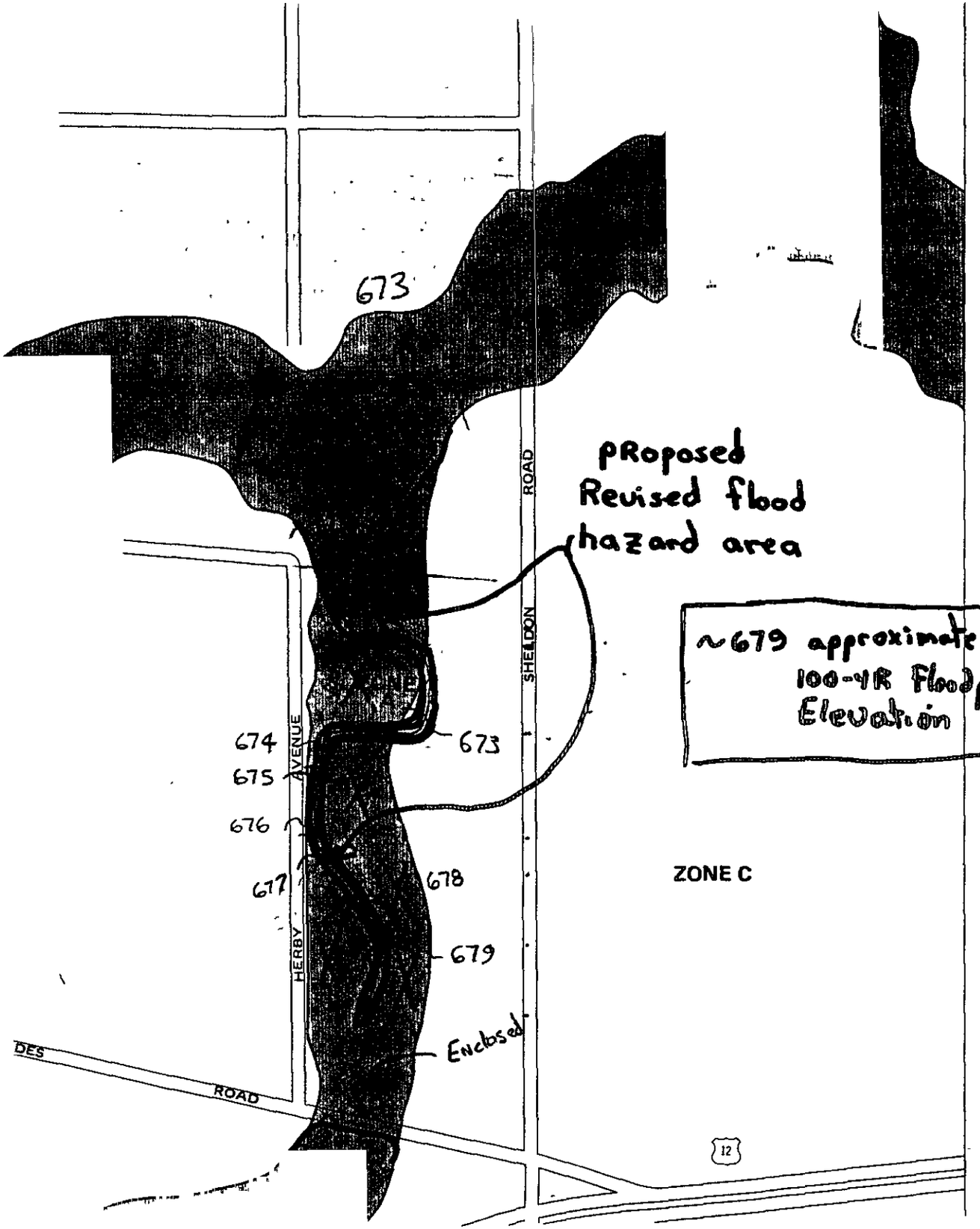
It is important to note that the floodplain area upstream of Geddes Road act as a "detention basin" during a 100-year flood event. If this area is filled, or the culvert at Geddes Road is enlarged, the 100-year flood elevations along Herby Avenue could be increased. If development is proposed within the floodplain upstream of Geddes Road, it is suggested that excavation be required to compensate for the loss of any flood storage. If flood storage is not maintained, future drain improvements would likely be required to eliminate potential flood damages.

Please review the enclosed information, and if you have any questions or comments, please feel free to contact me.

Sincerely,

Bruce E. Menerey, P.E.
Floodplain Mapping/Delineation
Land and Water Management Division
517-335-3181

BEM:bmw
Enclosures



pRoposed Revised flood hazard area

~679 approximate 100-YR Flood plain Elevation

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

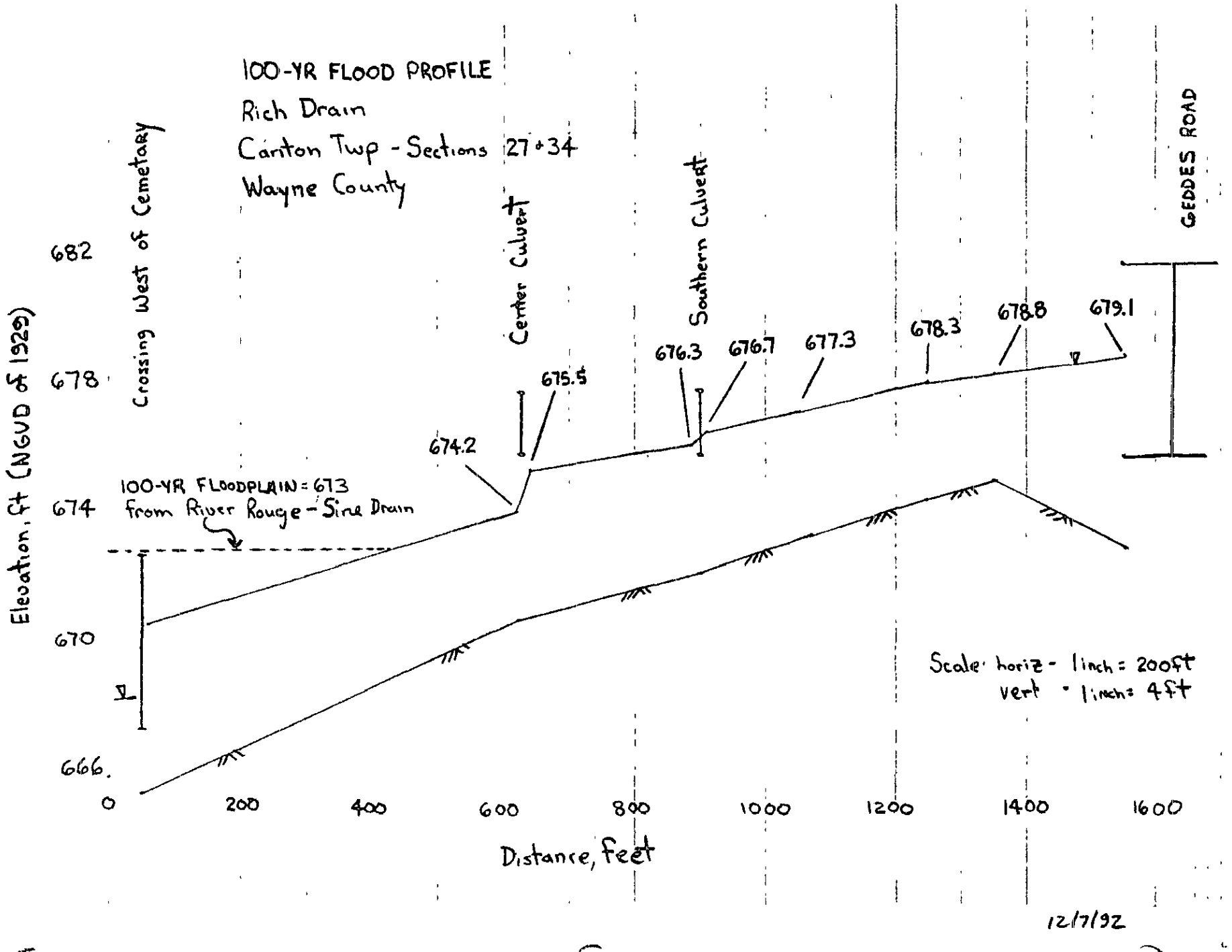
FIRM
FLOOD INSURANCE RATE MAP

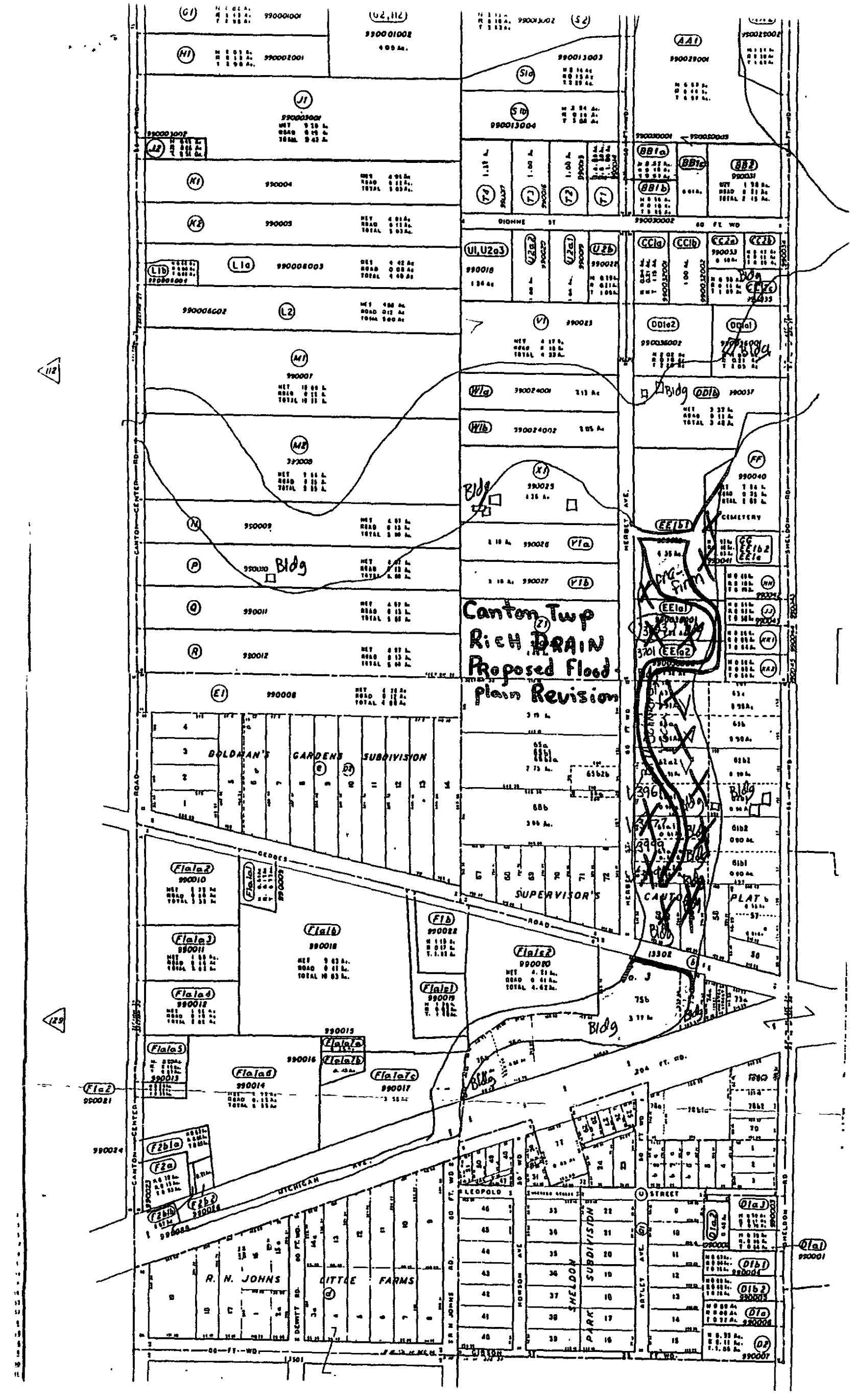
TOWNSHIP OF
CANTON,
MICHIGAN
WAYNE COUNTY

PANEL 8 OF 12
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
260219 0008 B

EFFECTIVE DATE:
SEPTEMBER 2, 1981


100-YR FLOOD PROFILE
Rich Drain
Canton Twp - Sections 27 + 34
Wayne County
Crossing West of Cemetary
Center Culvert
Southern Culvert
GEDDES ROAD
682
678
674
670
666
Elevation, Ft (NGVD of 1929)
674.2
675.5
676.3
676.7
677.3
678.3
678.8
679.1
100-YR FLOODPLAIN = 673
from River Rouge - Sine Drain
0
200
400
600
800
1000
1200
1400
1600
Distance, feet
Scale: horiz - 1 inch = 200 ft
vert - 1 inch = 4 ft
12/7/92

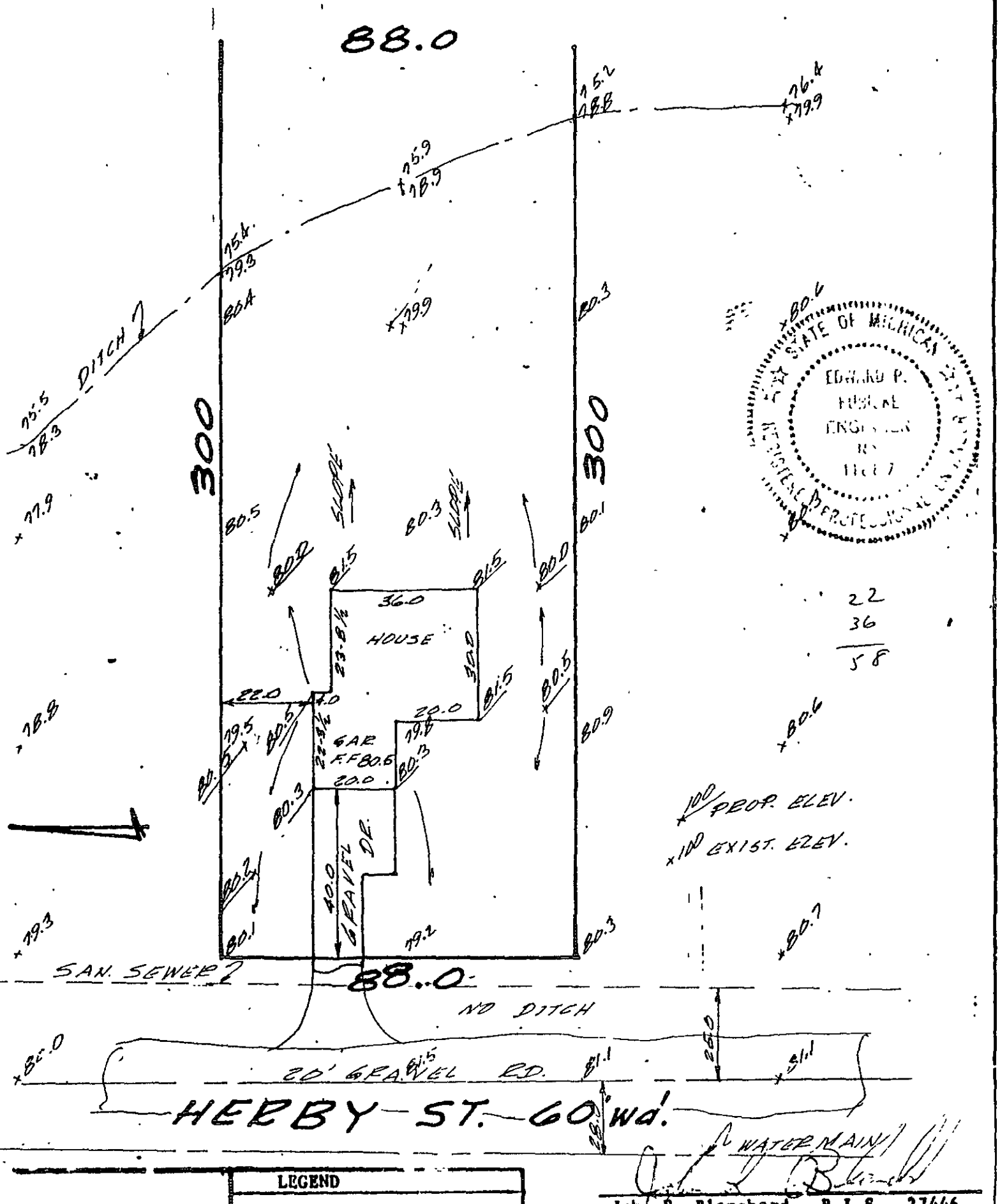

Canton Twp
Rich DRAIN
Proposed Flood-
plain Revision
BOLDMAN'S GARDENS SUBDIVISION
SUPERVISOR'S CANTON PLAT
R. N. JOHNS LITTLE FARMS
SHELDON PARK SUBDIVISION
CEMETERY
DIONNE ST
HERBERT AVE.
CANTON CENTER RD
SHELDON RD
GEDDES ROAD
MICHIGAN AVE.
LEOPOLD STREET
HOWSON AVE
ARTLEY AVE.
GIBSON
Bldg

PROPERTY SKETCH 3977 Hebby

Bench Mark Bronze Disc.
N.E. Corner Sheldon & Geddes
Elevations 681.801

Add 600 to all elevations for USGS.

DESCRIPTION: North 88 ft. of the west 300 ft. of Lot 61, Supervisors Canton Plat, as recorded in Liber 67, Page 70, Wayne County Records.



STATE OF MICHIGAN
EDWARD P. KUBISKE
ENGINEER
No. 11617
REGISTERED PROFESSIONAL ENGINEER

STATE OF MICHIGAN
JOHN S BLANCHARD
LAND SURVEYOR
27446
REGISTERED LAND SURVEYOR

LEGEND
F.I.= FOUND IRON
S.I.= SET IRON
FENCE = -+-+-

John S. Blanchard R.L.S. 27446

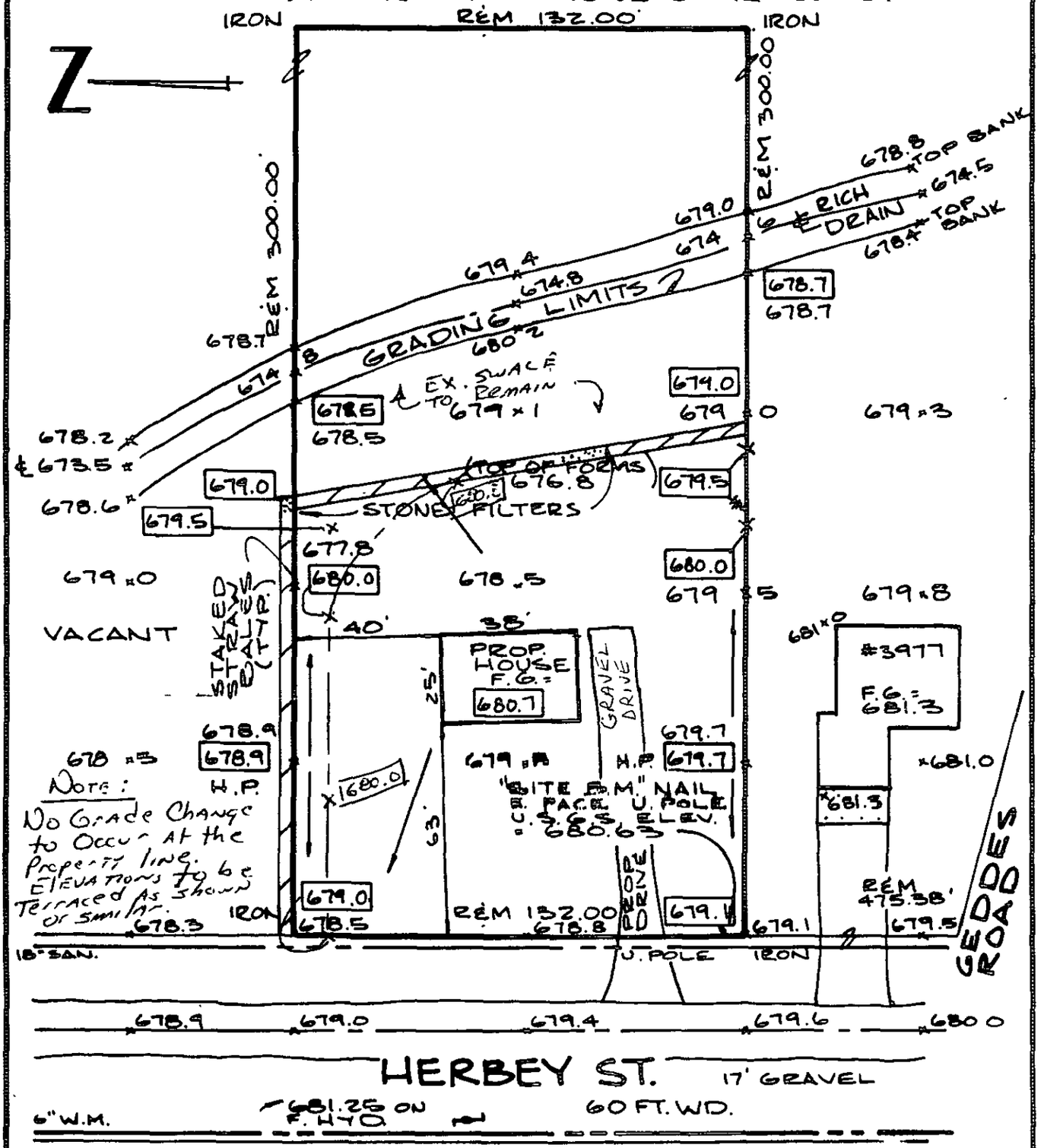
CLIENT: Glenn & Deborah Clark

E. P. KUBISKE & ASSOCIATES, INC.
40 Ypsi Court
YPSILANTI, MICHIGAN 48197
(313) 481-1322

JOB NO. 86-053
DATE 7/8/86 SCALE
DWG. BY
SHEET ___ OF ___

3961 Herbey

SOUTH 1/2 OF WEST 300.00 FEET OF LOT 62, OF "SUPERVISORS CANTON PLAT NO. 3" OF PART OF THE N. 1/2 OF SEC. 34., T.2S., R.8E., CANTON TOWNSHIP, WAYNE CO., MICHIGAN. AS RECORDED IN LIBER 67 OF PLATS ON PAGE 70, WAYNE COUNTY RECORDS. SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.



Note: No Grade Change to Occur At the Property line. Elevations to be Terraced As shown or similar.

LEGEND

0.00 = EXISTING ELEV.
[0.00] = PROPOSED ELEV.
——— = DRAINAGE COURSE

REFERENCE BENCH MARK

W.C.R.C. #35-113 AT N.E. CORNER OF MICHIGAN, SHELDON & GEDDES ROADS. ELEV. = 681.801

REV. PER TWP 10MAY88

STATE OF MICHIGAN
PETER PAUL PALCZYNSKI
LAND SURVEYOR
NO. 30096
LICENSED LAND SURVEYOR

PLOT PLAN

CLIENT: GHEORGE & LINDA OPRICAN
41275 OLD MICHIGAN AVE.
CANTON, MICHIGAN 48188
(313) 397-0638

DATE	6 MAY 88
JOB NO	88-4-31
SCALE	1" = 40'
DRAWN	P 3
CHECKED	MD
SHEET	1 OF 1

AMBIT
AMBIT LAND SURVEYORS
266 IRVIN, PLYMOUTH, MICHIGAN 48170
(313) 455-5501

3999 Herbey

IRON PIPE 97.4 [97.4]

97.4

R. & M. 88.00'

STEEL BAR IN PIPE 97.6 [97.6]

F.G. = 99.0

O.H. UTILITY LINES

EXISTING BUILDING

UTILITY POLE

LEGAL DESC

THE SOUTH
WEST 300.0
" SUPERVISO
NO. 3", OF PA
SEC. 34, T. 2
WAYNE CO.,
RECORDED
ON PAGE 7C
RECORDS. S
EASEMENTS
OF RECORD

300.00'

96.1

PART OF LOT 61

96.6

97.5

300.00' MEASURED

6.0

F.G. = 99.0

99.00

TIB = 95.9

89.8

92.04

DITCH

BANK

TIB = 96.6

Bridge deck = 96.6 96.2

TIB = 89.9

96.11

TIB = 96.1

96.11

97.1

MEASURED W.

98.1

TIB = 98.2

98.70

ASPHALT

48" PIPE
INV. = 90.0 ~ 673.07
½ Full standing water

TIB = 98.6

16'

UTILITY POLE

EXISTING BUILDINGS

98.80

97.6

48.0

PROPOSED HOUSE
F.G. = 99.3

48.0'

20.0

98.6 30.0

18.0

98.9

97.6

65.0'

98.0

RECORDED W.

98.9

O.H. UTILITY LINES

20.0

98.6

98.85 DRIVE

99.35

42'

F.G. = 99.3

682.3

PROPOSED DRIVE

STEEL BAR IN PIPE 98.4 [98.4]

ASPHALT

BENCH MARK
P.K. NAIL IN NORTH
SIDE OF UTILITY
ASSUMED ELEVA
100.00

98.0

HI 102.20

IRON PIPE 98.0 [98.0]

N

NATURAL RESOURCES COMMISSION
LARRY DEVUYST
PAUL EISELE
JAMES P HILL
DAVID HOLLI
O. STEWART MYERS
JOEY M SPANO
JORDAN B TATTER

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

Stevens T Mason Building, P O Box 30028, Lansing, MI 48909

ROLAND HARMES, Director

JAN 14 RECD

January 11, 1993

Mr. Norbert Schwartz
Natural and Technological Hazards
FEMA, Region V
175 West Jackson Blvd., 4th Floor
Chicago, Illinois 60604

Dear Mr. Schwartz:

Re: Flood Insurance Rate Map, Canton Township, Wayne County

We request that the Flood Insurance Rate Map (FIRM) for the Charter Township of Canton be amended as shown on the enclosed FIRM. The corrections are based on spot elevation information provided by the township, floodplain information developed by our office, and a site inspection by our office.

In addition to the revised FIRM, I have enclosed the following information:

1. A letter from Canton Township requesting the FIRM be revised.

2. A brief report describing the hydraulic analysis for Rich Drain.

3. The 100-year flood profile estimated by our office.

4. A copy of the HEC-2 input and output that was used to estimate the 100-year flood profile.

5. Spot elevation information provided by the township.

The existing flood hazard area for Rich Drain is a mapped as an unnumbered A zone. With the suggested amendment, the FIRM for Canton Township will provide a more accurate representation of the 100-year floodplain for Rich Drain. We are not requesting that the estimated 100-year flood elevations be published on the map, we are only requesting that the map delineation be amended as suggested. If you have any questions, or require additional information, please feel free to contact me.

Sincerely,

Bruce E. Menerey

Bruce E. Menerey, P.E.
Floodplain Mapping/Delineation
Land and Water Management Division
517-335-3181

BEM:cjr
Enclosures
cc: Ms. Susan Folsom, Canton Township Engineer

R 1026
9/92

NATURAL RESOURCES
COMMISSION
JERRY C. BARTNIK
LARRY DEVUYST
PAUL EISELE
JAMES HILL
DAVID HOLLI
JOEY M. SPANO
JORDAN B. TATTER

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES
Stevens T. Mason Building, P.O. Box 30028, Lansing, MI 48909

ROLAND HARMES, Director

October 26, 1993

Mr. Norbert Schwartz
Natural and Technological Hazards
FEMA, Region V
175 West Jackson Boulevard, 4th Floor
Chicago, Illinois 60604

Dear Mr. Schwartz:

SUBJECT: Flood Insurance Rate Map; Canton Township; Wayne County

Recently, I received a call from Susan Folsom of Canton Township. She had indicated that our January 11, 1993, request for a map amendment in Canton Township did not reach the Region and thus has not been processed.

Enclosed is a copy of our January 11, 1993, letter with the enclosures. We request that the Flood Insurance Rate Map (FIRM) for the Charter Township of Canton be amended as shown on the enclosed FIRM. The corrections are based on spot elevation information provided by the Township, floodplain information developed by our office, and a site inspection by our office.

As noted in our letter, we are not requesting that the estimated 100-year flood elevations be published on the map, we are only requesting that the map delineation be amended as suggested.

The Township has been waiting for this amendment for almost 10 months. Any assistance in expediting the processing of the amendment would be greatly appreciated. If you have any questions, or require additional information, please feel free to contact me.

Sincerely,

Bruce E. Menerey, P.E.
Floodplain Mapping/Delineation
Land and Water Management Division
517-335-3181

BEM:bmw
Enclosures
cc: Ms. Susan Folsom, Canton Township Engineer

****
FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1.1985
U.S. ARMY CORPS OF ENGINEERS. THE HYDROLOGIC ENGINEERING CENTER. 609 SECOND STREET, DAVIS, CA. 95616
****

THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3


```
      LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

        1           ID   CANTON TWP  WAYNE CO
        2           ID   RICH DRAIN
        3           ID
*** FREE ***
        4           IT     60       0       0      96
        5           IO      1       0       0

        6           KK   SUB1
        7           KM   SUB1
        8           BA     .36
        9           LS      0     79.     0.0
       10           BF     -1    -.35    1.18
       11           UD    1.2
       12           IN     60       0       0
       13           PB    4.7
                    * ************** SCS TYPE I RAINFALL*****************************************
                    *  .000 .008 .017 .026 .035 .045 .055 .065 .076 .087 .099 .112 .125 .140
                    *  .156 .174 .194 .219 .254 .303 .515 .563 .624 .654 .682 .705 .727 .748
                    *  .767 .784 .800 .816 .830 .844 .857 .870 .882 .893 .905 .916 .926 .936
                    *  .946 .955 .965 .974 .983 .992 1.000
                    * ************************************************************************
                    * ***************  SCS RAINFALL TYPE II ******************************
       14           PC     0.0   0.011   0.022   0.035   0.049   0.064   0.080   0.099   0.122   0.149
       15           PC   0.184   0.238   0.667   0.776   0.823   0.856   0.882   0.903   0.921   0.938
       16           PC   0.952   0.967   0.978   0.989     1.0
                    * ************************************************************************

       17           KK      2
       18           KM   ROUTING US OF GEDDES
       19           RS      1    FLOW      -1
       20           SA     .6     1.6     2.6     5.5     5.5     5.5
       21           SQ      0      15      30      50      70     100
       22           SE    675     677     678   680.3   681.8   682.2
       23           ZZ
```


****
FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1.1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER. 609 SECOND STREET, DAVIS, CA. 95616
****

CANTON TWP WAYNE CO
RICH DRAIN

```
 5 ID          OUTPUT CONTROL VARIABLES
                    IPRNT          1  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                     NMIN         60  MINUTES IN COMPUTATION INTERVAL
                    IDATE     1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ         96  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE     4    0  ENDING DATE
                   NDTIME       2300  ENDING TIME

                COMPUTATION INTERVAL    1.00 HOURS
                     TOTAL TIME BASE   95.00 HOURS

        ENGLISH UNITS


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 6 KK     *     SUB1   *
          *            *
          **************
                         SUB1

12 IN          TIME DATA FOR INPUT TIME SERIES
                    JXMIN         60  TIME INTERVAL IN MINUTES
                   JXDATE     1    0  STARTING DATE
                   JXTIME          0  STARTING TIME

             SUBBASIN RUNOFF DATA

 8 BA          SUBBASIN CHARACTERISTICS
                    TAREA        .36  SUBBASIN AREA

10 BF          BASE FLOW CHARACTERISTICS
                    STRTQ        .36  INITIAL FLOW
                    QRCSN       -.35  BEGIN BASE FLOW RECESSION
                    RTIOR    1.18000  RECESSION CONSTANT

               PRECIPITATION DATA

13 PB               STORM       4.70  BASIN TOTAL PRECIPITATION

14 PI            INCREMENTAL PRECIPITATION PATTERN
                    .01       .01       .01       .01       .02       .02       .02       .02       .03       .03
                    .05       .43       .11       .05       .03       .03       .02       .02       .02       .01
                    .01       .01       .01       .01

 9 LS          SCS LOSS RATE
                    STRTL        .53  INITIAL ABSTRACTION
                   CRVNBR      79.00  CURVE NUMBER
                    RTIMP        .00  PERCENT IMPERVIOUS AREA

11 UD          SCS DIMENSIONLESS UNITGRAPH
                     TLAG       1.20  LAG

                                                                  ***

WARNING *** TIME INTERVAL IS GREATER THAN  29*LAG
```

UNIT HYDROGRAPH
8 END-OF-PERIOD ORDINATES

66. 97. 43. 17. 6. 2. 1. 0.

HYDROGRAPH AT STATION SUB1

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	3		0000	49	.00	.00	.00	0.
1		0100	2	.05	.05	.00	0.	3		0100	50	.00	.00	.00	0.
1		0200	3	.05	.05	.00	0.	3		0200	51	.00	.00	.00	0.
1		0300	4	.06	.06	.00	0.	3		0300	52	.00	.00	.00	0.
1		0400	5	.07	.07	.00	0.	3		0400	53	.00	.00	.00	0.
1		0500	6	.07	.07	.00	0.	3		0500	54	.00	.00	.00	0.
1		0600	7	.08	.08	.00	0.	3		0600	55	.00	.00	.00	0.
1		0700	8	.09	.09	.00	0.	3		0700	56	.00	.00	.00	0.
1		0800	9	.11	.11	.00	0.	3		0800	57	.00	.00	.00	0.
1		0900	10	.13	.12	.01	1.	3		0900	58	.00	.00	.00	0.
1		1000	11	.16	.14	.03	3.	3		1000	59	.00	.00	.00	0.
1		1100	12	.25	.18	.07	8.	3		1100	60	.00	.00	.00	0.
1		1200	13	2.02	.83	1.18	86.	3		1200	61	.00	.00	.00	0.
1		1300	14	.51	.12	.39	144.	3		1300	62	.00	.00	.00	0.
1		1400	15	.22	.05	.18	102.	3		1400	63	.00	.00	.00	0.
1		1500	16	.16	.03	.13	62.	3		1500	64	.00	.00	.00	0.
1		1600	17	.12	.02	.10	47.	3		1600	65	.00	.00	.00	0.
1		1700	18	.10	.02	.08	40.	3		1700	66	.00	.00	.00	0.
1		1800	19	.08	.01	.07	34.	3		1800	67	.00	.00	.00	0.
1		1900	20	.08	.01	.07	28.	3		1900	68	.00	.00	.00	0.
1		2000	21	.07	.01	.06	24.	3		2000	69	.00	.00	.00	0.
1		2100	22	.07	.01	.06	20.	3		2100	70	.00	.00	.00	0.
1		2200	23	.05	.01	.04	17.	3		2200	71	.00	.00	.00	0.
1		2300	24	.05	.01	.04	15.	3		2300	72	.00	.00	.00	0.
2		0000	25	.05	.01	.04	12.	4		0000	73	.00	.00	.00	0.
2		0100	26	.00	.00	.00	11.	4		0100	74	.00	.00	.00	0.
2		0200	27	.00	.00	.00	9.	4		0200	75	.00	.00	.00	0.
2		0300	28	.00	.00	.00	8.	4		0300	76	.00	.00	.00	0.
2		0400	29	.00	.00	.00	6.	4		0400	77	.00	.00	.00	0.
2		0500	30	.00	.00	.00	5.	4		0500	78	.00	.00	.00	0.
2		0600	31	.00	.00	.00	5.	4		0600	79	.00	.00	.00	0.
2		0700	32	.00	.00	.00	4.	4		0700	80	.00	.00	.00	0.
2		0800	33	.00	.00	.00	3.	4		0800	81	.00	.00	.00	0.
2		0900	34	.00	.00	.00	3.	4		0900	82	.00	.00	.00	0.
2		1000	35	.00	.00	.00	2.	4		1000	83	.00	.00	.00	0.
2		1100	36	.00	.00	.00	2.	4		1100	84	.00	.00	.00	0.
2		1200	37	.00	.00	.00	2.	4		1200	85	.00	.00	.00	0.
2		1300	38	.00	.00	.00	1.	4		1300	86	.00	.00	.00	0.
2		1400	39	.00	.00	.00	1.	4		1400	87	.00	.00	.00	0.
2		1500	40	.00	.00	.00	1.	4		1500	88	.00	.00	.00	0.
2		1600	41	.00	.00	.00	1.	4		1600	89	.00	.00	.00	0.
2		1700	42	.00	.00	.00	1.	4		1700	90	.00	.00	.00	0.
2		1800	43	.00	.00	.00	1.	4		1800	91	.00	.00	.00	0.
2		1900	44	.00	.00	.00	1.	4		1900	92	.00	.00	.00	0.
2		2000	45	.00	.00	.00	0.	4		2000	93	.00	.00	.00	0.
2		2100	46	.00	.00	.00	0.	4		2100	94	.00	.00	.00	0.
2		2200	47	.00	.00	.00	0.	4		2200	95	.00	.00	.00	0.
2		2300	48	.00	.00	.00	0.	4		2300	96	.00	.00	.00	0.

TOTAL RAINFALL = 4.70. TOTAL LOSS = 2.15. TOTAL EXCESS = 2.55

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	95.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 144.	13.00		77.	29.	10.	8.
		(INCHES)	1.999	2.993	3.071	3.071
		(AC-FT)	38.	57.	59.	59.

CUMULATIVE AREA = .36 SQ MI

*** ***

17 KK

2

ROUTING US OF GEDDES

HYDROGRAPH ROUTING DATA

19 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	FLOW	TYPE OF INITIAL CONDITION
RSVRIC	-1.00	INITIAL CONDITION
X	.00	WORKING R AND D COEFFICIENT

20 SA	AREA	.6	1.6	2.6	5.5	5.5	5.5
21 SQ	DISCHARGE	0.	15.	30.	50.	70.	100.
22 SE	ELEVATION	675.00	677.00	678.00	680.30	681.80	682.20

***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	2.12	4.20	13.31	21.56	23.76
ELEVATION	675.00	677.00	678.00	680.30	681.80	682.20

HYDROGRAPH AT STATION 2

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.1	675.0	2		0800	33	5.	.7	675.6	3		1600	65	0.	.0	675.0
1		0100	2	0.	.0	675.0	2		0900	34	4.	.6	675.5	3		1700	66	0.	.0	675.0
1		0200	3	0.	.0	675.0	2		1000	35	3.	.5	675.4	3		1800	67	0.	.0	675.0
1		0300	4	0.	.0	675.0	2		1100	36	3.	.4	675.4	3		1900	68	0.	.0	675.0
1		0400	5	0.	.0	675.0	2		1200	37	2.	.3	675.3	3		2000	69	0.	.0	675.0
1		0500	6	0.	.0	675.0	2		1300	38	2.	.3	675.3	3		2100	70	0.	.0	675.0
1		0600	7	0.	.0	675.0	2		1400	39	2.	.2	675.2	3		2200	71	0.	.0	675.0
1		0700	8	0.	.0	675.0	2		1500	40	1.	.2	675.2	3		2300	72	0.	.0	675.0
1		0800	9	0.	.0	675.0	2		1600	41	1.	.2	675.2	4		0000	73	0.	.0	675.0
1		0900	10	0.	.0	675.0	2		1700	42	1.	.1	675.1	4		0100	74	0.	.0	675.0
1		1000	11	1.	.1	675.1	2		1800	43	1.	.1	675.1	4		0200	75	0.	.0	675.0
1		1100	12	3.	.4	675.4	2		1900	44	1.	.1	675.1	4		0300	76	0.	.0	675.0
1		1200	13	23.	3.2	677.5	2		2000	45	1.	.1	675.1	4		0400	77	0.	.0	675.0
1		1300	14	43	10.0	679.5	2		2100	46	1	1	675.1	4		0500	78	0	0	675.0

1	1400	15	57.	16.1	680.8	2	2200	47	0.	.1	675.1	4	0600	79	0.	.0	675.0
1	1500	16	61.	18.0	681.1	2	2300	48	0.	.1	675.1	4	0700	80	0.	.0	675.0
1	1600	17	60.	17.4	681.1	3	0000	49	0.	.0	675.0	4	0800	81	0.	.0	675.0
1	1700	18	57.	16.2	680.8	3	0100	50	0.	.0	675.0	4	0900	82	0.	.0	675.0
1	1800	19	53.	14.7	680.5	3	0200	51	0.	.0	675.0	4	1000	83	0.	.0	675.0
1	1900	20	49.	13.0	680.2	3	0300	52	0.	.0	675.0	4	1100	84	0.	.0	675.0
1	2000	21	45.	11.2	679.8	3	0400	53	0.	.0	675.0	4	1200	85	0.	.0	675.0
1	2100	22	42.	9.5	679.3	3	0500	54	0.	.0	675.0	4	1300	86	0.	.0	675.0
1	2200	23	38.	7.8	678.9	3	0600	55	0.	.0	675.0	4	1400	87	0.	.0	675.0
1	2300	24	34.	6.1	678.5	3	0700	56	0.	.0	675.0	4	1500	88	0.	.0	675.0
2	0000	25	31.	4.6	678.1	3	0800	57	0.	.0	675.0	4	1600	89	0.	.0	675.0
2	0100	26	23.	3.3	677.6	3	0900	58	0.	.0	675.0	4	1700	90	0.	.0	675.0
2	0200	27	17.	2.4	677.1	3	1000	59	0.	.0	675.0	4	1800	91	0.	.0	675.0
2	0300	28	13.	1.8	676.7	3	1100	60	0.	.0	675.0	4	1900	92	0.	.0	675.0
2	0400	29	10.	1.5	676.4	3	1200	61	0.	.0	675.0	4	2000	93	0.	.0	675.0
2	0500	30	8.	1.2	676.1	3	1300	62	0.	.0	675.0	4	2100	94	0.	.0	675.0
2	0600	31	7.	1.0	675.9	3	1400	63	0.	.0	675.0	4	2200	95	0.	.0	675.0
2	0700	32	6.	.8	675.8	3	1500	64	0.	.0	675.0	4	2300	96	0.	.0	675.0

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	95.00-HR
+ (CFS)	(HR)					
		(CFS)				
+ 61.	15.00		56.	29.	10.	9.
		(INCHES)	1.439	2.980	3.074	3.074
		(AC-FT)	28.	57.	59.	59.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	95.00-HR
+ (AC-FT)	(HR)				
18.	15.00	16.	7.	2.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	95.00-HR
+ (FEET)	(HR)				
681.14	15.00	680.70	678.07	676.06	675.81

CUMULATIVE AREA = .36 SQ MI

1

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS. AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+					6-HOUR	24-HOUR	72-HOUR			
	HYDROGRAPH AT									
+		SUB1	144.	13.00	77.	29.	10.	.36		
	ROUTED TO									
+		2	61.	15.00	56.	29.	10.	.36		
+									681.14	15.00

*** NORMAL END OF HEC-1 ***

R O SCRAMSTAD AND ASSOCIATES, INC.
CONSULTING ENGINEERS

November 17, 1992

Charter Township of Canton
Engineering Services

Charter Township of Canton
1150 South Canton Center Road
Canton, Michigan 48188-1699

Attn: Mrs. Susan Folsom, Engineer

Re: Rich Drain / Herby Street Survey

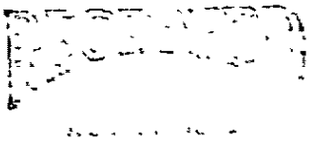
Dear Mrs. Folsom:

Following are the results of the survey in and around the homes on Herby Street. Reference benchmark was W.C.R.C 35-113 located at Michigan Avenue and Canton Center Road. Error of closure to the same benchmark was 0.05'.

679.7 679.88	House Number 3999:		
	Finish floor elevation	682.68 -	15+50'
678.2	Grade at rear of house	680.6	
	Lowest level elevation	680.6 (on crawl)	
	Fin. Flr. rear garage (slab)	681.23	
	House Number 3977:		
679.2	Finish floor elevation	682.73 - building permit	
	Grade at rear of house	680.3 July 1986	13+50
677.7	Lowest level elevation	678.31 post-FIRM	
679.1	House Number 3961:		
	Finish floor elevation	681.67 - building permit	
677.4	Grade at rear of house	680.9 May 1988	12+50
	Lowest level elevation	677.25 post-FIRM	
	House Number 3701:		
675	Finish floor elevation	681.99	6+25
	Grade at rear of house	680.0	
673.8	Lowest level elevation	673.98 (basement) - building permit May 1986 post-FIRM	
	House Number 3623:		
678.8	Finish floor elevation	682.27	4+25
680.8	Grade at rear of house	676.0/680.5	
672.1	Lowest level elevation	673.98 (walkout) - building permit issued May 1979 pre-FIRM	

A O SCRAMSTAD AND ASSOCIATES, INC.
CONSULTING ENGINEERS

November 17, 1992



Charter Township of Canton
1150 South Canton Center Road
Canton, Michigan 48188-1699

Attn: Mrs. Susan Folsom, Engineer

Re: Rich Drain / Herby Street Survey

Dear Mrs. Folsom:

Following are the results of the survey in and around the homes on Herby Street. Reference benchmark was W.C.R.C 35-113 located at Michigan Avenue and Canton Center Road. Error of closure to the same benchmark was 0.05'.

House Number 3999:		
Finish floor elevation	682.68	-
Grade at rear of house	680.6	
Lowest level elevation	680.6 (on crawl)	
Fin. Flr. rear garage (slab)	681.23	
House Number 3977:		
Finish floor elevation	682.73	- building permit July 1986 post-FIRM
Grade at rear of house	680.3	
Lowest level elevation	678.31	
House Number 3961:		
Finish floor elevation	681.67	- building permit May 1988 post-FIRM
Grade at rear of house	680.9	
Lowest level elevation	677.25	
House Number 3701:		
Finish floor elevation	681.99	
Grade at rear of house	680.0	
Lowest level elevation	673.98 (basement)	- building permit May 1986 post-FIRM
House Number 3623:		
Finish floor elevation	682.27	
Grade at rear of house	676.0/680.5	
Lowest level elevation	673.98 (walkout)	- building permit issued May 1979 pre-FIRM

9357 GENERAL DRIVE, SUITE 125, PLYMOUTH, MICHIGAN 48170 — TELE (313) 459-9160

Canton Twp.

Hydrology -

d.A = .36 mi^2 Ave R.O.$_{100}$ = 2.55 in. P_{100} = 4.7 in Comp RCN = 79

Total Runoff = .917 mi^2/in

t_c = 4.65 hrs from UD-21

t_c = 3.10 hrs from TR-55

$Q_p = 270.9(t_c)^{-.81} \Rightarrow Q_p = 78$ cfs (UD-21)

$Q_{100} = 78 cfs \times .917 = \underline{72 cfs}$

TR-55 Methodology

I_a = .532 $I_a/P = .532/4.7 = .11$

$\Rightarrow Q_p = 160 \times .917 = \underline{148 cfs}$

Brater

P_d (1990)

Area		Density	
1905	.20 mi^2	917 p/mi^2	183 4
1900	.16 mi^2	160 p/mi^2	416
	.36 mi^2		225 people $\Rightarrow$ Density = 625 p/mi^2

$Q_p = 175$ cfs/mi^2-in

Slope Adj: $\frac{25.5}{13,000} = .002 \Rightarrow$ Adj = .9

$L^2/A = \frac{(13000)^2}{.36 \times 5280^2} = 16.8 \Rightarrow$ Adj. = .7

$Q_{100} = 175 \times .917 \times .9 \times .7 = \underline{101 cfs}$

Rich Drain

Crossing by Cemetary

Twin 30" RCCP $L \sim 25'$ $A = 4.9 ft^2$ $A_T = 9.8 ft^2$

$$XKOR = 1 + .5 + \frac{29.1(.013)^2 25}{(2.5/4)^{4/3}} = 1.73$$

Middle crossing

5' CMP $L \sim 20'$ $A = 19.63$

$$XKOR = 1 + .9 + \frac{29.1(.031)^2 20}{(5/4)^{4/3}} = 2.32$$

Southern Crossing

4.5' RCCP $L \sim 25'$ $A = 15.9 ft^2$

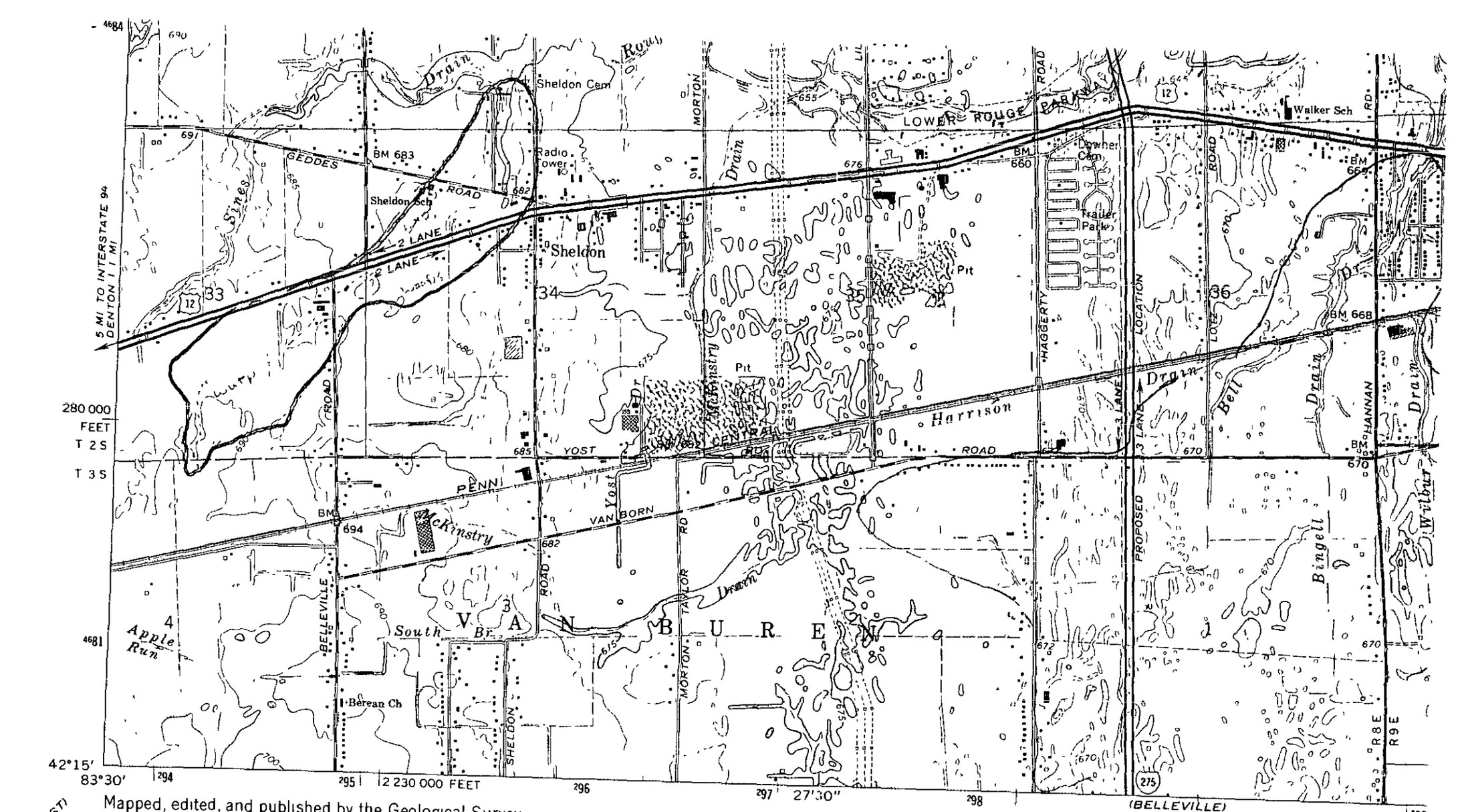
$$XKOR = 1 + .5 + \frac{29.1(.013)^2 25}{(4.5/4)^{4/3}} = 1.61$$

Geddes Road

4' RCCP $L \sim 250$ $A = 12.57 ft^2$

$$XKOR = 1 + .5 + \frac{29.1(.013)^2 250}{(1)} = 2.13$$

$$1 + .5 + \frac{29.1(.013)^2 350}{1} = 3.22$$



Mapped, edited, and published by the Geological Survey in cooperation with State of Michigan agencies

Control by USGS, USC&GS, and Wayne County Highway Commission

Planimetry by photogrammetric methods from aerial photographs
Topography by planetable surveys 1940–41. Revised from aerial photographs taken 1966–67 Field checked 1968

Polyconic projection 1927 North American datum
10,000-foot grid based on Michigan coordinate system, south zone
1000 meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

Red tint indicates areas in which only landmark buildings are shown

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs This information is unchecked

MN
GN
3½° 62 MILS
1°38' 29 MILS

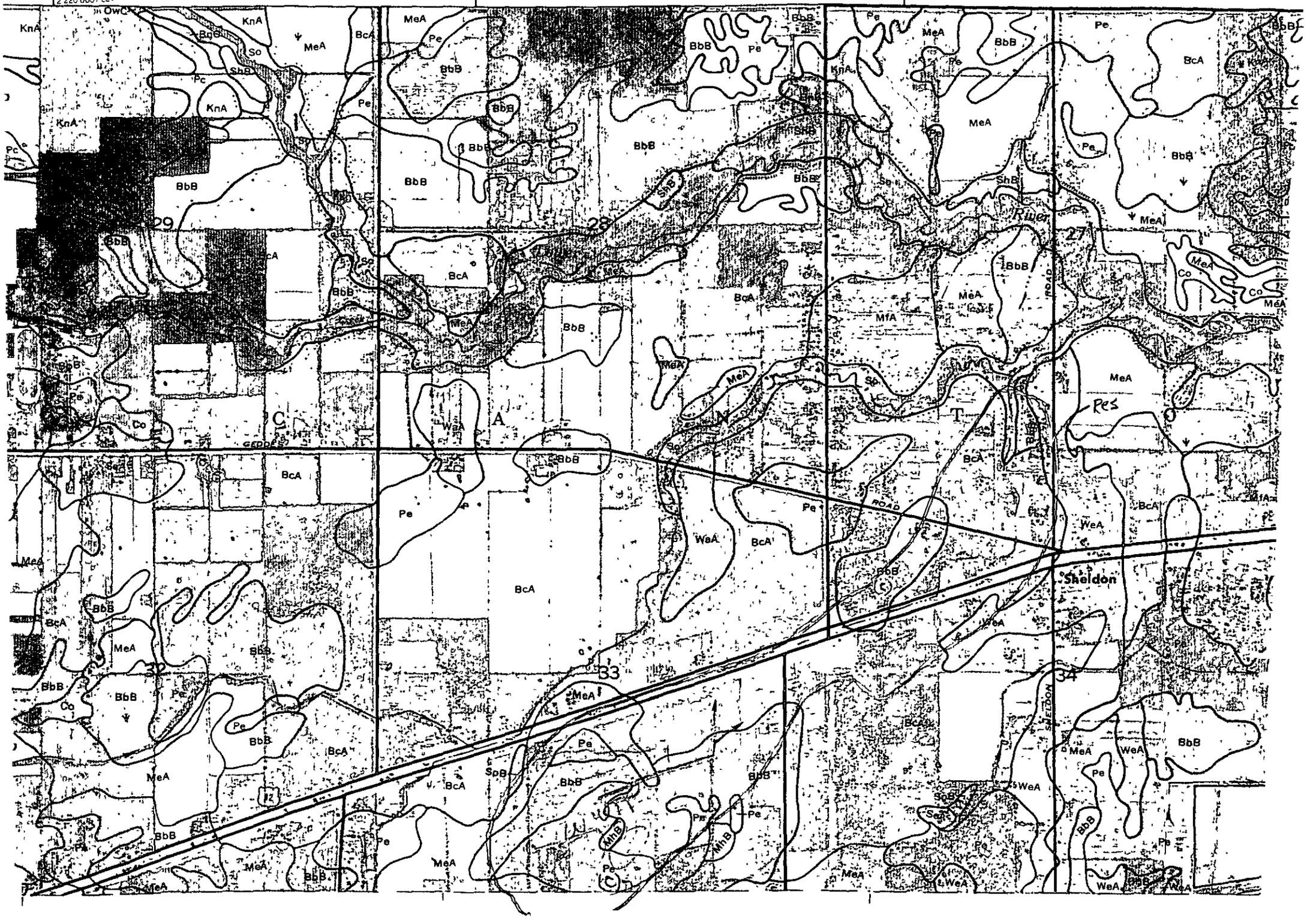
UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1000 0 1000 2000 3000 4000 5000 6000 7

1 5 0 1 KILOM

CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQU


2 220 000 FEET
R 8 E
29
28
27
32
33
34
River
Sheldon
GEDDES
ROAD
SHELDON
Pes
KnA
MeA
BcA
BbB
Pe
Pc
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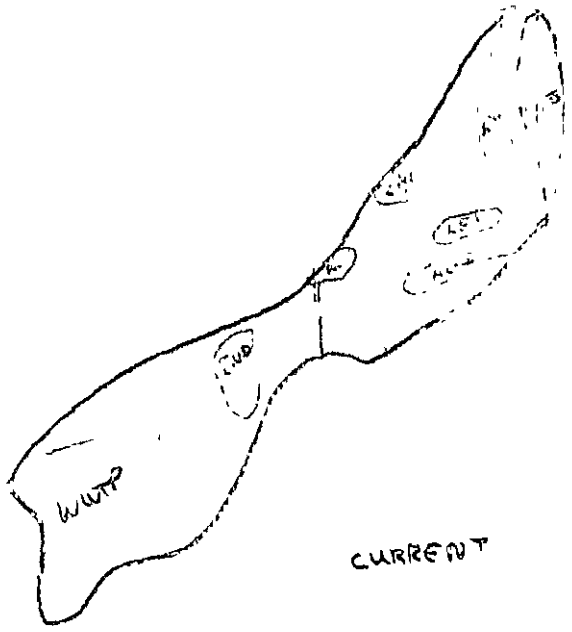
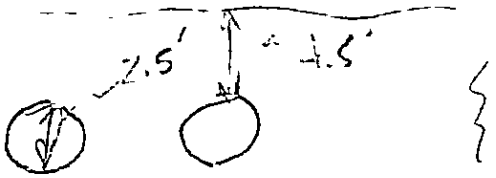
WeA
MfA
SpB
MhB


WWTP
CURRENT

21½ - 5

Canton Twp
Rich Dran

Cemetary Crossing
Twin 2.5' RCCP L ~ 25'

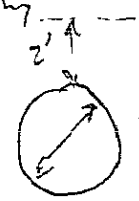


{ weir length ~ 60
relatively flat

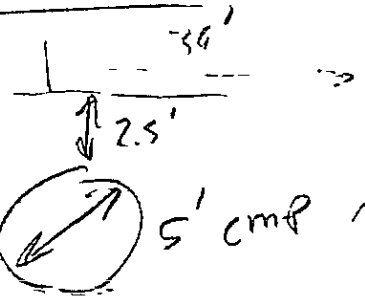
Channel - ~.06
O.B. - ~.1

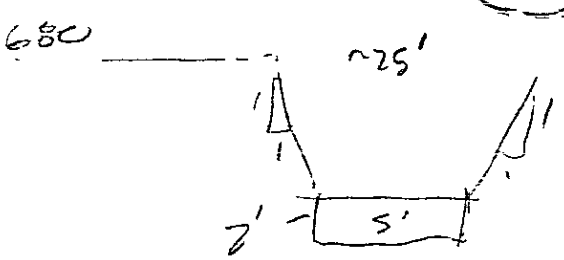
(25) Picture of weir in ROB to LOB

Southern Crossing



Middle



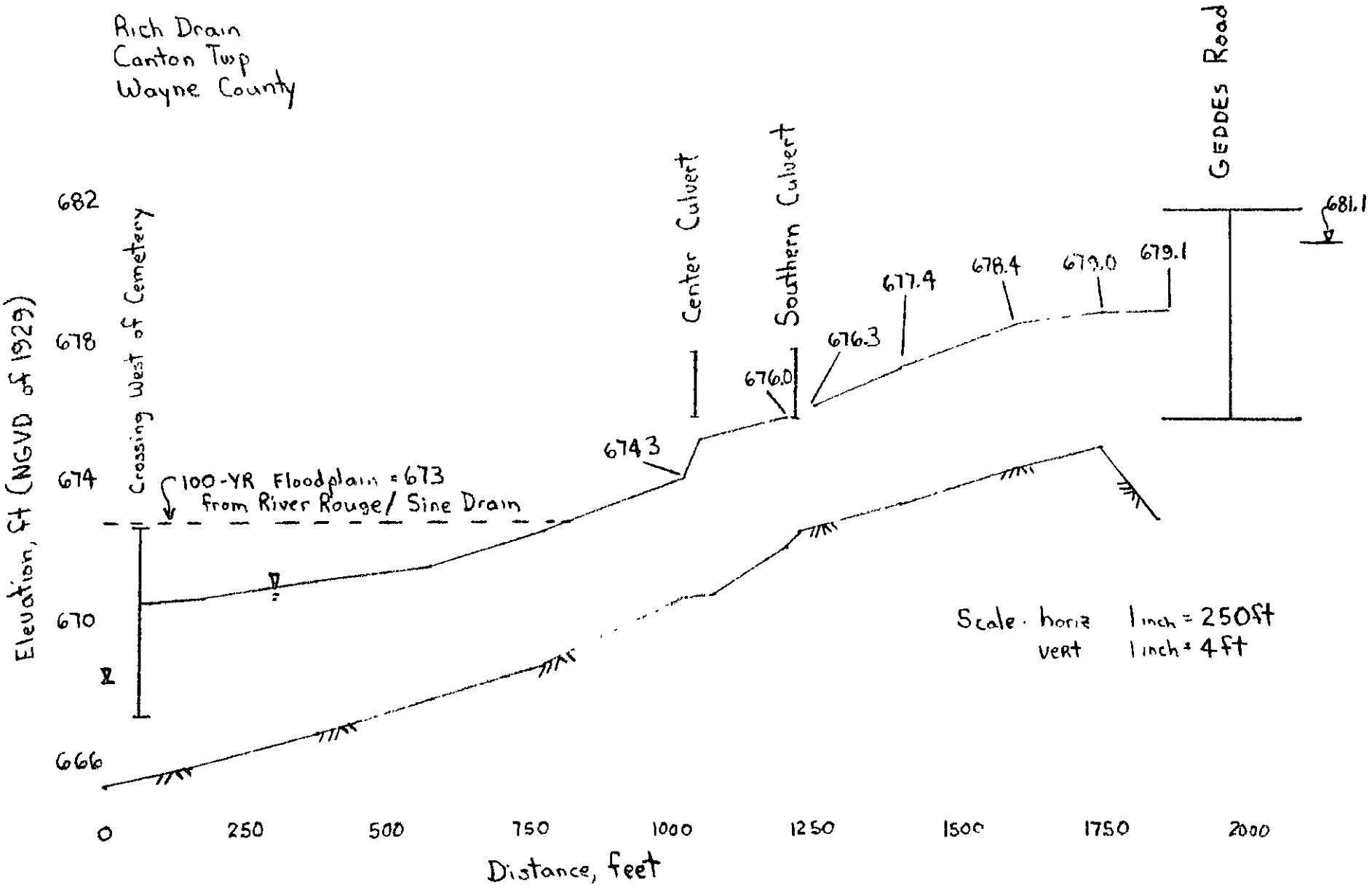


48" RCCP @ Geddis
~

Brookside Village
Lotz - Finley
Fellows

100-YR FLOOD PROFILE

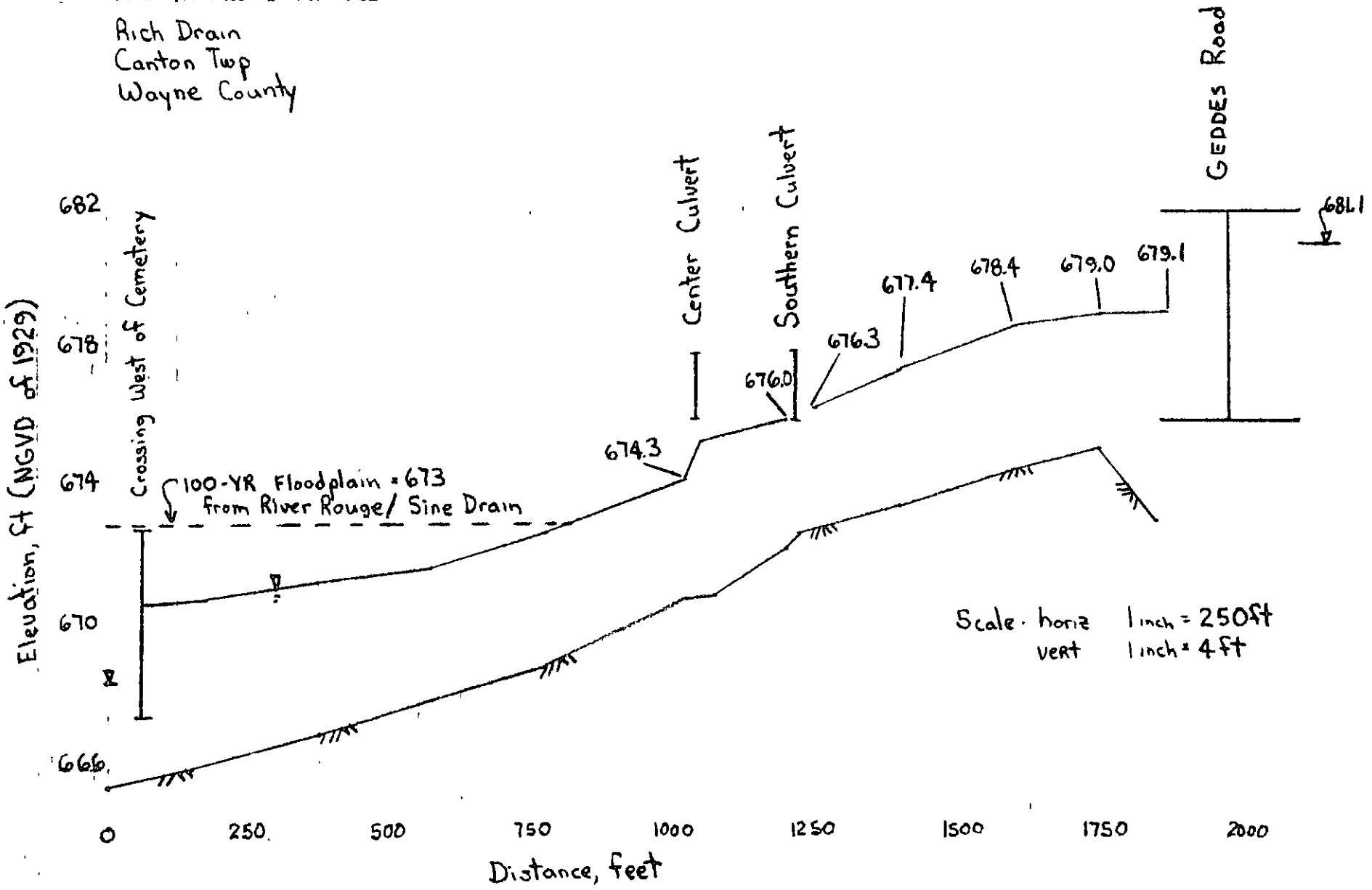
Rich Drain
Canton Twp
Wayne County



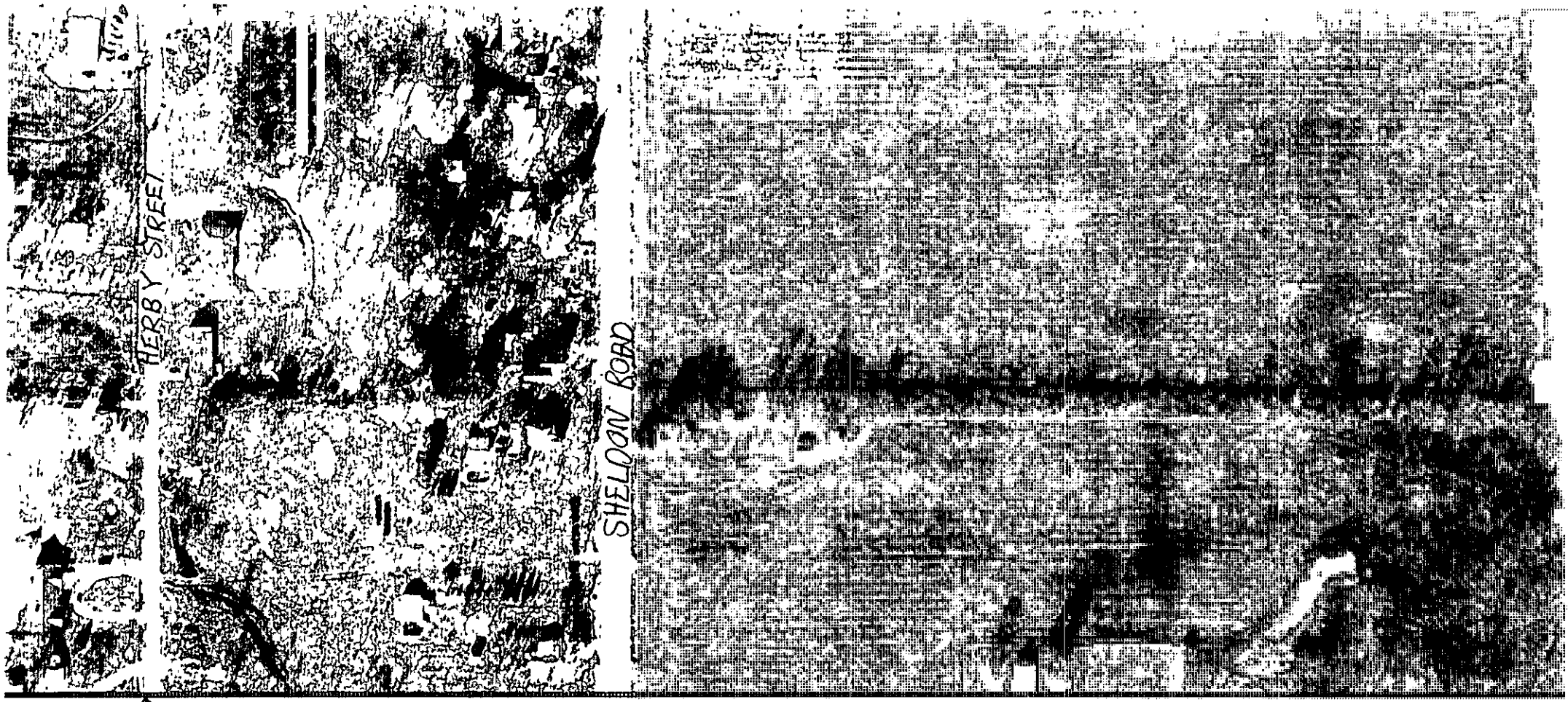
Rev. 3/15/94

100-YR FLOOD PROFILE

Rich Drain
Canton Twp
Wayne County



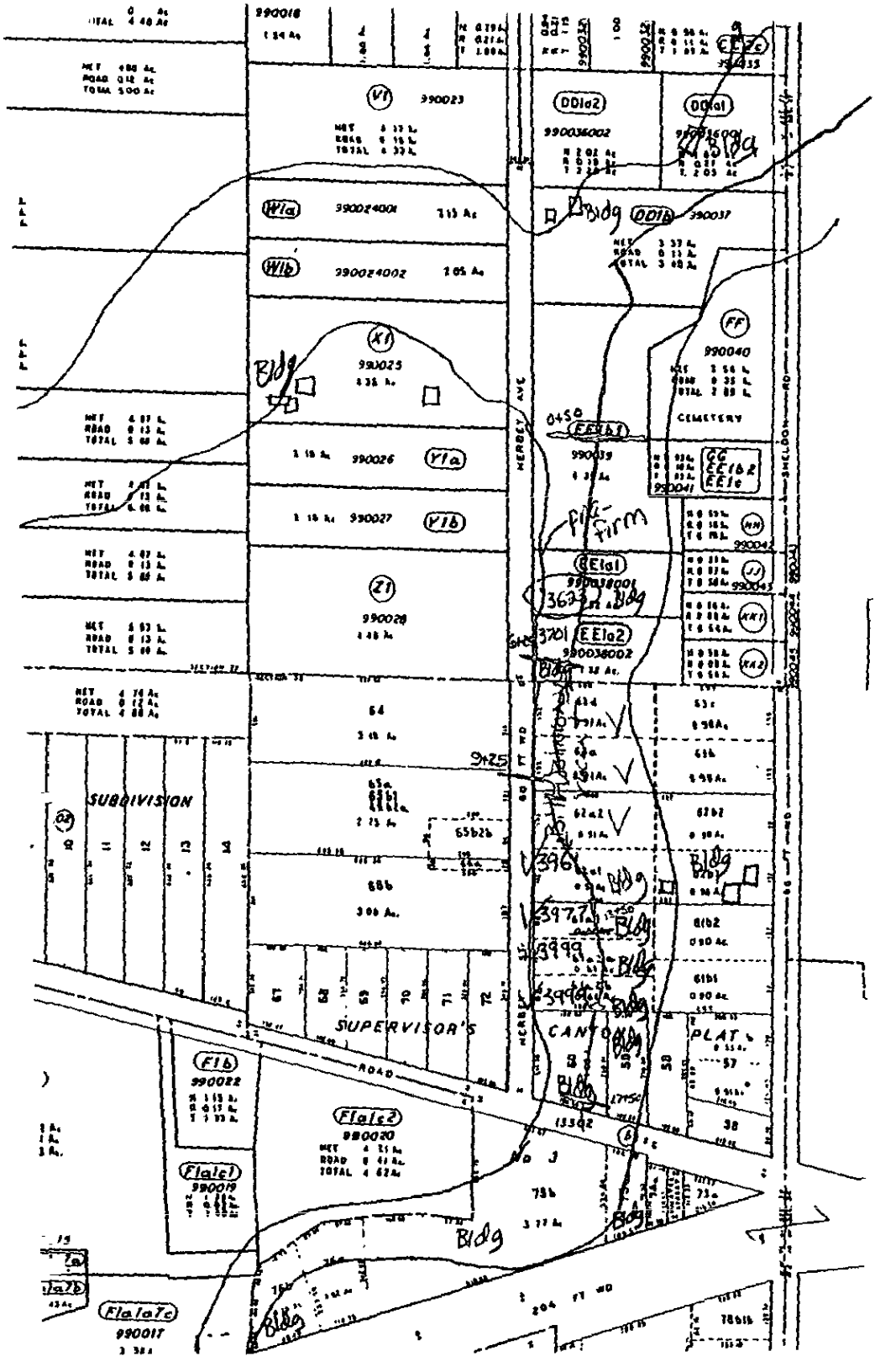
Rev. 3/15/94



MATCH LINE
SEE SHEET 1

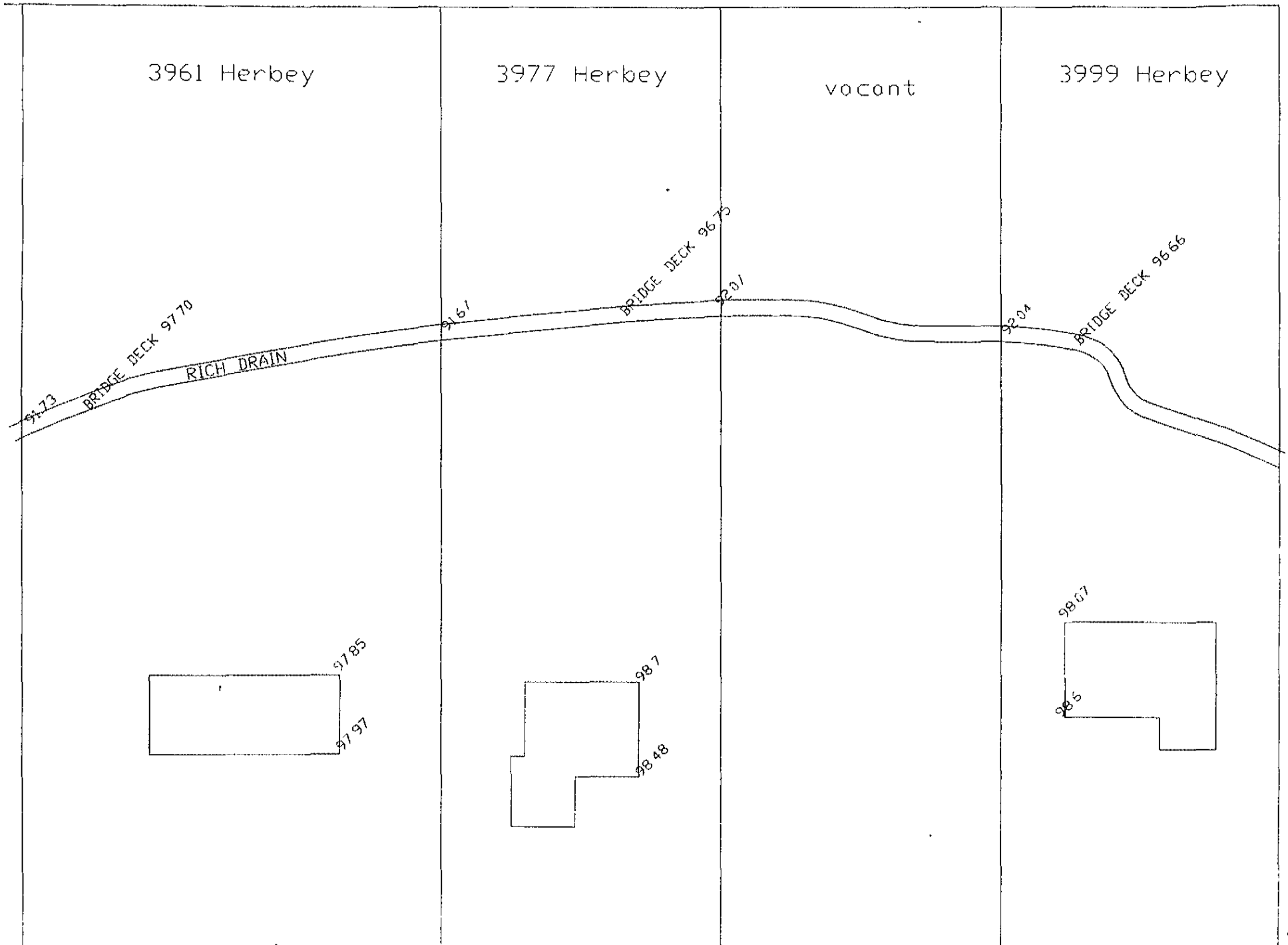
N

SCALE 1"=200'



990018
V1
990023
DD1a2
990036002
DD1a1
Bldg
W1a
990024001
W1b
990024002
DD1b
990037
X1
990025
FF
990040
CEMETERY
Bldg
990026
Y1a
990027
Y1b
HERBERT AVE
SHELDON RD
EE1b1
990039
GG
EE1b2
EE1c
990041
Fire-firm
EE1a1
990038001
3623
Bldg
3701
EE1a2
990038002
Z1
990028
SUBDIVISION
SUPERVISOR'S
CANYON
PLAT
ROAD
F1b
990022
F1a1c2
990020
F1a1c1
990019
F1a1a7c
990017
Bldg


HERBY STREET
MATCH LINE
SEE SHEET 1



we surveyed these 3 homes. Is this what you need? Jim



MATCH LINE
SEE SHEET 1

SEE SHEET 2
FOR MATCH LINE





MATCH LINE
SEE SHEET 1

```
* HEC-2 WATER SURFACE PROFILES                  *
*                                               *
* Version   4.6.2:  May 1991                    *
*                                               *
* RUN DATE    15MAR94    TIME   10:18:06        *
*************************************************
```

```
* U.S. ARMY CORPS OF ENGINEERS          *
* HYDROLOGIC ENGINEERING CENTER         *
* 609 SECOND STREET, SUITE D            *
* DAVIS, CALIFORNIA 95616-4687          *
*          (916) 756-1104               *
*************************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

1

15MAR94 10:18:06 PAGE 1

THIS RUN EXECUTED 15MAR94 10:18:06

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*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2:  May 1991
*************************************
```

T1 CANTON TOWNSHIP FLOODPLAIN INFORMATION
T2 XSEC STATIONING UPDATED TO MATCH AERIAL PHOTO
T3 RICH DRAIN RICH2.FPI

J1	IDHCA	IDQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
					.009			80.	672.	

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
		-1.								

NC	.1	.1	.06	.3	.5					
X1	0.	8.	54.5	59.5					-9.5	
GR	680.		680.	50.	676.	54.	675.	54.5	675.	59.5
GR	676.	60.	680.	64.	680.	100.				
X1	.5				50.	50.	50.			
SE		1.73	2.6		1.		9.8		665.6	665.5
X1	.75				25.	25.	25.		.1	
X2			1.	667.5	672.9					
BT	2.	0.	672.9		60.	672.9				
X1	1.75				100.	100.	100.		.4	
X1	3.75				200.	200.	200.		1.	

```
X1   5.75                                  200.      200.      200.                1.

X1   7.75                                  200.      200.      200.                1.

NC                                .6       .8
X1   10.25                                 250.      250.      250.                1.9

NC                        .032
X1   10.26   11.         53.5      58.5    1.        1.        1.
BT   10.     0.          677.9             46.       677.9                53.5      677.9     673.5
BT   54.4    677.9       675.4     56.     677.9     676.      56.9      677.9     675.9     58.1
BT   677.9   674.9       58.5      677.9   673.5     60.       677.9                100.      677.9
BT
GR   677.9               677.9     46.     673.5     53.5      671.6     54.4      671.      56.
GR   671.2   56.9        672.2     58.1    673.5     58.5      677.9     60.       677.9     100.
GR   677.9   200.
1
   15MAR94      10:18:06                                                                    PAGE    2


NC                        .032
X1   10.46                                 20.       20.       20.
X2                                                             1.

NC                        .06
X1   10.47   8.          106.      111.    1.        1.        1.
GR   678.                678.      100.    673.      105.      671.      106.      671.      111.
GR   673.    112.        678.      117.    678.      200.

X1   10.70                                 23.       23.       23.

NC                                .3       .5
X1    11.96                                126.      126.      126.                1.3

SB           1.61        2.8               4.5                 15.9                672.3     672.3
X1   12.21                                 25.       25.       25.                 .5
X2                        1.        675.    678.
BT   2.      0.          678.              60.       678.

X1   12.46                                 25.       25.       25.

X1   14.0    8.          105.      110.    154.      154.      154.
GR   679.                679.      100.    674.      105.      673.5     105.      673.5     110.
GR   674.    110.        679.      115.    679.      200.

X1   16.0    8.          105.      110.    200.      200.      200.
GR   680.                679.      100.    675.      105.      674.6     105.      674.6     110.
GR   675.    110.        679.      115.    680.      200.

X1   17.5    6.          104.      109.    150.      150.      150.
GR   680.                679.      100.    675.2     104.      675.2     109.      679.      113.
GR   680.    200.

X1   18.5    6.          108.      113.    100.      100.      100.
GR   681.                681.      100.    673.      108.      673.1     113.      681.      121.
GR   651.    200.

SB           3.22        2.8               4.                  12.57               675.      675.
X1   21.0                                  350.      350.      350.
X2                        1.        676.    682.
BT   2.      0.          682.              150.      682.
```

SECNO	DEPTH	CWSEL	CRITWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	XLOB	XCH	XRB	WTN	ELMIN	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	ALOBL	ALCH	ALOBR	ITRIAL	IBC	ICONT	CORAR	TOPWID	ENDST

#FROP 1

CCHV= .300 CEHV= .500
*SECNO .000

.000	2.97	668.47	.00	672.00	668.80	.33	.09	.00	665.50
80.0	4.0	72.0	4.0	3.2	14.8	3.2	.0	.0	665.50
.00	1.26	4.85	1.26	.100	.060	.100	.000	665.50	52.03
.008992	0.	0.	0.	0	0	6	.00	6.94	61.97

*SECNO .500

.500	3.44	668.94	.00	.00	669.17	.23	.34	.03	665.50
80.0	4.8	70.4	4.8	4.4	17.1	4.4	.0	.0	665.50
.00	1.09	4.11	1.09	.100	.060	.100	.000	665.50	51.57
.005330	50.	50.	50.	1	0	0	.00	10.85	62.43

SPECIAL BRIDGE

SB XA	ACOR	CDFG	RDLEN	BWC	EWP	BAREA	BS	ELCHU	ELCHD
.00	1.77	2.60	.00	1.00	.00	9.20	.00	665.60	665.50

*SECNO .750
3280 CROSS SECTION .75 EXTENDED .04 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, XRATIO = 2.06

PRESSURE FLOW

EGPRS	EGLWC	HS	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
670.73	669.37	.00	0.	80.	10.	2.	667.50	672.90	0.

.750	5.24	670.64	.00	.00	670.73	.08	1.56	.00	665.60
80.0	7.5	65.0	7.5	12.3	25.2	11.9	.0	.0	665.60
.01	.60	2.53	63	.100	.060	.100	.000	665.60	.00
.001253	25.	25.	25.	2	0	0	.00	100.00	100.00

#SECNO 1.750

1.750	4.77	670.77	.00	.00	670.87	.10	.14	.01	666.00
80.0	7.0	66.0	7.0	9.3	23.9	9.3	.2	.2	666.00
.02	.75	2.77	.75	.100	.060	.100	.000	666.00	50.23
.001553	100.	100.	100.	2	0	0	.00	13.55	63.77

1

SECNO	DEPTH	CWSEL	CRITWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	XLOB	XCH	XRB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	ALOBL	ALCH	ALOBR	ITRIAL	IBC	ICONT	CORAR	TOPWID	ENDST

SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

&SECND 3.750

3.750	4.15	671.15	.00	.00	671.29	.14	.40	.02	667.00
80.0	6.0	66.0	6.0	6.8	20.7	6.8	.3	.2	667.00
.04	.88	3.26	.88	.100	.060	.100	.000	667.00	50.85
.02631	200.	200.	200.	2	0	0	.00	12.30	63.15

&SECND 5.750

5.750	3.76	671.76	.00	.00	671.94	.19	.63	.02	666.00
80.0	5.3	69.3	5.3	5.4	18.8	5.4	.5	.3	668.00
.05	.98	3.69	.98	.100	.060	.100	.000	668.00	51.25
.003809	200.	200.	200.	2	0	0	.00	11.51	62.75

&SECND 7.750

7.750	3.58	672.58	.00	.00	672.79	.21	.83	.01	669.00
80.0	5.0	67.9	5.0	4.9	17.9	4.9	.6	.3	669.00
.07	1.04	3.91	1.04	.100	.060	.100	.000	669.00	51.43
.004565	200.	200.	200.	2	0	0	.00	11.15	62.57

CCHV= .800 CEHV= .800

CSECND 10.250

10.250	3.11	674.01	.00	.00	674.31	.30	1.45	.07	670.90
80.0	4.2	71.5	4.2	3.5	15.5	3.5	.8	.4	670.90
.09	1.20	4.60	1.20	.100	.060	.100	.000	670.90	51.39
.007626	250.	250.	250.	2	0	0	.00	10.21	62.11

&SECND 10.260

3301 HV CHANGED MORE THAN HVTOL

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, *RATIO = .66

3370 NORMAL BRIDGE, ARO= 10 MIN ELTRD= 677.90 MAX ELLC= 676.00

10.260	2.91	673.91	.00	.00	674.74	.83	.01	.42	673.50
80.0	.0	80.0	.0	.0	11.0	.0	.8	.4	673.50
.09	.00	7.30	.00	.009	.032	.000	.009	671.00	52.79
.017709	1.	1.	1.	2	0	0	-.24	5.83	58.64

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SECND	DEPTH	QUSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTI	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

&SECND 10.760

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, *RATIO = 1.41

3370 NORMAL BRIDGE, ARO= 10 MIN ELTRD= 677.90 MAX ELLC= 676.00

10.760	3.33	674.33	.00	.00	675.24	.47	.04	.21	673.50

80.0	.0	80.0	.0	.0	14.5	.0	.8	.4	673.50
.09	.00	5.51	.00	.000	.032	.000	.000	671.00	51.41
.008907	20.	20.	20.	4	0	0	-2.11	7.51	58.92

*SECNO 10.470

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.85

10.470	4.24	675.24	.00	.00	675.39	.15	.00	.19	671.00
80.0	4.8	70.4	4.8	5.8	21.2	5.8	.8	.4	671.00
.09	.83	3.32	.83	.100	.060	.100	.000	671.00	102.76
.002616	1.	1.	1.	3	0	0	.00	11.48	114.24

*SECNO 10.700

10.700	4.31	675.31	.00	.00	675.46	.15	.06	.00	671.00
80.0	4.9	70.2	4.9	6.0	21.6	6.0	.8	.4	671.00
.09	.82	3.26	.82	.100	.060	.100	.000	671.00	102.69
.002466	23.	23.	23.	2	0	0	.00	11.62	114.31

CCHV= .300 CEHV= .500
*SECNO 11.960

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

11.960	3.41	675.71	.00	.00	675.97	.26	.46	.06	672.30
80.0	3.6	72.9	3.6	3.4	17.0	3.4	.9	.4	672.30
.10	1.05	4.27	1.05	.100	.060	.100	.000	672.30	103.59
.005806	126.	126.	126.	2	0	0	.00	9.82	113.41

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EC	HV	HL	OLOSS	L-BANK ELEV
U	OLOB	OCH	OROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB XY	XKOT	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
.00	1.61	2.80	.00	4.50	.00	15.90	.00	672.30	672.30

*SECNO 12.210
PRESSURE FLOW

ECPRS	ESLWC	HD	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
676.34	676.09	.00	0.	80.	16.	17.	676.00	678.00	0.

12.210	3.25	676.05	.00	.00	676.34	.29	.37	.00	672.80
80.0	3.4	73.3	3.4	3.0	16.3	3.0	.9	.4	672.80
.10	1.10	4.50	1.10	.100	.060	.100	.000	672.80	103.74
.006848	25.	25.	25.	2	0	0	.00	9.51	113.26

*SECNO 12.460

12.460	3.46	676.26	.00	.00	676.51	.25	.15	.01	672.80

80.0	3.6	72.7	3.6	3.5	17.3	3.5	.9	.5	672.80
.10	1.04	4.21	1.04	.100	.060	.100	.000	672.80	103.54
.005530	25.	25.	25.	2	0	0	.00	9.91	113.46

*SECNO 14.000

14.000	3.66	677.16	.00	.00	677.35	.19	.82	.02	674.00
80.0	5.7	68.5	5.7	5.0	18.3	5.0	1.0	.5	674.00
.11	1.15	3.75	1.15	.100	.060	.100	.000	673.50	101.84
.005171	154.	154.	154.	2	0	0	.00	11.32	113.16

*SECNO 16.000

16.000	3.59	678.18	.00	.00	678.35	.17	1.00	.01	675.00
80.0	7.5	65.0	7.5	6.3	17.9	6.3	1.1	.5	675.00
.13	1.19	3.63	1.19	.100	.060	.100	.000	674.60	101.03
.004790	200.	200.	200.	2	0	0	.00	12.95	113.97

*SECNO 17.500

17.500	3.62	678.82	.00	.00	678.99	.17	.64	.00	675.20
80.0	7.5	64.9	7.5	6.9	18.1	6.9	1.2	.6	675.20
.15	1.09	3.59	1.09	.100	.060	.100	.000	675.20	100.19
.003770	150.	150.	150.	2	0	0	.00	12.62	112.81

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SECNO	DEPTH	CNSEL	CRIWS	WSELK	EG	HV	PL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNLH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18.500

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.57

18.500	6.00	679.10	.00	.00	679.14	.04	.12	.04	673.10
80.0	10.7	58.6	10.7	18.2	30.0	18.2	1.3	.6	673.10
.16	.59	1.95	.59	.100	.060	.100	.000	673.10	101.93
.000571	100.	100.	100.	2	0	0	.00	17.14	119.07

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLCN	BWC	BLP	BAREA	SS	ELCHU	ELCHD
	.00	3.22	2.80	.00	4.00	.00	12.57	.00	675.00	675.00

*SECNO 21.000
3280 CROSS SECTION 21.00 EXTENDED .11 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.79

PRESSURE FLOW

EGPRS	EGLNC	H3	QWEIR	CPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
681.12	681.02	.00	0.	80.	1[illegible].	4.	676.00	682.00	0.

21.309	8.60	661.10	.00	.00	661.12	.02	1.48	.00	673.10
89.0	11.6	53.0	13.5	43.7	40.1	41.3	2.1	1.5	673.10
.26	.31	1.32	.33	.100	.060	.100	.090	673.10	.00
.000178	350.	350.	350.	1	0	0	.00	200.00	200.00

THIS RUN EXECUTED 15MAR94 10:18:07

HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991

NOTE- ASTERIS: (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

RICH DRAIN

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELMAD	ELLOC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	.000	.00	.00	.00	665.50	80.00	668.47	.00	668.80	89.92	4.85	21.18	8.44
	.500	50.00	.00	.00	665.20	80.00	668.94	.00	669.17	53.30	4.11	25.95	10.96
*	.750	25.00	672.90	667.50	665.60	80.00	670.64	.00	670.73	12.53	2.58	49.63	22.60
	1.750	100.00	.00	.00	666.60	80.00	670.77	.00	670.87	15.59	2.77	42.38	20.30
	3.750	200.00	.00	.00	667.00	80.00	671.15	.00	671.29	26.31	3.28	34.30	15.60
	5.750	200.00	.00	.00	668.00	80.00	671.76	.00	671.94	38.09	3.69	29.62	12.96
	7.750	200.00	.00	.00	669.00	80.00	672.58	.00	672.79	45.65	3.91	27.59	11.84
	10.250	250.00	.00	.00	670.90	80.00	674.01	.00	674.31	76.26	4.60	22.58	9.16
*	10.260	1.00	677.90	676.00	671.00	80.00	673.91	.00	674.74	177.09	7.30	10.96	6.01
*	10.460	20.00	677.90	676.00	671.00	80.00	674.73	.00	675.20	89.07	5.51	14.51	8.48
*	10.470	1.00	.00	.00	671.00	80.00	675.24	.00	675.39	26.16	3.32	32.72	15.64
	10.730	23.00	.00	.00	671.00	80.00	675.31	.00	675.46	24.66	3.26	33.51	16.11
*	11.960	126.00	.00	.00	672.30	80.00	675.71	.00	675.97	58.06	4.27	23.85	10.50
	12.210	25.00	678.00	676.00	672.80	80.00	676.05	.00	676.34	68.48	4.50	22.37	9.67
	12.460	25.00	.00	.00	672.80	80.00	676.26	.00	676.51	55.30	4.21	24.50	10.76
	14.000	154.00	.00	.00	673.50	80.00	677.16	.00	677.35	51.71	3.75	28.28	11.13
	16.000	200.00	.00	.00	674.60	80.00	678.18	.00	678.35	47.90	3.63	30.52	11.56

	SECNO	XLCH	ELTRD	ELLC	ELRIN	Q	CUSEL	CRIWS	EG	10**3	VCH	AREA	.01K
	17.500	150.00	.00	.00	675.20	80.00	678.82	.00	678.99	37.70	3.87	31.50	13.03
X	18.500	100.00	.00	.00	673.10	80.00	679.10	.00	679.14	5.71	1.95	66.38	33.47
X	21.000	350.00	682.00	676.00	673.10	80.00	681.10	.00	681.12	1.78	1.32	125.09	60.02

1

15MAR94 10:18:06 PAGE 10

RICH BRAIN

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFWS	TOPWID	XLCH
	.000	80.00	668.47	.00	.00	-3.53	9.94	.00
	.500	80.00	668.94	.00	.47	.00	10.35	50.00
X	.750	80.00	670.64	.00	1.71	.00	100.00	25.00
	1.750	80.00	670.77	.00	.13	.00	13.35	100.00
	3.750	80.00	671.15	.00	.38	.00	12.30	200.00
	5.750	80.00	671.76	.00	.61	.00	11.51	200.00
	7.750	80.00	672.58	.00	.82	.00	11.15	200.00
	10.250	80.00	674.01	.00	1.43	.00	10.21	250.00
X	10.260	80.00	673.91	.00	-.09	.00	5.85	1.00
X	10.460	80.00	674.73	.00	.81	.00	7.51	20.00
X	10.470	80.00	675.24	.00	.52	.00	11.48	1.00
	10.700	80.00	675.31	.00	.07	.00	11.62	23.00
X	11.960	80.00	675.71	.00	.40	.00	9.82	126.00
	12.210	80.00	676.05	.00	.34	.00	9.51	25.00
	12.460	80.00	676.26	.00	.20	.00	9.91	25.00
	14.000	80.00	677.16	.00	.90	.00	11.32	154.00
	16.000	80.00	679.18	.00	1.02	.00	12.95	200.00
	17.360	80.00	678.82	.00	.64	.00	12.62	150.00
X	18.500	80.00	679.10	.00	.28	.00	17.14	100.00
X	21.000	80.00	681.10	.00	2.01	.00	200.00	350.00

1

15MAR94 10:18:06 PAGE 11

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= .750 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10.260 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

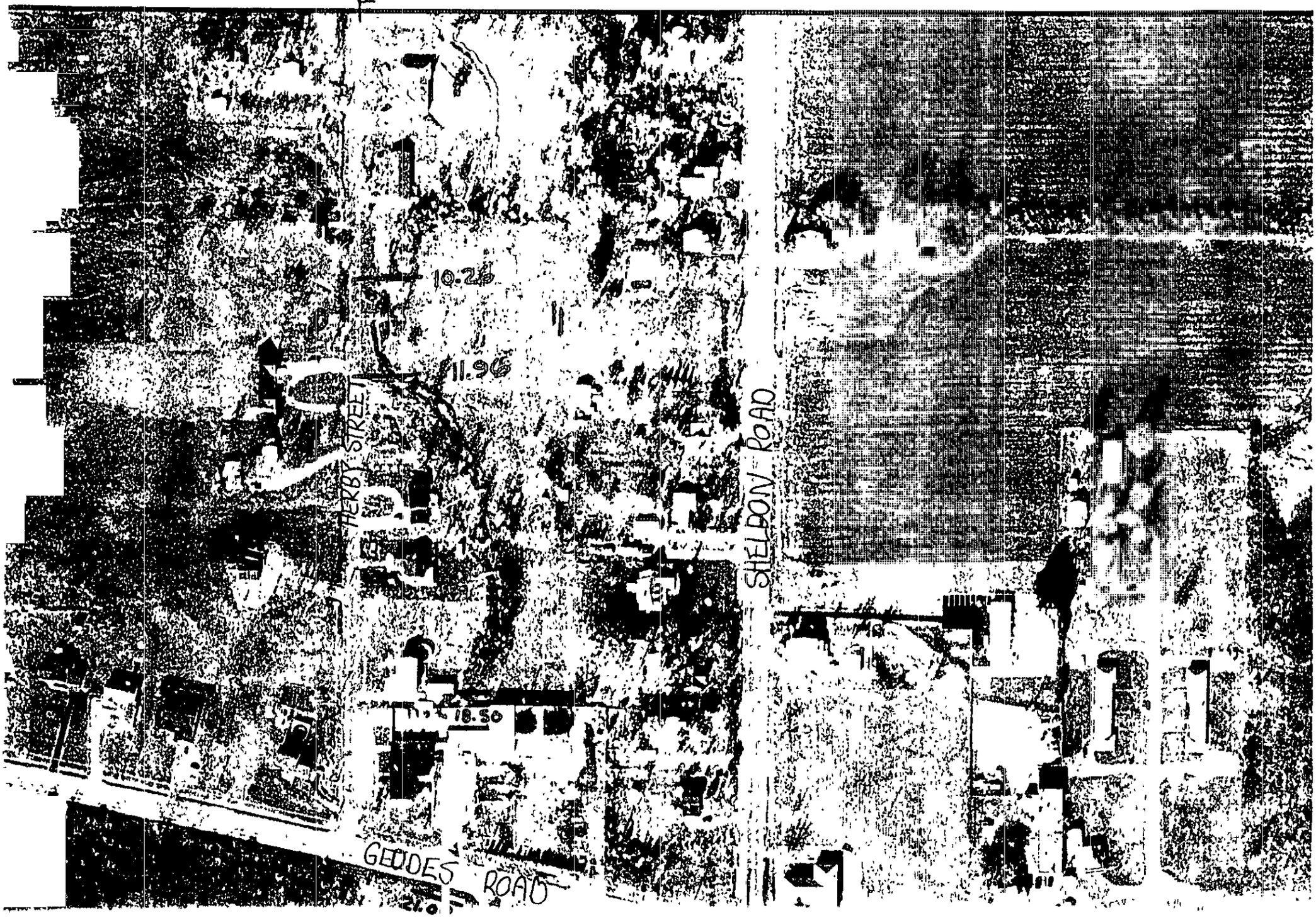
WARNING SECNO= 10.460 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10.470 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 11.960 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18.500 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 21.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

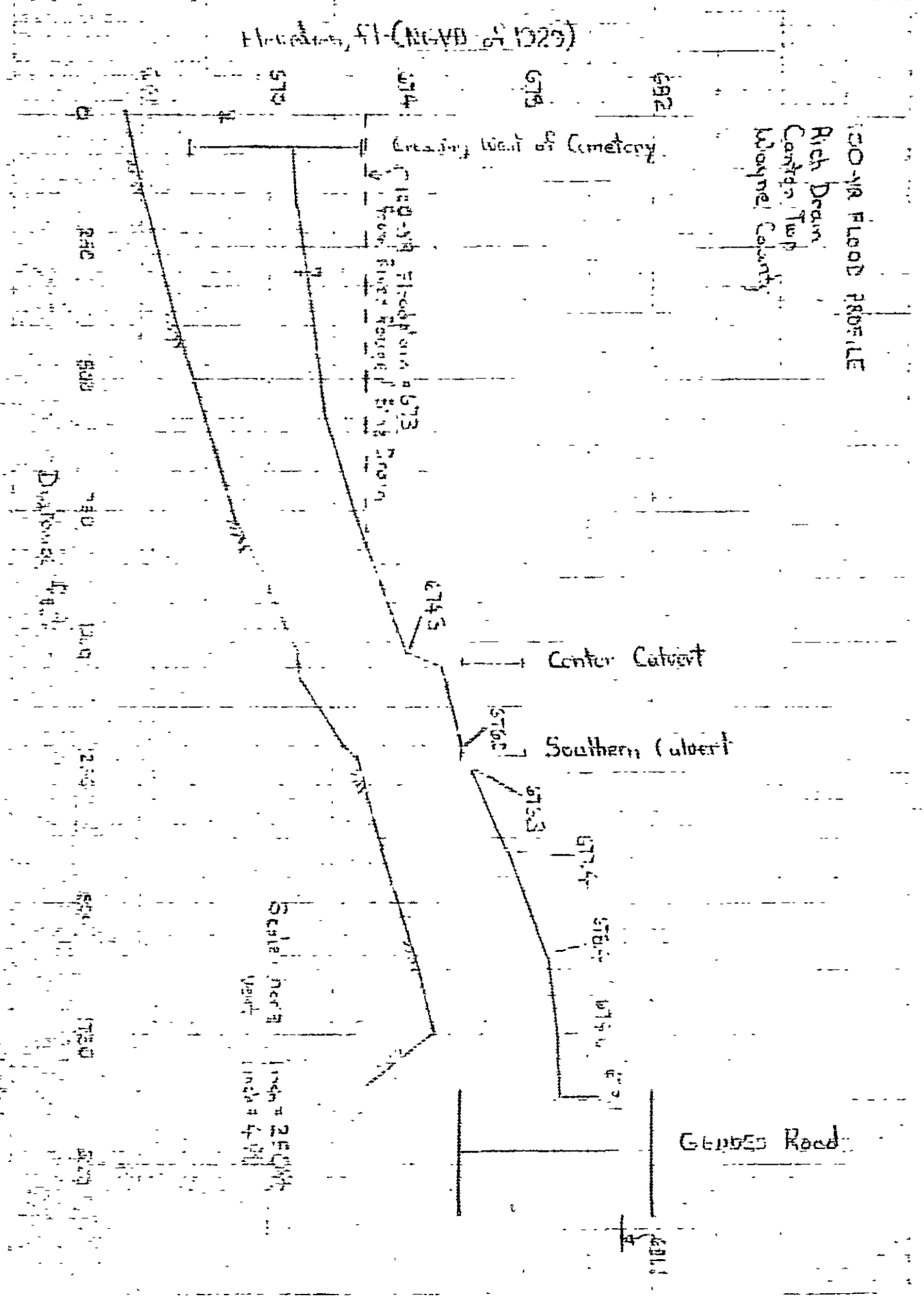

SEE SHEET 2
FOR MATCH LINE
10.26
11.96
HERBY STREET
SHELBOURNE ROAD
18.50
GEDDES ROAD

SEE SHEET 2
FOR MATCH LINE

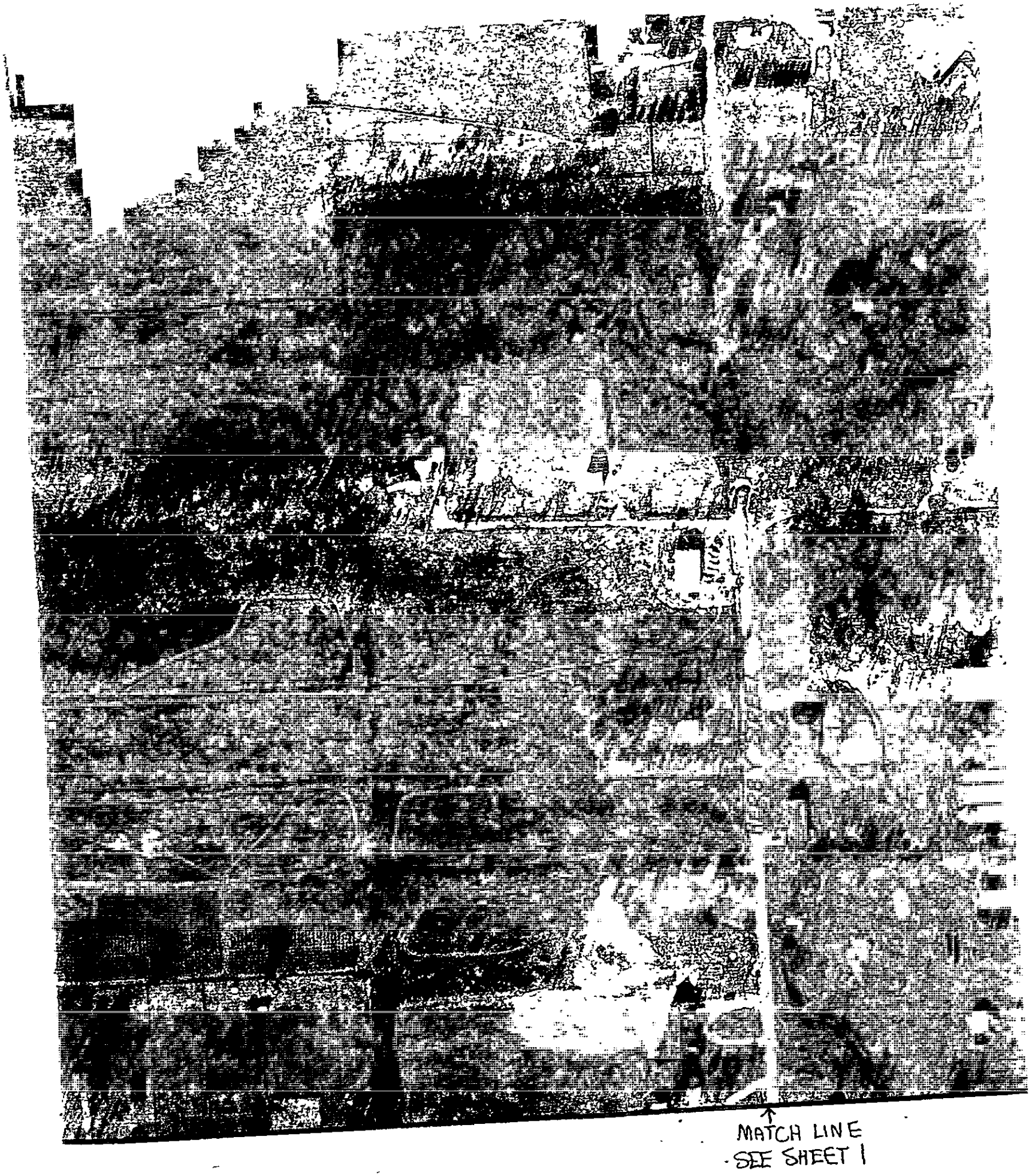


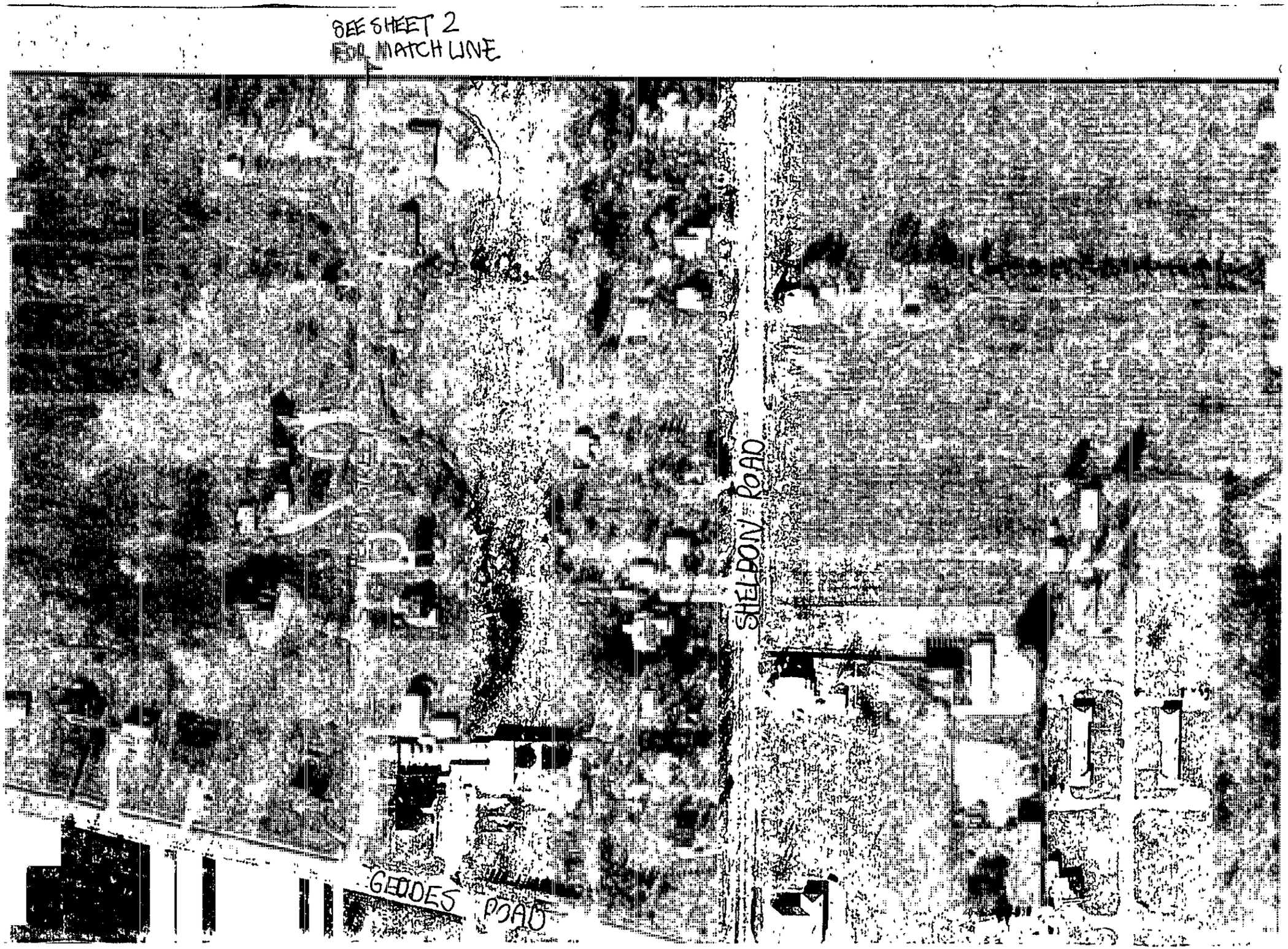
SEE SHEET 2
FOR MATCH LINE





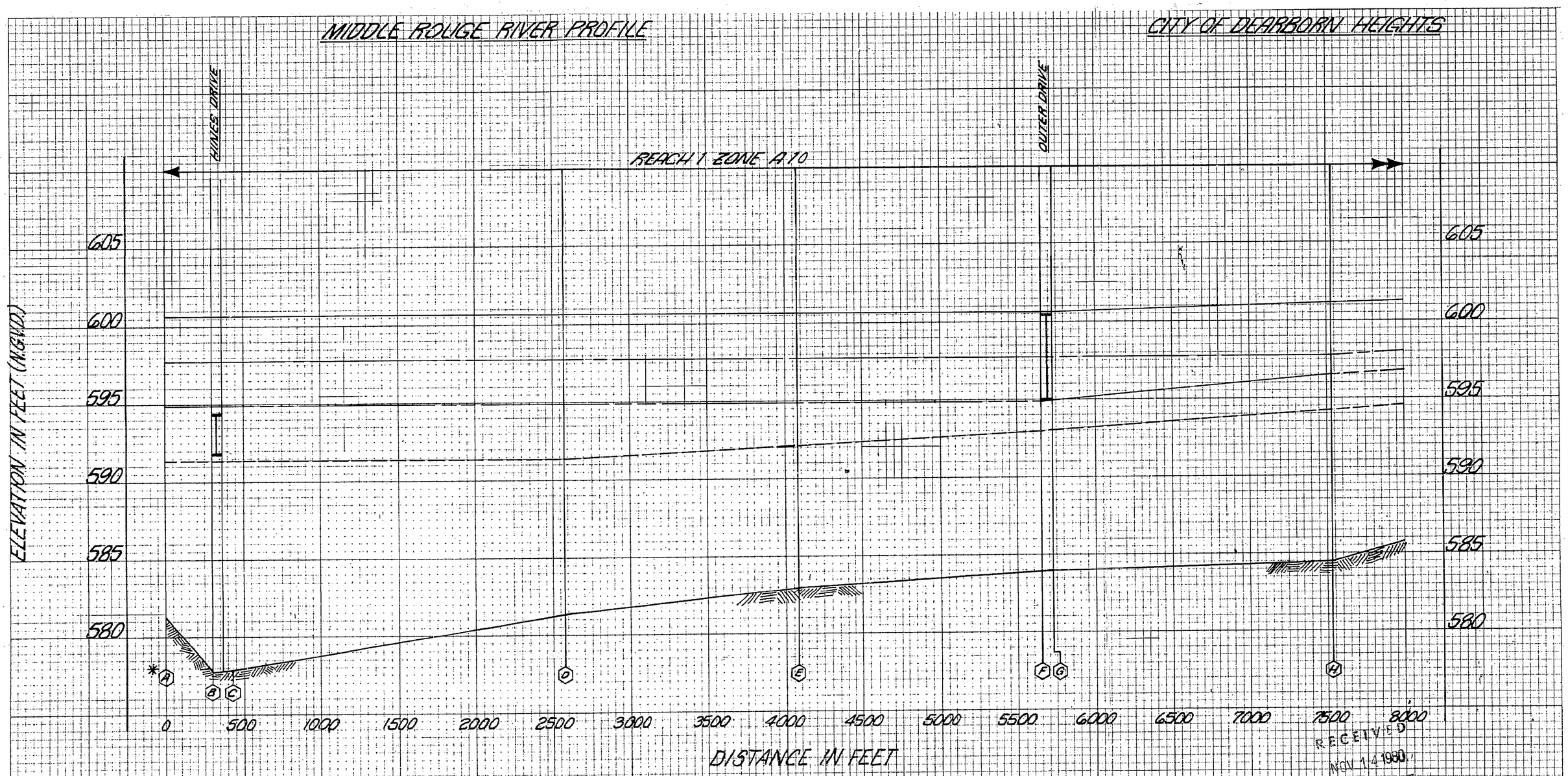
Elevation, ft (NGVD of 1929)
Crossing West of Cemetery
Center Culvert
Southern Culvert
Gendes Road
Rich Drain
Canton Twp
Wayne County


MATCH LINE
SEE SHEET 1


SEE SHEET 2
FOR MATCH LINE
SHELDON ROAD
GEDDES ROAD

MIDDLE ROUGE RIVER PROFILE

CITY OF DEARBORN HEIGHTS



RECEIVED
NOV 14 1980
FLOODPLAIN MANAGEMENT

LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- STREAM CHANNEL BOTTOM

* CROSS SECTION 'A' IS 800 FEET UPSTREAM FROM THE CONFLUENCE WITH THE MAIN ROUGE RIVER.

SCALE
HORIZ. 1" = 500'
VERT. 1" = 5'

SHEET 1 OF 4
HUD 2000-10

MIDDLE ROUGE RIVER PROFILE

CITY OF DEARBORN HEIGHTS

REACH 1 ZONE A10

REACH 2 ZONE A6

WARREN AVENUE

WARRENDALE

N. BND TELEGRAPH

S. BND TELEGRAPH

FORT BRIDGE

ELEVATION IN FEET (N.G.V.D.)

610

605

600

595

590

585

I J K L M N O P Q R S T U

8000 8500 9000 9500 10,000 10,500 11,000 11,500 12,000 12,500 13,000 13,500 14,000 14,500 15,000 15,500 16,000

DISTANCE IN FEET

LEGEND

500 YEAR WATER SURFACE

100 YEAR WATER SURFACE

50 YEAR WATER SURFACE

10 YEAR WATER SURFACE

STREAM CHANNEL BOTTOM

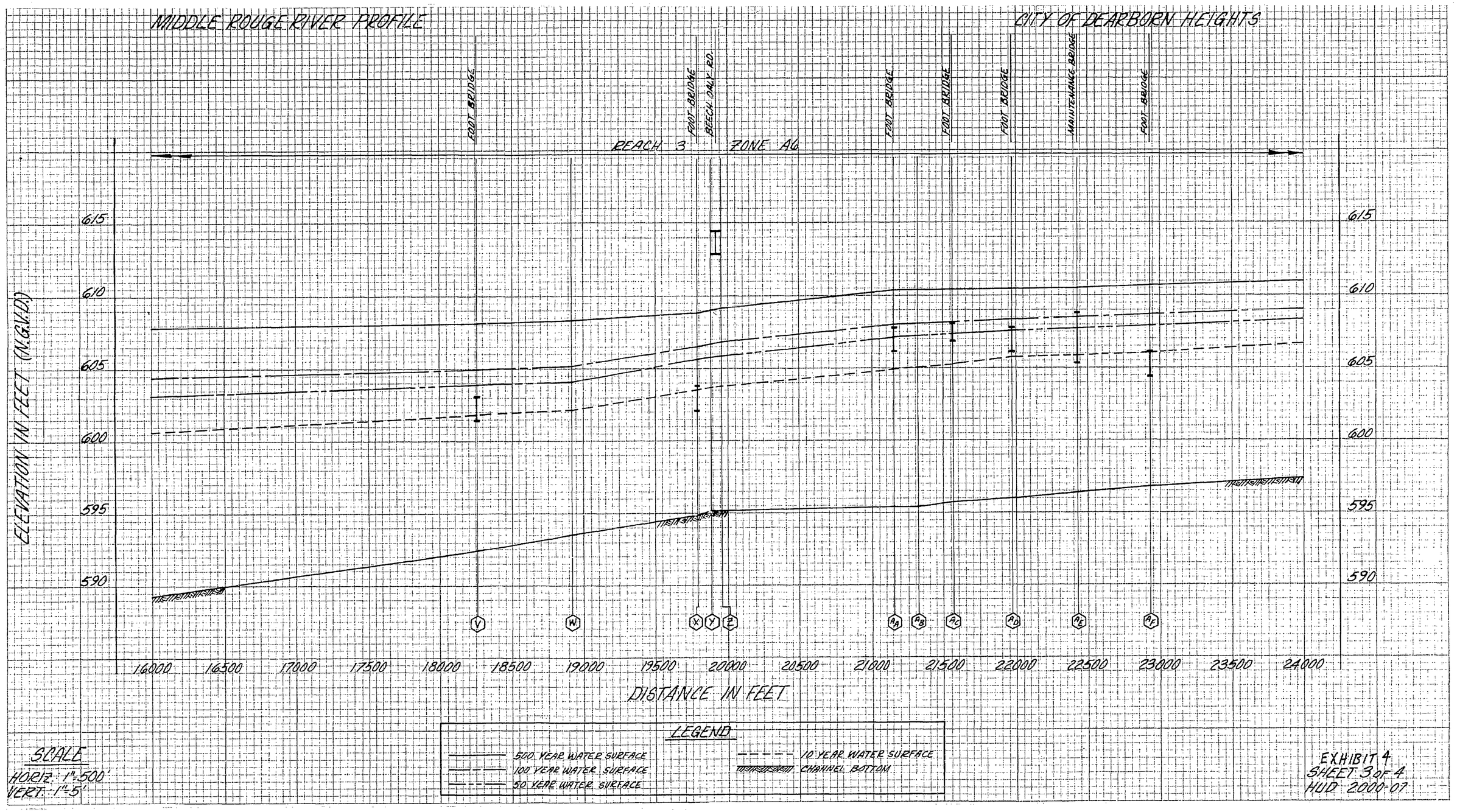
SCALE
HORIZ. 1"=500'
VERT. 1"=5'

REC'D
NOV 14 1990
WATER MANAGEMENT

SHEET 2 OF 4
HUD 2000-10

MIDDLE ROUGE RIVER PROFILE

CITY OF DEARBORN HEIGHTS

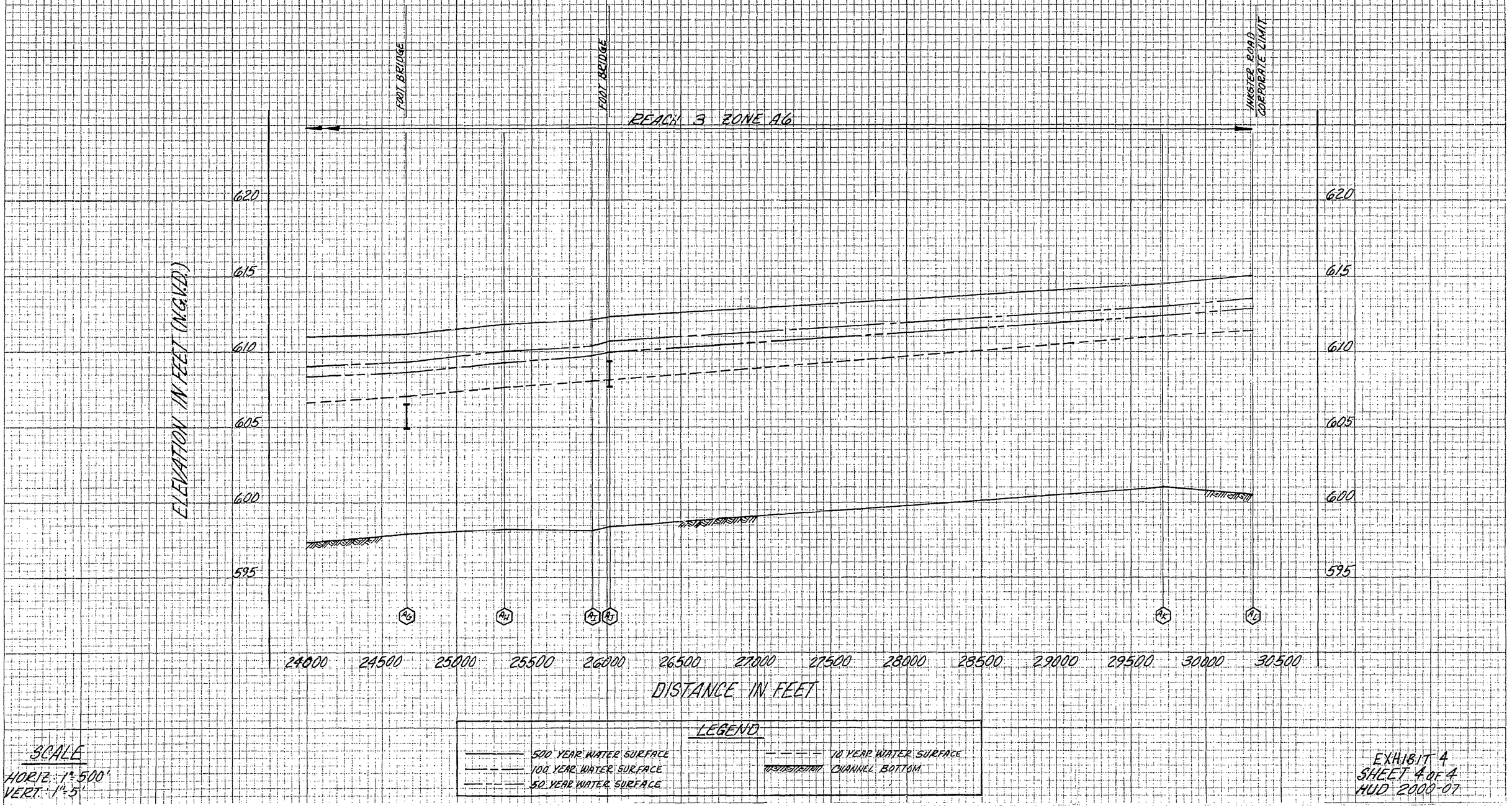


SCALE
HORIZ: 1"=500'
VERT: 1"=5'

EXHIBIT 4
SHEET 3 OF 4
HUD 2000-07

MIDDLE ROUGE RIVER PROFILE

CITY OF DEARBORN HEIGHTS



LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

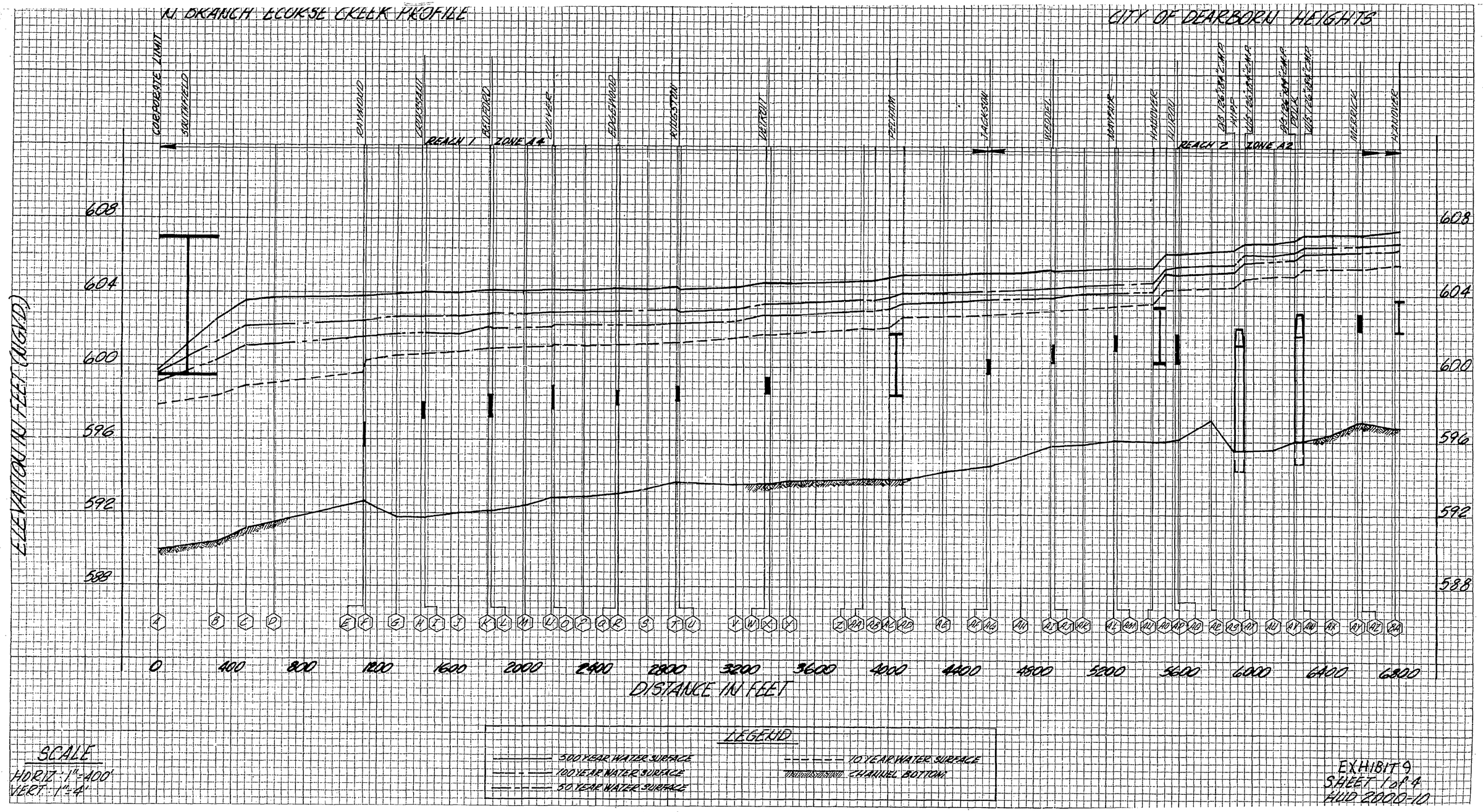
SCALE

HORIZ. 1"=500'
VERT. 1"=5'

EXHIBIT 4
SHEET 4 OF 4
HUD 2000-07

N. BRANCH ECORSE CREEK PROFILE

CITY OF DEARBORN HEIGHTS



LEGEND

——— 500 YEAR WATER SURFACE
— — — 100 YEAR WATER SURFACE
– – – – – 50 YEAR WATER SURFACE
– – – – – 10 YEAR WATER SURFACE
STABILIZED CHANNEL BOTTOM

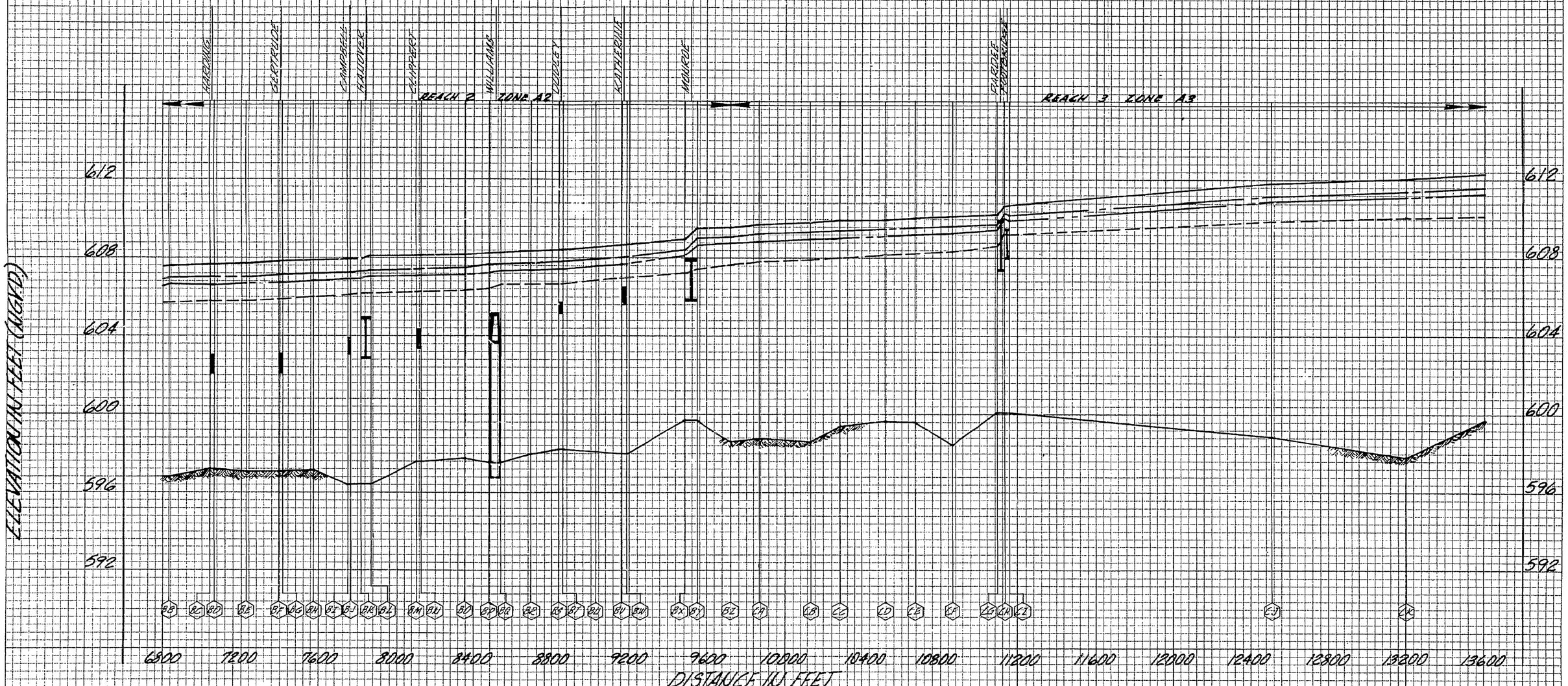
SCALE
HORIZ. 1" = 400'
VERT. 1" = 4'

EXHIBIT 9
SHEET 1 OF 4
HUD 2000-10

KEUFFEL & ESSER CO.
10 X 10 TO THE INCH
KEUFFEL & ESSER CO.
MADE IN U.S.A.

W. BRANCH ECORSE CREEK PROFILE

CITY OF DEARBORN HEIGHTS



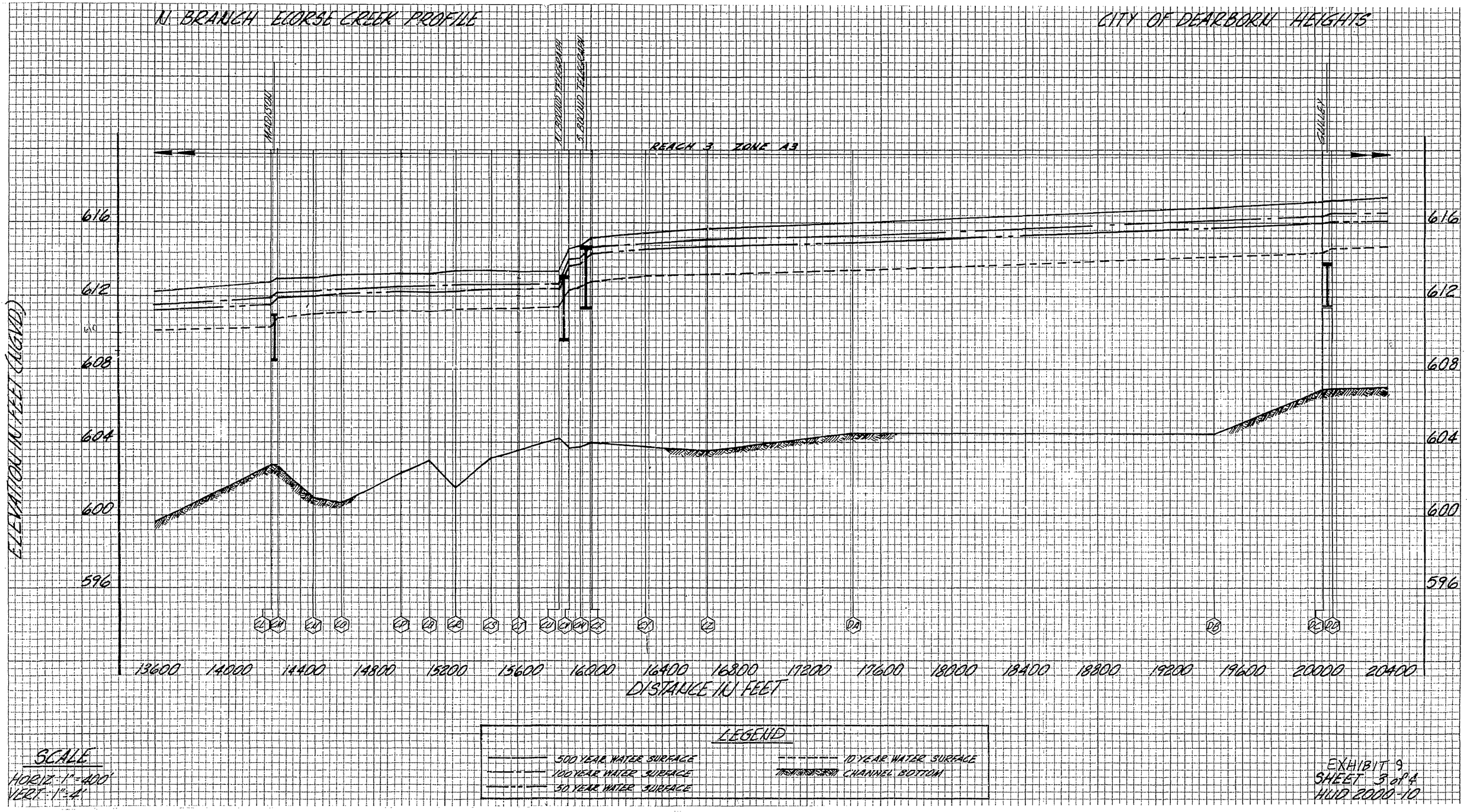
LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

SCALE

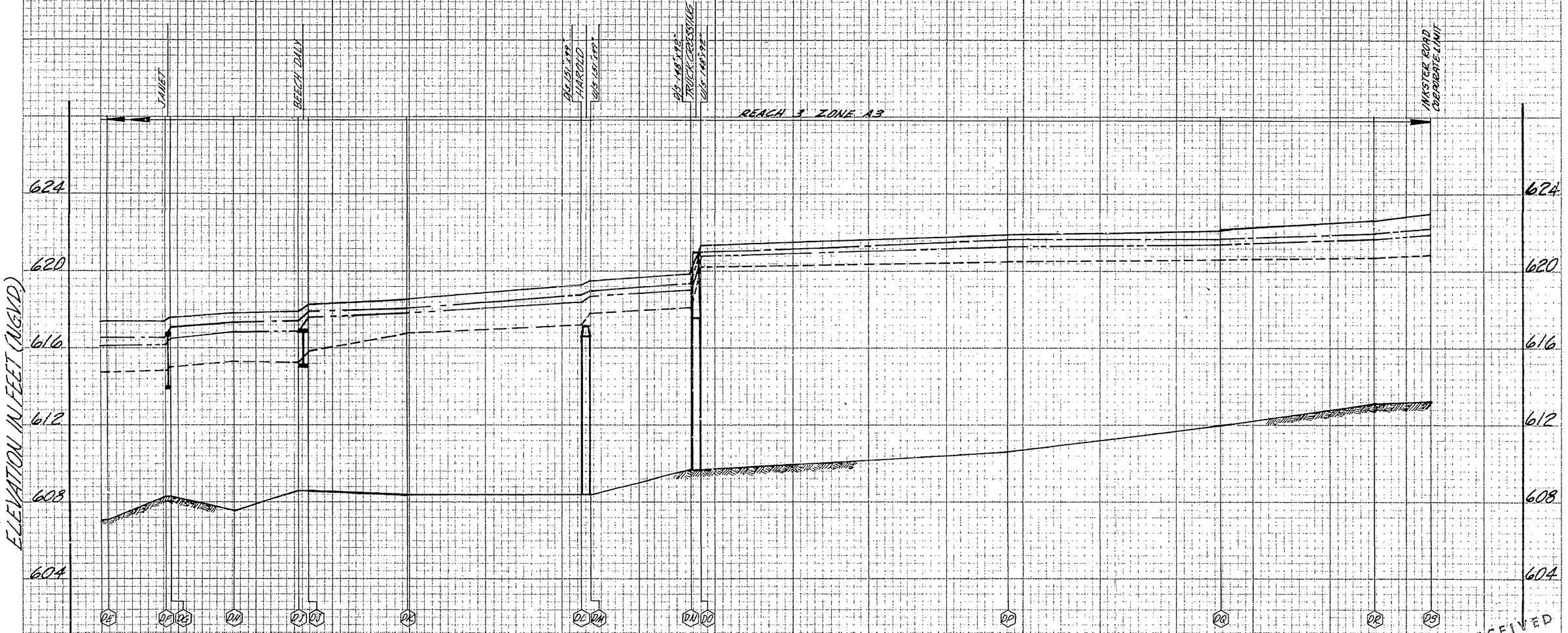
HORIZ. 1"=400'
VERT. 1"=4'

EXHIBIT 9
SHEET 2 of 4
HUD 2000-10


N. BRANCH ECORSE CREEK PROFILE
CITY OF DEARBORN HEIGHTS
MADISON
N. BOUND TELEGRAPH
S. BOUND TELEGRAPH
GALLEY
REACH 3 ZONE A3
ELEVATION IN FEET (NGVD)
616
612
608
604
600
596
CL
CM
CN
CO
CP
CQ
CR
CS
CT
CU
CV
CW
CX
CY
CZ
DA
DB
DC
DD
13600
14000
14400
14800
15200
15600
16000
16400
16800
17200
17600
18000
18400
18800
19200
19600
20000
20400
DISTANCE IN FEET
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM
SCALE
HORIZ: 1"=400'
VERT: 1"=4'
EXHIBIT 9
SHEET 3 of 4
HUD 2000-10

N BRANCH ECORSE CREEK PROFILE

CITY OF DEARBORN HEIGHTS



LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- THALWEG CHANNEL BOTTOM

SCALE

HORIZ 1"=400'
VERT 1"=4'

SHEET 4 of 4
HUD 2000-10

RECEIVED
AUG 8 1980
WATER MANAGEMENT

EXHIBIT #7
pg 1 of 1
W.J.W.
7/29/80

FLOOD MAP

Dearborn Heights
Middle Rouge

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — A CROSS SECTION

CORPORATE BOUNDARIES

N

RECEIVED
AUG 8 1980
WATER MANAGEMENT

CITY OF DEARBORN HEIGHTS
WAYNE COUNTY, MICHIGAN

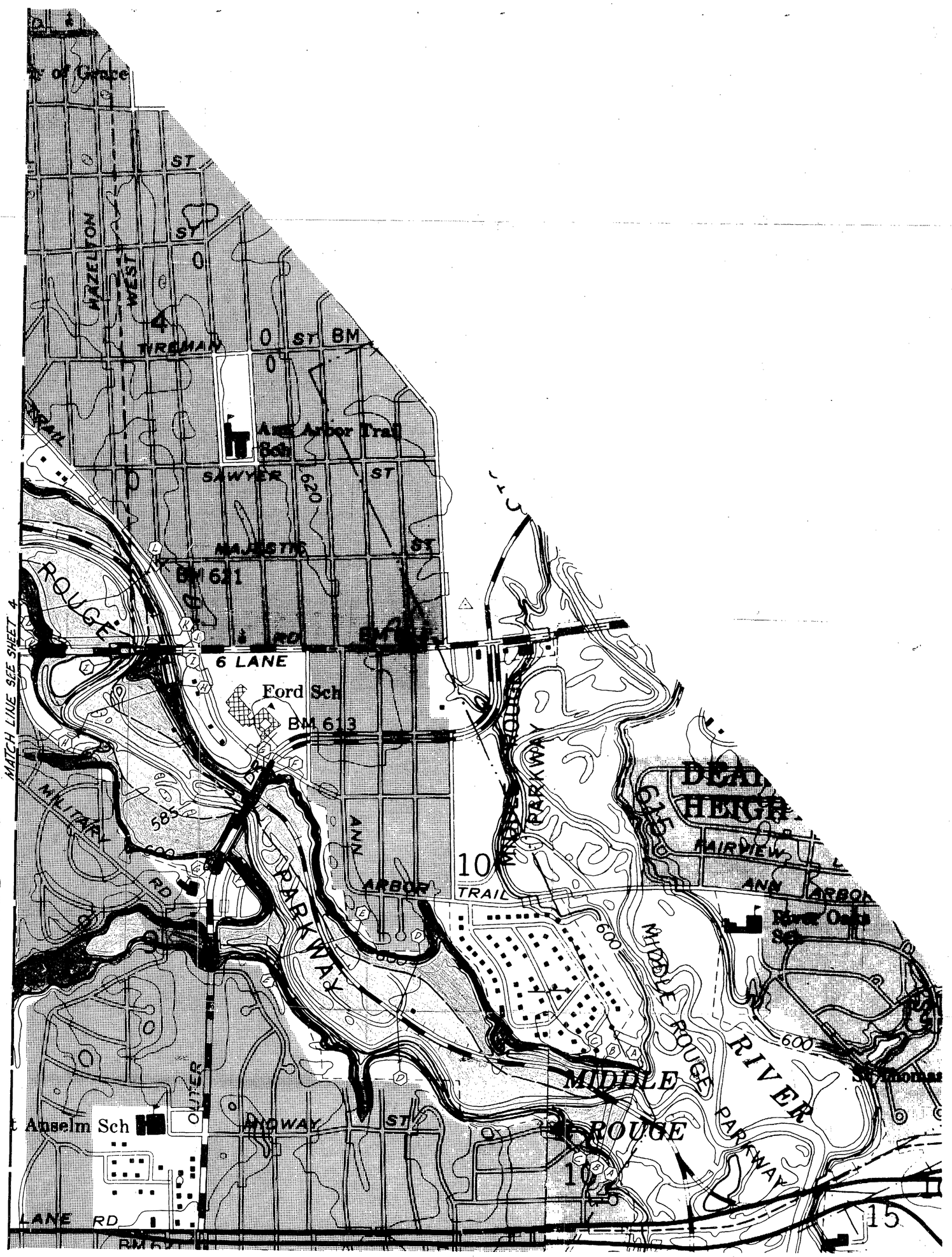
Rouge

EXHIBIT #3
Pg 1 of 2
U.J.W. 7/29/80

SHEET 4 OF 4

MATCH LINE SEE SHEET 3

Dearborn Heights
Middle Rouge



LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

(A)——(A) 2ROSS SECTION

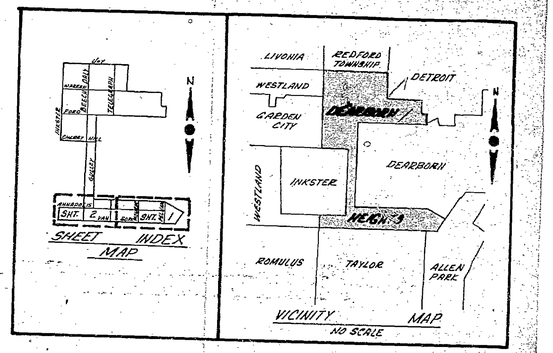
CORPORATE BOUNDARIES

FLOOD MAP

Aug 8, 1980
Resubmittal
Rouge

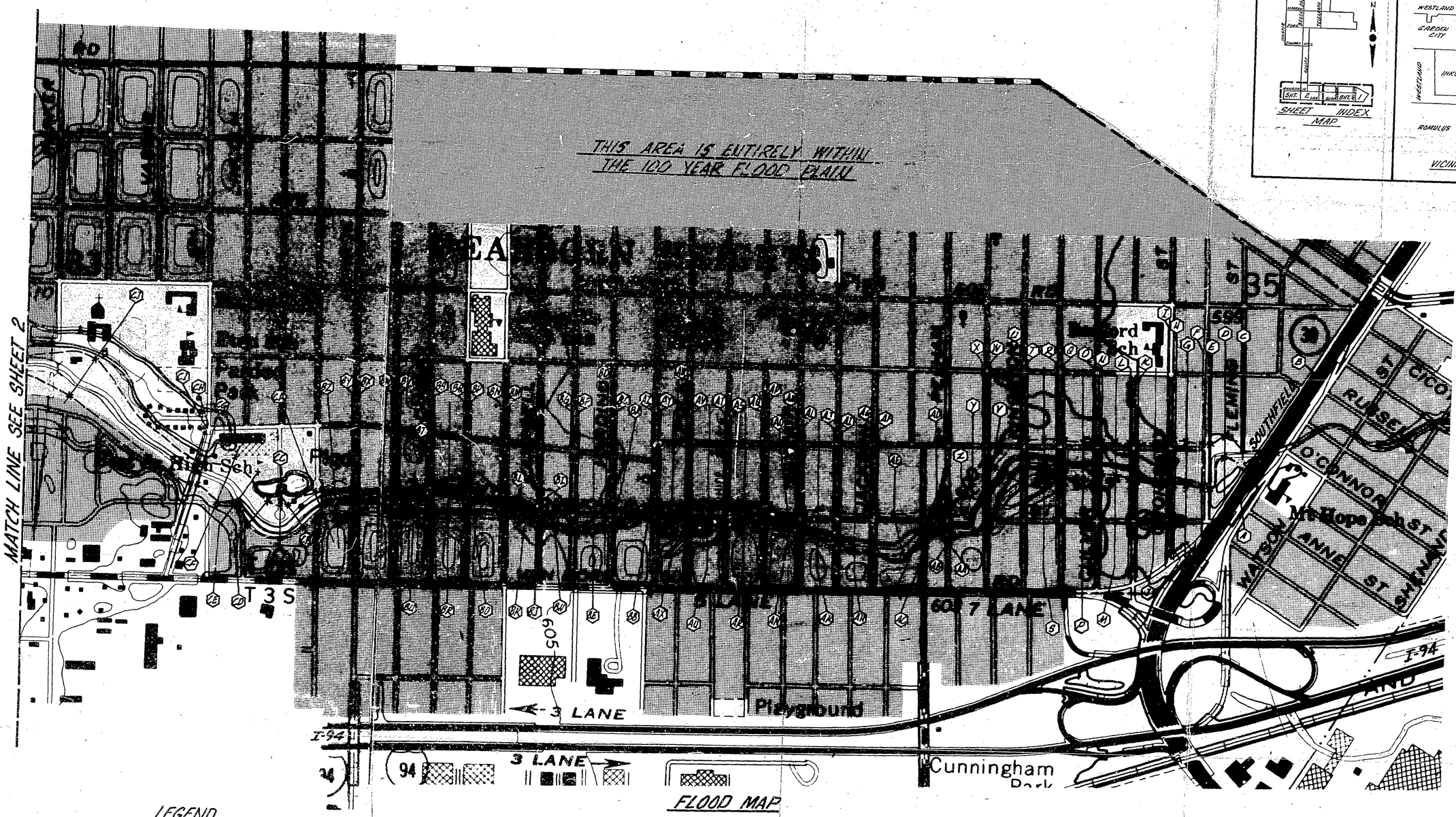
CITY OF DEARBORN HEIGHTS
WAYNE COUNTY, MICHIGAN

SHEET 3 of 4
HUD 2000



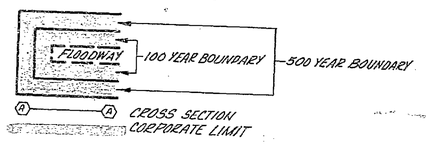
THIS AREA IS ENTIRELY WITHIN THE 100 YEAR FLOOD PLAIN

MATCH LINE SEE SHEET 2



FLOOD MAP

LEGEND



CITY OF DEARBORN HEIGHTS

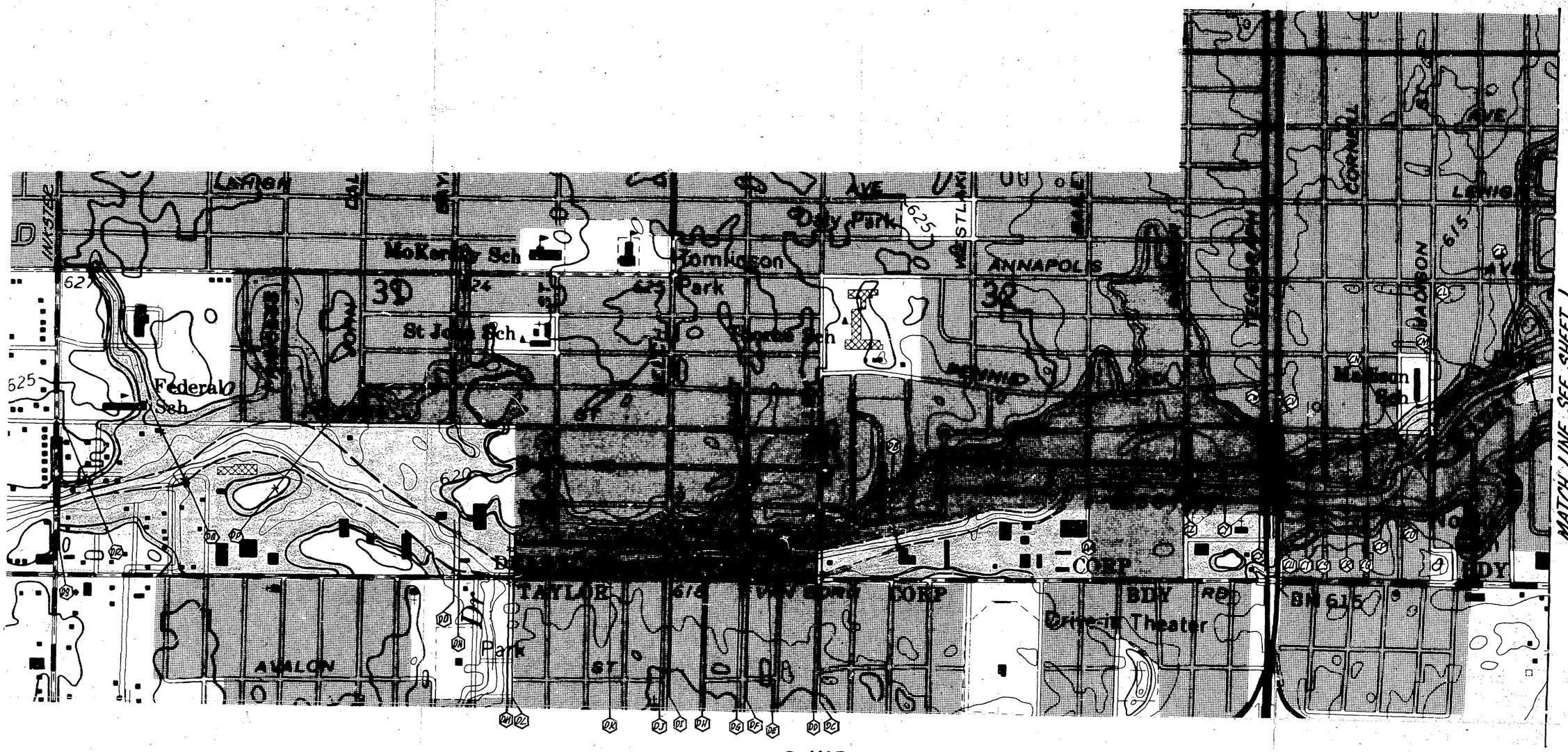
WAYNE COUNTY, MICHIGAN
SCALE: 1"=400'

RECEIVED
AUG 8 1980
WATER MANAGEMENT

Econe

EXHIBIT #4
pg 1 of 2
WJJ: 7/29/80

SHEET 1 OF 4
HDD 2000-10



FLOOD MAP

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — A CROSS SECTION

CORPORATE LIMIT

CITY OF DEARBORN HEIGHTS

WAYNE COUNTY, MICHIGAN

SCALE: 1"=400'

RECEIVED

AUG 8 1980

WATER MANAGEMENT

EXHIBIT #4

Pg 2 of 2

W.J.W. 7/29/80

SHEET 2 of 4

HUD 2000-10

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Grosse Ile Twp.

3) WATERCOURSE: Frenchman Twp.

4) DOCUMENT TYPE: Floodway

00BREAK00

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

T1  GROSSE ILE TWP. FIS HUD2008-07 FRENCHMAN CR. LK.E. TO G.C.  USGS DATUM
T2  Q-10YR.#100  Q-50YR.#180  Q-100YR.#200  Q-500YR.#200 ALL START AT MEAN LK.EL
T3      FRENCHMAN CR.-GROSSE ILE

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     W         WSEL      FQ
        0.        5.        0.        0.  0.0           0.0       0.0       0.   574.550     0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
   15.000       0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0    15.000
```


PRINTED IN U.S.A.

```
*PROF 2

CCHV=   0.100 CEHV=   0.300
*SECNO ,0
 2800 NAT Q1=   1130.59  WSEL=    574.45  ENC Q1=   1173.89  WSEL=    574.55  RATIO= -0.0383
 NAT Q1=   1187.  RATIOS LOB,CH,ROB=  0.0106  0.9887  0.0007  WSEL=    574.55
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3470 ENCROACHMENT STATIONS=     480.0     720.0  TYPE=     4  TARGET=       0.011

          SECTION SAME AS 1140

     0.0       5.43   574.55      0.0    574.45    574.55      0.00      0.0       0.0    572.92
    200.         0.    200.        0.       0.       850.        0.        0.        0.    572.87
     0.0       0.0       0.24      0.0      0.080     0.025     0.150     0.0     569.12   480.00
0.000003         0.        0.        0.       0         0         0       0.0     240.00   720.00

FLOW DISTRIBUTION FOR SECNO=      0.0          CWSEL=    574.55

STA=     480.     720.
  PER Q=    100.0
   AREA=    850.2
    VEL=      0.2

*SECNO 400.000
 2800 NAT Q1=   1131.28  WSEL=    574.45  ENC Q1=   1174.43  WSEL=    574.55  RATIO= -0.0381
 NAT Q1=   1188.  RATIOS LOB,CH,ROB=  0.0106  0.9887  0.0007  WSEL=    574.55

3470 ENCROACHMENT STATIONS=     480.0     720.0  TYPE=     4  TARGET=       0.011

          SECTION SAME AS 1140

   400.00      5.43   574.55      0.0    574.45    574.55      0.00      0.00      0.00   572.92
    200.         0.    200.        0.       0.       850.        0.        8.        2.    572.87
     0.47      0.0       0.24      0.0      0.080     0.025     0.150     0.025   569.12   480.00
0.000003       400.      400.      400.       0         0         0       0.0     240.00   720.00

FLOW DISTRIBUTION FOR SECNO=    400.00         CWSEL=    574.55

STA=     480.     720.
  PER Q=    100.0
   AREA=    850.4
    VEL=      0.2

*SECNO 800.000
 2800 NAT Q1=   1131.83  WSEL=    574.45  ENC Q1=   1175.10  WSEL=    574.55  RATIO= -0.0382
 NAT Q1=   1189.  RATIOS LOB,CH,ROB=  0.0106  0.9887  0.0007  WSEL=    574.55

3470 ENCROACHMENT STATIONS=     480.0     720.0  TYPE=     4  TARGET=       0.011

          SECTION SAME AS 1140

   800.00      5.43   574.55      0.0    574.45    574.55      0.00      0.00      0.00   572.92
    200.         0.    200.        0.       0.       851.        0.       16.        4.    572.87
     0.95      0.0       0.24      0.0      0.080     0.02      0.150     0.025   569.12   480.00
```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```
 .  .=   00.    .0 .    .0 .        0        0        0     0.0    240.00    720.00

FLOW DISTRIBUTION FOR SECNO=    800.00          CWSEL=    574.55

STA=      480.      720.
  PER Q=     100.0
   AREA=     850.6
    VEL=       0.2

*SECNO 1140.000
 2800 NAT Q1=    1132.38  WSEL=     574.45  ENC Q1=    1175.64  WSEL=     574.55  RATIO= -0.0382
 NAT Q1=    1189.  RATIOS LOB,CH,ROB=  0.0106  0.9887  0.0007  WSEL=     574.55

3470 ENCROACHMENT STATIONS=      480.0      720.0  TYPE=      4  TARGET=        0.011

          LEFT HALF OF 88+50 IN FIELD BOOK

  1140.00      5.43    574.55      0.0    574.45    574.55      0.00      0.00      0.00    572.92
     200.        0.     200.        0.        0.     851.        0.       22.        6.    572.87
     1.35       0.0      0.24      0.0     0.080     0.025     0.150     0.025    569.12    480.00
 0.000003      340.     340.      340.         0         0         0       0.0    240.00    720.00

FLOW DISTRIBUTION FOR SECNO=   1140.00          CWSEL=    574.55

STA=      480.      720.
  PER Q=     100.0
   AREA=     850.8
    VEL=       0.2

CCHV=    0.100 CEHV=    0.300
*SECNO 2090.000
 2800 NAT Q1=     719.19  WSEL=     574.46  ENC Q1=     719.19  WSEL=     574.56  RATIO=  0.0
 NAT Q1=     741.  RATIOS LOB,CH,ROB=  0.0049  0.9593  0.0358  WSEL=     574.56
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


3470 ENCROACHMENT STATIONS=      466.0      541.4  TYPE=      4  TARGET=        0.029

          79+00 IN FIELD BOOK

  2090.00      9.16    574.56      0.0    574.46    574.56      0.00      0.00      0.00    571.86
     200.        0.     198.        2.        0.     426.       28.       36.       10.    570.50
     1.92       0.0      0.46      0.08     0.080     0.030     0.100     0.027    565.40    466.00
 0.000008      950.     950.      950.         0         0         0       0.0     75.37    541.37

FLOW DISTRIBUTION FOR SECNO=   2090.00          CWSEL=    574.56

STA=      466.      534.      541.
  PER Q=      98.9       1.1
   AREA=     426.2      27.7
    VEL=       0.5       0.1

CCHV=    0.100 CEHV=    0.300
*SECNO 3640.000
 2800 NAT Q1=     655.52  WSEL=     574.47  ENC Q1=     660.91  WSEL=     574.57  RATIO= -0.0082
 NAT Q1=     672.  RATIOS LOB,CH,ROB=  0.0087  0.9834  0.0080  WSEL=     574.57

3470 ENCROACHMENT STATIONS=      325.0      375.0  TYPE=      4  TARGET=        0.017
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50+50 IN FIELD BOOK

3640.00	11.20	574.57	0.0	574.47	574.57	0.00	0.01	0.00	571.14
200.	0.	200.	0.	0.	365.	0.	51.	12.	571.16
2.71	0.0	0.55	0.0	0.090	0.030	0.080	0.028	563.37	325.00
0.000011	1550.	1550.	1550.	0	0	0	0.0	50.00	375.00

FLOW DISTRIBUTION FOR SECNO= 3640.00 CWSEL= 574.57

STA= 325. 375.
PER Q= 100.0
AREA= 365.4
VEL= 0.5

CCHV= 0.300 CEHV= 0.500
*SECNO 4945.000
2800 NAT Q1= 452.46 WSEL= 574.48 ENC Q1= 452.46 WSEL= 574.58 RATIO= 0.0000
NAT Q1= 467. RATIOS LOB,CH,ROB= 0.0220 0.9653 0.0128 WSEL= 574.58

3470 ENCROACHMENT STATIONS= 274.8 324.0 TYPE= 4 TARGET= 0.032

50+45 IN FIELD BOOK

4945.00	8.05	574.59	0.0	574.48	574.59	0.01	0.02	0.00	570.83
200.	0.	200.	0.	4.	283.	0.	61.	13.	570.69
3.22	0.08	0.71	0.0	0.080	0.030	0.060	0.029	566.54	274.79
0.000022	1305.	1305.	1305.	0	0	0	0.0	49.21	324.00

FLOW DISTRIBUTION FOR SECNO= 4945.00 CWSEL= 574.59

STA= 275. 276. 324.
PER Q= 0.2 99.8
AREA= 4.4 282.6
VEL= 0.1 0.7

*SECNO 5445.000
2800 NAT Q1= 454.11 WSEL= 574.49 ENC Q1= 454.11 WSEL= 574.59 RATIO= 0.0
NAT Q1= 469. RATIOS LOB,CH,ROB= 0.0221 0.9650 0.0128 WSEL= 574.59

3470 ENCROACHMENT STATIONS= 274.4 324.0 TYPE= 4 TARGET= 0.031

5445.00	8.06	574.60	0.0	574.49	574.60	0.01	0.01	0.00	570.83
200.	1.	199.	0.	6.	283.	0.	64.	14.	570.89
3.42	0.09	0.70	0.0	0.080	0.030	0.060	0.029	566.54	274.40
0.000021	500.	500.	500.	0	0	0	0.0	49.60	324.00

FLOW DISTRIBUTION FOR SECNO= 5445.00 CWSEL= 574.60

STA= 274. 276. 324.
PER Q= 0.3 99.7
AREA= 5.7 283.0
VEL= 0.1 0.7

*SECNO 6008.000
2800 NAT Q1= 62.17 WSEL= 574.46 ENC Q1= 62.17 WSEL= 574.55 RATIO= 0.0
NAT Q1= 66. RATIOS LOB,CH,ROB= 0.0107 0.9295 0.0598 WSEL= 574.55

3470 ENCROACHMENT STATIONS= 210.0 231.0 TYPE= 4 TARGET= 0.059

BASED ON FIELD NOTES SQUAD MAP

6008.00	3.85	574.55	0.0	574.46	574.72	0.17	0.04	0.08	572.70
200.	0.	198.	2.	0.	60.	2.	66.	14.	572.10
3.47	0.0	3.30	0.67	0.080	0.030	0.060	0.029	570.70	210.00

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FLOW DISTRIBUTION FOR SECNO= 6008.00 CWSEL= 574.55

STA=	210.	230.	231.
PER Q=	99.2	0.8	
AREA=	60.1	2.3	
VEL=	3.3	0.7	

*SECNO 6020.000
2800 NAT QI= 62.40 WSEL= 574.47 ENC QI= 62.40 WSEL= 574.57 RATIO= 0.0
NAT QI= 67. RATIOS LOB,CH,ROB= 0.0108 0.9290 0.0602 WSEL= 574.57

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
6020.00	3.87	574.57	0.0	574.47	574.74	0.17	0.01	0.00	572.70
200.	0.	199.	1.	0.	60.	2.	66.	14.	572.10
3.47	0.0	3.30	0.57	0.080	0.030	0.060	0.029	570.70	210.00
0.001174	12.	12.	12.	0	0	0	0.0	20.69	230.69

3470 ENCROACHMENT STATIONS= 210.0 230.7 TYPE= 4 TARGET= 0.062

FLOW DISTRIBUTION FOR SECNO= 6020.00 CWSEL= 574.57

STA=	210.	230.	231.
PER Q=	99.5	0.5	
AREA=	60.3	1.6	
VEL=	3.3	0.6	

*SECNO 6040.000
2800 NAT QI= 63.46 WSEL= 574.49 ENC QI= 63.46 WSEL= 574.59 RATIO= 0.0
NAT QI= 68. RATIOS LOB,CH,ROB= 0.0110 0.9281 0.0609 WSEL= 574.59

3470 ENCROACHMENT STATIONS= 210.0 231.0 TYPE= 4 TARGET= 0.060

6040.00	3.90	574.60	0.0	574.49	574.76	0.16	0.02	0.00	572.70
200.	0.	198.	2.	0.	61.	2.	66.	14.	572.10
3.47	0.0	3.27	0.66	0.080	0.030	0.060	0.029	570.70	210.00
0.001141	20.	20.	20.	0	0	0	0.0	20.97	230.97

FLOW DISTRIBUTION FOR SECNO= 6040.00 CWSEL= 574.60

STA=	210.	230.	231.
PER Q=	99.2	0.8	
AREA=	60.8	2.3	
VEL=	3.3	0.7	

CCHV= 0.300 CEHV= 0.500
*SECNO 6067.000
2800 NAT QI= 26.65 WSEL= 574.36 ENC QI= 28.24 WSEL= 574.46 RATIO= -0.0597
NAT QI= 28. RATIOS LOB,CH,ROB= 0.0 1.0000 0.0 WSEL= 574.46

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 577.43 MAX ELLC= 575.98

3470 ENCROACHMENT STATIONS= 210.0 223.0 TYPE= 4 TARGET= 0.0

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 577.00 ELREA= 579.00

D/S FACE OF GROH RD CULVERT. BASED ON FIELD NOTES &QUAD MAP

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6067.00	3.61	574.51	0.0	574.36	574.97	0.47	0.06	0.15	572.85
200.	0.	200.	0.	0.	37.	0.	66.	14.	572.27
3.47	0.0	5.47	0.0	0.060	0.035	0.060	0.029	570.90	210.00
0.006215	27.	27.	27.	2	0	0	0.0	13.00	223.00

FLOW DISTRIBUTION FOR SECNO= 6067.00 CWSEL= 574.51

STA= 210. 223.
PER Q= 100.0
AREA= 36.5
VEL= 5.5

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	1.35	3.00	0.0	4.32	0.0	23.76	0.0	570.02	570.48

*SECNO 6124.000

6070.LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.0 EGLWC= 575.244 ELLC= 575.980 PCWSE= 574.506 ELTRD= 577.430
2800 NAT Q1= 33.62 WSEL= 574.78 ENC Q1= 35.37 WSEL= 574.88 RATIO= -0.0521
NAT Q1= 35. RATIOS LOB,CH,ROB= 0.0 1.0000 0.0 WSEL= 574.88
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3470 ENCROACHMENT STATIONS= 210.0 223.0 TYPE= 4 TARGET= 0.0

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 577.43 ELREA= 579.64

U/S FACE OF GROH RD CULVERT, BASED ON FIELD NOTES &QUAD MAP

6124.00	4.03	574.93	0.0	574.78	575.28	0.35	0.29	0.03	572.85
200.	0.	200.	0.	0.	42.	0.	67.	15.	572.27
3.47	0.0	4.76	0.0	0.060	0.035	0.060	0.029	570.90	210.00
0.004158	57.	57.	57.	0	0	0	0.0	13.00	223.00

FLOW DISTRIBUTION FOR SECNO= 6124.00 CWSEL= 574.93

STA= 210. 223.
PER Q= 100.0
AREA= 42.0
VEL= 4.8

CCHV= 0.100 CEHV= 0.300
*SECNO 6198.000

3470 ENCROACHMENT STATIONS= 220.0 399.0 TYPE= 1 TARGET= 179.000
ELENCL= 577.00 ELENCR= 80.10

6198.00	3.58	575.38	0.0	575.27	575.43	0.05	0.12	0.03	572.70
200.	114.	82.	3.	138.	31.	6.	67.	15.	572.80
3.49	0.83	2.65	0.59	0.080	0.035	0.080	0.029	571.80	220.00
0.000881	74.	74.	74.	2	0	0	0.0	88.42	308.42

FLOW DISTRIBUTION FOR SECNO= 6198.00 CWSEL= 575.38

STA=	220.	294.	306.	308.
PER Q=	57.1	41.2	1.7	
AREA=	138.0	31.1	8.7	
VEL=	0.8	.7	0.6	

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CCHV= 0.100 CEHV= 0.300
*SECNO 7095.000
2800 NAT Q1= 127.01 WSEL= 575.73 ENC Q1= 127.01 WSEL= 575.83 RATIO= 0.0
NAT Q1= 138. RATIOS LOB,CH,ROB= 0.6252 0.3278 0.0469 WSEL= 575.83

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 276.2 461.5 TYPE= 4 TARGET= 0.078

7095.00	3.42	575.81	0.0	575.73	575.82	0.01	0.39	0.00	573.94
200.	127.	71.	2.	361.	65.	8.	73.	17.	574.55
3.89	0.35	1.10	0.20	0.120	0.040	0.120	0.031	572.39	276.23
0.000253	897.	897.	897.	2	0	0	0.0	185.24	461.47

FLOW DISTRIBUTION FOR SECNO= 7095.00 CWSEL= 575.81

STA=	276.	313.	363.	430.	455.	461.
PER Q=	8.2	23.9	31.5	35.5	0.8	
AREA=	61.1	129.1	171.0	64.7	7.9	
VEL=	0.3	0.4	0.4	1.1	0.2	

*SECNO 7600.000
2800 NAT Q1= 115.40 WSEL= 575.87 ENC Q1= 115.40 WSEL= 575.97 RATIO= 0.0
NAT Q1= 126. RATIOS LOB,CH,ROB= 0.6271 0.3339 0.0390 WSEL= 575.97

3470 ENCROACHMENT STATIONS= 281.7 455.0 TYPE= 4 TARGET= 0.081

7600.00	3.31	575.95	0.0	575.87	575.96	0.01	0.14	0.00	574.19
200.	129.	71.	0.	336.	62.	0.	78.	19.	574.80
4.10	0.38	1.15	0.0	0.120	0.040	0.120	0.031	572.64	281.72
0.000314	505.	505.	505.	1	0	0	0.0	173.28	455.00

FLOW DISTRIBUTION FOR SECNO= 7600.00 CWSEL= 575.95

STA=	282.	313.	363.	430.	455.
PER Q=	7.2	24.7	32.5	35.6	
AREA=	49.7	123.4	163.3	61.8	
VEL=	0.3	0.4	0.4	1.2	

*SECNO 8215.000
2800 NAT Q1= 59.31 WSEL= 576.17 ENC Q1= 59.31 WSEL= 576.27 RATIO= 0.0
NAT Q1= 66. RATIOS LOB,CH,ROB= 0.4050 0.3896 0.2054 WSEL= 576.27

3470 ENCROACHMENT STATIONS= 209.7 338.8 TYPE= 4 TARGET= 0.096

8215.00	3.32	576.26	0.0	576.17	576.31	0.04	0.33	0.01	573.98
200.	79.	86.	35.	133.	36.	61.	82.	22.	574.25
4.23	0.59	2.43	0.57	0.120	0.040	0.120	0.032	572.94	209.72
0.001147	615.	615.	615.	2	0	0	0.0	129.04	338.75

FLOW DISTRIBUTION FOR SECNO= 8215.00 CWSEL= 576.26

STA=	210.	288.	301.	339.
PER Q=	39.8	43.2	17.4	
AREA=	133.1	35.5	61.4	
VEL=	0.6	2.4	0.6	

*SECNO 8800.000
2800 NAT Q1= 84.55 WSEL= 576.64 ENC Q1= 84.55 WSEL= 576.74 RATIO= 0.0
NAT Q1= 92. RATIOS LOB,CH,ROB= 0.4286 0.3430 0.2284 WSEL= 576.74

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	ENT STATIONS=				TYPE=	4	TARGET=		0.068	
8800.00	3.70	576.74	0.0	576.64	576.76	0.02	0.45	0.00	574.08	
200.	84.	75.	41.	186.	40.	93.	86.	24.	574.35	
4.40	0.45	1.85	0.44	0.120	0.040	0.120	0.032	573.04	192.16	
0.000562	585.	585.	585.	0	0	0	0.0	158.22	350.38	

FLOW DISTRIBUTION FOR SECNO= 8800.00 CWSEL= 576.74

STA=	192.	288.	301.	350.
PER Q=	42.2	37.4	20.4	
AREA=	186.2	40.4	92.9	
VEL=	0.5	1.9	0.4	

CCHV= 0.100 CERV= 0.300

*SECNO 9415.000

2800 NAT Q1= 169.53 WSEL= 576.81 ENC Q1= 169.53 WSEL= 576.91 RATIO= 0.0

NAT Q1= 182. RATIOS LOB,CH,ROB= 0.2772 0.3539 0.3689 WSEL= 576.91

3470 ENCROACHMENT STATIONS=			143.3	336.0	TYPE=	4	TARGET=		0.068	
9415.00	3.79	576.91	0.0	576.81	576.92	0.01	0.15	0.00	573.97	
200.	53.	76.	72.	165.	68.	239.	92.	26.	573.91	
4.67	0.32	1.12	0.30	0.100	0.035	0.100	0.033	573.12	143.26	
0.000137	615.	615.	615.	2	0	0	0.0	192.76	336.02	

FLOW DISTRIBUTION FOR SECNO= 9415.00 CWSEL= 576.91

STA=	143.	144.	209.	229.	275.	336.
PER Q=	0.1	26.3	37.8	20.6	15.2	
AREA=	1.5	163.3	67.6	122.7	115.8	
VEL=	0.1	0.3	1.1	0.3	0.3	

*SECNO 9990.000

2600 NAT Q1= 165.31 WSEL= 576.89 ENC Q1= 165.31 WSEL= 576.99 RATIO= 0.0

NAT Q1= 177. RATIOS LOB,CH,ROB= 0.2766 0.3564 0.3670 WSEL= 576.99

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS=			143.4	335.4	TYPE=	4	TARGET=		0.068	
9990.00	3.75	576.99	0.0	576.89	577.00	0.01	0.08	0.00	574.09	
200.	53.	76.	71.	162.	67.	233.	98.	29.	574.03	
4.93	0.33	1.14	0.31	0.100	0.035	0.100	0.033	573.24	143.41	
0.000146	575.	575.	575.	0	0	0	0.0	192.02	335.43	

FLOW DISTRIBUTION FOR SECNO= 9990.00 CWSEL= 576.99

STA=	143.	144.	209.	229.	275.	335.
PER Q=	0.1	26.3	38.1	20.6	15.0	
AREA=	1.2	160.5	66.7	120.7	112.3	
VEL=	0.1	0.3	1.1	0.3	0.3	

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HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FRENCHMAN CR.-GROSSE ILE

SUMMARY PRINTOUT

CWSEL	.01K	PERENC	TOPWID	STENCL	STENCR	WSELK
574.450	1130.59	0.0	340.08	0.0	0.0	574.45
574.550	1162.72	0.01	240.00	480.00	720.00	574.45
574.451	1131.28	0.0	340.16	0.0	0.0	0.0
574.551	1163.25	0.01	240.00	480.00	720.00	574.45
574.452	1131.83	0.0	340.22	0.0	0.0	0.0
574.552	1163.65	0.01	240.00	480.00	720.00	574.45
574.453	1132.38	0.0	340.29	0.0	0.0	0.0
574.553	1164.18	0.01	240.00	480.00	720.00	574.45
574.456	719.19	0.0	173.10	0.0	0.0	0.0
574.555	699.86	0.03	75.37	466.00	541.37	574.46
574.468	655.52	0.0	84.57	0.0	0.0	0.0
574.569	607.73	0.02	50.00	325.00	375.00	574.47
574.483	452.46	0.0	102.55	0.0	0.0	0.0
574.586	430.39	0.03	49.21	274.79	324.00	574.48
574.493	454.11	0.0	103.22	0.0	0.0	0.0
574.597	431.77	0.03	49.60	274.40	324.00	574.49
574.455	62.17	0.0	35.32	0.0	0.0	0.0
574.554	58.21	0.06	20.97	210.00	230.97	574.46
574.468	62.40	0.0	35.36	0.0	0.0	0.0
574.568	58.36	0.06	20.69	210.00	230.69	574.47
574.492	63.46	0.0	35.56	0.0	0.0	0.0
574.596	59.21	0.06	20.97	210.00	230.97	574.49
574.360	26.65	0.0	13.00	0.0	0.0	0.0
574.506	25.37	0.0	13.00	210.00	223.00	574.36
574.781	33.62	0.0	13.00	0.0	0.0	0.0
574.928	31.02	0.0	13.00	210.00	223.00	574.78

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CWSEL	.01K	PERENC	TOPWID	STENCL	STENCR	WSELK
575.271	62.02	179.00	88.24	220.00	399.00	0.0
575.381	67.38	179.00	88.42	220.00	399.00	575.27
575.730	127.01	0.0	380.77	0.0	0.0	0.0
575.813	125.69	0.08	185.24	276.23	461.47	575.73
575.866	115.40	0.0	356.80	0.0	0.0	0.0
575.955	112.79	0.08	173.28	281.72	455.00	575.87
576.168	59.31	0.0	227.51	0.0	0.0	0.0
576.264	59.06	0.10	129.04	209.72	338.75	576.17
576.640	84.55	0.0	249.87	0.0	0.0	0.0
576.742	84.37	0.08	158.22	192.16	350.39	576.64
576.805	169.53	0.0	264.59	0.0	0.0	0.0
576.908	170.56	0.07	192.76	143.26	336.02	576.81
576.887	165.31	0.0	263.44	0.0	0.0	0.0
576.989	165.72	0.07	192.02	143.41	335.43	576.89

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SUMMARY PRINTOUT TABLE 110

SECNO	CHSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
0.0	574.45	0.0	574.45	340.08	1.88	197.99	0.12	0.0	0.0	480.00	720.00	0.0
0.0	574.55	0.10	574.55	240.00	0.0	200.00	0.0	0.01	480.00	480.00	720.00	720.00
400.000	574.45	0.0	574.45	340.16	1.88	197.99	0.12	0.0	0.0	480.00	720.00	0.0
400.000	574.55	0.10	574.55	240.00	0.0	200.00	0.0	0.01	480.00	480.00	720.00	720.00
800.000	574.45	0.0	574.45	340.22	1.89	197.99	0.12	0.0	0.0	480.00	720.00	0.0
800.000	574.55	0.10	574.55	240.00	0.0	200.00	0.0	0.01	480.00	480.00	720.00	720.00
1140.000	574.45	0.0	574.45	340.29	1.89	197.99	0.12	0.0	0.0	480.00	720.00	0.0
1140.000	574.55	0.10	574.55	240.00	0.0	200.00	0.0	0.01	480.00	480.00	720.00	720.00
2090.000	574.46	0.0	574.46	173.10	0.81	192.36	6.82	0.0	0.0	466.00	534.00	0.0
2090.000	574.56	0.10	574.56	75.37	0.0	197.81	2.19	0.03	466.00	466.00	534.00	541.37
3640.000	574.47	0.0	574.47	84.57	1.59	196.90	1.50	0.0	0.0	325.00	375.00	0.0
3640.000	574.57	0.10	574.57	50.00	0.0	200.00	0.0	0.02	325.00	325.00	375.00	375.00
4945.000	574.48	0.0	574.49	102.55	4.04	193.52	2.44	0.0	0.0	276.00	324.00	0.0
4945.000	574.59	0.10	574.59	49.21	0.36	199.64	0.0	0.03	274.79	276.00	324.00	324.00
5445.000	574.49	0.0	574.50	103.22	4.08	193.47	2.46	0.0	0.0	276.00	324.00	0.0
5445.000	574.60	0.10	574.60	49.60	0.54	199.46	0.0	0.03	274.40	276.00	324.00	324.00
6008.000	574.46	0.0	574.61	35.32	1.95	186.67	11.38	0.0	0.0	210.00	230.00	0.0
6008.000	574.55	0.10	574.72	20.97	0.0	198.47	1.53	0.06	210.00	210.00	230.00	230.97
6020.000	574.47	0.0	574.62	35.36	1.96	186.62	11.41	0.0	0.0	210.00	230.00	0.0
6020.000	574.57	0.10	574.74	20.69	0.0	199.07	0.93	0.06	210.00	210.00	230.00	230.69
6040.000	574.49	0.0	574.64	35.56	2.01	186.41	11.58	0.0	0.0	210.00	230.00	0.0
6040.000	574.60	0.10	574.76	20.97	0.0	198.47	1.53	0.06	210.00	210.00	230.00	230.97
6067.000	574.36	0.0	574.88	13.00	0.0	200.00	0.0	0.0	0.0	210.00	223.00	0.0
6067.000	574.51	0.15	574.97	13.00	0.0	200.00	0.0	0.0	210.00	210.00	223.00	223.00
6124.000	574.78	0.0	575.17	13.00	0.0	200.00	0.0	0.0	0.0	210.00	223.00	0.0
6124.000	574.93	0.15	575.28	13.00	0.0	200.00	0.0	0.0	210.00	210.00	223.00	223.00
6198.000	575.27	0.0	575.33	88.24	112.27	84.45	3.28	179.00	220.00	294.00	304.00	399.00
6198.000	575.38	0.11	575.43	88.42	114.13	82.49	3.38	179.00	220.00	294.00	304.00	399.00
7095.000	575.73	0.0	575.74	380.77	125.38	66.64	7.98	0.0	0.0	430.00	455.00	0.0
7095.000	575.81	0.08	575.82	185.24	127.33	71.09	1.58	0.08	276.23	430.00	455.00	461.47
7600.000	575.87	0.0	575.87	356.80	125.67	67.86	6.47	0.0	0.0	430.00	455.00	0.0
7600.000	575.95	0.09	575.96	173.28	128.86	71.14	0.0	0.08	281.72	430.00	455.00	455.00
8215.000	576.17	0.0	576.21	227.51	79.49	81.03	39.47	0.0	0.0	288.00	301.00	0.0
8215.000	576.26	0.10	576.31	129.04	78.80	86.35	34.85	0.10	209.72	288.00	301.00	336.75
8800.000	576.64	0.0	576.66	249.87	84.56	70.80	44.63	0.0	0.0	286.00	301.00	0.0
8800.000	576.74	0.10	576.76	158.22	84.40	74.83	40.77	0.08	192.16	288.00	301.00	350.39

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SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
9415.000	576.81	0.0	576.81	264.59	55.11	72.15	72.74	0.0	0.0	209.00	229.00	0.0
9415.000	576.91	0.10	576.92	192.76	52.79	75.61	71.60	0.07	143.26	209.00	229.00	336.02
9990.000	576.89	0.0	576.90	263.44	54.99	72.65	72.36	0.0	0.0	209.00	229.00	0.0
9990.000	576.99	0.10	577.00	192.02	52.70	76.14	71.16	0.07	143.41	209.00	229.00	335.43

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FRENCHMAN CR.-GROSSE ILE

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	FG	10K*S	VCH	AREA	.01K
0.0	0.0	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	903.00	1130.59
0.0	0.0	0.0	0.0	569.12	200.00	574.55	0.0	574.55	0.03	0.24	850.20	1162.72
400.000	400.00	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	903.41	1131.28
400.000	400.00	0.0	0.0	569.12	200.00	574.55	0.0	574.55	0.03	0.24	850.43	1163.25
800.000	400.00	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	903.75	1131.83
800.000	400.00	0.0	0.0	569.12	200.00	574.55	0.0	574.55	0.03	0.24	850.61	1163.65
1140.000	340.00	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	904.08	1132.38
1140.000	340.00	0.0	0.0	569.12	200.00	574.55	0.0	574.55	0.03	0.24	850.84	1164.18
2090.000	950.00	0.0	0.0	565.40	200.00	574.46	0.0	574.46	0.08	0.46	537.69	719.19
2090.000	950.00	0.0	0.0	565.40	200.00	574.56	0.0	574.56	0.08	0.46	453.86	699.86
3640.000	1550.00	0.0	0.0	563.37	200.00	574.47	0.0	574.47	0.09	0.55	403.05	655.52
3640.000	1550.00	0.0	0.0	563.37	200.00	574.57	0.0	574.57	0.11	0.55	365.42	607.73
4945.000	1305.00	0.0	0.0	566.54	200.00	574.48	0.0	574.49	0.20	0.70	330.68	452.46
4945.000	1305.00	0.0	0.0	566.54	200.00	574.59	0.0	574.59	0.22	0.71	286.99	430.39
5445.000	500.00	0.0	0.0	566.54	200.00	574.49	0.0	574.50	0.19	0.70	331.88	454.11
5445.000	500.00	0.0	0.0	566.54	200.00	574.60	0.0	574.60	0.21	0.70	288.75	431.77
6008.000	563.00	0.0	0.0	570.70	200.00	574.46	0.0	574.61	10.35	3.21	74.85	62.17
6008.000	563.00	0.0	0.0	570.70	200.00	574.55	0.0	574.72	11.80	3.30	62.39	58.21
6020.000	12.00	0.0	0.0	570.70	200.00	574.47	0.0	574.62	10.27	3.21	75.07	62.40
6020.000	12.00	0.0	0.0	570.70	200.00	574.57	0.0	574.74	11.74	3.30	61.98	58.36
6040.000	20.00	0.0	0.0	570.70	200.00	574.49	0.0	574.64	9.93	3.17	76.05	63.46
6040.000	20.00	0.0	0.0	570.70	200.00	574.60	0.0	574.76	11.41	3.27	63.08	59.21
6067.000	27.00	577.43	575.98	570.90	200.00	574.36	0.0	574.88	56.30	5.77	34.64	26.65
6067.000	27.00	577.43	575.98	570.90	200.00	574.51	0.0	574.97	62.15	5.47	36.54	25.37
6124.000	57.00	577.43	575.98	570.90	200.00	574.78	0.0	575.17	35.40	4.99	40.09	33.62
6124.000	57.00	999999.00	0.0	570.90	200.00	574.93	0.0	575.28	41.58	4.76	42.01	31.02
6198.000	74.00	0.0	0.0	571.80	200.00	575.27	0.0	575.33	10.40	2.81	165.16	62.02
6198.000	74.00	0.0	0.0	571.80	200.00	575.38	0.0	575.43	8.81	2.65	174.77	67.38
7095.000	897.00	0.0	0.0	572.39	200.00	575.73	0.0	575.74	2.48	1.06	524.36	127.01
7095.000	897.00	0.0	0.0	572.39	200.00	575.81	0.0	575.82	2.53	1.10	433.85	125.69
7600.000	505.00	0.0	0.0	572.64	200.00	575.87	0.0	575.87	3.00	1.14	402.27	115.40
7600.000	505.00	0.0	0.0	572.64	200.00	575.95	0.0	575.96	3.14	1.15	398.19	112.79
8215.000	615.00	0.0	0.0	572.94	200.00	576.17	0.0	576.21	11.37	2.36	277.95	59.31
8215.000	615.00	0.0	0.0	572.94	200.00	576.26	0.0	576.31	11.47	2.43	230.04	59.06
8800.000	585.00	0.0	0.0	573.04	200.00	576.64	0.0	576.66	5.60	1.81	366.52	84.55
8800.000	585.00	0.0	0.0	573.04	200.00	576.74	0.0	576.76	5.62	1.85	319.46	84.37

PRINTED IN U.S.A.

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
9415.000	615.00	0.0	0.0	573.12	200.00	576.81	0.0	576.81	1.39	1.10	518.10	169.53
9415.000	615.00	0.0	0.0	573.12	200.00	576.91	0.0	576.92	1.37	1.12	471.05	170.56
9990.000	575.00	0.0	0.0	573.24	200.00	576.89	0.0	576.90	1.46	1.12	508.68	165.31
9990.000	575.00	0.0	0.0	573.24	200.00	576.99	0.0	577.00	1.46	1.14	461.42	165.72

PRINTED IN U.S.A.

FRENCHMAN CR.-GROSSE ILE

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.0	200.00	574.45	0.0	0.0	0.0	340.08	0.0
0.0	200.00	574.55	0.10	0.0	0.10	240.00	0.0
400.000	200.00	574.45	0.0	0.00	0.0	340.16	400.00
400.000	200.00	574.55	0.10	0.00	0.10	240.00	400.00
800.000	200.00	574.45	0.0	0.00	0.0	340.22	400.00
800.000	200.00	574.55	0.10	0.00	0.10	240.00	400.00
1140.000	200.00	574.45	0.0	0.00	0.0	340.29	340.00
1140.000	200.00	574.55	0.10	0.00	0.10	240.00	340.00
2090.000	200.00	574.46	0.0	0.00	0.0	173.10	950.00
2090.000	200.00	574.56	0.10	0.00	0.10	75.37	950.00
3640.000	200.00	574.47	0.0	0.01	0.0	84.57	1550.00
3640.000	200.00	574.57	0.10	0.01	0.10	50.00	1550.00
4945.000	200.00	574.48	0.0	0.02	0.0	102.55	1305.00
4945.000	200.00	574.59	0.10	0.02	0.10	49.21	1305.00
5445.000	200.00	574.49	0.0	0.01	0.0	103.22	500.00
5445.000	200.00	574.60	0.10	0.01	0.10	49.60	500.00
6008.000	200.00	574.46	0.0	-0.04	0.0	35.32	563.00
6008.000	200.00	574.55	0.10	-0.04	0.10	20.97	563.00
6020.000	200.00	574.47	0.0	0.01	0.0	35.36	12.00
6020.000	200.00	574.57	0.10	0.01	0.10	20.69	12.00
6040.000	200.00	574.49	0.0	0.02	0.0	35.56	20.00
6040.000	200.00	574.60	0.10	0.03	0.10	20.97	20.00
6067.000	200.00	574.36	0.0	-0.13	0.0	13.00	27.00
6067.000	200.00	574.51	0.15	-0.09	0.15	13.00	27.00
6124.000	200.00	574.78	0.0	0.42	0.0	13.00	57.00
6124.000	200.00	574.93	0.15	0.42	0.15	13.00	57.00
6198.000	200.00	575.27	0.0	0.49	0.0	88.24	74.00
6198.000	200.00	575.38	0.11	0.45	0.11	88.42	74.00
7095.000	200.00	575.73	0.0	0.46	0.0	380.77	897.00
7095.000	200.00	575.81	0.08	0.43	0.08	185.24	897.00
7600.000	200.00	575.87	0.0	0.14	0.0	356.80	505.00
7600.000	200.00	575.95	0.09	0.14	0.09	173.28	505.00
8215.000	200.00	576.17	0.0	0.30	0.0	227.51	615.00
8215.000	200.00	576.26	0.10	0.31	0.10	129.04	615.00
8800.000	200.00	576.64	0.0	0.47	0.0	249.87	585.00
8800.000	200.00	576.74	0.10	0.48	0.10	158.22	585.00

PRINTED IN U.S.A.

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
9415.000	200.00	576.81	0.0	0.17	0.0	264.59	615.00
9415.000	200.00	576.91	0.10	0.17	0.10	192.76	615.00
9990.000	200.00	576.89	0.0	0.08	0.0	263.44	575.00
9990.000	200.00	576.99	0.10	0.08	0.10	192.02	575.00

SUMMARY OF ERRORS

FLOODWAY DATA. FRENCHMAN CR.-GROSSE ILE
PROFILE NO. 2

STATION	FLOODWAY WIDTH (FT)	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
0.0	240.	850.	0.2	574.5	574.4	0.1
400.000	240.	850.	0.2	574.6	574.5	0.1
800.000	240.	851.	0.2	574.6	574.5	0.1
1140.000	240.	851.	0.2	574.6	574.5	0.1
2090.000	75.	454.	0.4	574.6	574.5	0.1
3640.000	50.	365.	0.5	574.6	574.5	0.1
4945.000	49.	287.	0.7	574.6	574.5	0.1
5445.000	50.	289.	0.7	574.6	574.5	0.1
6008.000	21.	62.	3.2	574.6	574.5	0.1
6020.000	21.	62.	3.2	574.6	574.5	0.1
6040.000	21.	63.	3.2	574.6	574.5	0.1
6067.000	13.	37.	5.5	574.5	574.4	0.1
6124.000	13.	42.	4.8	574.9	574.8	0.1
6198.000	88.	175.	1.1	575.4	575.3	0.1
7095.000	185.	434.	0.5	575.8	575.7	0.1
7600.000	173.	398.	0.5	576.0	575.9	0.1
8215.000	129.	230.	0.9	576.3	576.2	0.1
8800.000	158.	319.	0.6	576.7	576.6	0.1
9415.000	193.	471.	0.4	576.9	576.8	0.1
9990.000	192.	461.	0.4	577.0	576.9	0.1

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Grosse Ile Twp.

3) WATERCOURSE: Frenchman Creek

4) DOCUMENT TYPE: Report

00BREAK00

Wade Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

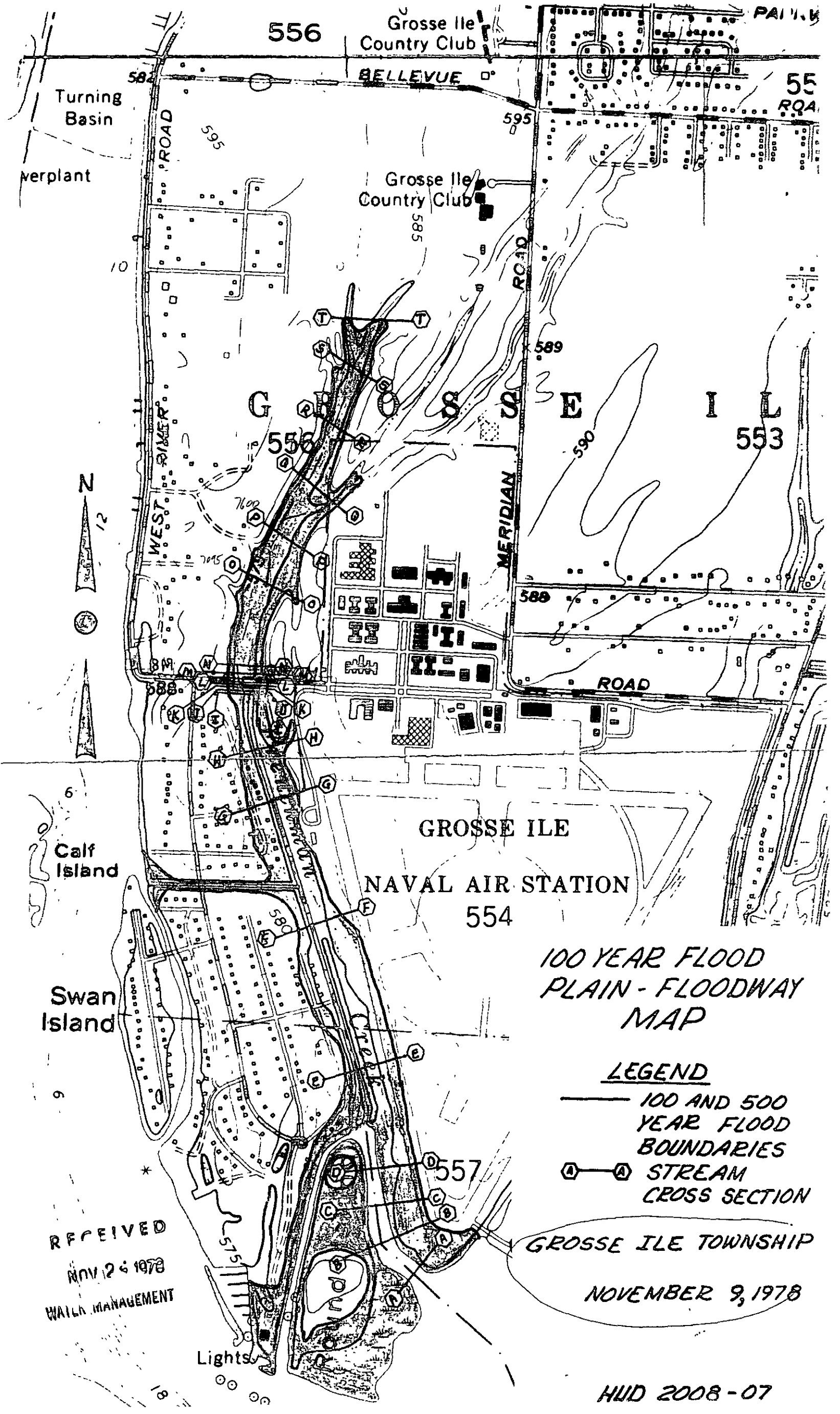
REFERENCE

Frenchman Creek
Cross Section Index

Floodway Map Ident.	SECNO for HEC-2	Remarks
A	0	same as SECNO 1140
B	400	
C	800	
D	1140	left half of 88+50 F.B.
E	2090	79+00 F.B.
F	3640	63+50 F.B.
G	4945	50+45 F.B.
H	5445	I.
I	6008	I.
J	6020	I.
K	6040	Groh Rd. Culvert etc
L	6067	
M	6124	I.
N	6198	I.
O	7095	28+95 F.B.
P	7600	I.
Q	8215	17+75 F.B.
R	8900	I.
S	9415	5+75 F.B.
T	9990	I.

F.B. = Field Book I. = Interpolated

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner Project Suffix
Grosse Ile Hydraulics	DATE 11-78	DATE	____ OF ____	HUD • 2208 • C7


556
Grosse Ile
Country Club
BELLEVUE
Turning
Basin
ROAD
595
Grosse Ile
Country Club
585
ROAD
589
G R O S S E I L
556
553
590
WEST RIVER
MERIDIAN
588
ROAD
N
GROSSE ILE
NAVAL AIR STATION
554
Calf
Island
Swan
Island
557
Lights
100 YEAR FLOOD
PLAIN - FLOODWAY
MAP
LEGEND
100 AND 500
YEAR FLOOD
BOUNDARIES
STREAM
CROSS SECTION
GROSSE ILE TOWNSHIP
NOVEMBER 9, 1978
RECEIVED
NOV 2 4 1978
WATER MANAGEMENT
HUD 2008-07

HYDRAULIC REPORT
GROSSE ILE TOWNSHIP - MICHIGAN

RECEIVED
NOV 24 1978
WATER MANAGEMENT

I INTRODUCTION

Grosse Ile Township covers approximately 11 square miles. The Township consists of one large island and several smaller ones in the Detroit River. It is a sparsely developed suburban-residential community. This report summarizes the hydraulic studies undertaken to support detailed studies of nearly 2 miles of the Frenchman Creek as well as coastal analysis of 19.5 miles of the Detroit River and 3 miles of the Thoroughfare Canal.

This study was conducted by Wade, Trim & Associates, Inc., Consulting Engineers, and Glen Roberts served as Project Manager.

II FRENCHMAN CREEK (DETAILED)

Detailed studies were performed of the Frenchman Creek from its outlet to the Detroit River to the Grosse Ile Country Club. A total of 7 valley and 1 bridge cross sections were field surveyed and completed in January, 1978. Twelve (12) additional cross sections were used in the analysis. These sections were based on interpolation of field survey data and U.S.G.S. Quad Maps of the study area which consists of 5 foot contour interval data (References 1 & 2). Cross section location data are shown in Exhibit 1. The flood plain of the Frenchman Creek ranges from heavy woods to grassy lawns. No detailed studies of the Frenchman Creek have been previously undertaken. Coastal studies have been performed on the Detroit River (outlet of Frenchman Creek) as part of an unpublished study on Lake Erie and Detroit River levels compiled by a consulting engineer as part of the Flood Insurance Study (FIS) they conducted

for the City of Ecorse (Reference 3) and the City of River Rouge (Reference 4) as well as other communities adjacent to Lake St. Clair, Lake Erie and the Detroit River. Table 1 lists discharges that have been approved by the Michigan Department of Natural Resources (MDNR) for this Creek.

A. Method of Analysis

The HEC-2 backwater program was used in developing water surface profiles (Reference 5).

Table 1 also contains selected flood elevations from the HEC-2 printouts. HEC-2 printouts including computer cross section plots are presented as Exhibit 2. Water surface profiles resulting from the backwater analyses are presented as Exhibit 3. (Exhibit 2 is contained in the 11" X 15" folder enclosed with this report).

B. Variables and Coefficients

Roughness coefficients (Mannings "n") were estimated by field inspection at each cross section. Typical roughness values for the main channel of the Frenchman Creek range from .025 to .040; roughness values for the overbank areas varied between .06 to .15 for all floods. These values are indicative of summer month conditions and are consistent with roughness values recommended and used in engineering practice.

C. High Water Marks

No documented high water data exists for flood elevations on Frenchman Creek.

D. Starting Conditions

The starting water surface elevation used in all backwater computations was the mean Detroit River elevation at the outlet of Frenchman Creek. This data was obtained from the previously mentioned unpublished study on Lake Erie and Detroit River levels.

E. Special Problems

While backwater analyses were performed for the Frenchmen Creek, final selected flood elevations were based upon flood elevations associated with the Detroit River as these elevations exceeded those determined for the discharges associated with the Creek.

F. General

Computed water-surface elevations were developed to an accuracy of 0.5 foot for floods of the selected recurrence intervals.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). This datum is equivalent to the U.S. Geological Survey (USGS) datum.

The hydraulic analyses for this study are based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

TABLE 1

GROSSE ILE TOWNSHIP

FRENCHMAN CREEK FLOOD ELEVATIONS*

Location	Selected Frequencies			
	10 Yr. Q=100 cfs	50 Yr. Q=180 cfs	100 Yr. Q=200 cfs	500 Yr. Q=300 cfs
at confluence w/ Detroit River	574.45	574.45	574.45	574.45
d/s of Groh Road	574.5	574.5	574.5	574.6
u/s of Groh Road	574.5	574.7	574.8	577.2
Grosse Ile Country Club (u/s study limits)	576.2	576.8	576.9	578.0

*NGVD Datum

Note: Elevations are based upon flood elevations determined for the Detroit River.

III THOROUGHFARE CANAL (COASTAL)

Thoroughfare Canal was initially to be studied in detail as a stream. However, after the field survey was completed and the data analyzed, it became apparent that water surface elevations calculated by backwater analysis would be lower than water surfaces determined for the Detroit River (References 3 & 4) for the various selected recurrence intervals. A canal profile is presented as Exhibit 4 to illustrate this point. A summary of water surface elevations applicable to the Canal is presented in Table 2.

IV GROSSE ILE SHORELINE (COASTAL)

That length of shoreline studied as part of this study is shown on Exhibit 5. The water surface elevations from the previously mentioned unpublished study on Lake Erie and Detroit River levels are considered applicable and were used for Grosse Ile. The analyses reported herein reflect the still water elevations due to tidal and wind set up effects, but do not include the contributions from wave action effect such as the wave crest height and wave run-up. Water surface elevations determined on the east side of the island were also determined to be applicable for the west side.

The water surface elevation at the Grosse Ile Parkway, the middle of the island, is slightly higher than at the two ends of the island due to data from a Canadian gage directly across from the center of the island. The exact reason for this phenomena was not explored, however, the apparent effect is small and considered not significant.

A summary of water surface elevations for the Grosse Ile shoreline is presented in Table 3.

TABLE 2

GROSSE ILE TOWNSHIP - THOROUGHFARE CANAL

WATER SURFACE ELEVATIONS*

Location	Frequency 10 Yr.	50 Yr.	100 Yr.	500 Yr.
From North End Near Parke Lane to South End Near West River Road	576.4	577.3	577.6 OK	578.3

Data Source - Detroit River Profile - Unpublished Report - Johnson & Anderson Inc., Consulting Engineers, December 1977.

TABLE 3

GROSSE ILE TOWNSHIP - DETROIT RIVER

WATER SURFACE ELEVATIONS*

Location	Frequency 10 Yr.	50 Yr.	100 Yr.	500 Yr.
South End of Island	576.0	577.0	Gk 577.4 577.3 OK	578.0
Grosse Ile Parkway	576.4	577.3	577.6 OK	578.3
Point Hennepin (North End of Island)	576.3	577.2	577.5 OK	578.2

Data Source - Detroit River Profile - Unpublished Report - Johnson & Anderson Inc., Consulting Engineers, December 1977.

*NGVD Datum

V REFERENCES

1. U.S. Geological Survey Topographical Maps - Wyandotte Quadrangle, Wayne County, Michigan, 7.5 Minute Series - Photorevised 1973.

2. U.S. Geological Survey Topographical Maps - Inkster Quadrangle, Wayne County, Michigan, 7.5 Minute Series - Photorevised 1973.

3. U.S. Department of Housing & Urban Development, Federal Insurance Administration, Flood Insurance Study, City of Ecorse, Wayne County, Michigan, February 1977.

4. U.S. Department of Housing & Urban Development, Federal Insurance Administration, Flood Insurance Study, City of River Rouge, Wayne County, Michigan, 1977.

5. HEC-2 - Water Surface Profile - Users Manual - U.S. Army Corps of Engineers - 1976.

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WATER MANAGEMENT

GROSSE ILE TOWNSHIP, MICHIGAN

FRENCHMAN CREEK

Exhibit 1

Field Cross-Section Location and 100 Year Flood Plain-Floodway Map

GROSSE ILE TOWNSHIP, MICHIGAN

FRENCHMAN CREEK

Exhibit 2

Computer Printouts
HEC-2 Backwater Analysis
with
Cross Section Plots



1) COUNTY: Wayne

2) STUDY NAME: Grosse Ile Twp.

3) WATERCOURSE: Frenchman Creek

4) DOCUMENT TYPE: Summary



MDET1	JMDETNAC	1057	GO.FT06F001	10.46.17	26 OCT 78	WADE TRIM	TRIM
MDET1	JMDETNAC	1057	GO.FT06F001	10.46.17	26 OCT 78	WADE TRIM	TRIM
MDET1	JMDETNAC	1057	GO.FT06F001	10.46.17	26 OCT 78	WADE TRIM	TRIM

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

C
T1  GROSSE ILE TWP. FIS HUD2008-07 FRENCHMAN CR. LK.E. TO G.C.  USGS DATUM
T2  Q-10YR.#100  Q-50YR.#180  Q-100YR.#200  Q-500YR.#200 ALL START AT MEAN LK.EL
T3       FRENCHMAN CR.-GROSSE ILE
J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      G          WSEL       FQ
        0.         2.         0.         0.  0.0             0.0        0.0         0.    574.450     0.0
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
    1.000      0.0       -1.000      0.0        0.0        0.0        0.0        0.0        0.0       15.000
J3  VARIABLE CODES FOR SUMMARY PRINTOUT
   150.000    110.000    201.000    0.0        0.0        0.0        0.0        0.0        0.0        0.0
QT      5.000    100.000    180.000    200.000    200.000    300.000      0.0        0.0        0.0        0.0
ET      0.0        0.0        0.0        0.0      1.400        0.0        0.0        0.0        0.0        0.0
NC      0.080      0.150      0.025      0.100      0.300      0.0        0.0        0.0        0.0        0.0

          SECTION SAME AS 1140
X1      0.0        8.000    480.000    720.000      0.0        0.0        0.0        0.0        0.0        0.0
GP    580.000      0.0      576.320    350.000    574.630    380.000    572.920    480.000    569.120    600.000
GR    572.870    720.000    580.320    770.000    582.320    795.000      0.0        0.0        0.0        0.0

          SECTION SAME AS 1140
X1    400.000      0.0        0.0        0.0      400.000    400.000    400.000      0.0        0.0        0.0

          SECTION SAME AS 1140
X1    800.000      0.0        0.0        0.0      400.000    400.000    400.000      0.0        0.0        0.0

          LEFT HALF OF 88+50 IN FIELD BOOK
X1   1140.000      0.0        0.0        0.0      340.000    340.000    340.000      0.0        0.0        0.0
NC      0.080      0.100      0.030      0.100      0.300      0.0        0.0        0.0        0.0        0.0

          79+00 IN FIELD BOOK
X1   2090.000     10.000    466.000    534.000    950.000    950.000    950.000      0.0        0.0        0.0
GR    580.000      0.0      577.280    200.000    573.960    460.000    571.060    466.000    565.400    500.000
GR    570.500    534.000,   573.780    574.000    575.650    630.000    578.350    730.000    579.760    800.000
NC      0.090      0.080      0.030      0.100      0.300      0.0        0.0        0.0        0.0        0.0
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X1	3640.000	11.000	325.000	375.000	1550.000	1550.000	1550.000	0.0	0.0	0.0
GR	580.000	0.0	579.020	50.000	577.490	237.000	573.870	315.000	571.140	325.000
GR	563.370	350.000	571.160	375.000	575.370	390.000	579.330	495.000	578.660	605.000
GR	580.000	650.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.080	0.060	0.030	0.300	0.500	0.0	0.0	0.0	0.0	0.0

50+45 IN FIELD BOOK

X1	4945.000	12.000	276.000	324.000	1305.000	1305.000	1305.000	0.0	0.0	0.0
GR	581.690	0.0	579.140	100.000	575.840	156.000	573.880	263.000	570.830	276.000
GR	566.540	300.000	570.890	324.000	574.940	334.000	575.840	374.000	578.200	450.000
GR	579.040	545.000	580.000	600.000	0.0	0.0	0.0	0.0	0.0	0.0
X1	5445.000	0.0	0.0	0.0	500.000	500.000	500.000	0.0	0.0	0.0

BASED ON FIELD NOTES &QUAD MAP

X1	6008.000	7.000	210.000	230.000	563.000	563.000	563.000	0.0	0.0	0.0
GR	580.000	0.0	576.800	200.000	572.700	210.000	570.700	220.000	572.100	230.000
GR	575.300	245.000	580.000	445.000	0.0	0.0	0.0	0.0	0.0	0.0
X1	6020.000	0.0	0.0	0.0	12.000	12.000	12.000	0.0	0.0	0.0
X1	6040.000	0.0	0.0	0.0	20.000	20.000	20.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0

D/S FACE OF GROH RD CULVERT. BASED ON FIELD NOTES &QUAD MAP

X1	6067.000	7.000	210.000	223.000	27.000	27.000	27.000	0.0	0.0	0.0
X2	0.0	0.0	0.0	575.980	577.430	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	577.000	579.000	0.0
GR	580.000	0.0	576.760	200.000	572.850	210.000	570.900	215.000	572.270	223.000
GR	575.320	235.000	580.000	440.000	0.0	0.0	0.0	0.0	0.0	0.0
SR	0.0	1.350	3.000	0.0	4.320	0.0	23.760	0.0	570.020	570.480

U/S FACE OF GROH RD CULVERT. BASED ON FIELD NOTES &QUAD MAP

X1	6124.000	0.0	994.000	1004.000	57.000	57.000	57.000	0.0	0.0	0.0
X2	0.0	0.0	1.000	575.980	577.430	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	577.430	579.640	0.0
BT	18.000	0.0	586.690	586.690	100.000	584.920	584.920	200.000	583.460	583.460
BT	300.000	583.230	583.230	400.000	582.860	582.860	500.000	582.990	582.990	600.000
BT	582.280	582.280	700.000	580.170	580.170	800.000	578.390	578.390	858.000	577.930
BT	575.670	900.000	577.430	574.600	994.000	577.730	572.580	1004.000	577.730	572.730
BT	1010.000	577.730	576.170	1100.000	579.640	579.640	1200.000	583.130	583.130	1300.000
BT	586.100	586.100	1400.000	587.970	587.970	0.0	0.0	0.0	0.0	0.0
NC	0.060	0.080	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0
X1	6198.000	7.000	294.000	304.000	74.000	74.000	74.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	220.000	577.000	399.000	80.100	0.0	0.0	0.0
GR	580.000	0.0	575.700	158.000	572.700	294.000	571.800	300.000	572.800	304.000
GR	576.300	310.000	580.000	400.000	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.120	0.120	0.040	0.100	0.300	0.0	0.0	0.0	0.0	0.0

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BASED ON FIELD NOTES &QUAD MAP

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X1	7095.000	11.000	430.000	455.000	897.000	897.000	897.000	0.0	0.0	0.0
GR	580.000	0.0	576.580	83.000	576.280	150.000	573.880	313.000	572.580	363.000
GR	573.940	430.000	572.390	450.000	574.550	455.000	575.300	507.000	576.060	615.000
GR	582.780	667.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

28+95 IN FIELD BOOK

X1	7600.000	0.0	0.0	0.0	505.000	505.000	505.000	0.0	0.250	0.0

28+95 REPEATED

X1	8215.000	9.000	288.000	301.000	615.000	615.000	615.000	0.0	0.0	0.0
GR	577.690	0.0	577.480	88.000	575.470	188.000	573.980	288.000	572.940	294.000
GR	574.250	301.000	575.810	377.000	582.480	447.000	584.980	490.000	0.0	0.0

17+75 IN FIELD BOOK

X1	8800.000	0.0	0.0	0.0	585.000	585.000	585.000	0.0	0.100	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

17+75 REPEATED

X1	9415.000	10.000	209.000	229.000	615.000	615.000	615.000	0.0	0.0	0.0
GR	585.020	0.0	578.920	74.000	574.820	144.000	573.970	209.000	573.120	218.000
GR	573.910	229.000	574.570	275.000	575.780	359.000	579.220	412.000	585.020	477.000

5+75 INFIELD BOOK

X1	9990.000	0.0	0.0	0.0	575.000	575.000	575.000	0.0	0.120	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FRENCHMAN CR.-GROSSE ILE

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
0.0	574.45	0.0	574.45	340.08	0.94	99.00	0.06	0.0	0.0	480.00	720.00	0.0
0.0	574.45	0.0	574.45	340.08	1.69	178.19	0.11	0.0	0.0	480.00	720.00	0.0
0.0	574.45	0.0	574.45	340.08	1.88	197.99	0.12	0.0	0.0	480.00	720.00	0.0
0.0	574.45	0.0	574.45	340.08	2.82	296.99	0.19	0.0	0.0	480.00	720.00	0.0
400.000	574.45	0.0	574.45	340.10	0.94	99.00	0.06	0.0	0.0	480.00	720.00	0.0
400.000	574.45	0.0	574.45	340.14	1.70	178.19	0.11	0.0	0.0	480.00	720.00	0.0
400.000	574.45	0.0	574.45	340.16	1.88	197.99	0.12	0.0	0.0	480.00	720.00	0.0
400.000	574.45	0.0	574.45	340.26	2.83	296.98	0.19	0.0	0.0	480.00	720.00	0.0
800.000	574.45	0.0	574.45	340.10	0.94	99.00	0.06	0.0	0.0	480.00	720.00	0.0
800.000	574.45	0.0	574.45	340.19	1.70	178.19	0.11	0.0	0.0	480.00	720.00	0.0
800.000	574.45	0.0	574.45	340.22	1.89	197.99	0.12	0.0	0.0	480.00	720.00	0.0
800.000	574.46	0.0	574.46	340.41	2.84	296.97	0.19	0.0	0.0	480.00	720.00	0.0
1140.000	574.45	0.0	574.45	340.11	0.94	99.00	0.06	0.0	0.0	480.00	720.00	0.0
1140.000	574.45	0.0	574.45	340.24	1.70	178.19	0.11	0.0	0.0	480.00	720.00	0.0
1140.000	574.45	0.0	574.45	340.29	1.89	197.99	0.12	0.0	0.0	480.00	720.00	0.0
1140.000	574.46	0.0	574.46	340.56	2.85	296.96	0.19	0.0	0.0	480.00	720.00	0.0
2090.000	574.45	0.0	574.45	172.57	0.40	96.19	3.40	0.0	0.0	466.00	534.00	0.0
2090.000	574.45	0.0	574.46	172.94	0.73	173.13	6.14	0.0	0.0	466.00	534.00	0.0
2090.000	574.46	0.0	574.46	173.10	0.81	192.36	6.82	0.0	0.0	466.00	534.00	0.0
2090.000	574.46	0.0	574.47	173.94	1.24	288.49	10.28	0.0	0.0	466.00	534.00	0.0
3640.000	574.45	0.0	574.46	84.29	0.79	98.46	0.75	0.0	0.0	325.00	375.00	0.0
3640.000	574.46	0.0	574.47	84.49	1.43	177.22	1.35	0.0	0.0	325.00	375.00	0.0
3640.000	574.47	0.0	574.47	84.57	1.59	196.90	1.50	0.0	0.0	325.00	375.00	0.0
3640.000	574.49	0.0	574.50	85.03	2.43	295.30	2.28	0.0	0.0	325.00	375.00	0.0
4945.000	574.46	0.0	574.46	101.28	1.98	96.81	1.21	0.0	0.0	276.00	324.00	0.0
4945.000	574.48	0.0	574.48	102.22	3.62	174.19	2.19	0.0	0.0	276.00	324.00	0.0
4945.000	574.48	0.0	574.49	102.55	4.04	193.52	2.44	0.0	0.0	276.00	324.00	0.0
4945.000	574.53	0.0	574.54	104.64	6.24	290.04	3.72	0.0	0.0	276.00	324.00	0.0
5445.000	574.46	0.0	574.46	101.45	1.99	96.80	1.21	0.0	0.0	276.00	324.00	0.0
5445.000	574.48	0.0	574.49	102.76	3.65	174.15	2.20	0.0	0.0	276.00	324.00	0.0
5445.000	574.49	0.0	574.50	103.22	4.08	193.47	2.46	0.0	0.0	276.00	324.00	0.0
5445.000	574.55	0.0	574.56	106.10	6.37	289.87	3.76	0.0	0.0	276.00	324.00	0.0

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SECNO	CWSELI	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
6008.000	574.45	0.0	574.49	35.33	0.98	93.33	5.69	0.0	0.0	210.00	230.00	0.0
6008.000	574.45	0.0	574.58	35.31	1.76	168.01	10.24	0.0	0.0	210.00	230.00	0.0
6008.000	574.46	0.0	574.61	35.32	1.95	186.67	11.38	0.0	0.0	210.00	230.00	0.0
6008.000	574.46	0.0	574.80	35.36	2.94	279.94	17.11	0.0	0.0	210.00	230.00	0.0
6020.000	574.45	0.0	574.49	35.30	0.97	93.34	5.68	0.0	0.0	210.00	230.00	0.0
6020.000	574.46	0.0	574.59	35.35	1.77	167.97	10.26	0.0	0.0	210.00	230.00	0.0
6020.000	574.47	0.0	574.62	35.36	1.96	186.62	11.41	0.0	0.0	210.00	230.00	0.0
6020.000	574.50	0.0	574.83	35.65	3.05	279.48	17.47	0.0	0.0	210.00	230.00	0.0
6040.000	574.46	0.0	574.50	35.35	0.98	93.32	5.70	0.0	0.0	210.00	230.00	0.0
6040.000	574.48	0.0	574.60	35.51	1.80	167.82	10.38	0.0	0.0	210.00	230.00	0.0
6040.000	574.49	0.0	574.64	35.56	2.01	186.41	11.58	0.0	0.0	210.00	230.00	0.0
6040.000	574.56	0.0	574.87	36.01	3.19	278.89	17.92	0.0	0.0	210.00	230.00	0.0
6067.000	574.43	0.0	574.55	13.00	0.0	100.00	0.0	0.0	0.0	210.00	223.00	0.0
6067.000	574.38	0.0	574.79	13.00	0.0	180.00	0.0	0.0	0.0	210.00	223.00	0.0
6067.000	574.36	0.0	574.88	13.00	0.0	200.00	0.0	0.0	0.0	210.00	223.00	0.0
* 6067.000	574.23	0.0	575.52	13.00	0.0	300.00	0.0	0.0	0.0	210.00	223.00	0.0
6124.000	574.51	0.0	574.63	13.00	0.0	100.00	0.0	0.0	0.0	210.00	223.00	0.0
6124.000	574.70	0.0	575.03	13.00	0.0	180.00	0.0	0.0	0.0	210.00	223.00	0.0
6124.000	574.78	0.0	575.17	13.00	0.0	200.00	0.0	0.0	0.0	210.00	223.00	0.0
6124.000	577.23	0.0	577.50	13.00	0.0	300.00	0.0	0.0	0.0	210.00	223.00	0.0
6198.000	574.67	0.0	574.70	87.20	48.36	50.30	1.34	179.00	220.00	294.00	304.00	399.00
6198.000	575.12	0.0	575.18	87.98	98.45	78.73	2.82	179.00	220.00	294.00	304.00	399.00
6198.000	575.27	0.0	575.33	88.24	112.27	84.45	3.28	179.00	220.00	294.00	304.00	399.00
6198.000	577.54	0.0	577.55	210.30	196.89	91.16	11.95	179.00	220.00	294.00	304.00	399.00
7095.000	575.04	0.0	575.04	254.73	62.71	36.69	0.60	0.0	0.0	430.00	455.00	0.0
7095.000	575.59	0.0	575.60	351.60	113.15	61.31	5.54	0.0	0.0	430.00	455.00	0.0
7095.000	575.73	0.0	575.74	380.77	125.38	66.64	7.98	0.0	0.0	430.00	455.00	0.0
7095.000	577.62	0.0	577.63	569.34	180.65	70.45	48.89	0.0	0.0	430.00	455.00	0.0
7600.000	575.16	0.0	575.17	237.51	62.49	37.20	0.31	0.0	0.0	430.00	455.00	0.0
7600.000	575.73	0.0	575.74	328.34	113.31	62.35	4.34	0.0	0.0	430.00	455.00	0.0
7600.000	575.87	0.0	575.87	356.80	125.67	67.86	6.47	0.0	0.0	430.00	455.00	0.0
7600.000	577.65	0.0	577.65	562.16	180.87	72.97	46.17	0.0	0.0	430.00	455.00	0.0
8215.000	575.48	0.0	575.53	173.55	30.36	56.72	12.92	0.0	0.0	288.00	301.00	0.0
8215.000	576.04	0.0	576.08	220.01	69.67	76.90	33.43	0.0	0.0	288.00	301.00	0.0
8215.000	576.17	0.0	576.21	227.51	79.49	81.03	39.47	0.0	0.0	288.00	301.00	0.0
8215.000	577.70	0.0	577.71	396.85	143.69	78.88	77.42	0.0	0.0	288.00	301.00	0.0
8800.000	576.00	0.0	576.01	211.31	37.32	45.72	16.97	0.0	0.0	288.00	301.00	0.0
8800.000	576.53	0.0	576.55	243.03	74.84	66.20	38.96	0.0	0.0	288.00	301.00	0.0
8800.000	576.64	0.0	576.66	249.87	84.56	70.80	44.63	0.0	0.0	288.00	301.00	0.0
8800.000	577.84	0.0	577.85	397.21	144.27	78.25	77.48	0.0	0.0	288.00	301.00	0.0
9415.000	576.13	0.0	576.14	242.50	26.11	42.26	31.64	0.0	0.0	209.00	229.00	0.0
9415.000	576.69	0.0	576.69	260.73	49.23	66.48	64.29	0.0	0.0	209.00	229.00	0.0
9415.000	576.81	0.0	576.81	264.59	55.11	72.15	72.74	0.0	0.0	209.00	229.00	0.0
9415.000	577.92	0.0	577.93	300.89	87.16	91.39	121.45	0.0	0.0	209.00	229.00	0.0

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
9990.000	576.19	0.0	576.20	240.89	25.96	42.87	31.17	0.0	0.0	209.00	229.00	0.0
9990.000	576.77	0.0	576.77	259.52	49.11	66.99	63.90	0.0	0.0	209.00	229.00	0.0
9990.000	576.89	0.0	576.90	263.44	54.99	72.65	72.36	0.0	0.0	209.00	229.00	0.0
9990.000	577.97	0.0	577.98	298.60	86.92	92.18	120.90	0.0	0.0	209.00	229.00	0.0

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SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
0.0	0.0	0.0	0.0	569.12	100.00	574.45	0.0	574.45	0.01	0.12	903.00	1130.59
0.0	0.0	0.0	0.0	569.12	180.00	574.45	0.0	574.45	0.03	0.22	903.00	1130.59
0.0	0.0	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	903.00	1130.59
0.0	0.0	0.0	0.0	569.12	300.00	574.45	0.0	574.45	0.07	0.36	903.00	1130.59
400.000	400.00	0.0	0.0	569.12	100.00	574.45	0.0	574.45	0.01	0.12	903.08	1130.73
400.000	400.00	0.0	0.0	569.12	180.00	574.45	0.0	574.45	0.03	0.22	903.33	1131.14
400.000	400.00	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	903.41	1131.28
400.000	400.00	0.0	0.0	569.12	300.00	574.45	0.0	574.45	0.07	0.36	903.91	1132.10
800.000	400.00	0.0	0.0	569.12	100.00	574.45	0.0	574.45	0.01	0.12	903.08	1130.73
800.000	400.00	0.0	0.0	569.12	180.00	574.45	0.0	574.45	0.03	0.22	903.58	1131.55
800.000	400.00	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	903.75	1131.83
800.000	400.00	0.0	0.0	569.12	300.00	574.46	0.0	574.46	0.07	0.36	904.74	1133.47
1140.000	340.00	0.0	0.0	569.12	100.00	574.45	0.0	574.45	0.01	0.12	903.16	1130.87
1140.000	340.00	0.0	0.0	569.12	180.00	574.45	0.0	574.45	0.03	0.22	903.83	1131.97
1140.000	340.00	0.0	0.0	569.12	200.00	574.45	0.0	574.45	0.03	0.24	904.08	1132.38
1140.000	340.00	0.0	0.0	569.12	300.00	574.46	0.0	574.46	0.07	0.36	905.49	1134.71
2090.000	950.00	0.0	0.0	565.40	100.00	574.45	0.0	574.45	0.02	0.23	536.85	718.15
2090.000	950.00	0.0	0.0	565.40	180.00	574.45	0.0	574.46	0.06	0.41	537.44	718.88
2090.000	950.00	0.0	0.0	565.40	200.00	574.46	0.0	574.46	0.08	0.46	537.69	719.19
2090.000	950.00	0.0	0.0	565.40	300.00	574.46	0.0	574.47	0.17	0.69	539.05	720.85
3640.000	1550.00	0.0	0.0	563.37	100.00	574.45	0.0	574.46	0.02	0.27	402.10	653.74
3640.000	1550.00	0.0	0.0	563.37	180.00	574.46	0.0	574.47	0.08	0.49	402.78	655.02
3640.000	1550.00	0.0	0.0	563.37	200.00	574.47	0.0	574.47	0.09	0.55	403.05	655.52
3640.000	1550.00	0.0	0.0	563.37	300.00	574.49	0.0	574.50	0.21	0.82	404.60	658.43
4945.000	1305.00	0.0	0.0	566.54	100.00	574.46	0.0	574.46	0.05	0.35	328.41	449.34
4945.000	1305.00	0.0	0.0	566.54	180.00	574.48	0.0	574.48	0.16	0.63	330.08	451.64
4945.000	1305.00	0.0	0.0	566.54	200.00	574.48	0.0	574.49	0.20	0.70	330.68	452.46
4945.000	1305.00	0.0	0.0	566.54	300.00	574.53	0.0	574.54	0.43	1.04	334.47	457.62
5445.000	500.00	0.0	0.0	566.54	100.00	574.46	0.0	574.46	0.05	0.35	328.71	449.75
5445.000	500.00	0.0	0.0	566.54	180.00	574.48	0.0	574.49	0.16	0.63	331.05	452.97
5445.000	500.00	0.0	0.0	566.54	200.00	574.49	0.0	574.50	0.19	0.70	331.88	454.11
5445.000	500.00	0.0	0.0	566.54	300.00	574.55	0.0	574.56	0.42	1.03	337.17	461.26
6008.000	563.00	0.0	0.0	570.70	100.00	574.45	0.0	574.49	2.58	1.61	74.92	62.24
6008.000	563.00	0.0	0.0	570.70	180.00	574.45	0.0	574.58	8.39	2.89	74.83	62.14
6008.000	563.00	0.0	0.0	570.70	200.00	574.46	0.0	574.61	10.35	3.21	74.85	62.17
6008.000	563.00	0.0	0.0	570.70	300.00	574.46	0.0	574.80	23.14	4.81	75.04	62.37
6020.000	12.00	0.0	0.0	570.70	100.00	574.45	0.0	574.49	2.60	1.61	74.76	62.07
6020.000	12.00	0.0	0.0	570.70	180.00	574.46	0.0	574.59	8.34	2.89	75.01	62.34
6020.000	12.00	0.0	0.0	570.70	200.00	574.47	0.0	574.62	10.27	3.21	75.07	62.40
6020.000	12.00	0.0	0.0	570.70	300.00	574.50	0.0	574.83	22.02	4.74	76.48	63.93
6040.000	20.00	0.0	0.0	570.70	100.00	574.46	0.0	574.50	2.57	1.60	74.99	62.32
6040.000	20.00	0.0	0.0	570.70	180.00	574.48	0.0	574.60	8.12	2.86	75.79	63.18
6040.000	20.00	0.0	0.0	570.70	200.00	574.49	0.0	574.64	9.93	3.17	76.05	63.46
6040.000	20.00	0.0	0.0	570.70	300.00	574.56	0.0	574.87	20.70	4.64	78.32	65.94

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
6067.000	27.00	577.43	575.98	570.90	100.00	574.43	0.0	574.55	12.98	2.81	35.53	27.76
6067.000	27.00	577.43	575.98	570.90	180.00	574.38	0.0	574.79	44.58	5.16	34.89	26.96
6067.000	27.00	577.43	575.98	570.90	200.00	574.36	0.0	574.88	56.30	5.77	34.64	26.65
6067.000	27.00	577.43	575.98	570.90	300.00	574.23	574.23	575.52	149.26	9.12	32.91	24.56
6124.000	57.00	577.43	575.98	570.90	100.00	574.51	0.0	574.63	11.72	2.73	36.69	29.21
6124.000	57.00	577.43	575.98	570.90	180.00	574.70	0.0	575.03	30.98	4.60	39.12	32.34
6124.000	57.00	577.43	575.98	570.90	200.00	574.78	0.0	575.17	35.40	4.99	40.09	33.62
6124.000	57.00	577.43	575.98	570.90	300.00	577.23	0.0	577.50	13.18	4.17	71.97	82.63
6198.000	74.00	0.0	0.0	571.80	100.00	574.67	0.0	574.70	7.82	2.10	112.04	35.76
6198.000	74.00	0.0	0.0	571.80	180.00	575.12	0.0	575.18	10.70	2.76	152.09	55.02
6198.000	74.00	0.0	0.0	571.80	200.00	575.27	0.0	575.33	10.40	2.81	165.16	62.02
6198.000	74.00	0.0	0.0	571.80	300.00	577.54	0.0	577.55	1.86	1.73	427.46	219.94
7095.000	897.00	0.0	0.0	572.39	100.00	575.04	0.0	575.04	2.20	0.81	309.08	67.38
7095.000	897.00	0.0	0.0	572.39	180.00	575.59	0.0	575.60	2.54	1.04	473.50	112.98
7095.000	897.00	0.0	0.0	572.39	200.00	575.73	0.0	575.74	2.48	1.06	524.36	127.01
7095.000	897.00	0.0	0.0	572.39	300.00	577.62	0.0	577.63	0.43	0.64	1487.92	460.17
7600.000	505.00	0.0	0.0	572.64	100.00	575.16	0.0	575.17	2.87	0.88	278.21	58.98
7600.000	505.00	0.0	0.0	572.64	180.00	575.73	0.0	575.74	3.08	1.11	435.85	102.56
7600.000	505.00	0.0	0.0	572.64	200.00	575.87	0.0	575.87	3.00	1.14	482.27	115.40
7600.000	505.00	0.0	0.0	572.64	300.00	577.65	0.0	577.65	0.54	0.70	1361.10	407.20
8215.000	615.00	0.0	0.0	572.94	100.00	575.48	0.0	575.53	15.25	2.24	137.90	25.61
8215.000	615.00	0.0	0.0	572.94	180.00	576.04	0.0	576.08	12.03	2.36	250.07	51.89
8215.000	615.00	0.0	0.0	572.94	200.00	576.17	0.0	576.21	11.37	2.36	277.95	59.31
8215.000	615.00	0.0	0.0	572.94	300.00	577.70	0.0	577.71	2.34	1.46	706.73	196.26
8800.000	585.00	0.0	0.0	573.04	100.00	576.00	0.0	576.01	5.18	1.49	218.94	43.93
8800.000	585.00	0.0	0.0	573.04	180.00	576.53	0.0	576.55	5.56	1.76	338.55	76.33
8800.000	585.00	0.0	0.0	573.04	200.00	576.64	0.0	576.66	5.60	1.81	366.52	84.55
8800.000	585.00	0.0	0.0	573.04	300.00	577.84	0.0	577.85	2.24	1.43	720.33	200.56
9415.000	615.00	0.0	0.0	573.12	100.00	576.13	0.0	576.14	1.04	0.81	345.66	98.17
9415.000	615.00	0.0	0.0	573.12	180.00	576.69	0.0	576.69	1.34	1.05	486.86	155.68
9415.000	615.00	0.0	0.0	573.12	200.00	576.81	0.0	576.81	1.39	1.10	518.10	169.53
9415.000	615.00	0.0	0.0	573.12	300.00	577.92	0.0	577.93	0.84	1.04	834.06	327.51
9990.000	575.00	0.0	0.0	573.24	100.00	576.19	0.0	576.20	1.14	0.84	333.64	93.70
9990.000	575.00	0.0	0.0	573.24	180.00	576.77	0.0	576.77	1.41	1.07	477.13	151.45
9990.000	575.00	0.0	0.0	573.24	200.00	576.89	0.0	576.90	1.46	1.12	508.68	165.31
9990.000	575.00	0.0	0.0	573.24	300.00	577.97	0.0	577.98	0.90	1.07	812.95	316.07

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SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.0	100.00	574.45	0.0	0.0	0.0	340.06	0.0
0.0	180.00	574.45	0.0	0.0	0.0	340.08	0.0
0.0	200.00	574.45	0.0	0.0	0.0	340.08	0.0
0.0	300.00	574.45	0.0	0.0	0.0	340.08	0.0
400.000	100.00	574.45	0.0	0.0	0.0	340.10	400.00
400.000	180.00	574.45	0.00	0.00	0.0	340.14	400.00
400.000	200.00	574.45	0.00	0.00	0.0	340.16	400.00
400.000	300.00	574.45	0.00	0.00	0.0	340.26	400.00
800.000	100.00	574.45	0.0	0.00	0.0	340.10	400.00
800.000	180.00	574.45	0.00	0.00	0.0	340.19	400.00
800.000	200.00	574.45	0.00	0.00	0.0	340.22	400.00
800.000	300.00	574.46	0.00	0.00	0.0	340.41	400.00
1140.000	100.00	574.45	0.0	0.00	0.0	340.11	340.00
1140.000	180.00	574.45	0.00	0.00	0.0	340.24	340.00
1140.000	200.00	574.45	0.00	0.00	0.0	340.29	340.00
1140.000	300.00	574.46	0.00	0.00	0.0	340.56	340.00
2090.000	100.00	574.45	0.0	0.00	0.0	172.57	950.00
2090.000	180.00	574.45	0.00	0.00	0.0	172.94	950.00
2090.000	200.00	574.46	0.00	0.00	0.0	173.10	950.00
2090.000	300.00	574.46	0.01	0.01	0.0	173.94	950.00
3640.000	100.00	574.45	0.0	0.00	0.0	84.29	1550.00
3640.000	180.00	574.46	0.01	0.01	0.0	84.49	1550.00
3640.000	200.00	574.47	0.00	0.01	0.0	84.57	1550.00
3640.000	300.00	574.49	0.02	0.03	0.0	85.03	1550.00
4945.000	100.00	574.46	0.0	0.00	0.0	101.28	1305.00
4945.000	180.00	574.48	0.02	0.01	0.0	102.22	1305.00
4945.000	200.00	574.48	0.01	0.02	0.0	102.55	1305.00
4945.000	300.00	574.53	0.04	0.03	0.0	104.64	1305.00
5445.000	100.00	574.46	0.0	0.00	0.0	101.45	500.00
5445.000	180.00	574.48	0.02	0.01	0.0	102.76	500.00
5445.000	200.00	574.49	0.01	0.01	0.0	103.22	500.00
5445.000	300.00	574.55	0.05	0.02	0.0	106.10	500.00
6008.000	100.00	574.45	0.0	-0.01	0.0	35.33	563.00
6008.000	180.00	574.45	0.00	-0.03	0.0	35.31	563.00
6008.000	200.00	574.46	0.00	-0.04	0.0	35.32	563.00
6008.000	300.00	574.46	0.00	-0.09	0.0	35.36	563.00
6020.000	100.00	574.45	0.0	0.00	0.0	35.30	12.00
6020.000	180.00	574.46	0.01	0.01	0.0	35.35	12.00
6020.000	200.00	574.47	0.00	0.01	0.0	35.36	12.00
6020.000	300.00	574.50	0.03	0.04	0.0	35.65	12.00
6040.000	100.00	574.46	0.0	0.01	0.0	35.35	20.00
6040.000	180.00	574.48	0.02	0.02	0.0	35.51	20.00
6040.000	200.00	574.49	0.01	0.02	0.0	35.56	20.00
6040.000	300.00	574.56	0.07	0.06	0.0	36.01	20.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
6067.000	100.00	574.43	0.0	-0.03	0.0	13100	27.00
6067.000	180.00	574.38	-0.05	-0.10	0.0	13.00	27.00
6067.000	200.00	574.36	-0.02	-0.13	0.0	13.00	27.00
6067.000	300.00	574.23	-0.13	-0.33	0.0	13.00	27.00
6124.000	100.00	574.51	0.0	0.08	0.0	13.00	57.00
6124.000	180.00	574.70	0.19	0.32	0.0	13.00	57.00
6124.000	200.00	574.78	0.08	0.42	0.0	13.00	57.00
6124.000	300.00	577.23	2.45	3.00	0.0	13.00	57.00
6198.000	100.00	574.67	0.0	0.16	0.0	87.20	74.00
6198.000	180.00	575.12	0.46	0.42	0.0	87.98	74.00
6198.000	200.00	575.27	0.15	0.49	0.0	88.24	74.00
6198.000	300.00	577.54	2.26	0.31	0.0	210.30	74.00
7095.000	100.00	575.04	0.0	0.37	0.0	254.73	897.00
7095.000	180.00	575.59	0.55	0.47	0.0	351.60	897.00
7095.000	200.00	575.73	0.14	0.46	0.0	380.77	897.00
7095.000	300.00	577.62	1.89	0.09	0.0	569.34	897.00
7600.000	100.00	575.16	0.0	0.13	0.0	237.51	505.00
7600.000	180.00	575.73	0.57	0.14	0.0	328.34	505.00
7600.000	200.00	575.87	0.14	0.14	0.0	356.80	505.00
7600.000	300.00	577.65	1.78	0.02	0.0	562.16	505.00
8215.000	100.00	575.48	0.0	0.32	0.0	173.55	615.00
8215.000	180.00	576.04	0.56	0.31	0.0	220.01	615.00
0215.000	200.00	576.17	0.12	0.30	0.0	227.51	615.00
8215.000	300.00	577.70	1.53	0.06	0.0	396.85	615.00
8800.000	100.00	576.00	0.0	0.52	0.0	211.31	585.00
8800.000	180.00	576.53	0.53	0.48	0.0	243.03	585.00
8800.000	200.00	576.64	0.11	0.47	0.0	249.87	585.00
8800.000	300.00	577.84	1.20	0.13	0.0	397.21	585.00
9415.000	100.00	576.13	0.0	0.13	0.0	242.50	615.00
9415.000	180.00	576.69	0.56	0.16	0.0	260.73	615.00
9415.000	200.00	576.81	0.12	0.17	0.0	264.59	615.00
9415.000	300.00	577.92	1.11	0.08	0.0	300.89	615.00
9990.000	100.00	576.19	0.0	0.06	0.0	240.89	575.00
9990.000	180.00	576.77	0.57	0.08	0.0	259.52	575.00
9990.000	200.00	576.89	0.12	0.08	0.0	263.44	575.00
9990.000	300.00	577.97	1.08	0.05	0.0	298.60	575.00

SUMMARY OF ERRORS

CAUTION SECNO= 6067.000 PROFILE= 4 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 6067.000 PROFILE= 4 MINIMUM SPECIFIC ENERGY

PRINTED IN U.S.A.

FLOOD INSURANCE ZONE DATA FOR FRENCHMAN CR.-GROSSE ILE

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10	2	0.2
0.0	0.	0.0	0.0	0.0
400.000	400.	-0.00	-0.00	0.00
800.000	800.	-0.00	-0.00	0.00
1140.000	1140.	-0.00	-0.00	0.00
2090.000	2090.	-0.00	-0.00	0.01
3640.000	3640.	-0.01	-0.00	0.02
4945.000	4945.	-0.03	-0.01	0.04
5445.000	5445.	-0.03	-0.01	0.05
6008.000	6008.	-0.00	-0.00	0.00
6020.000	6020.	-0.01	-0.00	0.03
6040.000	6040.	-0.03	-0.01	0.07
6067.000	6067.	0.07	0.02	-0.13
6124.000	6124.	-0.27	-0.08	2.45
6198.000	6198.	-0.61	-0.15	2.26
7095.000	7095.	-0.69	-0.14	1.89
7600.000	7600.	-0.70	-0.14	1.78
8215.000	8215.	-0.69	-0.12	1.53
8800.000	8800.	-0.64	-0.11	1.20
9415.000	9415.	-0.67	-0.12	1.11
9990.000	9990.	-0.69	-0.12	1.08
WEIGHTED AVG FOR REACH		-0.27	-0.05	0.63

FHF FOR THE REACH = 005 WITH 100.0 OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 1

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Huron Twp.

3) WATERCOURSE: North Branch Swan Creek

4) DOCUMENT TYPE: Floodway

00BREAK00

```
EEEEEE   EEEEEE   H    H   OOOO   L      BBBBB   RRRRR    OOOO
E        E        H    H   O    O L      B    B  R    R  O    O
E        E        H    H   O    O L      BBBBB   R    R  O    O
EEEE     EEEE     HHHHHH   O    O L      B    B  RRRRR   O    O
E        E        H    H   O    O L      B    B  R    R  O    O
EEEEEE   EEEEEE   H    H   OOOO   LLLLLL BBBBB   R    R   OOOO
```

EE HOLBRO 12 SEP 84 10:33:48

FILE: C723EEH2*SWANENO

TERMINAL:112

RECEIVED
SEP 26 1984
WATER MANAGEMENT

HURON TOWNSHIP FIS
ENCROACHED RUN
NORTH BRANCH SWAN CREEK

FINAL RUN

PRINTED IN U.S.A.

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*****************************************************                                  ****************************************
*  WATER SURFACE PROFILES                           *                                  *  U.S. ARMY CORPS OF ENGINEERS        *
*  VERSION OF NOVEMBER 1976                         *                                  *  THE HYDROLOGIC ENGINEERING CENTER   *
*  UPDATED MAY 1984                                 *                                  *  609 SECOND STREET, SUITE D          *
*                                                   *                                  *  DAVIS, CALIFORNIA 95616             *
*  RUN DATE  12 SEP 84 TIME   10:02:26              *                                  *  (916) 440-2105 (FTS) 448-2105       *
*****************************************************                                  ****************************************

                                        X     X  XXXXXXX   XXXXX            XXXXX
                                        X     X  X        X     X          X     X
                                        X     X  X        X                      X
                                        XXXXXXX  XXXX     X         XXXXX    XXXXX
                                        X     X  X        X                X
                                        X     X  X        X     X          X
                                        X     X  XXXXXXX   XXXXX           XXXXXXX
```

THIS RUN EXECUTED 12 SEP 84 10:02:27

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*************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
*************************************************

C
T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      10-YEAR FLOW
T3      NORTH BRANCH SWAN CREEK

J1  ICHECK    ING       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        2.        0.        0.  0.000000      0.00       0.0        0.   611.900     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000   110.000   200.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

NC      0.040     0.040     0.030     0.300     0.500     0.000     0.000     0.000     0.000     0.000
GT      2.000   960.000   960.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
ET      0.000     0.000     4.100   880.000   980.000     0.000     0.000     0.000     0.000     0.000
                DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION
X1      0.000    25.000   900.000   930.000     0.000     0.000     0.000     0.000     0.000     0.000
X4      1.000   615.000   700.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    615.000     0.000   612.800   800.000   612.800   825.000   612.800   850.000   612.800   875.000
GR    610.100   889.000   610.100   890.000   610.000   899.000   606.100   900.000   605.100   905.000
GR    604.900   910.000   604.200   915.000   604.500   920.000   605.500   930.000   610.000   931.000
GR    610.100   941.000   610.100   942.000   610.100   942.010   610.100   942.020   610.300   955.000
GR    610.600   980.000   611.800  1005.000   612.100  1030.000   614.000  1130.000   615.000  1800.000

SB      0.000     2.420     3.000     0.000    31.000     0.000   166.000     0.000     0.000     0.000
ET      0.000     0.000     4.100   877.000   980.000     0.000     0.000     0.000     0.000     0.000
                UPSTREAM FACE CARLTON ROAD BRIDGE SECTION
X1     17.000     0.000     0.000     0.000    35.000    35.000    35.000     0.000     0.000     0.000
X2      0.000     0.000     1.000   610.500   612.100     0.000     0.000     0.000     0.000     0.000
ET    -21.000   700.000   615.000     0.000   800.000   614.300     0.000   825.000   614.100     0.000
ET      0.000   850.000   613.700     0.000   875.000   613.400     0.000   889.000   613.300     0.000
ET      0.000   890.000   614.700     0.000   899.000   614.700   610.000   900.000   614.700   610.500
ET      0.000   930.000   614.700   610.200   931.000   614.700   610.000   941.000   614.700     0.000
ET      0.000   942.000   612.700     0.000   942.010   612.700     0.000   942.020   612.700     0.000
ET      0.000   955.000   612.500     0.000   980.000   612.300     0.000  1005.000   612.100     0.000
ET      0.000  1030.000   612.100     0.000  1130.000   614.000     0.000  1800.000   615.000     0.000
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NC	0.300	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	695.000	1200.000	935.000	1170.000	0.000	0.000	0.000
		VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD								
X1	175.000	15.000	950.000	971.000	158.000	158.000	158.000	0.000	0.000	0.000
GR	615.000	0.000	611.800	900.000	611.100	925.000	609.300	950.000	606.000	954.000
GR	605.000	956.000	604.700	962.000	604.700	969.000	608.000	971.000	608.600	975.000
GR	610.500	978.000	609.700	985.000	608.800	1010.000	609.200	1035.000	615.000	1800.000
NC	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	185.000	340.000	185.000	318.000	0.000	0.000	0.000
		VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD								
X1	2000.000	12.000	250.000	274.000	1825.000	1825.000	1825.000	0.000	0.000	0.000
GR	615.000	0.000	610.900	200.000	611.000	225.000	611.100	250.000	606.300	255.000
GR	606.000	263.000	605.700	269.000	610.400	274.000	611.500	278.000	611.400	303.000
GR	611.400	328.000	615.000	425.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	235.000	340.000	235.000	340.000	0.000	0.000	0.000
		REPEATED VALLEY SECTION B								
X1	2100.000	0.000	0.000	0.000	125.000	50.000	100.000	0.000	0.100	0.000
NC	0.000	0.000	0.000	0.400	0.700	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	1.400	0.000	304.000	0.000	0.000	0.000	0.000	0.000
X1	2224.000	22.000	175.000	203.000	155.000	50.000	124.000	0.000	0.000	0.000
GR	614.200	0.000	615.000	75.000	615.400	100.000	616.000	125.000	616.800	150.000
GR	617.400	174.000	610.400	175.000	608.400	181.000	606.900	187.000	606.200	189.000
GR	606.200	190.000	606.400	196.000	606.000	202.000	617.100	203.000	617.100	204.000
GR	615.900	229.000	614.600	254.000	613.700	279.000	613.300	304.000	612.900	354.000
GR	613.000	404.000	615.000	500.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.020	0.100	0.300	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.110	1.410	0.000	304.000	0.000	0.000	0.000	0.000	0.000
		DOWNSTREAM FACE BELL ROAD								
X1	2225.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
ET	-21.000	0.000	614.200	0.000	75.000	615.000	0.000	100.000	615.400	0.000
ET	0.000	125.000	616.000	0.000	150.000	616.300	0.000	174.000	617.400	617.400
ET	0.000	175.000	621.400	616.000	189.000	621.300	615.900	189.000	621.300	606.200
ET	0.000	190.000	621.300	606.200	190.000	621.300	615.900	202.000	621.200	615.700
ET	0.000	203.000	617.200	617.100	204.000	617.100	0.000	229.000	615.900	0.000
ET	0.000	254.000	614.600	0.000	279.000	613.700	0.000	304.000	613.300	0.000
ET	0.000	354.000	612.900	0.000	404.000	613.000	0.000	500.000	615.000	0.000
ET	0.000	4.110	1.410	0.000	304.000	0.000	0.000	0.000	0.000	0.000
		UPSTREAM FACE BELL ROAD								
X1	2254.000	0.000	0.000	0.000	29.000	29.000	29.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
NC	0.000	0.040	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	1.400	0.000	304.000	0.000	0.000	0.000	0.000	0.000
X1	2255.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

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NC	0.000	0.000	0.000	0.200	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	650.000	1150.000	813.000	1150.000	0.000	0.000	0.000
		VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTRERPOLATED								
X1	3055.000	16.000	889.000	923.000	900.000	800.000	800.000	0.000	-1.300	0.000
GR	620.000	0.000	615.000	700.000	612.800	850.000	612.600	875.000	614.200	889.000
GR	611.300	900.000	609.200	904.000	609.100	912.000	608.600	915.000	608.900	918.000
GR	609.900	919.000	612.500	923.000	613.700	948.000	613.000	973.000	615.000	1400.000
CR	620.000	1650.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.030	0.000	0.000	0.400	0.700	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	4.100	850.000	940.000	860.000	940.000	0.000	0.000	0.000
		VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE								
X1	3910.000	0.000	0.000	0.000	855.000	855.000	855.000	0.000	1.300	0.000
ET	0.000	4.100	4.100	1000.000	1057.000	0.000	0.000	0.000	0.000	0.000
X1	3984.000	29.000	1000.000	1067.000	100.000	25.000	74.000	0.710	0.000	0.000
GR	620.000	0.000	615.000	800.000	611.700	1000.000	611.700	1001.000	611.700	1006.000
GR	610.100	1012.900	610.100	1013.000	609.900	1014.000	609.900	1014.100	609.500	1025.900
GR	609.500	1026.000	609.300	1027.000	609.300	1027.100	608.600	1030.000	608.700	1039.900
GR	608.700	1040.000	609.500	1041.000	609.500	1041.100	609.900	1052.900	609.900	1053.000
GR	611.600	1054.000	611.600	1054.100	611.600	1066.900	611.600	1067.000	612.500	1093.000
GR	613.800	1118.000	614.300	1143.000	615.000	1168.000	620.000	1900.000	0.000	0.000
ET	0.000	4.100	4.100	710.000	757.600	0.000	0.000	0.000	0.000	0.000
		DOWNSTREAM FACE C&O RR BRIDGE								
X1	3985.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.710	0.000
ET	-28.000	0.000	620.000	0.000	800.000	622.000	0.000	1000.000	621.900	611.700
ET	0.000	1001.000	621.900	618.000	1006.000	621.900	618.000	1012.900	621.900	618.000
ET	0.000	1013.000	621.900	610.100	1014.000	621.900	609.900	1014.100	621.900	618.000
ET	0.000	1025.900	621.800	618.000	1026.000	621.800	609.500	1027.000	621.800	609.500
ET	0.000	1027.100	621.800	618.000	1039.900	621.800	618.000	1040.000	621.800	608.700
ET	0.000	1041.000	621.800	609.500	1041.100	621.800	618.000	1052.900	621.800	618.000
ET	0.000	1053.000	621.800	609.900	1054.000	621.800	611.600	1054.100	621.800	618.000
ET	0.000	1066.900	621.800	618.000	1067.000	621.800	611.600	1093.000	621.800	0.000
ET	0.000	1118.000	621.700	0.000	1143.000	621.700	0.000	1168.000	621.700	0.000
ET	0.000	1900.000	620.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.020	0.100	0.300	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.110	1.410	710.000	757.600	0.000	0.000	0.000	0.000	0.000
		UPSTREAM FACE C&C RR BRIDGE								
X1	4009.000	0.000	0.000	0.000	24.000	24.000	24.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
ET	0.000	4.100	1.400	710.000	757.600	0.000	0.000	0.000	0.000	0.000
X1	4010.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
NC	0.000	0.035	0.035	0.500	1.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	5.100	45.000	190.000	50.000	190.000	0.000	0.000	0.000

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50 FT UPSTREAM C&C RR BRIDGE, DATA PARTLY FROM VS-D

X1	4060.000	16.000	100.000	133.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	620.000	0.000	613.800	50.000	614.000	75.000	614.700	91.000	615.200	95.000
GR	613.700	100.000	609.900	108.000	608.700	111.000	608.800	115.000	608.800	119.000
GR	609.800	122.000	615.300	133.000	614.000	158.000	613.800	183.000	613.300	233.000
GR	620.000	800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	5.000	230.000	40.000	230.000	0.000	0.000	0.000

SECTION 4060 MOVED UPSTREAM

X1	4100.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	1.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION D 1250 FT UPSTREAM C&C RR BRIDGE

X1	5250.000	16.000	200.000	233.000	1150.000	1150.000	1150.000	0.000	0.000	0.000
GR	615.000	0.000	613.800	150.000	614.000	175.000	614.700	191.000	615.200	195.000
GR	613.700	200.000	609.900	208.000	608.700	211.000	608.800	215.000	608.800	219.000
GR	609.800	222.000	615.300	233.000	614.000	258.000	613.800	283.000	613.300	433.000
GR	620.000	1200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.030	0.000	0.500	1.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	5.100	550.000	675.000	0.000	0.000	0.000	0.000	0.000

200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

X1	6650.000	15.000	600.000	627.000	1400.000	1300.000	1400.000	0.000	0.000	0.000
GR	620.000	0.000	615.000	550.000	615.500	575.000	615.400	600.000	611.400	605.000
GR	610.300	608.000	610.400	613.000	610.400	617.000	611.400	620.000	614.700	623.000
GR	616.200	627.000	615.600	631.000	614.800	656.000	614.900	681.000	620.000	1150.000
ET	0.000	4.100	4.100	600.000	628.000	0.000	0.000	0.000	0.000	0.000

DOWNSTREAM FACE OF ASH ROAD

X1	6850.000	19.000	600.000	628.000	200.000	200.000	200.000	0.940	0.000	0.000
GR	620.000	0.000	617.500	400.000	613.700	599.000	613.700	600.000	612.900	605.000
GR	611.300	608.000	610.600	610.000	610.700	615.000	610.700	620.000	610.600	625.000
GR	612.200	628.000	613.400	631.000	613.400	632.000	613.500	635.000	613.800	660.000
GR	617.400	685.000	617.400	710.000	617.800	735.000	620.000	1000.000	0.000	0.000
SB	0.000	2.150	3.000	0.000	26.500	0.000	163.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	4.100	563.000	590.300	0.000	0.000	0.000	0.000	0.000

UPSTREAM FACE OF ASH ROAD

X1	6880.000	0.000	0.000	0.000	30.000	30.000	30.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	616.700	617.800	0.000	0.000	0.000	0.940	0.000
ET	-12.000	0.000	620.000	0.000	400.000	618.100	0.000	599.000	619.300	613.700
ET	0.000	600.000	619.300	616.800	631.000	619.400	616.600	632.000	619.400	613.400
ET	0.000	635.000	619.400	0.000	660.000	619.000	0.000	685.000	618.400	0.000
ET	0.000	710.000	618.000	0.000	735.000	617.800	0.000	1000.000	620.000	0.000
ET	0.000	4.100	5.100	430.000	670.000	480.000	670.000	0.000	0.000	0.000

VALLEY SECTION E 100 FT UPSTREAM OF ASH ROAD

X1	6980.000	15.000	600.000	627.000	200.000	99.000	99.000	0.000	0.000	0.000
GR	620.000	0.000	615.600	550.000	615.500	575.000	615.400	600.000	611.400	605.000
GR	610.300	608.000	610.400	613.000	610.400	617.000	611.400	620.000	614.700	623.000
GR	616.200	627.000	615.600	631.000	614.800	656.000	614.900	681.000	620.000	1150.000

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NC	C.000	0.000	0.CCO	0.3CO	0.500	0.000	0.C00	0.000	0.000	0.000
ET	C.000	0.000	4.100	500.0CO	700.000	0.000	0.000	0.000	0.000	0.000
X1	7980.000	14.000	600.CCO	628.5CO	1100.000	900.000	1000.000	0.000	0.000	0.000
GR	622.000	0.000	620.C00	350.0CO	616.900	550.000	616.550	600.000	612.750	606.000
GR	611.750	608.000	611.500	612.5CO	611.600	615.000	613.150	618.500	615.350	622.500
GR	617.700	628.500	617.500	680.CCO	620.000	900.000	625.C00	1300.000	0.000	0.000
NC	0.035	0.035	0.C00	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	C.000	4.100	4.100	570.CCO	660.000	0.000	0.000	0.000	0.000	0.000
		100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F								
X1	9045.000	17.000	600.C00	630.CCO	1100.000	1000.000	1065.000	0.900	0.000	0.000
GR	625.000	0.C00	618.500	450.CCO	618.500	550.000	618.900	575.000	620.000	587.000
GR	617.700	596.C00	617.700	600.CCO	614.100	607.000	613.200	608.000	612.600	612.000
GR	612.800	615.C00	614.900	617.CCO	616.000	622.000	619.200	630.000	619.200	650.000
GR	620.000	1400.000	625.C00	2000.CCO	0.000	0.000	0.C00	0.000	0.000	0.000
NC	0.000	0.000	0.C00	0.5CO	1.000	0.000	0.C00	0.000	0.000	0.000
ET	C.000	4.100	4.100	1800.CCO	1835.000	0.000	0.C00	0.000	0.000	0.000
		DOWNSTREAM FACE WALTZ ROAD								
X1	9145.000	23.000	1800.C00	1835.CCO	100.000	100.000	100.C00	0.870	0.000	0.000
GR	625.000	0.C00	618.700	1700.CCO	618.600	1725.000	618.500	1750.000	617.400	1775.000
GR	616.400	1800.000	616.400	1800.100	616.300	1802.000	616.300	1802.100	614.200	1807.000
GR	613.200	1812.000	613.300	1817.000	613.600	1825.000	614.500	1828.000	616.600	1833.000
GR	616.600	1833.100	616.800	1835.C00	616.800	1835.100	619.400	1862.000	619.400	1887.000
GR	619.400	1912.000	619.400	1937.CCO	625.000	3400.000	0.C00	0.000	0.000	0.000
SB	0.000	3.000	3.C00	0.C00	28.000	0.000	186.C00	0.000	0.000	0.000
ET	0.000	4.100	4.100	1566.CCO	1596.500	0.000	0.C00	0.000	0.000	0.000
		UPSTREAM FACE WALTZ ROAD								
X1	9194.000	0.000	0.C00	0.CCO	49.000	49.000	49.C00	0.000	0.000	0.000
X2	0.000	0.000	1.C00	620.CCO	621.700	0.000	0.C00	0.000	0.870	0.000
ET	-18.000	0.000	625.C00	0.CCO	1700.000	621.700	0.C00	1725.000	621.900	0.000
ET	0.000	1750.000	622.200	0.CCO	1775.000	622.300	0.C00	1800.000	622.400	0.000
ET	0.000	1800.100	625.400	0.CCO	1802.000	625.400	616.300	1802.100	625.400	619.900
ET	0.000	1833.000	625.400	620.CCO	1833.100	625.400	616.600	1835.000	625.400	0.000
ET	0.000	1835.100	622.400	0.CCO	1862.000	622.400	0.C00	1887.000	622.300	0.000
ET	0.000	1912.000	622.200	0.CCO	1937.000	622.100	0.C00	3400.000	625.000	0.000
ET	0.000	4.100	6.100	1285.0CO	1545.000	1400.000	1545.C00	0.000	0.000	0.000
		VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD								
X1	9325.000	15.000	1400.C00	1430.CCO	100.000	150.000	131.000	0.000	0.000	0.000
GR	625.000	0.000	618.500	1350.CCO	618.900	1375.000	620.C00	1388.000	617.700	1396.000
GR	617.700	1400.000	614.100	1407.CCO	613.200	1408.000	612.600	1412.000	612.800	1415.000
GR	614.900	1417.000	616.C00	1422.CCO	619.200	1430.000	619.400	1450.000	620.000	2500.000
ET	C.000	4.100	6.100	214.000	304.000	215.000	303.C00	0.000	0.000	0.000
		115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G								
X1	10185.000	14.000	241.C00	276.C00	800.000	860.000	860.C00	0.000	-1.000	0.000
GR	620.000	0.C00	619.400	200.C00	619.400	225.000	620.200	235.000	620.600	241.000
GR	617.900	249.000	617.600	250.C00	615.400	254.000	614.500	256.000	614.500	261.000
GR	614.700	268.C00	615.400	269.CCO	620.200	276.C00	625.C00	1400.000	0.000	0.000

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ET	0.000	4.100	4.100	950.000	982.000	0.000	0.000	0.000	0.000	0.000
		DOWNSTREAM FACE WILLOW ROAD								
X1	10300.000	22.000	950.000	982.000	115.000	115.000	115.000	0.900	0.000	0.000
GR	623.400	0.000	619.800	850.000	619.700	875.000	619.500	900.000	619.500	925.000
GR	619.400	935.000	619.400	935.100	617.800	950.000	617.800	950.100	615.000	956.000
GR	614.400	962.000	613.900	969.000	614.000	976.000	615.000	978.000	616.200	982.000
GR	616.200	982.100	619.400	997.000	619.400	997.100	619.900	1008.000	621.000	1033.000
GR	622.200	1058.000	623.100	1078.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.700	3.000	0.000	32.000	0.000	195.000	0.000	0.000	0.000
NC	0.040	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	1.410	855.000	883.800	0.000	0.000	0.000	0.000	0.000
		UPSTREAM FACE WILLOW ROAD								
X1	10348.000	0.000	0.000	0.000	48.000	48.000	48.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	621.100	623.100	0.000	0.000	0.000	0.900	0.000
ET	-22.000	0.000	623.400	0.000	850.000	623.400	0.000	875.000	623.500	0.000
ET	0.000	900.000	623.500	0.000	925.000	623.600	0.000	935.000	623.600	0.000
ET	0.000	935.100	626.600	0.000	950.000	626.500	617.800	950.100	626.500	621.100
ET	0.000	958.000	626.500	621.100	962.000	626.500	621.000	969.000	626.500	621.000
ET	0.000	976.000	626.500	621.000	978.000	626.500	620.900	982.000	626.500	620.900
ET	0.000	982.100	626.500	616.200	997.000	626.400	0.000	997.100	623.400	0.000
ET	0.000	1008.000	623.300	0.000	1033.000	623.200	0.000	1058.000	623.100	0.000
ET	0.000	1078.000	623.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	845.000	1081.000	880.000	1020.000	0.000	0.000	0.000
		VALLEY SECTION MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD								
X1	10450.000	16.000	950.000	978.000	127.000	75.000	102.000	0.000	-0.300	0.000
GR	625.000	0.000	619.400	900.000	619.400	925.000	620.200	935.000	620.600	941.000
GR	617.900	949.000	617.600	950.000	615.400	954.000	614.500	956.000	614.500	961.000
GR	614.700	968.000	615.400	969.000	620.200	976.000	620.100	1001.000	619.800	1026.000
GR	623.100	1275.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	4.100	6.100	595.000	0.000	600.000	1250.000	0.000	0.000	0.000
		VALLEY SECTION OF 350 FT UPSTREAM OF WILLOW ROAD								
X1	10700.000	0.000	0.000	0.000	325.000	175.000	250.000	0.000	0.300	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ITCONT	CORAR	TOPWID	ENDST

*PROF 1

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION

0.00	7.70	611.90	0.00	511.90	612.11	0.21	0.00	0.00	606.10
960.	32.	826.	103.	31.	210.	101.	0.	0.	605.50
0.00	1.04	3.94	1.02	0.040	0.030	0.040	0.000	604.20	879.67
0.000479	0.	0.	0.	0	0	0	0.00	133.67	1013.33

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	CCFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.42	3.00	0.00	31.00	0.00	166.00	0.00	604.20	604.20

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
613.16	612.11	0.00	134.	824.	166.	195.	610.50	612.10

UPSTREAM FACE CARLTON ROAD BRIDGE SECTION

17.00	8.50	612.70	0.00	0.00	612.93	0.12	0.72	0.00	606.10
960.	46.	739.	174.	49.	234.	189.	0.	0.	605.50
0.00	0.95	3.17	0.92	0.040	0.030	0.040	0.000	604.20	875.50
0.000267	35.	35.	35.	2	0	3	0.00	186.23	1061.73

*SECNO 175.000

3470 ENCROACHMENT STATIONS= 695.0 1200.0 TYPE= 1 TARGET= 505.000

VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD

175.00	8.17	612.87	0.00	0.00	612.88	0.02	0.03	0.03	609.30
960.	110.	232.	617.	248.	154.	737.	3.	1.	608.00
0.05	0.45	1.51	0.84	0.040	0.035	0.040	0.000	604.70	695.00
0.000108	158.	158.	158.	2	0	0	0.00	505.00	1200.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2000.000

3470 ENCROACHMENT STATIONS= 185.0 340.0 TYPE= 1 TARGET= 155.000

VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD

2000.00	7.52	613.22	C.00	0.00	613.35	0.12	0.41	0.05	611.10
960.	239.	524.	197.	143.	149.	118.	36.	15.	610.40
0.24	1.67	3.51	1.67	C.04C	0.035	0.035	0.000	605.70	185.00
0.000729	1825.	1825.	1825.	1	0	0	0.00	155.00	340.00

*SECNO 2100.000

3470 ENCROACHMENT STATIONS= 235.0 340.0 TYPE= 1 TARGET= 105.000

REPEATED VALLEY SECTION B

2100.00	7.45	613.25	C.00	0.00	613.49	0.23	0.09	0.05	611.20
960.	60.	661.	239.	31.	148.	114.	36.	15.	610.50
0.25	1.92	4.47	2.10	C.04C	0.035	0.035	0.000	605.80	235.00
0.001194	125.	100.	50.	C	0	0	0.00	105.00	340.00

CCHV= C.40C CEHV= 0.700

*SECNO 2224.000

2224.00	7.36	613.36	C.00	C.CC	613.87	0.52	0.19	0.20	610.40
960.	C.	960.	0.	1.	167.	0.	37.	16.	617.10
0.25	0.63	5.76	C.00	C.04C	0.035	0.000	0.000	606.00	174.58
0.002305	155.	124.	50.	C	0	0	0.00	28.09	202.66

CCHV= 0.100 CEHV= 0.300

*SECNO 2225.000

3700. BRIDGE STENCL= C.00 STENCR= 304.00

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.90 MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 304.000

DOWNSTREAM FACE BELL ROAD

2225.00	7.32	613.32	0.00	C.CC	613.89	0.57	0.00	0.02	610.40
960.	C.	960.	0.	1.	158.	C.	37.	16.	617.10
0.25	0.48	6.C5	C.00	C.C4C	C.020	0.000	0.000	606.00	174.58
0.001365	1.	1.	1.	9	0	0	-7.12	28.08	202.66

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 2254.000									
3370 NORMAL BRIDGE, NRD= 21 MIN ELTRD= 612.90 MAX ELLC= 617.40									
	UPSTREAM FACE BELL ROAD								
2254.00	7.37	613.37	C.00	C.CC	613.93	0.56	0.04	0.0C	610.40
960.	0.	96C.	0.	1.	16C.	C.	37.	16.	617.10
0.25	0.48	6.C1	C.00	C.04C	0.020	0.CCO	0.000	606.0C	174.58
0.001331	29.	29.	29.	C	0	0	-7.17	28.09	202.66
*SECNO 2255.000									
3470 ENCROACHMENT STATIONS=		0.0	304.0	TYPE=	1	TARGET=	304.000		
2255.00	7.43	613.43	C.00	0.CC	613.94	0.50	0.00	0.01	610.40
960.	0.	96C.	0.	1.	169.	C.	37.	16.	617.10
0.25	0.63	5.69	C.00	C.04C	0.035	0.000	0.000	606.0C	174.57
0.002217	1.	1.	1.	2	0	0	0.00	28.10	202.67
CCHV= 0.200 CEHV= 0.5C0									
*SECNO 3055.000									
3470 ENCROACHMENT STATIONS=		650.C	1150.0	TYPE=	1	TARGET=	50C.000		
	VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTRERPOLATED								
3055.00	7.C4	614.34	C.00	C.CC	614.15	0.C2	0.32	0.10	612.90
960.	282.	259.	419.	389.	17C.	515.	48.	20.	611.20
0.48	0.73	1.52	C.81	C.04C	0.035	0.C40	0.000	607.30	650.C0
0.000162	80C.	80C.	8C0.	3	0	0	0.00	500.00	1150.00
CCHV= 0.400 CEHV= 0.7C0									
*SECNO 3910.000									
3470 ENCROACHMENT STATIONS=		850.0	94C.0	TYPE=	1	TARGET=	9C.00C		
	VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE								
3910.00	6.CC	614.60	C.00	0.CC	614.92	0.32	0.35	0.21	614.20
960.	215.	674.	71.	65.	135.	29.	61.	26.	612.50
0.53	3.33	4.99	2.45	C.03C	0.035	0.C40	0.000	6C8.60	850.C0
0.00238C	855.	855.	855.	2	0	0	0.00	90.00	940.C0

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IDC	ICONT	CORAR	TCPWID	ENDST

*SECNO 3984.000

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 67.000

3984.00	6.17	614.77	C.00	0.CC	615.C7	0.30	0.15	0.01	611.70
960.	C.	96C.	0.	0.	21E.	0.	62.	26.	10C000.00
0.54	0.CC	4.40	C.00	C.CCC	0.035	0.CCO	0.000	608.6C	710.CO
0.001744	10C.	74.	25.	2	0	0	0.00	47.57	757.57

*SECNO 3985.000

3370 NORMAL BRIDGE,NRD= 2E MIN ELTRD= 620.CC MAX ELLC= 618.00

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.60C

DOWNSTREAM FACE C&O RR BRIDGE

3985.00	6.16	614.76	C.00	C.C0	615.11	0.35	0.00	0.03100C00.C0	
960.	0.	96C.	0.	0.	202.	C.	62.	26.	611.60
0.54	0.CO	4.74	C.00	C.0C0	0.035	0.CCO	0.000	608.60	710.CO
0.004377	1.	1.	1.	1	0	0	-15.53	47.60	757.60

CCHV= 0.100 CEHV= 0.3C0

*SECNO 4009.000

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.CC MAX ELLC= 618.00

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

UPSTREAM FACE C&C RR BRIDGE

4009.0C	6.23	614.83	C.00	C.C0	615.17	0.34	C.05	0.00100C00.C0	
960.	C.	96C.	0.	0.	20S.	C.	62.	26.	611.60
0.54	0.CO	4.68	C.00	C.0C0	0.020	0.CC0	0.000	608.60	710.CO
0.001376	24.	24.	24.	C	0	0	-15.77	47.60	757.60

*SECNO 4010.000

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

4010.00	6.29	614.89	C.00	0.C0	615.17	0.29	0.00	0.01100C00.C0	
960.	0.	96C.	0.	0.	223.	0.	62.	26.	611.60
0.54	0.CC	4.30	C.01	C.CCC	C.020	0.C40	0.000	608.60	710.CO
0.000487	1.	1.	1.	2	0	0	0.00	47.60	757.60

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= 0.500 CEHV= 1.000
*SECNO 4060.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 45.0 190.0 TYPE= 1 TARGET= 145.000
50 FT UPSTREAM C&O RR BRIDGE, DATA PARTLY FROM VS-D

4060.00	6.23	614.93	0.00	0.00	615.35	0.42	0.05	0.13	613.70
960.	103.	766.	91.	42.	134.	42.	62.	27.	615.30
0.54	2.44	5.70	2.16	0.030	0.035	0.035	0.000	608.70	45.00
0.002963	50.	50.	50.	0	0	0	0.00	134.15	190.00

*SECNO 4100.000

3470 ENCROACHMENT STATIONS= 5.0 230.0 TYPE= 1 TARGET= 225.000
SECTION 4060 MOVED UPSTREAM

4100.00	6.71	615.41	0.00	0.00	615.56	0.15	0.07	0.14	613.70
960.	135.	554.	271.	72.	150.	143.	62.	27.	615.30
0.55	1.88	3.69	1.89	0.030	0.035	0.035	0.000	608.70	37.02
0.001106	40.	40.	40.	3	0	0	0.00	192.98	230.00

CCHV= 0.300 CEHV= 0.500
*SECNO 5250.000
3280 CROSS SECTION 5250.00 EXTENDED 0.89 FEET

VALLEY SECTION D 1250 FT UPSTREAM C&C RR BRIDGE

5250.00	7.19	615.89	0.00	0.00	615.90	0.01	0.30	0.04	613.70
960.	217.	209.	534.	308.	166.	814.	84.	39.	615.30
0.95	0.70	1.26	0.66	0.030	0.035	0.035	0.000	608.70	0.00
0.000113	1150.	1150.	1150.	4	0	0	0.00	729.12	729.12

CCHV= 0.500 CEHV= 1.000
*SECNO 6650.000

3470 ENCROACHMENT STATIONS= 550.0 675.0 TYPE= 1 TARGET= 125.000
200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

6650.00	5.02	616.32	0.00	0.00	616.70	0.38	0.43	0.37	615.40
960.	129.	649.	182.	48.	114.	58.	107.	52.	616.20
1.03	2.66	5.69	3.14	0.030	0.035	0.030	0.000	610.30	550.00
0.003095	1400.	1400.	1300.	2	0	0	0.00	125.00	675.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 6850.000

3470 ENCROACHMENT STATIONS= 564.0 590.3 TYPE= 1 TARGET= 28.000

DOWNSTREAM FACE OF ASH ROAD

6850.00	6.38	616.98	C.00	C.CC	617.64	0.66	0.66	0.28	613.70
960.	C.	96C.	0.	0.	147.	C.	108.	52.	100000.00
1.03	0.C0	6.53	C.00	C.0CC	0.035	0.C00	0.000	610.60	564.C0
0.003537	20C.	2CC.	200.	2	0	0	0.00	26.32	590.32

SPECIAL BRIDGE

5070 VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0C	2.15	3.0C	0.00	26.50	0.00	163.00	0.00	610.6C	610.60

CCHV= C.100 CEHV= 0.3C0

*SECNO 6880.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.14	617.61	0.CC	13.	947.	163.	162.	616.70	617.80

3470 ENCROACHMENT STATIONS= 563.0 590.3 TYPE= 1 TARGET= 27.30C

UPSTREAM FACE OF ASH ROAD

6880.00	7.C0	617.60	C.00	C.CC	618.11	0.51	0.47	0.0C	613.70
960.	21.	939.	0.	4.	163.	C.	108.	52.	100000.00
1.04	5.37	5.75	C.00	C.03C	0.035	0.C00	0.000	610.60	563.C0
0.002150	3C.	3C.	3C.	2	0	4	C.00	27.3C	590.30

*SECNO 6980.000

3470 ENCROACHMENT STATIONS= 430.0 670.0 TYPE= 1 TARGET= 240.000

VALLEY SECTION E 100 FT UPSTREAM OF ASH ROAD

6980.00	7.88	618.18	C.00	C.CC	618.21	0.03	0.06	0.05	615.40
960.	471.	305.	194.	386.	164.	131.	110.	53.	616.20
1.06	1.22	1.86	1.41	C.03C	0.035	0.C30	0.000	610.3C	430.C0
0.000202	20C.	99.	99.	2	C	0	0.00	240.0C	670.C0

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= 0.300 CEHV= 0.500
*SECNO 7980.000

7980.00	7.03	618.53	0.00	0.00	618.66	0.13	0.40	0.05	616.55
960.	339.	498.	124.	178.	135.	96.	123.	59.	617.70
1.16	1.91	3.67	1.29	0.030	0.035	0.030	0.000	611.50	444.20
0.001054	1100.	1000.	900.	2	0	0	0.00	327.32	771.52

*SECNO 9045.000

3470 ENCROACHMENT STATIONS= 513.0 594.0 TYPE= 1 TARGET= 90.000
100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F

9045.00	7.53	620.13	0.00	0.00	620.67	0.53	1.80	0.20	617.70
960.	93.	811.	56.	32.	129.	25.	130.	64.	619.20
1.22	2.89	6.27	2.22	0.035	0.035	0.035	0.000	612.60	513.00
0.003136	1100.	1085.	1000.	3	0	0	0.00	81.00	594.00

CCHV= 0.500 CEHV= 1.000
*SECNO 9145.000

3470 ENCROACHMENT STATIONS= 1566.0 1596.4 TYPE= 1 TARGET= 35.000
DOWNSTREAM FACE WALTZ ROAD

9145.00	7.36	620.56	0.00	0.00	620.97	0.41	0.24	0.06	616.40
960.	0.	960.	0.	0.	187.	0.	130.	65.	100000.00
1.22	0.00	5.14	0.00	0.000	0.035	0.000	0.000	613.20	1566.00
0.001850	100.	100.	100.	2	0	0	0.00	30.45	1596.45

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFQ	RDLEN	EWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.00	3.00	0.00	28.00	0.00	186.00	0.00	613.20	613.20

*SECNO 9194.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	HB	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
621.80	620.97	0.00	1.	951.	196.	190.	620.00	621.70

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 1566.0 1596.5 TYPE= 1 TARGET= 30.500

UPSTREAM FACE WALTZ ROAD

9194.00	8.26	621.46	C.00	0.CC	621.77	0.31	0.81	0.00	100000.00
960.	0.	960.	0.	0.	214.	0.	131.	65.	616.80
1.22	0.CO	4.48	C.18	C.0CC	C.035	0.C35	0.000	613.20	1566.CO
0.001058	49.	49.	49.	2	0	3	0.00	30.50	1596.50

*SECNO 9325.000

3280 CROSS SECTION 9325.00 EXTENDED 1.93 FEET

3470 ENCROACHMENT STATIONS= 1285.0 1545.0 TYPE= 1 TARGET= 260.000

VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD

9325.00	9.33	621.93	C.00	C.CO	621.95	0.02	0.04	0.14	617.70
960.	383.	318.	259.	367.	198.	290.	132.	65.	619.20
1.25	1.04	1.61	C.89	C.035	0.035	0.C35	0.000	612.60	1285.CO
0.000132	100.	131.	150.	2	0	0	0.00	260.00	1545.CO

*SECNO 10185.000

3470 ENCROACHMENT STATIONS= 214.0 304.0 TYPE= 1 TARGET= 90.000

115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G

10185.00	8.62	622.12	C.00	0.CO	622.22	0.11	0.18	0.08	619.60
960.	165.	662.	134.	90.	227.	80.	144.	68.	619.20
1.35	1.82	2.92	1.67	C.035	0.035	0.C35	0.000	613.50	214.CO
0.000434	80C.	86C.	860.	2	0	0	0.00	90.00	304.CO

*SECNO 10300.000

3470 ENCROACHMENT STATIONS= 855.0 985.8 TYPE= 1 TARGET= 32.000

DOWNSTREAM FACE WILLOW ROAD

10300.00	8.30	622.20	C.00	C.CO	622.52	0.33	0.08	0.22	617.80
960.	C.	96C.	0.	0.	209.	0.	145.	69.	100000.00
1.35	0.CO	4.60	C.00	C.CCO	0.035	0.CCO	0.000	613.9C	855.CO
0.001305	115.	115.	115.	2	0	0	0.00	28.80	883.80

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SO70,VARIABLE ELCHO OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	CCFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHO	ELCHD
	0.00	2.70	3.00	0.00	32.00	0.00	195.00	0.00	613.90	613.90

*SECNO 10348.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
623.21	622.52	0.00	3.	957.	195.	230.	621.10	623.10

3470 ENCROACHMENT STATIONS= 855.0 883.8 TYPE= 1 TARGET= 28.800
UPSTREAM FACE WILLOW ROAD

10348.00	9.04	622.54	0.00	0.00	623.21	0.27	0.68	0.00	100000.00
960.	0.	960.	0.	0.	230.	0.	145.	69.	616.20
1.36	0.00	4.17	0.00	0.000	0.035	0.040	0.000	613.90	855.00
0.000990	48.	48.	48.	2	0	4	0.00	28.80	883.80

*SECNO 10450.000
3280 CROSS SECTION 10450.00 EXTENDED 0.54 FEET

3470 ENCROACHMENT STATIONS= 845.0 1081.0 TYPE= 1 TARGET= 236.000
VALLEY SECTION MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD

10450.00	9.14	623.34	0.00	0.00	623.35	0.02	0.02	0.13	617.30
960.	369.	300.	291.	428.	204.	370.	147.	69.	619.90
1.38	0.86	1.47	0.79	0.040	0.035	0.040	0.000	614.20	845.00
0.000087	127.	102.	75.	2	0	0	0.00	236.00	1081.00

*SECNO 10700.000
3280 CROSS SECTION 10700.00 EXTENDED 0.27 FEET

3470 ENCROACHMENT STATIONS= 595.0 1275.0 TYPE= 1 TARGET= -595.000
VALLEY SECTION 350 FT UPSTREAM OF WILLOW ROAD

10700.00	8.87	623.37	0.00	0.00	623.37	0.01	0.01	0.01	617.60
960.	531.	183.	247.	1112.	197.	644.	156.	72.	620.20
1.52	0.48	0.93	0.38	0.040	0.035	0.040	0.000	614.50	595.00
0.000036	325.	250.	175.	2	0	0	0.00	680.00	1275.00

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THIS RUN EXECUTED 12 SEP 84 10:02:45

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  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  C1,02,03,C4,C5,06
  MODIFICATION -  50,51,52,53,54,55,56
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T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      50-YEAR FLOOD
T3      NORTH BRANCH SWAN CREEK

J1  ICHECK     ING       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.       3.        0.        0.  0.CC0000      0.00      0.0       0.    611.90C     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000     C.000    -1.C00     0.00C     0.000     0.00C     0.000     C.000     0.C00     0.000
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 2

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

3470 ENCROACHMENT STATIONS= 880.0 980.0 TYPE= 1 TARGET= 100.000

DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION

0.00	7.70	611.90	0.00	611.90	612.12	0.22	0.00	0.00	606.10
960.	32.	836.	91.	31.	210.	83.	0.	0.	605.50
0.00	1.08	3.99	1.10	0.040	0.030	0.040	0.000	604.20	880.00
0.000491	0.	0.	0.	0	0	0	0.00	100.00	980.00

SPECIAL BRIDGE

5070 VARIABLE ELCHU OR ELCHD ON CARD SP NOT SPECIFIED

SB	XK	XKOR	CCFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.42	3.00	0.00	31.00	0.00	166.00	0.00	604.20	604.20

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
613.16	612.12	0.00	134.	824.	166.	195.	610.50	612.10

3470 ENCROACHMENT STATIONS= 877.0 980.0 TYPE= 1 TARGET= 103.000

UPSTREAM FACE CARLTON ROAD BRIDGE SECTION

17.00	8.48	612.68	0.00	612.70	612.83	0.14	0.71	0.00	606.10
960.	49.	777.	134.	48.	233.	122.	0.	0.	605.50
0.00	1.02	3.33	1.10	0.040	0.030	0.040	0.000	604.20	877.00
0.000297	35.	35.	35.	2	0	3	0.00	103.00	980.00

*SECNO 175.000

3470 ENCROACHMENT STATIONS= 935.0 1170.0 TYPE= 1 TARGET= 235.000

VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD

175.00	8.17	612.87	0.00	612.87	612.89	0.02	0.03	0.04	609.30
960.	38.	269.	653.	45.	154.	661.	3.	1.	608.00
0.04	0.84	1.75	0.99	0.040	0.035	0.040	0.000	604.70	935.00
0.000144	158.	158.	158.	2	0	0	0.00	235.00	1170.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2000.000

3470 ENCROACHMENT STATIONS= 185.0 318.0 TYPE= 1 TARGET= 133.000

VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD

2000.00	7.62	613.32	C.00	613.22	613.46	0.14	0.51	0.06	611.10
960.	262.	548.	150.	150.	152.	85.	29.	8.	610.40
0.22	1.75	3.61	1.76	C.040	0.035	0.C35	0.000	6C5.7C	185.CO
0.000753	1825.	1825.	1825.	2	0	0	0.00	133.00	318.CO

*SECNO 2100.000

3470 ENCROACHMENT STATIONS= 235.0 34C.0 TYPE= 1 TARGET= 105.00C

REPEATED VALLEY SECTION E

2100.00	7.57	613.37	C.00	613.25	613.58	0.22	0.08	0.04	611.20
960.	62.	647.	251.	33.	15C.	121.	29.	9.	610.50
0.23	1.88	4.31	2.07	C.04C	0.035	0.C35	0.000	6C5.8C	235.CO
0.001086	125.	1CC.	50.	C	0	0	0.00	105.00	340.CO

CCHV= 0.400 CEHV= 0.7CO

*SECNO 2224.000

2800 NAT Q1= 199.97 WSEL= 613.36 ENC Q1= 204.91 WSEL= 613.46 RATIO= -0.C247

NAT Q1= 216. RATIOS LOB,CH,RCB= 0.CCC4 0.9467 0.0529 WSEL= 613.46

3470 ENCROACHMENT STATIONS= 175.0 203.0 TYPE= 4 TARGET= C.053

2224.00	7.46	613.46	C.00	613.36	613.96	0.50	0.18	0.20	610.40
960.	C.	96C.	0.	0.	169.	C.	30.	9.	617.10
0.23	0.CO	5.67	C.00	C.OCO	0.035	0.C00	0.000	606.00	175.CO
0.002446	155.	124.	50.	2	0	0	0.00	27.67	202.67

CCHV= 0.100 CEHV= 0.3CO

*SECNO 2225.000

3700. BRIDGE STENCL= 175.00 STENCR= 203.00

2800 NAT Q1= 259.86 WSEL= 613.32 ENC Q1= 266.02 WSEL= 613.42 RATIO= -0.C237

NAT Q1= 276. RATIOS LOB,CH,RCB= 0.CC03 0.9641 0.0356 WSEL= 613.42

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.9C MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 175.0 203.0 TYPE= 4 TARGET= C.036

DOWNSTREAM FACE BELL ROAD

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2225.00	7.43	613.43	C.00	613.32	613.98	0.55	0.00	0.02	610.40
960.	C.	960.	0.	0.	161.	0.	30.	9.	617.10
0.23	0.00	5.96	C.00	C.000	0.020	0.000	0.000	606.00	175.00
0.001408	1.	1.	1.	2	0	0	-7.23	27.67	202.67

*SECNO 2254.000
2800 NAT Q1= 263.18 WSEL= 613.37 ENC Q1= 269.16 WSEL= 613.47 RATIO= -0.0227
NAT Q1= 281. RATIOS LOB,CH,ROB= 0.0003 0.9567 0.0429 WSEL= 613.47

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.90 MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 175.0 203.0 TYPE= 4 TARGET= 0.043
UPSTREAM FACE BELL ROAD

2254.00	7.48	613.48	C.00	613.37	614.02	0.54	0.04	0.00	610.40
960.	C.	960.	0.	0.	162.	C.	30.	9.	617.10
0.23	0.00	5.91	C.00	C.000	0.020	0.000	0.000	606.00	175.00
0.001380	29.	29.	29.	1	0	0	-7.27	27.67	202.67

*SECNO 2255.000
2800 NAT Q1= 203.89 WSEL= 613.43 ENC Q1= 209.00 WSEL= 613.53 RATIO= -0.0251
NAT Q1= 223. RATIOS LOB,CH,ROB= 0.0004 0.9392 0.0603 WSEL= 613.53

3470 ENCROACHMENT STATIONS= 175.0 203.0 TYPE= 4 TARGET= 0.061

2255.00	7.54	613.54	C.00	613.43	614.03	0.49	0.00	0.01	610.40
960.	C.	960.	0.	0.	172.	0.	30.	9.	617.10
0.23	0.00	5.60	C.00	C.000	0.035	0.000	0.000	606.00	175.00
0.002357	1.	1.	1.	2	0	0	0.00	27.68	202.68

CCHV= 0.200 CEHV= 0.500
*SECNO 3055.000

3470 ENCROACHMENT STATIONS= 813.0 1150.0 TYPE= 1 TARGET= 337.000
VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTERPOLATED

3055.00	7.15	614.45	C.00	614.34	614.47	0.C2	0.35	0.09	612.90
960.	20C.	283.	477.	208.	174.	54C.	40.	12.	611.20
0.43	0.96	1.62	0.88	C.040	0.035	0.C40	0.000	607.3C	813.00
0.000180	300.	8CC.	800.	3	0	0	0.00	337.00	1150.00

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    SECNO      DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q          QLOB      QCH       QRCB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME       VLOB      VCH       VRCB      XAL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE      XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

 CCHV=    0.400 CEHV=    0.700
 *SECNO 3910.000

 3470 ENCROACHMENT STATIONS=      850.0      940.0  TYPE=      1  TARGET=      90.000
                VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE
   3910.00      6.14    614.74      C.00    614.60    615.02      0.28      0.37      0.18    614.20
       960.       226.       660.       74.       70.       140.       31.       52.       16.    612.50
      0.49      3.23      4.72      2.38     C.030     0.035     0.040     0.000    608.60    850.00
  0.002035       855.       855.       855.         2         0         0      0.00     90.00    940.00

 *SECNO 3984.000

 3470 ENCROACHMENT STATIONS=      710.0      757.6  TYPE=      1  TARGET=      67.000
   3984.00      6.27    614.87      C.00    614.77    615.16      0.29      0.14      0.00    611.70
       960.       0.       960.       0.        0.       223.       0.       52.       16.  100000.00
      0.50      0.00      4.31      C.00     C.000     0.035     C.000     0.000    608.60    710.00
  0.001631       100.       74.       25.         2         0         0      0.00     47.57    757.57

 *SECNO 3985.000

 3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD=   620.00 MAX ELLC=   618.00

 3470 ENCROACHMENT STATIONS=      710.0      757.6  TYPE=      1  TARGET=      47.600
                DOWNSTREAM FACE C&O RR BRIDGE
   3985.00      6.26    614.86      C.00    614.76    615.20      0.33      0.00      0.03100C00.00
       960.       0.       960.       0.        0.       207.       0.       52.       16.    611.60
      0.50      0.00      4.64      C.00     C.000     0.035     0.000     0.000    608.60    710.00
  0.004134         1.         1.         1.         1         0         0    -15.89     47.60    757.60

 CCHV=    0.100 CEHV=    0.300
 *SECNO 4009.000
  2800 NAT Q1=     258.81  WSEL=     614.83  ENC Q1=     255.59  WSEL=     614.93  RATIO= -0.0262
  NAT Q1=     266.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     614.93

 3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD=   620.00 MAX ELLC=   618.00

 3470 ENCROACHMENT STATIONS=      710.0      757.6  TYPE=      4  TARGET=       0.000
                UPSTREAM FACE C&C RR BRIDGE
```

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	GCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
4009.00	6.32	614.92	C.00	614.83	615.25	0.33	0.05	0.00	611.70
960.	C.	96C.	0.	0.	209.	C.	52.	16.	611.60
0.50	0.CO	4.58	C.00	C.OCO	0.020	0.COO	0.000	608.6C	710.CO
0.001306	24.	24.	24.	C	0	0	-18.01	47.57	757.57

*SECNO 4010.000
2800 NAT Q1= 434.88 WSEL= 614.89 ENC Q1= 469.53 WSEL= 614.99 RATIO= -0.C797
NAT Q1= 696. RATIOS LOB,CH,ROB= 0.2301 0.6746 0.0953 WSEL= 614.99

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 4 TARGET= 0.325

4010.00	6.38	614.98	C.00	614.89	615.25	0.28	0.00	0.01	611.70
960.	C.	96C.	0.	0.	22E.	0.	52.	16.	611.60
0.50	0.CO	4.21	C.00	C.OCO	0.020	0.COO	0.000	6C8.6O	710.CO
0.000497	1.	1.	1.	2	0	0	0.00	47.57	757.57

CCHV= 0.5OC CEHV= 1.CCO
*SECNO 4060.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 50.C 19C.C TYPE= 1 TARGET= 140.000
50 FT UPSTREAM C&O RR BRIDGE, DATA PARTLY FROM VS-D

4060.00	6.33	615.C3	C.00	614.93	615.41	0.39	0.05	0.11	613.70
960.	103.	756.	1C1.	42.	137.	47.	52.	17.	615.30
0.50	2.44	5.5O	2.16	C.03C	0.035	0.C35	0.000	6C8.7C	50.CO
0.002701	5C.	5C.	5C.	C	0	0	0.00	132.14	190.CO

*SECNO 4100.000

3470 ENCROACHMENT STATIONS= 40.0 23C.0 TYPE= 1 TARGET= 190.000
SECTION 4C6C MOVED UPSTREAM

4100.00	6.77	615.47	C.00	615.41	615.60	0.14	0.06	0.13	613.70
960.	14C.	543.	276.	75.	152.	149.	53.	17.	615.30
0.50	1.88	3.58	1.86	C.03C	0.035	0.C35	0.000	6C8.7C	40.CO
0.001023	4C.	4C.	40.	3	0	0	C.00	190.0C	230.00

CCHV= 0.300 CEHV= 0.5CO

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 5250.000

2800 NAT Q1= 904.64 WSEL= 615.89 ENC Q1= 904.64 WSEL= 615.99 RATIO= 0.0000

NAT Q1= 978. RATIOS LOB,CH,ROB= 0.2320 0.2077 0.5603 WSEL= 615.99

3280 CROSS SECTION 5250.00 EXTENDED 0.93 FEET

3470 ENCROACHMENT STATIONS= 57.1 549.7 TYPE= 4 TARGET= 0.075

VALLEY SECTION D 1250 FT UPSTREAM C&C RR BRIDGE

5250.00	7.23	615.93	0.00	615.89	615.95	0.01	0.31	0.04	613.70
960.	199.	219.	542.	251.	187.	688.	72.	26.	615.30
0.86	0.79	1.31	0.79	0.030	0.035	0.035	0.000	608.70	57.11
0.000121	1150.	1150.	1150.	2	0	0	0.00	492.60	549.70

CCHV= 0.500 CEHV= 1.000

*SECNO 6650.000

2800 NAT Q1= 172.55 WSEL= 616.32 ENC Q1= 172.55 WSEL= 616.42 RATIO= 0.0000

NAT Q1= 281. RATIOS LOB,CH,ROB= 0.2546 0.4323 0.3131 WSEL= 616.42

3470 ENCROACHMENT STATIONS= 563.5 671.9 TYPE= 4 TARGET= 0.385

200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

6650.00	6.10	616.40	0.00	616.32	616.82	0.42	0.46	0.41	615.40
960.	94.	680.	186.	35.	116.	57.	92.	35.	616.20
0.93	2.66	5.85	3.28	0.030	0.035	0.030	0.000	610.30	563.54
0.003197	1400.	1400.	1300.	2	0	0	0.00	108.38	671.92

*SECNO 6850.000

3470 ENCROACHMENT STATIONS= 564.0 590.3 TYPE= 1 TARGET= 28.000

DOWNSTREAM FACE OF ASH ROAD

6850.00	6.45	617.05	0.00	616.98	617.70	0.64	0.66	0.22	613.70
960.	0.	960.	0.	0.	149.	0.	93.	35.	100000.00
0.94	0.00	6.44	0.00	0.000	0.035	0.000	0.000	610.60	564.00
0.003404	200.	200.	200.	2	0	0	0.00	26.32	590.32

SPECIAL BRIDGE

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

5070 VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFG	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.15	3.00	0.00	26.50	0.00	163.00	0.00	610.60	610.60

CCHV= 0.100 CEHV= 0.300
*SECNO 6880.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	KS	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.21	617.67	0.00	20.	940.	163.	162.	616.70	617.80

3470 ENCROACHMENT STATIONS= 563.0 590.3 TYPE= 1 TARGET= 27.300
UPSTREAM FACE OF ASH ROAD

6880.00	7.07	617.67	0.00	617.60	618.17	0.50	0.47	0.00	613.70
960.	21.	939.	0.	4.	165.	0.	93.	35.	100000.00
0.94	5.34	5.68	0.00	0.030	0.035	0.000	0.000	610.60	563.00
0.002077	30.	30.	30.	2	0	4	0.00	27.30	590.30

*SECNO 6980.000

3470 ENCROACHMENT STATIONS= 480.0 670.0 TYPE= 1 TARGET= 190.000
VALLEY SECTION E 100 FT UPSTREAM OF ASH ROAD

6980.00	7.93	618.23	0.00	618.18	618.28	0.04	0.06	0.05	615.40
960.	421.	334.	204.	301.	166.	133.	95.	36.	616.20
0.96	1.40	2.02	1.54	0.030	0.035	0.030	0.000	610.30	480.00
0.000236	200.	99.	99.	2	0	0	0.00	190.00	670.00

CCHV= 0.300 CEHV= 0.500
*SECNO 7980.000

3470 ENCROACHMENT STATIONS= 500.0 700.0 TYPE= 1 TARGET= 200.000

7980.00	7.12	618.62	0.00	618.53	618.76	0.13	0.44	0.05	616.55
960.	351.	495.	114.	162.	138.	73.	106.	40.	617.70
1.06	2.17	3.59	1.56	0.030	0.035	0.030	0.000	611.50	500.00
0.000988	1100.	1000.	900.	2	0	0	0.00	200.00	700.00

*SECNO 9045.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
3470 ENCROACHMENT STATIONS=			513.0	594.0	TYPE=	1	TARGET=	90.000	
100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F									
9045.00	7.55	620.15	C.00	620.13	620.28	0.53	1.72	0.20	617.70
960.	94.	809.	57.	33.	130.	26.	113.	44.	619.20
1.11	2.88	6.24	2.23	C.035	0.035	0.035	0.000	612.60	513.00
0.003090	1100.	1065.	1000.	3	0	0	0.00	31.00	594.00

CCHV= C.500 CEHV= 1.000
*SECNO 9145.000

3470 ENCROACHMENT STATIONS=			1566.0	1596.4	TYPE=	1	TARGET=	35.000	
DOWNSTREAM FACE WALTZ ROAD									
9145.00	7.36	620.56	C.00	620.56	620.97	0.41	0.24	0.06	616.40
960.	C.	960.	0.	0.	187.	C.	113.	44.	TOCOOO.00
1.12	0.00	5.13	C.00	C.000	0.035	0.003	0.000	613.20	1566.00
0.001847	100.	100.	100.	2	0	0	0.00	30.45	1596.45

SPECIAL BRIDGE

SO70,VARIABLE ELCHU OR ELCHD ON CARD SE NOT SPECIFIED

SB	XK	XKOR	CCFG	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.00	3.00	0.00	28.00	0.00	186.00	0.00	613.20	613.20

*SECNO 9194.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
621.80	620.97	0.00	1.	950.	136.	190.	620.00	621.70

File 8201.505
shows XKOR=1.54
A=152 ft²
Negligible Impact

3470 ENCROACHMENT STATIONS=			1566.0	1596.5	TYPE=	1	TARGET=	30.500	
UPSTREAM FACE WALTZ ROAD									
9194.00	5.27	621.47	C.00	621.46	621.78	0.31	0.81	0.00	100000.00
960.	C.	960.	0.	0.	215.	C.	114.	44.	616.80
1.12	0.00	4.47	C.13	C.000	0.035	0.035	0.000	613.20	1566.00
0.001057	49.	49.	49.	2	0	3	0.00	30.50	1596.50

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 9325.000

3280 CROSS SECTION 9325.00 EXTENDED 1.91 FEET

3470 ENCROACHMENT STATIONS= 1400.0 1545.0 TYPE= 1 TARGET= 145.000

VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD

9325.00	9.30	621.90	C.00	621.93	621.98	0.07	0.08	0.12	617.70
960.	0.	512.	448.	0.	197.	288.	115.	44.	619.20
1.14	0.00	2.60	1.56	C.000	0.035	0.035	0.000	612.60	1400.00
0.000407	100.	131.	150.	2	0	0	0.00	145.00	1545.00

*SECNO 10185.000

3470 ENCROACHMENT STATIONS= 215.0 303.0 TYPE= 1 TARGET= 88.000

115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G

10185.00	8.75	622.25	C.00	622.12	622.36	0.10	0.35	0.03	619.60
960.	152.	664.	134.	90.	232.	81.	123.	46.	619.20
1.23	1.80	2.86	1.66	C.035	0.035	0.035	0.000	613.50	215.00
0.000407	800.	86C.	860.	2	0	0	0.00	88.00	303.00

*SECNO 10300.000

3470 ENCROACHMENT STATIONS= 855.0 883.8 TYPE= 1 TARGET= 32.000

DOWNSTREAM FACE WILLOW ROAD

10300.00	8.43	622.33	C.00	622.20	622.64	0.32	0.08	0.21	617.80
960.	C.	960.	0.	0.	213.	0.	124.	47.	100000.00
1.24	0.00	4.51	C.00	C.000	0.035	0.000	0.000	613.90	855.00
0.001239	115.	115.	115.	2	0	0	0.00	28.80	883.80

SPECIAL BRIDGE

XKOR = 1.53

Area = 162 ft²

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.70	3.0C	0.00	32.00	0.00	195.00	0.00	613.90	613.90

*SECNO 10348.000

3700. BRIDGE STENCL= 855.00 STENCR= 883.80

ERROR ELTRD.LT.MIN ROAD ELEV, ELTRD SET EQUAL TO MIN ROAD ELEV

2800 NAT Q1= 305.07 WSEL= 622.94 ENC Q1= 443.44 WSEL= 623.04 RATIO= -0.4536

NAT Q1= 1400. RATIOS LOB,CH,ROB= 0.5664 0.3168 0.1168 WSEL= 623.04

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FRESSURE FLOW

EGPRS	EGLWC	HS	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
623.34	622.34	0.00	0.	960.	195.	230.	621.10	626.50

623.16 Using Info from File 7201-505

3470 ENCROACHMENT STATIONS= 855.0 883.8 TYPE= 4 TARGET= 0.683
LPSTREAM FACE WILLOW ROAD

10348.00	9.18	623.08	0.00	622.94	623.34	0.26	0.70	0.00	617.80
960.	0.	960.	0.	0.	234.	0.	124.	47.	616.20
1.24	0.00	4.10	0.00	0.000	0.035	0.000	0.000	613.90	855.00
0.000940	48.	48.	48.	2	0	0	0.00	28.80	883.80

*SECNO 10450.000
3280 CROSS SECTION 10450.00 EXTENDED 0.65 FEET

3470 ENCROACHMENT STATIONS= 880.0 1020.0 TYPE= 1 TARGET= 140.000
VALLEY SECTION G MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD

10450.00	9.25	623.45	0.00	623.34	623.49	0.04	0.03	0.11	617.30
960.	358.	427.	175.	296.	207.	161.	126.	47.	619.90
1.26	1.21	2.06	1.08	0.040	0.035	0.040	0.000	614.20	880.00
0.000167	127.	102.	75.	2	0	0	0.00	140.00	1020.00

*SECNO 10700.000
3280 CROSS SECTION 10700.00 EXTENDED 0.42 FEET

3470 ENCROACHMENT STATIONS= 600.0 1250.0 TYPE= 1 TARGET= 650.000
VALLEY SECTION G 350 FT UPSTREAM OF WILLOW ROAD

10700.00	9.02	623.52	0.00	623.37	623.52	0.00	0.02	0.02	617.60
960.	527.	175.	258.	1154.	201.	674.	134.	49.	620.20
1.41	0.46	0.87	0.38	0.040	0.035	0.040	0.000	614.50	600.00
0.000031	325.	250.	175.	2	0	0	0.00	650.00	1250.00

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THIS RUN EXECUTED 12 SEP 84 10:02:54

HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
ERROR CORR - 01,02,03,04,05,06
MODIFICATION - 50,51,52,53,54,55,56

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

NORTH BRANCH SWAN CREEK

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
0.000	611.90	C.00	612.11	133.67	31.88	825.62	102.50	C.00	0.00	900.00	930.00	0.00
0.000	611.90	C.00	612.12	100.00	32.41	836.42	91.17	100.00	880.00	900.00	930.00	980.00
17.000	612.70	C.00	612.83	136.23	46.44	739.45	174.11	C.00	0.00	900.00	930.00	0.00
17.000	612.68	-C.02	612.83	103.00	48.83	776.83	134.34	103.00	877.00	900.00	930.00	980.00
175.000	612.87	C.00	612.88	505.00	110.41	232.12	617.47	505.00	695.00	950.00	971.00	1200.00
175.000	612.87	C.00	612.89	235.00	38.23	268.67	653.11	235.00	935.00	950.00	971.00	1170.00
2000.000	613.22	C.00	613.35	155.00	239.12	524.05	196.84	155.00	185.00	250.00	274.00	340.00
2000.000	613.32	C.10	613.46	133.00	262.44	547.64	149.93	133.00	185.00	250.00	274.00	318.00
2100.000	613.25	C.00	613.49	105.00	60.29	660.53	239.18	105.00	235.00	250.00	274.00	340.00
2100.000	613.37	C.11	613.58	105.00	61.99	647.41	250.59	105.00	235.00	250.00	274.00	340.00
2224.000	613.36	C.00	613.87	28.09	0.39	959.61	0.00	304.00	0.00	175.00	203.00	304.00
2224.000	613.46	C.11	613.96	27.67	0.00	960.00	0.00	C.05	175.00	175.00	203.00	203.00
2225.000	613.32	C.00	613.89	28.08	0.29	959.71	0.00	304.00	0.00	175.00	203.00	304.00
2225.000	613.43	C.11	613.98	27.67	0.00	960.00	0.00	C.04	175.00	175.00	203.00	203.00
2254.000	613.37	C.00	613.93	28.09	0.30	959.70	0.00	304.00	0.00	175.00	203.00	304.00
2254.000	613.48	C.11	614.02	27.67	0.00	960.00	0.00	C.04	175.00	175.00	203.00	203.00
2255.000	613.43	C.00	613.94	28.10	0.41	959.59	0.00	304.00	0.00	175.00	203.00	304.00
2255.000	613.54	C.11	614.03	27.68	0.00	960.00	0.00	C.06	175.00	175.00	203.00	203.00
3055.000	614.34	C.00	614.36	500.00	282.04	259.11	418.85	500.00	650.00	889.00	923.00	1150.00
3055.000	614.45	C.11	614.47	337.00	200.20	282.70	477.10	337.00	813.00	889.00	923.00	1150.00
3910.000	614.60	C.00	614.92	90.00	214.84	674.34	70.81	90.00	850.00	889.00	923.00	940.00
3910.000	614.74	C.14	615.02	90.00	225.75	660.03	74.21	90.00	850.00	889.00	923.00	940.00

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SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
3984.000	614.77	C.00	615.C7	47.57	0.CC	960.00	0.00	67.00	710.00	710.00	757.57	757.57
3984.000	614.87	C.10	615.16	47.57	0.CC	960.00	0.00	67.00	710.00	710.00	757.57	757.57
3985.000	614.76	C.00	615.11	47.60	0.CC	960.00	0.00	47.60	710.00	710.00	757.57	757.60
3985.000	614.86	C.10	615.20	47.60	0.CC	960.00	0.CC	47.60	710.00	710.00	757.57	757.60
4009.000	614.83	C.00	615.17	47.60	0.00	960.00	0.CC	47.60	710.00	710.00	757.57	757.60
4009.000	614.92	C.10	615.25	47.57	0.00	960.00	0.CC	C.00	710.00	710.00	757.57	757.57
4010.000	614.89	C.00	615.17	47.60	0.CC	960.00	0.CC	47.60	710.00	710.00	757.57	757.60
4010.000	614.98	C.09	615.25	47.57	0.CC	960.00	0.CC	C.33	710.00	710.00	757.57	757.57
4060.000	614.93	C.00	615.35	134.15	102.55	766.13	91.32	145.00	45.00	100.00	133.00	190.00
4060.000	615.03	C.09	615.41	132.14	102.92	755.61	101.47	140.00	50.00	100.00	133.00	190.00
4100.000	615.41	C.00	615.56	192.98	134.99	553.57	271.44	225.00	5.00	100.00	133.00	230.00
4100.000	615.47	0.05	615.60	190.00	140.42	543.22	276.36	190.00	40.00	100.00	133.00	230.00
5250.000	615.89	0.00	615.90	729.12	217.11	208.56	534.33	0.00	0.00	200.00	233.00	0.00
5250.000	615.93	C.05	615.95	492.60	198.73	219.22	542.04	C.07	57.11	200.00	233.00	549.70
6650.000	616.32	C.00	616.70	125.00	128.99	649.35	181.66	125.00	550.00	600.00	627.00	675.00
6650.000	616.40	C.08	616.82	108.38	94.34	679.73	185.93	C.39	563.54	600.00	627.00	671.92
6850.000	616.98	C.00	617.64	26.32	0.CC	960.00	0.CO	28.00	564.00	564.00	590.32	590.32
6850.000	617.05	C.07	617.70	26.32	0.00	960.00	0.CO	28.00	564.00	564.00	590.32	590.32
6880.000	617.60	C.00	618.11	27.30	20.95	939.05	0.00	27.30	563.00	564.00	590.32	590.30
6880.000	617.67	C.07	618.17	27.30	21.20	938.80	0.00	27.30	563.00	564.00	590.32	590.30
6980.000	618.18	C.00	618.21	240.00	470.90	305.09	184.01	240.00	430.00	600.00	627.00	670.00
6980.000	618.23	C.05	618.28	190.00	421.04	334.48	204.49	190.00	480.00	600.00	627.00	670.00
7980.000	618.53	C.00	618.66	327.32	339.39	496.42	124.19	C.00	0.00	600.00	628.50	0.00
7980.000	618.62	C.09	618.76	200.00	351.15	494.79	114.06	200.00	500.00	600.00	628.50	700.00
9045.000	620.13	C.00	620.67	81.00	93.26	810.82	55.92	90.00	513.00	540.00	567.00	594.00
9045.000	620.15	C.01	620.68	81.00	94.18	808.90	56.92	90.00	513.00	540.00	567.00	594.00
9145.000	620.56	C.00	620.97	30.45	0.CC	960.00	0.CO	35.00	1566.00	1566.00	1596.45	1596.45
9145.000	620.56	C.00	620.97	30.45	0.CC	960.00	0.CO	35.00	1566.00	1566.00	1596.45	1596.45
9194.000	621.46	C.00	621.77	30.50	0.CC	959.96	0.04	30.50	1566.00	1566.00	1596.45	1596.50
9194.000	621.47	C.00	621.78	30.50	0.CC	959.96	0.04	30.50	1566.00	1566.00	1596.45	1596.50
9325.000	621.93	C.00	621.95	260.00	382.90	318.06	259.04	260.00	1285.00	1400.00	1430.00	1545.00
9325.000	621.90	-C.03	621.98	145.00	0.00	512.37	447.63	145.00	1400.00	1400.00	1430.00	1545.00
10185.000	622.12	C.00	622.22	90.00	164.52	661.86	133.61	90.00	214.00	241.00	276.00	304.00
10185.000	622.25	C.14	622.36	88.00	162.10	663.58	134.32	88.00	215.00	241.00	276.00	303.00

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SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
10300.000	622.20	C.00	622.52	28.80	0.CC	960.00	0.CO	32.00	855.00	855.00	883.80	883.80
10300.000	622.33	C.13	622.64	28.80	0.CC	960.00	0.CO	32.00	855.00	855.00	883.80	883.80
10348.000	622.94	C.00	623.21	28.80	0.CO	960.00	0.CO	28.80	855.00	855.00	883.80	883.80
10348.000	623.08	C.15	623.34	28.80	0.CC	960.00	0.00	C.68	855.00	855.00	883.80	883.80
10450.000	623.34	C.00	623.35	236.00	368.72	300.20	291.08	236.00	845.00	950.00	976.00	1081.00
10450.000	623.45	C.11	623.49	140.00	353.12	427.10	174.78	14C.00	880.00	950.00	976.CO	1020.00
10700.000	623.37	C.00	623.37	680.00	530.87	182.63	246.50	-595.00	595.00	950.00	976.00	1275.01
10700.000	623.52	C.15	623.52	650.00	527.29	174.71	258.CO	65C.00	600.00	950.00	976.00	1250.00

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NORTH BRANCH SWAN CREEK

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	TOK*S	VCH	AREA	.01K
0.000	0.00	C.00	0.CC	604.20	960.CC	611.90	0.00	612.11	4.79	3.94	340.92	438.82
0.000	0.00	C.00	0.C0	604.20	960.CC	611.90	0.00	612.12	4.91	3.99	322.99	433.15
17.000	35.00	612.10	610.50	604.20	960.CC	612.70	0.00	612.83	2.67	3.17	471.18	587.39
17.000	35.00	612.10	610.50	604.20	960.CC	612.68	0.00	612.83	2.97	3.33	402.94	556.73
175.000	158.CC	C.00	0.CC	604.70	960.CC	612.87	0.00	612.88	1.08	1.51	1136.75	925.58
175.000	158.00	0.00	0.CC	604.70	960.CC	612.87	0.00	612.89	1.44	1.75	860.46	799.99
2000.000	1825.CC	C.00	0.C0	605.70	960.00	613.22	0.C0	613.35	7.29	3.51	410.16	355.45
2000.000	1825.C0	C.00	0.C0	605.70	960.CC	613.32	0.00	613.46	7.53	3.61	386.92	349.83
2100.000	100.CC	C.00	0.C0	605.80	960.00	613.25	0.C0	613.49	11.94	4.47	293.33	277.87
2100.000	100.0C	C.00	0.C0	605.80	960.CC	613.37	0.C0	613.58	10.86	4.31	304.00	291.34
2224.000	124.00	C.00	0.00	606.00	960.C0	613.36	0.00	613.87	23.05	5.76	167.15	199.97
2224.000	124.CC	C.00	0.CC	606.00	960.C0	613.46	0.C0	613.96	24.46	5.67	169.38	194.10
2225.000	1.00	612.90	617.40	606.00	960.C0	613.32	0.00	613.89	13.65	6.06	158.91	259.86
2225.000	1.C0	612.90	617.4C	606.00	960.C0	613.43	0.C0	613.98	14.06	5.96	161.19	256.00
2254.000	29.C0	612.90	617.40	606.00	960.CC	613.37	0.C0	613.93	13.31	6.01	160.36	263.18
2254.000	29.CC	612.90	617.40	606.00	960.C0	613.48	0.C0	614.02	13.80	5.91	162.33	258.44
2255.000	1.CC	C.00	0.CC	606.00	960.C0	613.43	0.00	613.94	22.17	5.69	169.28	203.89
2255.000	1.C0	C.00	0.C0	606.00	960.C0	613.54	0.00	614.03	23.57	5.60	171.55	197.74
3055.000	800.00	C.00	0.C0	607.30	960.00	614.34	0.00	614.36	1.62	1.52	1073.94	753.16
3055.000	800.C0	C.00	0.C0	607.30	960.CC	614.45	0.00	614.47	1.80	1.62	922.64	716.23
3910.000	855.00	C.00	0.C0	608.60	960.CC	614.60	0.00	614.92	23.80	4.99	223.49	196.78
3910.000	855.00	C.00	0.C0	608.60	960.C0	614.74	0.00	615.02	20.35	4.72	240.89	212.80
3984.000	74.0C	C.00	0.C0	608.60	960.00	614.77	0.C0	615.07	17.44	4.40	218.10	229.90
3984.000	74.00	C.00	0.CC	608.60	960.CC	614.87	0.00	615.16	16.31	4.31	222.83	237.70
3985.000	1.00	620.00	618.C0	608.60	960.CC	614.76	0.00	615.11	43.77	4.74	202.42	145.10
3985.000	1.0C	620.00	618.C0	608.60	960.CC	614.86	0.C0	615.20	41.34	4.64	206.81	149.30
4009.000	24.00	620.00	618.C0	608.60	960.C0	614.83	0.00	615.17	13.76	4.68	205.34	258.81
4009.000	24.C0	620.00	618.C0	608.60	960.CC	614.92	0.C0	615.25	13.06	4.58	209.39	265.62
4010.000	1.00	C.00	0.C0	608.60	960.CC	614.89	0.C0	615.17	4.87	4.30	223.51	434.88
4010.000	1.00	C.00	0.C0	608.60	960.00	614.98	0.C0	615.25	4.97	4.21	227.86	430.66
4060.000	50.CC	C.00	0.C0	608.70	960.CC	614.93	0.C0	615.35	29.63	5.70	218.73	176.36
4060.000	50.00	C.00	0.CC	608.70	960.C0	615.03	0.C0	615.41	27.01	5.50	226.62	184.72

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
4100.000	40.00	0.00	0.00	608.70	960.00	615.41	0.00	615.56	11.06	3.69	365.37	288.67
4100.000	40.00	0.00	0.00	608.70	960.00	615.47	0.00	615.60	10.23	3.58	375.24	300.11
5250.000	1150.00	0.00	0.00	608.70	960.00	615.89	0.00	615.90	1.13	1.26	1288.09	904.64
5250.000	1150.00	0.00	0.00	608.70	960.00	615.93	0.00	615.95	1.21	1.31	1106.03	873.56
6650.000	1400.00	0.00	0.00	610.30	960.00	616.32	0.00	616.70	30.95	5.69	220.34	172.55
6650.000	1400.00	0.00	0.00	610.30	960.00	616.40	0.00	616.82	31.97	5.85	208.05	169.79
6850.000	200.00	0.00	0.00	610.60	960.00	616.98	0.00	617.64	35.37	6.53	147.12	161.41
6850.000	200.00	0.00	0.00	610.60	960.00	617.05	0.00	617.70	34.04	6.44	149.07	164.55
6880.000	30.00	617.80	616.70	610.60	960.00	617.60	0.00	618.11	21.50	5.75	167.28	207.05
6880.000	30.00	617.80	616.70	610.60	960.00	617.67	0.00	618.17	20.77	5.68	169.16	210.65
6980.000	99.00	0.00	0.00	610.30	960.00	618.18	0.00	618.21	2.02	1.86	680.85	674.72
6980.000	99.00	0.00	0.00	610.30	960.00	618.23	0.00	618.28	2.36	2.02	599.84	624.32
7980.000	1000.00	0.00	0.00	611.50	960.00	618.53	0.00	618.66	10.54	3.67	408.84	295.67
7980.000	1000.00	0.00	0.00	611.50	960.00	618.62	0.00	618.76	9.88	3.59	372.30	305.37
9045.000	1065.00	0.00	0.00	612.60	960.00	620.13	0.00	620.67	31.36	6.27	186.72	171.44
9045.000	1065.00	0.00	0.00	612.60	960.00	620.15	0.00	620.68	30.90	6.24	187.88	172.70
9145.000	100.00	0.00	0.00	613.20	960.00	620.56	0.00	620.97	18.50	5.14	186.89	223.18
9145.000	100.00	0.00	0.00	613.20	960.00	620.56	0.00	620.97	18.47	5.13	186.99	223.36
9194.000	49.00	621.70	620.00	613.20	960.00	621.46	0.00	621.77	10.58	4.48	214.70	295.09
9194.000	49.00	621.70	620.00	613.20	960.00	621.47	0.00	621.78	10.57	4.47	214.79	295.27
9325.000	131.00	0.00	0.00	612.60	960.00	621.93	0.00	621.95	1.32	1.61	855.44	836.15
9325.000	131.00	0.00	0.00	612.60	960.00	621.90	0.00	621.98	4.07	2.60	484.41	476.05
10185.000	860.00	0.00	0.00	613.50	960.00	622.12	0.00	622.22	4.34	2.92	397.30	460.72
10185.000	860.00	0.00	0.00	613.50	960.00	622.25	0.00	622.36	4.07	2.86	402.83	475.80
10300.000	115.00	0.00	0.00	613.90	960.00	622.20	0.00	622.52	13.05	4.60	208.82	265.73
10300.000	115.00	0.00	0.00	613.90	960.00	622.33	0.00	622.64	12.39	4.51	212.64	272.68
10348.000	48.00	623.10	621.10	613.90	960.00	622.94	0.00	623.21	9.90	4.17	230.16	305.07
10348.000	48.00	626.50	621.10	613.90	960.00	623.08	0.00	623.34	9.40	4.10	234.42	313.05
10450.000	102.00	0.00	0.00	614.20	960.00	623.34	0.00	623.35	0.87	1.47	1002.73	1031.93
10450.000	102.00	0.00	0.00	614.20	960.00	623.45	0.00	623.49	1.67	2.06	864.55	742.61
10700.000	250.00	0.00	0.00	614.50	960.00	623.37	0.00	623.37	0.36	0.93	1953.59	1601.33
10700.000	250.00	0.00	0.00	614.50	960.00	623.52	0.00	623.52	0.31	0.87	2029.49	1729.25

NORTH BRANCH SWAN CREEK

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.000	960.00	611.90	0.00	0.00	0.00	133.67	0.00
0.000	960.00	611.90	0.00	0.00	0.00	100.00	0.00
17.000	960.00	612.70	0.00	0.80	0.00	186.23	35.00
17.000	960.00	612.68	-0.02	0.78	-0.02	103.00	35.00
175.000	960.00	612.87	0.00	0.16	0.00	505.00	158.00
175.000	960.00	612.87	0.00	0.19	0.00	235.00	158.00
2000.000	960.00	613.22	0.00	0.36	0.00	155.00	1825.00
2000.000	960.00	613.32	0.10	0.45	0.10	133.00	1825.00
2100.000	960.00	613.25	0.00	0.03	0.00	105.00	100.00
2100.000	960.00	613.37	0.11	0.04	0.11	105.00	100.00
2224.000	960.00	613.36	0.00	0.10	0.00	28.09	124.00
2224.000	960.00	613.46	0.11	0.10	0.11	27.67	124.00
2225.000	960.00	613.32	0.00	-0.04	0.00	28.08	1.00
2225.000	960.00	613.43	0.11	-0.03	0.11	27.67	1.00
2254.000	960.00	613.37	0.00	0.05	0.00	28.09	29.00
2254.000	960.00	613.48	0.11	0.05	0.11	27.67	29.00
2255.000	960.00	613.43	0.00	0.07	0.00	28.10	1.00
2255.000	960.00	613.54	0.11	0.06	0.11	27.68	1.00
3055.000	960.00	614.34	0.00	0.91	0.00	500.00	800.00
3055.000	960.00	614.45	0.11	0.91	0.11	337.00	800.00
3910.000	960.00	614.60	0.00	0.26	0.00	90.00	855.00
3910.000	960.00	614.74	0.14	0.29	0.14	90.00	855.00
3984.000	960.00	614.77	0.00	0.17	0.00	47.57	74.00
3984.000	960.00	614.87	0.10	0.13	0.10	47.57	74.00
3985.000	960.00	614.76	0.00	-0.01	0.00	47.60	1.00
3985.000	960.00	614.86	0.10	-0.01	0.10	47.60	1.00
4009.000	960.00	614.83	0.00	0.07	0.00	47.60	24.00
4009.000	960.00	614.92	0.10	0.06	0.10	47.57	24.00
4010.000	960.00	614.89	0.00	0.06	0.00	47.60	1.00
4010.000	960.00	614.98	0.09	0.06	0.09	47.57	1.00
4060.000	960.00	614.93	0.00	0.05	0.00	134.15	50.00
4060.000	960.00	615.03	0.09	0.05	0.09	132.14	50.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
4100.000	960.00	615.41	0.00	0.48	0.00	192.98	40.00
4100.000	960.00	615.47	0.05	0.44	0.05	190.00	40.00
5250.000	960.00	615.89	0.00	0.47	0.00	729.12	1150.00
5250.000	960.00	615.93	0.05	0.47	0.05	492.60	1150.00
6650.000	960.00	616.32	0.00	0.43	0.00	125.00	1400.00
6650.000	960.00	616.40	0.08	0.46	0.08	108.38	1400.00
6850.000	960.00	616.98	0.00	0.66	0.00	26.32	200.00
6850.000	960.00	617.05	0.07	0.66	0.07	26.32	200.00
6880.000	960.00	617.60	0.00	0.62	0.00	27.30	30.00
6880.000	960.00	617.67	0.07	0.61	0.07	27.30	30.00
6980.000	960.00	618.18	0.00	0.58	0.00	240.00	99.00
6980.000	960.00	618.23	0.05	0.57	0.05	190.00	99.00
7980.000	960.00	618.53	0.00	0.35	0.00	327.32	1000.00
7980.000	960.00	618.62	0.09	0.39	0.09	200.00	1000.00
9045.000	960.00	620.13	0.00	1.60	0.00	81.00	1065.00
9045.000	960.00	620.15	0.01	1.53	0.01	81.00	1065.00
9145.000	960.00	620.56	0.00	0.42	0.00	30.45	100.00
9145.000	960.00	620.56	0.00	0.41	0.00	30.45	100.00
9194.000	960.00	621.46	0.00	0.91	0.00	30.50	49.00
9194.000	960.00	621.47	0.00	0.91	0.00	30.50	49.00
9325.000	960.00	621.93	0.00	0.47	0.00	260.00	131.00
9325.000	960.00	621.90	-0.03	0.44	-0.03	145.00	131.00
10185.000	960.00	622.12	0.00	0.18	0.00	90.00	860.00
10185.000	960.00	622.25	0.14	0.35	0.14	88.00	860.00
10300.000	960.00	622.20	0.00	0.08	0.00	28.80	115.00
10300.000	960.00	622.33	0.13	0.08	0.13	28.80	115.00
10348.000	960.00	622.94	0.00	0.74	0.00	28.80	48.00
10348.000	960.00	623.08	0.15	0.76	0.15	28.80	48.00
10450.000	960.00	623.34	0.00	0.40	0.00	236.00	102.00
10450.000	960.00	623.45	0.11	0.36	0.11	140.00	102.00
10700.000	960.00	623.37	0.00	0.03	0.00	680.00	250.00
10700.000	960.00	623.52	0.15	0.07	0.15	650.00	250.00

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PRINTED IN U.S.A.

SUMMARY OF ERRORS AND SPECIAL NOTES

FLOODWAY DATA, NORTH BRANCH SWAN CREEK
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
0.000	100.	323.	3.0	611.9	611.9	0.0
17.000	103.	405.	2.4	612.7	612.7	0.0
175.000	235.	860.	1.1	612.9	612.9	0.0
2000.000	133.	387.	2.5	613.3	613.2	0.1
2100.000	105.	304.	3.2	613.4	613.3	0.1
2224.000	28.	169.	5.7	613.5	613.4	0.1
2225.000	28.	161.	6.0	613.4	613.3	0.1
2254.000	28.	162.	5.9	613.5	613.4	0.1
2255.000	28.	172.	5.6	613.5	613.4	0.1
3055.000	337.	923.	1.0	614.4	614.3	0.1
3910.000	90.	241.	4.0	614.7	614.6	0.1
3984.000	48.	223.	4.3	614.9	614.8	0.1
3985.000	48.	207.	4.6	614.9	614.8	0.1
4009.000	48.	209.	4.6	614.9	614.8	0.1
4010.000	48.	228.	4.2	615.0	614.9	0.1
4060.000	140.	227.	4.2	615.0	614.9	0.1
4100.000	190.	375.	2.6	615.5	615.4	0.1
5250.000	493.	1106.	0.9	615.9	615.9	0.0
6650.000	108.	208.	4.6	616.4	616.3	0.1
6850.000	26.	149.	6.4	617.1	617.0	0.1
6880.000	27.	169.	5.7	617.7	617.6	0.1
6980.000	190.	600.	1.6	618.3	618.2	0.1
7980.000	200.	372.	2.6	618.6	618.5	0.1
9045.000	81.	183.	5.1	620.1	620.1	0.0
9145.000	30.	187.	5.1	620.6	620.6	0.0
9194.000	30.	215.	4.5	621.5	621.5	0.0
9325.000	145.	484.	2.0	621.9	621.9	0.0
10185.000	88.	403.	2.4	622.2	622.1	0.1
10300.000	29.	213.	4.5	622.3	622.2	0.1
10348.000	29.	234.	4.1	623.0	622.9	0.1
10450.000	140.	665.	1.4	623.4	623.3	0.1
10700.000	650.	2029.	0.5	623.5	623.4	0.1

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THIS RUN EXECUTED 12 SEP 84 10:03:01

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR =  C1,02,03,C4,C5,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************

===> CCED,SWANENC
===> FREE ALL
```

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Huron Twp

3) WATERCOURSE: North Branch Swan Creek, Silver Creek, Hand Drain

4) DOCUMENT TYPE: Report

00BREAK00

DEPARTMENT OF THE ARMY

DETROIT DISTRICT, CORPS OF ENGINEERS
BOX 1027
DETROIT, MICHIGAN 48231

REPLY TO
ATTENTION OF

September 21, 1984

Great Lakes Hydraulics and Hydrology Branch

RECEIVED
SEP 26 1984
WATER MANAGEMENT

Mr. Lawrence N. Witte
Chief, Water Management Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Dear Mr. Witte:

Submitted for your review and approval is a copy of the hydraulic calculations for the Huron Township, Michigan Flood Insurance Study. Enclosed are the HEC-2 multiple profile and encroached runs, a map showing the location of the field surveyed cross sections and a brief write up dealing with items that will assist the review process.

If you have any questions regarding the enclosed data, please contact Mr. Bruce Holbrook at (313) 226-6772.

Sincerely,

P. McCallister, P.E.
Chief, Engineering Division

Enclosures

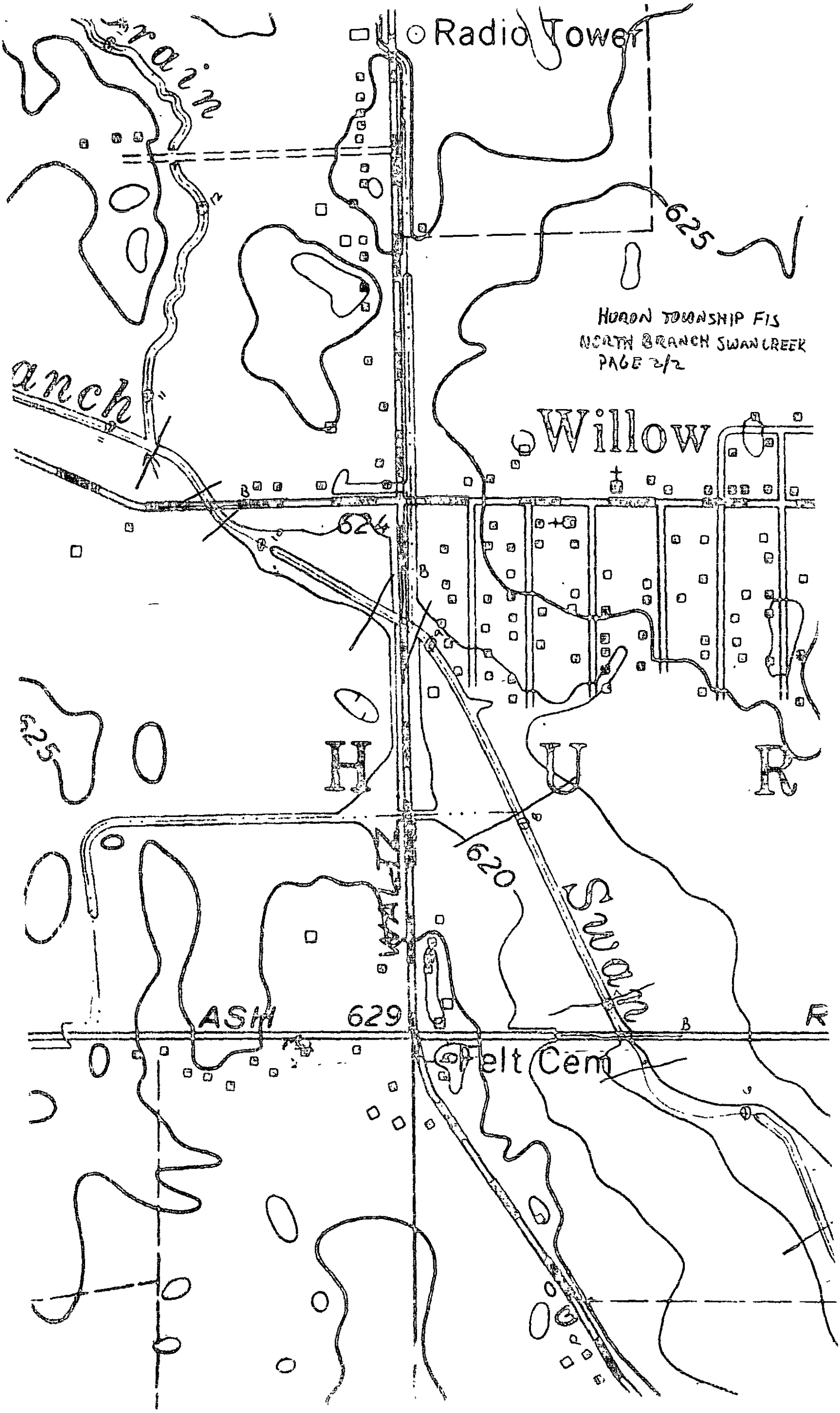
HURON TOWNSHIP, MICHIGAN FIS

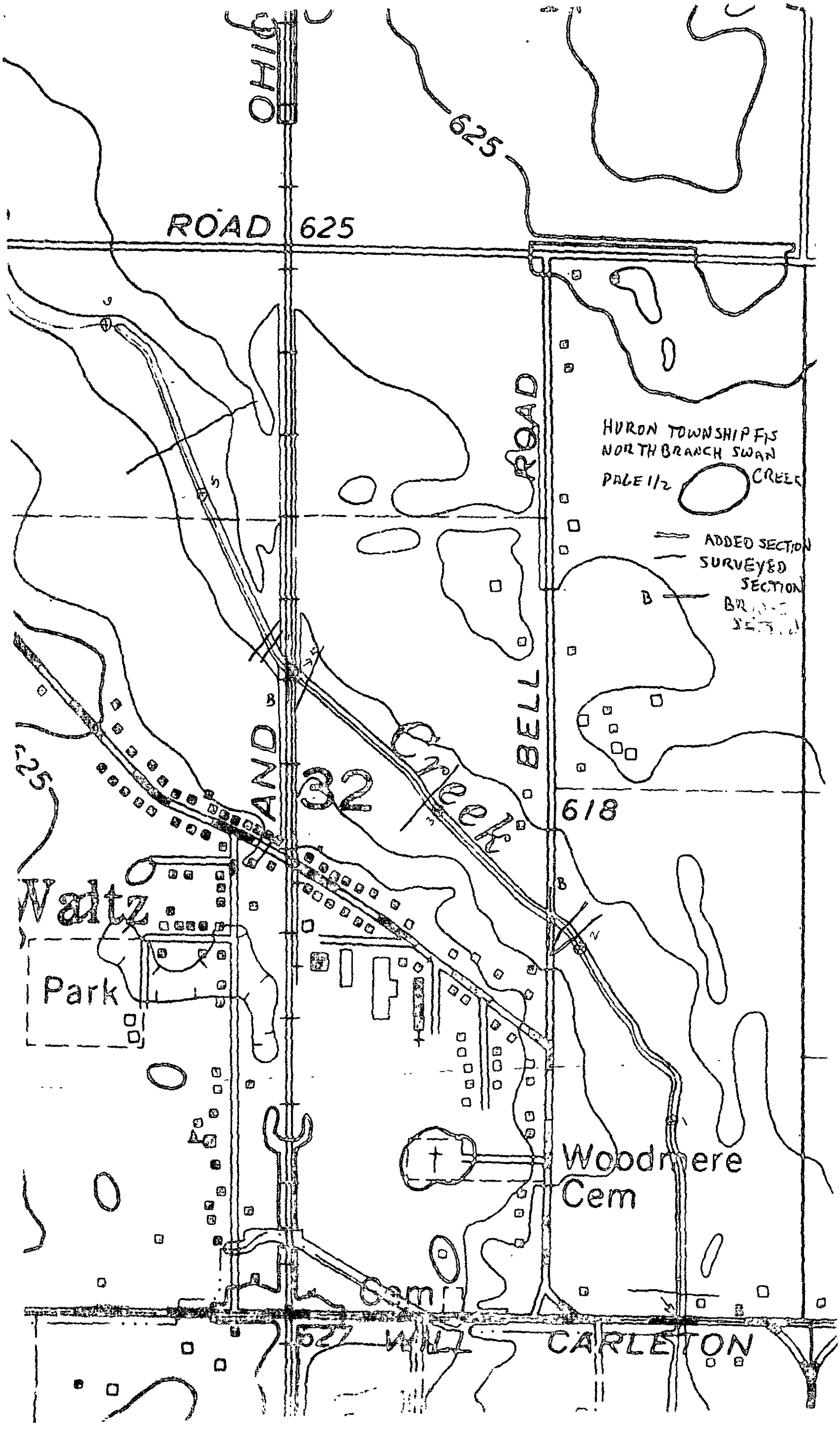
HYDRAULIC COMPUTATION BACKGROUND INFORMATION

The hydraulic computations were confined within the township limits. Two streams were studied, the North Branch of Swan Creek and Hand Drain.

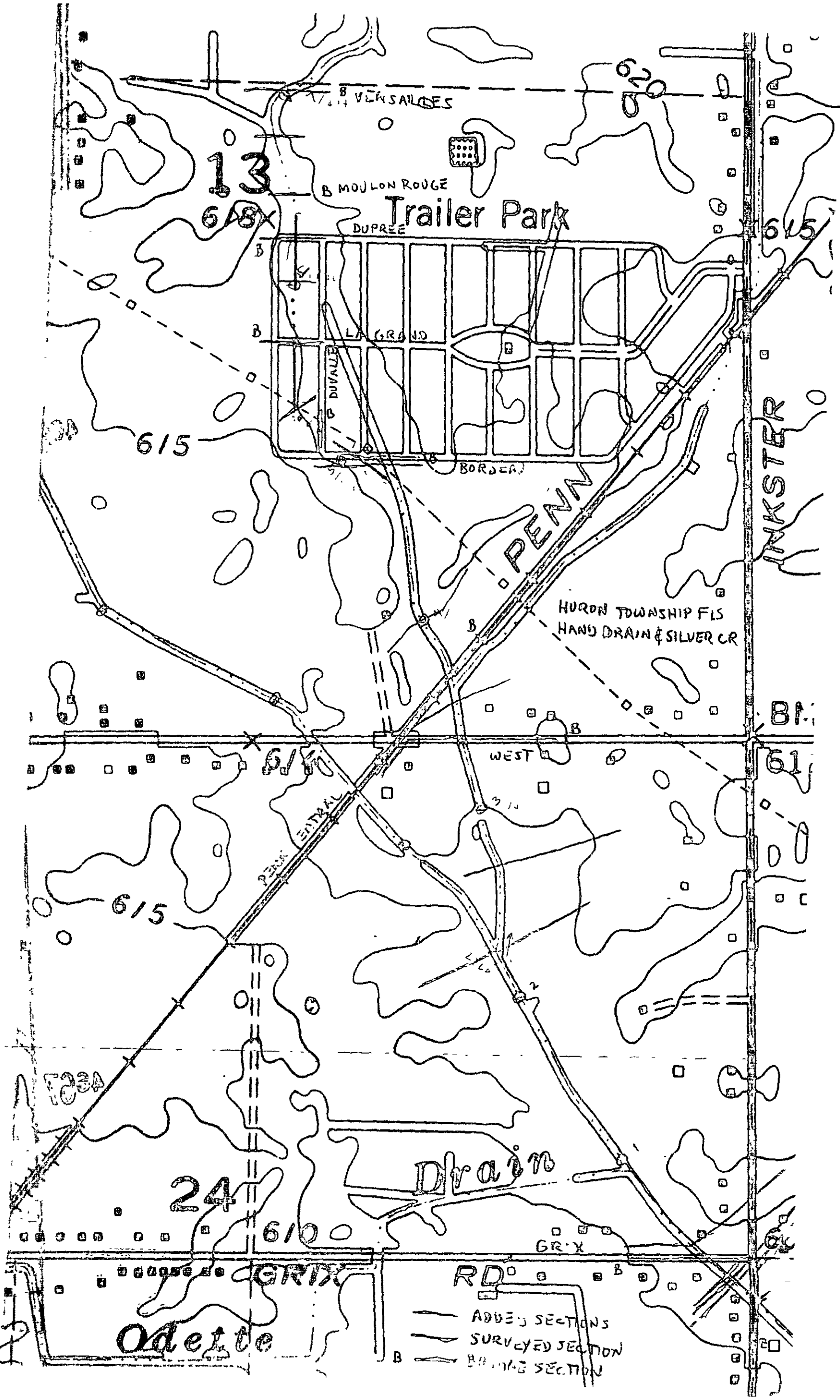
The North Branch of Swan Creek was studied from the downstream Corporate Limit upstream to 350 feet above Willow Road. Starting conditions were obtained from the Ash Township, Michigan FIS. Since the same flows were used in this study, the 10-, 50-, 100- and 500- year starting conditions are the corresponding ending conditions of the Ash Township Study. Manning's "N" values were obtained during a site visit.

Hand drain was studied from its confluence with Silver Creek to Versailles lane. The drainage area at this point is less than one square mile. Manning's "N" values were obtained during a site visit. Starting conditions were obtained by beginning the computations on Silver Creek at the downstream Corporate Limit. The slope area method was used. Computations proceeded up Silver Creek to Hand Drain. For the purposes of this study all computations on Silver Creek and Hand Drain above Versailles Lane are for use on approximate study areas only.


Radio Tower
Rain
625
HURON TOWNSHIP FIS
NORTH BRANCH SWAN CREEK
PAGE 2/2
anch
Willow
624
625
H
U
R
620
Swan
ASH
629
R
Felt Cem



OHIO
625
ROAD 625
ROAD
BELL
HURON TOWNSHIP FIS
NORTH BRANCH SWAN
PAGE 1/2
CREEK
ADDED SECTION
SURVEYED SECTION
B
32
Creek
618
Waltz
Park
Woodmere
Cem
Cem
527 WILL
CARLETON



VERSAILLES
620
13
MOULON ROUGE
Trailer Park
618
DUPREE
615
LA GRAND
DUVALLE
BORDEAU
PENN
INKSTER
HURON TOWNSHIP FLS
HAND DRAIN & SILVER CR
WEST
PENN CENTRAL
Drain
24
610
GRIX
RD
Odette
ADDED SECTIONS
SURVEYED SECTION

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Huron Twp.

3) WATERCOURSE: North Branch Swan Creek

4) DOCUMENT TYPE: Summary

00BREAK00

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EEEEEE   EEEEEE   H    H   COOC   L      BBEBB   RRRRR   COOC
E        E        H    H   O   C  L      B    B  R    R  C   C
E        E        H    H   O   C  L      BBEBB   R    R  C   C
EEEE     EEEE     HHHHHH   C   O  L      B    B  RRRRR   C   C
E        E        H    H   C   C  L      B    B  R   R   C   C
EEEEEE   EEEEEE   H    H   COOC   LLLLLL BBBBB   R    R   COOC

                EE HOLERO                6 SEP 84 13:11:57

                FILE: C723EEH2*HECSWANO

                TERMINAL:2C3
```

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*****************************************************                    ****************************************
*  WATER SURFACE PROFILES                           *                    *  L.S. ARMY CORPS OF ENGINEERS          *
*  VERSION OF NOVEMBER 1976                         *                    *  THE HYDROLOGIC ENGINEERING CENTER     *
*  UPDATED MAY 1984                                 *                    *  609 SECOND STREET, SUITE D            *
*                                                   *                    *  DAVIS, CALIFORNIA 95616               *
*  RUN DATE   6 SEP 84 TIME   13:03:10              *                    *  (916) 440-2105 (FTS) 448-2105         *
*****************************************************                    ****************************************
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X     X  XXXXXXX   XXXXX             XXXXX
X     X  X         X     X           X     X
X     X  X         X                       X
XXXXXXX  XXXX      X         XXXXX    XXXXX
X     X  X         X                 X
X     X  X         X     X           X
X     X  XXXXXXX   XXXXX             XXXXXXX
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HURON TOWNSHIP FIS
MULTIPLE PROFILE RUN
~~SILVER CREEK~~ NORTH BRANCH SWAN CREEK
WITH FHF
FINAL RUN

PRINTED IN U.S.A.

THIS RUN EXECUTED 6 SEP 84 13:03:11

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
*****************************************************

C
T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      10-YEAR FLOW
T3      NORTH BRANCH SWAN CREEK

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
       0.       2.       0.       0.  0.000000     0.00     0.0       0.   610.800    0.000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
     1.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000  201.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000

NC      0.040    0.040    0.030    0.300    0.500    0.000    0.000    0.000    0.000    0.000
GT      4.000  565.000  855.000  960.000 1170.000    0.000    0.000    0.000    0.000    0.000
                DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION
X1      0.000   25.000  900.000  930.000    0.000    0.000    0.000    0.000    0.000    0.000
X4      1.000  615.000  700.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
GR    615.000    0.000  612.800  800.000  612.800  825.000  612.800  850.000  612.800  875.000
GR    610.100  889.000  610.100  890.000  610.000  899.000  606.100  900.000  605.100  905.000
GR    604.900  910.000  604.200  915.000  604.500  920.000  605.500  930.000  610.000  931.000
GR    610.100  941.000  610.100  942.000  610.100  942.010  610.100  942.020  610.300  955.000
GR    610.600  980.000  611.800 1005.000  612.100 1030.000  614.000 1130.000  615.000 1800.000

SB      0.000    2.420    3.000    0.000   31.000    0.000  166.000    0.000    0.000    0.000
                UPSTREAM FACE CARLTON ROAD BRIDGE SECTION
X1     17.000    0.000    0.000    0.000   35.000   35.000   35.000    0.000    0.000    0.000
X2      0.000    0.000    1.000  610.500  612.100    0.000    0.000    0.000    0.000    0.000
ET    -21.000  700.000  615.000    0.000  800.000  614.300    0.000  825.000  614.100    0.000
ET      0.000  850.000  613.700    0.000  875.000  613.400    0.000  889.000  613.300    0.000
ET      0.000  890.000  614.700    0.000  899.000  614.700  610.000  900.000  614.700  610.500
ET      0.000  930.000  614.700  610.200  931.000  614.700  610.000  941.000  614.700    0.000
ET      0.000  942.000  612.700    0.000  942.010  612.700    0.000  942.020  612.700    0.000
ET      0.000  955.000  612.500    0.000  980.000  612.300    0.000 1005.000  612.100    0.000
ET      0.000 1030.000  612.100    0.000 1130.000  614.000    0.000 1800.000  615.000    0.000
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NC	C.000	0.000	0.035	C.000	0.000	0.000	0.000	0.000	0.000	0.000
		VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD								
X1	175.000	15.000	950.000	971.000	158.000	158.000	158.000	0.000	0.000	0.000
X3	C.000	0.000	0.000	695.000	0.000	1200.000	0.000	0.000	0.000	0.000
GR	615.000	0.000	611.800	900.000	611.100	925.000	609.300	950.000	606.000	954.000
GR	605.000	956.000	604.700	962.000	604.700	969.000	608.000	971.000	603.600	975.000
GR	610.500	978.000	609.700	985.000	608.800	1010.000	609.200	1035.000	615.000	1800.000
NC	C.000	0.035	0.000	C.000	0.000	0.000	0.000	0.000	0.000	0.000
		VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD								
X1	2000.000	12.000	250.000	274.000	1825.000	1325.000	1825.000	0.000	0.000	0.000
X3	C.000	0.000	0.000	185.000	0.000	340.000	0.000	0.000	0.000	0.000
CR	615.000	0.000	610.900	200.000	611.000	225.000	611.100	250.000	606.300	255.000
GR	606.000	263.000	605.700	269.000	610.400	274.000	611.500	278.000	611.400	303.000
GR	611.400	328.000	615.000	425.000	0.000	0.000	0.000	0.000	0.000	0.000
		REPEATED VALLEY SECTION E								
X1	2100.000	0.000	0.000	0.000	125.000	50.000	100.000	0.000	0.100	0.000
X3	C.000	0.000	0.000	235.000	0.000	340.000	0.000	0.000	0.000	0.000
NC	C.000	0.000	0.000	0.400	0.700	0.000	0.000	0.000	0.000	0.000
X1	2224.000	22.000	175.000	203.000	155.000	50.000	124.000	0.000	0.000	0.000
X3	C.000	0.000	0.000	C.000	0.000	304.000	0.000	0.000	0.000	C.000
GR	614.200	0.000	615.000	75.000	615.400	100.000	616.000	125.000	616.800	150.000
CR	617.400	174.000	610.400	175.000	608.400	181.000	606.900	187.000	606.200	189.000
GR	606.200	190.000	606.400	196.000	606.000	202.000	617.100	203.000	617.100	204.000
CR	615.900	229.000	614.600	254.000	613.700	279.000	613.300	304.000	612.900	354.000
GR	613.000	404.000	615.000	500.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	C.000	0.000	0.020	0.100	0.300	0.000	0.000	0.000	0.000	0.000
		DOWNSTREAM FACE BELL ROAD								
X1	2225.000	0.000	0.000	C.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	C.000	0.000	0.000	C.000	0.000	304.000	0.000	0.000	0.000	0.000
ET	-21.000	0.000	614.200	C.000	75.000	615.000	0.000	100.000	615.400	0.000
ET	C.000	125.000	616.000	0.000	150.000	616.800	0.000	174.000	617.400	617.400
ET	C.000	175.000	621.400	616.000	189.000	621.300	615.900	189.000	621.300	606.200
ET	C.000	190.000	621.300	606.200	190.000	621.300	615.900	202.000	621.200	615.700
ET	C.000	203.000	617.200	617.100	204.000	617.100	0.000	229.000	615.900	0.000
ET	C.000	254.000	614.600	0.000	279.000	613.700	0.000	304.000	613.300	0.000
ET	C.000	354.000	612.900	0.000	404.000	613.000	0.000	500.000	615.000	0.000
		UPSTREAM FACE BELL ROAD								
X1	2254.000	0.000	0.000	0.000	29.000	29.000	29.000	0.000	0.000	0.000
X3	C.000	0.000	0.000	0.000	0.000	304.000	0.000	0.000	0.000	C.000
X2	C.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
NC	C.000	0.040	0.035	C.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	2255.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	C.000	0.000	0.000	C.000	0.000	304.000	0.000	0.000	0.000	0.000

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NC	C.COC	0.C00	0.CC0	0.2CC	0.5C0	0.000	0.C00	0.CC0	0.CC0	0.CC0
		VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTRERPOLATED								
X1	3055.00C	16.000	889.CC0	923.CCO	800.CCC	800.C00	800.C00	0.CCO	-1.300	0.CCO
X3	C.COC	0.C00	0.CC0	650.CCC	0.CC0	1150.COC	0.C00	0.000	0.000	0.CC0
CR	620.C0C	0.C00	615.CC0	700.CCO	612.8C0	850.C00	612.600	875.CC0	614.200	889.CC0
GR	611.30C	900.000	609.200	904.CC0	609.1C0	912.000	608.600	915.CC0	608.900	918.000
GR	609.90C	919.000	612.5C0	923.CCC	613.7C0	948.C00	613.C00	973.000	615.0C0	1400.CC0
GR	620.00C	1650.C00	0.CC0	0.CC0	0.CC0	0.000	0.C00	0.000	0.0C0	0.CC0
NC	C.03C	0.C00	0.CC0	0.4C0	0.7C0	0.C00	0.C00	0.CC0	0.000	0.CC0
		VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE								
X1	391C.000	0.C00	0.CCC	0.CC0	855.CC0	855.000	855.C00	0.CC0	1.300	0.C00
X3	C.00C	0.C00	0.CC0	650.CCC	0.CC0	940.C00	0.C00	0.CC0	0.CC0	0.CC0
X1	3984.00C	29.C00	1CC0.CCC	1067.CC0	100.CC0	25.C00	74.C00	0.710	0.000	0.CC0
X3	C.00C	0.CC0	0.CC0	1CCC.CC0	0.CC0	1067.C00	0.C00	0.000	0.000	0.CC0
CR	620.CCC	0.C00	615.CCC	800.CC0	611.7C0	1CC0.C00	611.700	1CC1.CC0	611.700	1006.000
GR	610.10C	1012.9C0	610.1CC	1013.CC0	609.9C0	1014.C00	609.9C0	1014.100	609.5C0	1025.9C0
GR	609.500	1026.C00	609.3CC	1027.CCC	609.3C0	1027.100	608.600	1030.CC0	608.700	1039.9C0
GR	608.700	1040.C00	609.5CC	1041.CC0	609.5C0	1041.100	609.900	1052.9C0	609.900	1053.CC0
CR	611.60C	1054.C00	611.6CC	1054.1C0	611.6CC	1066.900	611.600	1067.CC0	612.500	1093.0C0
CR	613.80C	1118.C00	614.3CC	1143.CC0	615.CCC	1168.C00	620.C00	19C0.000	0.000	0.000
		DOWNSTREAM FACE C&C RR BRIDGE								
X1	3985.CCC	0.C00	0.CCC	0.CCO	1.CC0	1.C00	1.C00	0.CC0	0.000	0.C00
X2	C.COC	0.C00	0.CC0	0.CCO	0.CCC	0.C00	0.C00	0.C00	0.710	0.CCC
X3	C.C0C	0.C00	0.CCC	710.CCO	0.CC0	757.600	0.C00	0.C00	0.C00	0.CC0
ET	-28.C0C	0.C00	620.CCC	0.CCO	900.CCC	622.C00	0.C00	1CC0.CC0	621.900	611.700
ET	C.000	1001.C00	621.9CC	618.CC0	1006.CC0	621.900	618.C00	1012.900	621.900	618.000
ET	C.00C	1013.C00	621.9CC	618.1C0	1014.0C0	621.900	609.900	1014.1C0	621.900	618.CC0
ET	C.C00	1025.900	621.8CC	618.CC0	1025.0C0	621.800	609.500	1027.000	621.800	609.5C0
ET	C.00C	1027.100	621.8CC	618.CCC	1039.9C0	621.800	618.CC0	1040.C00	621.800	608.700
ET	C.000	1041.C00	621.8CC	609.5C0	1041.1C0	621.800	618.C00	1052.900	621.800	618.000
ET	C.C00	1053.C00	621.8CC	609.9C0	1054.CCC	621.800	611.600	1054.100	621.800	618.CC0
ET	C.C00	1066.900	621.8CC	618.CC0	1067.CCC	621.800	611.600	1093.CC0	621.800	0.CC0
ET	C.0CC	1118.C00	621.7CC	C.CCC	1143.0C0	621.700	0.C00	1168.000	621.700	0.CC0
ET	C.00C	19C0.C00	620.CC0	C.CC0	0.CC0	0.C00	0.CC0	0.CC0	0.000	0.CC0
NC	C.00C	0.C00	0.C2C	0.1C0	0.3CC	0.C00	0.CC0	0.CC0	0.0C0	0.CC0
		UPSTREAM FACE C&C RR BRIDGE								
X1	4009.00C	0.C00	0.CCC	0.CCC	24.0C0	24.C00	24.C00	0.CC0	0.0C0	0.0C0
X2	C.000	0.C00	0.CC0	0.CCG	0.0C0	0.000	1.C00	0.0C0	0.0C0	0.0C0
X3	C.00C	0.C00	0.CC0	710.CCC	0.CC0	757.600	0.C00	0.CC0	0.0C0	0.0C0
X1	4010.00C	0.C00	0.CC0	C.CCC	1.CC0	1.C00	1.C00	0.000	0.0C0	0.0C0
X3	C.00C	0.C00	0.C00	710.CC0	0.CC0	757.600	0.C00	0.0C0	0.C00	0.000
NC	C.00C	0.C35	0.C35	0.5C0	1.CC0	0.CC0	0.C00	0.C00	0.0C0	0.0C0

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50 FT UPSTREAM C&O RR BRIDGE, DATA PARTLY FROM VS-D

X1	4060.000	16.000	100.000	133.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	45.000	0.000	190.000	0.000	0.000	0.000	0.000
GR	620.000	0.000	613.800	50.000	614.000	75.000	614.700	91.000	615.200	95.000
GR	613.700	100.000	609.900	108.000	608.700	111.000	608.800	115.000	608.800	119.000
GR	609.800	122.000	615.700	133.000	614.000	158.000	613.800	183.000	613.300	233.000
GR	620.000	800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SECTION 4060 MOVED UPSTREAM

X1	4100.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	5.000	0.000	230.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION D 1250 FT UPSTREAM C&O RR BRIDGE

X1	5250.000	16.000	200.000	233.000	1150.000	1150.000	1150.000	0.000	0.000	0.000
GR	615.000	0.000	613.800	150.000	614.000	175.000	614.700	191.000	615.200	195.000
GR	613.700	200.000	609.900	208.000	608.700	211.000	608.800	215.000	608.800	219.000
GR	609.800	222.000	615.700	233.000	614.000	258.000	613.800	283.000	613.300	433.000
GR	620.000	1200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.030	0.000	0.500	1.000	0.000	0.000	0.000	0.000	0.000

200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

X1	6650.000	15.000	600.000	627.000	1400.000	1300.000	1400.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	550.000	0.000	675.000	0.000	0.000	0.000	0.000
GR	620.000	0.000	615.000	550.000	615.500	575.000	615.400	600.000	611.400	605.000
GR	610.300	608.000	610.400	613.000	610.400	617.000	611.400	620.000	614.700	623.000
GR	616.200	627.000	615.600	631.000	614.800	656.000	614.900	681.000	620.000	1150.000

DOWNSTREAM FACE OF ASH ROAD

X1	6850.000	19.000	600.000	628.000	200.000	200.000	200.000	0.540	0.000	0.000
X3	0.000	0.000	0.000	600.000	0.000	628.000	0.000	0.000	0.000	0.000
GR	620.000	0.000	617.500	600.000	613.700	599.000	613.700	600.000	612.900	605.000
GR	611.300	608.000	610.600	610.000	610.700	615.000	610.700	620.000	610.600	625.000
GR	612.200	628.000	613.400	631.000	613.400	632.000	613.500	635.000	613.600	660.000
GR	617.400	685.000	617.400	710.000	617.800	735.000	620.000	1000.000	0.000	0.000

SB	0.000	2.150	3.000	0.000	26.500	0.000	163.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000

UPSTREAM FACE OF ASH ROAD

X1	6880.000	0.000	0.000	0.000	30.000	30.000	30.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	616.700	617.800	0.000	0.000	0.000	0.940	0.000
X3	0.000	0.000	0.000	563.000	0.000	590.300	0.000	0.000	0.000	0.000
ET	-12.000	0.000	620.000	0.000	400.000	618.100	0.000	599.000	619.300	613.700
ET	0.000	600.000	619.300	616.800	631.000	619.400	616.600	632.000	619.400	613.400
ET	0.000	635.000	619.400	0.000	660.000	619.000	0.000	685.000	618.400	0.000
ET	0.000	710.000	618.000	0.000	735.000	617.800	0.000	1000.000	620.000	0.000

VALLEY SECTION E 100 FT UPSTREAM OF ASH ROAD

X1	6980.000	15.000	600.000	627.000	200.000	99.000	99.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	430.000	0.000	670.000	0.000	0.000	0.000	0.000
GR	620.000	0.000	615.600	550.000	615.500	575.000	615.400	600.000	611.400	605.000
GR	610.300	608.000	610.400	613.000	610.400	617.000	611.400	620.000	614.700	623.000
GR	616.200	627.000	615.600	631.000	614.800	656.000	614.900	681.000	620.000	1150.000

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NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
X1	7980.000	14.000	600.000	628.500	1100.000	900.000	1000.000	0.000	0.000	0.000
GR	622.000	0.000	620.000	350.000	616.900	550.000	616.550	600.000	612.750	606.000
GR	611.750	608.000	611.500	612.500	611.600	615.000	613.150	618.500	615.350	622.500
GR	617.700	628.500	617.500	680.000	620.000	900.000	625.000	1300.000	0.000	0.000
NC	0.035	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F									
X1	9045.000	17.000	600.000	630.000	1100.000	1000.000	1065.000	0.900	0.000	0.000
X3	0.000	0.000	0.000	570.000	0.000	660.000	0.000	0.000	0.000	0.000
GR	625.000	0.000	618.500	450.000	618.500	550.000	618.500	575.000	620.000	587.000
GR	617.700	596.000	617.700	600.000	614.100	607.000	613.200	608.000	612.600	612.000
GR	612.800	615.000	614.500	617.000	616.000	622.000	619.200	630.000	619.200	650.000
GR	620.000	1400.000	625.000	2000.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.500	1.000	0.000	0.000	0.000	0.000	0.000
	DOWNSTREAM FACE WALTZ ROAD									
X1	9145.000	23.000	1800.000	1835.000	100.000	100.000	100.000	0.870	0.000	0.000
X3	0.000	0.000	0.000	1800.000	0.000	1835.000	0.000	0.000	0.000	0.000
GR	625.000	0.000	618.700	1700.000	618.600	1725.000	618.500	1750.000	617.400	1775.000
GR	616.400	1800.000	616.400	1800.100	616.300	1802.000	616.300	1802.100	614.200	1807.000
GR	613.200	1812.000	613.300	1817.000	613.600	1825.000	614.500	1828.000	616.600	1833.000
GR	616.600	1833.100	616.500	1835.000	616.900	1835.100	619.400	1862.000	619.400	1887.000
GR	619.400	1912.000	619.400	1937.000	625.000	3400.000	0.000	0.000	0.000	0.000
SB	0.000	3.000	3.000	0.000	28.000	0.000	186.000	0.000	0.000	0.000
	UPSTREAM FACE WALTZ ROAD									
X1	9194.000	0.000	0.000	0.000	49.000	49.000	49.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	620.000	621.700	0.000	0.000	0.000	0.870	0.000
X3	0.000	0.000	0.000	1566.000	0.000	1596.500	0.000	0.000	0.000	0.000
ET	-18.300	0.000	625.000	0.000	1700.000	621.700	0.000	1725.000	621.900	0.000
ET	0.000	1750.000	622.200	0.000	1775.000	622.300	0.000	1800.000	622.400	0.000
ET	0.000	1800.100	625.400	0.000	1802.000	625.400	616.300	1802.100	625.400	619.900
ET	0.000	1833.000	625.400	620.000	1833.100	625.400	616.600	1835.000	625.400	0.000
ET	0.000	1835.100	622.400	0.000	1862.000	622.400	0.000	1887.000	622.300	0.000
ET	0.000	1912.000	622.200	0.000	1937.000	622.100	0.000	3400.000	625.000	0.000
	VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD									
X1	9325.000	15.000	1400.000	1430.000	100.000	150.000	131.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1285.000	0.000	1545.000	0.000	0.000	0.000	0.000
GR	625.000	0.000	613.500	1350.000	618.900	1375.000	620.000	1388.000	617.700	1396.000
GR	617.700	1400.000	614.100	1407.000	613.200	1408.000	612.600	1412.000	612.800	1415.000
GR	614.900	1417.000	615.000	1422.000	619.200	1430.000	619.400	1450.000	620.000	2500.000
	115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G									
X1	10185.000	14.000	241.000	276.000	800.000	860.000	860.000	0.000	-1.000	0.000
X3	0.000	0.000	0.000	214.000	0.000	304.000	0.000	0.000	0.000	0.000
GR	620.000	0.000	619.400	200.000	619.400	225.000	620.200	235.000	620.600	241.000
GR	617.900	249.000	617.600	250.000	615.400	254.000	614.500	256.000	614.500	261.000
GR	614.700	268.000	615.400	269.000	620.200	276.000	625.000	1400.000	0.000	0.000

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DOWNSTREAM FACE WILLOW ROAD

X1	10300.000	22.000	950.000	982.000	115.000	115.000	115.000	0.900	0.000	0.000
X3	0.000	0.000	0.000	950.000	0.000	982.000	0.000	0.000	0.000	0.000
GR	623.400	0.000	619.800	850.000	619.700	875.000	619.500	900.000	619.500	925.000
GR	619.400	935.000	619.400	935.100	617.800	950.000	617.800	950.100	615.000	958.000
GR	614.400	962.000	613.900	969.000	614.000	976.000	615.000	978.000	616.200	982.000
GR	616.200	982.100	619.400	997.000	619.400	997.100	619.500	1008.000	621.000	1033.000
GR	622.200	1058.000	623.100	1078.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.700	3.000	0.000	32.000	0.000	195.000	0.000	0.000	0.000
NC	0.040	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

UPSTREAM FACE WILLOW ROAD

X1	10348.000	0.000	0.000	0.000	48.000	48.000	48.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	621.100	623.100	0.000	0.000	0.000	0.900	0.000
X3	0.000	0.000	0.000	855.000	0.000	883.800	0.000	0.000	0.000	0.000
ET	-22.000	0.000	623.400	0.000	850.000	623.400	0.000	875.000	623.500	0.000
ET	0.000	900.000	623.500	0.000	925.000	623.600	0.000	935.000	623.600	0.000
ET	0.000	935.100	626.600	0.000	950.000	626.500	617.800	950.100	626.500	621.100
ET	0.000	958.000	626.500	621.100	962.000	626.500	621.000	969.000	626.500	621.000
ET	0.000	976.000	626.500	621.000	978.000	626.500	620.900	982.000	626.500	620.900
ET	0.000	982.100	626.500	616.200	997.000	626.400	0.000	997.100	623.400	0.000
ET	0.000	1008.000	623.300	0.000	1033.000	623.200	0.000	1058.000	623.100	0.000
ET	0.000	1078.000	623.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION G MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD

X1	10450.000	16.000	950.000	976.000	127.000	75.000	102.000	0.000	-0.300	0.000
X3	0.000	0.000	0.000	845.000	0.000	1081.000	0.000	0.000	0.000	0.000
GR	625.000	0.000	619.400	900.000	619.400	925.000	620.200	935.000	620.600	941.000
GR	617.900	949.000	617.600	950.000	615.400	954.000	614.500	956.000	614.500	961.000
GR	614.700	968.000	615.400	969.000	620.200	976.000	620.100	1001.000	619.800	1026.000
GR	623.100	1275.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION G 350 FT UPSTREAM OF WILLOW ROAD

X1	10700.000	0.000	0.000	0.000	325.000	175.000	250.000	0.000	0.300	0.000
X3	0.000	0.000	0.000	595.000	0.000	0.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCE	ALOB	ACH	ARCE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	TIRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION

0.00	6.60	610.80	0.00	610.80	610.54	0.14	0.00	0.00	606.10
565.	6.	545.	14.	11.	176.	28.	0.	0.	605.50
0.00	0.55	3.09	0.48	0.040	0.030	0.040	0.000	604.20	885.37
0.000369	0.	0.	0.	0	0	0	0.00	98.80	984.17

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SS	XK	XKOR	CCEQ	RDLEN	SKC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.42	3.00	0.00	31.00	0.00	166.00	0.00		604.20	604.20

*SECNO 17.000

PRESSURE FLOW

EGPRS	EGLWC	FR	GWEIP	GFR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
611.24	610.94	0.00	0.	565.	166.	195.	610.50	612.10

UPSTREAM FACE CARLTON ROAD BRIDGE SECTION

17.00	6.92	611.12	0.00	0.00	611.24	0.12	0.29	0.00	606.10
565.	10.	530.	25.	16.	186.	46.	0.	0.	605.50
0.00	0.59	2.85	0.55	0.040	0.030	0.040	0.000	604.20	883.73
0.000293	35.	35.	35.	2	0	0	0.00	107.04	990.77

*SECNO 175.000

3470 ENCROACHMENT STATIONS= 695.0 1200.0 TYPE= 1 TARGET= 505.000

VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD

175.00	6.57	611.27	0.00	0.00	611.30	0.03	0.04	0.03	609.30
565.	17.	237.	311.	27.	126.	372.	2.	1.	608.00
0.04	0.61	1.97	0.84	0.040	0.035	0.040	0.000	604.70	918.81
0.003255	158.	158.	158.	2	0	0	0.00	281.19	1200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	3RCB	ALCB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	ICPWID	ENDST

*SECNO 2000.000

3470 ENCROACHMENT STATIONS= 185.0 340.0 TYPE= 1 TARGET= 155.000
VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD

2000.00	6.34	612.04	0.00	0.00	612.21	0.17	0.83	0.07	611.10
565.	82.	443.	41.	67.	121.	40.	17.	10.	610.40
0.20	1.22	3.66	1.01	0.040	0.035	0.035	0.000	605.70	185.00
0.001046	1825.	1825.	1825.	2	0	0	0.00	155.00	340.00

*SECNO 2100.000

3470 ENCROACHMENT STATIONS= 235.0 340.0 TYPE= 1 TARGET= 105.000
REPEATED VALLEY SECTION E

2100.00	6.32	612.12	0.00	0.00	612.36	0.25	0.12	0.04	611.20
565.	18.	504.	43.	14.	120.	38.	18.	10.	610.50
0.21	1.27	4.20	1.13	0.040	0.035	0.035	0.000	605.80	235.00
0.001388	125.	100.	50.	1	0	0	0.00	105.00	340.00

CCHV= 0.400 CEHV= 0.700
*SECNO 2224.000

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

2224.00	6.29	612.29	0.00	0.00	612.55	0.26	0.17	0.01	610.40
565.	0.	565.	0.	0.	137.	0.	18.	10.	617.10
0.22	0.37	4.13	0.00	0.040	0.035	0.000	0.000	606.00	174.73
0.001471	155.	124.	50.	2	0	0	0.00	27.84	202.57

CCHV= 0.100 CEHV= 0.300
*SECNO 2225.000

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.90 MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999
DOWNSTREAM FACE BELL ROAD

2225.00	6.27	612.27	0.00	0.00	612.56	0.29	0.00	0.01	610.40
565.	0.	565.	0.	0.	131.	0.	18.	10.	617.10
0.22	0.28	4.32	0.00	0.040	0.020	0.000	0.000	606.00	174.73
0.000821	1.	1.	1.	1	0	0	-6.08	27.83	202.57

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALCB	ACH	ARQ=	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCPR	ITRIAL	IDC	ICONT	CORAR	IOPWID	ENDST

*SECNO 2254.CCO

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.9C MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= C.C 304.0 TYPE= 1 TARGET= 303.995

LPSTREAM FACE BELL ROAD

2254.0C	6.3C	612.70	C.CO	C.CC	612.58	0.29	C.02	C.0C	610.4C
565.	C.	565.	C.	0.	131.	C.	18.	10.	617.10
0.22	0.28	4.30	C.CO	C.04C	C.02C	C.CCC	0.00C	6C6.CC	174.73
0.000809	29.	29.	29.	C	0	C	-6.1C	27.84	202.57

*SECNO 2255.CCO

3470 ENCROACHMENT STATIONS= C.C 304.0 TYPE= 1 TARGET= 303.999

2255.0C	6.33	612.33	C.CO	C.CC	612.59	0.26	C.00	C.0C	610.40
565.	C.	565.	0.	0.	138.	C.	18.	10.	617.10
0.22	0.37	4.09	C.00	C.04C	C.035	0.CCO	0.000	6C6.CC	174.72
0.001434	1.	1.	1.	2	0	0	C.00	27.85	202.57

CCHV= C.20C CEHV= C.5CO

*SECNO 3C55.CCO

3470 ENCROACHMENT STATIONS= 650.C 115C.0 TYPE= 1 TARGET= 50C.0CC

VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTERPOLATED

3055.0C	5.85	613.15	C.00	C.CC	613.18	0.C3	C.55	0.05	612.50
565.	118.	257.	190.	151.	13C.	243.	24.	14.	611.20
0.38	0.78	1.59	C.78	C.04C	C.035	0.C40	0.000	6C7.3C	737.81
0.000398	80C.	3CC.	8CC.	2	0	0	C.00	412.18	1150.CC

CCHV= C.40C CEHV= C.7C0

*SECNO 3910.CCO

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 85C.C 94C.0 TYPE= 1 TARGET= 9C.00C

VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE

3910.0C	5.16	613.75	C.CO	C.CC	614.C2	0.26	C.68	C.16	614.2C
565.	74.	467.	23.	32.	107.	15.	31.	19.	612.50
0.44	2.29	4.38	1.59	C.23C	C.035	C.C4C	0.000	6C8.6C	850.CC
C.002348	855.	855.	855.	2	0	0	C.00	84.5C	940.CC

PRINTED IN USA

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	APOB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 3984.CCO

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 67.000

3984.00	5.43	614.03	C.CO	C.CC	614.19	0.15	0.11	C.04	611.70
565.	C.	565.	C.	0.	183.	C.	31.	19.	100000.00
0.45	0.CC	3.09	C.CO	C.CCC	C.035	C.CCO	0.000	608.60	710.CC
0.001053	100.	74.	25.	2	0	0	0.00	47.57	757.57

*SECNO 3985.CCO

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.CC MAX ELLC= 618.CO

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

DOWNSTREAM FACE C&O RR BRIDGE

3985.00	5.42	614.02	C.CO	C.CC	614.19	0.17	C.00	C.02100000.CC	
565.	C.	565.	0.	0.	170.	C.	31.	19.	611.60
0.45	0.CC	3.33	C.00	C.CCC	C.035	0.CCO	0.000	608.60	710.CC
0.002435	1.	1.	1.	C	0	0	-12.93	47.60	757.60

CCHV= C.100 CEHV= 0.300

*SECNO 4009.CCO

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.CC MAX ELLC= 618.CO

3470 ENCROACHMENT STATIONS= 710.C 757.6 TYPE= 1 TARGET= 47.6CC

UPSTREAM FACE C&C RR BRIDGE

4009.0C	5.46	614.06	C.CO	C.CC	614.22	0.17	C.03	0.0C100CC0.CC	
565.	C.	565.	C.	0.	171.	C.	31.	19.	611.60
0.45	0.CC	3.30	C.00	C.CCC	C.020	0.CCO	0.000	6C8.6C	710.CC
0.000776	24.	24.	24.	C	0	0	-13.05	47.6C	757.6C

*SECNO 4C1C.CCO

3470 ENCROACHMENT STATIONS= 71C.C 757.6 TYPE= 1 TARGET= 47.60C

4010.0C	5.48	614.C8	C.CO	C.CC	614.23	0.14	C.00	C.0C100C00.CC	
565.	C.	565.	C.	0.	185.	C.	31.	19.	611.60
0.45	0.CC	3.C5	C.C1	C.CCC	C.020	C.C40	0.000	608.6C	710.CC
0.000309	1.	1.	1.	2	0	0	C.00	47.6C	757.6C

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCE	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XAL	XACH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	TITIAL	IDC	ICONT	COBAR	TCPWID	ENDST

CCHV= C.500 CEHV= 1.000
*SECNO 4060.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 45.0 190.0 TYPE= 1 TARGET= 145.000
50 FT UPSTREAM C&O RR BRIDGE, DATA PARTLY FROM VS-D

4060.00	5.42	614.12	C.00	C.CC	614.51	C.39	C.04	C.25	613.70
565.	6.	552.	7.	6.	105.	8.	31.	19.	615.30
0.46	0.92	5.09	C.89	C.03C	C.035	0.035	0.000	608.70	47.50
0.002919	50.	50.	50.	C	0	0	C.00	96.14	190.00

*SECNO 4100.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 5.0 230.0 TYPE= 1 TARGET= 225.000
SECTION 4060 MOVED UPSTREAM

4100.00	5.52	614.52	C.00	C.CC	614.70	0.18	0.08	C.11	613.70
565.	26.	453.	87.	21.	121.	62.	32.	20.	615.30
0.46	1.20	3.74	1.39	C.03C	C.035	0.035	0.000	608.70	44.25
0.001413	40.	40.	40.	3	0	0	0.00	158.44	230.00

CCHV= C.300 CEHV= 0.500
*SECNO 5250.000

3265 DIVIDED FLOW

3280 CROSS SECTION 5250.00 EXTENDED 0.14 FEET

VALLEY SECTION D 1250 FT UPSTREAM C&C RR BRIDGE

5250.00	6.44	615.14	C.00	C.CC	615.15	0.01	C.40	C.05	613.70
565.	86.	188.	291.	159.	141.	475.	45.	30.	615.30
0.84	0.54	1.33	C.61	C.03C	C.035	0.035	0.000	608.70	0.00
C.000154	115C.	115C.	115C.	4	0	0	C.00	639.34	643.46

CCHV= C.50C CEHV= 1.000

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VPCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	TITAL	IDC	ICONT	COBAR	ICPWID	ENDST

*SECNO 6650.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 550.0 675.0 TYPE= 1 TARGET= 125.000
200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

6650.00	5.39	615.69	0.00	0.00	616.03	0.34	0.55	0.33	615.40
565.	22.	486.	56.	17.	97.	28.	59.	42.	616.20
0.92	1.71	4.59	1.99	0.030	0.035	0.030	0.000	610.30	550.00
0.002753	1400.	1400.	1300.	2	0	0	0.00	120.24	675.00

*SECNO 6850.000

3470 ENCROACHMENT STATIONS= 564.0 590.3 TYPE= 1 TARGET= 28.000
DOWNSTREAM FACE OF ASH ROAD

6850.00	5.59	616.19	0.00	0.00	616.50	0.31	0.46	0.01	613.70
565.	0.	565.	0.	0.	126.	0.	59.	42.	100000.00
0.93	0.00	4.47	0.00	0.000	0.035	0.000	0.000	610.60	564.00
0.001916	200.	200.	200.	2	0	0	0.00	26.32	590.32

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	CCEC	RDLEN	ELC	RWP	SAREA	SS	ELCHU	ELCHD
	0.30	2.15	3.00	0.00	26.50	0.00	163.00	0.00	610.60	610.60

CCHV= 0.100 CEHV= 0.300
*SECNO 6880.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 616.488 ELLC= 616.700 PCWSE= 616.188 ELTRD= 617.800

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 617.80 MAX ELLC= 616.70

3470 ENCROACHMENT STATIONS= 563.0 590.3 TYPE= 1 TARGET= 27.300
UPSTREAM FACE OF ASH ROAD

6880.00	5.65	616.25	0.00	0.00	616.55	0.30	0.05	0.00	613.70
565.	2.	563.	0.	1.	128.	0.	59.	42.	100000.00
0.94	1.08	4.41	0.00	0.030	0.035	0.000	0.000	610.60	563.00
0.001654	30.	30.	30.	2	0	0	-1.14	27.30	590.30

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBI	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 6980.000

3470 ENCROACHMENT STATIONS= 430.0 670.0 TYPE= 1 TARGET= 240.000
VALLEY SECTION = 100 FT UPSTREAM OF ASH ROAD

6980.00	6.30	616.60	0.00	0.00	616.68	0.08	0.11	0.02	615.40
565.	128.	336.	102.	118.	122.	63.	60.	43.	616.20
0.95	1.08	2.75	1.63	0.030	0.035	0.030	0.000	610.30	430.00
0.000664	200.	99.	99.	2	0	0	0.00	240.00	670.00

CCHV= 0.300 CEHV= 0.500
*SECNO 7980.000

3265 DIVIDED FLOW

7980.00	6.09	617.59	0.00	0.00	617.83	0.24	1.06	0.08	616.55
565.	101.	463.	0.	59.	108.	1.	66.	47.	617.70
1.02	1.73	4.28	0.27	0.030	0.035	0.030	0.000	611.50	505.53
0.001909	110.	100.	90.	2	0	0	0.00	153.52	687.85

*SECNO 9045.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 513.0 594.0 TYPE= 1 TARGET= 90.000
100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F

9045.00	7.00	619.60	0.00	0.00	619.89	0.29	2.03	0.03	617.70
565.	37.	517.	11.	19.	115.	11.	69.	50.	619.20
1.09	1.96	4.51	0.99	0.035	0.035	0.035	0.000	612.60	513.00
0.001900	110.	106.	100.	2	0	0	0.00	75.62	594.00

CCHV= 0.500 CEHV= 1.000
*SECNO 9145.000

3470 ENCROACHMENT STATIONS= 1566.0 1596.4 TYPE= 1 TARGET= 35.000
DOWNSTREAM FACE WALTZ ROAD

9145.00	6.69	619.89	0.00	0.00	620.07	0.18	0.13	0.06	616.40
565.	0.	565.	0.	0.	167.	0.	70.	50.	100000.00
1.10	0.00	3.39	0.00	0.000	0.035	0.000	0.000	613.20	1566.00
0.000897	100.	100.	100.	2	0	0	0.00	30.45	1596.45

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFG	RDLEN	BWC	BWP	BAREA	SS	ELCHL	ELCHD
	0.00	3.00	3.00	0.00	28.00	0.00	186.00	0.00	613.20	613.20

*SECNO 9194.000
PRESSURE FLOW

EGPRS	EGLWC	K	QWEIR	QBR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
620.32	620.07	0.00	0.	565.	186.	190.	620.00	621.70

3470 ENCROACHMENT STATIONS= 1566.0 1596.5 TYPE= 1 TARGET= 30.500
UPSTREAM FACE WALTZ ROAD

9194.00	6.96	620.16	0.00	0.00	620.72	0.16	0.25	0.00	100000.00	
565.	0.	565.	0.	0.	175.	0.	70.	50.	616.80	
1.11	0.00	3.23	0.15	0.000	0.035	0.035	0.000	613.20	1566.00	
0.000690	49.	49.	49.	2	0	0	0.00	30.50	1596.50	

*SECNO 9325.000
3280 CROSS SECTION 9325.00 EXTENDED 0.40 FEET

3470 ENCROACHMENT STATIONS= 1285.0 1545.0 TYPE= 1 TARGET= 260.000
VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD

9325.00	7.90	620.40	0.00	0.00	620.44	0.04	0.05	0.06	617.70	
565.	191.	295.	80.	192.	152.	115.	71.	51.	619.20	
1.13	0.99	1.94	0.70	0.035	0.035	0.035	0.000	612.60	1285.00	
0.000273	100.	131.	150.	2	0	0	0.00	260.00	1545.00	

*SECNO 10185.000

3470 ENCROACHMENT STATIONS= 214.0 304.0 TYPE= 1 TARGET= 90.000
115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G

10185.00	7.20	620.70	0.00	0.00	620.78	0.08	0.29	0.05	619.60	
565.	70.	450.	45.	52.	177.	40.	78.	54.	619.20	
1.23	1.34	2.54	1.12	0.035	0.035	0.035	0.000	613.50	214.00	
0.000457	800.	860.	860.	2	0	0	0.00	90.00	304.00	

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IPC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10300.000

3470 ENCROACHMENT STATIONS= 855.0 883.8 TYPE= 1 TARGET= 32.000
DOWNSTREAM FACE WILLOW ROAD

10300.00	6.87	620.77	C.00	C.CC	620.94	0.18	0.07	C.09	617.30
565.	C.	565.	0.	0.	168.	C.	78.	54.	100000.00
1.24	0.CC	3.37	C.00	C.CCC	C.035	0.CCO	0.000	613.9C	855.CC
0.000852	115.	115.	115.	2	0	0	C.00	28.8C	883.8C

SPECIAL BRIDGE

6070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKCR	CCFS	RDLEN	EWC	BWP	BAREA	SS	ELCHL	ELCHD
0.0C	2.70	3.0C	0.C0	32.00	0.C0	195.00	0.C0	613.9C	613.90

*SECNO 10348.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 ESLWC= 620.942 ELLC= 621.100 PCWSE= 620.766 ELTRD= 623.100

3370 NORMAL BRIDGE,NRD= 22 MIN ELTRD= 623.1C MAX ELLC= 621.10

3470 ENCROACHMENT STATIONS= 855.C 883.8 TYPE= 1 TARGET= 28.8CC
UPSTREAM FACE WILLOW ROAD

10348.00	6.91	620.81	C.00	C.CC	620.98	C.17	C.04	0.CC100CC0.CC	
565.	C.	565.	C.	C.	165.	C.	79.	54.	616.20
1.25	0.CC	3.35	C.00	C.CCC	C.035	0.CCO	0.000	613.9C	855.CC
0.000836	48.	48.	48.	2	0	0	-C.12	28.8C	883.8C

*SECNO 10450.000

3470 ENCROACHMENT STATIONS= 845.C 1081.0 TYPE= 1 TARGET= 236.00C
VALLEY SECTION MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD

10450.00	6.86	621.C6	C.00	C.CC	621.10	0.C4	C.C5	0.07	617.30
565.	171.	301.	93.	189.	145.	131.	79.	55.	619.90
1.27	0.91	2.C7	C.71	C.04C	C.035	C.C40	C.000	614.2C	845.CC
0.000272	127.	102.	75.	2	C	0	C.00	236.0C	1081.CC

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALCB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	TITIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10700.000

3470 ENCROACHMENT STATIONS= -595.0 1275.0 TYPE= 1 TARGET= -595.000

VALLEY SECTION 350 FT UPSTREAM OF WILLOW ROAD

10700.00	6.64	621.14	0.00	0.00	621.17	0.04	0.07	0.00	617.60
565.	209.	288.	68.	322.	139.	122.	83.	57.	620.20
1.32	0.65	2.07	0.56	0.040	0.035	0.040	0.000	614.50	621.09
0.000286	325.	250.	175.	2	0	0	0.00	505.67	1126.76

PRINTED IN U.S.A.

THIS RUN EXECUTED 6 SEP 84 13:03:31

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************

T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      50-YEAR FLOOD
T3      NORTH BRANCH SWAN CREEK

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
         0.        3.         0.         0.   0.000000       0.00       0.0        0.    611.600      0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
     2.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
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PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCE	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOER	IIRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 2

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION

0.00	7.40	611.60	C.CO	611.60	611.80	0.20	C.00	0.00	606.10
855.	23.	762.	70.	25.	201.	78.	0.	0.	605.50
0.00	0.93	3.80	C.90	C.04C	C.030	2.C40	0.000	6C4.2C	881.22
0.000472	C.	C.	C.	C	0	0	C.00	119.61	1000.83

SPECIAL BRIDGE

5070/VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFR	RDLEN	BWC	BWP	BAREA	SS	ELCHL	ELCHD
	0.00	2.42	3.00	0.00	31.00	0.00	166.00	0.00	604.20	604.20

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
612.60	611.80	0.CC	39.	812.	166.	195.	610.50	612.10

UPSTREAM FACE CARLTON ROAD BRIDGE SECTION

17.00	8.18	612.38	C.00	C.CC	612.50	0.12	0.70	C.0C	606.10
855.	36.	690.	129.	41.	224.	149.	0.	0.	605.50
0.0C	0.89	3.08	C.86	C.04C	C.030	C.C40	0.000	6C4.2C	877.18
0.000268	35.	35.	35.	2	C	3	C.00	167.5C	1044.69

*SECNO 175.000

3470 ENCROACHMENT STATIONS= 695.0 1200.0 TYPE= 1 TARGET= 505.000

VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD

175.00	7.84	612.54	C.CO	C.CC	612.56	C.C2	C.03	C.03	609.30
855.	71.	230.	554.	163.	147.	662.	3.	1.	608.00
0.05	0.44	1.56	C.84	C.04C	C.035	C.C40	0.000	6C4.7C	695.CC
0.000123	158.	158.	158.	2	0	0	C.00	505.CC	1200.CC

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCE	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	IIBIAL	IDC	ICONT	CORAR	ICPWIC	ENDST

*SECNO 2000.000

3470 ENCROACHMENT STATIONS= 185.0 340.0 TYPE= 1 TARGET= 155.000
VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD

2000.00	7.25	612.95	C.CC	C.CC	613.C7	0.13	C.46	C.06	611.10
855.	199.	502.	155.	126.	143.	100.	31.	15.	610.40
0.23	1.58	3.52	1.55	C.04C	C.035	0.C35	0.000	6C5.7C	185.C0
0.000776	1825.	1825.	1825.	2	0	0	C.00	155.0C	340.CC

*SECNO 2100.000

3470 ENCROACHMENT STATIONS= 235.0 340.0 TYPE= 1 TARGET= 105.000
REPEATED VALLEY SECTION E

2100.00	7.18	612.98	C.C3	C.CC	613.22	0.24	C.09	C.05	611.20
855.	49.	623.	163.	27.	141.	96.	32.	15.	610.50
0.24	1.8C	4.41	1.91	C.04C	0.035	C.C35	0.000	6C5.8C	235.CC
0.001236	125.	1CC.	5C.	C	0	0	C.00	105.0C	340.CC

CCHV= C.4CC CEHV= 0.7C0
*SECNO 2224.000

3470 ENCROACHMENT STATIONS= C.C 304.0 TYPE= 1 TARGET= 303.999

2224.00	7.1C	613.10	C.00	C.CC	613.55	0.45	0.19	C.15	610.40
855.	C.	855.	C.	1.	155.	C.	32.	16.	617.10
0.25	0.56	5.36	C.CO	C.04C	0.035	C.CC0	0.000	6C6.0C	174.61
0.002097	155.	124.	50.	1	0	0	0.00	28.02	202.64

CCHV= C.1CC CEHV= 0.3C0
*SECNO 2225.000

3370 NORMAL BRIDGE,NBD= 21 MIN ELTRD= 612.9C MAX ELLC= 617.4C

3470 ENCROACHMENT STATIONS= C.C 304.0 TYPE= 1 TARGET= 303.999
DOWNSTREAM FACE BELL ROAD

2225.CC	7.C7	613.C7	C.00	C.CC	613.57	0.49	C.00	C.01	610.4C
855.	C.	855.	C.	1.	152.	C.	32.	16.	617.10
0.25	0.43	5.63	C.CO	C.04C	C.020	C.CC0	0.000	6C6.CC	174.62
0.001221	1.	1.	1.	2	C	0	-6.87	28.02	202.64

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	ES	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TCPWID	ENDST

*SECNO 2254.000

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.90 MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

LPSTREAM FACE BELL ROAD

2254.00	7.12	613.12	C.00	C.CC	613.60	0.48	0.03	0.0C	610.4C
855.	C.	855.	0.	1.	153.	C.	32.	16.	617.10
0.25	0.43	5.59	C.00	C.C4C	C.020	C.CC0	0.000	6C6.0C	174.61
0.001192	29.	29.	29.	C	0	0	-6.92	28.03	202.64

*SECNO 2255.CC0

3470 ENCROACHMENT STATIONS= C.C 304.0 TYPE= 1 TARGET= 303.999

2255.0C	7.17	613.17	C.C0	C.CC	613.61	0.44	C.00	C.0C	610.4C
855.	C.	855.	C.	1.	161.	C.	32.	16.	617.10
0.25	0.56	5.30	C.00	C.04C	C.035	0.CC0	0.000	6C6.0C	174.6C
0.002C15	1.	1.	1.	2	0	C	C.0C	28.04	202.65

CCHV= C.20C CEHV= 0.5C0

*SECNO 3C55.CC0

3470 ENCROACHMENT STATIONS= 65C.0 115C.C TYPE= 1 TARGET= 5CC.0CC

VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTERPOLATED

3055.0C	6.74	614.C4	C.00	C.C0	614.C6	0.C2	C.37	C.0E	612.90
855.	233.	258.	365.	317.	16C.	446.	42.	20.	611.20
0.46	0.73	1.61	C.82	C.04C	0.035	C.C40	0.000	6C7.3C	652.47
0.000197	80C.	8CC.	8CC.	3	0	0	C.00	497.53	1150.CC

CCHV= C.40C CEHV= 0.7C0

*SECNO 391C.CC0

3470 ENCROACHMENT STATIONS= 85C.C 94C.0 TYPE= 1 TARGET= 9C.0CC

VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE

3910.00	5.76	614.36	C.C0	C.CC	614.67	0.31	C.41	C.2C	614.2C
855.	173.	625.	57.	55.	127.	25.	53.	26.	612.50
0.52	3.12	4.92	2.30	C.C3C	C.035	C.C40	0.000	6C8.6C	850.CC
0.002511	855.	855.	855.	2	0	0	C.00	9C.0C	940.CC

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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
    Q          QLOB       QCH        QRCB       ALCB       ACH        AROF       VOL        TWA    LEFT/RIGHT
    TIME       VLOB       VCH        VRCB       XAL        XNCH       XNR        WTN        ELMIN       SSTA
    SLOPE      XLOBL      XLCH       XLCBR      IIRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

 *SECNO 3984.CCO

 3470 ENCROACHMENT STATIONS=      710.C      757.6  TYPE=      1  TARGET=       67.00C
   3984.0C       5.98     614.58       C.CO       C.CC     614.84       0.26       C.15       C.02     611.7C
       855.         C.       855.         0.         0.      209.         C.       54.         26.  10CCCO.CO
      0.52       0.CC       4.C9       C.CO       C.CCC      0.015      C.CCO      0.000     6C8.6C     710.CC
 0.001579        10C.         74.        25.          2          0          0       C.00      47.57     757.57

 *SECNO 3985.CCO

 3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD=  62C.CC MAX ELLC=  618.CO

 3470 ENCROACHMENT STATIONS=      710.C      757.6  TYPE=      1  TARGET=       47.60C
                    DOWNSTREAM FACE C&C RR BRIDGE
   3985.00       5.97     614.57       C.00       C.CC     614.87       0.30       0.00       0.03100C00.CO
       855.         C.       855.         0.         C.      194.         C.       54.         26.     611.60
      0.52       0.CC       4.41       C.00       C.CCC      0.035      C.CCO      0.000     6C8.6C     710.CC
 0.003888          1.          1.         1.          1          0          0     -14.85      47.6C     757.6C

 CCHV=    C.10C CEHV=    0.3CO
 *SECNO 4009.CCO

 3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD=  62C.CC MAX ELLC=  618.CO

 3470 ENCROACHMENT STATIONS=      710.C      757.6  TYPE=      1  TARGET=       47.60C
                    UPSTREAM FACE C&C RR BRIDGE
   4009.00       6.C3     614.63       C.00       C.CC     614.52       C.29       C.05       C.0C100C00.CC
       855.         C.       855.         0.         C.      197.         C.       54.         26.     611.60
      0.53       0.CC       4.35       C.CO       C.CCC      C.020      C.CCO      0.000     6C8.6C     710.CC
 0.001225         24.         24.        24.          C          0          0     -15.06      47.6C     757.6C

 *SECNO 4C10.CCO

 3470 ENCROACHMENT STATIONS=      710.C      757.6  TYPE=      1  TARGET=       47.60C
   4010.00       6.CB     614.68       C.20       C.CC     614.53       0.25       C.00       C.0C100C00.CC
       855.         C.       855.         0.         0.      214.         C.       54.         26.     611.60
      0.53       0.CC       4.CO       C.C1       C.CCC      C.020      C.C40      0.000     6C8.6C     710.CC
 0.000447          1.          1.         1.          2          0          0       C.0C      47.6C     757.6C
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= 0.500 CEHV= 1.000
*SECNO 4060.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 45.0 190.0 TYPE= 1 TARGET= 145.000
50 FT UPSTREAM CSC RR BRIDGE, DATA PARTLY FROM VS-D

4060.00	6.03	614.73	0.00	0.00	615.16	0.44	0.05	0.19	613.70
855.	67.	726.	63.	31.	128.	32.	54.	26.	615.30
0.53	2.14	5.68	1.94	0.030	0.035	0.035	0.000	608.70	45.00
0.003101	50.	50.	50.	0	0	0	0.00	127.27	190.00

*SECNO 4100.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 5.0 230.0 TYPE= 1 TARGET= 225.000
SECTION 4060 MOVED UPSTREAM

4100.00	6.53	615.23	0.00	0.00	615.38	0.15	0.07	0.14	613.70
855.	105.	525.	225.	60.	144.	126.	54.	27.	615.30
0.53	1.74	3.65	1.79	0.030	0.035	0.035	0.000	608.70	38.51
0.001137	40.	40.	40.	3	0	0	0.00	189.89	230.00

CCHV= 0.300 CEHV= 0.500
*SECNO 5250.000
3280 CROSS SECTION 5250.00 EXTENDED 0.72 FEET

VALLEY SECTION D 1250 FT UPSTREAM CSC RR BRIDGE

5250.00	7.02	615.72	0.00	0.00	615.73	0.01	0.31	0.04	613.70
855.	183.	202.	470.	274.	150.	732.	74.	38.	615.30
0.93	0.67	1.26	0.64	0.030	0.035	0.035	0.000	608.70	0.00
0.000118	1150.	1150.	1150.	4	0	0	0.00	709.74	709.74

CCHV= 0.500 CEHV= 1.000
*SECNO 6650.000

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCE	ALOB	ACH	ARCE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBI	XLCH	XLCER	TITIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 550.0 675.0 TYPE= 1 TARGET= 125.000

200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

6650.00	5.87	616.17	0.00	0.00	616.54	0.38	0.45	0.36	615.40
855.	97.	611.	147.	41.	110.	51.	95.	51.	616.20
1.01	2.38	5.56	2.90	0.030	0.035	0.030	0.000	610.30	550.00
0.003085	1400.	1400.	1300.	2	0	0	0.00	124.69	675.00

*SECNO 6850.000

3470 ENCROACHMENT STATIONS= 564.0 590.3 TYPE= 1 TARGET= 28.000

DOWNSTREAM FACE OF ASH ROAD

6850.00	6.19	616.79	0.00	0.00	617.35	0.56	0.62	0.19	613.70
855.	0.	855.	0.	0.	142.	0.	96.	52.	100000.00
1.02	0.00	6.02	0.00	0.000	0.035	0.000	0.000	610.60	564.00
0.003110	200.	200.	200.	2	0	0	0.00	26.32	590.32

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	CCFG	RDLEN	BWC	BWP	BAREA	SS	ELCHL	ELCHD
0.00	2.15	3.00	0.00	26.50	0.00	163.00	0.00	610.60	610.60

CCHV= 0.100 CEHV= 0.300

*SECNO 6880.000

PRESSURE FLOW

EGPRS	EGLWC	HT	GWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
617.70	617.33	0.00	0.	855.	163.	162.	616.70	617.80

3470 ENCROACHMENT STATIONS= 563.0 590.3 TYPE= 1 TARGET= 27.300

UPSTREAM FACE OF ASH ROAD

6880.00	6.65	617.25	0.00	0.00	617.70	0.46	0.36	0.00	613.70
855.	17.	838.	0.	4.	154.	0.	96.	52.	100000.00
1.03	4.92	5.43	0.00	0.030	0.035	0.000	0.000	610.60	563.00
0.002043	30.	30.	30.	2	0	0	0.00	27.30	590.30

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TCPWID	ENDST

*SECNO 6980.000

3470 ENCROACHMENT STATIONS= 430.0 670.0 TYPE= 1 TARGET= 240.000
VALLEY SECTION 5100 FT UPSTREAM OF ASH ROAD

6980.00	7.43	617.78	0.00	0.00	617.82	0.04	0.07	0.04	615.40
855.	384.	306.	164.	317.	153.	113.	97.	52.	616.20
1.05	1.21	2.00	1.45	0.030	0.035	0.030	0.000	610.30	430.00
0.000256	200.	99.	99.	2	0	0	0.00	240.00	670.00

CCHV= 0.300 CEHV= 0.500
*SECNO 7980.000

7980.00	6.73	618.23	0.00	0.00	618.41	0.18	0.52	0.07	616.55
855.	268.	520.	67.	132.	126.	55.	108.	58.	617.70
1.14	2.03	4.12	1.21	0.030	0.035	0.030	0.000	611.50	464.42
0.001455	1100.	1000.	900.	3	0	0	0.00	279.52	743.94

*SECNO 9045.000

3470 ENCROACHMENT STATIONS= 513.0 594.0 TYPE= 1 TARGET= 90.000
100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F

9045.00	7.51	620.11	0.00	0.00	620.54	0.43	2.01	0.12	617.70
855.	32.	724.	49.	32.	129.	25.	114.	63.	619.20
1.19	2.58	5.63	1.97	0.035	0.035	0.035	0.000	612.60	513.00
0.002538	1100.	1065.	1000.	3	0	0	0.00	81.00	594.00

CCHV= 0.500 CEHV= 1.000
*SECNO 9145.000

3470 ENCROACHMENT STATIONS= 1566.0 1596.4 TYPE= 1 TARGET= 35.000
DOWNSTREAM FACE WALTZ ROAD

9145.00	7.25	620.45	0.00	0.00	620.79	0.34	0.20	0.05	616.40
855.	0.	855.	0.	0.	184.	0.	114.	63.	100000.00
1.20	0.00	4.66	0.00	0.000	0.035	0.000	0.000	613.20	1566.00
0.001546	100.	100.	100.	2	0	0	0.00	30.45	1596.45

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	IIBIAL	IDC	ICONT	CORAR	ICPWID	ENDST

SPECIAL BRIDGE

5070.VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFG	RDLEN	EWC	BWP	BAREA	SS	ELCHL	ELCHD
	0.00	3.00	3.00	0.00	28.00	0.00	186.00	0.00	613.20	613.20

*SECNO 9194.000
PRESSURE FLOW

EGPRS	EGLWC	HF	CWEIR	CPR	BAREA	TRAPEZCID AREA	ELLC	ELTRD
621.43	620.79	0.00	0.	855.	186.	190.	620.00	621.70

3470 ENCROACHMENT STATIONS= 1566.0 1596.5 TYPE= 1 TARGET= 30.500

LPSTREAM FACE WALTZ ROAD

9194.00	7.56	621.16	0.00	0.00	621.43	0.27	0.65	0.00100000.00	
855.	0.	855.	0.	0.	205.	0.	114.	63.	616.80
1.20	0.00	4.16	0.17	0.000	0.035	0.035	0.000	613.20	1566.00
0.000959	49.	49.	49.	2	0	0	0.00	30.50	1596.50

*SECNO 9325.000
3280 CROSS SECTION 9325.00 EXTENDED 1.57 FEET

3470 ENCROACHMENT STATIONS= 1285.0 1545.0 TYPE= 1 TARGET= 260.000

VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD

9325.00	8.97	621.57	0.00	0.00	621.60	0.02	0.04	0.12	617.70
855.	334.	307.	213.	326.	187.	249.	116.	63.	619.20
1.23	1.03	1.65	0.86	0.035	0.035	0.035	0.000	612.60	1285.00
0.000149	100.	131.	150.	2	0	0	0.00	260.00	1545.00

*SECNO 10185.000

3470 ENCROACHMENT STATIONS= 214.0 304.0 TYPE= 1 TARGET= 90.000

115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-6

10185.00	3.27	621.77	0.00	0.00	621.87	0.10	0.20	0.08	619.60
855.	139.	607.	109.	81.	215.	70.	127.	67.	619.20
1.33	1.71	2.82	1.55	0.035	0.035	0.035	0.000	613.50	214.00
0.000438	300.	860.	860.	2	0	0	0.00	90.00	304.00

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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLCSS   BANK ELEV
   Q         QLOB      QCH       QRCE      ALOB      ACH       AROE      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VRCE      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLCER     TIRIAL    TDC       TCONT     CORAR     TOPWID     ENDST

*SECNO 10300.000

3470 ENCROACHMENT STATIONS=      855.0      883.8  TYPE=      1  TARGET=      32.000
                DOWNSTREAM FACE WILLOW ROAD
 10300.00      7.95    621.85      0.00      0.00    622.14      0.29      0.08      0.19    617.80
     855.        0.      855.        0.        0.      199.        0.      127.       67.  100000.00
     1.33      0.00      4.30      0.00     0.000     0.035     0.000     0.000    613.90    855.00
 0.001191      115.      115.      115.         2         0         0      0.00     28.80    883.80


SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED
SB  XK         XKCR       CCFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     0.00       2.70       3.00       0.00      32.00       0.00     195.00      0.00     613.90     613.90

*SECNO 10348.000
PRESSURE FLOW


 EGPRS       EGLWC       H3        GWEIR       GPR        BAREA    TRAPEZOID       ELLC      ELTRD
                                                                      AREA
    622.66     622.14      0.00         0.       855.       195.       230.      621.10     623.10


3470 ENCROACHMENT STATIONS=      855.0      883.8  TYPE=      1  TARGET=      28.800
                UPSTREAM FACE WILLOW ROAD
 10348.00      3.51    622.41      0.00      0.00    622.66      0.25      0.52      0.00100000.00
     855.        0.      855.        0.        0.      215.        0.      128.       67.    616.20
     1.34      0.00      3.98      0.00     0.000     0.035     0.000     0.000    613.90    855.00
 0.000953       48.       48.       48.         2         0         0      0.00     28.80    883.80

*SECNO 10450.000

3470 ENCROACHMENT STATIONS=      845.0     1081.0  TYPE=      1  TARGET=     236.000
                VALLEY SECTION 6 MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD
 10450.00      8.57    622.77      0.00      0.00    622.79      0.02      0.02      0.11    617.30
     855.       320.      293.      242.      369.      190.      311.      129.       67.    619.90
     1.36      0.87      1.55      0.78     0.040     0.035     0.040     0.000    614.20    845.00
 0.000106      127.      102.       75.         2         0         0      0.00    236.00   1081.00
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCE	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCRR	IIRIAL	IDC	ICONI	CORAR	TOPWID	ENDST

*SECNO 10700.000

3470 ENCROACHMENT STATIONS= -595.0 1275.0 TYPE= 1 TARGET= -595.000

VALLEY SECTION 750 FT UPSTREAM OF WILLOW ROAD

10700.00	3.31	622.81	0.00	0.00	622.82	0.01	0.02	0.01	617.60
855.	466.	195.	195.	915.	187.	480.	136.	70.	620.20
1.48	0.51	1.07	0.41	0.040	0.035	0.040	0.000	614.50	595.00
0.000053	325.	250.	175.	2	0	0	0.00	658.23	1253.23

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THIS RUN EXECUTED 6 SEP 84 13:03:40

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
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T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      100-YEAR FLOOD
T3      NORTH BRANCH SWAN CREEK

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.       4.        0.        0.  0.000000      0.00      0.0       0.   611.900     0.000
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
        3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IPC	ICONT	CORAR	TOPWID	ENDST

*PROF 3

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION

0.00	7.70	611.90	0.00	611.90	612.11	0.21	0.00	0.00	606.10
960.	32.	926.	103.	31.	210.	101.	0.	0.	605.50
0.00	1.64	3.94	1.02	0.040	0.030	0.040	0.000	604.20	879.67
0.000479	0.	0.	0.	0	0	0	0.00	133.67	1013.33

SPECIAL BRIDGE

3070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKCR	CCEC	BDLEN	FWC	SWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.42	3.00	0.00	31.00	0.00	166.00	0.00	604.20	604.20

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	FR	QWEIR	QFR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
613.16	612.11	0.00	134.	824.	166.	195.	610.50	612.10

UPSTREAM FACE CARLTON ROAD BRIDGE SECTION

17.00	8.50	612.70	0.00	0.00	612.83	0.12	0.72	0.00	606.10
960.	46.	739.	174.	49.	234.	189.	0.	0.	605.50
0.00	3.95	3.17	0.92	0.040	0.030	0.040	0.000	604.20	875.50
0.000267	35.	35.	35.	2	0	3	0.00	186.23	1061.73

*SECNO 175.000

3470 ENCROACHMENT STATIONS= 695.0 1200.0 TYPE= 1 TARGET= 505.000

VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD

175.00	8.17	612.87	0.00	0.00	612.88	0.02	0.03	0.03	609.30
960.	110.	232.	617.	246.	154.	737.	3.	1.	608.00
0.05	0.45	1.51	0.84	0.040	0.035	0.040	0.000	604.70	695.00
0.000108	158.	158.	158.	2	0	0	0.00	505.00	1200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRITS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCE	ALOB	ACH	ARCE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	IIRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2000.000

3470 ENCROACHMENT STATIONS= 185.0 340.0 TYPE= 1 TARGET= 155.000

VALLEY SECTION B 225 FT DOWNSTREAM BELL ROAD

2000.00	7.52	613.22	0.00	0.00	613.35	0.12	0.41	0.05	611.10
960.	239.	524.	197.	143.	149.	118.	36.	15.	610.40
0.24	1.67	3.51	1.67	0.040	0.035	0.035	0.000	605.70	185.00
0.000729	1825.	1825.	1825.	1	0	0	0.00	155.00	340.00

*SECNO 2100.000

3470 ENCROACHMENT STATIONS= 235.0 340.0 TYPE= 1 TARGET= 105.000

REPEATED VALLEY SECTION E

2100.00	7.45	613.25	0.00	0.00	613.49	0.23	0.09	0.05	611.20
960.	60.	661.	239.	31.	148.	114.	36.	15.	610.50
0.25	1.92	4.47	2.10	0.040	0.035	0.035	0.000	605.80	235.00
0.001194	125.	100.	50.	0	0	0	0.00	105.00	340.00

CCHV= 0.400 CEHV= 0.700

*SECNO 2224.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

2224.00	7.76	613.76	0.00	0.00	613.87	0.52	0.19	0.20	610.40
960.	0.	960.	0.	1.	167.	0.	37.	16.	617.10
0.25	0.63	5.76	0.19	0.040	0.035	0.035	0.000	606.00	174.58
0.002305	155.	124.	50.	0	0	0	0.00	31.76	304.00

CCHV= 0.100 CEHV= 0.300

*SECNO 2225.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.90 MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

DOWNSTREAM FACE BELL ROAD

2225.00	7.32	613.32	C.00	C.CC	613.89	0.57	C.00	C.02	610.40
960.	C.	96C.	C.	1.	158.	C.	37.	16.	617.10
0.25	0.48	6.C6	C.02	C.04C	C.020	0.C35	0.000	6C6.0C	174.58
0.001365	1.	1.	1.	2	0	0	-7.12	29.26	304.CC

*SECNO 2254.CCO

7265 DIVIDED FLOW

7370 NORMAL BRIDGE,NRD= 21 MIN ELTRD= 612.9C MAX ELLC= 617.40

7470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.995

UPSTREAM FACE BELL ROAD

2254.00	7.37	613.37	C.CO	C.CC	613.53	0.56	C.04	0.0C	610.40
960.	C.	96C.	0.	1.	16C.	C.	37.	16.	617.10
0.25	0.48	6.C1	C.17	C.04C	C.020	0.C35	0.000	6C6.CC	174.58
0.001331	29.	29.	29.	C	0	0	-7.17	32.6C	304.CC

*SECNO 2255.000

7265 DIVIDED FLOW

7470 ENCROACHMENT STATIONS= C.0 304.0 TYPE= 1 TARGET= 303.999

2255.00	7.43	613.43	C.30	C.CC	613.54	0.50	C.00	0.01	610.40
960.	C.	955.	C.	1.	165.	1.	37.	16.	617.10
0.25	0.67	5.69	C.29	C.04C	C.C35	C.C40	0.000	6C6.0C	174.57
0.002216	1.	1.	1.	2	0	0	C.00	36.52	304.CC

CCHV= C.20C CEHV= 0.5C0

*SECNO 3C55.000

7470 ENCROACHMENT STATIONS= 650.C 115C.0 TYPE= 1 TARGET= 50C.00C

VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTERPOLATED

3055.0C	7.C4	614.34	C.CO	C.CC	614.36	0.C2	C.32	C.1C	612.90
960.	282.	255.	419.	389.	17C.	515.	48.	21.	611.20
0.48	0.73	1.52	C.81	C.04C	C.035	0.C40	0.000	6C7.3C	650.CC
0.000162	80C.	8CC.	8C0.	3	0	0	C.0C	5C0.0C	1150.CC

CCHV= C.40C CEHV= 0.7C0

*SECNO 3910.CCO

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCP	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCP	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOER	IITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 850.0 940.0 TYPE= 1 TARGET= 90.000

VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE

3910.00	6.00	614.60	0.00	0.00	614.52	0.32	0.35	0.21	614.20
960.	215.	674.	71.	65.	135.	29.	61.	25.	612.50
0.53	3.33	4.99	2.45	0.030	0.035	0.040	0.000	608.60	850.00
0.002380	855.	855.	855.	2	0	0	0.00	90.00	940.00

*SECNO 3984.000

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 67.000

3984.00	6.17	614.77	0.00	0.00	615.07	0.30	0.15	0.01	611.70
960.	0.	960.	0.	0.	218.	0.	52.	26.	100000.00
0.54	0.00	4.40	0.00	0.000	0.035	0.000	0.000	608.60	710.00
0.001744	100.	74.	25.	2	0	0	0.00	47.57	757.57

*SECNO 3985.000

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.00 MAX ELLO= 618.00

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

DOWNSTREAM FACE C&C RR BRIDGE

3985.00	6.16	614.76	0.00	0.00	615.11	0.35	0.00	0.03100000.00	
960.	0.	960.	0.	0.	202.	0.	62.	26.	611.60
0.54	0.00	4.74	0.00	0.000	0.035	0.000	0.000	608.60	710.00
0.004377	1.	1.	1.	1	0	0	-15.53	47.60	757.60

CCHV= 0.100 CEHV= 0.300

*SECNO 4009.000

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.00 MAX ELLO= 618.00

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

UPSTREAM FACE C&C RR BRIDGE

4009.00	6.23	614.83	0.00	0.00	615.17	0.34	0.05	0.05100000.00	
960.	0.	960.	0.	0.	205.	0.	62.	26.	611.60
0.54	0.00	4.68	0.00	0.000	0.020	0.000	0.000	608.60	710.00
0.001376	24.	24.	24.	0	0	0	-15.77	47.60	757.60

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALOB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IDC	ICONT	CORAR	TCPWID	ENDST

*SECNO 4C10.CCO

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.60C

4010.0C	2.29	614.89	C.CO	C.CC	615.17	0.29	C.00	0.01100C00.C0	
960.	C.	96C.	0.	0.	223.	C.	62.	26.	611.60
0.54	0.CC	4.30	C.C1	C.CCC	C.C20	C.C40	0.000	6C8.6C	710.CC
0.000487	1.	1.	1.	2	0	0	C.00	47.6C	757.6C

CCHV= C.50C CEHV= 1.CCO

*SECNO 4C60.CCO

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 45.C 19C.C TYPE= 1 TARGET= 145.0CC

5C FT UPSTREAM C8C RR BRIDGE, DATA PARTLY FROM VS-D

4060.CC	6.23	614.93	C.00	C.CC	615.35	0.42	C.05	0.13	613.70
960.	103.	766.	91.	42.	134.	42.	62.	27.	615.30
0.54	2.44	5.70	2.16	C.03C	C.035	0.C35	0.000	6C8.7C	45.CC
0.002963	5C.	5C.	50.	C	0	0	C.00	134.15	190.CO

*SECNO 410C.CCO

3470 ENCROACHMENT STATIONS= 5.C 23C.0 TYPE= 1 TARGET= 225.0CC

SECTION 4C6C MOVED UPSTREAM

4100.0C	6.71	615.41	C.CO	C.CC	615.56	0.15	C.07	0.14	613.7C
960.	135.	554.	271.	72.	15C.	143.	62.	27.	615.30
0.55	1.88	3.69	1.89	C.03C	C.035	0.C35	0.000	6C8.7C	37.C2
0.001106	4C.	4C.	4C.	3	0	0	C.00	192.98	230.CC

CCHV= C.300 CEHV= 0.5C0

*SECNO 5250.CCO

3280 CROSS SECTION 525C.0C EXTENDED 0.89 FEET

VALLEY SECTION D 1250 FT UPSTREAM C8C RR BRIDGE

5250.0C	7.19	615.89	C.CO	C.CC	615.90	0.C1	C.30	C.04	613.70
960.	217.	209.	534.	308.	166.	814.	84.	39.	615.30
0.95	0.7C	1.24	C.66	C.03C	0.035	C.C35	0.000	6C8.7C	0.CC
0.000113	115C.	115C.	1150.	4	0	0	C.00	729.12	729.12

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	TIBTAL	IDC	ICONT	COBAR	TOPWID	ENDST

CCHV= 0.500 CEHV= 1.000
*SECNO 6650.000

3470 ENCROACHMENT STATIONS= 550.0 675.0 TYPE= 1 TARGET= 125.000
200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-E

6650.00	6.62	616.32	0.00	0.00	616.70	0.38	0.43	0.37	615.40
960.	129.	649.	182.	48.	114.	58.	107.	52.	616.20
1.03	2.66	5.69	3.14	0.030	0.035	0.030	0.000	610.30	550.00
0.003095	140.	140.	130.	2	0	0	0.00	125.00	675.00

*SECNO 6850.000

3470 ENCROACHMENT STATIONS= 564.0 590.3 TYPE= 1 TARGET= 28.000
DOWNSTREAM FACE OF ASH ROAD

6850.00	6.38	616.58	0.00	0.00	617.64	0.66	0.66	0.28	613.70
960.	0.	960.	0.	0.	147.	0.	108.	52.	100000.00
1.03	0.00	6.53	0.00	0.000	0.035	0.000	0.000	610.60	564.00
0.003537	200.	200.	200.	2	0	0	0.00	26.32	590.32

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKCR	CCFG	RDLEN	EWC	PWP	BAREA	SS	ELCHU	ELCHD
0.00	2.15	3.00	0.00	26.50	0.00	163.00	0.00	610.60	610.60

CCHV= 0.100 CEHV= 0.300
*SECNO 6880.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	HT	QWEIR	QER	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.14	617.61	0.00	13.	947.	163.	162.	616.70	617.80

3470 ENCROACHMENT STATIONS= 563.0 590.3 TYPE= 1 TARGET= 27.300
UPSTREAM FACE OF ASH ROAD

6880.00	7.00	617.60	0.00	0.00	618.11	0.51	0.47	0.00	613.70
960.	21.	939.	0.	4.	163.	0.	108.	52.	100000.00
1.04	5.37	5.75	0.00	0.030	0.035	0.000	0.000	610.60	563.00
0.002150	30.	30.	30.	2	0	4	0.00	27.30	590.30

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TCPWID	ENDST

*SECNO 6980.000

3470 ENCROACHMENT STATIONS= 430.0 670.0 TYPE= 1 TARGET= 240.000
VALLEY SECTION E 100 FT UPSTREAM OF ASH ROAD

6980.00	7.88	618.18	0.00	0.00	618.21	0.03	0.06	0.05	615.40
960.	471.	305.	196.	386.	164.	131.	110.	53.	616.20
1.06	1.22	1.86	1.41	0.030	0.035	0.030	0.000	610.30	430.00
0.000202	200.	99.	99.	2	0	0	0.00	240.00	670.00

CCHV= 0.300 CEHV= 0.500
*SECNO 7980.000

7980.00	7.03	618.53	0.00	0.00	618.66	0.13	0.40	0.05	616.55
960.	339.	496.	124.	178.	135.	96.	123.	60.	617.70
1.16	1.91	3.67	1.29	0.030	0.035	0.030	0.000	611.50	444.20
0.001054	1100.	1000.	900.	2	0	0	0.00	327.32	771.52

*SECNO 9045.000

3470 ENCROACHMENT STATIONS= 513.0 594.0 TYPE= 1 TARGET= 90.000
100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-F

9045.00	7.53	620.13	0.00	0.00	620.67	0.53	1.80	0.20	617.70
960.	93.	811.	56.	32.	125.	25.	130.	64.	619.20
1.22	2.89	6.27	2.22	0.035	0.035	0.035	0.000	612.60	513.00
0.003136	1100.	1065.	1000.	3	0	0	0.00	81.00	594.00

CCHV= 0.500 CEHV= 1.000
*SECNO 9145.000

3470 ENCROACHMENT STATIONS= 1566.0 1596.4 TYPE= 1 TARGET= 35.000
DOWNSTREAM FACE WALTZ ROAD

9145.00	7.36	620.56	0.00	0.00	620.57	0.41	0.24	0.06	616.40
960.	0.	960.	0.	0.	187.	0.	130.	65.	100000.00
1.22	0.00	5.14	0.00	0.000	0.035	0.000	0.000	613.20	1566.00
0.001850	100.	100.	100.	2	0	0	0.00	30.45	1596.45

INTERNUSA

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	QCH	QRCB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBI	XLCH	XLCBR	TIBIAL	IDC	ICONT	CORAR	TCPWID	ENDST

SPECIAL BRIDGE

5020,VARIABLE ELCHU OR ELCHD CN CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFG	RDLEN	EWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.00	7.00	0.00	28.00	0.00	186.00	0.00	613.20	613.20

*SECNO 9194.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	HT	QWEIR	QBR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
621.80	620.97	0.00	1.	951.	186.	190.	620.00	621.70

3470 ENCROACHMENT STATIONS= 1566.0 1596.5 TYPE= 1 TARGET= 30.500

UPSTREAM FACE WALTZ ROAD

9194.00	8.26	621.46	0.00	0.00	621.77	0.31	0.81	0.00	100000.00
960.	0.	960.	0.	0.	214.	0.	131.	65.	616.80
1.22	0.00	4.43	0.18	0.000	0.035	0.035	0.000	613.20	1566.00
0.001058	49.	49.	49.	2	0	3	0.00	30.50	1596.50

*SECNO 9325.000

3280 CROSS SECTION 9325.00 EXTENDED 1.93 FEET

3470 ENCROACHMENT STATIONS= 1285.0 1545.0 TYPE= 1 TARGET= 260.000

VALLEY SECTION F 125 FT UPSTREAM OF WALTZ ROAD

9325.00	9.33	621.93	0.00	0.00	621.55	0.02	0.04	0.14	617.70
960.	383.	318.	259.	367.	198.	290.	132.	65.	619.20
1.25	1.04	1.61	0.89	0.035	0.035	0.035	0.000	612.60	1285.00
0.000132	100.	131.	150.	2	0	0	0.00	260.00	1545.00

*SECNO 10185.000

3470 ENCROACHMENT STATIONS= 214.0 304.0 TYPE= 1 TARGET= 90.000

115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G

10185.00	3.62	622.12	0.00	0.00	622.22	0.11	0.18	0.08	619.60
960.	165.	662.	134.	90.	227.	80.	144.	68.	619.20
1.35	1.82	2.92	1.67	0.035	0.035	0.035	0.000	613.50	214.00
0.000434	300.	360.	360.	2	0	0	0.00	90.00	304.00

FORM 1 USA

SECNO	DEPTH	CWSEL	CRITWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCB	ALCH	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 10300.000									
3470 ENCROACHMENT STATIONS=		855.0	883.8	TYPE=	1	TARGET=	32.000		
DOWNSTREAM FACE WILLOW ROAD									
10300.00	8.30	622.20	0.00	0.00	622.52	0.33	0.08	0.22	617.80
960.	0.	960.	0.	0.	205.	0.	145.	69.	100000.00
1.35	0.00	4.60	0.00	0.000	0.035	0.000	0.000	613.90	855.00
0.001305	115.	115.	115.	2	0	0	0.00	28.80	883.80
SPECIAL BRIDGE									
5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED									
SB XK	XKOR	CDEC	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.70	3.00	0.00	32.00	0.00	195.00	0.00	613.90	613.90
*SECNO 10348.000									
PRESSURE AND WEIR FLOW									
EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA		ELLC	ELTRD
623.21	622.52	0.00	3.	957.	195.	230.		621.10	623.10
3470 ENCROACHMENT STATIONS=		855.0	883.8	TYPE=	1	TARGET=	28.800		
UPSTREAM FACE WILLOW ROAD									
10348.00	9.04	622.94	0.00	0.00	623.21	0.27	0.68	0.00	100000.00
960.	0.	960.	0.	0.	230.	0.	145.	69.	616.20
1.36	0.00	4.17	0.00	0.000	0.035	0.000	0.000	613.90	855.00
0.000990	48.	48.	48.	2	0	4	0.00	28.80	883.80
*SECNO 10450.000									
3280 CROSS SECTION 10450.00 EXTENDED 0.54 FEET									
3470 ENCROACHMENT STATIONS=		845.0	1081.0	TYPE=	1	TARGET=	236.000		
VALLEY SECTION 7 MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD									
10450.00	9.14	623.74	0.00	0.00	623.35	0.02	0.02	0.13	617.30
960.	369.	300.	291.	428.	204.	370.	147.	69.	619.90
1.38	0.86	1.47	0.79	0.040	0.035	0.040	0.000	614.20	845.00
0.000087	127.	102.	75.	2	0	0	0.00	236.00	1081.00

INI INUSA

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	ORCE	ALCB	ACH	ARCE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IDC	ICONT	CORAR	ICPWID	ENDST

*SECNO 10700.000
3280 CROSS SECTION 10700.00 EXTENDED 0.27 FEET

3470 ENCROACHMENT STATIONS= -595.0 1275.0 TYPE= 1 TARGET= -595.000
VALLEY SECTION @ 350 FT UPSTREAM OF WILLOW ROAD

10700.00	8.87	623.37	C.00	C.CC	623.37	C.C1	C.01	C.01	617.60
960.	531.	183.	247.	1112.	197.	644.	156.	72.	620.20
1.52	0.48	0.93	C.38	C.04C	C.035	0.C40	0.000	614.5C	595.CO
C.000036	325.	25C.	175.	2	0	0	C.00	680.0C	1275.CC

THIS RUN EXECUTED 6 SEP 84 13:03:49

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**************************************************
   HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
   ERROR CORR -  C1,02,03,C4,C5,06
   MODIFICATION -  50,51,52,53,54,55,56
**************************************************

T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      500-YEAR FLOOD
T3      NORTH BRANCH SWAN CREEK
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	5.	C.	C.	C.CCCOOO	O.CO	O.C	C.	612.50C	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.COO	C.OOC	-1.CCO	C.OOC	0.0CO	C.COC	0.000	C.OCC	0.CCO	0.00C

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QRCE	ALCE	ACH	ARCE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XAL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	ITRIAL	IPC	ICONT	CORAR	TOPWID	ENDST

*PROF 4

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

DOWNSTREAM FACE CARLTON ROAD BRIDGE SECTION

0.00	8.30	612.50	0.00	612.50	612.71	0.21	0.00	0.00	606.10
1170.	52.	928.	189.	44.	228.	163.	0.	0.	605.50
0.00	1.20	4.09	1.16	0.040	0.030	0.040	0.000	604.20	876.56
0.000460	0.	0.	0.	0	0	0	0.00	174.50	1051.05

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	CCES	BDLEN	ELC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.42	3.00	0.00	31.00	0.00	166.00	0.00	604.20	604.20

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIP	QFR	AAREA	TRAPEZOID AREA	ELLC	ELTRD
614.37	612.71	0.00	388.	789.	166.	195.	610.50	612.10

UPSTREAM FACE CARLTON ROAD BRIDGE SECTION

17.00	9.03	613.23	0.00	0.00	613.35	0.12	0.64	0.00	606.10
1170.	79.	823.	268.	98.	245.	265.	0.	0.	605.50
0.00	0.91	3.30	1.01	0.040	0.030	0.040	0.000	604.20	780.62
0.000266	35.	35.	35.	2	0	3	0.00	308.66	1089.28

*SECNO 175.000

3470 ENCROACHMENT STATIONS= 695.0 1200.0 TYPE= 1 TARGET= 505.000

VALLEY SECTION A 175 FT UPSTREAM CARLTON ROAD

175.00	8.69	613.39	0.00	0.00	613.41	0.01	0.02	0.03	609.30
1170.	192.	242.	736.	380.	165.	856.	4.	2.	608.00
0.05	0.51	1.47	0.56	0.040	0.035	0.040	0.000	604.70	695.00
0.000093	159.	158.	158.	2	0	0	0.00	505.00	1200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCE	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XAL	XACH	XAR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	IIRTAL	IDC	ICONT	COBAR	TOPWID	ENDST

*SECNO 2000.000

3470 ENCROACHMENT STATIONS= 185.0 340.0 TYPE= 1 TARGET= 155.000
VALLEY SECTION B 225 FT DOWNSTREAM FELL ROAD

2000.00	8.00	613.70	0.00	0.00	613.82	0.12	0.36	0.05	611.10
1170.	316.	571.	281.	175.	161.	150.	46.	15.	610.40
0.24	1.82	3.55	1.88	0.040	0.035	0.035	0.000	605.70	185.00
0.000675	1825.	1825.	1825.	2	0	0	0.00	155.00	340.00

*SECNO 2100.000

3470 ENCROACHMENT STATIONS= 235.0 340.0 TYPE= 1 TARGET= 105.000
REPEATED VALLEY SECTION E

2100.00	7.92	613.72	0.00	0.00	613.96	0.24	0.08	0.06	611.20
1170.	82.	738.	350.	38.	155.	145.	44.	16.	610.50
0.25	2.14	4.64	2.42	0.040	0.035	0.035	0.000	605.80	235.00
0.001170	125.	100.	50.	1	0	0	0.00	105.00	340.00

CCHV= 0.400 CEHV= 0.700

*SECNO 2224.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

2224.00	7.79	613.79	0.00	0.00	614.44	0.66	0.19	0.29	610.40
1170.	1.	1162.	7.	1.	178.	7.	45.	16.	617.10
0.25	0.75	6.52	0.94	0.040	0.035	0.035	0.000	606.00	174.52
0.002732	155.	124.	50.	2	0	0	0.00	55.62	304.00

CCHV= 0.100 CEHV= 0.300

*SECNO 2225.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NBO= 21 MIN ELBO= 612.90 MAX ELC= 617.40

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

PRINTED IN U.S.A.

DOWNSTREAM FACE BELL ROAD

2225.00	7.74	613.74	C.00	C.CC	614.47	0.73	C.00	C.02	610.40
1170.	C.	1166.	4.	1.	169.	6.	45.	16.	617.10
0.25	0.58	6.88	C.65	C.04C	C.020	0.C35	0.000	606.0C	174.52
0.001661	1.	1.	1.	2	0	0	-7.54	54.17	304.CO

*SECNO 2254.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE/NRD= 21 MIN ELTRD= 612.9C MAX ELLC= 617.40

3470 ENCROACHMENT STATIONS= 0.C 304.C TYPE= 1 TARGET= 303.999

UPSTREAM FACE BELL ROAD

2254.0C	7.8C	613.80	C.00	C.CC	614.52	0.71	C.05	C.CC	610.40
1170.	C.	1164.	6.	1.	171.	8.	45.	16.	617.10
0.25	0.58	6.80	C.74	C.04C	C.020	0.C35	0.000	606.0C	174.51
0.00161C	29.	29.	29.	C	0	0	-7.60	55.95	304.CC

*SECNO 2255.CCO

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 0.0 304.0 TYPE= 1 TARGET= 303.999

2255.0C	7.9C	613.90	C.00	C.CC	614.53	0.63	C.00	C.01	610.40
1170.	1.	1159.	10.	1.	182.	11.	45.	16.	617.10
0.25	0.74	6.38	C.98	C.04C	C.035	0.C40	0.000	606.0C	174.5C
0.002573	1.	1.	1.	2	0	0	C.00	58.8C	304.CC

CCHV= C.25C CEHV= C.5CC

*SECNO 3C55.CCO

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 650.0 1150.C TYPE= 1 TARGET= 500.00C

VALLEY SECTION C MOVED DOWNSTREAM, INVERT INTRERPOLATED

3055.0C	7.6C	614.90	C.00	C.CC	614.91	C.C1	C.26	0.12	612.5C
1170.	381.	267.	522.	523.	189.	642.	59.	21.	611.20
0.49	0.73	1.41	C.81	C.04C	0.035	C.C43	0.000	6C7.3C	650.CC
0.000121	80C.	8CC.	8CO.	3	0	0	C.00	500.0C	1150.CC

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	SRCE	ALCB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= C.400 CEHV= 0.700

*SECNO 3910.000

3470 ENCROACHMENT STATIONS= 850.0 940.0 TYPE= 1 TARGET= 90.000

VALLEY SECTION C 75 FT DOWNSTREAM C&C RR BRIDGE

3910.00	6.48	615.08	C.00	C.CC	615.40	0.32	C.27	0.22	614.20
1170.	304.	767.	99.	83.	151.	37.	75.	27.	612.50
0.55	3.65	5.07	2.68	C.C3C	C.035	C.C40	0.000	608.60	850.00
0.002109	355.	855.	855.	2	0	0	C.00	90.00	940.00

*SECNO 3984.000

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 67.000

3984.00	6.61	615.21	C.00	C.CC	615.59	0.37	0.15	0.03	611.70
1170.	C.	1170.	0.	0.	239.	C.	76.	27.	100000.00
0.55	0.00	4.89	C.00	C.CCC	C.035	0.CCC	0.000	608.60	710.00
0.001948	100.	74.	25.	2	0	0	C.00	47.57	757.57

*SECNO 3985.000

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.00 MAX ELLC= 618.00

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

DOWNSTREAM FACE C&O RR BRIDGE

3985.00	6.60	615.20	C.00	C.CC	615.63	0.43	C.00	0.041000	0.00
1170.	C.	1170.	0.	0.	222.	C.	76.	27.	611.60
0.55	0.CC	5.28	C.00	C.CCC	C.035	C.CCO	0.000	608.60	710.00
0.005107	1.	1.	1.	1	0	0	-17.13	47.60	757.60

CCHV= C.100 CEHV= 0.300

*SECNO 4009.000

3370 NORMAL BRIDGE,NRD= 28 MIN ELTRD= 620.00 MAX ELLC= 618.00

3470 ENCROACHMENT STATIONS= 710.0 757.6 TYPE= 1 TARGET= 47.600

UPSTREAM FACE C&C RR BRIDGE

4009.00	6.68	615.28	C.00	C.CC	615.70	0.42	C.06	0.001000	0.00
1170.	C.	1170.	0.	0.	225.	C.	76.	27.	611.60
0.55	0.CC	5.20	C.00	C.CCC	C.020	0.CCO	0.000	608.60	710.00
0.001603	24.	24.	24.	0	0	0	-17.41	47.60	757.60

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	SLOB	SCH	SRCE	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBI	XLCH	XLOER	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4C1C.CCO

3470 ENCROACHMENT STATIONS= 710.C 757.6 TYPE= 1 TARGET= 47.6CC

4010.0C	6.75	615.35	C.00	C.CC	615.70	0.35	C.00	0.01100C00.CC	
1170.	C.	117C.	0.	0.	246.	C.	76.	27.	611.60
0.55	0.CC	4.76	C.08	C.0CC	C.030	C.C40	0.C00	6C8.6C	710.CC
0.000534	1.	1.	1.	2	0	0	C.00	47.6C	757.6C

CCHV= C.50C CEHV= 1.CCO

*SECNO 4C6C.CCO

3470 ENCROACHMENT STATIONS= 45.0 190.0 TYPE= 1 TARGET= 145.00C

5C FT UPSTREAM C&C RR BRIDGE, DATA PARTLY FROM VS-D

4060.0C	6.7C	615.40	C.00	C.CC	615.75	0.35	0.05	C.0C	613.70
1170.	192.	816.	164.	68.	150.	68.	76.	27.	615.30
0.56	2.85	5.43	2.41	C.03C	C.035	C.C35	0.000	6C8.7C	45.C0
0.002401	5C.	5C.	50.	C	C	0	C.00	145.0C	190.C0

*SECNO 410C.CCO

3470 ENCROACHMENT STATIONS= 5.C 23C.0 TYPE= 1 TARGET= 225.00C

SECTION 4C6C MOVED UPSTREAM

4100.0C	7.C7	615.77	C.00	C.CC	615.92	0.14	C.06	0.1C	613.7C
1170.	199.	6C2.	368.	95.	162.	179.	77.	27.	615.30
0.56	2.C9	3.72	2.06	C.03C	C.035	C.C35	0.000	6C8.7C	34.C9
0.001016	4C.	4C.	40.	3	0	0	C.CC	195.91	230.CC

CCHV= C.30C CEHV= 0.5C0

*SECNO 525C.CCO

3280 CROSS SECTION 525C.00 EXTENDED 1.22 FEET

VALLEY SECTION D 125C FT UPSTREAM C&C RR BRIDGE

5250.0C	7.52	616.22	C.00	C.CC	616.23	0.C1	0.27	C.04	613.70
1170.	285.	22C.	665.	375.	177.	987.	103.	40.	615.30
0.96	0.76	1.25	C.67	C.03C	C.035	0.C35	0.000	6C8.7C	0.CC
0.000101	115C.	115C.	115C.	3	0	0	C.00	767.45	767.45

CCHV= 0.500 CEHV= 1.CCO

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRITS	WSELK	EG	FV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALCB	ACH	AROF	VOL	TBA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCEB	ITRIAL	IDC	ICONT	CORAR	TCPWID	ENDST

*SECNO 6650.000

3470 ENCROACHMENT STATIONS= 550.0 675.0 TYPE= 1 TARGET= 125.000
200 FT DOWNSTREAM ASH ROAD, DATA PARTLY FROM VS-F

6650.00	6.31	616.61	0.00	0.00	617.01	0.40	0.39	0.39	615.40
1170.	197.	719.	254.	63.	122.	72.	130.	54.	616.20
1.03	3.12	5.90	3.54	0.030	0.035	0.030	0.000	610.30	550.00
0.003041	1400.	1400.	1300.	2	0	0	0.00	125.00	675.00

*SECNO 6850.000

3470 ENCROACHMENT STATIONS= 564.0 590.3 TYPE= 1 TARGET= 28.000
DOWNSTREAM FACE OF ASH ROAD

6850.00	6.73	617.33	0.00	0.00	618.20	0.87	0.73	0.47	613.70
1170.	0.	1170.	0.	0.	156.	0.	131.	54.	100000.00
1.04	0.00	7.48	0.00	0.000	0.035	0.000	0.000	610.60	564.00
0.004396	200.	200.	200.	2	0	0	0.00	26.32	590.32

SPECIAL BRIDGE

3070 VARIABLE ELCHU OR ELCHD CN CARD SB NOT SPECIFIED

SB	XK	XKOR	CCFS	RDLEN	EWC	BWP	BAREA	SS	ELCHL	ELCHD
	0.00	2.15	7.00	0.00	26.50	0.00	163.00	0.00	610.60	610.60

CCHV= 0.100 CEHV= 0.300
*SECNO 6880.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	HI	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.06	618.17	0.00	178.	993.	163.	162.	616.70	617.80

3470 ENCROACHMENT STATIONS= 563.0 590.3 TYPE= 1 TARGET= 27.300
UPSTREAM FACE OF ASH ROAD

6880.00	7.28	617.88	0.00	0.00	618.58	0.69	0.37	0.00	613.70
1170.	27.	1143.	0.	4.	171.	0.	131.	54.	100000.00
1.04	6.40	6.70	0.00	0.030	0.035	0.000	0.000	610.60	563.00
0.002783	30.	30.	30.	3	0	4	0.00	27.30	590.30

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCE	ALOB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	IIBIAL	IDC	ICONT	CORAR	ICPWID	ENDST

*SECNC 6980.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 430.0 670.0 TYPE= 1 TARGET= 240.000

VALLEY SECTION E 100 FT UPSTREAM OF ASH ROAD

6980.00	8.36	613.66	C.00	C.CC	618.70	0.04	C.06	C.07	615.40
1170.	617.	330.	223.	468.	177.	151.	133.	55.	616.20
1.07	1.32	1.86	1.47	C.030	C.035	0.030	0.000	610.30	430.00
0.000184	200.	99.	99.	2	0	0	C.00	240.00	670.00

CCHV= C.300 CEHV= 0.500

*SECNO 7980.000

7980.00	7.47	618.97	C.00	C.CC	619.07	0.10	C.36	C.03	616.55
1170.	457.	487.	226.	251.	148.	166.	149.	62.	617.70
1.19	1.82	3.30	1.36	C.030	C.035	C.030	0.000	611.50	416.24
0.000759	1100.	1000.	900.	3	0	0	C.00	393.40	809.64

*SECNO 9045.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 513.0 594.0 TYPE= 1 TARGET= 90.000

100 FT DOWNSTREAM WALTZ ROAD, DATA PARTLY FROM VS-E

9045.00	7.65	620.25	C.00	C.CC	620.97	0.72	1.59	C.31	617.70
1170.	122.	970.	78.	35.	132.	28.	158.	68.	619.20
1.23	3.46	7.33	2.75	C.035	C.035	0.035	0.000	612.60	513.00
0.004157	1100.	1065.	1000.	3	0	0	C.00	81.00	594.00

CCHV= C.300 CEHV= 1.000

*SECNO 9145.000

3470 ENCROACHMENT STATIONS= 1566.0 1596.4 TYPE= 1 TARGET= 35.000

DOWNSTREAM FACE WALTZ ROAD

9145.00	7.60	620.80	C.00	C.CC	621.36	0.56	C.31	C.08	616.40
1170.	C.	1170.	0.	C.	194.	C.	159.	68.	100000.00
1.24	0.00	6.02	C.00	C.CCC	C.035	0.000	0.000	613.20	1566.00
0.002453	100.	100.	100.	2	0	0	C.00	30.45	1596.45

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	CLOB	CCH	ORCE	ALCE	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCE	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCER	IITRIAL	IOC	ICONT	CORAR	TCPWID	ENDST

SPECIAL BRIDGE

5070.VARIABLE ELCHU OR ELCHD CW CARD SB NOT SPECIFIED

SB	XK	XKCR	CCFG	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.00	3.00	0.00	28.00	0.00	186.00	0.00	613.20	613.20

*SECNO 9194.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZCID AREA	ELLC	ELTRD
622.64	621.36	0.00	135.	1036.	186.	190.	620.00	621.70

3470 ENCROACHMENT STATIONS= 1566.0 1596.5 TYPE= 1 TARGET= 30.500

LPSTREAM FACE WALTZ ROAD

9194.00	8.63	621.83	0.00	0.00	622.25	0.42	0.88	0.00	100000.00
1170.	0.	1170.	0.	0.	226.	0.	159.	68.	616.80
1.24	0.00	5.13	0.21	0.000	0.035	0.035	0.000	613.20	1566.00
0.001345	49.	49.	49.	2	0	4	0.00	30.50	1596.50

*SECNO 9325.000

3230 CROSS SECTION 9325.00 EXTENDED 2.45 FEET

3470 ENCROACHMENT STATIONS= 1285.0 1545.0 TYPE= 1 TARGET= 260.000

VALLEY SECTION F 125 FT LPSTREAM OF WALTZ ROAD

9325.00	9.85	622.45	0.00	0.00	622.48	0.02	0.04	0.20	617.70
1170.	476.	351.	343.	428.	213.	351.	161.	68.	619.20
1.27	1.11	1.64	0.38	0.035	0.035	0.035	0.000	612.60	1285.00
0.000124	100.	131.	150.	2	0	0	0.00	260.00	1545.00

*SECNO 10185.000

3470 ENCROACHMENT STATIONS= 214.0 304.0 TYPE= 1 TARGET= 90.000

115 FT DOWNSTREAM WILLOW ROAD, DATA PARTLY FROM VS-G

10185.00	3.14	622.64	0.00	0.00	622.76	0.12	0.18	0.10	619.60
1170.	214.	776.	180.	104.	245.	95.	175.	72.	619.20
1.35	2.05	3.17	1.91	0.035	0.035	0.035	0.000	613.50	214.00
0.000462	80.	86.	86.	2	0	0	0.00	90.00	304.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	ALCB	ACH	AROE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLCBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10360.000

3470 ENCROACHMENT STATIONS= 855.0 883.8 TYPE= 1 TARGET= 32.000

DOWNSTREAM FACE WILLOW ROAD

10300.00	8.33	622.73	C.00	C.CC	623.15	C.42	C.09	C.3C	617.8C
1170.	C.	1170.	0.	C.	224.	C.	175.	72.	100000.CC
1.36	0.CC	5.22	C.00	C.CCC	C.035	0.CCO	0.000	613.9C	855.CC
0.001587	115.	115.	115.	2	0	0	C.00	28.8C	883.8C

SPECIAL BRIDGE

5070/VARIABLE ELCHU OR ELCHD CN CARD SE NOT SPECIFIED

SB	XK	XKCR	CCFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0C	2.70	1.CC	0.C0	32.0C	0.C0	195.CC	0.C0	613.9C	613.90

*SECNO 10348.000

3280 CROSS SECTION 10348.0C EXTENDED 0.13 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	FR	QWEIR	QPR	AREA	TRAPEZOID AREA	ELLC	ELTRD
624.23	623.15	0.CC	277.	893.	195.	230.	621.1C	623.10

3470 ENCROACHMENT STATIONS= 855.C 883.8 TYPE= 1 TARGET= 28.8CC

UPSTREAM FACE WILLOW ROAD

10348.0C	9.33	623.23	C.C0	C.CC	623.60	0.37	C.46	0.0C	100CC0.C0
1170.	C.	117C.	C.	0.	239.	C.	176.	72.	616.20
1.36	0.CC	4.50	C.C0	C.CCC	C.C35	C.CCO	C.000	613.9C	855.CC
0.001328	48.	48.	48.	2	0	4	C.00	28.8C	883.8C

*SECNO 10450.000

3280 CROSS SECTION 10450.0C EXTENDED 0.98 FEET

3470 ENCROACHMENT STATIONS= 845.C 1081.0 TYPE= 1 TARGET= 236.00C

VALLEY SECTION # MOVED DOWNSTREAM, 100 FT UPSTREAM OF WILLOW RD

10450.0C	9.58	623.78	C.00	C.CC	623.8C	0.02	C.02	C.1R	617.3C
1170.	456.	344.	370.	475.	216.	417.	177.	72.	619.90
1.39	0.96	1.59	C.89	C.C4C	C.C35	C.C40	C.000	614.2C	845.CC
0.000094	127.	102.	75.	2	0	0	C.00	236.0C	1081.CC

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	VV	HL	OLOSS	BANK ELEV
Q	GLOB	GCH	QRCB	AICB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VRCB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBI	XICH	XICBR	TIBIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10700.000

3280 CROSS SECTION 10700.00 EXTENDED 0.72 FEET

3470 ENCROACHMENT STATIONS= -595.0 1275.0 TYPE= 1 TARGET= -595.000

VALLEY SECTION @ 350 FT UPSTREAM OF WILLOW ROAD

10700.00	9.32	623.82	C.00	C.00	623.83	0.01	C.01	0.01	617.60
1170.	647.	156.	327.	1273.	209.	779.	187.	75.	620.20
1.52	0.51	0.94	C.42	C.040	C.035	C.040	0.000	614.50	595.00
0.000034	325.	250.	175.	2	0	0	C.00	680.00	1275.00

PRINTED IN U.S.A.

THIS RUN EXECUTED 6 SEP 84 13:04:00

****
HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
ERROR CORR - 01,02,03,04,05,06
MODIFICATION - 50,51,52,53,54,55,56
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

NORTH BRANCH SWAN CREEK

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
0.000	0.00	0.00	0.00	604.20	565.00	610.80	0.00	610.94	3.69	3.09	216.19	293.98
0.000	0.00	0.00	0.00	604.20	855.00	611.60	0.00	611.80	4.72	3.80	303.55	393.73
0.000	0.00	0.00	0.00	604.20	960.00	611.90	0.00	612.11	4.79	3.94	340.92	438.82
0.000	0.00	0.00	0.00	604.20	1170.00	612.50	0.00	612.71	4.60	4.08	434.60	545.73
17.000	35.00	612.10	610.50	604.20	565.00	611.12	0.00	611.24	2.93	2.85	248.82	330.08
17.000	35.00	612.10	610.50	604.20	855.00	612.38	0.00	612.50	2.68	3.08	413.91	522.25
17.000	35.00	612.10	610.50	604.20	960.00	612.70	0.00	612.83	2.67	3.17	471.18	587.39
17.000	35.00	612.10	610.50	604.20	1170.00	613.23	0.00	613.35	2.66	3.30	612.24	716.90
175.000	153.00	0.00	0.00	604.70	565.00	611.27	0.00	611.30	2.55	1.97	519.38	353.84
175.000	153.00	0.00	0.00	604.70	855.00	612.54	0.00	612.56	1.23	1.56	972.19	770.53
175.000	158.00	0.00	0.00	604.70	960.00	612.87	0.00	612.88	1.08	1.51	1136.75	925.58
175.000	158.00	0.00	0.00	604.70	1170.00	613.39	0.00	613.41	0.93	1.47	1400.93	1212.77
2000.000	1825.00	0.00	0.00	605.70	565.00	612.04	0.00	612.21	10.46	3.66	228.16	174.67
2000.000	1825.00	0.00	0.00	605.70	855.00	612.95	0.00	613.07	7.76	3.52	368.14	307.02
2000.000	1825.00	0.00	0.00	605.70	960.00	613.22	0.00	613.35	7.29	3.51	410.16	355.45
2000.000	1825.00	0.00	0.00	605.70	1170.00	613.70	0.00	613.82	6.75	3.55	484.78	450.26
2100.000	100.00	0.00	0.00	605.80	565.00	612.12	0.00	612.36	13.88	4.20	172.24	151.64
2100.000	100.00	0.00	0.00	605.80	855.00	612.98	0.00	613.22	12.36	4.41	264.45	243.18
2100.000	100.00	0.00	0.00	605.80	960.00	613.25	0.00	613.49	11.94	4.47	293.33	277.87
2100.000	100.00	0.00	0.00	605.80	1170.00	613.72	0.00	613.96	11.70	4.64	342.01	342.03
2224.000	124.00	0.00	0.00	606.00	565.00	612.29	0.00	612.55	14.71	4.13	137.17	147.29
2224.000	124.00	0.00	0.00	606.00	855.00	613.10	0.00	613.55	20.97	5.36	159.85	186.69
2224.000	124.00	0.00	0.00	606.00	960.00	613.36	0.00	613.87	23.05	5.76	167.26	199.98
2224.000	124.00	0.00	0.00	606.00	1170.00	613.79	0.00	614.44	27.32	6.52	186.52	223.83
2225.000	1.00	612.90	617.40	606.00	565.00	612.27	0.00	612.56	8.21	4.32	130.88	197.23
2225.000	1.00	612.90	617.40	606.00	855.00	613.07	0.00	613.57	12.21	5.63	152.28	244.72
2225.000	1.00	612.90	617.40	606.00	960.00	613.32	0.00	613.89	13.65	6.06	158.93	259.86
2225.000	1.00	612.90	617.40	606.00	1170.00	613.74	0.00	614.47	16.61	6.88	176.14	287.04

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SECNO	XLCH	ELTRD	ELLC	ELMIN	G	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
2254.000	29.CC	612.90	617.4C	606.00	565.CC	612.30	0.CO	612.58	8.C9	4.30	131.51	198.60
2254.000	29.CC	612.90	617.4C	606.00	855.CC	613.12	0.CO	613.60	11.92	5.58	153.58	247.67
2254.000	29.CC	612.90	617.4C	606.00	96C.CC	613.37	0.CO	613.93	13.31	6.01	160.52	263.19
2254.000	29.CC	612.90	617.4C	606.00	117C.CC	613.80	0.CO	614.52	16.1C	6.80	179.58	291.57
2255.000	1.CC	C.00	0.CC	606.00	565.CC	612.33	0.CO	612.59	14.34	4.09	138.31	149.20
2255.000	1.CC	C.00	0.CC	606.00	855.CC	613.17	0.CO	613.61	20.15	5.30	161.94	190.46
2255.000	1.CC	C.00	0.CC	606.00	96C.CC	613.43	0.CO	613.94	22.16	5.69	169.85	203.94
2255.000	1.CC	C.00	0.CC	606.00	1170.CC	613.90	0.CO	614.53	25.73	6.38	193.01	230.64
3055.000	800.CC	C.00	0.CC	607.3C	565.CC	613.15	0.CO	613.18	3.98	1.99	523.74	283.30
3055.000	800.CC	C.00	0.CC	607.30	855.CC	614.04	0.CO	614.06	1.97	1.61	923.68	608.55
3055.000	800.CC	C.00	0.CC	607.30	96C.CC	614.34	0.CO	614.36	1.62	1.52	1073.91	753.13
3055.000	800.CC	C.00	0.CC	607.30	1170.CC	614.90	0.CO	614.91	1.21	1.41	1353.45	1061.87
3910.000	855.CC	C.00	C.CC	608.60	565.CC	613.76	0.CO	614.02	23.48	4.38	153.74	116.60
3910.000	855.CC	C.00	0.CC	608.60	855.CC	614.36	0.CO	614.67	25.11	4.92	207.17	170.63
3910.000	855.CC	C.00	C.CC	608.60	960.CC	614.60	0.CO	614.92	23.80	4.99	228.48	196.78
3910.000	855.CC	C.00	0.CC	608.60	1170.CC	615.08	0.CO	615.40	21.09	5.07	271.53	254.77
3984.000	74.CC	C.00	C.CC	608.60	565.CC	614.03	0.CO	614.18	10.53	3.09	182.63	174.15
3984.000	74.CC	C.00	C.CC	608.60	855.CC	614.58	0.CO	614.84	15.79	4.09	209.C1	215.14
3984.000	74.CC	C.00	0.CC	608.60	96C.CC	614.77	0.CO	615.07	17.44	4.40	218.10	229.90
3984.000	74.CC	C.00	0.CC	608.60	1170.CC	615.21	0.CO	615.59	19.48	4.89	239.C4	265.07
3985.000	1.CC	62C.00	618.CC	608.60	565.CC	614.02	0.CO	614.19	24.35	3.33	169.83	114.49
3985.000	1.CC	62C.00	618.CC	608.60	855.CC	614.57	0.CO	614.87	38.88	4.41	194.C4	137.11
3985.000	1.CC	62C.00	618.CC	608.60	960.CC	614.76	0.CO	615.11	43.77	4.74	202.42	145.10
3985.000	1.CC	62C.00	618.CC	608.60	1170.CC	615.20	0.CO	615.63	51.07	5.28	221.71	163.72
4009.000	24.CC	62C.00	618.CC	608.60	565.CC	614.06	0.CC	614.22	7.76	3.30	171.36	202.83
4009.000	24.CC	62C.00	618.CC	608.60	855.CC	614.63	0.CO	614.92	12.25	4.35	196.65	244.30
4009.000	24.CC	62C.00	618.CC	608.60	960.CC	614.83	0.CC	615.17	13.76	4.68	205.34	258.81
4009.000	24.CC	62C.00	618.CC	608.60	1170.CC	615.28	0.CO	615.70	16.03	5.20	225.C5	292.19
4010.000	1.CC	C.00	0.CC	608.60	565.CC	614.08	0.CC	614.23	3.09	3.05	185.33	321.53
4010.000	1.CC	C.00	0.CC	608.60	855.CC	614.68	0.CO	614.93	4.47	4.00	213.68	404.54
4010.000	1.CC	C.00	0.CC	608.60	960.CC	614.89	0.CC	615.17	4.87	4.30	223.51	434.88
4010.000	1.CC	C.00	0.CC	608.60	1170.CC	615.35	0.CO	615.70	5.34	4.76	245.66	506.C7
4060.000	50.CC	C.00	0.CC	608.70	565.CC	614.12	0.CO	614.51	29.19	5.09	122.47	104.58
4060.000	50.CC	C.00	0.CC	608.70	855.CC	614.73	0.CO	615.16	31.C1	5.68	191.12	153.55
4060.000	50.CC	C.00	0.CC	608.70	960.CC	614.93	0.CO	615.35	29.63	5.70	218.73	176.35
4060.000	50.CC	C.00	0.CC	608.70	1170.CC	615.40	0.CO	615.75	24.C1	5.43	285.35	238.78
4100.000	40.CC	C.00	C.CC	608.70	565.CC	614.52	0.CO	614.70	14.13	3.74	204.90	150.31
4100.000	40.CC	C.00	0.CC	608.70	855.CC	615.23	0.CO	615.38	11.37	3.65	329.78	253.53
4100.000	40.CC	C.00	0.CC	608.70	960.CC	615.41	0.CO	615.56	11.06	3.69	365.36	288.67
4100.000	40.CC	C.00	0.CC	608.70	1170.CC	615.77	0.CO	615.92	10.16	3.72	436.CC	366.99

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
5250.000	1150.00	0.00	0.00	608.70	565.00	615.14	0.00	615.15	1.54	1.33	774.86	454.74
5250.000	1150.00	0.00	0.00	608.70	855.00	615.72	0.00	615.73	1.18	1.26	1166.31	787.48
5250.000	1150.00	0.00	0.00	608.70	960.00	615.89	0.00	615.90	1.13	1.26	1288.09	904.64
5250.000	1150.00	0.00	0.00	608.70	1170.00	616.22	0.00	616.23	1.01	1.25	1538.62	1162.07
6650.000	1400.00	0.00	0.00	610.30	565.00	615.69	0.00	616.03	27.53	4.99	142.84	107.69
6650.000	1400.00	0.00	0.00	610.30	855.00	616.17	0.00	616.54	30.85	5.56	201.32	153.94
6650.000	1400.00	0.00	0.00	610.30	960.00	616.32	0.00	616.70	30.95	5.69	220.34	172.55
6650.000	1400.00	0.00	0.00	610.30	1170.00	616.61	0.00	617.01	30.41	5.90	256.66	212.17
6850.000	200.00	0.00	0.00	610.60	565.00	616.19	0.00	616.50	19.16	4.47	126.32	129.07
6850.000	200.00	0.00	0.00	610.60	855.00	616.79	0.00	617.35	31.10	6.02	142.02	153.31
6850.000	200.00	0.00	0.00	610.60	960.00	616.98	0.00	617.64	35.37	6.53	147.12	161.41
6850.000	200.00	0.00	0.00	610.60	1170.00	617.33	0.00	618.20	43.96	7.48	156.44	176.47
6880.000	30.00	617.80	616.70	610.60	565.00	616.25	0.00	616.55	16.54	4.41	129.33	138.91
6880.000	30.00	617.30	616.70	610.60	855.00	617.25	0.00	617.70	20.43	5.43	157.77	189.15
6880.000	30.00	617.30	616.70	610.60	960.00	617.60	0.00	618.11	21.50	5.75	167.28	207.05
6880.000	30.00	617.30	616.70	610.60	1170.00	617.88	0.00	618.58	27.83	6.70	174.91	221.79
6980.000	99.00	0.00	0.00	610.30	565.00	616.60	0.00	616.68	6.64	2.75	302.65	219.21
6980.000	99.00	0.00	0.00	610.30	855.00	617.78	0.00	617.82	2.56	2.00	584.06	534.00
6980.000	99.00	0.00	0.00	610.30	960.00	618.18	0.00	618.21	2.02	1.86	680.85	674.72
6980.000	99.00	0.00	0.00	610.30	1170.00	618.66	0.00	618.70	1.84	1.86	797.02	862.82
7980.000	1000.00	0.00	0.00	611.50	565.00	617.59	0.00	617.83	19.09	4.28	168.17	129.32
7980.000	1000.00	0.00	0.00	611.50	855.00	618.23	0.00	618.41	14.55	4.12	313.74	224.16
7980.000	1000.00	0.00	0.00	611.50	960.00	618.53	0.00	618.66	10.54	3.67	408.84	295.67
7980.000	1000.00	0.00	0.00	611.50	1170.00	618.97	0.00	619.07	7.59	3.30	564.97	424.60
9045.000	1065.00	0.00	0.00	612.60	565.00	619.60	0.00	619.89	19.00	4.51	144.25	129.63
9045.000	1065.00	0.00	0.00	612.60	855.00	620.11	0.00	620.54	25.38	5.63	185.14	169.73
9045.000	1065.00	0.00	0.00	612.60	960.00	620.13	0.00	620.67	31.36	6.27	186.72	171.44
9045.000	1065.00	0.00	0.00	612.60	1170.00	620.25	0.00	620.97	41.57	7.33	195.78	181.47
9145.000	100.00	0.00	0.00	613.20	565.00	619.89	0.00	620.07	3.97	3.39	166.68	188.67
9145.000	100.00	0.00	0.00	613.20	855.00	620.45	0.00	620.79	15.46	4.66	183.61	217.48
9145.000	100.00	0.00	0.00	613.20	960.00	620.56	0.00	620.97	18.50	5.14	186.89	223.18
9145.000	100.00	0.00	0.00	613.20	1170.00	620.80	0.00	621.36	24.53	6.02	194.32	236.23
9194.000	49.00	621.70	620.00	613.20	565.00	620.16	0.00	620.32	6.90	3.23	175.01	215.03
9194.000	49.00	621.70	620.00	613.20	855.00	621.16	0.00	621.43	9.59	4.16	205.62	276.08
9194.000	49.00	621.70	620.00	613.20	960.00	621.46	0.00	621.77	10.58	4.48	214.70	295.09
9194.000	49.00	621.70	620.00	613.20	1170.00	621.83	0.00	622.25	13.45	5.19	225.87	318.98
9325.000	131.00	0.00	0.00	612.60	565.00	620.40	0.00	620.44	2.73	1.94	458.09	342.23
9325.000	131.00	0.00	0.00	612.60	855.00	621.57	0.00	621.60	1.49	1.65	761.89	701.51
9325.000	131.00	0.00	0.00	612.60	960.00	621.93	0.00	621.95	1.32	1.61	855.44	836.15
9325.000	131.00	0.00	0.00	612.60	1170.00	622.45	0.00	622.48	1.24	1.64	991.47	1050.09

SECNO	XLCH	ELTRD	ELLC	ELMIN	G	CWSEL	CRIWS	EC	10K*S	VCH	AREA	.01K
10185.000	860.00	0.00	0.00	613.50	565.00	620.70	0.00	620.78	4.57	2.54	269.54	264.17
10185.000	860.00	0.00	0.00	613.50	855.00	621.77	0.00	621.87	4.38	2.82	366.30	408.53
10185.000	860.00	0.00	0.00	613.50	960.00	622.12	0.00	622.22	4.34	2.92	397.30	460.72
10185.000	860.00	0.00	0.00	613.50	1170.00	622.64	0.00	622.76	4.62	3.17	444.08	544.46
10300.000	115.00	0.00	0.00	613.90	565.00	620.77	0.00	620.94	8.52	3.37	167.64	193.55
10300.000	115.00	0.00	0.00	613.90	855.00	621.85	0.00	622.14	11.91	4.30	198.83	247.74
10300.000	115.00	0.00	0.00	613.90	960.00	622.20	0.00	622.52	13.05	4.60	208.82	265.73
10300.000	115.00	0.00	0.00	613.90	1170.00	622.73	0.00	623.15	15.87	5.22	224.06	293.70
10348.000	48.00	623.10	621.10	613.90	565.00	620.81	0.00	620.98	8.36	3.35	168.78	195.43
10348.000	48.00	623.10	621.10	613.90	855.00	622.41	0.00	622.66	9.53	3.98	214.99	276.98
10348.000	48.00	623.10	621.10	613.90	960.00	622.94	0.00	623.21	9.90	4.17	230.16	305.07
10348.000	48.00	623.10	621.10	613.90	1170.00	623.23	0.00	623.60	13.28	4.90	238.68	321.09
10450.000	102.00	0.00	0.00	614.20	565.00	621.06	0.00	621.10	2.72	2.07	464.77	342.38
10450.000	102.00	0.00	0.00	614.20	855.00	622.77	0.00	622.79	1.06	1.55	869.85	830.76
10450.000	102.00	0.00	0.00	614.20	960.00	623.34	0.00	623.35	0.87	1.47	1002.73	1031.93
10450.000	102.00	0.00	0.00	614.20	1170.00	623.78	0.00	623.80	0.94	1.59	1108.41	1204.82
10700.000	250.00	0.00	0.00	614.50	565.00	621.14	0.00	621.17	2.86	2.07	582.46	334.31
10700.000	250.00	0.00	0.00	614.50	855.00	622.81	0.00	622.82	0.53	1.07	1577.59	1177.38
10700.000	250.00	0.00	0.00	614.50	960.00	623.37	0.00	623.37	0.36	0.93	1953.59	1601.33
10700.000	250.00	0.00	0.00	614.50	1170.00	623.82	0.00	623.83	0.34	0.94	2261.06	2000.79

NORTH BRANCH SWAN CREEK

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.000	565.00	610.80	0.00	0.00	0.00	98.80	0.00
0.000	855.00	611.60	0.80	0.00	0.00	119.61	0.00
0.000	960.00	611.90	0.30	0.00	0.00	133.67	0.00
0.000	1170.00	612.50	0.60	0.00	0.00	174.50	0.00
17.000	565.00	611.12	0.00	0.32	0.00	107.04	35.00
17.000	855.00	612.38	1.26	0.78	0.00	167.50	35.00
17.000	960.00	612.70	0.32	0.80	0.00	186.23	35.00
17.000	1170.00	613.23	0.52	0.73	0.00	308.66	35.00
175.000	565.00	611.27	0.00	0.16	0.00	281.19	158.00
175.000	855.00	612.54	1.27	0.16	0.00	505.00	158.00
175.000	960.00	612.87	0.33	0.16	0.00	505.00	158.00
175.000	1170.00	613.39	0.52	0.16	0.00	505.00	158.00
2000.000	565.00	612.04	0.00	0.77	0.00	155.00	1825.00
2000.000	855.00	612.95	0.91	0.40	0.00	155.00	1825.00
2000.000	960.00	613.22	0.28	0.36	0.00	155.00	1825.00
2000.000	1170.00	613.70	0.47	0.31	0.00	155.00	1825.00
2100.000	565.00	612.12	0.00	0.08	0.00	105.00	100.00
2100.000	855.00	612.98	0.86	0.04	0.00	105.00	100.00
2100.000	960.00	613.25	0.27	0.03	0.00	105.00	100.00
2100.000	1170.00	613.72	0.46	0.02	0.00	105.00	100.00
2224.000	565.00	612.29	0.00	0.17	0.00	27.84	124.00
2224.000	855.00	613.10	0.82	0.12	0.00	28.02	124.00
2224.000	960.00	613.36	0.25	0.10	0.00	31.76	124.00
2224.000	1170.00	613.79	0.43	0.07	0.00	55.62	124.00
2225.000	565.00	612.27	0.00	-0.02	0.00	27.83	1.00
2225.000	855.00	613.07	0.80	-0.03	0.00	28.02	1.00
2225.000	960.00	613.32	0.25	-0.04	0.00	29.26	1.00
2225.000	1170.00	613.74	0.42	-0.05	0.00	54.17	1.00
2254.000	565.00	612.30	0.00	0.03	0.00	27.84	29.00
2254.000	855.00	613.12	0.82	0.04	0.00	28.03	29.00
2254.000	960.00	613.37	0.25	0.05	0.00	32.60	29.00
2254.000	1170.00	613.80	0.43	0.07	0.00	55.95	29.00
2255.000	565.00	612.33	0.00	0.03	0.00	27.85	1.00
2255.000	855.00	613.17	0.85	0.06	0.00	28.04	1.00
2255.000	960.00	613.43	0.26	0.07	0.00	36.52	1.00
2255.000	1170.00	613.90	0.47	0.10	0.00	58.80	1.00

PRINTED IN U.S.A.

SECNO	Q	CWSEL	DIFWSF	DIFWSX	DIFKWS	TOPWID	XLCH
3055.000	565.CC	613.15	0.CC	0.82	0.CC	412.18	800.CO
3055.000	855.CC	614.04	0.59	0.87	0.CC	497.53	800.CO
3055.000	960.CC	614.34	0.3C	0.90	0.CC	500.00	800.CC
3055.000	1170.CC	614.90	0.56	1.CO	0.CC	500.00	800.CC
3910.000	565.CC	613.76	0.CC	0.62	0.CC	84.50	855.CC
3910.000	855.CC	614.36	0.6C	0.32	0.CC	90.00	855.CO
3910.000	960.CC	614.60	0.24	0.26	0.CC	90.00	855.CC
3910.000	1170.CC	615.08	0.48	0.18	0.CC	90.00	855.CO
3984.000	565.CC	614.03	0.CC	0.27	0.CC	47.57	74.CC
3984.000	855.CC	614.58	0.55	0.22	0.CC	47.57	74.CC
3984.000	960.00	614.77	0.19	0.17	0.CC	47.57	74.CO
3984.000	1170.CC	615.21	0.44	0.14	0.CC	47.57	74.CO
3985.000	565.CC	614.02	0.CC	-0.01	0.CC	47.60	1.CO
3985.000	855.CO	614.57	0.55	-0.01	0.CC	47.60	1.CO
3985.000	960.CC	614.76	0.19	-0.01	0.CC	47.60	1.CO
3985.000	1170.CC	615.20	0.44	-0.02	0.CC	47.60	1.CO
4009.000	565.CC	614.06	0.CC	0.03	0.CC	47.60	24.CO
4009.000	855.CC	614.63	0.57	0.06	0.CC	47.60	24.CO
4009.000	960.00	614.83	0.2C	0.07	0.CC	47.60	24.CO
4009.000	1170.CC	615.28	0.45	0.08	0.CC	47.60	24.CO
4010.000	565.CC	614.08	0.CC	0.03	0.CC	47.60	1.CO
4010.000	855.CC	614.68	0.6C	0.05	0.CC	47.60	1.CO
4010.000	960.CC	614.89	0.21	0.06	0.CC	47.60	1.CO
4010.000	1170.CC	615.35	0.47	0.07	0.CC	47.60	1.CO
4060.000	565.CC	614.12	0.CC	0.04	0.CC	96.14	50.CO
4060.000	855.CC	614.73	0.61	0.05	0.CC	122.27	50.CO
4060.000	960.CC	614.93	0.21	0.05	0.CC	134.15	50.CO
4060.000	1170.CC	615.40	0.47	0.05	0.CC	145.00	50.CO
4100.000	565.CC	614.52	0.CC	0.40	0.CC	158.44	40.CO
4100.000	855.CC	615.23	0.71	0.50	0.CC	189.89	40.CO
4100.000	960.CC	615.41	0.18	0.48	0.CC	192.98	40.CO
4100.000	1170.CC	615.77	0.36	0.37	0.CC	195.91	40.CO
5250.000	565.CC	615.14	0.CC	0.62	0.CC	639.34	1150.CO
5250.000	855.CC	615.72	0.58	0.49	0.CC	709.74	1150.CO
5250.000	960.00	615.39	0.17	0.47	0.CC	729.12	1150.CO
5250.000	1170.00	616.22	0.83	0.44	0.CC	767.45	1150.CO
6650.000	565.CC	615.69	0.CC	0.55	0.CC	120.24	1400.CO
6650.000	855.CO	616.17	0.49	0.45	0.CC	124.69	1400.CO
6650.000	960.CC	616.32	0.15	0.43	0.CC	125.00	1400.CO
6650.000	1170.CC	616.81	0.29	0.39	0.CC	125.00	1400.CO

PRINTED IN U.S.A.

SECNO	G	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
6850.000	565.00	616.19	0.00	0.50	0.00	26.32	200.00
6850.000	855.00	616.79	0.60	0.62	0.00	26.32	200.00
6850.000	960.00	616.98	0.19	0.66	0.00	26.32	200.00
6850.000	1170.00	617.33	0.35	0.73	0.00	26.32	200.00
6880.000	565.00	616.25	0.00	0.06	0.00	27.30	30.00
6880.000	855.00	617.25	1.00	0.46	0.00	27.30	30.00
6880.000	960.00	617.60	0.35	0.62	0.00	27.30	30.00
6880.000	1170.00	617.88	0.28	0.55	0.00	27.30	30.00
6980.000	565.00	616.60	0.00	0.35	0.00	240.00	99.00
6980.000	855.00	617.78	1.17	0.53	0.00	240.00	99.00
6980.000	960.00	618.18	0.40	0.58	0.00	240.00	99.00
6980.000	1170.00	618.66	0.48	0.78	0.00	240.00	99.00
7980.000	565.00	617.59	0.00	0.98	0.00	153.52	1000.00
7980.000	855.00	618.23	0.64	0.45	0.00	279.52	1000.00
7980.000	960.00	618.53	0.31	0.35	0.00	327.32	1000.00
7980.000	1170.00	618.97	0.44	0.31	0.00	393.40	1000.00
9045.000	565.00	619.60	0.00	2.01	0.00	75.62	1065.00
9045.000	855.00	620.11	0.52	1.89	0.00	81.00	1065.00
9045.000	960.00	620.13	0.02	1.60	0.00	81.00	1065.00
9045.000	1170.00	620.25	0.11	1.23	0.00	81.00	1065.00
9145.000	565.00	619.89	0.00	0.30	0.00	30.45	100.00
9145.000	855.00	620.45	0.56	0.33	0.00	30.45	100.00
9145.000	960.00	620.56	0.11	0.42	0.00	30.45	100.00
9145.000	1170.00	620.80	0.24	0.55	0.00	30.45	100.00
9194.000	565.00	620.16	0.00	0.27	0.00	30.50	49.00
9194.000	855.00	621.16	1.00	0.72	0.00	30.50	49.00
9194.000	960.00	621.46	0.30	0.91	0.00	30.50	49.00
9194.000	1170.00	621.83	0.37	1.03	0.00	30.50	49.00
9325.000	565.00	620.40	0.00	0.24	0.00	260.00	131.00
9325.000	855.00	621.57	1.17	0.41	0.00	260.00	131.00
9325.000	960.00	621.93	0.36	0.47	0.00	260.00	131.00
9325.000	1170.00	622.45	0.52	0.63	0.00	260.00	131.00
10185.000	565.00	620.70	0.00	0.29	0.00	90.00	860.00
10185.000	855.00	621.77	1.08	0.20	0.00	90.00	860.00
10185.000	960.00	622.12	0.34	0.18	0.00	90.00	860.00
10185.000	1170.00	622.64	0.52	0.18	0.00	90.00	860.00
10300.000	565.00	620.77	0.00	0.07	0.00	28.80	115.00
10300.000	855.00	621.85	1.08	0.08	0.00	28.80	115.00
10300.000	960.00	622.20	0.35	0.08	0.00	28.80	115.00
10300.000	1170.00	622.73	0.53	0.09	0.00	28.80	115.00

SECNO	G	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
10348.000	565.00	620.81	0.00	0.04	0.00	28.80	48.00
10348.000	855.00	622.41	1.60	0.56	0.00	28.80	48.00
10348.000	960.00	622.94	0.53	0.74	0.00	28.80	48.00
10348.000	1170.00	623.23	0.30	0.51	0.00	28.80	48.00
10450.000	565.00	621.06	0.00	0.25	0.00	236.00	102.00
10450.000	855.00	622.77	1.72	0.36	0.00	236.00	102.00
10450.000	960.00	623.34	0.56	0.40	0.00	236.00	102.00
10450.000	1170.00	623.73	0.45	0.55	0.00	236.00	102.00
10700.000	565.00	621.14	0.00	0.08	0.00	505.67	250.00
10700.000	855.00	622.91	1.68	0.04	0.00	658.23	250.00
10700.000	960.00	623.37	0.56	0.03	0.00	680.00	250.00
10700.000	1170.00	623.82	0.45	0.04	0.00	680.00	250.00

PRINTED IN U.S.A.

SUMMARY OF ERRORS AND SPECIAL NOTES

FLOOD INSURANCE ZONE DATA FOR NORTH BRANCH SWAN CREEK

PRINTED IN U.S.A.

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 1C	2	C.2
0.000	0.	-1.1C	-0.3C	C.6C
17.0C0	35.	-1.59	-0.32	C.52
175.0C0	193.	-1.59	-0.33	C.52
2000.0C0	2C13.	-1.18	-0.28	C.47
2100.0C0	2118.	-1.14	-0.27	C.46
2224.0C0	2242.	-1.07	-0.25	C.43
2225.0C0	2243.	-1.05	-0.25	C.42
2254.0C0	2272.	-1.07	-0.25	C.43
2255.0C0	2273.	-1.11	-0.26	C.47
3055.0C0	3C73.	-1.19	-0.3C	C.56
3910.0C0	3928.	-C.84	-0.24	C.48
3984.0C0	4C02.	-C.75	-0.19	C.44
3985.0C0	4C03.	-C.74	-0.19	C.44
4009.0C0	4C27.	-C.77	-0.20	C.45
4010.0C0	4C28.	-C.8C	-0.21	C.47
4060.0C0	4C78.	-C.82	-0.21	C.47
4100.0C0	4118.	-C.9C	-0.18	C.36
5250.0C0	5268.	-C.75	-0.17	C.33
6650.0C0	6668.	-C.63	-0.15	C.29
6850.0C0	6868.	-C.79	-0.19	C.35
6880.0C0	6898.	-1.34	-0.35	C.28
6980.0C0	6997.	-1.59	-0.40	C.48
7930.0C0	7997.	-C.95	-0.31	C.44
9045.0C0	9C62.	-C.54	-0.02	C.11
9145.0C0	9162.	-C.66	-0.11	C.24
9194.0C0	9211.	-1.3C	-0.30	C.37
9325.0C0	9342.	-1.53	-0.36	C.52
10185.0C0	1C2C2.	-1.42	-0.34	C.52
10300.0C0	1C317.	-1.43	-0.35	C.53
10348.0C0	1C365.	-2.13	-0.53	C.30
10450.0C0	1C467.	-2.28	-0.56	C.45
10700.0C0	1C717.	-2.23	-0.56	C.45
WEIGHTED AVG FOR REACH		-1.11	-0.26	C.42

FHF FOR THE REACH = 010 WITH 95.3 PERCENT OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 2

THIS RUN EXECUTED 6 SEP 84 13:04:14

```
*************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
*************************************************


===> COED,HECSWANC
===> FREE ALL
```

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Huron Twp

3) WATERCOURSE: Silver Creek and Hand Drain

4) DOCUMENT TYPE: Floodway

00BREAK00

```
EEEEEE   EEEEEE          H    H    0000    L        BBBBB    RRRRR     0000
E        E               H    H   0    0   L        B    B   R    R   0    0
E        E               H    H   0    0   L        BBBBB    R    R   0    0
EEEE     EEEE            HHHHHH   0    0   L        B    B   RRRRR    0    0
E        E               H    H   0    0   L        B    B   R    R   0    0
EEEEEE   EEEEEE          H    H    0000    LLLLLL   BBBBB    R    R    0000
```

EE HOLBRO 12 SEP 84 14:12:14

FILE: 0723EEH2*HANDENO

TERMINAL:112

PRINTED IN U.S.A.

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**************************************************          ****************************************
*  WATER SURFACE PROFILES                        *          *  U.S. ARMY CORPS OF ENGINEERS          *
*  VERSION OF NOVEMBER 1976                      *          *  THE HYDROLOGIC ENGINEERING CENTER     *
*  UPDATED MAY 1984                              *          *  609 SECOND STREET, SUITE D            *
*                                                *          *  DAVIS, CALIFORNIA 95616               *
*  RUN DATE  11 SEP 84 TIME    15:58:38          *          *  (916) 440-2105 (FTS) 448-2105         *
**************************************************          ****************************************

X      X  XXXXXXX   XXXXX                XXXXX
X      X  X         X     X             X     X
X      X  X         X                         X
XXXXXXX   XXXX      X           XXXXX     XXXXX
X      X  X         X                       X
X      X  X         X     X             X
X      X  XXXXXXX   XXXXX                XXXXXXX
```

HURON TOWNSHIP FIS

SILVER CREEK AND HAND DRAIN

ENCROACHED RUN ON DETAILED

PORTION OF STREAM ONLY

FINAL RUN

PRINTED IN U.S.A.

THIS RUN EXECUTED 11 SEP 84 15:58:40

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
  ERROR CORR - 01,02,03,04,05,06
  MODIFICATION - 50,51,52,53,54,55,56
**************************************************

C
I1      HURON TOWNSHIP FLOOD INSURANCE STUDY
I2      100- YEAR FLOW
T3      SILVER CREEK AND HAND DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        2.        0.        0.  0.000000      0.00      0.0        0.   608.760     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    150.000   110.000   200.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

QT    2.000   260.000   260.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
NC    0.040     0.040     0.035     0.300     0.500     0.000     0.000     0.000     0.000     0.000
ET    0.000     0.000     1.400     0.000     0.000     0.000     0.000     0.000     0.000     0.000
                CONFLUENCE SILVER CREEK AND HAND DRAIN
X1    0.000    13.000   495.000   521.000  1725.000  1725.000  1725.000     0.000     0.000     0.000
GR  610.000     0.000   608.000   445.000   608.100   470.000   608.200   495.000   605.200   501.000
GR  605.000   504.000   604.200   508.000   604.200   512.000   605.000   514.000   609.000   521.000
GR  608.900   546.000   609.000   571.000   610.000  1100.000     0.000     0.000     0.000     0.000

GT    2.000   150.000   150.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
                VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE
X1  350.000    12.000   500.000   520.000   350.000   350.000   350.000     0.000     0.000     0.000
GR  610.000     0.000   608.800   450.000   609.100   475.000   609.300   500.000   607.300   505.000
GR  605.600   503.000   605.100   511.000   605.600   514.000   609.300   520.000   609.000   545.000
GR  609.300   570.000   609.300   700.000     0.000     0.000     0.000     0.000     0.000     0.000

X1 1090.000    20.000   390.000   400.000   740.000   740.000   740.000     0.000     0.000     0.000
GR  615.000     0.000   612.400   290.000   612.100   315.000   611.900   340.000   611.700   365.000
GR  611.500   387.000   607.800   390.000   607.800   390.100   607.700   392.000   607.000   394.000
GR  606.900   397.000   607.900   398.000   608.100   400.000   608.100   400.100   611.000   403.000
GR  612.400   425.000   612.200   450.000   612.000   475.000   611.900   500.000   618.500   725.000

SB    0.000     1.780     3.000     0.000    10.000     0.000    37.000     0.000     0.000     0.000
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Reviewed Nathan

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			UPSTREAM FACE WEST ROAD							
X1	1122.000	0.000	0.000	0.000	32.000	32.000	32.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	611.500	611.900	0.000	0.000	0.000	0.000	0.000
BT	-14.000	0.000	615.000	0.000	290.000	612.900	0.000	315.000	612.900	0.000
BT	0.000	340.000	612.900	0.000	365.000	612.800	0.000	390.000	612.800	607.800
BT	0.000	390.100	612.800	611.500	400.000	612.800	611.500	400.100	612.800	608.100
BT	0.000	425.000	612.400	0.000	450.000	612.200	0.000	475.000	612.000	0.000
BT	0.000	500.000	611.900	0.000	725.000	618.500	0.000	0.000	0.000	0.000
			150 FT UPSTREAM OF WEST ROAD							
X1	1272.000	12.000	150.000	165.000	170.000	130.000	150.000	0.000	0.000	0.000
GR	616.900	0.000	612.900	100.000	612.400	125.000	611.100	150.000	609.400	154.000
GR	607.100	156.000	607.000	158.000	607.100	160.000	608.900	162.000	611.800	165.000
GR	612.400	190.000	612.100	215.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1400.000	17.000	100.000	119.000	150.000	100.000	128.000	0.000	0.000	0.000
GR	618.200	0.000	616.700	25.000	615.100	50.000	613.600	75.000	612.100	100.000
GR	609.500	106.000	609.300	106.100	608.100	107.000	607.500	109.000	608.100	111.000
GR	609.300	112.000	609.500	112.100	611.400	119.000	613.100	125.000	614.900	150.000
GR	616.600	175.000	618.300	200.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.800	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.340	3.000	0.000	6.000	0.000	28.400	0.000	0.000	0.000
NC	0.045	0.040	0.000	0.400	0.700	0.000	0.000	0.000	0.000	0.000
			UPSTREAM FACE PENN CENTRAL RR BRIDGE							
X1	1447.000	0.000	0.000	0.000	47.000	47.000	47.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	613.500	618.200	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	618.200	0.000	25.000	618.200	0.000	50.000	618.300	0.000
BT	0.000	75.000	618.300	0.000	100.000	618.300	0.000	106.000	618.300	609.500
BT	0.000	106.100	618.300	611.500	107.000	618.300	612.900	109.000	618.300	613.500
BT	0.000	111.000	618.300	612.900	112.000	618.300	611.500	112.100	618.300	609.500
BT	0.000	119.000	618.300	0.000	125.000	618.300	0.000	150.000	618.300	0.000
BT	0.000	175.000	618.300	0.000	200.000	618.300	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000
			353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE							
X1	1800.000	12.000	269.000	275.000	300.000	400.000	353.000	0.000	0.000	0.000
GR	615.000	0.000	613.900	210.000	613.800	235.000	613.600	260.000	610.200	269.000
GR	608.400	270.000	608.100	273.000	608.400	275.000	612.400	279.000	614.200	285.000
GR	613.500	310.000	615.000	485.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000
			10 FT DOWNSTREAM OF BORDEAU ROAD							
X1	2520.000	11.000	50.000	70.000	720.000	720.000	720.000	0.000	0.000	0.000
GR	614.800	0.000	614.500	25.000	614.200	39.000	611.800	48.000	611.400	50.000
GR	608.900	54.000	608.500	57.000	608.900	60.000	613.000	70.000	614.600	95.000
GR	614.600	120.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.030	0.030	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	2530.000	21.000	100.000	138.000	10.000	10.000	10.000	0.000	0.000	0.000
GR	616.600	0.000	616.200	25.000	615.700	50.000	615.700	75.000	614.900	100.000
GR	610.000	114.000	610.500	115.000	610.500	115.100	610.000	116.000	610.000	118.000
GR	610.000	120.000	610.500	121.000	610.500	121.100	610.500	123.000	611.600	125.000
GR	613.400	133.000	614.300	138.000	614.500	150.000	614.500	175.000	614.500	200.000

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GR	615.400	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	8.050	3.000	0.000	6.000	0.000	17.000	0.000	0.000	0.000
		UPSTREAM FACE BORDEAU ROAD								
X1	2815.000	0.000	0.000	0.000	285.000	285.000	285.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	611.600	615.400	0.000	0.000	0.000	0.000	0.000
BT	-18.000	0.000	616.600	0.000	25.000	616.300	0.000	50.000	616.000	0.000
BT	0.000	75.000	615.900	0.000	100.000	615.900	0.000	114.000	615.800	0.000
BT	0.000	115.000	615.800	610.500	115.100	615.800	611.500	116.000	615.800	612.900
BT	0.000	118.000	615.700	613.600	120.000	615.700	612.900	121.000	615.700	611.500
BT	0.000	121.100	615.700	610.500	125.000	615.700	0.000	150.000	615.400	0.000
BT	0.000	175.000	615.400	0.000	200.000	615.400	0.000	300.000	615.700	0.000
X1	2900.000	19.000	100.000	142.000	100.000	70.000	85.000	0.000	0.000	0.000
GR	614.500	0.000	614.200	25.000	614.000	50.000	613.900	75.000	613.800	100.000
GR	610.800	114.000	610.100	119.000	610.100	119.100	609.600	120.000	609.600	122.000
GR	609.600	124.000	610.100	125.000	610.100	125.100	610.900	128.000	613.100	138.000
GR	614.000	142.000	615.100	150.000	616.100	175.000	616.100	200.000	0.000	0.000
SB	0.000	3.340	3.000	0.000	6.000	0.000	17.000	0.000	0.000	0.000
		UPSTREAM FACE DUVALLE ROAD								
X1	2980.000	0.000	0.000	0.000	80.000	80.000	80.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	613.000	614.800	0.000	0.000	0.000	0.000	0.000
BT	-15.000	0.000	614.800	0.000	25.000	615.000	0.000	50.000	615.200	0.000
BT	0.000	75.000	615.400	0.000	100.000	615.600	0.000	119.000	615.600	610.100
BT	0.000	119.100	615.600	611.100	120.000	615.600	612.600	122.000	615.700	613.000
BT	0.000	124.000	615.700	612.600	125.000	615.800	611.100	125.100	615.800	610.100
BT	0.000	150.000	615.900	0.000	175.000	616.100	0.000	200.000	616.100	0.000
NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		120 FT UPSTREAM DUVALLE ROAD								
X1	3100.000	11.000	50.000	100.000	100.000	130.000	120.000	0.000	0.000	0.000
GR	615.000	0.000	614.700	25.000	614.100	50.000	612.700	60.000	610.800	71.000
GR	609.900	77.000	610.800	81.000	613.100	90.000	614.200	100.000	615.000	125.000
GR	615.900	150.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	3430.000	22.000	100.000	147.000	310.000	340.000	330.000	0.000	0.000	0.000
GR	614.600	0.000	614.600	25.000	614.600	50.000	614.600	75.000	614.600	100.000
GR	612.900	110.000	611.000	119.000	609.900	122.500	609.800	122.600	609.300	122.900
GR	608.500	123.700	608.200	125.000	608.500	126.300	609.300	127.100	609.800	127.500
GR	609.900	127.600	611.000	128.000	612.800	138.000	614.600	147.000	614.600	150.000
GR	614.600	175.000	614.600	200.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.500	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE LA GRAND BLVD								
X1	3510.000	0.000	0.000	0.000	80.000	80.000	80.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	612.900	615.200	0.000	0.000	0.000	0.000	0.000
BT	-16.000	0.000	615.300	0.000	25.000	615.300	0.000	50.000	615.300	0.000
BT	0.000	75.000	615.400	0.000	100.000	615.500	0.000	122.500	615.400	609.900
BT	0.000	122.600	615.400	611.500	122.900	615.400	612.100	123.700	615.400	612.900
BT	0.000	126.300	615.400	612.900	127.100	615.400	612.100	127.500	615.400	611.500
BT	0.000	127.600	615.400	609.900	150.000	615.300	0.000	175.000	615.300	0.000
BT	0.000	200.000	615.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		190 FT UPSTREAM LA GRAND BLVD								
X1	3700.000	13.000	50.000	90.000	190.000	190.000	190.000	0.000	0.000	0.000
GR	614.000	0.000	614.600	25.000	614.500	50.000	613.300	60.000	611.900	70.000
GR	611.600	74.000	610.700	76.000	610.500	77.000	610.700	79.000	611.600	81.000
GR	614.200	90.000	615.600	115.000	616.300	140.000	0.000	0.000	0.000	0.000
X1	3860.000	23.000	100.000	137.000	160.000	160.000	160.000	0.000	0.000	0.000
GR	614.800	0.000	614.800	25.000	614.300	50.000	613.800	75.000	613.300	100.000
GR	611.200	112.000	610.200	115.000	609.800	115.500	609.700	115.600	609.200	115.900
GR	608.400	116.700	608.000	118.000	608.400	119.300	609.200	120.100	609.700	120.500
GR	609.800	120.600	610.300	123.000	610.900	125.000	611.200	126.000	614.000	137.000
GR	614.100	150.000	614.200	175.000	614.200	200.000	0.000	0.000	0.000	0.000
SB	0.000	3.240	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE DUPREE ROAD								
X1	4000.000	0.000	0.000	0.000	140.000	140.000	140.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	612.800	615.300	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	615.300	0.000	25.000	615.400	0.000	50.000	615.400	0.000
BT	0.000	75.000	615.600	0.000	100.000	615.700	0.000	115.500	615.700	609.800
BT	0.000	115.600	615.700	611.400	115.900	615.700	612.000	116.700	615.700	612.800
BT	0.000	119.300	615.700	612.800	120.100	615.600	612.000	120.500	615.600	611.400
BT	0.000	120.600	615.600	609.800	125.000	615.600	0.000	150.000	615.500	0.000
BT	0.000	175.000	615.400	0.000	200.000	615.200	0.000	0.000	0.000	0.000
X1	4200.000	25.000	100.000	141.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	615.000	0.000	615.000	25.000	615.000	50.000	615.000	75.000	614.900	100.000
GR	612.100	110.000	611.300	113.000	610.400	117.000	609.800	117.500	609.700	117.600
GR	609.200	117.900	608.900	118.700	608.900	120.000	608.900	121.300	609.200	122.100
GR	609.700	122.500	609.300	122.600	610.300	124.000	610.300	125.000	611.300	127.000
GR	612.200	130.000	614.800	141.000	614.800	150.000	614.800	175.000	614.800	200.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.250	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE MOULON ROUGE DRIVE								
X1	4260.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	612.800	615.000	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	615.400	0.000	25.000	615.500	0.000	50.000	615.600	0.000
BT	0.000	75.000	615.700	0.000	100.000	615.900	0.000	117.500	615.900	609.800
BT	0.000	117.600	615.900	611.400	117.900	615.900	612.000	118.700	615.900	612.800
BT	0.000	121.300	615.900	612.800	122.100	615.900	612.000	122.500	615.800	611.400
BT	0.000	122.600	615.800	609.800	125.000	615.700	0.000	150.000	615.500	0.000
BT	0.000	175.000	615.200	0.000	200.000	615.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		290 FT UPSTREAM MOULON ROUGE DRIVE								
X1	4550.000	10.000	50.000	89.000	290.000	290.000	290.000	0.000	0.000	0.000
GR	615.200	0.000	614.800	25.000	613.200	50.000	611.200	62.000	610.200	68.000
GR	610.500	71.000	611.200	72.000	613.100	80.000	614.900	89.000	615.500	114.000

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X1	4700.000	24.000	75.000	118.000	150.000	150.000	150.000	0.000	0.000	0.000
GR	614.800	0.000	614.800	25.000	614.800	50.000	615.800	75.000	614.000	85.000
GR	611.400	95.000	610.800	97.000	610.300	97.500	610.200	97.600	609.700	97.900
GR	609.200	98.700	609.200	100.000	609.200	101.300	609.700	102.100	610.200	102.500
GR	610.300	102.600	610.800	103.000	611.400	105.000	614.200	115.000	615.500	118.000
GR	615.500	125.000	614.900	150.000	614.900	175.000	614.900	200.000	0.000	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.250	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000

UPSTREAM FACE VERSAILLES LANE

X1	4760.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	613.600	614.800	0.000	0.000	0.000	0.000	0.000
BT	-19.000	0.000	614.800	0.000	25.000	615.000	0.000	50.000	615.400	0.000
BT	0.000	75.000	615.800	0.000	97.000	615.900	0.000	97.500	615.900	610.300
BT	0.000	97.600	615.900	611.900	97.900	615.900	612.500	98.700	615.900	613.300
BT	0.000	100.000	615.900	613.600	101.300	615.900	613.300	102.100	615.900	612.500
BT	0.000	102.500	615.900	611.900	102.600	615.900	610.300	103.000	615.900	0.000
BT	0.000	125.000	615.700	0.000	150.000	615.500	0.000	175.000	615.200	0.000
BT	0.000	200.000	614.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

CCHV= 0.300 CEHV= 0.500

*SECNO 0.000

CONFLUENCE SILVER CREEK AND HAND DRAIN

0.00	4.56	608.76	0.00	608.76	608.83	0.07	0.00	0.00	608.20
260.	63.	197.	0.	97.	79.	0.	0.	0.	609.00
0.00	0.65	2.49	0.00	0.040	0.035	0.000	0.000	604.20	275.90
0.000845	1725.	1725.	1725.	0	0	0	0.00	244.68	520.58

*SECNO 350.000

3265 DIVIDED FLOW

VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE

350.00	4.01	609.11	0.00	0.00	609.25	0.14	0.39	0.03	609.30
150.	11.	139.	0.	23.	45.	1.	1.	2.	609.30
0.03	0.48	3.10	0.25	0.040	0.035	0.040	0.000	605.10	331.79
0.001962	350.	350.	350.	2	0	0	0.00	183.56	554.60

*SECNO 1090.000

1090.00	3.74	610.64	0.00	0.00	610.91	0.27	1.59	0.07	607.80
150.	5.	138.	6.	3.	32.	3.	2.	3.	608.10
0.08	1.68	4.33	1.81	0.040	0.035	0.040	0.000	606.90	387.70
0.002374	740.	740.	740.	2	0	0	0.00	14.94	402.64

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.78	3.00	0.00	10.00	0.00	37.00	0.00	606.90	606.90

*SECNO 1122.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 610.913 ELLC= 611.500 PCWSE= 610.642 ELTRD= 611.900

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 611.90 MAX ELLC= 611.50

UPSTREAM FACE WEST ROAD

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1122.00	3.81	610.71	0.00	0.00	611.04	0.33	0.09	0.03	607.80
150.	0.	150.	0.	0.	32.	0.	2.	3.	608.10
0.09	0.00	4.62	0.34	0.000	0.035	0.040	0.000	606.90	387.64
0.003648	32.	32.	32.	2	0	0	-7.03	15.06	402.71

*SECNO 1272.000

150 FT UPSTREAM OF WEST ROAD

1272.00	4.33	611.33	0.00	0.00	611.58	0.25	0.52	0.02	611.10
150.	0.	150.	0.	1.	37.	0.	2.	3.	611.80
0.10	0.50	4.01	0.00	0.040	0.035	3.000	0.000	607.09	145.59
0.003278	170.	150.	130.	2	0	0	0.00	18.93	164.51

*SECNO 1400.000

1400.00	4.29	611.79	0.00	0.00	612.04	0.25	0.46	0.00	612.10
150.	0.	150.	0.	0.	38.	0.	2.	4.	611.40
0.10	0.00	3.98	0.77	0.000	0.035	0.040	0.000	607.50	100.71
0.003935	150.	128.	100.	2	0	0	0.00	19.67	120.38

CCHV= 0.300 CEHV= 0.800

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.34	3.00	0.00	6.00	0.00	28.40	0.00	607.50	607.50

CCHV= 0.400 CEHV= 0.700

*SECNO 1447.000

6020, LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 612.039 ELLC= 613.500 PCWSE= 611.793 ELTRD= 618.200

3320 NORMAL BRIDGE, NRD= 17 MIN ELTRD= 618.20 MAX ELLC= 613.50

UPSTREAM FACE PENN CENTRAL RR BRIDGE

1447.00	4.46	611.96	610.78	0.00	612.62	0.66	0.29	0.29	612.10
150.	0.	150.	0.	0.	23.	0.	2.	4.	611.40
0.11	0.00	6.54	0.00	0.000	0.035	0.000	0.000	607.50	100.32
0.010929	47.	47.	47.	2	15	0	-18.43	20.67	120.99

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= 0.400 CEHV= 0.500
*SECNO 1800.000

3301 HV CHANGED MORE THAN HVINS

353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE

1800.00	5.39	613.49	0.00	0.00	613.63	0.14	0.80	0.21	610.20
150.	20.	105.	25.	14.	30.	14.	3.	4.	608.40
0.14	1.36	3.45	1.76	0.045	0.035	0.040	0.000	608.10	260.27
0.000948	300.	353.	400.	2	0	0	0.00	22.39	282.66

CCHV= 0.300 CEHV= 0.500
*SECNO 2520.000

10 FT DOWNSTREAM OF BORDEAU ROAD

2520.00	5.48	613.98	0.00	0.00	614.03	0.04	0.37	0.03	611.40
150.	10.	137.	3.	14.	77.	8.	4.	4.	613.00
0.26	0.76	1.77	0.41	0.045	0.035	0.040	0.000	608.50	39.82
0.000316	720.	720.	720.	4	0	0	0.00	45.50	85.32

*SECNO 2530.000

2530.00	3.98	613.93	0.00	0.00	614.04	0.06	0.00	0.01	614.90
150.	0.	150.	0.	0.	76.	0.	4.	4.	614.30
0.26	0.00	1.99	0.00	0.000	0.035	0.000	0.000	610.00	102.61
0.000791	10.	10.	10.	0	0	0	0.00	33.65	136.26

SPECIAL BRIDGE

5070-VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	8.05	3.00	0.00	6.00	0.00	17.00	0.00	610.00	610.00

*SECNO 2815.000
3280 CROSS SECTION 2815.00 EXTENDED 0.40 FEET

PRESSURE AND WEIR FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSIA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
623.71	614.04	0.00	86.	65.	17.	10.	611.60	615.40

UPSTREAM FACE BORDEAU ROAD

2815.00	5.80	615.80	0.00	0.00	615.80	0.00	1.76	0.00	614.90
150.	3.	92.	56.	15.	143.	167.	5.	5.	614.30
0.41	0.18	0.64	0.33	0.030	0.035	0.030	0.000	610.00	44.91
0.000041	285.	285.	285.	0	0	7	0.00	255.09	300.00

*SECNO 2900.000
3280 CROSS SECTION 2900.00 EXTENDED 1.30 FEET

2900.00	6.20	615.80	0.00	0.00	615.80	0.00	0.00	0.00	613.80
150.	58.	89.	3.	174.	175.	16.	6.	6.	614.00
0.47	0.33	0.50	0.21	0.030	0.035	0.030	0.000	609.60	0.00
0.000022	100.	85.	70.	2	0	0	0.00	167.55	167.55

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	3.34	3.00	0.00	6.00	0.00	17.00	0.00	609.60	609.60

*SECNO 2980.000
3280 CROSS SECTION 2980.00 EXTENDED 1.39 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.84	615.80	0.00	127.	22.	17.	20.	613.00	614.80

UPSTREAM FACE DUVALLE ROAD

2980.00	6.28	615.88	0.00	0.00	615.89	0.00	0.08	0.00	613.80
150.	59.	87.	4.	182.	179.	18.	7.	6.	614.00
0.52	0.33	0.48	0.20	0.030	0.035	0.030	0.000	609.60	0.00
0.000020	80.	80.	80.	0	0	5	0.00	169.64	169.64

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 3100.000

3280 CROSS SECTION 3100.00 EXTENDED 0.89 FEET

120 FT UPSTREAM DUVALLE ROAD

3100.00	5.98	615.88	0.00	0.00	615.89	0.01	0.00	0.00	614.10
150.	20.	118.	12.	63.	183.	43.	7.	6.	614.20
0.58	0.32	0.64	0.28	0.030	0.030	0.030	0.000	609.90	0.00
0.000030	100.	120.	130.	0	0	0	0.00	149.59	149.59

*SECNO 3430.000

3280 CROSS SECTION 3430.00 EXTENDED 1.29 FEET

3430.00	7.70	615.90	0.00	0.00	615.90	0.00	0.01	0.00	614.60
150.	40.	90.	21.	129.	174.	68.	10.	8.	614.60
0.79	0.31	0.51	0.30	0.030	0.035	0.030	0.000	608.20	0.00
0.000028	310.	330.	340.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.50	3.00	0.00	5.00	0.00	19.63	0.00	608.20	608.20

*SECNO 3510.000

3280 CROSS SECTION 3510.00 EXTENDED 1.34 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.16	615.90	0.00	132.	20.	20.	24.	612.90	615.20

UPSTREAM FACE LA GRAND BLVD

3510.00	7.23	615.93	0.00	0.00	615.94	0.00	0.04	0.00	614.60
150.	40.	88.	21.	134.	176.	71.	11.	8.	614.60
0.34	0.30	0.50	0.30	0.030	0.035	0.030	0.000	608.20	0.00
0.000026	80.	80.	80.	0	0	7	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 3700.000
3280 CROSS SECTION 3700.00 EXTENDED 1.94 FEET

190 FT UPSTREAM LA GRAND BLVD

3700.00	5.44	615.94	0.00	0.00	615.94	0.01	0.01	0.00	614.50
150.	35.	105.	10.	76.	133.	28.	12.	9.	614.20
0.92	0.46	0.79	0.35	0.030	0.030	0.030	0.000	610.50	0.00
0.000053	190.	190.	190.	0	0	0	0.00	127.07	127.07

*SECNO 3860.000
3280 CROSS SECTION 3860.00 EXTENDED 1.74 FEET

3860.00	7.95	615.95	0.00	0.00	615.95	0.00	0.00	0.00	613.30
150.	44.	77.	29.	171.	167.	113.	13.	9.	614.00
1.04	0.26	0.46	0.26	0.030	0.030	0.030	0.000	608.00	0.00
0.000013	160.	160.	160.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070 VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	3.24	3.00	0.00	5.00	0.00	19.63	0.00	608.00	608.00

*SECNO 4000.000
3280 CROSS SECTION 4000.00 EXTENDED 1.80 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.89	615.95	0.00	130.	19.	20.	24.	612.80	615.30

UPSTREAM FACE DUPREE ROAD

4000.00	7.99	615.99	0.00	0.00	616.00	0.00	0.04	0.00	613.30
150.	45.	76.	29.	176.	169.	116.	15.	10.	614.00
1.15	0.26	0.45	0.25	0.030	0.030	0.030	0.000	608.00	0.00
0.000012	140.	140.	140.	0	0	7	0.00	200.00	200.00

PRINTED IN USA

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4200.000
3280 CROSS SECTION 4200.00 EXTENDED 1.20 FEET

4200.00	7.10	616.00	0.00	0.00	616.00	0.00	0.00	0.00	614.90
150.	27.	103.	21.	101.	161.	71.	16.	11.	614.80
1.26	0.26	0.64	0.29	0.030	0.030	0.030	0.000	608.90	0.00
0.000029	200.	200.	200.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	608.90	608.90

*SECNO 4260.000
3280 CROSS SECTION 4260.00 EXTENDED 1.25 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.04	616.00	0.00	127.	24.	20.	19.	612.80	615.00

UPSTREAM FACE MOULON ROUGE DRIVE

4260.00	7.14	616.04	0.00	0.00	616.05	0.00	0.05	0.00	614.90
150.	31.	96.	24.	106.	163.	73.	17.	11.	614.80
1.29	0.29	0.59	0.32	0.030	0.035	0.030	0.000	608.90	0.00
0.000032	60.	60.	60.	0	0	5	0.00	200.00	200.00

*SECNO 4550.000
3280 CROSS SECTION 4550.00 EXTENDED 0.85 FEET

290 FT UPSTREAM MOULON ROUGE DRIVE

4550.00	5.85	616.05	0.00	0.00	616.06	0.01	0.01	0.00	613.20
150.	33.	111.	6.	78.	150.	21.	19.	12.	614.90
1.42	0.43	0.74	0.27	0.030	0.030	0.030	0.000	610.20	0.00
0.000038	290.	290.	290.	0	0	0	0.00	114.00	114.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSIA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4700.000

3230 CROSS SECTION 4700.00 EXTENDED 1.26 FEET

4700.00	6.86	616.06	0.00	0.00	616.06	0.01	0.01	0.00	615.80
150.	28.	95.	27.	82.	140.	83.	20.	13.	615.50
1.49	0.34	0.68	0.33	0.030	0.030	0.030	0.000	609.20	0.00
0.000042	150.	150.	150.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	609.20	609.20

*SECNO 4760.000

3230 CROSS SECTION 4760.00 EXTENDED 1.30 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	SAREA	TRAPEZOID AREA	ELLC	ELTRD
618.10	616.06	0.00	129.	20.	20.	22.	613.60	614.80

UPSTREAM FACE VERSAILLES LANE

4760.00	6.89	616.09	0.00	0.00	616.10	0.00	0.03	0.00	615.80
150.	32.	88.	31.	85.	142.	86.	20.	13.	615.50
1.53	0.37	0.62	0.35	0.030	0.035	0.030	0.000	609.20	0.00
0.000047	60.	60.	60.	0	0	6	0.00	200.00	200.00

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THIS RUN EXECUTED 11 SEP 84 15:59:12

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  HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
  ERROR CORR - 01,02,03,04,05,06
  MODIFICATION - 50,51,52,53,54,55,56
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I1      HURON TOWNSHIP FLOOD INSURANCE STUDY
I2      100-YEAR FLOW ENCHROACHED RUN
I3      SILVER CREEK AND HAND DRAIN

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
       0.      3.       0.       0.  0.000000     0.00     0.0      0.   608.760    0.000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
   15.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HI        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WIN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

*PROF 2

CCHV=   0.300 CEHV=   0.500
*SECNO 0.000
 2800 NAT Q1=      89.46  WSEL=     608.76  ENC Q1=      89.46  WSEL=     608.86  RATIO=  0.0000
 NAT Q1=     100.  RATIOS LOB,CH,ROB=  0.2915  0.7085  0.0000  WSEL=     608.86

3470 ENCROACHMENT STATIONS=      417.1      521.0  TYPE=      4  TARGET=        0.107
                  CONFLUENCE SILVER CREEK AND HAND DRAIN
      0.00      4.56    608.76      C.00    6C8.76    608.85      0.09      0.00      0.00    608.20
      260.       47.       213.       0.       52.       79.       0.        0.        0.     609.00
      0.00      0.90      2.70      0.00     C.040     0.035     0.000     0.000    604.20    417.10
 0.000992      1725.     1725.     1725.         0         0         0      0.00    103.48    520.58

*SECNO 350.000
 2800 NAT Q1=      33.86  WSEL=     609.11  ENC Q1=      33.86  WSEL=     609.21  RATIO=  0.0000
 NAT Q1=      39.  RATIOS LOB,CH,ROB=  0.1359  0.8558  0.0083  WSEL=     609.21

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=      454.7      532.0  TYPE=      4  TARGET=        0.125
                  VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE
    350.00      4.07    609.17      0.00    609.11    609.33      0.16      0.44      0.03    609.30
      150.        2.       148.       0.        4.       46.       0.        1.        1.     609.30
      0.03      0.53      3.23      0.02     0.040     0.035     0.040     0.000    605.10    454.72
 0.002092       350.      350.      350.         2         0         0      0.00     49.64    531.96

*SECNO 1090.000
 2800 NAT Q1=      30.78  WSEL=     610.64  ENC Q1=      30.78  WSEL=     610.74  RATIO=  0.0000
 NAT Q1=      33.  RATIOS LOB,CH,ROB=  0.0380  0.9182  0.0438  WSEL=     610.74

3470 ENCROACHMENT STATIONS=      389.6      400.5  TYPE=      4  TARGET=        0.055
    1090.00      3.85    610.75      0.00    610.64    611.06      0.30      1.66      0.07    607.80
      150.        1.       147.       2.        1.       33.       1.        1.        1.     608.10
      0.08      0.93      4.45      1.45     0.040     0.035     0.040     0.000    606.90    389.58
 0.002398       740.      740.      740.         1         0         0      0.00     10.97    400.55
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSIA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.78	3.00	0.00	10.00	0.00	37.00	0.00	606.90	606.90

*SECNO 1122.000

4.6 x10

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 611.047 ELLC= 611.500 PCWSE= 610.754 ELTRD= 611.900
2800 NAT Q1= 24.83 WSEL= 610.71 ENC Q1= 25.97 WSEL= 610.81 RATIO= -0.0458
NAT Q1= 26. RATIOS LOB,CH,ROB= 0.0000 0.9997 0.0003 WSEL= 610.81
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3470 ENCROACHMENT STATIONS= 390.0 400.0 TYPE= 4 TARGET= 0.000
UPSTREAM FACE WEST ROAD

1122.00	3.92	610.82	0.00	610.71	611.13	0.31	0.10	0.00	607.80	
150.	0.	150.	0.	0.	34.	0.	1.	1.	608.10	
0.08	0.00	4.45	0.00	0.000	0.035	0.000	0.000	606.90	390.00	
0.004156	32.	32.	32.	0	0	0	0.00	10.00	400.00	

*SECNO 1272.000
2800 NAT Q1= 26.20 WSEL= 611.33 ENC Q1= 27.72 WSEL= 611.43 RATIO= -0.0581
NAT Q1= 28. RATIOS LOB,CH,ROB= 0.0042 0.9958 0.0000 WSEL= 611.43

3470 ENCROACHMENT STATIONS= 150.0 165.0 TYPE= 4 TARGET= 0.004
150 FT UPSTREAM OF WEST ROAD

1272.00	4.44	611.44	0.00	611.33	611.67	0.23	0.52	0.02	611.10	
150.	0.	150.	0.	0.	39.	0.	2.	1.	611.80	
0.09	0.00	3.85	0.00	0.000	0.035	0.000	0.000	607.00	150.00	
0.002965	170.	150.	130.	2	0	0	0.00	14.63	164.63	

*SECNO 1400.000
2800 NAT Q1= 23.91 WSEL= 611.79 ENC Q1= 25.68 WSEL= 611.89 RATIO= -0.0737
NAT Q1= 26. RATIOS LOB,CH,ROB= 0.0000 0.9976 0.0024 WSEL= 611.89

3470 ENCROACHMENT STATIONS= 100.0 119.0 TYPE= 4 TARGET= 0.002

1400.00	4.36	611.86	0.00	611.79	612.09	0.23	0.42	0.00	612.10	
150.	0.	150.	0.	0.	39.	0.	2.	1.	611.40	
0.10	0.00	3.85	0.00	0.000	0.035	0.000	0.000	607.50	100.55	
0.003625	150.	128.	100.	2	0	0	0.00	18.45	119.00	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= 0.300 CEHV= 0.800

SPECIAL BRIDGE Low

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	6.00	0.00	28.40	0.00	607.50	607.50

CCHV= 0.400 CEHV= 0.700
*SECNO 1447.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 612.247 ELLC= 613.500 PCWSE= 611.862 ELTRD= 618.200
2800 NAT Q1= 14.35 WSEL= 611.96 ENC Q1= 14.69 WSEL= 612.06 RATIO= -0.0237
NAT Q1= 15. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 612.06
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3470 ENCROACHMENT STATIONS= 100.0 119.0 TYPE= 4 TARGET= 0.000
UPSTREAM FACE PENN CENTRAL RR BRIDGE

1447.00	4.52	612.02	0.00	611.96	612.22	0.20	0.15	0.01	612.10	
150.	0.	150.	0.	0.	42.	0.	2.	1.	611.40	
0.10	0.00	3.57	0.00	0.000	0.035	0.000	0.000	607.50	100.17	
0.002963	47.	47.	47.	0	0	0	0.00	18.83	119.00	

CCHV= 0.400 CEHV= 0.500
*SECNO 1800.000
2800 NAT Q1= 48.71 WSEL= 613.49 ENC Q1= 48.71 WSEL= 613.59 RATIO= 0.0000
NAT Q1= 51. RATIOS LOB,CH,ROB= 0.1345 0.6925 0.1730 WSEL= 613.59

3470 ENCROACHMENT STATIONS= 264.1 279.4 TYPE= 4 TARGET= 0.040
353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE

1800.00	4.71	612.81	0.00	613.49	613.05	0.24	0.81	0.02	610.20	
150.	14.	114.	22.	8.	26.	10.	2.	1.	608.40	
0.13	1.74	4.32	2.23	0.045	0.035	0.040	0.000	608.10	264.06	
0.001806	300.	353.	400.	2	0	0	0.00	15.33	279.40	

CCHV= 0.300 CEHV= 0.500
*SECNO 2520.000
2800 NAT Q1= 84.41 WSEL= 613.98 ENC Q1= 84.41 WSEL= 614.08 RATIO= 0.0000
NAT Q1= 89. RATIOS LOB,CH,ROB= 0.0720 0.9027 0.0253 WSEL= 614.08

3470 ENCROACHMENT STATIONS= 66.6 70.1 TYPE= 4 TARGET= 0.050

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10 FT DOWNSTREAM OF BORDEAU ROAD

2520.00	5.14	613.64	0.00	613.98	613.70	0.06	0.60	0.05	611.40
150.	6.	144.	0.	6.	70.	0.	3.	2.	613.00
0.23	0.95	2.04	0.01	0.045	0.035	0.040	0.000	608.50	46.59
0.000478	720.	720.	720.	2	0	0	0.00	23.49	70.07

*SECNO 2530.000
2800 NAT Q1= 53.33 WSEL= 613.98 ENC Q1= 56.16 WSEL= 614.08 RATIO= -0.0531
NAT Q1= 56. RATIOS LOB/CH/ROB= 0.0000 1.0000 0.0000 WSEL= 614.08

3470 ENCROACHMENT STATIONS= 100.0 138.0 TYPE= 4 TARGET= 0.000

2530.00	3.63	613.63	0.00	613.98	613.72	0.08	0.01	0.01	614.90
150.	0.	150.	0.	0.	64.	0.	3.	2.	614.30
0.23	0.00	2.33	0.00	0.000	0.035	0.000	0.000	610.00	103.59
0.001192	10.	10.	10.	0	0	0	0.00	30.76	134.35

SPECIAL BRIDGE

5070/VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	SAREA	SS	ELCHU	ELCHD
	0.00	8.05	3.00	0.00	6.00	0.00	17.00	0.00	610.00	610.00

*SECNO 2815.000
2800 NAT Q1= 233.52 WSEL= 615.80 ENC Q1= 233.52 WSEL= 615.90 RATIO= 0.0000
NAT Q1= 255. RATIOS LOB/CH/ROB= 0.0242 0.5334 0.3924 WSEL= 615.90
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE
3230 CROSS SECTION 2815.00 EXTENDED 0.05 FEET

3470 ENCROACHMENT STATIONS= 100.0 245.8 TYPE= 4 TARGET= 0.084

UPSTREAM FACE BORDEAU ROAD

2815.00	5.45	615.45	0.00	615.80	615.46	0.01	0.06	0.02	614.90
150.	0.	110.	40.	0.	130.	95.	4.	2.	614.30
0.34	0.00	0.85	0.42	0.000	0.035	0.030	0.000	610.00	100.00
0.000084	285.	285.	285.	0	0	7	0.00	145.83	245.83

*SECNO 2900.000
2800 NAT Q1= 321.91 WSEL= 615.80 ENC Q1= 321.91 WSEL= 615.90 RATIO= 0.0000
NAT Q1= 343. RATIOS LOB/CH/ROB= 0.3984 0.5763 0.0253 WSEL= 615.90
3230 CROSS SECTION 2900.00 EXTENDED 0.96 FEET

3470 ENCROACHMENT STATIONS= 13.0 142.0 TYPE= 4 TARGET= 0.061

2900.00	5.86	615.46	0.00	615.80	615.47	0.00	0.00	0.00	613.80
150.	50.	100.	0.	126.	161.	0.	5.	3.	614.00
0.38	0.39	0.62	0.00	0.030	0.035	0.000	0.000	609.60	12.95
0.000039	100.	85.	70.	0	0	0	0.00	129.05	142.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.34	3.00	0.00	6.00	0.00	17.00	0.00	609.60	609.60

*SECNO 2980.000
2800 NAT Q1= 339.51 WSEL= 615.88 ENC Q1= 339.51 WSEL= 615.98 RATIO= 0.0000
NAT Q1= 361. RATIOS LOB,CH,ROB= 0.4068 0.5656 0.0276 WSEL= 615.98
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE
3280 CROSS SECTION 2980.00 EXTENDED 1.05 FEET

3470 ENCROACHMENT STATIONS= 10.7 142.0 TYPE= 4 TARGET= 0.058
UPSTREAM FACE DUVALLE ROAD

2980.00	5.95	615.55	0.00	615.88	615.55	0.00	0.00	0.00	613.80
150.	52.	98.	0.	136.	165.	0.	5.	3.	614.00
0.42	0.38	0.59	0.00	0.030	0.035	0.000	0.000	609.60	10.69
0.000034	80.	80.	80.	0	0	6	0.00	131.31	142.00

*SECNO 3100.000
2800 NAT Q1= 272.67 WSEL= 615.88 ENC Q1= 272.67 WSEL= 615.98 RATIO= 0.0000
NAT Q1= 291. RATIOS LOB,CH,ROB= 0.1428 0.7691 0.0831 WSEL= 615.98
3280 CROSS SECTION 3100.00 EXTENDED 0.55 FEET

3470 ENCROACHMENT STATIONS= 16.2 117.9 TYPE= 4 TARGET= 0.063
120 FT UPSTREAM DUVALLE ROAD

3100.00	5.65	615.55	0.00	615.88	615.56	0.01	0.00	0.00	614.10
150.	13.	130.	7.	36.	167.	19.	6.	3.	614.20
0.47	0.37	0.78	0.36	0.030	0.030	0.030	0.000	609.90	16.17
0.000051	100.	120.	130.	0	0	0	0.00	101.74	117.91

*SECNO 3430.000
2800 NAT Q1= 285.09 WSEL= 615.90 ENC Q1= 285.09 WSEL= 616.00 RATIO= 0.0000
NAT Q1= 309. RATIOS LOB,CH,ROB= 0.2774 0.5768 0.1458 WSEL= 616.00
3280 CROSS SECTION 3430.00 EXTENDED 0.96 FEET

3470 ENCROACHMENT STATIONS= 13.9 186.1 TYPE= 4 TARGET= 0.077

3430.00	7.37	615.57	0.00	615.90	615.57	0.01	0.02	0.00	614.60
150.	29.	108.	13.	83.	159.	38.	8.	4.	614.60
0.62	0.35	0.68	0.35	0.030	0.035	0.030	0.000	608.20	13.87
0.000055	310.	330.	340.	0	0	0	0.00	172.26	186.13

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.50	3.00	0.00	5.00	0.00	19.63	0.00	608.20	608.20

*SECNO 3510.000
2800 NAT Q1= 294.88 WSEL= 615.93 ENC Q1= 294.88 WSEL= 616.03 RATIO= 0.0000
NAT Q1= 317. RATIOS LOB,CH,ROB= 0.2816 0.5703 0.1480 WSEL= 616.03
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE
3280 CROSS SECTION 3510.00 EXTENDED 1.01 FEET

3470 ENCROACHMENT STATIONS= 12.5 187.5 TYPE= 4 TARGET= 0.071
UPSTREAM FACE LA GRAND BLVD

3510.00	7.41	615.61	0.00	615.93	615.61	0.01	0.00	0.00	614.60
150.	31.	105.	14.	88.	161.	41.	8.	4.	614.60
0.66	0.35	0.65	0.35	0.030	0.035	0.030	0.000	608.20	12.52
0.000050	80.	80.	80.	0	0	5	0.00	174.96	187.48

*SECNO 3700.000
2800 NAT Q1= 206.16 WSEL= 615.94 ENC Q1= 206.16 WSEL= 616.04 RATIO= 0.0000
NAT Q1= 221. RATIOS LOB,CH,ROB= 0.2419 0.6861 0.0721 WSEL= 616.04
3280 CROSS SECTION 3700.00 EXTENDED 1.61 FEET

3470 ENCROACHMENT STATIONS= 5.0 93.4 TYPE= 4 TARGET= 0.068
190 FT UPSTREAM LA GRAND BLVD

3700.00	5.11	615.61	0.00	615.94	615.63	0.01	0.01	0.00	614.50
150.	27.	118.	5.	52.	120.	10.	9.	5.	614.20
0.72	0.52	0.99	0.50	0.030	0.030	0.030	0.000	610.50	5.02
0.000094	190.	190.	190.	0	0	0	0.00	93.38	98.40

*SECNO 3860.000
2800 NAT Q1= 423.20 WSEL= 615.95 ENC Q1= 423.20 WSEL= 616.05 RATIO= 0.0000
NAT Q1= 452. RATIOS LOB,CH,ROB= 0.3050 0.4974 0.1976 WSEL= 616.05
3280 CROSS SECTION 3860.00 EXTENDED 1.42 FEET

3470 ENCROACHMENT STATIONS= 20.5 189.6 TYPE= 4 TARGET= 0.064

3860.00	7.63	615.63	0.00	615.95	615.64	0.00	0.01	0.00	613.30
150.	39.	39.	23.	122.	155.	78.	10.	5.	614.00
0.82	0.32	0.57	0.29	0.030	0.030	0.030	0.000	608.00	20.47
0.000021	160.	160.	160.	0	0	0	0.00	169.13	189.60

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.24	3.00	0.00	5.00	0.00	19.63	0.00	608.00	608.00

*SECNO 4000.000
2800 NAT Q1= 437.27 WSEL= 615.99 ENC Q1= 437.27 WSEL= 616.09 RATIO= 0.0000
NAT Q1= 465. RATIOS LOB,CH,ROB= 0.3084 0.4917 0.1998 WSEL= 616.09
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE
3280 CROSS SECTION 4000.00 EXTENDED 1.48 FEET

3470 ENCROACHMENT STATIONS= 18.3 190.5 TYPE= 4 TARGET= 0.059
UPSTREAM FACE DUPREE ROAD

4000.00	7.68	615.68	0.00	615.99	615.68	0.00	0.00	0.00	613.30
150.	40.	87.	24.	128.	157.	82.	11.	6.	614.00
0.91	0.31	0.55	0.29	0.030	0.030	0.030	0.000	608.00	18.26
0.000020	140.	140.	140.	0	0	5	0.00	172.27	190.53

*SECNO 4200.000
2800 NAT Q1= 280.75 WSEL= 616.00 ENC Q1= 280.75 WSEL= 616.10 RATIO= 0.0000
NAT Q1= 303. RATIOS LOB,CH,ROB= 0.1927 0.6609 0.1464 WSEL= 616.10
3280 CROSS SECTION 4200.00 EXTENDED 0.88 FEET

3470 ENCROACHMENT STATIONS= 19.5 185.4 TYPE= 4 TARGET= 0.073

4200.00	6.78	615.68	0.00	616.00	615.69	0.01	0.01	0.00	614.90
150.	16.	121.	13.	56.	148.	39.	13.	7.	614.80
0.98	0.28	0.82	0.33	0.030	0.030	0.030	0.000	608.90	19.53
0.000053	200.	200.	200.	0	0	0	0.00	165.83	185.36

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	608.90	608.90

*SECNO 4260.000
2800 NAT Q1= 263.70 WSEL= 616.04 ENC Q1= 263.70 WSEL= 616.14 RATIO= 0.0000
NAT Q1= 284. RATIOS LOB,CH,ROB= 0.2197 0.6150 0.1653 WSEL= 616.14
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3280 CROSS SECTION 4260.00 EXTENDED 0.93 FEET

3470 ENCROACHMENT STATIONS= 16.9 187.2 TYPE= 4 TARGET= 0.073
UPSTREAM FACE MOULON ROUGE DRIVE

4260.00	6.83	615.73	0.00	616.04	615.73	0.01	0.00	0.00	614.90
150.	20.	115.	16.	62.	150.	43.	13.	7.	614.80
1.01	0.32	0.76	0.36	0.030	0.035	0.030	0.000	608.90	16.90
0.000062	60.	60.	60.	0	0	5	0.00	170.29	187.19

*SECNO 4550.000
2300 NAT Q1= 243.61 WSEL= 616.05 ENC Q1= 243.61 WSEL= 616.15 RATIO= 0.0000
NAT Q1= 259. RATIOS LOB/CH/POB= 0.2301 0.7267 0.0432 WSEL= 616.15
3230 CROSS SECTION 4550.00 EXTENDED 0.54 FEET

3470 ENCROACHMENT STATIONS= 13.8 94.9 TYPE= 4 TARGET= 0.059
290 FT UPSTREAM MOULON ROUGE DRIVE

4550.00	5.54	615.74	0.00	616.05	615.75	0.01	0.02	0.00	613.20
150.	27.	121.	1.	53.	138.	5.	15.	8.	614.90
1.11	0.51	0.88	0.30	0.030	0.030	0.030	0.000	610.20	13.82
0.000060	290.	290.	290.	0	0	0	0.00	81.06	94.88

*SECNO 4700.000
2800 NAT Q1= 231.41 WSEL= 616.06 ENC Q1= 231.41 WSEL= 616.16 RATIO= 0.0000
NAT Q1= 253. RATIOS LOB/CH/ROB= 0.1981 0.6082 0.1936 WSEL= 616.16

3265 DIVIDED FLOW

3280 CROSS SECTION 4700.00 EXTENDED 0.95 FEET

3470 ENCROACHMENT STATIONS= 13.2 184.9 TYPE= 4 TARGET= 0.086

4700.00	6.55	615.75	0.00	616.06	615.76	0.01	0.01	0.00	615.80
150.	18.	115.	17.	46.	122.	45.	15.	8.	615.50
1.16	0.40	0.91	0.37	0.030	0.030	0.030	0.000	609.20	13.22
0.000035	150.	150.	150.	0	0	0	0.00	170.19	184.93

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WIN	ELMIN	SSIA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

3070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	609.20	609.20

*SECNO 4760.000
2800 NAT Q1= 218.57 WSEL= 616.09 ENC Q1= 218.57 WSEL= 616.19 RATIO= 0.0000
NAT Q1= 238. RATIOS LOB,CH,ROB= 0.2203 0.5636 0.2160 WSEL= 616.19
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3265 DIVIDED FLOW

3280 CROSS SECTION 4760.00 EXTENDED 0.99 FEET

3470 ENCROACHMENT STATIONS= 11.3 187.1 TYPE= 4 TARGET= 0.082
UPSTREAM FACE VERSAILLES LANE

4760.00	6.59	615.79	0.00	616.09	615.80	0.01	0.01	0.00	615.80
150.	22.	108.	20.	50.	128.	50.	16.	9.	615.50
1.18	0.44	0.84	0.41	0.030	0.035	0.030	0.000	609.20	11.32
0.000098	60.	60.	60.	0	0	6	0.00	175.43	187.14

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THIS RUN EXECUTED 11 SEP 84 15:59:37

****
HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
ERROR CORR - 01,02,03,04,05,06
MODIFICATION - 50,51,52,53,54,55,56
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SILVER CREEK AND HAND DR

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
0.000	608.76	0.00	608.83	244.68	63.49	196.51	0.00	0.00	0.00	495.00	521.00	0.00
0.000	608.76	0.00	608.85	103.48	47.01	212.99	0.00	0.11	417.10	495.00	521.00	521.00
350.000	609.11	0.00	609.25	183.56	10.99	138.73	0.27	0.00	0.00	500.00	520.00	0.00
350.000	609.17	0.06	609.33	49.64	2.23	147.77	0.00	0.13	454.72	500.00	520.00	531.96
1090.000	610.64	0.00	610.91	14.94	5.49	138.23	6.28	0.00	0.00	390.00	400.00	0.00
1090.000	610.75	0.11	611.06	10.97	1.05	146.99	1.96	0.06	389.58	390.00	400.00	400.55
1122.000	610.71	0.00	611.04	15.06	0.00	149.94	0.05	0.00	0.00	390.00	400.00	0.00
1122.000	610.82	0.11	611.13	10.00	0.00	150.00	0.00	0.00	390.00	390.00	400.00	400.00
1272.000	611.33	0.00	611.58	18.93	0.25	149.75	0.00	0.00	0.00	150.00	165.00	0.00
1272.000	611.44	0.11	611.67	14.63	0.00	150.00	0.00	0.00	150.00	150.00	165.00	165.00
1400.000	611.79	0.00	612.04	19.67	0.00	149.79	0.21	0.00	0.00	100.00	119.00	0.00
1400.000	611.86	0.07	612.09	18.45	0.00	150.00	0.00	0.00	100.00	100.00	119.00	119.00
1447.000	611.96	0.00	612.62	20.67	0.00	150.00	0.00	0.00	0.00	100.00	119.00	0.00
1447.000	612.02	0.07	612.22	18.83	0.00	150.00	0.00	0.00	100.00	100.00	119.00	119.00
1800.000	613.49	0.00	613.63	22.39	19.54	105.05	25.41	0.00	0.00	269.00	275.00	0.00
1800.000	612.81	-0.68	613.05	15.33	14.40	113.79	21.81	0.04	264.06	269.00	275.00	279.40
2520.000	613.98	0.00	614.03	45.50	10.33	136.59	3.08	0.00	0.00	50.00	70.00	0.00
2520.000	613.64	-0.34	613.70	23.49	6.11	143.89	0.00	0.05	46.59	50.00	70.00	70.08
2530.000	613.98	0.00	614.04	33.65	0.00	150.00	0.00	0.00	0.00	100.00	138.00	0.00
2530.000	613.63	-0.34	613.72	30.76	0.00	150.00	0.00	0.00	100.00	100.00	138.00	138.00
2815.000	615.80	0.00	615.80	255.09	2.71	91.60	55.69	0.00	0.00	100.00	138.00	0.00
2815.000	615.45	-0.34	615.46	145.83	0.00	110.30	39.70	0.08	100.00	100.00	138.00	245.83

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SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
2900.000	615.80	0.00	615.80	167.55	58.08	88.54	3.37	0.00	0.00	100.00	142.00	0.00
2900.000	615.46	-0.34	615.47	129.05	49.79	100.21	0.00	0.06	12.95	100.00	142.00	142.00
2980.000	615.88	0.00	615.89	169.64	59.50	86.78	3.72	0.00	0.00	100.00	142.00	0.00
2980.000	615.55	-0.34	615.55	131.31	52.37	97.63	0.00	0.06	10.69	100.00	142.00	142.00
3100.000	615.88	0.00	615.89	149.59	20.22	117.71	12.07	0.00	0.00	50.00	100.00	0.00
3100.000	615.55	-0.34	615.56	101.74	13.15	130.05	6.80	0.06	16.17	50.00	100.00	117.91
3430.000	615.90	0.00	615.90	200.00	39.63	89.52	20.85	0.00	0.00	100.00	147.00	0.00
3430.000	615.57	-0.33	615.57	172.26	29.27	107.55	13.18	0.08	13.87	100.00	147.00	186.13
3510.000	615.93	0.00	615.94	200.00	40.47	88.24	21.29	0.00	0.00	100.00	147.00	0.00
3510.000	615.61	-0.33	615.61	174.96	30.70	105.22	14.08	0.07	12.52	100.00	147.00	187.48
3700.000	615.94	0.00	615.94	127.07	35.07	105.13	9.80	0.00	0.00	50.00	90.00	0.00
3700.000	615.61	-0.32	615.63	93.38	26.71	118.34	4.95	0.07	5.02	50.00	90.00	98.40
3860.000	615.95	0.00	615.95	200.00	44.48	76.69	28.84	0.00	0.00	100.00	137.00	0.00
3860.000	615.63	-0.32	615.64	169.13	38.58	88.50	22.91	0.06	20.47	100.00	137.00	189.60
4000.000	615.99	0.00	616.00	200.00	45.11	75.64	29.24	0.00	0.00	100.00	137.00	0.00
4000.000	615.68	-0.32	615.68	172.27	39.51	86.76	23.72	0.06	18.26	100.00	137.00	190.53
4200.000	616.00	0.00	616.00	200.00	26.66	102.58	20.76	0.00	0.00	100.00	141.00	0.00
4200.000	615.68	-0.31	615.69	165.83	15.80	121.42	12.78	0.07	19.53	100.00	141.00	185.36
4260.000	616.04	0.00	616.05	200.00	30.75	95.60	23.64	0.00	0.00	100.00	141.00	0.00
4260.000	615.73	-0.31	615.73	170.29	19.56	114.82	15.63	0.07	16.90	100.00	141.00	187.19
4550.000	616.05	0.00	616.06	114.00	33.29	110.97	5.74	0.00	0.00	50.00	89.00	0.00
4550.000	615.74	-0.31	615.75	81.06	27.26	121.38	1.35	0.06	13.82	50.00	89.00	94.88
4700.000	616.06	0.00	616.06	200.00	28.11	94.74	27.15	0.00	0.00	75.00	118.00	0.00
4700.000	615.75	-0.30	615.76	170.19	18.36	115.09	16.56	0.09	13.22	75.00	118.00	184.93
4760.000	616.09	0.00	616.10	200.00	31.57	87.78	30.65	0.00	0.00	75.00	118.00	0.00
4760.000	615.79	-0.30	615.80	175.43	22.04	107.75	20.21	0.08	11.32	75.00	118.00	187.14

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SILVER CREEK AND HAND DR

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
0.000	0.00	0.00	0.00	604.20	260.00	608.76	0.00	608.83	8.45	2.49	176.17	89.46
0.000	0.00	0.00	0.00	604.20	260.00	608.76	0.00	608.85	9.92	2.70	131.37	82.53
350.000	350.00	0.00	0.00	605.10	150.00	609.11	0.00	609.25	19.62	3.10	68.61	33.86
350.000	350.00	0.00	0.00	605.10	150.00	609.17	0.00	609.33	20.92	3.23	49.99	32.80
1090.000	740.00	0.00	0.00	606.90	150.00	610.64	0.00	610.91	23.74	4.33	38.67	30.78
1090.000	740.00	0.00	0.00	606.90	150.00	610.75	0.00	611.06	23.98	4.45	35.50	30.63
1122.000	32.00	611.90	611.50	606.90	150.00	610.71	0.00	611.04	36.45	4.62	32.65	24.83
1122.000	32.00	999999.00	0.00	606.90	150.00	610.82	0.00	611.13	41.56	4.45	33.73	23.27
1272.000	150.00	0.00	0.00	607.00	150.00	611.33	0.00	611.58	32.78	4.01	37.81	26.20
1272.000	150.00	0.00	0.00	607.00	150.00	611.44	0.00	611.67	29.65	3.85	38.32	27.55
1400.000	128.00	0.00	0.00	607.50	150.00	611.79	0.00	612.04	39.35	3.98	37.91	23.91
1400.000	128.00	0.00	0.00	607.50	150.00	611.86	0.00	612.09	36.75	3.85	38.92	24.74
1447.000	47.00	618.20	613.50	607.50	150.00	611.96	610.78	612.62	109.29	6.54	22.93	14.35
1447.000	47.00	999999.00	0.00	607.50	150.00	612.02	0.00	612.22	29.63	3.57	41.96	27.55
1800.000	353.00	0.00	0.00	608.10	150.00	613.49	0.00	613.63	9.48	3.45	59.23	48.71
1800.000	353.00	0.00	0.00	608.10	150.00	612.81	0.00	613.05	18.06	4.32	44.40	35.30
2520.000	720.00	0.00	0.00	608.50	150.00	613.98	0.00	614.03	3.16	1.77	98.50	84.41
2520.000	720.00	0.00	0.00	608.50	150.00	613.64	0.00	613.70	4.78	2.04	76.89	68.62
2530.000	10.00	0.00	0.00	610.00	150.00	613.98	0.00	614.04	7.91	1.99	75.54	53.33
2530.000	10.00	0.00	0.00	610.00	150.00	613.63	0.00	613.72	11.92	2.33	64.48	43.44
2815.000	285.00	615.40	611.60	610.00	150.00	615.80	0.00	615.80	0.41	0.64	325.51	233.52
2815.000	285.00	999999.00	0.00	610.00	150.00	615.45	0.00	615.46	0.34	0.85	224.47	163.49
2900.000	85.00	0.00	0.00	609.60	150.00	615.80	0.00	615.80	0.22	0.50	365.54	321.91
2900.000	85.00	0.00	0.00	609.60	150.00	615.46	0.00	615.47	0.39	0.62	287.21	241.14
2980.000	80.00	614.80	613.00	609.60	150.00	615.88	0.00	615.89	0.20	0.48	379.66	339.51
2980.000	80.00	999999.00	0.00	609.60	150.00	615.55	0.00	615.55	0.34	0.59	301.09	256.57
3100.000	120.00	0.00	0.00	609.90	150.00	615.88	0.00	615.89	0.30	0.64	289.48	272.67
3100.000	120.00	0.00	0.00	609.90	150.00	615.55	0.00	615.56	0.51	0.78	221.41	210.26
3430.000	330.00	0.00	0.00	608.20	150.00	615.90	0.00	615.90	0.28	0.51	371.97	285.09
3430.000	330.00	0.00	0.00	608.20	150.00	615.57	0.00	615.57	0.55	0.68	278.88	202.91
3510.000	80.00	615.20	612.90	608.20	150.00	615.93	0.00	615.94	0.26	0.50	380.64	294.88
3510.000	80.00	999999.00	0.00	608.20	150.00	615.61	0.00	615.61	0.50	0.65	289.34	212.02

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
3700.000	190.00	0.00	0.00	610.50	150.00	615.94	0.00	615.94	0.53	0.79	236.66	206.16
3700.000	190.00	0.00	0.00	610.50	150.00	615.61	0.00	615.63	0.94	0.99	181.64	154.40
3860.000	160.00	0.00	0.00	608.00	150.00	615.95	0.00	615.95	0.13	0.46	450.53	423.20
3860.000	160.00	0.00	0.00	608.00	150.00	615.63	0.00	615.64	0.21	0.57	354.68	324.24
4000.000	140.00	615.30	612.80	608.00	150.00	615.99	0.00	616.00	0.12	0.45	460.86	437.27
4000.000	140.00	999999.00	0.00	608.00	150.00	615.68	0.00	615.68	0.20	0.55	367.27	337.99
4200.000	200.00	0.00	0.00	608.90	150.00	616.00	0.00	616.00	0.29	0.64	332.71	280.75
4200.000	200.00	0.00	0.00	608.90	150.00	615.68	0.00	615.69	0.53	0.82	243.72	206.52
4260.000	60.00	615.00	612.80	608.30	150.00	616.04	0.00	616.05	0.32	0.59	342.69	263.70
4260.000	60.00	999999.00	0.00	608.30	150.00	615.73	0.00	615.73	0.62	0.76	254.83	191.11
4550.000	290.00	0.00	0.00	610.20	150.00	616.05	0.00	616.06	0.38	0.74	249.05	243.61
4550.000	290.00	0.00	0.00	610.20	150.00	615.74	0.00	615.75	0.60	0.88	195.75	193.69
4700.000	150.00	0.00	0.00	609.20	150.00	616.06	0.00	616.06	0.42	0.68	304.59	231.41
4700.000	150.00	0.00	0.00	609.20	150.00	615.75	0.00	615.76	0.85	0.91	218.20	162.32
4760.000	60.00	614.80	613.60	609.20	150.00	616.09	0.00	616.10	0.47	0.62	312.76	218.57
4760.000	60.00	999999.00	0.00	609.20	150.00	615.79	0.00	615.80	0.98	0.84	228.37	151.25

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SILVER CREEK AND HAND DR

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.000	260.00	608.76	0.00	0.00	0.00	244.68	0.00
0.000	260.00	608.76	0.00	0.00	0.00	103.48	0.00
350.000	150.00	609.11	0.00	0.35	0.00	183.56	350.00
350.000	150.00	609.17	0.06	0.41	0.06	49.64	350.00
1090.000	150.00	610.64	0.00	1.53	0.00	14.94	740.00
1090.000	150.00	610.75	0.11	1.58	0.11	10.97	740.00
1122.000	150.00	610.71	0.00	0.06	0.00	15.06	32.00
1122.000	150.00	610.82	0.11	0.06	0.11	10.00	32.00
1272.000	150.00	611.33	0.00	0.62	0.00	18.93	150.00
1272.000	150.00	611.44	0.11	0.62	0.11	14.63	150.00
1400.000	150.00	611.79	0.00	0.46	0.00	19.67	128.00
1400.000	150.00	611.86	0.07	0.42	0.07	18.45	128.00
1447.000	150.00	611.96	0.00	0.16	0.00	20.67	47.00
1447.000	150.00	612.02	0.07	0.16	0.07	18.83	47.00
1800.000	150.00	613.49	0.00	1.53	0.00	22.39	353.00
1800.000	150.00	612.81	-0.68	0.79	-0.68	15.33	353.00
2520.000	150.00	613.98	0.00	0.49	0.00	45.50	720.00
2520.000	150.00	613.64	-0.34	0.83	-0.34	23.49	720.00
2530.000	150.00	613.98	0.00	0.00	0.00	33.65	10.00
2530.000	150.00	613.63	-0.34	0.00	-0.34	30.76	10.00
2815.000	150.00	615.80	0.00	1.82	0.00	255.09	285.00
2815.000	150.00	615.45	-0.34	1.82	-0.34	145.83	285.00
2900.000	150.00	615.80	0.00	0.00	0.00	167.55	85.00
2900.000	150.00	615.46	-0.34	0.01	-0.34	129.05	85.00
2980.000	150.00	615.88	0.00	0.08	0.00	169.64	80.00
2980.000	150.00	615.55	-0.34	0.08	-0.34	131.31	80.00
3100.000	150.00	615.88	0.00	0.00	0.00	149.59	120.00
3100.000	150.00	615.55	-0.34	0.00	-0.34	101.74	120.00
3430.000	150.00	615.90	0.00	0.01	0.00	200.00	330.00
3430.000	150.00	615.57	-0.33	0.02	-0.33	172.26	330.00
3510.000	150.00	615.93	0.00	0.04	0.00	200.00	80.00
3510.000	150.00	615.61	-0.33	0.04	-0.33	174.96	80.00

PRINTED IN U.S.A.

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
3700.000	150.00	615.94	0.00	0.00	0.00	127.07	190.00
3700.000	150.00	615.61	-0.32	0.01	-0.32	93.38	190.00
3860.000	150.00	615.95	0.00	0.01	0.00	200.00	160.00
3860.000	150.00	615.63	-0.32	0.02	-0.32	169.13	160.00
4000.000	150.00	615.99	0.00	0.05	0.00	200.00	140.00
4000.000	150.00	615.68	-0.32	0.05	-0.32	172.27	140.00
4200.000	150.00	616.00	0.00	0.00	0.00	200.00	200.00
4200.000	150.00	615.68	-0.31	0.00	-0.31	165.83	200.00
4260.000	150.00	616.04	0.00	0.05	0.00	200.00	60.00
4260.000	150.00	615.73	-0.31	0.05	-0.31	170.29	60.00
4550.000	150.00	616.05	0.00	0.01	0.00	114.00	290.00
4550.000	150.00	615.74	-0.31	0.02	-0.31	81.06	290.00
4700.000	150.00	616.06	0.00	0.01	0.00	200.00	150.00
4700.000	150.00	615.75	-0.30	0.01	-0.30	170.19	150.00
4760.000	150.00	616.09	0.00	0.03	0.00	200.00	60.00
4760.000	150.00	615.79	-0.30	0.03	-0.30	175.43	60.00

PRINTED IN U.S.A.

SUMMARY OF ERRORS AND SPECIAL NOTES

PRINTED IN U.S.A.

FLOODWAY DATA. SILVER CREEK AND HAND DR
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
0.000	103.	131.	2.0	608.8	608.8	0.0
350.000	77.	50.	3.0	609.2	609.1	0.1
1090.000	11.	36.	4.2	610.7	610.6	0.1
1122.000	10.	34.	4.4	610.8	610.7	0.1
1272.000	15.	39.	3.9	611.4	611.3	0.1
1400.000	18.	39.	3.9	611.9	611.8	0.1
1447.000	19.	42.	3.6	612.1	612.0	0.1
1800.000	15.	44.	3.4	612.9	613.5	-0.6
2520.000	23.	77.	2.0	613.8	614.0	-0.2
2530.000	31.	64.	2.3	613.8	614.0	-0.2
2815.000	146.	224.	0.7	615.6	615.8	-0.2
2900.000	129.	287.	0.5	615.6	615.8	-0.2
2980.000	131.	301.	0.5	615.7	615.9	-0.2
3100.000	102.	221.	0.7	615.7	615.9	-0.2
3430.000	172.	279.	0.5	615.7	615.9	-0.2
3510.000	175.	289.	0.5	615.7	615.9	-0.2
3700.000	93.	182.	0.8	615.7	615.9	-0.2
3860.000	169.	355.	0.4	615.7	615.9	-0.2
4000.000	172.	367.	0.4	615.8	616.0	-0.2
4200.000	166.	244.	0.6	615.8	616.0	-0.2
4260.000	170.	255.	0.6	615.8	616.0	-0.2
4550.000	81.	196.	0.8	615.9	616.1	-0.2
4700.000	172.	218.	0.7	615.9	616.1	-0.2
4760.000	176.	228.	0.7	615.9	616.1	-0.2

PRINTED IN U.S.A.

THIS RUN EXECUTED 11 SEP 84 15:59:54

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************
```

UNEXPECTED END OF FILE ABORT IN SUBROUTINE H2MAIN

```
===> COED,HANDENO
===> FREE ALL
```

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Huron Twp.

3) WATERCOURSE: Silver Creek and Hand Drain

4) DOCUMENT TYPE: Summary

00BREAK00

```
EEEEEE   EEEEEE   H    H    0000    L       BBBBB    RRRRR     0000
E        E        H    H   0    0   L       B    B   R    R   0    0
E        E        H    H   0    0   L       BBBBB    R    R   0    0
EEEE     EEEE     HHHHHH   0    0   L       B    B   RRRR    0    0
E        E        H    H   0    0   L       B    B   R   R   0    0
EEEEEE   EEEEEE   H    H    0000    LLLLLL  BBBBB    R    R   0000
```

EE HOLBRO 12 SEP 84 10:52:38

FILE: 0723EEH2*HANDOUT

TERMINAL:112

HURON TOWNSHIP FIS
MULTIPLE PROFILE RUN
SILVER CREEK & HAND DRAIN

FINAL RUN

PRINTED IN U.S.A.

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*****************************************************                                  ***************************************
*  WATER SURFACE PROFILES                           *                                  *  U.S. ARMY CORPS OF ENGINEERS       *
*  VERSION OF NOVEMBER 1976                         *                                  *  THE HYDROLOGIC ENGINEERING CENTER  *
*  UPDATED MAY 1984                                 *                                  *  609 SECOND STREET, SUITE D         *
*                                                   *                                  *  DAVIS, CALIFORNIA 95616            *
*  RUN DATE  11 SEP 84 TIME    8:42:06              *                                  *  (916) 440-2105 (FTS) 448-2105      *
*****************************************************                                  ***************************************
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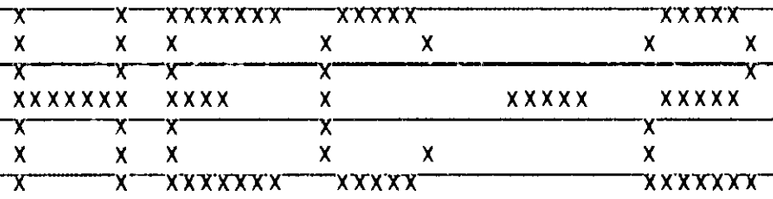
X     X  XXXXXXX   XXXXX             XXXXX
X     X  X        X     X           X     X
X     X  X        X                       X
XXXXXXX  XXXX     X         XXXXX    XXXXX
X     X  X        X                 X
X     X  X        X     X           X
X     X  XXXXXXX   XXXXX             XXXXXXX
```



PRINTED IN U.S.A.

THIS RUN EXECUTED 11 SEP 84 8:42:07

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************

C
T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      10- YEAR FLOW
T3      SILVER CREEK AND HAND DRAIN
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	0.002500	0.00	0.0	0.	604.000	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

	150.000	201.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.040	0.035	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000
QT	4.000	140.000	220.000	260.000	320.000	0.000	0.000	0.000	0.000	0.000
X1	0.000	18.000	1510.000	1527.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	610.000	0.000	607.500	1410.000	607.600	1435.000	608.400	1460.000	608.700	1485.000
GR	602.100	1510.000	602.100	1510.100	601.800	1513.000	601.100	1518.000	601.700	1522.000
GR	602.000	1527.000	602.000	1527.100	606.000	1528.000	606.100	1535.000	606.400	1560.000
GR	606.700	1585.000	607.000	1610.000	610.000	1845.000	0.000	0.000	0.000	0.000
SB	0.000	2.380	3.000	0.000	17.000	0.000	93.500	0.000	0.000	0.000
		UPSTREAM FACE INKSTER ROAD								
X1	0.160	0.000	0.000	0.000	32.000	32.000	32.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	607.000	607.500	0.000	0.000	0.000	0.000	0.000
BT	-14.000	0.000	610.000	0.000	1410.000	607.500	0.000	1435.000	607.600	0.000
BT	0.000	1460.000	608.400	0.000	1485.000	608.700	0.000	1510.000	609.200	602.100
BT	0.000	1510.100	609.200	607.000	1527.000	609.400	607.000	1527.100	609.400	602.000
BT	0.000	1535.000	609.400	0.000	1560.000	609.300	0.000	1585.000	609.000	0.000
BT	0.000	1610.000	609.000	0.000	1845.000	610.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
X1	0.920	18.000	1783.000	1808.000	26.000	126.000	76.000	0.000	0.000	0.000
GR	610.000	0.000	605.700	1733.000	606.100	1758.000	605.900	1783.000	601.900	1789.000
GR	601.900	1789.100	601.400	1790.000	601.400	1790.100	601.700	1796.000	602.000	1799.000
GR	602.400	1802.000	602.400	1802.100	602.800	1803.000	602.800	1803.100	605.100	1808.000
GR	606.300	1833.000	607.100	1858.000	610.000	2116.000	0.000	0.000	0.000	0.000

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X1	0.116	0.000	0.000	0.000	24.000	24.000	24.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1760.000	0.000	1830.000	0.000	0.000	0.000	0.000
X1	0.130	0.000	0.000	0.000	14.000	14.000	14.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1770.000	0.000	1820.000	0.000	0.000	0.000	0.000
X1	0.310	18.000	980.000	1003.000	119.000	194.000	180.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	930.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	610.000	0.000	606.100	880.000	606.100	905.000	606.300	930.000	607.000	955.000
GR	602.400	980.000	602.400	980.100	602.300	981.000	602.000	984.000	602.000	988.000
GR	602.000	992.000	602.400	995.000	604.100	1003.000	604.100	1003.100	606.600	1030.000
GR	606.600	1055.000	606.600	1080.000	610.000	1350.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	3.000	0.000	23.000	0.000	92.000	0.000	0.000	0.000
NC	0.030	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	UPSTREAM FACE GRIX ROAD									
X1	0.335	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	606.000	606.100	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	930.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	-13.000	0.000	610.000	0.000	880.000	606.100	0.000	905.000	605.100	0.000
BT	0.000	930.000	606.300	0.000	955.000	607.000	0.000	980.000	607.700	602.400
BT	0.000	980.100	607.700	606.000	1003.000	607.800	606.000	1003.100	607.800	604.100
BT	0.000	1030.000	607.400	0.000	1055.000	607.000	0.000	1080.000	607.200	0.000
BT	0.000	1350.000	610.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.035	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	200 FT UPSTREAM GRIX ROAD									
X1	0.535	13.000	170.000	195.000	300.000	100.000	200.000	0.000	0.000	0.000
GR	610.000	0.000	607.800	120.000	607.900	145.000	607.600	170.000	602.700	179.000
GR	601.500	181.000	601.500	184.000	601.800	187.000	602.700	189.000	606.800	195.000
GR	607.000	220.000	606.900	245.000	610.000	470.000	0.000	0.000	0.000	0.000
NC	0.040	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	CONFLUENCE SILVER CREEK AND HAND DRAIN									
X1	0.000	13.000	495.000	521.000	1725.000	1725.000	1725.000	0.000	0.000	0.000
GR	610.000	0.000	608.000	445.000	608.100	470.000	608.200	495.000	605.200	501.000
GR	605.000	504.000	604.200	508.000	604.200	512.000	605.000	514.000	609.000	521.000
GR	608.900	546.000	609.000	571.000	610.000	1100.000	0.000	0.000	0.000	0.000
QT	4.000	80.000	130.000	150.000	190.000	0.000	0.000	0.000	0.000	0.000
	VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE									
X1	350.000	12.000	500.000	520.000	350.000	350.000	350.000	0.000	0.000	0.000
GR	610.000	0.000	608.800	450.000	609.100	475.000	609.300	500.000	607.300	505.000
GR	605.600	508.000	605.100	511.000	605.600	514.000	509.300	520.000	609.000	545.000
GR	609.300	570.000	609.300	700.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1090.000	20.000	390.000	400.000	740.000	740.000	740.000	0.000	0.000	0.000
GR	615.000	0.000	612.400	290.000	612.100	315.000	611.900	340.000	611.700	365.000
GR	611.500	387.000	607.800	390.000	607.800	390.100	607.700	392.000	607.000	394.000
GR	606.900	397.000	607.900	398.000	608.100	400.000	608.100	400.100	611.000	403.000
GR	612.400	425.000	612.200	450.000	612.000	475.000	611.900	500.000	618.500	725.000

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SB	0.000	1.780	3.000	0.000	10.000	0.000	37.000	0.000	0.000	0.000
		UPSTREAM FACE WEST ROAD								
X1	1122.000	0.000	0.000	0.000	32.000	32.000	32.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	611.500	611.900	0.000	0.000	0.000	0.000	0.000
BT	-14.000	0.000	615.000	0.000	290.000	612.900	0.000	315.000	612.900	0.000
BT	0.000	340.000	612.900	0.000	365.000	612.800	0.000	390.000	612.800	607.800
BT	0.000	390.100	612.800	611.500	400.000	612.800	611.500	400.100	612.800	608.100
BT	0.000	425.000	612.400	0.000	450.000	612.200	0.000	475.000	612.000	0.000
BT	0.000	500.000	611.900	0.000	725.000	618.500	0.000	0.000	0.000	0.000
		150 FT UPSTREAM OF WEST ROAD								
X1	1272.000	12.000	150.000	155.000	170.000	130.000	150.000	0.000	0.000	0.000
GR	616.900	0.000	612.900	100.000	612.400	125.000	611.100	150.000	609.400	154.000
GR	607.100	156.000	607.000	158.000	607.100	160.000	608.900	162.000	611.800	165.000
GR	612.400	190.000	612.100	215.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1400.000	17.000	100.000	119.000	150.000	100.000	128.000	0.000	0.000	0.000
GR	618.200	0.000	616.700	25.000	615.100	50.000	613.600	75.000	612.100	100.000
GR	609.500	106.000	609.300	106.100	608.100	107.000	607.500	109.000	608.100	111.000
GR	609.300	112.000	609.500	112.100	611.400	119.000	613.100	125.000	614.900	150.000
GR	616.600	175.000	618.300	200.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.800	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.340	3.000	0.000	6.000	0.000	28.400	0.000	0.000	0.000
NC	0.045	0.040	0.000	0.400	0.700	0.000	0.000	0.000	0.000	0.000
		UPSTREAM FACE PENN CENTRAL RR BRIDGE								
X1	1447.000	0.000	0.000	0.000	47.000	47.000	47.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	613.500	618.200	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	618.200	0.000	25.000	618.200	0.000	50.000	618.300	0.000
BT	0.000	75.000	618.300	0.000	100.000	618.300	0.000	106.000	618.300	609.500
BT	0.000	106.100	618.300	611.500	107.000	618.300	612.900	109.000	618.300	613.500
BT	0.000	111.000	618.300	612.900	112.000	618.300	611.500	112.100	618.300	609.500
BT	0.000	119.000	618.300	0.000	125.000	618.300	0.000	150.000	618.300	0.000
BT	0.000	175.000	618.300	0.000	200.000	618.300	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000
		353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE								
X1	1800.000	12.000	269.000	275.000	300.000	400.000	353.000	0.000	0.000	0.000
GR	615.000	0.000	613.900	210.000	613.800	235.000	613.600	260.000	610.200	269.000
GR	608.400	270.000	608.100	273.000	608.400	275.000	612.400	279.000	614.200	285.000
GR	613.500	310.000	615.000	485.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000
		10 FT DOWNSTREAM OF BORDEAU ROAD								
X1	2520.000	11.000	50.000	70.000	720.000	720.000	720.000	0.000	0.000	0.000
GR	614.800	0.000	614.500	25.000	614.200	39.000	611.800	48.000	611.400	50.000
GR	608.900	54.000	608.500	57.000	608.900	60.000	613.000	70.000	614.600	95.000
GR	614.600	120.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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NC	0.030	0.030	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	2530.000	21.000	100.000	138.000	10.000	10.000	10.000	0.000	0.000	0.000
GR	616.600	0.000	616.200	25.000	615.700	50.000	615.700	75.000	614.900	100.000
GR	610.000	114.000	610.500	115.000	610.500	115.100	610.000	116.000	610.000	118.000
GR	610.000	120.000	610.500	121.000	610.500	121.100	610.500	123.000	611.600	125.000
GR	613.400	133.000	614.300	138.000	614.500	150.000	614.500	175.000	614.500	200.000
GR	615.400	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	8.050	3.000	0.000	6.000	0.000	17.000	0.000	0.000	0.000

UPSTREAM FACE BORDEAU ROAD

X1	2815.000	0.000	0.000	0.000	285.000	285.000	285.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	611.600	615.400	0.000	0.000	0.000	0.000	0.000
BT	-18.000	0.000	616.600	0.000	25.000	616.300	0.000	50.000	616.000	0.000
BT	0.000	75.000	615.900	0.000	100.000	615.900	0.000	114.000	615.800	0.000
BT	0.000	115.000	615.800	610.500	115.100	615.800	611.500	116.000	615.800	612.900
BT	0.000	118.000	615.700	613.600	120.000	615.700	612.900	121.000	615.700	611.500
BT	0.000	121.100	615.700	610.500	125.000	615.700	0.000	150.000	615.400	0.000
BT	0.000	175.000	615.400	0.000	200.000	615.400	0.000	300.000	615.700	0.000
X1	2900.000	19.000	100.000	142.000	100.000	70.000	85.000	0.000	0.000	0.000
GR	614.500	0.000	614.200	25.000	614.000	50.000	613.900	75.000	613.800	100.000
GR	610.800	114.000	610.100	119.000	610.100	119.100	609.600	120.000	609.600	122.000
GR	609.600	124.000	610.100	125.000	610.100	125.100	610.900	128.000	613.100	138.000
GR	614.000	142.000	615.100	150.000	615.100	175.000	616.100	200.000	0.000	0.000
SB	0.000	3.340	3.000	0.000	6.000	0.000	17.000	0.000	0.000	0.000

UPSTREAM FACE DUVALLE ROAD

X1	2980.000	0.000	0.000	0.000	80.000	80.000	80.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	613.000	614.800	0.000	0.000	0.000	0.000	0.000
BT	-15.000	0.000	614.800	0.000	25.000	615.000	0.000	50.000	615.200	0.000
BT	0.000	75.000	615.400	0.000	100.000	615.600	0.000	119.000	615.600	610.100
BT	0.000	119.100	615.600	611.100	120.000	615.600	612.600	122.000	615.700	613.000
BT	0.000	124.000	615.700	612.600	125.000	615.800	611.100	125.100	615.800	610.100
BT	0.000	150.000	615.900	0.000	175.000	616.100	0.000	200.000	616.100	0.000
NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000

120 FT UPSTREAM DUVALLE ROAD

X1	3100.000	11.000	50.000	100.000	100.000	130.000	120.000	0.000	0.000	0.000
GR	615.000	0.000	614.700	25.000	614.100	50.000	612.700	60.000	610.800	71.000
GR	609.900	77.000	610.800	81.000	613.100	90.000	614.200	100.000	615.000	125.000
GR	615.900	150.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	3430.000	22.000	100.000	147.000	310.000	340.000	330.000	0.000	0.000	0.000
GR	614.600	0.000	614.600	25.000	614.600	50.000	614.600	75.000	614.600	100.000
GR	612.900	110.000	611.000	119.000	609.900	122.500	609.800	122.600	609.300	122.900
GR	608.500	123.700	608.200	125.000	608.500	126.300	609.300	127.100	609.800	127.500
GR	609.900	127.600	611.000	128.000	612.800	138.000	614.600	147.000	614.600	150.000
GR	614.600	175.000	614.600	200.000	0.000	0.000	0.000	0.000	0.000	0.000

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SB	0.000	2.500	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE LA GRAND BLVD								
X1	3510.000	0.000	0.000	0.000	80.000	80.000	80.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	612.900	615.200	0.000	0.000	0.000	0.000	0.000
BT	-16.000	0.000	615.300	0.000	25.000	615.300	0.000	50.000	615.300	0.000
BT	0.000	75.000	615.400	0.000	100.000	615.500	0.000	122.500	615.400	609.900
BT	0.000	122.600	615.400	611.500	122.900	615.400	612.100	123.700	615.400	612.900
BT	0.000	126.300	615.400	512.900	127.100	615.400	612.100	127.500	615.400	611.500
BT	0.000	127.600	615.400	609.900	150.000	615.300	0.000	175.000	615.300	0.000
BT	0.000	200.000	615.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		190 FT UPSTREAM LA GRAND BLVD								
X1	3700.000	13.000	50.000	90.000	190.000	190.000	190.000	0.000	0.000	0.000
GR	614.000	0.000	614.600	25.000	614.500	50.000	613.300	60.000	611.900	70.000
GR	611.600	74.000	610.700	76.000	610.500	77.000	610.700	79.000	611.600	81.000
GR	614.200	90.000	615.600	115.000	616.300	140.000	0.000	0.000	0.000	0.000
X1	3860.000	23.000	100.000	137.000	160.000	160.000	160.000	0.000	0.000	0.000
GR	614.800	0.000	614.800	25.000	614.300	50.000	613.800	75.000	613.300	100.000
GR	611.200	112.000	610.200	115.000	609.800	115.500	609.700	115.600	609.200	115.900
GR	608.400	116.700	608.000	118.000	608.400	119.300	609.200	120.100	609.700	120.500
GR	609.800	120.600	610.300	123.000	610.900	125.000	611.200	126.000	614.000	137.000
GR	614.100	150.000	614.200	175.000	614.200	200.000	0.000	0.000	0.000	0.000
SB	0.000	3.240	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE DUPREE ROAD								
X1	4000.000	0.000	0.000	0.000	140.000	140.000	140.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	612.800	615.300	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	615.300	0.000	25.000	615.400	0.000	50.000	615.400	0.000
BT	0.000	75.000	615.600	0.000	100.000	615.700	0.000	115.500	615.700	609.800
BT	0.000	115.600	615.700	611.400	115.900	615.700	612.000	116.700	615.700	612.800
BT	0.000	119.300	615.700	612.800	120.100	615.600	612.000	120.500	615.600	611.400
BT	0.000	120.600	615.600	609.800	125.000	615.600	0.000	150.000	615.500	0.000
BT	0.000	175.000	615.400	0.000	200.000	615.200	0.000	0.000	0.000	0.000
X1	4200.000	25.000	100.000	141.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	615.000	0.000	615.000	25.000	615.000	50.000	615.000	75.000	614.900	100.000
GR	612.100	110.000	611.300	113.000	610.400	117.000	609.800	117.500	609.700	117.600
GR	609.200	117.900	608.900	118.700	608.900	120.000	608.900	121.300	609.200	122.100
GR	609.700	122.500	609.800	122.600	610.300	124.000	610.300	125.000	611.300	127.000
GR	612.200	130.000	614.800	141.000	614.800	150.000	614.800	175.000	614.800	200.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.250	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE MOULON ROUGE DRIVE								
X1	4260.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	612.800	615.000	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	615.400	0.000	25.000	615.500	0.000	50.000	615.600	0.000
BT	0.000	75.000	615.700	0.000	100.000	615.900	0.000	117.500	615.900	609.800
BT	0.000	117.600	615.900	611.400	117.900	615.900	612.000	118.700	615.900	612.800
BT	0.000	121.300	615.900	612.800	122.100	615.900	612.000	122.500	615.800	611.400
BT	0.000	122.600	615.800	609.800	125.000	615.700	0.000	150.000	615.500	0.000

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BT	0.000	175.000	615.200	0.000	200.000	615.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		290 FT UPSTREAM MOULON ROUGE DRIVE								
X1	4550.000	10.000	50.000	89.000	290.000	290.000	290.000	0.000	0.000	0.000
GR	615.200	0.000	614.800	25.000	613.200	50.000	611.200	62.000	610.200	68.000
GR	610.500	71.000	611.200	72.000	613.100	80.000	614.900	89.000	615.500	114.000
X1	4700.000	24.000	75.000	118.000	150.000	150.000	150.000	0.000	0.000	0.000
GR	614.800	0.000	614.800	25.000	614.800	50.000	615.800	75.000	614.000	85.000
GR	611.400	95.000	610.800	97.000	610.300	97.500	610.200	97.600	609.700	97.900
GR	609.200	98.700	609.200	100.000	609.200	101.300	609.700	102.100	610.200	102.500
GR	610.300	102.600	610.800	103.000	611.400	105.000	614.200	115.000	615.500	118.000
GR	615.500	125.000	614.900	150.000	614.900	175.000	614.900	200.000	0.000	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.250	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE VERSAILLES LANE								
X1	4760.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	613.600	614.800	0.000	0.000	0.000	0.000	0.000
BT	-19.000	0.000	614.800	0.000	25.000	615.000	0.000	50.000	615.400	0.000
BT	0.000	75.000	615.800	0.000	97.000	615.900	0.000	97.500	615.900	610.300
BT	0.000	97.600	615.900	611.900	97.900	615.900	612.500	98.700	615.900	613.300
BT	0.000	100.000	615.900	613.600	101.300	615.900	613.300	102.100	615.900	612.500
BT	0.000	102.500	615.900	611.900	102.600	615.900	610.300	103.000	615.900	0.000
BT	0.000	125.000	615.700	0.000	150.000	615.500	0.000	175.000	615.200	0.000
BT	0.000	200.000	614.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.040	0.040	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		880 FT UPSTREAM VERSAILLES LANE								
X1	5640.000	13.000	50.000	71.000	700.000	800.000	880.000	0.000	0.000	0.000
GR	615.900	-100.000	616.300	25.000	616.800	50.000	612.400	55.000	611.300	56.000
GR	610.900	59.000	611.700	63.000	612.400	65.000	617.600	71.000	618.500	85.000
GR	617.000	90.000	617.100	96.000	617.000	121.000	0.000	0.000	0.000	0.000
NC	0.035	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6900.000	21.000	88.000	109.000	1400.000	1100.000	1250.000	0.000	0.000	0.000
GR	617.400	0.000	616.600	25.000	616.600	50.000	616.400	75.000	615.400	88.000
GR	613.300	94.000	612.600	95.000	612.100	98.500	612.100	98.600	611.400	99.000
GR	611.100	100.000	611.400	101.000	612.100	101.500	612.100	101.600	612.600	105.000
GR	613.500	106.000	615.500	109.000	616.300	125.000	616.200	150.000	616.100	175.000
GR	616.000	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.320	3.000	0.000	3.000	0.000	7.070	0.000	0.000	0.000
		UPSTREAM FACE HARRISON ROAD								
X1	6916.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	614.100	615.400	0.000	0.000	0.000	0.000	0.000
BT	-15.000	0.000	617.400	0.000	25.000	616.600	0.000	50.000	616.600	0.000
BT	0.000	75.000	616.500	0.000	98.500	615.400	612.100	98.600	615.400	613.100
BT	0.000	99.000	615.400	613.800	100.000	615.400	614.100	101.000	615.400	613.800
BT	0.000	101.500	615.400	613.100	101.600	615.400	612.100	125.000	616.300	0.000
BT	0.000	150.000	616.200	0.000	175.000	616.100	0.000	200.000	616.000	0.000

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NC	0.030	0.030	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7200.000	20.000	100.000	114.000	284.000	284.000	284.000	0.000	0.000	0.000
GR	617.200	-50.000	616.800	25.000	616.400	50.000	616.000	75.000	615.600	100.000
GR	612.800	106.000	612.200	106.500	612.200	106.600	612.200	107.000	612.200	108.000
GR	612.500	109.000	612.500	109.500	612.500	109.600	612.700	110.000	614.700	111.000
GR	616.700	114.000	616.800	125.000	617.100	150.000	617.300	175.000	617.600	200.000
SB	0.000	3.210	3.000	0.000	3.000	0.000	7.070	0.000	0.000	0.000
NC	0.035	0.035	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		UPSTREAM FACE ISABELE ROAD								
X1	7590.000	18.000	38.000	63.000	390.000	390.000	390.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	615.600	616.600	0.000	0.000	0.000	0.000	0.000
BT	-13.000	-50.000	617.100	0.000	25.000	617.200	0.000	48.500	617.200	613.600
BT	0.000	48.500	617.200	614.600	49.000	617.200	615.300	50.000	617.200	615.600
BT	0.000	51.000	617.200	615.300	51.500	617.200	614.600	51.600	617.200	613.500
BT	0.000	54.000	617.600	0.000	75.000	617.100	0.000	125.000	616.600	0.000
BT	0.000	175.000	617.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	617.100	-50.000	616.900	25.000	616.600	38.000	614.300	46.000	613.200	47.000
GR	613.600	48.500	612.900	48.600	612.800	49.000	612.600	50.000	612.900	51.000
GR	613.000	51.500	613.600	51.600	613.600	52.000	614.800	54.000	617.300	63.000
GR	617.100	75.000	616.600	125.000	617.000	175.000	0.000	0.000	0.000	0.000
		150 FT UPSTREAM ISABELE ROAD								
X1	7740.000	12.000	43.000	58.000	150.000	150.000	150.000	0.000	0.000	0.000
GR	616.600	-50.000	617.400	25.000	616.900	42.000	616.200	43.000	614.600	47.000
GR	613.700	48.000	613.400	50.000	613.700	53.000	614.500	54.000	616.300	58.000
GR	617.300	75.000	616.300	150.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.035	0.035	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7880.000	19.000	96.000	105.000	140.000	140.000	140.000	0.000	0.000	0.000
GR	617.500	0.000	617.200	25.000	617.000	50.000	616.700	75.000	616.500	96.000
GR	612.900	97.500	612.800	97.600	612.300	97.900	611.500	98.700	611.200	100.000
GR	611.500	101.300	612.300	102.100	612.800	102.400	612.900	102.500	615.700	105.000
GR	616.100	125.000	616.600	150.000	617.200	175.000	617.600	200.000	0.000	0.000
SB	0.000	2.400	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
		UPSTREAM FACE SPRINGHILL ROAD								
X1	7920.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	616.200	617.500	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	617.500	0.000	25.000	617.500	0.000	50.000	617.600	0.000
BT	0.000	75.000	617.700	0.000	97.500	617.700	612.900	97.600	617.700	614.500
BT	0.000	97.900	617.700	615.100	98.700	617.700	615.900	100.000	617.700	616.200
BT	0.000	101.300	617.700	615.900	102.100	617.700	615.100	102.400	617.600	614.500
BT	0.000	102.500	617.600	612.900	125.000	617.600	0.000	150.000	617.600	0.000
BT	0.000	175.000	617.600	0.000	200.000	617.600	0.000	0.000	0.000	0.000
		120 FT UPSTREAM SPRINGHILL ROAD								
X1	8040.000	15.000	26.000	43.000	100.000	140.000	120.000	0.000	0.000	0.000
GR	617.600	0.000	617.500	10.000	617.200	25.000	616.800	26.000	615.100	31.000
GR	614.500	32.000	613.900	35.000	614.500	37.000	615.200	39.000	617.000	43.000
GR	618.000	45.000	617.400	47.000	617.300	60.000	616.900	85.000	620.000	240.000

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NC	0.030	0.030	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		110 FT DOWNSTREAM KING ROAD								
X1	8100.000	14.000	45.000	53.000	50.000	70.000	60.000	0.000	0.000	0.000
GR	618.100	0.000	617.800	25.000	617.200	40.000	617.000	43.000	616.800	45.000
GR	614.700	47.000	614.400	50.000	614.700	53.000	617.400	56.000	617.500	57.000
GR	617.600	60.000	617.300	75.000	617.800	90.000	620.000	250.000	0.000	0.000
QT	4.000	70.000	115.000	130.000	170.000	0.000	0.000	0.000	0.000	0.000
X1	8210.000	21.000	96.000	106.000	80.000	130.000	110.000	0.000	0.000	0.000
GR	617.800	0.000	617.300	25.000	616.800	50.000	616.300	75.000	615.800	96.000
GR	614.800	97.000	613.900	97.500	613.800	97.600	613.300	97.900	612.500	98.700
GR	612.200	100.000	612.500	101.300	613.300	102.100	613.800	102.400	613.900	102.500
GR	614.200	102.600	617.700	106.000	617.800	125.000	618.000	150.000	618.100	175.000
GR	618.300	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.340	3.000	0.000	5.000	0.000	19.630	0.000	0.000	0.000
NC	0.035	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		UPSTREAM FACE KING ROAD								
X1	8248.000	0.000	0.000	0.000	38.000	38.000	38.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	617.200	617.700	0.000	0.000	0.000	0.000	0.000
BT	-17.000	0.000	617.800	0.000	25.000	617.700	0.000	50.000	617.800	0.000
BT	0.000	75.000	618.000	0.000	97.500	618.100	613.900	97.600	618.100	615.500
BT	0.000	97.900	618.100	616.100	98.700	618.100	616.900	100.000	618.100	617.200
BT	0.000	101.300	618.100	616.900	102.100	618.100	616.100	102.400	618.100	615.500
BT	0.000	102.500	618.100	613.900	125.000	618.100	0.000	150.000	618.000	0.000
BT	0.000	175.000	618.200	0.000	200.000	618.300	0.000	0.000	0.000	0.000
X1	8400.000	24.000	100.000	110.000	150.000	150.000	152.000	0.000	0.000	0.000
GR	618.200	0.000	617.900	25.000	617.500	50.000	617.200	75.000	616.900	100.000
GR	615.100	102.000	614.900	103.300	614.700	103.400	614.300	103.700	614.200	104.000
GR	614.100	104.500	614.300	105.300	614.700	105.700	614.900	105.800	615.000	107.000
GR	617.600	110.000	617.800	115.000	618.400	125.000	618.600	137.000	618.900	146.000
GR	619.000	148.000	619.300	154.000	620.100	175.000	621.400	200.000	0.000	0.000
SB	0.000	1.310	3.000	0.000	2.500	0.000	4.900	0.000	0.000	0.000
		DRIVEWAY OFF KING ROAD								
X1	8412.000	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	616.600	617.500	0.000	0.000	0.000	0.000	0.000
BT	-16.000	0.000	618.200	0.000	25.000	617.900	0.000	50.000	617.500	0.000
BT	0.000	75.000	617.500	0.000	100.000	617.800	0.000	103.300	617.800	614.900
BT	0.000	103.400	617.800	615.800	103.700	617.800	616.400	104.500	617.800	616.600
BT	0.000	105.300	617.800	616.400	105.700	617.800	615.800	105.800	617.800	614.900
BT	0.000	125.000	618.400	0.000	148.000	619.000	0.000	175.000	620.100	0.000
BT	0.000	200.000	621.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8500.000	24.000	102.300	104.800	83.000	38.000	88.000	0.000	0.000	0.000
GR	617.900	0.000	617.400	25.000	616.900	50.000	616.500	75.000	616.000	100.000
GR	615.200	101.000	614.900	102.300	614.700	102.400	614.700	102.700	614.200	103.500
GR	614.100	104.000	614.200	104.300	614.400	104.700	614.900	104.800	615.000	106.000
GR	616.600	107.000	618.200	115.000	618.400	126.000	618.200	140.000	618.100	147.000
GR	617.400	150.000	618.300	153.000	620.800	175.000	621.300	200.000	0.000	0.000

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SB	0.000	1.310	3.000	0.000	2.500	0.000	4.900	0.000	0.000	0.000
		DRIVEWAY OFF KING ROAD								
X1	8512.000	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	615.600	617.400	0.000	0.000	0.000	0.000	0.000
BT	-19.000	0.000	617.900	0.000	25.000	618.000	0.000	50.000	617.900	0.000
BT	0.000	75.000	617.900	0.000	100.000	618.100	0.000	101.000	618.100	0.000
BT	0.000	102.300	618.100	614.900	102.400	618.100	615.800	102.700	618.100	616.400
BT	0.000	103.500	618.100	616.600	104.300	618.100	616.400	104.700	618.100	615.800
BT	0.000	104.800	618.100	614.900	106.000	618.100	0.000	126.000	618.400	0.000
BT	0.000	140.000	618.200	0.000	150.000	617.400	0.000	175.000	620.800	0.000
BT	0.000	200.000	621.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		452 FT UPSTREAM OF KING ROAD								
X1	8700.000	11.000	50.000	67.000	170.000	200.000	188.000	0.000	0.000	0.000
GR	618.100	-50.000	618.200	25.000	617.200	50.000	615.500	56.000	615.200	57.000
GR	614.600	60.000	615.200	61.000	615.500	64.000	616.900	67.000	613.200	92.000
GR	618.900	117.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.050	0.050	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		300 FT DOWNSTREAM OF MIDDLEBELT ROAD								
X1	10400.000	11.000	50.000	72.000	1800.000	1600.000	1700.000	0.000	0.000	0.000
GR	621.000	0.000	620.800	25.000	621.600	50.000	618.900	56.000	618.500	57.000
GR	618.300	60.000	618.500	64.000	618.900	65.000	620.100	72.000	618.900	97.000
GR	620.400	122.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

CCHV= 0.100 CEHV= 0.300

*SECNO 0.000

0.00	2.71	603.81	0.00	604.00	603.99	0.18	0.00	0.00	602.10
140.	9.	130.	1.	6.	37.	1.	0.	0.	602.00
0.00	1.84	3.54	1.52	0.040	0.035	0.035	0.000	601.10	1503.53
0.002505	0.	0.	0.	0	0	5	0.00	23.98	1527.51

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.38	3.00	0.00	17.00	0.00	93.50	0.00	601.10	601.10

*SECNO 0.160

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 603.992 ELLC= 607.000 PCWSE= 603.808 ELTRD= 607.500

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 607.50 MAX ELLC= 607.00

UPSTREAM FACE INKSTER ROAD

0.16	2.78	603.88	0.00	0.00	604.09	0.21	0.09	0.01	602.10
140.	0.	140.	0.	0.	38.	0.	0.	0.	602.00
0.00	0.00	3.69	0.42	0.000	0.035	0.035	0.000	601.10	1503.27
0.002990	32.	32.	32.	2	0	0	-6.44	24.25	1527.52

CCHV= 0.300 CEHV= 0.500

*SECNO 0.920

0.92	2.72	604.12	0.00	0.00	604.34	0.22	0.25	0.00	605.90
140.	0.	140.	0.	0.	37.	0.	0.	0.	606.10
0.01	0.00	3.77	0.00	0.000	0.035	0.000	0.000	601.40	1785.67
0.003625	26.	76.	126.	2	0	0	0.00	19.39	1805.06

*SECNO 0.116

3470 ENCROACHMENT STATIONS= 1760.0 1830.0 TYPE= 1 TARGET= 70.000

0.12	2.83	604.23	0.00	0.00	604.43	0.20	0.08	0.01	605.90
140.	0.	140.	0.	0.	39.	0.	0.	0.	606.10
0.01	0.00	3.56	0.00	0.000	0.035	0.000	0.000	601.40	1785.50
0.003077	24.	24.	24.	2	0	0	0.00	19.72	1805.23

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 0.130

3470 ENCROACHMENT STATIONS= 1770.0 1820.0 TYPE= 1 TARGET= 50.000

0.13	2.89	604.29	0.00	0.00	604.47	0.19	0.04	0.00	605.90
140.	0.	140.	0.	0.	40.	0.	0.	0.	606.10
0.01	0.00	3.48	0.00	0.000	0.035	0.000	0.000	601.40	1785.43
0.002877	14.	14.	14.	0	0	0	0.00	19.86	1805.30

*SECNO 0.310

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000

0.31	2.72	604.72	0.00	0.00	604.80	0.08	0.29	0.03	602.40
140.	19.	119.	1.	15.	51.	2.	0.	0.	604.10
0.03	1.32	2.34	0.61	0.040	0.035	0.035	0.000	602.00	967.40
0.001057	119.	180.	194.	2	0	0	0.00	42.36	1009.76

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.67	3.00	0.00	23.00	0.00	92.00	0.00	602.00	602.00

*SECNO 0.335

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 604.790 ELLC= 606.000 PCWSE= 604.719 ELTRD= 606.100

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 606.10 MAX ELLC= 606.00

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000
UPSTREAM FACE GRIX ROAD

0.33	2.73	604.73	0.00	0.00	604.85	0.12	0.03	0.02	602.40
140.	0.	140.	0.	0.	51.	0.	0.	0.	604.10
0.04	0.00	2.73	0.02	0.000	0.035	0.040	0.000	602.00	967.36
0.001642	25.	25.	25.	1	0	0	-16.88	42.47	1009.83

*SECNO 0.535
200 FT UPSTREAM GRIX ROAD

0.53	3.58	605.03	0.00	0.00	605.26	0.17	0.38	0.03	607.60
140.	0.	140.	0.	0.	42.	0.	1.	0.	606.80
0.05	0.00	3.33	0.00	0.000	0.035	0.000	0.000	601.50	174.62
0.002240	300.	200.	100.	2	0	0	0.00	17.87	192.49

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST
*SECNO 0.000									
	CONFLUENCE SILVER CREEK AND HAND DRAIN								
0.00	3.65	607.95	0.00	0.00	607.95	0.09	2.67	0.02	608.20
140.	0.	140.	0.	0.	57.	0.	3.	1.	609.00
0.25	0.00	2.47	0.00	0.000	0.035	0.000	0.000	604.20	495.68
0.001132	1725.	1725.	1725.	2	0	0	0.00	23.32	519.00
*SECNO 350.000									
	VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE								
350.00	3.21	608.31	0.00	0.00	608.42	0.11	0.46	0.01	609.30
80.	0.	80.	0.	0.	31.	0.	3.	1.	609.30
0.28	0.00	2.62	0.00	0.000	0.035	0.000	0.000	605.10	502.48
0.001794	350.	350.	350.	2	0	0	0.00	15.92	518.39
*SECNO 1090.000									
1090.00	2.84	609.74	0.00	0.00	609.90	0.16	1.46	0.03	607.80
80.	2.	76.	2.	2.	23.	2.	3.	2.	608.10
0.35	1.24	3.32	1.33	0.040	0.035	0.040	0.000	606.90	388.43
0.002165	740.	740.	740.	2	0	0	0.00	13.31	401.74

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.78	3.00	0.00	10.00	0.00	37.00	0.00	606.90	606.90

*SECNO 1122.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 609.902 ELLC= 611.500 PCWSE= 609.738 ELTRD= 611.900

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 611.90 MAX ELLC= 611.50

	UPSTREAM FACE WEST ROAD								
1122.00	2.91	609.81	0.00	0.00	609.99	0.18	0.08	0.01	607.80
80.	0.	80.	0.	0.	24.	0.	3.	2.	608.10
0.35	0.00	3.39	0.33	0.000	0.035	0.040	0.000	606.90	388.37
0.002756	32.	32.	32.	2	0	0	-3.19	13.44	401.81

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 1272.000									
	150 FT UPSTREAM OF WEST ROAD								
1272.00	3.26	610.26	0.00	0.00	610.44	0.18	0.45	0.00	611.10
80.	0.	80.	0.	0.	23.	0.	3.	2.	611.80
0.36	0.00	3.45	0.00	0.000	0.035	0.000	0.000	607.00	151.98
0.003334	170.	150.	130.	2	0	0	0.00	11.43	163.41
*SECNO 1400.000									
1400.00	3.28	610.78	0.00	0.00	611.00	0.23	0.54	0.02	612.10
80.	0.	80.	0.	0.	21.	0.	4.	2.	611.40
0.37	0.00	3.81	0.00	0.000	0.035	0.000	0.000	607.50	103.05
0.005486	150.	128.	100.	2	0	0	0.00	13.69	116.74

CCHV= 0.300 CEHV= 0.800

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	6.00	0.00	28.40	0.00	607.50	607.50

CCHV= 0.400 CEHV= 0.700

*SECNO 1447.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 611.003 ELLC= 613.500 PCWSE= 610.777 ELTRD= 618.200

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 618.20 MAX ELLC= 613.50

	UPSTREAM FACE PENN CENTRAL RR BRIDGE								
1447.00	3.52	611.02	0.00	0.00	611.34	0.33	0.27	0.07	612.10
80.	0.	80.	0.	0.	17.	0.	4.	2.	611.40
0.37	0.00	4.58	0.00	0.000	0.035	0.000	0.000	607.50	102.50
0.006052	47.	47.	47.	2	0	0	-6.96	15.12	117.61

CCHV= 0.400 CEHV= 0.500

*SECNO 1800.000

	353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE								
1800.00	3.97	612.07	0.00	0.00	612.19	0.12	0.77	0.08	610.20
80.	5.	65.	10.	5.	22.	7.	4.	2.	608.40
0.41	1.00	2.99	1.47	0.045	0.035	0.040	0.000	603.10	264.03
0.001100	300.	353.	400.	3	0	0	0.00	14.64	278.68

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= 0.300 CEHV= 0.500

*SECNO 2520.000

10 FT DOWNSTREAM OF BORDEAU ROAD

2520.00	4.13	612.63	0.00	0.00	612.67	0.04	0.45	0.02	611.40
80.	2.	78.	0.	3.	51.	0.	4.	2.	613.00
0.54	0.55	1.55	0.00	0.045	0.035	0.000	0.000	608.50	44.87
0.000401	720.	720.	720.	3	0	0	0.00	24.24	69.11

*SECNO 2530.000

2530.00	2.62	612.62	0.00	0.00	612.69	0.07	0.01	0.02	614.90
80.	0.	80.	0.	0.	37.	0.	5.	2.	614.30
0.54	0.00	2.15	0.00	0.000	0.035	0.000	0.000	610.00	106.49
0.001447	10.	10.	10.	1	0	0	0.00	23.08	129.57

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	8.05	3.00	0.00	6.00	0.00	17.00	0.00	610.00	610.00

*SECNO 2815.000

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
615.39	612.69	0.00	0.	80.	17.	10.	611.60	615.40

UPSTREAM FACE BORDEAU ROAD

2815.00	5.38	615.38	0.00	0.00	615.39	0.00	2.70	0.00	614.90
80.	0.	60.	20.	4.	127.	100.	5.	3.	614.30
0.74	0.10	0.47	0.20	0.030	0.035	0.030	0.000	610.00	84.79
0.000026	285.	285.	285.	0	0	0	0.00	213.75	298.54

*SECNO 2900.000

3280 CROSS SECTION 2900.00 EXTENDED 0.89 FEET

2900.00	5.79	615.39	0.00	0.00	615.39	0.00	0.00	0.00	613.80
80.	26.	53.	1.	132.	158.	8.	6.	3.	614.00
0.82	0.20	0.33	0.13	0.030	0.035	0.030	0.000	609.50	0.00
0.000011	100.	85.	70.	2	0	0	0.00	157.18	157.18

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.34	3.00	0.00	6.00	0.00	17.00	0.00	609.60	609.60

*SECNO 2980.000
3280 CROSS SECTION 2980.00 EXTENDED 1.00 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
616.54	615.39	0.00	54.	26.	17.	20.	613.00	614.80

UPSTREAM FACE DUVALLE ROAD

2980.00	5.90	615.50	0.00	0.00	615.50	0.00	0.12	0.00	613.80
80.	28.	51.	1.	144.	163.	10.	6.	4.	614.00
0.91	0.19	0.31	0.13	0.030	0.035	0.030	0.000	609.60	0.00
0.000009	80.	80.	80.	0	0	5	0.00	160.10	160.10

*SECNO 3100.000
3280 CROSS SECTION 3100.00 EXTENDED 0.50 FEET

120 FT UPSTREAM DUVALLE ROAD

3100.00	5.60	615.50	0.00	0.00	615.51	0.00	0.00	0.00	614.10
80.	8.	68.	4.	44.	164.	26.	7.	4.	614.20
0.99	0.18	0.41	0.16	0.030	0.030	0.030	0.000	609.90	0.00
0.000015	100.	120.	130.	0	0	0	0.00	139.00	139.00

*SECNO 3430.000
3280 CROSS SECTION 3430.00 EXTENDED 0.91 FEET

3430.00	7.31	615.51	0.00	0.00	615.51	0.00	0.00	0.00	614.60
80.	16.	55.	9.	91.	156.	48.	9.	5.	614.60
1.30	0.18	0.35	0.18	0.030	0.035	0.030	0.000	608.20	0.00
0.000015	310.	330.	340.	0	0	0	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.50	3.00	0.00	5.00	0.00	19.63	0.00	608.20	608.20

*SECNO 3510.000

3280 CROSS SECTION 3510.00 EXTENDED 0.97 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
616.15	615.51	0.00	57.	24.	20.	24.	612.90	615.20

UPSTREAM FACE LA GRAND BLVD

3510.00	7.36	615.56	0.00	0.00	615.57	0.00	0.05	0.00	614.60
80.	17.	54.	9.	97.	159.	51.	10.	6.	614.60
1.37	0.18	0.34	0.18	0.030	0.035	0.030	0.000	508.20	0.00
0.000014	80.	80.	80.	0	0	5	0.00	200.00	200.00

*SECNO 3700.000

3280 CROSS SECTION 3700.00 EXTENDED 1.57 FEET

190 FT UPSTREAM LA GRAND BLVD

3700.00	5.07	615.57	0.00	0.00	615.57	0.00	0.00	0.00	614.50
80.	16.	61.	3.	57.	118.	17.	11.	6.	614.20
1.49	0.27	0.52	0.20	0.030	0.030	0.030	0.000	510.50	0.00
0.000026	190.	190.	190.	0	0	0	0.00	114.42	114.42

*SECNO 3860.000

3280 CROSS SECTION 3860.00 EXTENDED 1.37 FEET

3860.00	7.57	615.57	0.00	0.00	615.57	0.00	0.00	0.00	613.30
80.	21.	46.	13.	133.	153.	90.	12.	7.	614.00
1.68	0.16	0.30	0.15	0.030	0.030	0.030	0.000	508.00	0.00
0.000006	160.	160.	160.	0	0	0	0.00	200.00	200.00

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	SWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.24	3.00	0.00	5.00	0.00	19.63	0.00	608.00	608.00

*SECNO 4000.000
3280 CROSS SECTION 4000.00 EXTENDED 1.47 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
616.41	615.57	0.00	53.	27.	20.	24.	612.80	615.30

UPSTREAM FACE DUPREE ROAD

4000.00	7.67	615.67	0.00	0.00	615.67	0.00	0.09	0.00	613.30
80.	22.	44.	14.	143.	157.	96.	13.	7.	614.00
1.85	0.15	0.28	0.15	0.030	0.030	0.030	0.000	608.00	0.00
0.000005	140.	140.	140.	0	0	5	0.00	200.00	200.00

*SECNO 4200.000
3280 CROSS SECTION 4200.00 EXTENDED 0.87 FEET

4200.00	6.77	615.67	0.00	0.00	615.67	0.00	0.00	0.00	614.90
80.	10.	62.	9.	68.	148.	51.	15.	8.	614.80
2.01	0.14	0.42	0.17	0.030	0.030	0.030	0.000	608.90	0.00
0.000014	200.	200.	200.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	SWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	608.90	608.90

*SECNO 4260.000
3280 CROSS SECTION 4260.00 EXTENDED 0.92 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	DLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
616.25	615.67	0.00	55.	25.	20.	19.	612.80	615.00

UPSTREAM FACE MOULON ROUGE DRIVE

4260.00	6.82	615.72	0.00	0.00	615.72	0.00	0.06	0.00	614.90
80.	12.	58.	10.	74.	150.	55.	15.	9.	614.80
2.06	0.16	0.39	0.19	0.030	0.035	0.030	0.000	608.90	0.00
0.000016	60.	60.	60.	0	0	5	0.00	200.00	200.00

*SECNO 4550.000

3280 CROSS SECTION 4550.00 EXTENDED 0.53 FEET

290 FT UPSTREAM MOULON ROUGE DRIVE

4550.00	5.53	615.73	0.00	0.00	615.73	0.00	0.00	0.00	613.20
80.	15.	63.	2.	61.	138.	13.	17.	10.	614.90
2.25	0.25	0.46	0.13	0.030	0.030	0.030	0.000	610.20	0.00
0.000016	290.	290.	290.	0	0	0	0.00	114.00	114.00

*SECNO 4700.000

3265 DIVIDED FLOW

3280 CROSS SECTION 4700.00 EXTENDED 0.93 FEET

4700.00	6.53	615.73	0.00	0.00	615.73	0.00	0.00	0.00	615.80
80.	12.	58.	11.	57.	126.	56.	17.	10.	615.50
2.36	0.20	0.46	0.19	0.030	0.030	0.030	0.000	609.20	0.00
0.000022	150.	150.	150.	0	0	0	0.00	197.85	200.00

SPECIAL BRIDGE

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	609.20	609.20

*SECNO 4760.000

3265 DIVIDED FLOW

3280 CROSS SECTION 4760.00 EXTENDED 0.96 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
616.31	615.73	0.00	62.	18.	20.	22.	613.60	614.80

UPSTREAM FACE VERSAILLES LANE

4760.00	6.56	615.76	0.00	0.00	615.76	0.00	0.03	0.00	615.80
80.	13.	54.	12.	60.	127.	59.	18.	11.	615.50
2.41	0.22	0.43	0.21	0.030	0.035	0.030	0.000	609.20	0.00
0.000026	60.	60.	60.	0	0	5	0.00	198.80	200.00

*SECNO 5640.000

880 FT UPSTREAM VERSAILLES LANE

5640.00	4.90	615.80	0.00	0.00	615.83	0.03	0.05	0.01	616.80
80.	0.	80.	0.	0.	57.	0.	21.	12.	617.60
2.58	0.00	1.41	0.00	0.000	0.035	0.000	0.000	610.90	51.15
0.000296	700.	880.	800.	1	0	0	0.00	17.76	68.91

*SECNO 6900.000

3265 DIVIDED FLOW

3280 CROSS SECTION 6900.00 EXTENDED 0.13 FEET

6900.00	5.03	616.13	0.00	0.00	616.16	0.02	0.33	0.00	615.40
80.	1.	77.	1.	4.	63.	6.	22.	14.	615.50
2.87	0.33	1.24	0.23	0.035	0.035	0.035	0.000	611.10	78.45
0.000230	1400.	1260.	1100.	2	0	0	0.00	76.96	200.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.32	3.00	0.00	3.00	0.00	7.07	0.00	611.10	611.10

*SECNO 6916.000

3265 DIVIDED FLOW

3230 CROSS SECTION 6916.00 EXTENDED 0.30 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.76	616.16	0.00	60.	21.	7.	9.	614.10	615.40

UPSTREAM FACE HARRISON ROAD

6916.00	5.19	616.29	0.00	0.00	616.31	0.02	0.15	0.00	615.40
80.	2.	74.	4.	5.	66.	18.	22.	14.	615.50
2.87	0.33	1.13	0.23	0.055	0.035	0.055	0.000	611.10	76.31
0.000177	16.	16.	16.	1	0	6	0.00	123.43	200.00

*SECNO 7200.000

7200.00	4.17	616.37	0.00	0.00	616.42	0.04	0.10	0.01	615.60
80.	17.	63.	0.	19.	34.	0.	23.	14.	616.70
2.92	0.92	1.85	0.00	0.030	0.040	0.000	0.000	612.20	51.61
0.000935	284.	284.	284.	2	0	0	0.00	61.90	113.51

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.21	3.00	0.00	3.00	0.00	7.07	0.00	612.20	612.20

*SECNO 7590.000

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST

3280 CROSS SECTION 7590.00 EXTENDED 0.12 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
622.76	616.45	0.00	53.	28.	7.	10.	615.60	616.60

UPSTREAM FACE ISABELE ROAD

7590.00	4.52	617.12	0.00	0.00	617.14	0.02	0.72	0.00	616.60
80.	4.	66.	10.	14.	53.	29.	24.	16.	617.30
3.02	0.27	1.25	0.36	0.035	0.035	0.035	0.000	612.60	-50.00
0.000359	390.	390.	390.	2	0	7	0.00	213.45	175.00

*SECNO 7740.000

3265 DIVIDED FLOW

3280 CROSS SECTION 7740.00 EXTENDED 0.87 FEET

150 FT UPSTREAM ISABELE ROAD

7740.00	3.77	617.17	0.00	0.00	617.20	0.03	0.06	0.00	616.20
80.	6.	57.	17.	17.	38.	35.	24.	16.	616.30
3.05	0.36	1.49	0.48	0.035	0.035	0.035	0.000	613.40	-50.00
0.000393	150.	150.	150.	2	0	0	0.00	159.15	150.00

*SECNO 7880.000

7880.00	6.03	617.23	0.00	0.00	617.24	0.01	0.04	0.00	616.50
80.	9.	39.	33.	26.	39.	57.	24.	17.	615.70
3.11	0.35	1.00	0.58	0.035	0.040	0.035	0.000	611.20	22.93
0.000188	140.	140.	140.	0	0	0	0.00	153.62	176.55

SPECIAL BRIDGE

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.40	3.00	0.00	5.00	0.00	19.63	0.00	611.20	611.20

*SECNO 7920.000

3280 CROSS SECTION 7920.00 EXTENDED 0.16 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
617.85	617.24	0.00	13.	67.	20.	25.	616.20	617.50

UPSTREAM FACE SPRINGHILL ROAD

7920.00	6.46	617.66	0.00	0.00	617.66	0.00	0.43	0.00	616.50
80.	18.	26.	36.	65.	43.	94.	24.	17.	615.70
3.13	0.28	0.61	0.39	0.035	0.040	0.035	0.000	611.20	0.00
0.000061	40.	40.	40.	0	0	4	0.00	200.00	200.00

*SECNO 8040.000

3265 DIVIDED FLOW

3280 CROSS SECTION 8040.00 EXTENDED 0.08 FEET

120 FT UPSTREAM SPRINGHILL ROAD

8040.00	3.77	617.67	0.00	0.00	617.69	0.02	0.02	0.01	616.80
80.	3.	58.	19.	7.	41.	34.	25.	17.	617.00
3.16	0.43	1.42	0.56	0.035	0.040	0.035	0.000	613.90	0.00
0.000493	100.	120.	140.	0	0	0	0.00	122.08	123.80

*SECNO 8100.000

110 FT DOWNSTREAM KING ROAD

8100.00	3.27	617.67	0.00	0.00	617.78	0.10	0.05	0.04	616.80
80.	6.	63.	10.	6.	23.	6.	25.	18.	614.70
3.17	1.04	2.81	1.77	0.030	0.035	0.030	0.000	614.40	28.04
0.001264	50.	60.	70.	1	0	0	0.00	37.85	65.89

*SECNO 8210.000

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
3280 CROSS SECTION 8210.00 EXTENDED 0.02 FEET									
8210.00	5.62	617.82	0.00	0.00	617.83	0.00	0.02	0.03	615.80
70.	46.	24.	0.	95.	36.	1.	25.	18.	617.70
3.22	0.48	0.67	0.07	0.030	0.035	0.030	0.000	612.20	0.00
0.000069	80.	110.	130.	2	0	0	0.00	127.78	127.78

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	5.00	0.00	19.63	0.00	612.20	612.20

*SECNO 8248.000
3280 CROSS SECTION 8248.00 EXTENDED 0.17 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.09	617.83	0.00	17.	53.	20.	25.	617.20	617.70

UPSTREAM FACE KING ROAD

8248.00	5.77	617.97	0.00	0.00	617.97	0.00	0.15	0.00	615.80
70.	45.	24.	1.	110.	38.	6.	25.	18.	617.70
3.24	0.41	0.64	0.10	0.035	0.035	0.035	0.000	612.20	0.00
0.000061	38.	38.	38.	0	0	4	0.00	146.59	146.59

*SECNO 8400.000

8400.00	3.88	617.98	0.00	0.00	618.00	0.02	0.02	0.01	616.90
70.	32.	37.	1.	46.	26.	2.	26.	18.	617.60
3.28	0.70	1.44	0.35	0.035	0.035	0.035	0.000	614.10	18.45
0.000436	150.	152.	150.	0	0	0	0.00	99.52	117.98

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8412.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
622.13	618.00	0.00	60.	10.	5.	6.	616.60	617.50

DRIVEWAY OFF KING ROAD

8412.00	3.95	618.05	0.00	0.00	618.07	0.02	0.06	0.00	616.90
70.	35.	35.	1.	53.	26.	2.	26.	18.	617.60
3.28	0.66	1.31	0.35	0.035	0.035	0.035	0.000	614.10	11.87
0.000343	12.	12.	12.	1	0	7	0.00	107.42	119.29

*SECNO 8500.000

3265 DIVIDED FLOW

3280 CROSS SECTION 8500.00 EXTENDED 0.18 FEET

8500.00	3.98	618.08	0.00	0.00	618.08	0.00	0.01	0.00	614.90
70.	57.	7.	6.	121.	9.	13.	26.	19.	614.90
3.33	0.47	0.75	0.45	0.035	0.035	0.035	0.000	614.10	0.00
0.000078	88.	83.	88.	0	0	0	0.00	119.62	152.28

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8512.000

3265 DIVIDED FLOW

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3280 CROSS SECTION 8512.00 EXTENDED 0.33 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
622.23	618.08	0.00	57.	13.	5.	6.	616.60	617.40

DRIVEWAY OFF KING ROAD

8512.00	4.13	618.23	0.00	0.00	618.23	0.00	0.15	0.00	614.90
70.	58.	6.	6.	136.	10.	16.	26.	19.	614.90
3.34	0.42	0.66	0.37	0.035	0.035	0.035	0.000	614.10	0.00
0.000057	12.	12.	12.	0	0	6	0.00	131.42	152.76

*SECNO 8700.000

3280 CROSS SECTION 8700.00 EXTENDED 0.14 FEET

452 FT UPSTREAM OF KING ROAD

8700.00	3.64	618.24	0.00	0.00	618.26	0.02	0.02	0.01	617.20
70.	7.	53.	9.	20.	42.	17.	26.	19.	616.90
3.39	0.36	1.26	0.55	0.035	0.035	0.035	0.000	614.60	-50.00
0.000277	170.	188.	200.	0	0	0	0.00	143.38	93.38

*SECNO 10400.000

3265 DIVIDED FLOW

300 FT DOWNSTREAM OF MIDDLEBELT ROAD

10400.00	1.35	619.65	619.54	0.00	619.81	0.16	1.48	0.07	621.60
70.	0.	47.	23.	0.	13.	11.	28.	23.	620.10
3.53	0.00	3.63	2.13	0.000	0.050	0.050	0.000	618.30	54.32
0.018875	1800.	1700.	1600.	16	22	0	0.00	43.40	109.59

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THIS RUN EXECUTED 11 SEP 84 8:42:45

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************

T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      50-YEAR FLOW
T3      SILVER CREEK AND HAND DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        3.        0.        0.  0.002500      0.00      0.0        0.   605.000     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
```

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 2

CCHV= 0.100 CEHV= 0.300

*SECNO 0.000

0.00	3.33	604.43	0.00	605.00	604.68	0.25	0.00	0.00	602.10
220.	21.	198.	2.	10.	47.	1.	0.	0.	602.00
0.00	2.01	4.18	1.67	0.040	0.035	0.035	0.000	601.10	1501.18
0.002504	0.	0.	0.	0	0	5	0.00	26.46	1527.65

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.38	3.00	0.00	17.00	0.00	93.50	0.00	601.10	601.10

*SECNO 0.160

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 604.678 ELLC= 607.000 PCWSE= 604.427 ELTRD= 607.500

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 607.50 MAX ELLC= 607.00

UPSTREAM FACE INKSTER ROAD

0.16	3.37	604.47	0.00	0.00	604.79	0.33	0.09	0.02	602.10
220.	0.	220.	0.	0.	48.	0.	0.	0.	602.00
0.00	0.00	4.59	0.44	0.000	0.035	0.035	0.000	601.10	1501.03
0.003515	32.	32.	32.	2	0	0	-11.43	26.63	1527.66

CCHV= 0.300 CEHV= 0.500

*SECNO 0.920

0.92	3.39	604.79	0.00	0.00	605.08	0.29	0.27	0.01	605.90
220.	0.	220.	0.	0.	51.	0.	0.	0.	606.10
0.01	0.00	4.34	0.00	0.000	0.035	0.000	0.000	601.40	1784.67
0.003668	26.	76.	126.	2	0	0	0.00	21.38	1806.05

*SECNO 0.116

3470 ENCROACHMENT STATIONS= 1760.0 1830.0 TYPE= 1 TARGET= 70.000

0.12	3.50	604.90	0.00	0.00	605.17	0.27	0.08	0.01	605.90
220.	0.	220.	0.	0.	53.	0.	0.	0.	606.10
0.01	0.00	4.13	0.00	0.000	0.035	0.000	0.000	601.40	1784.50
0.003198	24.	24.	24.	2	0	0	0.00	21.73	1806.22

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST

*SECNO 0.130

3470 ENCROACHMENT STATIONS= 1770.0 1820.0 TYPE= 1 TARGET= 50.000

0.13	3.56	604.96	0.00	0.00	605.21	0.26	0.04	0.00	605.90
220.	0.	220.	0.	0.	54.	0.	0.	0.	605.10
0.01	0.00	4.06	0.00	0.000	0.035	0.000	0.000	601.40	1784.42
0.003026	14.	14.	14.	0	0	0	0.00	21.87	1806.29

*SECNO 0.310

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000

0.31	3.44	605.44	0.00	0.00	605.53	0.09	0.26	0.05	602.40
220.	36.	174.	9.	25.	68.	10.	0.	0.	604.10
0.03	1.44	2.58	0.97	0.040	0.035	0.035	0.000	602.00	963.49
0.000884	119.	180.	194.	2	0	0	0.00	54.02	1017.50

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.67	3.00	0.00	23.00	0.00	92.00	0.00	602.00	602.00

*SECNO 0.335

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 605.521 ELLC= 606.000 PCWSE= 605.439 ELTRD= 606.100

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 606.10 MAX ELLC= 606.00

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000
UPSTREAM FACE GRIX ROAD

0.33	3.43	605.43	0.00	0.00	605.59	0.16	0.03	0.04	602.40
220.	0.	220.	0.	0.	68.	0.	1.	0.	604.10
0.03	0.00	3.26	0.02	0.000	0.035	0.040	0.000	602.00	963.49
0.001669	25.	25.	25.	0	0	0	-34.91	54.02	1017.51

*SECNO 0.535
200 FT UPSTREAM GRIX ROAD

0.53	4.30	605.30	0.00	0.00	606.04	0.24	0.41	0.04	607.60
220.	0.	220.	0.	0.	56.	0.	1.	0.	606.80
0.05	0.00	3.95	0.00	0.000	0.035	0.000	0.000	501.50	173.30
0.002582	300.	200.	100.	2	0	0	0.00	20.24	193.54

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST

*SECNO 0.000

CONFLUENCE SILVER CREEK AND HAND DRAIN

0.00	4.35	608.55	0.00	0.00	608.64	0.09	2.55	0.05	608.20
220.	32.	188.	0.	56.	74.	0.	4.	5.	609.00
0.26	0.56	2.56	0.00	0.040	0.035	0.000	0.000	604.20	322.23
0.000956	1725.	1725.	1725.	4	0	0	0.00	197.99	520.22

*SECNO 350.000

3265 DIVIDED FLOW

VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE

350.00	3.85	608.95	0.00	0.00	609.10	0.15	0.43	0.03	609.30
130.	2.	128.	0.	6.	42.	0.	5.	6.	609.30
0.29	0.30	3.08	0.00	0.040	0.035	0.000	0.000	605.10	391.55
0.002020	350.	350.	350.	2	0	0	0.00	90.02	519.44

*SECNO 1090.000

1090.00	3.56	610.46	0.00	0.00	610.70	0.23	1.55	0.04	607.80
130.	4.	121.	5.	3.	30.	3.	6.	7.	608.10
0.34	1.54	4.00	1.66	0.040	0.035	0.040	0.000	606.90	387.84
0.002187	740.	740.	740.	2	0	0	0.00	14.62	402.46

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.78	3.00	0.00	10.00	0.00	37.00	0.00	606.90	606.90

*SECNO 1122.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 610.695 ELLC= 611.500 PCWSE= 610.462 ELTRD= 611.900

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 611.90 MAX ELLC= 611.50

UPSTREAM FACE WEST ROAD

1122.00	3.62	610.52	0.00	0.00	610.80	0.28	0.08	0.02	607.80
130.	0.	130.	0.	0.	31.	0.	6.	7.	608.10
0.35	0.00	4.24	0.33	0.000	0.035	0.040	0.000	606.90	387.79
0.003255	32.	32.	32.	2	0	0	-6.13	14.73	402.52

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 1272.000									
	150 FT UPSTREAM OF WEST ROAD								
1272.00	4.08	611.08	0.00	0.00	611.31	0.23	0.50	0.01	611.10
130.	0.	130.	0.	0.	34.	0.	6.	7.	611.80
0.36	0.00	3.85	0.00	0.000	0.035	0.000	0.000	607.00	150.04
0.003347	170.	150.	130.	2	0	0	0.00	14.22	164.26
*SECNO 1400.000									
1400.00	4.06	611.56	0.00	0.00	611.79	0.23	0.48	0.00	612.10
130.	0.	130.	0.	0.	33.	0.	6.	7.	611.40
0.37	0.00	3.89	0.02	0.000	0.035	0.040	0.000	607.50	101.25
0.004229	150.	128.	100.	2	0	0	0.00	18.31	119.56

CCHV= 0.300 CEHV= 0.800

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	6.00	0.00	28.40	0.00	607.50	607.50

CCHV= 0.400 CEHV= 0.700

*SECNO 1447.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 611.794 ELLC= 613.500 PCWSE= 611.559 ELTRD= 618.200

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 618.20 MAX ELLC= 613.50

UPSTREAM FACE PENN CENTRAL RR BRIDGE									
1447.00	4.25	611.75	610.53	0.00	612.30	0.56	0.28	0.23	612.10
130.	0.	130.	0.	0.	22.	0.	6.	7.	611.40
0.37	0.00	5.99	0.00	0.000	0.035	0.000	0.000	607.50	100.84
0.009302	47.	47.	47.	2	15	0	-15.14	19.35	120.19

CCHV= 0.400 CEHV= 0.500

*SECNO 1800.000

353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE									
1800.00	5.03	613.13	0.00	0.00	613.27	0.14	0.80	0.17	610.20
130.	15.	95.	20.	11.	28.	12.	6.	7.	608.40
0.40	1.29	3.36	1.72	0.045	0.035	0.040	0.000	608.10	261.24
0.000995	300.	353.	400.	3	0	0	0.00	20.20	281.44

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= 0.300 CEHV= 0.500

*SECNO 2520.000

10 FT DOWNSTREAM OF BORDEAU ROAD

2520.00	5.14	613.64	0.00	0.00	613.69	0.04	0.39	0.03	611.40
130.	8.	121.	1.	10.	71.	3.	8.	8.	613.00
0.52	0.72	1.72	0.32	0.045	0.035	0.040	0.000	608.50	41.09
0.000338	720.	720.	720.	4	0	0	0.00	38.97	80.06

*SECNO 2530.000

2530.00	3.64	613.64	0.00	0.00	613.70	0.06	0.01	0.01	614.90
130.	0.	130.	0.	0.	65.	0.	8.	8.	614.30
0.52	0.00	2.01	0.00	0.000	0.035	0.000	0.000	610.00	103.59
0.000894	10.	10.	10.	1	0	0	0.00	30.77	134.36

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	8.05	3.00	0.00	6.00	0.00	17.00	0.00	610.00	610.00

*SECNO 2815.000

3280 CROSS SECTION 2815.00 EXTENDED 0.34 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
620.95	613.70	0.00	61.	70.	17.	10.	611.60	615.40

UPSTREAM FACE BORDEAU ROAD

2815.00	5.74	615.74	0.00	0.00	615.74	0.00	2.04	0.00	614.90
130.	2.	82.	46.	12.	141.	157.	9.	9.	614.30
0.69	0.16	0.58	0.29	0.030	0.035	0.030	0.000	610.00	48.02
0.000035	285.	285.	285.	0	0	7	0.00	251.98	300.00

*SECNO 2900.000

3280 CROSS SECTION 2900.00 EXTENDED 1.24 FEET

2900.00	6.14	615.74	0.00	0.00	615.74	0.00	0.00	0.00	613.80
130.	49.	78.	3.	168.	173.	15.	9.	9.	614.00
0.75	0.29	0.45	0.19	0.030	0.035	0.030	0.000	609.60	0.00
0.000018	100.	85.	70.	2	0	0	0.00	165.99	165.99

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.34	3.00	0.00	6.00	0.00	17.00	0.00	609.60	609.60

*SECNO 2980.000
3280 CROSS SECTION 2980.00 EXTENDED 1.32 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.77	615.74	0.00	109.	21.	17.	20.	613.00	614.80

UPSTREAM FACE DUVALLE ROAD

2980.00	6.22	615.82	0.00	0.00	615.82	0.00	0.08	0.00	613.80
130.	51.	76.	3.	176.	176.	17.	10.	9.	614.00
0.81	0.29	0.43	0.18	0.030	0.035	0.030	0.000	609.60	0.00
0.000016	80.	80.	80.	0	0	6	0.00	167.99	167.99

*SECNO 3100.000
3280 CROSS SECTION 3100.00 EXTENDED 0.82 FEET

120 FT UPSTREAM DUVALLE ROAD

3100.00	5.92	615.82	0.00	0.00	615.82	0.00	0.00	0.00	614.10
130.	17.	103.	10.	60.	180.	40.	11.	10.	614.20
0.88	0.28	0.57	0.25	0.030	0.030	0.030	0.000	609.90	0.00
0.000025	100.	120.	130.	0	0	0	0.00	147.76	147.76

*SECNO 3430.000
3280 CROSS SECTION 3430.00 EXTENDED 1.23 FEET

3430.00	7.63	615.83	0.00	0.00	615.83	0.00	0.01	0.00	614.60
130.	33.	79.	17.	123.	171.	65.	13.	11.	614.60
1.11	0.27	0.46	0.27	0.030	0.035	0.030	0.000	608.20	0.00
0.000023	310.	330.	340.	0	0	0	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.50	3.00	0.00	5.00	0.00	19.63	0.00	608.20	608.20

*SECNO 3510.000
3280 CROSS SECTION 3510.00 EXTENDED 1.26 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
617.53	615.83	0.00	112.	19.	20.	24.	612.90	615.20

UPSTREAM FACE LA GRAND BLVD

3510.00	7.66	615.86	0.00	0.00	615.86	0.00	0.03	0.00	614.60
130.	34.	78.	18.	126.	173.	67.	14.	11.	614.60
1.17	0.27	0.45	0.27	0.030	0.035	0.030	0.000	608.20	0.00
0.000022	80.	80.	80.	0	0	7	0.00	200.00	200.00

*SECNO 3700.000
3280 CROSS SECTION 3700.00 EXTENDED 1.87 FEET

190 FT UPSTREAM LA GRAND BLVD

3700.00	5.37	615.87	0.00	0.00	615.87	0.01	0.01	0.00	614.50
130.	30.	93.	8.	72.	130.	25.	15.	12.	614.20
1.25	0.41	0.71	0.31	0.030	0.030	0.030	0.000	610.50	0.00
0.000044	190.	190.	190.	0	0	0	0.00	124.52	124.52

*SECNO 3860.000
3280 CROSS SECTION 3860.00 EXTENDED 1.67 FEET

3860.00	7.87	615.87	0.00	0.00	615.88	0.00	0.00	0.00	613.30
130.	38.	68.	24.	163.	164.	108.	17.	13.	614.00
1.39	0.23	0.41	0.23	0.030	0.030	0.030	0.000	608.00	0.00
0.000010	160.	160.	160.	0	0	0	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.24	3.00	0.00	5.00	0.00	19.63	0.00	608.00	608.00

*SECNO 4000.000
3280 CROSS SECTION 4000.00 EXTENDED 1.72 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.08	615.88	0.00	111.	19.	20.	24.	612.80	615.30

UPSTREAM FACE DUPREE ROAD

4000.00	7.92	615.92	0.00	0.00	615.92	0.00	0.04	0.00	613.30
130.	38.	67.	25.	168.	166.	112.	18.	13.	614.00
1.51	0.23	0.40	0.22	0.030	0.030	0.030	0.000	608.00	0.00
0.000010	140.	140.	140.	0	0	7	0.00	200.00	200.00

*SECNO 4200.000
3280 CROSS SECTION 4200.00 EXTENDED 1.12 FEET

4200.00	7.02	615.92	0.00	0.00	615.93	0.00	0.00	0.00	614.90
130.	22.	91.	17.	93.	158.	66.	20.	14.	614.80
1.63	0.23	0.58	0.26	0.030	0.030	0.030	0.000	608.90	0.00
0.000024	200.	200.	200.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	608.90	608.90

*SECNO 4260.000
3280 CROSS SECTION 4260.00 EXTENDED 1.17 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
617.45	615.93	0.00	107.	23.	20.	19.	612.80	615.00

UPSTREAM FACE MOULON ROUGE DRIVE

4260.00	7.07	615.97	0.00	0.00	615.97	0.00	0.05	0.00	614.90
130.	25.	85.	20.	98.	160.	69.	20.	14.	614.80
1.67	0.25	0.53	0.28	0.030	0.035	0.030	0.000	608.90	0.00
0.000027	60.	60.	60.	0	0	5	0.00	200.00	200.00

*SECNO 4550.000
3280 CROSS SECTION 4550.00 EXTENDED 0.78 FEET

290 FT UPSTREAM MOULON ROUGE DRIVE

4550.00	5.77	615.97	0.00	0.00	615.98	0.01	0.01	0.00	613.20
130.	28.	93.	4.	74.	147.	19.	22.	15.	614.90
1.80	0.38	0.66	0.23	0.030	0.030	0.030	0.000	610.20	0.00
0.000031	290.	290.	290.	0	0	0	0.00	114.00	114.00

*SECNO 4700.000
3280 CROSS SECTION 4700.00 EXTENDED 1.18 FEET

4700.00	6.78	615.98	0.00	0.00	615.99	0.00	0.01	0.00	615.80
130.	23.	85.	22.	76.	137.	77.	23.	16.	615.50
1.89	0.31	0.62	0.29	0.030	0.030	0.030	0.000	609.20	0.00
0.000036	150.	150.	150.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	609.20	609.20

*SECNO 4760.000
3280 CROSS SECTION 4760.00 EXTENDED 1.22 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
617.51	615.99	0.00	111.	20.	20.	22.	613.60	614.80

UPSTREAM FACE VERSAILLES LANE

4760.00	6.81	616.01	0.00	0.00	616.02	0.00	0.03	0.00	615.80
130.	26.	79.	25.	79.	138.	80.	23.	16.	615.50
1.92	0.33	0.57	0.32	0.030	0.035	0.030	0.000	609.20	0.00
0.000041	60.	60.	60.	0	0	6	0.00	200.00	200.00

*SECNO 5640.000

3265 DIVIDED FLOW

3280 CROSS SECTION 5640.00 EXTENDED 0.17 FEET

880 FT UPSTREAM VERSAILLES LANE

5640.00	5.17	616.07	0.00	0.00	616.14	0.07	0.09	0.03	616.80
130.	1.	129.	0.	5.	62.	0.	27.	19.	617.60
2.04	0.18	2.10	0.00	0.040	0.035	0.000	0.000	510.90	-100.00
0.000611	700.	880.	800.	2	0	0	0.00	71.46	69.23

*SECNO 6900.000

3280 CROSS SECTION 6900.00 EXTENDED 0.60 FEET

6900.00	5.50	616.60	0.00	0.00	616.63	0.03	0.48	0.01	615.40
130.	5.	105.	20.	12.	72.	45.	30.	22.	615.50
2.31	0.46	1.45	0.44	0.035	0.035	0.035	0.000	611.10	50.03
0.000261	1400.	1260.	1100.	2	0	0	0.00	149.97	200.00

SPECIAL BRIDGE

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.32	3.00	0.00	3.00	0.00	7.07	0.00	611.10	611.10

*SECNO 6916.000

3280 CROSS SECTION 6916.00 EXTENDED 0.64 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
623.53	616.63	0.00	119.	12.	7.	9.	614.10	615.40

UPSTREAM FACE HARRISON RDAD

6916.00	5.54	616.64	0.00	0.00	616.66	0.02	0.04	0.00	615.40
130.	6.	103.	21.	14.	73.	48.	30.	22.	615.50
2.32	0.42	1.41	0.44	0.035	0.035	0.035	0.000	611.10	23.81
0.000241	16.	16.	16.	2	0	7	0.00	176.19	200.00

*SECNO 7200.000

7200.00	4.55	616.75	0.00	0.00	616.80	0.05	0.12	0.01	615.60
130.	51.	79.	0.	41.	39.	0.	30.	23.	616.70
2.36	1.24	2.02	0.13	0.030	0.040	0.030	0.000	612.20	28.24
0.000964	284.	284.	284.	2	0	0	0.00	91.05	119.30

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.21	3.00	0.00	3.00	0.00	7.07	0.00	612.20	612.20

*SECNO 7590.000

3265 DIVIDED FLOW

3280 CROSS SECTION 7590.00 EXTENDED 0.25 FEET

PRESSURE AND WEIR FLOW

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
633.60	616.80	0.00	107.	23.	7.	10.	615.60	616.60

UPSTREAM FACE ISABELE ROAD

7590.00	4.65	617.25	0.00	0.00	617.28	0.03	0.49	0.00	616.60
130.	12.	93.	25.	25.	56.	43.	31.	24.	617.30
2.44	0.47	1.66	0.58	0.035	0.035	0.035	0.000	612.60	-50.00
0.000596	390.	390.	390.	2	0	8	0.00	221.96	175.00

*SECNO 7740.000

3265 DIVIDED FLOW

3280 CROSS SECTION 7740.00 EXTENDED 1.04 FEET

150 FT UPSTREAM ISABELE ROAD

7740.00	3.94	617.34	0.00	0.00	617.38	0.04	0.09	0.00	616.20
130.	16.	80.	35.	30.	41.	50.	32.	25.	616.30
2.47	0.53	1.95	0.70	0.035	0.035	0.035	0.000	613.40	-50.00
0.000620	150.	150.	150.	2	0	0	0.00	192.31	150.00

*SECNO 7880.000

7880.00	6.23	617.43	0.00	0.00	617.44	0.02	0.06	0.01	616.50
130.	21.	52.	56.	42.	40.	72.	32.	26.	615.70
2.51	0.51	1.29	0.78	0.035	0.040	0.035	0.000	611.20	6.26
0.000294	140.	140.	140.	0	0	0	0.00	182.80	189.06

SPECIAL BRIDGE

5070>VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.40	3.00	0.00	5.00	0.00	19.63	0.00	611.20	611.20

*SECNO 7920.000

3280 CROSS SECTION 7920.00 EXTENDED 0.33 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.06	617.44	0.00	66.	64.	20.	25.	616.20	617.50

UPSTREAM FACE SPRINGHILL ROAD

7920.00	6.62	617.82	0.00	0.00	617.83	0.01	0.38	0.00	616.50
130.	33.	37.	60.	80.	44.	109.	32.	26.	615.70
2.53	0.42	0.83	0.55	0.035	0.040	0.035	0.000	611.20	0.00
0.000109	40.	40.	40.	0	0	5	0.00	200.00	200.00

*SECNO 8040.000

3265 DIVIDED FLOW

3280 CROSS SECTION 8040.00 EXTENDED 0.24 FEET

120 FT UPSTREAM SPRINGHILL ROAD

8040.00	3.93	617.83	0.00	0.00	617.87	0.04	0.03	0.02	616.80
130.	8.	83.	40.	11.	44.	48.	33.	26.	617.00
2.56	0.71	1.89	0.83	0.035	0.040	0.035	0.000	613.90	0.00
0.000804	100.	120.	140.	1	0	0	0.00	131.12	131.97

*SECNO 8100.000

110 FT DOWNSTREAM KING ROAD

8100.00	3.43	617.83	0.00	0.00	618.04	0.20	0.08	0.08	616.80
130.	15.	97.	19.	9.	24.	9.	33.	26.	614.70
2.56	1.61	4.06	2.06	0.030	0.035	0.030	0.000	614.40	22.45
0.002471	50.	60.	70.	2	0	0	0.00	69.78	92.23

*SECNO 8210.000

3280 CROSS SECTION 8210.00 EXTENDED 0.32 FEET

8210.00	5.92	618.12	0.00	0.00	618.12	0.01	0.03	0.06	615.80
115.	79.	33.	3.	123.	39.	14.	33.	27.	617.70
2.60	0.64	0.84	0.20	0.030	0.035	0.030	0.000	612.20	0.00
0.000099	80.	110.	130.	2	0	0	0.00	177.07	177.07

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	5.00	0.00	19.63	0.00	612.20	612.20

*SECNO 8248.000
3280 CROSS SECTION 8248.00 EXTENDED 0.42 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.83	618.12	0.00	71.	43.	20.	25.	617.20	617.70

UPSTREAM FACE KING ROAD

8248.00	6.01	618.21	0.00	0.00	618.22	0.01	0.09	0.00	615.80
115.	76.	35.	4.	133.	40.	22.	33.	27.	617.70
2.62	0.57	0.86	0.20	0.035	0.035	0.035	0.000	612.20	0.00
0.000099	38.	38.	38.	0	0	4	0.00	189.84	189.84

*SECNO 8400.000
3280 CROSS SECTION 8400.00 EXTENDED 0.03 FEET

8400.00	4.13	618.23	0.00	0.00	618.26	0.03	0.03	0.01	616.90
115.	64.	49.	2.	69.	28.	4.	34.	27.	617.60
2.65	0.92	1.75	0.55	0.035	0.035	0.035	0.000	614.10	0.00
0.000567	150.	152.	150.	0	0	0	0.00	122.11	122.11

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8412.000
3280 CROSS SECTION 8412.00 EXTENDED 0.09 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
629.44	618.26	0.00	106.	10.	5.	6.	616.60	617.50

DRIVEWAY OFF KING ROAD

8412.00	4.19	618.29	0.00	0.00	618.31	0.02	0.05	0.00	616.90
115.	66.	47.	3.	75.	29.	5.	34.	27.	617.60
2.65	0.87	1.63	0.53	0.035	0.035	0.035	0.000	614.10	0.00
0.000478	12.	12.	12.	2	0	7	0.00	123.12	123.12

*SECNO 8500.000

3265 DIVIDED FLOW

3280 CROSS SECTION 8500.00 EXTENDED 0.43 FEET

8500.00	4.23	618.33	0.00	0.00	618.34	0.01	0.02	0.00	614.90
115.	95.	10.	10.	147.	10.	20.	34.	28.	614.90
2.69	0.65	0.99	0.52	0.035	0.035	0.035	0.000	614.10	0.00
0.000123	88.	88.	88.	0	0	0	0.00	144.95	153.29

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8512.000

3280 CROSS SECTION 8512.00 EXTENDED 0.52 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
629.53	618.34	0.00	105.	10.	5.	6.	616.60	617.40

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ORIVEWAY OFF KING ROAD

8512.00	4.31	618.41	0.00	0.00	618.42	0.01	0.08	0.00	614.90
115.	95.	9.	11.	155.	10.	24.	34.	28.	614.90
2.69	0.61	0.92	0.46	0.035	0.035	3.035	0.000	614.10	0.00
0.000103	12.	12.	12.	0	0	8	0.00	154.04	154.04

*SECNO 8700.000
3280 CROSS SECTION 8700.00 EXTENDED 0.33 FEET

452 FT UPSTREAM OF KING ROAD

8700.00	3.83	618.43	0.00	0.00	618.46	0.03	0.03	0.01	617.20
115.	21.	76.	18.	40.	46.	23.	35.	28.	616.90
2.73	0.54	1.66	0.79	0.035	0.035	0.035	0.000	614.60	-50.00
0.000434	170.	188.	200.	0	0	0	0.00	150.32	100.32

*SECNO 10400.000

300 FT DOWNSTREAM OF MIDDLEBELT ROAD

10400.00	1.91	620.21	619.76	0.00	620.29	0.07	1.80	0.02	621.60
115.	0.	57.	58.	0.	23.	32.	38.	33.	620.10
2.95	0.00	2.53	1.78	0.000	0.050	0.050	0.000	618.30	53.07
0.005902	1800.	1700.	1600.	11	22	0	0.00	65.87	118.94

PRINTED IN U.S.A.

THIS RUN EXECUTED 11 SEP 84 8:43:13

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
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T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      100-YEAR FLOW
T3      SILVER CREEK AND HAND DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        4.        0.        0.  0.002500      0.00      0.0       0.   606.500     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 3

CCHV= 0.100 CEHV= 0.300

*SECNO 0.000

0.00	3.60	604.70	0.00	606.50	604.98	0.28	0.00	0.00	602.10
260.	28.	231.	2.	13.	52.	1.	0.	0.	602.00
0.00	2.16	4.44	1.73	0.040	0.035	0.035	0.000	601.10	1500.16
0.002496	0.	0.	0.	0	0	4	0.00	27.54	1527.71

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.38	3.00	0.00	17.00	0.00	93.50	0.00	601.10	601.10

*SECNO 0.160

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 604.977 ELLC= 607.000 PCWSE= 604.697 ELTRD= 607.500

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 607.50 MAX ELLC= 607.00

UPSTREAM FACE INKSTER ROAD

0.16	3.62	604.72	0.00	0.00	605.11	0.38	0.10	0.03	602.10
260.	0.	260.	0.	0.	52.	0.	0.	0.	602.00
0.00	0.00	4.98	0.44	0.000	0.035	0.035	0.000	601.10	1500.07
0.003756	32.	32.	32.	2	0	0	-13.99	27.64	1527.71

CCHV= 0.300 CEHV= 0.500

*SECNO 0.920

0.92	3.69	605.09	0.00	0.00	605.41	0.32	0.28	0.02	605.90
260.	0.	260.	0.	0.	57.	0.	0.	0.	606.10
0.01	0.00	4.54	0.00	0.000	0.035	0.000	0.000	601.40	1784.22
0.003631	26.	76.	126.	2	0	0	0.00	22.27	1806.49

*SECNO 0.116

3470 ENCROACHMENT STATIONS= 1760.0 1830.0 TYPE= 1 TARGET= 70.000

0.12	3.80	605.20	0.00	0.00	605.50	0.29	0.08	0.01	605.90
260.	0.	260.	0.	0.	50.	0.	0.	0.	606.10
0.01	0.00	4.34	0.00	0.000	0.035	0.000	0.000	601.40	1784.05
0.003203	24.	24.	24.	2	0	0	0.00	22.62	1806.67

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 0.130

3470 ENCROACHMENT STATIONS= 1770.0 1820.0 TYPE= 1 TARGET= 50.000

0.13	3.86	605.26	0.00	0.00	605.54	0.28	0.04	0.00	605.90
260.	0.	260.	0.	0.	61.	0.	0.	0.	606.10
0.01	0.00	4.27	0.00	0.000	0.035	0.000	0.000	601.40	1783.97
0.003045	14.	14.	14.	0	0	0	0.00	22.76	1806.74

*SECNO 0.310

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000

0.31	3.76	605.76	0.00	0.00	605.85	0.09	0.25	0.06	602.40
260.	45.	198.	16.	31.	75.	15.	1.	0.	604.10
0.03	1.48	2.64	1.07	0.040	0.035	0.035	0.000	602.00	961.72
0.000807	119.	180.	194.	1	0	0	0.00	59.29	1021.01

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.67	3.00	0.00	23.00	0.00	92.00	0.00	602.00	602.00

*SECNO 0.335

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 605.841 ELLC= 606.000 PCWSE= 605.757 ELTRD= 606.100

3370 NORMAL BRIDGE,NRD= 13 MIN ELTRD= 606.10 MAX ELLC= 606.00

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000
UPSTREAM FACE GRIX ROAD

0.33	3.74	605.74	0.00	0.00	605.93	0.19	0.03	0.05	602.40
260.	0.	260.	0.	0.	74.	0.	1.	0.	604.10
0.03	0.00	3.50	0.02	0.000	0.035	0.040	0.000	602.00	961.87
0.001720	25.	25.	25.	2	0	0	-44.84	58.82	1020.69

*SECNO 0.535
200 FT UPSTREAM GRIX ROAD

0.53	4.62	606.12	0.00	0.00	606.39	0.27	0.42	0.04	607.60
260.	0.	260.	0.	0.	62.	0.	1.	0.	606.80
0.04	0.00	4.17	0.00	0.000	0.035	0.000	0.000	601.50	172.72
0.002668	300.	200.	100.	2	0	0	0.00	21.28	194.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 0.000

CONFLUENCE SILVER CREEK AND HAND DRAIN

0.00	4.56	608.76	0.00	0.00	608.84	0.07	2.39	0.06	603.20
260.	63.	197.	0.	97.	79.	0.	6.	6.	609.00
0.28	0.65	2.49	0.00	0.040	0.035	0.000	0.000	604.20	276.11
0.000847	1725.	1725.	1725.	4	0	0	0.00	244.47	520.58

*SECNO 350.000

3265 DIVIDED FLOW

VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE

350.00	4.02	609.12	0.00	0.00	609.26	0.14	0.39	0.03	609.30
150.	11.	138.	0.	23.	45.	1.	7.	7.	609.30
0.31	0.48	3.09	0.25	0.040	0.035	0.040	0.000	605.10	330.63
0.001948	350.	350.	350.	2	0	0	0.00	185.63	554.86

*SECNO 1090.000

1090.00	3.74	610.64	0.00	0.00	610.91	0.27	1.59	0.07	607.80
150.	5.	138.	6.	3.	32.	3.	8.	9.	608.10
0.36	1.68	4.33	1.81	0.040	0.035	0.040	0.000	606.90	387.70
0.002380	740.	740.	740.	2	0	0	0.00	14.94	402.64

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	SWC	SWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.78	3.00	0.00	10.00	0.00	37.00	0.00	606.90	606.90

*SECNO 1122.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 610.911 ELLC= 611.500 PCWSE= 610.640 ELTRD= 611.900

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 611.90 MAX ELLC= 611.50

UPSTREAM FACE WEST ROAD

1122.00	3.80	610.70	0.00	0.00	611.03	0.33	0.09	0.03	607.80
150.	0.	150.	0.	0.	32.	0.	8.	9.	608.10
0.36	0.00	4.62	0.34	0.000	0.035	0.040	0.000	606.90	387.65
0.003654	32.	32.	32.	2	0	0	-7.02	15.06	402.70

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	#VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1272.000

150 FT UPSTREAM OF WEST ROAD

1272.00	4.33	611.33	0.00	0.00	611.58	0.25	0.52	0.02	611.10
150.	0.	150.	0.	1.	37.	0.	8.	9.	611.80
0.38	0.50	4.02	0.00	0.040	0.035	0.000	0.000	607.00	145.60
0.003282	170.	150.	130.	2	0	0	0.00	18.91	164.51

*SECNO 1400.000

1400.00	4.29	611.79	0.00	0.00	612.04	0.25	0.46	0.00	612.10
150.	0.	150.	0.	0.	38.	0.	8.	9.	611.40
0.38	0.00	3.98	0.77	0.000	0.035	0.040	0.000	607.50	100.71
0.003937	150.	128.	100.	2	0	0	0.00	19.67	120.38

CCHV= 0.300 CEHV= 0.800

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	6.00	0.00	28.40	0.00	607.50	607.50

CCHV= 0.400 CEHV= 0.700

*SECNO 1447.000

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 612.038 ELLC= 613.500 PCWSE= 611.793 ELTRD= 618.200

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 618.20 MAX ELLC= 613.50

UPSTREAM FACE PENN CENTRAL RR BRIDGE

1447.00	4.46	611.96	610.78	0.00	612.62	0.66	0.29	0.29	612.10
150.	0.	150.	0.	0.	23.	0.	8.	9.	611.40
0.39	0.00	6.54	0.00	0.000	0.035	0.000	0.000	607.50	100.32
0.010931	47.	47.	47.	2	15.	0	-18.43	20.67	120.99

CCHV= 0.400 CEHV= 0.500

*SECNO 1800.000

3301 HV CHANGED MORE THAN HVINS

353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1800.00	5.39	613.49	0.00	0.00	613.63	0.14	0.80	0.21	610.20
150.	20.	105.	25.	14.	30.	14.	8.	9.	608.40
0.42	1.36	3.45	1.76	0.045	0.035	0.040	0.000	508.10	260.27
0.000948	300.	353.	400.	2	0	0	0.00	22.39	282.66

CCHV= 0.300 CEHV= 0.500

*SECNO 2520.000

10 FT DOWNSTREAM OF BORDEAU ROAD

2520.00	5.48	613.98	0.00	0.00	614.03	0.04	0.37	0.03	611.40
150.	10.	137.	3.	14.	77.	8.	9.	10.	613.00
0.54	0.76	1.77	0.41	0.045	0.035	0.040	0.000	608.50	39.82
0.000316	720.	720.	720.	4	0	0	0.00	45.50	85.32

*SECNO 2530.000

2530.00	3.98	613.98	0.00	0.00	614.04	0.06	0.00	0.01	614.90
150.	0.	150.	0.	0.	76.	0.	9.	10.	614.30
0.54	0.00	1.99	0.00	0.000	0.035	0.000	0.000	510.00	102.61
0.000791	10.	10.	10.	0	0	0	0.00	33.65	136.26

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	8.05	3.00	0.00	6.00	0.00	17.00	0.00	610.00	610.00

*SECNO 2815.000

5280 CROSS SECTION 2815.00 EXTENDED 0.40 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
623.71	614.04	0.00	86.	65.	17.	10.	611.60	615.40

UPSTREAM FACE BORDEAU ROAD

2815.00	5.80	615.80	0.00	0.00	615.80	0.00	1.76	0.00	614.90
150.	3.	92.	56.	15.	143.	167.	11.	11.	614.30
0.69	0.18	0.64	0.33	0.030	0.035	0.030	0.000	510.00	44.91
0.000041	285.	285.	285.	0	0	7	0.00	255.09	300.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 2900.000
3280 CROSS SECTION 2900.00 EXTENDED 1.30 FEET

2900.00	6.20	615.80	0.00	0.00	615.80	0.00	0.00	0.00	613.80
150.	58.	89.	3.	174.	175.	16.	11.	11.	614.00
0.75	0.33	0.50	0.21	0.030	0.035	0.030	0.000	609.60	0.00
0.000022	100.	85.	70.	2	0	0	0.00	167.54	167.54

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.34	3.00	0.00	6.00	0.00	17.00	0.00	609.60	609.60

*SECNO 2930.000
3280 CROSS SECTION 2980.00 EXTENDED 1.39 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.84	615.80	0.00	127.	22.	17.	20.	613.00	614.80

UPSTREAM FACE DUVALLE ROAD

2980.00	6.28	615.88	0.00	0.00	615.89	0.00	0.08	0.00	613.80
150.	59.	87.	4.	182.	179.	18.	12.	12.	614.00
0.80	0.33	0.48	0.20	0.030	0.035	0.030	0.000	609.60	0.00
0.000020	80.	80.	80.	0	0	5	0.00	169.64	169.64

*SECNO 3100.000
3280 CROSS SECTION 3100.00 EXTENDED 0.89 FEET

120 FT UPSTREAM DUVALLE ROAD

3100.00	5.98	615.88	0.00	0.00	615.89	0.01	0.00	0.00	614.10
150.	20.	118.	12.	63.	183.	43.	13.	12.	614.20
0.86	0.32	0.64	0.28	0.030	0.030	0.030	0.000	609.90	0.00
0.000030	100.	120.	130.	0	0	0	0.00	149.59	149.59

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENOST
*SECNO 3430.000									
3280 CROSS SECTION	3430.00 EXTENDED		1.29 FEET						
3430.00	7.70	615.90	0.00	0.00	615.90	0.00	0.01	0.00	614.60
150.	40.	90.	21.	129.	174.	68.	16.	13.	614.60
1.07	0.31	0.51	0.30	0.030	0.035	0.030	0.000	608.20	0.00
0.000028	310.	330.	340.	0	0	0	0.00	200.00	200.00
SPECIAL BRIDGE									
5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED									
SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.50	3.00	0.00	5.00	0.00	19.63	0.00	608.20	608.20
*SECNO 3510.000									
3280 CROSS SECTION	3510.00 EXTENDED		1.34 FEET						
PRESSURE AND WEIR FLOW									

EGPRS	EGLWC	H3	QWEIR	QPR	AREA	TRAPEZOID AREA	ELLC	ELTRD
618.16	615.90	0.00	132.	20.	20.	24.	612.90	615.20
UPSTREAM FACE LA GRAND BLVD								
3510.00	7.73	615.93	0.00	0.00	615.94	0.00	0.04	0.00	614.60
150.	40.	88.	21.	134.	176.	71.	16.	14.	614.60
1.12	0.30	0.50	0.30	0.030	0.035	0.030	0.000	608.20	0.00
0.000026	80.	80.	80.	0	0	7	0.00	200.00	200.00
*SECNO 3700.000									
3280 CROSS SECTION	3700.00 EXTENDED		1.94 FEET						
190 FT UPSTREAM LA GRAND BLVD									
3700.00	5.44	615.94	0.00	0.00	615.94	0.01	0.01	0.00	614.50
150.	35.	105.	10.	76.	133.	28.	18.	15.	614.20
1.20	0.46	0.79	0.35	0.030	0.030	0.030	0.000	610.50	0.00
0.000053	190.	190.	190.	0	0	0	0.00	127.07	127.07

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 3860.000
3280 CROSS SECTION 3860.00 EXTENDED 1.74 FEET

3860.00	7.95	615.95	0.00	0.00	615.95	0.00	0.00	0.00	613.30
150.	44.	77.	29.	171.	167.	113.	19.	15.	614.00
1.32	0.26	0.46	0.26	0.030	0.030	0.030	0.000	606.00	0.00
0.000013	160.	160.	160.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.24	3.00	0.00	5.00	0.00	19.63	0.00	608.00	608.00

*SECNO 4000.000
3280 CROSS SECTION 4000.00 EXTENDED 1.80 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.89	615.95	0.00	130.	19.	20.	24.	612.80	615.30

UPSTREAM FACE DUPREE ROAD

4000.00	7.99	615.99	0.00	0.00	616.00	0.00	0.04	0.00	613.30
150.	45.	76.	29.	176.	169.	116.	20.	16.	614.00
1.43	0.26	0.45	0.25	0.030	0.030	0.030	0.000	608.00	0.00
0.000012	140.	140.	140.	0	0	7	0.00	200.00	200.00

*SECNO 4200.000
3280 CROSS SECTION 4200.00 EXTENDED 1.20 FEET

4200.00	7.10	616.00	0.00	0.00	616.00	0.00	0.00	0.00	614.90
150.	27.	103.	21.	101.	161.	71.	22.	17.	614.80
1.54	0.26	0.64	0.29	0.030	0.030	0.030	0.000	608.90	0.00
0.000029	200.	200.	200.	0	0	0	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	608.90	608.90

*SECNO 4260.000
3280 CROSS SECTION 4260.00 EXTENDED 1.25 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.04	616.00	0.00	127.	24.	20.	19.	612.80	615.00

UPSTREAM FACE MOULON ROUGE DRIVE

4260.00	7.14	616.04	0.00	0.00	616.05	0.00	0.05	0.00	614.90
130.	31.	96.	24.	106.	163.	73.	23.	17.	614.80
1.57	0.29	0.59	0.32	0.030	0.035	0.030	0.000	608.90	0.00
0.000032	60.	60.	60.	0	0	5	0.00	200.00	200.00

*SECNO 4550.000
3280 CROSS SECTION 4550.00 EXTENDED 0.85 FEET

290 FT UPSTREAM MOULON ROUGE DRIVE

4550.00	5.85	616.05	0.00	0.00	616.06	0.01	0.01	0.00	613.20
130.	33.	111.	6.	78.	150.	21.	25.	18.	614.90
1.70	0.43	0.74	0.27	0.030	0.030	0.030	0.000	610.20	0.00
0.000038	290.	290.	290.	0	0	0	0.00	114.00	114.00

*SECNO 4700.000
3280 CROSS SECTION 4700.00 EXTENDED 1.26 FEET

4700.00	6.86	616.06	0.00	0.00	616.06	0.01	0.01	0.00	615.80
150.	28.	95.	27.	82.	140.	83.	25.	19.	615.50
1.77	0.34	0.68	0.33	0.030	0.030	0.030	0.000	609.20	0.00
0.000042	150.	150.	150.	0	0	0	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COPQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	609.20	609.20

*SECNO 4760.000
3280 CROSS SECTION 4760.00 EXTENDED 1.30 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
618.10	616.06	0.00	129.	20.	20.	22.	613.60	614.80

UPSTREAM FACE VERSAILLES LANE

4760.00	6.89	616.09	0.00	0.00	616.10	0.00	0.03	0.00	615.80
150.	32.	88.	31.	85.	142.	86.	26.	19.	615.50
1.81	0.37	0.62	0.35	0.030	0.035	0.030	0.000	609.20	0.00
0.000047	60.	60.	60.	0	0	6	0.00	200.00	200.00

*SECNO 5640.000

3265 DIVIDED FLOW

3280 CROSS SECTION 5640.00 EXTENDED 0.26 FEET

880 FT UPSTREAM VERSAILLES LANE

5640.00	5.26	616.16	0.00	0.00	616.24	0.08	0.10	0.04	616.80
150.	3.	147.	0.	10.	63.	0.	30.	21.	517.60
1.91	0.26	2.33	0.00	0.040	0.035	0.000	0.000	610.90	-100.00
0.000743	700.	880.	800.	2	0	0	0.00	98.29	69.33

*SECNO 6900.000
3280 CROSS SECTION 6900.00 EXTENDED 0.74 FEET

6900.00	5.64	616.74	0.00	0.00	616.77	0.03	0.51	0.02	615.40
150.	9.	112.	29.	21.	75.	58.	33.	26.	615.50
2.19	0.43	1.49	0.51	0.035	0.035	0.035	0.000	611.10	20.64
0.000259	1400.	1260.	1100.	2	0	0	0.00	179.36	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.32	3.00	0.00	3.00	0.00	7.07	0.00	611.10	611.10

*SECNO 6916.000

3280 CROSS SECTION 6916.00 EXTENDED 0.77 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
625.97	616.77	0.00	138.	11.	7.	9.	614.10	615.40

UPSTREAM FACE HARRISON ROAD

6916.00	5.67	616.77	0.00	0.00	616.79	0.02	0.03	0.00	615.40
150.	10.	110.	31.	23.	76.	60.	33.	26.	615.50
2.19	0.42	1.45	0.51	0.035	0.035	0.035	0.000	611.10	19.74
0.000243	16.	16.	16.	2	0	8	0.00	180.26	200.00

*SECNO 7200.000

7200.00	4.68	616.88	0.00	0.00	616.92	0.05	0.12	0.01	615.60
150.	67.	83.	1.	51.	41.	2.	34.	27.	616.70
2.24	1.29	2.03	0.35	0.030	0.040	0.030	0.000	612.20	10.43
0.000915	284.	284.	284.	2	0	0	0.00	121.05	131.48

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.21	3.00	0.00	3.00	0.00	7.07	0.00	612.20	612.20

*SECNO 7590.000

3265 DIVIDED FLOW

3280 CROSS SECTION 7590.00 EXTENDED 0.29 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
639.31	616.92	0.00	129.	21.	7.	10.	615.60	616.60

UPSTREAM FACE ISABELE ROAD

7590.00	4.69	617.29	0.00	0.00	617.33	0.04	0.40	0.00	616.60
150.	16.	102.	32.	29.	57.	48.	35.	28.	617.30
2.32	0.55	1.80	0.66	0.035	0.035	0.035	0.000	612.60	-50.00
0.000690	390.	390.	390.	2	0	8	0.00	224.51	175.00

*SECNO 7740.000
3280 CROSS SECTION 7740.00 EXTENDED 1.10 FEET

150 FT UPSTREAM ISABELE ROAD

7740.00	3.99	617.39	0.00	0.00	617.43	0.04	0.10	0.00	616.20
150.	21.	86.	43.	35.	42.	55.	35.	29.	616.30
2.34	0.58	2.06	0.78	0.035	0.035	0.035	0.000	613.40	-50.00
0.000675	150.	150.	150.	1	0	0	0.00	200.00	150.00

*SECNO 7880.000

7880.00	6.29	617.49	0.00	0.00	617.51	0.02	0.06	0.01	616.50
150.	27.	57.	66.	48.	41.	77.	36.	29.	615.70
2.38	0.57	1.39	0.85	0.035	0.040	0.035	0.000	611.20	1.04
0.000334	140.	140.	140.	0	0	0	0.00	191.92	192.97

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.40	3.00	0.00	5.00	0.00	19.63	0.00	611.20	611.20

*SECNO 7920.000
3280 CROSS SECTION 7920.00 EXTENDED 0.37 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.66	617.51	0.00	87.	63.	20.	25.	616.20	617.50

UPSTREAM FACE SPRINGHILL ROAD

7920.00	6.67	617.87	0.00	0.00	617.87	0.01	0.37	0.00	616.50
150.	40.	41.	70.	85.	44.	114.	36.	30.	615.70
2.40	0.47	0.91	0.61	0.035	0.040	0.035	0.000	611.20	0.00
0.000130	40.	40.	40.	0	0	5	0.00	200.00	200.00

*SECNO 8040.000

3265 DIVIDED FLOW

3280 CROSS SECTION 8040.00 EXTENDED 0.29 FEET

120 FT UPSTREAM SPRINGHILL ROAD

8040.00	3.98	617.88	0.00	0.00	617.93	0.05	0.03	0.02	616.80
150.	10.	92.	48.	12.	44.	52.	36.	30.	617.00
2.42	0.81	2.06	0.92	0.035	0.040	0.035	0.000	613.90	0.00
0.000929	100.	120.	140.	1	0	0	0.00	133.85	134.45

*SECNO 8100.000

110 FT DOWNSTREAM KING ROAD

8100.00	3.48	617.88	0.00	0.00	618.12	0.24	0.09	0.10	616.80
150.	18.	109.	23.	10.	24.	11.	36.	30.	614.70
2.43	1.81	4.48	2.09	0.030	0.035	0.030	0.000	614.40	18.53
0.002949	50.	60.	70.	2	0	0	0.00	77.11	95.64

*SECNO 8210.000

3280 CROSS SECTION 8210.00 EXTENDED 0.41 FEET

8210.00	6.01	618.21	0.00	0.00	618.22	0.01	0.03	0.07	615.80
130.	90.	35.	5.	133.	40.	22.	37.	31.	617.70
2.47	0.68	0.87	0.24	0.030	0.035	0.030	0.000	612.20	0.00
0.000102	80.	110.	130.	2	0	0	0.00	189.28	189.28

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.34	3.00	0.00	5.00	0.00	19.63	0.00	612.20	612.20

*SECNO 8243.000
3280 CROSS SECTION 8248.00 EXTENDED 0.50 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.13	618.22	0.00	91.	39.	20.	25.	617.20	617.70

UPSTREAM FACE KING ROAD

8248.00	6.09	618.29	0.00	0.00	618.30	0.01	0.07	0.00	615.80
130.	86.	37.	7.	141.	41.	29.	37.	31.	617.70
2.48	0.61	0.90	0.23	0.035	0.035	0.035	0.000	612.20	0.00
0.000107	38.	38.	38.	0	0	5	0.00	199.62	199.62

*SECNO 8400.000
3280 CROSS SECTION 8400.00 EXTENDED 0.11 FEET

8400.00	4.21	618.31	0.00	0.00	618.34	0.03	0.03	0.01	616.90
130.	75.	52.	3.	77.	29.	5.	37.	31.	617.60
2.51	0.97	1.80	0.60	0.035	0.035	0.035	0.000	614.10	0.00
0.000581	150.	152.	150.	0	0	0	0.00	123.42	123.42

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8412.000
3280 CROSS SECTION 8412.00 EXTENDED 0.16 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
632.63	618.34	0.00	120.	9.	5.	6.	616.60	617.50

DRIVEWAY OFF KING ROAD

8412.00	4.26	618.36	0.00	0.00	618.38	0.03	0.05	0.00	616.90
130.	77.	50.	3.	82.	29.	6.	37.	31.	617.60
2.52	0.93	1.70	0.58	0.035	0.035	0.035	0.000	614.10	0.00
0.000502	12.	12.	12.	2	0	9	0.00	124.32	124.32

*SECNO 8500.000
3280 CROSS SECTION 8500.00 EXTENDED 0.51 FEET

8500.00	4.30	618.40	0.00	0.00	618.41	0.01	0.02	0.01	614.90
130.	107.	11.	12.	154.	10.	23.	38.	32.	614.90
2.55	0.70	1.05	0.53	0.035	0.035	0.035	0.000	614.10	0.00
0.000135	88.	88.	88.	0	0	0	0.00	153.94	153.94

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8512.000
3280 CROSS SECTION 8512.00 EXTENDED 0.59 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
632.72	618.41	0.00	120.	10.	5.	6.	616.60	617.40

DRIVEWAY OFF KING ROAD

8512.00	4.38	618.48	0.00	0.00	618.49	0.01	0.08	0.00	614.90
130.	107.	10.	13.	162.	10.	27.	38.	32.	614.90
2.56	0.66	0.98	0.48	0.035	0.035	0.035	0.000	614.10	0.00
0.000115	12.	12.	12.	0	0	8	0.00	154.64	154.64

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 8700.000									
3280 CROSS SECTION	8700.00 EXTENDED		0.40 FEET						
	452 FT UPSTREAM OF KING ROAD								
8700.00	3.90	618.50	0.00	0.00	618.54	0.03	0.04	0.01	617.20
130.	28.	81.	21.	46.	47.	25.	38.	32.	616.90
2.59	0.59	1.73	0.84	0.035	0.035	0.035	0.000	614.50	-50.00
0.000458	170.	188.	200.	0	0	0	0.00	152.79	102.79
*SECNO 10400.000									
	300 FT DOWNSTREAM OF MIDDLEBELT ROAD								
10400.00	2.02	620.32	619.82	0.00	620.39	0.07	1.84	0.02	621.60
130.	0.	62.	68.	0.	25.	37.	42.	37.	620.10
2.81	0.00	2.52	1.82	0.000	0.050	0.050	0.000	618.30	52.85
0.005350	1800.	1700.	1600.	10	22	0	0.00	67.80	120.65

PRINTED IN U.S.A.

THIS RUN EXECUTED 11 SEP 84 8:43:32

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************

T1      HURON TOWNSHIP FLOOD INSURANCE STUDY
T2      500-YEAR FLOW
T3      SILVER CREEK AND HAND DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        5.        0.        0.  0.002500      0.00       0.0        0.   606.800     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CRNIM     ITRACE
     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 4

CCHV= 0.100 CEHV= 0.300

*SECNO 0.000

0.00	3.96	605.06	0.00	606.80	605.38	0.32	0.00	0.00	602.10
320.	39.	278.	2.	17.	58.	1.	0.	0.	602.00
0.00	2.36	4.79	1.80	0.040	0.035	0.035	0.000	601.10	1498.77
0.002493	0.	0.	0.	0	0	4	0.00	29.02	1527.79

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.38	3.00	0.00	17.00	0.00	93.50	0.00	601.10	601.10

*SECNO 0.160

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 605.384 ELLC= 607.000 PCWSE= 605.064 ELTRD= 607.500

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 607.50 MAX ELLC= 607.00

UPSTREAM FACE INKSTER ROAD

0.16	3.96	605.06	0.00	0.00	605.53	0.47	0.10	0.05	602.10
320.	0.	320.	0.	0.	58.	0.	0.	0.	602.00
0.00	0.00	5.51	0.45	0.000	0.035	0.035	0.000	601.10	1498.77
0.004096	32.	32.	32.	0	0	0	-17.87	29.02	1527.79

CCHV= 0.300 CEHV= 0.500

*SECNO 0.920

0.92	4.10	605.50	0.00	0.00	605.86	0.36	0.29	0.03	605.90
320.	0.	320.	0.	0.	67.	0.	0.	0.	606.10
0.01	0.00	4.79	0.00	0.000	0.035	0.000	0.000	601.40	1783.60
0.003571	26.	76.	126.	2	0	0	0.00	23.51	1807.11

*SECNO 0.116

3470 ENCROACHMENT STATIONS= 1760.0 1830.0 TYPE= 1 TARGET= 70.000

0.12	4.21	605.61	0.00	0.00	605.94	0.33	0.08	0.01	605.90
320.	0.	320.	0.	0.	69.	0.	0.	0.	606.10
0.01	0.00	4.61	0.00	0.000	0.035	0.000	0.000	601.40	1783.43
0.003198	24.	24.	24.	2	0	0	0.00	23.85	1807.28

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 0.130

3470 ENCROACHMENT STATIONS= 1770.0 1820.0 TYPE= 1 TARGET= 50.000

0.13	4.27	605.67	0.00	0.00	605.99	0.32	0.04	0.00	605.90
320.	0.	320.	0.	0.	71.	0.	0.	0.	606.10
0.01	0.00	4.53	0.00	0.000	0.035	0.000	0.000	601.40	1783.35
0.003042	14.	14.	14.	1	0	0	0.00	24.01	1807.36

*SECNO 0.310

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000

0.31	4.20	606.20	0.00	0.00	606.29	0.09	0.23	0.07	602.40
320.	60.	232.	28.	39.	85.	24.	1.	0.	604.10
0.03	1.52	2.73	1.19	0.040	0.035	0.035	0.000	602.00	959.39
0.000734	119.	180.	194.	1	0	0	0.00	66.22	1025.61

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARO SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.67	3.00	0.00	23.00	0.00	92.00	0.00	602.00	602.00

*SECNO 0.335

3265 DIVIDED FLOW

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	3AREA	TRAPEZOID AREA	ELLC	ELTRD
606.51	606.29	0.00	39.	278.	92.	92.	606.00	606.10

3470 ENCROACHMENT STATIONS= 930.0 1350.0 TYPE= 1 TARGET= -930.000
UPSTREAM FACE GRIX ROAD

0.33	4.36	606.36	0.00	0.00	606.43	0.08	0.14	0.00	602.40
320.	77.	217.	26.	43.	89.	28.	1.	0.	604.10
0.03	1.81	2.44	0.95	0.030	0.035	0.040	0.000	602.00	930.00
0.000551	25.	25.	25.	2	0	3	0.00	71.04	1027.41

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENOST
*SECNO 0.535									
	200 FT UPSTREAM GRIX ROAD								
0.53	4.96	606.46	0.00	0.00	606.78	0.33	0.22	0.13	607.60
320.	0.	320.	0.	0.	70.	0.	1.	1.	606.80
0.04	0.00	4.59	0.00	0.000	0.035	0.000	0.000	601.50	172.10
0.002985	300.	200.	100.	2	0	0	0.00	22.40	194.50
*SECNO 0.000									
	CONFLUENCE SILVER CREEK AND HAND DRAIN								
0.00	4.82	609.02	0.00	0.00	609.08	0.06	2.21	0.08	608.20
320.	116.	204.	1.	161.	86.	3.	8.	8.	609.00
0.31	0.72	2.38	0.16	0.040	0.035	0.040	0.000	604.20	218.49
0.000709	1725.	1725.	1725.	4	0	0	0.00	362.04	580.53
*SECNO 350.000									
3280 CROSS SECTION	350.00 EXTENDED		0.03 FEET						
	VALLEY SECTION ON HAND DRAIN 350 FT ABOVE CONFLUNCE								
350.00	4.22	609.32	0.00	0.00	609.43	0.10	0.33	0.02	609.30
190.	41.	144.	5.	64.	49.	12.	9.	11.	609.30
0.36	0.64	2.96	0.38	0.040	0.035	0.040	0.000	605.10	252.80
0.001669	350.	350.	350.	2	0	0	0.00	447.20	700.00
*SECNO 1090.000									
1090.00	3.93	610.83	0.00	0.00	611.21	0.38	1.65	0.14	607.80
190.	7.	174.	9.	4.	34.	4.	11.	15.	608.10
0.40	2.01	5.15	2.16	0.040	0.035	0.040	0.000	606.90	387.55
0.003110	740.	740.	740.	2	0	0	0.00	15.28	402.83

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.78	3.00	0.00	10.00	0.00	37.00	0.00	606.90	606.90

*SECNO 1122.000

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 611.211 ELLC= 611.500 PCWSE= 610.830 ELTRD= 611.900

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 611.90 MAX ELLC= 611.50

UPSTREAM FACE WEST ROAD

1122.00	4.01	610.91	0.00	0.00	611.38	0.47	0.12	0.04	607.80
190.	0.	190.	0.	0.	35.	0.	11.	15.	608.10
0.40	0.00	5.50	0.38	0.000	0.035	0.040	0.000	506.90	387.48
0.004882	32.	32.	32.	2	0	0	-8.11	15.43	402.91

*SECNO 1272.000

150 FT UPSTREAM OF WEST ROAD

1272.00	4.74	611.74	0.00	0.00	612.02	0.28	0.59	0.06	611.10
190.	4.	186.	0.	4.	43.	0.	11.	15.	611.80
0.41	0.99	4.29	0.00	0.040	0.035	0.000	0.000	507.00	137.61
0.003191	170.	150.	130.	2	0	0	0.00	27.34	164.94

*SECNO 1400.000

1400.00	4.69	612.19	0.00	0.00	612.46	0.27	0.43	0.00	612.10
190.	0.	189.	1.	0.	45.	1.	11.	15.	611.40
0.42	0.02	4.19	1.17	0.040	0.035	0.040	0.000	507.50	98.51
0.003595	150.	128.	100.	2	0	0	0.00	23.27	121.79

CCHV= 0.300 CEHV= 0.800

SPECIAL BRIOGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.34	3.00	0.00	6.00	0.00	28.40	0.00	607.50	607.50

CCHV= 0.400 CEHV= 0.700

*SECNO 1447.000

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 612.460 ELLC= 613.500 PCWSE= 612.189 ELTRO= 618.200

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 17 MIN ELTRD= 618.20 MAX ELLC= 613.50

UPSTREAM FACE PENN CENTRAL RR BRIDGE

1447.00	4.80	612.30	611.23	0.00	613.22	0.93	0.30	0.46	612.10
190.	0.	190.	0.	0.	25.	0.	11.	15.	611.40
0.42	0.00	7.72	0.00	0.000	0.035	0.000	0.000	607.50	96.71
0.015015	47.	47.	47.	4	18	0	-24.27	25.46	122.17

CCHV= 0.400 CEHV= 0.500

*SECNO 1800.000

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

353 FT UPSTREAM OF PENN CENTRAL RR BRIDGE

1800.00	6.02	614.12	0.00	0.00	614.21	0.09	0.66	0.33	610.20
190.	37.	108.	45.	42.	34.	49.	11.	16.	608.40
0.46	0.88	3.17	0.91	0.045	0.035	0.040	0.000	608.10	168.03
0.000688	300.	353.	400.	4	0	0	0.00	211.15	382.31

CCHV= 0.300 CEHV= 0.500

*SECNO 2520.000

10 FT DOWNSTREAM OF BORDEAU ROAD

2520.00	5.99	614.49	0.00	0.00	614.54	0.05	0.31	0.01	611.40
190.	17.	164.	9.	21.	88.	17.	14.	19.	613.00
0.58	0.79	1.87	0.53	0.045	0.035	0.040	0.000	608.50	25.27
0.000300	720.	720.	720.	4	0	0	0.00	68.07	93.35

*SECNO 2530.000

2530.00	4.49	614.49	0.00	0.00	614.55	0.06	0.00	0.01	614.90
190.	0.	190.	0.	0.	94.	1.	14.	19.	614.30
0.58	0.00	2.02	0.28	0.000	0.035	0.030	0.000	610.00	101.15
0.000694	10.	10.	10.	0	0	0	0.00	48.80	149.94

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	8.05	3.00	0.00	6.00	0.00	17.00	0.00	610.00	610.00

*SECNO 2815.000
3280 CROSS SECTION 2815.00 EXTENDED 0.50 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
630.10	614.55	0.00	133.	57.	17.	10.	611.60	615.40

UPSTREAM FACE BORDEAU ROAD

2815.00	5.89	615.89	0.00	0.00	615.90	0.01	1.35	0.00	614.90
190.	5.	111.	75.	21.	147.	183.	15.	20.	614.30
0.71	0.22	0.75	0.41	0.030	0.035	0.030	0.000	610.00	40.03
0.000055	285.	285.	285.	0	0	8	0.00	259.97	300.00

*SECNO 2900.000
3280 CROSS SECTION 2900.00 EXTENDED 1.40 FEET

2900.00	6.30	615.90	0.00	0.00	615.90	0.00	0.00	0.00	613.80
190.	76.	110.	5.	184.	180.	19.	16.	20.	614.00
0.76	0.41	0.61	0.26	0.030	0.035	0.030	0.000	609.60	0.00
0.000031	100.	85.	70.	2	0	0	0.00	169.97	169.97

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.34	3.00	0.00	6.00	0.00	17.00	0.00	609.60	609.60

*SECNO 2980.000
3280 CROSS SECTION 2980.00 EXTENDED 1.50 FEET

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
622.38	615.90	0.00	167.	23.	17.	20.	613.00	614.80

UPSTREAM FACE DUVALLE ROAD

2980.00	6.39	615.99	0.00	0.00	616.00	0.00	0.09	0.00	613.80
190.	78.	107.	5.	193.	184.	22.	16.	21.	614.00
0.80	0.40	0.58	0.25	0.030	0.035	0.030	0.000	609.60	0.00
0.000027	80.	80.	80.	0	0	6	0.00	172.42	172.42

*SECNO 3100.000
3280 CROSS SECTION 3100.00 EXTENDED 1.00 FEET

120 FT UPSTREAM DUVALLE ROAD

3100.00	6.09	615.99	0.00	0.00	616.00	0.01	0.00	0.00	614.10
190.	27.	146.	17.	69.	189.	49.	17.	21.	614.20
0.85	0.40	0.77	0.35	0.030	0.030	0.030	0.000	609.90	0.00
0.000042	100.	120.	130.	0	0	0	0.00	150.00	150.00

*SECNO 3430.000
3280 CROSS SECTION 3430.00 EXTENDED 1.41 FEET

3430.00	7.81	616.01	0.00	0.00	616.02	0.00	0.01	0.00	614.60
190.	53.	109.	28.	141.	180.	75.	20.	22.	614.60
1.03	0.38	0.61	0.37	0.030	0.035	0.030	0.000	608.20	0.00
0.000037	310.	330.	340.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.50	3.00	0.00	5.00	0.00	19.63	0.00	608.20	608.20

*SECNO 3510.000
3280 CROSS SECTION 3510.00 EXTENDED 1.46 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.65	616.02	0.00	169.	21.	20.	24.	612.90	615.20

UPSTREAM FACE LA GRAND BLVD

3510.00	7.85	616.05	0.00	0.00	616.06	0.00	0.04	0.00	614.60
190.	54.	108.	28.	146.	182.	77.	21.	23.	614.60
1.07	0.37	0.59	0.37	0.030	0.035	0.030	0.000	608.20	0.00
0.000035	80.	80.	80.	0	0	6	0.00	200.00	200.00

*SECNO 3700.000
3280 CROSS SECTION 3700.00 EXTENDED 2.06 FEET

190 FT UPSTREAM LA GRAND BLVD

3700.00	5.56	616.06	0.00	0.00	616.07	0.01	0.01	0.00	614.50
190.	46.	130.	14.	82.	138.	33.	22.	23.	614.20
1.14	0.57	0.94	0.43	0.030	0.030	0.030	0.000	610.50	0.00
0.000071	190.	190.	190.	0	0	0	0.00	131.44	131.44

*SECNO 3860.000
3280 CROSS SECTION 3860.00 EXTENDED 1.87 FEET

3860.00	8.07	616.07	0.00	0.00	616.08	0.00	0.00	0.00	613.30
190.	58.	94.	38.	183.	171.	121.	24.	24.	614.00
1.24	0.32	0.55	0.31	0.030	0.030	0.030	0.000	608.00	0.00
0.000017	160.	160.	160.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	3.24	3.00	0.00	5.00	0.00	19.63	0.00	608.00	608.00

*SECNO 4000.000
3280 CROSS SECTION 4000.00 EXTENDED 1.93 FEET

PRINTED IN USA

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
620.79	616.08	0.00	171.	20.	20.	24.	612.80	615.30

UPSTREAM FACE DUPREE ROAD

4000.00	8.12	616.12	0.00	0.00	616.13	0.00	0.05	0.00	613.30
190.	59.	93.	38.	189.	174.	125.	25.	25.	614.00
1.33	0.31	0.53	0.31	0.030	0.030	0.030	0.000	608.00	0.00
0.000016	140.	140.	140.	0	0	8	0.00	200.00	200.00

*SECNO 4200.000
3280 CROSS SECTION 4200.00 EXTENDED 1.33 FEET

4200.00	7.23	616.13	0.00	0.00	616.13	0.01	0.00	0.00	614.90
190.	37.	124.	28.	114.	167.	78.	27.	25.	614.80
1.43	0.33	0.75	0.36	0.030	0.030	0.030	0.000	608.90	0.00
0.000038	200.	200.	200.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	608.90	608.90

*SECNO 4260.000
3280 CROSS SECTION 4260.00 EXTENDED 1.38 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.40	616.13	0.00	167.	24.	20.	19.	612.80	615.00

UPSTREAM FACE MOULON ROUGE DRIVE

4260.00	7.27	616.17	0.00	0.00	616.18	0.01	0.05	0.00	614.90
190.	43.	115.	32.	119.	169.	81.	28.	26.	614.80
1.45	0.36	0.68	0.39	0.030	0.035	0.030	0.000	608.90	0.00
0.000042	60.	60.	60.	0	0	6	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4550.000
3280 CROSS SECTION 4550.00 EXTENDED 0.99 FEET

290 FT UPSTREAM MOULON ROUGE DRIVE

4550.00	5.99	616.19	0.00	0.00	616.20	0.01	0.01	0.00	613.20
190.	44.	137.	9.	84.	156.	25.	30.	27.	614.90
1.56	0.52	0.88	0.35	0.030	0.030	0.030	0.000	610.20	0.00
0.000052	290.	290.	290.	0	0	0	0.00	114.00	114.00

*SECNO 4700.000
3280 CROSS SECTION 4700.00 EXTENDED 1.39 FEET

4700.00	7.00	616.20	0.00	0.00	616.20	0.01	0.01	0.00	615.80
190.	38.	114.	38.	92.	146.	94.	31.	27.	615.50
1.62	0.42	0.78	0.40	0.030	0.030	0.030	0.000	609.20	0.00
0.000053	150.	150.	150.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070/VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.25	3.00	0.00	5.00	0.00	19.63	0.00	609.20	609.20

*SECNO 4760.000
3280 CROSS SECTION 4760.00 EXTENDED 1.44 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
619.47	616.20	0.00	168.	22.	20.	22.	613.60	614.80

UPSTREAM FACE VERSAILLES LANE

4760.00	7.04	616.24	0.00	0.00	616.24	0.01	0.04	0.00	615.80
190.	43.	105.	42.	96.	148.	98.	31.	28.	615.50
1.65	0.45	0.71	0.43	0.030	0.035	0.030	0.000	609.20	0.00
0.000059	60.	60.	60.	0	0	7	0.00	200.00	200.00

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 5640.000

3265 DIVIDED FLOW

3280 CROSS SECTION 5640.00 EXTENDED 0.41 FEET

880 FT UPSTREAM VERSAILLES LANE

5640.00	5.41	616.31	0.00	0.00	616.42	0.11	0.13	0.05	616.80
190.	11.	179.	0.	27.	66.	0.	35.	31.	617.60
1.74	0.41	2.71	0.00	0.040	0.035	0.000	0.000	610.90	-100.00
0.000969	700.	880.	800.	2	0	0	0.00	144.57	69.51

*SECNO 6900.000

3280 CROSS SECTION 6900.00 EXTENDED 0.97 FEET

6900.00	5.88	616.98	0.00	0.00	617.00	0.03	0.56	0.02	615.40
190.	18.	123.	49.	37.	80.	79.	39.	36.	615.50
2.03	0.50	1.54	0.62	0.035	0.035	0.035	0.000	611.10	13.41
0.000255	1400.	1260.	1100.	1	0	0	0.00	186.59	200.00

SPECIAL BRIDGE

5070-VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.32	3.00	0.00	3.00	0.00	7.07	0.00	611.10	611.10

*SECNO 6916.000

3280 CROSS SECTION 6916.00 EXTENDED 1.00 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
631.78	617.00	0.00	179.	11.	7.	9.	614.10	615.40

UPSTREAM FACE HARRISON ROAD

6916.00	5.90	617.00	0.00	0.00	617.03	0.02	0.03	0.00	615.40
190.	19.	121.	50.	40.	81.	82.	39.	36.	615.50
2.04	0.49	1.49	0.61	0.035	0.035	0.035	0.000	611.10	12.40
0.000238	16.	16.	16.	2	0	8	0.00	187.60	200.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 7200.000									
7200.00	4.91	617.11	0.00	0.00	617.15	0.04	0.11	0.01	615.60
190.	98.	87.	4.	77.	44.	8.	40.	37.	616.70
2.09	1.28	1.98	0.55	0.030	0.040	0.030	0.000	612.20	-32.59
0.000786	284.	284.	284.	2	0	0	0.00	183.48	150.89

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.21	3.00	0.00	3.00	0.00	7.07	0.00	612.20	612.20

*SECNO 7590.000

3280 CROSS SECTION 7590.00 EXTENDED 0.37 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
653.11	617.15	0.00	173.	18.	7.	10.	615.60	616.60

UPSTREAM FACE ISABELE ROAD

7590.00	4.77	617.37	0.00	0.00	617.41	0.04	0.27	0.00	616.60
190.	25.	119.	46.	36.	59.	57.	42.	39.	617.30
2.16	0.69	2.03	0.80	0.035	0.035	0.035	0.000	612.60	-50.00
0.000839	390.	390.	390.	2	0	8	0.00	225.00	175.00

*SECNO 7740.000

3280 CROSS SECTION 7740.00 EXTENDED 1.19 FEET

150 FT UPSTREAM ISABELE ROAD

7740.00	4.09	617.49	0.00	0.00	617.54	0.05	0.12	0.00	616.20
190.	32.	99.	59.	44.	43.	64.	42.	39.	616.30
2.18	0.73	2.29	0.93	0.035	0.035	0.035	0.000	613.40	-50.00
0.000796	150.	150.	150.	0	0	0	0.00	200.00	150.00

*SECNO 7880.000

3280 CROSS SECTION 7880.00 EXTENDED 0.11 FEET

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7880.00	6.40	617.60	0.00	0.00	617.62	0.02	0.08	0.01	616.50
190.	40.	64.	85.	59.	42.	88.	43.	40.	615.70
2.22	0.68	1.54	0.97	0.035	0.040	0.035	0.000	611.20	0.00
0.000396	140.	140.	140.	0	0	0	0.00	200.00	200.00

SPECIAL BRIDGE

5070, VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	2.40	3.00	0.00	5.00	0.00	19.63	0.00	611.20	611.20

*SECNO 7920.000

3280 CROSS SECTION 7920.00 EXTENDED 0.46 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
621.09	617.62	0.00	130.	61.	20.	25.	616.20	617.50

UPSTREAM FACE SPRINGHILL ROAD

7920.00	6.75	617.95	0.00	0.00	617.96	0.01	0.34	0.00	616.50
190.	53.	48.	89.	93.	45.	122.	43.	40.	615.70
2.23	0.57	1.06	0.73	0.035	0.040	0.035	0.000	611.20	0.00
0.000173	40.	40.	40.	0	0	5	0.00	200.00	200.00

*SECNO 8040.000

3265 DIVIDED FLOW

3280 CROSS SECTION 8040.00 EXTENDED 0.38 FEET

120 FT UPSTREAM SPRINGHILL ROAD

8040.00	4.07	617.97	0.00	0.00	618.03	0.06	0.04	0.02	616.80
190.	15.	108.	67.	15.	46.	61.	44.	41.	617.00
2.25	1.01	2.56	1.10	0.035	0.040	0.035	0.000	613.90	0.00
0.001161	100.	120.	140.	1	0	0	0.00	138.82	138.93

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 8100.000									
	110 FT DOWNSTREAM KING ROAD								
8100.00	3.56	617.96	617.87	0.00	618.27	0.31	0.12	0.13	616.80
190.	27.	129.	33.	13.	25.	15.	44.	41.	614.70
2.26	2.13	5.19	2.22	0.030	0.035	0.030	0.000	614.40	11.21
0.003802	50.	60.	70.	4	9	0	0.00	90.83	102.04
*SECNO 8210.000									
3280 CROSS SECTION	8210.00 EXTENDED		0.59 FEET						
8210.00	6.19	618.39	0.00	0.00	618.40	0.01	0.04	0.09	615.80
170.	117.	41.	12.	150.	42.	38.	44.	41.	617.70
2.29	0.78	0.97	0.32	0.030	0.035	0.030	0.000	612.20	0.00
0.000121	80.	110.	130.	2	0	0	0.00	200.00	200.00
SPECIAL BRIDGE									
5070>VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED									
SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.34	3.00	0.00	5.00	0.00	19.63	0.00	612.20	612.20
*SECNO 8248.000									
3280 CROSS SECTION	8248.00 EXTENDED		0.65 FEET						
PRESSURE AND WEIR FLOW									
EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	
619.95	618.40	0.00	134.	34.	20.	25.	617.20	617.70	
	UPSTREAM FACE KING ROAD								
8248.00	6.24	618.44	0.00	0.00	618.45	0.01	0.05	0.00	615.80
170.	112.	44.	14.	156.	43.	44.	44.	41.	617.70
2.30	0.72	1.03	0.31	0.035	0.035	0.035	0.000	612.20	0.00
0.000134	38.	38.	38.	0	0	3	0.00	200.00	200.00
*SECNO 3400.000									
3280 CROSS SECTION	8400.00 EXTENDED		0.26 FEET						

PRINTED IN U.S.A.

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8400.00	4.37	618.47	0.00	0.00	618.50	0.03	0.04	0.01	616.90
170.	104.	60.	5.	93.	30.	8.	45.	42.	617.60
2.33	1.13	1.98	0.72	0.035	0.035	0.035	0.000	614.10	0.00
0.000653	150.	152.	150.	0	0	0	0.00	128.78	128.78

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8412.000
3280 CROSS SECTION 8412.00 EXTENDED 0.32 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
642.95	618.50	0.00	160.	10.	5.	6.	616.60	617.53

DRIVEWAY OFF KING ROAD

8412.00	4.42	618.52	0.00	0.00	618.55	0.03	0.05	0.00	616.90
170.	106.	58.	6.	98.	31.	9.	45.	42.	617.60
2.34	1.08	1.87	0.69	0.035	0.035	0.035	0.000	614.10	0.00
0.000565	12.	12.	12.	2	0	10	0.00	132.20	132.20

*SECNO 8500.000
3280 CROSS SECTION 8500.00 EXTENDED 0.67 FEET

8500.00	4.47	618.57	0.00	0.00	618.58	0.01	0.02	0.01	614.90
170.	140.	13.	18.	171.	10.	31.	45.	42.	614.90
2.37	0.82	1.19	0.57	0.035	0.035	0.035	0.000	614.10	0.00
0.000166	88.	88.	88.	0	0	0	0.00	155.41	155.41

PRINTED IN U.S.A

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

5070,VARIABLE ELCHU OR ELCHD ON CARD SB NOT SPECIFIED

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.31	3.00	0.00	2.50	0.00	4.90	0.00	614.10	614.10

*SECNO 8512.000

3280 CROSS SECTION 8512.00 EXTENDED 0.75 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
643.05	618.58	0.00	160.	9.	5.	6.	616.60	617.40

DRIVEWAY OFF KING ROAD

8512.00	4.54	618.64	0.00	0.00	618.65	0.01	0.06	0.00	614.90
170.	139.	12.	19.	178.	11.	35.	45.	42.	614.90
2.37	0.78	1.13	0.54	0.035	0.035	0.035	0.000	614.10	0.00
0.000145	12.	12.	12.	0	0	9	0.00	156.04	156.04

*SECNO 8700.000

3280 CROSS SECTION 8700.00 EXTENDED 0.56 FEET

452 FT UPSTREAM OF KING ROAD

8700.00	4.07	618.67	0.00	0.00	618.70	0.04	0.04	0.01	617.20
170.	46.	94.	30.	63.	50.	32.	46.	43.	616.90
2.41	0.74	1.89	0.95	0.035	0.035	0.035	0.000	614.60	-50.00
0.000508	170.	188.	200.	0	0	0	0.00	158.58	108.58

*SECNO 10400.000

3280 CROSS SECTION 10400.00 EXTENDED 0.15 FEET

300 FT DOWNSTREAM OF MIDDLEBELT ROAD

10400.00	2.26	620.56	619.96	0.00	620.63	0.08	1.91	0.02	621.60
170.	0.	74.	96.	0.	29.	49.	50.	47.	620.10
2.62	0.00	2.54	1.97	0.000	0.050	0.050	0.000	618.30	52.33
0.004515	1800.	1700.	1600.	6	18	0	0.00	69.67	122.00

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THIS RUN EXECUTED 11 SEP 84 8:43:51

****
HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
ERROR CORR - 01,02,03,04,05,06
MODIFICATION - 50,51,52,53,54,55,56
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SILVER CREEK AND HAND DR

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	TOK*S	VCH	AREA	.01K
0.000	0.00	0.00	0.00	601.10	140.00	603.81	0.00	603.99	25.05	3.54	42.85	27.97
0.000	0.00	0.00	0.00	601.10	220.00	604.43	0.00	604.68	25.04	4.18	58.46	43.97
0.000	0.00	0.00	0.00	601.10	260.00	604.70	0.00	604.98	24.96	4.44	65.75	52.04
0.000	0.00	0.00	0.00	601.10	320.00	605.06	0.00	605.38	24.93	4.79	76.12	64.09
0.160	32.00	607.50	607.00	601.10	140.00	603.88	0.00	604.09	29.90	3.69	38.05	25.60
0.160	32.00	607.50	607.00	601.10	220.00	604.47	0.00	604.79	35.15	4.59	48.13	37.11
0.160	32.00	607.50	607.00	601.10	260.00	604.72	0.00	605.11	37.56	4.98	52.42	42.42
0.160	32.00	607.50	607.00	601.10	320.00	605.05	0.00	605.53	40.96	5.51	58.24	50.00
0.920	76.00	0.00	0.00	601.40	140.00	604.12	0.00	604.34	36.25	3.77	37.13	23.25
0.920	76.00	0.00	0.00	601.40	220.00	604.79	0.00	605.08	36.68	4.34	50.69	36.32
0.920	76.00	0.00	0.00	601.40	260.00	605.09	0.00	605.41	36.31	4.54	57.24	43.15
0.920	76.00	0.00	0.00	601.40	320.00	605.50	0.00	605.86	35.71	4.79	66.74	53.55
0.116	24.00	0.00	0.00	601.40	140.00	604.23	0.00	604.43	30.77	3.56	39.30	25.24
0.116	24.00	0.00	0.00	601.40	220.00	604.90	0.00	605.17	31.98	4.13	53.21	38.91
0.116	24.00	0.00	0.00	601.40	260.00	605.20	0.00	605.50	32.03	4.34	59.85	45.94
0.116	24.00	0.00	0.00	601.40	320.00	605.61	0.00	605.94	31.98	4.61	69.42	56.59
0.130	14.00	0.00	0.00	601.40	140.00	604.29	0.00	604.47	28.77	3.48	40.23	26.10
0.130	14.00	0.00	0.00	601.40	220.00	604.96	0.00	605.21	30.26	4.06	54.25	39.99
0.130	14.00	0.00	0.00	601.40	260.00	605.26	0.00	605.54	30.45	4.27	60.93	47.12
0.130	14.00	0.00	0.00	601.40	320.00	605.67	0.00	605.99	30.42	4.53	70.68	58.02
0.310	180.00	0.00	0.00	602.00	140.00	604.72	0.00	604.80	10.57	2.34	67.87	43.07
0.310	180.00	0.00	0.00	602.00	220.00	605.44	0.00	605.53	8.84	2.58	102.55	74.01
0.310	180.00	0.00	0.00	602.00	260.00	605.76	0.00	605.85	8.07	2.64	121.00	91.51
0.310	180.00	0.00	0.00	602.00	320.00	606.20	0.00	606.29	7.34	2.73	147.83	118.12
0.335	25.00	606.10	606.00	602.00	140.00	604.73	0.00	604.85	16.42	2.73	51.25	34.55
0.335	25.00	606.10	606.00	602.00	220.00	605.43	0.00	605.59	16.69	3.26	67.64	53.85
0.335	25.00	606.10	606.00	602.00	260.00	605.74	0.00	605.93	17.20	3.50	74.44	62.70
0.335	25.00	606.10	606.00	602.00	320.00	606.36	0.00	606.43	5.51	2.44	159.20	136.36

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10KWS	VCH	AREA	.01K
0.535	200.00	0.00	0.00	601.50	140.00	605.08	0.00	605.26	22.40	3.33	42.08	29.58
0.535	200.00	0.00	0.00	601.50	220.00	605.80	0.00	606.04	25.82	3.95	55.74	43.30
0.535	200.00	0.00	0.00	601.50	260.00	606.12	0.00	606.39	26.68	4.17	62.31	50.35
0.535	200.00	0.00	0.00	601.50	320.00	606.46	0.00	606.78	29.85	4.59	69.73	58.57
0.000	1725.00	0.00	0.00	604.20	140.00	607.85	0.00	607.95	11.32	2.47	56.69	41.60
0.000	1725.00	0.00	0.00	604.20	220.00	608.55	0.00	608.64	9.56	2.56	130.09	71.16
0.000	1725.00	0.00	0.00	604.20	260.00	608.76	0.00	608.84	8.47	2.49	175.94	89.36
0.000	1725.00	0.00	0.00	604.20	320.00	609.02	0.00	609.08	7.09	2.38	250.25	120.14
350.000	350.00	0.00	0.00	605.10	80.00	608.31	0.00	608.42	17.94	2.62	30.57	18.89
350.000	350.00	0.00	0.00	605.10	130.00	608.95	0.00	609.10	20.20	3.08	47.28	28.92
350.000	350.00	0.00	0.00	605.10	150.00	609.12	0.00	609.26	19.48	3.09	69.18	33.99
350.000	350.00	0.00	0.00	605.10	190.00	609.32	0.00	609.43	16.69	2.96	125.41	46.51
1090.000	740.00	0.00	0.00	606.90	80.00	609.74	0.00	609.90	21.65	3.32	25.97	17.19
1090.000	740.00	0.00	0.00	606.90	130.00	610.46	0.00	610.70	21.87	4.00	36.03	27.80
1090.000	740.00	0.00	0.00	606.90	150.00	610.64	0.00	610.91	23.80	4.33	38.64	30.75
1090.000	740.00	0.00	0.00	606.90	190.00	610.83	0.00	611.21	31.10	5.15	41.50	34.07
1122.000	32.00	611.90	611.50	606.90	80.00	609.81	0.00	609.99	27.56	3.39	23.70	15.24
1122.000	32.00	611.90	611.50	606.90	130.00	610.52	0.00	610.80	32.55	4.24	30.84	22.79
1122.000	32.00	611.90	611.50	606.90	150.00	610.70	0.00	611.03	36.54	4.62	32.63	24.81
1122.000	32.00	611.90	611.50	606.90	190.00	610.91	0.00	611.38	48.82	5.50	34.68	27.19
1272.000	150.00	0.00	0.00	607.00	80.00	610.26	0.00	610.44	33.34	3.45	23.19	13.86
1272.000	150.00	0.00	0.00	607.00	130.00	611.08	0.00	611.31	33.47	3.85	33.75	22.47
1272.000	150.00	0.00	0.00	607.00	150.00	611.33	0.00	611.58	32.82	4.02	37.80	26.18
1272.000	150.00	0.00	0.00	607.00	190.00	611.74	0.00	612.02	31.91	4.29	47.41	33.65
1400.000	128.00	0.00	0.00	607.50	80.00	610.78	0.00	611.00	54.86	3.81	20.98	10.80
1400.000	128.00	0.00	0.00	607.50	130.00	611.56	0.00	611.79	42.29	3.89	33.49	19.99
1400.000	128.00	0.00	0.00	607.50	150.00	611.79	0.00	612.04	39.37	3.98	37.90	23.91
1400.000	128.00	0.00	0.00	607.50	190.00	612.19	0.00	612.46	35.95	4.19	46.25	31.69
1447.000	47.00	618.20	613.50	607.50	80.00	611.02	0.00	611.34	60.52	4.58	17.48	10.28
1447.000	47.00	618.20	613.50	607.50	130.00	611.75	610.53	612.30	93.02	5.99	21.70	13.45
1447.000	47.00	618.20	613.50	607.50	150.00	611.96	610.78	612.62	109.31	6.54	22.92	14.35
1447.000	47.00	618.20	613.50	607.50	190.00	612.30	611.23	613.22	150.15	7.72	24.61	15.51
1800.000	353.00	0.00	0.00	608.10	80.00	612.07	0.00	612.19	11.00	2.99	33.32	24.12
1800.000	353.00	0.00	0.00	608.10	130.00	613.13	0.00	613.27	9.95	3.36	51.44	41.21
1800.000	353.00	0.00	0.00	608.10	150.00	613.49	0.00	613.63	9.48	3.45	59.23	48.71
1800.000	353.00	0.00	0.00	608.10	190.00	614.12	0.00	614.21	6.88	3.17	125.08	72.45
2520.000	720.00	0.00	0.00	608.50	80.00	612.63	0.00	612.67	4.01	1.55	53.94	39.97
2520.000	720.00	0.00	0.00	608.50	130.00	613.64	0.00	613.69	3.38	1.72	84.28	70.69
2520.000	720.00	0.00	0.00	608.50	150.00	613.98	0.00	614.03	3.16	1.77	98.50	84.41
2520.000	720.00	0.00	0.00	608.50	190.00	614.49	0.00	614.54	3.00	1.87	126.28	109.64

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	TOK*S	VCH	AREA	.01K
2530.000	10.00	0.00	0.00	610.00	80.00	612.62	0.00	612.69	14.47	2.15	37.25	21.03
2530.000	10.00	0.00	0.00	610.00	130.00	613.64	0.00	613.70	8.94	2.01	64.52	43.48
2530.000	10.00	0.00	0.00	610.00	150.00	613.98	0.00	614.04	7.91	1.99	75.54	53.33
2530.000	10.00	0.00	0.00	610.00	190.00	614.49	0.00	614.55	6.94	2.02	94.96	72.14
2815.000	285.00	615.40	611.60	610.00	80.00	615.38	0.00	615.39	0.26	0.47	230.86	156.76
2815.000	285.00	615.40	611.60	610.00	130.00	615.74	0.00	615.74	0.35	0.58	309.71	220.35
2815.000	285.00	615.40	611.60	610.00	150.00	615.80	0.00	615.80	0.41	0.64	325.50	233.52
2815.000	285.00	615.40	611.60	610.00	190.00	615.89	0.00	615.90	0.55	0.75	350.60	255.35
2900.000	85.00	0.00	0.00	609.60	80.00	615.39	0.00	615.39	0.11	0.33	298.24	242.46
2900.000	85.00	0.00	0.00	609.60	130.00	615.74	0.00	615.74	0.18	0.45	355.17	309.19
2900.000	85.00	0.00	0.00	609.60	150.00	615.80	0.00	615.80	0.22	0.50	365.54	321.91
2900.000	85.00	0.00	0.00	609.60	190.00	615.90	0.00	615.90	0.31	0.61	381.92	342.35
2980.000	80.00	614.80	613.00	609.60	80.00	615.50	0.00	615.50	0.09	0.31	316.77	263.56
2980.000	80.00	614.80	613.00	609.60	130.00	615.82	0.00	615.82	0.16	0.43	368.53	325.61
2980.000	80.00	614.80	613.00	609.60	150.00	615.88	0.00	615.89	0.20	0.48	379.66	339.51
2980.000	80.00	614.80	613.00	609.60	190.00	615.99	0.00	616.00	0.27	0.58	398.68	363.68
3100.000	120.00	0.00	0.00	609.90	80.00	615.50	0.00	615.51	0.15	0.41	234.49	210.02
3100.000	120.00	0.00	0.00	609.90	130.00	615.82	0.00	615.82	0.25	0.57	279.69	261.09
3100.000	120.00	0.00	0.00	609.90	150.00	615.88	0.00	615.89	0.30	0.64	289.48	272.67
3100.000	120.00	0.00	0.00	609.90	190.00	615.99	0.00	616.00	0.42	0.77	306.12	293.10
3430.000	330.00	0.00	0.00	608.20	80.00	615.51	0.00	615.51	0.15	0.35	295.00	205.70
3430.000	330.00	0.00	0.00	608.20	130.00	615.83	0.00	615.83	0.23	0.46	358.55	270.27
3430.000	330.00	0.00	0.00	608.20	150.00	615.90	0.00	615.90	0.28	0.51	371.97	285.09
3430.000	330.00	0.00	0.00	608.20	190.00	616.01	0.00	616.02	0.37	0.61	394.71	311.10
3510.000	80.00	615.20	612.90	608.20	80.00	615.56	0.00	615.57	0.14	0.34	306.70	216.87
3510.000	80.00	615.20	612.90	608.20	130.00	615.86	0.00	615.86	0.22	0.45	366.40	278.89
3510.000	80.00	615.20	612.90	608.20	150.00	615.93	0.00	615.94	0.26	0.50	380.64	294.85
3510.000	80.00	615.20	612.90	608.20	190.00	616.05	0.00	616.06	0.35	0.59	404.98	323.21
3700.000	190.00	0.00	0.00	610.50	80.00	615.57	0.00	615.57	0.26	0.52	192.01	155.47
3700.000	190.00	0.00	0.00	610.50	130.00	615.87	0.00	615.87	0.44	0.71	227.66	195.71
3700.000	190.00	0.00	0.00	610.50	150.00	615.94	0.00	615.94	0.53	0.79	236.66	206.16
3700.000	190.00	0.00	0.00	610.50	190.00	616.06	0.00	616.07	0.71	0.94	252.47	224.76
3860.000	160.00	0.00	0.00	608.00	80.00	615.57	0.00	615.57	0.06	0.30	375.89	328.27
3860.000	160.00	0.00	0.00	608.00	130.00	615.87	0.00	615.88	0.10	0.41	436.05	403.84
3860.000	160.00	0.00	0.00	608.00	150.00	615.95	0.00	615.95	0.13	0.46	450.53	423.20
3860.000	160.00	0.00	0.00	608.00	190.00	616.07	0.00	616.08	0.17	0.55	475.35	457.40
4000.000	140.00	615.30	612.80	608.00	80.00	615.67	0.00	615.67	0.05	0.28	395.19	351.63
4000.000	140.00	615.30	612.80	608.00	130.00	615.92	0.00	615.92	0.10	0.40	446.07	417.19
4000.000	140.00	615.30	612.80	608.00	150.00	615.99	0.00	616.00	0.12	0.45	460.86	437.27
4000.000	140.00	615.30	612.80	608.00	190.00	616.12	0.00	616.13	0.16	0.53	487.10	474.04

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SECNO	XLCH	ELTRO	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
4200.000	200.00	0.00	0.00	608.90	80.00	615.67	0.00	615.67	0.14	0.42	267.02	214.80
4200.000	200.00	0.00	0.00	608.90	130.00	615.92	0.00	615.93	0.24	0.58	317.92	264.95
4200.000	200.00	0.00	0.00	608.90	150.00	616.00	0.00	616.00	0.29	0.64	332.71	280.75
4200.000	200.00	0.00	0.00	608.90	190.00	616.13	0.00	616.13	0.38	0.75	358.96	310.08
4260.000	60.00	615.00	612.80	608.90	80.00	615.72	0.00	615.72	0.16	0.39	278.59	201.25
4260.000	60.00	615.00	612.80	608.90	130.00	615.97	0.00	615.97	0.27	0.53	327.77	248.27
4260.000	60.00	615.00	612.80	608.90	150.00	616.04	0.00	616.05	0.32	0.59	342.69	263.70
4260.000	60.00	615.00	612.80	608.90	190.00	616.17	0.00	616.18	0.42	0.68	369.63	292.85
4550.000	290.00	0.00	0.00	610.20	80.00	615.73	0.00	615.73	0.16	0.46	212.23	197.94
4550.000	290.00	0.00	0.00	610.20	130.00	615.97	0.00	615.98	0.31	0.66	240.46	232.47
4550.000	290.00	0.00	0.00	610.20	150.00	616.05	0.00	616.06	0.38	0.74	249.05	243.61
4550.000	290.00	0.00	0.00	610.20	190.00	616.19	0.00	616.20	0.52	0.88	264.56	264.44
4700.000	150.00	0.00	0.00	609.20	80.00	615.73	0.00	615.73	0.22	0.46	239.53	170.75
4700.000	150.00	0.00	0.00	609.20	130.00	615.98	0.00	615.99	0.36	0.62	289.37	216.05
4700.000	150.00	0.00	0.00	609.20	150.00	616.06	0.00	616.06	0.42	0.68	304.59	231.41
4700.000	150.00	0.00	0.00	609.20	190.00	616.20	0.00	616.20	0.53	0.78	332.13	260.65
4760.000	60.00	614.80	613.60	609.20	80.00	615.76	0.00	615.75	0.26	0.43	245.65	157.82
4760.000	60.00	614.80	613.60	609.20	130.00	616.01	0.00	616.02	0.41	0.57	296.95	203.14
4760.000	60.00	614.80	613.60	609.20	150.00	616.09	0.00	616.10	0.47	0.62	312.76	218.57
4760.000	60.00	614.80	613.60	609.20	190.00	616.24	0.00	616.24	0.59	0.71	341.75	248.38
5640.000	880.00	0.00	0.00	610.90	80.00	615.80	0.00	615.83	2.96	1.41	56.56	46.47
5640.000	880.00	0.00	0.00	610.90	130.00	616.07	0.00	616.14	6.11	2.10	65.17	52.58
5640.000	880.00	0.00	0.00	610.90	150.00	616.16	0.00	616.24	7.43	2.33	73.41	55.04
5640.000	880.00	0.00	0.00	610.90	190.00	616.31	0.00	616.42	9.69	2.71	92.73	61.05
6900.000	1260.00	0.00	0.00	611.10	80.00	616.13	0.00	616.15	2.30	1.24	72.33	52.77
6900.000	1260.00	0.00	0.00	611.10	130.00	616.60	0.00	616.63	2.61	1.45	128.80	80.51
6900.000	1260.00	0.00	0.00	611.10	150.00	616.74	0.00	616.77	2.59	1.49	153.55	93.26
6900.000	1260.00	0.00	0.00	611.10	190.00	616.98	0.00	617.00	2.55	1.54	195.90	119.04
6916.000	16.00	615.40	614.10	611.10	80.00	616.29	0.00	616.31	1.77	1.13	88.79	60.14
6916.000	16.00	615.40	614.10	611.10	130.00	616.64	0.00	616.66	2.41	1.41	135.50	83.76
6916.000	16.00	615.40	614.10	611.10	150.00	616.77	0.00	616.79	2.43	1.45	158.76	96.19
6916.000	16.00	615.40	614.10	611.10	190.00	617.00	0.00	617.03	2.38	1.49	201.92	123.05
7200.000	284.00	0.00	0.00	612.20	80.00	616.37	0.00	616.42	9.35	1.85	52.61	26.16
7200.000	284.00	0.00	0.00	612.20	130.00	616.75	0.00	616.80	9.64	2.02	80.36	41.87
7200.000	284.00	0.00	0.00	612.20	150.00	616.88	0.00	616.92	9.15	2.03	93.90	49.59
7200.000	284.00	0.00	0.00	612.20	190.00	617.11	0.00	617.15	7.86	1.98	128.80	67.76
7590.000	390.00	616.60	615.60	612.60	80.00	617.12	0.00	617.14	3.59	1.25	95.59	42.21
7590.000	390.00	616.60	615.60	612.60	130.00	617.25	0.00	617.28	5.96	1.66	124.69	53.26
7590.000	390.00	616.60	615.60	612.60	150.00	617.29	0.00	617.33	6.90	1.80	133.66	57.09
7590.000	390.00	616.60	615.60	612.60	190.00	617.37	0.00	617.41	8.39	2.03	151.48	65.59

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	TOK*S	VCH	AREA	.01K
7740.000	150.00	0.00	0.00	613.40	80.00	617.17	0.00	617.20	3.93	1.49	90.61	40.38
7740.000	150.00	0.00	0.00	613.40	130.00	617.34	0.00	617.38	6.20	1.95	120.29	52.19
7740.000	150.00	0.00	0.00	613.40	150.00	617.39	0.00	617.43	6.75	2.06	132.43	57.74
7740.000	150.00	0.00	0.00	613.40	190.00	617.49	0.00	617.54	7.96	2.29	150.72	67.55
7880.000	140.00	0.00	0.00	611.20	80.00	617.23	0.00	617.24	1.88	1.00	120.72	58.28
7880.000	140.00	0.00	0.00	611.20	130.00	617.43	0.00	617.44	2.94	1.29	154.37	75.77
7880.000	140.00	0.00	0.00	611.20	150.00	617.49	0.00	617.51	3.34	1.39	166.10	82.15
7880.000	140.00	0.00	0.00	611.20	190.00	617.60	0.00	617.62	3.96	1.54	189.43	95.50
7920.000	40.00	617.50	616.20	611.20	80.00	617.66	0.00	617.66	0.61	0.61	201.05	102.65
7920.000	40.00	617.50	616.20	611.20	130.00	617.82	0.00	617.83	1.09	0.83	233.59	124.63
7920.000	40.00	617.50	616.20	611.20	150.00	617.87	0.00	617.87	1.30	0.91	243.08	131.51
7920.000	40.00	617.50	616.20	611.20	190.00	617.95	0.00	617.96	1.73	1.06	260.31	144.55
8040.000	120.00	0.00	0.00	613.90	80.00	617.67	0.00	617.69	4.93	1.42	81.95	36.02
8040.000	120.00	0.00	0.00	613.90	130.00	617.83	0.00	617.87	8.04	1.89	102.64	45.86
8040.000	120.00	0.00	0.00	613.90	150.00	617.88	0.00	617.93	9.29	2.06	109.19	49.22
8040.000	120.00	0.00	0.00	613.90	190.00	617.97	0.00	618.03	11.61	2.36	121.42	55.76
8100.000	60.00	0.00	0.00	614.40	80.00	617.67	0.00	617.78	12.64	2.81	34.51	22.50
8100.000	60.00	0.00	0.00	614.40	130.00	617.83	0.00	618.04	24.71	4.06	41.91	26.15
8100.000	60.00	0.00	0.00	614.40	150.00	617.88	0.00	618.12	29.49	4.48	45.36	27.62
8100.000	60.00	0.00	0.00	614.40	190.00	617.96	617.87	618.27	38.02	5.19	52.75	30.82
8210.000	110.00	0.00	0.00	612.20	70.00	617.82	0.00	617.83	0.69	0.67	133.00	84.35
8210.000	110.00	0.00	0.00	612.20	115.00	618.12	0.00	618.12	0.99	0.84	176.85	115.77
8210.000	110.00	0.00	0.00	612.20	130.00	618.21	0.00	618.22	1.02	0.87	194.75	128.54
8210.000	110.00	0.00	0.00	612.20	170.00	618.39	0.00	618.40	1.21	0.97	229.37	154.67
8248.000	38.00	617.70	617.20	612.20	70.00	617.97	0.00	617.97	0.61	0.64	153.64	89.53
8248.000	38.00	617.70	617.20	612.20	115.00	618.21	0.00	618.22	0.99	0.86	195.60	115.68
8248.000	38.00	617.70	617.20	612.20	130.00	618.29	0.00	618.30	1.07	0.90	210.83	125.41
8248.000	38.00	617.70	617.20	612.20	170.00	618.44	0.00	618.45	1.34	1.03	242.16	147.05
8400.000	152.00	0.00	0.00	614.10	70.00	617.98	0.00	618.00	4.36	1.44	73.43	33.53
8400.000	152.00	0.00	0.00	614.10	115.00	618.23	0.00	618.25	5.67	1.75	101.19	48.50
8400.000	152.00	0.00	0.00	614.10	130.00	618.31	0.00	618.34	5.81	1.80	110.82	53.95
8400.000	152.00	0.00	0.00	614.10	170.00	618.47	0.00	618.50	6.53	1.98	130.59	66.52
8412.000	12.00	617.50	616.60	614.10	70.00	618.05	0.00	618.07	3.43	1.31	81.61	37.77
8412.000	12.00	617.50	616.60	614.10	115.00	618.29	0.00	618.31	4.78	1.63	108.61	52.67
8412.000	12.00	617.50	616.60	614.10	130.00	618.36	0.00	618.38	5.02	1.70	117.50	58.03
8412.000	12.00	617.50	616.60	614.10	170.00	618.52	0.00	618.55	5.65	1.87	138.03	71.50
8500.000	88.00	0.00	0.00	614.10	70.00	618.08	0.00	618.08	0.78	0.75	143.60	79.21
8500.000	88.00	0.00	0.00	614.10	115.00	618.33	0.00	618.34	1.23	0.99	176.12	103.65
8500.000	88.00	0.00	0.00	614.10	130.00	618.40	0.00	618.41	1.35	1.05	187.12	111.79
8500.000	88.00	0.00	0.00	614.10	170.00	618.57	0.00	618.58	1.66	1.19	212.93	131.93

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SECNO	XLCH	ELTRO	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
8512.000	12.00	617.40	616.60	614.10	70.00	618.23	0.00	618.23	0.57	0.66	161.75	92.92
8512.000	12.00	617.40	616.60	614.10	115.00	618.41	0.00	618.42	1.03	0.92	188.86	113.09
8512.000	12.00	617.40	616.60	614.10	130.00	618.48	0.00	618.49	1.15	0.98	199.34	121.09
8512.000	12.00	617.40	616.60	614.10	170.00	618.64	0.00	618.65	1.45	1.13	224.06	141.19
8700.000	188.00	0.00	0.00	614.60	70.00	618.24	0.00	618.26	2.77	1.26	79.72	42.06
8700.000	188.00	0.00	0.00	614.60	115.00	618.43	0.00	618.46	4.34	1.66	108.25	55.19
8700.000	188.00	0.00	0.00	614.60	130.00	618.50	0.00	618.54	4.58	1.73	118.74	60.75
8700.000	188.00	0.00	0.00	614.60	170.00	618.67	0.00	618.70	5.08	1.89	143.99	75.41
10400.000	1700.00	0.00	0.00	618.30	70.00	619.65	619.54	619.81	188.75	3.65	23.68	5.10
10400.000	1700.00	0.00	0.00	618.30	115.00	620.21	619.76	620.29	59.02	2.53	55.04	14.97
10400.000	1700.00	0.00	0.00	618.30	130.00	620.32	619.82	620.39	53.50	2.52	61.88	17.77
10400.000	1700.00	0.00	0.00	618.30	170.00	620.56	619.96	620.63	45.15	2.54	77.93	25.30

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SILVER CREEK AND HAND DR

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.000	140.00	603.81	0.00	0.00	-0.19	23.98	0.00
0.000	220.00	604.43	0.62	0.00	-0.57	26.46	0.00
0.000	260.00	604.70	0.27	0.00	-1.80	27.54	0.00
0.000	320.00	605.06	0.37	0.00	-1.74	29.02	0.00
0.160	140.00	603.83	0.00	0.07	0.00	24.25	32.00
0.160	220.00	604.47	0.59	0.04	0.00	26.63	32.00
0.160	260.00	604.72	0.25	0.02	0.00	27.64	32.00
0.160	320.00	605.06	0.34	-0.01	0.00	29.02	32.00
0.920	140.00	604.12	0.00	0.25	0.00	19.39	76.00
0.920	220.00	604.79	0.66	0.32	0.00	21.38	76.00
0.920	260.00	605.09	0.30	0.36	0.00	22.27	76.00
0.920	320.00	605.50	0.41	0.44	0.00	23.51	76.00
0.116	140.00	604.23	0.00	0.11	0.00	19.72	24.00
0.116	220.00	604.90	0.67	0.12	0.00	21.73	24.00
0.116	260.00	605.20	0.30	0.12	0.00	22.62	24.00
0.116	320.00	605.61	0.41	0.12	0.00	23.85	24.00
0.130	140.00	604.29	0.00	0.05	0.00	19.86	14.00
0.130	220.00	604.96	0.67	0.06	0.00	21.87	14.00
0.130	260.00	605.26	0.30	0.06	0.00	22.76	14.00
0.130	320.00	605.67	0.41	0.06	0.00	24.01	14.00
0.310	140.00	604.72	0.00	0.43	0.00	42.36	180.00
0.310	220.00	605.44	0.72	0.48	0.00	54.02	180.00
0.310	260.00	605.76	0.32	0.50	0.00	59.29	180.00
0.310	320.00	606.20	0.44	0.52	0.00	66.22	180.00
0.335	140.00	604.73	0.00	0.01	0.00	42.47	25.00
0.335	220.00	605.43	0.70	-0.01	0.00	54.02	25.00
0.335	260.00	605.74	0.31	-0.02	0.00	58.82	25.00
0.335	320.00	606.36	0.62	0.16	0.00	71.04	25.00
0.535	140.00	605.08	0.00	0.35	0.00	17.87	200.00
0.535	220.00	605.80	0.72	0.37	0.00	20.24	200.00
0.535	260.00	606.12	0.32	0.38	0.00	21.28	200.00
0.535	320.00	606.46	0.34	0.10	0.00	22.40	200.00
0.000	140.00	607.85	0.00	2.77	0.00	23.32	1725.00
0.000	220.00	608.55	0.70	2.75	0.00	197.99	1725.00
0.000	260.00	608.76	0.21	2.64	0.00	244.47	1725.00
0.000	320.00	609.02	0.26	2.56	0.00	362.04	1725.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
350.000	80.00	608.31	0.00	0.46	0.00	15.92	350.00
350.000	130.00	608.95	0.64	0.40	0.00	90.02	350.00
350.000	150.00	609.12	0.17	0.36	0.00	135.63	350.00
350.000	190.00	609.32	0.21	0.30	0.00	447.20	350.00
1090.000	80.00	609.74	0.00	1.43	0.00	13.31	740.00
1090.000	130.00	610.46	0.72	1.51	0.00	14.62	740.00
1090.000	150.00	610.64	0.18	1.52	0.00	14.94	740.00
1090.000	190.00	610.83	0.19	1.51	0.00	15.28	740.00
1122.000	80.00	609.81	0.00	0.07	0.00	13.44	32.00
1122.000	130.00	610.52	0.72	0.06	0.00	14.73	32.00
1122.000	150.00	610.70	0.18	0.06	0.00	15.06	32.00
1122.000	190.00	610.91	0.21	0.08	0.00	15.43	32.00
1272.000	80.00	610.26	0.00	0.45	0.00	11.43	150.00
1272.000	130.00	611.08	0.82	0.56	0.00	14.22	150.00
1272.000	150.00	611.33	0.25	0.62	0.00	18.91	150.00
1272.000	190.00	611.74	0.42	0.83	0.00	27.34	150.00
1400.000	80.00	610.78	0.00	0.52	0.00	13.69	128.00
1400.000	130.00	611.56	0.78	0.48	0.00	18.31	128.00
1400.000	150.00	611.79	0.23	0.46	0.00	19.67	128.00
1400.000	190.00	612.19	0.40	0.45	0.00	23.27	128.00
1447.000	80.00	611.02	0.00	0.24	0.00	15.12	47.00
1447.000	130.00	611.75	0.73	0.19	0.00	19.35	47.00
1447.000	150.00	611.96	0.21	0.16	0.00	20.67	47.00
1447.000	190.00	612.30	0.34	0.11	0.00	25.46	47.00
1800.000	80.00	612.07	0.00	1.06	0.00	14.64	353.00
1800.000	130.00	613.13	1.06	1.39	0.00	20.20	353.00
1800.000	150.00	613.49	0.36	1.53	0.00	22.39	353.00
1800.000	190.00	614.12	0.63	1.82	0.00	211.15	353.00
2520.000	80.00	612.63	0.00	0.56	0.00	24.24	720.00
2520.000	130.00	613.64	1.01	0.51	0.00	38.97	720.00
2520.000	150.00	613.98	0.34	0.49	0.00	45.50	720.00
2520.000	190.00	614.49	0.51	0.37	0.00	68.07	720.00
2530.000	80.00	612.62	0.00	-0.01	0.00	23.08	10.00
2530.000	130.00	613.64	1.02	0.00	0.00	30.77	10.00
2530.000	150.00	613.98	0.34	0.00	0.00	33.65	10.00
2530.000	190.00	614.49	0.51	0.00	0.00	48.80	10.00
2815.000	80.00	615.38	0.00	2.77	0.00	213.75	285.00
2815.000	130.00	615.74	0.35	2.10	0.00	251.98	285.00
2815.000	150.00	615.80	0.06	1.82	0.00	255.09	285.00
2815.000	190.00	615.89	0.10	1.40	0.00	259.97	285.00

PRINTED IN U.S.A.

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
2900.000	80.00	615.39	0.00	0.00	0.00	157.18	85.00
2900.000	130.00	615.74	0.35	0.00	0.00	165.99	85.00
2900.000	150.00	615.80	0.06	0.00	0.00	167.54	85.00
2900.000	190.00	615.90	0.10	0.01	0.00	169.97	85.00
2980.000	80.00	615.50	0.00	0.12	0.00	160.10	80.00
2980.000	130.00	615.82	0.31	0.08	0.00	167.99	80.00
2980.000	150.00	615.88	0.07	0.08	0.00	169.64	80.00
2980.000	190.00	615.99	0.11	0.09	0.00	172.42	80.00
3100.000	80.00	615.50	0.00	0.00	0.00	139.00	120.00
3100.000	130.00	615.82	0.31	0.00	0.00	147.76	120.00
3100.000	150.00	615.88	0.07	0.00	0.00	149.59	120.00
3100.000	190.00	615.99	0.11	0.00	0.00	150.00	120.00
3430.000	80.00	615.51	0.00	0.01	0.00	200.00	330.00
3430.000	130.00	615.83	0.32	0.01	0.00	200.00	330.00
3430.000	150.00	615.90	0.07	0.01	0.00	200.00	330.00
3430.000	190.00	616.01	0.12	0.02	0.00	200.00	330.00
3510.000	80.00	615.56	0.00	0.06	0.00	200.00	80.00
3510.000	130.00	615.86	0.30	0.03	0.00	200.00	80.00
3510.000	150.00	615.93	0.07	0.04	0.00	200.00	80.00
3510.000	190.00	616.05	0.12	0.04	0.00	200.00	80.00
3700.000	80.00	615.57	0.00	0.00	0.00	114.42	190.00
3700.000	130.00	615.87	0.30	0.00	0.00	124.52	190.00
3700.000	150.00	615.94	0.07	0.00	0.00	127.07	190.00
3700.000	190.00	616.06	0.12	0.01	0.00	131.44	190.00
3860.000	80.00	615.57	0.00	0.00	0.00	200.00	160.00
3860.000	130.00	615.87	0.30	0.01	0.00	200.00	160.00
3860.000	150.00	615.95	0.07	0.01	0.00	200.00	160.00
3860.000	190.00	616.07	0.13	0.01	0.00	200.00	160.00
4000.000	80.00	615.67	0.00	0.09	0.00	200.00	140.00
4000.000	130.00	615.92	0.25	0.04	0.00	200.00	140.00
4000.000	150.00	615.99	0.07	0.05	0.00	200.00	140.00
4000.000	190.00	616.12	0.13	0.05	0.00	200.00	140.00
4200.000	80.00	615.67	0.00	0.00	0.00	200.00	200.00
4200.000	130.00	615.92	0.25	0.00	0.00	200.00	200.00
4200.000	150.00	616.00	0.07	0.00	0.00	200.00	200.00
4200.000	190.00	616.13	0.13	0.00	0.00	200.00	200.00
4260.000	80.00	615.72	0.00	0.06	0.00	200.00	60.00
4260.000	130.00	615.97	0.24	0.05	0.00	200.00	60.00
4260.000	150.00	616.04	0.07	0.05	0.00	200.00	60.00
4260.000	190.00	616.17	0.13	0.05	0.00	200.00	60.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
4550.000	80.00	615.73	0.00	0.00	0.00	114.00	290.00
4550.000	130.00	615.97	0.25	0.01	0.00	114.00	290.00
4550.000	150.00	616.05	0.08	0.01	0.00	114.00	290.00
4550.000	190.00	616.19	0.14	0.01	0.00	114.00	290.00
4700.000	80.00	615.73	0.00	0.00	0.00	197.85	150.00
4700.000	130.00	615.98	0.25	0.01	0.00	200.00	150.00
4700.000	150.00	616.06	0.08	0.01	0.00	200.00	150.00
4700.000	190.00	616.20	0.14	0.01	0.00	200.00	150.00
4760.000	80.00	615.76	0.00	0.03	0.00	198.80	60.00
4760.000	130.00	616.01	0.26	0.03	0.00	200.00	60.00
4760.000	150.00	616.09	0.08	0.03	0.00	200.00	60.00
4760.000	190.00	616.24	0.14	0.04	0.00	200.00	60.00
5640.000	80.00	615.80	0.00	0.04	0.00	17.76	880.00
5640.000	130.00	616.07	0.27	0.06	0.00	71.46	880.00
5640.000	150.00	616.16	0.09	0.06	0.00	98.29	880.00
5640.000	190.00	616.31	0.16	0.08	0.00	144.57	880.00
6900.000	80.00	616.13	0.00	0.34	0.00	76.96	1260.00
6900.000	130.00	616.60	0.47	0.53	0.00	149.97	1260.00
6900.000	150.00	616.74	0.14	0.58	0.00	179.36	1260.00
6900.000	190.00	616.98	0.24	0.66	0.00	186.59	1260.00
6916.000	80.00	616.29	0.00	0.16	0.00	123.43	16.00
6916.000	130.00	616.64	0.35	0.04	0.00	176.19	16.00
6916.000	150.00	616.77	0.13	0.03	0.00	180.26	16.00
6916.000	190.00	617.00	0.23	0.03	0.00	187.60	16.00
7200.000	80.00	616.37	0.00	0.08	0.00	61.90	284.00
7200.000	130.00	616.75	0.37	0.11	0.00	91.05	284.00
7200.000	150.00	616.88	0.13	0.11	0.00	121.05	284.00
7200.000	190.00	617.11	0.23	0.10	0.00	183.48	284.00
7590.000	80.00	617.12	0.00	0.74	0.00	213.45	390.00
7590.000	130.00	617.25	0.13	0.50	0.00	221.96	390.00
7590.000	150.00	617.29	0.04	0.41	0.00	224.51	390.00
7590.000	190.00	617.37	0.08	0.26	0.00	225.00	390.00
7740.000	80.00	617.17	0.00	0.05	0.00	159.15	150.00
7740.000	130.00	617.34	0.17	0.09	0.00	192.31	150.00
7740.000	150.00	617.39	0.05	0.10	0.00	200.00	150.00
7740.000	190.00	617.49	0.10	0.12	0.00	200.00	150.00
7880.000	80.00	617.23	0.00	0.06	0.00	153.62	140.00
7880.000	130.00	617.43	0.20	0.09	0.00	182.80	140.00
7880.000	150.00	617.49	0.06	0.10	0.00	191.92	140.00
7880.000	190.00	617.60	0.12	0.11	0.00	200.00	140.00

PRINTED IN U.S.A.

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
7920.000	80.00	617.66	0.00	0.43	0.00	200.00	40.00
7920.000	130.00	617.82	0.16	0.39	0.00	200.00	40.00
7920.000	150.00	617.87	0.05	0.38	0.00	200.00	40.00
7920.000	190.00	617.95	0.08	0.35	0.00	200.00	40.00
8040.000	80.00	617.67	0.00	0.01	0.00	122.08	120.00
8040.000	130.00	617.83	0.17	0.01	0.00	131.12	120.00
8040.000	150.00	617.88	0.05	0.02	0.00	133.85	120.00
8040.000	190.00	617.97	0.09	0.02	0.00	138.82	120.00
8100.000	80.00	617.67	0.00	0.01	0.00	37.85	60.00
8100.000	130.00	617.83	0.16	0.00	0.00	69.78	60.00
8100.000	150.00	617.88	0.05	-0.01	0.00	77.11	60.00
8100.000	190.00	617.96	0.09	-0.01	0.00	90.83	60.00
8210.000	70.00	617.82	0.00	0.15	0.00	127.78	110.00
8210.000	115.00	618.12	0.29	0.29	0.00	177.07	110.00
8210.000	130.00	618.21	0.10	0.34	0.00	189.28	110.00
8210.000	170.00	618.39	0.18	0.43	0.00	200.00	110.00
8248.000	70.00	617.97	0.00	0.15	0.00	146.59	38.00
8248.000	115.00	618.21	0.24	0.10	0.00	189.84	38.00
8248.000	130.00	618.29	0.08	0.07	0.00	199.62	38.00
8248.000	170.00	618.44	0.15	0.05	0.00	200.00	38.00
8400.000	70.00	617.98	0.00	0.01	0.00	99.52	152.00
8400.000	115.00	618.23	0.25	0.02	0.00	122.11	152.00
8400.000	130.00	618.31	0.08	0.02	0.00	123.42	152.00
8400.000	170.00	618.47	0.16	0.03	0.00	128.78	152.00
8412.000	70.00	618.05	0.00	0.07	0.00	107.42	12.00
8412.000	115.00	618.29	0.24	0.06	0.00	123.12	12.00
8412.000	130.00	618.36	0.07	0.05	0.00	124.32	12.00
8412.000	170.00	618.52	0.16	0.05	0.00	132.20	12.00
8500.000	70.00	618.08	0.00	0.03	0.00	119.62	88.00
8500.000	115.00	618.33	0.25	0.04	0.00	144.95	88.00
8500.000	130.00	618.40	0.07	0.04	0.00	153.94	88.00
8500.000	170.00	618.57	0.17	0.05	0.00	155.41	88.00
8512.000	70.00	618.23	0.00	0.15	0.00	131.42	12.00
8512.000	115.00	618.41	0.19	0.08	0.00	154.04	12.00
8512.000	130.00	618.48	0.07	0.03	0.00	154.64	12.00
8512.000	170.00	618.64	0.16	0.07	0.00	156.04	12.00
8700.000	70.00	618.24	0.00	0.01	0.00	143.38	188.00
8700.000	115.00	618.43	0.20	0.02	0.00	150.32	188.00
8700.000	130.00	618.50	0.07	0.02	0.00	152.79	188.00
8700.000	170.00	618.67	0.16	0.03	0.00	158.58	188.00

PRINTED IN U.S.A.

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
10400.000	70.00	619.65	0.00	1.41	0.00	43.40	1700.00
10400.000	115.00	620.21	0.56	1.78	0.00	65.87	1700.00
10400.000	130.00	620.32	0.11	1.82	0.00	67.80	1700.00
10400.000	170.00	620.56	0.24	1.89	0.00	69.67	1700.00

PRINTED IN U.S.A.

SUMMARY OF ERRORS AND SPECIAL NOTES

PRINTED IN U.S.A.

FLOOD INSURANCE ZONE DATA FOR SILVER CREEK AND HAND DR

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10	2	0.2
0.000	0.	-0.89	-0.27	0.37
0.160	32.	-0.84	-0.25	0.34
0.920	108.	-0.96	-0.30	0.41
0.116	132.	-0.97	-0.30	0.41
0.130	146.	-0.97	-0.30	0.41
0.310	326.	-1.04	-0.32	0.44
0.335	351.	-1.00	-0.31	0.62
0.535	551.	-1.03	-0.32	0.34
0.000	2276.	-0.91	-0.21	0.26
350.000	2626.	-0.81	-0.17	0.21
1090.000	3366.	-0.90	-0.18	0.19
1122.000	3398.	-0.90	-0.18	0.21
1272.000	3548.	-1.07	-0.25	0.42
1400.000	3676.	-1.02	-0.23	0.40
1447.000	3723.	-0.94	-0.21	0.34
1800.000	4076.	-1.41	-0.36	0.63
2520.000	4796.	-1.35	-0.34	0.51
2530.000	4806.	-1.36	-0.34	0.51
2815.000	5091.	-0.41	-0.06	0.10
2900.000	5176.	-0.41	-0.06	0.10
2980.000	5256.	-0.38	-0.07	0.11
3100.000	5376.	-0.38	-0.07	0.11
3430.000	5706.	-0.39	-0.07	0.12
3510.000	5786.	-0.37	-0.07	0.12
3700.000	5976.	-0.37	-0.07	0.12
3860.000	6136.	-0.38	-0.07	0.13
4000.000	6276.	-0.33	-0.07	0.13
4200.000	6476.	-0.33	-0.07	0.13
4260.000	6536.	-0.32	-0.07	0.13
4550.000	6826.	-0.32	-0.08	0.14
4700.000	6976.	-0.33	-0.08	0.14
4760.000	7036.	-0.33	-0.08	0.14
5340.000	7916.	-0.36	-0.09	0.15
6900.000	9176.	-0.61	-0.14	0.24
6916.000	9192.	-0.48	-0.13	0.23
7200.000	9476.	-0.50	-0.13	0.23
7590.000	9866.	-0.17	-0.04	0.08
7740.000	10016.	-0.22	-0.05	0.10
7880.000	10156.	-0.26	-0.06	0.12
7920.000	10196.	-0.21	-0.05	0.08
8040.000	10316.	-0.22	-0.05	0.09
8100.000	10376.	-0.20	-0.05	0.09
8210.000	10486.	-0.39	-0.10	0.18
8248.000	10524.	-0.32	-0.08	0.15

NITED , U.S.A.

~~8400.000~~	~~10676.~~	~~-0.33~~	~~-0.08~~	~~0.16~~
8412.000	10688.	-0.31	-0.07	0.16
8500.000	10776.	-0.32	-0.07	0.17
8512.000	10788.	-0.25	-0.07	0.16
8700.000	10976.	-0.27	-0.07	0.16
10400.000	12676.	-0.67	-0.11	0.24
WEIGHTED AVG FOR REACH		~~-0.64~~ -0.77	~~-0.15~~ -0.17	~~0.24~~ 0.27

FHF FOR THE REACH = ~~005~~ 010 WITH ~~91.5~~ 84.7 PERCENT OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A ~~2~~ 2

IN IN U.S.A

THIS RUN EXECUTED 11 SEP 84 3:44:31

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************
```

UNEXPECTED END OF FILE ABORT IN SUBROUTINE H2MAIN

```
===> COED,HANDOUT
===> SP,HANDOUT,:6
===> /SQ
===> /SQ
===> /SQ
===> /SS
===> /SQ
===> /SQ
===> /SQ
===> /SS
===> /SQ
===> /SQ
===> /SQ
===> /SS
===> /SQ
===> /SQ
===> FREE ALL
```

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Lincoln Park and Allen Park

3) WATERCOURSE: Sexton-Kitfoil Drain

4) DOCUMENT TYPE: Summary

00BREAK00

Date

ROUTING AND TRANSMITTAL SLIP

22 MAY 1989

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. BRUCE E. MENEBEY P.E		
2. TECHNICAL PROGRAMS		
3. LAND & WATER MANAGEMENT DIVISION		
4. MICHIGAN DNR		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

SUBJECT: SEXTON - KILFOIL DRAIN, DETROIT RIVER TO ALLEN ROAD

THE HEC-2 DATA FOR THE REACH BETWEEN DETROIT RIVER AND ALLEN ROAD ARE PROVIDED AS REQUESTED. A FLOPPY DISC SHOWING THE HEC-2 INPUT DATA IS ALSO ATTACHED. PLEASE NOTE THAT THE INFORMATION PROVIDED IS NOT FINAL IF YOU NEED MORE INFORMATION, FEEL FREE TO CONTACT ME.

DO NOT use this form as a RECORD of approvals, concurrences, disposals clearances and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg
JEFF WEISER, PE CIV. TECHNICAL SUPPT. SEC'T	Phone No (313) 226-4886

5041-102

GPO : 1987 0 - 170-636

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

TABLE A-43
ECORSE CREEK FLOOD PROTECTION STUDY
SEXTON-KILFOIL DRAIN
STAGE-DISCHARGE
WITHOUT PROJECT
PRESENT CONDITION

BENDAL

NODE	INDEX POINT	X-SEC. H-2	TOP BANK EL.	2-yr. FLOW DISCH.	2-yr. FLOW STAGE	5-yr. FLOW DISCH.	5-yr. FLOW STAGE	10-yr. FLOW DISCH.	10-yr. FLOW STAGE	50-yr. FLOW DISCH.	50-yr. FLOW STAGE	100-yr. FLOW DISCH.	100-yr. FLOW STAGE	500-yr. FLOW DISCH.	500-yr. FLOW STAGE
	EMMONS BLVD.	4281	578.0	255	576.88	630	577.29	1030	577.65	1610	578.59	1900	579.11	2590	580.21
	HARRISON BLVD.	8147	578.0	255	576.81	630	577.78	1030	578.65	1610	580.11	1900	580.83	2590	582.34
	HARRISON AVE.	11017	581.5	255	576.96	630	578.24	1030	579.47	1610	581.36	1900	582.22	2590	583.95
22	FORT ST.	11721	582.5	210	577.04	580	578.44	950	579.71	1550	582.12	1850	583.25	2640	585.35
	HOWARD	13309	583.0	210	577.24	580	578.91	950	580.34	1550	582.83	1850	584.06	2640	585.87
21	DIX HWY	15555	587.0	180	577.76	540	579.73	900	581.24	1480	583.77	1760	585.08	2520	587.20
	HAZEL AVE.	16380	590.5	180	578.25	540	580.36	900	581.88	1480	584.27	1760	585.50	2520	587.99
19	I-75	21310	593.5	150	581.93	430	584.21	700	585.89	1100	588.05	1310	589.07	1830	591.39
	REECK RD.	5	598.8	150	588.84	430	591.29	700	592.93	1100	594.87	1310	595.76	1830	597.74
18	ALLEN RD	100	601.5	150	591.75	430	594.48	700	596.15	1100	598.01	1310	598.91	1830	600.72
	D.T.&I. R.R.	1448	604.5	115	598.07	370	600.83	630	602.73	970	604.28	1170	605.14	1610	606.64
	WILLIAMS RD.	4616	605.4	115	600.54	370	603.52	630	606.25	970	606.73	1170	606.93	1610	607.71
16	PARDEE RD.	7156	606.2	75	603.31	240	606.36	410	608.69	660	609.83	810	610.07	1120	610.41
	BIRCH	8967	608.6	75	604.29	240	607.06	410	609.38	660	610.21	810	610.49	1120	610.93
	SYRACUSE	10480	612.0	75	605.75	240	608.10	410	610.42	660	612.15	810	612.42	1120	612.81
15	TELEGRAPH	11671	613.7	65	607.23	210	609.06	360	611.03	590	613.29	730	614.35	1050	615.91
	WESTLAKE RD.	14721	616.6	65	610.92	210	613.45	360	615.26	590	616.15	730	616.32	1050	616.66
14	BEECH DALY	17288	617.0	50	612.39	165	615.24	290	617.66	500	619.83	640	620.13	990	620.47
	CONTINENTAL DR.	18768	621.0	50	613.79	165	616.00	290	618.10	500	620.06	640	620.43	990	620.99
	HOLLAND RD.	20056	621.6	50	615.18	165	617.52	290	619.30	500	621.34	640	622.09	990	622.92
	INKSTER RD.	23500	624.7	10	618.83	20	620.99	40	622.90	60	623.23	80	623.61	130	624.27

```
EEEEEE   EEEEEE          JJJJJJ    AAAA    IIIII     SSSS    IIIII    N    N            1
E        E                    J    A    A     I      S          I      NN   N           11
E        E        ------      J    A    A     I       SSSS      I      N N  N   ------   1
EEEE     EEEE             J   J    AAAAAA     I           S     I      N  N N            1
E        E                J   J    A    A     I      S    S     I      N   NN            1
EEEEEE   EEEEEE            JJJ     A    A   IIIII     SSSS    IIIII    N    N          11111
```

USACOE DETROIT H800 VOS 7.1.0 PRINTER: 6

EE-JAISIN-1 22 MAY 89 10:35:43

TERMINAL: 105

SEXTON - KILFOIL DRAIN
DETROIT RIVER TO D/S FACE ALLEN ROAD
PRESENT CONDITION (W/O PROJECT)

I = BEMPAL

```
**********************************************************
*  WATER SURFACE PROFILES                                *
*  VERSION OF NOVEMBER 1976                              *
*  UPDATED MAY 1984                                      *
*                                                        *
*  RUN DATE  22 MAY 89 TIME    10:18:47                  *
**********************************************************
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**************************************
*  U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER *
*  609 SECOND STREET, SUITE D        *
*  DAVIS, CALIFORNIA 95616           *
*  (916) 440-2105 (FTS) 448-2105     *
**************************************
```

```
X      X  XXXXXXX   XXXXX              XXXXX
X      X  X         X     X           X     X
X      X  X         X                       X
XXXXXXX   XXXX      X           XXXXX    XXXXX
X      X  X         X                 X
X      X  X         X     X           X
X      X  XXXXXXX    XXXXX            XXXXXXX
```

THIS RUN EXECUTED 22 MAY 89 10:18:47

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
**************************************************

C
T1   ECORSE CREEK FLOOD PROTECTION STUDY
T2   SEXTON KILFOIL DRAIN-DETROIT R. TO D/S FACE ALLEN ROAD
T3       2-YEAR FREQUENCY FLOOD -PRESENT CONDITION

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

       0.         2.         0.          0   0.000000       0.00       0.0         0.    574.900      0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

     1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

   110.000    150.000    201.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000


NC       0.035      0.035      0.032      0.300      0.500      0.000      0.000      0.000      0.000      0.000
QT       6.000   2470.000   2960.000   3150.000   3830.000   4230.000   5130.000      0.000      0.000      0.000
X1       1.000     41.000    500.000    619.000      0.000      0.000      0.000      0.000      0.000      0.000
GR     576.200      0.000    575.900    100.000    576.600    200.000    578.500    300.000    581.100    400.000
GR     584.600    500.000    582.800    500.000    582.600    505.000    581.900    510.000    581.100    515.000
GR     579.200    520.000    575.400    525.000    574.800    530.000    572.800    535.000    569.200    540.000
GR     569.200    540.000    565.500    543.500    565.500    543.500    565.500    545.000    563.900    555.000
GR     566.100    560.000    565.300    565.000    565.400    570.000    564.100    575.000    566.200    580.000
GR     566.200    580.000    565.300    583.500    565.300    583.500    565.300    585.000    563.400    590.000
GR     564.400    595.000    565.400    600.000    567.700    605.000    571.100    610.000    573.500    615.000
GR     574.000    619.000    584.600    619.000    582.300    700.000    579.600    800.000    579.000    890.000
GR     578.700   1000.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      30.000      0.000      0.000      0.000     29.000     29.000     29.000      0.000      0.000      0.000

X1      60.000     41.000    500.000    619.000     30.000     30.000     30.000      0.000      0.000      0.000
GR     576.200      0.000    575.900    100.000    576.600    200.000    578.500    300.000    581.100    400.000
GR     584.600    500.000    582.800    500.000    582.600    505.000    581.900    510.000    581.100    515.000
GR     579.200    520.000    575.400    525.000    574.800    530.000    572.800    535.000    569.200    540.000
GR     569.200    540.000    565.500    543.500    565.500    543.500    565.500    545.000    563.900    555.000
GR     566.100    560.000    565.300    565.000    565.400    570.000    564.100    575.000    566.200    580.000
GR     566.200    580.000    565.300    583.500    565.300    583.500    565.300    585.000    563.400    590.000
GR     564.400    595.000    565.400    600.000    567.700    605.000    571.100    610.000    573.500    615.000
GR     574.000    619.000    584.600    619.000    582.300    700.000    579.600    800.000    579.000    890.000
GR     578.700   1000.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
```

WEST JEFFERSON AVENUE BRIDGE

X1	61.000	41.000	500.000	619.000	1.000	1.000	1.000	0.000	0.000	0.000
BT	11.000	500.000	584.300	579.800	500.000	587.700	579.800	520.000	587.700	579.200
BT	520.000	587.700	580.300	540.000	588.100	580.300	543.500	588.100	580 300	560.000
BT	588.300	580.300	580.000	588.100	580.300	583.500	588.100	580.300	619.000	587.700
BT	579.700	619.000	584.400	579.700	0.000	0.000	0.000	0.000	0.000	0.000
GR	576.200	0.000	575.900	100.000	576 600	200.000	578.500	300.000	581.100	400.000
GR	584.600	500.000	582.800	500.000	582.600	505.000	581.900	510.000	581.100	515.000
GR	579.200	520.000	575.400	525.000	574.800	530.000	572.800	535.000	569.200	540.000
GR	580.300	540.000	580.300	543.500	565.500	543.500	565.500	545.000	563 900	555.000
GR	566.100	560.000	565.300	565.000	565.400	570.000	564.100	575.000	566.200	580.000
GR	580.300	580.000	580.300	583.500	565.300	583.500	565.300	585.000	563.400	590.000
GR	564.400	595.000	565.400	600.000	567.700	605.000	571.100	610.000	573.500	615.000
GR	574.000	619.000	584.600	619.000	582.300	700.000	579.600	800.000	579.000	890.000
GR	578.700	1000.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	136.000	0.000	500.000	619.000	75.000	75.000	75.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	137 000	41.000	500.000	619 000	1.000	1.000	1.000	0.000	0.000	0.000
GR	576.200	0.000	575.900	100.000	576.600	200.000	578.500	300.000	581.100	400.000
GR	584.600	500.000	582.800	500.000	582.600	505.000	581.900	510.000	581.100	515.000
GR	579.200	520.000	575.400	525.000	574.800	530.000	572.800	535.000	569.200	540.000
GR	569.200	540.000	565.500	543.500	565.500	543.500	565.500	545.000	563.900	555.000
GR	566.100	560.000	565.300	565.000	565.400	570.000	564.100	575.000	566.200	580.000
GR	566.200	580.000	565.300	583.500	565.300	583.500	565.300	585.000	563.400	590 000
GR	564.400	595.000	565 400	600.000	567 700	605.000	571.100	610.000	573.500	615.000
GR	574.000	619.000	584.600	619.000	582.300	700.000	579.600	800.000	579.000	890.000
GR	578.700	1000.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.035	0.042	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	187.000	27.000	331.000	441.000	50.000	50.000	50 000	0.000	0 000	0.000
GR	575.800	0.000	576.600	41.000	578.500	141.000	580.600	241.000	583.100	331 000
GR	575.400	341.000	574.800	346.000	571.300	351.000	568.100	356.000	567.200	361 000
GR	565.700	366.000	565.100	371.000	565.500	376.000	565.100	381.000	564.700	391.000
GR	564.100	401.000	564.400	406.000	565.700	411.000	568.200	416.000	570.500	421.000
GR	572.800	426.000	574.800	432.000	580.200	441.000	583.600	454.000	581.000	541 000
GR	579.300	641.000	578.300	698.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	362.000	35.000	244.000	400.000	175.000	175.000	175.000	0.000	0.270	0.000
GR	580.200	0.000	579.500	100.000	578.300	200.000	578.300	244.000	574.600	254.000
GR	573.600	255.000	571.500	260.000	569.800	265.000	568.500	270.000	567.600	275.000
GR	566.900	280.000	565.900	285.000	565.600	290.000	563.700	300.000	563.700	310 000
GR	564.300	320.000	565.800	330.000	568.200	340.000	569.800	345.000	571.100	350.000
GR	571.600	355.000	572.400	360.000	572 100	365.000	572.600	370.000	572.600	375.000
GR	572.800	380.000	572.800	385.000	572.900	390.000	574.600	395.000	576.900	400 000
GR	577.600	500.000	577.700	545.000	577.500	600.000	577.700	700.000	577.500	800.000

X1	737.000	35.000	244.000	400.000	375.000	375.000	375.000	0.000	0.000	0.000
GR	580.200	0.000	579.500	100.000	578.300	200.000	578.300	244.000	574.600	254.000
GR	573.600	255.000	571.500	260.000	569.800	265.000	568.500	270 000	567.600	275.000
GR	566.900	280.000	565.900	285.000	565.600	290.000	563.700	300 000	563.700	310 000
GR	564.300	320.000	565.800	330.000	568.200	340.000	569.800	345.000	571.100	350.000
GR	571.600	355.000	572.400	360.000	572.100	365.000	572.600	370.000	572.600	375.000
GR	572.800	380.000	572.800	385.000	572.900	390.000	574.600	395.000	576.900	400.000
GR	577.600	500.000	577.700	545.000	577.500	600.000	577.700	700.000	577.500	800.000
X1	787.000	67.000	795.000	901.600	50.000	50.000	50.000	0.000	0.000	0.000
GR	581.500	0.000	581.400	95.000	581.300	195.000	581.200	295.000	581.100	395.000
GR	581.100	495.000	581.100	595.000	581.000	695.000	581.000	795.000	575.200	795.000
GR	574.500	800.000	574.500	800.000	574.500	801.000	574.500	801.000	574.000	805.000
GR	573.200	810.000	573.200	810.000	573.200	811.000	573.200	811.000	570.800	815.000
GR	569.300	820.000	570.100	825.000	570.100	825.000	570.100	826.000	570.100	826.000
GR	566.600	829.900	566.600	829.900	566.600	831.200	566.600	831.200	565.500	835.000
GR	565.500	835.000	565.500	836.000	565.500	836.000	563.900	840.000	564.500	845.000
GR	564.500	845.000	564.500	846.000	564.500	846.000	564.900	850.000	564.900	855.000
GR	564.900	855.000	564.900	856.000	564.900	856.000	565.500	860.000	565.200	865.000
GR	565.200	865.000	565.200	866.300	565.300	866.300	566.000	870.000	566.000	875.000
GR	566.000	875.000	566.000	876.000	566.000	876.000	566.700	880.000	568.700	885.000
GR	568.300	890 000	569.700	895.000	571.700	900.000	571.700	901 600	581.000	901.600
GR	580.800	995.000	580.800	1095.000	580.600	1195.000	580.400	1295 000	580.100	1395.000
GR	579 900	1495.000	580.000	1540.000	0.000	0.000	0.000	0.000	0.000	0.000

D. T. AND I. RAILROAD

X1	788 000	67.000	795.000	901.600	1.000	1.000	1.000	0.000	0.000	0.000
BT	4.000	795.000	581.000	577.200	830.000	581.000	577.200	860.000	581.000	577.200
BT	901.600	581.000	577.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	581.500	0.000	581.400	95.000	581.300	195.000	581.200	295.000	581.100	395.000
GR	581.100	495.000	581.100	595.000	581.000	695.000	581.000	795.000	575.200	795.000
GR	574.500	800.000	575.500	800.000	575.500	801.000	574.500	801.000	574.000	805.000
GR	573.200	810.000	575.500	810.000	575.500	811.000	573.200	811.000	570.800	815.000
GR	569.300	820.000	570.100	825.000	575.500	825.000	575.500	826.000	570.100	826.000
GR	566.600	830 000	577.200	830.000	577.200	831.300	566.600	831.300	565.500	835.000
GR	575.500	835.000	575.500	836.000	565.500	836.000	563.900	840.000	564.500	845.000
GR	575.500	845.000	575.500	846.000	564.500	846.000	564.900	850.000	564.900	855.000
GR	575.500	855.000	575.500	856.000	564.900	856.000	565.500	860.000	565.200	865.000
GR	577.200	865.000	577.200	866.300	565.200	866.300	566.000	870.000	566.000	875.000
GR	575.500	875.000	575.500	876.000	566.000	876.000	566.700	880.000	568.700	885.000
GR	568.300	890.000	569.700	895.000	571.700	900.000	571.700	901.600	581.000	901.600
GR	580.800	995.000	580.800	1095.000	580.600	1195.000	580.400	1295.000	580.100	1395.000
GR	579.900	1495.000	580.000	1540.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	797.000	0.000	795.000	901.600	9.000	9.000	9.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	798.000	67.000	795.000	901.600	1.000	1.000	1.000	0.000	0.000	0.000
GR	581.500	0.000	581.400	95.000	581.300	195.000	581.200	295.000	581.100	395.000
GR	581.100	495.000	581.100	595.000	581.000	695.000	581.000	795.000	575.200	795.000
GR	574.500	800.000	574.500	800.000	574.500	801.000	574.500	801.000	574.000	805.000
GR	573.200	810.000	573.200	810.000	573.200	811.000	573.200	811.000	570.800	815.000
GR	569 300	820.000	570.100	825.000	570.100	825.000	570.100	826.000	570.100	826.000

GR	566.600	829.900	566.600	829.900	566.600	831.200	566.600	831 200	565.500	835.000
GR	565.500	835.000	565.500	836.000	565.500	836.000	563.900	840.000	564.500	845 000
GR	564.500	845.000	564.500	846.000	564.500	846.000	564.900	850.000	564.900	855.000
GR	564.900	855.000	564.900	856.000	564.900	856.000	565.500	860.000	565.200	865.000
GR	565.200	865.000	565.200	866.300	565.300	866.300	566.000	870.000	566.000	875.000
GR	566.000	875.000	566.000	876.000	566.000	876.000	566.700	880.000	568.700	885.000
GR	568.300	890.000	569.700	895.000	571.700	900.000	571.700	901.600	581.000	901.600
GR	580.800	995.000	580.800	1095.000	580.600	1195.000	580.400	1295.000	580 100	1395.000
GR	579.900	1495.000	580.000	1540.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	844.000	58.000	815.000	924.000	46.000	46.000	46.000	0.000	0.000	0.000
GR	583.400	0.000	583.400	15.000	583.100	115.000	582.900	215.000	582.800	315.000
GR	582.600	415.000	582.300	515.000	582.100	615.000	581.800	715.000	581.500	815.000
GR	576.100	815.000	574.200	820.000	572.700	825.000	570.000	829.000	570.000	829.000
GR	570.000	830.000	570.000	830.000	568.000	835.000	565.900	840.000	565.000	844.000
GR	565.000	844.000	565.000	845.000	565.000	845.000	565.000	855.000	566.000	864.000
GR	566.000	864.000	566.000	865.000	566.000	865.000	566.100	874.000	566.100	874.000
GR	566.100	875.000	566.100	875.000	565.800	884.000	565.800	884.000	565.800	885 000
GR	565.800	885.000	565.600	890.000	565.200	894.000	565.200	894.000	565.200	895.000
GR	565.200	895.000	567.600	900.000	570.300	905.000	572.000	909.000	572.000	909.000
GR	572.000	910.000	572.000	910.000	574.000	915.000	575.100	920.000	576.200	924 000
GR	581.400	924.000	581.300	1015.000	581.300	1115.000	581.100	1215.000	581.100	1315.000
GR	581.100	1415.000	581.200	1515.000	581 200	1565.000	0.000	0 000	0 000	0.000
X1	845.000	58.000	815.000	924.000	1.000	1.000	1.000	0.000	0.000	0.000
BT	16.000	815.000	581.500	578.400	829.000	581.500	578.100	830.000	581.500	578.100
BT	844.000	581.500	577.900	845.000	581.500	577.900	864.000	581.500	577.500	865.000
BT	581.500	577.500	874.000	581.400	577.400	875.000	581.400	577.400	884 000	581.400
BT	577.200	885.000	581.400	577.200	894.000	581.400	577.000	895.000	581.400	577.000
BT	909.000	581.400	576.800	910.000	581.400	576.800	924.000	581.400	576.500	0.000
GR	583.400	0.000	583.400	15.000	583.100	115.000	582.900	215.000	582.800	315.000
GR	582.600	415.000	582.300	515.000	582.100	615.000	581.800	715.000	581.500	815 000
GR	576.100	815.000	574.200	820.000	572.700	825.000	570.000	829.000	578.100	829.000
GR	578.100	830.000	570.000	830.000	568.000	835.000	565.900	840.000	565.000	844.000
GR	577.900	844.000	577.900	845.000	565.000	845.000	565.000	855.000	566.000	864.000
GR	577.500	864.000	577.500	865.000	566.000	865.000	566.100	874.000	577.400	874.000
GR	577.400	875.000	566.100	875.000	565.800	884.000	577.200	884.000	577.200	885.000
GR	565.800	885.000	565.600	890.000	565.200	894.000	577.000	894.000	577.000	895 000
GR	565.200	895.000	567.600	900.000	570.300	905.000	572.000	909.000	576.800	909.000
GR	576.800	910.000	572.000	910.000	574.000	915.000	575.100	920.000	576.200	924.000
GR	581.400	924.000	581.300	1015.000	581.300	1115.000	581.100	1215.000	581.100	1315.000
GR	581.100	1415.000	581.200	1515.000	581.200	1565.000	0.000	0.000	0.000	0.000
		CONRAIL								
X1	859.000	0.000	815.000	924.000	14.500	14.500	14.500	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	860.000	58.000	815.000	924.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	583.400	0.000	583.400	15.000	583.100	115.000	582.900	215.000	582.800	315.000
GR	582.600	415.000	582.300	515.000	582.100	615.000	581.800	715.000	581.500	815.000
GR	576.100	815.000	574.200	820.000	572.700	825.000	570.000	829.000	570.000	829.000
GR	570.000	830.000	570 000	830.000	568.000	835.000	565.900	840.000	565.000	844.000
GR	565.000	844.000	565.000	845.000	565.000	845.000	565.000	855.000	566.000	864.000
GR	566.000	864.000	566 000	865.000	566.000	865.000	566.100	874.000	566.100	874.000

GR	566.100	875.000	566.100	875.000	565.800	884.000	565.800	884.000	565.800	885 000
GR	565.800	885.000	565.600	890.000	565.200	894.000	565.200	894.000	565.200	895.000
GR	565.200	895.000	567.600	900.000	570.300	905.000	572.000	909.000	572.000	909.000
GR	572.000	910.000	572.000	910.000	574.000	915.000	575.100	920.000	576.200	924.000
GR	581.400	924.000	581.300	1015.000	581.300	1115.000	581.100	1215.000	581.100	1315.000
GR	581.100	1415.000	581.200	1515.000	581.200	1565.000	0.000	0.000	0.000	0.000
X1	910.000	64.000	835.000	942.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	583.700	0.000	583.600	35.000	583.400	135.000	583.300	235.000	583 300	335.000
GR	583.300	435 000	583.300	535.000	583.200	635.000	583.100	735.000	583.100	835.000
GR	574.800	835.000	572.600	840.000	571.600	844.000	571.600	844.000	571.600	845.000
GR	571.600	845.000	570.700	854.000	570.700	854.000	570.700	855 000	570.700	855.000
GR	565.600	864.000	565.600	864.000	565 600	865.000	565.600	865.000	564.300	874.000
GR	564.300	874.000	564.300	875.000	564.300	875.000	564.800	884.000	564.800	884.000
GR	564.800	885.000	564.800	885.000	564.900	894.000	564.900	894.000	564.900	895.000
GR	564 900	895.000	564.000	904.000	564.000	904.000	564.000	905.000	564.000	905.000
GR	566.100	914.000	566.100	914.000	566.100	915.000	566.100	915.000	567.000	920.000
GR	571.000	924.000	571.000	924.000	571.000	925.000	571.000	925.000	572.400	930.000
GR	573.900	934.000	573.900	934.000	573.900	935.000	573.900	935.000	575 000	940.000
GR	574.900	942.000	583.000	942.000	582.700	1035.000	582.600	1135.000	582.300	1235.000
GR	582.100	1335.000	581.900	1435.000	581.800	1535.000	581.800	1585.000	0.000	0 000

RAILROAD SPUR

X1	911.000	64.000	835.000	942.000	1.000	1.000	1.000	0.000	0.000	0.000
BT	6.000	835.000	583.100	578.600	874.000	583.100	578.600	875.000	583.100	578.600
BT	904.000	583.000	578.600	905.000	583.000	578.600	942.000	583.000	578.600	0.000
GR	583.700	0.000	583.600	35.000	583.400	135.000	583.300	235.000	583.300	335.000
GR	583.300	435.000	583.300	535.000	583.200	635.000	583.100	735.000	583.100	835.000
GR	574.800	835.000	572.600	840.000	571.600	844.000	575.500	844.000	575.500	345.000
GR	571.600	845.000	570.700	854.000	575.500	854.000	575.500	855.000	570.700	855.000
GR	565.600	864.000	575.500	864.000	575.500	865.000	565.600	865.000	564.300	874.000
GR	578.600	874.000	578 600	875.000	564.300	875.000	564.800	884.000	575.500	884.000
GR	575.500	885.000	564.800	885.000	564.900	894.000	575 500	894.000	575.500	395.000
GR	564.900	895.000	564.000	904.000	578.600	904.000	578.600	905.000	564.000	905.000
GR	566.100	914.000	575.500	914 000	575.500	915.000	566.100	915.000	567.000	920.000
GR	571.000	924.000	575.500	924.000	575.500	925.000	571.000	925.000	572.400	930 000
GR	573.900	934.000	575.500	934.000	575.500	935.000	573.900	935.000	575.000	940.000
GR	574.900	942.000	583.000	942.000	582.700	1035.000	582.600	1135.000	582.300	1235.000
GR	582.100	1335.000	581.900	1435.000	581.800	1535.000	581.800	1585.000	0.000	0.000
X1	921.000	0.000	835.000	942.000	10.000	10.000	10.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	922.000	64.000	835.000	942.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	583.700	0.000	583 600	35.000	583.400	135.000	583.300	235.000	583.300	335.000
GR	583.300	435.000	583.300	535.000	583.200	635.000	583.100	735.000	583.100	835.000
GR	574.800	835.000	572.600	840.000	571.600	844.000	571.600	844.000	571.600	845.000
GR	571.600	845 000	570.700	854.000	570.700	854.000	570.700	855.000	570.700	855.000
GR	565.600	864.000	565.600	864.000	565.600	865 000	565.600	865.000	564.300	874.000
GR	564.300	874.000	564.300	875.000	564.300	875.000	564.800	884.000	564.800	884 000
GR	564.800	885.000	564.800	885.000	564.900	894.000	564.900	894.000	564.900	895.000
GR	564.900	895.000	564.000	904.000	564.000	904.000	564.000	905.000	564.000	905.000
GR	566.100	914.000	566.100	914.000	566.100	915.000	566.100	915.000	567.000	920.000
GR	571.000	924 000	571.000	924.000	571.000	925.000	571.000	925.000	572.400	930.000

GR	573.900	934.000	573.900	934.000	573.900	935.000	573.900	935.000	575.000	940.000
GR	574.900	942.000	583.000	942.000	582.700	1035.000	582.600	1135.000	582.300	1235.000
GR	582.100	1335.000	581.900	1435.000	581.800	1535.000	581.800	1585.000	0.000	0.000
X1	953.000	48.000	600.000	681.000	31.000	31.000	31.000	0.000	0 000	0 000
GR	582.000	0.000	581.800	100.000	581.600	200.000	581.500	300.000	581.400	400.000
GR	581.200	500.000	581.000	600.000	571.000	600.000	568.100	605.000	566.900	610.000
GR	566.900	610.000	566.900	612.300	566.900	612.300	565.900	615.000	565.100	620.000
GR	565.100	620.000	565.100	622.300	565.100	622.300	566.300	625.000	566.200	630.000
GR	566.200	630.000	566.200	632.300	566.200	632.300	566.700	635.000	566.400	640.000
GR	566.100	645.000	566.400	650.000	566.400	650.000	566.400	652.300	566.400	652.300
GR	566.600	655.000	567.500	660.000	567.500	660.000	567.500	662.300	567.500	662.300
GR	567.500	665.000	569.900	670.000	569.900	670.000	569.900	672.300	569.900	672 300
GR	573.400	680.000	573.400	681.000	580.800	681.000	580.800	700.000	580.700	800.000
GR	580.600	900.000	580.600	1000.000	580.500	1100.000	0.000	0.000	0.000	0.000

D.T. AND I. RAILROAD

X1	954.000	48.000	600.000	681.000	1.000	1.000	1 000	0.000	0.000	0.000
BT	14.000	600.000	581.000	577.700	610.000	581.000	577.700	612.300	581.000	577.700
BT	620.000	581.000	577.700	622.300	581.000	577.700	630.000	580.900	577.700	632.300
BT	580.900	577.700	650.000	580.900	577.600	652.300	580.900	577.600	660.000	580.900
BT	577.600	662.300	580.800	577.600	670.000	580.800	577.600	672.300	580.800	577.600
BT	681.000	580.800	577.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	582.000	0.000	581.800	100.000	581.600	200.000	581.500	300.000	581.400	400.000
GR	581.200	500.000	581.000	600.000	571.000	600.000	568.100	605.000	566.900	610.000
GR	577.700	610.000	577.700	612.300	566.900	612.300	565.900	615.000	565.100	620.000
GR	577.700	620 000	577.700	622.300	565.100	622.300	566.300	625.000	566.200	630.000
GR	577.700	630.000	577.700	632.300	566.200	632.300	566.700	635.000	566.400	640.000
GR	566.100	645.000	566.400	650.000	577.600	650.000	577.600	652.300	566.400	652.300
GR	566.600	655.000	567.500	660.000	577.600	660.000	577.600	662.300	567.500	662.300
GR	567.500	665.000	569.900	670.000	577.600	670.000	577.600	672.300	569.900	672.300
GR	573.400	680.000	573.400	681.000	580.800	681.000	580.800	700.000	580.700	800.000
GR	580.600	900.000	580.600	1000.000	580.500	1100.000	0.000	0.000	0.000	0.000

X1	985.000	0.000	600.000	681.000	30.500	30.500	30.500	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	986.000	48.000	600.000	681.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	582.000	0.000	581.800	100.000	581.600	200.000	581.500	300.000	581.400	400.000
GR	581.200	500.000	581.000	600.000	571.000	600.000	568.100	605.000	566.900	610.000
GR	566.900	610.000	566.900	612.300	566.900	612.300	565.900	615.000	565.100	620.000
GR	565.100	620.000	565.100	622.300	565.100	622.300	566.300	625.000	566.200	630.000
GR	566.200	630.000	566.200	632.300	566.200	632.300	566.700	635.000	566.400	640.000
GR	566.100	645.000	566.400	650.000	566.400	650.000	566.400	652.300	566.400	652.300
GR	566.600	655.000	567.500	660.000	567.500	660.000	567.500	662.300	567.500	662.300
GR	567.500	665.000	569.900	670.000	569.900	670.000	569.900	672.300	569.900	672.300
GR	573.400	680.000	573.400	681.000	580.800	681.000	580.800	700.000	580 700	800.000
GR	580.600	900.000	580.600	1000.000	580.500	1100.000	0.000	0.000	0.000	0.000

NC	0.040	0.035	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1036.000	37.000	565.000	700.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	700.000	0.000	0.000	0.000	0.000
GR	581.900	0.000	581.200	100.000	581.200	200.000	580.800	300.000	581.000	400 000
GR	579.900	500.000	581.100	565.000	575.400	587.000	574 900	590.000	573.900	595.000
GR	572.500	600.000	571.000	605.000	569.800	610.000	568.800	615.000	568.000	620.000
GR	567.400	625.000	566.600	630.000	566.300	635.000	566.200	640.000	566.300	650.000
GR	566.800	660.000	568.300	670.000	570.200	675.000	570.400	680.000	571.700	685.000
GR	573.100	690.000	574.800	695.000	574.900	696.000	577.700	700.000	577.500	800.000
GR	576.600	900.000	576.600	1000.000	577.000	1030.000	576.800	1100.000	577.500	1200.000
GR	578.300	1300.000	579.200	1345.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.060	0.035	0.032	0.000	0.000	0.000	0 000	0.000	0.000	0.000
X1	1736.000	40.000	374.000	492.500	700.000	700 000	700.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	580.400	0.000	580.400	167.000	579.500	283.700	578.800	335.300	579.100	374.000
GR	577.200	377.900	576.100	381.900	575.100	385.800	574.100	389.800	573.200	393.700
GR	572.400	397.700	571.500	401.600	570.300	405.600	569.400	409.500	568.400	413.500
GR	567.600	417.400	566.900	421.400	566.500	425.300	566.000	429.200	565.700	433.200
GR	565.500	437.200	565.400	441.100	565.500	445.000	565.600	449.000	565.900	453.000
GR	566.500	456.900	567.200	460.800	568.000	464.800	569.000	468.700	569.800	472.700
GR	570.600	476.600	571.700	480.600	573.400	484.500	575.100	488.500	577.500	492.500
GR	577.400	550.000	577 300	650.000	577.400	750.000	577.700	890.000	579.500	975.000
		CONFL. WITH NORTH BRANCH ECORSE CREEK								
X1	2436 000	31.000	183.000	285.000	700.000	700.000	700.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	485.000	0.000	0.000	0.000	0.000
GR	579.000	0.000	579.900	85.000	570.500	135.000	577.100	183.000	575.100	185.000
GR	573.500	190.000	572.200	195.000	571.100	200.000	570.200	205.000	568.500	210.000
GR	567.700	215.000	566.400	220.000	565.600	225.000	565.300	230.000	565.000	235.000
GR	564.600	240.000	564.800	245.000	565.200	250.000	566.400	255.000	567.800	260.000
GR	568.800	265.000	569.900	270.000	571.500	275.000	574.700	280.000	575.100	281.000
GR	577.400	285.000	577.300	385.000	578.200	485.000	577.700	557.000	578 600	585.000
GR	579.800	605.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	6.000	255.000	630.000	1030.000	1610.000	1900.000	2590.000	0.000	0.000	0.000
X1	3186.000	25.000	200.000	300.000	750.000	750.000	750.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	500.000	0.000	0.000	0.000	0.000
GR	580.600	0.000	583.100	100.000	581.300	200.000	579.600	208.000	575.200	216.000
GR	573.900	220 000	571.600	225.000	569.900	230.000	569.900	235.000	569.300	240 000
GR	569.100	245.000	568.800	250.000	569.200	260.000	570.800	270.000	571.100	280 000
GR	571.700	285.000	573.000	290.000	574.100	295.000	576.400	300.000	577.900	400.000
GR	579.000	500 000	579.100	600.000	578.700	625.000	578.700	700.000	578.900	800.000
X1	3686.000	0.000	0.000	0.000	500.000	500.000	500.000	0.000	0.600	0.000
X3	10.000	0.000	0.000	0.000	0.000	500.000	0.000	0.000	0.000	0.000
NC	0 040	0.037	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4186.000	27.000	417.000	500.000	500.000	500.000	500.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	350.000	0.000	550.000	0.000	0.000	0.000	0.000
GR	581.800	0.000	580.900	100.000	580.600	200.000	580.000	300.000	578.900	400.000
GR	578.200	417.000	575.000	419.000	574.700	420.000	573.000	425.000	571.200	430.000
GR	570.500	435.000	570.400	440.000	570.400	445.000	570.300	450.000	570.000	455.000

GR	570.300	460.000	570.300	465.000	570.400	470.000	570.500	475.000	571.800	480.000
GR	572.500	485.000	573.200	490.000	575.000	494.000	578.700	500.000	579.500	600.000
GR	581.000	700.000	583.000	770.000	0.000	0.000	0.000	0.000	0.000	0 000
NC	0.030	0.030	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4236.000	32.000	592.000	644.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	592.000	0.000	644.000	0.000	0.000	0.000	0.000
GR	582.000	0.000	581.600	92.000	581.200	192.000	580.800	292.000	580.700	392.000
GR	580.000	492.000	580.100	592.000	570.200	592.000	569.200	597.000	570.000	602.000
GR	569.700	607.000	569.000	612.000	568.100	617.000	568.100	617.000	568.100	618.500
GR	568.100	618.500	568.900	622.000	568.800	627.000	569.200	632.000	570.000	637.000
GR	570.600	642.000	570.600	644.000	580.000	644.000	579.300	692.000	579.600	792.000
GR	580.400	892.000	580.700	992.000	580.500	1092.000	580.300	1192.000	580.000	1292.000
GR	579.600	1392.000	579.300	1492.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1.250	1.370	2.500	0.000	50.500	1.500	400.000	0.000	568.100	568.100
	EMMONS BLVD.									
X1	4281.000	32.000	592.000	644.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	577.400	580.000	0.000	0.000	0.000	0.000	0.000
X3	10 000	0.000	0.000	592.000	0.000	644.000	0.000	0.000	0.000	0.000
BT	6.000	592.000	580.100	577.400	617.000	580.000	577.300	617.000	580.000	568.100
BT	618.500	580.000	568.100	618.500	580.000	577.300	644.000	580.000	577.300	0.000
GR	582.000	0.000	581.600	92.000	581.200	192.000	580.800	292.000	580 700	392.000
GR	580.000	492.000	580.100	592.000	570.200	592.000	569.200	597.000	570.000	602.000
GR	569.700	607.000	569.000	612.000	568.100	617.000	568.200	617.000	568.100	618.500
GR	568.200	618.500	568.900	622.000	568.800	627.000	569.200	632.000	570.000	637.000
GR	570.600	642.000	570.600	644.000	580.000	644.000	579.300	692.000	579.600	792.000
GR	580 400	892.000	580.700	992.000	580.500	1092.000	580.300	1192.000	580.000	1292.000
GR	579.600	1392.000	579.300	1492.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.040	0.037	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4931.000	23.000	115.000	200.000	650.000	650.000	650.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	115.000	0.000	200.000	0.000	0.000	0.000	0.000
GR	582.200	0.000	581.600	37.000	580.800	100.000	580.900	115.000	575.300	124.000
GR	574.600	125.000	571.500	130.000	570.800	135.000	570.500	140.000	570.300	145.000
GR	570.300	150.000	570.300	155.000	570.400	160.000	570.600	165.000	570.800	170.000
GR	571.100	175.000	571.300	180.000	573.100	185.000	573.600	190.000	575.300	195.000
GR	579.800	200.000	579.100	300.000	580.100	400.000	0.000	0.000	0.000	0.000
X1	5956.000	0.000	0.000	0.000	1025.000	1025.000	1025.000	0.000	0.350	0.000
X3	10.000	0.000	0.000	115.000	0.000	200.000	0.000	0.000	0.000	0.000
X1	6981.000	29.000	505.000	600.000	1025.000	1025.000	1025.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0 000	0.000	0.000	582.600	582 000	0.000
GR	582.800	0.000	581.300	100.000	581.300	200.000	580.900	300.000	579.700	400.000
GR	579.400	425.000	582.700	500.000	582.600	505.000	576.000	517.000	575.200	520.000
GR	572.000	525.000	571 800	530.000	572.200	535.000	572.300	540.000	571.100	545.000
GR	571.100	550.000	571.000	560.000	571.200	570.000	572.400	575.000	572.500	580.000
GR	574.200	584.000	575.200	588.000	582.000	600.000	579.100	700.000	581.500	800.000
GR	580.800	900.000	581.000	920.000	581.300	1000.000	581.200	1100.000	0.000	0.000

X1	8031.000	27.000	150.000	246.000	1050.000	1050.000	1050.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	150.000	0.000	246.000	0.000	0.000	0.000	0.000
GR	580.300	0.000	580.400	50.000	580.700	78.000	578.900	114.000	580.700	150.000
GR	579.000	155.000	575.200	162.000	573.800	166.000	572.800	170.000	572.300	175.000
GR	572.000	180.000	571.700	190.000	571.500	200.000	571.500	210.000	571.700	215.000
GR	571.800	220.000	572 500	225.000	573.600	230.000	575.200	235.000	577.800	238.000
GR	579.400	246.000	579.400	250.000	578.600	336.000	578.500	350.000	579.200	450.000
GR	578.900	492.000	580.500	550.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.030	0.030	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8082.000	39.000	580.000	655.000	51.000	51.000	51.000	0.000	0.000	0.000
X3	10.000	0 000	0.000	580.000	0.000	655.000	0.000	0.000	0 000	0.000
GR	578.600	0.000	578.100	80.000	578.000	180.000	577.700	280.000	577.600	380.000
GR	577.900	480.000	580.900	580.000	571.800	580.000	572.200	585.000	571.700	590.000
GR	571.500	595.000	571.200	600.000	570.400	605.000	578.300	605.000	578.300	606.500
GR	570.400	606.500	571.400	610.000	571.000	615.000	570.900	620.000	571.000	625.000
GR	571.000	630.000	578.300	630.000	578.300	631.500	571.000	631.500	571.100	635.000
GR	570.900	640.000	570.800	645.000	570.300	650.000	569.900	655.000	581 100	655.000
GR	580.300	680.000	578.900	780.000	578.500	830.000	578.300	880.000	577.900	980 000
GR	577.500	1080.000	577.300	1180.000	577.700	1280.000	577.600	1380.000	0.000	0.000
SB	1.250	1.560	2.600	0.000	75.000	3.000	519.000	0.000	569.900	569.900
		HARRISON BLVD.								
X1	8147.000	0.000	580.000	655.000	65.000	65.000	65.000	0.000	0.000	0.000
X2	0 000	0.000	1.000	578.400	580 900	0.000	0.000	0.000	0.631	0.000
X3	10.000	0.000	0.000	580.000	0.000	655.000	0.000	0.000	0.000	0.000
BT	6.000	580.000	580.900	578.200	605.000	581.000	578 300	606.500	581.000	578.300
BT	630.000	581.000	578.300	631.500	581.000	578.300	655.000	581.100	578.400	0.000
NC	0.035	0.040	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	9397.000	28.000	550.000	635.000	1250.000	1250.000	1250.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	550.000	0.000	635.000	0.000	0.000	0.000	0.000
GR	580 800	0.000	581.500	150.000	580.700	250.000	579.800	355.000	580.800	450.000
GR	579.300	550.000	578.800	555.000	574.700	564.000	573.700	570.000	573.200	575.000
GR	572.200	580.000	572.000	585.000	572.100	590.000	571.800	595.000	571.800	600.000
GR	571.900	605.000	572.200	610.000	572.500	615.000	572.800	620.000	573.200	625.000
GR	574.700	626.000	581.700	635.000	582.000	650.000	582.100	750.000	583.100	850.000
GR	582.600	950.000	582.200	1050.000	581.900	1150.000	0.000	0.000	0.000	0.000
X1	10297.000	29.000	400.000	480.000	900.000	900.000	900.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	480.000	0.000	0.000	0.000	0.000
GR	583.100	0.000	582.700	100.000	582.200	200.000	582.100	220.000	582.900	300.000
GR	583.400	400.000	573.800	416 000	572.900	420.000	572.000	425.000	572.000	430.000
GR	572.000	435.000	571.800	440.000	572.000	445.000	572.200	450.000	572.200	455.000
GR	572.500	460.000	572.800	465.000	573.400	470.000	574.500	475.000	581.900	480.000
GR	581.400	500.000	580.900	600.000	581.000	700.000	581.600	800.000	581.900	900.000
GR	582.800	1000.000	582.600	1100.000	582.900	1200.000	583.400	1300.000	0.000	0.000

NC	0.035	0.035	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10897.000	23.000	112.000	185.000	600.000	600.000	600.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	112.000	0.000	185.000	0.000	0.000	0.000	0.000
GR	580.700	0.000	581.200	85.000	580.400	112.000	574.800	122.000	574.500	123.000
GR	573.500	125.000	572.900	130.000	572.400	135.000	572.200	140.000	572.300	150.000
GR	572.700	155.000	572.800	160.000	573.200	165.000	573.000	170.000	573.000	176.000
GR	574.500	178.000	579.400	185.000	581.800	231.000	583.700	243.000	583.100	285.000
GR	584.400	355.000	582.600	385.000	583.500	477.000	0.000	0.000	0.000	0.000
X1	10973.000	30.000	500.000	552.000	76.000	76.000	76.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	500.000	0.000	552.000	0.000	0.000	0.000	0.000
GR	582.200	0.000	581.900	100.000	581.400	200.000	580.900	300.000	580.800	400.000
GR	581.200	448.000	581.700	500.000	571.700	500.000	571.900	505.000	571.800	510.000
GR	571.800	515.000	571.800	520.000	572.100	525.000	579.000	525.000	579.000	527.000
GR	572.100	527.000	572.600	530.000	573.000	535.000	573.700	540.000	573.700	545.000
GR	573.600	550.000	573.400	552.000	581.600	552.000	580.400	600.000	581.100	700.000
GR	581.400	800.000	581.600	900 000	581.800	1000.000	582.000	1100.000	582 100	1122.000
SB	0.900	1.470	2.500	0.000	52.000	2.000	315.000	0.000	571 700	571.700
		HARRISON BLVD.								
X1	11017.000	0.000	500.000	552.000	44.000	44.000	44.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	579.000	581.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	500.000	590.000	552.000	590.000	0.000	0.000	0.000
BT	4.000	500.000	581.700	578 900	525.000	581.700	579.000	527.000	581.700	579.000
BT	552 000	581.600	578.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.060	0.060	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11477.000	22.000	155.000	236.000	460.000	460.000	460.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	155.000	0.000	255.000	0.000	0.000	0.000	0 000
GR	583.100	0.000	583.400	50.000	583.400	110.000	582.900	155 000	574 900	170.000
GR	573.900	175.000	573.700	180.000	572.800	185.000	572.900	190.000	572.900	195 000
GR	572.900	200.000	572.700	205.000	572.400	210.000	571.800	215.000	573.100	220 000
GR	574.400	225.000	575.500	227.000	581.400	236.000	582.600	255.000	582.200	265.000
GR	582.100	310.000	582.200	343.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	6.000	210.000	580.000	950.000	1550.000	1850.000	2640.000	0.000	0.000	0.000
X1	11528.000	35.000	530.000	582.500	51.000	51.000	51.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	530.000	0.000	582.500	0.000	0.000	0.000	0.000
GR	584.400	0.000	584.800	30.000	584.400	130.000	583.900	230.000	583.500	330 000
GR	582.900	370.000	582.900	430.000	583.000	530.000	573.000	530.000	573.400	535.000
GR	573.000	540.000	572.700	545.000	572.500	550.000	572.100	555.200	580.600	555.200
GR	580.600	557.200	572.800	557.200	572.800	560.000	572.700	565.000	572.500	570.000
GR	572.400	575.000	572.600	580.000	572.500	582.500	582.800	582.500	582.200	630.000
GR	582.200	730.000	583.300	830.000	582.900	880.000	583.100	930.000	583.900	1030.000
GR	584.100	1130.000	584.400	1230 000	584.100	1330.000	583.700	1430 000	583.900	1439.000
SB	1.250	1.610	2.500	0.000	52.500	2.000	400.000	0.000	572 100	572.100
		U/S FACE N.B.	FORT STREET							
X1	11599.000	0.000	530.000	582.500	71.000	71.000	71.000	0 000	0.000	0.000
X2	0.000	0.000	1.000	580.700	582.800	0.000	0.000	0.000	0.000	0 000
X3	10.000	0.000	0.000	530.000	0.000	582.500	0.000	0.000	0.000	0.000
BT	4.000	530.000	583.000	580.700	555.200	582.900	580.600	557.200	582.900	580.600
BT	582.500	582.800	580.500	0.000	0.000	0 000	0.000	0.000	0.000	0.000

	D/S FACE S.B. FORT STREET (FROM CITY OF LINCOLN PARK FIS)									
X1	11650.000	36.000	548.000	604.000	51.000	51.000	51.000	0.000	0.000	0.000
X3	10 000	0.000	0.000	548.000	0.000	604.000	0.000	0.000	0.000	0.000
GR	584.800	0.000	584.500	48.000	584.300	148.000	584 100	248.000	583.600	348.000
GR	583.000	448.000	583.400	548.000	573.400	548.000	573.700	553.000	573.300	558.000
GR	573.000	563.000	572.600	568.000	572.600	573.000	572.600	573.500	580.700	573.500
GR	580.700	575.500	572.500	575.500	572.400	578.000	572.100	583.000	572.600	588.000
GR	572.100	593.000	572.600	598.000	572.400	601.000	580.500	604.000	583.200	604 000
GR	582.400	648.000	581.900	748.000	582 400	823.000	582.900	848.000	583 300	948.000
GR	583.800	1048.000	584.100	1148.000	584.500	1248.000	584.300	1348.000	583.900	1448.000
GR	584.300	1558.000	0 000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1 250	1.610	2.500	0.000	56.000	2.000	400.000	0.000	572.100	572.100
	U/S FACE S.B. FORT STREET (FROM CITY OF LINCOLN PARK FIS)									
X1	11721.000	0.000	548.000	604.000	71.000	71.000	71.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	580.700	583.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	548.000	0 000	604.000	0.000	0.000	0.000	0.000
BT	4.000	548.000	583.400	580.700	573.500	583.300	580.700	575.500	583.300	580.700
BT	604.000	583.200	580.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.040	148.000	0.060	171.000	0.035	229.000	0.060	240.000	0.040
NH	800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	VALLEY STATION FIELD POOOK STA. 44+95									
X1	12689.000	9.000	171.000	229.000	968.000	968.000	968.000	0.000	0.000	0 000
GR	585.800	0.000	585.000	100.000	585.300	148.000	575.600	171.000	573.000	200.000
GR	575.600	229.000	582.800	240.000	584.500	292.000	585.000	800.000	0.000	0.000
NC	0.060	0.060	0.035	0.300	0.500	0.000	0.000	0 000	0.000	0.000
	50' D/S HOWARD AVE.									
X1	13219.000	15.000	233.500	280.500	530.000	530.000	530.000	0.000	0.000	0.000
GR	585.400	0.000	585.000	57.000	584.700	157.000	584.400	208.000	574.900	229.000
GR	573.000	233.500	573.000	256.500	573.000	257.500	573.000	280.500	575.300	281.000
GR	584.600	298.000	584.600	357.000	584.200	457.000	584.200	557.000	584.800	577.000
	D/S FACE HOWARD AVE. FIELD BOOK STA. 3+75									
X1	13269.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	583.800	583.800	0.000
SB	1.250	1.650	3.000	0.000	47.000	1.000	414.000	0.000	573.000	573.000
	U/S FACE HOWARD AVE. FIELD BOOK STATION 38+75									
X1	13309.000	15.000	233.500	280.500	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	582.000	584.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	112.000	0.000	402.000	0.000	584 500	584.500	0.000
BT	17.000	0.000	585.400	0.000	57.000	585.000	0.000	157.000	584.700	0.000
BT	211.000	584.700	0.000	233.500	584.500	0.000	233.500	584.500	582.000	256.500
BT	584.500	582.000	256.500	584.500	0.000	257.500	584.500	0.000	257 500	584.500
BT	582.000	280.500	584.500	582.000	280.500	584.500	0.000	298.000	584.500	0.000
BT	357.000	584.600	0.000	457.000	584.200	0.000	557.000	584.200	0.000	577.000
BT	584 800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	585.400	0.000	585.000	57.000	584.700	157.000	584.700	211.000	575.400	233.500
GR	573.000	235.000	573.000	256.500	573.000	257.500	573.000	280.500	575.200	284 000
GR	584.500	298.000	584.600	357.000	584.200	457.000	584.200	557.000	584.800	577.000

100' U/S OF HOWARD AVE.

X1	13409.000	0.000	0.000	0.000	108 000	100.000	100.000	0.000	0.000	0.000
NH	5.000	0.040	157.000	0.060	176.000	0.035	224.000	0.060	240.000	0.040
NH	400 000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION FIELD BOOK STA. 20+40

X1	15144.000	10.000	176.000	224.000	1735.000	1735.000	1735.000	0.000	0 000	0.000
X3	0.000	0.000	0.000	103.500	0.000	296.500	0.000	0.000	0.000	0.000
GR	585.100	0.000	585.100	0.000	585.100	100.000	585.100	157.000	577 200	176.000
GR	573.700	200.000	576.800	224 000	585.900	240.000	585.500	300 000	586.200	400.000
QT	6.000	180.000	540.000	900.000	1480.000	1760.000	2520.000	0.000	0.000	0.000
NC	0.060	0.060	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE DIX AVE. FIELD BOOK STA. 17+50

X1	15434.000	11.000	276.000	324.000	290.000	290.000	290.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	587.300	587.300	0.000
GR	588.000	0.000	587.400	100.000	586.900	200.000	587.300	250.000	575.200	276.000
GR	574.900	300.000	575.800	324.000	587.500	336.000	587.600	400.000	588.100	500.000
GR	588.300	575.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1.250	1.850	3.000	0.000	48.000	2.000	409.000	0.000	574 900	574.900

U/S FACE DIX AVE. FIELD BOOK STA. 16+29

X1	15555.000	12.000	276.000	324.000	121.000	121.000	121.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	583.800	587.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	587.300	587.300	0.000
BT	16.000	0.000	588.000	0.000	100.000	587.400	0.000	200.000	587.000	0.000
BT	256.000	587.800	0.000	276.000	587.300	0.000	276.000	587.300	583.800	299.000
BT	587.300	583.800	299.000	587.300	0.000	301.000	587.300	0.000	301.000	587.300
BT	583.800	324.000	587.300	583.800	324.000	587.300	0.000	343.000	588.200	0.000
BT	400.000	587.500	0.000	500.000	588.100	0.000	575.000	588.300	0.000	0.000
GR	588.000	0.000	587.400	100.000	587.000	200.000	587.800	256.000	575.300	276.000
GR	574.900	299.000	574.900	301.000	575.900	324.000	588.200	343.000	587.600	400 000
GR	588.100	500.000	588.300	575.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.040	60.000	0.060	78.000	0.035	108.000	0.060	129.000	0.040
NH	253.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION FIELD BOOK STA. 13+25

X1	15859.000	9.000	78.000	108.000	304.000	304.000	304.000	0.000	0.000	0.000
GR	588.100	0.000	588.100	0.000	586.200	60.000	576.200	78.000	574.300	93.000
GR	575 900	108.000	588.400	129.000	589 700	193.000	589.600	253.000	0 000	0.000
NC	0.060	0.060	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0 000

D/S HAZEL AVE.

X1	16339.000	12.000	262 500	297.500	480.000	480.000	480.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
GR	593.100	0.000	591.900	80.000	589.700	180.000	589 200	238.000	575.800	262.500
GR	575.400	280.000	576.000	297.500	589.600	326.000	589.300	380.000	591.300	480.000
GR	594.100	580.000	594.500	607.000	0.000	0.000	0.000	0.000	0.000	0.000

	D/S FACE HAZEL AVE.									
X1	16340.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589 200	0.000
BT	13.000	0.000	593.100	0.000	80.000	591.900	0.000	180.000	589.700	0.000
BT	238.000	589.200	0.000	262.500	589.200	575.800	262.500	589.200	585.700	297.500
BT	589.200	585.700	297.500	589.200	0.000	326.000	589.600	589.600	380.000	589.300
BT	0.000	480.000	591.300	0.000	580.000	594.000	0.000	607.000	594.500	0.000
	U/S FACE HAZEL AVE. FIELD BOOK STA. 8+05									
X1	16379.000	12.000	262.500	297.500	39.000	39.000	39.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
BT	13.000	0.000	593.100	0.000	80 000	591.900	0.000	180.000	589.700	0.000
BT	238.000	589.800	0.000	262.500	589 200	576.500	262 500	589.200	585.700	297.500
BT	589.200	585.700	297.500	589.200	0.000	321.000	589.300	589 200	380.000	589.300
BT	0.000	480.000	591.300	0.000	580.000	594.100	0.000	607.000	594.500	0.000
GR	593.100	0.000	591.900	80.000	589.700	180.000	589.800	238.000	576.500	262.500
GR	575.400	280.000	576 500	297.500	589.200	321.000	589.300	380.000	591.300	480.000
GR	594.100	580.000	594.500	607.000	0.000	0 000	0.000	0.000	0.000	0.000
	U/S HAZEL AVE.									
X1	16380.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
NH	5.000	0.040	149.000	0.060	193.000	0.035	207.000	0 060	252.000	0.040
NH	400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	LINCOLN PARK CORPORATE BOUNDARY FIELD BOOK STA. 0.00									
X1	17184.000	9.000	193.000	207.000	805.000	805.000	805.000	0.000	0.000	0.000
GR	594.400	0.000	593.600	100.000	592.900	149.000	576.700	193.000	574.600	200.000
GR	576.700	207.000	591.500	252.000	594.000	300.000	596.300	400.000	0.000	0.000
QT	6.000	160.000	490.000	810.000	1310.000	1570.000	2230.000	0.000	0.000	0.000
NH	8.000	0.040	50.000	0.060	93.000	0.035	114.000	0.060	181.000	0.040
NH	207.000	0.035	212.000	0.060	240.000	0.040	310.000	0.000	0.000	0 000
	CONFLUENCE OF GRAM'S DRAIN									
X1	17709.000	29.000	93.000	114.000	525.000	525.000	525 000	0.000	0.000	0.000
GR	594.900	0.000	594.800	25.000	594.800	50.000	578.800	80.000	578.300	93.000
GR	576.600	95.000	576.200	95.000	575.400	100.000	575.100	105.000	575.200	110.000
GR	576.100	112.000	578.600	114.000	580.600	127.000	591.200	144.000	592.400	155 000
GR	593.100	166.000	596.900	174.000	596.300	181.000	590.600	194.000	580.500	207.000
GR	580.200	210.000	580.400	212.000	581.100	213.000	583.800	224 000	595 600	240.000
GR	596 000	250.000	598.900	259.000	598.600	284.000	594.700	310.000	0.000	0.000
X1	18699.000	0.000	0.000	0.000	990.000	990.000	990.000	0.000	0.000	0.000
NC	0.060	0.060	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
	D/S FACE MORAN ST.									
X1	19699.000	0.000	0.000	0.000	1000.000	1000.000	1000.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	594.800	594.800	0.000

SB	1.250	1.610	2.500	0.000	62.500	2.000	900.000	0.000	575.100	575.100
	U/S FACE MORAN ST.									
X1	19779.000	37.000	100.000	185.000	80.000	80.000	80.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	590.100	592.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	590.100	590.300	0.000
BT	24.000	0.000	592.500	0.000	25.000	592.000	0.000	50.000	592.500	0.000
BT	79.500	592.500	0.000	100.000	592.100	0.000	100.000	592.500	590.100	124.000
BT	592.500	590.100	124.000	592.500	0.000	127.000	592.500	0.000	127.000	592.500
BT	590.100	159.000	592.100	590.100	159.000	592.500	0.000	162.000	592.500	0.000
BT	162.000	592.500	590.100	185.000	592.700	590.300	185.000	592.700	0.000	206.400
BT	592.700	0.000	235.000	592.200	0.000	260.000	592.300	0.000	285.000	592.300
BT	0.000	310.000	592.400	0.000	335.000	592.700	0.000	360.000	592.300	0.000
BT	385.000	593.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	592.500	0.000	592.300	25.000	592.000	50.000	592.500	79.500	592 500	100.000
GR	592.100	100.000	584.900	101.000	583 800	105.000	581.900	110.000	580.400	115.000
GR	579.900	120.000	579.900	124.000	580.100	127.000	580.400	130.000	579 200	133.000
GR	578.100	135.000	577.600	140.000	577.700	145.000	577.900	150.000	578.300	155.000
GR	579.200	156.000	579.800	159.000	579.800	162.000	579.900	165 000	580.400	170.000
GR	581.300	175.000	583.100	180.000	583.200	185.000	592.700	185.000	592.700	206.400
GR	592.200	235.000	592.300	260 000	592.300	285.000	592.400	310.000	592 700	335.000
GR	592.800	360.000	593.000	385.000	0.000	0.000	0.000	0 000	0.000	0.000
X1	19829.000	17.000	89.000	108 000	50.000	50.000	50.000	0.000	0.000	0.000
GR	593.300	0.000	592.600	25.000	590.800	50.000	584.400	61.000	580.100	75.000
GR	579.700	89.000	579.000	90.000	577.400	95.000	577.000	100.000	577.200	105.000
GR	577.700	107.000	580.100	108.000	581.900	115.000	586.600	125.000	591.600	133.000
GR	592.300	158.000	593.100	183.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	20179.000	0.000	0.000	0.000	400.000	400.000	400.000	0.000	0.000	0.000
QT	6.000	150.000	430.000	700.000	1100.000	1310.000	1830.000	0.000	0.000	0.000
	U/S FACE R/R BRIDGE									
X1	20199.000	33.000	130.000	192.000	20.000	20.000	20.000	0.000	0.000	0.000
X4	6.000	593.300	100.100	582.100	130.100	580.300	138.100	581.200	185.100	583.100
X4	192.100	593.200	228.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	21.000	0.000	603.200	0.000	25.000	603.000	0.000	50.000	602.900	0.000
BT	75.000	602.800	0.000	100.000	602.800	593.300	100.100	602 800	596.900	130.000
BT	602.800	596.900	130.100	602.800	582.100	138.000	602.800	580.300	138.100	602.800
BT	596.900	185.000	602.800	596.900	185.100	602.800	581.200	192.000	602.800	583.100
BT	192.100	602.800	596.900	228.000	602.800	596.900	228.100	602.800	593.200	253.000
BT	602.700	0.000	278.000	602.700	0.000	303.000	602.700	0.000	328.000	602.700
BT	0.000	453.000	602.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	603.200	0.000	603.000	25.000	602.900	50.000	602.800	75.000	602.800	100.000
GR	601.300	100.000	593.300	100.000	590.500	110.000	586.300	120.000	582.100	130.000
GR	580.300	138.000	580.000	146.000	579.100	148.000	578.200	150.000	577.800	155.000
GR	577.400	160.000	578.100	165.000	578.100	170.000	578.700	175.000	580.000	177.000
GR	581.200	185.000	583.100	192.000	585.900	200.000	588.800	210.000	591.400	220.000
GR	593.200	228.000	601.300	228.000	602.800	228.000	602.700	253.000	602.700	278.000
GR	602.700	303.000	602.700	328.000	602.800	453.000	0.000	0.000	0.000	0.000

X1	20249.000	25.000	115.000	133.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	588.100	0.000	591.100	25.000	593.100	50.000	593.200	62.000	592.600	75.000
GR	586.300	91.000	581.100	107 000	580.300	115.000	578.900	117.000	575.600	118.000
GR	577.600	120.000	577.600	125 000	577.500	130.000	577.800	132.000	580.100	133.000
GR	580.700	142.000	587.100	155.000	593.300	167.000	594.100	170.000	600.400	179.000
GR	602.800	190.000	602.900	195.000	601.600	200.000	599 300	210.000	599.200	235.000
X1	20750.000	0.000	0.000	0.000	501.000	501.000	501.000	0.000	0.000	0.000
X1	21125.000	0.000	0.000	0 000	375.000	375.000	375.000	0.000	0.000	0.000
	U/S FACE I-75 BRIDGE									
X1	21260.000	18.000	60.000	117.000	135.000	135 000	135.000	0.000	0.000	0.000
X4	8.000	602.300	0.100	582.100	57.100	581.200	60.100	588.200	117 100	589.200
X4	120.100	594.800	177.100	594.800	181.100	606.700	238.100	0.000	0.000	0.000
BT	17.000	0.000	612.500	602.300	0.100	612.500	609.000	57.000	613.900	610.400
BT	57.100	613.900	582.100	60.000	614.000	581.200	60.100	614.000	610.500	117.000
BT	615.300	611.800	117.100	615.300	588.200	120.000	615.400	589.200	120.100	615.400
BT	611.900	177.000	616.800	613.300	177.100	616.800	594.800	181.000	616.900	594.800
BT	181.100	616.900	613.400	238.000	618.200	614.700	238.100	618.200	606.700	300.000
BT	619.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	602 300	0.000	592.500	34.000	582.100	57.000	581.200	60.000	580.600	68.000
GR	579.900	72.000	579.900	77.000	579.900	82.000	580.600	88.000	581.000	97.000
GR	588.200	117.000	589.200	120.000	593.300	131.000	594.600	156.000	594.800	177.000
GR	594.800	181.000	606.700	238.000	619.600	300.000	0.000	0.000	0.000	0.000
X1	21310.000	17.000	79.000	107.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	596.600	0 000	595.000	25.000	593.500	50.000	583.500	74.000	582.100	76.000
GR	581.000	79.000	580.600	85.000	580 800	90.000	580.700	95.000	580.600	100.000
GR	580.500	105.000	580.600	107.000	581.700	108.000	582.200	110.000	595.300	150.000
GR	596.600	175.000	596.900	200.000	0.000	0.000	0.000	0.000	0.000	0.000
	U/S FACE CONRAIL R/R BRIDGE									
X1	21335.000	29.000	129.000	163.000	25.000	25.000	25.000	0.000	0.000	0.000
X4	6.000	596.300	100.100	583.200	128.100	581.900	129.100	582.500	163.100	584.000
X4	164.100	596.300	190.100	0.000	0 000	0.000	0.000	0.000	0.000	0.000
BT	20.000	0.000	600.400	0.000	25.000	600.400	0.000	50.000	600.500	0.000
BT	75.000	600.600	0.000	100.000	600.700	0.000	100.100	600.700	596.300	128.000
BT	600.700	596.300	128.100	600.700	583.200	129.000	600.700	581.900	129.100	600.700
BT	596.300	163.000	600.700	596.300	163.100	600.700	582.500	164.000	600.700	584.000
BT	164.100	600.700	596.300	190.000	600.700	596.300	190.100	600.700	0.000	215.000
BT	600.700	0.000	315.000	600.700	0.000	365.000	600.800	0.000	390.000	600.900
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	600.400	0.000	600.400	25.000	600.500	50.000	600.600	75.000	600.700	100.000
GR	596.300	100.000	596.300	103.000	591.700	105.000	587.700	115.000	583.200	128.000
GR	581.900	129.000	581.300	133.000	581.100	135.000	581.000	140.000	581.000	145.000
GR	581.200	150.000	581.300	155.000	582.500	163.000	584.000	164.000	586 400	170.000
GR	590.800	180.000	592.900	186.000	596.300	186.000	596.300	190.000	600.700	190.000
GR	600.700	215.000	600.700	315.000	600.800	365.000	600.900	390.000	0.000	0.000

X1	21385.000	16.000	75.000	99.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	593.500	0.000	593.200	25.000	593.200	50.000	583.600	68.000	582.200	75.000
GR	581.400	76.000	580.400	80.000	579.900	85.000	580.200	90.000	580.400	95.000
GR	581.400	98.000	582.300	99.000	582.500	104.000	592.600	124.000	593.700	149.000
GR	595.000	174.000	0.000	0.000	0.000	0.000	0.000	0 000	0.000	0.000
X1	21735.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	0 000	0.000
X1	22085.000	16.000	75.000	99.000	350.000	350.000	350.000	0.000	0.000	0.000
GR	596.000	0.000	595.800	25.000	595.800	50.000	591.000	68 000	582.300	75.000
GR	581.900	76.000	581.300	80 000	581.100	85 000	581.200	90.000	581.300	95.000
GR	582.100	98.000	582.200	99 000	586.400	104.000	595.800	124.000	596.200	149.000
GR	597.000	174.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	22385.000	0.000	0.000	0.000	300.000	300.000	300.000	0.000	0.000	0.000
X1	22730.000	18.000	101.000	131.000	345.000	345.000	345.000	0.000	0.000	0.000
GR	598.400	0.000	598.500	25.000	598.600	50.000	598.700	75.000	598.900	100.000
GR	582.800	101.000	582.300	105.000	582.100	110.000	582.500	115.000	582.300	120.000
GR	582.200	125 000	582.400	130.000	582.800	131.000	599.200	133.000	598.900	158.000
GR	598.900	183.000	599.000	208.000	599.100	283.000	0.000	0.000	0.000	0.000
NC	0.060	0.060	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	23205.000	0.000	0.000	0.000	475.000	475.000	475.000	0.000	0.000	0.000
X1	23705.000	12.000	110.000	130.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	600.100	0.000	600.200	25.000	600.200	100.000	588.700	105.000	585.300	110.000
GR	583.600	115.000	583.500	120.000	586.500	130.000	599.000	137.000	600.300	160.000
GR	600.200	190.000	600.300	212.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	24155.000	10.000	60.000	78.000	450.000	450.000	450.000	0.000	0.000	0.000
GR	601.000	0.000	601.100	50.000	588.800	60.000	585.100	64.000	583.900	64.100
GR	584.000	73.900	585.000	74 000	587.100	78.000	600.400	90.000	601.000	140.000
		100' D/S REEK ROAD								
X1	24655.000	10 000	60.000	78.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	601.800	0 000	601.800	50.000	588.600	60.000	586.600	64.000	584.600	64.100
GR	584.600	73.900	586.600	74.000	588.600	78.000	601.800	90.000	601.800	140.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
		D/S FACE REEK RD.								
X1	3.000	9.000	67.000	100.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.300	598.300	0.000
GR	601.800	0.000	601.800	50.000	584.600	67.000	584.600	67.100	584.600	83.500
GR	586.800	99.900	586.800	100.000	601.800	115.000	601.800	165.000	0.000	0.000
NC	0 000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	3.100	0 000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.300	598.300	0.000
BT	8.000	0.000	601.800	0.000	50.000	601.800	0.000	67.000	601.800	584.600
BT	67.100	601.800	598.300	99.900	601.800	598.300	100.000	601.800	586.800	115.000
BT	601.800	0.000	165.000	601.800	0.000	0.000	0.000	0.000	0.000	0.000

X1	3.900	0.000	0.000	0.000	37.000	37.000	37.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	601.800	601.800	0.000
NC	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	U/S FACE REEK RD.									
X1	4.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	601.800	601.800	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	50' U/S REEK RD.									
X1	5.000	8.000	50.000	125.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	601.800	0.000	601.800	50.000	585.700	67.000	584.700	67.100	584.700	75.000
GR	585.700	75.100	601.800	125.000	601.800	175.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000
	VALLEY SECTION									
X1	6.000	8.000	50.000	126.000	1400.000	1400.000	1400.000	0.000	0.000	0.000
GR	602.000	0.000	602.000	50.000	587.300	84.000	586.300	84.100	586.300	92.000
GR	587.300	92.100	602.000	126.000	602.000	176.000	0.000	0.000	0.000	0.000
NH	3.000	0.060	177.000	0.030	194.000	0.060	490.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
	100' D/S OF ALLEN RD.									
X1	7.000	8.000	160.000	211.000	1500.000	1500.000	1500.000	0.000	0.000	0.000
GR	602.400	0.000	602.500	160.000	588.500	177.000	587.500	178.000	587.500	193.000
GR	588.500	194.000	602.500	211.000	601.700	490.000	0.000	0.000	0.000	0.000
NH	3.000	0.060	168.000	0.030	203.000	0.060	490.000	0.000	0.000	0.000
	D/S FACE ALLEN RD.									
X1	8.000	8.000	168.000	203.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.500	598.500	0.000
GR	602.400	0.000	602.500	140.000	587.500	168.000	587.500	168.100	587.500	202.900
GR	587.500	203.000	602.500	230.000	601.700	490.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

THIS RUN EXECUTED 22 MAY 89 10:19:55

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  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

2-YEAR FREQUENCY FLOOD

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
1.000	574.90	0.00	575.09	89.83	0.00	2470.00	0.00	0.00	0.00	500.00	619.00	0.00
1.000	574.90	0.00	575.18	89.83	0.00	2960.00	0.00	0.00	0.00	500.00	619.00	0 00
1.000	574.90	0.00	575.21	89.83	0.00	3150.00	0.00	0.00	0 00	500.00	619.00	0.00
1.000	574.90	0.00	575.36	89.83	0.00	3830.00	0.00	0.00	0.00	500.00	619.00	0 00
1.000	574.90	0.00	575.46	89.83	0.00	4230.00	0.00	0.00	0.00	500.00	619.00	0.00
1.000	574.90	0.00	575.73	89.83	0.00	5130.00	0.00	0.00	0.00	500.00	619.00	0.00
30.000	574.91	0.00	575.10	89.93	0.00	2470.00	0.00	0.00	0.00	500.00	619.00	0.00
30.000	574.92	0.00	575.19	89.98	0.00	2960.00	0.00	0.00	0.00	500.00	619.00	0.00
30.000	574.92	0.00	575.23	90.00	0.00	3150.00	0.00	0.00	0.00	500.00	619.00	0 00
30.000	574.93	0.00	575.39	90.08	0.00	3830.00	0.00	0.00	0.00	500.00	619.00	0.00
30.000	574.94	0.00	575.50	90.13	0.00	4230.00	0.00	0.00	0.00	500.00	619.00	0.00
30.000	574.97	0.00	575.79	90.33	0.00	5130.00	0.00	0.00	0.00	500.00	619.00	0.00
60.000	574.93	0.00	575.12	90.04	0.00	2470 00	0.00	0.00	0.00	500.00	619.00	0.00
60.000	574.94	0.00	575.21	90.14	0.00	2960.00	0.00	0.00	0.00	500.00	619.00	0.00
60.000	574.94	0.00	575 25	90.18	0.00	3150.00	0.00	0.00	0.00	500.00	619.00	0 00
60.000	574.97	0.00	575.42	90.36	0.00	3830.00	0.00	0.00	0.00	500.00	619.00	0.00
60.000	574.99	0.00	575.54	90.49	0.00	4230.00	0.00	0.00	0.00	500.00	619.00	0.00
60.000	575.04	0.00	575.84	90.91	0.00	5130.00	0.00	0.00	0.00	500.00	619 00	0.00
61.000	574.91	0.00	575.14	82.98	0.00	2470.00	0.00	0.00	0.00	500.00	619.00	0 00
61.000	574.91	0.00	575.24	82 93	0.00	2960.00	0.00	0.00	0.00	500.00	619.00	0.00
61.000	574.91	0.00	575.29	82 95	0.00	3150.00	0.00	0.00	0.00	500.00	619.00	0.00
61.000	574.92	0.00	575.47	83.03	0.00	3830.00	0.00	0.00	0.00	500.00	619.00	0.00
61.000	574 93	0.00	575.60	83.09	0.00	4230.00	0.00	0.00	0.00	500.00	619.00	0.00
61.000	574.96	0.00	575.93	83.30	0.00	5130.00	0.00	0.00	0.00	500.00	619.00	0.00
136.000	574.97	0.00	575.19	83.33	0.00	2470.00	0.00	0.00	0.00	500.00	619.00	0.00
136.000	575.00	0.00	575.32	83.68	0.00	2960.00	0.00	0.00	0.00	500.00	619 00	0.00
136.000	575.02	0.00	575 38	83.81	0.00	3150.00	0.00	0.00	0.00	500.00	619.00	0.00
136.000	575.08	0.00	575.61	84.36	0.00	3830.00	0.00	0.00	0.00	500.00	619.00	0.00
136.000	575.13	0.00	575.77	84.78	0.00	4230.00	0.00	0.00	0.00	500.00	619.00	0.00
136.000	575.29	0 00	576.18	86.07	0.00	5130.00	0.00	0 00	0.00	500.00	619.00	0.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
137.000	575.02	0.00	575.21	90.82	0.00	2470.00	0.00	0.00	0.00	500.00	619.00	0.00
137.000	575.08	0.00	575.34	91.29	0.00	2960.00	0.00	0.00	0.00	500.00	619.00	0.00
137.000	575.10	0.00	575.40	91.51	0.00	3150.00	0.00	0.00	0.00	500.00	619.00	0.00
137.000	575.21	0.00	575.64	92.44	0.00	3830.00	0.00	0.00	0.00	500.00	619.00	0.00
137.000	575.29	0.00	575.81	93.12	0.00	4230.00	0.00	0.00	0.00	500.00	619.00	0.00
137.000	575.53	0.00	576.24	94.18	0.00	5130.00	0.00	0.00	0.00	500.00	619.00	0.00
187.000	575.03	0.00	575.24	88.26	0.00	2470.00	0.00	0.00	0.00	331.00	441.00	0.00
187.000	575.09	0.00	575.39	88.87	0.00	2960.00	0.00	0.00	0.00	331.00	441.00	0.00
187.000	575.11	0.00	575.45	89.14	0.00	3150.00	0.00	0.00	0.00	331.00	441.00	0.00
187.000	575.23	0.00	575.72	90.32	0.00	3830.00	0.00	0.00	0.00	331.00	441.00	0.00
187.000	575.32	0.00	575.90	91.18	0.00	4230.00	0.00	0.00	0.00	331.00	441.00	0.00
187.000	575.57	0.00	576.36	92.49	0.00	5130.00	0.00	0.00	0.00	331.00	441.00	0.00
362.000	575.22	0.00	575.33	142.68	0.00	2470.00	0.00	0.00	0.00	244.00	400.00	0.00
362.000	575.36	0.00	575.52	143.38	0.00	2960.00	0.00	0.00	0.00	244.00	400.00	0.00
362.000	575.42	0.00	575.60	143.68	0.00	3150.00	0.00	0.00	0.00	244.00	400.00	0.00
362.000	575.68	0.00	575.93	144.95	0.00	3830.00	0.00	0.00	0.00	244.00	400.00	0.00
362.000	575.86	0.00	576.14	145.82	0.00	4230.00	0.00	0.00	0.00	244.00	400.00	0.00
362.000	576.32	0.00	576.69	148.11	0.00	5130.00	0.00	0.00	0.00	244.00	400.00	0.00
737.000	575.34	0.00	575.45	144.67	0.00	2470.00	0.00	0.00	0.00	244.00	400.00	0.00
737.000	575.53	0.00	575.67	145.53	0.00	2960.00	0.00	0.00	0.00	244.00	400.00	0.00
737.000	575.61	0.00	575.77	145.92	0.00	3150.00	0.00	0.00	0.00	244.00	400.00	0.00
737.000	575.93	0.00	576.14	147.49	0.00	3830.00	0.00	0.00	0.00	244.00	400.00	0.00
737.000	576.14	0.00	576.39	148.52	0.00	4230.00	0.00	0.00	0.00	244.00	400.00	0.00
737.000	576.67	0.00	576.99	151.11	0.00	5130.00	0.00	0.00	0.00	244.00	400.00	0.00
787.000	575.33	0.00	575.49	106.60	0.00	2470.00	0.00	0.00	0.00	795.00	901.60	0.00
787.000	575.51	0.00	575.74	106.60	0.00	2960.00	0.00	0.00	0.00	795.00	901.60	0.00
787.000	575.59	0.00	575.84	106.60	0.00	3150.00	0.00	0.00	0.00	795.00	901.60	0.00
787.000	575.90	0.00	576.24	106.60	0.00	3830.00	0.00	0.00	0.00	795.00	901.60	0.00
787.000	576.10	0.00	576.50	106.60	0.00	4230.00	0.00	0.00	0.00	795.00	901.60	0.00
787.000	576.61	0.00	577.13	106.60	0.00	5130.00	0.00	0.00	0.00	795.00	901.60	0.00
788.000	575.31	0.00	575.51	97.00	0.00	2470.00	0.00	0.00	0.00	795.00	901.60	0.00
788.000	575.48	0.00	575.76	97.00	0.00	2960.00	0.00	0.00	0.00	795.00	901.60	0.00
788.000	575.56	0.00	575.87	104.00	0.00	3150.00	0.00	0.00	0.00	795.00	901.60	0.00
788.000	575.86	0.00	576.28	104.00	0.00	3830.00	0.00	0.00	0.00	795.00	901.60	0.00
788.000	576.06	0.00	576.54	104.00	0.00	4230.00	0.00	0.00	0.00	795.00	901.60	0.00
788.000	576.56	0.00	577.19	104.00	0.00	5130.00	0.00	0.00	0.00	795.00	901.60	0.00
797.000	575.32	0.00	575.53	97.00	0.00	2470.00	0.00	0.00	0.00	795.00	901.60	0.00
797.000	575.50	0.00	575.78	97.00	0.00	2960.00	0.00	0.00	0.00	795.00	901.60	0.00
797.000	575.58	0.00	575.89	104.00	0.00	3150.00	0.00	0.00	0.00	795.00	901.60	0.00
797.000	575.89	0.00	576.31	104.00	0.00	3830.00	0.00	0.00	0.00	795.00	901.60	0.00
797.000	576.09	0.00	576.58	104.00	0.00	4230.00	0.00	0.00	0.00	795.00	901.60	0.00
797.000	576.60	0.00	577.22	104.00	0.00	5130.00	0.00	0.00	0.00	795.00	901.60	0.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
798.000	575.38	0.00	575.54	106.60	0.00	2470.00	0.00	0.00	0.00	795.00	901.60	0.00
798 000	575.58	0.00	575.80	106.60	0.00	2960.00	0.00	0.00	0.00	795.00	901.60	0.00
798.000	575.66	0.00	575.91	106.60	0.00	3150.00	0.00	0.00	0.00	795.00	901.60	0.00
798.000	576.00	0.00	576.34	106.60	0.00	3830.00	0.00	0.00	0.00	795.00	901 60	0.00
798.000	576.22	0.00	576.61	106.60	0.00	4230.00	0.00	0.00	0.00	795.00	901.60	0.00
798 000	576.77	0.00	577.26	106.60	0.00	5130.00	0.00	0.00	0.00	795.00	901.60	0.00
844 000	575.40	0.00	575.56	104.22	0.00	2470.00	0.00	0.00	0.00	815.00	924.00	0.00
844.000	575.60	0.00	575.82	105.52	0.00	2960.00	0.00	0.00	0.00	815.00	924 00	0.00
844 000	575.69	0.00	575.94	106.07	0.00	3150.00	0.00	0.00	0.00	815.00	924.00	0.00
844 000	576.04	0.00	576.37	108.24	0.00	3830.00	0.00	0.00	0.00	815.00	924.00	0.00
844.000	576.26	0.00	576.64	109.00	0.00	4230.00	0.00	0.00	0.00	815.00	924.00	0.00
844.000	576.82	0.00	577.31	109.00	0.00	5130.00	0.00	0.00	0.00	815.00	924.00	0.00
845.000	575.38	0.00	575.57	97.18	0.00	2470.00	0.00	0.00	0.00	815.00	924 00	0.00
845.000	575.58	0.00	575.84	98.46	0 00	2960.00	0.00	0.00	0.00	815.00	924 00	0.00
845.000	575.67	0.00	575.96	98.94	0.00	3150.00	0.00	0.00	0.00	815.00	924.00	0.00
845.000	576.01	0.00	576.40	101.06	0.00	3830.00	0.00	0.00	0.00	815.00	924.00	0.00
845.000	576.23	0.00	576.68	102.00	0.00	4230.00	0.00	0.00	0.00	815.00	924.00	0.00
845.000	576:78	0.00	577.36	102.00	0 00	5130.00	0.00	0.00	0.00	815.00	924.00	0.00
859.000	575.40	0.00	575 59	97.21	0.00	2470.00	0.00	0.00	0.00	815.00	924.00	0.00
859.000	575 61	0.00	575.87	98.50	0.00	2960.00	0.00	0.00	0.00	815.00	924.00	0.00
859.000	575.70	0.00	575.99	99 08	0.00	3150.00	0.00	0.00	0.00	815.00	924.00	0.00
859.000	576.05	0.00	576 43	101.25	0.00	3830.00	0.00	0.00	0.00	815.00	924 00	0.00
859.000	576.27	0.00	576.72	102.00	0.00	4230.00	0.00	0.00	0.00	815.00	924.00	0.00
859.000	576.84	0.00	577.41	103.00	0.00	5130.00	0.00	0.00	0.00	815.00	924.00	0.00
860.000	575.44	0.00	575.60	104.49	0.00	2470.00	0.00	0.00	0.00	815.00	924.00	0.00
860.000	575.66	0.00	575.88	105.89	0.00	2960.00	0.00	0.00	0.00	815.00	924.00	0.00
860.000	575.76	0.00	576.00	106.50	0.00	3150.00	0.00	0.00	0.00	815 00	924.00	0.00
860.000	576.13	0.00	576.45	108.75	0.00	3830.00	0.00	0.00	0.00	815.00	924.00	0.00
860.000	576.37	0.00	576.74	109.00	0.00	4230.00	0.00	0.00	0.00	815.00	924.00	0.00
860.000	576.97	0.00	577.44	109.00	0.00	5130 00	0.00	0.00	0.00	815.00	924.00	0.00
910.000	575.47	0.00	575.62	107.00	0.00	2470.00	0.00	0.00	0.00	835.00	942.00	0.00
910.000	575.70	0.00	575.91	107.00	0.00	2960 00	0.00	0.00	0.00	835.00	942.00	0.00
910.000	575.80	0.00	576.03	107.00	0.00	3150.00	0.00	0.00	0.00	835.00	942.00	0 00
910.000	576.19	0.00	576.49	107.00	0.00	3830.00	0.00	0.00	0.00	835 00	942.00	0.00
910.000	576.44	0.00	576.79	107.00	0.00	4230.00	0.00	0 00	0.00	835.00	942 00	0.00
910.000	577.05	0.00	577.49	107.00	0.00	5130.00	0.00	0.00	0.00	835.00	942.00	0.00
911.000	575.45	0.00	575.64	97.00	0.00	2470.00	0 00	0.00	0.00	835.00	942.00	0.00
911.000	575.68	0.00	575.93	105.00	0.00	2960.00	0.00	0.00	0.00	835.00	942.00	0.00
911.000	575.78	0.00	576.06	105.00	0.00	3150.00	0.00	0.00	0.00	835.00	942.00	0.00
911.000	576.16	0.00	576.53	105 00	0.00	3830.00	0.00	0.00	0.00	835.00	942.00	0.00
911 000	576.40	0.00	576.82	105.00	0.00	4230.00	0 00	0.00	0.00	835.00	942.00	0 00
911.000	577.00	0.00	577.54	105.00	0.00	5130.00	0.00	0.00	0.00	835.00	942.00	0.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
921.000	575.47	0.00	575 65	97.00	0.00	2470.00	0.00	0.00	0.00	835.00	942.00	0 00
921.000	575.70	0.00	575.95	105.00	0.00	2960.00	0.00	0.00	0.00	835.00	942.00	0.00
921.000	575.80	0.00	576.08	105.00	0.00	3150.00	0.00	0 00	0.00	835.00	942.00	0.00
921.000	576.19	0.00	576.55	105.00	0.00	3830.00	0.00	0 00	0.00	835.00	942.00	0.00
921.000	576.44	0.00	576.86	105.00	0.00	4230.00	0.00	0.00	0.00	835.00	942.00	0.00
921.000	577.04	0.00	577.57	105.00	0.00	5130.00	0.00	0.00	0.00	835.00	942.00	0.00
922 000	575.52	0.00	575.67	107.00	0.00	2470 00	0.00	0.00	0.00	835.00	942.00	0.00
922.000	575.77	0.00	575.97	107.00	0.00	2960.00	0.00	0.00	0.00	835 00	942.00	0.00
922.000	575.87	0.00	576.10	107.00	0.00	3150.00	0.00	0.00	0.00	835.00	942.00	0.00
922.000	576.28	0.00	576.58	107.00	0.00	3830.00	0.00	0 00	0.00	835 00	942.00	0.00
922.000	576.54	0.00	576.88	107.00	0.00	4230.00	0.00	0.00	0.00	835.00	942.00	0 00
922.000	577 17	0.00	577.60	107.00	0.00	5130.00	0.00	0.00	0.00	835.00	942 00	0.00
953.000	575.49	0 00	575.72	81.00	0.00	2470.00	0.00	0.00	0.00	600.00	681.00	0.00
953.000	575.73	0.00	576.04	81.00	0.00	2960.00	0.00	0.00	0.00	600.00	681.00	0.00
953.000	575.83	0.00	576.17	81.00	0.00	3150.00	0.00	0.00	0.00	600.00	681.00	0.00
953.000	576.23	0.00	576.68	81.00	0.00	3830.00	0.00	0.00	0.00	600.00	681.00	0.00
953.000	576.47	0.00	577.00	81.00	0.00	4230.00	0.00	0.00	0.00	600.00	681.00	0.00
953.000	577.08	0.00	577.76	81.00	0.00	5130.00	0.00	0.00	0.00	600.00	681.00	0.00
954 000	575.43	0.00	575.77	67.20	0.00	2470.00	0.00	0.00	0.00	600.00	681.00	0.00
954.000	575.65	0.00	576.12	67.20	0.00	2960.00	0.00	0.00	0.00	600.00	681.00	0 00
954.000	575.75	0.00	576.26	67.20	0.00	3150.00	0.00	0.00	0.00	600.00	681.00	0.00
954.000	576.11	0.00	576.80	67.20	0.00	3830 00	0.00	0.00	0.00	600.00	681.00	0.00
954.000	576.34	0.00	577.14	67.20	0.00	4230.00	0.00	0.00	0.00	600.00	681.00	0.00
954.000	576.90	0.00	577.94	67.20	0.00	5130.00	0.00	0.00	0.00	600.00	681.00	0.00
985.000	575.52	0.00	575 85	67.20	0.00	2470.00	0.00	0.00	0.00	600 00	681.00	0.00
985.000	575.77	0.00	576.22	67.20	0.00	2960.00	0.00	0.00	0.00	600.00	681.00	0.00
985.000	575.87	0.00	576.37	67 20	0.00	3150.00	0.00	0.00	0.00	600.00	681.00	0.00
985.000	576.28	0.00	576.95	67.20	0.00	3830.00	0.00	0.00	0.00	600.00	681.00	0.00
985.000	576.54	0.00	577.31	67.20	0.00	4230.00	0.00	0.00	0.00	600.00	681.00	0.00
985.000	577.17	0.00	578.15	67.20	0.00	5130.00	0.00	0.00	0.00	600.00	681.00	0.00
986.000	575.67	0.00	575.88	81.00	0.00	2470.00	0.00	0 00	0.00	600.00	681.00	0.00
986.000	575.98	0.00	576.27	81.00	0.00	2960.00	0.00	0.00	0.00	600.00	681.00	0.00
986 000	576.11	0.00	576.42	81.00	0.00	3150.00	0.00	0.00	0.00	600.00	681.00	0.00
986.000	576.61	0.00	577.02	81.00	0.00	3830.00	0.00	0.00	0.00	600.00	681.00	0.00
986.000	576.92	0.00	577.40	81.00	0.00	4230.00	0.00	0.00	0.00	600.00	681.00	0.00
986.000	577.67	0.00	578.27	81.00	0.00	5130.00	0.00	0.00	0.00	600.00	681.00	0.00
1036.000	575.71	0.00	575.91	111.38	0.00	2470.00	0.00	700.00	0.00	565.00	700.00	700.00
1036 000	576.05	0.00	576.31	113.14	0.00	2960.00	0 00	700.00	0.00	565.00	700.00	700 00
1036.000	576.19	0.00	576.47	113.94	0.00	3150.00	0.00	700.00	0.00	565.00	700 00	700.00
1036.000	576.73	0.00	577.08	116.78	0.00	3830.00	0.00	700.00	0.00	565.00	700.00	700.00
1036.000	577.08	0.00	577.46	118.53	0.00	4230.00	0.00	700.00	0 00	565.00	700.00	700.00
1036.000	577.91	0.00	578.36	122.68	0.00	5130.00	0.00	700.00	0.00	565.00	700.00	700.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
1736.000	576.08	0.00	576.25	108.09	0.00	2470.00	0.00	0.00	0.00	374.00	492.50	0.00
1736.000	576.49	0.00	576.72	110.33	0.00	2960.00	0.00	0.00	0.00	374.00	492.50	0.00
1736.000	576.66	0.00	576.90	111.20	0.00	3150.00	0.00	0.00	0.00	374.00	492.50	0 00
1736.000	577.29	0.00	577 59	114.44	0.00	3830.00	0.00	0.00	0.00	374.00	492.50	0.00
1736.000	577.68	0.00	578.00	504 48	0.00	4185.57	44.43	0.00	0.00	374.00	492.50	0.00
1736.000	578.62	0.00	578.90	558 36	0.00	4600.50	529.50	0.00	0.00	374.00	492.50	0.00
2436 000	576.37	0.00	576.50	173.43	186.29	2283 71	0.00	485.00	0.00	183.00	285.00	485.00
2436.000	576.86	0.00	577.02	180.88	249.22	2710.78	0.00	485.00	0.00	183.00	285.00	485.00
2436.000	577.05	0.00	577.22	183.85	276.21	2873.79	0.00	485.00	0.00	183.00	285.00	485.00
2436.000	577.75	0.00	577.96	338.99	388.52	3419.54	21.95	485.00	0.00	183.00	285.00	485.00
2436.000	578.16	0.00	578.37	386.44	455.43	3695.88	78.69	485.00	0.00	183.00	285.00	485.00
2436.000	579.01	0.00	579.23	396.21	599.91	4217.56	312.53	485.00	0.00	183 00	285.00	485 00
3186.000	576.66	0.00	576.66	103.89	0.00	254.91	0.09	500.00	0.00	200.00	300.00	500.00
3186.000	577.21	0.00	577.23	141.44	0.00	625.98	4.02	500.00	0.00	200.00	300.00	500.00
3186.000	577.41	0.00	577.47	155.53	0.00	1018.64	11.36	500.00	0.00	200.00	300.00	500.00
3186.000	578.14	0.00	578.24	210.58	0.00	1544.83	65.17	500.00	0.00	200.00	300.00	500 00
3186.000	578.55	0.00	578.66	248.44	0.00	1772.93	127.07	500.00	0.00	200.00	300.00	500.00
3186.000	579.38	0.00	579.52	291.60	0.00	2242 13	347.87	500.00	0.00	200.00	300.00	500 00
3686.000	576.67	0.00	576.67	84.85	0.00	255.00	0.00	500.00	0.00	200.00	300.00	500.00
3686 000	577.24	0.00	577.27	102.72	0.00	629.81	0.19	500.00	0.00	200.00	300.00	500.00
3686.000	577.49	0.00	577 56	120.01	0.00	1028.06	1.94	500.00	0.00	200.00	300.00	500.00
3686.000	578.27	0.00	578.39	173.05	0.00	1579.88	30.12	500.00	0.00	200.00	300.00	500.00
3686.000	578.69	0.00	578.83	206.39	0.00	1828.11	71.89	500.00	0.00	200.00	300 00	500.00
3686.000	579.54	0.00	579.71	285.82	0.00	2339.13	250.87	500.00	0.00	200.00	300 00	500 00
4186.000	576.68	0.00	576.68	78.76	0.00	255.00	0.00	200.00	350.00	417.00	500.00	550.00
4186.000	577.29	0.00	577.32	80.12	0.00	630.00	0.00	200.00	350 00	417.00	500.00	550.00
4186.000	577.60	0.00	577 67	80.82	0.00	1030.00	0.00	200.00	350.00	417.00	500.00	550.00
4186.000	578.43	0.00	578.56	87.86	0.09	1609.91	0.00	200 00	350.00	417.00	500 00	550.00
4186.000	578.86	0.00	579.03	117.91	1.80	1897.99	0.21	200.00	350.00	417.00	500.00	550.00
4186.000	579.72	0.00	579.95	200.00	32.34	2526.67	31.00	200.00	350.00	417.00	500.00	550.00
4236.000	576.68	0.00	576.68	52.00	0.00	255.00	0.00	52.00	592.00	592 00	644.00	644.00
4236.000	577.29	0.00	577.32	52.00	0.00	630.00	0.00	52.00	592.00	592.00	644.00	644.00
4236.000	577.60	0.00	577.69	52.00	0.00	1030.00	0.00	52.00	592.00	592.00	644.00	644.00
4236.000	578.42	0.00	578.60	52.00	0.00	1610.00	0.00	52.00	592.00	592.00	644.00	644.00
4236.000	578.85	0.00	579.08	52.00	0.00	1900.00	0.00	52.00	592.00	592.00	644.00	644.00
4236.000	579.68	0.00	580.05	52.00	0 00	2590.00	0.00	52.00	592.00	592.00	644.00	644.00
4281.000	576.68	0.00	576.68	52.00	0.00	255.00	0.00	52.00	592.00	592.00	644.00	644.00
4281.000	577.29	0.00	577.33	52.00	0.00	630.00	0.00	52.00	592.00	592.00	644.00	644 00
4281.000	577.65	0.00	577.74	52.00	0.00	1030.00	0.00	52.00	592.00	592.00	644.00	644 00
4281.000	578.59	0.00	578.77	52.00	0.00	1610.00	0.00	52.00	592.00	592.00	644.00	644.00
4281.000	579.11	0.00	579.33	52.00	0.00	1900.00	0.00	52.00	592.00	592.00	644.00	644.00
4281.000	580.21	0.00	580.54	52.00	0.00	2590.00	0.00	52.00	592.00	592.00	644.00	644.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
4931.000	576.69	0.00	576.70	74.78	0.00	255.00	0.00	85.00	115.00	115 00	200.00	200.00
4931 000	577.35	0.00	577.39	76.57	0.00	630.00	0.00	85.00	115.00	115.00	200.00	200.00
4931.000	577.80	0.00	577.88	77.80	0.00	1030.00	0.00	85.00	115.00	115.00	200.00	200.00
4931 000	578.87	0.00	579.00	80.69	0.00	1610.00	0.00	85.00	115.00	115.00	200.00	200.00
4931.000	579.44	0.00	579.60	82.25	0.00	1900.00	0.00	85.00	115.00	115.00	200.00	200.00
4931.000	580.67	0.00	580.89	84.63	0.00	2590.00	0.00	85.00	115.00	115.00	200.00	200.00
5956.000	576.72	0.00	576.73	73.89	0.00	255.00	0.00	85.00	115.00	115.00	200.00	200.00
5956.000	577.47	0.00	577.51	75.93	0.00	630.00	0.00	85.00	115.00	115 00	200.00	200.00
5956.000	578.04	0.00	578.12	77.51	0.00	1030.00	0.00	85.00	115.00	115.00	200.00	200.00
5956.000	579.22	0.00	579.35	80.70	0.00	1610.00	0.00	85.00	115.00	115.00	200.00	200 00
5956.000	579.82	0.00	579.98	82.34	0.00	1900.00	0.00	85.00	115.00	115.00	200.00	200.00
5956.000	581.11	0.00	581 32	84.77	0.00	2590.00	0.00	85 00	115.00	115.00	200.00	200.00
6981.000	576.76	0.00	576.77	75.10	0.00	255.00	0.00	0 00	0.00	505.00	600.00	0.00
6981.000	577.61	0.00	577.65	78.15	0.00	630.00	0.00	0.00	0.00	505.00	600.00	0.00
6981.000	578.30	0.00	578.38	80.63	0.00	1030.00	0.00	0.00	0.00	505.00	600.00	0.00
6981.000	579.57	0.00	579 70	85.18	0.00	1610 00	0.00	0.00	0.00	505.00	600.00	0.00
6981.000	580.20	0.00	580 36	87.46	0.00	1900.00	0.00	0.00	0.00	505.00	600.00	0.00
6981.000	581.55	0.00	581 74	92.26	0.00	2590.00	0.00	0.00	0.00	505.00	600.00	0.00
8031.000	576.80	0.00	576.81	77.78	0.00	255.00	0.00	96.00	150.00	150.00	246.00	246 00
8031.000	577.76	0.00	577.80	80.64	0.00	630.00	0.00	96 00	150.00	150.00	246.00	246.00
8031.000	578.57	0.00	578.65	86.05	0.00	1030.00	0.00	96.00	150.00	150.00	246.00	246.00
8031.000	579.93	0.00	580.05	93.74	0.00	1610.00	0.00	96.00	150.00	150.00	246.00	246.00
8031.000	580.59	0.00	580.72	95.67	0.00	1900.00	0.00	96.00	150.00	150.00	246.00	246.00
8031.000	581.96	0.00	582.13	96.00	0.00	2590.00	0.00	96.00	150.00	150.00	246.00	246.00
8082.000	576.81	0.00	576 81	72.00	0.00	255.00	0.00	75.00	580.00	580.00	655.00	655 00
8082.000	577.78	0.00	577.81	72.00	0.00	630.00	0.00	75.00	580.00	580.00	655.00	655 00
8082.000	578.61	0.00	578.66	75.00	0.00	1030.00	0.00	75.00	580.00	580.00	655.00	655.00
8082.000	579.97	0.00	580.07	75.00	0.00	1610.00	0.00	75.00	580.00	580.00	655.00	655.00
8082.000	580.62	0.00	580.74	75.00	0.00	1900.00	0.00	75.00	580.00	580.00	655.00	655.00
8082.000	581.98	0.00	582.15	75.00	0.00	2590.00	0.00	75.00	580.00	580.00	655.00	655.00
8147.000	576.81	0.00	576.81	72.00	0.00	255.00	0.00	75.00	580.00	580.00	655.00	655.00
8147.000	577.78	0.00	577.81	72.00	0.00	630.00	0.00	75 00	580.00	580.00	655.00	655.00
8147.000	578.65	0.00	578.70	75.00	0.00	1030.00	0.00	75.00	580.00	580.00	655.00	655.00
8147.000	580.11	0.00	580.20	75.00	0.00	1610.00	0.00	75.00	580.00	580.00	655.00	655.00
8147.000	580.83	0.00	580.94	75.00	0.00	1900.00	0.00	75.00	580.00	580.00	655.00	655.00
8147 000	582.34	0.00	582.49	75.00	0.00	2590.00	0.00	75 00	580.00	580.00	655.00	655.00
9397.000	576.85	0.00	576.87	69.47	0.00	255.00	0.00	85.00	550.00	550.00	635.00	635.00
9397.000	577.94	0.00	577.99	73.28	0.00	630.00	0.00	85.00	550.00	550.00	635.00	635.00
9397 000	578.93	0.00	579.02	77.72	0.00	1030.00	0.00	85.00	550.00	550.00	635.00	635.00
9397.000	580.47	0.00	580.60	83.41	0.00	1610.00	0.00	85.00	550.00	550.00	635.00	635.00
9397.000	581.21	0.00	581.35	84.36	0.00	1900.00	0.00	85.00	550.00	550.00	635.00	635.00
9397.000	582.76	0.00	582.94	85.00	0.00	2590.00	0.00	85.00	550.00	550.00	635.00	635.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
10297.000	576.91	0.00	576.93	65.80	0.00	255.00	0.00	480.00	0.00	400.00	480.00	480.00
10297.000	578.11	0.00	578.16	68.62	0 00	630.00	0.00	480.00	0.00	400.00	480.00	480.00
10297.000	579.18	0.00	579.27	71.13	0.00	1030.00	0.00	480.00	0.00	400.00	480 00	480.00
10297.000	580.76	0.00	580.90	74.84	0.00	1610.00	0.00	480.00	0.00	400.00	480.00	480.00
10297.000	581.51	0.00	581.66	76.56	0.00	1900.00	0.00	480.00	0.00	400.00	480.00	480.00
10297.000	583.07	0.00	583.27	79.45	0.00	2590.00	0.00	480.00	0.00	400.00	480.00	480.00
10897.000	576.96	0.00	576.98	63.35	0.00	255.00	0.00	73.00	112.00	112.00	185.00	185.00
10897.000	578.23	0.00	578.28	67.42	0.00	630.00	0.00	73.00	112.00	112.00	185.00	185.00
10897.000	579.35	0.00	579.46	71.06	0.00	1030.00	0.00	73.00	112.00	112.00	185.00	185.00
10897.000	580.96	0.00	581.11	73.00	0.00	1610.00	0 00	73.00	112.00	112.00	185.00	185.00
10897.000	581.71	0.00	581.88	73.00	0.00	1900.00	0.00	73.00	112.00	112.00	185.00	185.00
10897.000	583.29	0.00	583.51	73.00	0.00	2590.00	0.00	73.00	112.00	112.00	185.00	185.00
10973.000	576.96	0.00	576.98	50.00	0.00	255.00	0.00	52.00	500.00	500.00	552.00	552.00
10973.000	578.24	0.00	578.32	50.00	0.00	630.00	0.00	52.00	500.00	500.00	552.00	552.00
10973.000	579.37	0.00	579.51	52.00	0.00	1030.00	0.00	52.00	500.00	500 00	552.00	552.00
10973.000	580.97	0.00	581.19	52.00	0 00	1610.00	0.00	52.00	500.00	500.00	552.00	552.00
10973.000	581.71	0.00	581.97	52 00	0.00	1900.00	0.00	52.00	500.00	500.00	552.00	552 00
10973.000	583.27	0.00	583.62	52.00	0.00	2590.00	0.00	52.00	500.00	500.00	552.00	552.00
11017.000	576.96	0.00	576.99	50 00	0.00	255.00	0.00	52.00	500.00	500.00	552.00	552.00
11017.000	578.24	0.00	578.32	50.00	0.00	630.00	0.00	52.00	500.00	500.00	552.00	552.00
11017.000	579.47	0 00	579.61	52.00	0.00	1030.00	0.00	52.00	500.00	500.00	552.00	552.00
11017.000	581.36	0.00	581.56	52.00	0.00	1610.00	0.00	52.00	500.00	500.00	552.00	552.00
11017.000	582.22	0.00	582.45	52.00	0.00	1900.00	0.00	52.00	500.00	500.00	552.00	552.00
11017.000	583.95	0.00	584.26	52.00	0.00	2590.00	0.00	52.00	500.00	500.00	552.00	552.00
11477.000	577.02	0.00	577.04	63.31	0.00	255.00	0.00	100.00	155.00	155.00	236.00	255.00
11477.000	578.40	0.00	578.46	68.01	0.00	630.00	0.00	100.00	155.00	155.00	236.00	255 00
11477.000	579.71	0.00	579.81	72.45	0.00	1030.00	0.00	100.00	155.00	155.00	236.00	255.00
11477.000	581.65	0.00	581 78	82.65	0.00	1609.95	0.05	100 00	155.00	155.00	236.00	255.00
11477.000	582.54	0.00	582.68	98.32	0.00	1897.02	2.98	100.00	155.00	155.00	236.00	255.00
11477.000	584.33	0.00	584.50	100.00	0.00	2559.76	30.24	100.00	155.00	155.00	236.00	255.00
11528.000	577.03	0.00	577.05	50.50	0 00	210.00	0.00	52.50	530.00	530.00	582.50	582.50
11528.000	578.41	0.00	578.47	50.50	0.00	580.00	0.00	52.50	530.00	530.00	582.50	582.50
11528.000	579.73	0.00	579.84	50.50	0.00	950.00	0.00	52.50	530.00	530.00	582.50	582.50
11528.000	581.65	0.00	581.83	52.50	0 00	1550.00	0.00	52.50	530.00	530.00	582.50	582 50
11528.000	582.52	0.00	582.74	52.50	0.00	1850.00	0.00	52.50	530.00	530.00	582.50	582 50
11528.000	584.28	0.00	584.59	52.50	0.00	2640.00	0.00	52.50	530.00	530.00	582.50	582.50
11599.000	577.03	0.00	577.05	50.50	0.00	210.00	0.00	52.50	530.00	530.00	582.50	582.50
11599.000	578.42	0 00	578.48	50.50	0 00	580.00	0.00	52.50	530.00	530.00	582 50	582 50
11599.000	579 73	0.00	579.85	50.50	0.00	950.00	0.00	52.50	530.00	530.00	582.50	582 50
11599.000	581.85	0.00	582.02	52.50	0.00	1550.00	0.00	52.50	530.00	530.00	582.50	582.50
11599 000	582.85	0.00	583.05	52.50	0.00	1850.00	0.00	52.50	530.00	530.00	582.50	582.50
11599.000	584.78	0.00	585.06	52.50	0.00	2640.00	0.00	52.50	530.00	530.00	582.50	582.50

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
11650.000	577.04	0.00	577.05	52.72	0.00	210.00	0.00	56.00	548.00	548.00	604.00	604.00
11650.000	578.44	0.00	578.50	53.23	0.00	580.00	0.00	56.00	548.00	548.00	604.00	604.00
11650.000	579.77	0 00	579.87	53.72	0.00	950.00	0.00	56.00	548.00	548.00	604.00	604.00
11650.000	581.90	0.00	582.05	56.00	0.00	1550.00	0.00	56.00	548.00	548.00	604.00	604.00
11650.000	582.90	0.00	583.08	56.00	0.00	1850.00	0.00	56.00	548.00	548.00	604.00	604.00
11650.000	584.85	0.00	585.10	56.00	0.00	2640.00	0.00	56.00	548.00	548.00	604.00	604.00
11721.000	577.04	0.00	577.05	52.72	0.00	210 00	0.00	56.00	548.00	548.00	604.00	604.00
11721.000	578.44	0.00	578.50	53.24	0.00	580.00	0.00	56.00	548.00	548.00	604.00	604.00
11721.000	579.77	0.00	579.88	53.73	0.00	950.00	0.00	56.00	548.00	548.00	604.00	604.00
11721.000	582.12	0.00	582.27	56.00	0.00	1550.00	0.00	56.00	548.00	548.00	604.00	604.00
11721.000	583.25	0.00	583.42	56.00	0.00	1850.00	0.00	56.00	548.00	548.00	604.00	604.00
11721.000	585.35	0.00	585.59	56.00	0.00	2640.00	0.00	56.00	548.00	548.00	604.00	604.00
12689.000	577.16	0.00	577.18	64.08	0.84	208.65	0.51	0.00	0.00	171.00	229.00	0 00
12689.000	578.74	0.00	578.82	70.25	7.15	568.53	4.32	0.00	0.00	171.00	229.00	0.00
12689.000	580.15	0.00	580.26	75.76	19 63	918.50	11.86	0.00	0.00	171.00	229.00	0 00
12689.000	582.50	0.00	582.64	84.89	53.98	1463.41	32.61	0.00	0.00	171.00	229.00	0.00
12689.000	583.62	0.00	583.77	113.15	76.64	1720.86	52.50	0.00	0.00	171.00	229.00	0.00
12689.000	585.80	0.00	585.91	800.00	148.13	2026.29	465.58	0.00	0.00	171.00	229.00	0.00
13219 000	577.24	0.00	577 25	60.72	8.37	200.68	0.95	0.00	0.00	233.50	280.50	0 00
13219.000	578.91	0.00	578.96	67.48	30.71	542.80	6.49	0.00	0.00	233.50	280.50	0.00
13219.000	580.34	0.00	580.43	73.22	60.03	873.14	16.83	0.00	0.00	233.50	280.50	0.00
13219.000	582.66	0.00	582.79	82.60	122.04	1383.13	44.83	0.00	0.00	233.50	280.50	0.00
13219.000	583.77	0.00	583.91	87.07	158.61	1627.95	63.44	0.00	0.00	233.50	280.50	0.00
13219.000	585.90	0.00	586.03	577 00	319.41	2011.68	308.91	0.00	0.00	233.50	280.50	0.00
13269.000	577.24	0.00	577 26	47.00	0.00	210.00	0.00	0.00	0.00	233.50	280.50	0.00
13269.000	578.91	0.00	578 98	47.00	0.00	580.00	0.00	0.00	0.00	233.50	280.50	0.00
13269.000	580.34	0.00	580 45	47.00	0.00	950.00	0.00	0.00	0.00	233.50	280.50	0 00
13269.000	582.65	0.00	582.83	47.00	0.00	1550.00	0.00	0.00	0.00	233.50	280.50	0.00
13269.000	583.75	0.00	583.96	47.00	0.00	1850.00	0.00	0 00	0.00	233.50	280.50	0.00
13269.000	585.91	0.00	586.04	577.00	320.34	2009.09	310.57	0 00	0.00	233.50	280.50	0.00
13309.000	577.24	0.00	577.26	47.00	0.00	210.00	0.00	290.00	112.00	233.50	280.50	402.00
13309.000	578.91	0.00	578.98	47.00	0.00	580.00	0.00	290.00	112.00	233.50	280.50	402.00
13309.000	580.34	0.00	580.46	47.00	0.00	950.00	0.00	290 00	112.00	233.50	280.50	402.00
13309.000	582.83	0.00	583.01	47.00	0.00	1550.00	0.00	290.00	112.00	233.50	280.50	402.00
13309.000	584.06	0.00	584.26	47.00	0.00	1850.00	0.00	290.00	112.00	233.50	280.50	402.00
13309.000	585.87	0.00	586.04	290.00	206.66	2194.85	238.49	290.00	112.00	233.50	280.50	402.00
13409.000	577.25	0.00	577.27	58.07	0.87	203.49	5.64	0.00	0.00	233.50	280.50	0.00
13409.000	578.95	0.00	579 01	64.70	7.62	551.55	20.82	0.00	0.00	233.50	280.50	0.00
13409.000	580.40	0.00	580.50	70.42	21.29	887.86	40.85	0.00	0.00	233.50	280.50	0.00
13409.000	582 92	0.00	583.05	80.30	61.22	1404.63	84.15	0.00	0.00	233.50	280.50	0.00
13409.000	584.16	0.00	584.30	85.19	88.85	1651.04	110.11	0.00	0.00	233.50	280 50	0.00
13409.000	585.94	0.00	586.07	577.00	230.64	2033.23	376.14	0.00	0.00	233.50	280.50	0.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
15144.000	577.57	0.00	577.63	50.26	0.04	209.79	0.17	193.00	103.50	176.00	224.00	296.50
15144.000	579.52	0.00	579.65	58.37	4.39	570.90	4.71	193.00	103.50	176.00	224.00	296.50
15144.000	581.04	0.00	581.21	64.68	16.08	919.21	14.71	193 00	103.50	176.00	224.00	296.50
15144.000	583.46	0.00	583.67	74.78	52.01	1454.91	43.08	193.00	103.50	176.00	224.00	296.50
15144.000	584.66	0 00	584.87	79.74	77.41	1710 11	62.48	193.00	103.50	176.00	224.00	296.50
15144.000	586.39	0.00	586.65	193.00	208.15	2298.50	133.35	193.00	103.50	176.00	224.00	296.50
15434.000	577.75	0.00	577.79	48.00	0.00	180.00	0.00	0.00	0.00	276.00	324.00	0.00
15434.000	579.72	0.00	579.82	48.00	0.00	540.00	0 00	0.00	0.00	276.00	324.00	0.00
15434.000	581.22	0.00	581.38	48.00	0.00	900.00	0.00	0.00	0.00	276.00	324.00	0.00
15434.000	583.59	0.00	583.80	48.00	0.00	1480.00	0.00	0.00	0.00	276.00	324.00	0 00
15434 000	584.77	0.00	585.00	48.00	0.00	1760.00	0.00	0.00	0.00	276.00	324.00	0.00
15434.000	586.48	0.00	586.82	48.00	0.00	2520.00	0.00	0.00	0.00	276.00	324 00	0 00
15555.000	577 76	0.00	577.79	48.00	0.00	180.00	0.00	0.00	0.00	276.00	324.00	0.00
15555.000	579.73	0.00	579.83	48.00	0.00	540.00	0.00	0.00	0.00	276.00	324.00	0.00
15555.000	581.24	0.00	581.39	48.00	0.00	900.00	0.00	0.00	0.00	276.00	324 00	0.00
15555.000	583.77	0.00	583.97	48.00	0.00	1480.00	0 00	0.00	0.00	276.00	324 00	0.00
15555 000	585.08	0.00	585 30	48.00	0.00	1760.00	0.00	0.00	0.00	276.00	324.00	0.00
15555.000	587.20	0.00	587.50	48.00	0.00	2520 00	0.00	0.00	0.00	276.00	324.00	0.00
15859.000	577.89	0.00	577.96	36.37	1.37	176.68	1.95	0.00	0.00	78.00	108 00	0.00
15859.000	579.88	0.00	580 07	43.28	12.65	512.96	14.39	0.00	0.00	78.00	108.00	0.00
15859.000	581.38	0.00	581.67	48.54	32.35	832.97	34.68	0.00	0.00	78.00	108.00	0.00
15859.000	583 86	0.00	584.22	57 17	82.63	1312.91	84.46	0.00	0 00	78.00	108 00	0 00
15859.000	585.16	0.00	585.52	61.69	115.70	1527.73	116.56	0.00	0.00	78.00	108.00	0.00
15859.000	587.28	0.00	587.72	101.31	225.47	2093.67	200.86	0.00	0.00	78.00	108.00	0.00
16339.000	578.22	0.00	578 28	35.00	0.00	180.00	0.00	0.00	0.00	262.50	297.50	0 00
16339.000	580.32	0.00	580.49	35.00	0.00	540.00	0.00	0.00	0.00	262.50	297.50	0.00
16339.000	581.84	0.00	582.11	35.00	0.00	900.00	0.00	0.00	0.00	262.50	297 50	0.00
16339.000	584.23	0.00	584.60	35.00	0.00	1480.00	0.00	0.00	0.00	262.50	297.50	0.00
16339.000	585.46	0.00	585.87	35.00	0.00	1760.00	0.00	0.00	0.00	262.50	297 50	0.00
16339.000	587.56	0.00	588.13	35.00	0.00	2520.00	0.00	0.00	0.00	262.50	297 50	0.00
16340.000	578.22	0.00	578.28	35.00	0.00	180.00	0.00	0.00	0.00	262.50	297.50	0.00
16340.000	580.32	0.00	580.49	35.00	0.00	540.00	0.00	0.00	0.00	262.50	297.50	0.00
16340.000	581.84	0.00	582.11	35.00	0 00	900.00	0.00	0.00	0.00	262.50	297.50	0.00
16340.000	584.23	0.00	584.60	35 00	0.00	1480.00	0.00	0.00	0.00	262.50	297.50	0.00
16340.000	585.46	0.00	585.87	35.00	0.00	1760.00	0.00	0.00	0.00	262.50	297.50	0.00
16340.000	587.44	0.00	588.24	35.00	0.00	2520.00	0.00	0.00	0.00	262.50	297 50	0 00
16379.000	578.24	0.00	578.32	35.00	0.00	180.00	0.00	0 00	0.00	262.50	297.50	0 00
16379.000	580.36	0.00	580.55	35.00	0.00	540.00	0 00	0.00	0.00	262.50	297 50	0.00
16379.000	581.88	0.00	582.17	35.00	0.00	900.00	0.00	0.00	0.00	262.50	297.50	0.00
16379.000	584.27	0 00	584 67	35.00	0.00	1480.00	0.00	0.00	0.00	262 50	297.50	0.00
16379.000	585.50	0 00	585.93	35.00	0.00	1760.00	0.00	0.00	0.00	262.50	297 50	0 00
16379.000	587.61	0.00	588.45	35.00	0.00	2520.00	0.00	0.00	0.00	262.50	297.50	0 00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
16380.000	578.25	0.00	578.32	35.00	0.00	180.00	0 00	0.00	0.00	262.50	297.50	0.00
16380.000	580.36	0.00	580.55	35.00	0.00	540.00	0 00	0.00	0.00	262.50	297.50	0.00
16380.000	581.88	0.00	582.17	35.00	0.00	900 00	0.00	0.00	0 00	262.50	297.50	0.00
16380.000	584.27	0.00	584.67	35.00	0.00	1480.00	0.00	0 00	0.00	262.50	297.50	0.00
16380.000	585.50	0.00	585.93	35.00	0.00	1760.00	0.00	0.00	0.00	262.50	297.50	0.00
16380.000	587.99	0.00	588.54	35.00	0.00	2520.00	0.00	0.00	0.00	262.50	297.50	0.00
17184.000	579.08	0.00	579.25	27.72	7.48	164.07	8.44	0.00	0.00	193.00	207.00	0.00
17184.000	581.28	0.00	581.67	40.34	49.55	434.52	55.93	0.00	0.00	193.00	207.00	0.00
17184.000	582.82	0.00	583.34	49.27	110.15	665.53	124.32	0 00	0.00	193.00	207.00	0.00
17184.000	585.09	0.00	585.68	62.31	236.68	976.19	267.12	0.00	0.00	193.00	207.00	0.00
17184.000	586.24	0.00	586.81	68.93	310.11	1099.89	350.00	0.00	0.00	193.00	207.00	0.00
17184.000	588.70	0.00	589.27	83.07	519.11	1415.01	585.88	0.00	0.00	193.00	207.00	0 00
17709.000	579.59	0.00	579.64	41.92	7.01	152.01	0.98	0.00	0.00	93.00	114.00	0.00
17709.000	582.09	0.00	582.19	67.61	63.69	380.28	46.02	0.00	0.00	93.00	114.00	0.00
17709.000	583.77	0.00	583.90	82.53	126.67	552.42	130.91	0.00	0.00	93.00	114.00	0.00
17709 000	586.06	0.00	586.19	96.59	229.76	771.52	308.71	0.00	0.00	93.00	114.00	0.00
17709.000	587.14	0.00	587.28	103.22	284.93	872.90	412.17	0.00	0.00	93.00	114.00	0.00
17709.000	589.55	0.00	589.68	117.93	427.40	1112.22	690.38	0.00	0.00	93.00	114.00	0.00
18699.000	579.94	0.00	579.98	44.80	9.66	148.51	1.83	0.00	0.00	93.00	114 00	0.00
18699.000	582.51	0.00	582.59	71.33	67.65	367.47	54.88	0.00	0.00	93.00	114.00	0.00
18699.000	584.19	0.00	584.29	85.14	130.21	536.34	143.44	0.00	0.00	93.00	114.00	0.00
18699.000	586.42	0.00	586.54	98.79	232.60	756.36	321.04	0.00	0.00	93.00	114.00	0.00
18699.000	587.47	0.00	587.60	105.25	287.50	858.66	423.84	0.00	0.00	93.00	114.00	0.00
18699.000	589.83	0.00	589.96	119.69	429.64	1099.38	700.97	0.00	0.00	93.00	114.00	0.00
19699.000	580.21	0.00	580.26	21.00	0.00	160.00	0.00	0.00	0.00	93.00	114.00	0.00
19699.000	582.89	0.00	583.05	21.00	0.00	490 00	0.00	0.00	0.00	93.00	114.00	0.00
19699.000	584.57	0.00	584.87	21.00	0.00	810.00	0.00	0.00	0.00	93.00	114.00	0.00
19699.000	586.72	0.00	587.23	21.00	0.00	1310.00	0.00	0.00	0.00	93.00	114.00	0.00
19699.000	587.72	0.00	588.33	21.00	0.00	1570.00	0.00	0.00	0.00	93.00	114.00	0.00
19699.000	589.93	0.00	590.81	21.00	0.00	2230.00	0.00	0.00	0.00	93.00	114.00	0.00
19779.000	580.21	0.00	580.32	48.94	0.00	160.00	0.00	0.00	0.00	100.00	185.00	0.00
19779.000	582.90	0.00	583.05	72.06	0.00	490.00	0.00	0.00	0.00	100.00	185.00	0.00
19779.000	584.59	0.00	584.87	82.88	0.00	810.00	0.00	0.00	0.00	100.00	185.00	0.00
19779.000	586.76	0.00	587.23	84.26	0.00	1310.00	0.00	0.00	0.00	100.00	185.00	0.00
19779.000	587.77	0.00	588.33	84.40	0.00	1570.00	0.00	0.00	0.00	100.00	185.00	0.00
19779.000	590.02	0.00	590.81	84.71	0.00	2230.00	0.00	0.00	0.00	100.00	185.00	0.00
19829.000	580.30	0.00	580.45	34.39	3.08	156.92	0.00	0.00	0.00	89.00	108.00	0.00
19829.000	582.96	0.00	583.15	51.57	84.85	387.83	17.32	0.00	0.00	89.00	108.00	0.00
19829.000	584.75	0.00	584.96	60.68	185.72	572.06	52.22	0.00	0.00	89.00	108.00	0.00
19829.000	587.09	0.00	587.32	69.40	366.40	819.84	123.76	0.00	0.00	89.00	108.00	0.00
19829.000	588.18	0.00	588.42	73.04	462.99	937.65	169.36	0.00	0.00	89.00	108.00	0.00
19829.000	590.65	0.00	590.89	81.21	713.13	1222.05	294.82	0.00	0.00	89.00	108.00	0.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
20179.000	580.85	0.00	580.94	38.34	9.53	150.08	0.40	0.00	0.00	89.00	108.00	0.00
20179.000	583.36	0.00	583.51	53.74	91.90	377.25	20.85	0.00	0.00	89.00	108.00	0.00
20179.000	585.10	0.00	585.28	62.00	193.45	560.50	56.05	0.00	0.00	89.00	108.00	0.00
20179.000	587.37	0.00	587.58	70.33	371.90	809.62	128.48	0.00	0.00	89.00	108.00	0.00
20179.000	588.44	0.00	588.65	73.88	467.82	928.37	173.81	0.00	0.00	89.00	108.00	0.00
20179.000	590.86	0.00	591.09	82.64	717.17	1213.96	298.87	0.00	0.00	89.00	108.00	0.00
20199.000	580.93	0.00	580.97	47.98	0.00	150.00	0.00	0.00	0.00	130.00	192.00	0.00
20199.000	583.49	0.00	583.55	66.51	0.81	429.16	0.03	0.00	0.00	130.00	192.00	0.00
20199.000	585.24	0.00	585.32	75.60	7.04	689.90	3.06	0.00	0.00	130.00	192.00	0.00
20199.000	587.52	0.00	587.62	88.48	32.43	1043.97	23.60	0.00	0.00	130.00	192.00	0.00
20199.000	588.59	0.00	588.70	94.74	53.08	1214.47	42.44	0.00	0.00	130.00	192.00	0.00
20199.000	591.03	0.00	591.14	110.45	121.41	1592.28	116.31	0.00	0.00	130.00	192.00	0.00
20249.000	580.94	0.00	581.04	33.88	0.78	146.59	2.63	0.00	0.00	115.00	133.00	0.00
20249.000	583.48	0.00	583.62	47.95	38.31	343.00	48.69	0.00	0.00	115.00	133.00	0.00
20249.000	585.22	0.00	585.39	56.86	94.07	500.10	105.83	0.00	0.00	115.00	133.00	0.00
20249.000	587.50	0.00	587.67	67.84	203.52	693.60	202.88	0.00	0.00	115.00	133.00	0.00
20249.000	588.58	0.00	588.75	76.63	268.45	781.53	260.02	0.00	0.00	115.00	133.00	0.00
20249.000	591.02	0.00	591.18	107.91	455.85	971.46	402.69	0.00	0.00	115.00	133.00	0.00
20750.000	581.40	0.00	581.46	37.32	2.77	141.45	5.78	0.00	0.00	115.00	133.00	0.00
20750.000	583.88	0.00	583.99	50.00	43.26	333.66	53.08	0.00	0.00	115.00	133.00	0.00
20750.000	585.59	0.00	585.73	58.73	99.78	490.02	110.20	0.00	0.00	115.00	133.00	0.00
20750.000	587.80	0.00	587.95	69.16	209.87	682.65	207.47	0.00	0.00	115.00	133.00	0.00
20750.000	588.85	0.00	589.00	80.05	274.59	771.42	263.99	0.00	0.00	115.00	133.00	0.00
20750.000	591.23	0.00	591.38	111.16	463.59	961.50	404.92	0.00	0.00	115.00	133.00	0.00
21125.000	581.63	0.00	581.68	38.50	4.01	138.66	7.32	0.00	0.00	115.00	133.00	0.00
21125.000	584.12	0.00	584.22	51.22	46.05	328.48	55.48	0.00	0.00	115.00	133.00	0.00
21125.000	585.82	0.00	585.95	59.91	103.25	483.96	112.79	0.00	0.00	115.00	133.00	0.00
21125.000	588.00	0.00	588.14	70.08	214.13	675.36	210.51	0.00	0.00	115.00	133.00	0.00
21125.000	589.03	0.00	589.18	82.45	278.89	764.48	266.63	0.00	0.00	115.00	133.00	0.00
21125.000	591.38	0.00	591.53	113.69	469.24	954.41	406.36	0.00	0.00	115.00	133.00	0.00
21260.000	581.73	0.00	581.88	40.74	0.00	150.00	0.00	0.00	0.00	60.00	117.00	0.00
21260.000	584.20	0.00	584.32	53.51	3.62	426.38	0.00	0.00	0.00	60.00	117.00	0.00
21260.000	585.90	0.00	586.03	61.98	15.04	684.96	0.00	0.00	0.00	60.00	117.00	0.00
21260.000	588.08	0.00	588.21	72.84	43.59	1056.41	0.00	0.00	0.00	60.00	117.00	0.00
21260.000	589.10	0.00	589.24	78.16	61.72	1248.28	0.00	0.00	0.00	60.00	117.00	0.00
21260.000	591.43	0.00	591.57	89.66	116.77	1710.04	3.19	0.00	0.00	60.00	117.00	0.00
21310.000	581.93	0.00	582.20	32.47	1.45	147.41	1.14	0.00	0.00	79.00	107.00	0.00
21310.000	584.21	0.00	584.44	43.84	18.14	393.23	18.63	0.00	0.00	79.00	107.00	0.00
21310.000	585.89	0.00	586.13	52.98	42.21	609.30	48.49	0.00	0.00	79.00	107.00	0.00
21310.000	588.05	0.00	588.30	64.78	89.96	900.70	109.34	0.00	0.00	79.00	107.00	0.00
21310.000	589.07	0.00	589.32	70.35	119.51	1043.25	147.24	0.00	0.00	79.00	107.00	0.00
21310.000	591.39	0.00	591.65	83.02	203.39	1371.35	255.26	0.00	0.00	79.00	107.00	0.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	21335.000	582.17	0.00	582 61	31.96	0.00	150.00	0.00	0.00	0.00	129.00	163.00	0.00
	21335.000	584.23	0.00	584.53	39.67	1.27	428.68	0.04	0.00	0.00	129.00	163.00	0.00
	21335.000	585.89	0.00	586.19	48.57	12.62	683.15	4.23	0.00	0.00	129.00	163.00	0.00
	21335.000	588.05	0.00	588.34	59.67	51.04	1020.12	28.83	0.00	0.00	129.00	163 00	0.00
	21335.000	589.07	0.00	589.36	64.53	83.33	1178.42	48.25	0.00	0.00	129.00	163.00	0.00
	21335.000	591.40	0.00	591.67	75.99	179.68	1536.72	113.60	0.00	0.00	129.00	163.00	0.00
	21385 000	582.78	0.00	582.89	32.41	0.34	148.73	0.93	0.00	0.00	75.00	99.00	0.00
	21385.000	584.38	0.00	584.65	41.19	14.12	396.39	19.48	0.00	0.00	75.00	99.00	0.00
	21385.000	585.97	0.00	586.26	47.28	44.69	604.01	51.30	0.00	0.00	75.00	99.00	0 00
	21385.000	588.09	0.00	588.40	55.52	103.88	884.50	111.62	0.00	0.00	75.00	99.00	0.00
	21385 000	589.10	0.00	589.42	59.43	139.15	1023.29	147.55	0.00	0.00	75.00	99.00	0.00
	21385.000	591.41	0.00	591.73	68.29	235.89	1347.71	246.40	0.00	0.00	75.00	99.00	0.00
	21735.000	583.20	0.00	583.28	35.40	1.10	146.31	2.59	0.00	0.00	75.00	99.00	0.00
	21735.000	584.95	0 00	585.14	43.39	19.42	386.31	24.27	0.00	0.00	75.00	99.00	0.00
	21735 000	586.43	0.00	586.67	49.10	50.04	593.81	56.16	0.00	0.00	75.00	99.00	0.00
	21735.000	588.44	0.00	588.71	56.85	108.47	875.59	115.94	0.00	0.00	75.00	99.00	0.00
	21735 000	589 41	0.00	589.69	60.59	143.41	1014.96	151.63	0.00	0.00	75.00	99.00	0.00
	21735.000	591.65	0.00	591.95	69.21	239.76	1340.02	250.22	0.00	0.00	75.00	99 00	0 00
	22085.000	583.57	0.00	583.70	26.65	0.35	148.92	0.73	0.00	0.00	75.00	99.00	0.00
	22085.000	585.37	0.00	585.66	30.24	3.81	419.17	7.02	0.00	0.00	75.00	99.00	0.00
	22085.000	586.78	0.00	587.18	33.40	10.07	670.98	18.95	0.00	0.00	75.00	99.00	0 00
	22085.000	588.68	0.00	589.18	38.98	23.88	1025.86	50.26	0.00	0.00	75.00	99.00	0.00
	22085.000	589.61	0.00	590.15	41.70	32.99	1204.89	72.12	0.00	0.00	75.00	99.00	0.00
	22085.000	591.77	0.00	592.37	50.34	63.46	1625.27	141.27	0.00	0.00	75.00	99.00	0 00
	22385.000	583.98	0.00	584 07	27.47	0.56	148.35	1.10	0.00	0.00	75.00	99.00	0.00
	22385.000	585.87	0.00	586 10	31.25	4.66	416.85	8.49	0.00	0.00	75.00	99.00	0.00
	22385.000	587.28	0.00	587.62	34.89	11 46	666.12	22.42	0.00	0.00	75.00	99.00	0.00
	22385.000	589.13	0 00	589.57	40.32	25.77	1018.94	55.29	0.00	0.00	75.00	99.00	0 00
	22385.000	590.03	0.00	590.51	42.96	35.04	1197.12	77.84	0.00	0.00	75.00	99.00	0.00
	22385.000	592.14	0.00	592.68	52.48	67.46	1614.56	147.97	0.00	0.00	75.00	99.00	0.00
	22730.000	584.36	0.00	584.45	30.29	0.00	149.97	0.03	0.00	0.00	101.00	131.00	0.00
	22730.000	586.31	0.00	586.51	30.65	0.07	429.70	0.22	0.00	0.00	101.00	131.00	0.00
	22730.000	587.73	0.00	588.02	30.91	0.18	699.28	0.54	0.00	0 00	101.00	131.00	0.00
	22730.000	589.55	0.00	589.95	31.24	0.40	1098.38	1.22	0.00	0 00	101.00	131.00	0.00
	22730.000	590.43	0.00	590.88	31.40	0.54	1307.80	1.66	0.00	0.00	101.00	131.00	0.00
	22730.000	592.45	0.00	593.01	31.78	0.97	1826.04	2.99	0 00	0.00	101.00	131.00	0 00
	23205.000	584.83	0.00	584.89	30.37	0.01	149.95	0.04	0.00	0.00	101.00	131.00	0.00
	23205.000	586.80	0.00	586.96	30.74	0.09	429.65	0.26	0.00	0.00	101.00	131.00	0.00
	23205.000	588.23	0.00	588.47	31.00	0.20	699.19	0.61	0.00	0.00	101.00	131.00	0.00
	23205.000	590.04	0.00	590.39	31.33	0.43	1098.25	1.32	0.00	0.00	101.00	131.00	0.00
	23205.000	590.91	0.00	591.31	31.49	0.58	1307.65	1.77	0.00	0.00	101.00	131.00	0.00
	23205.000	592.91	0.00	593.42	31.86	1.02	1825.84	3.14	0.00	0.00	101.00	131.00	0.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	23705.000	585.55	0.00	586.24	17.22	0.00	150.00	0.00	0.00	0.00	110.00	130.00	0.00
	23705.000	587.19	0.00	588.14	23.17	5.44	424.46	0.10	0.00	0.00	110.00	130.00	0.00
	23705.000	588.54	0.00	589.61	25 91	18.60	679.94	1.45	0.00	0.00	110.00	130.00	0 00
	23705.000	590.26	0.00	591.46	27.78	53.38	1040.34	6.27	0.00	0.00	110.00	130.00	0 00
	23705.000	591.08	0.00	592 35	28 60	73.96	1226.00	10.04	0.00	0.00	110.00	130.00	0 00
	23705.000	593.00	0.00	594.41	30.51	128.75	1678.43	22.82	0.00	0.00	110.00	130.00	0.00
	24155.000	587.82	0.00	587.96	17.58	0.00	149.91	0.09	0.00	0.00	60.00	78 00	0 00
	24155.000	589.74	0.00	590.14	21.14	0.19	426.29	3.52	0.00	0.00	60.00	78 00	0.00
	24155.000	590.90	0.00	591.56	23.11	1.82	687.86	10.32	0.00	0.00	60.00	78.00	0.00
	24155.000	592.27	0.00	593 29	25.48	7.66	1066 68	25.66	0.00	0.00	60.00	78.00	0.00
	24155.000	592.91	0.00	594.12	26.59	12.39	1261.61	36.00	0.00	0.00	60.00	78.00	0.00
	24155.000	594.49	0.00	596.03	29 30	29.78	1731.18	69.04	0.00	0.00	60.00	78.00	0.00
	24655.000	588.67	0.00	588.81	18.11	0.00	150.00	0.00	0.00	0.00	60.00	78.00	0.00
	24655.000	590.90	0.00	591.25	21.84	1 76	425.96	2.27	0.00	0.00	60.00	78.00	0.00
	24655.000	592.33	0.00	592.87	24.22	6.73	684.59	8.68	0.00	0.00	60.00	78 00	0.00
	24655.000	594.00	0.00	594.80	27.00	18.93	1056.65	24.41	0.00	0.00	60.00	78 00	0.00
	24655.000	594.77	0.00	595.68	28.28	27.34	1247.40	35.26	0.00	0.00	60.00	78.00	0 00
	24655.000	596.47	0.00	597.65	31.11	53.44	1707.65	68.91	0.00	0.00	60.00	78.00	0.00
	3.000	588.86	0.00	588.88	33.00	0.00	150.00	0.00	0.00	0.00	67 00	100.00	0.00
	3.000	591.32	0.00	591.39	33.00	0.00	430.00	0.00	0.00	0.00	67.00	100.00	0 00
	3.000	592.95	0.00	593.06	33.00	0.00	700.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.000	594.87	0.00	595.05	33.00	0.00	1100.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.000	595.75	0.00	595.96	33.00	0.00	1310.00	0.00	0 00	0.00	67.00	100.00	0 00
	3.000	597.69	0.00	597.99	33.00	0.00	1830.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.100	588.86	0.00	588.88	33.00	0.00	150.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.100	591.32	0.00	591.39	33.00	0.00	430.00	0.00	0.00	0.00	67 00	100.00	0.00
	3.100	592.95	0.00	593.06	33.00	0.00	700.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.100	594.86	0.00	595.05	33.00	0.00	1100.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.100	595.74	0.00	595.96	33.00	0.00	1310.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.100	597.69	0.00	598.00	33.00	0.00	1830.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.900	588.86	0.00	588.89	33.00	0.00	150.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.900	591.32	0.00	591.39	33.00	0.00	430.00	0.00	0.00	0.00	67.00	100.00	0 00
	3.900	592.95	0.00	593.07	33.00	0.00	700.00	0.00	0.00	0.00	67.00	100.00	0 00
	3.900	594.87	0.00	595.06	33.00	0.00	1100.00	0.00	0.00	0.00	67.00	100 00	0.00
	3.900	595.75	0.00	595.97	33.00	0.00	1310.00	0.00	0.00	0.00	67.00	100.00	0.00
	3.900	597.70	0.00	598.00	33.00	0.00	1830.00	0.00	0.00	0.00	67.00	100.00	0 00
	4 000	588.86	0.00	588.89	33.00	0.00	150.00	0.00	0.00	0.00	67.00	100.00	0.00
	4.000	591.32	0.00	591.39	33.00	0.00	430.00	0.00	0.00	0.00	67.00	100.00	0.00
	4.000	592.95	0.00	593.07	33.00	0.00	700.00	0.00	0.00	0 00	67.00	100 00	0 00
	4.000	594.87	0.00	595.06	33.00	0.00	1100.00	0.00	0.00	0 00	67.00	100.00	0.00
	4.000	595.75	0.00	595.97	33.00	0.00	1310.00	0.00	0.00	0.00	67 00	100.00	0.00
	4.000	597.70	0.00	598.01	33.00	0.00	1830.00	0.00	0.00	0.00	67.00	100.00	0.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
5.000	588.84	0.00	588.96	21.16	0.00	150.00	0.00	0.00	0.00	50.00	125.00	0.00
5.000	591.29	0.00	591.50	31.33	0.00	430.00	0.00	0.00	0.00	50.00	125.00	0.00
5.000	592.93	0.00	593.17	38.13	0.00	700.00	0.00	0.00	0.00	50.00	125.00	0.00
5.000	594.87	0.00	595.15	46.19	0.00	1100.00	0.00	0.00	0.00	50.00	125.00	0.00
5.000	595.76	0.00	596.06	49.94	0.00	1310.00	0.00	0.00	0.00	50.00	125.00	0 00
5.000	597.74	0.00	598.06	58.11	0.00	1830.00	0.00	0.00	0.00	50.00	125.00	0 00
6.000	590.66	0.00	590.75	23.66	0.00	150.00	0.00	0.00	0.00	50.00	126.00	0.00
6.000	593.15	0.00	593.31	35.07	0.00	430.00	0 00	0.00	0.00	50.00	126.00	0.00
6.000	594.70	0.00	594.91	42.26	0.00	700.00	0.00	0.00	0.00	50.00	126.00	0.00
6.000	596.50	0.00	596.74	50.55	0.00	1100.00	0.00	0.00	0.00	50.00	126.00	0.00
6.000	597.31	0.00	597 57	54.31	0.00	1310.00	0.00	0.00	0.00	50.00	126.00	0.00
6.000	599.12	0.00	599 40	62.66	0.00	1830.00	0.00	0.00	0.00	50.00	126.00	0 00
7.000	591.69	0.00	591.74	24.75	0.00	150.00	0.00	0.00	0.00	160.00	211.00	0.00
7.000	594.38	0.00	594.50	31.26	0.00	430 00	0.00	0.00	0.00	160.00	211.00	0.00
7.000	596.02	0.00	596.19	35.26	0.00	700.00	0.00	0.00	0 00	160.00	211.00	0.00
7.000	597.85	0.00	598.09	39.71	0.00	1100.00	0.00	0.00	0.00	160.00	211.00	0.00
7.000	598.67	0.00	598.94	41.68	0.00	1310.00	0.00	0.00	0.00	160.00	211.00	0.00
7.000	600.44	0.00	600.78	46.00	0.00	1830.00	0.00	0.00	0.00	160.00	211.00	0.00
8.000	591.75	0.00	591.76	35.00	0.00	150.00	0.00	0.00	0.00	168.00	203 00	0.00
8.000	594.49	0.00	594.54	35.00	0.00	430.00	0.00	0.00	0.00	168.00	203 00	0.00
8.000	596.16	0.00	596.24	35.00	0.00	700.00	0.00	0.00	0.00	168 00	203 00	0 00
8.000	598.01	0.00	598.15	35.00	0.00	1100.00	0.00	0.00	0.00	168.00	203.00	0.00
8.000	598.91	0.00	599.01	76.83	98.41	1117.22	94.37	0.00	0.00	168.00	203.00	0.00
8.000	600.72	0.00	600.87	83.48	155.71	1524.98	149.31	0.00	0.00	168.00	203.00	0.00

2-YEAR FREQUENCY FLOOD

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
1.000	0.00	0.00	0.00	563.40	2470.00	574.90	0.00	575.09	4.16	3.52	701.34	1210.30
1.000	0.00	0.00	0.00	563.40	2960.00	574.90	0.00	575.18	5.98	4.22	701.34	1210.30
1.000	0.00	0.00	0.00	563.40	3150.00	574.90	0.00	575.21	6 77	4.49	701.34	1210.30
1.000	0.00	0.00	0.00	563.40	3830.00	574.90	0.00	575.36	10.01	5.46	701.34	1210.30
1.000	0.00	0.00	0.00	563.40	4230.00	574.90	0.00	575.46	12.22	6.03	701.34	1210.30
1.000	0.00	0.00	0.00	563.40	5130.00	574.90	0.00	575.73	17.97	7.31	701.34	1210.30
30 000	29.00	0.00	0.00	563.40	2470 00	574.91	0.00	575.10	4.15	3.52	702.43	1212.49
30.000	29.00	0.00	0.00	563.40	2960.00	574.92	0.00	575.19	5.95	4.21	702.90	1213.44
30.000	29.00	0.00	0.00	563.40	3150.00	574.92	0.00	575.23	6.73	4.48	703.11	1213.86
30.000	29.00	0.00	0.00	563.40	3830.00	574.93	0.00	575.39	9.93	5.44	703.95	1215 57
30.000	29.00	0.00	0.00	563.40	4230.00	574.94	0.00	575.50	12.09	6 00	704.53	1216.73
30.000	29.00	0.00	0.00	563.40	5130.00	574.97	0.00	575.79	17.65	7.26	706.66	1221.03
60.000	30.00	0.00	0.00	563.40	2470.00	574.93	0.00	575.12	4.13	3.51	703.62	1214.89
60.000	30.00	0.00	0.00	563.40	2960.00	574.94	0.00	575.21	5.92	4.20	704.65	1216.98
60.000	30.00	0.00	0.00	563 40	3150.00	574.94	0.00	575.25	6.69	4.47	705.11	1217.90
60.000	30.00	0.00	0.00	563.40	3830.00	574.97	0.00	575.42	9.83	5.42	707.04	1221.80
60.000	30.00	0.00	0.00	563.40	4230.00	574.99	0.00	575.54	11.93	5.97	708.40	1224.55
60.000	30.00	0.00	0.00	563.40	5130.00	575.04	0.00	575.84	17.29	7.19	713.01	1233.89
61.000	1.00	584.30	580 30	563.40	2470.00	574 91	0.00	575.14	7.48	3.83	644.34	903.37
61.000	1.00	584.30	580.30	563.40	2960.00	574.91	0.00	575.24	10.75	4.60	643.90	902.69
61.000	1.00	584.30	580 30	563.40	3150.00	574.91	0.00	575.29	12.17	4.89	644.07	902.95
61.000	1.00	584.30	580.30	563.40	3830.00	574.92	0.00	575.47	17.94	5.94	644.84	904.13
61.000	1.00	584.30	580.30	563.40	4230.00	574.93	0.00	575.60	21.84	6.55	645.45	905.08
61.000	1.00	584.30	580.30	563.40	5130.00	574.96	0.00	575.93	31.90	7.92	647.55	908.34
136.000	75.00	584.30	580 30	563.40	2470.00	574.97	0.00	575.19	7.39	3.81	647.81	908.73
136.000	75.00	584.30	580.30	563.40	2960.00	575.00	0.00	575.32	10.48	4 54	651.34	914.21
136 000	75.00	584.30	580.30	563.40	3150.00	575.02	0.00	575.38	11.82	4.83	652.62	916.19
136.000	75.00	584.30	580.30	563.40	3830.00	575.08	0.00	575.61	17.15	5.82	658.25	924.96
136.000	75.00	584.30	580.30	563.40	4230.00	575.13	0.00	575.77	20.62	6.38	662.51	931.61
136.000	75.00	584.30	580.30	563.40	5130.00	575.29	0.00	576 18	29.02	7.59	675.65	952.23
137.000	1.00	0.00	0.00	563.40	2470.00	575.02	0.00	575.21	4.02	3.47	712.02	1231.87
137.000	1.00	0.00	0.00	563.40	2960.00	575.08	0.00	575.34	5.68	4.13	717.22	1242.43
137.000	1.00	0.00	0.00	563.40	3150.00	575.10	0.00	575.40	6.38	4.38	719.57	1247.20
137.000	1.00	0.00	0.00	563.40	3830.00	575.21	0.00	575.64	9.12	5.25	729.83	1268.12
137.000	1.00	0.00	0.00	563.40	4230.00	575.29	0.00	575.81	10.86	5.74	737.43	1283.68
137.000	1.00	0.00	0.00	563 40	5130.00	575.53	0.00	576.24	14.70	6.75	759.97	1337.93

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
187.000	50.00	0.00	0.00	564.10	2470.00	575.03	0.00	575.24	4.61	3.71	666.23	1150.84
187.000	50.00	0.00	0.00	564.10	2960.00	575.09	0.00	575.39	6.50	4.41	671 60	1161.13
187.000	50.00	0.00	0.00	564.10	3150.00	575.11	0.00	575.45	7.30	4.67	674.02	1165.78
187.000	50.00	0.00	0.00	564.10	3830.00	575.23	0.00	575.72	10.43	5.59	684 58	1186.13
187.000	50.00	0.00	0.00	564.10	4230.00	575.32	0.00	575.90	12.40	6.11	692.37	1201 25
187.000	50.00	0.00	0.00	564.10	5130.00	575.57	0.00	576 36	16.70	7.17	715.20	1255.41
362.000	175.00	0.00	0.00	563.97	2470.00	575.22	0.00	575.33	3.20	2.78	889.95	1380 63
362.000	175.00	0.00	0.00	563.97	2960.00	575.36	0.00	575.52	4.29	3.25	910 30	1428.75
362.000	175.00	0.00	0.00	563.97	3150.00	575.42	0.00	575.60	4.72	3.43	919.27	1450.13
362.000	175.00	0.00	0.00	563.97	3830.00	575.68	0.00	575.93	6.18	4.00	956.67	1540.24
362.000	175.00	0.00	0.00	563.97	4230.00	575.86	0.00	576.14	6.96	4.30	982.62	1603.71
362.000	175.00	0.00	0.00	563.97	5130 00	576.32	0.00	576.69	8.34	4.88	1051.68	1776 31
737.000	375.00	0.00	0.00	563.70	2470.00	575.34	0.00	575.45	2.64	2.60	948.40	1520.18
737.000	375.00	0.00	0.00	563.70	2960.00	575.53	0.00	575 67	3.50	3.04	974.12	1582.83
737.000	375.00	0.00	0.00	563.70	3150.00	575.61	0.00	575.77	3.82	3.20	985.80	1611.56
737.000	375.00	0.00	0.00	563.70	3830.00	575.93	0.00	576.14	4.91	3.71	1032.88	1728.81
737.000	375.00	0.00	0.00	563.70	4230.00	576.14	0.00	576.39	5.47	3.97	1064.24	1808.25
737.000	375.00	0.00	0.00	563.70	5130.00	576.67	0.00	576.99	6.48	4.48	1143.85	2014.62
787.000	50.00	0.00	0.00	563.90	2470.00	575.33	0.00	575.49	4.05	3 28	753.16	1227.45
787.000	50.00	0.00	0.00	563.90	2960.00	575.51	0.00	575.74	5.37	3.83	772.41	1277.47
787.000	50.00	0.00	0.00	563.90	3150.00	575.59	0.00	575.84	5.88	4.04	780.66	1299.15
787.000	50.00	0.00	0.00	563.90	3830.00	575 90	0.00	576.24	7.63	4.71	813.66	1386.99
787.000	50.00	0.00	0.00	563.90	4230.00	576.10	0.00	576.50	8.56	5.06	835.44	1446 02
787.000	50.00	0.00	0.00	563.90	5130.00	576.61	0.00	577.13	10.31	5.76	890 08	1597.67
788.000	1.00	581.00	577.20	563.90	2470.00	575.31	0.00	575.51	15.29	3.64	679.14	631.70
788.000	1.00	581.00	577.20	563.90	2960.00	575.48	0.00	575.76	20.70	4.26	695.01	650.59
788.000	1.00	581.00	577.20	563.90	3150.00	575.56	0.00	575.87	23.56	4.48	702.66	648 92
788.000	1.00	581.00	577.20	563 90	3830.00	575.86	0.00	576.28	30.43	5.22	733.86	694.34
788.000	1.00	581.00	577.20	563.90	4230.00	576.06	0.00	576.54	34.04	5.61	754.56	724.99
788.000	1.00	581.00	577.20	563.90	5130.00	576.56	0.00	577.19	40.70	6.36	806.74	804.12
797.000	9.00	581.00	577.20	563.90	2470.00	575.32	0.00	575.53	15.29	3.64	679.06	631.61
797.000	9.00	581.00	577.20	563 90	2960.00	575.50	0.00	575.78	20.61	4.25	696.15	651.95
797.000	9.00	581.00	577 20	563.90	3150.00	575.58	0.00	575.89	23.42	4.47	704.04	650.91
797.000	9.00	581.00	577 20	563.90	3830 00	575.89	0.00	576.31	30 11	5.20	736.31	697.94
797.000	9.00	581.00	577.20	563.90	4230.00	576.09	0.00	576.58	33.66	5.59	757.31	729.10
797.000	9.00	581.00	577.20	563.90	5130.00	576.60	0.00	577.22	39.97	6 32	811.51	811.48
798.000	1.00	0.00	0.00	563.90	2470.00	575.38	0.00	575.54	3.96	3.26	758.37	1240.94
798.000	1.00	0 00	0.00	563.90	2960.00	575.58	0.00	575.80	5.21	3.80	779.76	1296.78
798.000	1.00	0.00	0.00	563.90	3150.00	575.66	0.00	575.91	5.69	3.99	788.92	1320.97
798.000	1.00	0.00	0.00	563.90	3830.00	576.00	0.00	576.34	7.30	4.64	824.88	1417.29
798.000	1.00	0.00	0.00	563.90	4230.00	576.22	0.00	576.61	8.15	4.99	848.36	1481.43
798.000	1.00	0.00	0.00	563.90	5130.00	576.77	0.00	577.26	9.73	5.66	906.49	1644.19

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
844.000	46.00	0.00	0.00	565.00	2470.00	575.40	0.00	575 56	3.65	3.25	760.57	1292.94
844.000	46.00	0.00	0.00	565.00	2960.00	575.60	0.00	575.82	4.85	3.78	782.26	1343.77
844.000	46.00	0.00	0.00	565.00	3150.00	575.69	0.00	575.94	5.32	3.98	791.62	1365.85
844.000	46.00	0.00	0.00	565.00	3830.00	576.04	0 00	576.37	6.94	4.62	828.75	1454.33
844.000	46.00	0.00	0.00	565.00	4230.00	576.26	0.00	576.64	7.77	4.96	853.31	1517.78
844.000	46.00	0.00	0.00	565.00	5130.00	576.82	0.00	577 31	9.20	5.61	914 01	1690 94
845.000	1.00	581.40	578.40	565.00	2470.00	575.38	0.00	575.57	11.97	3.52	702.27	713.98
845.000	1.00	581.40	578.40	565.00	2960.00	575.58	0.00	575.84	16.06	4.10	722.28	738 67
845.000	1.00	581.40	578.40	565.00	3150.00	575.67	0.00	575.96	17.73	4.32	729.82	748 03
845.000	1.00	581.40	578.40	565.00	3830.00	576.01	0.00	576.40	23.48	5.01	763.72	790.40
845.000	1.00	581.40	578.40	565.00	4230.00	576.23	0.00	576.68	26.64	5.38	786.24	819.56
845.000	1.00	581.40	578.40	565.00	5130.00	576.78	0.00	577.36	35.29	6.11	840 17	863 53
859.000	14.50	581.40	578.40	565.00	2470.00	575.40	0.00	575.59	11.95	3.52	702.68	714.49
859.000	14.50	581.40	578.40	565.00	2960.00	575.61	0.00	575.87	16.03	4.10	722.82	739.35
859.000	14.50	581.40	578.40	565.00	3150.00	575.70	0.00	575.99	17 61	4.30	732.00	750.74
859.000	14.50	581.40	578.40	565.00	3830.00	576.05	0.00	576.43	23.26	5.00	766.70	794 15
859.000	14.50	581.40	578.40	565.00	4230.00	576.27	0.00	576.72	26.34	5.36	789.66	824.26
859.000	14.50	581.40	578.40	565.00	5130.00	576.84	0.00	577.41	35.38	6.07	845.47	862.45
860.000	1.00	0.00	0.00	565.00	2470.00	575.44	0.00	575.60	3.59	3.23	765.13	1303.60
860.000	1.00	0.00	0.00	565 00	2960.00	575.66	0.00	575.88	4.75	3.75	788.63	1358.80
860.000	1.00	0.00	0.00	565.00	3150.00	575.76	0.00	576.00	5.19	3.94	798.83	1382.93
860.000	1.00	0.00	0.00	565.00	3830.00	576.13	0.00	576.45	6.70	4.57	838.92	1479.30
860.000	1.00	0.00	0.00	565.00	4230.00	576.37	0.00	576.74	7.44	4.89	865.18	1551.15
860 000	1.00	0.00	0.00	565.00	5130.00	576.97	0.00	577.44	8.71	5.52	930 18	1738.10
910.000	50.00	0.00	0.00	564.00	2470.00	575.47	0.00	575.62	3.36	3.12	791 98	1347 41
910.000	50.00	0.00	0.00	564.00	2960.00	575.70	0.00	575.91	4.37	3.62	817.28	1415.97
910.000	50.00	0.00	0.00	564.00	3150.00	575.80	0.00	576.03	4.76	3.81	827.54	1444.09
910.000	50.00	0.00	0.00	564.00	3830.00	576.19	0.00	576.49	6.03	4.41	869.12	1559.91
910.000	50.00	0.00	0.00	564.00	4230.00	576.44	0.00	576.79	6.69	4.72	895.80	1635.81
910.000	50.00	0.00	0.00	564.00	5130.00	577.05	0.00	577.49	7.92	5.34	959.86	1822.73
911.000	1.00	583.00	578 60	564.00	2470.00	575.45	0.00	575.64	14.40	3.47	712.57	650.80
911.000	1.00	583.00	578.60	564.00	2960.00	575.68	0.00	575.93	19 59	4.03	735.32	668.78
911.000	1.00	583.00	578.60	564.00	3150.00	575.78	0.00	576.06	21.24	4.22	745.59	683.42
911.000	1.00	583.00	578.60	564.00	3830.00	576.16	0.00	576.53	26.71	4.88	785 39	741.13
911.000	1.00	583.00	578.60	564.00	4230.00	576.40	0.00	576.82	29.48	5.22	811.02	779.07
911.000	1.00	583.00	578.60	564.00	5130.00	577.00	0.00	577.54	34.39	5.87	874.02	874.84
921.000	10.00	583.00	578.60	564.00	2470.00	575.47	0.00	575.65	14.40	3.47	712 58	650.81
921.000	10.00	583.00	578.60	564.00	2960.00	575.70	0.00	575.95	19.49	4.02	736.58	670.56
921.000	10.00	583.00	578.60	564.00	3150.00	575.80	0 00	576.08	21.12	4.22	746.96	685.38
921.000	10.00	583.00	578.60	564.00	3830.00	576.19	0 00	576.55	26.46	4.86	787.76	744.61
921.000	10.00	583.00	578.60	564 00	4230.00	576.44	0.00	576.86	29.19	5.20	813.64	782.99
921.000	10 00	583.00	578.60	564.00	5130.00	577.04	0.00	577.57	34.01	5.85	877.11	879.63

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
922.000	1.00	0.00	0.00	564.00	2470.00	575.52	0 00	575.67	3.31	3.10	796.12	1358 53
922.000	1.00	0.00	0.00	564.00	2960.00	575.77	0.00	575.97	4.27	3.60	823 02	1431 68
922.000	1.00	0.00	0.00	564.00	3150.00	575.87	0.00	576.10	4.64	3.78	834.38	1462.94
922.000	1.00	0.00	0.00	564.00	3830.00	576.28	0.00	576.58	5.84	4.36	878.04	1585 17
922.000	1.00	0.00	0.00	564.00	4230.00	576.54	0.00	576.88	6.46	4.67	905.86	1664.71
922.000	1.00	0.00	0.00	564.00	5130.00	577.17	0.00	577.60	7.58	5 27	973.36	1862.98
953.000	31.00	0.00	0.00	565.10	2470.00	575.49	0.00	575.72	4.85	3.80	649.19	1121.65
953.000	31.00	0.00	0.00	565.10	2960.00	575.73	0.00	576.04	6.35	4.43	668.72	1174.28
953.000	31.00	0.00	0.00	565.10	3150.00	575.83	0.00	576.17	6.93	4.65	676.97	1196.73
953.000	31.00	0.00	0.00	565.10	3830.00	576.23	0 00	576.68	8.89	5.40	708 65	1284 19
953.000	31.00	0.00	0.00	565.10	4230.00	576.47	0.00	577.00	9.95	5.80	728.84	1340.90
953.000	31.00	0.00	0.00	565.10	5130.00	577.08	0.00	577.76	11.99	6.59	777.90	1481.77
954.000	1.00	580.80	577.70	565.10	2470.00	575.43	0.00	575.77	23.73	4.68	528.22	506.99
954.000	1.00	580.80	577.70	565.10	2960.00	575.65	0.00	576.12	31.81	5.45	543.02	524.84
954.000	1.00	580.80	577.70	565.10	3150.00	575.75	0.00	576.26	35.00	5.73	549.29	532.41
954.000	1.00	580.80	577.70	565.10	3830.00	576 11	0.00	576.80	46.50	6.68	573.43	561.69
954.000	1.00	580.80	577.70	565.10	4230.00	576 34	0.00	577.14	53.10	7 18	588.88	580.51
954.000	1.00	580.80	577.70	565.10	5130.00	576.90	0.00	577.94	66.99	8.19	626.70	626.79
985.000	30.50	580.80	577.70	565.10	2470.00	575.52	0.00	575.85	23.14	4.63	533.62	513.50
985.000	30.50	580.80	577.70	565.10	2960.00	575.77	0.00	576.22	30.74	5.38	550.52	533.90
985.000	30.50	580.80	577.70	565.10	3150.00	575.87	0.00	576.37	33.71	5.65	557.66	542.55
985.000	30.50	580.80	577.70	565.10	3830.00	576.28	0.00	576.95	44.23	6.55	585.12	575.92
985.000	30.50	580.80	577.70	565.10	4230.00	576 54	0.00	577.31	50.16	7.02	602.62	597.28
985.000	30.50	580.80	577.70	565.10	5130.00	577.17	0.00	578.15	62 41	7.95	645.07	649.38
986.000	1.00	0.00	0.00	565.10	2470.00	575.67	0.00	575.88	4.53	3.72	663.59	1160.38
986.000	1.00	0.00	0.00	565.10	2960.00	575.98	0.00	576.27	5.80	4.30	688.68	1228 84
986.000	1.00	0.00	0.00	565.10	3150.00	576.11	0.00	576.42	6 27	4.50	699.22	1257 97
986.000	1.00	0.00	0.00	565.10	3830.00	576.61	0.00	577.02	7.80	5.18	739.62	1371.50
986.000	1.00	0.00	0.00	565.10	4230.00	576.92	0.00	577.40	8.57	5.53	765.15	1444.75
986.000	1.00	0.00	0.00	565.10	5130.00	577.67	0.00	578.27	9.97	6.21	826.25	1624.65
1036.000	50.00	0.00	0.00	566.20	2470.00	575.71	0.00	575.91	5.35	3.58	690.79	1067.74
1036.000	50.00	0.00	0.00	566.20	2960.00	576.05	0.00	576.31	6.59	4.06	728.25	1153.08
1036.000	50.00	0.00	0.00	566.20	3150.00	576.19	0.00	576.47	6.97	4.23	745.42	1192.81
1036.000	50.00	0.00	0.00	566.20	3830.00	576.73	0.00	577.08	8.18	4.74	807 32	1338 98
1036.000	50.00	0.00	0.00	566.20	4230.00	577.08	0.00	577.46	8.71	5.00	846.30	1433.33
1036.000	50.00	0.00	0.00	566.20	5130.00	577.91	0.00	578.36	9.23	5.41	947 76	1688.13
1736.000	700.00	0.00	0.00	565.40	2470.00	576.08	0.00	576.25	4.12	3.34	739.14	1216.16
1736 000	700.00	0.00	0.00	565.40	2960.00	576.49	0.00	576.72	4.99	3.77	785.06	1325.50
1736.000	700.00	0.00	0.00	565.40	3150.00	576.66	0.00	576.90	5.29	3.92	803 41	1369.93
1736.000	700.00	0.00	0.00	565.40	3830.00	577.29	0.00	577.59	6.11	4.37	875.49	1549.93
1736.000	700.00	0.00	0.00	565.40	4230.00	577.68	0.00	578.00	6.27	4.55	1018.38	1689.07
1736.000	700.00	0.00	0.00	565.40	5130.00	578.62	0.00	578.90	5.34	4.47	1519.62	2219.98

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	01K
2436.000	700.00	0 00	0.00	564.60	2470.00	576.37	0.00	576.50	2.90	3.00	979.14	1449.46
2436.000	700.00	0.00	0.00	564.60	2960.00	576.86	0.00	577.02	3.40	3.34	1065 33	1605.42
2436.000	700.00	0.00	0.00	564.60	3150.00	577.05	0.00	577.22	3.56	3.46	1100.64	1669.90
2436.000	700.00	0.00	0.00	564.60	3830.00	577.75	0.00	577 96	3.86	3.79	1283.28	1948.58
2436.000	700.00	0.00	0.00	564.60	4230.00	578.16	0.00	578.37	3.88	3.92	1431.11	2146.51
2436.000	700.00	0.00	0.00	564.60	5130.00	579.01	0.00	579.23	3.77	4.10	1764.60	2640.71
3186.000	750.00	0.00	0.00	568.80	255.00	576.66	0.00	576.66	0.14	0.54	477.29	673.90
3186.000	750 00	0.00	0.00	568.80	630.00	577.21	0 00	577.23	0.64	1 20	544.54	788.70
3186.000	750.00	0.00	0.00	568.80	1030.00	577.41	0.00	577.47	1.52	1.88	575.08	835.94
3186.000	750.00	0.00	0.00	568.80	1610.00	578.14	0.00	578.24	2.46	2.55	705.70	1026.69
3186.000	750.00	0.00	0.00	568.80	1900.00	578.55	0.00	578.66	2.70	2.76	799.42	1157.35
3186.000	750.00	0.00	0.00	568.80	2590.00	579.38	0.00	579.52	3.04	3.12	1034.36	1486.17
3686.000	500.00	0.00	0.00	569.40	255.00	576.67	0.00	576 67	0.20	0.60	424.19	566.41
3686.000	500.00	0.00	0.00	569 40	630.00	577.24	0.00	577.27	0.88	1.33	475.51	670.53
3686.000	500.00	0.00	0.00	569.40	1030.00	577.49	0.00	577.56	2.04	2.07	503.63	721.40
3686.000	500.00	0.00	0.00	569.40	1610.00	578 27	0 00	578.39	3.21	2.80	617.11	898.40
3686.000	500.00	0.00	0.00	569.40	1900.00	578.69	0.00	578.83	3.52	3.04	696.29	1013 21
3686.000	500.00	0.00	0.00	569.40	2590.00	579.54	0.00	579 71	3 95	3.45	907.11	1303.38
4186.000	500.00	0.00	0.00	570.00	255.00	576.68	0.00	576.68	0.22	0.63	404.79	547.10
4186.000	500.00	0.00	0 00	570.00	630.00	577.29	0.00	577.32	0.94	1.39	452.80	649.61
4186.000	500.00	0.00	0.00	570.00	1030.00	577.60	0.00	577.67	2.13	2.16	477.72	704 93
4186 000	500.00	0.00	0.00	570 00	1610.00	578.43	0.00	578.56	3.47	2.95	546.12	863.89
4186.000	500.00	0.00	0.00	570.00	1900.00	578.86	0.00	579.03	3.94	3.26	588.08	957 78
4186.000	500.00	0.00	0.00	570.00	2590.00	579.72	0.00	579.95	4.73	3.87	741.22	1190.93
4236.000	50.00	0.00	0.00	568.10	255.00	576.68	0.00	576.68	0.17	0.67	380.14	610 85
4236.000	50.00	0.00	0.00	568.10	630.00	577.29	0.00	577.32	0.83	1.53	411.99	689.89
4236.000	50.00	0.00	0.00	568.10	1030.00	577.60	0.00	577.69	1.98	2.40	428.40	731 67
4236.000	50.00	0.00	0.00	568.10	1610.00	578.42	0.00	578.60	3.65	3.42	470.85	842.79
4236.000	50.00	0.00	0.00	568.10	1900.00	578.85	0.00	579.08	4.43	3.85	493.05	902.59
4236.000	50.00	0.00	0.00	568.10	2590.00	579.68	0.00	580.05	6.42	4.83	536.45	1029 52
4281.000	45.00	580.00	577.40	568.10	255.00	576.68	0.00	576.68	0.18	0.67	379.88	609.03
4281.000	45.00	580.00	577.40	568.10	630.00	577.29	0.00	577.33	0 84	1.53	411.66	687 74
4281.000	45.00	580.00	577.40	568.10	1030.00	577 65	0.00	577.74	1.96	2.39	430.40	735.39
4281.000	45.00	580.00	577.40	568.10	1610.00	578.59	0.00	578.77	3.47	3.36	479.42	864.14
4281.000	45.00	580.00	577.40	568.10	1900.00	579.11	0.00	579.33	4.11	3.75	506.40	937.34
4281.000	45.00	580.00	577.40	568.10	2590.00	580.21	0.00	580.54	5.57	4.60	563.58	1097.45
4931.000	650.00	0.00	0.00	570.30	255.00	576.69	0.00	576.70	0.26	0.68	374.84	497.79
4931.000	650.00	0.00	0.00	570.30	630.00	577.35	0.00	577.39	1.10	1.48	424.75	601.59
4931.000	650.00	0.00	0 00	570.30	1030.00	577.80	0.00	577.88	2.31	2.24	459.71	677.71
4931.000	650.00	0.00	0.00	570.30	1610.00	578.87	0.00	579.00	3.41	2.96	544.09	871 87
4931.000	650.00	0.00	0.00	570.30	1900.00	579.44	0.00	579.60	3.72	3.22	590.83	985.26
4931 000	650.00	0.00	0.00	570.30	2590.00	580.67	0.00	580.89	4.28	3.73	693.71	1251.81

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	01K
5956.000	1025.00	0.00	0.00	570.65	255.00	576.72	0.00	576.73	0.32	0.73	350.66	449.71
5956.000	1025.00	0.00	0.00	570.65	630.00	577.47	0.00	577.51	1.25	1.55	406.77	563 52
5956.000	1025.00	0.00	0.00	570.65	1030.00	578.04	0.00	578.12	2.44	2.28	451.32	659.19
5956.000	1025.00	0.00	0.00	570.65	1610.00	579.22	0.00	579.35	3.41	2.96	544.31	872.38
5956.000	1025.00	0.00	0.00	570.65	1900.00	579.82	0.00	579.98	3.67	3.20	593.35	991.47
5956.000	1025.00	0.00	0 00	570.65	2590.00	581.11	0.00	581.32	4.15	3.69	701.14	1271.87
6981.000	1025.00	0.00	0.00	571.00	255.00	576.76	0.00	576.77	0.41	0.78	327.41	397.28
6981.000	1025.00	0 00	0.00	571.00	630.00	577.61	0.00	577.65	1.46	1.60	392.57	529.06
6981.000	1025 00	0.00	0.00	571.00	1030.00	578.30	0.00	578.38	2.63	2.30	447.68	635.04
6981.000	1025.00	0.00	0.00	571.00	1610.00	579.57	0.00	579.70	3.44	2.91	552.99	867.49
6981.000	1025.00	0.00	0.00	571.00	1900.00	580.20	0.00	580.36	3.64	3.13	607.73	996.00
6981.000	1025.00	0.00	0.00	571.00	2590.00	581.55	0.00	581.74	4.00	3.56	728.25	1295.17
8031.000	1050.00	0.00	0 00	571.50	255.00	576.80	0.00	576.81	0.41	0.77	330.94	397.35
8031.000	1050.00	0.00	0.00	571.50	630.00	577.76	0.00	577.80	1.34	1.55	406.61	544 99
8031.000	1050.00	0.00	0.00	571.50	1030.00	578.57	0.00	578.65	2.33	2.17	474.70	674.12
8031.000	1050.00	0.00	0.00	571.50	1610.00	579.93	0.00	580.05	2 98	2.69	598.14	931.87
8031.000	1050.00	0.00	0.00	571.50	1900.00	580.59	0.00	580.72	3.10	2.88	660.34	1079.07
8031.000	1050.00	0.00	0 00	571.50	2590.00	581.96	0.00	582.13	3.25	3.26	793.27	1436.32
8082.000	51.00	0.00	0.00	569.90	255.00	576.81	0.00	576.81	0.27	0.62	411.46	495.23
8082.000	51.00	0.00	0.00	569.90	630.00	577.78	0.00	577.81	1.03	1.31	481.28	621.09
8082.000	51.00	0.00	0.00	569.90	1030.00	578.61	0.00	578.66	1.99	1.90	542.33	729.34
8082.000	51.00	0.00	0.00	569.90	1610.00	579.97	0.00	580 07	2.83	2.50	643.69	956.25
8082.000	51.00	0.00	0.00	569.90	1900.00	580.62	0.00	580.74	3 14	2.74	692.61	1072.91
8082.000	51.00	0.00	0.00	569.90	2590.00	581.98	0.00	582.15	3.78	3.26	795.44	1331.96
8147.000	65.00	580.90	578.40	569.90	255.00	576.81	0.00	576.81	0.26	0.62	411.76	495.76
8147.000	65.00	580.90	578.40	569.90	630.00	577.78	0.00	577.81	1.03	1.31	481.87	622.18
8147.000	65.00	580.90	578.40	569.90	1030.00	578.65	0.00	578.70	1.96	1.89	545.33	735.76
8147.000	65.00	580.90	578.40	569.90	1610.00	580.11	0.00	580.20	2.69	2 46	654.83	982 43
8147.000	65.00	580.90	578.40	569.90	1900.00	580.83	0.00	580.94	2.92	2.68	708.83	1112.56
8147.000	65.00	580.90	578.40	569.90	2590.00	582.34	0.00	582.49	3.41	3.15	822.13	1402.09
9397.000	1250.00	0.00	0.00	571.80	255.00	576.85	0.00	576.87	0.68	0.93	273.61	310.16
9397.000	1250.00	0.00	0.00	571.80	630.00	577.94	0 00	577.99	1.93	1.79	351.70	452.91
9397.000	1250.00	0.00	0.00	571.80	1030.00	578.93	0.00	579.02	2.97	2.42	425.83	597.25
9397.000	1250.00	0.00	0.00	571.80	1610.00	580.47	0.00	580.60	3.45	2.92	551.39	866.88
9397.000	1250.00	0.00	0.00	571.80	1900.00	581.21	0.00	581.35	3.46	3.09	613.94	1021.87
9397.000	1250.00	0.00	0.00	571.80	2590.00	582.76	0.00	582.94	3.53	3 47	745.51	1377.94
10297.000	900.00	0.00	0 00	571.80	255.00	576.91	0.00	576.93	0.65	0 94	270.93	315.29
10297.000	900.00	0.00	0 00	571.80	630.00	578.11	0.00	578.16	1.80	1.79	351.86	470.15
10297.000	900.00	0.00	0.00	571.80	1030.00	579.18	0.00	579.27	2.68	2.41	426.90	629.36
10297.000	900.00	0.00	0.00	571.80	1610.00	580.76	0.00	580.90	3.21	2.97	542.37	898.79
10297.000	900.00	0.00	0.00	571.80	1900.00	581.51	0.00	581.66	3.35	3.18	598.05	1037.95
10297.000	900.00	0.00	0.00	571.80	2590.00	583.07	0.00	583.27	3.60	3.59	720.53	1364.75

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
10897.000	600.00	0.00	0.00	572.20	255.00	576.96	0.00	576.98	0.93	1.06	239.64	264.06
10897.000	600.00	0.00	0.00	572.20	630.00	578.23	0.00	578.28	2.32	1.95	322.52	413.26
10897 000	600.00	0.00	0.00	572.20	1030.00	579.35	0.00	579.46	3.26	2.57	400.89	570 89
10897.000	600.00	0.00	0.00	572 20	1610.00	580.96	0.00	581.11	3 66	3.11	517.57	841.47
10897.000	600.00	0.00	0.00	572.20	1900.00	581.71	0.00	581.88	3.74	3.32	572.15	982.14
10897.000	600 00	0 00	0.00	572.20	2590.00	583.29	0.00	583.51	3.98	3.77	686.92	1298.42
10973.000	76.00	0.00	0.00	571.70	255.00	576.96	0.00	576.98	1.31	1.16	220 62	223.04
10973.000	76.00	0.00	0.00	571.70	630.00	578.24	0.00	578.32	3.76	2.21	284.51	324.87
10973.000	76.00	0.00	0.00	571.70	1030.00	579.37	0.00	579.51	6.02	3.01	341.99	419.80
10973.000	76.00	0.00	0.00	571.70	1610.00	580.97	0.00	581.19	7.53	3.79	424.63	586.63
10973.000	76.00	0.00	0.00	571.70	1900.00	581.71	0.00	581.97	8.04	4.10	463.24	670.21
10973.000	76.00	0.00	0.00	571.70	2590.00	583.27	0.00	583.62	9 16	4.76	544.24	855.72
11017.000	44.00	581.70	579.00	571.70	255.00	576.96	0.00	576.99	1.31	1.16	220.68	223.13
11017.000	44.00	581.70	579.00	571.70	630.00	578.24	0.00	578.32	3.76	2.21	284.53	324.89
11017.000	44.00	581.70	579.00	571.70	1030.00	579.47	0.00	579.61	5 75	2.97	347.12	429.63
11017.000	44.00	581.70	579.00	571.70	1610.00	581.36	0.00	581.56	6.52	3.62	445.08	630.49
11017.000	44.00	581.70	579.00	571.70	1900.00	582.22	0.00	582 45	6.78	3.88	489.94	729.90
11017.000	44.00	581.70	579.00	571.70	2590.00	583.95	0.00	584.26	7.58	4.47	579.66	940.79
11477.000	460.00	0.00	0.00	571.80	255.00	577.02	0.00	577.04	1.10	1.12	227 77	243.66
11477.000	460.00	0.00	0.00	571.80	630.00	578.40	0.00	578.46	2.43	1.98	318.51	403.85
11477.000	460.00	0.00	0.00	571.80	1030.00	579.71	0.00	579.81	3.07	2.51	410.29	587.59
11477.000	460.00	0.00	0.00	571.80	1610.00	581.65	0.00	581.78	3.06	2 89	557.58	920.86
11477.000	460.00	0.00	0.00	571.80	1900.00	582.54	0.00	582.68	2.94	3.02	637.65	1107.75
11477.000	460.00	0.00	0.00	571.80	2590.00	584.33	0.00	584.50	2.77	3.31	816.91	1556.42
11528.000	51.00	0.00	0.00	572.10	210.00	577.03	0.00	577.05	0.92	0.96	217.95	219.43
11528.000	51.00	0.00	0.00	572.10	580.00	578.41	0.00	578.47	3.06	2.01	288.02	331.47
11528.000	51.00	0 00	0.00	572.10	950.00	579.73	0 00	579.84	4.51	2.68	354.47	447 47
11528.000	51.00	0.00	0.00	572.10	1550.00	581.65	0.00	581.83	5.97	3.42	453.34	634.41
11528.000	51.00	0.00	0.00	572.10	1850.00	582.52	0.00	582.74	6.33	3.71	499.29	735 29
11528.000	51.00	0.00	0.00	572.10	2640.00	584.28	0 00	584 59	7.72	4.46	591.55	950.41
11599.000	71.00	582.80	580.70	572.10	210.00	577.03	0.00	577.05	0.91	0.96	218.28	219.92
11599.000	71.00	582.80	580.70	572.10	580.00	578.42	0.00	578 48	3.06	2.01	288.09	331.59
11599.000	71.00	582.80	580.70	572.10	950 00	579.73	0.00	579.85	4.50	2.68	354.63	447.75
11599.000	71.00	582.80	580.70	572.10	1550.00	581.85	0.00	582.02	5.56	3.34	463.96	657.32
11599.000	71.00	582.80	580.70	572.10	1850.00	582.85	0.00	583.05	5.72	3.58	516.28	773.69
11599.000	71.00	582.80	580.70	572.10	2640.00	584.78	0.00	585 06	6.78	4.27	617.70	1014.15
11650.000	51.00	0.00	0.00	572.10	210.00	577.04	0.00	577.05	0.85	0.94	223.52	227.91
11650.000	51.00	0.00	0.00	572.10	580.00	578.44	0.00	578.50	2.78	1.95	297.34	347.84
11650.000	51.00	0.00	0.00	572.10	950.00	579.77	0.00	579.87	4.02	2.58	368 19	474.06
11650.000	51.00	0.00	0.00	572.10	1550.00	581.90	0.00	582.05	4.85	3.19	485.48	704 16
11650.000	51.00	0.00	0 00	572.10	1850.00	582.90	0.00	583.08	4.93	3.41	542.05	833.45
11650.000	51.00	0.00	0.00	572.10	2640.00	584.85	0.00	585.10	5.76	4.05	651.22	1100.05

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
11721.000	71.00	583.20	580 70	572.10	210.00	577.04	0.00	577.05	0.85	0.94	223.60	228.03
11721.000	71.00	583.20	580.70	572.10	580.00	578.44	0.00	578.50	2.77	1.95	297.78	348.59
11721.000	71.00	583.20	580.70	572.10	950.00	579.77	0.00	579.88	3.99	2.57	369.08	475.69
11721.000	71.00	583.20	580.70	572.10	1550.00	582.12	0.00	582.27	4.47	3.11	498.57	733.50
11721.000	71.00	583.20	580.70	572.10	1850.00	583.25	0.00	583.42	4.41	3.29	562.00	880.57
11721.000	71.00	583.20	580.70	572.10	2640.00	585.35	0.00	585.59	5.07	3.88	679.55	1172.57
12689.000	968.00	0.00	0.00	573.00	210.00	577.16	0.00	577.18	2.18	1.26	170.57	142.37
12689.000	968.00	0.00	0.00	573.00	580.00	578.74	0.00	578.82	3.72	2.21	276.84	300.69
12689.000	968.00	0.00	0.00	573.00	950.00	580.15	0.00	580.26	3.87	2.70	380.03	483.16
12689.000	968.00	0.00	0.00	573.00	1550 00	582.50	0.00	582.64	3 20	3.08	568.18	866.95
12689.000	968.00	0.00	0.00	573.00	1850.00	583.62	0.00	583.77	2 88	3.18	675.91	1090.18
12689.000	968.00	0.00	0.00	573.00	2640.00	585.80	0.00	585.91	1.98	3.04	1580.96	1875 59
13219.000	530.00	0.00	0.00	573.00	210.00	577.24	0.00	577.25	0.82	1.01	225 08	231.88
13219.000	530.00	0.00	0.00	573.00	580.00	578.91	0.00	578.96	1.98	1.95	332.38	412.34
13219.000	530.00	0.00	0.00	573.00	950.00	580.34	0.00	580.43	2.50	2.53	432.41	601 27
13219.000	530.00	0.00	0.00	573.00	1550.00	582.66	0.00	582.79	2.50	3.05	613.40	979.62
13219.000	530.00	0.00	0 00	573.00	1850.00	583.77	0.00	583.91	2.42	3.22	707.34	1190.38
13219.000	530.00	0.00	0.00	573.00	2640.00	585.90	0.00	586.03	2.02	3.32	1535.70	1857.84
13269.000	50.00	0.00	0.00	573.00	210.00	577.24	0.00	577.26	0.89	1.05	199.53	222.13
13269.000	50.00	0.00	0.00	573.00	580.00	578.91	0.00	578.98	2.25	2.08	278.23	386.59
13269.000	50.00	0.00	0.00	573.00	950.00	580.34	0.00	580.45	2.94	2.75	345.16	553.70
13269.000	50.00	0.00	0.00	573.00	1550.00	582.65	0 00	582.83	3.16	3.42	453.41	872.43
13269.000	50.00	0.00	0.00	573.00	1850.00	583.75	0.00	583.96	3.14	3.66	505.12	1044.50
13269.000	50.00	0.00	0.00	573.00	2640.00	585.91	0 00	586.04	2.01	3.31	1541.45	1862.62
13309.000	40.00	584.50	582.00	573.00	210.00	577.24	0.00	577.26	0.96	1.06	197.57	214 46
13309.000	40.00	584.50	582.00	573.00	580.00	578.91	0.00	578.98	2.40	2.10	276.11	374.66
13309.000	40.00	584.50	582.00	573.00	950.00	580.34	0.00	580.46	3.11	2.77	343.24	538.48
13309.000	40.00	584.50	582.00	573.00	1550.00	582.83	0.00	583.01	3.12	3.37	460.21	871.88
13309.000	40.00	584.50	582.00	573.00	1850.00	584.06	0.00	584.26	2.99	3.57	518.06	1069.10
13309.000	40.00	584.50	582.00	573 00	2640.00	585.87	0.00	586.04	2.54	3.64	1110.67	1656.55
13409.000	100.00	0.00	0.00	573.00	210.00	577.25	0.00	577.27	0.89	1.03	216.36	222.15
13409.000	100.00	0 00	0.00	573.00	580.00	578.95	0.00	579.01	2.13	1.99	320.17	397.29
13409.000	100.00	0.00	0.00	573.00	950.00	580.40	0.00	580.50	2.65	2.57	418.60	583.82
13409.000	100.00	0.00	0.00	573.00	1550.00	582.92	0.00	583.05	2.49	3.03	608.36	983.17
13409.000	100.00	0.00	0.00	573.00	1850.00	584.16	0.00	584.30	2.31	3.16	711.38	1216.71
13409.000	100.00	0.00	0.00	573.00	2640.00	585.94	0.00	586.07	2.14	3.35	1521.97	1804.86
15144.000	1735.00	0.00	0.00	573.70	210.00	577.57	0.00	577.63	7.48	1.97	107.43	76.80
15144.000	1735.00	0.00	0.00	573.70	580.00	579.52	0.00	579.65	6.79	2.85	213.32	222.56
15144.000	1735.00	0.00	0.00	573.70	950.00	581.04	0.00	581.21	6.27	3.37	306.48	379.30
15144.000	1735.00	0.00	0.00	573.70	1550.00	583.46	0.00	583.67	4 81	3.74	475.69	706.93
15144.000	1735.00	0.00	0.00	573.70	1850.00	584.66	0.00	584.87	4.21	3.83	567.75	902.02
15144.000	1735.00	0.00	0.00	573.70	2640.00	586.39	0.00	586.65	4.30	4.34	817.25	1273.13

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01Y
15434.000	290.00	0.00	0.00	574.90	180.00	577.75	0.00	577.79	3.43	1.47	122.57	97.20
15434.000	290.00	0.00	0.00	574.90	540.00	579.72	0.00	579.82	4.60	2.49	217.03	251.90
15434.000	290.00	0.00	0.00	574.90	900.00	581.22	0.00	581.38	4.90	3.11	289.18	406 43
15434.000	290.00	0.00	0.00	574.90	1480.00	583.59	0.00	583.80	4.39	3.67	402.95	706.51
15434 000	290.00	0.00	0.00	574.90	1760.00	584.77	0.00	585.00	4.03	3.84	458.80	877 16
15434.000	290.00	0.00	0.00	574.90	2520.00	586.48	0.00	586.82	4.75	4.65	541.55	1156.40
15555.000	121.00	587 30	583 80	574.90	180.00	577.76	0.00	577.79	3.58	1.49	121.00	95 13
15555.000	121.00	587.30	583.80	574.90	540.00	579.73	0.00	579.83	4.69	2.50	215.74	249.38
15555.000	121.00	587.30	583.80	574.90	900.00	581.24	0.00	581.39	4.96	3.12	288.15	403.98
15555.000	121.00	587.30	583.80	574.90	1480.00	583.77	0.00	583.97	4.16	3.61	409.58	725.93
15555.000	121.00	587.30	583.80	574.90	1760.00	585.08	0.00	585.30	3.65	3.72	472.71	921.84
15555.000	121.00	587.30	583.80	574.90	2520.00	587.20	0.00	587.50	3.91	4.39	574 25	1275 00
15859.000	304.00	0.00	0.00	574.30	180.00	577.89	0.00	577.96	6.99	2.17	87.18	68.06
15859.000	304.00	0.00	0.00	574.30	540.00	579.88	0.00	580.07	9.44	3.64	166.26	175.79
15859.000	304.00	0.00	0.00	574.30	900.00	581.38	0.00	581.67	9.82	4.47	235.63	287.22
15859.000	304.00	0.00	0.00	574.30	1480.00	583.86	0.00	584.22	7.95	5.04	366.74	524.82
15859.000	304.00	0.00	0.00	574.30	1760.00	585.16	0.00	585.52	6.77	5.10	443.86	676.41
15859.000	304.00	0.00	0.00	574.30	2520.00	587.28	0.00	587.72	6.69	5.76	600.06	974.39
16339.000	480.00	0.00	0.00	575 40	180.00	578.22	0.00	578.28	6.34	2.00	89.86	71.51
16339.000	480.00	0.00	0.00	575.40	540.00	580.32	0.00	580.49	7.75	3 30	163.49	193.93
16339 000	480.00	0.00	0.00	575.40	900.00	581.84	0.00	582.11	8.43	4.15	216.65	310.02
16339.000	480.00	0.00	0 00	575.40	1480.00	584.23	0.00	584.60	7.69	4.93	300.17	533.85
16339.000	480.00	0 00	0 00	575.40	1760.00	585.46	0.00	585.87	6.94	5.12	343.47	668 29
16339.000	480.00	0.00	0 00	575.40	2520.00	587.56	0.00	588.13	7.49	6.05	416.38	921.09
16340 000	1.00	589.20	589.60	575.40	180.00	578.22	0 00	578.28	7.47	2.00	89.88	65.85
16340.000	1.00	589.20	589.60	575.40	540.00	580.32	0.00	580.49	10 46	3.30	163.52	166.94
16340.000	1.00	589.20	589.60	575.40	900.00	581.84	0.00	582.11	12.44	4.15	216.68	255.21
16340.000	1.00	589.20	589.60	575.40	1480.00	584.23	0.00	584.60	12.91	4.93	300.20	411.94
16340.000	1.00	589.20	589.60	575.40	1760.00	585.46	0.00	585 87	12.40	5.12	343.49	499.82
16340.000	1.00	589.20	589.60	575.40	2520.00	587.44	0.00	588.24	45.98	7.16	351.75	371.63
16379.000	39.00	589.20	589.20	575.40	180.00	578.24	0.00	578.32	10.47	2.24	80.33	55.63
16379.000	39.00	589.20	589.20	575.40	540.00	580.36	0.00	580.55	12.29	3.50	154.27	154 02
16379.000	39.00	589.20	589.20	575.40	900.00	581.88	0.00	582.17	13.91	4.34	207.61	241.32
16379.000	39.00	589.20	589.20	575.40	1480.00	584.27	0.00	584.67	13.91	5.08	291.11	396.84
16379.000	39.00	589.20	589.20	575.40	1760.00	585.50	0.00	585.93	13.21	5.26	334.32	484.18
16379.000	39.00	589.20	589.20	575.40	2520.00	587.61	0.00	588.45	50.00	7.38	341.25	356.37
16380.000	1.00	0.00	0.00	575.40	180.00	578.25	0.00	578.32	9.22	2.24	80.34	59.28
16380.000	1.00	0.00	0.00	575.40	540.00	580.36	0.00	580.55	9.43	3.50	154.25	175.81
16380.000	1.00	0.00	0.00	575.40	900.00	581.88	0.00	582.17	9.73	4.34	207.60	288 46
16380.000	1.00	0.00	0.00	575.40	1480.00	584.27	0.00	584.67	8.52	5.08	291.16	506.90
16380.000	1.00	0.00	0.00	575.40	1760.00	585.50	0.00	585.93	7.60	5.26	334.40	638.47
16380.000	1.00	0.00	0.00	575.40	2520.00	587.99	0.00	588.54	7.21	5.98	421.30	938.32

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01V
17184.000	805.00	0.00	0 00	574.60	180.00	579.08	0.00	579.25	13.22	3.41	64.41	49.50
17184.000	805.00	0.00	0.00	574.60	540.00	581.28	0.00	581.67	17.87	5.52	139.05	127.76
17184.000	805.00	0.00	0.00	574.60	900.00	582.82	0.00	583.34	18.62	6.62	208.52	208.57
17184.000	805.00	0.00	0.00	574.60	1480.00	585.09	0.00	585.68	16.05	7.38	334.92	369.40
17184.000	805.00	0.00	0.00	574.60	1760.00	586.24	0.00	586.81	13.89	7.42	410.39	472 21
17184.000	805.00	0.00	0.00	574.60	2520.00	588.70	0.00	589.27	11.47	7.75	597 10	744.02
17709.000	525.00	0.00	0.00	575.10	160.00	579.59	0.00	579.64	3.99	1.91	96.79	80.07
17709.000	525.00	0.00	0.00	575.10	490.00	582.09	0.00	582.19	4.62	2.88	235 88	228.04
17709.000	525.00	0.00	0.00	575.10	810 00	583.77	0.00	583.90	4.41	3.30	362.55	385.78
17709 000	525.00	0.00	0.00	575.10	1310.00	586.06	0.00	586.19	3.71	3.58	567.30	680.04
17709.000	525.00	0.00	0.00	575.10	1570.00	587.14	0.00	587.28	3.40	3.67	675.52	851.60
17709.000	525.00	0.00	0.00	575.10	2230.00	589.55	0.00	589.68	2.91	3.85	941.16	1307.73
18699.000	990.00	0.00	0.00	575.10	160.00	579.94	0.00	579.98	2.85	1.71	111.70	94.75
18699.000	990.00	0.00	0 00	575.10	490.00	582.51	0.00	582.59	3.47	2.61	265 07	262.88
18699.000	990.00	0.00	0.00	575 10	810.00	584.19	0.00	584.29	3.51	3.05	397.32	432.39
18699.000	990.00	0.00	0.00	575.10	1310.00	586.42	0.00	586.54	3.18	3.39	602.43	734.69
18699 000	990.00	0.00	0.00	575 10	1570.00	587.47	0.00	587.60	2.99	3.50	710.14	908.40
18699.000	990.00	0.00	0.00	575 10	2230.00	589.83	0.00	589.96	2.65	3.73	975.30	1369.43
19699.000	1000.00	0.00	0.00	575.10	160.00	580.21	0.00	580.26	2.67	1.73	92.53	97.98
19699.000	1000.00	0.00	0.00	575.10	490.00	582.89	0.00	583.05	5.15	3.30	148.69	216.00
19699.000	1000.00	0.00	0.00	575.10	810.00	584.57	0.00	584.87	6.88	4.40	184.22	308.72
19699.000	1000.00	0.00	0.00	575.10	1310.00	586.72	0 00	587.23	8.69	5.72	229.18	444.26
19699.000	1000.00	0.00	0.00	575.10	1570.00	587.72	0.00	588.33	9.33	6.28	250.15	514.07
19699.000	1000.00	0.00	0.00	575.10	2230.00	589.93	0.00	590.81	10.66	7.52	296.63	682.96
19779.000	80.00	592.00	590.10	577.60	160.00	580 21	0.00	580.32	29.92	2.64	60.56	29.25
19779.000	80.00	592.00	590.10	577.60	490.00	582.90	0.00	583.05	5.43	2.12	231.39	210.34
19779.000	80.00	592.00	590.10	577.60	810.00	584.59	0.00	584.87	3.97	2.21	365.77	406.47
19779.000	80.00	592.00	590.10	577.60	1310.00	586.76	0.00	587.23	2.92	2.39	548.10	767.08
19779.000	80.00	592.00	590.10	577.60	1570.00	587.77	0.00	588.33	2.66	2.48	633.29	961.74
19779.000	80.00	592.00	590.10	577.60	2230.00	590.02	0 00	590.81	2.39	2.71	823 13	1442.82
19829.000	50.00	0.00	0.00	577.00	160.00	580.30	0.00	580.45	17.40	3.14	55.62	38.35
19829.000	50.00	0.00	0.00	577.00	490.00	582.96	0.00	583.15	10.31	3.86	171.69	152.62
19829.000	50.00	0.00	0.00	577.00	810.00	584.75	0 00	584.96	8.48	4.25	272.70	278.11
19829.000	50.00	0.00	0.00	577.00	1310.00	587.09	0.00	587.32	6.74	4.58	424.84	504.51
19829 000	50.00	0.00	0.00	577.00	1570.00	588.18	0.00	588.42	6.11	4.69	502.88	635.05
19829.000	50.00	0.00	0.00	577.00	2230.00	590.65	0.00	590.89	5.15	4.96	692 71	982 56
20179.000	400.00	0.00	0.00	577.00	160.00	580.85	0.00	580.94	8.43	2.48	75.71	55.11
20179.000	400.00	0.00	0.00	577.00	490.00	583.36	0.00	583.51	7.64	3.49	192.87	177.27
20179.000	400.00	0.00	0.00	577.00	810.00	585.10	0.00	585.28	6.95	3.97	293.84	307 21
20179.000	400.00	0.00	0.00	577.00	1310.00	587.37	0.00	587.58	5.97	4.39	444.33	536.33
20179.000	400.00	0.00	0.00	577.00	1570.00	588.44	0.00	588.65	5.53	4.54	521.49	667.35
20179.000	400.00	0.00	0.00	577.00	2230.00	590.86	0.00	591.09	4.81	4.84	710.17	1016 40

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	20199.000	20.00	602.70	596 90	577.40	150.00	580.93	0.00	580 97	5.65	1.60	93.63	63.12
	20199.000	20.00	602.70	596.90	577.40	430.00	583.49	0.00	583.55	3.65	2.01	216.50	224.99
	20199.000	20.00	602.70	596.90	577.40	700.00	585.24	0.00	585.32	3.60	2.33	314.69	369.03
	20199.000	20.00	602.70	596.90	577.40	1100.00	587 52	0.00	587.62	3.39	2.59	467 42	597.36
	20199.000	20.00	602.70	596.90	577.40	1310.00	588.59	0.00	588.70	3.30	2.67	549.70	721.46
	20199.000	20.00	602.70	596.90	577.40	1830.00	591.03	0.00	591.14	3.05	2.80	762.54	1047.22
	20249.000	50.00	0.00	0.00	575.60	150.00	580 94	0.00	581.04	10.93	2.56	64.21	45.37
	20249.000	50.00	0.00	0.00	575.60	430.00	583.48	0.00	583.62	8.48	3.33	169.30	147.68
	20249.000	50.00	0 00	0.00	575 60	700.00	585.22	0.00	585.39	7.42	3.72	260.7/	257.05
	20249.000	50 00	0.00	0.00	575.60	1100.00	587.50	0.00	587.67	5.86	3.95	403.46	454.38
	20249.000	50.00	0.00	0 00	575.60	1310.00	588.58	0.00	588.75	5.25	4.01	479.93	571 75
	20249.000	50.00	0.00	0.00	575.60	1830.00	591.02	0.00	591.18	4.12	4.07	705.27	902.01
	20750.000	501.00	0.00	0.00	575.60	150.00	581.40	0.00	581 46	6.51	2.16	80.61	58 77
	20750.000	501.00	0.00	0.00	575.60	430.00	583.88	0.00	583.99	6.39	3.03	189.02	170.04
	20750.000	501.00	0.00	0.00	575.60	700.00	585.59	0.00	585.73	6.07	3.48	281.88	284.09
	20750.000	501.00	0 00	0.00	575.60	1100.00	587.80	0.00	587.95	5.14	3.78	423.74	485.28
	20750 000	501.00	0.00	0.00	575.60	1310.00	588.85	0.00	589.00	4.72	3.87	500.83	603.24
	20750.000	501.00	0.00	0.00	575.60	1830.00	591.23	0.00	591.38	3.83	3.96	728.35	935.65
	21125.000	375.00	0.00	0.00	575.60	150.00	581.63	0.00	581.68	5.10	1.99	89.33	66.41
	21125.000	375 00	0.00	0.00	575.60	430.00	584 12	0.00	584.22	5 46	2.87	201.07	184.07
	21125.000	375.00	0.00	0.00	575.60	700.00	585.82	0.00	585.95	5.38	3.34	295.54	301.88
	21125 000	375.00	0.00	0.00	575.60	1100.00	588.00	0.00	588.14	4.70	3.66	438.10	507.42
	21125.000	375.00	0.00	0.00	575.60	1310.00	589.03	0.00	589.18	4.38	3.77	516.01	625.91
	21125.000	375 00	0.00	0.00	575.60	1830 00	591.38	0.00	591.53	3.63	3.89	745.09	960.02
	21260.000	135.00	612.50	614.70	579.90	150.00	581.73	0.00	581.88	39.89	3.07	48.83	23 75
	21260.000	135.00	612.50	614.70	579.90	430.00	584.20	0.00	584.32	9.48	2.78	158.56	139.65
	21260.000	135.00	612.50	614.70	579.90	700.00	585.90	0.00	586.03	6.97	2 91	251.63	265.11
	21260.000	135.00	612.50	614 70	579.90	1100.00	588.08	0.00	588.21	5.24	3.00	391.92	480.50
	21260.000	135.00	612.50	614.70	579.90	1310.00	589.10	0.00	589.24	4.52	3.04	465.14	616.47
	21260.000	135.00	612.50	614.70	579.90	1830.00	591.43	0.00	591.57	3.48	3.15	647.53	980.93
	21310.000	50.00	0.00	0.00	580.50	150.00	581.93	0.00	582.20	73.45	4.22	37 03	17 50
	21310.000	50.00	0.00	0.00	580.50	430.00	584.21	0.00	584.44	16.41	3.98	123.88	106.14
	21310.000	50.00	0.00	0.00	580.50	700.00	585.89	0.00	586.13	10.78	4.18	205.03	213.21
	21310.000	50.00	0.00	0.00	580.50	1100.00	588.05	0.00	588.30	7.39	4.37	332.44	404 67
	21310.000	50.00	0.00	0.00	580.50	1310.00	589.07	0.00	589.32	6.43	4.44	401.37	516.50
	21310.000	50.00	0.00	0.00	580.50	1830.00	591.39	0.00	591.65	4.92	4.57	579.61	825.21
*	21335.000	25.00	600.40	596.30	581.00	150.00	582.17	582.17	582.61	191.47	5.36	28.01	10.84
	21335.000	25.00	600.40	596.30	581.00	430.00	584.23	0.00	584.53	28.46	4.38	99.88	80.61
	21335.000	25.00	600.40	596.30	581.00	700.00	585 89	0.00	586.19	16.79	4.42	170.21	170.82
	21335.000	25.00	600.40	596.30	581.00	1100.00	588.05	0.00	588.34	11.04	4.48	283.09	330 99
	21335.000	25.00	600.40	596.30	581.00	1310.00	589.07	0.00	589 36	9.51	4.49	344.40	424.83
	21335.000	25.00	600.40	596 30	581.00	1830.00	591.40	0.00	591.67	7.24	4.50	502.87	680.19

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	21385.000	50.00	0.00	0.00	579.90	150.00	582.78	0.00	582.89	14.91	2.75	56.90	38.85
	21385.000	50.00	0.00	0.00	579.90	430.00	584.38	0.00	584.65	17.62	4.28	117.06	102.43
	21385.000	50.00	0.00	0.00	579.90	700.00	585.97	0.00	586.26	13.05	4.62	186.91	193.75
	21385.000	50.00	0.00	0.00	579.90	1100.00	588.09	0.00	588.40	9.28	4.86	296.75	361.13
	21385.000	50.00	0.00	0.00	579.90	1310.00	589.10	0.00	589.42	8 17	4.96	355.09	458 38
	21385 000	50.00	0.00	0.00	579.90	1830.00	591.41	0.00	591.73	6.43	5.16	501.80	721.58
	21735.000	350.00	0.00	0.00	579.90	150.00	583.20	0.00	583 28	8.09	2.27	71.40	52 74
	21735.000	350.00	0.00	0.00	579.90	430.00	584.95	0.00	585.14	10.57	3.63	141.20	132.25
	21735.000	350.00	0.00	0.00	579.90	700.00	586.43	0.00	586.67	9.56	4.18	209.65	226.38
	21735.000	350.00	0.00	0.00	579.90	1100.00	588.44	0.00	588.71	7.84	4.60	316.19	392.98
	21735.000	350.00	0.00	0.00	579.90	1310.00	589.41	0.00	589.69	7.16	4.75	373.14	489.40
	21735.000	350.00	0.00	0.00	579.90	1830.00	591.65	0.00	591 95	5.91	5.02	518.24	752 48
	22085.000	350.00	0.00	0.00	581.10	150.00	583.57	0.00	583.70	16.53	2.87	53.68	36.90
	22085.000	350.00	0.00	0.00	581.10	430.00	585.37	0.00	585.66	17.45	4.41	104.78	102.93
	22085.000	350.00	0.00	0.00	581.10	700.00	586.78	0.00	587.18	16.20	5.21	149.47	173.92
	22085.000	350.00	0.00	0.00	581.10	1100.00	588.68	0.00	589.18	13.79	5.88	218.28	296.25
	22085.000	350.00	0.00	0.00	581.10	1310.00	589.61	0.00	590.15	12.74	6.12	255.77	367.06
	22085.000	350.00	0.00	0.00	581.10	1830.00	591 77	0.00	592.37	10.60	6.53	353.95	561.99
	22385.000	300.00	0.00	0.00	581.10	150.00	583.98	0.00	584.07	9.18	2.40	64.82	49.51
	22385.000	300.00	0.00	0.00	581.10	430.00	585.87	0.00	586.10	11.54	3.89	120.41	126.58
	22385.000	300.00	0.00	0.00	581.10	700.00	587.28	0.00	587.62	11.81	4.72	166.85	203.72
	22385.000	300.00	0.00	0.00	581.10	1100.00	589.13	0.00	589.57	11.10	5.49	236.38	330 13
	22385.000	300.00	0.00	0 00	581.10	1310.00	590.03	0 00	590.51	10.61	5.78	273.88	402.13
	22385.000	300.00	0.00	0.00	581.10	1830.00	592.14	0.00	592.68	9.33	6.27	372.63	599.14
	22730 000	345.00	0.00	0.00	582.10	150.00	584.36	0.00	584.45	13.36	2.47	60.86	41.04
	22730.000	345.00	0.00	0.00	582.10	430.00	586.31	0.00	586.51	11.54	3.61	120.28	126 57
	22730.000	345.00	0.00	0.00	582.10	700.00	587.73	0.00	588.02	11.00	4.32	164.14	211.07
	22730.000	345.00	0.00	0.00	582.10	1100.00	589.55	0.00	589.95	10.27	5.07	220.89	343.25
	22730.000	345.00	0.00	0.00	582 10	1310.00	590.43	0.00	590.88	9.95	5.38	248.27	415.32
	22730.000	345.00	0.00	0.00	582.10	1830.00	592.45	0 00	593.01	9.24	6.02	312.02	602 11
	23205.000	475.00	0.00	0.00	582.10	150.00	584.83	0.00	584.89	6.65	2.01	75.12	58 16
	23205.000	475.00	0.00	0.00	582.10	430.00	586.80	0.00	586.96	7.81	3.21	135.41	153.85
	23205.000	475.00	0.00	0.00	582.10	700.00	588.23	0.00	588.47	8.18	3.95	179.61	244.69
	23205.000	475.00	0 00	0.00	582.10	1100.00	590.04	0.00	590.39	8.24	4.74	236 33	383.25
	23205.000	475.00	0.00	0.00	582.10	1310.00	590.91	0.00	591.31	8.20	5.08	263.45	457.45
	23205.000	475.00	0.00	0.00	582.10	1830 00	592.91	0.00	593.42	7.99	5.76	326.34	647.47
*	23705.000	500.00	0.00	0.00	583.50	150.00	585.55	585.55	586.24	173.41	6.64	22.63	11.39
	23705.000	500.00	0.00	0.00	583.50	430.00	587.19	0.00	588.14	96.51	7 88	56.61	43.77
	23705.000	500 00	0.00	0 00	583.50	700.00	588.54	0.00	589.61	63.89	8.41	89 74	87.58
	23705.000	500.00	0.00	0.00	583.50	1100.00	590.26	0.00	591.46	45.98	9.03	135 94	162.22
	23705.000	500.00	0.00	0.00	583.50	1310.00	591.08	0.00	592.35	40.85	9.31	159.23	204.97
	23705.000	500.00	0.00	0.00	583.50	1830.00	593.00	0.00	594.41	32.62	9 87	215.98	320.40

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
24155.000	450.00	0.00	0.00	583 90	150.00	587.82	0.00	587.96	15.62	3.02	49.84	37 95
24155.000	450.00	0.00	0.00	583.90	430.00	589 74	0.00	590.14	24.26	5.10	87.12	87.31
24155.000	450.00	0.00	0.00	583.90	700.00	590.90	0.00	591.56	30.20	6.59	112.59	127.38
24155.000	450.00	0.00	0.00	583.90	1100.00	592.27	0.00	593.29	35.65	8.26	146.10	184.22
24155.000	450.00	0.00	0.00	583.90	1310.00	592.91	0.00	594.12	37.41	8.96	162.93	214.17
24155.000	450.00	0.00	0.00	583.90	1830.00	594.49	0.00	596.03	38.14	10.23	207.10	296.31
24655.000	500.00	0.00	0.00	584.60	150.00	588.67	0.00	588.81	18.72	3.06	48 98	34.67
24655.000	500.00	0.00	0.00	584.60	430.00	590.90	0.00	591.25	20.42	4.77	93.67	95.15
24655.000	500.00	0.00	0.00	584.60	700.00	592.33	0.00	592.87	22.70	5.96	126.52	146.92
24655.000	500.00	0.00	0.00	584.60	1100.00	594.00	0 00	594.80	24.90	7.29	169.36	220.43
24655.000	500.00	0.00	0.00	584.60	1310.00	594.77	0.00	595.68	25.66	7.86	190.47	258 60
24655 000	500.00	0.00	0.00	584.60	1830.00	596.47	0.00	597 65	26.71	9.02	241.01	354.09
3.000	100.00	0.00	0.00	584.60	150.00	588.86	0.00	588.88	1.46	1.23	122.35	124.08
3.000	100.00	0.00	0.00	584.60	430.00	591.32	0.00	591.39	2.21	2.11	203.41	289.50
3.000	100.00	0.00	0.00	584.60	700.00	592.95	0.00	593.06	2.68	2.72	257.15	427.90
3.000	100.00	0.00	0.00	584.60	1100.00	594.87	0.00	595 05	3.17	3.43	320.52	617.69
3.000	100.00	0.00	0.00	584.60	1310.00	595.75	0.00	595.96	3.37	3.75	349.57	713.81
3.000	100.00	0.00	0.00	584.60	1830.00	597.69	0.00	597.99	3.75	4.42	413.82	945 63
3.100	1.00	601.80	598.30	584.60	150.00	588.86	0.00	588.88	0.60	1.23	122.30	193.14
3.100	1.00	601.80	598.30	584.60	430.00	591.32	0.00	591.39	1.07	2.12	203.20	416.28
3.100	1.00	601.80	598.30	584.60	700.00	592.95	0.00	593.06	1.42	2.73	256.77	586.49
3.100	1.00	601.80	598.30	584.60	1100.00	594.86	0.00	595.05	1.88	3.44	319.87	803 28
3.100	1.00	601.80	598.30	584.60	1310.00	595.74	0.00	595.96	2.08	3.76	348.77	907.31
3.100	1.00	601.80	598.30	584.60	1830.00	597 69	0 00	598.00	2.55	4.43	412.64	1145 64
3.900	37.00	601.80	598.30	584.60	150.00	588.86	0.00	588.89	0.60	1.23	122.40	193.37
3.900	37.00	601.80	598.30	584.60	430.00	591.32	0.00	591.39	1.06	2.11	203.36	416.78
3.900	37 00	601.80	598.30	584.60	700.00	592.95	0.00	593.07	1.42	2.72	256.98	587.18
3.900	37.00	601.80	598.30	584 60	1100.00	594.87	0.00	595 06	1.87	3.44	320.12	804.19
3.900	37.00	601.80	598.30	584.60	1310.00	595.75	0.00	595.97	2.08	3.75	349.05	908.32
3.900	37.00	601.80	598.30	584.60	1830.00	597.70	0.00	598.00	2.55	4.43	412.95	1146.83
4.000	1.00	0.00	0 00	584.60	150.00	588.86	0.00	588.89	1.07	1.23	122.43	144.91
4.000	1.00	0.00	0.00	584.60	430.00	591.32	0.00	591.39	1.62	2.11	203.55	338 14
4.000	1.00	0.00	0.00	584.60	700.00	592.95	0.00	593.07	1.96	2.72	257.33	499 79
4.000	1.00	0.00	0.00	584.60	1100.00	594.87	0.00	595.06	2.32	3.43	320.73	721.44
4.000	1.00	0.00	0.00	584.60	1310.00	595.75	0.00	595.97	2.47	3.75	349.79	833 66
4.000	1.00	0.00	0.00	584.60	1830.00	597.70	0.00	598.01	2 75	4.42	414.05	1104.23
5.000	100.00	0.00	0.00	584.70	150.00	588.84	0.00	588.96	15.13	2.78	53 96	38.56
5.000	100.00	0.00	0.00	584.70	430.00	591.29	0.00	591.50	15.17	3.64	118.22	110.39
5.000	100.00	0.00	0.00	584.70	700.00	592.93	0.00	593.17	14.05	4.00	175.04	186.72
5.000	100.00	0.00	0.00	584.70	1100.00	594.87	0.00	595.15	12.43	4.28	256.87	311.97
5.000	100.00	0.00	0.00	584.70	1310.00	595.76	0.00	596.06	11.62	4.36	300.23	384.34
5.000	100.00	0.00	0.00	584.70	1830.00	597.74	0 00	598.06	10.08	4.50	406.49	576.35

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
6.000	1400.00	0.00	0.00	586.30	150.00	590.66	0.00	590.75	10.95	2.44	61.48	45.33
6.000	1400.00	0.00	0 00	586.30	430.00	593.15	0.00	593.31	11.12	3.21	134.06	128 97
6.000	1400.00	0.00	0.00	586.30	700 00	594.70	0.00	594.91	10.90	3.60	194.25	211.99
6.000	1400 00	0.00	0 00	586.30	1100.00	596.50	0.00	596.74	10.35	3.96	277.55	341 87
6.000	1400.00	0.00	0.00	586.30	1310.00	597.31	0.00	597.57	10.02	4.09	320.13	413.84
6.000	1400.00	0.00	0.00	586.30	1830.00	599.12	0.00	599.40	9.11	4.30	425.86	606.29
7.000	1500.00	0.00	0.00	587.50	150.00	591.69	0.00	591.74	4.29	1.82	82.61	72.39
7.000	1500.00	0.00	0.00	587.50	430.00	594.38	0.00	594.50	5.82	2.73	157 70	178.26
7.000	1500.00	0.00	0.00	587.50	700.00	596.02	0.00	596.19	6.82	3.29	212 50	268.10
7.000	1500.00	0.00	0.00	587.50	1100.00	597.85	0.00	598.09	7.87	3.91	281.21	392.12
7.000	1500.00	0.00	0.00	587.50	1310.00	598.67	0.00	598.94	8.28	4.17	314.14	455.38
7.000	1500.00	0.00	0.00	587.50	1830.00	600.44	0.00	600.78	8.89	4.67	392.09	613.74
8.000	100.00	0.00	0.00	587.50	150.00	591.75	0.00	591.76	0.60	1.01	149.02	193.92
8.000	100.00	0.00	0.00	587.50	430.00	594.49	0.00	594.54	0.94	1.76	244.57	442 81
8.000	100.00	0.00	0.00	587.50	700.00	596.16	0 00	596.24	1.22	2.31	303.04	632.96
8.000	100.00	0.00	0.00	587.50	1100.00	598.01	0.00	598.15	1.58	2.99	367.92	874.59
8.000	100.00	0.00	0.00	587.50	1310.00	598.91	0.00	599.01	1.24	2.80	637.82	1175.17
8.000	100.00	0.00	0 00	587.50	1830 00	600.72	0.00	600.87	1.41	3.30	783.36	1538.42

2-YEAR FREQUENCY FLOOD

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
1.000	2470.00	574.90	0.00	0.00	0.00	89.83	0.00
1.000	2960.00	574.90	0.00	0.00	0.00	89.83	0 00
1 000	3150.00	574.90	0.00	0.00	0.00	89.83	0.00
1.000	3830.00	574.90	0.00	0.00	0.00	89.83	0.00
1.000	4230.00	574.90	0.00	0.00	0.00	89.83	0.00
1.000	5130.00	574.90	0.00	0.00	0.00	89.83	0.00
30.000	2470.00	574.91	0.00	0.01	0.00	89.93	29.00
30.000	2960.00	574.92	0.01	0.02	0.00	89.98	29.00
30.000	3150.00	574.92	0.00	0.02	0.00	90.00	29.00
30.000	3830.00	574.93	0.01	0.03	0.00	90.08	29.00
30.000	4230.00	574.94	0.01	0.04	0.00	90.13	29.00
30 000	5130.00	574.97	0.03	0.07	0.00	90.33	29.00
60.000	2470.00	574.93	0.00	0.01	0.00	90.04	30.00
60.000	2960.00	574.94	0.01	0.02	0.00	90.14	30.00
60.000	3150.00	574.94	0.01	0.02	0.00	90.18	30.00
60.000	3830.00	574.97	0.02	0.03	0.00	90.36	30.00
60.000	4230.00	574.99	0.02	0.04	0.00	90.49	30.00
60.000	5130.00	575.04	0.05	0.07	0.00	90.91	30.00
61.000	2470 00	574.91	0.00	-0.02	0.00	82 98	1.00
61.000	2960.00	574 91	0.00	-0.03	0.00	82.93	1.00
61.000	3150.00	574.91	0.00	-0.03	0.00	82.95	1.00
61.000	3830.00	574.92	0.01	-0.04	0.00	83.03	1.00
61.000	4230.00	574.93	0.01	-0.06	0.00	83.09	1.00
61.000	5130.00	574.96	0.03	-0.08	0.00	83.30	1.00
136.000	2470.00	574.97	0.00	0.06	0.00	83.33	75.00
136.000	2960.00	575.00	0.03	0.09	0.00	83 68	75.00
136.000	3150.00	575.02	0.02	0.10	0.00	83.81	75.00
136.000	3830.00	575.08	0.07	0.16	0.00	84.36	75.00
136.000	4230.00	575.13	0.05	0.20	0.00	84.78	75.00
136.000	5130.00	575.29	0.15	0.33	0.00	86.07	75.00
137.000	2470.00	575.02	0.00	0.05	0.00	90.82	1.00
137.000	2960.00	575.08	0.06	0.07	0.00	91.29	1.00
137.000	3150.00	575.10	0.03	0.08	0.00	91 51	1.00
137.000	3830.00	575.21	0.11	0.13	0.00	92.44	1.00
137.000	4230.00	575.29	0.08	0.16	0.00	93.12	1.00
137 000	5130.00	575.53	0.24	0.25	0.00	94.18	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
187.000	2470.00	575.03	0.00	0.01	0.00	88.26	50.00
187.000	2960.00	575.09	0.06	0.01	0.00	88.87	50.00
187.000	3150.00	575.11	0.03	0.01	0.00	89.14	50.00
187.000	3830.00	575.23	0.12	0.02	0.00	90.32	50.00
187.000	4230.00	575.32	0.09	0.02	0.00	91.18	50.00
187.000	5130.00	575.57	0.25	0.03	0.00	92.49	50.00
362.000	2470.00	575.22	0.00	0.19	0.00	142.68	175.00
362.000	2960.00	575.36	0.14	0.27	0.00	143.38	175.00
362.000	3150.00	575.42	0.06	0.31	0.00	143.68	175.00
362.000	3830.00	575.68	0.26	0.45	0.00	144.95	175.00
362.000	4230.00	575.86	0.18	0.54	0.00	145.82	175.00
362.000	5130.00	576.32	0.47	0.76	0.00	148.11	175.00
737.000	2470.00	575.34	0.00	0.13	0.00	144.67	375.00
737.000	2960.00	575.53	0.19	0.17	0.00	145.53	375.00
737.000	3150.00	575.61	0.08	0.19	0.00	145.92	375.00
737.000	3830.00	575.93	0.32	0.25	0.00	147.49	375.00
737.000	4230.00	576.14	0.21	0.29	0.00	148.52	375.00
737.000	5130.00	576.67	0.53	0.35	0.00	151.11	375.00
787.000	2470.00	575.33	0.00	-0.01	0.00	106.60	50.00
787.000	2960.00	575.51	0.18	-0.02	0.00	106.60	50.00
787.000	3150.00	575.59	0.08	-0.02	0.00	106.60	50.00
787.000	3830.00	575.90	0.31	-0.04	0.00	106.60	50.00
787.000	4230.00	576.10	0.20	-0.04	0.00	106.60	50.00
787.000	5130.00	576.61	0.51	-0.06	0.00	106.60	50.00
788.000	2470.00	575.31	0.00	-0.02	0.00	97.00	1.00
788.000	2960.00	575.48	0.17	-0.03	0.00	97.00	1.00
788.000	3150.00	575.56	0.07	-0.03	0.00	104.00	1.00
788.000	3830.00	575.86	0.30	-0.04	0.00	104.00	1.00
788.000	4230.00	576.06	0.20	-0.04	0.00	104.00	1.00
788.000	5130.00	576.56	0.50	-0.05	0.00	104.00	1.00
797.000	2470.00	575.32	0.00	0.01	0.00	97.00	9.00
797.000	2960.00	575.50	0.18	0.02	0.00	97.00	9.00
797.000	3150.00	575.58	0.08	0.02	0.00	104.00	9.00
797.000	3830.00	575.89	0.31	0.03	0.00	104.00	9.00
797.000	4230.00	576.09	0.20	0.04	0.00	104.00	9.00
797.000	5130.00	576.60	0.51	0.05	0.00	104.00	9.00
798.000	2470.00	575.38	0.00	0.05	0.00	106.60	1.00
798.000	2960.00	575.58	0.20	0.07	0.00	106.60	1.00
798.000	3150.00	575.66	0.09	0.08	0.00	106.60	1.00
798.000	3830.00	576.00	0.34	0.11	0.00	106.60	1.00
798.000	4230.00	576.22	0.22	0.13	0.00	106.60	1.00
798.000	5130.00	576.77	0.55	0.16	0.00	106.60	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
844.000	2470.00	575.40	0.00	0.02	0.00	104.22	46.00
844.000	2960.00	575.60	0.21	0.02	0.00	105.52	46.00
844.000	3150.00	575.69	0.09	0.03	0.00	106.07	46.00
844.000	3830.00	576.04	0.35	0 04	0.00	108 24	46.00
844.000	4230.00	576.26	0.23	0.04	0 00	109.00	46.00
844.000	5130.00	576.82	0.56	0.05	0.00	109.00	46.00
845.000	2470.00	575.38	0.00	-0.01	0.00	97.18	1.00
845.000	2960.00	575.58	0.20	-0.02	0.00	98.46	1.00
845.000	3150.00	575.67	0.09	-0.02	0.00	98.94	1.00
845.000	3830.00	576.01	0.34	-0 03	0.00	101.06	1.00
845.000	4230.00	576.23	0.22	-0.03	0.00	102.00	1.00
845.000	5130 00	576.78	0.55	-0.04	0.00	102.00	1 00
859.000	2470.00	575.40	0.00	0.02	0.00	97.21	14.50
859.000	2960 00	575.61	0.21	0.02	0.00	98.50	14.50
859.000	3150.00	575.70	0.09	0.03	0.00	99.08	14.50
859.000	3830.00	576.05	0.35	0.04	0.00	101.25	14.50
859.000	4230.00	576.27	0.23	0.04	0.00	102.00	14.50
859.000	5130.00	576.84	0.56	0.06	0.00	103.00	14.50
860.000	2470.00	575.44	0.00	0.04	0.00	104.49	1.00
860.000	2960.00	575.66	0.22	0.05	0.00	105.89	1.00
860.000	3150.00	575.76	0.10	0.06	0.00	106.50	1.00
860.000	3830.00	576.13	0.37	0.08	0.00	108.75	1.00
860.000	4230.00	576.37	0.24	0 10	0.00	109.00	1.00
860.000	5130.00	576.97	0.60	0.13	0.00	109.00	1.00
910.000	2470.00	575.47	0.00	0.03	0 00	107 00	50.00
910.000	2960.00	575.70	0.23	0.04	0.00	107.00	50.00
910.000	3150.00	575.80	0.10	0.05	0.00	107.00	50.00
910.000	3830.00	576.19	0.39	0.06	0.00	107.00	50.00
910.000	4230.00	576.44	0.25	0.07	0.00	107.00	50.00
910.000	5130.00	577.05	0.61	0.08	0.00	107.00	50.00
911.000	2470.00	575.45	0.00	-0.02	0.00	97.00	1.00
911.000	2960.00	575.68	0 23	-0.02	0.00	105.00	1.00
911.000	3150.00	575.78	0.10	-0.03	0.00	105.00	1.00
911.000	3830.00	576.16	0.38	-0.03	0.00	105.00	1.00
911.000	4230.00	576.40	0.24	-0.04	0.00	105.00	1.00
911.000	5130.00	577.00	0.60	-0.04	0.00	105.00	1.00
921.000	2470.00	575.47	0.00	0.01	0.00	97.00	10.00
921.000	2960.00	575.70	0.23	0.02	0.00	105.00	10.00
921.000	3150.00	575.80	0.10	0.02	0.00	105.00	10.00
921.000	3830.00	576.19	0.39	0.03	0.00	105.00	10.00
921.000	4230.00	576.44	0.25	0.03	0.00	105.00	10.00
921.000	5130.00	577.04	0.61	0.04	0.00	105.00	10.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
2436.000	2470 00	576. 37	0. 00	0. 30	0. 00	173. 43	700. 00
2436.000	2960. 00	576. 86	0. 49	0. 36	0. 00	180 88	700. 00
2436.000	3150. 00	577. 05	0. 19	0. 39	0. 00	183. 85	700. 00
2436.000	3830. 00	577. 75	0. 70	0. 46	0. 00	338. 99	700. 00
2436.000	4230. 00	578. 16	0. 41	0. 48	0. 00	386. 44	700. 00
2436.000	5130. 00	579. 01	0. 85	0. 39	0. 00	396. 21	700. 00
3186.000	255. 00	576. 66	0. 00	0. 29	0. 00	103. 89	750. 00
3186.000	630. 00	577. 21	0. 55	0. 35	0. 00	141. 44	750. 00
3186.000	1030. 00	577. 41	0. 21	0. 36	0. 00	155. 53	750. 00
3186.000	1610. 00	578. 14	0. 73	0. 39	0. 00	210. 58	750. 00
3186.000	1900. 00	578. 55	0. 41	0. 39	0 00	248. 44	750. 00
3186.000	2590. 00	579. 38	0. 83	0. 37	0. 00	291. 60	750 00
3686.000	255. 00	576. 67	0. 00	0. 01	0. 00	84. 85	500. 00
3686.000	630. 00	577. 24	0. 57	0. 03	0. 00	102. 72	500. 00
3686.000	1030. 00	577. 49	0. 25	0. 08	0. 00	120. 01	500. 00
3686.000	1610. 00	578. 27	0. 77	0. 13	0. 00	173. 05	500. 00
3686.000	1900 00	578. 69	0. 42	0. 14	0. 00	206. 39	500. 00
3686.000	2590. 00	579. 54	0. 85	0. 15	0. 00	285. 82	500. 00
4186.000	255. 00	576. 68	0. 00	0. 01	0. 00	78. 76	500. 00
4186.000	630. 00	577. 29	0. 61	0. 04	0. 00	80. 12	500. 00
4186.000	1030. 00	577. 60	0. 31	0. 10	0. 00	80. 82	500. 00
4186.000	1610. 00	578. 43	0. 83	0. 16	0 00	87. 86	500. 00
4186.000	1900. 00	578. 86	0. 43	0. 17	0. 00	117. 91	500. 00
4186.000	2590. 00	579. 72	0. 86	0. 19	0. 00	200. 00	500. 00
4236.000	255. 00	576. 68	0 00	0. 00	0. 00	52. 00	50. 00
4236.000	630. 00	577. 29	0. 61	0. 00	0. 00	52. 00	50. 00
4236.000	1030. 00	577. 60	0. 31	0. 00	0. 00	52. 00	50. 00
4236.000	1610. 00	578. 42	0. 83	-0 01	0. 00	52. 00	50. 00
4236.000	1900. 00	578. 85	0. 43	-0. 01	0. 00	52. 00	50. 00
4236.000	2590. 00	579. 68	0. 83	-0. 04	0. 00	52. 00	50. 00
4281.000	255. 00	576. 68	0. 00	0. 00	0. 00	52. 00	45. 00
4281.000	630. 00	577. 29	0. 61	0. 00	0. 00	52. 00	45. 00
4281.000	1030. 00	577. 65	0. 36	0. 05	0. 00	52. 00	45. 00
4281.000	1610. 00	578. 59	0. 94	0. 17	0. 00	52. 00	45. 00
4281.000	1900. 00	579. 11	0. 52	0. 26	0. 00	52. 00	45. 00
4281.000	2590. 00	580. 21	1. 10	0. 53	0. 00	52. 00	45. 00
4931.000	255. 00	576. 69	0. 00	0. 01	0. 00	74. 78	650. 00
4931.000	630. 00	577. 35	0. 66	0. 06	0. 00	76. 57	650. 00
4931.000	1030. 00	577. 80	0. 45	0. 15	0. 00	77. 80	650. 00
4931.000	1610. 00	578. 87	1. 06	0. 27	0. 00	80. 69	650. 00
4931.000	1900. 00	579. 44	0 57	0. 33	0. 00	82 25	650. 00
4931.000	2590. 00	580. 67	1. 23	0 46	0. 00	84. 63	650. 00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
5956.000	255 00	576.72	0.00	0.03	0.00	73.89	1025.00
5956.000	630.00	577.47	0.75	0.12	0.00	75.93	1025.00
5956.000	1030.00	578.04	0.57	0 24	0.00	77.51	1025.00
5956 000	1610.00	579.22	1.17	0.35	0.00	80.70	1025.00
5956.000	1900.00	579.82	0.60	0.38	0.00	82.34	1025.00
5956.000	2590.00	581.11	1.29	0.44	0.00	84.77	1025.00
6981.000	255.00	576.76	0.00	0.04	0.00	75.10	1025.00
6981.000	630.00	577.61	0.85	0.14	0.00	78.15	1025.00
6981.000	1030.00	578.30	0.69	0.26	0.00	80.63	1025.00
6981.000	1610.00	579.57	1.27	0.36	0.00	85.18	1025.00
6981.000	1900.00	580.20	0.63	0.38	0.00	87 46	1025.00
6981.000	2590.00	581.55	1.34	0.44	0.00	92.26	1025.00
8031.000	255.00	576 80	0.00	0.04	0.00	77.78	1050.00
8031.000	630.00	577 76	0.96	0.15	0.00	80.64	1050.00
8031.000	1030.00	578.57	0.82	0.27	0.00	86.05	1050.00
8031.000	1610.00	579.93	1.36	0.36	0.00	93.74	1050.00
8031.000	1900.00	580.59	0.65	0.38	0.00	95.67	1050.00
8031.000	2590.00	581.96	1.38	0.42	0.00	96.00	1050.00
8082.000	255.00	576.81	0.00	0.01	0.00	72.00	51.00
8082.000	630.00	577.78	0.97	0.02	0.00	72.00	51.00
8082.000	1030.00	578.61	0.83	0.03	0.00	75.00	51.00
8082 000	1610.00	579.97	1.36	0.03	0.00	75.00	51.00
8082.000	1900.00	580.62	0.65	0.03	0.00	75.00	51.00
8082.000	2590.00	581.98	1.36	0.02	0.00	75.00	51.00
8147.000	255.00	576.81	0.00	0.00	0.00	72.00	65.00
8147.000	630.00	577.78	0.97	0.00	0.00	72.00	65.00
8147.000	1030.00	578.65	0.87	0.04	0.00	75.00	65 00
8147.000	1610.00	580.11	1.46	0.14	0.00	75 00	65.00
8147.000	1900.00	580.83	0.72	0.21	0.00	75 00	65.00
8147.000	2590.00	582.34	1.51	0.36	0.00	75.00	65.00
9397 000	255.00	576.85	0.00	0.05	0.00	69.47	1250.00
9397.000	630.00	577.94	1.09	0.16	0.00	73.28	1250.00
9397.000	1030.00	578 93	0.99	0.28	0.00	77.72	1250.00
9397.000	1610.00	580.47	1.54	0.36	0.00	83.41	1250.00
9397.000	1900.00	581.21	0.74	0.38	0.00	84.36	1250.00
9397.000	2590.00	582.76	1 55	0.42	0.00	85.00	1250.00
10297.000	255.00	576.91	0 00	0.06	0.00	65.80	900.00
10297.000	630.00	578.11	1.20	0.17	0.00	68.62	900.00
10297.000	1030.00	579.18	1.07	0.25	0.00	71.13	900.00
10297.000	1610.00	580.76	1.58	0.30	0.00	74.84	900.00
10297.000	1900.00	581.51	0.74	0.30	0.00	76.56	900.00
10297.000	2590 00	583.07	1.56	0.31	0.00	79.45	900.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
10897.000	255.00	576.96	0.00	0.04	0.00	63.35	600.00
10897.000	630.00	578.23	1.27	0.12	0.00	67.42	600.00
10897.000	1030.00	579.35	1.13	0.17	0.00	71.06	600.00
10897.000	1610.00	580.96	1.61	0.20	0.00	73.00	600.00
10897.000	1900.00	581.71	0.75	0.21	0.00	73.00	600.00
10897.000	2590.00	583.29	1.57	0.22	0.00	73.00	600.00
10973.000	255.00	576.96	0.00	0 01	0.00	50.00	76.00
10973.000	630.00	578.24	1.28	0.01	0.00	50.00	76.00
10973 000	1030.00	579.37	1 13	0.01	0.00	52.00	76.00
10973.000	1610.00	580.97	1.60	0.00	0.00	52.00	76.00
10973.000	1900.00	581.71	0.74	0.00	0.00	52.00	76.00
10973.000	2590.00	583.27	1.56	-0.02	0.00	52.00	76.00
11017.000	255.00	576.96	0.00	0.00	0.00	50.00	44.00
11017.000	630.00	578.24	1.28	0.00	0.00	50.00	44.00
11017.000	1030.00	579.47	1.23	0 11	0.00	52.00	44.00
11017.000	1610.00	581.36	1.88	0.39	0.00	52.00	44.00
11017.000	1900.00	582.22	0.86	0.51	0.00	52.00	44.00
11017.000	2590.00	583.95	1.73	0.68	0.00	52.00	44.00
11477.000	255.00	577.02	0.00	0.06	0.00	63.31	460.00
11477.000	630.00	578 40	1.38	0.16	0.00	68.01	460.00
11477.000	1030.00	579.71	1.31	0.24	0.00	72.45	460.00
11477.000	1610.00	581.65	1.94	0.29	0.00	82.65	460.00
11477.000	1900.00	582.54	0.88	0.32	0.00	98.32	460.00
11477.000	2590.00	584.33	1.79	0.38	0.00	100.00	460.00
11528.000	210.00	577.03	0.00	0.01	0.00	50.50	51.00
11528.000	580.00	578.41	1.38	0.01	0.00	50.50	51.00
11528.000	950.00	579.73	1.31	0.01	0.00	50.50	51.00
11528.000	1550.00	581.65	1.92	0.00	0 00	52.50	51.00
11528.000	1850.00	582.52	0.88	-0.01	0.00	52.50	51.00
11528.000	2640.00	584.28	1.76	-0.05	0.00	52.50	51.00
11599.000	210.00	577.03	0.00	0.00	0.00	50.50	71.00
11599.000	580.00	578.42	1.38	0.00	0.00	50.50	71.00
11599.000	950.00	579.73	1.32	0.01	0.00	50.50	71.00
11599.000	1550.00	581.85	2.12	0.20	0.00	52.50	71.00
11599.000	1850.00	582.85	1.00	0.32	0.00	52.50	71.00
11599.000	2640.00	584.78	1.93	0.50	0.00	52.50	71.00
11650.000	210.00	577.04	0.00	0.01	0.00	52.72	51.00
11650.000	580.00	578.44	1.40	0.02	0.00	53.23	51.00
11650.000	950.00	579.77	1.33	0.03	0.00	53.72	51.00
11650.000	1550.00	581.90	2.13	0.05	0.00	56.00	51.00
11650.000	1850.00	582.90	1.00	0.05	0.00	56.00	51 00
11650.000	2640.00	584.85	1.95	0.07	0.00	56.00	51.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
11721.000	210.00	577.04	0 00	0.00	0.00	52.72	71.00
11721.000	580.00	578.44	1.40	0.00	0.00	53.24	71.00
11721.000	950.00	579.77	1 33	0.01	0.00	53.73	71.00
11721 000	1550.00	582.12	2.35	0.23	0.00	56.00	71.00
11721.000	1850.00	583.25	1.13	0.36	0.00	56.00	71.00
11721.000	2640.00	585.35	2.10	0.51	0.00	56.00	71.00
12689.000	210.00	577.16	0.00	0.12	0.00	64.08	968.00
12689 000	580.00	578.74	1.58	0.30	0.00	70.25	968.00
12689.000	950.00	580.15	1.41	0.38	0.00	75.76	968.00
12689.000	1550.00	582.50	2.35	0.38	0.00	84.89	968.00
12689.000	1850.00	583.62	1.12	0.37	0.00	113.15	968.00
12689.000	2640.00	585.80	2.18	0.45	0.00	800.00	968.00
13219.000	210.00	577.24	0.00	0.08	0.00	60.72	530.00
13219.000	580.00	578.91	1.67	0.16	0.00	67.48	530.00
13219.000	950.00	580.34	1.43	0.19	0.00	73.22	530.00
13219.000	1550.00	582.66	2.32	0.16	0.00	82.60	530.00
13219.000	1850.00	583.77	1.11	0.14	0.00	87 07	530.00
13219.000	2640.00	585.90	2.13	0.10	0.00	577 00	530.00
13269.000	210.00	577.24	0.00	0.00	0.00	47.00	50.00
13269.000	580.00	578.91	1.67	0.00	0.00	47 00	50 00
13269.000	950.00	580.34	1.43	0.00	0.00	47.00	50.00
13269.000	1550.00	582.65	2 31	-0.01	0.00	47.00	50.00
13269.000	1850.00	583.75	1.10	-0.02	0.00	47.00	50.00
13269.000	2640.00	585.91	2.16	0.01	0.00	577.00	50.00
13309.000	210.00	577.24	0.00	0.00	0.00	47.00	40.00
13309.000	580.00	578.91	1.67	0.00	0.00	47.00	40.00
13309.000	950.00	580.34	1.43	0.01	0.00	47.00	40.00
13309.000	1550.00	582.83	2.49	0.18	0.00	47.00	40.00
13309.000	1850 00	584.06	1.23	0.31	0.00	47.00	40.00
13309.000	2640.00	585.87	1.81	-0.04	0.00	290.00	40.00
13409.000	210.00	577.25	0.00	0.01	0.00	58.07	100.00
13409.000	580.00	578.95	1.70	0.04	0.00	64.70	100.00
13409.000	950.00	580.40	1.45	0.06	0.00	70.42	100.00
13409.000	1550.00	582.92	2.52	0.09	0.00	80.30	100.00
13409.000	1850.00	584.16	1.24	0.10	0.00	85.19	100.00
13409.000	2640.00	585.94	1.78	0.07	0.00	577.00	100.00
15144.000	210.00	577.57	0.00	0.32	0.00	50.26	1735.00
15144.000	580.00	579.52	1.95	0.57	0.00	58.37	1735.00
15144.000	950.00	581.04	1.51	0 64	0.00	64.68	1735.00
15144.000	1550.00	583.46	2.43	0.55	0.00	74.78	1735.00
15144.000	1850.00	584.66	1.19	0 49	0.00	79.74	1735.00
15144.000	2640.00	586.39	1.73	0.45	0.00	193 00	1735.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
15434.000	180.00	577.75	0.00	0.18	0.00	48.00	290.00
15434.000	540.00	579.72	1.97	0.20	0.00	48.00	290 00
15434.000	900 00	581.22	1.50	0.19	0.00	48.00	290.00
15434.000	1480.00	583.59	2.37	0.13	0 00	48.00	290.00
15434 000	1760.00	584.77	1 17	0.11	0.00	48.00	290 00
15434 000	2520.00	586.48	1.71	0.09	0.00	48.00	290.00
15555.000	180.00	577.76	0.00	0.00	0.00	48.00	121.00
15555.000	540.00	579.73	1.97	0.01	0.00	48.00	121.00
15555.000	900.00	581.24	1.51	0.01	0.00	48.00	121.00
15555.000	1480.00	583.77	2.53	0.17	0.00	48.00	121.00
15555.000	1760.00	585.08	1.32	0.32	0.00	48.00	121.00
15555.000	2520.00	587.20	2.12	0.72	0.00	48.00	121.00
15859.000	180.00	577.89	0.00	0.13	0.00	36.37	304.00
15859.000	540.00	579.88	1.99	0.15	0.00	43.28	304 00
15859.000	900.00	581.38	1.50	0.14	0.00	48.54	304.00
15859 000	1480.00	583.86	2.49	0.09	0 00	57.17	304.00
15859.000	1760.00	585.16	1.30	0.08	0.00	61.69	304.00
15859.000	2520.00	587.28	2.12	0.08	0.00	101.31	304 00
16339.000	180.00	578.22	0.00	0.33	0.00	35 00	480.00
16339.000	540.00	580.32	2.10	0.44	0.00	35.00	480.00
16339.000	900.00	581.84	1.52	0.46	0.00	35.00	480.00
16339.000	1480.00	584.23	2.39	0.36	0.00	35.00	480.00
16339.000	1760.00	585.46	1.24	0.30	0.00	35.00	480 00
16339.000	2520.00	587.56	2.09	0.27	0.00	35.00	480.00
16340.000	180 00	578.22	0.00	0.00	0.00	35.00	1.00
16340.000	540.00	580.32	2.10	0.00	0.00	35.00	1.00
16340.000	900.00	581.84	1.52	0.00	0.00	35.00	1.00
16340.000	1480.00	584.23	2.39	0.00	0.00	35.00	1.00
16340.000	1760 00	585.46	1.24	0.00	0.00	35.00	1.00
16340.000	2520 00	587.44	1.98	-0.11	0.00	35.00	1.00
16379.000	180.00	578.24	0.00	0.03	0.00	35.00	39.00
16379.000	540.00	580.36	2.11	0.03	0.00	35.00	39.00
16379.000	900.00	581.88	1.52	0.04	0.00	35.00	39.00
16379.000	1480.00	584.27	2.39	0.04	0.00	35.00	39 00
16379.000	1760.00	585.50	1.24	0.04	0.00	35.00	39.00
16379.000	2520.00	587.61	2.10	0.16	0.00	35.00	39.00
16380.000	180.00	578.25	0.00	0.00	0.00	35.00	1.00
16380.000	540.00	580.36	2.11	0.00	0.00	35.00	1.00
16380.000	900.00	581.88	1.52	0.00	0.00	35 00	1.00
16380.000	1480.00	584.27	2.39	0.00	0.00	35.00	1.00
16380.000	1760.00	585.50	1.24	0.00	0.00	35.00	1.00
16380.000	2520.00	587.99	2.48	0.38	0.00	35.00	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
17184.000	180.00	579.08	0.00	0.84	0.00	27.72	805.00
17184.000	540.00	581.28	2.19	0.92	0.00	40.34	805.00
17184.000	900.00	582.82	1.55	0.94	0.00	49.27	805.00
17184.000	1480.00	585.09	2.27	0.82	0.00	62.31	805.00
17184.000	1760.00	586.24	1.15	0.74	0.00	68.93	805.00
17184.000	2520.00	588.70	2 46	0.71	0.00	83.07	805.00
17709.000	160.00	579.59	0.00	0.51	0.00	41.92	525.00
17709.000	490.00	582.09	2.50	0.81	0.00	67.61	525.00
17709.000	810.00	583.77	1.69	0.95	0.00	82 53	525.00
17709.000	1310 00	586.06	2.29	0.97	0.00	96.59	525.00
17709.000	1570.00	587.14	1.08	0.90	0.00	103.22	525.00
17709.000	2230.00	589.55	2.40	0.85	0.00	117.93	525.00
18699.000	160.00	579.94	0.00	0.35	0.00	44.80	990.00
18699.000	490.00	582.51	2.57	0.42	0.00	71.33	990.00
18699.000	810.00	584.19	1.68	0.41	0.00	85.14	990.00
18699.000	1310.00	586.42	2.23	0.36	0.00	98.79	990.00
18699.000	1570.00	587.47	1.06	0.33	0.00	105.25	990.00
18699 000	2230.00	589.83	2.36	0.29	0.00	119.69	990.00
19699.000	160.00	580.21	0.00	0.27	0.00	21 00	1000.00
19699.000	490.00	582.89	2.67	0.38	0.00	21.00	1000.00
19699.000	810.00	584.57	1.68	0.38	0.00	21.00	1000.00
19699.000	1310.00	586.72	2.15	0.30	0.00	21.00	1000.00
19699.000	1570.00	587.72	1.00	0.24	0.00	21.00	1000.00
19699.000	2230.00	589.93	2.21	0.10	0.00	21.00	1000.00
19779.000	160.00	580.21	0.00	0.00	0.00	48.94	80 00
19779.000	490.00	582.90	2.68	0.01	0.00	72.06	80.00
19779.000	810.00	584.59	1.70	0.02	0.00	82.88	80.00
19779.000	1310.00	586.76	2.17	0.04	0.00	84.26	80.00
19779.000	1570.00	587.77	1.01	0.06	0.00	84.40	80.00
19779.000	2230.00	590.02	2.25	0.09	0.00	84.71	80.00
19829.000	160.00	580.30	0.00	0.09	0.00	34.39	50.00
19829.000	490.00	582.96	2.66	0.06	0.00	51.57	50.00
19829.000	810.00	584.75	1.79	0.16	0.00	60.68	50.00
19829.000	1310.00	587.09	2.34	0.33	0.00	69.40	50.00
19829.000	1570.00	588.18	1.10	0.41	0.00	73.04	50.00
19829.000	2230.00	590.65	2.46	0.63	0.00	81.21	50.00
20179.000	160.00	580.85	0.00	0.55	0.00	38.34	400.00
20179.000	490.00	583.36	2.51	0.40	0.00	53.74	400.00
20179.000	810.00	585 10	1.74	0 34	0.00	62.00	400.00
20179.000	1310.00	587.37	2.27	0.28	0.00	70.33	400.00
20179.000	1570.00	588.44	1.07	0.25	0.00	73.88	400.00
20179.000	2230.00	590.86	2.42	0.21	0.00	82.64	400.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	20199.000	150.00	580.93	0.00	0.08	0.00	47.98	20.00
	20199.000	430.00	583.49	2.56	0.13	0.00	66.51	20.00
	20199.000	700.00	585.24	1.75	0.14	0.00	75.60	20 00
	20199.000	1100.00	587.52	2.28	0.15	0.00	88.48	20.00
	20199.000	1310.00	588.59	1.07	0.15	0.00	94.74	20.00
	20199.000	1830 00	591.03	2.44	0.17	0.00	110.45	20.00
	20249.000	150.00	580.94	0.00	0.01	0.00	33.88	50.00
	20249.000	430.00	583.48	2.54	-0.01	0.00	47.95	50.00
	20249.000	700.00	585.22	1.75	-0.02	0.00	56.86	50.00
	20249.000	1100.00	587.50	2.28	-0 01	0.00	67.84	50.00
	20249.000	1310.00	588 58	1.08	-0.01	0.00	76.63	50.00
	20249.000	1830.00	591.02	2.44	-0.01	0.00	107.91	50.00
	20750 000	150.00	581.40	0.00	0.46	0.00	37.32	501.00
	20750 000	430.00	583.88	2.48	0.40	0.00	50.00	501.00
	20750.000	700.00	585.59	1.71	0.37	0.00	58.73	501.00
	20750 000	1100.00	587.80	2.21	0.30	0.00	69.16	501.00
	20750.000	1310.00	588.85	1.05	0.27	0.00	80.05	501.00
	20750.000	1830.00	591.23	2.39	0.21	0.00	111.16	501.00
	21125.000	150.00	581.63	0.00	0.23	0.00	38.50	375.00
	21125.000	430.00	584.12	2.49	0.24	0.00	51.22	375.00
	21125.000	700.00	585.82	1.70	0.23	0.00	59.91	375.00
	21125.000	1100.00	588.00	2.18	0.20	0.00	70.08	375.00
	21125.000	1310.00	589.03	1 03	0.18	0.00	82.45	375.00
	21125.000	1830.00	591.38	2 35	0.15	0.00	113.69	375.00
	21260.000	150.00	581.73	0.00	0.10	0.00	40.74	135.00
	21260.000	430.00	584.20	2.47	0.09	0.00	53.51	135.00
	21260.000	700 00	585.90	1.70	0.08	0.00	61.98	135 00
	21260.000	1100 00	588.08	2.18	0.08	0.00	72.84	135.00
	21260.000	1310.00	589.10	1.02	0.07	0.00	78.16	135.00
	21260.000	1830.00	591.43	2 33	0.05	0.00	89.66	135.00
	21310.000	150.00	581.93	0.00	0.20	0.00	32.47	50 00
	21310.000	430.00	584.21	2.28	0.01	0.00	43.84	50.00
	21310.000	700.00	585.89	1.68	-0.01	0.00	52.98	50.00
	21310.000	1100.00	588.05	2.16	-0.03	0.00	64.78	50.00
	21310.000	1310.00	589.07	1.02	-0.03	0.00	70.35	50.00
	21310.000	1830.00	591.39	2.32	-0.03	0.00	83.02	50.00
*	21335.000	150.00	582.17	0.00	0.23	0.00	31.96	25.00
	21335.000	430.00	584.23	2.06	0.02	0.00	39.67	25.00
	21335.000	700.00	585.89	1.66	0.01	0.00	48 57	25.00
	21335.000	1100.00	588.05	2.16	0.00	0 00	59 67	25.00
	21335.000	1310.00	589.07	1.02	0.00	0.00	64.53	25.00
	21335.000	1830.00	591.40	2.33	0.01	0.00	75.99	25.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	21385.000	150.00	582.78	0.00	0.61	0.00	32 41	50 00
	21385.000	430.00	584.38	1.60	0.15	0.00	41.19	50.00
	21385.000	700.00	585 97	1.59	0.08	0.00	47.28	50.00
	21385.000	1100.00	588.09	2.12	0.04	0.00	55.52	50.00
	21385.000	1310.00	589.10	1.01	0.03	0.00	59.43	50.00
	21385.000	1830.00	591.41	2.31	0 01	0.00	68.29	50.00
	21735.000	150.00	583.20	0.00	0.42	0.00	35.40	350.00
	21735.000	430.00	584.95	1.75	0.57	0.00	43.39	350.00
	21735.000	700.00	586.43	1.48	0.46	0.00	49.10	350.00
	21735.000	1100.00	588.44	2 00	0.34	0.00	56.85	350.00
	21735 000	1310.00	589.41	0.97	0.30	0.00	60.59	350.00
	21735.000	1830.00	591.65	2.24	0.24	0.00	69.21	350.00
	22085 000	150.00	583.57	0.00	0.37	0.00	26.65	350.00
	22085.000	430.00	585.37	1.80	0.41	0.00	30.24	350.00
	22085.000	700.00	586.78	1.41	0.34	0.00	33.40	350.00
	22085.000	1100.00	588.68	1.90	0.24	0.00	38.98	350.00
	22085.000	1310.00	589.61	0.93	0 20	0.00	41.70	350.00
	22085.000	1830.00	591.77	2.17	0.12	0.00	50.34	350.00
	22385.000	150.00	583.98	0.00	0.41	0.00	27.47	300.00
	22385.000	430.00	585.87	1.89	0.51	0.00	31.25	300.00
	22385.000	700.00	587.28	1.41	0.51	0.00	34.89	300.00
	22385.000	1100.00	589.13	1.85	0.46	0.00	40.32	300.00
	22385.000	1310.00	590.03	0 90	0.43	0.00	42.96	300.00
	22385.000	1830.00	592.14	2 10	0.36	0.00	52.48	300.00
	22730.000	150.00	584.36	0.00	0.38	0.00	30.29	345.00
	22730.000	430.00	586.31	1.95	0.43	0.00	30.65	345.00
	22730.000	700.00	587.73	1.43	0.45	0.00	30.91	345.00
	22730.000	1100.00	589.55	1.82	0.42	0.00	31.24	345.00
	22730.000	1310.00	590.43	0.87	0.39	0.00	31.40	345.00
	22730.000	1830.00	592.45	2.02	0.31	0.00	31.78	345.00
	23205.000	150.00	584.83	0.00	0.47	0.00	30.37	475.00
	23205.000	430.00	586.80	1.97	0.49	0.00	30.74	475.00
	23205.000	700.00	588.23	1.43	0.50	0.00	31.00	475.00
	23205.000	1100.00	590.04	1.81	0.49	0.00	31.33	475.00
	23205.000	1310.00	590.91	0.87	0.48	0.00	31.49	475.00
	23205.000	1830.00	592.91	2.00	0.46	0.00	31 86	475.00
*	23705.000	150.00	585.55	0.00	0.73	0.00	17.22	500.00
	23705.000	430.00	587.19	1.64	0.39	0.00	23.17	500.00
	23705.000	700.00	588.54	1.35	0.31	0.00	25.91	500 00
	23705.000	1100.00	590.26	1.72	0.21	0.00	27.78	500.00
	23705.000	1310.00	591.08	0.83	0.17	0.00	28.60	500.00
	23705.000	1830.00	593.00	1.92	0.09	0.00	30.51	500.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
24155.000	150.00	587.82	0.00	2.26	0.00	17.58	450.00
24155.000	430.00	589.74	1.92	2.55	0.00	21.14	450 00
24155.000	700.00	590.90	1.16	2.36	0.00	23.11	450.00
24155.000	1100.00	592.27	1.37	2.01	0.00	25.48	450.00
24155.000	1310.00	592.91	0.65	1.83	0.00	26.59	450.00
24155.000	1830.00	594.49	1.58	1.49	0.00	29.30	450 00
24655.000	150.00	588.67	0.00	0.85	0.00	18.11	500.00
24655.000	430.00	590.90	2.24	1.17	0.00	21.84	500.00
24655.000	700.00	592.33	1.43	1.44	0.00	24.22	500.00
24655.000	1100.00	594.00	1.67	1.74	0.00	27.00	500.00
24655.000	1310.00	594.77	0.76	1.85	0.00	28.28	500.00
24655.000	1830.00	596.47	1.70	1.98	0.00	31.11	500.00
3 000	150.00	588.86	0.00	0.19	0.00	33.00	100.00
3.000	430.00	591.32	2.46	0.42	0.00	33.00	100.00
3.000	700.00	592.95	1.63	0.61	0.00	33.00	100.00
3.000	1100.00	594.87	1.92	0.86	0.00	33.00	100.00
3.000	1310.00	595.75	0.88	0.98	0.00	33.00	100.00
3.000	1830.00	597.69	1.95	1.22	0.00	33.00	100.00
3.100	150.00	588.86	0.00	0.00	0.00	33.00	1.00
3.100	430.00	591.32	2.46	0.00	0.00	33.00	1.00
3.100	700.00	592.95	1.63	0.00	0.00	33.00	1.00
3.100	1100.00	594.86	1.92	0.00	0 00	33.00	1 00
3.100	1310.00	595.74	0.88	0 00	0.00	33.00	1.00
3.100	1830.00	597.69	1.95	0.00	0.00	33.00	1.00
3.900	150.00	588.86	0.00	0.00	0.00	33.00	37.00
3.900	430.00	591.32	2.46	0.00	0.00	33.00	37.00
3.900	700.00	592.95	1.63	0.01	0.00	33.00	37.00
3.900	1100.00	594.87	1.92	0.01	0.00	33.00	37.00
3.900	1310.00	595 75	0.88	0.01	0 00	33.00	37.00
3.900	1830.00	597.70	1.95	0.01	0.00	33.00	37.00
4.000	150.00	588.86	0.00	0.00	0.00	33.00	1.00
4.000	430.00	591.32	2.46	0.00	0.00	33.00	1.00
4.000	700.00	592.95	1.63	0.00	0.00	33.00	1.00
4.000	1100.00	594.87	1.92	0.00	0.00	33.00	1.00
4.000	1310.00	595.75	0.88	0.00	0.00	33.00	1.00
4.000	1830 00	597.70	1.95	0.00	0.00	33.00	1.00
5.000	150.00	588.84	0.00	-0.02	0.00	21.16	100.00
5.000	430 00	591.29	2.45	-0.03	0.00	31.33	100.00
5.000	700.00	592.93	1.64	-0.03	0.00	38 13	100.00
5.000	1100.00	594.87	1.94	-0.01	0.00	46.19	100.00
5.000	1310.00	595.76	0.89	0.01	0.00	49.94	100.00
5.000	1830.00	597.74	1.98	0.04	0.00	58.11	100.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
6.000	150.00	590.66	0.00	1.82	0.00	23.66	1400.00
6 000	430.00	593.15	2.49	1.86	0.00	35.07	1400 00
6.000	700.00	594.70	1.56	1.78	0.00	42.26	1400.00
6.000	1100.00	596.50	1.79	1.63	0.00	50.55	1400.00
6.000	1310.00	597.31	0.81	1.55	0.00	54.31	1400.00
6 000	1830.00	599.12	1.81	1.37	0.00	62.66	1400.00
7.000	150.00	591.69	0.00	1.03	0.00	24.75	1500.00
7.000	430.00	594 38	2.69	1.23	0.00	31.26	1500.00
7.000	700.00	596.02	1.64	1.32	0.00	35.26	1500 00
7.000	1100.00	597.85	1.83	1.36	0.00	39.71	1500.00
7.000	1310.00	598.67	0.81	1 36	0.00	41.68	1500.00
7.000	1830.00	600.44	1.77	1.32	0.00	46.00	1500.00
8 000	150.00	591.75	0.00	0.06	0.00	35.00	100.00
8.000	430.00	594.49	2.74	0.11	0.00	35.00	100.00
8.000	700.00	596.16	1.67	0 14	0.00	35.00	100 00
8.000	1100.00	598.01	1.85	0.16	0.00	35.00	100.00
8.000	1310.00	598.91	0.90	0.24	0.00	76.83	100.00
8.000	1830.00	600.72	1.82	0.28	0.00	83.48	100.00

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION  SECNO= 21335.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 21335 000  PROFILE= 1  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO= 23705.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 23705.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 23705.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
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FLOOD INSURANCE ZONE DATA FOR 2-YEAR FREQUENCY FLOOD

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10	2	0.2
1.000	0.	0.00	0.00	0.00
30.000	29	-0 01	0.00	0.01
60.000	59.	-0.02	-0.01	0.02
61.000	60.	-0 01	0.00	0.01
136.000	135.	-0.05	-0.02	0.07
137.000	136.	-0.08	-0.03	0.11
187.000	186.	-0.09	-0.03	0.12
362.000	361.	-0.20	-0.06	0.26
737.000	736.	-0.27	-0.08	0.32
787.000	786.	-0.26	-0.08	0.31
788.000	787.	-0.25	-0.07	0.30
797.000	796.	-0.26	-0.08	0.31
798.000	797.	-0.29	-0.09	0.34
844.000	843.	-0.30	-0.09	0 35
845.000	844.	-0.29	-0.09	0.34
859.000	859.	-0.30	-0.09	0.35
860.000	860.	-0.32	-0.10	0 37
910.000	910.	-0.33	-0 10	0.39
911.000	911.	-0.33	-0.10	0.38
921.000	921.	-0.33	-0.10	0.39
922.000	922.	-0.36	-0.11	0.41
953.000	953.	-0.34	-0.10	0.39
954.000	954.	-0.31	-0.09	0.36
985.000	984.	-0 36	-0.11	0.41
986.000	985.	-0.44	-0.13	0.50
1036.000	1035.	-0.48	-0.14	0.54
1736.000	1735.	-0.59	-0.17	0.63
2436.000	2435.	-0.68	-0.19	0.70
3186.000	3185.	-0.75	-0 21	0.73
3686.000	3685.	-0 83	-0.25	0.77
4186.000	4185.	-0.92	-0.31	0.83
4236.000	4235.	-0.92	-0.31	0.83
4281.000	4280.	-0.97	-0.36	0.94
4931.000	4930.	-1.11	-0.45	1.06
5956.000	5955.	-1.32	-0.57	1.17
6981.000	6980.	-1.55	-0.69	1.27
8031.000	8030.	-1.77	-0.82	1.36
8082.000	8081.	-1.80	-0.83	1.36
8147.000	8146.	-1.84	-0.87	1.46
9397.000	9396.	-2.08	-0.99	1.54
10297.000	10296.	-2.27	-1.07	1.58
10897.000	10896.	-2.40	-1.13	1.61
10973.000	10972.	-2.40	-1.13	1.60
11017.000	11016.	-2.51	-1 23	1.88

11477.000	11476.	-2.69	-1.31	1.94
11528.000	11527.	-2.69	-1.31	1.92
11599.000	11598.	-2.70	-1.32	2.12
11650.000	11649.	-2.73	-1.33	2.13
11721.000	11720.	-2.73	-1.33	2.35
12689.000	12688.	-2.99	-1 41	2.35
13219.000	13218.	-3.10	-1.43	2.32
13269.000	13268.	-3.10	-1.43	2.31
13309.000	13308.	-3.10	-1.43	2.49
13409.000	13408.	-3 15	-1.45	2.52
15144.000	15143.	-3.46	-1.51	2.43
15434.000	15433.	-3.47	-1.50	2.37
15555.000	15554.	-3.48	-1.51	2.53
15859.000	15858.	-3.49	-1.50	2.49
16339.000	16338.	-3.62	-1.52	2.39
16340.000	16339.	-3.62	-1.52	2.39
16379.000	16378.	-3.64	-1.52	2.39
16380.000	16379.	-3.64	-1.52	2.39
17184.000	17184.	-3.74	-1.55	2.27
17709.000	17709.	-4.18	-1.69	2.29
18699.000	18699	-4.25	-1.68	2.23
19699.000	19699.	-4.36	-1.68	2.15
19779.000	19779.	-4.38	-1.70	2.17
19829.000	19829.	-4.45	-1.79	2.34
20179.000	20229.	-4.25	-1.74	2.27
20199.000	20249.	-4.31	-1.75	2.28
20249.000	20299.	-4.28	-1.75	2.28
20750.000	20800.	-4.19	-1.71	2.21
21125.000	21175.	-4.19	-1.70	2.18
21260.000	21310.	-4.17	-1.70	2.18
21310.000	21360	-3.95	-1.68	2.16
21335.000	21385.	-3.72	-1.66	2.16
21385.000	21435.	-3.19	-1.59	2.12
21735.000	21785.	-3.23	-1.48	2.00
22085.000	22135.	-3.21	-1.41	1.90
22385.000	22435.	-3.30	-1.41	1.85
22730.000	22780.	-3.38	-1.43	1.82
23205.000	23255.	-3.41	-1.43	1.81
23705.000	23755.	-2.99	-1.35	1.72
24155.000	24205.	-3.08	-1.16	1.37
24655.000	24705.	-3.67	-1.43	1.67
3.000	24805.	-4.08	-1.63	1.92
3.100	24806.	-4.08	-1.63	1.92
3.900	24843.	-4 09	-1.63	1 92
4 000	24844.	-4.09	-1.63	1 92
5.000	24944.	-4.08	-1.64	1.94
6.000	26344.	-4.04	-1.56	1.79
7.000	27844.	-4.33	-1.64	1.83
8.000	27944.	-4.41	-1.67	1.85

WEIGHTED AVG FOR REACH -2.71 -1.14 1.70

FHF FOR THE REACH = 025 WITH 44.6 PERCENT OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 5

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA 10	1	DIFF.	WTD. AVG.	FHF	PERCENT WITHIN
	0.				SEC.		1.000
	29.				SEC.		30.000
	59.				SEC.		60.000
	60.				SEC.		61.000
1	100.	574.92	574.93	-0.01	-0.01	005	100.
	135.				SEC.		136.000
	136.				SEC.		137.000
	186.				SEC.		187.000
2	200.	574.99	575.05	-0.06	-0.04	005	100.
3	300.	575.10	575.23	-0.13	-0.07	005	100.
	361.				SEC.		362.000
4	400.	575.19	575.38	-0.19	-0.10	005	100.
5	500.	575.25	575.46	-0.21	-0.12	005	100.
6	600.	575.28	575.52	-0.24	-0.14	005	100.
7	700.	575.31	575 57	-0.26	-0.16	005	100.
	736.				SEC.		737.000
	786.				SEC.		787.000
	787.				SEC.		788.000
	796.				SEC.		797.000
	797.				SEC.		798.000
8	800.	575.35	575.63	-0.28	-0.17	005	100.
	843.				SEC.		844.000
	844.				SEC.		845.000
	859.				SEC.		859.000
	860.				SEC.		860.000
9	900.	575.42	575.73	-0.31	-0.19	005	100.
	910.				SEC.		910.000
	911.				SEC.		911.000
	921.				SEC.		921.000
	922.				SEC.		922.000
	953.				SEC.		953.000
	954.				SEC.		954.000
	984.				SEC.		985.000
	985.				SEC.		986.000
10	1000.	575.57	575.96	-0.39	-0.21	005	100.
	1035.				SEC.		1036.000
11	1100.	575.72	576.18	-0.46	-0.23	005	100
12	1200.	575.77	576.27	-0.50	-0.25	005	100.

13	1300.	575.83	576.34	-0.51	-0.27	005	100.
14	1400.	575.88	576.40	-0.52	-0.29	005	100.
15	1500	575.93	576.47	-0.54	-0.31	005	100.
16	1600.	575.98	576.54	-0.56	-0.32	005	100.
17	1700.	576.03	576.61	-0.58	-0.34	005	100.
	1735.				SEC.	1736.000	
18	1800.	576.08	576.67	-0.59	-0.35	005	100.
19	1900.	576.12	576 73	-0.61	-0.37	005	100.
20	2000.	576.17	576.78	-0.61	-0.38	005	100.
21	2100.	576.21	576.84	-0.63	-0.39	005	100.
22	2200.	576.25	576.89	-0.64	-0.40	005	100.
23	2300.	576.29	576 95	-0.66	-0.41	005	100.
24	2400.	576.34	577 01	-0.67	-0.42	005	100.
	2435.				SEC.	2436.000	
25	2500.	576.38	577.06	-0.68	-0.43	005	100.
26	2600.	576.42	577.11	-0.69	-0.44	005	100.
27	2700.	576.45	577.16	-0.71	-0.45	005	100.
28	2800.	576.49	577.20	-0.71	-0.46	005	100.
29	2900.	576.53	577.25	-0.72	-0.47	005	100.
30	3000.	576.57	577 30	-0.73	-0.48	005	100.
31	3100.	576.61	577.35	-0.74	-0.49	005	100.
	3185.				SEC.	3186.000	
32	3200.	576.64	577.39	-0.75	-0.50	005	100.
33	3300.	576.66	577.42	-0.76	-0.50	005	100.
34	3400.	576.66	577.44	-0.78	-0.51	005	100.
35	3500.	576.66	577 46	-0.80	-0.52	005	97.
36	3600.	576.66	577.47	-0.81	-0.53	005	97.
	3685				SEC.	3686.000	
37	3700.	576.67	577.49	-0.82	-0.54	005	97.
38	3800.	576.67	577.51	-0.84	-0.54	005	97.
39	3900.	576.67	577.53	-0.86	-0.55	005	97.
40	4000.	576.67	577.55	-0.88	-0.56	005	98.
41	4100.	576.67	577.57	-0.90	-0.57	005	95
	4185.				SEC.	4186.000	
42	4200.	576.68	577.59	-0.91	-0.58	005	95
	4235.				SEC.	4236.000	
	4280.				SEC.	4281 000	
43	4300.	576.68	577.62	-0.94	-0.59	005	95.
44	4400.	576.68	577.67	-0.99	-0.59	005	95.
45	4500.	576.68	577.69	-1.01	-0.60	005	96.
46	4600.	576.68	577.71	-1.03	-0.61	005	96.
47	4700.	576.69	577.74	-1.05	-0.62	005	96.
48	4800.	576.69	577.76	-1.07	-0.63	005	96.
49	4900.	576.69	577.78	-1.09	-0.64	005	94
	4930.				SEC.	4931.000	
50	5000.	576.69	577.81	-1.12	-0.65	005	94.
51	5100.	576.69	577.83	-1.14	-0.66	005	94.
52	5200.	576.70	577.85	-1.15	-0.67	005	94.
53	5300.	576.70	577.88	-1.18	-0.68	005	94
54	5400.	576.70	577.90	-1.20	-0.69	005	93.
55	5500.	576.71	577.92	-1.21	-0.70	005	91.
56	5600	576.71	577.95	-1.24	-0.71	005	91.
57	5700.	576.71	577.97	-1.26	-0.72	005	88.
58	5800.	576.71	578.00	-1.29	-0.73	005	86.

59	5900.	576.72	578 02	-1.30	-0.74	005	86.
	5955.				SEC.	5956.000	
60	6000.	576.72	578.04	-1.32	-0.75	010	83.
61	6100.	576.72	578.07	-1.35	-0.76	010	84.
62	6200.	576.73	578.09	-1.36	-0.77	010	81.
63	6300.	576.73	578.12	-1.39	-0.78	010	79.
64	6400.	576.73	578.14	-1.41	-0.79	010	78.
65	6500.	576.74	578.17	-1.43	-0.80	010	78.
66	6600.	576.74	578.19	-1.45	-0 81	010	77.
67	6700.	576.75	578.22	-1.47	-0.82	010	76.
68	6800.	576.75	578.24	-1.49	-0.83	010	75.
69	6900.	576.75	578.27	-1.52	-0.84	010	74.
	6980.				SEC.	6981.000	
70	7000.	576.76	578 29	-1.53	-0.85	010	74.
71	7100	576.76	578.32	-1.56	-0.86	010	75.
72	7200.	576.76	578.35	-1.59	-0.87	010	74.
73	7300.	576 77	578.37	-1.60	-0.88	010	73.
74	7400.	576 77	578.40	-1.63	-0.89	010	73
75	7500	576.78	578.42	-1.64	-0.90	010	71.
76	7600.	576.78	578.45	-1.67	-0.91	010	71.
77	7700.	576.78	578.48	-1.70	-0 92	010	70.
78	7800.	576.79	578.50	-1.71	-0.93	010	71.
79	7900.	576.79	578.53	-1.74	-0.94	010	70.
80	8000.	576.80	578.55	-1.75	-0.95	010	70.
	8030.				SEC.	8031.000	
	8081.				SEC.	8082.000	
81	8100.	576.80	578.59	-1.79	-0.96	010	69.
	8146.				SEC.	8147.000	
82	8200.	576.81	578.64	-1.83	-0.97	010	68.
83	8300.	576.81	578.67	-1.86	-0.98	010	67.
84	8400.	576.81	578.69	-1.88	-0.99	010	68.
85	8500.	576.82	578.72	-1.90	-1.00	010	67.
86	8600.	576.82	578.74	-1.92	-1.01	010	65.
87	8700.	576.83	578.76	-1.93	-1.02	010	64.
88	8800.	576.83	578.78	-1.95	-1.03	010	64.
89	8900.	576.83	578.81	-1.98	-1.04	010	63.
90	9000.	576.84	578.83	-1.99	-1.05	010	61.
91	9100.	576.84	578.85	-2.01	-1.06	010	62.
92	9200.	576.84	578.87	-2.03	-1.07	010	60.
93	9300.	576.85	578.90	-2.05	-1.09	010	59.
	9396.				SEC.	9397.000	
94	9400.	576.85	578.92	-2.07	-1.10	010	59.
95	9500.	576.86	578.94	-2.08	-1.11	010	58.
96	9600.	576.86	578.97	-2.11	-1.12	010	55.
97	9700.	576.87	579.00	-2.13	-1.13	010	56.
98	9800.	576.88	579.03	-2.15	-1.14	010	55.
99	9900.	576.88	579.06	-2.18	-1.15	010	54.
100	10000.	576.89	579.08	-2.19	-1.16	010	53.
101	10100.	576.90	579.11	-2.21	-1.17	010	52.
102	10200.	576.90	579.14	-2.24	-1.18	010	51.
	10296.				SEC.	10297.000	
103	10300.	576.91	579.17	-2.26	-1.19	010	50
104	10400.	576.92	579.20	-2.28	-1.20	010	49.
105	10500.	576.92	579.23	-2.31	-1.21	010	50.

106	10600.	576.93	579.25	-2.32	-1 22	010	47.
107	10700.	576.94	579.28	-2.34	-1.23	010	46.
108	10800	576.95	579.31	-2.36	-1.24	010	45.
	10896.				SEC.	10897.000	
109	10900.	576.95	579.34	-2.39	-1.25	015	45.
	10972.				SEC.	10973.000	
110	11000.	576.96	579.39	-2.43	-1.26	015	44.
	11016.				SEC.	11017.000	
111	11100.	576.97	579.48	-2.51	-1.27	015	42.
112	11200.	576.98	579.54	-2.56	-1.29	015	42.
113	11300.	576.99	579.60	-2.61	-1.30	015	42.
114	11400.	577.01	579.65	-2.64	-1.31	015	40.
	11476.				SEC.	11477.000	
115	11500	577.02	579.70	-2.68	-1.32	015	39.
	11527.				SEC.	11528.000	
	11598.				SEC.	11599.000	
116	11600.	577.03	579.73	-2.70	-1.33	015	39.
	11649.				SEC.	11650.000	
117	11700.	577.04	579.75	-2.71	-1.35	015	38.
	11720.				SEC	11721.000	
118	11800.	577.04	579.79	-2.75	-1.36	015	38.
119	11900.	577.06	579.82	-2.76	-1 37	015	37.
120	12000.	577.07	579.86	-2.79	-1.38	015	38.
121	12100.	577.08	579.90	-2.82	-1.39	015	36.
122	12200.	577.09	579.94	-2.85	-1.40	015	37.
123	12300.	577.11	579.98	-2.87	-1.42	015	36.
124	12400.	577.12	580.02	-2.90	-1.43	015	36.
125	12500.	577.13	580.06	-2.93	-1.44	015	36.
126	12600.	577.14	580.10	-2.96	-1.45	015	36.
	12688.				SEC.	12689.000	
127	12700.	577.15	580.13	-2 98	-1.46	015	35.
128	12800.	577.17	580.17	-3.00	-1.48	015	36.
129	12900.	577.18	580.21	-3.03	-1.49	015	36
130	13000.	577 20	580.24	-3.04	-1.50	015	35.
131	13100.	577.21	580.28	-3.07	-1.51	015	36.
132	13200	577.23	580.31	-3.08	-1.52	015	35.
	13218.				SEC.	13219.000	
	13268.				SEC.	13269.000	
133	13300.	577.24	580.33	-3.09	-1.54	015	35.
	13308.				SEC.	13309.000	
134	13400.	577.25	580.37	-3.12	-1.55	015	35.
	13408.				SEC.	13409.000	
135	13500.	577.26	580.41	-3.15	-1.56	015	34.
136	13600.	577.28	580.45	-3.17	-1.57	015	35.
137	13700.	577.30	580.49	-3.19	-1.58	015	34.
138	13800.	577.32	580.53	-3.21	-1.60	015	33.
139	13900.	577.33	580.56	-3.23	-1.61	015	34.
140	14000.	577.35	580.60	-3.25	-1.62	015	34.
141	14100.	577.37	580.64	-3.27	-1.63	015	33.
142	14200.	577.39	580.67	-3.28	-1.64	015	33.
143	14300.	577.41	580.71	-3.30	-1.65	015	33.
144	14400.	577.43	580.75	-3.32	-1.67	015	32.
145	14500.	577.45	580.78	-3.33	-1.68	015	32.
146	14600.	577.46	580.82	-3.36	-1.69	015	32.

147	14700.	577.48	580.86	-3.38	-1.70	015	32.
148	14800.	577.50	580.89	-3.39	-1.71	015	32.
149	14900.	577.52	580.93	-3 41	-1.72	015	31.
150	15000.	577.54	580.97	-3.43	-1.73	015	31.
151	15100.	577.56	581.00	-3.44	-1.75	020	30.
	15143.				SEC.	15144.000	
152	15200.	577.59	581.05	-3.46	-1.76	020	31.
153	15300.	577.64	581.11	-3.47	-1.77	020	30.
154	15400.	577.70	581.17	-3.47	-1.78	020	31.
	15433.				SEC.	15434.000	
155	15500.	577.74	581.22	-3.48	-1.79	020	30.
	15554.				SEC.	15555.000	
156	15600.	577.77	581.25	-3.48	-1.80	020	29.
157	15700.	577.80	581.28	-3.48	-1.81	020	29.
158	15800.	577.84	581.33	-3.49	-1.82	020	30
	15858.				SEC.	15859.000	
159	15900.	577.89	581.38	-3.49	-1.83	020	29.
160	16000.	577.95	581.46	-3.51	-1.84	020	29.
161	16100.	578.02	581.56	-3.54	-1.85	020	29.
162	16200	578.09	581.66	-3.57	-1 86	020	29.
163	16300.	578.16	581.75	-3.59	-1.87	020	28.
	16338.				SEC.	16339.000	
	16339.				SEC.	16340.000	
	16378				SEC	16379.000	
	16379.				SEC.	16380.000	
164	16400.	578.23	581 85	-3.62	-1 89	020	29.
165	16500.	578.32	581.96	-3.64	-1.90	020	28.
166	16600.	578.42	582.08	-3.66	-1.91	020	28.
167	16700.	578.53	582.20	-3.67	-1.92	020	27.
168	16800.	578.63	582.31	-3.68	-1.93	020	27.
169	16900.	578.74	582.43	-3.69	-1.94	020	27.
170	17000.	578.84	582.55	-3.71	-1.95	020	26.
171	17100.	578.94	582.67	-3.73	-1.96	020	26.
	17184.				SEC.	17184.000	
172	17200.	579.05	582.79	-3.74	-1.97	020	26.
173	17300.	579.15	582.94	-3.79	-1.98	020	25.
174	17400.	579.24	583.12	-3.88	-1.99	020	25.
175	17500.	579.34	583.30	-3.96	-2.00	020	48.
176	17600.	579.44	583.49	-4.05	-2.01	020	48.
177	17700.	579.53	583.67	-4.14	-2.03	020	47.
	17709.				SEC.	17709.000	
178	17800	579.60	583.79	-4.19	-2.04	020	47.
179	17900.	579.64	583.83	-4.19	-2.05	020	47.
180	18000.	579.67	583.88	-4.21	-2.06	020	46.
181	18100.	579.71	583.92	-4.21	-2 07	020	46.
182	18200.	579.74	583.96	-4.22	-2.09	020	47.
183	18300.	579.78	584.00	-4 22	-2.10	020	46.
184	18400.	579.81	584.04	-4.23	-2 11	020	46.
185	18500.	579 85	584.09	-4.24	-2.12	020	46.
186	18600.	579.88	584.13	-4.25	-2.13	020	45.
	18699.				SEC.	18699.000	
187	18700.	579.92	584.17	-4.25	-2.14	020	45.
188	18800.	579 95	584.21	-4.26	-2.15	020	45
189	18900.	579.98	584.25	-4.27	-2.17	020	44.

190	19000.	580.01	584.28	-4.27	-2.18	020	44.
191	19100.	580.03	584.32	-4.29	-2.19	020	44.
192	19200.	580.06	584.36	-4.30	-2.20	020	44.
193	19300.	580 09	584.40	-4.31	-2 21	020	44.
194	19400.	580.12	584.44	-4.32	-2.22	020	43.
195	19500	580.14	584.47	-4.33	-2.23	020	43.
196	19600.	580.17	584.51	-4.34	-2.24	020	43
	19699.				SEC.	19699.000	
197	19700.	580.20	584.55	-4.35	-2.25	025	43.
	19779.				SEC.	19779.000	
198	19800	580.23	584.61	-4.38	-2.26	025	42.
	19829.				SEC.	19829.000	
199	19900.	580.33	584 74	-4.41	-2.27	025	42.
200	20000.	580.47	584.86	-4.39	-2.28	025	43.
201	20100.	580.61	584.94	-4.33	-2.30	025	42.
202	20200.	580.74	585.03	-4.29	-2.30	025	42.
	20229.				SEC.	20179.000	
	20249.				SEC.	20199.000	
	20299.				SEC.	20249.000	
203	20300.	580.88	585.15	-4.27	-2.31	025	41.
204	20400.	580.99	585.26	-4.27	-2.32	025	42.
205	20500.	581.08	585.33	-4.25	-2 33	025	41.
206	20600.	581.17	585.40	-4.23	-2.34	025	41.
207	20700.	581.26	585.48	-4.22	-2.35	025	41.
	20800.				SEC.	20750.000	
208	20800.	581.35	585.55	-4.20	-2.36	025	41.
209	20900.	581 43	585.62	-4.19	-2.37	025	40.
210	21000.	581.49	585.68	-4.19	-2.38	025	40.
211	21100.	581.55	585.74	-4.19	-2.39	025	41.
	21175.				SEC.	21125.000	
212	21200.	581.61	585.80	-4.19	-2.40	025	40.
213	21300.	581.68	585.86	-4 18	-2.40	025	40.
	21310.				SEC.	21260.000	
	21360				SEC.	21310.000	
	21385.				SEC.	21335.000	
214	21400.	582.04	585.90	-3.86	-2.41	025	40.
	21435.				SEC.	21385.000	
215	21500.	582.60	585.99	-3.39	-2.42	025	40.
216	21600.	582 92	586.12	-3.20	-2.42	025	40.
217	21700.	583.04	586 25	-3.21	-2.42	025	41.
	21785.				SEC.	21735.000	
218	21800.	583.16	586.38	-3.22	-2.43	025	41.
219	21900.	583.27	586.50	-3.23	-2.43	025	42.
220	22000.	583 38	586.59	-3.21	-2.43	025	42
221	22100.	583.48	586.69	-3.21	-2.44	025	42.
	22135.				SEC.	22085.000	
222	22200.	583.60	586.81	-3.21	-2.44	025	42.
223	22300.	583.73	586.97	-3.24	-2.44	025	43.
224	22400.	583.86	587.14	-3.28	-2.45	025	43
	22435.				SEC.	22385.000	
225	22500	583.99	587.30	-3.31	-2.45	025	43.
226	22600.	584.11	587.43	-3.32	-2.46	025	43.
227	22700.	584.21	587.56	-3.35	-2.46	025	44.
	22780.				SEC.	22730.000	

228	22800.	584 32	587 69	-3.37	-2.46	025	44.
229	22900.	584.43	587.81	-3.38	-2.47	025	45.
230	23000.	584.52	587.91	-3.39	-2.47	025	45
231	23100.	584 62	588.02	-3.40	-2.48	025	46.
232	23200.	584.72	588.12	-3.40	-2.48	025	47.
	23255.				SEC.	23205.000	
233	23300.	584.83	588.22	-3.39	-2.48	025	47.
234	23400.	584.96	588.29	-3.33	-2.49	025	48.
235	23500.	585.11	588.35	-3.24	-2.49	025	48.
236	23600.	585.26	588.41	-3.15	-2.49	025	48.
237	23700.	585.40	588.48	-3.08	-2.50	025	48.
	23755.				SEC.	23705.000	
238	23800.	585 63	588.64	-3.01	-2.50	025	48.
239	23900.	586.03	589.04	-3.01	-2.50	025	49.
240	24000.	586.53	589.56	-3.03	-2.50	025	49.
241	24100.	587.04	590.08	-3.04	-2.50	025	49.
242	24200.	587.54	590.61	-3.07	-2.51	025	50.
	24205.				SEC.	24155.000	
243	24300.	587 88	591 02	-3.14	-2.51	025	50.
244	24400.	588.06	591.31	-3.25	-2.51	025	50.
245	24500.	588.23	591 60	-3.37	-2.52	025	50.
246	24600.	588.40	591.89	-3.49	-2.52	025	50.
247	24700.	588.57	592.18	-3.61	-2.52	025	50.
	24705.				SEC.	24655.000	
248	24800	588.75	592.62	-3.87	-2 53	025	50.
	24805.				SEC.	3.000	
	24806.				SEC.	3.100	
	24843.				SEC.	3.900	
	24844.				SEC.	4.000	
249	24900.	588.85	592.93	-4.08	-2.54	025	49.
	24944.				SEC.	5.000	
250	25000.	588.88	592.97	-4.09	-2.54	025	49.
251	25100.	588.98	593.06	-4.08	-2.55	025	49.
252	25200.	589.11	593.19	-4.08	-2.55	025	49.
253	25300.	589.24	593.32	-4.08	-2.56	025	49.
254	25400.	589.37	593 44	-4.07	-2.57	025	48.
255	25500.	589.50	593.57	-4.07	-2.57	025	48.
256	25600.	589.63	593.70	-4.07	-2.58	025	48.
257	25700.	589.76	593.82	-4.06	-2.58	025	48.
258	25800.	589.89	593.95	-4.06	-2.59	025	48.
259	25900.	590.02	594 08	-4.06	-2 59	025	48.
260	26000.	590.15	594.20	-4.05	-2.60	025	47.
261	26100.	590.28	594.33	-4.05	-2.61	025	47
262	26200.	590.41	594.46	-4.05	-2.61	025	47.
263	26300.	590.54	594.58	-4.04	-2.62	025	47.
	26344.				SEC.	6.000	
264	26400.	590.65	594.70	-4.05	-2.62	025	47.
265	26500.	590.74	594.80	-4.06	-2.63	025	47.
266	26600.	590.80	594.89	-4.09	-2.63	025	47.
267	26700.	590.87	594.97	-4.10	-2.64	025	46.
268	26800.	590 94	595.06	-4.12	-2.64	025	46.
269	26900.	591.01	595.15	-4.14	-2.65	025	46
270	27000.	591.08	595.24	-4.16	-2.66	025	46.
271	27100.	591.15	595.32	-4.17	-2.66	025	46.

272	27200.	591.21	595.41	-4.20	-2.67	025	46.
273	27300	591.28	595.50	-4.22	-2.67	025	46.
274	27400.	591.35	595.59	-4.24	-2.68	025	46.
275	27500.	591.42	595.68	-4.26	-2.68	025	45.
276	27600	591.49	595 76	-4.27	-2.69	025	46.
277	27700.	591.56	595.85	-4.29	-2.70	025	45.
278	27800.	591.63	595.94	-4.31	-2.70	025	45.
	27844.				SEC.		7.000
279	27900.	591.69	596 04	-4 35	-2.71	025	45.
	27944.				SEC.		8.000

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS
INPUT 20N WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE 202 62 279
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	WEIGHTED AVG DIFFERENCE BETWEEN BASE FLOOD AND 10	2	0.2
62	6200.	-0.77	-0.27	0.75

FHF FOR REACH 1 = 010 WITH 81. PERCENT OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 2

177	17700.	-2.70	-1.22	1.97

FHF FOR REACH 2 = 025 WITH 81. PERCENT OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 5

279	27900.	-3.89	-1.57	1.96

FHF FOR REACH 3 = 040 WITH 100. PERCENT OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 8

THIS RUN EXECUTED 22 MAY 89 10:20:52

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
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1) COUNTY: Wayne

2) STUDY NAME: City of Lincoln Park

3) WATERCOURSE: South Branch Ecorse Creek

4) DOCUMENT TYPE: Summary

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1CITY OF LINCOLN PARK FIS ,UD 2010-07
T2 10 YR FLOW
T3       SOUTH BRANCH ECORSE CR.

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        2.        0.        0.  0.000030     0.00      1.0       0.    580.070     0.0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IDW       CHAIN     ITRACE
    1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
  150.000   201.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

J5  LPRNT     NUMSEC          ********REQUESTED SECTION NUMBERS********
    -10.000   -10.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
OT    3.300  1120.000  1625.000  1700.000  1750.000  2055.000     0.000     0.000     0.000     0.000
NC    0.070     0.060     0.035     0.300     0.500     0.000     0.000     0.000     0.000     0.000

          U/S FACE SOUTH BOUND FORT ST. FROM STANDOTTE FIS

X1  11721.000     0.000     0.000     0.000    71.000    71.000    71.000     0.000     0.000     0.000
X2      0.003     0.000     1.000   510.700   563.850     0.000     0.630     0.000     0.000     0.000
X3    -10.000     0.000     1.000   540.000     0.130   604.000     0.670     0.000     0.000     0.000
GR      4.000   540.700   553.400   510.700   573.500   605.700   570.700   572.300   572.300   568.700
OT    604.000   583.200   580.500     0.000     0.000     0.000     0.000     0.000     0.000     0.000
NC      5.000     0.040   148.000     0.040   171.000     1.065   229.000     0.060   240.000     0.040
XE    800.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

          U/S FACE SOUTH BOUND FORT ST. FROM DYANDOTTE FIS

X1  12669.000     0.000   171.300   669.000   568.000   744.000   698.000     0.000     0.000     0.000
X2    515.800     0.000   545.300   605.000   525.300   148.000   515.500   171.000   572.000   570.300
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GP	575.600	229.000	582.800	240.000	[illegible]	[illegible]	585.000	800.000	0.000	0.000
NC	0.060	0.060	0.035	0.390	0.500	0.000	0.000	0.000	0.000	0.000
	50FT D/S HOWARD AVE.									
X1	13219.000	15.000	233.500	230.500	530.000	530.000	530.000	0.000	0.000	0.000
GR	585.400	0.000	585.000	57.000	584.700	157.000	584.400	208.000	574.900	229.000
GR	573.000	233.500	573.000	256.500	573.000	257.500	573.000	280.500	575.500	281.000
GR	584.600	298.000	584.600	357.000	584.200	457.000	584.200	557.000	584.800	577.000
	D/S FACE HOWARD AVE.				FIELD BOOK STA. 34+15					
X1	13269.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	583.800	583.800	0.000
BT	1.250	1.650	3.000	0.000	47.000	1.000	414.300	0.000	573.000	573.000
	U/S FACE HOWARD AVE.				FIELD BOOK STA. 36+75					
X1	13309.000	15.000	233.500	230.500	40.000	40.000	40.000	0.000	0.000	0.000
X3	0.000	0.000	1.250	365.000	584.500	0.210	0.000	0.000	0.000	0.000
BT	10.000	0.000	0.500	118.000	0.000	402.200	0.000	584.500	584.500	0.000
BT	17.000	0.000	583.400	0.000	17.000	585.300	0.000	157.000	584.700	0.000
BT	211.000	584.700	0.300	253.500	584.500	0.300	233.500	584.500	582.000	256.500
BT	584.500	582.000	256.500	584.500	0.000	257.300	584.500	0.000	257.500	584.500
BT	582.000	280.500	584.500	582.000	280.500	584.500	0.300	298.000	584.500	0.000
BT	357.900	584.000	0.000	457.000	584.200	0.000	557.300	584.200	0.000	577.000
BT	584.300	0.000	0.000	0.000	0.300	0.000	0.300	0.000	0.000	0.000
GR	585.400	0.000	585.000	57.000	584.700	157.000	584.700	211.000	575.400	253.300
GR	573.000	235.000	573.000	256.500	573.000	257.500	573.000	280.500	575.200	284.000
GR	584.500	298.000	584.600	357.000	584.200	457.000	584.200	557.000	584.800	577.000
	100 FT D/S HOWARD AVE.									
X1	13409.000	0.000	0.000	0.000	100.000	100.000	100.000	0.000	0.000	0.000
X4	5.000	0.040	157.000	0.000	176.000	0.535	224.000	0.000	240.000	0.040
X4	600.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	VALLEY SECTION				FIELD BOOK STA. 8+44					
X1	13144.000	10.000	176.000	224.000	1735.000	1735.000	1735.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	103.500	0.000	296.300	0.000	0.000	0.000	0.000
BT	895.100	0.000	585.100	0.000	565.100	100.000	565.100	197.000	577.200	175.000
GP	575.700	230.000	576.000	224.000	565.900	270.000	565.500	300.000	586.200	464.000
NC	0.060	0.360	0.010	0.300	0.500	0.000	0.100	0.000	0.000	0.000
	D/S FACE DIX AVE				FIELD BOOK STA. 17+50					
X1	13434.000	11.000	276.000	324.000	290.100	290.000	290.000	0.000	0.000	0.000
X3	10.000	0.000	2.000	0.300	0.500	0.000	0.300	587.300	587.300	0.000
GR	588.000	0.000	587.400	100.000	586.900	208.000	587.400	250.000	575.200	276.000
GR	574.900	400.000	575.500	326.000	587.500	336.000	587.600	430.000	586.700	500.000
GR	500.300	575.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	1.250	1.850	3.600	0.300	48.200	2.000	409.000	0.000	574.900	574.900
	D/S FACE DIX AVE.				FIELD BOOK STA. 16+29					
X1	13455.000	12.000	276.100	326.000	121.000	121.000	121.000	0.000	0.000	0.000

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X2	0.000	0.000	1.000	583.800	587.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	587.300	587.300	0.000
BT	16.000	0.000	588.000	0.000	100.000	587.400	0.000	200.000	587.000	0.000
BT	256.000	587.800	0.000	276.000	587.300	0.000	276.000	587.300	583.800	299.000
BT	387.300	583.000	299.000	587.300	0.000	587.000	587.300	0.000	301.000	587.300
BT	583.800	324.000	587.300	583.600	324.000	587.300	0.000	343.000	588.200	0.000
BT	400.000	587.500	0.000	500.000	586.100	0.000	575.000	583.300	0.000	0.000
GR	598.000	0.000	587.400	100.000	587.000	200.000	587.800	256.000	575.300	276.000
GR	574.900	299.000	574.900	301.000	575.900	324.000	588.200	343.000	587.600	400.000
GR	588.100	500.000	588.300	575.000	0.000	0.000	0.000	0.000	0.000	0.000
MH	5.000	0.000	60.000	0.060	78.000	0.035	100.000	0.060	129.000	0.040
MH	253.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION FIELD BOOK STA. 1S+25

X1	15059.000	9.000	78.300	108.000	304.300	304.000	304.000	0.000	0.000	0.000
GR	580.100	0.000	580.100	0.000	586.200	80.000	576.200	78.000	574.300	93.000
GR	575.900	105.000	588.400	129.000	589.700	128.000	579.600	253.000	0.000	0.000
NC	0.060	0.060	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S HAZEL AVE.

X1	16339.000	12.000	262.500	297.500	480.000	480.000	480.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
GR	593.100	0.000	591.900	80.000	589.700	160.000	589.200	238.000	575.800	262.500
GR	575.400	280.000	576.500	297.500	589.600	526.000	589.300	360.000	591.300	480.000
GR	596.100	580.000	594.500	607.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE HAZEL AVE. FIELD BOOK STA. 8+44

X1	16340.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
BT	13.000	0.000	593.100	0.000	80.000	591.900	0.000	180.000	589.700	0.000
BT	238.000	585.300	0.000	262.500	339.200	0.000	262.500	589.200	305.700	297.500
BT	589.200	585.700	297.500	589.200	0.000	326.000	589.600	0.000	300.000	589.300
BT	0.000	430.000	591.300	0.000	580.000	594.000	0.000	607.000	594.500	0.000

D/S FACE HAZEL AVE. FIELD BOOK STA. 8+44

X1	16379.000	12.000	262.500	297.500	39.000	39.000	39.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
BT	13.000	0.000	593.100	0.000	80.000	591.900	0.000	180.000	589.700	0.000
BT	238.000	585.300	0.000	262.500	339.200	0.000	262.500	589.200	305.700	297.500
BT	589.200	585.700	297.500	589.200	0.000	326.000	589.600	0.000	300.000	589.300
BT	0.000	430.000	591.300	0.000	580.000	594.000	0.000	607.000	594.500	0.000
GR	596.100	0.000	591.900	80.000	589.700	160.000	589.800	238.000	576.500	262.500
GR	575.400	280.000	576.500	297.500	589.200	521.000	589.300	360.000	591.300	480.000
GR	596.100	580.000	594.500	607.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S HAZEL AVE.

X2	16380.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	589.200	0.000
BT	5.000	0.000	589.000	0.000	193.000	0.000	207.000	0.000	252.000	0.000
BT	400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECTION LINCOLN PARK CAP. BOUNDARY FIELD BOOK STA. 2+00

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X1	17184.000	9.000	193.000	207.000	805.000	805.000	805.000	0.000	0.000	0.000
GR	594.400	0.000	593.600	100.000	592.900	149.000	576.700	193.000	574.600	200.000
G9	576.700	207.000	591.500	252.000	594.000	300.000	596.300	400.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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*****************************************************
 WSC2 RELEASE DATED NOV 76 UPDATED FEB 1977
 ERROR CORR -  01
 MODIFICATION -  50,51,52
*****************************************************

TTCIFY OF LINCOLN PARK FIS MOD 2010-07
T250 YR FLOW
13        SOUTH BRANCH ECORSE CR.

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      0.        3.        0.        0.  0.000000      0.00      0.0       0.   562.060     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IDC       CLIM      ITRACE
    2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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*****************************************************
 HFC2 RELEASE DATED NOV 76 UPDATED FEB 1977
 ERROR CORR -  01
 MODIFICATION -  50,51,52
*****************************************************

T'CITY OF LINCOLN PARK FIS BUD 2013-07
T2 100 YR FLOW
T3      SOUTH BRANCH ECORSE CR.

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        4.        0.        1.  0.000000      0.00      0.0       2.   582.600     0.000

J2  NPROG     IPLOT     PRFVS     XSAVE     XSECH     KA        ALDC      IOM       CHNSH     ITRACE

     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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FORM 1411.00-PRINTED BY ROTARY MANIFOLD FORMS.
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*****************************************************
  HEC2 RELEASE DATED NOV 75 UPDATED FE, 1977
  ERROR CORR -  J1
  MODIFICATION -  50,51,52
*****************************************************

T CITY OF LINCOLN PARK FIG HUD 2010-27
T2 500 YR FLOW
T3      SOUTH BRANCH GEORGE CR.

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       6.       0.       0.  0.000000     0.00     0.0      0.   563.600   0.000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHAIN    ITRACE

    15.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
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HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 51,51,52

****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SOUTH BRANCH ECORSE CR.

SUMMARY PRINTOUT TABLE 153

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CSEL	CHIMS	36	1LAWE	VCL	AREA	WTK
11650.000	51.00	0.00	0.00	572.10	1760.00	582.60	0.00	582.77	5.87	3.35	525.42	726.66
11721.000	71.00	583.20	580.70	572.10	1760.00	582.92	0.00	583.08	5.29	3.24	543.39	764.88
12609.000	988.00	0.00	0.00	573.00	1760.00	583.32	0.00	583.46	2.96	3.15	645.10	1026.65
13219.000	530.00	0.00	0.00	573.00	1760.00	583.47	0.00	583.61	2.42	3.16	681.48	1131.50
13269.000	50.00	0.00	0.00	573.00	1760.00	583.45	0.00	583.65	3.32	3.56	491.19	966.18
13309.000	40.00	584.30	582.00	573.00	1760.00	583.72	0.00	583.91	3.69	3.50	502.18	916.78
13409.000	100.00	0.00	0.00	573.00	1760.00	583.62	0.00	583.96	2.34	3.11	662.66	1150.59
15144.000	1735.00	0.00	0.00	573.70	1760.00	584.33	0.00	584.35	4.39	3.79	542.39	867.79
15434.000	290.00	0.00	0.00	574.90	1760.00	584.84	0.00	584.66	4.73	3.97	463.03	807.20
15555.000	121.00	587.30	583.80	574.90	1760.00	584.74	0.00	584.97	4.34	3.86	456.16	845.25
15859.000	304.00	0.00	0.00	575.50	1760.00	586.33	0.00	585.22	7.65	5.30	423.02	635.32
16339.000	680.00	0.00	0.00	575.40	1760.00	585.19	0.00	585.63	8.36	5.27	334.04	608.79
16340.000	1.00	589.20	585.70	575.40	1760.00	585.19	0.00	585.63	8.36	5.27	334.06	608.84
16379.000	39.00	589.20	585.70	575.40	1760.00	585.22	0.00	585.67	9.22	5.42	324.52	579.73
16380.000	1.00	0.00	0.00	575.40	1760.00	585.22	0.00	585.67	9.25	5.43	324.35	579.26
17184.000	805.00	0.00	0.00	574.60	1760.00	586.07	0.00	586.68	14.88	7.59	398.89	456.25

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SOUTH BRANCH ECORSE CR.

SUMMARY PRINTOUT TABLE 150

SECMD	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
11650.000	1760.00	582.60	0.00	0.00	0.00	56.00	51.00
11721.000	1760.00	582.93	0.00	0.32	0.00	56.00	71.00
12689.000	1760.00	583.32	0.00	0.40	0.00	103.16	968.00
13219.000	1760.00	583.47	0.00	0.15	0.00	85.86	530.00
13269.000	1760.00	583.45	0.00	-0.02	0.00	47.00	50.00
13309.000	1760.00	583.72	0.00	0.27	0.00	47.00	40.00
13409.000	1760.00	583.82	0.00	0.10	0.00	85.86	100.00
15144.000	1760.00	584.33	0.00	0.53	0.00	78.41	1735.00
15434.000	1760.00	584.45	0.00	0.11	0.00	48.00	290.00
15555.000	1760.00	584.74	0.00	0.30	0.00	48.00	121.00
15839.000	1760.00	584.83	0.00	0.09	0.00	60.55	304.00
16339.000	1760.00	585.19	0.00	0.36	0.00	35.00	480.00
16340.000	1760.00	585.19	0.00	0.00	0.00	33.00	1.00
16379.000	1760.00	585.22	0.00	0.02	0.00	35.00	39.00
16380.000	1760.00	585.22	0.00	0.00	0.00	33.00	1.00
17134.000	1760.00	586.07	0.00	0.06	0.00	57.57	605.00

SUMMARY OF ERRORS

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*****************************************************
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR -  01
MODIFICATION -  50,51,52
*****************************************************
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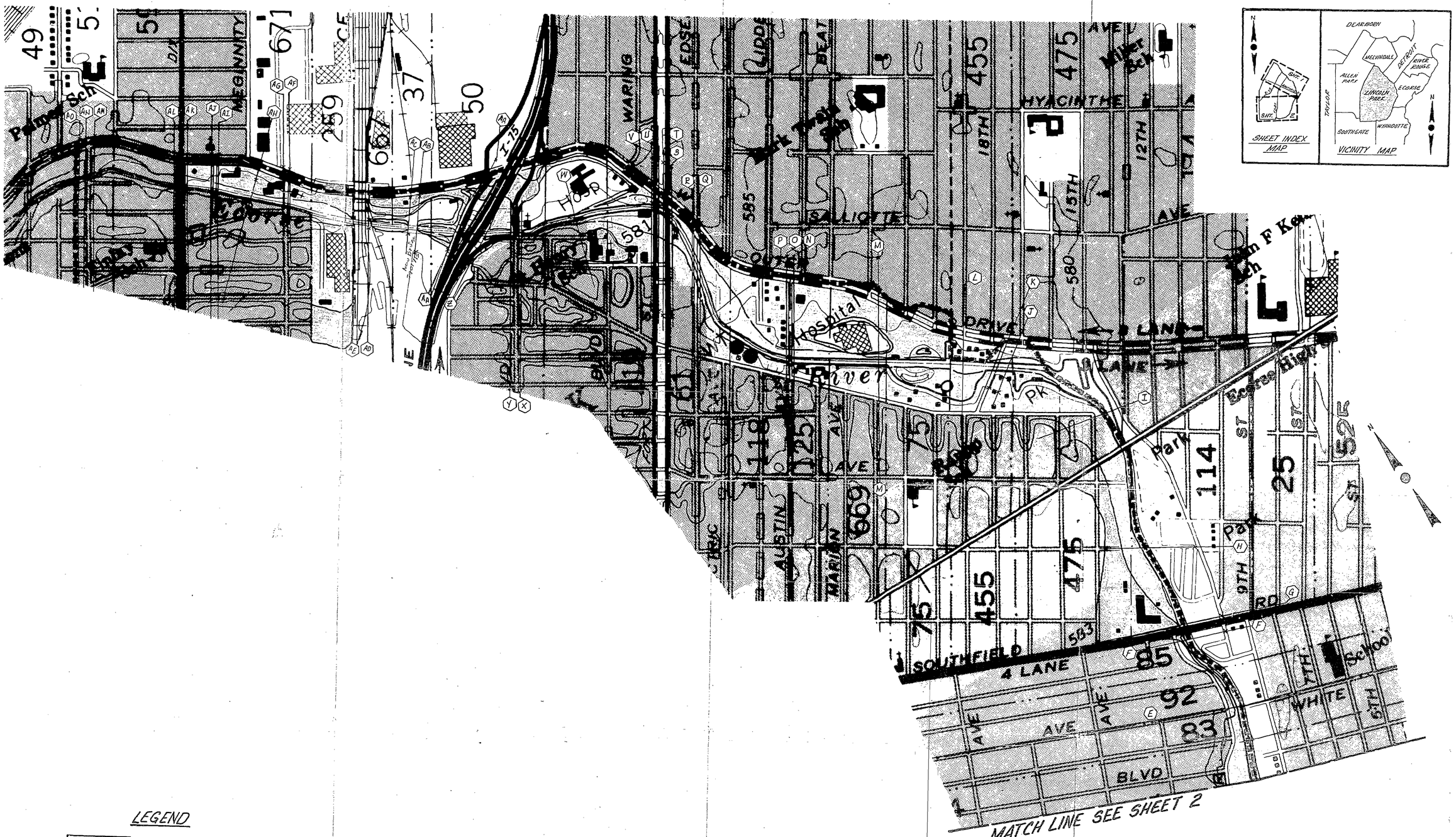
FORM 1411-OD-PRINTED BY ROTARY MANIFOLD FORMS

ERROR SUMMARY

0 ERROR(S) DETECTED BY THE USER PROGRAM
0 ERROR(S) DETECTED BY THE MATHEMATICAL PACKAGE
0 ERROR(S) DETECTED FOR INPUT/OUPUT STATEMENTS

FORM 1411-OD PRINTED BY ROTARY MANIFOLD FORMS
PRINTED IN U.S.A.



LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — A CROSS SECTION

CORPORATE LIMIT

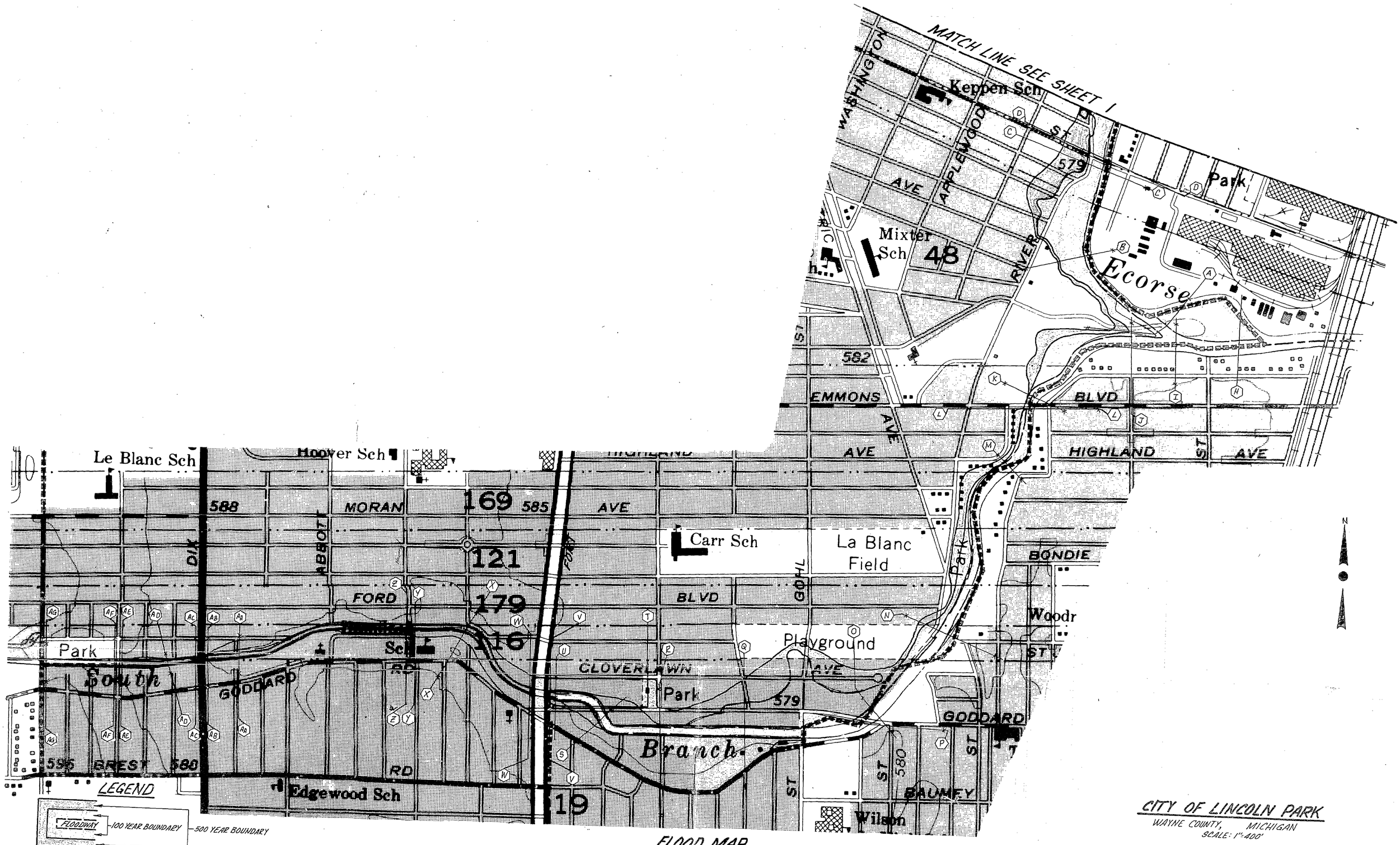
FLOOD MAP

CITY OF LINCOLN PARK

WAYNE COUNTY, MICHIGAN

SCALE: 1"=400'

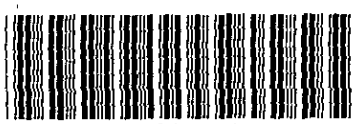
EXHIBIT 1
SHEET 1 of 2
HUD 2010-10



FLOOD MAP

CITY OF LINCOLN PARK
WAYNE COUNTY, MICHIGAN
SCALE: 1"=400'

EXHIBIT 1
SHEET 2 OF 2
AUD 2010-10



1) COUNTY: Wayne

2) STUDY NAME: _____

3) WATERCOURSE: Ecorse Creek

4) DOCUMENT TYPE: Summary



Summer

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CODE -  01
  MODIFICATION -  30,51,52
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

COURSE SIMON

SUMMARY PRINTOUT TABLE 150

STCHL	XLCH	XLOB	XRCH	ELMIN	Q	LOSEL	COLSS	CE	VLCH	VCH	VRCH	ELEV
1.200	0.00	0.00	0.00	582.70	960.00	590.65	0.00	590.88	11.81	4.32	478.13	279.31
1.000	0.00	0.00	0.00	582.70	1325.00	591.10	0.00	591.32	11.96	4.55	685.75	383.50
1.000	0.00	0.00	0.00	582.70	1490.00	591.27	0.00	591.48	11.97	4.64	766.66	430.74
1.000	0.01	0.00	0.00	582.70	1730.00	591.50	0.00	591.71	11.99	4.74	880.10	499.55
2.000	600.00	0.00	0.00	583.40	960.00	591.83	0.00	591.98	11.21	4.46	362.20	283.66
2.000	600.00	0.00	0.00	583.40	1325.00	591.61	0.00	592.13	14.33	5.16	414.07	350.06
2.000	600.00	0.00	0.00	583.40	1490.00	591.99	0.00	592.33	15.79	5.53	440.12	374.94
2.000	600.00	0.00	0.00	583.40	1730.00	592.23	0.00	592.65	17.82	6.00	474.87	409.76
3.000	300.00	0.00	0.00	584.30	960.00	592.2.	0.00	592.56	12.21	4.75	235.62	274.76
3.000	300.00	0.00	0.00	584.30	1325.00	592.59	0.00	592.79	16.02	5.82	270.61	351.08
3.000	300.00	0.00	0.00	584.30	1490.00	593.1*	0.00	593.75	17.64	6.27	284.54	354.81
3.000	300.00	0.00	0.00	584.30	1730.00	593.55	0.00	594.23	19.94	6.80	303.07	387.58
4.000	1.00	0.00	0.00	584.40	960.00	592.52	0.00	592.52	19.38	6.72	251.42	248.27
4.000	50.00	0.00	0.00	584.40	1325.00	593.1*	0.00	593.33	22.75	8.04	219.33	297.10
4.000	50.00	0.00	0.00	584.40	1490.00	593.41	0.00	593.71	24.24	8.57	230.01	320.00
4.000	50.00	0.00	0.00	584.40	1730.00	593.83	0.00	594.43	31.05	7.32	238.30	300.02
5.000	70.00	396.53	591.00	584.40	960.00	592.54	0.00	593.24	12.03	4.38	278.95	276.78
5.000	70.00	396.53	591.00	584.40	1325.00	593.1*	0.00	593.82	14.39	5.14	257.85	329.02
5.000	70.00	396.53	591.00	584.40	1490.00	593.1*	0.00	593.50	16.37	5.58	277.14	370.37
5.000	70.00	396.53	591.00	584.40	1730.00	593.1*	0.00	593.80	18.56	2.31	1140.92	1025.03
6.000	100.00	0.00	0.00	584.60	960.00	593.36	0.00	593.36	3.02	2.76	833.55	552.77
6.000	100.00	0.00	0.00	584.60	1325.00	594.91	0.00	594.97	2.25	2.70	1250.70	863.82
6.000	100.00	0.00	0.00	584.60	1490.00	593.65	0.00	595.78	1.91	2.64	1487.77	1066.15
6.000	100.00	0.00	0.00	584.60	1730.00	595.87	0.00	596.53	1.81	2.71	1828.17	1287.89
7.000	250.00	0.00	0.00	584.70	960.00	593.37	0.00	593.45	2.76	2.60	930.91	612.45
7.000	250.00	0.00	0.00	584.70	1325.00	594.97	.07	595.03	2.15	2.93	1254.04	903.10
7.000	250.00	0.00	0.00	584.70	1490.00	595.74	0.00	595.80	1.96	2.95	1380.72	1060.22
7.000	250.00	0.00	0.00	584.70	1730.00	596.8*	0.00	596.88	1.91	3.05	1540.47	1252.03
8.000	300.00	0.00	0.00	585.20	960.00	593.2*	0.00	593.31	11.05	4.27	224.64	276.9*
8.000	300.00	0.00	0.00	585.20	1325.00	594.91	0.00	595.23	10.62	4.56	296.23	406.67
8.000	300.00	0.00	0.00	585.20	1490.00	595.66	0.00	595.99	9.39	4.81	332.02	466.50
8.000	300.00	0.00	0.00	585.20	1730.00	596.52	0.00	596.87	8.80	4.79	374.66	545.09

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SECNO	XLCH	ELTRD	ELLC	ELMIN	H	CHSEL	CRIWS	EG	TURWS	VCH	AREA	.CIK
9.000	50.00	0.00	0.00	585.30	915.00	593.60	.00	593.75	14.87	4.64	197.35	237.27
9.000	30.00	0.00	0.00	585.30	1290.00	594.90	0.00	595.37	17.39	5.45	236.70	309.32
9.000	50.00	0.00	0.00	585.30	1470.00	595.61	0.00	596.15	17.86	5.75	255.65	367.85
9.000	50.00	0.00	0.00	585.30	1810.00	596.43	0.00	597.09	21.41	6.55	276.27	391.20
10.000	50.00	596.30	591.30	585.30	915.00	594.25	0.00	594.51	11.00	4.17	219.58	275.94
10.000	30.00	596.30	591.30	585.30	1290.00	596.17	0.00	596.53	12.21	4.78	269.74	369.17
10.000	50.00	596.30	591.30	585.30	1470.00	596.32	0.00	596.77	15.19	5.37	273.56	377.13
10.000	50.00	596.30	591.30	585.30	1810.00	596.43	0.00	597.09	22.32	6.55	276.56	363.00
11.000	50.00	0.00	0.00	585.40	915.00	594.69	0.00	594.80	4.12	3.18	635.87	650.76
11.000	50.00	0.00	0.00	585.40	1290.00	596.53	0.00	596.63	3.23	3.26	890.57	717.52
11.000	50.00	0.00	0.00	585.40	1470.00	596.77	0.00	596.90	3.81	3.60	921.27	772.85
11.000	50.00	0.00	0.00	585.40	1810.00	597.11	0.00	597.29	5.08	4.25	963.87	862.93
12.000	1425.00	0.00	0.00	586.30	915.00	595.10	0.00	595.25	4.98	3.54	474.30	610.02
12.000	1425.00	0.00	0.00	586.30	1290.00	597.01	0.00	597.19	4.43	3.87	567.07	612.75
12.000	1425.00	0.00	0.00	586.30	1470.00	597.34	0.00	597.55	5.11	4.25	611.99	650.01
12.000	1425.00	0.00	0.00	586.30	1810.00	597.83	0.00	598.14	6.50	4.95	650.07	710.01
13.000	100.00	0.00	0.00	586.10	915.00	595.37	0.00	595.53	6.16	6.12	322.30	446.79
13.000	100.00	0.00	0.00	586.10	1290.00	597.25	0.00	597.29	6.43	6.76	269.65	619.66
13.000	100.00	0.00	0.00	586.10	1470.00	597.53	0.00	597.67	5.32	5.30	277.53	637.06
13.000	100.00	0.00	0.00	586.10	1810.00	597.69	0.00	598.30	7.10	6.26	269.19	879.24
68.000	65.00	598.60	594.30	585.50	915.00	595.36	0.00	595.54	5.49	3.79	241.50	489.66
68.000	65.00	598.90	594.30	585.50	1290.00	597.29	0.00	597.86	5.63	4.31	299.50	671.60
68.000	65.00	598.60	594.30	585.50	1470.00	598.11	0.00	598.46	6.12	4.76	312.75	742.54
68.000	65.00	598.30	594.30	585.50	1810.00	598.57	0.00	598.65	2.19	4.00	333.91	1224.25
189.000	121.00	0.00	0.00	586.40	915.00	595.35	0.00	595.63	4.92	6.36	219.97	412.45
189.000	121.00	0.00	0.00	586.40	1290.00	597.60	0.00	597.96	6.51	6.82	267.75	607.44
189.000	121.00	0.00	0.00	586.40	1470.00	598.13	0.00	598.56	5.92	6.25	281.26	636.80
189.000	121.00	0.00	0.00	586.40	1810.00	598.62	0.00	598.91	5.95	6.46	322.49	1126.11
253.000	64.00	599.30	594.30	585.90	915.00	595.36	0.00	595.79	5.61	3.83	238.63	481.60
253.000	64.00	599.30	594.30	585.90	1290.00	598.22	0.00	598.53	5.37	4.21	316.64	732.70
253.000	64.00	599.20	594.30	585.90	1470.00	598.37	0.00	599.19	5.75	4.55	323.07	755.65
253.000	64.00	599.10	594.30	585.90	1810.00	598.82	0.00	599.43	4.77	4.05	342.55	1224.36
353.000	100.00	0.00	0.00	586.00	915.00	595.10	0.00	595.63	5.37	2.36	614.62	743.22
353.000	100.00	0.00	0.00	586.00	1290.00	598.52	0.00	598.58	1.11	2.27	997.38	1220.68
353.000	100.00	0.00	0.00	586.00	1470.00	599.22	0.00	599.29	1.15	2.40	1004.37	1372.28
353.000	100.00	0.00	0.00	586.00	1810.00	599.40	0.00	599.50	1.65	2.90	1106.86	1410.91
1832.000	1479.00	0.00	0.00	587.40	870.00	595.10	0.00	595.62	7.25	5.34	548.73	910.45
1832.000	1479.00	0.00	0.00	587.40	740.00	595.01	0.00	595.75	.14	2.35	439.76	644.23
1832.000	1479.00	0.00	0.00	587.40	870.00	599.41	0.00	599.65	0.64	2.06	975.99	839.92
1832.000	1479.00	0.00	0.00	587.40	800.00	599.67	0.00	599.70	0.79	2.34	1031.06	696.92
2132.000	350.00	0.00	0.00	587.50	870.00	595.10	0.00	595.65	7.46	5.72	351.17	318.46
2132.000	350.00	0.00	0.00	587.50	740.00	595.01	0.00	595.79	1.25	2.75	496.74	442.00
2132.000	350.00	0.00	0.00	587.50	870.00	599.42	0.00	599.66	0.72	2.15	561.12	405.07
2132.000	350.00	0.00	0.00	587.60	800.00	599.69	0.00	599.73	0.85	2.42	995.55	860.63

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CUSEL	CRIMS	EG	10K*S	VCH	AREA	.01K
2534.000	404.00	0.00	0.00	586.00	870.00	596.75	0.00	596.94	4.07	4.24	508.06	431.02
2534.000	404.00	0.00	0.00	588.00	740.00	598.80	0.00	598.84	0.71	2.05	1078.29	875.54
2534.000	404.00	0.00	0.00	580.00	670.00	599.47	0.00	599.48	0.40	1.59	1263.09	1061.33
2536.000	404.00	0.00	0.00	586.00	800.00	599.74	0.00	599.76	0.49	1.79	1336.96	1144.44
2541.000	5.00	595.30	594.90	588.00	870.00	596.96	0.00	597.14	3.42	3.96	573.43	470.69
2541.000	5.00	595.30	594.90	586.00	740.00	598.68	0.00	598.91	0.68	2.00	1100.16	898.64
2541.000	5.00	595.30	594.90	586.00	670.00	599.54	0.00	599.55	0.36	1.56	1264.59	1087.46
2541.000	5.00	595.30	594.90	586.00	800.00	599.82	0.00	599.84	0.47	1.76	1367.76	1171.67
2591.000	50.00	0.00	0.00	585.00	870.00	597.06	0.00	597.16	3.57	3.94	574.47	473.90
2591.000	50.00	0.00	0.00	586.00	740.00	598.69	0.00	598.92	0.66	2.00	1101.13	899.56
2591.000	50.00	0.00	0.00	588.00	670.00	599.54	0.00	599.56	0.36	1.56	1282.69	1085.44
2591.000	50.00	0.00	0.00	586.00	800.00	599.83	0.00	599.83	0.47	1.75	1382.50	1172.70
2941.000	350.00	0.00	0.00	587.00	870.00	597.34	0.00	597.27	4.41	2.62	865.24	723.55
2941.000	350.00	0.00	0.00	587.00	740.00	599.02	0.00	598.97	0.46	1.87	1167.41	1093.49
2941.000	350.00	0.00	0.00	587.00	670.00	599.56	0.00	599.57	0.29	1.38	1253.50	1243.97
2941.000	350.00	0.00	0.00	587.00	800.00	599.65	0.00	599.86	0.37	1.58	1301.94	1315.25
3287.000	346.00	0.00	0.00	588.20	870.00	597.47	0.00	597.39	5.31	3.43	592.47	477.79
3287.000	346.00	0.00	0.00	590.20	740.00	599.14	0.00	598.97	1.14	2.64	896.08	680.67
3287.000	346.00	0.00	0.00	588.20	670.00	599.87	0.00	599.89	0.66	1.65	1021.38	823.57
3287.000	346.00	0.00	0.00	588.20	800.00	599.66	0.00	599.80	0.80	1.65	1080.15	891.78
3687.000	209.00	595.50	593.50	588.20	870.00	597.29	0.00	597.40	5.26	3.42	564.67	379.45
3687.000	209.00	595.50	593.50	588.20	740.00	599.00	0.00	599.02	1.15	2.62	905.59	696.71
3687.000	209.00	595.50	593.50	588.20	670.00	599.82	0.00	599.83	0.64	1.45	1082.54	836.36
3687.000	209.00	595.50	593.50	588.20	800.01	599.72	0.00	599.74	0.73	1.61	1091.18	904.79
3776.000	289.00	0.00	0.00	589.00	870.00	597.45	0.00	597.54	4.07	3.06	612.45	451.04
3776.000	289.00	0.00	0.00	589.00	740.00	599.02	0.00	599.06	1.03	2.72	929.59	730.52
3776.000	289.00	0.00	0.00	587.00	670.00	599.85	0.00	599.85	0.62	1.37	1084.11	803.61
3776.000	289.00	0.00	0.00	589.00	800.00	599.7	0.00	599.96	0.73	1.54	1113.16	936.36
3843.000	67.00	595.00	594.90	589.00	870.00	597.49	0.00	597.50	3.91	3.01	623.38	440.07
3843.000	67.00	595.00	594.90	589.00	740.00	599.08	0.00	599.10	0.99	1.73	940.24	741.96
3843.000	67.00	595.00	594.90	589.00	670.00	599.69	0.00	599.70	0.58	1.35	1063.37	678.39
3843.000	67.00	595.00	594.90	589.00	800.00	599.6	0.00	599.72	0.71	1.52	1126.51	952.0
4234.000	391.00	0.00	0.00	588.30	870.00	597.00	0.00	597.70	4.40	3.31	648.23	479.29
4234.000	391.00	0.00	0.00	588.30	1010.00	599.11	0.00	599.19	2.62	2.81	674.18	624.43
4234.000	391.00	0.00	0.00	588.30	1040.00	599.70	0.00	599.77	2.10	2.61	751.27	717.56
4234.000	391.00	0.00	0.00	586.30	1250.00	600.02	0.00	600.10	2.64	2.98	792.36	769.60
4294.000	60.00	596.00	594.50	588.30	880.00	597.74	0.00	597.86	4.16	3.24	644.39	491.00
4294.000	60.00	596.00	594.50	588.30	1110.00	599.15	0.00	599.26	2.35	2.76	883.46	823.35
4294.000	60.00	596.00	594.50	588.30	1070.00	599.78	0.00	599.83	2.03	2.56	761.24	736.05
4294.000	60.00	596.00	594.50	588.30	1250.00	600.11	0.00	600.19	2.35	2.94	803.17	785.46
4610.000	316.00	0.00	0.00	586.60	870.00	597.06	0.00	597.03	4.50	3.37	557.67	410.69
4610.000	316.00	0.00	0.00	588.60	1010.00	599.26	0.00	599.35	2.23	2.91	636.53	580.59
4610.000	316.00	0.00	0.00	586.60	1150.00	599.96	0.00	599.92	2.27	2.70	715.05	690.82
4610.000	316.00	0.00	0.00	586.60	1250.00	600.10	0.00	600.22	2.21	3.07	759.17	745.06

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRILS	ES	10K*S	VCH	AREA	.01K
4678.000	68.00	596.30	594.50	588.60	880.00	597.98	0.00	598.11	4.31	3.29	471.71	424.00
4678.000	68.00	596.30	594.50	588.60	1010.00	599.33	0.00	599.42	2.74	2.87	647.96	610.48
4678.000	68.00	596.30	594.50	588.60	1040.00	599.92	0.00	600.00	2.19	2.66	724.34	702.26
4678.000	68.00	596.30	594.50	588.60	1250.00	600.27	0.00	600.36	2.72	3.03	769.61	756.54
4853.000	175.00	0.00	0.00	590.00	915.00	597.89	0.00	598.41	9.61	5.30	157.80	295.21
4853.000	175.00	0.00	0.00	590.00	1290.00	599.36	0.00	599.86	12.29	7.10	161.64	367.95
4853.000	175.00	0.00	0.00	590.00	1470.00	599.60	0.00	600.51	15.46	7.66	191.91	400.65
4853.000	175.00	0.00	0.00	590.00	1810.00	599.77	0.00	601.10	19.30	9.26	195.42	411.96

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FORM 1411 OFFPRINTED BY ROTARY MANIFOLD FORMS

ECORSE RIVER

SUMMARY PRINTOUT TABLE 150

SECNO	R	C.SEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
1.000	960.00	590.65	0.00	0.00	0.65	478.13	0.00
1.000	1325.00	591.10	0.00	0.00	1.10	478.22	0.00
1.000	1490.00	591.27	0.00	0.00	1.27	478.25	0.00
1.000	1730.00	591.50	0.00	0.00	1.50	478.30	0.00
2.000	960.00	591.33	0.00	0.68	0.00	148.27	600.00
2.000	1325.00	591.81	0.00	0.71	0.00	148.36	600.00
2.000	1490.00	591.99	0.00	0.72	0.00	148.40	600.00
2.000	1730.00	592.23	0.00	0.72	0.00	148.46	600.00
3.000	960.00	592.21	0.00	0.88	0.00	50.00	800.00
3.000	1325.00	592.80	0.00	1.19	0.00	50.00	800.00
3.000	1490.00	593.13	0.00	1.20	0.00	50.00	800.00
3.000	1730.00	593.55	0.00	1.33	0.00	50.00	800.00
4.000	960.00	592.26	0.00	0.66	0.00	26.50	50.00
4.000	1325.00	593.56	0.00	0.53	0.00	26.50	50.00
4.000	1490.00	593.26	0.00	0.53	0.00	26.50	50.00
4.000	1730.00	593.60	0.00	0.04	0.00	26.50	50.00
5.000	960.00	592.96	0.00	0.68	0.00	26.50	70.00
5.000	1325.00	594.41	0.00	1.45	0.00	26.50	70.00
5.000	1490.00	595.14	0.00	1.90	0.00	26.50	70.00
5.000	1730.00	596.55	0.00	2.96	0.00	224.00	70.00
6.000	960.00	593.30	0.00	0.35	0.00	227.00	100.00
6.000	1325.00	594.91	0.00	0.50	0.00	227.00	100.00
6.000	1490.00	595.59	0.00	0.56	0.00	227.00	100.00
6.000	1730.00	596.57	0.00	0.02	0.00	227.00	100.00
7.000	960.00	593.37	0.00	0.07	0.00	190.00	250.00
7.000	1325.00	594.97	0.00	0.06	0.00	190.00	250.00
7.000	1490.00	595.76	0.00	0.04	0.00	190.00	250.00
7.000	1730.00	596.91	0.00	0.04	0.00	90.40	250.00
8.000	960.00	593.35	0.00	-0.03	0.00	30.00	300.00
8.000	1325.00	594.91	0.00	-0.06	0.00	30.00	300.00
8.000	1490.00	595.66	0.00	-0.10	0.00	30.00	300.00
8.000	1730.00	596.52	0.00	-0.10	0.00	50.00	300.00
9.000	915.00	593.40	0.00	0.04	0.00	26.00	50.00
9.000	1290.00	596.90	0.00	-0.50	0.00	26.00	50.00
9.000	1470.00	595.63	0.00	-0.03	0.00	26.00	50.00
9.000	1810.00	596.43	0.00	-0.09	0.00	26.00	50.00
10.000	915.00	593.25	0.00	0.05	0.00	26.00	90.00
10.000	1290.00	596.77	0.00	1.27	0.00	26.00	90.00
10.000	1470.00	596.42	0.00	0.69	0.00	26.00	90.00
10.000	1810.00	596.43	0.00	0.00	0.00	26.00	90.00
11.000	915.00	594.49	0.00	0.25	0.00	125.00	50.00
11.000	1290.00	596.53	0.00	0.35	0.00	124.00	90.00
11.000	1470.00	596.77	0.00	0.43	0.00	125.00	90.00
11.000	1810.00	596.21	0.00	0.69	0.00	125.00	90.00

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FORM 1411-OD PRINTED BY ROTARY MANIFOLD FORMS

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
12.000	915.00	595.10	0.00	0.61	0.00	75.00	1425.00
12.000	1290.00	597.01	0.00	0.48	0.00	75.00	1425.00
12.000	1470.00	597.34	0.10	0.56	0.00	75.00	1425.00
12.000	1810.00	597.85	0.00	0.73	0.00	75.00	1425.00
13.000	915.00	595.07	0.00	-0.03	0.00	25.50	100.00
13.000	1290.00	596.93	0.00	-0.08	0.00	25.50	100.00
13.000	1470.00	597.23	0.00	-0.10	0.00	25.50	100.00
13.000	1810.00	597.69	0.00	-0.16	0.00	25.50	100.00
68.000	915.00	595.32	0.00	0.25	0.00	25.50	68.00
68.000	1290.00	597.59	0.00	0.65	0.00	25.50	68.00
68.000	1470.00	598.11	0.00	0.86	0.00	25.50	68.00
68.000	1810.00	598.67	0.00	1.08	0.00	990.00	68.00
189.000	915.00	595.33	0.00	0.01	0.00	25.50	189.00
189.000	1290.00	597.45	0.00	0.01	0.00	25.50	189.00
189.000	1470.00	598.13	0.00	0.01	0.00	25.50	121.00
189.000	1810.00	598.68	0.00	0.01	0.00	1000.00	121.00
253.000	915.00	595.50	0.00	0.22	0.00	25.50	64.00
253.000	1290.00	596.22	0.00	0.62	0.00	25.50	64.00
253.000	1470.00	598.67	0.00	0.74	0.00	25.50	64.00
253.000	1810.00	599.26	0.00	0.58	0.00	1000.00	64.00
353.000	915.00	595.80	0.00	0.24	0.00	118.55	100.00
353.000	1290.00	596.53	0.00	0.30	0.00	125.50	100.00
353.000	1470.00	599.22	0.00	0.55	0.00	125.50	100.00
353.000	1810.00	599.40	0.00	0.14	0.00	125.50	100.00
1832.000	870.00	596.10	0.00	0.30	0.00	155.99	1479.00
1832.000	740.00	596.70	0.00	0.15	0.00	257.00	1479.00
1832.000	670.00	597.44	0.00	0.19	0.00	257.00	1479.00
1832.000	600.00	598.37	0.00	0.26	0.00	257.00	1479.00
2132.000	870.00	596.38	0.00	0.28	0.00	156.39	350.00
2132.000	740.00	598.74	0.00	0.04	0.00	257.00	350.00
2132.000	670.00	599.49	0.00	0.02	0.00	257.00	350.00
2132.000	600.00	599.59	0.00	0.03	0.00	257.00	350.00
2536.000	670.00	596.75	0.00	0.39	0.00	275.00	406.00
2536.000	740.00	598.80	0.00	0.06	0.00	278.00	406.00
2536.000	670.00	599.47	0.00	0.04	0.00	278.00	406.00
2536.000	800.00	599.74	0.00	0.04	0.00	278.00	406.00
2541.000	670.00	596.78	0.00	0.24	0.00	278.00	5.00
2541.000	740.00	598.38	0.00	0.02	0.00	278.00	5.00
2541.000	670.00	599.54	0.00	0.07	0.00	278.00	5.00
2541.000	800.00	599.82	0.00	0.02	0.00	278.00	5.00
2591.000	670.00	597.30	0.00	0.03	0.00	275.54	50.00
2591.000	740.00	598.49	0.00	0.02	0.00	278.00	50.00
2591.000	670.00	599.54	0.00	0.03	0.00	278.00	50.00
2591.000	800.00	599.83	0.00	0.00	0.00	278.00	50.00

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FORM (41).00-PRINTED BY ROTARY MANIFOLD FORMS

SECLO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
2941.000	870.00	597.23	0.00	0.22	0.00	167.30	350.00
2941.000	740.00	598.92	0.00	0.04	0.00	167.00	350.00
2941.000	670.00	599.56	0.00	0.02	0.00	167.00	350.00
2941.000	800.00	599.45	0.00	0.02	0.00	167.00	350.00
3287.000	870.00	597.27	0.00	0.05	0.00	200.00	346.00
3287.000	740.00	598.94	0.00	0.02	0.00	200.00	346.00
3287.000	670.00	599.57	0.00	0.01	0.00	200.00	346.00
3287.000	800.00	599.36	0.00	0.02	0.00	200.00	346.00
3487.000	870.00	597.29	0.00	0.01	0.00	200.00	200.00
3487.000	740.00	598.99	0.00	0.05	0.00	200.00	200.00
3487.000	670.00	599.62	0.00	0.05	0.00	200.00	200.00
3487.000	800.00	599.92	0.00	0.05	0.00	200.00	200.00
3776.000	870.00	597.43	0.00	0.16	0.00	200.00	269.00
3776.000	740.00	599.02	0.00	0.03	0.00	200.00	269.00
3776.000	670.00	599.64	0.00	0.02	0.00	200.00	269.00
3776.000	800.00	599.94	0.00	0.02	0.00	200.00	269.00
3843.000	870.00	597.49	0.00	0.05	0.00	200.00	67.00
3843.000	740.00	599.08	0.00	0.05	0.00	200.00	67.00
3843.000	670.00	599.69	0.00	0.05	0.00	200.00	67.00
3843.000	800.00	600.00	0.00	0.06	0.00	200.00	67.00
4234.000	880.00	597.65	0.00	0.14	0.00	150.00	391.00
4234.000	1010.00	599.11	0.00	0.05	0.00	150.00	391.00
4234.000	1040.00	599.70	0.00	0.02	0.00	150.00	391.00
4234.000	1250.00	600.02	0.00	0.02	0.00	150.00	391.00
4294.000	880.00	597.74	0.00	0.11	0.00	150.00	60.00
4294.000	1010.00	599.19	0.00	0.08	0.00	150.00	60.00
4294.000	1040.00	599.78	0.00	0.05	0.00	150.00	60.00
4294.000	1250.00	600.11	0.00	0.09	0.00	150.00	60.00
4610.000	880.00	597.86	0.00	0.13	0.00	150.00	316.00
4610.000	1010.00	599.26	0.00	0.06	0.00	150.00	316.00
4610.000	1040.00	599.85	0.00	0.06	0.00	150.00	316.00
4610.000	1251.00	600.18	0.00	0.08	0.00	150.00	316.00
4673.000	880.00	597.91	0.00	0.11	0.00	150.00	58.00
4673.000	1010.00	599.33	0.00	0.07	0.00	150.00	58.00
4673.000	1040.00	599.92	0.00	0.06	0.00	150.00	58.00
4673.000	1250.00	600.27	0.00	0.06	0.00	150.00	58.00
4853.000	910.00	597.99	0.00	-0.09	0.00	80.00	175.00
4853.000	1393.00	599.64	0.00	-0.25	0.00	75.00	175.00
4853.000	1670.00	599.67	0.00	-0.33	0.00	20.00	175.00
4853.000	1010.00	599.77	0.00	-0.30	0.00	20.00	175.00

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HECR RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

N.BRANCH ECORSE DBN.HTS.

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	LG	TWAVE	VCH	AREA	WTI
4853.000	0.00	0.00	0.00	590.00	1470.00	599.60	0.00	600.51	18.30	7.66	192.00	343.65
5181.000	328.00	607.00	599.40	590.40	1470.00	601.32	0.00	602.02	12.33	6.73	218.49	418.69
5336.000	155.00	0.00	0.00	591.10	1470.00	602.17	0.00	602.29	2.99	2.36	620.42	850.34
5436.000	150.00	0.00	0.00	591.50	1470.00	602.22	0.00	602.36	4.51	3.26	646.01	692.37
5968.000	482.00	0.00	0.00	592.60	1470.00	602.43	0.00	602.58	4.78	4.27	1309.63	672.13
5969.000	1.00	596.90	595.60	592.60	1470.00	602.49	0.00	602.59	7.49	6.10	1263.84	537.01
5983.000	14.00	596.90	595.60	592.60	1470.00	602.50	0.00	602.60	7.43	6.09	1267.10	538.71
5984.000	1.00	0.00	0.00	592.60	1470.00	602.40	0.00	602.62	4.68	4.22	1325.35	681.02
6156.000	172.00	0.00	0.00	591.80	1470.00	602.56	0.00	602.69	2.08	2.44	1416.03	1019.97
6297.000	141.00	0.00	0.00	591.80	1470.00	602.70	0.00	602.72	0.94	2.02	1936.75	1519.50
6298.000	1.00	598.00	597.20	591.80	1470.00	602.70	0.00	602.72	1.13	1.78	1920.42	1581.49
6314.000	16.00	598.00	597.20	591.80	1470.00	602.71	0.00	602.72	1.13	1.77	1930.07	1385.35
6315.000	1.00	0.00	0.00	591.80	1470.00	602.70	0.00	602.73	0.93	2.01	1963.87	1527.27
6496.000	181.00	0.00	0.00	592.00	1470.00	602.67	0.00	602.82	4.51	3.50	1275.19	691.65
6662.000	166.00	0.00	0.00	592.10	1470.00	602.66	0.00	602.90	1.46	2.54	1567.26	1209.66
6663.000	1.00	598.50	597.20	592.10	1470.00	602.66	0.00	602.90	2.24	2.39	1481.46	982.19
6679.000	16.00	597.20	597.20	592.10	1470.00	602.87	0.00	602.90	1.71	2.28	1578.60	1123.30
6680.000	1.00	0.00	0.00	592.10	1470.00	602.67	0.00	602.90	1.47	2.51	1571.43	1213.89
6866.000	186.00	0.00	0.00	592.40	1470.00	602.90	0.00	602.93	1.56	2.01	1191.51	1164.28
7207.000	141.00	0.00	0.00	592.80	1470.00	602.93	0.00	602.93	1.21	2.16	1437.20	1227.94

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRINS	EG	TOK-S	VCH	AREA	.01K
7008.000	1.00	599.00	597.70	592.80	1470.00	602.92	0.00	602.96	2.42	2.37	1211.16	945.14
7024.000	16.00	599.00	597.70	592.80	1470.00	602.93	0.00	602.96	2.42	2.37	1211.02	944.97
7025.000	1.00	0.00	0.00	592.80	1470.00	602.94	0.00	602.96	1.20	2.16	1440.32	1342.24
7186.000	161.00	0.00	0.00	592.90	1470.00	602.95	0.00	603.00	2.08	2.20	1019.34	1316.54
7362.000	176.00	0.00	0.00	593.00	1470.00	602.99	0.00	603.03	1.35	2.29	1181.34	1265.92
7363.000	1.00	598.80	598.00	593.00	1470.00	603.00	0.00	603.03	1.78	2.09	1126.21	1101.05
7379.000	16.00	598.80	599.00	593.00	1470.00	603.00	0.00	603.03	1.77	2.09	1129.73	1103.38
7380.000	1.00	0.00	0.00	593.00	1470.00	603.00	0.00	603.04	1.34	2.28	1104.82	1271.60
7526.000	146.00	0.00	0.00	593.30	1470.00	603.02	0.00	603.07	2.76	1.98	899.29	885.09
7692.000	166.00	0.00	0.00	593.70	1470.00	603.05	0.00	603.15	3.83	3.69	805.56	750.74
7693.100	1.00	598.00	598.20	593.70	1470.00	603.05	0.00	603.15	3.94	3.66	769.93	803.29
7709.000	16.00	599.00	598.20	593.70	1470.00	603.06	0.00	603.16	3.87	3.52	772.96	806.70
7710.000	1.00	0.00	0.00	593.70	1470.00	603.06	0.00	603.17	3.81	3.68	807.35	753.01
8016.000	306.00	0.00	0.00	593.80	1470.00	603.16	0.00	603.41	8.84	4.24	442.35	500.15
8182.000	166.00	0.00	0.00	593.80	1470.00	603.44	0.00	603.55	4.13	3.96	722.90	723.65
8183.000	1.00	599.50	598.60	593.80	1470.00	603.44	0.00	603.55	7.39	4.10	677.95	552.10
8199.000	16.00	599.30	598.60	593.80	1470.00	603.55	0.00	603.56	7.07	4.09	670.57	552.06
8200.000	1.00	0.00	0.00	593.80	1470.00	603.44	0.00	603.57	5.25	4.47	724.06	641.60
8316.000	116.00	0.00	0.00	593.70	1470.00	603.49	0.00	603.65	4.73	3.40	629.48	676.16
8616.000	300.00	0.00	0.00	593.80	1470.00	603.63	0.00	603.76	6.29	3.64	633.24	620.31
8710.000	100.00	0.00	0.00	593.90	1470.00	603.63	0.00	603.86	5.73	3.64	550.80	615.57
8771.000	95.00	0.00	0.00	593.90	1470.00	603.78	0.00	603.91	4.66	3.36	661.39	679.40
8862.000	91.00	0.00	0.00	593.90	1470.00	603.83	0.00	603.95	5.33	3.59	779.56	605.30
8863.000	1.00	600.50	598.50	593.90	1470.00	603.83	0.00	603.96	9.44	3.64	645.66	472.41
8928.000	65.00	601.90	599.90	593.90	1470.00	603.86	0.00	604.06	11.12	4.76	578.03	440.75
9029.000	1.00	0.00	0.00	593.90	1470.00	604.02	0.00	604.39	8.26	4.45	812.15	350.97
9155.000	226.00	0.00	0.00	594.30	1470.00	604.00	0.00	604.17	5.75	3.94	955.54	759.33
9396.000	241.00	0.00	0.00	594.60	1470.00	604.17	0.00	604.27	4.63	3.84	1110.40	732.02
9397.000	1.00	600.50	599.70	594.60	1470.00	604.15	0.00	604.28	5.45	3.56	1191.23	629.12

PRINTED IN U.S.A.
FORM 1611-98 PRINTED BY HOTSKY MANIFOLD FORMS

SECNO	XLCH	ELTRO	ELLC	ELMIN	Q	CHSEL	CRIBS	EG	TOKAS	VCH	AREA	.01K
9413.000	16.00	600.50	599.70	594.60	1470.00	604.20	0.00	604.20	5.43	3.55	1103.64	630.94
9414.000	1.00	0.00	0.00	594.60	1470.00	604.20	0.00	604.29	3.90	3.79	1125.57	744.81
9580.000	166.00	0.00	0.00	595.20	1470.00	604.25	0.00	604.38	5.18	3.47	793.24	646.16
9746.000	166.00	0.00	0.00	595.70	1470.00	604.35	0.00	604.47	5.20	4.08	904.47	644.36
9747.000	1.00	601.30	600.30	595.70	1470.00	604.39	0.00	604.48	7.74	3.87	884.39	528.40
9763.000	16.00	601.30	600.30	595.70	1470.00	604.39	0.00	604.49	7.66	3.85	887.51	531.00
9764.000	1.00	0.00	0.00	595.70	1470.00	604.30	0.00	604.50	5.02	4.02	917.38	655.87
9923.000	161.00	0.00	0.00	595.00	1470.00	604.50	0.00	604.59	4.10	3.00	825.37	720.36

PRINTED IN U.S.A.
FORM 1411-GE PRINTED BY ROTARY MANIFOLD FORMS

N.BRANCH ECORSE D3N.HTS.

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CUSEL	DIFWSP	DIFWSX	DIFKHS	TOPWID	XLCH
4853.000	1470.00	599.60	0.00	0.00	0.00	20.00	0.00
5181.000	1470.00	601.32	0.00	1.72	0.00	23.00	328.00
5336.000	1470.00	602.17	0.00	0.85	0.02	120.00	155.00
5486.000	1470.00	602.22	0.00	0.04	0.00	177.00	150.00
5968.000	1470.00	602.45	0.00	0.23	0.00	370.00	482.00
5969.000	1470.00	602.49	0.02	0.04	0.00	370.00	1.00
5983.000	1470.00	602.50	0.00	0.01	0.00	370.00	14.00
5984.000	1470.00	602.48	0.00	-0.01	0.00	370.00	1.00
6156.000	1470.00	602.64	0.00	0.15	0.00	397.00	172.00
6297.000	1470.00	602.70	0.00	0.06	0.00	440.00	141.00
6298.000	1470.00	602.70	0.00	0.01	0.00	440.00	1.00
6314.000	1470.00	602.71	0.00	0.00	0.00	440.00	16.00
6315.000	1470.00	602.70	0.00	-0.00	0.00	440.00	1.00
6496.000	1470.00	602.47	0.00	-0.03	0.00	362.00	181.00
6662.000	1470.00	602.36	0.00	0.19	0.00	440.00	166.00
6663.000	1470.00	602.86	0.00	0.01	0.00	440.00	1.00
6679.000	1470.00	602.87	0.00	0.01	0.00	440.00	16.00
6680.000	1470.00	602.87	0.00	-0.00	0.00	440.00	1.00
6866.000	1470.00	602.93	0.00	0.03	0.00	289.00	186.00
7027.000	1470.00	602.93	0.00	0.00	0.00	243.00	161.00
7028.000	1470.00	602.92	0.00	-0.00	0.00	243.00	1.00
7024.000	1470.00	602.93	0.00	0.00	0.00	285.00	16.00
7025.000	1470.00	602.94	0.00	0.01	0.00	285.00	1.00
7186.000	1470.00	602.94	0.00	0.00	0.00	234.00	161.00
7362.000	1470.00	602.90	0.00	0.04	0.00	290.00	176.00
7363.000	1470.00	603.00	0.00	0.00	0.00	290.00	1.00
7379.000	1470.00	603.00	0.00	0.00	0.00	290.00	16.00

PRINTED IN U.S.A.

FORM 7411-60-PRINTED BY ROTARY MANIFOLD FORM

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
7380.000	1470.00	603.00	0.00	-0.00	0.00	250.00	1.00
7526.000	1470.00	603.02	0.00	0.02	0.00	230.00	146.00
7692.000	1470.00	603.05	0.00	0.02	0.00	200.00	166.00
7693.000	1470.00	603.05	0.00	0.01	0.00	200.00	1.00
7709.000	1470.00	603.06	0.00	0.01	0.00	200.00	16.00
7710.000	1470.00	603.06	0.00	-0.00	0.00	200.00	1.00
8016.000	1470.00	603.16	0.00	0.09	0.00	120.00	306.00
8182.000	1470.00	603.44	0.00	0.28	0.00	140.00	166.00
8183.000	1470.00	603.44	0.00	-0.00	0.00	140.00	1.00
8199.000	1470.00	603.45	0.00	0.01	0.00	140.00	16.00
8200.000	1470.00	603.44	0.00	-0.01	0.00	140.00	1.00
8316.000	1470.00	603.49	0.00	0.05	0.00	137.00	116.00
8616.000	1470.00	603.53	0.00	0.13	0.00	155.00	300.00
8716.000	1470.00	603.60	0.00	0.04	0.00	115.00	100.00
8771.000	1470.00	603.78	0.00	0.11	0.00	139.00	55.00
8862.000	1470.00	603.85	0.00	0.07	0.00	215.00	91.00
8863.000	1470.00	603.85	0.00	-0.00	0.00	215.00	1.00
8928.000	1470.00	603.88	0.00	0.03	0.00	215.00	65.00
8929.000	1470.00	604.00	0.00	0.13	0.00	215.00	1.00
9155.000	1470.00	604.06	0.00	0.07	0.00	356.00	226.00
9396.000	1470.00	604.17	0.00	0.09	0.00	334.00	241.00
9397.000	1470.00	604.19	0.00	0.03	0.00	334.00	1.00
9413.000	1470.00	604.20	0.00	0.01	0.00	334.00	16.00
9414.000	1470.00	604.20	0.00	-0.01	0.00	334.00	1.00
9580.000	1470.00	604.25	0.00	0.06	0.00	295.00	166.00
9746.000	1470.00	604.35	0.00	0.10	0.00	305.00	166.00
9747.000	1470.00	604.38	0.00	0.03	0.00	305.00	1.00
9763.000	1470.00	604.39	0.00	0.01	0.00	305.00	16.00
9764.000	1470.00	604.38	0.00	-0.01	0.00	305.00	1.00

PRINTED IN U.S.A.
FORM 1-11-00 PRINTED BY ROTARY MANIFOLD FORMS

SECNO	Q	CXSEL	DIFJSP	DIFWSX	DIFKUS	TOPWID	XLCH
9925.000	1470.00	604.50	0.00	0.12	0.00	236.00	161.00

SUMMARY OF ERRORS

PRINTED IN U.S.A.

FORM 1401-GD PRINTED BY ROTARY MANIFOLD FORMS

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     HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
     ERROR CORR - 01
     MODIFICATION - 50,51,52
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PRINTED IN U.S.A.
FORM 1411-GD PRINTED BY ROTARY MANIFOLD FORMS

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HEC2 RELEASE DATED NOV.76 UPDATED FEB.1977
ERROR CORR - 01
MODIFICATION - 50,51,52

****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

N.BR.ECORSE CR.LINC.PK.

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	C SEL	CRIME	SS	TOPWS	VCH	AREA	K.TK
	10636.000	0.00	0.00	0.00	572.47	850.00	582.06	0.00	582.10	2.03	1.69	503.53	596.02
	10636.000	0.00	0.00	0.00	572.47	1250.00	583.19	0.00	583.25	2.29	1.96	637.94	826.22
	10636.000	0.00	0.00	0.00	572.47	1410.00	583.53	0.00	583.60	2.44	2.07	679.97	901.82
	10636.000	0.00	0.00	0.00	572.47	1840.00	584.43	0.00	584.51	2.64	2.30	800.72	1091.69
	11536.000	900.00	0.00	0.00	572.00	850.00	582.26	0.00	582.35	3.43	2.41	352.78	459.18
	11536.000	900.00	0.00	0.00	572.00	1250.00	583.42	0.00	583.55	4.36	2.93	426.49	598.32
	11536.000	900.00	0.00	0.00	572.00	1410.00	583.77	0.00	583.92	4.74	3.13	453.18	647.76
	11536.000	900.00	0.00	0.00	572.00	1840.00	584.69	0.00	584.84	5.35	3.58	582.00	795.14
	12274.000	738.00	0.00	0.00	573.50	850.00	582.45	0.00	582.52	1.22	1.90	570.29	749.74
	12274.000	738.00	0.00	0.00	573.50	1250.00	583.67	0.00	583.74	1.52	2.33	710.98	1012.54
	12274.000	738.00	0.00	0.00	573.50	1410.00	584.05	0.00	584.13	1.65	2.49	767.76	1099.15
	12274.000	738.00	0.00	0.00	573.50	1840.00	585.02	0.00	585.13	1.87	2.83	915.47	1344.57
	12324.000	50.00	0.00	0.00	573.60	850.00	582.45	0.00	582.51	1.52	1.90	429.22	629.08
	12324.000	50.00	0.00	0.00	573.60	1250.00	583.60	0.00	583.75	1.90	2.21	787.21	1155.10
	12324.000	50.00	0.00	0.00	573.60	1410.00	584.07	0.00	584.14	1.99	2.35	822.47	1195.65
	12324.000	50.00	0.00	0.00	573.60	1840.00	585.05	0.00	585.15	1.59	2.67	965.42	1440.94
	12325.000	1.00	580.70	581.40	573.60	850.00	582.45	0.00	582.52	2.59	2.24	380.01	527.67
	12325.000	1.00	580.40	581.80	573.60	1250.00	583.67	0.00	583.77	3.41	2.70	505.16	567.24
	12325.000	1.00	580.40	581.80	573.60	1410.00	584.05	0.00	584.16	3.53	2.81	640.67	900.61
	12325.000	1.00	580.40	581.80	573.60	1840.00	585.04	0.00	585.16	3.53	3.03	783.56	782.44
	12367.000	42.00	580.60	581.80	573.60	850.00	582.46	0.00	582.53	2.59	2.24	380.01	527.67
	12367.000	42.00	580.40	581.80	573.60	1250.00	583.69	0.00	583.79	3.40	2.70	505.98	526.13
	12367.000	42.00	580.40	581.80	573.60	1410.00	584.08	0.00	584.18	3.50	2.81	641.59	4.1.50
	12367.000	42.00	580.40	581.80	573.60	1840.00	585.06	0.00	585.18	3.51	3.03	784.70	784.13
	12383.000	1.00	0.00	0.00	573.60	850.00	582.48	0.00	582.54	1.51	1.98	430.08	691.24
	12383.000	1.00	0.00	0.00	573.60	1250.00	583.74	0.00	583.80	1.26	2.19	775.56	1114.85
	12383.000	1.00	0.00	0.00	573.60	1410.00	584.12	0.00	584.19	1.36	2.33	890.60	1290.49
	12383.000	1.00	0.00	0.00	573.60	1840.00	585.10	0.00	585.19	1.56	2.65	972.20	1479.56
	12418.000	50.00	0.00	0.00	573.60	850.00	582.50	0.00	582.55	1.03	1.01	395.34	835.70
	12418.000	50.00	0.00	0.00	573.60	1250.00	583.75	0.00	583.81	1.25	2.18	778.01	1116.90
	12418.000	50.00	0.00	0.00	573.60	1410.00	584.13	0.00	584.20	1.35	2.32	833.41	9214.04
	12418.000	50.00	0.00	0.00	573.60	1840.00	585.11	0.00	585.20	1.54	2.64	975.35	1460.50

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FORM 1411.00 PRINTED BY ROTARY MANIFOLD FORMS

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CHSEL	CRIMS	EG	TOK*S	VCH	AREA	.01K
	13295.000	877.00	0.00	0.00	573.30	850.00	582.62	0.00	582.68	2.32	2.01	507.68	558.23
1	13295.000	877.00	0.00	0.00	573.30	1250.00	583.69	0.00	583.96	2.57	2.36	803.92	779.07
2	13295.000	877.00	0.00	0.00	573.30	1410.00	584.27	0.00	584.56	2.65	2.48	956.94	866.57
3	13295.000	877.00	0.00	0.00	573.30	1840.00	585.86	0.00	585.97	2.65	2.77	1352.39	1129.29
5	13676.000	381.00	0.00	0.00	572.90	850.00	582.69	0.00	582.77	1.81	2.38	666.94	632.41
6	13676.000	381.00	0.00	0.00	572.90	1250.00	583.96	0.00	584.06	2.15	2.85	914.40	852.05
7	13676.000	381.00	0.00	0.00	572.90	1410.00	584.35	0.00	584.46	2.32	3.03	990.91	927.92
8	13676.000	381.00	0.00	0.00	572.90	1840.00	585.54	0.00	585.69	2.65	3.45	1182.81	1129.57
10	13726.000	50.00	0.00	0.00	573.00	850.00	582.68	0.00	582.79	2.16	2.84	488.33	578.26
11	13726.000	50.00	0.00	0.00	573.00	1250.00	583.94	0.00	584.10	2.80	3.50	700.96	747.65
12	13726.000	50.00	0.00	0.00	573.00	1410.00	584.33	0.00	584.51	3.05	3.74	767.12	807.05
13	13726.000	50.00	0.00	0.00	573.00	1840.00	585.32	0.00	585.54	3.60	4.30	954.65	969.90
15	13727.000	1.00	581.40	579.60	573.00	850.00	582.31	0.00	582.64	0.34	4.04	286.11	294.26
16	13727.000	1.00	581.40	579.60	573.00	1250.00	583.87	0.00	584.17	9.00	4.65	499.08	416.76
17	13727.000	1.00	581.40	579.60	573.00	1410.00	584.26	0.00	584.58	9.32	4.88	565.28	461.79
18	13727.000	1.00	581.40	579.60	573.00	1840.00	585.25	0.00	585.61	9.75	5.34	733.62	589.20
20	13964.000	237.00	581.40	579.60	573.00	850.00	582.85	0.00	583.05	7.42	3.88	321.53	342.06
21	13964.000	237.00	581.40	579.60	573.00	1250.00	584.11	0.00	584.38	7.92	4.44	549.92	444.19
22	13964.000	237.00	581.40	579.60	573.00	1410.00	584.51	0.00	584.80	8.20	4.66	607.86	492.32
23	13964.000	237.00	581.40	579.60	573.00	1840.00	585.52	0.00	585.84	8.64	5.11	778.36	625.97
25	13965.000	1.00	0.00	0.00	573.00	850.00	582.99	0.00	583.09	1.91	2.72	539.35	615.60
26	13965.000	1.00	0.00	0.00	573.00	1250.00	584.25	0.00	584.42	2.45	3.34	757.74	798.45
27	13965.000	1.00	0.00	0.00	573.00	1410.00	584.66	0.00	584.96	2.66	3.58	825.52	861.45
28	13965.000	1.00	0.00	0.00	573.00	1840.00	585.67	0.00	585.87	3.18	4.11	994.52	1032.21
30	14019.000	50.00	0.00	0.00	573.00	850.00	583.04	0.00	583.11	1.40	2.34	547.73	717.46
31	14019.000	50.00	0.00	0.00	573.00	1250.00	584.36	0.00	584.45	1.87	2.76	771.15	936.07
32	14019.000	50.00	0.00	0.00	573.00	1410.00	584.77	0.00	584.87	1.99	2.94	841.16	1054.19
33	14019.000	50.00	0.00	0.00	573.00	1840.00	585.76	0.00	585.91	2.03	3.31	1015.35	1292.42
35	14287.000	272.00	0.00	0.00	574.50	850.00	583.09	0.00	583.16	2.58	2.14	396.84	529.53
36	14287.000	272.00	0.00	0.00	574.50	1250.00	584.45	0.00	584.50	1.81	2.04	855.36	928.07
37	14287.000	272.00	0.00	0.00	574.50	1410.00	584.87	0.00	584.93	1.69	2.03	994.14	1085.72
38	14287.000	272.00	0.00	0.00	574.50	1840.00	585.91	0.00	585.98	1.62	2.03	1328.88	1541.24
40	14337.000	50.00	0.00	0.00	574.60	850.00	583.09	0.00	583.19	3.66	2.55	332.96	456.70
41	14337.000	50.00	0.00	0.00	574.60	1250.00	584.46	0.00	584.51	1.79	2.21	684.89	933.49
42	14337.000	50.00	0.00	0.00	574.60	1410.00	584.88	0.00	584.94	1.66	2.26	1020.83	1093.40
43	14337.000	50.00	0.00	0.00	574.60	1840.00	585.94	0.00	585.99	1.40	2.19	1393.65	1395.67
45	14338.000	1.00	581.00	581.40	574.60	850.00	583.04	0.00	583.24	6.39	3.62	295.58	293.42
46	14338.000	1.00	580.00	581.40	574.60	1250.00	584.45	0.00	584.52	4.91	2.57	723.54	563.83
47	14338.000	1.00	580.00	581.40	574.60	1410.00	584.88	0.00	584.94	4.06	2.45	859.40	700.00
48	14338.000	1.00	580.00	581.40	574.60	1840.00	585.94	0.00	585.99	2.79	2.26	1196.67	1101.80
50	14402.000	64.00	581.00	581.40	574.60	850.00	583.04	0.00	583.30	6.39	3.62	295.58	293.42
51	14402.000	64.00	580.00	581.40	574.60	1250.00	584.45	0.00	584.53	4.81	2.55	729.79	569.76
52	14402.000	64.00	580.00	581.40	574.60	1410.00	584.90	0.00	584.97	4.00	2.44	863.77	704.65
53	14402.000	64.00	580.00	581.40	574.60	1840.00	585.95	0.00	586.00	2.76	2.25	1200.73	1107.15

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SECNO	XLOC	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
14403.000	1.00	0.00	0.00	574.60	850.00	583.23	0.00	583.33	3.24	2.50	340.12	472.38
14403.000	1.00	0.00	0.00	574.60	1250.00	584.50	0.00	584.56	1.73	2.18	899.27	949.65
14403.000	1.00	0.00	0.00	574.60	1410.00	584.92	0.00	584.97	1.63	2.19	1029.50	1104.13
14403.000	1.00	0.00	0.00	574.60	1840.00	585.96	0.00	586.00	1.39	2.19	1363.25	1561.13
14460.000	57.00	0.00	0.00	572.60	850.00	583.29	0.00	583.35	1.20	1.99	426.27	776.46
14460.000	57.00	0.00	0.00	572.60	1250.00	584.50	0.00	584.58	1.18	2.28	998.37	1151.08
14460.000	57.00	0.00	0.00	572.60	1410.00	584.91	0.00	584.99	1.22	2.39	1162.23	1277.23
14460.000	57.00	0.00	0.00	572.60	1840.00	585.95	0.00	586.01	1.25	2.59	1575.71	1643.99
14461.000	1.00	580.00	581.60	572.60	850.00	583.27	0.00	583.37	3.03	2.62	324.39	488.50
14461.000	1.00	580.00	581.60	572.60	1250.00	584.49	0.00	584.59	4.66	2.81	819.15	979.18
14461.000	1.00	580.00	581.60	572.60	1410.00	584.90	0.00	585.00	4.39	2.84	983.60	672.77
14461.000	1.00	580.00	581.60	572.60	1840.00	585.94	0.00	586.03	3.69	2.84	1399.32	957.40
14521.000	60.00	580.00	581.60	572.60	850.00	583.20	0.00	583.39	3.03	2.62	324.39	488.46
14521.000	60.00	580.00	581.60	572.60	1250.00	584.52	0.00	584.62	4.61	2.80	825.30	982.45
14521.000	60.00	580.00	581.60	572.60	1410.00	584.93	0.00	585.03	4.34	2.83	990.05	676.68
14521.000	60.00	580.00	581.60	572.60	1840.00	585.97	0.00	586.05	3.66	2.83	1404.30	961.18
14522.000	1.00	0.00	0.00	572.60	850.00	583.34	0.00	583.40	1.17	1.98	429.25	785.06
14522.000	1.00	0.00	0.00	572.60	1250.00	584.56	0.00	584.63	1.15	2.26	1021.73	1167.55
14522.000	1.00	0.00	0.00	572.60	1410.00	584.96	0.00	585.03	1.19	2.37	1181.08	1292.50
14522.000	1.00	0.00	0.00	572.60	1840.00	585.97	0.00	586.06	1.24	2.58	1584.21	1652.19
14572.000	50.00	0.00	0.00	572.70	850.00	583.32	0.00	583.44	3.92	2.62	457.12	429.17
14572.000	50.00	0.00	0.00	572.70	1250.00	584.55	0.00	584.66	3.85	2.86	653.04	656.86
14572.000	50.00	0.00	0.00	572.70	1410.00	584.95	0.00	585.06	3.73	2.92	1022.54	729.59
14572.000	50.00	0.00	0.00	572.70	1840.00	585.97	0.00	586.08	3.35	3.02	1453.92	1005.87
15292.000	720.00	0.00	0.00	574.40	850.00	583.65	0.00	583.79	5.05	2.95	288.10	351.54
15292.000	720.00	0.00	0.00	574.40	1250.00	584.65	0.00	584.84	6.99	3.58	554.61	476.55
15292.000	720.00	0.00	0.00	574.40	1410.00	585.24	0.00	585.46	7.35	3.71	680.17	620.16
15292.000	720.00	0.00	0.00	574.40	1840.00	586.21	0.00	586.40	8.10	4.20	933.34	840.37
15820.000	528.00	0.00	0.00	577.00	850.00	583.95	0.00	584.13	7.60	4.05	247.56	308.23
15820.000	528.00	0.00	0.00	577.00	1250.00	585.18	0.00	585.55	8.84	4.91	359.54	420.33
15820.000	528.00	0.00	0.00	577.00	1410.00	585.59	0.00	585.97	9.30	5.23	534.75	486.55
15820.000	528.00	0.00	0.00	577.00	1840.00	586.56	0.00	587.05	10.13	5.87	672.89	570.11
15870.000	50.00	0.00	0.00	577.00	850.00	584.05	0.00	584.23	5.45	3.65	303.44	363.97
15870.000	50.00	0.00	0.00	577.00	1250.00	585.33	0.00	585.59	6.41	4.62	381.04	493.56
15870.000	50.00	0.00	0.00	577.00	1410.00	585.75	0.00	586.04	6.80	4.70	408.24	540.77
15870.000	50.00	0.00	0.00	577.00	1840.00	586.76	0.00	587.13	7.61	5.35	493.31	557.19
15914.000	44.00	585.40	583.00	577.00	850.00	584.46	0.00	584.71	4.62	4.07	208.71	239.65
15914.000	44.00	585.40	583.00	577.00	1250.00	586.29	0.00	586.48	4.29	3.89	444.22	603.44
15914.000	44.00	585.40	583.00	577.00	1410.00	586.59	0.00	586.82	4.81	4.20	473.12	643.10
15914.000	44.00	585.40	583.00	577.00	1840.00	587.21	0.00	587.52	6.31	5.02	534.89	732.68
15964.000	50.00	0.00	0.00	577.00	850.00	584.45	0.00	584.63	11.34	5.05	160.21	247.07
15964.000	50.00	0.00	0.00	577.00	1250.00	586.34	0.00	586.59	7.96	5.10	323.65	443.47
15964.000	50.00	0.00	0.00	577.00	1410.00	586.74	0.00	586.94	8.74	5.47	366.78	476.92
15964.000	50.00	0.00	0.00	577.00	1840.00	587.75	0.00	587.66	10.78	6.34	458.99	560.50

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CHSEL	CRIWS	EG	TOK*S	VCH	AREA	.01K
	16194.000	230.00	0.00	0.00	576.50	850.00	584.91	0.00	585.05	3.57	3.02	331.53	449.81
1	16194.000	230.00	0.00	0.00	576.50	1250.00	586.57	0.00	586.77	3.88	3.61	414.67	634.55
2	16194.000	230.00	0.00	0.00	576.50	1410.00	586.90	0.00	587.13	4.30	3.93	431.00	673.62
3	16194.000	230.00	0.00	0.00	576.50	1840.00	587.58	0.00	587.90	5.93	4.78	464.01	755.52
	16244.000	50.00	0.00	0.00	576.50	850.00	584.31	0.00	585.21	14.51	5.12	166.07	223.18
	16244.000	50.00	0.00	0.00	576.50	1250.00	586.21	0.00	587.00	17.29	6.16	202.82	300.64
	16244.000	50.00	0.00	0.00	576.50	1410.00	586.70	0.00	587.41	19.98	6.73	209.53	315.41
	16244.000	50.00	0.00	0.00	576.50	1840.00	587.25	0.00	588.32	28.67	8.28	232.14	343.66
	16245.000	1.00	603.60	588.10	576.50	850.00	584.61	0.00	585.22	4.80	5.14	165.38	387.87
	16245.000	1.00	603.60	588.10	576.50	1250.00	586.41	0.00	587.00	5.73	6.19	201.94	522.28
	16245.000	1.00	603.60	588.10	576.50	1410.00	586.70	0.00	587.41	6.62	6.76	208.61	547.91
	16245.000	1.00	603.60	588.10	576.50	1840.00	587.29	0.00	588.32	9.53	8.32	221.13	596.88
	16503.000	258.00	603.60	588.10	576.50	850.00	586.58	0.00	585.34	4.54	5.04	160.94	399.03
	16503.000	258.00	603.60	588.10	576.50	1250.00	586.58	0.00	587.15	5.42	6.07	205.81	537.13
	16503.000	258.00	603.60	588.10	576.50	1410.00	586.91	0.00	587.58	6.21	6.61	213.19	565.72
	16503.000	258.00	603.60	588.10	576.50	1840.00	587.57	0.00	588.58	8.65	8.06	228.33	625.52
	16504.000	1.00	0.00	0.00	576.50	850.00	584.38	0.00	585.34	13.70	5.02	169.20	229.65
	16504.000	1.00	0.00	0.00	576.50	1250.00	586.59	0.00	587.16	16.36	6.05	204.79	309.26
	16504.000	1.00	0.00	0.00	576.50	1410.00	586.91	0.00	587.59	18.73	6.58	214.18	325.77
	16504.000	1.00	0.00	0.00	576.50	1840.00	587.58	0.00	588.58	26.04	8.02	229.55	360.57
	16554.000	50.00	0.00	0.00	576.60	770.00	585.33	0.00	585.45	3.46	3.02	338.35	414.21
	16554.000	50.00	0.00	0.00	576.60	1160.00	587.14	0.00	587.31	3.37	3.55	498.58	613.92
	16554.000	50.00	0.00	0.00	576.60	1330.00	587.97	0.00	587.77	3.96	3.86	597.15	667.94
	16554.000	50.00	0.00	0.00	576.60	1940.00	588.51	0.00	588.84	5.84	4.98	597.61	802.82
	16826.000	272.00	0.00	0.00	575.30	770.00	585.47	0.00	585.52	0.94	1.92	529.01	795.30
	16826.000	272.00	0.00	0.00	575.30	1160.00	587.31	0.00	587.39	1.19	2.62	645.17	1003.04
	16826.000	272.00	0.00	0.00	575.30	1330.00	588.17	0.00	587.86	1.38	2.87	671.22	1132.93
	16826.000	272.00	0.00	0.00	575.30	1940.00	588.81	0.00	588.88	2.25	3.58	725.76	1501.45
	16876.000	50.00	0.00	0.00	574.60	770.00	585.47	0.00	585.54	1.53	2.14	340.03	621.69
	16876.000	50.00	0.00	0.00	574.60	1160.00	587.30	0.00	587.42	2.19	2.76	420.41	783.70
	16876.000	50.00	0.00	0.00	574.60	1330.00	588.15	0.00	587.70	2.60	3.06	435.28	825.04
	16876.000	50.00	0.00	0.00	574.60	1940.00	588.78	0.00	589.24	4.43	4.13	469.27	921.57
	16963.000	87.00	589.70	587.20	574.90	770.00	585.48	0.00	585.57	3.47	2.49	309.67	413.25
	16963.000	87.00	589.70	587.20	574.90	1160.00	587.30	0.00	587.49	9.94	3.50	331.45	367.95
	16963.000	87.00	589.70	587.20	574.90	1330.00	588.06	0.00	588.21	2.59	3.05	435.76	826.40
	16963.000	87.00	589.70	587.20	574.90	1940.00	589.51	0.00	589.76	4.06	4.04	423.51	962.20
	17013.000	50.00	0.00	0.00	576.20	770.00	585.52	0.00	585.60	1.04	2.93	565.23	723.65
	17013.000	50.00	0.00	0.00	576.20	1160.00	587.49	0.00	587.54	1.08	2.23	771.98	1113.66
	17013.000	50.00	0.00	0.00	576.20	1330.00	588.18	0.00	588.24	1.11	2.35	848.39	1260.10
	17013.000	50.00	0.00	0.00	576.20	1940.00	589.72	0.00	589.82	1.64	2.89	1022.66	1616.49
	17255.000	242.00	0.00	0.00	577.90	770.00	585.46	0.00	585.65	8.24	2.45	372.85	514.14
	17255.000	242.00	0.00	0.00	577.90	1160.00	587.29	0.00	587.51	2.39	2.94	472.91	716.66
	17255.000	242.00	0.00	0.00	577.90	1330.00	588.16	0.00	588.32	2.49	3.15	508.68	863.06
	17255.000	242.00	0.00	0.00	577.90	1940.00	589.70	0.00	589.94	3.33	4.00	588.07	1062.55

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SECNO	XLCH	ELTRD	ELLC	ELMIN	R	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
17505.000	50.00	0.00	0.00	577.90	770.00	585.52	0.00	585.73	7.07	3.72	207.23	289.52
17505.000	50.00	0.00	0.00	577.90	1160.00	587.42	0.00	587.73	8.21	4.46	258.83	404.79
17505.000	50.00	0.00	0.00	577.90	1330.00	588.09	0.00	588.45	8.80	4.80	277.29	448.33
17505.000	50.00	0.00	0.00	577.90	1940.00	589.56	0.00	590.16	12.59	6.12	347.11	546.71
17502.000	197.00	600.40	585.50	577.90	770.00	586.02	0.00	586.21	5.82	3.49	220.94	319.07
17502.000	197.00	600.40	585.50	577.90	1160.00	588.75	0.00	588.99	5.57	3.93	295.03	491.62
17502.000	197.00	600.40	585.50	577.90	1330.00	589.90	0.00	590.16	5.44	4.08	326.36	570.21
17502.000	197.00	600.40	585.50	577.90	1940.00	593.63	0.00	593.95	5.30	4.53	427.92	842.64
17552.000	50.00	0.00	0.00	577.50	770.00	586.11	0.00	586.25	3.21	3.18	364.88	429.45
17552.000	50.00	0.00	0.00	577.50	1160.00	588.93	0.00	589.04	2.13	3.13	690.67	794.51
17552.000	50.00	0.00	0.00	577.50	1330.00	590.11	0.00	590.22	1.79	3.07	841.38	993.62
17552.000	50.00	0.00	0.00	577.50	1940.00	593.94	0.00	594.03	1.21	3.00	1327.71	1771.19
17817.000	265.00	0.00	0.00	576.90	770.00	586.24	0.00	586.35	4.26	2.60	296.50	373.04
17817.000	265.00	0.00	0.00	576.90	1160.00	589.02	0.00	589.10	2.20	2.32	641.90	781.57
17817.000	265.00	0.00	0.00	576.90	1330.00	590.21	0.00	590.26	1.44	2.07	902.98	1109.38
17817.000	265.00	0.00	0.00	576.90	1940.00	594.03	0.00	594.06	0.55	1.62	1749.56	2627.57
18109.000	289.00	0.00	0.00	579.00	770.00	586.29	0.00	586.56	7.92	4.23	182.17	273.67
18106.000	289.00	0.00	0.00	579.00	1160.00	589.07	0.00	589.21	3.69	3.79	727.57	603.62
18106.000	289.00	0.00	0.00	579.00	1330.00	590.19	0.00	590.35	2.98	3.66	930.72	771.01
18106.000	289.00	0.00	0.00	579.00	1940.00	593.99	0.00	594.11	1.78	3.44	1595.08	1455.33
18156.000	50.00	0.00	0.00	579.00	770.00	586.33	0.00	586.60	7.04	4.19	183.02	290.11
18156.000	50.00	0.00	0.00	579.00	1160.00	589.04	0.00	589.23	2.82	3.87	635.45	690.60
18156.000	50.00	0.00	0.00	579.00	1330.00	590.14	0.00	590.37	2.30	3.76	830.00	876.94
18156.000	50.00	0.00	0.00	579.00	1940.00	593.99	0.00	594.12	1.34	3.49	1501.43	1674.25
18197.000	1.00	586.70	585.90	579.00	770.00	586.31	0.00	586.61	8.25	4.45	172.86	268.15
18197.000	1.00	586.70	585.90	579.00	1160.00	589.05	0.00	589.32	15.94	5.65	307.09	490.54
18197.000	1.00	586.70	585.90	579.00	1330.00	590.05	0.00	590.42	10.14	4.93	556.52	417.74
18197.000	1.00	586.70	585.90	579.00	1940.00	593.95	0.00	594.23	3.68	3.77	1295.05	1015.05
18195.000	98.00	586.70	585.90	579.00	770.00	586.34	0.00	586.65	8.25	4.43	172.86	268.06
18195.000	98.00	586.70	585.90	579.00	1160.00	589.08	0.00	589.36	15.21	5.54	350.77	297.42
18195.000	98.00	586.70	585.90	579.00	1330.00	590.14	0.00	590.45	9.66	4.94	962.47	825.00
18195.000	98.00	586.70	585.90	579.00	1940.00	593.99	0.00	594.14	3.64	3.77	1236.53	1016.54
18196.000	1.00	0.00	0.00	579.00	770.00	586.38	0.00	586.65	6.88	4.16	185.28	293.60
18196.000	1.00	0.00	0.00	579.00	1160.00	589.22	0.00	589.40	2.62	3.78	665.74	716.47
18196.000	1.00	0.00	0.00	579.00	1330.00	590.32	0.00	590.47	2.21	3.71	856.92	893.85
18196.000	1.00	0.00	0.00	579.00	1940.00	594.01	0.00	594.14	1.34	3.49	1503.09	1676.66
18246.000	50.00	0.00	0.00	579.00	770.00	586.24	0.00	586.75	14.49	5.00	154.14	227.87
18246.000	50.00	0.00	0.00	579.00	1160.00	589.15	0.00	589.46	5.77	4.78	595.10	463.09
18246.000	50.00	0.00	0.00	579.00	1330.00	590.22	0.00	590.53	5.09	4.80	755.94	569.65
18246.000	50.00	0.00	0.00	579.00	1940.00	593.91	0.00	594.20	3.54	4.84	1309.76	1030.45
18545.000	299.00	0.00	0.00	578.60	770.00	586.89	0.00	587.06	10.55	3.96	195.23	237.29
18545.000	299.00	0.00	0.00	578.60	1160.00	589.47	0.00	589.63	4.46	3.27	507.06	549.61
18545.000	299.00	0.00	0.00	578.60	1330.00	590.56	0.00	590.66	3.07	2.95	667.37	758.67
18545.000	299.00	0.00	0.00	578.60	1940.00	594.25	0.00	594.28	1.26	2.36	1217.23	1728.04

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FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	1UK*S	VCH	AREA	.01K
	18829.000	284.00	0.00	0.00	578.70	770.00	587.13	0.00	587.28	4.82	3.86	394.43	350.75
1	18829.000	284.00	0.00	0.00	578.70	1160.00	589.63	0.00	589.74	3.00	3.62	799.39	664.62
2	18829.000	284.00	0.00	0.00	578.70	1330.00	590.64	0.00	590.76	2.61	3.58	964.83	823.99
3	18829.000	284.00	0.00	0.00	578.70	1940.00	594.25	0.00	594.34	1.71	3.46	1560.78	1484.75
5	18879.000	50.00	0.00	0.00	578.70	770.00	587.15	0.00	587.30	3.56	3.88	399.73	406.20
6	18879.000	50.00	0.00	0.00	578.70	1160.00	589.64	0.00	589.76	2.32	3.72	800.88	760.85
7	18879.000	50.00	0.00	0.00	578.70	1330.00	590.65	0.00	590.76	2.03	3.69	967.17	932.77
8	18879.000	50.00	0.00	0.00	578.70	1940.00	594.25	0.00	594.35	1.36	3.60	1561.90	1562.08
10	18880.000	1.00	585.00	583.20	578.70	770.00	587.08	0.00	587.37	17.99	5.32	277.03	161.54
11	18880.000	1.00	585.00	583.20	578.70	1160.00	589.64	0.00	589.76	5.69	3.73	688.19	486.41
12	18880.000	1.00	585.00	583.20	578.70	1330.00	590.66	0.00	590.76	4.27	3.46	855.84	643.78
13	18880.000	1.00	585.00	583.20	578.70	1940.00	594.28	0.00	594.36	2.03	2.97	1454.73	1343.67
15	18910.000	30.00	585.00	583.20	578.70	770.00	587.34	0.00	587.43	16.65	5.16	288.21	188.72
16	18910.000	30.00	585.00	583.20	578.70	1160.00	589.65	0.00	589.77	5.65	3.72	690.00	488.01
17	18910.000	30.00	585.00	583.20	578.70	1330.00	590.67	0.00	590.78	4.23	3.45	858.36	646.30
18	18910.000	30.00	585.00	583.20	578.70	1940.00	594.29	0.00	594.37	2.08	2.97	1455.54	1344.75
20	18911.000	1.00	0.00	0.00	578.70	770.00	587.33	0.00	587.47	3.21	3.74	425.31	429.46
21	18911.000	1.00	0.00	0.00	578.70	1160.00	589.63	0.00	589.78	2.32	3.72	802.25	762.20
22	18911.000	1.00	0.00	0.00	578.70	1330.00	590.67	0.00	590.78	2.02	3.68	970.39	936.25
23	18911.000	1.00	0.00	0.00	578.70	1940.00	594.28	0.00	594.38	1.35	3.59	1566.17	1667.90
25	18961.000	50.00	0.00	0.00	578.70	770.00	587.36	0.00	587.49	4.18	3.66	429.17	376.50
26	18961.000	50.00	0.00	0.00	578.70	1160.00	589.68	0.00	589.79	2.95	3.60	836.03	675.75
27	18961.000	50.00	0.00	0.00	578.70	1330.00	590.69	0.00	590.79	2.56	3.56	972.16	831.13
28	18961.000	50.00	0.00	0.00	578.70	1940.00	594.30	0.00	594.39	1.69	3.44	1566.70	1492.07
30	19112.000	151.00	0.00	0.00	579.00	770.00	587.41	0.00	587.60	5.77	3.51	219.54	320.66
31	19112.000	151.00	0.00	0.00	579.00	1160.00	589.96	0.00	589.99	3.87	4.05	602.41	589.72
32	19112.000	151.00	0.00	0.00	579.00	1330.00	590.86	0.00	590.92	3.70	4.20	767.36	794.20
33	19112.000	151.00	0.00	0.00	579.00	1940.00	594.37	0.00	594.52	2.99	4.51	1464.17	1729.06
35	19162.000	50.00	0.00	0.00	579.00	770.00	587.44	0.00	587.63	5.73	3.50	220.04	321.75
36	19162.000	50.00	0.00	0.00	579.00	1160.00	589.62	0.00	589.93	3.85	4.04	605.47	591.60
37	19162.000	50.00	0.00	0.00	579.00	1330.00	590.64	0.00	590.94	3.66	4.19	736.06	693.44
38	19162.000	50.00	0.00	0.00	579.00	1940.00	594.24	0.00	594.34	2.95	4.51	1426.23	1122.54
40	19163.000	1.00	588.20	585.00	579.00	770.00	587.31	0.00	587.75	15.37	5.33	144.42	196.42
41	19163.000	1.00	588.20	585.00	579.00	1160.00	589.49	0.00	590.12	23.25	6.42	328.11	240.56
42	19163.000	1.00	588.20	585.00	579.00	1330.00	590.32	0.00	591.10	18.33	6.26	522.19	310.64
43	19163.000	1.00	588.20	585.00	579.00	1940.00	594.28	0.00	594.69	9.61	5.36	1116.52	625.72
45	19263.000	100.00	588.20	585.00	579.00	770.00	587.40	0.00	587.91	19.42	5.33	144.42	196.10
46	19263.000	100.00	588.20	585.00	579.00	1160.00	589.79	0.00	590.36	19.92	6.11	391.41	259.91
47	19263.000	100.00	588.20	585.00	579.00	1330.00	590.74	0.00	591.29	16.50	6.05	563.02	327.39
48	19263.000	100.00	588.20	585.00	579.00	1940.00	594.26	0.00	594.73	9.29	5.78	1196.31	636.63
50	19264.000	1.00	0.00	0.00	579.00	770.00	587.51	0.00	587.99	5.01	3.55	230.05	345.96
51	19264.000	1.00	0.00	0.00	579.00	1160.00	590.21	0.00	590.46	3.20	3.91	727.03	646.42
52	19264.000	1.00	0.00	0.00	579.00	1330.00	591.14	0.00	591.38	3.19	4.01	868.48	744.47
53	19264.000	1.00	0.00	0.00	579.00	1940.00	594.50	0.00	594.78	2.81	4.42	1473.65	1157.81

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
19514.000	50.00	0.00	0.00	579.00	770.00	587.84	0.00	588.01	4.97	3.34	230.73	345.48
19514.000	50.00	0.00	0.00	579.00	1160.00	590.26	0.00	590.48	3.18	3.81	709.84	650.04
19514.000	50.00	0.00	0.00	579.00	1330.00	591.16	0.00	591.39	3.18	4.00	871.38	746.25
19514.000	50.00	0.00	0.00	579.00	1940.00	594.52	0.00	594.80	2.79	4.42	1477.83	1160.93
20080.000	766.00	0.00	0.00	580.10	770.00	588.20	0.00	588.42	5.09	3.86	315.69	341.18
20080.000	766.00	0.00	0.00	580.10	1160.00	590.52	0.00	590.81	4.85	4.46	550.87	526.56
20080.000	766.00	0.00	0.00	580.10	1330.00	591.41	0.00	591.73	4.74	4.56	685.24	610.62
20080.000	766.00	0.00	0.00	580.10	1940.00	594.73	0.00	595.09	3.94	5.04	1188.34	977.49
20130.000	50.00	0.00	0.00	580.10	770.00	588.30	0.00	588.46	2.80	3.37	328.98	460.57
20130.000	50.00	0.00	0.00	580.10	1160.00	590.66	0.00	590.86	2.51	3.78	576.64	732.21
20130.000	50.00	0.00	0.00	580.10	1330.00	591.57	0.00	591.78	2.40	3.90	693.08	858.18
20130.000	50.00	0.00	0.00	580.10	1940.00	594.93	0.00	595.15	1.91	4.13	1122.70	1405.50
20131.000	1.00	588.30	586.70	580.10	770.00	588.22	0.00	588.54	7.44	4.49	171.60	282.25
20131.000	1.00	588.30	586.70	580.10	1160.00	590.45	0.00	591.07	25.96	6.43	273.76	227.69
20131.000	1.00	588.30	586.70	580.10	1330.00	591.40	0.00	591.96	20.46	6.24	366.11	294.05
20131.000	1.00	588.30	586.70	580.10	1940.00	594.84	0.00	595.23	9.79	5.54	785.91	619.91
20168.000	37.00	588.30	586.70	580.10	770.00	588.25	0.00	588.56	7.44	4.49	171.60	282.25
20168.000	37.00	588.30	586.70	580.10	1160.00	590.54	0.00	591.18	26.12	6.51	281.70	226.95
20168.000	37.00	588.30	586.70	580.10	1330.00	591.44	0.00	592.07	21.95	6.49	370.25	283.85
20168.000	37.00	588.30	586.70	580.10	1940.00	594.81	0.00	595.35	12.14	6.16	781.88	556.73
20169.000	1.00	0.00	0.00	580.10	770.00	588.45	0.00	588.51	2.62	3.30	337.46	475.83
20169.000	1.00	0.00	0.00	580.10	1160.00	591.13	0.00	591.32	2.11	3.57	638.86	798.23
20169.000	1.00	0.00	0.00	580.10	1330.00	592.02	0.00	592.21	2.07	3.72	750.45	923.99
20169.000	1.00	0.00	0.00	580.10	1940.00	595.24	0.00	595.44	1.76	4.02	1162.55	1462.28
20269.000	100.00	0.00	0.00	580.10	770.00	588.49	0.00	588.64	3.42	3.25	339.87	416.12
20269.000	100.00	0.00	0.00	580.10	1160.00	591.19	0.00	591.35	2.69	3.46	568.65	706.97
20269.000	100.00	0.00	0.00	580.10	1330.00	592.07	0.00	592.23	2.60	3.58	823.06	824.86
20269.000	100.00	0.00	0.00	580.10	1940.00	[illegible]	0.00	595.47	2.10	3.78	1319.04	1338.54

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N.RR.ECORSE CR.LINC.PK.

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKUS	TOPWID	XLCN
10636.000	850.00	582.06	0.00	0.00	0.00	111.44	0.00
10636.000	1250.00	583.19	0.00	0.00	0.00	122.58	0.00
10636.000	1410.00	583.53	0.00	0.00	0.00	125.95	0.00
10636.000	1840.00	584.43	0.00	0.00	0.00	142.45	0.00
11536.000	850.00	582.26	0.00	0.20	0.00	61.55	900.00
11536.000	1250.00	583.42	0.00	0.23	0.00	66.28	900.00
11536.000	1410.00	583.77	0.00	0.24	0.00	91.03	900.00
11536.000	1840.00	584.69	0.00	0.26	0.00	125.69	900.00
12274.000	850.00	582.45	0.00	0.19	0.00	150.00	738.00
12274.000	1250.00	583.67	0.00	0.25	0.00	150.00	738.00
12274.000	1410.00	584.05	0.00	0.28	0.00	150.00	738.00
12274.000	1840.00	585.02	0.00	0.33	0.00	150.00	738.00
12324.000	850.00	582.45	0.00	0.00	0.00	50.10	50.00
12324.000	1250.00	583.69	0.00	0.02	0.00	145.00	50.00
12324.000	1410.00	584.07	0.00	0.02	0.00	145.00	50.00
12324.000	1840.00	585.05	0.00	0.03	0.00	145.00	50.00
12325.000	850.00	582.45	0.00	-0.01	0.00	50.10	1.00
12325.000	1250.00	583.67	0.00	-0.02	0.00	145.00	1.00
12325.000	1410.00	584.05	0.00	-0.02	0.00	145.00	1.00
12325.000	1840.00	585.04	0.00	-0.01	0.00	145.00	1.00
12367.000	850.00	582.46	0.00	0.01	0.00	50.10	42.00
12367.000	1250.00	583.69	0.00	0.02	0.00	145.00	42.00
12367.000	1410.00	584.06	0.00	0.02	0.00	145.00	42.00
12367.000	1840.00	585.06	0.00	0.02	0.00	145.00	42.00
12368.000	850.00	582.40	0.00	0.02	0.00	50.10	1.00
12368.000	1250.00	583.74	0.00	0.04	0.00	145.00	1.00
12368.000	1410.00	584.12	0.00	0.04	0.00	145.00	1.00
12368.000	1840.00	585.10	0.00	0.03	0.00	145.00	1.00
12418.000	850.00	582.50	0.00	0.02	0.00	145.00	50.00
12418.000	1250.00	583.75	0.00	0.01	0.00	145.00	50.00
12418.000	1410.00	584.13	0.00	0.01	0.00	145.00	50.00
12418.000	1840.00	585.11	0.00	0.01	0.00	145.00	50.00
13295.000	850.00	582.62	0.00	0.12	0.00	160.62	877.00
13295.000	1250.00	583.88	0.00	0.14	0.00	357.02	877.00
13295.000	1410.00	584.27	0.00	0.14	0.00	398.00	877.00
13295.000	1840.00	585.26	0.00	0.16	0.00	398.00	877.00
13676.000	850.00	582.69	0.00	0.07	0.00	195.00	381.00
13676.000	1250.00	583.96	0.00	0.08	0.00	195.00	381.00
13676.000	1410.00	584.35	0.00	0.08	0.00	195.00	381.00
13676.000	1840.00	585.34	0.00	0.08	0.00	195.00	381.00
13726.000	850.00	582.53	0.00	-0.01	0.00	160.39	50.00
13726.000	1250.00	583.94	0.00	-0.02	0.00	172.00	50.00
13726.000	1410.00	584.33	0.00	-0.02	0.00	172.00	50.00
13726.000	1840.00	585.32	0.00	-0.03	0.00	172.00	50.00

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FORM 1411 OD-PRINTED BY ROTARY MANIFOLD FORMS

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
13727.000	850.00	582.61	0.00	-0.07	0.00	155.10	1.00
13727.000	1250.00	583.87	0.00	-0.07	0.00	170.00	1.00
13727.000	1410.00	584.26	0.00	-0.07	0.00	170.00	1.00
13727.000	1840.00	585.25	0.00	-0.07	0.00	170.00	1.00
13964.000	850.00	582.83	0.00	0.21	0.00	170.00	237.00
13964.000	1250.00	584.11	0.00	0.24	0.00	170.00	237.00
13964.000	1410.00	584.51	0.00	0.25	0.00	170.00	237.00
13964.000	1840.00	585.52	0.00	0.26	0.00	170.00	237.00
13965.000	850.00	582.99	0.00	0.16	0.00	170.00	1.00
13965.000	1250.00	584.28	0.00	0.16	0.00	170.00	1.00
13965.000	1410.00	584.68	0.00	0.16	0.00	170.00	1.00
13965.000	1840.00	585.67	0.00	0.15	0.00	170.00	1.00
14015.000	850.00	583.04	0.00	0.05	0.00	170.00	50.00
14015.000	1250.00	584.36	0.00	0.08	0.00	170.00	50.00
14015.000	1410.00	584.77	0.00	0.09	0.00	170.00	50.00
14015.000	1840.00	585.79	0.00	0.12	0.00	170.00	50.00
14287.000	850.00	583.09	0.00	0.06	1.00	52.10	272.00
14287.000	1250.00	584.45	0.00	0.09	0.00	320.00	272.00
14287.000	1410.00	584.87	0.00	0.11	0.00	320.00	272.00
14287.000	1840.00	585.93	0.00	0.14	0.00	320.00	272.00
14337.000	850.00	583.09	0.00	0.00	0.00	52.10	50.00
14337.000	1250.00	584.46	0.00	0.01	0.00	320.00	50.00
14337.000	1410.00	584.89	0.00	0.01	0.00	320.00	50.00
14337.000	1840.00	585.94	0.00	0.01	0.00	320.00	50.00
14401.000	850.00	583.04	0.00	-0.05	0.00	52.10	1.00
14401.000	1250.00	584.43	0.00	-0.03	0.00	320.00	1.00
14401.000	1410.00	584.88	0.00	-0.03	0.00	320.00	1.00
14401.000	1840.00	585.94	0.00	-0.03	0.00	320.00	1.00
14402.000	850.00	583.09	0.00	0.05	0.00	52.10	64.00
14402.000	1250.00	584.48	0.00	0.03	0.00	320.00	64.00
14402.000	1410.00	584.90	0.00	0.03	0.00	320.00	64.00
14402.000	1840.00	585.95	0.00	0.02	0.00	320.00	64.00
14403.000	850.00	583.23	0.00	0.14	0.00	52.10	1.00
14403.000	1250.00	584.50	0.00	0.02	0.00	320.00	1.00
14403.000	1410.00	584.92	0.00	0.01	0.00	320.00	1.00
14403.000	1840.00	585.96	0.00	0.00	0.00	320.00	1.00
14460.000	850.00	583.29	0.00	0.06	0.00	53.40	57.00
14460.000	1250.00	584.50	0.00	-0.00	0.00	400.00	57.00
14460.000	1410.00	584.91	0.00	-0.00	0.00	400.00	57.00
14460.000	1840.00	585.95	0.00	-0.01	0.00	400.00	57.00
14461.000	850.00	583.27	0.00	-0.02	0.00	53.40	1.00
14461.000	1250.00	584.49	0.00	-0.01	0.00	400.00	1.00
14461.000	1410.00	584.90	0.00	-0.01	0.00	400.00	1.00
14461.000	1840.00	585.94	0.00	-0.00	0.00	400.00	1.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKKS	TOPWID	XLCH
14521.000	850.00	583.28	0.00	0.02	0.00	53.40	60.00
14521.000	1250.00	584.32	0.00	0.03	0.00	400.00	60.00
14521.000	1410.00	584.95	0.00	0.03	0.00	400.00	60.00
14521.000	1840.00	585.97	0.00	0.02	0.00	400.00	60.00
14522.000	850.00	583.34	0.00	0.06	0.00	53.40	1.00
14522.000	1250.00	584.56	0.00	0.04	0.00	400.00	1.00
14522.000	1410.00	584.96	0.00	0.03	0.00	400.00	1.00
14522.000	1840.00	585.97	0.00	0.01	0.00	400.00	1.00
14572.000	850.00	583.33	0.00	-0.01	0.00	281.17	50.00
14572.000	1250.00	584.55	0.00	-0.01	0.00	420.00	50.00
14572.000	1410.00	584.95	0.00	-0.01	0.00	420.00	50.00
14572.000	1840.00	585.97	0.00	-0.00	0.00	420.00	50.00
15292.000	850.00	583.85	0.00	0.32	0.00	53.40	720.00
15292.000	1250.00	584.85	0.00	0.30	0.00	59.03	720.00
15292.000	1410.00	585.24	0.00	0.29	0.00	60.19	720.00
15292.000	1840.00	586.21	0.00	0.24	0.00	60.30	720.00
15820.000	850.00	583.95	0.00	0.30	0.00	43.26	528.00
15820.000	1250.00	584.19	0.00	0.33	0.00	82.34	528.00
15820.000	1410.00	585.59	0.00	0.35	0.00	88.14	528.00
15820.000	1840.00	586.58	0.00	0.37	0.00	112.00	528.00
15870.000	850.00	584.05	0.00	0.11	0.00	50.32	50.00
15870.000	1250.00	585.33	0.00	0.15	0.00	65.46	50.00
15870.000	1410.00	585.65	0.00	0.17	0.00	65.46	50.00
15870.000	1840.00	586.76	0.00	0.18	0.00	100.00	50.00
15914.000	850.00	584.43	0.00	0.40	0.00	28.30	44.00
15914.000	1250.00	585.29	0.00	0.43	0.00	76.73	44.00
15914.000	1410.00	585.59	0.00	0.84	0.00	130.20	44.00
15914.000	1840.00	586.81	0.00	0.43	0.00	130.20	46.00
15964.000	850.00	584.43	0.00	-0.02	0.00	24.00	50.00
15964.000	1250.00	586.24	0.00	-0.05	0.00	122.14	50.00
15964.000	1410.00	586.84	0.00	-0.05	0.00	130.20	50.00
15964.000	1840.00	587.15	0.00	-0.06	0.00	130.20	50.00
16194.000	850.00	584.41	0.00	0.48	0.00	50.00	230.00
16194.000	1250.00	586.57	0.00	0.34	0.00	50.00	230.00
16194.000	1410.00	586.90	0.00	0.36	0.00	50.00	230.00
16194.000	1840.00	587.56	0.00	0.41	0.00	50.00	230.00
16244.000	850.00	584.81	0.00	-0.15	0.00	22.93	50.00
16244.000	1250.00	586.41	0.00	-0.16	0.00	22.93	50.00
16244.000	1410.00	586.70	0.00	-0.20	0.00	22.93	50.00
16244.000	1840.00	587.25	0.00	-0.31	0.00	22.93	50.00
16245.000	850.00	584.41	0.00	-0.00	0.00	22.93	1.00
16245.000	1250.00	586.41	0.00	-0.00	0.00	22.93	1.00
16245.000	1410.00	586.70	0.00	-0.00	0.00	22.93	1.00
16245.000	1840.00	587.25	0.00	-0.00	0.00	22.93	1.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
16503.000	850.00	584.95	0.00	0.14	0.00	22.93	258.00
16503.000	1250.00	586.58	0.00	0.17	0.00	22.93	258.00
16503.000	1410.00	586.91	0.00	0.20	0.00	22.93	258.00
16503.000	1840.00	587.57	0.00	0.32	0.00	22.94	258.00
16504.000	850.00	584.95	0.00	0.01	0.00	22.93	1.00
16504.000	1250.00	586.59	0.00	0.01	0.00	22.93	1.00
16504.000	1410.00	586.91	0.00	0.01	0.00	22.93	1.00
16504.000	1840.00	587.58	0.00	0.02	0.00	22.94	1.00
16554.000	770.00	585.33	0.00	0.37	0.00	64.14	50.00
16554.000	1160.00	587.14	0.00	0.55	0.00	65.54	50.00
16554.000	1530.00	587.57	0.00	0.65	0.00	93.61	50.00
16554.000	1940.00	588.51	0.00	0.93	0.00	95.06	50.00
16826.000	770.00	585.47	0.00	0.15	0.00	62.00	272.00
16826.000	1160.00	587.31	0.00	0.18	0.00	62.00	272.00
16826.000	1530.00	587.77	0.00	0.20	0.00	62.00	272.00
16826.000	1940.00	588.81	0.00	0.30	0.00	62.00	272.00
16876.000	770.00	585.47	0.00	-0.01	0.00	33.10	50.00
16876.000	1160.00	587.30	0.00	-0.01	0.00	33.10	50.00
16876.000	1530.00	587.75	0.00	-0.02	0.00	33.10	50.00
16876.000	1940.00	588.73	0.00	-0.04	0.00	33.10	50.00
16963.000	770.00	585.48	0.00	0.01	0.00	33.10	37.00
16963.000	1160.00	587.30	0.00	-0.00	0.00	33.10	87.00
16963.000	1530.00	588.06	0.00	0.31	0.00	33.10	87.00
16965.000	1940.00	589.51	0.00	0.73	0.00	33.10	87.00
17015.000	770.00	585.53	0.00	0.07	0.00	104.37	50.00
17015.000	1160.00	587.69	0.00	0.13	0.00	109.21	50.00
17015.000	1530.00	588.78	0.00	0.11	0.00	110.68	50.00
17015.000	1940.00	589.72	0.00	0.22	0.00	111.41	50.00
17255.000	770.00	585.56	0.00	0.01	0.00	32.00	242.00
17255.000	1160.00	587.49	0.00	0.00	0.00	32.00	242.00
17255.000	1530.00	588.18	0.00	-0.00	0.00	32.00	242.00
17255.000	1940.00	589.70	0.00	-0.02	0.00	32.00	242.00
17305.000	770.00	585.52	0.00	-0.04	0.00	27.20	50.00
17305.000	1160.00	587.42	0.00	-0.07	0.00	27.20	50.00
17305.000	1530.00	588.09	0.00	-0.08	0.00	27.20	50.00
17305.000	1940.00	589.36	0.00	-0.16	0.00	27.20	50.00
17502.000	770.00	586.22	0.00	0.50	0.00	27.20	197.00
17502.000	1160.00	588.75	0.00	1.33	0.00	27.20	197.00
17502.000	1530.00	589.90	0.00	1.91	0.00	27.20	197.00
17502.000	1940.00	593.65	0.00	4.07	0.00	27.20	197.00
17552.000	770.00	586.11	0.00	0.59	0.00	37.60	50.00
17552.000	1160.00	588.93	0.00	0.13	0.00	127.30	50.00
17552.000	1530.00	590.11	0.00	0.21	0.00	127.30	50.00
17552.000	1940.00	593.94	0.00	0.35	0.00	127.30	50.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKUS	TOPWID	XLCH
17817.000	770.00	586.24	0.00	0.13	0.00	54.50	265.00
17817.000	1160.00	589.02	0.00	0.10	0.00	214.65	265.00
17817.000	1330.00	590.21	0.00	0.10	0.00	221.60	265.00
17817.000	1940.00	594.01	0.00	0.09	0.00	221.60	265.00
18106.000	770.00	586.29	0.00	0.04	0.00	25.00	269.00
18106.000	1160.00	589.03	0.00	0.01	0.00	175.00	269.00
18106.000	1330.00	590.19	0.00	-0.02	0.00	175.00	269.00
18106.000	1940.00	593.99	0.00	-0.04	0.00	175.00	269.00
18156.000	770.00	586.33	0.00	0.04	0.00	25.10	50.00
18156.000	1160.00	589.04	0.00	0.01	0.00	175.00	50.00
18156.000	1330.00	590.19	0.00	0.00	0.00	175.00	50.00
18156.000	1940.00	593.99	0.00	0.00	0.00	175.00	50.00
18157.000	770.00	586.31	0.00	-0.02	0.00	25.12	1.00
18157.000	1160.00	588.85	0.00	-0.19	0.00	175.00	1.00
18157.000	1330.00	590.09	0.00	-0.10	0.00	175.00	1.00
18157.000	1940.00	593.98	0.00	-0.01	0.00	175.00	1.00
18195.000	770.00	586.34	0.00	0.03	0.00	33.10	36.00
18195.000	1160.00	588.99	0.00	0.03	0.00	173.31	36.00
18195.000	1330.00	590.14	0.00	0.05	0.00	175.00	36.00
18195.000	1940.00	593.99	0.00	0.01	0.00	175.00	36.00
18196.000	770.00	586.38	0.00	0.04	0.00	25.10	1.00
18196.000	1160.00	589.22	0.00	0.29	0.00	175.00	1.00
18196.000	1330.00	591.30	0.00	0.16	0.00	175.00	1.00
18196.000	1940.00	594.31	0.00	0.02	0.00	175.00	1.00
18246.000	770.00	586.34	0.00	-0.06	0.00	21.00	50.00
18246.000	1160.00	590.13	0.00	-0.07	0.00	150.00	50.00
18246.000	1330.00	590.92	0.00	-0.08	0.00	150.00	50.00
18246.000	1940.00	593.91	0.00	-0.10	0.00	150.00	50.00
18545.000	770.00	586.31	0.00	0.47	0.00	35.09	299.00
18545.000	1160.00	589.49	0.00	0.34	0.00	150.00	299.00
18545.000	1330.00	590.56	0.00	0.36	0.00	150.00	299.00
18545.000	1940.00	594.45	0.00	0.31	0.00	150.00	299.00
18829.000	770.00	587.13	0.00	0.31	0.00	141.39	284.00
18829.000	1160.00	589.63	0.00	0.14	0.00	165.00	284.00
18829.000	1330.00	590.64	0.00	0.08	0.00	165.00	284.00
18829.000	1940.00	594.25	0.00	0.02	0.00	165.00	284.00
18879.000	770.00	587.15	0.00	0.02	0.00	142.43	50.00
18879.000	1160.00	589.64	0.00	0.01	0.00	165.00	50.00
18879.000	1330.00	590.65	0.00	0.01	0.00	165.00	50.00
18879.000	1940.00	594.25	0.00	0.00	0.00	165.00	50.00
18880.000	770.00	587.08	0.00	-0.07	0.00	140.97	1.00
18880.000	1160.00	589.54	0.00	-0.00	0.00	165.00	1.00
18880.000	1330.00	590.66	0.00	0.01	0.00	165.00	1.00
18880.000	1940.00	594.26	0.00	0.03	0.00	165.00	1.00

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	SECNO	Q	CHSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	18910.000	770.00	587.16	0.00	0.08	0.00	142.38	30.00
1	18910.000	1160.00	589.65	0.00	0.02	0.00	165.00	30.00
2	18910.000	1330.00	590.67	0.00	0.01	0.00	165.00	30.00
3	18910.000	1940.00	594.29	0.00	0.01	0.00	165.00	30.00
4								
5	18911.000	770.00	587.33	0.00	0.18	0.00	147.38	1.00
6	18911.000	1160.00	589.66	0.00	0.00	0.00	165.00	1.00
7	18911.000	1330.00	590.67	0.00	-0.00	0.00	165.00	1.00
8	18911.000	1940.00	594.26	0.00	-0.01	0.00	165.00	1.00
9								
10	18961.000	770.00	587.56	0.00	0.03	0.00	148.11	50.00
11	18961.000	1160.00	589.68	0.00	0.02	0.00	165.00	50.00
12	18961.000	1330.00	590.69	0.00	0.02	0.00	165.00	50.00
13	18961.000	1940.00	594.30	0.00	0.02	0.00	165.00	50.00
14								
15	19112.000	770.00	587.41	0.00	0.04	0.00	26.10	151.00
16	19112.000	1160.00	589.66	0.00	-0.02	0.00	180.00	151.00
17	19112.000	1330.00	590.66	0.00	-0.03	0.00	180.00	151.00
18	19112.000	1940.00	594.23	0.00	-0.07	0.00	180.00	151.00
19								
20	19162.000	770.00	587.44	0.00	0.03	0.00	26.10	50.00
21	19162.000	1160.00	589.68	0.00	0.02	0.00	180.00	50.00
22	19162.000	1330.00	590.68	0.00	0.02	0.00	180.00	50.00
23	19162.000	1940.00	594.24	0.00	0.02	0.00	180.00	50.00
24								
25	19163.000	770.00	587.31	0.00	-0.12	0.00	26.10	1.00
26	19163.000	1160.00	589.69	0.00	-0.19	0.00	180.00	1.00
27	19163.000	1330.00	590.62	0.00	-0.16	0.00	180.00	1.00
28	19163.000	1940.00	594.15	0.00	-0.09	0.00	180.00	1.00
29								
30	19263.000	770.00	587.46	0.00	0.15	0.00	26.10	100.00
31	19263.000	1160.00	589.79	0.00	0.30	0.00	180.00	100.00
32	19263.000	1330.00	590.74	0.00	0.23	0.00	180.00	100.00
33	19263.000	1940.00	594.27	0.00	0.11	0.00	180.00	100.00
34								
35	19264.000	770.00	587.41	0.00	0.39	0.00	26.10	1.00
36	19264.000	1160.00	590.24	0.00	0.45	0.00	180.00	1.00
37	19264.000	1330.00	591.14	0.00	0.40	0.00	180.00	1.00
38	19264.000	1940.00	594.50	0.00	0.24	0.00	180.00	1.00
39								
40	19314.000	770.00	587.04	0.00	0.03	0.00	26.10	50.00
41	19314.000	1160.00	590.26	0.00	0.02	0.00	180.00	50.00
42	19314.000	1330.00	591.16	0.00	0.02	0.00	180.00	50.00
43	19314.000	1940.00	594.52	0.00	0.02	0.00	180.00	50.00
44								
45	20040.000	770.00	588.20	0.00	0.38	0.00	53.97	764.00
46	20080.000	1160.00	590.52	0.00	0.26	0.00	151.00	766.00
47	20080.000	1330.00	591.41	0.00	0.25	0.00	151.00	766.00
48	20080.000	1940.00	594.73	0.00	0.21	0.00	151.00	766.00
49								
50	20130.000	770.00	587.50	0.00	0.10	0.00	26.10	50.00
51	20130.000	1160.00	590.66	0.00	0.12	0.00	126.00	50.00
52	20130.000	1330.00	591.57	0.00	0.16	0.00	126.00	50.00
53	20130.000	1940.00	594.93	0.00	0.20	0.00	126.00	50.00
54								
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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
20131.000	770.00	588.22	0.00	-0.07	0.00	53.92	1.00
20131.000	1160.00	590.45	0.00	-0.21	0.00	123.00	1.00
20131.000	1330.00	591.43	0.00	-0.19	0.00	123.00	1.00
20131.000	1940.00	594.64	0.00	-0.09	0.00	123.00	1.00
20168.000	770.00	588.25	0.00	0.03	0.00	53.99	37.00
20168.000	1160.00	590.54	0.00	0.08	0.00	123.00	37.00
20168.000	1330.00	591.44	0.00	0.04	0.00	123.00	37.00
20168.000	1940.00	594.81	0.20	-0.03	0.20	123.00	37.00
20169.000	770.00	588.45	0.00	0.20	0.00	54.71	1.00
20169.000	1160.00	591.15	0.00	0.61	0.00	128.00	1.00
20169.000	1330.00	592.02	0.00	0.58	0.00	128.00	1.00
20169.000	1940.00	595.24	0.00	0.43	0.00	128.00	1.00
20269.000	770.00	588.49	0.00	0.04	0.00	54.06	100.00
20269.000	1160.00	591.19	0.00	0.04	0.00	153.00	100.00
20269.000	1330.00	592.07	0.00	0.05	0.00	153.00	100.00
20269.000	1940.00	595.30	0.00	0.06	0.00	153.00	100.00

SUMMARY OF ERRORS

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FORM 1411-OD-PRINTED BY ROTARY MANIFOLD FORMS

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HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 30.31.42
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

L. SUPERCH SCORSE

SUMMARY PRINTOUT TABLE 15.

SECID	ALOB	ELTRD	ELLOB	ELMIN	Q	CHSEL	CRITWS	E.G.	VCH	AREA	TOPWID
24499.000	1990.00	0.00	0.00	604.50	815.00	614.26	0.00	614.55	3.30	2.82	297.33	390.12
24499.000	1990.00	0.00	0.00	604.50	1205.00	615.76	0.00	615.91	4.18	3.20	441.50	569.04
24499.000	1990.00	0.00	0.00	604.50	1370.00	616.18	0.00	616.35	4.33	3.37	489.79	656.52
24499.000	1990.00	0.00	0.00	604.50	1760.00	616.92	0.00	617.08	4.79	3.71	581.80	806.24
25104.000	605.00	0.00	0.00	607.00	815.00	614.32	0.00	614.47	3.17	2.90	650.96	957.59
25104.000	605.00	0.00	0.00	607.00	1205.00	616.04	0.00	616.20	1.74	2.43	909.89	1412.70
25104.000	605.00	0.00	0.00	607.00	1370.00	616.48	0.00	616.63	1.62	2.42	910.17	1076.70
25104.000	605.00	0.00	0.00	607.00	1760.00	617.32	0.00	617.37	1.51	2.41	1104.12	1430.04
25151.000	1.00	612.60	611.40	607.00	815.00	614.50	0.01	614.53	11.79	3.59	344.70	237.36
25151.000	1.00	612.40	611.40	607.00	1205.00	615.04	0.00	615.40	3.50	2.34	647.20	644.47
25151.000	1.00	612.40	611.40	607.00	1370.00	615.24	0.00	615.55	2.90	2.23	797.58	795.58
25151.000	1.00	612.40	611.40	607.00	1760.00	617.32	0.00	617.37	2.47	2.21	991.39	1110.82
25151.000	45.00	612.60	611.40	607.00	815.00	614.50	0.01	614.53	10.72	3.53	357.02	240.97
25151.000	45.00	612.40	611.40	607.00	1205.00	615.04	0.00	615.41	3.45	2.36	720.71	546.95
25151.000	45.00	612.40	611.40	607.00	1370.00	615.24	0.00	615.56	2.75	2.23	829.68	736.02
25151.000	45.00	612.40	611.40	607.00	1760.00	617.33	0.00	617.39	2.46	2.21	995.81	1125.15
25152.000	1.00	0.00	0.00	607.00	815.00	614.61	0.00	614.70	2.91	2.60	580.50	477.72
25152.000	1.00	0.00	0.00	607.00	1205.00	615.06	0.00	615.17	1.73	2.24	911.33	911.73
25152.000	1.00	0.00	0.00	607.00	1370.00	615.29	0.00	615.34	1.60	2.41	993.96	1023.11
25152.000	1.00	0.00	0.00	607.00	1760.00	617.33	0.00	617.39	1.50	2.22	1197.21	1426.04
25483.000	331.00	0.00	0.00	607.10	815.00	614.75	0.00	614.84	5.35	2.64	366.64	352.34
25483.000	331.00	0.00	0.00	607.10	1205.00	616.13	0.00	616.19	2.77	2.40	764.01	726.32
25483.000	331.00	0.00	0.00	607.10	1370.00	616.56	0.00	616.61	2.43	2.38	951.47	885.19
25483.000	331.00	0.00	0.00	607.10	1760.00	617.40	0.00	617.45	1.93	2.35	1302.16	1267.28
25703.000	300.00	0.00	0.00	606.30	815.00	614.84	0.20	615.02	4.75	3.95	287.93	374.05
25703.000	300.00	0.00	0.00	606.30	1205.00	616.13	0.20	616.38	4.96	4.13	387.37	540.92
25703.000	300.00	0.00	0.00	606.30	1370.00	616.56	0.20	616.80	4.94	4.26	524.29	616.48
25703.000	300.00	0.00	0.00	606.30	1760.00	617.40	0.20	617.61	4.51	4.27	550.78	844.26
25784.000	1.00	614.0	614.30	608.30	815.10	614.77	0.07	615.10	15.74	1.93	206.47	243.74
25784.000	1.00	614.0	614.30	608.30	1205.00	615.93	0.29	616.38	21.57	8.46	263.24	260.84
25784.000	1.00	614.0	614.30	608.30	1370.00	616.32	612.46	617.05	25.61	7.10	260.38	262.65
25784.000	1.00	614.30	614.30	608.30	1760.00	617.45	0.00	617.66	25.29	5.67	573.95	550.30

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FORM 1411-30-PRINTED BY ROTARY MANIFOLD FORMS.

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CUSEL	CRIMS	EG	10K*S	VCH	AREA	.01K
25812.000	28.00	614.10	614.00	608.30	815.00	614.00	0.00	615.13	10.75	4.58	160.69	248.81
25812.000	28.00	614.10	614.00	608.30	1205.00	616.03	0.00	616.64	21.16	6.43	207.37	261.96
25812.000	28.00	614.10	614.00	608.30	1370.00	616.47	612.45	617.14	24.24	6.88	276.51	278.26
25812.000	28.00	614.10	614.00	608.30	1760.00	617.48	0.00	617.76	20.77	5.20	653.64	586.22
25813.000	1.00	0.00	0.00	608.30	815.00	615.00	0.00	615.17	4.34	3.45	277.79	391.52
25813.000	1.00	0.00	0.00	608.30	1205.00	616.55	0.00	616.76	4.21	3.94	405.91	587.52
25813.000	1.00	0.00	0.00	608.30	1370.00	617.11	0.00	617.28	3.58	3.77	701.02	732.03
25813.000	1.00	0.00	0.00	608.30	1760.00	617.51	0.00	617.79	5.67	4.21	966.53	919.32
26143.000	330.00	0.00	0.00	607.60	815.00	615.27	0.00	615.34	5.45	2.23	459.53	426.71
26143.000	330.00	0.00	0.00	607.60	1205.00	616.86	0.00	616.91	2.09	2.02	769.31	834.35
26143.000	330.00	0.00	0.00	607.60	1370.00	617.36	0.00	617.41	1.87	2.01	897.56	1001.49
26143.000	330.00	0.00	0.00	607.60	1760.00	617.86	0.00	617.92	2.15	2.26	1076.94	1199.62
26472.000	329.00	0.00	0.00	608.60	815.00	615.27	0.00	615.64	27.33	6.12	133.19	156.70
26472.000	329.00	0.00	0.00	608.60	1205.00	616.94	0.00	617.13	6.09	3.13	694.46	543.91
26472.000	329.00	0.00	0.00	608.60	1370.00	617.43	0.00	617.51	4.23	3.23	839.37	885.87
26472.000	329.00	0.00	0.00	608.60	1760.00	617.94	0.00	618.04	4.66	3.54	991.46	813.49
26524.000	52.00	616.50	615.00	608.60	815.00	615.64	0.00	616.35	21.14	5.04	144.34	177.27
26524.000	52.00	616.50	615.00	608.60	1205.00	617.04	0.00	617.76	2.65	2.44	911.33	755.13
26524.000	52.00	616.50	615.00	608.60	1370.00	617.55	0.00	617.61	2.02	2.76	990.37	814.59
26524.000	52.00	616.50	615.00	608.60	1760.00	618.32	0.00	618.39	3.56	3.17	1101.87	952.96
27038.000	514.00	0.00	0.00	608.40	760.00	616.76	0.00	616.85	3.93	2.62	335.94	313.52
27038.000	514.00	0.00	0.00	608.40	1235.00	617.92	0.00	617.99	3.03	3.43	420.33	412.03
27038.000	514.00	0.00	0.00	608.40	1430.00	618.30	0.00	618.29	6.73	3.76	443.61	548.63
27038.000	514.00	0.00	0.00	608.40	1900.00	618.80	0.00	618.83	9.86	4.47	426.38	625.21
27953.000	915.00	0.00	0.00	608.40	760.00	617.19	0.00	617.39	7.51	4.39	261.01	277.40
27953.000	915.00	0.00	0.00	608.40	1235.00	618.39	0.00	618.60	7.16	4.68	427.01	461.41
27953.000	915.00	0.00	0.00	608.40	1430.00	618.77	0.00	619.00	7.29	4.93	493.51	529.75
27953.000	915.00	0.00	0.00	608.40	1900.00	619.36	0.00	619.61	7.75	5.26	592.79	632.05
27954.000	1.00	615.90	615.70	608.40	760.00	616.94	0.00	617.04	65.65	7.57	150.00	114.76
27954.000	1.00	615.90	615.70	608.40	1235.00	618.52	0.00	618.67	37.31	6.14	328.75	202.20
27954.000	1.00	615.90	615.70	608.40	1430.00	618.88	0.00	619.00	33.67	6.09	394.62	246.45
27954.000	1.00	615.90	615.70	608.40	1900.00	619.35	0.00	619.45	28.30	5.99	559.33	348.33
27992.000	38.00	615.90	616.70	608.40	760.00	617.67	0.00	617.90	32.05	5.33	221.04	156.19
27992.000	38.00	615.90	616.70	608.40	1235.00	618.54	0.00	618.62	29.04	5.54	309.23	229.17
27992.000	38.00	615.90	616.70	608.40	1430.00	618.87	0.00	619.05	27.67	5.51	452.70	272.65
27992.000	38.00	615.90	616.70	608.40	1900.00	619.51	0.00	619.78	25.92	5.57	578.71	377.59
27993.000	1.00	0.00	0.00	608.40	760.00	617.63	0.00	617.85	4.91	3.49	330.38	365.97
27993.000	1.00	0.00	0.00	608.40	1235.00	618.50	0.00	618.66	4.60	4.20	443.37	521.05
27993.000	1.00	0.00	0.00	608.40	1430.00	618.99	0.00	619.18	5.95	4.46	543.76	566.01
27993.000	1.00	0.00	0.00	608.40	1900.00	619.58	0.00	619.78	6.71	4.90	679.19	733.54
28521.000	528.00	0.00	0.00	608.20	760.00	618.00	0.00	618.31	8.47	4.32	274.08	310.76
28528.000	530.00	0.00	0.00	608.20	1235.00	618.83	0.00	618.99	5.18	4.06	351.27	314.16
28532.000	530.00	0.00	0.00	608.20	1430.00	619.35	0.00	619.49	5.75	4.32	454.14	395.91
28532.000	529.00	0.00	0.00	608.20	1900.00	620.00	0.00	620.13	14.35	6.71	696.22	583.68

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRISS	EG	10K*S	VCH	AREA	.01K
28575.000	53.00	620.00	617.60	609.70	760.00	620.24	0.00	620.23	1.84	2.47	738.33	559.69
28575.000	53.00	620.00	617.60	609.70	1235.00	620.80	0.00	620.92	4.06	3.79	645.54	613.22
28575.000	53.00	620.00	617.60	609.70	1430.00	621.01	0.00	621.09	5.45	3.55	1002.13	769.35
28575.000	53.00	620.00	617.60	609.70	1900.00	621.32	0.00	621.43	4.82	4.27	1167.55	865.60
30184.000	1609.00	0.00	0.00	610.60	760.00	620.48	0.00	620.50	0.96	1.34	1048.37	786.67
30184.000	1609.00	0.00	0.00	610.60	1235.00	621.26	0.00	621.29	1.43	1.73	1394.61	1032.44
30184.000	1609.00	0.00	0.00	610.60	1430.00	621.44	0.00	621.48	1.70	1.91	1470.67	1096.62
30184.000	1609.00	0.00	0.00	610.60	1900.00	621.90	0.00	621.95	2.20	2.25	1678.31	1282.24
31284.000	1100.00	0.00	0.00	612.00	495.00	620.59	0.00	620.62	1.35	1.59	472.27	426.21
31284.000	1100.00	0.00	0.00	612.00	930.00	621.43	0.00	621.51	2.71	2.45	639.48	584.91
31284.000	1100.00	0.00	0.00	612.00	1160.00	621.65	0.00	621.76	3.66	2.91	694.26	606.10
31284.000	1100.00	0.00	0.00	612.00	1600.00	622.17	0.00	622.32	5.01	3.56	847.37	715.15
32084.000	800.00	0.00	0.00	613.20	495.00	620.72	0.00	620.80	3.43	2.51	243.71	267.25
32084.000	800.00	0.00	0.00	613.20	930.00	621.60	0.00	621.87	6.87	3.56	336.19	354.15
32084.000	800.00	0.00	0.00	613.20	1160.00	621.98	0.00	622.24	9.01	4.18	371.77	386.40
32084.000	800.00	0.00	0.00	613.20	1600.00	622.61	0.00	622.98	11.92	5.10	464.05	463.52
32384.000	500.00	0.00	0.00	613.20	495.00	620.62	0.00	620.90	3.22	2.26	252.45	273.27
32384.000	500.00	0.00	0.00	613.20	930.00	621.97	0.00	622.36	6.09	3.42	361.39	375.62
32384.000	500.00	0.00	0.00	613.20	1160.00	622.27	0.00	622.69	7.66	3.98	408.13	419.05
32384.000	500.00	0.00	0.00	613.20	1600.00	623.00	0.00	623.30	9.51	4.71	542.23	518.93

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N. BRANCH ECORSE

SUMMARY PRINTOUT TABLE 150

SECLO	Q	CUSEL	DIFUSP	DIFWSX	DIFWHS	YOPWID	XLCH
24499.000	815.00	614.25	0.00	0.00	0.00	67.43	1990.00
24499.000	1205.00	615.76	0.00	0.00	0.00	115.00	1990.00
24499.000	1370.00	616.18	0.00	0.00	0.00	115.00	1990.00
24499.000	1760.00	616.98	0.00	0.00	0.00	115.00	1990.00
25104.000	815.00	614.52	0.00	0.26	0.00	230.00	605.00
25104.000	1205.00	616.04	0.00	0.28	0.00	230.00	605.00
25104.000	1370.00	616.48	0.00	0.30	0.00	230.00	605.00
25104.000	1760.00	617.32	0.00	0.34	0.00	230.00	605.00
25105.000	815.00	614.53	0.00	-0.02	0.00	230.00	1.00
25105.000	1205.00	616.04	0.00	0.00	0.00	230.00	1.00
25105.000	1370.00	616.48	0.00	0.00	0.00	230.00	1.00
25105.000	1760.00	617.32	0.00	0.00	0.00	230.00	1.00
25151.000	815.00	614.57	0.00	0.07	0.00	230.00	46.00
25151.000	1205.00	616.06	0.00	0.02	0.00	230.00	46.00
25151.000	1370.00	616.49	0.00	0.01	0.00	230.00	46.00
25151.000	1760.00	617.33	0.00	0.01	0.00	230.00	46.00
25152.000	815.00	614.67	0.00	0.04	0.00	230.00	1.00
25152.000	1205.00	616.06	0.00	-0.02	0.00	230.00	1.00
25152.000	1370.00	616.49	0.00	-0.03	0.00	230.00	1.00
25152.000	1760.00	617.33	0.00	0.00	0.00	230.00	1.00
25403.000	815.00	614.73	0.00	0.12	0.00	183.54	331.00
25403.000	1205.00	616.13	0.00	0.07	0.00	320.00	331.00
25403.000	1370.00	616.55	0.00	0.02	0.00	423.43	331.00
25403.000	1760.00	617.43	0.00	0.07	0.00	445.00	331.00
25783.000	815.00	614.04	0.00	0.12	0.00	82.77	300.00
25783.000	1205.00	616.15	0.00	0.02	0.00	83.06	300.00
25783.000	1370.00	616.55	0.00	0.01	1.72	320.27	300.00
25783.000	1760.00	617.43	0.00	0.00	0.00	320.00	300.00
25784.000	815.00	614.77	0.00	-0.02	0.00	84.21	1.00
25784.000	1205.00	616.96	0.00	-0.19	0.00	84.44	1.00
25784.000	1370.00	616.32	0.00	-0.24	1.55	312.29	1.00
25784.000	1760.00	617.33	0.00	-0.07	0.00	396.91	1.00
25812.000	815.00	614.82	0.00	0.03	0.00	80.01	28.00
25812.000	1205.00	616.05	0.00	0.07	0.00	85.77	28.00
25812.000	1370.00	616.47	0.00	0.15	1.67	337.49	28.00
25812.000	1760.00	617.43	0.00	0.15	0.00	401.40	28.00
25813.000	815.00	614.00	0.00	0.20	0.00	65.52	1.00
25813.000	1205.00	616.55	0.00	0.32	1.54	66.40	1.00
25813.000	1370.00	617.11	0.00	0.63	2.10	343.00	1.00
25813.000	1760.00	617.61	0.00	0.13	0.00	402.56	1.00
25143.000	815.00	615.27	0.00	0.27	0.00	168.01	330.00
25143.000	1205.00	616.05	0.00	0.31	1.52	287.00	330.00
25143.000	1370.00	617.36	0.00	0.25	2.00	378.71	330.00
25143.000	1760.00	617.05	0.00	0.25	0.00	401.71	330.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKUS	TOPWID	XLCH
26472.000	815.00	615.27	0.00	-0.00	0.00	20.00	329.00
26472.000	1205.00	616.93	0.00	0.08	1.66	293.69	329.00
26472.000	1370.00	617.43	0.00	0.07	2.16	296.00	329.00
26472.000	1760.00	617.94	0.00	0.00	0.00	298.13	329.00
26524.000	815.00	615.84	0.00	0.56	0.00	20.00	52.00
26524.000	1205.00	617.68	0.00	0.75	1.85	297.01	52.00
26524.000	1370.00	617.95	0.00	0.52	2.11	298.12	52.00
26524.000	1760.00	618.32	0.00	0.36	0.00	299.07	52.00
27038.000	760.00	616.76	0.00	0.92	0.02	77.89	514.00
27038.000	1235.00	617.82	0.00	0.14	1.07	80.44	514.00
27038.000	1430.00	618.10	0.00	0.15	1.34	95.93	514.00
27038.000	1900.00	618.50	0.00	0.18	0.00	126.03	514.00
27953.000	760.00	617.19	0.00	0.43	0.02	106.03	915.00
27953.000	1235.00	618.39	0.00	0.57	1.21	176.87	915.00
27953.000	1430.00	618.73	0.00	0.64	1.55	197.76	915.00
27953.000	1900.00	619.38	0.00	0.88	0.00	237.72	915.00
27954.000	760.00	616.97	0.00	-0.24	0.00	102.75	1.00
27954.000	1235.00	618.32	0.00	-0.07	1.36	172.39	1.00
27954.000	1430.00	618.66	0.00	-0.05	1.74	194.42	1.00
27954.000	1900.00	619.35	0.00	-0.03	0.00	235.75	1.00
27992.000	760.00	617.60	0.00	0.66	0.00	123.21	38.00
27992.000	1235.00	618.36	0.00	0.22	1.94	135.24	38.00
27992.000	1430.00	618.87	0.00	0.19	1.27	206.08	38.00
27992.000	1900.00	619.51	0.00	0.15	0.00	245.23	38.00
27993.000	760.00	617.83	0.00	0.24	0.00	140.63	1.00
27993.000	1235.00	618.69	0.00	0.25	0.86	195.41	1.00
27993.000	1430.00	618.99	0.00	0.17	1.15	213.41	1.00
27993.000	1900.00	619.53	0.00	0.07	0.00	242.75	1.00
28522.000	760.00	618.10	0.00	0.26	0.00	71.44	529.00
28522.000	1235.00	619.03	0.00	0.33	0.95	276.70	529.00
28522.000	1430.00	619.35	0.00	0.37	1.26	290.49	529.00
28522.000	1900.00	620.00	0.00	0.47	0.00	340.00	529.00
28575.000	760.00	620.24	0.00	2.14	0.00	340.00	53.00
28575.000	1235.00	620.80	0.00	1.77	0.55	176.03	53.00
28575.000	1430.00	621.01	0.00	1.66	0.75	340.00	53.00
28575.000	1900.00	621.32	0.00	1.32	0.00	340.00	53.00
30184.000	760.00	620.40	0.00	0.24	0.00	441.56	1609.00
30184.000	1235.00	621.26	0.00	0.40	0.76	445.56	1609.00
30184.000	1430.00	621.44	0.00	0.43	0.96	443.99	1609.00
30184.000	1900.00	621.90	0.00	0.58	0.00	445.17	1609.00
31284.000	760.00	620.97	0.00	0.17	0.00	170.05	1100.00
31284.000	1235.00	621.43	0.00	0.12	0.84	207.19	1100.00
31284.000	1430.00	621.65	0.00	0.21	0.00	234.30	1100.00
31284.000	1900.00	622.17	0.00	0.28	0.00	324.53	1100.00

PRINTED IN U.S.A.
FORM 1411-00-PRINTED BY ROTARY MANIFOLD FORMS.

SECNO	Q	CJSEL	DIFWSP	DIFJSX	DIFKWS	TOPJID	XLCH
32084.000	495.00	620.72	0.00	0.13	0.00	82.04	800.00
32084.000	930.00	621.68	0.00	0.25	0.96	111.15	800.00
32084.000	1150.00	622.18	0.00	0.33	1.27	125.49	800.00
32084.000	1600.00	622.61	0.00	0.44	2.00	142.38	800.00
32384.000	495.00	620.62	0.00	0.10	0.00	85.23	300.00
32384.000	930.00	621.90	0.00	0.21	1.07	117.56	300.00
32384.000	1160.00	622.27	0.00	0.26	1.64	142.67	300.00
32384.000	1600.00	623.02	0.00	0.36	2.81	229.56	300.00

SUMMARY OF ERRORS

PRINTED IN U.S.A.
FORM 1411-OD-PRINTED BY ROTARY MANIFOLD FORMS,

FLOOD INSURANCE ZONE DATA FOR N. BRANCH ECORSE

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10%	2%	0.2%
24489.000	0.	-1.9	-0.4	0.8
25104.000	605.	-2.0	-0.4	0.8
25109.000	626.	-2.0	-0.4	0.8
25151.000	652.	-1.9	-0.4	0.8
25152.000	653.	-1.9	-0.4	0.8
25463.000	984.	-1.8	-0.4	0.8
25783.000	1285.	-1.7	-0.4	0.8
25784.000	1285.	-1.5	-0.4	1.0
25812.000	1313.	-1.7	-0.4	1.0
25813.000	1314.	-2.1	-0.6	0.5
26143.000	1644.	-2.1	-0.5	0.5
26472.000	1973.	-2.2	-0.5	0.5
26824.000	2325.	-2.1	-0.5	0.4
27033.000	2534.	-1.3	-0.3	0.6
27953.000	3454.	-1.5	-0.3	0.6
27954.000	3455.	-1.7	-0.4	0.7
27992.000	3493.	-1.3	-0.3	0.6
27993.000	3494.	-1.2	-0.3	0.6
28522.000	4023.	-1.3	-0.3	0.6
28575.000	4076.	-1.0	-0.2	0.5
30134.000	5683.	-1.0	-0.2	0.5
31234.000	6785.	-1.1	-0.2	0.5
32034.000	7585.	-1.3	-0.3	0.6
32384.000	7885.	-1.4	-0.4	0.7
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[illegible]	[illegible]	-1.4	-0.3	0.5

FHF FOR THE REACH = 315 WITH 82.73 OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 3

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HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52

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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

N.BRANCH ECORSE

SUMMARY PRINTOUT TABLE 150

SECND	XLOB	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIMS	EG	TUMWS	VCH	AREA	WTK
14588.000	0.00	0.00	0.00	599.70	1450.00	609.03	0.00	609.17	3.36	3.45	538.04	791.08
14759.000	171.00	0.00	0.00	598.60	1415.00	609.09	0.00	609.20	4.18	3.66	814.94	569.31
14909.000	150.00	0.00	0.00	598.60	1415.00	609.23	0.00	609.34	4.54	3.13	712.52	664.11
15179.000	270.00	0.00	0.00	598.60	1415.00	609.34	0.00	609.47	4.40	4.10	768.14	674.47
15329.000	150.00	0.00	0.00	599.40	1415.00	609.42	0.00	609.51	3.35	3.50	925.62	773.62
15559.000	230.00	0.00	0.00	599.60	1415.00	609.42	0.00	609.62	6.19	4.77	641.91	568.64
15719.000	160.00	0.00	0.00	599.60	1415.00	609.52	0.00	609.72	6.38	4.92	689.70	560.10
15909.000	190.00	0.00	0.00	598.40	1415.00	609.63	0.00	609.84	5.76	4.90	683.57	589.65
16143.000	234.00	0.00	0.00	600.10	1415.00	609.75	0.00	609.97	5.5[illegible]	4.54	586.23	603.53
16175.000	32.00	600.30	607.40	600.10	1415.00	610.26	0.00	610.42	4.14	4.05	634.76	695.45
16193.000	15.00	0.00	0.00	600.10	1415.00	610.1[illegible]	0.00	610.53	8.29	5.70	673.69	491.36
16191.000	1.00	609.50	608.00	600.10	1415.00	610.18	0.00	610.54	65.30	5.77	432.45	209.63
16197.000	6.00	609.50	608.00	600.10	1415.00	610.2[illegible]	0.00	610.57	43.03	5.63	395.14	215.72
16198.000	1.00	0.00	0.00	600.10	1415.00	610.22	0.00	610.58	7.94	5.60	487.65	502.16
17559.000	1351.00	0.00	0.00	598.90	1415.00	611.18	0.00	611.31	3.60	3.27	915.21	737.19
18259.000	700.00	0.00	0.00	597.80	1415.00	611.44	0.00	611.62	4.76	3.47	485.75	648.62
19240.000	981.00	0.00	0.00	602.80	1415.00	611.97	0.00	612.22	7.71	3.[illegible]	565.98	509.52
19290.000	50.00	0.00	0.00	602.80	1415.00	612.06	0.00	612.26	3.60	4.43	653.60	597.7[illegible]
19291.000	1.00	608.50	608.50	602.80	1415.00	611.95	0.00	612.31	22.33	3.97	461.55	299.06
19320.000	35.00	608.50	608.50	602.80	1415.00	612.07	0.00	612.[illegible]	19.93	3.71	484.70	318.54

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FORM 1411-GD-PRINTED BY ROTARY MANIFOLD FORMS

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRITS	EG	TOK*S	VCH	AREA	.01K
19527.000	1.00	0.00	0.00	602.80	1415.00	612.22	0.00	612.43	5.05	4.26	685.54	629.47
19919.000	192.00	0.00	0.00	601.00	1415.00	612.34	0.00	612.53	6.66	3.58	570.07	655.75
19674.000	155.00	0.00	0.00	600.70	1415.00	612.49	0.00	612.55	2.12	2.40	980.89	972.64
20309.000	335.00	0.00	0.00	602.40	1415.00	612.56	0.30	612.64	2.92	2.80	863.15	628.11
20164.000	155.00	0.00	0.00	603.10	1415.00	612.61	0.30	612.69	3.05	2.82	859.61	809.76
20309.000	145.00	0.00	0.00	601.50	1415.00	612.68	0.00	612.73	1.95	2.30	1098.96	1012.64
20509.000	200.00	0.00	0.00	603.20	1415.00	612.72	0.00	612.78	2.80	2.38	978.03	844.96
20659.000	150.00	0.00	0.00	603.60	1415.00	612.73	0.00	612.83	4.67	3.09	793.42	654.79
20875.000	214.00	0.00	0.00	604.20	1415.00	612.69	0.00	613.20	12.23	6.16	356.42	404.61
20963.300	68.00	612.50	609.60	603.70	1415.00	614.01	0.00	614.31	5.82	4.85	477.97	586.45
20997.300	54.00	0.00	0.00	603.70	1415.00	614.06	0.00	614.36	3.75	4.56	466.39	730.24
21062.300	65.00	613.60	611.30	604.00	1415.00	614.73	0.00	615.01	3.47	4.49	508.50	759.90

FORM 1611 UD-PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN U.S.A.

N.BRANCH ECORSE

SUMMARY PRINTOUT TABLE 150

SECNO	I	CNSEL	DIFHSP	DIFHSX	DIFKWS	TOPWID	XLCI
14588.000	1450.00	609.03	0.00	0.00	0.00	120.00	0.00
14759.000	1415.00	609.09	0.00	0.06	0.00	306.00	171.00
14909.000	1415.00	609.23	0.00	0.14	0.00	230.00	150.00
15179.000	1415.00	609.34	0.00	0.11	0.00	305.00	270.00
15329.000	1415.00	609.42	0.00	0.09	0.00	360.00	150.00
15559.000	1415.00	609.42	0.00	-0.00	0.00	275.00	230.00
15719.000	1415.00	609.52	0.00	0.10	0.00	342.00	160.00
15909.000	1415.00	609.63	0.00	0.11	0.00	320.00	190.00
16143.000	1415.00	609.76	0.00	0.13	0.00	200.00	234.00
16175.000	1415.00	610.26	0.00	0.50	0.00	200.00	32.00
16190.000	1415.00	610.16	0.00	-0.10	0.00	200.00	15.00
16191.000	1415.00	610.18	0.00	0.02	0.00	200.00	1.00
16197.000	1415.00	610.23	0.00	0.05	0.00	200.00	6.00
16198.000	1415.00	610.22	0.00	-0.01	0.00	200.00	1.00
17559.000	1415.00	611.18	0.00	0.96	0.00	405.00	1351.00
18259.000	1415.00	611.44	0.00	0.26	0.00	95.00	700.00
19240.000	1415.00	611.97	0.00	0.53	0.00	150.00	981.00
19290.000	1415.00	612.06	0.00	0.09	0.00	200.00	50.00
19291.000	1415.00	611.95	0.00	-0.11	0.00	200.00	1.00
19326.000	1415.00	612.07	0.00	0.12	0.00	200.00	35.00
19327.000	1415.00	612.22	0.00	0.13	0.00	200.00	1.00
19519.000	1415.00	612.34	0.00	0.12	0.00	112.00	192.00
19674.000	1415.00	612.49	0.00	0.15	0.00	220.00	155.00
20009.000	1415.00	612.56	0.00	0.07	0.00	190.00	335.00
20164.000	1415.00	612.61	0.00	0.05	0.00	190.00	155.00
20309.000	1415.00	612.68	0.00	0.07	0.00	240.00	145.00
20529.000	1415.00	612.72	0.00	0.04	0.00	224.00	200.00

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FORM 1411-GB-PRINTED BY ROTARY MANIFOLD FORMS

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
20659.000	1415.00	612.73	0.00	0.02	0.00	223.12	150.00
20876.000	1415.00	612.69	0.00	-0.04	0.00	128.00	216.00
20943.000	1415.00	614.01	0.00	1.32	0.00	90.00	68.00
20997.000	1415.00	614.06	0.00	0.05	0.00	106.26	54.00
21062.000	1415.00	614.73	0.00	0.67	0.00	150.00	65.00

SUMMARY OF ERRORS

PRINTED IN U.S.A.
FORM 1611 GO PRINTED BY ROKAR MANIFOLD FORMS.

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HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
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PRINTED IN U.S.A.
FORM 1411-D PRINTED BY ROTARY MANIFOLD FORMS

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HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52

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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

N.BR.ECORSE DR. DBN.HTS.

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	QWSEL	CRIWS	IG	TOKAS	VCH	AREA	[illegible]
9925.000	0.00	0.00	0.00	595.80	1470.00	604.50	0.00	604.59	4.14	3.00	827.46	722.70
10091.000	166.00	0.00	0.00	596.00	1470.00	604.53	0.00	604.69	5.25	4.27	615.99	641.44
10092.000	1.00	601.80	601.00	596.00	1470.00	604.53	0.00	604.69	8.88	4.16	563.63	493.98
10108.000	16.00	601.80	601.00	596.00	1470.00	604.56	0.00	604.71	8.81	4.16	564.65	495.29
10109.000	1.00	0.00	0.00	596.00	1470.00	604.58	0.00	604.71	5.21	4.06	617.55	643.73
10310.000	201.00	0.00	0.00	596.00	1470.00	604.65	0.00	604.83	4.25	3.69	431.98	712.94
10371.000	61.00	602.50	600.30	596.00	1470.00	605.46	0.00	605.60	2.86	3.21	497.43	869.16
10422.000	60.00	0.00	0.00	596.10	1470.00	605.52	0.00	605.63	3.81	3.70	673.04	755.03
10423.000	1.00	601.90	600.30	596.10	1470.00	605.49	0.00	605.66	10.16	4.63	605.23	445.43
10439.000	16.00	601.90	600.30	596.10	1470.00	605.51	0.00	605.68	10.79	4.61	606.99	447.49
10440.000	1.00	0.00	0.00	596.10	1470.00	605.59	0.00	605.70	3.04	3.63	606.53	770.23
10616.000	176.00	0.00	0.00	597.20	1470.00	605.67	0.00	605.77	4.57	2.98	637.75	688.08
10744.000	128.00	0.00	0.00	595.50	1470.00	605.69	0.00	605.88	4.89	4.07	549.82	664.30
10745.000	1.00	602.30	601.40	595.50	1470.00	605.58	0.00	606.01	60.30	6.25	404.70	231.34
10797.000	52.00	602.30	601.40	595.50	1470.00	605.86	0.00	606.22	31.74	3.71	449.82	260.93
10798.000	1.00	0.00	0.00	595.50	1470.00	605.13	0.00	606.28	3.77	3.68	616.39	757.54
10955.000	130.00	0.00	0.00	595.80	1470.00	606.18	0.00	606.38	5.47	3.62	531.00	606.93
11079.000	123.00	0.00	0.00	596.00	1470.00	606.31	0.00	606.46	4.34	3.75	675.10	737.90
11080.000	1.00	603.10	601.80	596.00	1470.00	606.26	0.00	606.51	24.30	5.06	582.67	296.98
11132.000	52.00	603.10	601.80	596.00	1470.00	606.41	0.00	606.64	21.71	4.83	537.89	315.51

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FORM 1411 GD PRINTED BY ROTARY MANIFOLD FORMS.

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
11133.000	1.00	0.00	0.00	596.00	1470.00	606.54	0.00	606.67	3.55	3.57	712.60	780.19
11466.000	133.00	0.00	0.00	596.40	1470.00	606.67	0.00	606.73	1.87	2.27	793.28	1075.61
11627.000	141.00	0.00	0.00	597.00	1470.00	606.57	0.00	606.80	3.91	3.81	606.67	743.00
11628.000	1.00	603.00	602.10	597.00	1470.00	606.65	0.00	606.83	8.72	4.46	536.72	497.90
11644.000	16.00	603.00	602.10	597.00	1470.00	606.66	0.00	606.84	8.86	4.47	539.86	499.64
11645.000	1.00	0.00	0.00	597.00	1470.00	606.75	0.00	606.86	3.79	3.77	615.79	755.56
11825.000	180.00	0.00	0.00	596.80	1470.00	606.80	0.00	606.92	3.14	3.49	674.24	829.16
11826.000	1.00	603.80	602.00	596.80	1470.00	606.76	0.00	606.96	10.02	4.58	601.84	464.40
11871.000	45.00	603.80	602.00	596.80	1470.00	606.81	0.00	607.01	9.56	4.52	608.95	672.54
11872.000	1.00	0.00	0.00	596.80	1470.00	606.92	0.00	607.04	2.93	3.40	692.44	858.74
12087.000	215.00	0.00	0.00	597.20	1470.00	607.09	0.00	607.10	2.56	3.11	669.58	918.47
12088.000	1.00	603.00	602.10	597.20	1470.00	607.00	0.00	607.11	4.79	3.36	638.09	671.48
12104.000	16.00	603.00	602.10	597.20	1470.00	607.01	0.00	607.12	4.80	3.36	637.93	671.22
12105.000	1.00	0.00	0.00	597.20	1470.00	607.03	0.00	607.12	2.54	3.11	670.80	921.46
12265.000	161.00	0.00	0.00	597.10	1470.00	607.07	0.00	607.16	3.82	3.36	584.96	751.95
12437.000	171.00	0.00	0.00	597.10	1470.00	607.14	0.00	607.25	3.31	3.59	730.28	807.97
12438.000	1.00	603.10	602.10	597.10	1470.00	607.12	0.00	607.26	7.37	4.21	701.72	540.71
12454.000	16.00	603.10	602.10	597.10	1470.00	607.14	0.00	607.28	7.59	4.21	701.25	540.61
12455.000	1.00	0.00	0.00	597.10	1470.00	607.19	0.00	607.29	3.18	3.54	740.67	824.05
12916.000	151.00	0.00	0.00	597.60	1470.00	607.25	0.00	607.38	3.32	3.64	660.91	706.71
12705.000	170.00	0.00	0.00	596.60	1470.00	607.31	0.00	607.39	2.21	3.11	736.04	986.06
12787.000	1.00	603.90	603.10	596.60	1470.00	607.31	0.00	607.40	5.44	3.16	689.36	792.06
12803.000	16.00	603.90	603.10	596.60	1470.00	607.32	0.00	607.40	5.44	3.16	689.64	792.08
12804.000	1.00	0.00	0.00	596.60	1470.00	607.32	0.00	607.40	2.20	3.10	737.56	991.30
12858.000	54.00	0.00	0.00	596.60	1470.00	607.32	0.00	607.42	2.58	3.07	736.70	1014.15
12859.000	1.00	605.00	602.90	596.60	1470.00	607.31	0.00	607.43	5.14	3.46	695.00	648.19
12910.000	51.00	605.00	602.90	596.60	1470.00	607.35	0.00	607.45	5.13	3.45	695.74	649.01
12911.000	1.00	0.00	0.00	596.60	1470.00	607.37	0.00	607.46	2.04	3.00	742.75	1028.54
13191.000	280.00	0.00	0.00	597.00	1470.00	607.49	0.00	607.54	3.58	3.59	647.00	745.19

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FORM 741-00 PRINTED BY ROTARY MANIFOLD FORMS

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	COSEL	CRIWS	EG	10X+S	VCN	AREA	.01K
13152.000	1.00	604.30	603.40	597.60	1470.00	607.42	0.00	607.54	6.23	3.59	606.23	589.04
13169.000	17.00	604.30	603.40	597.60	1470.00	607.44	0.00	607.55	6.20	3.56	607.19	590.46
13170.000	1.00	0.00	0.00	597.60	1470.00	607.44	0.00	607.56	5.86	3.58	638.61	747.90
13400.000	230.00	0.00	0.00	597.70	1470.00	607.56	0.00	607.65	4.70	3.17	746.17	678.05
13523.000	123.00	0.00	0.00	597.50	1470.00	607.62	0.00	607.70	2.87	3.04	944.67	867.07
13524.000	1.00	604.60	603.70	597.50	1470.00	607.61	0.00	607.70	11.97	3.39	801.14	424.95
13576.000	52.00	604.60	603.70	597.50	1470.00	607.68	0.00	607.76	11.28	3.31	817.44	437.61
13577.000	1.00	0.00	0.00	597.50	1470.00	607.69	0.00	607.77	2.75	2.99	961.56	806.49
13740.000	163.00	0.00	0.00	598.00	1470.00	607.71	0.00	607.87	5.89	3.69	724.56	605.55
13880.000	140.00	0.00	0.00	598.20	1470.00	607.78	0.00	607.94	3.89	4.40	746.87	745.71
13881.000	1.00	605.80	605.20	598.20	1470.00	607.74	0.00	607.97	11.49	5.22	679.13	433.59
13898.000	17.00	605.80	605.20	598.20	1470.00	607.77	0.00	607.99	11.38	5.20	682.42	435.77
13899.000	1.00	0.00	0.00	598.20	1470.00	607.87	0.00	608.02	3.63	4.26	771.71	772.06
14070.000	171.00	0.00	0.00	598.10	1470.00	607.91	0.00	608.17	10.12	4.53	458.23	462.03
14210.000	140.00	0.00	0.00	598.00	1470.00	608.00	0.00	608.33	7.63	5.45	503.36	532.33
14211.000	1.00	606.50	605.60	598.00	1470.00	607.97	0.00	608.36	14.84	5.99	468.03	381.61
14228.000	17.00	606.50	605.60	598.00	1470.00	608.02	0.00	608.39	14.32	5.90	476.36	388.47
14229.000	1.00	0.00	0.00	598.00	1470.00	608.10	0.00	608.41	7.16	5.31	522.20	549.53
14530.000	301.00	0.00	0.00	599.70	1470.00	608.43	0.00	608.62	4.91	3.99	485.59	663.33
14531.000	1.00	607.00	605.80	599.70	1470.00	608.19	0.00	608.82	32.33	6.92	250.61	256.52
14587.000	56.00	607.00	605.80	599.70	1470.00	608.50	0.00	609.07	22.85	6.05	295.64	307.49
14588.000	1.00	0.00	0.00	599.70	1470.00	609.03	0.00	609.17	3.45	3.50	358.22	791.46

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FORM 1411-3D PRINTED BY ROTARY MANIFOLD FORMS

N.BR.ECORSE DR. DON.HTS.

SUMMARY PRINTOUT TABLE 150

SECTO	Q	CHSEL	DIFKSP	DIFKSX	DIFKNS	TOPKID	XLOH
9923.000	1470.00	604.50	0.00	0.00	0.00	236.00	0.00
10091.000	1470.00	604.55	0.00	0.05	0.00	160.00	168.00
10092.000	1470.00	604.53	0.00	-0.00	0.00	100.00	1.00
10108.000	1470.00	604.56	0.00	0.02	0.00	160.00	16.00
10109.000	1470.00	604.56	0.00	0.01	0.00	160.00	1.00
10310.000	1470.00	604.65	0.00	0.07	0.00	60.00	201.00
10371.000	1470.00	605.46	0.00	0.82	0.00	80.00	61.00
10422.000	1470.00	605.52	0.00	0.05	0.00	150.00	60.00
10423.000	1470.00	605.49	0.00	-0.03	0.00	150.00	1.00
10439.000	1470.00	605.51	0.00	0.02	0.00	150.00	16.00
10440.000	1470.00	605.59	0.00	0.08	0.00	130.00	1.00
10616.000	1470.00	605.67	0.00	0.09	0.00	177.00	176.00
10744.000	1470.00	605.69	0.00	0.02	0.00	130.00	128.00
10745.000	1470.00	605.56	0.00	-0.13	0.00	130.00	1.00
10797.000	1470.00	605.86	0.00	0.30	0.00	130.00	52.00
10798.000	1470.00	606.13	0.00	0.27	0.00	150.00	1.00
10956.000	1470.00	606.31	0.00	0.18	0.00	130.00	158.00
11090.000	1470.00	606.31	0.00	0.00	0.00	130.00	134.00
11080.000	1470.00	606.26	0.00	-0.05	0.00	165.00	1.00
11132.000	1470.00	606.47	0.00	0.15	0.00	165.00	52.00
11133.000	1470.00	606.59	0.00	0.12	0.00	165.00	1.00
11486.000	1470.00	606.67	0.00	0.13	0.00	192.00	153.00
11527.000	1470.00	606.57	0.00	0.00	0.00	120.00	146.00
11628.000	1470.00	606.55	0.00	-0.02	0.00	120.00	1.00
11664.000	1470.00	606.66	0.00	0.01	0.00	120.00	16.00
11665.000	1470.00	606.73	0.00	0.07	0.00	120.00	1.00
11825.000	1470.00	606.80	0.00	0.07	0.00	120.00	160.00

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FORM 1411 GO PRINTED BY ROTARY MARIFOLD FORMS

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
11826.000	1470.00	606.76	0.00	-0.04	0.00	150.00	1.00
11871.000	1470.00	606.81	0.00	0.05	0.00	150.00	45.00
11872.000	1470.00	606.92	0.00	0.11	0.00	150.00	1.00
12087.000	1470.00	607.01	0.00	0.09	0.00	130.00	215.00
12088.000	1470.00	607.00	0.00	-0.01	0.00	130.00	1.00
12104.000	1470.00	607.01	0.00	0.01	0.00	130.00	16.00
12105.000	1470.00	607.03	0.00	0.02	0.00	130.00	1.00
12266.000	1470.00	607.07	0.00	0.04	0.00	143.00	161.00
12437.000	1470.00	607.14	0.00	0.07	0.00	190.00	171.00
12438.000	1470.00	607.12	0.00	-0.02	0.00	190.00	1.00
12454.000	1470.00	607.14	0.00	0.01	0.00	190.00	16.00
12455.000	1470.00	607.19	0.00	0.05	0.00	190.00	1.00
12616.000	1470.00	607.25	0.00	0.06	0.00	155.00	161.00
12786.000	1470.00	607.31	0.00	0.06	0.00	150.00	170.00
12787.000	1470.00	607.31	0.00	-0.00	0.00	150.00	1.00
12803.000	1470.00	607.32	0.00	0.01	0.00	150.00	16.00
12804.000	1470.00	607.31	0.00	0.00	0.00	150.00	1.00
12858.000	1470.00	607.32	0.00	0.00	0.00	150.00	54.00
12859.000	1470.00	607.31	0.00	-0.02	0.00	150.00	1.00
12910.000	1470.00	607.35	0.00	0.02	0.00	150.00	51.00
12911.000	1470.00	607.37	0.00	0.04	0.00	150.00	1.00
13151.000	1470.00	607.43	0.00	0.06	0.00	165.00	240.00
13152.000	1470.00	607.42	0.00	-0.00	0.00	165.00	1.00
13169.000	1470.00	607.44	0.00	0.01	0.00	165.00	17.00
13170.000	1470.00	607.44	0.00	0.01	0.00	165.00	1.00
13400.000	1470.00	607.54	0.00	0.10	0.00	320.00	230.00
13523.000	1470.00	607.62	0.00	0.08	0.00	265.00	123.00
13524.000	1470.00	607.61	0.00	-0.00	0.00	265.00	1.00
13576.000	1470.00	607.68	0.00	0.07	0.00	265.00	52.00

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
13577.000	1470.00	607.69	0.00	0.01	0.00	265.00	1.00
13740.300	1470.00	607.71	0.00	0.02	0.00	260.00	163.00
13880.000	1470.00	607.75	0.00	0.07	0.00	250.00	143.00
13881.000	1470.00	607.74	0.00	-0.04	0.00	250.00	1.00
13898.000	1470.00	607.77	0.00	0.08	0.00	250.00	17.00
13899.000	1470.00	607.87	0.00	0.11	0.00	250.00	1.00
14070.300	1470.00	607.91	0.00	0.04	0.00	190.00	171.00
14210.000	1470.00	608.00	0.00	0.09	0.00	200.00	140.00
14211.000	1470.00	607.97	0.00	-0.03	0.00	200.00	1.00
14228.000	1470.00	608.02	0.00	0.04	0.00	200.00	17.00
14229.000	1470.00	608.10	0.00	0.09	0.00	200.00	1.00
14530.000	1470.00	608.43	0.00	0.32	0.00	120.00	301.00
14531.000	1470.00	605.19	0.00	-0.24	0.00	119.80	1.00
14537.300	1470.00	608.58	0.00	0.39	0.00	120.00	96.00
14580.000	1470.00	609.03	0.00	0.45	0.00	120.00	1.00

SUMMARY OF ERRORS

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FORM 1411-82 PRINTED BY ROYAT MANIFOLD FORMS.

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**************************************************
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
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PRINTED IN U.S.A.
FORM 1411-00 PRINTED BY NOTARY-MANIFOLD FORMS.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME:

3) WATERCOURSE: North Branch Ecorse Creek

4) DOCUMENT TYPE: Input

00BREAK00

Input

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**********************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CODE =  31
  MODIFICATION =  50,51,52
**********************************************

C
T  ALLEN PARK FLOOD INSURANCE STUDY-
T2 100 YR FLOW
T3    ROUGE RIVER                                                    REVISED
                                                                     DEC 1 1979
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         SKEL      FQ      WATER MANAGEMENT
          0.        0.        0.        0.  0.001200    1.02      0.0       0.     530.000   0.700
J2  NPROF     ITYP1     ITYP2     ITYP3     ITYP4     ITYP5     ITYP6     ITYP7     ITYP8     ITYP9     ITYP10
      -1.000    0.000    -1.000    0.300     0.200     0.000     0.300     0.000     0.000    13.000
    7.600   540.700  5389.000  1470.220   760.000  1750.000  1139.500  1250.300     0.300     0.300
    0.150     0.063     0.035     0.400     0.150     0.020     0.200     0.300     0.300     0.300

T4  1/8 J. ALLEN ROAD
    1.500    0.300   280.300    80.300     0.300     1.050     1.000     1.050     0.000     0.000
    1.000    0.300   500.300    41.150   500.000   2501.530   765.750   357.030   502.750   212.000
    1.500   333.000   500.000   425.000   500.000     0.500     0.000     0.000     0.000     0.000

    2.100    3.000    40.000    60.050   500.000   230.500   613.030     0.000     0.070     0.030
    0.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
    0.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
    3.000    0.300   400.000   111.020   701.000   530.300   603.030     0.200     0.600     0.600
    0.000    0.300     0.000    50.000     0.000   150.300     0.030     0.300     0.300     0.300
    0.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
    0.000  134.300   500.000   129.230   601.000     0.000     0.000     0.000     0.000     0.000
    0.000    0.300     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

C4  FACE OF 1/2 ORDER 11
    0.300   16.000   150.000   136.300   500.000     0.000    20.500     0.300     1.200     1.000
    0.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
  270.300   51.000   594.230    50.100   564.000   100.000   500.000   130.300   564.000   132.000
  544.400   116.500   515.000   120.000   564.500   120.000   524.200   575.300   630.300   575.300
    1.250     1.500     1.100   575.000    30.100     0.000    10.200     0.300   564.700   564.700

C4  1/2 OF 1/2 ORDER 11
    5.000    0.100     0.300     0.000     0.200     0.000     0.300     0.000     0.000     0.000
    5.000    0.300     1.000   301.000   500.000     0.000     0.700     0.000     0.000     0.000
    0.000    0.300     0.000     0.000     0.000     0.000   564.000   564.000     0.300     0.300
    0.000    0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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X3		[illegible]	[illegible]	[illegible]	0.000	227.000	0.000	0.000	0.000	0.000
G9	[illegible]			0.000	590.000	50.000	584.600	60.000	584.600	75.000
GR	590.000	85.000	590.000	435.000	600.000	435.000	0.000	0.000	0.000	0.000
K9	0.700	0.100	0.335	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	7.000	10.000	290.000	309.000	250.000	250.000	250.000	0.000	0.000	0.000
X3	0.000	0.000	0.300	205.000	0.300	205.000	0.000	0.000	0.000	0.000
GR	600.000	0.000	590.000	0.000	590.000	250.000	565.000	290.000	584.700	292.000
GR	584.700	307.000	585.000	309.000	590.000	350.000	593.000	600.000	600.000	600.000
X1	8.000	0.300	300.000	343.000	300.000	370.000	300.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	295.000	0.000	295.000	0.000	0.000	0.000	0.000
GR	605.000	0.000	594.300	0.300	594.300	370.000	515.270	314.000	565.200	329.000
GR	594.300	343.000	595.000	593.000	605.000	593.300	0.000	0.000	0.000	0.000
K9	0.000	0.000	0.000	0.300	0.500	0.300	0.000	0.000	0.000	0.000
X2	7.000	915.000	1390.000	1470.000	1470.000	1470.000	1400.000	1250.000	0.000	0.000

D/S FACE OF S/R BRIDGE #2

X9	9.000	10.000	300.000	326.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.000	600.000	0.000
GR	600.000	0.000	595.000	0.000	595.000	390.000	586.300	300.000	586.300	312.000
K1	595.300	315.000	595.700	326.000	594.300	326.300	576.300	576.300	600.000	576.000
X	1.250	1.500	3.000	576.000	26.000	2.000	192.300	0.000	585.300	585.300

D/S FACE OF S/R BRIDGE #2

X1	0.200	10.000	300.000	326.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	1.000	591.300	596.300	0.000	0.000	0.000	0.000	0.000
X9	10.000	0.000	0.000	0.000	0.000	0.000	600.000	600.000	0.000	0.000
GR	595.000	0.000	596.300	0.000	595.800	302.000	586.300	300.000	586.300	312.000
K1	596.300	314.000	596.210	326.000	596.400	326.000	579.300	576.000	600.000	576.000
X	0.100	0.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.000	8.000	300.300	326.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.300	295.000	0.000	295.000	0.000	0.000	0.000	0.000
GR	605.000	0.000	595.300	0.000	590.000	300.000	586.300	300.000	586.300	316.000
GR	590.000	326.000	596.300	596.000	595.000	596.000	0.000	0.000	0.000	0.000
K	0.100	0.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

100' D/S OF STUDY : I-77 (I-94) BRIDGE, END OF CONVERGENCE RUN

X1	12.000	8.000	300.300	326.000	1300.000	326.000	1426.300	0.000	0.000	0.000
X3	0.000	0.000	0.300	295.000	0.300	326.000	0.000	0.000	0.000	0.000
GR	605.000	0.000	590.300	0.000	590.300	300.000	586.300	300.000	586.300	316.000
GR	590.000	326.000	595.000	626.000	605.300	626.000	0.000	0.000	0.000	0.000
K	0.080	0.280	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF E.300) I-94 (E. [illegible] BRIDGE)

X1	13.000	8.300	435.000	512.500	100.200	100.000	100.300	0.000	0.300	0.000
X3	10.000	0.300	0.300	0.000	0.200	0.000	0.300	598.000	598.000	0.000
GR	605.000	0.200	596.300	0.000	590.000	402.000	596.500	435.300	586.300	316.000
GR	598.000	540.400	596.100	600.500	605.000	601.000	0.000	0.000	0.000	0.000
K	1.200	1.500	3.100	601.000	25.500	1.500	218.200	0.000	593.450	592.450

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FORM 1411-00-PRINTED BY ROTARY MANIFOLD FORMS

R

E/S FACE OF E.BOUND I-94 (SURVEY=50+64)

	X1	68.000	10.000	485.000	510.500	68.000	68.300	68.000	0.000	0.000	0.300
	X2	0.000	0.300	1.000	594.300	598.600	0.000	0.000	0.000	0.000	0.300
	X3	15.000	0.000	0.000	0.000	0.000	0.000	0.000	598.600	598.600	0.300
1	GR	605.000	0.000	598.000	0.000	598.000	485.000	585.500	485.000	585.500	497.000
2	GR	586.200	498.500	586.200	510.500	598.000	540.000	596.000	990.000	603.000	990.000
3	NC	0.080	0.080	0.030	0.300	0.500	0.000	0.300	0.000	0.000	0.000

W/S FACE OF E.BOUND I-94 (SURVEY=49+43)

	X1	139.000	3.000	486.000	511.500	121.000	12 .000	121.000	0.000	0.000	0.000
	X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.500	598.500	0.000
	GR	605.000	0.000	598.400	0.000	598.400	480.000	586.400	486.000	587.800	511.500
	GR	598.400	547.500	598.400	1000.000	605.000	1000.000	0.000	0.000	0.000	0.000
	NC	1.250	1.500	3.000	1000.000	25.500	1.500	207.600	0.000	585.950	585.950

W/S FACE OF E.BOUND I-94 (SURVEY=49+79)

	X1	259.000	10.000	480.000	535.500	64.000	64.000	64.000	0.000	0.000	0.000
	X2	0.000	0.000	1.000	594.600	599.100	0.000	0.000	0.000	0.000	0.000
	X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.100	599.100	0.000
	GR	605.000	0.000	598.000	0.000	598.000	480.000	585.900	480.000	585.900	497.000
	GR	586.500	498.500	586.500	510.500	598.000	540.000	596.000	1200.000	603.000	1200.000
	NC	0.090	0.090	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000

I-80 W/S OF E.BOUND I-94.

	X1	454.100	12.000	18.000	92.000	100.000	120.000	100.000	0.000	0.000	0.000
	GR	605.000	0.000	595.000	0.000	590.000	55.000	568.000	58.000	566.000	65.000
	GR	586.000	65.000	590.000	92.000	595.000	117.000	599.100	125.000	605.000	125.000
	NC	0.079	0.070	0.080	0.300	0.500	0.000	0.000	0.000	0.000	0.000
	GR	5.000	671.000	740.000	592.000	670.000	670.000	0.000	0.000	0.000	0.000

E/S OF J.F.K. PARK (SURVEY= 55+00)

	X1	1832.000	11.000	113.000	123.000	1550.000	1550.000	1472.000	0.000	0.000	0.000
	GR	610.000	0.200	595.300	0.000	591.200	75.700	594.700	67.000	607.200	113.500
	GR	587.450	150.300	587.500	154.000	593.300	154.700	596.700	158.000	595.200	207.300
	GR	610.000	237.300	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NC	0.000	0.000	0.000	0.100	0.300	0.300	0.000	0.000	0.000	0.000

X.

	X1	3132.000	0.300	0.300	0.000	200.000	200.000	200.000	0.000	0.000	0.000
	NC	0.000	0.000	0.000	0.300	0.500	0.300	0.000	0.000	0.000	0.300

W/S FACE (SURVEY = 25+00)

	X1	2534.000	10.000	10.000	180.500	2500.000	10.000	200.000	0.000	0.000	0.000
	X3	90.000	0.000	0.000	0.300	0.000	0.000	0.000	598.000	598.000	0.000
	GR	610.000	0.000	595.100	0.000	595.700	72.000	134.700	140.000	598.200	117.000
	GR	595.100	154.000	592.000	161.000	588.000	164.000	580.200	160.000	58 .000	185.000
	GR	595.500	192.000	595.500	240.000	593.700	374.000	37.300	275.200	0.000	270.000
	NC	0.000	0.500	0.000	0.000	10.000	1.000	0.000	0.000	0.000	0.000

W/S FACE (SURVEY = 25+00)

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X1	2541.000	0.000	0.000	0.000	5.000	5.000	5.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	594.900	595.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	3.000	0.000	0.000	0.000	0.000	0.000	595.300	595.500	0.000
GT	10.000	117.000	595.300	0.000	161.000	594.300	0.000	161.000	599.000	0.000
[illegible]	164.300	993.000	538.700	144.000	597.300	594.900	162.000	597.000	594.900	162.000
[illegible]	599.000	988.000	133.300	599.000	0.000	163.000	596.300	0.000	245.000	295.500
[illegible]	0.000	3.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000

50'U/S OF FOOTBRIDGE

X1	2591.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000

X - 400' U/S OF FOOTBRIDGE

X1	2941.000	70.100	95.000	192.300	550.000	550.000	550.200	0.000	0.000	0.000
X2	610.000	0.300	595.000	0.000	595.000	0.000	590.000	90.000	587.000	90.000
X3	587.600	132.000	593.000	116.000	593.000	146.000	595.000	167.000	596.000	167.000

U/S FACE LAVRE ST@ CULVERTS(SURVEY = 17+94)

X1	3287.000	8.000	93.000	110.300	340.000	340.000	340.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	1.000	0.000	0.000	0.000	595.000	595.000	0.000
GT	610.000	0.000	595.000	0.000	595.000	90.000	568.200	90.000	568.200	100.800
GR	595.000	110.300	593.000	200.000	610.000	200.000	0.000	0.000	0.000	0.000
SD	1.250	2.910	3.000	200.000	15.700	1.000	78.000	0.000	568.200	588.200

U/S FACE KERR'S ST. (SURVEY= 15+94)

X1	3407.000	3.000	0.000	0.000	200.000	200.000	200.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	595.500	595.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	3.000	0.000	0.000	0.000	0.000	0.000	595.500	595.500	0.000

U/S FACE RUSSELL ST. CULVERTS (SURVEY = 13+05)

X1	3776.000	3.000	20.000	110.800	289.000	289.000	289.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	595.500	595.500	0.000
GT	610.000	0.000	595.000	0.000	595.000	0.000	568.200	90.000	568.200	100.800
GR	595.000	110.300	593.000	200.000	610.000	200.000	0.000	0.000	0.000	0.000
SD	1.250	2.910	3.000	200.000	14.560	1.300	80.000	0.000	589.000	589.000
NC	0.070	0.070	0.030	0.300	0.500	0.000	0.000	0.000	0.000	0.500

U/S FACE RUSSELL ST. CULVERTS(SURVEY = 12+3[illegible])

X1	3842.000	0.100	0.000	0.300	67.000	67.000	67.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	596.900	596.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	596.000	596.000	0.000
GT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
[illegible]	5.000	140.000	0.000	1000.000	1000.000	1000.000	0.000	0.000	0.000	0.000

U/S FACE OF WATSON AVE. (SURVEY = 8+47)

X1	3234.000	8.000	55.000	95.000	372.000	430.000	331.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	595.000	595.000	0.000
GT	610.000	0.000	595.000	0.000	595.000	90.000	568.200	90.000	568.200	100.800
GR	595.000	75.000	593.000	130.000	610.000	130.000	0.000	0.000	0.000	0.000
SD	1.250	2.000	3.000	130.000	13.000	1.000	80.000	0.000	568.200	588.200

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U/S FACE OF WATSON AVE. (SURVEY = 7+87)

X1	4294.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	594.500	596.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	596.000	596.000	0.000

D/S FACE OF EUCLID AVE. CULVERTS. (SURVEY=4+71)

X1	4610.000	3.000	54.000	75.700	350.000	280.000	316.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	595.500	595.500	0.000
GR	610.000	0.000	595.500	0.000	595.500	4.000	588.600	54.000	588.600	75.700
GR	595.500	75.700	595.500	130.000	610.000	130.000	0.000	0.000	0.000	0.000
SU	1.250	2.040	3.000	130.000	14.220	1.000	76.000	0.000	588.600	588.600

U/S FACE OF EUCLID AVE. CULVERTS. (SURVEY= 4+33)

X1	4678.000	0.000	0.000	0.000	63.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	594.500	596.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	596.300	596.300	0.000
X4	3.000	995.000	4293.000	1470.000	1470.000	1010.000	0.000	0.000	0.000	0.000

D/S FACE SOUTHFIELD F/WAY CULVERT

X1	4853.000	6.000	40.000	63.000	140.000	200.000	170.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
X3	610.000	0.000	603.000	1.000	590.000	0.000	580.000	60.000	603.000	100.000
GR	610.000	101.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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   HLOP RELEASE DATED NOV 76 UPDATED FEB 1977
   ERDAS CORP - 1.3.0
   METRIC,TIO= -  90,31,32
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T1 NORTH BRANCH ESCORSE CREEK CEARSDAM NTS. FIS MOD 2000 UP
T2 100 YR
T3       N.BRANCH ESCORSE CON.NTS.

J1  ICHECK    INR      NINP      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.        5.        0.        5.  0.050000     0.30     0.0       0.    599.000     0.002

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBW       CHNIM     ITRACE
    -1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000    15.000

JT    7.500   385.000   250.000  1470.000  1010.000     0.000     0.300     0.300     0.000     0.000
JX    0.400     0.100     0.033     0.300     0.500     0.000     0.000     0.000     0.000     0.000

D/S FACE SOUTHFIELD P/WAY CULVERT

GR   36.200     2.000    40.000    60.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    0.000     0.000     0.000     0.000     0.000     0.000     0.000   605.000   605.000     0.000
GR    0.000     0.000   601.000     1.000   590.000    40.000   590.000    60.000   605.000   100.000
GR  610.000   601.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    0.000     2.340     5.280     0.300    20.000     0.000   100.000     0.000   590.400   590.000

U/S FACE SOUTHFIELD P/WAY CULVERT

GR 5181.000     0.000     0.000     0.000   323.000   320.000   320.000     0.000     0.400     0.000
GR    0.000     0.000     5.000   599.400   607.000     0.000     0.200     0.000     0.000     0.000
GR   10.200     0.016     3.000     0.200     2.000     0.002     0.000   627.200   627.200     0.200
GR    0.650     0.050     0.333     0.200     2.000     0.002     0.500     0.100     0.400     0.500

VALLEY AT FLEMING DEAD END  27+00

GR 5578.000     7.000   120.000   102.000   105.000   125.000   159.000     0.000     0.000     0.000
GR    3.000     0.000     3.000    94.000     0.000   214.300     2.000     0.000     3.000     3.000
GR  598.800     0.100   598.800   100.000   599.400   124.600   591.100   165.000   591.100   165.000
GR  601.400   102.300   602.400   554.000     0.000     0.000     2.000     0.000     0.000     0.000
NC    0.060     0.050     0.035     0.400     0.600     0.600     0.000     0.000     0.000     0.000

VALLEY 26+45

GR 5406.000     7.300   101.000   212.000   150.000   155.000   150.000     0.000     0.000     0.000
GR   10.000     0.300     0.000    55.000     0.000   155.000     0.000   601.300   602.400     0.000
GR  598.500     0.300   601.300   101.000   591.500   102.000   591.500   198.000   600.200   212.000
GR 5402.400   223.300   598.400   598.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    0.000     0.300     0.000     0.500     0.500     0.000     0.000     0.000     0.000     0.000
GR    0.000     0.050    47.000     0.000    54.000     0.000   700.300    30.000   300.000     0.050
GR  592.000     0.335   598.000    10.000   250.000     0.000     0.300     0.000     0.000     0.000
GR    0.000     2.400     0.100     0.100     0.100     0.000   250.000   428.000   600.000   450.000
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D/S FACE RAYMOND

X1	5968.000	16.000	392.000	408.100	482.000	482.000	482.000	3.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	595.600	595.600	0.000
BT	615.000	0.000	600.800	0.000	599.800	37.000	599.800	64.000	599.800	30.000
BT	599.800	130.000	600.300	200.000	598.700	400.000	598.700	303.000	592.600	392.000
BT	592.600	392.100	592.600	408.000	592.600	438.100	602.000	427.000	598.200	500.000
BT	599.700	700.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MH	7.000	0.050	37.000	0.020	64.000	0.050	100.000	10.000	300.000	0.050
MH	592.000	0.020	600.100	10.000	700.000	0.200	0.000	0.000	0.000	0.000
BT	6.000	7.100	9.100	9.100	9.100	0.000	250.000	428.000	60.000	450.000

X1	5969.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	595.600	595.600	0.000
BT	15.000	0.000	595.800	0.000	0.000	600.800	0.000	37.000	599.600	0.000
BT	64.000	599.800	0.000	130.000	599.600	0.000	250.000	600.300	0.000	350.000
BT	599.700	0.000	580.000	598.700	0.000	392.000	596.900	592.600	592.100	596.900
BT	595.600	408.000	596.900	595.600	603.100	396.900	595.600	427.000	602.000	0.000
BT	500.000	598.200	0.000	700.000	599.700	0.000	0.000	0.000	0.000	0.000
MH	7.000	0.050	37.000	0.020	64.000	0.050	100.000	10.000	300.000	0.050
MH	592.000	0.020	600.100	10.000	700.000	0.000	0.000	0.000	0.000	0.000
BT	0.000	7.100	9.100	9.100	9.100	0.000	250.000	428.000	60.000	450.000

X1	5935.000	0.000	0.000	0.000	14.000	14.000	14.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	10.000	0.000	0.000	0.000	0.000	0.000	0.000	596.900	595.900	0.000
BT	7.000	0.050	37.000	0.020	64.000	0.050	100.000	10.000	300.000	0.050
BT	592.000	0.020	600.100	10.000	700.000	0.000	0.000	0.000	0.000	0.000
BT	0.000	7.100	9.100	9.100	9.100	0.000	250.000	428.000	60.000	450.000

D/S FACE RAYMOND

X1	5936.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	596.900	596.900	0.000
BT	7.000	0.050	37.000	0.020	64.000	0.050	100.000	10.000	300.000	0.050
BT	592.000	0.020	600.100	10.000	700.000	0.000	0.000	0.000	0.000	0.000
BT	0.000	7.100	9.100	9.100	9.100	0.000	250.000	428.000	60.000	450.000

VALLEY 2024SD

X1	5136.000	16.000	367.000	336.000	172.000	172.000	172.000	0.000	0.000	0.000
X3	515.000	0.000	359.000	0.000	599.000	37.000	599.000	64.000	599.000	30.000
BT	599.000	200.000	599.000	301.000	600.000	337.000	599.000	347.000	591.000	359.000
BT	591.000	360.000	598.000	310.000	592.000	592.000	592.000	597.000	0.000	0.000
MH	7.000	0.050	37.000	0.020	64.000	0.050	100.000	10.000	300.000	0.050
MH	301.000	0.000	379.000	0.000	400.000	0.000	0.000	0.000	0.000	0.000
BT	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	179.000	457.000

VALLEY CROSSING

X1	5297.000	13.000	367.000	379.000	141.000	141.000	141.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	597.200	597.200	0.000
BT	596.000	0.000	596.700	0.000	598.700	37.000	598.700	64.000	0.000	0.000
BT	598.000	320.000	599.000	299.000	598.000	337.000	598.000	0.000	0.000	0.000
BT	598.000	596.000	598.000	449.000	598.000	449.000	0.000	0.000	0.000	0.000
MH	7.000	0.050	37.000	0.020	64.000	0.050	100.000	10.000	300.000	0.050
MH	301.000	0.020	379.000	0.000	400.000	0.000	0.000	0.000	0.000	0.000
BT	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	179.000	457.000

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R	6298.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
	0.000	0.000	0.000	597.200	598.000	0.000	0.000	0.000	0.000	0.000
	10.000	0.000	0.000	0.000	0.000	0.000	0.000	597.200	597.200	0.000
	7.000	0.050	37.000	0.020	64.000	0.050	170.000	10.000	300.000	0.000
	361.000	0.020	379.000	0.050	440.000	0.000	0.000	0.000	0.000	0.000
	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	176.000	439.000

X1	6316.000	0.000	0.000	0.000	15.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	597.200	598.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
MH	7.000	0.050	37.000	0.020	64.000	0.050	170.000	10.000	300.000	0.000
MH	361.000	0.035	379.000	0.050	440.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	176.000	439.000

U/S FACE CROSSMENT

X1	6315.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
MH	7.000	0.050	121.000	0.020	143.000	0.050	144.000	10.000	401.000	0.050
MH	412.000	0.035	451.000	0.050	466.000	0.020	0.000	0.000	0.000	0.000

VALLEY 259-40

X1	6696.000	11.000	412.000	451.000	191.000	157.000	191.000	0.000	0.000	0.000
GR	6[illegible].300	[illegible].000	60[illegible].900	64.000	600.900	121.000	600.900	146.000	601.000	134.000
GR	599.700	600.000	599.700	601.000	598.800	612.000	592.000	426.000	598.000	142.000
GR	6[illegible].300	451.000	599.500	466.000	615.000	466.000	0.000	0.000	0.000	0.000
MH	5.000	0.040	100.000	10.000	201.000	0.050	261.000	0.035	279.000	0.050
MH	340.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE BEARING

X1	6642.000	13.000	261.000	279.000	161.000	166.000	160.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	597.200	597.200	0.000
GR	600.000	0.000	599.000	0.000	599.000	600.000	599.200	125.000	599.000	125.000
GR	597.000	200.000	597.000	201.000	598.000	433.000	592.000	291.000	592.000	279.000
GR	599.300	291.000	597.200	340.000	615.000	340.000	0.000	0.000	0.000	0.000
MH	5.000	0.040	100.000	10.000	201.000	0.050	261.000	0.020	279.000	0.050
MH	340.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	6564.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	597.200	598.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	597.200	597.200	0.000
MH	5.000	0.040	100.000	10.000	201.000	0.050	261.000	0.020	279.000	0.050
MH	340.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	6679.000	0.000	0.000	0.000	16.200	13.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	597.200	597.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
MH	5.000	0.040	100.300	10.000	201.000	0.050	261.000	0.035	279.000	0.050
MH	340.000	0.020	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE BEARING

X1	6680.000	0.000	0.000	0.000	0.000	13.000	1.000	20.000	0.000	0.000

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X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
NH	7.000	0.050	77.000	0.020	113.000	0.050	140.000	10.000	201.000	0.050
NH	234.000	0.035	279.000	0.050	329.000	0.000	0.000	0.000	0.000	0.000

VALLEY 255+75

X1	6366.000	13.000	234.000	279.000	180.000	186.000	186.000	0.000	0.000	0.000
GR	615.000	40.000	599.800	40.200	598.800	77.000	598.600	113.000	599.600	140.000
GR	599.700	200.000	599.700	201.000	599.900	234.000	592.400	247.000	592.400	263.000
GR	600.000	279.000	599.500	319.000	615.000	329.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
[illegible]	5.000	11.000	165.000	10.000	201.000	0.050	266.000	0.000	284.000	0.050
NH	350.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

6'S FACE CULVERT

X1	7097.000	13.000	266.000	286.000	141.000	141.000	141.000	0.000	0.000	0.000
X3	13.000	0.000	0.000	0.000	0.000	0.000	0.000	597.700	597.700	0.000
GR	615.000	65.000	598.000	65.000	598.000	165.000	598.000	180.000	598.000	190.000
GR	599.000	200.000	598.000	201.000	599.900	254.000	592.800	266.000	592.800	284.000
GR	600.000	284.000	598.100	356.000	615.000	356.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	10.000	201.000	0.050	266.000	0.000	284.000	0.050
NH	150.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	7068.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	597.700	599.000	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	597.700	597.700	0.000
GR	5.000	0.040	165.000	10.000	201.000	0.050	266.000	0.000	284.000	0.050
NH	350.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	7024.000	0.000	0.000	0.000	1.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	597.700	599.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
GR	5.000	0.040	165.000	10.000	201.000	0.050	266.000	0.000	284.000	0.050
NH	350.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

6'S FACE CULVERT

X1	7028.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
GR	7.000	0.050	147.000	0.020	178.000	0.050	210.000	10.000	251.000	0.050
NH	875.000	0.035	519.000	0.050	564.000	0.000	0.000	0.000	0.000	0.000

VALLEY 252+30

X1	7186.000	13.000	273.000	316.000	161.000	161.000	161.000	0.000	0.000	0.000
GR	619.000	10.000	599.000	11.000	598.000	185.000	598.000	173.000	599.000	210.000
GR	596.000	250.000	599.000	251.000	601.000	275.000	592.000	291.000	592.000	305.000
GR	600.000	316.000	599.000	364.000	615.000	364.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	0.000	0.000	251.000	0.000	269.000	0.000	320.000	0.000	0.000	0.000

6'S FACE SPILLWAY

X1	7192.000	13.000	251.000	269.000	176.000	176.000	176.000	0.000	0.000	0.000
GR	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
GR	5.000	11.000	599.000	70.000	599.000	135.000	598.000	149.000	599.000	0.000

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GR	598.700	200.000	598.700	201.000	599.200	246.000	595.000	251.000	593.000	269.000
GR	599.800	274.000	598.500	320.000	615.000	320.000	0.000	0.000	0.000	0.000
NH	3.000	0.040	251.000	0.020	269.000	0.050	320.000	0.000	0.000	0.000
X1	7363.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	598.200	599.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.000	598.000	0.000
NH	3.000	0.040	251.000	0.020	269.000	0.050	320.000	0.000	0.000	0.000
X1	7379.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	598.200	599.000	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	598.800	598.800	0.000
NH	3.000	0.040	251.000	0.035	269.000	0.050	320.000	0.000	0.000	0.000

U/S FACE EDGEMOOR

X1	7380.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.300	598.500	0.000
NH	6.000	0.053	50.000	0.025	90.000	0.050	145.000	0.100	162.000	0.035
NH	136.300	0.053	250.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	9.100	0.000	0.000	0.000	0.000	0.000	139.000	139.000

VALLEY 249-20

X1	7526.000	10.000	145.500	108.000	146.300	146.000	146.000	0.000	0.000	0.000
GR	313.000	0.000	599.500	0.000	598.900	90.000	596.900	90.000	600.900	145.000
GR	593.300	168.000	593.300	178.000	602.900	100.000	600.500	230.000	595.000	250.000
NC	0.050	0.050	0.035	0.500	0.500	0.050	0.000	0.000	0.000	0.000

U/S FACE KINGSTON

X1	7692.300	0.000	115.000	29.000	146.300	146.000	146.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.200	598.200	0.000
GR	115.000	0.000	599.600	0.000	600.500	95.000	595.700	111.000	595.700	129.000
GR	600.200	138.000	598.700	202.000	615.000	202.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7693.300	0.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	598.200	599.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.200	598.200	0.000
X1	7703.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	598.200	599.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.000	599.000	0.000
MC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE KINGSTON

X3	7710.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.000	599.000	0.000

VALLEY 244-3

X3	7716.000	0.000	44.200	68.000	350.000	250.000	600.000	0.000	0.000	0.000
GR	600.500	0.000	99.700	0.000	591.900	44.000	595.000	90.000	595.000	70.000

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GR	602.200	88.000	601.000	120.000	615.000	120.000	0.000	0.000	0.000	0.000

D/S FACE DETROIT SKEW

X1	8182.000	0.000	64.200	75.800	166.000	166.000	160.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.600	598.600	0.000
GR	615.000	0.000	599.300	0.000	599.300	44.000	593.600	64.200	593.600	75.600
GR	599.600	86.000	598.900	140.000	615.000	140.000	0.000	0.000	0.000	0.000
DC	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	8183.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	598.800	599.550	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	598.600	598.600	0.000

X1	8199.000	0.000	0.000	0.000	14.000	14.000	14.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	598.500	599.500	0.000	0.200	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.500	599.500	0.000
DC	0.060	0.060	0.055	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE DETROIT SKEW

X1	8200.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.500	599.500	0.000

VALLEY 241^30

X1	8416.000	3.000	55.000	100.000	140.000	60.000	116.000	0.000	0.000	0.000
CJ	77.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GI	615.000	0.000	600.300	0.000	600.700	55.000	593.700	70.000	593.700	84.000
GI	600.100	100.000	600.300	157.000	615.000	147.000	0.000	0.000	0.000	0.000

VALLEY 230^30

X1	8616.000	0.000	45.000	74.000	200.000	350.000	600.300	0.000	0.000	0.000
CJ	300.000	0.000	0.000	65.000	599.600	90.000	593.000	55.000	600.100	74.000
GI	601.300	150.000	0.000	0.000	0.000	0.000	0.300	0.300	0.000	0.000

VALLEY 237^30

X1	8716.300	0.000	54.000	91.300	75.000	150.000	100.000	0.000	0.000	0.000
GR	600.000	0.000	600.400	54.300	593.900	65.000	593.900	65.300	599.700	91.100
GP	600.200	115.000	0.000	0.000	0.000	0.000	0.000	0.300	0.000	0.000
NH	7.000	0.050	35.000	0.020	62.000	0.050	70.000	10.000	152.000	0.050
NH	112.000	0.035	147.000	0.080	159.000	0.000	0.000	0.000	0.000	0.000

VALLEY 230^75

X1	8774.000	12.000	112.000	147.000	55.000	55.300	55.000	0.000	0.000	0.000
GI	615.000	0.000	601.600	0.000	600.400	61.300	601.300	62.000	601.000	72.000
GI	600.600	102.000	600.700	112.000	593.900	117.000	593.900	153.000	600.000	147.000
GI	601.700	100.000	615.000	159.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	7.000	0.040	56.000	0.000	82.000	0.000	104.000	10.000	0.000	0.040
NH	170.000	0.035	97.000	0.040	215.000	0.000	0.000	0.000	0.000	0.000

D/S FACE DETROIT

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X1	8862.000	15.000	177.000	193.000	91.000	91.000	91.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.500	601.900	0.000
GR	615.000	0.000	601.800	0.000	601.500	56.000	600.500	56.000	600.500	82.000
B9	600.900	104.000	600.900	135.000	601.000	172.000	593.900	177.000	593.900	177.100
BT	593.900	192.900	593.900	193.000	602.000	207.000	602.000	215.000	615.000	215.000
BA	7.000	0.040	58.000	0.030	82.000	0.040	104.000	10.000	135.000	0.040
BH	177.000	0.020	193.000	0.040	215.000	0.000	0.000	0.000	0.000	0.000

X1	8863.000	0.300	0.000	0.300	1.000	1.000	1.300	0.000	0.000	0.300
X3	10.000	0.300	0.000	0.300	0.000	0.000	0.300	600.500	601.900	0.300
B1	15.000	0.300	615.000	0.300	0.000	601.400	0.300	10.300	601.500	0.000
BT	58.000	600.500	0.000	82.000	600.500	0.000	104.000	600.900	0.000	135.000
B9	600.900	0.000	172.000	601.000	0.000	177.000	601.900	593.900	177.100	601.900
BT	590.500	192.900	601.900	598.500	193.000	601.900	593.900	207.000	602.000	0.000
BT	215.000	602.000	0.000	215.000	615.000	0.000	0.000	0.000	0.000	0.000
BA	7.000	0.040	58.000	0.030	82.000	0.040	104.000	10.000	135.000	0.040
BH	177.000	0.020	193.000	0.040	215.000	0.000	0.000	0.000	0.000	0.000

X1	8928.000	0.300	0.000	0.300	65.000	65.000	65.300	0.000	0.000	0.000
X2	0.000	0.300	0.000	0.300	0.000	0.000	1.300	0.000	0.300	0.000
X3	10.000	0.300	0.000	0.000	0.000	0.000	0.000	600.500	601.900	0.000
X5	0.400	0.300	0.000	599.900	601.900	0.000	0.000	0.000	0.000	0.000
BA	7.000	0.040	58.000	0.020	82.000	0.040	104.000	10.000	135.000	0.040
BH	177.000	0.035	193.000	0.040	215.000	0.000	0.000	0.000	0.000	0.000

B/S FACE PELHAM

X1	8929.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.500	601.900	0.000
X4	7.000	0.300	58.000	0.020	64.000	0.040	90.000	10.000	225.000	0.000
X5	215.000	0.335	193.000	0.000	356.000	0.000	0.000	0.000	0.000	0.000

VALLEY 232+40

X1	9155.000	12.000	283.000	320.000	226.000	226.000	226.000	0.000	0.000	0.000
B9	615.000	0.000	602.500	0.000	601.500	82.000	601.900	64.000	602.500	90.000
BT	602.900	328.000	601.100	285.000	594.500	592.000	593.900	351.000	620.000	620.200
BA	601.900	356.000	615.000	330.000	0.000	0.000	0.000	0.000	10.000	0.000
XH	5.000	0.020	73.000	10.000	207.000	0.000	292.000	0.000	300.000	0.000
BH	354.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

B/S FACE JACKSON

X1	9396.000	10.000	292.000	308.000	241.000	241.000	241.000	0.000	0.000	0.000
B2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.700	599.700	0.000
GT	615.000	0.300	601.600	0.000	601.600	75.000	601.100	247.000	601.900	285.000
BA	594.800	292.300	594.800	308.000	601.300	322.000	601.000	350.000	0.000	258.000
BT	9.000	0.320	75.000	10.000	247.700	0.000	292.000	0.000	304.000	0.000
BH	354.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	9397.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
B4	0.000	0.000	0.000	599.700	600.500	0.000	0.000	0.000	0.000	0.000
BB	10.000	0.000	0.000	0.000	0.000	0.000	0.000	599.700	599.700	0.000
BA	0.000	0.000	75.000	10.000	601.000	0.000	601.000	0.000	601.000	0.000
BH	354.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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X1	9413.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	599.700	600.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	0.000	0.000	0.000	0.000	600.500	600.500	0.000
NH	5.000	0.020	75.000	10.000	267.000	0.050	292.000	0.035	308.000	0.050
NH	334.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE JACKSON

X1	9414.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.500	600.500	0.000
GR	7.000	0.050	17.000	0.020	44.000	0.050	60.000	0.000	0.000	0.050
GR	231.000	0.035	270.000	0.050	295.000	0.000	0.000	0.000	0.000	0.000

VALLEY 228+15

X1	9680.000	14.000	231.000	270.000	166.000	166.000	166.000	0.000	0.000	0.000
GR	418.000	0.300	602.400	0.000	601.600	17.000	601.400	64.000	602.400	60.000
GR	602.900	219.000	601.400	231.000	595.200	231.000	595.200	259.000	601.300	270.000
GR	601.600	295.000	615.000	295.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.020	60.000	10.000	165.000	0.050	221.000	0.035	239.000	0.050
NH	305.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE MEDDEL

X1	9746.000	10.000	231.000	259.000	166.000	166.000	166.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	0.000	0.000	0.000	0.000	600.500	600.500	0.000
GR	615.000	0.700	602.600	0.000	602.300	50.000	601.600	165.000	601.600	219.000
GR	595.700	221.000	595.700	239.000	601.300	250.000	601.600	305.000	615.000	535.000
NH	5.000	0.020	60.000	10.300	165.000	0.050	221.000	0.020	239.000	0.050
NH	305.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	9747.000	0.000	7.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	600.300	601.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.300	0.000	600.300	600.300	0.000
NH	5.000	0.020	60.000	10.300	165.000	0.050	221.000	0.020	239.000	0.050
NH	305.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	9763.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	600.500	601.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	601.300	601.300	0.000
NH	5.000	0.020	60.000	10.300	165.000	0.050	221.000	0.035	239.000	0.050
NH	305.300	0.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE MEDDEL

X1	9704.000	0.000	0.000	0.300	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.300	0.000	0.300	0.000	601.300	601.300	0.000
NH	7.000	0.050	85.000	0.020	51.000	0.050	75.000	11.000	264.000	0.050
MH	132.000	0.035	220.000	0.050	256.000	0.300	0.000	0.000	0.000	0.000

VALLEY 224+70

X1	9925.000	12.000	192.300	220.000	166.000	166.000	166.000	0.000	0.000	0.000
GR	615.000	0.000	601.700	0.000	602.730	24.000	602.730	59.300	602.700	75.000
GR	602.400	164.000	602.500	192.000	595.650	221.000	595.650	219.000	602.000	220.000
GR	602.300	235.300	615.300	231.000	0.000	0.000	0.000	0.000	0.000	0.000

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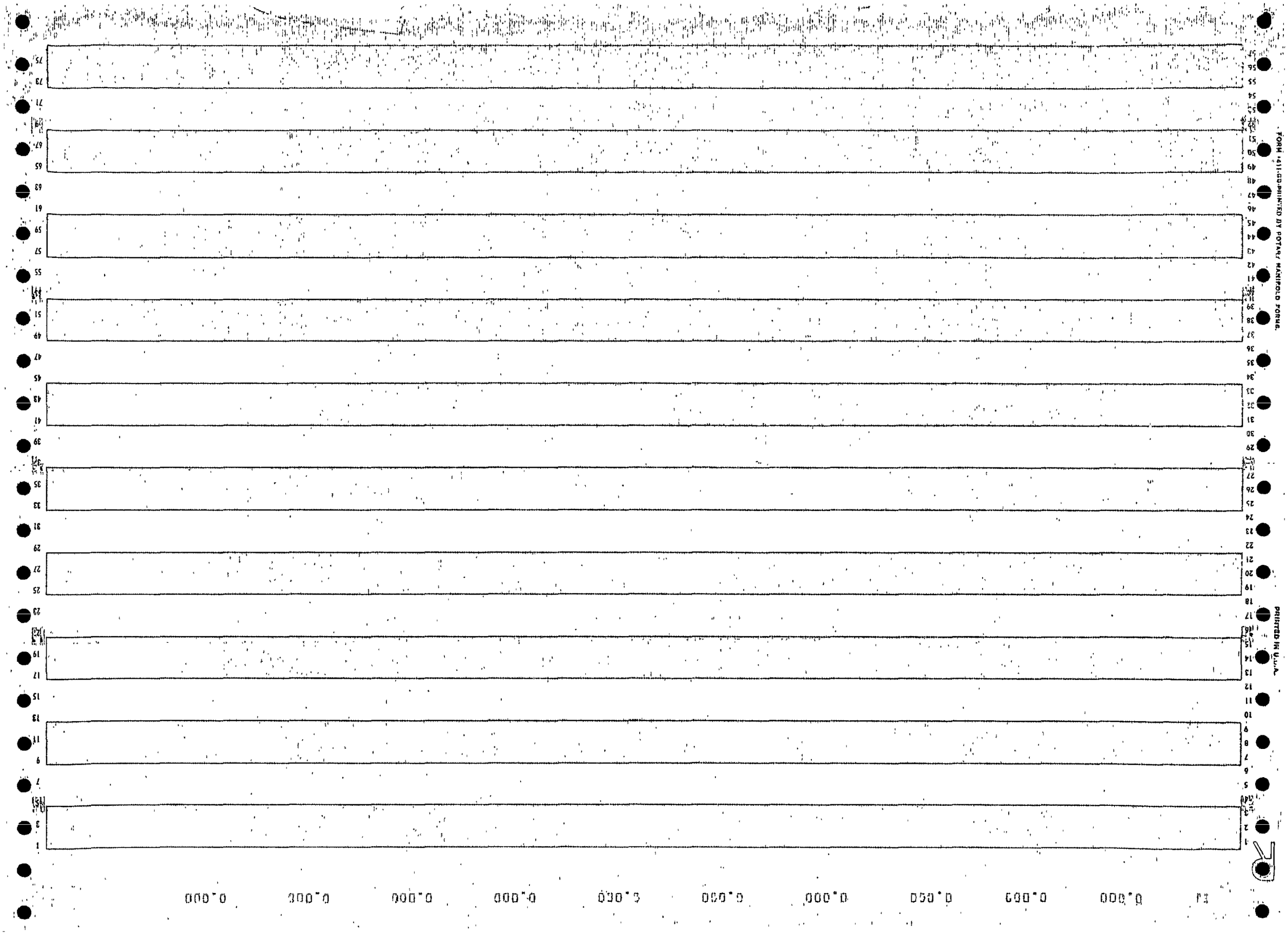
FORM 1471-30 PRINTED BY ROLART MANIFOLD FORMS.


FORM 4611-GD-PRINTED BY POTAR/ MANIFOLD FORMS.
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     HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
     ERROR CODE =  01
     CLASSIFICATION =  50,51,52
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C
T1  NORTH BRANCH SCOTSE CREEK FLS 90D 2000 07 DEARBORN HEIGHTS
T2  100 YR FLOW
T3       N.BR.ECORSE CR. DEV.HTS.

J1   ICHECK     INQ      NRPO      IDIT      STRT     METRIC    HVINS      Q          NSEL       IQ
          0.        .         0.        0.  0.000000     0.00      .0       0.       504.50     0.000

J2   NPROF     IPLOT     PRFVS     XSECV     XSECH        FN     ALLOC      ID.       CINT      ITRACE
         -1.000    0.200    -1.000    0.500     0.000     0.000     0.500     0.500     0.000    15.000

NC      4.020   944.500  1290.000  1670.000  1910.000     0.030     0.020     0.030     0.030     0.000
NC      5.020     0.300     0.300     0.300     0.300     0.030     0.020     0.030     0.030     0.000
NR      7.020     0.050    24.000     0.020    51.000     0.050    75.000    10.000   164.000     0.050
NR    162.020     0.535   220.000     0.050   256.000     0.000     0.000     0.000     0.000     0.000

                 XSECV  224+71

X1   9929.020    12.300   982.000   220.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    615.000     0.000   601.700     0.300   600.700    24.200   600.700    59.000   601.700    65.000
GR    902.400   144.000   902.000   182.300   895.300   181.300   565.600   209.000   602.000   223.000
GR    482.220    29.500   613.000   205.230     0.000     0.000     0.000     0.000     0.000     0.000
NH      3.000     0.040   101.500     0.500   110.500     0.040   160.000     0.000     0.000     0.000

                 X/S #2CE CENTER

X1   10291.000     5.000   931.500   118.500   136.500   165.000   160.000     0.000     0.000     0.000
GR      16.000     3.030     0.500     3.000     0.500     0.000     0.000   601.000   601.000     0.000
GR     415.000     0.000   601.200     0.000   602.200    92.000   348.000   701.500   706.000   124.300
NH     202.000   133.000   631.700   160.000   613.000   165.000     0.000     0.000     0.000     0.000
NH       3.000     0.040   101.500     0.020   110.500     0.040   160.000     0.000     0.000     0.000

X1   10042.200     0.000     3.000     0.000     3.020     1.000     1.500     0.500     0.000     0.000
GR       0.000     0.000     0.000   601.000   601.000     0.000     1.000     0.000     0.000     0.000
NR      10.000     0.000     3.000     0.000     0.000     0.000     0.000   601.300   601.000     0.000
NH       3.000     0.040   101.500     0.020   110.500     0.040   160.000     0.000     0.000     0.000

X1   1102.020     0.000     3.000     0.300    10.000    10.300    10.000     0.700     3.020     3.020
GR       0.000     0.300     0.300     0.300   601.300     1.000     2.020     2.020     2.020     2.000
NR      10.000     0.000     0.000     0.020     0.000     0.000     0.020     0.000     0.000     0.000
NH       3.000     0.040   101.500     0.020   110.500     0.040   160.020     0.020     0.020     0.000

                 X/S #3CE CENTER

X1   10102.000     3.000     0.300     3.020     1.200     1.020     1.000     0.000     0.000     0.000
GR       0.000     1.000     0.000     3.020     0.500     0.000     0.000   601.000   601.000     0.000
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FORM E211-00 PRINTED BY ROTARY MANIFOLD FORMS.
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NH	60.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE HANOVER BETH. MAYFAIR AND HURON,SKEW

X1	10310.000	0.000	25.100	54.900	201.000	201.000	201.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.300	606.300	0.000
GR	615.000	0.000	604.300	0.000	604.000	10.000	596.000	25.100	596.000	25.200
GR	596.000	54.900	596.000	54.900	602.800	70.000	602.500	80.000	615.000	80.000
GR	0.000	2.020	3.000	0.000	29.800	0.000	128.000	0.000	596.000	596.000
NH	5.000	0.300	10.000	0.025	25.100	0.035	54.900	0.025	70.000	0.040
NH	60.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE HANOVER BETH. MAYFAIR AND HURON,SKEW

X1	10371.000	0.000	0.000	0.000	61.000	61.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	600.300	602.900	0.300	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	1.000	0.000	0.000	603.700	603.100	0.000
BT	7.000	0.000	604.300	0.000	25.100	603.700	596.000	25.200	603.700	600.300
BT	56.000	603.100	600.300	54.900	603.100	596.000	80.000	602.500	0.000	80.000
BT	615.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.000	50.000	0.035	69.000	0.040	150.000	0.000	0.000	0.000

D/S FACE HURON

X1	10422.000	0.000	51.000	69.000	60.000	61.000	60.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.300	600.300	0.000
BT	615.000	0.000	601.700	0.000	602.500	46.000	596.100	51.000	596.100	69.000
BT	612.000	78.000	601.700	750.000	615.000	150.000	0.000	0.000	0.000	0.000
NH	5.000	0.000	51.000	0.020	69.000	0.060	150.000	0.000	0.000	0.000

X1	10423.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	600.300	601.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.300	600.300	0.000
NH	5.000	0.000	51.000	0.020	69.000	0.060	150.000	0.000	0.000	0.000

X1	10439.000	0.100	0.000	0.200	15.000	15.000	14.000	0.200	0.100	0.000
X2	0.000	0.100	1.000	600.300	301.900	0.300	1.000	0.200	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.500	600.300	0.000
NH	5.000	0.040	51.000	0.035	69.000	0.040	150.000	0.000	0.000	0.000

U/S FACE HURON

X1	10462.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	301.900	301.900	0.000
NH	5.000	0.000	19.000	0.035	69.000	0.040	107.000	0.000	134.000	0.000
NH	177.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	10416.000	19.000	19.000	69.000	176.000	176.000	176.000	0.000	0.000	0.000
X3	6.000	0.000	602.300	0.000	602.500	19.000	597.300	29.000	597.200	37.000
BT	597.300	45.000	604.900	59.000	602.500	107.000	602.300	134.000	603.200	177.500
GR	615.000	177.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE HIGH

PRINTED IN U.S.A.
FORM 1431-GD PRINTED BY ROTARY MANIFOLD FORMS

X1	10744.000	28.000	37.600	62.200	128.000	126.000	128.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	601.400	601.400	0.000
GR	615.000	0.000	602.300	0.000	602.500	32.000	596.600	37.300	595.700	38.100
GR	595.300	38.600	595.500	39.100	595.500	41.100	595.800	43.100	595.500	45.100
GR	595.500	47.100	595.300	47.600	595.700	66.100	596.600	45.300	596.600	51.500
GR	595.700	51.800	595.800	52.300	595.600	52.800	595.500	56.400	595.500	56.800
GR	595.500	58.800	595.500	60.800	595.500	61.300	595.700	61.300	596.600	62.200
GR	604.900	72.000	603.500	150.000	615.000	150.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.027	0.000	0.000	0.002	0.000	0.000	0.000	0.000
X1	10743.000	0.000	0.000	0.000	1.000	1.000	1.200	0.300	0.300	0.300
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	600.400	600.300	0.300
GT	28.000	0.000	615.000	0.000	0.000	602.300	0.000	32.000	602.500	0.000
GT	37.800	602.800	596.600	38.100	602.800	597.800	30.600	602.800	596.400	39.100
GT	602.900	399.400	41.100	602.800	600.900	43.100	602.800	601.400	43.100	602.800
GT	600.800	47.100	602.800	399.400	47.800	602.800	596.800	46.100	602.800	397.800
GT	48.500	602.800	596.600	51.500	602.800	596.600	51.300	602.800	597.300	52.300
GT	602.800	598.000	52.800	602.800	599.400	54.600	602.800	600.800	56.300	602.800
GT	601.400	58.600	602.800	600.800	60.800	602.600	599.400	61.300	602.000	598.800
GT	61.800	602.800	597.900	62.200	602.800	596.600	72.000	604.900	0.000	150.000
GT	603.500	0.000	150.300	615.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10797.000	0.000	0.000	0.000	52.000	52.000	52.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.300	0.000	0.000	0.000	0.000	602.600	602.300	0.000
NC	0.040	0.040	0.333	0.000	0.000	0.300	0.000	0.000	0.000	0.000

U/S CAGE FIPP

X1	10798.000	0.000	0.300	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.300	0.000	0.000	0.000	0.000	602.000	602.300	0.000
NC	0.000	0.040	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY 216800

X1	10956.300	42.000	9.000	69.000	154.200	154.000	154.200	0.300	0.300	0.300
X3	630.000	0.000	603.600	0.000	603.430	0.000	603.600	32.000	602.300	0.000
GR	604.600	69.000	604.600	75.300	605.200	150.000	605.100	147.000	605.100	176.630
GR	603.500	195.000	615.000	176.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.050	0.050	0.033	0.300	0.550	0.000	0.000	0.300	0.000	0.000

D/S FACE PEAK

X1	11079.000	32.000	32.300	57.200	123.000	123.300	123.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.300	0.000	601.000	601.000	0.000
GR	615.000	0.000	603.400	0.000	603.400	30.000	597.000	32.000	596.100	34.100
GR	596.000	33.300	596.000	34.100	596.000	36.100	596.000	38.100	596.000	40.100
GR	596.000	42.100	596.700	42.600	596.100	43.100	597.300	43.300	597.000	46.300
GR	596.100	46.800	596.000	47.300	596.000	47.800	596.000	49.800	596.000	51.000
GR	596.000	53.900	596.300	55.000	596.000	54.300	596.700	56.000	597.000	57.200
GR	604.600	64.000	604.000	80.000	604.300	110.000	603.400	124.000	603.400	131.000
GR	604.000	165.000	615.300	165.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.367	0.000	0.000	0.000	0.200	0.000	0.000	0.000

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FORM 1411-80 PRINTED BY ROTARY MANIFOLD FORMS.

BT	32.000	0.000	615.000	0.000	0.000	603.400	0.000	20.000	603.400	0.000
BT	32.800	603.100	597.000	33.100	603.100	596.200	33.600	603.100	599.200	34.100
BT	603.100	599.900	36.100	603.100	601.300	38.100	603.100	601.800	40.100	603.100
BT	601.300	42.100	603.100	599.900	42.600	603.100	599.200	43.100	603.100	598.200
BT	43.500	603.100	597.000	46.500	603.100	597.000	46.800	603.100	598.200	47.300
BT	603.100	599.200	47.800	603.100	599.900	49.800	603.100	601.300	51.800	603.100
BT	601.300	51.800	603.100	601.300	53.800	603.100	599.900	56.300	603.100	599.200
BT	56.800	603.100	598.200	57.200	603.100	597.000	64.000	604.600	0.000	10.000
BT	604.000	3.000	110.000	604.000	0.000	124.000	603.400	0.000	151.000	603.400
BT	0.000	165.000	604.000	0.000	165.000	615.000	0.000	0.000	0.000	0.000
X1	11132.000	0.000	0.000	0.000	52.000	52.000	52.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.100	603.100	0.000
NP	0.050	0.050	0.335	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE BOLT

X1	11133.000	0.000	0.300	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.300	0.000	0.000	0.000	0.000	603.100	603.100	0.000
NP	5.000	0.050	14.300	0.035	93.100	0.040	95.000	0.020	122.000	0.050
NP	52.000	0.000	0.300	0.000	0.300	0.030	0.000	0.000	0.000	0.000

VALLEY 210+73

X1	10466.000	10.000	24.000	53.000	135.000	153.000	153.000	1.000	0.000	0.000
GR	618.000	1.000	603.300	0.000	602.400	24.300	598.400	25.000	598.400	45.000
GR	606.100	58.000	602.000	95.000	602.000	122.000	603.000	152.000	615.000	152.000
NP	9.000	0.240	31.500	0.035	68.300	0.340	120.000	0.020	0.000	0.000

U/S FACE HANGER

X1	11623.000	0.000	0.300	45.500	121.300	153.000	201.000	0.000	0.000	0.000
X3	10.000	0.000	0.500	0.000	0.000	0.000	0.000	602.100	602.100	0.000
GR	615.000	0.000	602.700	0.000	601.800	19.000	597.000	31.500	597.000	40.500
GR	606.300	58.000	602.200	120.000	615.000	122.000	0.000	0.000	0.000	0.000
NP	9.300	0.040	31.500	0.020	68.500	0.040	120.000	0.000	0.000	0.000
X1	11620.300	0.000	0.000	0.000	1.000	1.000	1.300	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.100	603.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.100	602.100	0.000
NP	9.500	0.040	31.500	0.320	48.500	0.040	120.000	0.000	0.000	0.000
X1	11644.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.100	603.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
NP	9.000	0.240	31.500	0.035	68.500	0.240	120.000	0.000	0.000	0.000

U/S FACE FERRICK

X1	11645.000	0.000	0.300	0.000	1.300	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
NP	9.000	0.040	50.000	0.035	72.500	0.040	120.000	0.000	0.000	0.000

D/S FACE HANGER SET. SPRING AND HARDING SEC.

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X1	11825.000	8.000	50.000	72.600	180.300	180.000	180.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.000	602.000	0.000
GR	615.000	0.000	604.000	0.000	604.000	36.000	596.800	50.000	596.800	72.600
GR	604.000	80.000	603.600	150.000	615.000	150.000	0.000	0.000	0.000	0.000
MH	3.000	0.060	50.000	0.020	72.600	0.060	150.000	0.000	0.000	0.000
X1	11826.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.000	603.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.000	602.000	0.000
MH	3.000	0.060	50.000	0.020	72.600	0.060	150.000	0.000	0.000	0.000
X1	11871.000	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.000	603.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.800	603.800	0.000
MH	3.000	0.060	50.000	0.020	72.600	0.060	150.000	0.000	0.000	0.000

U/S FACE HANOVER BETW. MERRICK AND HARDING,SKEW

X1	11872.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
MH	3.000	0.060	50.000	0.020	45.000	0.060	81.000	0.000	96.000	0.000
MH	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE HARDING

X1	12037.000	10.000	81.500	98.500	215.000	215.000	215.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.100	602.100	0.000
GR	615.000	0.000	602.900	0.000	602.900	18.000	602.900	45.000	603.800	69.000
GR	597.200	81.500	597.200	98.500	603.700	109.000	603.100	130.000	615.000	130.000
MH	5.000	0.060	50.000	0.020	45.000	0.060	81.000	0.000	96.500	0.000
MH	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12083.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.000	603.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
MH	5.000	0.060	50.000	0.020	45.000	0.060	81.000	0.020	96.500	0.000
MH	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12104.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.100	603.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
MH	5.000	0.060	50.000	0.020	45.000	0.060	81.000	0.000	96.500	0.000
MH	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE HARDING

X1	12135.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
MH	5.000	0.060	50.000	0.020	45.000	0.060	81.000	0.000	96.500	0.000
MH	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY 203+90

X1	12266.000	10.000	97.000	137.000	161.000	161.000	161.000	0.000	0.000	0.000
GR	615.000	81.000	604.300	51.000	609.300	0.000	602.600	45.000	603.100	80.000
GR	604.000	97.000	597.300	109.000	577.600	117.000	597.200	125.000	603.900	137.000

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GR	604.300	143.000	615.000	143.000	0.000	0.000	0.000	0.000	0.000	0.000
NP	5.000	0.040	18.000	0.020	45.000	0.040	141.500	0.035	158.500	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D/S FACE GERTRUDE										
X1	12437.000	10.000	141.500	158.500	171.000	171.000	171.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.100	602.100	0.000
GR	615.000	0.000	604.400	0.000	604.400	18.300	604.400	45.000	604.600	130.000
GR	597.100	141.500	597.100	158.500	603.900	170.000	603.900	190.000	615.000	195.000
NP	5.000	0.040	18.000	0.025	45.000	0.040	141.500	0.020	158.500	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12438.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.100	603.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.100	602.100	0.000
NP	5.000	0.040	18.000	0.025	45.000	0.040	141.500	0.020	158.500	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12454.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.100	603.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.100	603.100	0.000
NH	5.000	0.040	18.000	0.020	45.000	0.040	141.500	0.035	158.500	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D/S FACE GERTRUDE										
X1	12455.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.100	603.100	0.000
NH	5.000	0.040	30.000	0.020	57.000	0.050	76.000	0.035	116.000	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VALLEY 199+60										
X1	12616.000	10.000	76.000	116.000	161.000	161.000	161.000	0.000	0.000	0.000
X3	615.000	0.000	604.600	0.000	603.300	50.000	603.300	87.000	603.500	70.000
GR	598.100	69.000	597.800	95.000	596.100	107.000	604.300	116.100	625.000	150.000
NP	5.000	0.040	60.000	0.020	87.000	0.060	141.500	0.035	158.500	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D/S FACE CAMPBELL										
X1	12756.000	10.000	141.500	140.300	170.300	170.000	170.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.100	603.100	0.000
GR	615.000	0.000	603.500	0.000	603.700	60.000	603.700	87.000	604.600	100.000
GR	556.400	141.500	536.400	128.500	604.200	140.000	604.200	150.000	615.000	130.000
NP	5.000	0.040	30.000	0.020	57.000	0.050	76.000	0.035	116.000	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12757.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.100	603.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.100	603.100	0.000
NP	5.000	0.040	30.000	0.020	57.000	0.050	76.000	0.035	116.000	0.060
NH	190.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12803.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

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X2	0.000	0.000	0.000	603.100	603.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.900	603.900	0.000
NH	5.000	0.040	60.000	0.020	87.000	0.040	111.503	0.035	126.500	0.040
NH	160.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE CARPDELL

X1	12804.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.900	603.900	0.000
NH	3.000	0.040	30.000	0.035	105.500	0.040	166.000	0.000	0.000	0.000

D/S FACE HANOVER BETW. CARPDELL AND CLIPPERT,SKEW

X1	12858.000	0.000	00.000	105.500	1.000	54.000	54.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.900	602.900	0.000
NH	615.000	0.000	604.500	0.000	604.700	70.000	596.400	80.000	596.400	105.500
NH	605.000	30.000	606.000	150.000	615.000	150.000	0.000	0.000	0.000	0.000
NH	3.000	0.040	80.000	0.020	105.500	0.040	150.000	0.000	0.000	0.000

X1	12859.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.900	603.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	602.900	602.900	0.000
NH	3.000	0.040	80.000	0.020	105.500	0.040	150.000	0.000	0.000	0.000

X1	12710.000	0.000	0.000	0.000	1.000	51.000	51.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	602.900	603.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
NH	3.000	0.040	80.000	0.035	105.500	0.040	150.000	0.000	0.000	0.000

U/S FACE HANOVER BETW. CARPDELL AND CLIPPERT,SKEW

X1	12910.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.000	603.000	0.000
NH	5.000	0.040	56.000	0.035	74.000	0.040	113.000	0.020	143.000	0.040
NH	165.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE CLIPPERT

X1	13151.000	10.000	56.000	74.000	241.000	240.000	241.000	0.000	0.000	0.000
X2	11.000	0.000	0.000	0.000	0.000	0.000	0.000	603.400	603.400	0.000
X3	615.000	0.000	604.200	0.000	605.300	61.000	599.200	56.000	597.000	63.000
NH	598.200	74.000	605.400	87.000	604.400	113.000	604.400	143.000	604.400	105.000
NH	5.000	0.040	56.000	0.020	74.000	0.040	110.000	0.020	145.000	0.040
NH	165.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	13152.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	603.400	604.300	0.000	0.000	1.000	0.000	1.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.400	603.400	0.000
NH	5.000	0.040	56.000	0.020	74.000	0.040	110.000	0.020	145.000	0.040
NH	165.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	13159.000	0.000	0.000	0.000	1.000	17.000	17.000	0.000	0.000	0.000
X2	11.000	0.000	0.000	603.400	604.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	604.300	604.300	0.000
NH	5.000	0.040	56.000	0.035	74.000	0.040	110.000	0.020	145.000	0.040
NH	165.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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R

U/S FACE CLIPPERT

X1	13170.000	0.300	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	0.000	0.000	0.000	0.000	604.300	604.300	0.000
BH	7.000	0.030	66.000	0.035	114.000	0.050	140.000	10.000	220.000	0.040
XH	258.000	0.020	285.000	0.040	320.000	0.000	0.000	0.000	0.000	0.000

VALLEY 191+50

X1	13420.000	13.000	66.000	114.300	290.300	230.000	330.000	0.000	0.000	0.000
B2	615.300	0.000	605.600	0.000	605.200	66.000	598.500	89.000	597.700	96.000
B1	598.500	103.000	605.300	114.000	606.600	140.000	606.600	220.000	605.500	256.000
B2	605.500	285.000	606.800	320.000	615.000	320.000	0.000	0.000	0.000	0.000
XH	7.000	0.040	37.000	0.035	62.200	0.000	110.000	10.000	190.000	0.000
BH	217.300	0.020	244.000	0.000	265.000	0.000	0.000	0.000	0.000	0.000

D/S FACE WILLIAMS

X1	13523.000	33.000	37.000	62.200	120.000	1.000	125.000	0.500	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.700	603.700	0.000
B2	615.300	0.300	604.600	0.000	605.400	24.200	599.000	17.800	598.100	31.100
B1	597.700	38.600	597.500	39.100	597.500	41.100	597.500	43.100	597.500	45.100
B2	597.500	47.100	597.700	47.600	598.100	48.100	599.000	48.500	599.000	51.500
BH	598.100	51.000	597.700	52.300	597.500	52.800	597.500	54.800	597.500	56.800
XH	597.500	58.800	597.800	60.800	597.700	61.300	599.100	61.800	599.000	62.200
BH	605.400	70.300	605.000	110.000	604.800	190.500	604.800	217.500	604.800	244.000
BH	604.900	265.500	615.000	265.000	0.000	0.500	0.000	0.000	0.000	0.000
XH	7.000	0.040	37.800	0.027	62.200	0.000	110.500	10.000	190.000	0.000
BH	217.000	0.025	244.000	0.000	265.000	0.000	0.000	0.300	0.000	0.000

X1	13524.300	0.000	0.000	0.000	1.200	1.600	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.700	603.700	0.000
B2	32.000	0.000	595.000	0.000	0.000	604.600	0.000	24.000	605.400	0.000
B1	37.800	505.200	599.000	44.100	605.200	600.300	36.600	605.200	601.300	39.300
B2	605.200	601.900	41.100	605.200	603.300	43.100	605.200	603.700	45.300	605.200
BH	603.300	47.100	605.200	601.900	47.000	605.200	601.300	48.100	605.200	630.300
XH	10.500	605.200	599.000	51.500	604.200	599.000	51.300	605.200	600.300	52.500
BH	605.200	601.300	52.500	605.400	601.900	54.000	605.200	603.300	56.200	625.200
BH	603.700	56.000	605.200	603.300	60.000	605.200	601.700	61.300	605.200	631.300
BT	61.000	605.200	620.300	62.200	605.200	599.000	70.000	605.400	0.000	110.000
BT	605.000	0.000	190.000	604.600	0.000	217.000	604.300	0.000	244.000	604.600
BT	0.000	265.000	604.600	0.000	265.000	615.000	0.300	0.000	0.000	0.000
XH	7.000	0.040	37.000	0.000	62.200	0.000	110.000	10.000	190.000	0.000
BH	217.000	0.020	244.000	0.000	265.000	0.000	0.000	0.000	0.000	0.000

U/S FACE WILLIAMS

X1	13576.000	1.000	0.000	0.000	32.300	32.600	32.000	0.000	0.000	0.000
X3	0.300	1.000	0.000	0.000	0.300	0.000	1.000	0.000	0.000	0.000
B2	14.000	0.000	0.000	0.300	0.300	0.000	0.000	615.200	305.200	0.000
B1	7.000	0.040	37.300	0.035	62.200	0.000	110.000	10.000	190.000	0.000
BH	217.000	0.020	244.000	0.000	265.000	0.000	0.000	0.000	0.000	0.000

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FORM 1411-OR PRINTED BY ROY-AR MANIFOLD FORMS

VALLEY 188+10

R1	13740.000	12.000	28.000	66.000	163.000	163.000	163.000	0.000	0.000	0.000
GR	615.000	0.000	605.600	0.000	604.800	25.000	598.000	39.000	598.000	53.000
G2	605.400	66.000	604.000	96.000	606.420	220.000	605.400	237.000	605.400	266.000
GR	606.400	280.000	615.000	280.000	0.000	0.000	0.000	0.000	0.000	0.000
NR	7.000	0.040	32.000	0.020	48.000	0.040	80.000	10.000	175.000	0.040
NR	197.000	0.020	224.000	0.040	250.000	0.000	0.000	0.000	0.000	0.000

D/S EAST DUDLEY

X1	13880.000	12.000	32.000	46.000	140.000	140.000	140.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	605.200	605.200	0.000
G2	615.000	0.000	605.600	0.000	604.800	24.000	598.200	32.000	598.200	46.000
GR	606.800	58.000	606.000	80.000	605.000	175.000	604.700	197.000	604.700	224.000
GR	605.700	250.000	615.000	250.000	0.000	0.000	0.000	0.000	0.000	0.000
NR	7.000	0.040	32.000	0.020	48.000	0.040	80.000	10.000	175.000	0.040
NR	197.000	0.020	224.000	0.040	250.000	0.000	0.000	0.000	0.000	0.000

X1	13681.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	605.200	605.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	605.200	605.200	0.000
NR	7.000	0.040	32.000	0.020	48.000	0.040	80.000	10.000	175.000	0.040
NR	197.000	0.020	224.000	0.040	250.000	0.000	0.000	0.000	0.000	0.000

X1	13626.000	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	605.200	605.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	605.200	605.200	0.000
NR	7.000	0.040	32.000	0.020	48.000	0.040	80.000	10.000	175.000	0.040
NR	197.000	0.020	224.000	0.040	250.000	0.000	0.000	0.000	0.000	0.000

D/S FACE DUDLEY

X1	13999.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	605.200	605.200	0.000
NR	7.000	0.040	32.000	0.020	64.000	0.040	80.000	10.000	175.000	0.040
NR	197.000	0.020	224.000	0.040	250.000	0.000	0.000	0.000	0.000	0.000

VALLEY 189+80

X1	13980.000	12.000	28.000	64.000	171.000	171.000	171.000	0.000	0.000	0.000
X2	613.000	0.000	604.600	0.000	604.000	42.000	596.200	54.000	596.200	56.000
GR	606.200	64.000	607.000	77.000	607.000	135.000	606.000	191.000	606.000	178.000
GR	607.000	190.000	615.000	190.000	0.000	0.000	0.000	0.000	0.000	0.000
NR	7.000	0.040	31.000	0.040	48.000	0.040	70.000	10.000	150.000	0.040
NR	157.000	0.020	174.000	0.040	200.000	0.000	0.000	0.000	0.000	0.000

D/S FACE KATHERINE

X1	14210.000	12.000	31.000	49.000	146.000	146.000	146.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	605.000	605.000	0.000
G2	615.000	0.000	614.000	0.000	606.400	39.000	598.000	51.000	598.000	69.000
GR	606.300	64.000	607.000	70.000	607.000	140.000	606.000	191.000	606.000	174.000
GR	607.000	200.000	615.000	200.000	0.000	0.000	0.000	0.000	0.000	0.000
NR	7.000	0.040	31.000	0.020	48.000	0.040	70.000	10.000	150.000	0.040
NR	157.000	0.020	174.000	0.040	200.000	0.000	0.000	0.000	0.000	0.000

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X1	14211.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	605.600	606.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.500	606.500	0.000
NH	7.000	0.040	31.000	0.020	49.000	0.040	75.000	98.000	130.000	0.040
NH	157.000	0.020	174.000	0.040	200.000	0.000	0.000	0.000	0.000	0.000

X1	14228.000	0.000	0.000	0.000	17.000	17.000	17.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	605.600	606.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.500	606.500	0.000
NH	7.000	0.040	31.000	0.020	49.000	0.040	75.000	98.000	130.000	0.040
NH	157.000	0.020	174.000	0.040	200.000	0.000	0.000	0.000	0.000	0.000

D/S FACE CATHERINE

X1	14229.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.500	606.500	0.000
NH	5.000	0.040	25.000	0.035	55.000	0.040	73.000	0.020	130.000	0.040
NH	155.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	24.000	56.000
ET	0.000	0.000	9.100	9.100	0.000	0.000	26.000	129.000	0.000	129.000

D/S FACE MONROE

X1	14230.000	11.000	25.000	55.000	301.000	301.000	301.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.000	607.000	0.000
NH	615.000	0.000	607.500	0.000	607.500	9.000	599.700	25.000	599.700	25.100
NH	599.700	54.900	599.700	55.000	607.500	73.000	607.500	100.000	607.500	130.000
NH	615.000	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.040	25.000	0.020	55.000	0.040	73.000	0.020	100.000	0.040
NH	155.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	24.000	56.000
ET	0.000	0.000	9.100	9.100	0.000	0.000	26.000	129.000	0.000	129.000

X1	14231.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.000	607.000	0.000
ET	11.000	0.000	615.000	0.000	0.000	608.000	0.000	0.000	609.000	0.000
ET	25.000	609.000	599.700	73.000	607.500	0.000	607.500	606.000	607.500	73.000
ET	608.000	599.700	73.000	607.500	0.000	100.000	607.000	0.000	100.000	607.000
ET	0.000	130.000	615.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.040	25.000	0.020	55.000	0.040	73.000	0.020	100.000	0.040
NH	130.000	1.000	0.100	0.000	0.300	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.300	0.000	0.000	0.000	0.000	0.000	24.000	56.000
ET	0.000	0.000	0.300	9.100	0.200	0.000	0.000	0.000	0.000	129.000

X1	14232.000	0.000	0.000	0.000	36.000	36.000	36.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.000	607.000	0.000
NH	5.000	1.040	25.000	0.020	55.000	0.040	73.000	0.020	100.000	0.040
NH	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	24.000	56.000
ET	0.000	0.000	9.100	9.100	0.000	0.000	0.000	0.000	9.000	129.000

X1	14568.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.000	607.000	0.000

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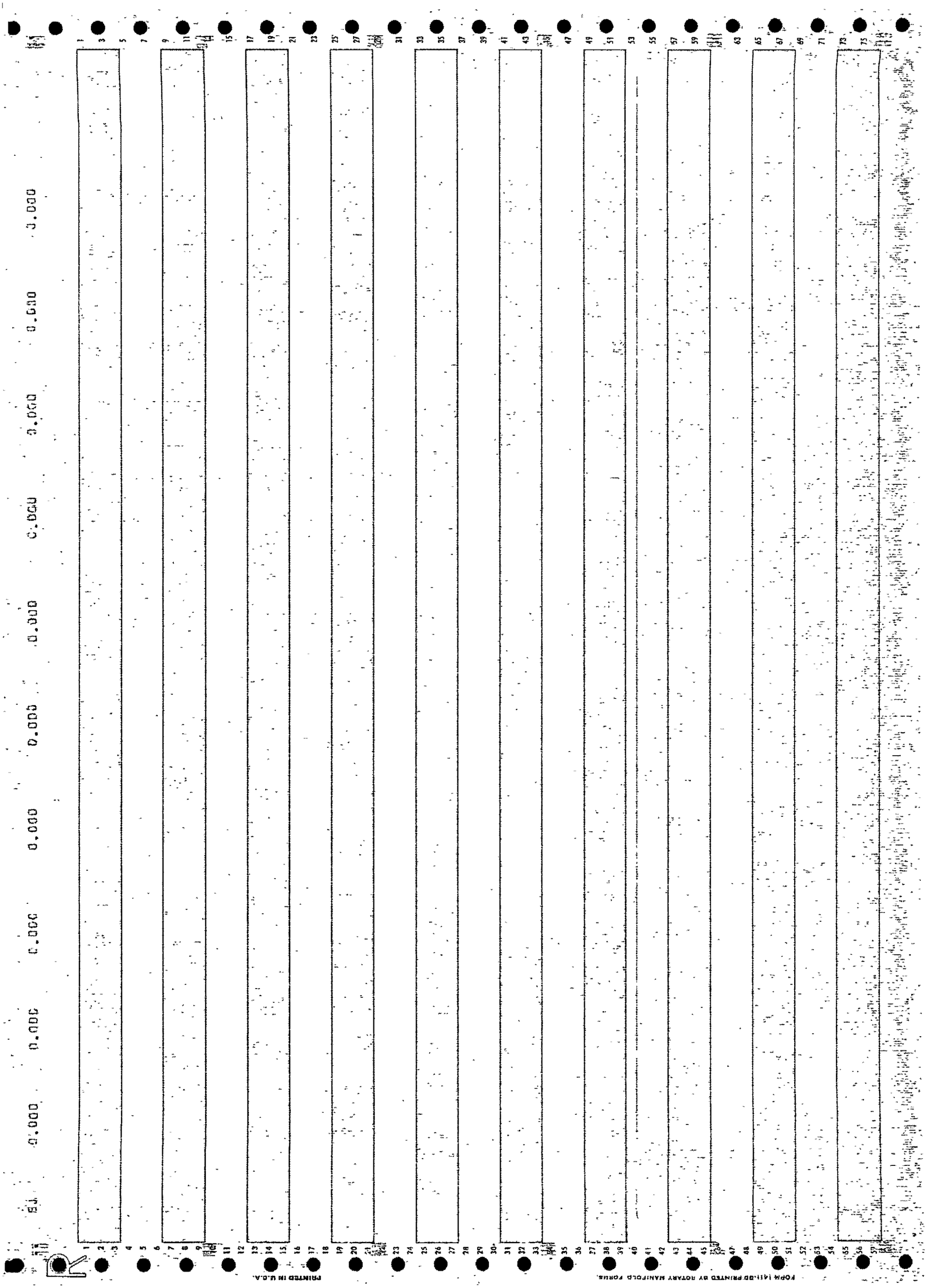
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  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERRCS CORR. =  01
  UNIVAC 1100 -  50.31.52
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C
T1 NORTH BRANCH ECORSE CR. CYS NJO 2010 07 LINCOL, PARK
T2 100 YR FLO.
T3       N.BR.ECORSE CR.LINC.PK.

J1   ICHEC     KNO      KNOW     IOPT      STRT     METRIC    HVINS      Q        WSEL       FQ
          0.       4.       3.       3.  0.000050     0.50      1.0       0.   583.330     0.000

J2   VCHEK     IPLOT     PRFVS     XSECV     XSECH      FN     ALLDC      IBW      CHNIM     ITRACE
      -1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000    15.000

NC      0.035     0.035     0.033     0.370     0.500     0.300     0.300     0.300     0.000     0.000
X1      5.000    85.000  1230.000  1440.000  1510.000  1530.000     0.000     0.000     0.000     0.000

                VALLEY SECT. FROM 10A COARSE FTS

GR   1036.000     27.000    650.000    755.000      0.000     0.000     0.000     0.000     0.000     0.000
GR    582.670     0.000    682.670     55.000    584.370    155.000    584.670    755.000    586.870    755.000
GR    585.270    655.000    675.470    705.000    584.370    655.000    583.370    677.000    576.870    607.000
GR    571.270    705.000    579.070    705.000    572.470    730.000    573.470    715.000    573.470    720.000
GR    574.370    720.000    575.070    737.000    571.070    736.000    575.070    755.000    573.870    755.000
GR    583.270    955.000    593.470   1055.000    583.970   1146.000    593.370   1155.000    593.370   1255.000
GR    583.270   1255.000    583.370   1422.000      0.000     0.000      0.000     0.000      0.000     0.000
NC      0.000     0.000      0.000     0.100      0.300     0.000      0.300     0.100      0.000     0.000
NV      7.000     0.200    340.000     0.400    680.000     1.000    900.000     0.050    945.000     0.045
X1    1034.000     0.000   4375.000     0.500   3920.000     0.000      0.000     0.000      0.000     0.000

                VALLEY SECT. 50' DIA OF FLOOD

GR   1156.000    15.000    983.000   1054.000    900.000    930.000    905.000     0.000     1.000     1.000
GR      0.000     1.000      0.000    951.000      0.000   1110.000      0.000     0.000     0.000     0.000
GR    585.000     0.000    582.500    540.000    570.000    610.000    617.130    960.000    585.600    944.000
GR    585.200    985.300    575.400   1054.200     75.000   1.1.300    593.400    905.100    575.400   1045.100
GR    584.500   1045.300    585.200   1155.300    583.300   1251.300    595.020    955.200    585.300   1920.200
NC      0.000     0.000      0.000     0.300      0.500     0.000      0.000      0.000      0.000     0.000
NV      1.200     0.300    250.000     0.300    920.000     0.050    997.300     0.045   1046.000     0.400
X1    1041.000     0.000      0.000     0.000      2.000     0.000      0.000      0.000      0.000     0.000

                VALLEY SEC. 50' DIA OF FLOOD

GR   1174.000    11.100    994.000   1046.000    780.000    758.000    758.000     0.000     0.000     0.000
GR      0.000     0.300      0.000    930.000      0.000   1050.000      0.000     0.000     0.000     0.000
GR    585.000   582.200    905.000     0.700      0.000      0.000      0.000     0.000     1.600     1.000
GR    585.200     0.000    565.000    250.300    560.000    650.000    585.000    965.000    525.200    574.000
GR    575.000   1120.000    595.000   1045.200    581.000   1045.200    585.000    115.000    565.000    257.000
GR    585.100   1580.000      0.000     0.000      0.000     0.000      0.000      0.000      0.000     0.000
GR      0.000     0.000    650.000     0.000    935.000     0.000   1045.000      0.000      0.000     0.000
X1    1040.000     0.000      0.000     0.000      0.000     0.000      0.000      0.000      0.000     0.000
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D/S FACE OF AUSTIN

X1	12324.000	22.000	1014.000	1064.100	50.000	50.000	50.300	0.000	0.000	0.000
X3	10.000	2.000	1.000	920.000	0.000	1065.000	0.000	593.300	593.300	0.000
[illegible]	285.000	0.000	565.300	250.000	562.600	430.000	530.400	930.000	582.400	1500.000
BT	574.100	1014.000	574.100	1014.100	574.100	1030.000	574.100	1030.100	574.100	1031.000
BT	574.100	1031.100	573.600	1039.000	573.800	1047.000	573.800	1047.100	573.800	1048.000
BT	573.800	1048.100	573.800	1064.000	573.800	1064.100	581.800	1013.000	583.100	1140.000
ET	593.400	1240.000	584.800	1500.000	0.000	0.000	0.300	0.001	0.000	0.000
XB	5.000	0.200	250.000	0.300	930.000	0.050	1014.000	0.025	1064.100	0.500
XB	1600.000	0.000	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000

1' 1 SIDE U/S FACE OF AUSTIN BRIDGE

X1	12325.000	0.300	0.000	0.300	1.000	1.000	1.300	0.000	0.000	0.000
X3	10.000	0.000	0.000	920.300	0.000	1065.300	0.300	583.300	583.300	0.000
BT	20.300	0.000	565.000	0.000	250.000	583.300	0.000	430.000	583.600	0.000
BT	930.000	580.400	0.000	1014.000	565.300	574.100	1014.100	565.300	581.800	1030.000
BT	585.300	581.300	1030.100	533.300	574.100	1031.000	583.300	574.100	1031.100	585.300
ET	581.800	1047.000	573.300	581.400	1047.100	530.300	573.800	1048.000	583.300	573.800
XB	1048.100	583.300	581.400	1500.000	583.300	581.300	1064.100	585.300	575.800	1585.000
ET	581.800	0.300	1240.000	585.100	0.000	1240.300	585.800	0.000	1600.000	584.800
ET	0.000	0.300	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000
XB	5.000	0.300	250.000	0.300	930.000	0.050	1014.000	0.025	1064.100	0.500
XB	1600.000	0.000	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000

1' INSIDE U/S FACE OF AUSTIN BRIDGE

X1	12367.000	0.300	0.000	0.300	62.000	42.300	42.000	0.000	0.000	1.000
X3	0.000	0.300	0.000	0.300	0.000	0.300	0.000	0.300	0.000	0.000
[illegible]	1.000	1.300	0.000	920.300	0.000	1065.300	0.300	583.300	0.300	0.000
BT	1.000	0.300	250.000	0.300	930.000	0.050	1014.000	0.025	1064.100	0.500
BT	0.000	0.300	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF AUSTIN

X1	12565.000	0.300	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	100.000	0.000	0.000	0.000	0.000
XB	5.000	0.200	250.000	0.300	930.000	0.050	1014.000	0.025	1064.100	0.500
XB	1600.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. ST. U/S OF AUSTIN

X1	12418.000	0.300	0.000	0.000	60.000	60.300	60.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	920.000	0.000	1065.300	0.000	0.000	0.000	0.000
BT	0.000	0.000	0.000	0.300	0.000	0.300	0.000	0.000	0.000	0.000
BT	5.000	1.000	250.000	0.300	930.000	0.050	1014.000	0.025	1064.100	0.500
BT	1065.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 3RT. 300 AUSTIN AND WESTBAL

X1	12323.000	11.000	928.000	401.000	0.000	0.000	177.000	0.000	0.000	1.000
X3	0.000	0.000	1.000	920.000	0.000	1065.000	0.000	0.000	0.000	0.000
[illegible]	0.000	0.000	565.000	250.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	574.100	1014.000	574.100	1014.100	574.100	1030.000	574.100	1030.100	574.100	1031.000
BT	574.100	1031.100	573.600	1039.000	573.800	1047.000	573.800	1047.100	573.800	1048.000
BT	573.800	1048.100	573.800	1064.000	573.800	1064.100	581.800	1013.000	583.100	1140.000
ET	593.400	1240.000	584.800	1500.000	0.000	0.000	0.300	0.001	0.000	0.000
XB	5.000	0.200	250.000	0.300	930.000	0.050	1014.000	0.025	1064.100	0.500
XB	1600.000	0.000	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000

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NR	5.000	0.150	200.000	0.120	472.000	0.035	5[illegible]	[illegible]	526.000	0.300
X4	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' D/S OF VICTORI-

X1	13676.000	10.000	472.000	508.000	301.000	100.000	581.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	348.000	0.000	543.000	0.000	0.000	0.000	0.000
GR	565.000	0.000	504.600	230.000	580.000	420.000	581.800	462.000	574.900	472.000
GP	572.900	490.000	575.600	508.000	581.400	526.000	580.000	650.000	535.000	1300.000
NR	5.000	0.150	150.000	0.120	466.500	0.035	493.600	0.100	512.000	0.300
NU	1450.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF VICTORIA

X1	13724.000	10.000	466.500	493.600	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	348.000	0.000	120.000	5.000	581.400	581.400	0.000
GR	565.000	0.000	580.000	150.000	581.400	420.000	573.000	466.500	573.000	466.600
GP	573.000	479.600	573.000	479.600	573.000	486.500	573.000	400.600	573.000	493.600
GR	573.000	493.600	581.400	542.000	581.500	720.000	505.000	1450.000	0.000	0.000
NR	5.000	0.150	150.000	0.120	466.500	0.030	493.600	0.100	512.000	0.300
NU	1450.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1' INSIDE D/S FACE OF VICTORI. BRIDGE

X1	13722.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	348.000	0.000	120.000	0.000	581.400	581.400	0.000
GT	10.000	0.000	580.000	0.000	150.000	580.000	0.000	493.500	581.500	0.000
GP	466.500	541.400	573.000	466.600	581.400	529.400	493.500	581.400	529.600	479.600
GR	581.400	573.000	480.600	581.400	573.000	480.600	581.400	579.600	493.500	581.400
GP	579.600	493.600	581.400	573.000	512.000	581.400	0.000	810.000	581.500	0.000
NR	1450.000	5.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NU	5.000	0.150	150.000	0.120	466.500	0.030	493.600	0.100	512.000	0.300
	1450.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1' INSIDE U/S FACE OF VICTORI: BRIDGE

X1	13966.000	0.000	0.000	0.000	337.500	2.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NR	5.000	0.150	150.000	0.120	466.500	0.035	493.600	0.100	512.000	0.300
NU	1450.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF VICTORIA

X1	13965.300	0.000	0.000	0.000	1.300	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	350.000	0.000	120.000	5.000	581.400	581.400	0.000
NR	5.000	0.150	150.000	0.067	466.500	0.035	493.600	0.040	520.000	0.300
NU	1451.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' U/S OF VICTORIA

X1	14015.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	350.000	0.000	525.000	0.000	0.000	0.000	0.000
NR	5.000	0.300	150.000	0.067	275.000	0.035	365.000	0.040	520.000	0.300
NU	1450.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. [illegible] D/S OF [illegible]

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FORM 1411-OD-PRINTED BY ROTARY MANIFOLD FORMS

X1	14287.000	13.000	279.000	345.000	272.000	272.000	272.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	200.000	0.000	520.000	0.000	583.200	583.200	0.000
GR	585.000	0.000	584.300	150.000	583.700	275.000	526.300	295.000	574.500	510.000
GR	575.900	531.200	502.600	345.200	383.000	360.000	582.800	490.300	582.200	520.000
BT	581.900	750.300	500.000	1160.300	393.000	1160.000	0.300	0.300	0.000	0.000
NF	5.000	0.200	150.000	0.030	469.700	0.030	501.800	0.040	700.000	0.500
NH	1380.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

S/S FACE OF N.E. FORT ST.

X1	14332.000	20.000	469.700	504.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	380.000	0.000	700.000	0.000	583.200	583.200	0.000
GR	585.000	0.000	585.000	150.000	584.300	300.000	583.600	440.000	578.400	469.700
GR	578.400	469.800	578.400	453.200	574.600	475.000	574.600	475.100	574.600	476.400
BR	574.600	475.500	578.400	498.200	576.400	501.700	578.400	501.600	582.600	510.000
BT	582.800	575.000	582.200	700.000	581.200	950.300	580.000	1380.000	583.000	1380.100
NH	5.000	0.200	150.000	0.000	469.700	0.030	0.600	0.000	700.000	0.500
NH	1380.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

N' ZUSCHE S/S FACE O[illegible] FORT ST.

[illegible]	14332.100	0.200	0.000	0.300	1.000	1.000	1.300	0.200	0.000	0.000
XS	10.000	0.000	0.000	380.000	0.000	700.000	0.300	583.200	583.200	0.000
BT	17.000	0.000	585.000	0.000	150.000	585.000	0.000	300.000	584.300	0.000
BT	460.000	585.600	0.000	469.700	583.200	578.400	469.800	583.200	581.400	475.000
BT	583.200	581.600	479.100	583.200	574.600	475.400	583.200	574.600	476.500	582.200
BT	581.600	581.700	582.200	581.400	501.800	583.200	576.400	510.000	582.600	0.000
BT	575.000	182.800	0.000	700.000	582.200	0.000	340.000	301.200	0.000	1380.000
BT	550.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NF	5.000	0.200	150.000	0.030	469.700	0.030	501.800	0.040	700.000	0.500
NH	1380.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

not utilized due to encroachment

[illegible] S'DE OF [illegible] FORT ST.

X1	14402.300	0.000	0.000	0.000	64.000	64.000	64.000	0.000	0.000	1.000
X2	0.000	1.000	0.300	0.000	0.000	0.000	1.000	0.000	0.000	0.000
GR	10.300	1.000	0.300	380.000	0.000	700.000	0.000	583.200	584.200	0.000
BT	5.000	1.200	150.300	0.000	469.700	0.000	501.800	0.000	700.000	0.500
NH	1380.000	1.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000

N/S FACE OF N.E. FORT ST.

X1	14401.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	380.000	0.000	700.000	0.000	583.200	583.200	0.000
NF	5.000	0.200	300.000	0.030	473.300	0.030	526.700	0.100	700.000	0.500
NH	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

S/S FACE OF N.E. FORT ST.

X1	14466.000	20.000	473.300	526.700	97.000	97.000	97.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	380.000	0.000	770.000	0.000	583.600	583.600	0.000
GR	585.800	0.000	584.600	300.000	584.300	440.000	528.900	423.300	578.900	473.400
BT	578.900	477.800	578.900	413.800	572.600	498.300	572.900	439.400	572.900	510.500
BT	572.600	505.700	574.900	516.100	578.900	522.000	572.900	526.500	572.900	526.700
BT	585.400	574.900	585.000	516.100	582.900	601.200	574.900	560.000	582.900	582.900
NF	5.000	0.200	300.000	0.030	473.300	0.030	526.700	0.100	700.000	0.500
NH	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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1' INSIDE D/S FACE OF S.B. FORT ST.

X1	14461.000	0.300	0.000	0.000	1.030	1.000	1.300	0.000	0.000	0.000
X3	10.000	0.000	0.000	370.000	0.000	770.000	0.300	543.600	543.600	0.000
Y1	15.000	0.000	303.600	0.000	300.000	300.600	0.000	440.000	584.300	0.000
Y3	473.300	585.600	588.900	473.600	583.600	583.600	485.300	583.600	561.600	485.600
B1	583.600	572.600	500.600	583.600	572.600	583.700	573.600	581.600	526.600	583.600
B3	581.600	526.700	583.600	578.900	538.300	583.400	6.000	800.000	581.600	0.000
B5	1050.000	581.300	0.000	1400.000	580.000	0.000	0.000	0.000	0.000	0.000
N1	5.000	0.200	300.000	0.000	473.300	1.000	526.700	0.100	800.000	0.500
N4	1400.000	0.000	0.000	0.000	0.000	0.400	0.000	0.000	0.000	0.000

1' INSIDE D/S FACE OF S.B. FORT ST.

X1	14521.300	0.300	0.000	0.300	60.000	60.900	60.300	0.001	0.000	1.300
X2	0.300	0.300	0.000	0.300	1.000	0.300	1.300	0.000	0.000	0.000
X3	10.000	0.300	0.000	920.000	0.000	920.000	0.300	543.600	543.600	0.000
N8	5.000	0.200	300.000	0.000	473.300	0.000	526.700	0.100	800.000	0.500
NP	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF S.B. FORT ST.

X1	14522.000	0.000	0.000	0.000	1.300	1.000	1.000	0.000	0.000	0.000
X3	10.300	0.000	0.000	370.000	0.000	770.000	0.000	543.600	543.600	0.000
Y1	5.000	0.200	200.000	0.120	415.000	0.000	470.000	0.120	800.000	0.500
Y3	1150.000	0.000	0.300	0.000	0.000	0.700	0.000	0.300	0.000	0.000

VALLEY SECT. 50' D/S OF S.B. FORT ST.

X1	14572.000	10.300	465.000	470.000	50.000	50.000	50.300	0.000	0.000	0.000
X2	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Y1	565.000	0.300	300.000	200.300	300.000	415.000	570.600	485.000	572.700	470.000
Y3	572.000	450.000	568.400	470.000	500.000	1.000.000	1.000.000	1150.000	0.000	1.000.000
N1	5.000	0.300	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000
N3	1.000	0.100	159.000	0.035	225.000	0.100	272.000	0.000	0.000	0.000

VALLEY SECT.

Y1	15292.000	6.000	159.000	225.000	720.000	650.000	720.000	0.000	0.000	1.000
Y3	0.000	0.000	0.000	159.000	0.000	225.000	0.000	0.000	0.000	0.000
B1	598.200	0.000	559.500	200.000	587.200	650.000	672.100	135.000	524.400	200.000
B3	577.200	211.000	592.600	225.000	586.500	272.000	0.000	0.000	0.000	0.000
N1	0.250	0.000	0.000	0.300	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' D/S OF LAFAYETTE

X1	15220.300	7.000	33.000	115.000	350.000	55.000	57.000	0.000	0.000	0.000
X3	10.300	0.000	0.300	0.000	0.300	0.000	0.000	543.600	0.000	0.000
Y1	596.300	0.000	596.300	23.000	577.200	55.000	572.000	485.000	572.700	115.000
Y3	535.500	127.000	535.400	200.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF LAFAYETTE

X1	15572.000	0.300	36.000	115.000	60.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	50.000	0.000	150.000	0.000	543.600	543.600	0.000
Y1	536.000	0.000	536.400	50.000	572.000	56.000	572.000	485.000	572.700	115.000
Y3	577.000	127.000	536.500	115.000	586.500	572.000	0.000	0.000	0.000	0.000

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1' INSIDE D/S FACE OF S.B. FORT ST.

X1	14461.000	0.300	0.000	0.000	1.030	1.000	1.300	0.000	0.000	0.000
X3	10.000	0.000	0.000	370.000	0.000	770.000	0.300	543.600	543.600	0.000
Y1	15.000	0.000	303.600	0.000	300.000	300.600	0.000	440.000	584.300	0.000
Y3	473.300	585.600	588.900	473.600	583.600	583.600	485.300	583.600	561.600	485.600
B1	583.600	572.600	500.600	583.600	572.600	583.700	573.600	581.600	526.600	583.600
B3	581.600	526.700	583.600	578.900	538.300	583.400	6.000	800.000	581.600	0.000
B5	1050.000	581.300	0.000	1400.000	580.000	0.000	0.000	0.000	0.000	0.000
N1	5.000	0.200	300.000	0.000	473.300	1.000	526.700	0.100	800.000	0.500
N4	1400.000	0.000	0.000	0.000	0.000	0.400	0.000	0.000	0.000	0.000

1' INSIDE D/S FACE OF S.B. FORT ST.

X1	14521.300	0.300	0.000	0.300	60.000	60.900	60.300	0.001	0.000	1.300
X2	0.300	0.300	0.000	0.300	1.000	0.300	1.300	0.000	0.000	0.000
X3	10.000	0.300	0.000	920.000	0.000	920.000	0.300	543.600	543.600	0.000
N8	5.000	0.200	300.000	0.000	473.300	0.000	526.700	0.100	800.000	0.500
NP	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF S.B. FORT ST.

X1	14522.000	0.000	0.000	0.000	1.300	1.000	1.000	0.000	0.000	0.000
X3	10.300	0.000	0.000	370.000	0.000	770.000	0.000	543.600	543.600	0.000
Y1	5.000	0.200	200.000	0.120	415.000	0.000	470.000	0.120	800.000	0.500
Y3	1150.000	0.000	0.300	0.000	0.000	0.700	0.000	0.300	0.000	0.000

VALLEY SECT. 50' D/S OF S.B. FORT ST.

X1	14572.000	10.300	465.000	470.000	50.000	50.000	50.300	0.000	0.000	0.000
X2	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Y1	565.000	0.300	300.000	200.300	300.000	415.000	570.600	485.000	572.700	470.000
Y3	572.000	450.000	568.400	470.000	500.000	1.000.000	1.000.000	1150.000	0.000	1.000.000
N1	5.000	0.300	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000
N3	1.000	0.100	159.000	0.035	225.000	0.100	272.000	0.000	0.000	0.000

VALLEY SECT.

Y1	15292.000	6.000	159.000	225.000	720.000	650.000	720.000	0.000	0.000	1.000
Y3	0.000	0.000	0.000	159.000	0.000	225.000	0.000	0.000	0.000	0.000
B1	598.200	0.000	559.500	200.000	587.200	650.000	672.100	135.000	524.400	200.000
B3	577.200	211.000	592.600	225.000	586.500	272.000	0.000	0.000	0.000	0.000
N1	0.250	0.000	0.000	0.300	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' D/S OF LAFAYETTE

X1	15220.300	7.000	33.000	115.000	350.000	55.000	57.000	0.000	0.000	0.000
X3	10.300	0.000	0.300	0.000	0.300	0.000	0.000	543.600	0.000	0.000
Y1	596.300	0.000	596.300	23.000	577.200	55.000	572.000	485.000	572.700	115.000
Y3	535.500	127.000	535.400	200.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF LAFAYETTE

X1	15572.000	0.300	36.000	115.000	60.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	50.000	0.000	150.000	0.000	543.600	543.600	0.000
Y1	536.000	0.000	536.400	50.000	572.000	56.000	572.000	485.000	572.700	115.000
Y3	577.000	127.000	536.500	115.000	586.500	572.000	0.000	0.000	0.000	0.000

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SB	0.000	1.650	3.000	100.000	28.000	0.000	168.000	0.000	577.000	577.050

U/S FACE OF LAFAYETTE

J*	15916.000	0.000	0.000	0.000	44.000	44.010	44.000	0.000	0.000	1.000
X2	0.000	0.000	1.330	583.000	585.400	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	50.000	0.000	140.000	0.000	586.000	585.400	0.000
BT	8.000	0.000	586.000	0.000	66.000	586.400	0.000	86.000	586.400	577.000
ST	86.100	586.400	583.900	113.900	586.400	553.000	114.000	566.400	577.000	134.000
TT	585.400	0.000	200.300	505.400	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' U/S OF LAFAYETTE

X1	15964.000	7.000	88.000	142.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	150.000	0.000	586.000	585.400	0.000
BK	586.000	0.000	586.300	73.300	577.900	88.000	577.000	100.000	577.000	112.000
BT	586.400	122.000	585.400	200.200	0.000	0.000	0.000	0.000	0.000	0.000
MF	3.000	0.080	799.000	0.035	835.000	0.080	840.000	0.000	0.000	0.000

VALLEY SECT. 50' D/S OF I-75

X1	16196.000	5.000	799.000	835.000	230.000	230.000	835.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	799.000	0.000	645.000	0.000	0.000	0.000	0.000
BK	587.600	773.000	573.600	799.000	576.500	820.000	575.000	845.000	588.000	820.000
MF	0.080	0.035	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF I-75 BRIDGE

X1	16244.000	7.000	813.500	841.500	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.600	603.600	0.000
BK	603.600	813.500	573.600	813.600	576.600	820.000	575.000	845.000	588.000	820.000
MF	573.600	841.500	603.600	841.600	0.000	0.000	0.000	0.000	0.000	0.000
LT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	16245.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	603.600	603.600	0.000
BK	8.000	816.500	813.600	0.000	813.600	841.600	573.600	845.000	603.600	556.000
MF	841.600	603.600	830.000	0.000	35.000	73.500	0.000	603.600	0.000	0.000

X1	16503.000	3.000	0.000	0.000	250.000	235.000	250.000	0.000	0.000	1.000
X	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BK	10.000	1.000	0.000	0.000	0.000	0.000	0.000	603.600	603.600	0.000
MF	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF I-75 BRIDGE

X1	16504.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X	10.000	1.000	0.000	0.000	0.000	0.000	0.000	603.600	603.600	0.000
BK	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MF	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

01	5.000	770.000	1160.000	1530.000	1530.000	1640.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' U/S OF I-75

X1	16534.000	3.000	1.000	455.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	500.000	0.000	0.000	0.000	0.000	0.000	0.000
BK	505.000	0.000	585.000	1130.000	560.000	330.000	577.000	603.600	603.600	0.000
MF	73.000	600.000	577.000	616.000	0.000	0.000	0.000	0.000	0.000	0.000

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NH	4.000	0.040	100.000	0.060	410.000	0.035	442.000	0.060	480.000	0.000

VALLEY SECT. 50' D/S OF INDUSTRIAL DRIVE

X1	16626.200	10.000	410.000	442.000	272.700	272.000	272.000	0.000	0.000	0.000
X2	0.500	0.000	0.000	394.000	0.000	455.000	0.000	0.000	0.000	0.000
GR	587.300	0.000	587.300	100.000	587.300	170.000	589.000	220.000	586.000	300.000
GR	575.400	410.000	575.300	426.000	575.400	442.000	586.000	462.000	593.000	480.000
NH	4.000	0.040	100.000	0.060	290.000	0.035	323.100	0.060	346.000	0.000

D/S FACE OF INDUSTRIAL DRIVE

X1	16876.000	9.000	290.000	323.100	50.000	50.000	50.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	590.500	590.500	0.000
GR	587.300	0.000	587.300	100.000	589.700	240.000	574.600	290.000	574.600	240.000
GR	574.900	323.100	574.600	323.100	591.000	354.000	593.000	590.500	0.000	0.000
X3	0.000	1.830	0.000	0.000	25.630	0.000	130.000	0.000	574.900	574.600
NH	3.000	0.060	290.000	0.035	323.100	0.060	350.000	0.000	0.000	0.000

D/S FACE OF INDUSTRIAL DRIVE

X1	16963.300	13.000	2.000	323.100	87.300	0.000	63.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	587.200	589.700	0.300	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	590.500	590.500	0.000
GR	46.000	241.000	589.700	0.000	290.000	590.500	574.900	290.100	590.500	574.500
GR	292.000	587.000	312.300	254.000	590.300	593.300	268.000	590.500	565.600	302.000
GR	90.500	587.000	306.500	570.500	587.200	311.000	590.500	587.000	315.000	590.500
GR	325.600	313.000	590.500	593.500	321.000	590.500	593.500	323.500	590.500	570.500
BT	327.100	590.500	574.900	338.000	591.000	0.000	0.000	0.000	0.000	0.000
GR	589.700	240.000	574.900	290.000	574.900	290.100	576.900	292.000	574.900	294.000
GR	574.900	292.000	574.900	332.000	574.900	306.500	574.900	311.000	574.900	315.000
GR	574.900	589.500	574.900	591.000	574.900	590.000	576.900	590.500	594.000	590.500
NH	4.000	0.340	100.000	0.060	344.000	0.035	347.000	0.060	447.000	0.000

VALLEY SECT. 50' D/S OF INDUSTRIAL DRIVE

X1	17013.000	7.000	324.000	347.300	50.000	50.000	50.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	394.300	0.000	455.000	0.000	0.000	0.000	0.000
X3	592.500	0.000	152.100	590.000	625.000	324.000	593.500	344.300	626.300	347.300
GR	585.000	407.000	997.000	447.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	4.000	0.040	100.000	0.060	422.000	0.035	461.000	0.060	500.000	0.000

VALLEY SECT. 50' D/S OF PENN CENTRAL R.R.

X1	17255.000	9.000	422.000	461.000	242.000	242.000	242.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	414.000	0.000	466.000	0.000	0.000	0.000	0.000
GR	587.200	0.000	587.200	100.000	590.500	200.000	587.700	401.000	576.100	422.000
GR	577.900	443.000	573.100	461.000	597.000	513.000	590.000	500.000	0.000	0.000
NH	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE OF PENN CENTRAL R.R. BRIDGE

X1	17405.000	10.000	586.400	503.600	50.000	50.000	50.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	601.400	601.400	0.000
X3	305.400	16.000	422.000	586.400	577.900	503.500	579.900	602.400	582.900	305.400
GR	577.900	371.000	577.900	503.600	577.900	506.500	577.900	601.400	603.400	503.600
NH	4.000	0.490	3.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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U/S FACE OF PENN CENTRAL R.R. BRIDGE

X1	17502.000	0.000	0.000	0.000	197.000	197.000	197.000	0.000	0.000	1.000
X2	0.000	0.000	1.000	535.500	600.400	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.300	0.000	0.000	0.000	600.400	600.400	0.000
GT	10.000	356.300	600.400	0.000	356.400	600.400	577.900	356.500	600.400	585.500
BT	368.400	600.400	585.500	368.500	600.400	577.900	371.500	600.400	577.900	371.400
RT	600.400	585.500	383.500	600.400	585.500	383.600	600.400	577.900	383.700	600.400
NT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NT	5.000	0.000	100.000	0.000	328.000	0.000	359.000	0.000	420.000	1.000
NT	1060.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' U/S OF PENN CENTRAL R.R.

X1	17552.000	10.000	525.000	352.000	50.000	50.300	50.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	277.000	0.000	404.000	0.000	0.000	0.000	0.000
GR	600.000	100.300	582.200	100.000	586.900	334.300	577.800	334.000	577.500	582.600
GR	577.500	352.000	585.400	370.000	585.000	470.000	585.000	1060.000	600.000	1060.000
NC	0.050	0.050	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY FROM SUBD'N PLANS

X1	17817.000	11.000	101.000	132.000	265.000	265.000	265.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	8.830	0.000	250.400	0.000	0.000	0.000	0.000
GR	500.000	0.000	587.000	0.000	586.000	0.000	588.300	101.000	573.400	130.000
GR	577.900	139.000	578.500	149.000	586.500	165.400	589.100	294.300	589.100	279.500
GR	590.100	272.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.100	0.050	100.000	0.050	150.000	1.000	265.000	0.000	360.000	0.035
NR	365.000	0.500	1230.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' U/S OF PORTER AVE.

X1	18006.000	12.000	241.000	502.000	239.000	254.100	265.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	263.000	0.300	632.000	0.000	587.900	587.900	0.000
X2	586.300	0.000	583.000	100.000	585.000	150.000	585.000	240.000	586.400	220.000
GT	579.200	342.000	579.200	350.000	579.000	365.000	587.700	493.000	586.700	410.000
BT	586.700	586.000	587.500	350.000	587.900	601.000	585.400	910.000	581.300	940.000
RT	583.700	1100.000	583.700	1190.300	0.000	1.000	0.200	0.000	0.000	0.300
NT	4.000	1.200	210.000	0.000	352.000	0.000	0.000	0.000	0.000	0.300

U/S FACE OF PORTER AVE.

X1	18[illegible].000	11.200	356.000	375.100	50.000	50.000	0.000	0.000	0.000	1.000
X2	0.000	0.000	0.000	275.000	0.000	430.000	0.000	587.900	587.900	1.000
GR	600.000	225.000	588.600	225.000	586.400	230.000	587.900	330.000	579.000	360.000
GR	579.000	350.100	579.000	375.000	579.000	375.100	587.900	604.000	586.700	583.000
GR	600.000	600.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
[illegible]	0.000	0.000	280.000	0.000	350.000	0.000	0.000	0.000	0.000	0.000

INTERSECT U/S FACE OF PORTER AVE.

X1	18152.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	275.000	0.000	50.000	0.000	587.900	587.900	0.000
X3	10.000	325.000	600.000	0.000	229.000	565.000	0.000	340.000	587.900	0.000
GT	350.000	587.900	587.900	350.000	587.900	585.400	587.900	587.900	585.900	375.000
BT	587.900	579.400	603.000	587.900	0.000	600.000	0.000	0.000	580.000	620.000
RT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NT	0.000	1.100	210.000	0.000	352.000	0.000	0.000	0.000	0.000	0.000

1' INSIDE OF U/S FACE OF PORTER AVE.

X1	18195.000	0.000	0.000	0.000	38.200	38.000	38.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	275.000	0.000	450.000	0.000	587.900	587.900	0.000
NH	4.000	1.000	250.000	0.060	350.000	0.030	375.100	0.500	500.000	0.000

U/S FACE OF PORTER AVE.

X1	18196.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	275.000	0.000	450.000	0.000	587.900	587.900	0.000
NH	5.000	0.340	100.000	1.000	270.000	0.100	351.000	0.035	372.000	0.500
NP	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' S/O OF PORTER AVE.

X1	18246.000	16.000	351.000	372.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	320.000	0.000	450.000	0.000	587.900	587.900	0.000
[illegible]	530.000	5.000	538.200	100.000	535.000	420.000	100.000	570.000	583.000	535.000
[illegible]	570.300	351.000	579.000	542.000	507.900	350.000	396.700	440.000	586.700	460.000
[illegible]	587.900	700.000	587.900	700.000	308.300	920.000	948.900	1020.000	588.200	1250.000
GW	538.700	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NP	0.050	0.050	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. BETW. PORTER AND KAUPP PLACE

X1	17545.000	11.000	184.000	220.000	299.000	299.000	295.000	0.000	0.000	1.000
X3	10.000	0.000	0.000	159.000	0.000	309.000	0.000	588.000	588.000	0.000
[illegible]	423.000	0.000	587.700	0.000	587.900	100.000	568.000	584.000	586.200	100.000
[illegible]	573.670	200.000	583.900	213.000	536.900	220.000	568.200	586.000	385.600	400.000
[illegible]	570.300	400.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000
[illegible]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.040	100.000	0.000	250.000	0.000	358.000	0.035	382.100	0.500
NH	1410.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' S/S OF KAUPP PL.

X1	18829.000	17.000	363.500	377.100	284.000	284.000	284.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	290.000	0.000	455.000	0.000	585.000	585.000	0.000
[illegible]	587.900	0.000	587.900	100.000	505.600	137.000	568.200	585.000	578.700	363.500
[illegible]	575.700	300.000	578.200	370.000	578.700	327.000	590.000	587.900	585.900	586.700
[illegible]	568.500	470.000	590.100	450.000	590.100	340.000	568.000	740.200	587.200	610.300
[illegible]	588.500	1100.000	585.200	440.000	590.000	1360.000	580.000	1410.200	0.000	0.000
NP	5.000	0.040	100.000	0.800	250.000	0.000	358.000	0.000	382.100	0.500
NH	1410.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE OF KAUPP PL. OPENING

X1	18879.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	290.000	0.000	455.000	0.000	585.000	585.000	0.000
NP	5.000	0.040	100.000	0.800	250.000	0.000	358.000	0.035	382.100	0.500
NH	1410.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1' INSIDE OF D/S FACE KAUPP PL.

X1	18880.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000

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X3	10.000	0.000	0.000	290.000	0.000	455.000	0.000	585.000	585.000	0.000
BT	18.000	0.000	587.900	0.000	100.000	587.900	0.000	137.000	585.600	0.000
BT	345.000	585.200	0.000	363.500	585.000	570.700	363.600	585.000	583.200	377.000
BT	585.000	583.200	377.100	585.000	578.700	386.000	585.500	0.000	470.000	588.500
BT	0.000	660.300	590.100	0.000	710.000	590.500	0.300	760.000	589.000	0.300
BT	610.200	589.300	0.000	1150.000	589.900	0.300	1140.200	589.900	0.000	1390.000
BT	750.000	0.000	1410.000	590.000	0.000	0.000	0.000	0.000	0.000	0.000
NB	5.000	0.040	100.000	0.800	290.000	0.030	348.000	0.020	382.100	0.500
NB	1410.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.900	0.000

1' INSIDE OF U/S FACE RALPH PL.

X1	18910.000	0.000	0.000	0.000	30.000	30.000	30.300	0.000	0.000	1.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	290.000	0.000	455.000	0.000	585.000	585.000	0.000
NB	5.000	0.040	100.000	0.800	290.000	0.030	348.000	0.020	382.100	0.500
NB	1410.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF RALPH PL. BRIDGE

X1	1891..000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	290.000	0.000	455.000	0.000	585.000	585.000	0.000
NB	5.000	0.040	100.000	0.800	290.000	0.030	348.000	0.020	382.100	0.500
NB	1410.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 50' D/S OF RALPH PL.

X1	19862.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	290.000	0.000	455.000	0.000	585.000	585.000	0.000
NB	4.000	0.040	100.000	0.800	307.000	0.035	333.100	0.500	1438.000	0.000

VALLEY SECT. 50' D/S OF DAM

X1	19112.000	20.000	307.300	333.100	151.000	151.300	151.000	0.000	0.000	0.300
X3	10.000	0.000	0.000	220.000	0.000	400.000	0.000	586.200	586.200	0.000
BT	308.900	0.000	588.900	100.000	588.300	295.000	529.000	337.300	529.000	307.100
BT	570.000	514.000	370.100	619.100	570.000	530.500	521.500	529.100	333.000	
BT	776.000	533.100	530.300	951.000	589.300	290.500	619.200	630.300	562.700	640.100
BT	939.700	0.000	890.500	1147.000	590.400	0.000	0.000	1300.000	561.600	0.000
NB	4.000	0.040	100.000	0.800	307.000	0.035	333.100	0.500	1438.000	0.000

D/S FACE OF DAM TO BRIDGE

X1	19162.000	0.000	0.000	0.000	50.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	220.000	0.000	400.000	0.000	586.200	586.200	0.000
NB	4.000	0.040	100.000	0.800	307.000	0.020	333.100	0.500	1438.000	0.000

1' INSIDE D/S FACE OF DAM

X1	19163.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	220.000	0.000	400.000	0.000	586.200	586.200	0.000
BT	20.000	0.000	586.200	0.000	100.000	586.200	0.000	295.000	586.200	0.000
BT	307.000	586.200	479.100	317.100	586.200	936.000	100.300	936.200	586.000	0.000
BT	530.300	579.300	321.000	549.200	579.000	935.000	581.800	936.900	593.300	580.200
BT	75.000	335.100	186.300	333.100	334.000	540.000	30.000	30.000	586.200	0.000
BT	30.000	589.200	0.000	640.000	586.200	0.000	640.000	0.200	0.000	1190.000
		0.300	1190.000	586.200		1190.000	590.600	0.300	1490.000	590.600
			0.000						0.000	0.000

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N4	4.000	0.040	100.000	0.800	307.000	0.020	333.100	0.500	1430.000	0.000

1' INSIDE U/S FACE OF DIX

X1	19263.000	0.000	0.000	0.000	100.000	100.000	100.000	0.000	0.000	1.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	220.000	0.000	400.000	0.000	588.200	588.200	0.000
N4	4.000	0.040	100.000	0.800	307.000	0.035	333.100	0.500	1430.000	0.000

U/S FACE OF DIX RD. BRIDGE

X1	19264.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	220.000	0.000	400.000	0.000	588.200	588.200	0.000

VALLEY SECT. 30' U/S OF DIX

X1	19314.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	220.000	0.000	400.000	0.000	588.200	588.200	0.000
N4	4.000	0.040	100.000	0.500	365.000	0.035	389.000	0.500	1320.000	0.000

VALLEY SECT. 50' U/S OF FRANK AVE.

X1	20060.000	12.000	365.000	389.000	766.000	766.000	766.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	338.000	0.000	489.000	0.000	0.000	0.000	0.000
G4	588.300	0.000	588.300	100.000	585.000	200.000	589.400	100.000	580.100	365.000
G4	580.100	337.000	589.200	400.000	590.500	590.000	590.800	740.000	590.800	740.000
G4	589.600	1020.000	589.630	1320.000	0.000	0.000	0.000	0.000	0.000	0.000
N4	5.000	0.040	100.000	0.500	357.000	0.100	387.000	0.030	413.100	0.200
N4	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

DOT FACE OF FRANK AVE. BRIDGE

X1	20130.000	413.000	387.000	413.100	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	372.000	0.000	500.000	0.000	0.000	0.000	0.000
G4	588.300	0.000	588.300	100.000	588.800	372.000	588.800	372.100	580.100	387.000
G4	580.100	387.100	580.100	413.000	580.100	413.100	580.300	426.000	588.000	426.100
G4	590.600	710.000	589.600	1020.000	589.600	1300.000	0.000	0.000	0.000	0.000
N4	5.000	0.040	100.000	0.300	387.000	0.100	387.000	0.030	413.100	0.200
N4	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1' INSIDE U/S OF FRANK AVE.

X1	20133.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	372.000	0.000	500.000	0.000	0.000	0.000	0.000
G4	18.000	0.000	588.300	0.000	100.000	588.300	0.000	372.000	588.300	0.000
G4	372.100	592.100	0.000	387.000	592.100	580.100	387.000	590.400	586.700	413.000
G4	590.400	586.700	413.100	592.100	580.100	426.000	592.100	0.000	426.100	590.300
G4	0.000	710.000	590.600	0.000	1000.000	589.600	0.000	1300.000	589.600	0.000
N4	5.000	0.040	100.000	0.300	387.000	0.100	387.000	0.030	413.100	0.200
N4	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1' INSIDE U/S OF FRANK AVE.

X1	20148.000	0.000	0.000	0.000	37.000	37.000	37.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	372.000	0.000	500.000	0.000	0.000	0.000	0.000
N4	5.000	0.040	100.000	0.500	387.000	0.100	387.000	0.030	413.100	0.200

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NH	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF FRANK AVE. BRIDGE

X1	20169.000	0.000	0.000	0.000	1.000	1.000	1.100	0.000	0.000	0.000
X3	10.000	0.000	0.000	372.000	0.000	501.000	0.000	0.000	0.000	0.000
NH	5.000	0.040	100.000	0.500	357.000	0.100	387.000	0.035	413.100	0.200
NV	1300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY SECT. 100'U/S OF FRANK AVE.

X1	20269.000	0.000	0.000	0.000	100.000	100.000	100.300	0.000	0.000	1.000
X3	10.000	0.000	0.000	372.000	0.000	525.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	3.000	0.000	0.000	0.000	0.000	0.000

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**************************************************
     NEC2 RELEASE DATE: NOV 76 UPDATED FEB 1977.
     ERROR CORR -- 21
     MODIFICATION -  50,51,52
**************************************************

C
T1 NORTH BRANCH ESSEX SCALE 3
T2 150 MHz FLD
T3       N.BRA,CN ESSEX

J1  ICHECK      INS         MINV        EJIR        STRT        METRIC      MAINS       J           USEL        IQ
          0.          0.          0.          1.  0.000000        0.00        0.0         1.      939.350     0.000
J2  NPRO        IPLOT       PRFVS       XSECV       XSECH       FN          ALLDC       IEO         CHNIM       ITRACE
       -1.000      3.000      -1.000      0.000      0.000      0.000      0.000      1.000      0.000     15.000
CT        9.000    915.000   1890.000   1450.000   1825.000    500.000   1135.000   1175.000   1520.500   1725.400
CC        0.050      3.050      0.033      0.302      0.307      0.000      0.000      0.300      0.000      0.300
NH        5.000      3.040     25.000      0.035     55.000      0.040     73.000      0.020    130.000      0.040
NI      130.000      3.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
ET        0.000      9.100      0.000      0.000      0.000      0.000      0.000      0.000     26.000     56.000
ET        0.000      0.000      9.100      9.100      0.000      0.000      0.000      0.000      9.000    129.000

                 U/S FACE MONROE
XT    14528.000     11.000     25.000     55.000      0.300      0.000      0.300      0.300      0.000      0.200
XC       15.200      3.000      0.000      0.300      0.300      6.200      0.300    628.200    617.000      0.300
GH      611.000      0.000    -90.300      0.000    928.300      4.200    599.700     23.200    599.700     25.100
GI      599.700     33.000    599.700      5.300    957.500     79.200    628.500    100.000    580.500     10.015
GC      615.000    150.000      0.300      0.000      0.000      0.000      0.000      0.000      0.000      1.000
GR        9.000    875.000   1230.000   1415.000   1795.000    685.500   1020.000   1170.000   1665.000   1665.000
GZ        4.000     10.000    230.000      0.540    279.000      0.005    323.000      0.040    365.000      0.000

                 ROUTE 17N+20

XT    14759.000     10.200    279.000    323.000    171.000    171.000    171.000      0.000      0.300      1.000
XC        0.003      0.000      2.000     63.000      0.000    365.000      0.002      0.000      0.300      0.000
GH      575.000      0.100    605.000      0.000    607.000    201.000    607.200    279.000    599.600    293.100
GI      595.600    313.200    609.600    307.000    607.400    323.000    608.600    305.000    600.200    339.000
GC        6.000     10.100     75.000      6.000    177.000      6.000    193.000      0.035    208.200      0.160
GR      224.300      0.140    230.000      0.000      0.000      0.000      0.000      0.001      0.100      0.000
GZ        0.000      0.000      0.000      0.100      0.300      0.000      0.000      0.000      0.000      0.000

                 MALLET  175+55 ROUTE 9 EAST EXT. NO BRIDGE

XT    14599.000     10.000    177.000    224.300    150.200    150.200    150.300      0.334      0.000      1.000
XC      615.600      0.000    607.000      0.300    607.100     70.200    607.200    177.100    599.600    193.100
GH      543.600    200.000    599.400    207.300    607.600    224.200    600.600    230.000    615.000    230.000
GI        3.000      0.001    177.300      0.250    193.000      0.250    207.000      3.000    221.000      3.000
GC      305.000      0.000      0.300      0.200      0.200      0.100      0.100      1.000      1.000      1.000

                 MALLET  175+55
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X1	15179.000	9.000	192.000	208.000	270.000	270.000	270.000	0.000	0.000	1.000
GR	615.000	0.000	607.600	0.000	607.200	174.000	600.000	192.000	599.600	200.000
GR	600.000	208.000	608.200	224.000	608.400	305.000	615.000	305.000	0.000	0.000
NH	5.000	0.040	272.000	0.060	292.000	0.035	308.000	0.060	325.000	0.060
NH	390.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	316.000	376.000

VALLEY 172+30 MCKINLEY EXT. NO BRIDGE

X1	15339.000	9.000	292.000	308.000	1.000	250.000	250.000	0.000	0.000	1.000
GR	615.000	0.000	607.300	0.000	607.300	272.000	600.200	292.000	599.400	300.000
GR	600.200	308.000	608.400	325.000	609.000	350.000	615.000	350.000	0.000	0.000
NH	5.000	0.040	175.000	0.060	192.000	0.035	208.000	0.060	223.000	0.040
NH	275.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY 170+00

X1	15559.000	9.000	192.000	208.000	75.000	300.000	235.000	0.000	0.000	1.000
GR	615.000	0.000	608.600	0.000	607.200	175.000	600.000	192.000	599.600	200.000
GR	600.000	208.000	608.400	223.000	608.700	275.000	615.000	275.000	0.000	0.000
NH	5.000	0.040	277.000	0.060	293.000	0.035	307.000	0.060	322.000	0.040
NH	342.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY 168+40 LINCOLN EXT. NO BRIDGE

X1	15719.000	9.000	293.000	307.000	160.000	330.000	160.000	0.000	0.000	1.000
GR	611.000	0.000	609.200	0.000	607.400	277.000	599.600	293.000	599.600	300.000
GR	599.800	307.000	608.200	322.000	607.250	342.000	615.000	342.000	0.000	0.000
NH	5.000	0.040	230.000	0.060	242.000	0.035	256.000	0.060	269.000	0.040
NH	469.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ST	0.000	7.100	9.100	0.000	0.000	0.000	162.000	342.000	102.000	390.000
ET	0.000	0.000	0.000	9.100	0.000	9.100	0.000	0.000	0.000	0.000

VALLEY 164+50

X1	15909.000	9.000	242.000	256.000	190.000	190.000	190.000	0.000	0.000	1.000
GR	615.000	0.000	610.100	0.000	607.900	230.000	597.500	242.000	599.400	249.000
GR	599.000	256.000	608.000	269.000	608.200	469.000	615.000	469.000	0.000	0.000
NH	5.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	7.100	9.100	0.000	0.000	0.000	90.000	192.000	90.000	178.000

3/8 FACE PAVAGE

X1	15142.000	10.000	90.000	110.000	294.000	294.000	294.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	606.900	606.300	0.000
GR	620.000	0.000	608.900	0.000	609.400	60.000	900.100	90.000	606.100	90.100
GR	600.100	109.900	608.100	110.000	609.400	140.000	606.300	200.000	620.000	200.000
ST	0.000	7.100	9.100	0.000	20.000	0.000	90.000	0.000	300.100	600.100
ET	0.000	7.100	9.100	0.000	0.000	0.000	90.000	300.000	90.000	152.000

3/8 FACE PAVAGE

X1	15275.000	9.000	0.000	0.000	52.000	52.000	52.000	0.000	0.000	1.000
GR	0.000	0.000	0.000	607.600	603.200	0.000	0.000	0.000	0.000	0.000
GR	10.000	0.000	0.000	0.000	0.000	0.000	0.000	204.800	606.300	0.000
ST	10.000	0.000	620.000	0.000	0.100	606.900	0.200	90.000	606.000	0.000
ST	90.000	609.900	620.100	90.200	609.900	607.200	0.000	609.900	607.000	0.000
ET	609.900	609.100	0.000	609.300	0.000	200.000	606.300	0.000	200.000	20.000

PRINTED IN U.S.A.
FORM 141-GO-PRINTED W/ROTARY MANIFOLD FORMS.

BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E?	0.000	7.100	0.000	0.000	0.000	0.000	360.000	440.000	0.000	0.000
ET	0.000	0.000	9.100	7.100	7.100	0.000	280.000	480.000	350.000	450.000

D/S FACE FOOTBRIDGE

X1	16190.000	12.000	391.000	409.000	15.000	15.000	15.000	0.000	0.000	0.000
GR	612.400	0.000	611.800	100.000	610.500	200.000	608.900	300.000	609.500	377.000
G?	600.100	391.000	600.100	409.000	609.600	423.000	607.900	600.000	609.500	700.000
GR	610.500	900.000	610.500	900.000	0.000	0.000	0.000	0.000	0.000	0.000
E?	0.300	0.000	9.100	7.100	7.100	0.000	280.000	480.000	350.000	450.000
ET	0.000	7.100	0.300	0.000	0.000	0.000	360.000	440.000	0.000	0.000

X?	16191.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
LR	0.300	0.000	0.000	609.000	609.500	0.000	0.000	0.000	0.000	0.000
E	0.300	0.000	9.100	7.100	7.100	0.000	280.000	480.000	350.000	450.000
ET	0.000	7.100	0.300	0.000	0.000	0.000	360.000	440.000	0.000	0.000

X?	16197.000	0.000	0.000	0.000	6.000	6.000	6.000	0.000	0.000	1.000
RR	0.300	0.000	0.000	609.000	609.500	0.000	0.000	0.000	0.000	0.000
E?	0.300	0.000	9.100	7.100	7.100	0.000	280.000	480.000	350.000	450.000
ET	0.000	7.100	0.000	0.000	0.000	0.000	360.000	440.000	0.000	0.000

U/S FACE FOOTBRIDGE

X1	16192.000	3.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
BC	0.000	3.000	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY 143+00

X1	16550.000	10.000	396.000	322.000	1354.000	1351.000	1351.200	0.000	0.000	1.100
G	615.000	0.000	610.000	0.000	611.000	321.000	610.500	296.000	600.000	293.200
GR	598.900	320.000	600.000	358.000	609.000	322.000	609.000	405.000	615.000	625.000

WALSH 141+20

X1	16540.000	10.000	25.000	23.000	705.000	730.000	705.000	0.000	0.000	0.000
GR	615.000	0.000	610.600	0.000	615.200	25.000	608.100	37.000	620.200	49.000
GR	598.900	56.000	600.200	83.000	607.000	73.000	608.500	95.000	615.000	93.000
BC	0.000	0.150	89.000	0.035	106.000	0.000	200.000	0.000	0.000	0.000

30° R/B DIVISION

X1	16240.000	8.000	89.000	106.000	981.000	981.200	981.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000
GL	621.000	0.000	606.000	0.000	609.000	30.000	602.000	69.000	602.000	206.000
GR	598.900	110.000	600.000	230.000	620.000	250.000	0.000	0.000	0.000	0.000
BC	0.000	1.150	89.000	0.075	911.000	0.000	205.000	0.000	0.000	0.000
ET	0.000	7.100	0.000	0.000	0.000	0.000	15.000	161.000	0.000	0.000

U/S FACE FOOTBRIDGE

X1	16240.000	0.000	89.000	111.000	156.000	50.000	50.000	0.000	0.000	0.000
XS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	606.000	606.000	0.000
GL	622.000	0.000	606.500	0.000	611.000	75.000	602.000	69.000	602.000	206.000
GR	598.900	110.000	600.000	111.000	611.000	145.000	605.000	205.000	620.000	250.000

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FORM 741-80-PRINTED BY ROTARY MANIFOLD FORMS

NH	3.000	0.060	89.000	0.020	111.000	0.060	200.000	0.000	0.000	0.000
X1	19291.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	0.000	0.000	0.000	0.000	608.500	608.500	0.000
BT	13.000	0.300	620.000	0.000	0.000	636.500	0.000	75.000	611.000	0.000
DT	69.000	611.000	402.000	89.120	611.000	636.500	110.900	611.000	608.500	111.000
DT	611.000	602.800	125.000	611.000	0.000	200.000	609.600	0.000	200.000	625.000
BT	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NI	3.000	0.060	89.000	0.020	111.000	0.060	200.000	0.000	0.000	0.000
X1	19526.000	0.000	0.000	0.000	35.000	35.000	35.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	608.500	609.600	0.000
NH	3.000	0.060	89.000	0.020	111.000	0.060	200.000	0.000	0.000	0.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	15.000	135.000	0.000	0.000

U/S FACE MADISON

X1	19327.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	608.500	609.600	0.000
NH	0.060	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY 128+40

X1	19519.000	9.000	40.000	76.000	152.000	152.000	192.000	0.000	0.000	1.000
BR	620.000	0.000	604.600	0.000	607.100	47.000	602.200	56.000	601.000	57.000
BE	602.200	64.000	609.600	76.000	610.000	112.000	620.000	112.000	0.000	0.000
NC	0.000	0.000	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY 128+55 SYKA TUBE EXT. NO SCREEN

X1	19474.000	10.300	17.000	65.000	151.000	155.000	159.300	0.300	0.300	1.000
X3	0.000	0.000	0.000	0.000	0.000	220.000	0.300	0.300	0.300	0.000
BT	620.300	0.000	604.900	0.000	609.500	17.000	622.400	29.000	600.700	37.000
BE	602.400	65.100	608.600	65.000	610.000	300.000	613.300	420.000	620.300	420.000

VALLEY 128+50

X1	20009.000	10.300	29.000	69.000	335.000	335.300	339.000	0.300	0.000	1.000
BE	620.000	0.300	608.700	0.000	609.600	35.300	602.900	35.000	602.470	44.400
CR	602.400	35.100	604.100	69.000	609.200	150.300	608.500	150.000	620.000	150.000

VALLEY 127+95 CORNELL EXT. NO BRIDGE

X1	19164.000	10.300	25.000	63.000	159.000	159.200	165.000	0.000	0.000	1.000
BR	620.000	0.100	601.700	0.000	609.300	25.000	602.100	35.000	603.200	44.000
CR	602.100	55.200	601.100	63.000	609.300	160.200	609.500	160.000	620.000	160.000

VALLEY 125+50

X1	20309.000	10.300	30.000	112.000	140.300	145.000	345.000	0.000	0.000	1.000
BR	620.000	0.100	608.800	0.000	609.900	70.000	602.900	60.000	609.300	66.000
CR	602.400	66.000	608.300	112.000	608.800	215.000	606.000	240.000	620.000	240.000

VALLEY 118+50 WESTPOINT EXT. NO BRIDGE

X1	20509.000	11.000	70.000	109.000	200.000	200.000	200.000	0.000	0.000	1.000
GR	620.000	0.000	608.600	0.000	608.600	30.000	609.600	70.000	603.800	85.000
GR	603.200	93.000	603.800	101.000	609.000	109.600	609.100	204.000	609.100	224.000
GR	620.000	226.200	0.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.200	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000
ET	5.000	7.100	0.000	0.000	0.000	0.000	45.000	200.000	0.000	0.000

VALLEY 117+00

X1	20669.000	75.000	94.000	146.000	150.000	150.000	150.000	0.000	0.000	1.000
GR	620.000	0.200	610.300	0.000	606.500	65.000	609.800	94.000	604.100	111.000
GR	603.800	120.000	603.800	129.000	612.300	146.000	613.400	179.000	613.800	180.000
GR	610.800	217.000	610.800	240.000	620.000	240.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	5.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	60.400	111.400

J/S FACE N. BOULD TELEGRAPH

X1	20875.000	10.000	90.600	111.400	216.000	216.000	216.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	609.600	609.600	0.000
GR	620.000	40.000	612.000	40.000	612.000	70.000	604.200	88.600	604.200	88.700
ES	604.200	111.400	604.200	111.400	612.200	135.000	612.200	160.000	620.000	160.000
CS	5.000	1.900	3.000	0.000	22.800	0.300	135.000	0.000	603.700	604.200
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	96.600	111.400

J/S FACE N. BOUND TELEGRAPH

X1	20963.000	10.000	90.600	111.400	66.300	68.000	68.000	0.000	0.000	1.000
X2	0.000	0.000	1.000	609.600	612.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.300	0.000	0.300	0.000	0.000	612.500	612.700	0.000
GR	0.300	55.000	620.300	0.000	55.200	612.500	0.000	66.000	612.400	204.000
GR	60.700	612.200	609.800	111.300	60.100	609.600	111.400	613.200	64.200	145.000
GR	612.700	0.000	141.000	135.000	0.500	0.000	0.000	0.000	0.000	0.000
GR	620.300	55.000	612.000	55.000	612.000	75.000	603.700	86.600	603.700	86.700
GR	603.700	111.300	603.700	111.400	612.200	135.000	612.200	145.000	620.100	145.000
NC	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	96.200	111.000

J/S FACE S. BOULD TELEGRAPH

X1	20992.000	10.000	87.000	113.300	54.000	54.000	54.000	0.000	0.000	0.000
X3	10.000	0.300	0.000	0.000	0.000	0.000	0.000	611.200	611.300	0.000
GR	620.000	0.200	611.000	0.000	614.800	55.000	603.700	87.000	603.700	87.100
GR	603.700	113.000	603.700	113.000	614.800	140.000	614.600	203.000	620.000	203.000
CS	0.000	1.700	3.000	0.000	26.000	0.000	150.000	0.000	604.000	603.700
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	87.000	113.000

J/S FACE S. BOULD TELEGRAPH

X1	21062.000	10.000	87.000	113.000	65.000	65.000	65.000	0.000	0.000	1.000
X2	0.000	0.000	1.000	611.300	615.600	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	613.300	613.400	0.000
GR	0.300	0.000	620.100	0.000	0.000	615.000	0.000	78.000	614.200	0.000
GR	87.000	614.000	0.000	87.000	614.000	614.000	112.000	614.000	614.300	113.000
GR	614.000	0.000	620.000	614.300	0.000	0.000	0.000	0.000	0.000	0.000
CS	2.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	614.000	0.000	614.000	78.000	614.000	87.000	614.000	113.000
BR	604.000	14.000	604.000	113.000	614.000	140.000	614.000	203.000	614.000	203.000

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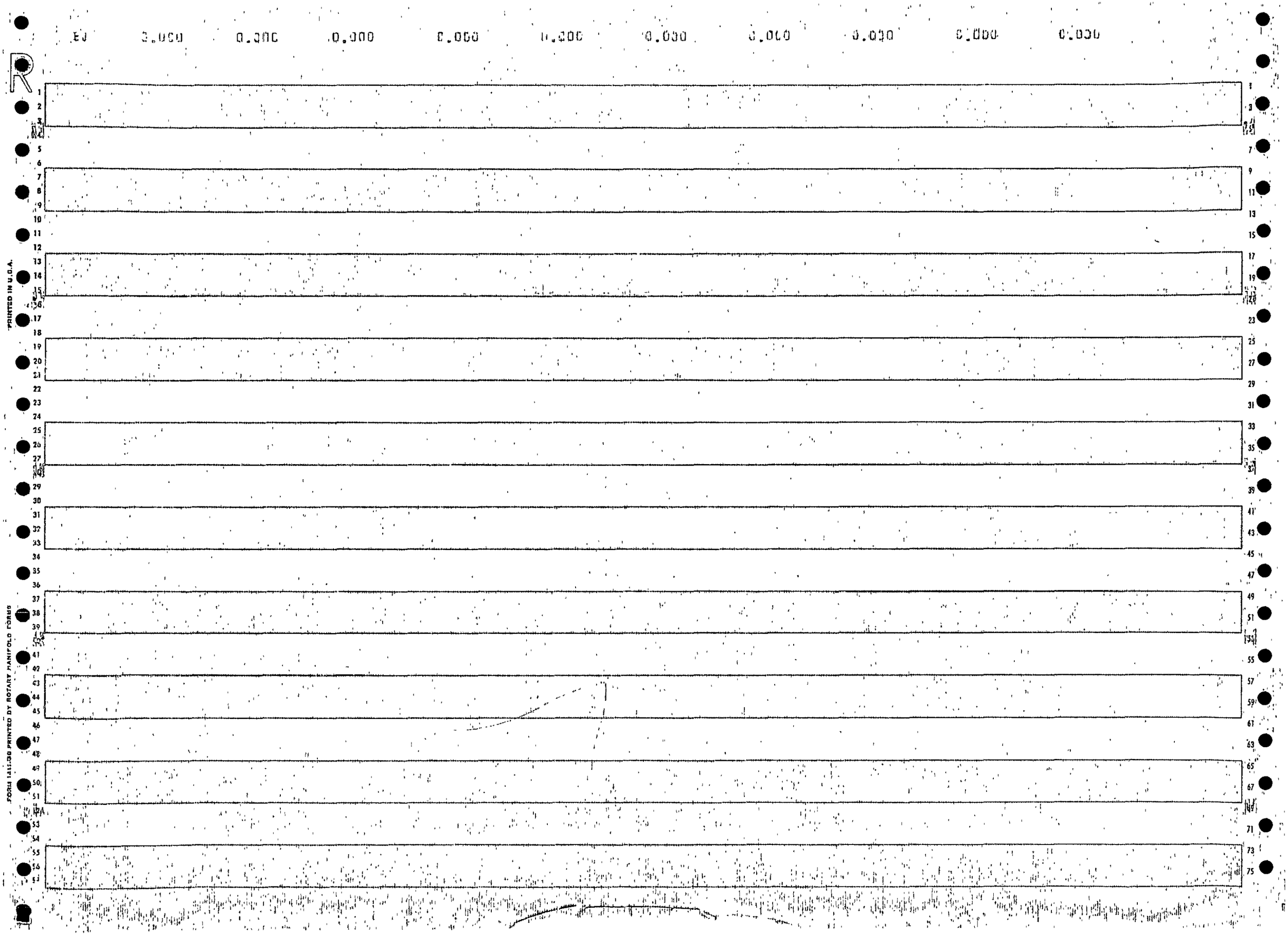

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**********************************************************
*  PERT RELEASE DATED NOV 76 UPDATED FEB 1977            *
*  ERROR CORR -  01                                      *
*  MODIFICATION -  50,51,-2                              *
**********************************************************

T1 NORTH HOLLOW SCORSE DEARBORN HEIGHTS, FIS MHC 2010 57
T2 MHC YR FLOW
T3      N.BR.ECORSE DBN.HTS.

J1  ICHECK    INA       METRIC    IDC1      SIAT      METRIC    NVARS     0         USEL      PO
          0.        0.        0.        1.  0.000000     0.00      0.0       0.   614.969     1.000

J2  MPROP     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IOW       CHNIN     ATRACE
         -1.000    0.000    -1.000    0.000    0.000    0.000    0.000    0.000    1.000   15.000

ID          1.000     0.700     0.250     0.300     0.900     0.000     0.000     0.000     0.000     0.000
MT          9.000   873.000  1250.000  1445.000  1795.000   465.000  1520.000  1170.000  1495.000  1515.000
ET          3.000     9.100     0.000     0.000     0.000     0.000     0.000     0.000    87.000   113.000

                  D/S -ACR S. BOUND TELEGRAPH

MT      21562.000    13.000    87.000   113.000     0.000     0.000     0.000     0.000     0.000     0.000
QO         13.000     3.030     0.000     0.000     0.000     0.000     0.000   611.300   611.300     0.000
QR        626.000     3.000   613.800     0.000   614.800    65.000   603.700    87.000   603.700    87.100
QL         50.000   112.500   603.700   113.000   614.800   190.000   613.600   250.000   620.000   200.000
SD          3.000     1.743     3.030     0.000    65.100     1.000   190.300     0.000   611.300     3.700
ET          0.000     0.100     3.000     0.000     0.500     0.000     0.000     0.000    87.000   113.000

                  D/S PACE S. BOUND TELEGRAPH

MT      21562.000    13.000    87.000   113.000    50.000    65.000    65.000     0.000     0.000     0.000
QO          0.000     0.000     1.000   611.300   611.600     0.300     0.000     0.000     0.000     0.000
QR          0.000     0.000     0.000     0.000     0.000     0.000     0.000   613.600   611.600     3.000
QT          0.000     0.000   620.000     0.000     0.000   620.600     0.000    72.000   611.600     3.000
QX         87.000   614.300     0.000    87.100   614.000   611.300   112.900   614.600   611.500   113.000
QS        614.800     0.000   620.000   614.800     0.000   200.000   613.000     3.000   200.000   620.000
QB          0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
QE         20.000     0.300   613.800     3.000   614.300    72.000   300.000    87.000   604.000    87.100
QL        604.200   112.100   603.700   113.000   614.300   128.000   613.600   300.000   620.000   200.000
MT          9.000   875.300  1305.000  1370.000  1760.000   465.000  1905.000  1155.000  1485.000  1675.000
NC          3.000     0.000     0.000     3.300     0.500     0.000     0.000     0.000     0.000     0.000

                  VALLEY (WEST)

MT      21356.000     9.000    11.000    51.000   297.200   297.000   297.000     0.000     0.000     1.000
QO        620.000     0.700   613.600     0.000   110.400    11.000   603.200    23.300   603.300    32.000
QR        604.200     0.000   613.200    51.000   613.500    65.000   620.000    65.000     0.500     0.200
SD          0.000     3.000     0.200     0.100     0.300     0.000     0.300     0.000     0.000     0.200

                  VALLEY (EAST)
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GR	620.000	0.000	610.500	0.000	611.500	10.000	604.500	26.000	603.600	35.000
GR	604.500	44.000	608.600	59.000	608.700	70.000	620.000	70.000	0.000	0.000
NC	0.070	0.070	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000

VALLEY 98+50 BAILEY EXT.

X1	22250.000	9.000	20.000	71.000	800.000	800.000	800.000	0.000	0.000	1.000
GR	620.000	0.000	612.200	0.000	612.200	20.000	605.800	36.000	604.600	45.000
GR	605.800	54.000	611.600	71.000	612.800	85.000	620.000	85.000	0.000	0.000
NC	0.050	0.050	0.035	0.300	0.300	0.000	0.000	0.000	0.000	0.000

VALLEY 78+60

X1	24499.000	9.000	13.000	60.000	1990.000	1990.000	1990.000	0.000	0.000	1.000
GR	620.000	0.000	614.600	0.000	612.500	10.000	606.000	27.000	606.500	35.000
GR	606.000	63.000	614.000	60.000	613.300	115.000	620.000	115.000	0.000	0.000
NH	6.000	0.060	86.500	0.035	113.500	0.060	170.000	0.020	230.000	0.000



1) COUNTY: Wayne

2) STUDY NAME:

3) WATERCOURSE: South Branch Ecorse Creek

4) DOCUMENT TYPE: Summary



****

HFC2 RELEASE DATED NOV 75 UPDATED FEB 1977

GROUP CORR - 0

FORTRAN IV: - 50,51,52

****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES PASSAGE IN SUMMARY OF ERRORS LIST

SOUTH BRANCH ECORSE CR.

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	B.TRD	ELLC	ELMIN	Q	CLSEL	CRIJS	ES	VHDAS	VCH	AREA	QDR
11650.000	51.00	0.30	0.00	572.10	1120.00	580.07	0.00	580.20	5.88	2.91	385.04	462.07
11650.000	51.00	0.30	0.00	572.10	1620.00	582.06	0.00	582.23	5.96	3.27	495.10	663.66
11650.000	51.00	0.30	0.00	572.10	1760.00	582.61	0.00	582.77	5.97	3.33	525.42	720.69
11650.000	51.00	0.30	0.00	572.10	2055.00	583.62	0.00	583.79	5.89	3.53	581.42	847.06
11721.000	71.00	583.20	580.70	572.10	1120.00	580.06	0.00	580.21	5.85	2.90	385.55	462.95
11721.000	71.00	583.20	580.70	572.10	1620.00	582.31	0.00	582.47	5.46	3.18	509.36	692.98
11721.000	71.00	583.20	580.70	572.10	1760.00	582.92	0.00	583.06	5.29	3.24	543.39	764.38
11721.000	71.00	583.20	580.70	572.10	2055.00	584.02	0.00	584.16	5.25	3.40	603.91	897.12
12689.000	968.00	1.00	0.00	573.00	1120.00	580.57	0.00	580.69	4.27	2.97	410.95	542.15
12689.000	968.00	0.00	0.00	573.00	1620.00	582.73	0.00	582.87	3.17	3.12	587.76	909.86
12689.000	968.00	0.00	0.00	573.00	1760.00	583.32	0.00	583.46	2.94	3.15	643.10	1026.65
12689.000	968.00	0.00	0.00	573.00	2055.00	584.39	0.00	584.56	2.64	3.21	773.03	1263.28
13219.000	530.00	1.00	0.00	573.00	1120.00	580.47	0.00	580.68	2.34	2.60	494.41	665.15
13219.000	530.00	1.00	0.00	573.00	1620.00	582.63	0.00	582.83	2.52	3.12	632.39	1029.51
13219.000	530.00	1.00	0.00	573.00	1760.00	583.47	0.00	583.61	2.42	3.16	681.48	1151.36
13219.000	530.00	1.00	0.00	573.00	2055.00	584.52	0.00	584.67	2.31	3.29	822.64	1551.22
13289.000	57.00	0.67	0.00	573.00	1120.00	580.67	0.00	580.87	5.50	3.02	363.45	561.25
13289.000	57.00	0.00	0.00	573.00	1620.00	582.89	0.00	583.09	3.36	3.49	665.17	1171.36
13289.000	57.00	0.00	0.00	573.00	1760.00	583.49	0.00	583.65	3.12	3.61	699.19	1266.11
13289.000	50.00	0.00	0.00	573.00	2055.00	584.56	0.00	584.69	2.30	3.29	826.73	1354.53
13303.000	40.00	584.50	582.00	573.00	1120.00	580.77	0.00	580.92	6.08	3.00	363.55	554.58
13303.000	40.00	584.50	582.00	573.00	1620.00	583.05	0.00	583.27	3.78	3.43	673.11	1232.40
13303.000	40.00	584.50	582.00	573.00	1760.00	583.72	0.00	583.91	3.59	3.56	742.19	1410.76
13303.000	40.00	584.50	582.00	573.00	2055.00	584.82	0.00	584.98	2.34	3.29	893.16	1645.16
13404.000	100.00	0.00	0.00	573.00	1120.00	580.85	0.00	580.96	2.99	2.84	453.57	647.79
13404.000	100.00	0.00	0.00	573.00	1620.00	583.18	0.00	583.31	2.47	3.07	629.39	1030.00
13404.000	100.00	0.00	0.00	573.00	1760.00	583.82	0.00	583.96	2.31	3.11	692.66	1150.59
13404.000	100.00	0.00	0.00	573.00	2055.00	584.80	0.00	584.96	2.27	3.35	891.60	1503.00
15144.000	1735.00	0.00	0.00	573.70	1120.00	581.54	0.00	581.74	6.43	3.62	359.77	659.95
15144.000	1735.00	0.00	0.00	573.70	1620.00	583.72	0.00	583.93	4.70	3.77	494.96	946.88
15144.000	1735.00	0.00	0.00	573.70	1760.00	584.33	0.00	584.53	4.31	3.79	542.59	1047.39
15144.000	1735.00	0.00	0.00	573.70	2055.00	585.43	0.00	585.60	4.12	3.95	727.99	1315.14

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SECNO	XLCH	ELTRD	E_LC	ELMIN	Q	CJSEL	CRIVS	EG	10K*S	VCR	AREA	.C1K
15434.000	290.00	0.00	0.00	574.90	1120.00	581.72	0.00	581.92	5.98	3.58	313.09	457.95
15434.000	290.00	0.00	0.00	574.90	1620.00	583.14	0.00	584.06	4.99	3.90	414.67	725.56
15434.000	290.00	0.00	0.00	574.90	1760.00	584.46	0.00	584.68	4.75	3.97	443.05	807.20
15434.000	290.00	0.00	0.00	574.90	2055.00	586.84	0.00	585.66	4.73	4.21	438.27	944.66
15553.000	121.00	587.30	583.80	574.90	1120.00	581.74	0.00	581.94	6.04	3.59	312.34	455.81
15555.000	121.00	587.30	583.80	574.90	1620.00	584.17	0.00	584.29	4.66	3.82	423.94	750.65
15555.000	121.00	587.30	583.80	574.90	1760.00	584.74	0.00	584.97	4.34	3.86	456.16	845.25
15555.000	121.00	587.30	583.80	574.90	2055.00	586.15	0.00	586.11	4.13	4.03	504.71	1110.82
15859.000	304.00	0.00	0.00	574.30	1120.00	581.90	0.00	582.27	11.42	5.09	261.36	331.44
15859.000	304.00	0.00	0.00	574.30	1620.00	584.17	0.00	584.56	8.39	5.30	384.56	559.21
15859.000	304.00	0.00	0.00	574.30	1760.00	584.83	0.00	585.22	7.65	5.30	423.62	636.32
15859.000	304.00	0.00	0.00	574.30	2055.00	586.34	0.00	586.04	7.01	5.43	495.02	776.07
16339.000	480.00	0.00	0.00	575.40	1120.00	582.40	0.00	582.80	15.05	4.70	236.09	353.72
16339.000	480.00	0.00	0.00	575.40	1620.00	584.57	0.00	584.99	8.78	5.19	312.16	546.68
16339.000	480.00	0.00	0.00	575.40	1760.00	585.19	0.00	585.63	8.36	5.27	334.04	608.79
16339.000	480.00	0.00	0.00	575.40	2055.00	586.27	0.00	586.74	8.15	5.53	371.35	719.98
16340.000	1.00	589.20	585.70	575.40	1120.00	582.40	0.00	582.80	15.08	4.70	236.12	353.79
16340.000	1.00	589.20	585.70	575.40	1620.00	584.57	0.00	584.99	8.78	5.19	312.20	546.84
16340.000	1.00	589.20	585.70	575.40	1760.00	585.19	0.00	585.63	8.36	5.27	334.06	608.84
16340.000	1.00	589.20	585.70	575.40	2055.00	586.25	0.00	586.76	22.26	5.76	356.53	435.37
16379.000	39.00	589.20	585.70	575.40	1120.00	582.41	0.00	582.85	11.47	4.90	228.74	330.76
16379.000	39.00	589.20	585.70	575.40	1620.00	584.59	0.00	585.04	9.74	5.35	302.71	519.02
16379.000	39.00	589.20	585.70	575.40	1760.00	585.19	0.00	585.67	9.22	5.42	326.32	577.75
16379.000	39.00	589.20	585.70	575.40	2055.00	586.32	0.00	586.87	24.50	5.93	346.63	415.17
16340.000	1.00	0.00	0.00	575.40	1120.00	582.48	0.00	582.85	11.49	4.90	228.62	330.36
16340.000	1.00	0.00	0.00	575.40	1620.00	584.64	0.00	585.04	9.76	5.35	302.55	519.43
16340.000	1.00	0.00	0.00	575.40	1760.00	585.24	0.00	585.67	9.23	5.43	326.32	577.25
16340.000	1.00	0.00	0.00	575.40	2055.00	586.39	0.00	586.89	24.52	5.93	346.52	415.04
17184.000	805.00	0.00	0.00	574.60	1120.00	583.55	0.00	584.15	19.42	7.21	265.65	234.15
17184.000	805.00	0.00	0.00	574.60	1620.00	585.50	0.00	586.12	16.06	7.60	360.84	404.20
17184.000	805.00	0.00	0.00	574.60	1760.00	586.07	0.00	586.69	15.53	7.59	393.77	454.25
17184.000	805.00	0.00	0.00	574.60	2055.00	587.20	0.00	587.78	15.04	7.64	473.77	545.01

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SOUTH BRANCH ECORSE CR.

SUMMARY PRINTOUT TABLE 130

SECNO	X	C SEL	SIESE	DIEHCK	DIFKUS	TOFWIE	WSEL
11650.000	1120.00	580.07	0.00	0.00	0.00	55.64	51.00
11650.000	1620.00	582.06	0.00	0.00	0.00	56.00	51.00
11650.000	1760.00	582.65	0.00	0.00	0.00	56.00	51.00
11650.000	2055.00	583.60	0.00	0.00	0.00	55.00	51.00
11721.000	1120.00	580.08	0.00	0.01	0.00	53.64	71.00
11721.000	1620.00	582.31	0.00	0.25	0.00	56.00	71.00
11721.000	1760.00	582.92	0.00	0.32	0.00	56.00	71.00
11721.000	2055.00	584.00	0.00	0.40	0.00	55.00	71.00
12689.000	1120.00	580.56	0.00	0.46	0.00	77.33	968.00
12689.000	1620.00	582.73	0.00	0.41	0.00	85.79	968.00
12689.000	1760.00	583.32	0.00	0.40	0.00	103.16	968.00
12689.000	2055.00	584.39	0.00	0.39	0.00	138.59	968.00
13219.000	1120.00	580.72	0.00	0.21	0.00	74.00	530.00
13219.000	1620.00	582.89	0.00	0.16	0.00	82.58	530.00
13219.000	1760.00	583.47	0.00	0.15	0.00	85.66	530.00
13219.000	2055.00	584.52	0.00	0.13	0.00	302.04	530.00
13269.000	1120.00	580.77	0.00	-0.00	0.00	47.00	51.00
13269.000	1620.00	582.87	0.00	-0.01	0.00	47.00	51.00
13269.000	1760.00	583.46	0.00	-0.02	0.00	47.00	51.00
13269.000	2055.00	584.54	0.00	0.01	0.00	308.15	51.00
13309.000	1120.00	580.77	0.00	0.01	0.00	47.00	60.00
13309.000	1620.00	582.93	0.00	0.21	0.00	47.00	60.00
13309.000	1760.00	583.52	0.00	0.27	0.00	47.00	60.00
13309.000	2055.00	584.57	0.00	0.28	0.00	47.00	60.00
13409.000	1120.00	580.85	0.00	0.07	0.00	72.10	100.00
13409.000	1620.00	583.18	0.00	0.07	0.00	81.35	100.00
13409.000	1760.00	583.92	0.00	0.12	0.00	84.00	100.00
13409.000	2055.00	584.99	0.00	0.01	0.00	48.00	100.00
15144.000	1120.00	581.34	0.00	0.70	0.00	65.79	1735.00
15144.000	1620.00	583.72	0.00	0.54	0.00	75.65	1735.00
15144.000	1760.00	584.33	0.00	0.50	0.00	78.41	1735.00
15144.000	2055.00	585.40	0.00	0.48	0.00	138.41	1735.00
15434.000	1120.00	581.78	0.00	0.16	0.00	46.00	292.00
15434.000	1620.00	583.84	0.00	0.13	0.00	46.00	292.00
15434.000	1760.00	584.44	0.00	0.11	0.00	46.00	292.00
15434.000	2055.00	585.38	0.00	0.10	0.00	46.00	292.00
15535.000	1120.00	581.79	0.00	0.32	0.00	46.00	121.00
15535.000	1620.00	583.87	0.00	0.32	0.00	46.00	121.00
15535.000	1760.00	584.74	0.00	0.30	0.00	46.00	121.00
15535.000	2055.00	586.09	0.00	0.47	0.00	46.00	121.00
15559.000	1120.00	581.91	0.00	0.16	0.00	46.00	342.00
15559.000	1620.00	584.17	0.00	0.11	0.00	56.25	342.00
15559.000	1760.00	584.93	0.00	0.09	0.00	62.55	342.00
15559.000	2055.00	585.94	0.00	0.09	0.00	64.41	342.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
16339.000	1120.00	582.45	0.00	0.55	0.00	35.00	480.00
16339.000	1620.00	584.57	0.00	0.40	0.00	35.00	461.53
16339.000	1760.00	585.19	0.00	0.36	0.00	35.00	480.00
16339.000	2035.00	586.27	0.00	0.35	0.00	35.00	480.00
16340.000	1120.00	582.45	0.00	0.00	0.00	35.00	1.00
16340.000	1620.00	584.57	0.00	0.00	0.00	35.00	1.00
16340.000	1760.00	585.19	0.00	0.00	0.00	35.00	1.00
16340.000	2055.00	586.25	0.00	-0.02	0.00	35.00	1.00
16379.000	1120.00	582.48	0.00	0.03	0.00	35.00	39.00
16379.000	1620.00	584.59	0.00	0.02	0.00	35.00	39.00
16379.000	1760.00	585.22	0.00	0.02	0.00	35.00	39.00
16379.000	2055.00	586.32	0.00	0.04	0.00	34.00	39.00
16380.000	1120.00	582.45	0.00	0.00	0.00	35.00	1.00
16380.000	1620.00	584.59	0.00	0.00	0.00	35.00	1.00
16380.000	1760.00	585.22	0.00	0.00	0.00	35.00	1.00
16380.000	2055.00	586.40	0.00	0.07	0.00	35.00	1.00
17184.000	1120.00	583.55	0.00	1.17	0.00	53.14	305.00
17184.000	1620.00	585.50	0.00	0.91	0.00	66.30	305.00
17184.000	1760.00	586.07	0.00	0.86	0.00	67.97	305.00
17184.000	2055.00	587.20	0.00	0.80	0.00	74.42	305.00

SUMMARY OF ERRORS

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FLOOD INSURANCE ZONE DATA FOR SOUTH BRANCH ECORSE CR.

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 100	2%	0.2%
11850.000	0.	-2.5	-0.5	1.0
11921.000	71.	-2.5	-0.6	1.1
12649.000	1039.	-2.8	-0.6	1.1
13219.000	1569.	-2.7	-0.6	1.1
13269.000	1619.	-2.7	-0.6	1.1
13309.000	1659.	-2.9	-0.6	1.0
13409.000	1759.	-3.0	-0.6	1.0
15134.000	3484.	-2.6	-0.6	1.0
15434.000	3784.	-2.7	-0.6	1.0
15555.000	3905.	-3.0	-0.7	1.1
15659.000	4209.	-2.9	-0.7	1.1
16339.000	4569.	-2.9	-0.6	1.1
16340.000	4690.	-2.9	-0.6	1.1
16379.000	4725.	-3.0	-0.6	1.1
16380.000	4730.	-2.7	-0.6	1.2
17184.000	5535.	-2.5	-0.6	1.1
WEIGHTED AVG FOR REACH		-2.8	-0.6	1.0

FHF FOR THE REACH = 030 WITH 100.0% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 5

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORE -  01
  MODIFICATION -  50,51,52
*****************************************************
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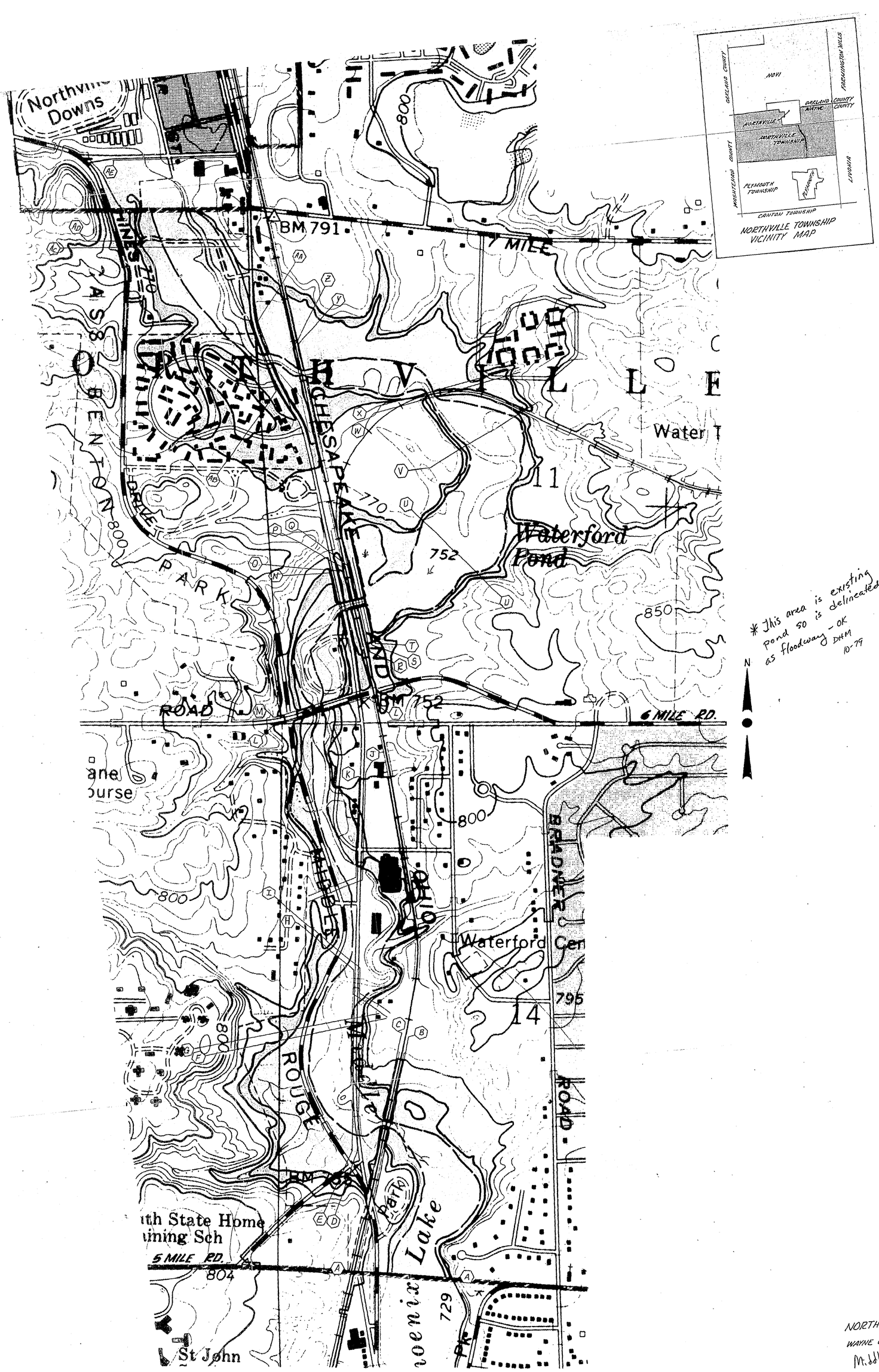

* This area is existing pond so is delineated as floodway - OK DHM 10-79

N

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

CROSS SECTION

CORPORATE LIMIT

FLOOD MAP

NORTHVILLE TOWNSHIP
WAYNE COUNTY MICHIGAN
Middle Rouge

SCALE: 1" = 400'

AUGUST, 1979

HUD 2007-10

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Northville Twp

3) WATERCOURSE: Middle Branch Rouge River

4) DOCUMENT TYPE: 1968 Flood Profile

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1       NORTHVILLE TOWNSHIP FIS HUD 2007-07
T2      MIDDLE ROUGE R. XSECT. FROM CORPS  START W.S. FROM PHOENIX LK. ROUTINGS
T3       MID.ROUGE R. N.VILLE TWP

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
          0.         7.         0.         0.  0.000000       0.00       0.0         0.    727.650      0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
     -1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

QT       6.000   2570.000   3590.000   4190.000   4190.000   5730.000   1610.000      0.000      0.000      0.000
ET       0.000      0.000      0.000      0.000      1.400      0.000      0.000      0.000      0.000      0.000
NC       0.120      0.120      0.035      0.100      0.300      0.000      0.000      0.000      0.000      0.000

          NORTHVILLE TOWNSHIP CORPERATE BOUNDARY  CORPS C.S. #2

X1       1.000     11.000     43.000    490.000      0.000      0.000      0.000      0.000      0.000      0.000
GR     747.000      0.000    725.000     43.000    721.000     70.000    717.100    230.000    720.500    280.000
GR     721.000    390.000    719.500    400.000    720.000    460.000    724.500    490.000    724.500    510.000
GR     739.000    550.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
NC       0.120      0.120      0.035      0.300      0.500      0.000      0.000      0.000      0.000      0.000

          INLET TO PHOENIX LAKE                    CORPS C.S. #4

X1       2.000     11.000    370.000    416.000    800.000   1700.000   1400.000      0.000     -0.900      0.000
X3       0.000      0.000      0.000    257.500      0.000    528.500      0.000      0.000      0.000      0.000
GR     740.000      0.000    730.000     60.000    726.700    210.000    725.800    370.000    721.100    385.000
GR     723.300    405.000    725.500    416.000    727.500    460.000    727.100    610.000    730.000    620.000
GR     740.000    630.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

          50 FT D/S C.O. R.R. BRIDGE #1            CORPS C.S. #4

X1       3.000      0.000      0.000      0.000    300.000    500.000    395.000      0.000      0.900      0.000
X3       0.000      0.000      0.000    358.000      0.000    428.000      0.000      0.000      0.000      0.000
ET       0.000      0.000      0.000      0.000      9.100      0.000      0.000      0.000      1.000    630.000

          D/S C.O. R.R. BRIDGE

X1       3.900     21.000    370.000    416.000     49.000     49.000     49.000      0.000      0.000      0.000
X3      10.000      0.000      0.000      0.000      0.000      0.000      0.000    737.400    737.400      0.000
GR     740.000      0.000    730.000     60.000    726.700    210.000    725.600    370.000    725.000    372.000
GR     724.000    376.000    723.000    380.000    721.100    384.000    721.100    388.000    721.100    390.000
GR     721.100    396.000    721.100    398.000    722.500    402.000    723.000    406.000    724.500    410.000
GR     726.000    414.000    726.000    416.000    727.500    460.000    727.100    610.000    730.000    620.000
GR     740.000    630.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
NC       0.120      0.120      0.030      0.300      0.500      0.000      0.000      0.000      0.000      0.000
ET       0.000      0.000      0.000      0.000      9.100      0.000      0.000      0.000      1.000    630.000
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D/S FACE C.O. R.R. BRIDGE #1

X1	4.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	737.400	737.400	0.000
BT	20.000	0.000	760.000	0.000	370.000	760.000	725.600	370.000	760.000	730.000
BT	372.000	760.000	734.000	376.000	760.000	737.000	380.000	760.000	737.400	384.000
BT	760.000	737.000	388.000	760.000	734.000	390.000	760.000	730.000	390.000	760.000
BT	721.100	396.000	760.000	721.100	396.000	760.000	730.000	398.000	760.000	734.000
BT	402.000	760.000	737.000	406.000	760.000	737.400	410.000	760.000	737.000	414.000
BT	760.000	734.000	416.000	760.000	730.000	416.000	760.000	726.000	630.000	760.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	1025.000

U/S FACE C.O. R.R. BRIDGE #1 CORPS C.S. #5

X1	5.000	25.000	529.000	375.000	90.000	90.000	90.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	760.000	760.000	0.000
BT	20.000	0.000	760.000	0.000	329.000	760.000	727.000	329.000	760.000	730.000
BT	331.000	760.000	734.000	335.000	760.000	737.000	339.000	760.000	737.400	343.000
BT	760.000	737.000	347.000	760.000	734.000	349.000	760.000	730.000	349.000	760.000
BT	722.500	355.000	760.000	722.200	355.000	760.000	730.000	357.000	760.000	734.000
BT	361.000	760.000	737.000	365.000	760.000	737.400	369.000	760.000	737.000	373.000
BT	760.000	734.000	375.000	760.000	730.000	375.000	760.000	726.000	1025.000	760.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	740.000	0.000	730.000	95.000	728.000	175.000	726.000	225.000	728.000	325.000
GR	727.000	329.000	726.500	331.000	726.000	335.000	724.500	339.000	723.500	343.000
GR	723.000	347.000	722.500	349.000	722.200	355.000	722.500	357.000	723.000	361.000
GR	723.500	365.000	724.500	369.000	725.000	373.000	726.000	375.000	728.500	525.000
GR	732.500	575.000	727.000	625.000	732.500	675.000	734.000	775.000	740.000	1025.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	1025.000

U/S C.O. R.R. BRIDGE

X1	5.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	760.000	760.000	0.000
NC	0.080	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	288.500	415.500

VALLEY SECTION

X1	6.000	0.000	0.000	0.000	150.000	150.000	150.000	0.000	0.150	0.000
ET	0.000	0.000	0.000	0.000	1.400	0.000	0.000	0.000	0.000	0.000

D/S NORTHVILLE RD. #1 CORPS C.S. # 6

X1	6.900	14.000	270.000	330.000	250.000	50.000	133.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	732.400	732.400	0.000
GR	740.000	0.000	735.800	125.000	728.000	145.000	728.000	200.000	734.200	244.000
GR	724.500	270.000	723.000	299.500	723.000	300.500	722.500	310.000	725.000	330.000
GR	734.200	355.000	732.000	455.000	734.500	505.000	740.000	1000.000	0.000	0.000
NC	0.120	0.080	0.030	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #1

X1	7.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	732.400	732.400	0.000

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BT	12.000	0.000	740.000	0.000	244.000	734.200	0.000	270.000	734.200	0.000
BT	270.000	734.200	732.400	299.500	734.200	732.400	299.500	734.200	0.000	300.500
BT	734.200	0.000	300.500	734.200	732.400	330.000	734.400	732.400	330.000	734.400
BT	0.000	355.000	734.500	0.000	1000.000	740.000	0.000	0.000	0.000	0.000

U/S FACE NORTHVILLE RD. #1

X1	8.000	0.000	0.000	0.000	65.000	65.000	65.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	734.200	734.200	0.000

U/S NORTHVILLE RD. #1

X1	8.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	734.200	734.200	0.000
NC	0.120	0.080	0.040	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	220.000	380.000

50 FT U/S NORTHVILLE RD. #1

X1	9.000	7.000	260.000	320.000	49.000	49.000	49.000	0.000	0.000	0.000
GR	740.000	0.000	730.000	200.000	724.500	260.000	722.500	300.000	725.000	320.000
GR	730.000	480.000	740.000	980.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.030	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	409.000	541.000

D/S ABANDONED MILL CORPS C.S. #7

X1	10.000	13.000	450.000	500.000	500.000	1500.000	1035.000	0.000	0.000	0.000
GR	751.700	0.000	743.300	70.000	730.000	250.000	731.000	442.000	727.500	444.000
GR	727.500	448.000	725.000	450.000	723.100	470.000	726.000	500.000	728.000	510.000
GR	732.000	515.000	733.300	640.000	740.000	850.000	0.000	0.000	0.000	0.000
NH	5.000	0.080	428.000	0.050	482.000	0.030	498.000	0.050	536.000	0.080
NH	735.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

1FT D/S ABANDONED MILL CORPS C.S. #8

X1	10.900	19.000	482.000	498.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	751.700	0.000	743.300	70.000	732.000	250.000	731.000	350.000	732.000	428.000
GR	730.000	430.000	730.000	450.000	728.000	477.000	727.500	482.000	725.100	485.000
GR	725.500	495.000	728.000	498.000	728.000	503.000	729.000	535.000	732.000	536.000
GR	733.000	610.000	735.000	620.000	735.000	705.000	750.000	735.000	0.000	0.000
ET	0.900	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

D/S FACE ABANDONED MILL

X1	11.000	22.000	482.000	498.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	751.700	0.000	743.300	70.000	732.000	250.000	731.000	350.000	732.000	428.000
GR	730.000	430.000	730.000	467.000	734.000	467.000	735.000	477.000	740.000	477.000
GR	740.000	482.000	728.400	482.000	728.400	498.000	734.000	498.000	733.000	513.000
GR	729.000	513.000	729.000	535.000	732.000	536.000	733.000	610.000	735.000	620.000
GR	735.000	705.000	750.000	735.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

U/S FACE ABANDONED MILL

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X1	11.500	0.000	0.000	0.000	5.000	5.000	5.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

1 FT U/S ABANDONED MILL

X1	11.600	19.000	482.000	498.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	751.700	0.000	743.300	70.000	732.000	250.000	731.000	350.000	732.000	428.000
GR	730.000	430.000	730.000	450.000	728.000	477.000	727.500	482.000	725.100	485.000
GR	725.500	495.000	728.000	498.000	728.000	503.000	729.000	535.000	732.000	536.000
GR	733.000	610.000	735.000	620.000	735.000	705.000	750.000	735.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	378.000	586.000

U/S ABANDONED MILL

X1	11.900	0.000	0.000	0.000	49.000	49.000	49.000	0.000	0.000	0.000
NC	0.120	0.120	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	173.000	263.000

50 FT D/S NORTHVILLE RD. #2 CORPS C.S. #9

X1	12.000	12.000	188.000	248.000	200.000	675.000	325.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	30.000	736.100	170.000	728.200	188.000	726.900	217.500
GR	726.900	218.500	728.200	248.000	736.200	260.000	735.000	310.000	735.000	410.000
GR	740.000	810.000	750.000	860.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #2

X1	13.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	735.000	735.000	0.000
SB	1.050	1.610	3.000	0.000	54.000	1.000	340.000	0.000	726.900	726.900

U/S FACE NORTHVILLE RD. #2

X1	14.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	733.200	736.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	736.100	736.100	0.000
BT	16.000	0.000	750.000	0.000	30.000	740.000	0.000	170.000	736.100	0.000
BT	188.000	736.100	0.000	188.000	736.100	733.100	217.500	736.100	733.100	217.500
BT	736.100	0.000	218.500	736.100	0.000	218.500	736.100	733.100	248.000	736.200
BT	733.200	248.000	736.200	0.000	260.000	736.200	0.000	310.000	735.000	0.000
BT	410.000	735.000	0.000	810.000	740.000	0.000	860.000	750.000	0.000	0.000
NC	0.120	0.120	0.045	0.400	0.600	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	140.000	280.000

50 FT U/S NORTHVILLE RD. #2 CORPS C.S. #10

X1	15.000	12.000	190.000	250.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	30.000	735.000	150.000	732.500	185.000	728.000	190.000
GR	728.000	200.000	728.000	210.000	729.000	250.000	733.000	265.000	734.000	300.000
GR	740.000	810.000	750.000	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	802.500	897.500

50 FT D/S NORTHVILLE RD. #3 CORPS C.S. #11

X1	16.000	11.000	815.000	875.000	1500.000	450.000	1690.000	0.891	0.000	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000

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GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

X1	17.000	11.000	815.000	875.000	50.000	50.000	50.000	0.891	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	737.400	737.400	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1.250	2.150	3.000	0.000	38.600	2.000	267.000	0.000	730.000	730.000

U/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

X1	18.000	11.000	815.000	875.000	60.000	60.000	60.000	0.891	0.000	0.000
X2	0.000	0.000	1.000	737.300	740.400	0.000	0.000	0.000	0.891	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	740.400	740.400	0.000
BT	13.000	0.000	750.000	0.000	800.000	740.400	0.000	815.000	740.400	0.000
BT	815.000	740.400	737.300	844.000	740.400	737.300	844.000	740.400	0.000	846.000
BT	740.400	0.000	846.000	740.400	737.300	875.000	740.400	737.300	875.000	740.400
BT	0.000	890.000	740.400	0.000	1230.000	740.000	0.000	1260.000	750.000	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.050	0.400	0.600	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	775.000	925.000

50 FT U/S NORTHVILLE RD. #3 CORPS C.S. #11

X1	19.000	11.000	815.000	875.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

50 FT D/S 6 MILE RD. CORPS C.S. #13

X1	20.000	15.000	400.000	455.000	750.000	1750.000	1550.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	390.000	0.000	465.000	0.000	0.000	0.000	0.000
GR	750.000	0.000	747.500	150.000	743.000	200.000	739.000	400.000	737.000	418.000
GR	735.000	420.000	732.000	420.010	731.900	425.000	733.000	440.000	735.000	443.000
GR	737.000	445.000	740.000	455.000	742.000	490.000	757.000	545.000	756.000	570.000

D/S 6 MILE RD. CORPS C.S. #14

X1	21.000	11.000	400.000	450.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	750.000	750.000	0.000
GR	751.000	0.000	750.000	240.000	752.000	380.000	740.000	400.000	737.000	408.000
GR	734.000	410.000	733.100	425.000	736.000	440.000	740.000	450.000	754.000	500.000
GR	760.000	650.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE 6 MILE RD.

X1	21.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000
BT	9.000	0.000	751.000	0.000	240.000	750.000	0.000	380.000	752.000	0.000
BT	400.000	753.200	0.000	400.000	753.200	750.000	450.000	754.400	750.000	450.000
BT	754.400	0.000	500.000	754.000	0.000	650.000	760.000	0.000	0.000	0.000

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U/S FACE 6 MILE RD.

X1	21.900	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000

U/S 6 MILE RD.

X1	22.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000

50 FT U/S 6 MILE RD.

X1	23.000	8.000	320.000	370.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	270.000	0.000	420.000	0.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	320.000	737.000	328.000	734.000	330.000	733.100	345.000
GR	736.000	360.000	740.000	370.000	750.000	700.000	0.000	0.000	0.000	0.000

50 FT D/S NORTHVILLE RD. #4

X1	24.000	7.000	750.000	830.000	200.000	1750.000	1040.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	745.000	0.000	835.000	0.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	750.000	738.000	765.000	737.000	790.000	738.000	815.000
GR	740.000	830.000	750.000	1280.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #4 CORPS C.S. #15

X1	25.000	13.000	1070.000	1130.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	750.800	750.800	0.000
GR	751.000	0.000	747.500	810.000	747.500	910.000	750.000	1035.000	738.000	1070.000
GR	737.100	1099.000	737.100	1101.000	738.000	1122.000	741.000	1125.000	742.500	1130.000
GR	751.000	1160.000	750.000	1220.000	752.000	1420.000	0.000	0.000	0.000	0.000
SB	1.050	1.670	3.000	0.000	56.240	1.000	590.500	0.000	737.200	737.100

U/S FACE NORTHVILLE RD. #4 COPPS C.S. #16

X1	26.000	15.000	1070.000	1130.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	747.700	750.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000
BT	12.000	0.000	751.000	0.000	1035.000	751.000	0.000	1070.000	750.800	0.000
BT	1070.000	750.800	747.700	1099.000	750.800	747.700	1099.000	750.800	0.000	1101.000
BT	750.800	0.000	1101.000	750.800	747.700	1130.000	750.800	747.700	1130.000	750.800
BT	0.000	1160.000	751.000	0.000	1700.000	752.000	0.000	0.000	0.000	0.000
GR	751.000	0.000	748.500	800.000	746.500	900.000	747.000	1000.000	748.000	1035.000
GR	738.000	1070.000	737.200	1099.000	737.200	1101.000	737.500	1110.000	740.000	1120.000
GR	742.000	1130.000	745.500	1160.000	745.500	1250.000	748.000	1500.000	750.000	1700.000

D/S C.O. R.R. BRIDGE #2 CORPS C.S. #17

X1	27.900	33.000	1026.000	1074.000	53.000	53.000	53.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	755.600	755.600	0.000
GR	760.000	0.000	746.000	800.000	746.000	950.000	741.000	1026.000	741.000	1027.000
GR	740.500	1029.000	740.000	1031.000	740.000	1033.000	739.000	1035.000	738.000	1037.000
GR	738.000	1039.000	738.000	1041.000	738.000	1043.000	737.600	1045.000	737.600	1047.000
GR	737.600	1048.000	738.000	1052.000	738.000	1053.000	738.000	1055.000	738.200	1057.000
GR	738.500	1059.000	738.500	1061.000	738.800	1063.000	739.000	1065.000	739.200	1067.000

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GR	739.500	1069.000	740.000	1071.000	740.500	1073.000	741.000	1074.000	748.000	1085.000
GR	745.000	1105.000	745.000	1555.000	760.000	2150.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.025	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE C.O. R.R. BRIDGE #2

X1	28.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	755.600	755.600	0.000
BT	32.000	0.000	773.000	0.000	1026.000	773.000	0.000	1026.000	773.000	745.000
BT	1027.000	773.000	748.500	1029.000	773.000	751.000	1031.000	773.000	753.000	1033.000
BT	773.000	754.500	1035.000	773.000	755.000	1037.000	773.000	755.600	1039.000	773.000
BT	755.000	1041.000	773.000	754.500	1043.000	773.000	753.000	1045.000	773.000	751.000
BT	1047.000	773.000	748.500	1048.000	773.000	745.000	1048.000	773.000	0.000	1052.000
BT	773.000	0.000	1052.000	773.000	745.000	1053.000	773.000	748.500	1055.000	773.000
BT	751.000	1057.000	773.000	753.000	1059.000	773.000	754.500	1061.000	773.000	755.000
BT	1063.000	773.000	755.600	1065.000	773.000	755.000	1067.000	773.000	754.500	1069.000
BT	773.000	753.000	1071.000	773.000	751.000	1073.000	773.000	748.500	1074.000	773.000
BT	745.000	1074.000	773.000	0.000	2150.000	773.000	0.000	0.000	0.000	0.000

U/S FACE C.O. R.R. BRIDGE #2

X1	29.000	0.000	0.000	0.000	46.000	46.000	46.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	773.000	773.000	0.000

U/S C.O. R.R. BRIDGE #2

X1	29.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	773.000	773.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	2150.000

D/S FACE SERVICE DRIVE CORPS C.S. =18

X1	30.000	12.000	1019.000	1081.000	25.000	25.000	25.000	0.000	-2.800	0.000
X3	10.000	0.000	0.000	994.000	0.000	1106.000	0.000	753.900	753.900	0.000
GR	760.000	0.000	757.500	820.000	757.100	980.000	755.400	1019.000	743.500	1019.000
GR	743.300	1049.000	743.300	1051.000	743.500	1081.000	755.400	1081.000	756.900	1100.000
GR	757.100	1400.000	760.000	2150.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1.250	1.570	3.000	0.000	62.000	2.000	657.000	0.000	743.300	740.500
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	2150.000

U/S FACE SERVICE DRIVE

X1	31.000	0.000	0.000	0.000	25.000	25.000	25.000	0.000	2.800	0.000
X2	0.000	0.000	1.000	753.900	755.400	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	969.000	0.000	1131.000	0.000	755.400	755.400	0.000
BT	14.000	0.000	760.000	0.000	820.000	757.500	0.000	980.000	757.100	0.000
BT	1019.000	755.400	0.000	1019.000	755.400	753.900	1049.000	755.400	753.900	1049.000
BT	755.400	0.000	1051.000	755.400	0.000	1051.000	755.400	753.900	1081.000	755.400
BT	753.900	1081.000	755.400	0.000	1100.000	757.100	0.000	1400.000	757.100	0.000
BT	2150.000	760.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	1.400	0.000	0.000	0.000	0.000	0.000

D/S WATERFORD DAM

X1	31.900	8.000	0.000	122.000	25.000	25.000	25.000	0.000	0.000	0.000
GR	770.000	0.000	755.400	0.000	755.400	35.000	746.900	35.000	747.500	97.000
GR	755.400	97.000	755.400	122.000	770.000	122.000	0.000	0.000	0.000	0.000

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QT	5.000	2420.000	3380.000	3950.000	3950.000	5470.000	0.000	0.000	0.000	0.000
SB	0.000	1.500	3.000	0.000	62.000	0.000	0.100	0.000	746.900	746.900

WATERFORD DAM CORPS C.S. #19

X1	32.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	0.000	752.800	0.000	0.000	0.000	0.000	0.000
BT	8.000	0.000	770.000	0.000	0.000	755.400	0.000	35.000	755.400	0.000
BT	35.000	752.800	0.000	97.000	752.800	0.000	97.000	755.400	0.000	122.000
BT	755.400	0.000	122.000	770.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000

MIDDLE WATERFORD POND CORPS C.S. #20

X1	33.000	13.000	80.000	765.000	550.000	1600.000	1170.000	0.000	0.000	0.000
GR	748.000	0.000	764.000	80.000	758.000	90.000	754.000	93.000	752.000	95.000
GR	749.300	125.000	751.000	185.000	751.000	535.000	750.000	735.000	754.000	740.000
GR	757.500	745.000	767.000	765.000	768.000	855.000	0.000	0.000	0.000	0.000

NORTH END WATERFORD POND CORPS C.S. #21

X1	34.000	13.000	30.000	570.000	2085.000	665.000	1530.000	0.000	0.000	0.000
GR	772.000	0.000	758.300	10.000	759.000	20.000	755.500	30.000	755.500	40.000
GR	753.000	60.000	753.000	360.000	755.500	490.000	752.000	520.000	751.000	560.000
GR	757.000	570.000	759.000	660.000	769.000	670.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	81.000	206.000

50 FT D/S R.R. SPUR LINE CORPS C.S. #23

X1	35.000	9.000	117.000	170.000	250.000	650.000	490.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	93.000	0.000	213.000	0.000	0.000	0.000	0.000
GR	760.000	0.000	756.000	20.000	754.000	117.000	751.300	125.000	752.000	165.000
GR	754.000	170.000	757.500	220.000	773.000	270.000	775.000	280.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S R.R. SPUR LINE CORPS C.S. =22

X1	35.900	20.000	0.000	130.000	49.000	49.000	49.000	0.000	0.000	0.000
GR	774.300	0.000	767.000	0.000	758.000	13.500	758.000	14.500	750.900	28.000
GR	750.900	29.000	750.900	42.500	750.900	43.500	750.900	57.000	750.900	58.000
GR	753.500	71.500	753.500	72.500	754.000	86.000	754.000	87.000	757.500	100.500
GR	757.500	101.500	761.500	115.000	761.500	116.000	765.500	129.500	774.300	130.000

D/S FACE R.R. SPUR LINE CORPS C.S. #22

X1	36.000	42.000	0.000	130.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	772.000	775.000	0.000	0.000	0.000	0.000	0.000
GR	772.000	0.000	767.000	0.000	758.000	12.000	772.000	12.000	772.000	13.000
GR	758.000	13.000	751.000	25.000	772.000	25.000	772.000	26.000	751.000	26.000
GR	751.000	38.500	772.000	38.500	772.000	39.500	751.000	39.500	751.000	52.000
GR	772.000	52.000	772.000	53.000	751.000	53.000	751.000	55.000	750.900	58.000
GR	753.000	65.000	772.000	65.000	772.000	66.000	753.000	66.000	754.000	78.000
GR	772.000	78.000	772.000	79.000	754.000	79.000	757.500	91.000	772.000	91.000
GR	772.000	92.000	757.500	92.000	761.000	104.000	772.000	104.000	772.000	105.000
GR	761.000	105.000	766.000	117.000	772.000	117.000	772.000	118.000	766.000	118.000
GR	770.000	130.000	772.000	130.000	0.000	0.000	0.000	0.000	0.000	0.000

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U/S FACE R.R. SPUR LINE

X1	37.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	772.000	775.000	0.000	0.000	0.000	0.000	0.000

U/S R.R. SPUR LINE

X1	37.100	20.000	0.000	130.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	774.300	0.000	767.000	0.000	758.000	13.500	758.000	14.500	750.900	28.000
GR	750.900	29.000	750.900	42.500	750.900	43.500	750.900	57.000	750.900	58.000
GR	753.500	71.500	753.500	72.500	754.000	86.000	754.000	87.000	757.500	100.500
GR	757.500	101.500	761.500	115.000	761.500	116.000	765.500	129.500	774.300	130.000
NC	0.150	0.150	0.045	0.400	0.600	0.000	0.000	0.000	0.000	0.000

50 FT U/S R.R. SPUR LINE CORPS C.S. #23

X1	38.000	9.000	117.000	170.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	53.000	0.000	253.000	0.000	0.000	0.000	0.000
GR	765.000	0.000	756.000	20.000	755.000	117.000	752.300	125.000	753.000	165.000
GR	755.000	170.000	757.500	220.000	773.000	270.000	775.000	280.000	0.000	0.000
NC	0.080	0.080	0.045	0.400	0.600	0.000	0.000	0.000	0.000	0.000

50 FT D/S C.O. R.R. BRIDGE #3 CORPS C.S. #24

X1	39.000	14.000	430.000	480.000	1600.000	1000.000	1800.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	418.000	0.000	493.000	0.000	0.000	0.000	0.000
GR	770.000	0.000	767.500	180.000	758.000	230.000	758.500	430.000	758.000	435.000
GR	754.100	450.000	755.000	478.000	757.000	480.000	758.000	540.000	758.000	580.000
GR	757.000	690.000	762.500	730.000	762.500	780.000	770.000	1060.000	0.000	0.000

D/S C.O. R.R. BRIDGE #3 CORPS C.S. #25

X1	39.900	21.000	976.000	1024.000	49.000	49.000	49.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	772.400	772.400	0.000
GR	770.000	0.000	760.000	170.000	760.000	810.000	758.000	960.000	756.000	976.000
GR	756.500	979.000	755.000	983.000	755.000	987.000	754.500	991.000	754.000	995.000
GR	754.000	998.000	753.500	1002.000	753.500	1005.000	753.000	1009.000	752.800	1013.000
GR	754.000	1017.000	755.000	1021.000	756.000	1024.000	763.000	1060.000	765.000	1310.000
GR	770.000	1900.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.045	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE C.O. R.R. BRIDGE #3

X1	40.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	772.400	772.400	0.000
BT	20.000	0.000	788.000	0.000	976.000	788.000	0.000	976.000	788.000	765.000
BT	979.000	788.000	767.000	983.000	788.000	770.500	987.000	788.000	772.400	991.000
BT	788.000	770.500	995.000	788.000	767.000	998.000	788.000	765.000	998.000	788.000
BT	0.000	1002.000	788.000	0.000	1002.000	788.000	765.000	1005.000	788.000	767.000
BT	1009.000	788.000	770.500	1013.000	788.000	772.400	1017.000	788.000	770.500	1021.000
BT	788.000	767.000	1024.000	788.000	765.000	1024.000	788.000	0.000	1900.000	788.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE C.O. R.R. BRIDGE #3

X1	41.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000

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X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	788.000	788.000	0.000

U/S C.O. R.R. BRIDGE #5

X1	41.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	788.000	788.000	0.000

VALLEY SECTION

X1	42.000	0.000	0.000	0.000	140.000	200.000	180.000	0.000	0.750	0.000
X3	0.000	0.000	0.000	910.000	0.000	1085.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

D/S NORTHVILLE RD. #5 CORPS C.S. #26

X1	43.900	13.000	1105.000	1195.000	140.000	200.000	180.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.000	768.000	0.000
GR	770.000	0.000	764.000	840.000	762.000	1105.000	762.000	1105.100	757.500	1129.990
GR	757.500	1130.000	757.500	1133.500	757.500	1133.510	754.300	1166.490	754.300	1166.500
GR	754.300	1170.000	754.300	1170.010	764.000	1194.990	764.000	1195.000	764.000	1345.000
GR	765.000	1370.000	767.000	1515.000	770.000	2250.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

D/S FACE NORTHVILLE RD. #5

X1	44.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.000	768.000	0.000
BT	18.000	0.000	770.000	0.000	840.000	769.000	0.000	1105.000	768.600	0.000
BT	1105.100	768.600	768.000	1129.990	768.600	768.000	1130.000	768.600	0.000	1133.500
BT	768.600	0.000	1133.510	768.600	768.000	1166.490	768.600	768.000	1166.500	768.600
BT	0.000	1170.000	768.600	0.000	1170.010	768.600	768.000	1194.990	768.600	768.000
BT	1195.000	768.600	0.000	1345.000	768.600	0.000	1370.000	768.600	0.000	1515.000
BT	768.600	0.000	2250.000	768.600	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

U/S FACE NORTHVILLE RD. #5

X1	45.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.600	768.600	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

U/S NORTHVILLE RD. #5

X1	45.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.600	768.600	0.000
NC	0.150	0.060	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

50 FT U/S NORTHVILLE RD. #5 CORPS C.S. #27

X1	46.000	16.000	640.000	700.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	770.000	0.000	768.500	360.000	763.000	400.000	762.000	500.000	763.000	600.000
GR	762.000	640.000	757.500	660.000	753.900	665.000	753.900	680.000	761.500	700.000
GR	764.000	730.000	761.200	740.000	759.500	830.000	766.000	850.000	766.000	1000.000
GR	770.000	1161.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	262.500	627.500

FORM 1411 GENERATED BY HOSAM MANNED FORMS.

50 FT D/S PARK BRIDGE CORPS C.S. #28

X1	47.000	15.000	425.000	465.000	1000.000	1750.000	1400.000	0.000	0.000	0.000
GR	780.000	0.000	770.000	110.000	761.000	160.000	763.000	180.000	762.000	280.000
GR	762.500	410.000	759.000	425.000	757.500	430.000	756.600	440.000	758.500	465.000
GR	763.000	480.000	762.000	580.000	765.000	880.000	777.500	1255.000	779.000	1280.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

D/S PARK BRIDGE CORPS C.S. # 29

X1	47.900	15.000	275.000	310.000	49.000	49.000	49.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	761.900	761.900	0.000
GR	782.000	0.000	762.000	70.000	763.000	210.000	764.700	275.000	758.500	275.000
GR	757.000	280.000	758.000	310.000	764.700	310.000	763.000	360.000	763.000	460.000
GR	764.000	465.000	765.000	660.000	767.500	770.000	778.000	1020.000	779.500	1050.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

D/S FACE PARK BRIDGE

X1	48.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	761.900	761.900	0.000
BT	14.000	0.000	782.000	0.000	70.000	762.000	0.000	210.000	763.000	0.000
BT	275.000	764.000	0.000	275.000	764.000	761.900	310.000	764.700	761.900	310.000
BT	767.700	0.000	360.000	763.000	0.000	460.000	763.000	0.000	560.000	764.000
BT	0.000	660.000	765.000	0.000	770.000	767.500	0.000	1020.000	778.000	0.000
BT	1050.000	779.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

U/S FACE PARK BRIDGE

X1	49.000	0.000	0.000	0.000	22.000	22.000	22.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	762.000	762.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

U/S PARK BRIDGE

X1	49.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	762.000	762.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	225.000	665.000

50 FT U/S PARK BRIDGE CORPS C.S. #28

X1	50.000	15.000	425.000	465.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	780.000	0.000	770.000	110.000	761.000	160.000	763.000	180.000	762.000	280.000
GR	763.000	410.000	759.500	425.000	758.000	430.000	757.100	440.000	759.000	465.000
GR	763.500	480.000	762.000	580.000	765.000	880.000	777.500	1255.000	779.000	1280.000

D/S 7 MILE RD.

X1	51.000	15.000	575.000	600.000	978.000	978.000	978.000	0.000	0.000	0.000
GR	780.000	0.000	767.000	0.000	769.000	310.000	766.500	350.000	765.000	500.000
GR	763.000	550.000	761.000	575.000	760.100	585.000	761.000	595.000	764.000	600.000
GR	764.000	700.000	767.000	1000.000	769.000	1100.000	772.500	1160.000	780.000	1260.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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*PROF 1

CCHV=   0.100 CEHV=   0.300
*SECNO 1.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST

         NORTHVILLE TOWNSHIP CORPERATE BOUNDARY  CORPS C.S. #2

      1.00     10.55    727.65      0.00    727.65    727.65      0.00      0.00      0.00    725.00
     1610.        0.      1604.        5.       7.      3413.       77.        0.        0.    724.50
      0.00      0.04      0.47      0.07     0.120     0.035     0.120     0.000    717.10     37.82
  0.000008        0.        0.        0.         0         0         0      0.00    480.87    518.69

CCHV=   0.300 CEHV=   0.500
*SECNO 2.000

 5470 ENCROACHMENT STATIONS=      257.5      528.5  TYPE=       1  TARGET=      271.000

         INLET TO PHOENIX LAKE                     CORPS C.S. #4

      2.00      7.32    727.52      0.00      0.00    727.86      0.34      0.04      0.17    724.90
     1610.       229.      1278.       102.       259.       243.       154.        66.        12.    724.60
      0.09      0.88      5.26      0.67     0.120     0.035     0.120     0.036    720.20    257.50
 0.001716       800.      1400.      1700.         2         0         0      0.00    271.00    528.50

*SECNO 3.000

 5470 ENCROACHMENT STATIONS=      358.0      428.0  TYPE=       1  TARGET=       70.000

         50 FT D/S C.O. R.R. BRIDGE #1             CORPS C.S. #4

      3.00      7.12    728.22      0.00      0.00    728.87      0.66      0.85      0.16    725.80
     1610.        30.      1548.        32.       29.       234.       29.        70.        13.    725.50
      0.10      1.05      6.62      1.08     0.120     0.035     0.120     0.036    721.10    358.00
 0.002865       300.       395.       500.         2         0         0      0.00     70.00    428.00

*SECNO 3.900

 5495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      737.40 ELREA=      737.40

         D/S C.O. R.R. BRIDGE

      3.90      7.29    728.39      0.00      0.00    729.01      0.63      0.13      0.01    725.60
     1610.        0.      1610.        0.        0.       253.        0.        70.        13.    726.00
      0.11      0.00      6.36      0.00     0.120     0.035     0.120     0.036    721.10    370.00
 0.002535        49.        49.        49.         2         0         0      0.00     46.00    416.00

CCHV=   0.500 CEHV=   0.500
*SECNO 4.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST
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3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 760.00 MAX ELLC= 737.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 737.40 ELREA= 737.40

D/S FACE C.O. R.R. BRIDGE #1

4.00	7.19	728.29	0.00	0.00	729.12	0.83	0.00	0.10	725.60
1610.	0.	1610.	0.	0.	220.	0.	70.	13.	726.00
0.11	0.00	7.32	0.00	0.120	0.030	0.120	0.036	721.10	370.00
0.002972	1.	1.	1.	2	0	0	-46.05	46.00	416.00

*SECNO 5.000

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 760.00 MAX ELLC= 737.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 760.00 ELREA= 760.00

U/S FACE C.O. R.R. BRIDGE #1 CORPS C.S. #5

5.00	6.24	728.44	0.00	0.00	729.68	1.24	0.36	0.20	727.00
1610.	0.	1610.	0.	0.	181.	0.	71.	13.	726.00
0.11	0.00	8.92	0.00	0.120	0.030	0.120	0.035	722.20	329.00
0.005511	90.	90.	90.	2	0	0	-24.96	46.00	375.00

CCHV= 0.300 CEHV= 0.500

*SECNO 5.100

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 760.00 ELREA= 760.00

U/S C.O. R.R. BRIDGE

5.10	6.91	729.11	0.00	0.00	729.83	0.72	0.00	0.15	727.00
1610.	0.	1610.	0.	0.	236.	0.	71.	13.	726.00
0.11	0.00	6.82	0.00	0.120	0.030	0.120	0.035	722.20	329.00
0.002287	1.	1.	1.	3	0	0	0.00	46.00	375.00

*SECNO 6.000

3470 ENCROACHMENT STATIONS= 288.5 415.5 TYPE= 1 TARGET= 127.000

VALLEY SECTION

6.00	7.47	729.82	0.00	0.00	730.17	0.35	0.23	0.11	727.15
1610.	79.	1353.	177.	83.	262.	135.	72.	14.	726.15
0.12	0.95	5.16	1.31	0.080	0.030	0.080	0.035	722.35	288.50
0.001100	150.	150.	150.	2	0	0	0.00	127.00	415.50

*SECNO 6.900

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3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 732.40 ELREA= 732.40

D/S NORTHVILLE RD. #1 CORPS C.S. # 6

6.90	7.54	730.04	0.00	0.00	730.30	0.27	0.10	0.02	724.50
1610.	0.	1610.	0.	0.	387.	0.	73.	14.	725.00
0.13	0.00	4.16	0.00	0.080	0.030	0.080	0.035	722.50	270.00
0.000599	250.	133.	50.	2	0	0	0.00	60.00	330.00

CCHV= 0.300 CEHV= 0.500

*SECNO 7.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOR	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 734.20 MAX ELLC= 732.40

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 732.40 ELREA= 732.40

D/S FACE NORTHVILLE RD. #1

7.00	7.50	730.00	0.00	0.00	730.34	0.33	0.00	0.03	724.50
1610.	0.	1610.	0.	0.	349.	0.	73.	14.	725.00
0.13	0.00	4.62	0.00	0.120	0.030	0.080	0.035	722.50	270.00
0.000849	1.	1.	1.	2	0	0	-36.78	60.00	330.00

*SECNO 8.000

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 734.20 MAX ELLC= 732.40

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 734.20 ELREA= 734.20

U/S FACE NORTHVILLE RD. #1

8.00	7.57	730.07	0.00	0.00	730.39	0.33	0.05	0.00	724.50
1610.	0.	1610.	0.	0.	352.	0.	74.	14.	725.00
0.13	0.00	4.58	0.00	0.120	0.030	0.080	0.034	722.50	270.00
0.000826	65.	65.	65.	1	0	0	-37.06	60.00	330.00

*SECNO 8.100

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 734.20 ELREA= 734.20

U/S NORTHVILLE RD. #1

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8.10	7.65	730.15	0.00	0.00	730.41	0.26	0.00	0.02	724.50
1610.	0.	1610.	0.	0.	394.	0.	74.	14.	725.00
0.13	0.00	4.08	0.00	0.120	0.030	0.080	0.034	722.50	270.00
0.000564	1.	1.	1.	2	0	0	0.00	60.00	330.00

CCHV= 0.300 CEHV= 0.500
*SECNO 9.000

3470 ENCROACHMENT STATIONS= 220.0 380.0 TYPE= 1 TARGET= 160.000

50 FT U/S NORTHVILLE RD. #1

9.00	7.88	730.38	0.00	0.00	730.48	0.11	0.03	0.05	724.50
1610.	109.	1213.	288.	162.	408.	266.	74.	14.	725.00
0.14	0.68	2.98	1.08	0.120	0.040	0.080	0.035	722.50	220.00
0.000501	49.	49.	49.	2	0	0	0.00	160.00	380.00

CCHV= 0.500 CEHV= 0.500
*SECNO 10.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 409.0 541.0 TYPE= 1 TARGET= 132.000

D/S ABANDONED MILL CORPS C.S. #7

10.00	7.80	730.90	0.00	0.00	731.23	0.32	0.64	0.11	725.00
1610.	27.	1553.	51.	27.	328.	44.	90.	17.	726.00
0.20	0.99	4.67	1.15	0.080	0.030	0.080	0.033	723.10	409.00
0.000729	500.	1035.	1500.	1	0	0	0.00	87.19	513.64

1490 NH CARD USED
*SECNO 10.900

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL>CWSEL
3695 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 428.0 536.0 TYPE= 1 TARGET= 108.000

1FT D/S ABANDONED MILL CORPS C.S. #8

10.90	5.93	731.03	731.03	0.00	732.07	1.04	0.08	0.36	727.50
1610.	322.	883.	405.	92.	84.	97.	90.	17.	728.00
0.20	3.49	10.47	4.19	0.050	0.030	0.050	0.033	725.10	428.97
0.005600	50.	50.	50.	20	14	0	0.00	106.70	535.68

*SECNO 11.000

3265 DIVIDED FLOW

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 428.0 536.0 TYPE= 1 TARGET= 108.000

D/S FACE ABANDONED MILL

11.00	3.69	732.09	732.09	0.00	733.29	1.21	0.01	0.08	740.00
1610.	453.	669.	488.	79.	59.	69.	90.	17.	734.00
0.20	5.71	11.35	7.02	0.050	0.030	0.050	0.033	728.40	428.00
0.015285	1.	1.	1.	20	14	0	0.00	78.00	536.00

*SECNO 11.500

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 428.0 536.0 TYPE= 1 TARGET= 108.000

U/S FACE ABANDONED MILL

11.50	4.36	732.76	0.00	0.00	733.49	0.73	0.05	0.14	740.00
1610.	515.	615.	480.	105.	70.	85.	90.	17.	734.00
0.20	4.89	8.82	5.66	0.050	0.030	0.050	0.033	728.40	428.00
0.007965	5.	5.	5.	3	0	0	0.00	78.00	536.00

*SECNO 11.600

5301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 428.0 536.0 TYPE= 1 TARGET= 108.000

1 FT U/S ABANDONED MILL

11.60	8.32	733.42	0.00	0.00	733.64	0.22	0.00	0.15	727.50
1610.	496.	644.	470.	221.	123.	187.	90.	17.	728.00
0.20	2.25	5.25	2.51	0.050	0.030	0.050	0.033	725.10	428.00
0.000856	1.	1.	1.	3	0	0	0.00	108.00	536.00

*SECNO 11.900

3470 ENCROACHMENT STATIONS= 378.0 586.0 TYPE= 1 TARGET= 208.000

U/S ABANDONED MILL

11.90	8.43	733.53	0.00	0.00	733.70	0.16	0.04	0.02	727.50
1610.	538.	597.	475.	320.	124.	252.	91.	18.	728.00
0.21	1.68	4.80	1.89	0.054	0.030	0.052	0.033	725.10	378.00
0.000700	49.	49.	49.	2	0	0	0.00	208.00	586.00

CCHV= 0.500 CEHV= 0.500

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*SECNO 12.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 173.0 263.0 TYPE= 1 TARGET= 90.000

50 FT D/S NORTHVILLE RD. #2 CORPS C.S. #9

12.00	6.86	733.76	0.00	0.00	734.03	0.27	0.28	0.05	728.20
1610.	24.	1571.	15.	35.	373.	23.	95.	19.	728.20
0.23	0.68	4.21	0.64	0.120	0.035	0.120	0.033	726.90	175.34
0.000862	200.	325.	675.	2	0	0	0.00	81.00	256.34

*SECNO 13.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 735.00 ELREA= 735.00

D/S FACE NORTHVILLE RD. #2

13.00	6.89	733.79	0.00	0.00	734.08	0.29	0.04	0.01	728.20
1610.	0.	1610.	0.	0.	375.	0.	96.	19.	728.20
0.24	0.00	4.29	0.00	0.120	0.035	0.120	0.033	726.90	188.00
0.000901	50.	50.	50.	0	0	0	0.00	60.00	248.00

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.05	1.61	3.00	0.00	54.00	1.00	340.00	0.00	726.90	726.90

*SECNO 14.000

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QFR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
734.35	734.09	0.01	0.	1610.	340.	334.	733.20	736.10

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 736.10 ELREA= 736.10

U/S FACE NORTHVILLE RD. #2

14.00	7.19	734.09	0.00	0.00	734.35	0.26	0.27	0.00	728.20
1610.	0.	1610.	0.	0.	393.	0.	96.	19.	728.20
0.24	0.00	4.09	0.00	0.120	0.035	0.120	0.033	726.90	188.00
0.000773	60.	60.	60.	2	0	0	0.00	60.00	248.00

CCHV= 0.400 CEHV= 0.600

*SECNO 15.000

3470 ENCROACHMENT STATIONS= 140.0 280.0 TYPE= 1 TARGET= 140.000

50 FT U/S NORTHVILLE RD. #2 CORPS C.S. #10

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15.00	6.14	734.14	0.00	0.00	734.42	0.28	0.05	0.01	728.00
1610.	28.	1525.	57.	38.	348.	61.	97.	19.	729.00
0.24	0.74	4.38	0.93	0.120	0.045	0.120	0.033	728.00	162.11
0.001689	50.	50.	50.	0	0	0	0.00	117.89	280.00

*SECNO 16.000

3470 ENCROACHMENT STATIONS= 715.0 799.7 TYPE= 1 TARGET= 95.000

50 FT D/S NORTHVILLE RD. #3 CORPS C.S. #11

16.00	7.15	737.15	0.00	0.00	737.57	0.42	3.07	0.08	735.00
1610.	4.	1599.	8.	6.	305.	11.	111.	22.	734.00
0.33	0.56	5.24	0.71	0.120	0.040	0.120	0.035	730.00	720.39
0.002028	1300.	1690.	450.	1	0	0	0.00	66.27	786.66

*SECNO 17.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 737.40 ELREA= 737.40

D/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

17.00	7.24	737.24	0.00	0.00	737.66	0.42	0.09	0.00	735.00
1610.	0.	1610.	0.	0.	310.	0.	111.	22.	734.00
0.34	0.00	5.20	0.00	0.120	0.035	0.120	0.035	730.00	726.17
0.001540	50.	50.	50.	0	0	0	0.00	53.46	779.63

SPECIAL BRIDGE

SB XK	XKOR	COPR	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.25	2.15	3.00	0.00	38.60	2.00	267.00	0.00	730.00	730.00

*SECNO 18.000

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
738.46	737.72	0.07	0.	1610.	267.	267.	737.30	740.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 740.40 ELREA= 740.40

U/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

18.00	8.14	738.14	0.00	0.00	738.46	0.31	0.79	0.00	735.00
1610.	0.	1610.	0.	0.	358.	0.	111.	22.	734.00
0.34	0.00	4.50	0.00	0.120	0.035	0.120	0.035	730.00	726.17
0.000964	60.	60.	60.	2	0	0	0.00	53.46	779.63

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CCHV= 0.400 CEHV= 0.600
*SECNO 19.000

3470 ENCROACHMENT STATIONS= 775.0 925.0 TYPE= 1 TARGET= 150.000

50 FT U/S NORTHVILLE RD. #3 CORPS C.S. #11

19.00	8.32	738.32	0.00	0.00	738.55	0.23	0.06	0.04	735.00
1610.	10.	1583.	17.	17.	412.	23.	112.	22.	734.00
0.34	0.61	3.84	0.72	0.120	0.050	0.120	0.035	730.00	805.03
0.001318	50.	50.	50.	2	0	0	0.00	80.78	885.81

*SECNO 20.000

3470 ENCROACHMENT STATIONS= 390.0 465.0 TYPE= 1 TARGET= 75.000

50 FT D/S 6 MILE RD. CORPS C.S. #13

20.00	9.42	741.32	0.00	0.00	741.71	0.39	3.06	0.10	739.00
1610.	24.	1579.	7.	22.	311.	10.	126.	25.	740.00
0.43	1.07	5.08	0.69	0.120	0.050	0.120	0.038	731.90	390.00
0.003516	750.	1550.	1750.	5	0	0	0.00	75.00	465.00

*SECNO 21.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 750.00 ELREA= 750.00

D/S 6 MILE RD. CORPS C.S. #14

21.00	8.36	741.46	0.00	0.00	741.93	0.47	0.17	0.05	740.00
1610.	0.	1610.	0.	0.	292.	0.	126.	25.	740.00
0.43	0.00	5.50	0.00	0.120	0.050	0.120	0.038	733.10	400.00
0.003592	50.	50.	50.	2	0	0	0.00	50.00	450.00

*SECNO 21.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE, NRD= 9 MIN ELTRD= 750.00 MAX ELLC= 750.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 751.00 ELREA= 751.00

D/S FACE 6 MILE RD.

21.10	8.36	741.46	0.00	0.00	741.93	0.47	0.00	0.00	740.00
1610.	0.	1610.	0.	0.	293.	0.	126.	25.	740.00
0.43	0.00	5.50	0.00	0.120	0.050	0.120	0.038	733.10	400.00
0.003586	1.	1.	1.	0	0	0	0.00	50.00	450.00

*SECNO 21.900

3370 NORMAL BRIDGE, NRD= 9 MIN ELTRD= 750.00 MAX ELLC= 750.00

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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, FLLEA= 751.00 ELREA= 751.00

U/S FACE 6 MILE RD.

21.90	8.58	741.68	0.00	0.00	742.12	0.44	0.17	0.01	740.00
1610.	0.	1610.	0.	0.	303.	0.	127.	25.	740.00
0.43	0.00	5.31	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.003186	50.	50.	50.	2	0	0	0.00	50.00	450.00

*SECNO 22.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 751.00 ELREA= 751.00

U/S 6 MILE RD.

22.00	8.58	741.68	0.00	0.00	742.12	0.44	0.00	0.00	740.00
1610.	0.	1610.	0.	0.	304.	0.	127.	25.	740.00
0.43	0.00	5.30	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.003181	1.	1.	1.	0	0	0	0.00	50.00	450.00

*SECNO 23.000

3470 ENCROACHMENT STATIONS= 270.0 420.0 TYPE= 1 TARGET= 150.000

50 FT U/S 6 MILE RD.

23.00	8.85	741.95	0.00	0.00	742.29	0.34	0.14	0.04	740.00
1610.	40.	1530.	41.	59.	317.	60.	127.	25.	740.00
0.44	0.68	4.82	0.68	0.120	0.050	0.120	0.039	733.10	270.00
0.002459	50.	50.	50.	2	0	0	0.00	150.00	420.00

*SECNO 24.000

3470 ENCROACHMENT STATIONS= 745.0 835.0 TYPE= 1 TARGET= 90.000

50 FT D/S NORTHVILLE RD. #4

24.00	6.93	743.93	0.00	0.00	744.10	0.17	1.74	0.07	740.00
1610.	14.	1582.	14.	19.	469.	19.	138.	28.	740.00
0.52	0.73	3.37	0.73	0.120	0.050	0.120	0.040	737.00	745.00
0.001221	200.	1040.	1750.	3	0	0	0.00	90.00	835.00

*SECNO 25.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOP	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 750.80 ELREA= 750.80

D/S FACE NORTHVILLE RD. #4 CORPS C.S. #15

25.00	6.85	743.95	0.00	0.00	744.27	0.31	0.08	0.08	738.00

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1610.	0.	1610.	0.	0.	358.	0.	139.	28.	742.50
0.53	0.00	4.49	0.00	0.120	0.050	0.120	0.040	737.10	1070.00
0.002219	50.	50.	50.	2	0	0	0.00	60.00	1130.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.67	3.00	0.00	56.24	1.00	590.50	0.00	737.20	737.10

*SECNO 26.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 743.99 BRIDGE VELOCITY= 4.26 CALCULATED CHANNEL AREA= 375.

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
0.00	744.31	0.01	0.	1610.	591.	580.	747.70	750.80

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 751.00 ELREA= 751.00

U/S FACE NORTHVILLE RD. #4 CORPS C.S. #16

26.00	6.76	743.96	0.00	0.00	744.31	0.35	0.05	0.00	738.00
1610.	0.	1610.	0.	0.	339.	0.	139.	28.	742.00
0.53	0.00	4.74	0.00	0.120	0.050	0.120	0.040	737.20	1070.00
0.002601	60.	60.	60.	0	0	0	0.00	60.00	1130.00

*SECNO 27.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 755.60 ELREA= 755.60

D/S C.O. R.R. BRIDGE #2 CORPS C.S. #17

27.90	6.44	744.04	0.00	0.00	744.68	0.64	0.20	0.17	741.00
1610.	0.	1610.	0.	0.	251.	0.	139.	28.	741.00
0.53	0.00	6.42	0.00	0.120	0.050	0.120	0.040	737.60	1026.00
0.005607	53.	53.	53.	2	0	0	0.00	48.00	1074.00

CCHV= 0.300 CEHV= 0.500
*SECNO 28.000

3370 NORMAL BRIDGE, NRD= 32 MIN ELTRD= 773.00 MAX ELLC= 755.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 755.60 ELREA= 755.60

D/S FACE C.O. R.R. BRIDGE #2

28.00	6.40	744.00	0.00	0.00	744.73	0.74	0.00	0.05	741.00
1610.	0.	1610.	0.	0.	234.	0.	139.	28.	741.00
0.53	0.00	6.89	0.00	0.120	0.025	0.120	0.040	737.60	1026.00
0.001775	1.	1.	1.	2	0	0	-14.99	48.00	1074.00

*SECNO 29.000

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3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 773.00 MAX ELLC= 755.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 773.00 ELREA= 773.00

U/S FACE C.O. R.R. BRIDGE #2

29.00	6.52	744.12	0.00	0.00	744.82	0.70	0.08	0.01	741.00
1610.	0.	1610.	0.	0.	239.	0.	140.	28.	741.00
0.53	0.00	6.73	0.00	0.120	0.025	0.120	0.040	737.60	1026.00
0.001644	46.	46.	46.	2	0	0	-15.30	48.00	1074.00

*SECNO 29.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	DLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 773.00 ELREA= 773.00

U/S C.O. R.R. BRIDGE #2

29.10	6.67	744.27	0.00	0.00	744.86	0.59	0.00	0.03	741.00
1610.	0.	1610.	0.	0.	262.	0.	140.	28.	741.00
0.53	0.00	6.15	0.00	0.120	0.025	0.120	0.040	737.60	1026.00
0.001220	1.	1.	1.	2	0	0	0.00	48.00	1074.00

*SECNO 30.000

3470 ENCROACHMENT STATIONS= 994.0 1106.0 TYPE= 1 TARGET= 112.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 753.90 ELREA= 753.90

D/S FACE SERVICE DRIVE CORPS C.S. =18

30.00	3.71	744.21	0.00	0.00	745.01	0.80	0.05	0.11	752.60
1610.	0.	1610.	0.	0.	224.	0.	140.	28.	752.60
0.54	0.00	7.18	0.00	0.120	0.025	0.120	0.040	740.50	1019.00
0.003036	25.	25.	25.	2	0	0	0.00	62.00	1081.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	RWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.57	3.00	0.00	62.00	2.00	657.00	0.00	743.30	740.50

*SECNO 31.000

3255 SLOPE TOO STEEP,EXCEEDS 0.10

3301 HV CHANGED MORE THAN HVINS

CLASS A LOW FLOW

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342U BRIDGE W.S.= 745.51 BRIDGE VELOCITY= 7.42 CALCULATED CHANNEL AREA= 133.

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
744.36	754.95	0.18	0.	1610.	657.	636.	753.90	755.40

347U ENCROACHMENT STATIONS= 969.0 1131.0 TYPE= 1 TARGET= 162.000

5495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 755.40 ELREA= 755.40

U/S FACE SERVICE DRIVE

31.00	1.09	744.39	0.00	0.00	754.95	10.55	9.94	0.00	755.40
1610.	0.	1610.	0.	0.	62.	0.	140.	28.	755.40
0.54	0.00	26.07	0.00	0.120	0.025	0.120	0.040	743.30	1019.00
0.200878	25.	25.	25.	0	0	0	0.00	62.00	1081.00

*SECNO 31.900

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3720 CRITICAL DEPTH ASSUMED

D/S WATERFORD DAM

31.90	3.04	749.94	749.94	0.00	751.33	1.39	0.52	2.75	770.00
1610.	0.	1610.	0.	0.	170.	0.	140.	28.	770.00
0.54	0.00	9.47	0.00	0.120	0.025	0.120	0.040	746.90	35.00
0.007393	25.	25.	25.	20	20	0	0.00	62.00	97.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.50	3.00	0.00	62.00	0.00	0.10	0.00	746.90	746.90

*SECNO 32.000

3301 HV CHANGED MORE THAN HVINS

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
038247.00	751.33	0.00	1613.	2.	0.	-46308.	0.00	752.80

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WATERFORD DAM CORPS C.S. #19

32.00	9.61	756.51	0.00	0.00	756.60	0.10	5.27	0.00	770.00	
1610.	0.	1610.	0.	0.	643.	0.	140.	28.	770.00	
0.54	0.00	2.50	0.00	0.120	0.025	0.120	0.040	746.90	0.00	
0.000233	1.	1.	1.	2	0	8	0.00	122.00	122.00	

CCHV= 0.100 CEHV= 0.300
*SECNO 33.000,

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

MIDDLE WATERFORD POND CORPS C.S. #20

33.00	7.34	756.64	0.00	0.00	756.64	0.00	0.03	0.01	764.00	
1610.	0.	1610.	0.	0.	3810.	0.	200.	39.	767.00	
1.31	0.00	0.42	0.00	0.120	0.035	0.120	0.039	749.30	91.02	
0.000010	550.	1170.	1600.	3	0	0	0.00	652.75	743.77	

*SECNO 34.000

NORTH END WATERFORD POND CORPS C.S. #21

34.00	5.67	756.67	0.00	0.00	756.68	0.01	0.03	0.00	755.50	
1610.	0.	1610.	0.	2.	1796.	0.	298.	60.	757.00	
1.78	0.08	0.90	0.00	0.120	0.035	0.120	0.039	751.00	26.66	
0.000090	2085.	1530.	665.	2	0	0	0.00	542.78	569.45	

CCHV= 0.300 CEHV= 0.500
*SECNO 35.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 93.0 213.0 TYPE= 1 TARGET= 120.000

50 FT D/S R.R. SPUR LINE CORPS C.S. #23

35.00	5.24	756.54	0.00	0.00	757.06	0.52	0.13	0.25	754.00	
1610.	87.	1471.	52.	55.	244.	46.	310.	63.	754.00	
1.80	1.58	6.02	1.12	0.080	0.035	0.080	0.039	751.30	93.00	
0.002670	250.	490.	650.	2	0	0	0.00	113.31	206.31	

CCHV= 0.300 CEHV= 0.500
*SECNO 35.900

D/S R.R. SPUR LINE CORPS C.S. =22

35.90	5.97	756.87	0.00	0.00	757.22	0.35	0.11	0.05	774.30	
1610.	0.	1610.	0.	0.	341.	0.	311.	63.	774.30	
1.81	0.00	4.73	0.00	0.080	0.035	0.080	0.039	750.90	16.64	
0.001904	49.	49.	49.	2	0	0	0.00	81.44	98.08	

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*SECNO 36.000

5265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  775.00 MAX ELLC=  772.00

          D/S FACE R.R. SPUR LINE                    CORPS C.S. #22

      36.00      5.91    756.81      0.00      0.00    757.29      0.48      0.00      0.06    772.00
      1610.         0.    1610.         0.         0.    291.         0.    311.        63.    772.00
       1.81      0.00      5.54      0.00     0.080     0.035     0.080     0.039    750.90     15.04
  0.005180         1.         1.         1.         2         0         0      0.00     68.59     88.63

*SECNO 37.000

5265 DIVIDED FLOW

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID      ENDST


3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  775.00 MAX ELLC=  772.00

          U/S FACE R.R. SPUR LINE

      37.00      6.17    757.07      0.00      0.00    757.49      0.42      0.19      0.02    772.00
      1610.         0.    1610.         0.         0.    309.         0.    311.        64.    772.00
       1.81      0.00      5.21      0.00     0.080     0.035     0.080     0.039    750.90     14.59
  0.004426        40.        40.        40.         2         0         0      0.00     69.94     89.53

*SECNO 37.100

          U/S R.R. SPUR LINE

      37.10      6.34    757.24      0.00      0.00    757.53      0.29      0.00      0.04    774.30
      1610.         0.    1610.         0.         0.    371.         0.    311.        64.    774.30
       1.81      0.00      4.34      0.00     0.080     0.035     0.080     0.039    750.90     15.94
  0.001483         1.         1.         1.         2         0         0      0.00     83.56     99.51


CCHV=   0.400 CEHV=   0.600
*SECNO 38.000

3470 ENCROACHMENT STATIONS=      53.0      253.0  TYPE=      1  TARGET=      200.000

          50 FT U/S R.R. SPUR LINE                   CORPS C.S. #23

      38.00      4.97    757.27      0.00      0.00    757.81      0.54      0.13      0.15    755.00
      1610.       135.     1435.        40.       124.    230.        51.    311.        64.    755.00
       1.81      1.09      6.24      0.77     0.150     0.045     0.150     0.039    752.30     53.00
  0.005147        50.        50.        50.         2         0         0      0.00    162.38    215.38


CCHV=   0.400 CEHV=   0.600
*SECNO 39.000
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3470 ENCROACHMENT STATIONS= 418.0 493.0 TYPE= 1 TARGET= 75.000

50 FT D/S C.O. R.R. BRIDGE #3 CORPS C.S. #24

39.00	7.92	762.02	0.00	0.00	762.30	0.27	4.38	0.11	758.50
1610.	59.	1444.	107.	42.	330.	64.	327.	68.	757.00
1.93	1.39	4.38	1.67	0.080	0.045	0.080	0.040	754.10	418.00
0.001472	1600.	1800.	1000.	2	0	0	0.00	75.00	493.00

*SECNO 39.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 772.40 ELREA= 772.40

D/S C.O. R.R. BRIDGE #3 CORPS C.S. #25

39.90	9.28	762.08	0.00	0.00	762.37	0.29	0.07	0.01	756.00
1610.	0.	1610.	0.	0.	372.	0.	328.	68.	756.00
1.93	0.00	4.33	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.001252	49.	49.	49.	2	0	0	0.00	48.00	1024.00

CCHV= 0.300 CEHV= 0.500

*SECNO 40.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 788.00 MAX ELLC= 772.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 772.40 ELREA= 772.40

D/S FACE C.O. R.R. BRIDGE #3

40.00	9.26	762.06	0.00	0.00	762.40	0.35	0.00	0.03	756.00
1610.	0.	1610.	0.	0.	341.	0.	328.	68.	756.00
1.93	0.00	4.72	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.001676	1.	1.	1.	2	0	0	-29.95	48.00	1024.00

*SECNO 41.000

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 788.00 MAX ELLC= 772.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 788.00 ELREA= 788.00

U/S FACE C.O. R.R. BRIDGE #3

41.00	9.33	762.13	0.00	0.00	762.47	0.34	0.07	0.00	756.00
1610.	0.	1610.	0.	0.	344.	0.	328.	68.	756.00
1.94	0.00	4.68	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.001631	40.	40.	40.	1	0	0	-30.18	48.00	1024.00

*SECNO 41.100

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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 788.00 ELREA= 788.00

U/S C.O. R.R. BRIDGE #3

41.10	9.41	762.21	0.00	0.00	762.49	0.28	0.00	0.02	756.00
1610.	0.	1610.	0.	0.	378.	0.	328.	68.	756.00
1.94	0.00	4.26	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.001190	1.	1.	1.	2	0	0	0.00	48.00	1024.00

*SECNO 42.000

3470 ENCROACHMENT STATIONS= 910.0 1085.0 TYPE= 1 TARGET= 175.000

VALLEY SECTION

42.00	9.01	762.56	0.00	0.00	762.70	0.14	0.16	0.04	756.75
1610.	304.	1218.	88.	250.	359.	87.	330.	68.	756.75
1.95	1.21	3.40	1.02	0.030	0.045	0.080	0.040	753.55	910.00
0.000742	140.	180.	200.	2	0	0	0.00	143.85	1053.85

*SECNO 43.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.00 ELREA= 768.00

D/S NORTHVILLE RD. #5 CORPS C.S. #26

43.90	8.40	762.70	0.00	0.00	762.91	0.21	0.18	0.04	762.00
1610.	0.	1610.	0.	0.	437.	0.	333.	69.	764.00
1.97	0.00	3.69	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.001512	140.	180.	200.	2	0	0	0.00	86.65	1191.65

*SECNO 44.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 NORMAL BRIDGE,NRD= 18 MIN ELTRD= 768.60 MAX ELLC= 768.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.00 ELREA= 768.00

D/S FACE NORTHVILLE RD. #5

44.00	8.37	762.67	0.00	0.00	762.94	0.27	0.00	0.03	762.00
1610.	0.	1610.	0.	0.	387.	0.	333.	69.	764.00
1.97	0.00	4.16	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.002263	1.	1.	1.	2	0	0	-47.56	86.58	1191.58

*SECNO 45.000

3470 NORMAL BRIDGE,NRD= 18 MIN ELTRD= 768.60 MAX ELLC= 768.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.60 ELREA= 768.60

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U/S FACE NORTHVILLE RD. #5

45.00	8.52	762.82	0.00	0.00	763.08	0.25	0.13	0.00	762.00
1610.	0.	1610.	0.	0.	399.	0.	333.	69.	764.00
1.97	0.00	4.04	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.002062	60.	60.	60.	2	0	0	-48.61	86.96	1191.96

*SECNO 45.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 768.60 ELREA= 768.60

U/S NORTHVILLE RD. #5

45.10	8.60	762.90	0.00	0.00	763.10	0.20	0.00	0.02	762.00
1610.	0.	1610.	0.	0.	454.	0.	333.	69.	764.00
1.97	0.00	3.55	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.001343	1.	1.	1.	2	0	0	0.00	87.16	1192.16

CCHV= 0.300 CEHV= 0.500
*SECNO 46.000

3265 DIVIDED FLOW

50 FT U/S NORTHVILLE RD. #5 CORPS C.S. #27

46.00	9.10	763.00	0.00	0.00	763.16	0.16	0.05	0.01	762.00
1610.	20.	1233.	357.	118.	344.	286.	334.	69.	761.50
1.98	0.17	3.59	1.25	0.150	0.035	0.060	0.040	753.90	400.81
0.000746	50.	50.	50.	1	0	0	0.00	423.35	840.74

CCHV= 0.300 CEHV= 0.500
*SECNO 47.000

3470 ENCROACHMENT STATIONS= 262.5 627.5 TYPE= 1 TARGET= 365.000

50 FT D/S PARK BRIDGE CORPS C.S. #28

47.00	7.48	764.08	0.00	0.00	764.27	0.19	1.10	0.02	759.00
1610.	272.	1100.	238.	323.	263.	296.	360.	81.	758.50
2.10	0.84	4.18	0.80	0.080	0.035	0.080	0.039	756.60	262.50
0.000798	1000.	1400.	1750.	3	0	0	0.00	365.00	627.50

*SECNO 47.900

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 122.5 462.5 TYPE= 1 TARGET= 340.000

D/S PARK BRIDGE CORPS C.S. # 29

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47.90	7.00	764.00	0.00	0.00	764.49	0.49	0.06	0.15	764.70
1610.	137.	1371.	102.	134.	226.	117.	361.	82.	764.70
2.10	1.02	6.06	0.88	0.080	0.035	0.080	0.039	757.00	122.50
0.002486	49.	49.	49.	2	0	0	0.00	292.63	462.50

*SECNO 48.000.

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 762.00 MAX ELLC= 761.90

3470 ENCROACHMENT STATIONS= 122.5 462.5 TYPE= 1 TARGET= 340.000

D/S FACE PARK BRIDGE

48.00	6.96	763.96	0.00	0.00	764.54	0.58	0.00	0.05	764.70
1610.	291.	1105.	214.	129.	153.	111.	361.	82.	764.70
2.10	2.26	7.23	1.93	0.080	0.035	0.080	0.039	757.00	122.50
0.012585	1.	1.	1.	2	0	0	-72.07	289.87	462.50

*SECNO 49.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 762.00 MAX ELLC= 761.90

3470 ENCROACHMENT STATIONS= 122.5 462.5 TYPE= 1 TARGET= 340.000

U/S FACE PARK BRIDGE

49.00	7.61	764.61	0.00	0.00	764.83	0.22	0.18	0.11	764.70
1610.	429.	811.	370.	218.	163.	202.	361.	82.	764.70
2.11	1.97	4.97	1.83	0.080	0.035	0.080	0.039	757.00	122.50
0.006009	22.	22.	22.	5	0	0	-84.38	333.81	462.50

*SECNO 49.100

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 122.5 462.5 TYPE= 1 TARGET= 340.000

U/S PARK BRIDGE

49.10	7.58	764.58	0.00	0.00	764.87	0.29	0.00	0.04	764.70
1610.	210.	1220.	180.	213.	246.	197.	361.	82.	764.70
2.11	0.99	4.95	0.91	0.080	0.035	0.080	0.039	757.00	122.50
0.001531	1.	1.	1.	2	0	0	0.00	331.63	462.50

*SECNO 50.000

3470 ENCROACHMENT STATIONS= 225.0 665.0 TYPE= 1 TARGET= 440.000

50 FT U/S PARK BRIDGE CORPS C.S. #28

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50.00	7.77	764.87	0.00	0.00	764.96	0.10	0.04	0.06	759.50
1610.	373.	899.	338.	505.	274.	474.	362.	82.	759.00
2.11	0.74	3.28	0.71	0.080	0.035	0.080	0.039	757.10	225.00
0.000463	50.	50.	50.	2	0	0	0.00	440.00	665.00

*SECNO 51.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

D/S / MILE RD.

51.00	5.59	765.69	0.00	0.00	766.09	0.40	0.97	0.15	761.00
1610.	385.	821.	403.	201.	119.	312.	384.	92.	764.00
2.18	1.92	6.91	1.29	0.080	0.035	0.080	0.039	760.10	430.91
0.003483	978.	978.	978.	2	0	0	0.00	438.18	869.09

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****
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	1.000	0.00	0.00	0.00	717.10	1610.00	727.65	0.00	727.65	0.08	0.47	3496.54	5631.43
	2.000	1400.00	0.00	0.00	720.20	1610.00	727.52	0.00	727.86	17.16	5.26	656.05	388.61
	3.000	395.00	0.00	0.00	721.10	1610.00	728.22	0.00	728.87	28.65	6.62	291.88	300.79
	3.900	49.00	0.00	0.00	721.10	1610.00	728.39	0.00	729.01	25.35	6.36	253.32	319.76
	4.000	1.00	760.00	737.40	721.10	1610.00	728.29	0.00	729.12	29.72	7.32	220.04	295.33
	5.000	90.00	760.00	737.40	722.20	1610.00	728.44	0.00	729.68	55.11	8.92	180.51	216.87
	5.100	1.00	0.00	0.00	722.20	1610.00	729.11	0.00	729.83	22.87	6.82	235.97	336.63
	6.000	150.00	0.00	0.00	722.35	1610.00	729.82	0.00	730.17	11.00	5.16	480.39	485.52
	6.900	133.00	0.00	0.00	722.50	1610.00	730.04	0.00	730.30	5.99	4.16	387.34	657.99
	7.000	1.00	734.20	732.40	722.50	1610.00	730.00	0.00	730.34	8.49	4.62	348.77	552.48
	8.000	65.00	734.20	732.40	722.50	1610.00	730.07	0.00	730.39	8.26	4.58	351.71	560.19
	8.100	1.00	0.00	0.00	722.50	1610.00	730.15	0.00	730.41	5.64	4.08	394.48	678.11
	9.000	49.00	0.00	0.00	722.50	1610.00	730.38	0.00	730.48	5.01	2.98	835.72	719.55
	10.000	1035.00	0.00	0.00	723.10	1610.00	730.90	0.00	731.23	7.29	4.67	399.27	596.24
*	10.900	50.00	0.00	0.00	725.10	1610.00	731.03	731.03	732.07	56.00	10.47	273.29	215.15
*	11.000	1.00	0.00	0.00	728.40	1610.00	732.09	732.09	733.29	152.85	11.35	207.77	130.22
	11.500	5.00	0.00	0.00	728.40	1610.00	732.76	0.00	733.49	79.65	8.82	259.85	180.40
	11.600	1.00	0.00	0.00	725.10	1610.00	733.42	0.00	733.64	8.56	5.25	530.68	550.29
	11.900	49.00	0.00	0.00	725.10	1610.00	733.53	0.00	733.70	7.00	4.80	695.79	608.50
	12.000	525.00	0.00	0.00	726.90	1610.00	733.76	0.00	734.03	8.62	4.21	431.46	548.51

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	13.000	50.00	0.00	0.00	726.90	1610.00	733.79	0.00	734.08	9.01	4.29	375.45	536.44
	14.000	60.00	736.10	733.20	726.90	1610.00	734.09	0.00	734.35	7.73	4.09	393.29	579.15
	15.000	50.00	0.00	0.00	728.00	1610.00	734.14	0.00	734.42	16.89	4.38	447.10	391.81
	16.000	1690.00	0.00	0.00	730.00	1610.00	737.15	0.00	737.57	20.28	5.24	322.35	357.49
	17.000	50.00	0.00	0.00	730.00	1610.00	737.24	0.00	737.66	15.40	5.20	309.53	410.24
	18.000	60.00	740.40	737.30	730.00	1610.00	738.14	0.00	738.46	9.64	4.50	357.64	518.54
	19.000	50.00	0.00	0.00	730.00	1610.00	738.32	0.00	738.55	13.18	3.84	452.17	443.43
	20.000	1550.00	0.00	0.00	731.90	1610.00	741.32	0.00	741.71	33.16	5.08	343.47	279.58
	21.000	50.00	0.00	0.00	733.10	1610.00	741.46	0.00	741.93	35.92	5.50	292.47	268.63
	21.100	1.00	750.00	750.00	733.10	1610.00	741.46	0.00	741.93	35.86	5.50	292.63	268.86
	21.900	50.00	750.00	750.00	733.10	1610.00	741.68	0.00	742.12	31.86	5.31	303.43	285.23
	22.000	1.00	0.00	0.00	733.10	1610.00	741.68	0.00	742.12	31.81	5.30	303.58	285.45
	23.000	50.00	0.00	0.00	733.10	1610.00	741.95	0.00	742.29	24.39	4.82	435.34	326.01
	24.000	1040.00	0.00	0.00	737.00	1610.00	743.93	0.00	744.10	12.21	3.37	508.14	460.67
	25.000	50.00	0.00	0.00	737.10	1610.00	743.95	0.00	744.27	22.19	4.49	358.23	341.81
	26.000	60.00	750.80	747.70	737.20	1610.00	743.96	0.00	744.31	26.01	4.74	339.37	315.70
	27.900	53.00	0.00	0.00	737.60	1610.00	744.04	0.00	744.68	56.07	6.42	250.80	215.01
	28.000	1.00	773.00	755.60	737.60	1610.00	744.00	0.00	744.73	17.75	6.89	233.57	382.15
	29.000	46.00	773.00	755.60	737.60	1610.00	744.12	0.00	744.82	16.44	6.73	239.21	397.05
	29.100	1.00	0.00	0.00	737.60	1610.00	744.27	0.00	744.86	12.20	6.15	261.91	460.91
	30.000	25.00	0.00	0.00	740.50	1610.00	744.21	0.00	745.01	30.36	7.18	224.16	292.19
*	31.000	25.00	755.40	753.90	743.30	1610.00	744.39	0.00	754.95	2008.78	26.07	61.75	35.92
*	31.900	25.00	0.00	0.00	746.90	1610.00	749.94	749.94	751.33	73.93	9.47	170.09	187.24
	32.000	1.00	752.80	0.00	746.90	1610.00	756.51	0.00	756.60	2.33	2.50	643.38	1054.05
	33.000	1170.00	0.00	0.00	749.30	1610.00	756.64	0.00	756.64	0.10	0.42	3810.22	5220.62
	34.000	1530.00	0.00	0.00	751.00	1610.00	756.67	0.00	756.68	0.90	0.90	1797.61	1695.77
	35.000	490.00	0.00	0.00	751.30	1610.00	756.54	0.00	757.06	26.70	6.02	345.69	311.58
	35.900	49.00	0.00	0.00	750.90	1610.00	756.87	0.00	757.22	19.04	4.73	340.53	368.95
	36.000	1.00	775.00	772.00	750.90	1610.00	756.81	0.00	757.29	51.80	5.54	290.56	223.71

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
37.000	40.00	775.00	772.00	750.90	1610.00	757.07	0.00	757.49	44.26	5.21	308.74	242.01
37.100	1.00	0.00	0.00	750.90	1610.00	757.24	0.00	757.53	14.83	4.34	370.98	418.05
38.000	50.00	0.00	0.00	752.30	1610.00	757.27	0.00	757.81	51.47	6.24	405.65	224.42
39.000	1800.00	0.00	0.00	754.10	1610.00	762.02	0.00	762.30	14.72	4.38	436.25	419.59
39.900	49.00	0.00	0.00	752.80	1610.00	762.08	0.00	762.37	12.52	4.33	372.02	454.99
40.000	1.00	788.00	772.40	752.80	1610.00	762.06	0.00	762.40	16.76	4.72	340.80	393.26
41.000	40.00	788.00	772.40	752.80	1610.00	762.13	0.00	762.47	16.31	4.68	343.74	398.64
41.100	1.00	0.00	0.00	752.80	1610.00	762.21	0.00	762.49	11.90	4.26	378.06	466.69
42.000	180.00	0.00	0.00	753.55	1610.00	762.56	0.00	762.70	7.42	3.40	695.79	590.94
43.900	180.00	0.00	0.00	754.30	1610.00	762.70	0.00	762.91	15.12	3.69	436.63	414.00
44.000	1.00	768.60	768.00	754.30	1610.00	762.67	0.00	762.94	22.63	4.16	386.70	338.41
45.000	60.00	768.60	768.00	754.30	1610.00	762.82	0.00	763.08	20.62	4.04	398.66	354.54
45.100	1.00	0.00	0.00	754.30	1610.00	762.90	0.00	763.10	13.43	3.55	453.96	439.32
46.000	50.00	0.00	0.00	753.90	1610.00	763.00	0.00	763.16	7.46	3.59	747.10	589.46
47.000	1400.00	0.00	0.00	756.60	1610.00	764.08	0.00	764.27	7.98	4.18	882.51	569.97
47.900	49.00	0.00	0.00	757.00	1610.00	764.00	0.00	764.49	24.86	6.06	476.72	322.91
48.000	1.00	762.00	761.90	757.00	1610.00	763.96	0.00	764.54	125.85	7.23	392.78	143.52
49.000	22.00	762.00	761.90	757.00	1610.00	764.61	0.00	764.83	60.09	4.97	582.98	207.70
49.100	1.00	0.00	0.00	757.00	1610.00	764.58	0.00	764.87	15.31	4.95	656.64	411.52
50.000	50.00	0.00	0.00	757.10	1610.00	764.87	0.00	764.96	4.63	3.28	1252.84	748.41
51.000	978.00	0.00	0.00	760.10	1610.00	765.69	0.00	766.09	34.83	6.91	631.51	272.79

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MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	1.000	1610.00	727.65	0.00	0.00	0.00	480.87	0.00
	2.000	1610.00	727.52	0.00	-0.13	0.00	271.00	1400.00
	3.000	1610.00	728.22	0.00	0.70	0.00	70.00	395.00
	3.900	1610.00	728.39	0.00	0.17	0.00	46.00	49.00
	4.000	1610.00	728.29	0.00	-0.10	0.00	46.00	1.00
	5.000	1610.00	728.44	0.00	0.15	0.00	46.00	90.00
	5.100	1610.00	729.11	0.00	0.67	0.00	46.00	1.00
	6.000	1610.00	729.82	0.00	0.71	0.00	127.00	150.00
	6.900	1610.00	730.04	0.00	0.21	0.00	60.00	133.00
	7.000	1610.00	730.00	0.00	-0.03	0.00	60.00	1.00
	8.000	1610.00	730.07	0.00	0.06	0.00	60.00	65.00
	8.100	1610.00	730.15	0.00	0.09	0.00	60.00	1.00
	9.000	1610.00	730.38	0.00	0.22	0.00	160.00	49.00
	10.000	1610.00	730.90	0.00	0.53	0.00	87.19	1035.00
*	10.900	1610.00	731.03	0.00	0.12	0.00	106.70	50.00
*	11.000	1610.00	732.09	0.00	1.06	0.00	78.00	1.00
	11.500	1610.00	732.76	0.00	0.67	0.00	78.00	5.00
	11.600	1610.00	733.42	0.00	0.66	0.00	108.00	1.00
	11.900	1610.00	733.53	0.00	0.12	0.00	208.00	49.00
	12.000	1610.00	733.76	0.00	0.22	0.00	81.00	325.00
	13.000	1610.00	733.79	0.00	0.04	0.00	60.00	50.00
	14.000	1610.00	734.09	0.00	0.30	0.00	60.00	60.00
	15.000	1610.00	734.14	0.00	0.05	0.00	117.89	50.00
	16.000	1610.00	737.15	0.00	3.01	0.00	66.27	1690.00
	17.000	1610.00	737.24	0.00	0.09	0.00	53.46	50.00
	18.000	1610.00	738.14	0.00	0.90	0.00	53.46	60.00
	19.000	1610.00	738.32	0.00	0.18	0.00	80.78	50.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	20.000	1610.00	741.32	0.00	2.99	0.00	75.00	1550.00
	21.000	1610.00	741.46	0.00	0.14	0.00	50.00	50.00
	21.100	1610.00	741.46	0.00	0.00	0.00	50.00	1.00
	21.900	1610.00	741.68	0.00	0.21	0.00	50.00	50.00
	22.000	1610.00	741.68	0.00	0.00	0.00	50.00	1.00
	23.000	1610.00	741.95	0.00	0.27	0.00	150.00	50.00
	24.000	1610.00	743.93	0.00	1.98	0.00	90.00	1040.00
	25.000	1610.00	743.95	0.00	0.02	0.00	60.00	50.00
	26.000	1610.00	743.96	0.00	0.01	0.00	60.00	60.00
	27.900	1610.00	744.04	0.00	0.08	0.00	48.00	53.00
	28.000	1610.00	744.00	0.00	-0.05	0.00	48.00	1.00
	29.000	1610.00	744.12	0.00	0.12	0.00	48.00	46.00
	29.100	1610.00	744.27	0.00	0.15	0.00	48.00	1.00
	30.000	1610.00	744.21	0.00	-0.06	0.00	62.00	25.00
*	31.000	1610.00	744.39	0.00	0.18	0.00	62.00	25.00
*	31.900	1610.00	749.94	0.00	5.55	0.00	62.00	25.00
	32.000	1610.00	756.51	0.00	6.56	0.00	122.00	1.00
	33.000	1610.00	756.64	0.00	0.13	0.00	652.75	1170.00
	34.000	1610.00	756.67	0.00	0.03	0.00	542.78	1530.00
	35.000	1610.00	756.54	0.00	-0.13	0.00	113.31	490.00
	35.900	1610.00	756.87	0.00	0.33	0.00	81.44	49.00
	36.000	1610.00	756.81	0.00	-0.06	0.00	68.59	1.00
	37.000	1610.00	757.07	0.00	0.26	0.00	69.94	40.00
	37.100	1610.00	757.24	0.00	0.17	0.00	83.56	1.00
	38.000	1610.00	757.27	0.00	0.03	0.00	162.38	50.00
	39.000	1610.00	762.02	0.00	4.76	0.00	75.00	1800.00
	39.900	1610.00	762.08	0.00	0.06	0.00	48.00	49.00
	40.000	1610.00	762.06	0.00	-0.03	0.00	48.00	1.00
	41.000	1610.00	762.13	0.00	0.07	0.00	48.00	40.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
41.100	1610.00	762.21	0.00	0.08	0.00	48.00	1.00
42.000	1610.00	762.56	0.00	0.35	0.00	143.85	180.00
43.900	1610.00	762.70	0.00	0.15	0.00	86.65	180.00
44.000	1610.00	762.67	0.00	-0.03	0.00	86.58	1.00
45.000	1610.00	762.82	0.00	0.15	0.00	86.96	60.00
45.100	1610.00	762.90	0.00	0.08	0.00	87.16	1.00
46.000	1610.00	763.00	0.00	0.10	0.00	423.35	50.00
47.000	1610.00	764.08	0.00	1.09	0.00	365.00	1400.00
47.900	1610.00	764.00	0.00	-0.09	0.00	292.63	49.00
48.000	1610.00	763.96	0.00	-0.04	0.00	289.87	1.00
49.000	1610.00	764.61	0.00	0.65	0.00	333.81	22.00
49.100	1610.00	764.58	0.00	-0.03	0.00	331.63	1.00
50.000	1610.00	764.87	0.00	0.29	0.00	440.00	50.00
51.000	1610.00	765.69	0.00	0.82	0.00	438.18	978.00

SUMMARY OF ERRORS

CAUTION SECNO= 10.900 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 10.900 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 10.900 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 11.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 11.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 31.000 PROFILE= 1 SLOPE TOO STEEP

CAUTION SECNO= 31.900 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 31.900 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

PRINTED IN U.S.A.
FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Northville Twp.

3) WATERCOURSE: Middle Branch Rouge River

4) DOCUMENT TYPE: Floodway

00BREAK00

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**************************************************
  HEC2 RELEASE DATED  OV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1       NORTHVILLE TOWNSHIP FIS HJD 2307-07
T2     MIDDLE ROUGE R. XSECT. FROM CORPS  START C.S. FROM PHOENIX LK. ROUTINGS
T3       MID.ROUGE R. N.VILLE TWP

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

        0.       4.        0.        0.  0.000000      0.00      0.0       0.    730.380     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000    15.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    110.000   150.000   200.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

QT      6.000  2570.000  3590.000  4190.000  4190.000  5780.000  1610.000     0.000     0.000     0.000
ET      0.000     0.000     0.000     0.000     1.400     0.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.035     0.100     0.300     0.000     0.000     0.000     0.000     0.000

        NORTHVILLE TOWNSHIP CORPERATE BOUNDARY  CORPS C.S. #2

X1      1.000    11.000    43.000   490.000     0.000     0.000     0.000     0.000     0.000     0.000
GR    747.000     0.000   725.000    45.000   721.000    70.000   717.100   230.000   720.500   280.000
GR    721.000   390.000   719.500   405.000   720.000   450.000   724.500   490.000   724.500   510.000
GR    739.000   550.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
NC      0.120     0.120     0.035     0.100     0.300     0.000     0.000     0.000     0.000     0.000

        INLET TO PHOENIX LAKE                   CORPS C.S. #4

X1      2.000    11.000   370.000   416.000   800.000  1700.000  1400.000     0.000    -0.900     0.000
X3      0.000     0.000     0.000   257.500     0.000   528.500     0.000     0.000     0.000     0.000
GR    740.000     0.000   730.000    60.000   726.700   210.000   725.800   370.000   721.100   385.000
GR    723.300   405.000   725.500   416.000   727.500   440.000   727.100   610.000   730.000   620.000
GR    740.000   600.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        50 FT D/S C.O. R.R. BRIDGE #1           CORPS C.S. #4

X1      3.000     0.000     0.000     0.000   300.000   500.000   395.000     0.000     0.900     0.000
X3      0.000     0.000     0.000   375.000     0.000   429.000     0.000     0.000     0.000     0.000
ET      0.000     0.000     0.000     0.000     0.100     0.000     0.000     0.000     1.000   630.000

        D/S C.O. R.R. BRIDGE

X1      3.000    21.000   370.000   416.000    49.000    49.000    49.000     0.000     0.000     0.000
X3     15.000     0.000     0.000     0.000     0.000     0.000     0.000   737.400   737.400     0.000
GR    740.000     0.000   730.000    60.000   726.700   210.000   725.600   370.000   725.000   372.000
GR    724.000   376.000   725.000   410.000   721.100   384.000   721.100   386.000   721.100   390.000
GR    721.100   396.000   721.100   390.000   722.500   402.000   723.000   406.000   724.500   410.000
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GR	726.000	414.000	726.000	416.000	727.500	460.000	727.100	610.000	730.000	620.000
GR	740.000	630.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.030	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	630.000

D/S FACE C.O. R.R. BRIDGE #1

X1	4.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	737.400	737.400	0.000
BT	20.000	0.000	760.000	0.000	370.000	760.000	725.600	370.000	760.000	730.000
BT	372.000	760.000	734.000	376.000	760.000	737.000	380.000	760.000	737.400	384.000
BT	760.000	737.000	384.000	760.000	734.000	390.000	760.000	730.000	390.000	760.000
BT	721.100	396.000	760.000	721.100	396.000	760.000	730.000	398.000	760.000	734.000
BT	402.000	760.000	737.000	406.000	760.000	737.400	410.000	760.000	737.000	414.000
BT	760.000	734.000	416.000	760.000	730.000	416.000	760.000	726.000	630.000	760.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	1025.000

U/S FACE C.O. R.R. BRIDGE #1 CORPS C.S. #5

X1	5.000	25.000	329.000	375.000	90.000	90.000	90.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	760.000	760.000	0.000
BT	20.000	0.000	760.000	0.000	329.000	760.000	727.000	329.000	760.000	730.000
BT	331.000	760.000	734.000	335.000	760.000	737.000	339.000	760.000	737.400	343.000
BT	760.000	737.000	347.000	760.000	734.000	349.000	760.000	730.000	349.000	760.000
BT	722.500	355.000	760.000	722.200	355.000	760.000	730.000	357.000	760.000	734.000
BT	361.000	760.000	737.000	365.000	760.000	737.400	369.000	760.000	737.000	373.000
BT	760.000	734.000	375.000	760.000	730.000	375.000	760.000	726.000	1025.000	760.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	740.000	0.000	730.000	95.000	728.000	175.000	726.000	225.000	728.000	325.000
GR	727.000	329.000	726.500	331.000	726.000	335.000	724.500	339.000	723.500	343.000
GR	723.000	347.000	722.500	349.000	722.200	355.000	722.500	357.000	723.000	361.000
GR	723.500	365.000	724.500	369.000	725.000	375.000	726.000	375.000	728.500	525.000
GR	732.500	575.000	727.000	625.000	732.500	675.000	734.000	775.000	740.000	1025.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	1025.000

U/S C.O. R.R. BRIDGE

X1	5.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	760.000	760.000	0.000
NC	0.080	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	7.100	7.100	7.100	7.100	179.000	525.000	289.000	415.000

VALLEY SECTION

X1	6.000	0.010	0.000	0.000	150.000	150.000	150.000	0.000	0.150	0.000
ET	0.000	0.000	0.000	0.000	1.400	0.000	0.000	0.000	0.000	0.000

D/S NORTHVILLE RD. #1 CORPS C.S. # 6

X1	6.900	14.000	270.000	320.000	250.000	50.000	133.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	732.400	732.400	0.000
GR	740.000	0.000	735.000	125.000	729.000	145.000	728.000	200.000	734.200	244.000
GR	727.500	272.000	725.100	309.500	723.000	320.500	722.500	310.000	725.000	330.000
GR	734.200	353.000	732.700	415.000	734.500	505.000	740.000	1000.000	0.000	0.000
NC	0.120	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #1

X1	7.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	732.400	732.400	0.000
BT	12.000	0.000	740.000	0.000	244.000	734.200	0.000	270.000	734.200	0.000
BT	270.000	734.200	732.400	299.500	734.200	732.400	299.500	734.200	0.000	300.500
BT	734.200	0.000	300.500	734.200	732.400	330.000	734.400	732.400	330.000	734.400
BT	0.000	355.000	734.500	0.000	1000.000	740.000	0.000	0.000	0.000	0.000

U/S FACE NORTHVILLE RD. #1

X1	8.000	0.000	0.000	0.000	65.000	65.000	65.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	734.200	734.200	0.000

U/S NORTHVILLE RD. #1

X1	8.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	125.000	0.000	535.000	0.000	734.200	734.200	0.000
NC	0.120	0.080	0.040	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	7.100	7.100	0.000	7.100	135.000	645.000	210.000	370.000

50 FT U/S NORTHVILLE RD. #1

X1	9.000	7.000	260.000	320.000	49.000	49.000	49.000	0.000	0.000	0.000
GR	740.000	0.000	750.000	200.000	724.500	260.000	722.500	300.000	725.000	320.000
GR	720.000	480.000	740.000	500.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.030	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	409.000	541.000

D/S ABANDONED MILL — CORPS C.S. #7

X1	10.000	13.000	450.000	500.000	500.000	1500.000	1035.000	0.000	0.000	0.000
GR	751.700	0.000	740.300	70.000	730.000	250.000	731.000	442.000	727.500	444.000
GR	727.500	448.000	725.300	450.000	723.100	470.000	726.000	500.000	728.000	510.000
GR	732.000	515.000	733.300	640.000	740.000	850.000	0.000	0.000	0.000	0.000
NC	5.000	0.080	426.000	0.050	482.000	0.050	498.000	0.050	536.000	0.080
NS	75.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

1FT D/S ABANDONED MILL — CORPS C.S. #8

X1	10.900	19.000	482.000	498.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	751.700	0.000	745.300	70.000	732.000	250.000	731.000	350.000	732.000	428.000
GR	730.000	470.000	730.000	450.000	728.000	477.000	727.500	482.000	725.100	485.000
GR	725.500	495.000	728.000	498.000	728.000	503.000	729.000	535.000	732.000	536.000
GR	733.000	610.000	735.000	620.000	735.000	705.000	750.000	735.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

D/S FACE ABANDONED MILL

X1	11.000	22.000	482.000	498.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	751.700	0.000	745.300	70.000	732.000	250.000	731.000	350.000	732.000	428.000
GR	730.000	431.000	730.000	447.000	734.300	467.000	735.000	477.000	740.000	477.000
GR	720.000	483.000	725.400	498.000	728.400	495.000	724.000	498.000	733.000	513.000
GR	729.000	513.000	735.000	515.000	732.000	566.000	733.000	610.000	735.000	620.000
GR	735.300	705.000	750.700	735.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

U/S FACE ABANDONED MILL

X1	11.500	0.000	0.000	0.000	5.000	5.000	5.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	428.000	536.000

1 FT U/S ABANDONED MILL

X1	11.600	19.000	482.000	498.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	751.700	0.000	743.300	70.000	732.000	250.000	731.000	350.000	732.000	428.000
GR	730.000	430.000	730.000	450.000	728.000	477.000	727.500	482.000	725.100	485.000
GR	725.500	495.000	728.000	498.000	728.000	503.000	729.000	535.000	732.000	536.000
GR	733.000	610.000	735.000	620.000	735.000	705.000	750.000	735.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	378.000	586.000

U/S ABANDONED MILL

X1	11.900	0.000	0.000	0.000	49.000	49.000	49.000	0.000	0.000	0.000
NC	0.120	0.120	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	173.000	263.000

50 FT D/S NORTHVILLE RD. #2 CORPS C.S. #9

X1	12.000	12.000	188.000	248.000	200.000	675.000	325.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	30.000	736.100	170.000	728.200	188.000	726.900	217.500
GR	726.900	218.500	728.200	248.000	736.200	260.000	735.000	310.000	735.000	410.000
GR	740.000	810.000	750.000	860.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #2

X1	13.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	735.000	735.000	0.000
SB	1.050	1.610	3.000	0.000	54.000	1.000	340.000	0.000	726.900	726.900

U/S FACE NORTHVILLE RD. #2

X1	14.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	733.200	736.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	736.100	736.100	0.000
BT	16.000	0.000	750.000	0.000	30.000	740.000	0.000	170.000	736.100	0.000
BT	188.000	736.100	0.000	188.000	736.100	733.100	217.500	736.100	733.100	217.500
BT	736.100	0.000	218.500	736.100	0.000	218.500	736.100	733.100	248.000	736.200
BT	733.200	248.000	736.200	0.000	260.000	736.200	0.000	310.000	735.000	0.000
BT	410.000	735.000	0.000	810.000	740.000	0.000	860.000	750.000	0.000	0.000
NC	0.120	0.120	0.045	0.400	0.600	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	0.000	0.000	0.000	0.000	0.000	0.000	140.000	300.000

50 FT U/S NORTHVILLE RD. #2 CORPS C.S. #10

X1	15.000	12.000	190.000	250.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	30.000	735.000	150.000	732.500	185.000	728.000	190.000
GR	728.000	300.000	728.000	210.000	729.000	250.000	733.000	265.000	734.000	300.000
GR	740.000	810.000	750.000	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	7.100	0.000	0.000	0.000	700.000	995.000	760.000	930.000

50 FT D/S NORTHVILLE RD. #3 CORPS C.S. %11

X1	16.000	11.000	815.000	875.000	1300.000	450.000	1690.000	0.891	0.000	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	7.100	0.000	0.000	0.000	700.000	995.000	760.000	930.000

D/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

X1	17.000	11.000	815.000	875.000	50.000	50.000	50.000	0.891	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	737.400	737.400	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1.250	2.150	3.000	0.000	38.600	2.000	267.000	0.000	730.000	730.000
ET	0.000	9.100	7.100	0.000	0.000	0.000	700.000	995.000	760.000	930.000

U/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

X1	18.000	11.000	815.000	875.000	60.000	60.000	60.000	0.891	0.000	0.000
X2	0.000	0.000	1.000	737.300	740.400	0.000	0.000	0.000	0.891	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	740.400	740.400	0.000
BT	13.000	0.000	750.000	0.000	800.000	740.400	0.000	815.000	740.400	0.000
BT	815.000	740.400	737.300	844.000	740.400	737.300	844.000	740.400	0.000	846.000
BT	740.400	0.000	846.000	740.400	737.300	875.000	740.400	737.300	875.000	740.400
BT	0.000	890.000	740.400	0.000	1230.000	740.000	0.000	1260.000	750.000	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.050	0.400	0.600	0.000	0.000	0.000	0.000	0.000
ET	0.000	9.100	7.100	0.000	0.000	0.000	645.000	1045.000	710.000	980.000

50 FT U/S NORTHVILLE RD. #3 CORPS C.S. #11

X1	19.000	11.000	815.000	875.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	800.000	735.000	815.000	731.500	824.000	731.000	844.000
GR	731.000	846.000	730.000	864.000	734.000	875.000	740.000	890.000	740.000	1230.000
GR	750.000	1260.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

50 FT D/S 6 MILE RD. CORPS C.S. #13

X1	20.000	15.000	400.000	455.000	750.000	1750.000	1550.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	390.000	0.000	465.000	0.000	0.000	0.000	0.000
GR	750.000	0.000	747.500	150.000	743.000	200.000	739.000	400.000	737.000	418.000
GR	735.000	420.000	732.000	420.010	731.900	425.000	733.000	440.000	735.000	443.000
GR	737.000	445.000	740.000	455.000	742.000	490.000	757.000	545.000	756.000	570.000

D/S 6 MILE RD. CORPS C.S. #14

X1	21.000	11.000	400.000	450.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	750.000	750.000	0.000
GR	751.000	0.000	750.000	240.000	752.000	380.000	740.000	400.000	737.000	408.000
GR	734.000	410.000	733.100	425.000	736.000	440.000	740.000	450.000	754.000	500.000
GR	750.000	650.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE 6 MILE RD.

X1	21.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000
BT	9.000	0.000	751.000	0.000	240.000	750.000	0.000	380.000	752.000	0.000
BT	400.000	753.200	0.000	400.000	753.200	750.000	450.000	754.400	750.000	450.000
BT	754.400	0.000	500.000	754.000	0.000	650.000	760.000	0.000	0.000	0.000

U/S FACE 6 MILE RD.

X1	21.900	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000

U/S 6 MILE RD.

X1	22.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000

50 FT U/S 6 MILE RD.

X1	23.000	8.000	320.000	370.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	270.000	0.000	420.000	0.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	320.000	737.000	328.000	734.000	330.000	733.100	345.000
GR	736.000	360.000	740.000	370.000	750.000	700.000	0.000	0.000	0.000	0.000

50 FT D/S NORTHVILLE RD. #4

X1	24.000	7.000	750.000	830.000	200.000	1750.000	1040.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	745.000	0.000	835.000	0.000	0.000	0.000	0.000
GR	750.000	0.000	740.000	750.000	738.000	765.000	737.000	790.000	738.000	815.000
GR	740.000	820.000	750.000	1280.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE NORTHVILLE RD. #4 CORPS C.S. #15

X1	25.000	13.000	1070.000	1130.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	750.800	750.800	0.000
GR	751.000	0.000	747.500	810.000	747.500	910.000	750.000	1035.000	738.000	1070.000
GR	737.100	1099.000	737.100	1101.000	738.000	1122.000	741.000	1125.000	742.500	1130.000
GR	751.000	1160.000	750.000	1220.000	752.000	1420.000	0.000	0.000	0.000	0.000
SB	1.050	1.670	3.000	0.000	56.240	1.000	590.500	0.000	737.200	737.100

U/S FACE NORTHVILLE RD. #4 CORPS C.S. #16

X1	26.000	15.000	1070.000	1130.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	747.700	750.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	751.000	751.000	0.000
BT	12.000	0.000	751.000	0.000	1035.000	751.000	0.000	1070.000	750.800	0.000
BT	1070.000	750.800	747.700	1099.000	750.800	747.700	1099.000	750.800	0.000	1101.000
BT	750.800	0.000	1101.000	750.800	747.700	1130.000	750.800	747.700	1130.000	750.800
BT	0.000	1160.000	751.000	0.000	1700.000	752.000	0.000	0.000	0.000	0.000
GR	751.000	0.000	748.500	800.000	746.500	900.000	747.000	1000.000	748.000	1035.000
GR	738.000	1070.000	737.200	1099.000	737.200	1101.000	737.500	1110.000	740.000	1120.000
GR	742.000	1130.000	745.500	1160.000	745.500	1250.000	748.000	1500.000	750.000	1700.000

D/S C.O. R.R. BRIDGE #2 CORPS C.S. #17

X1	27.900	33.000	102.000	1074.000	53.000	53.000	53.000	0.000	0.000	0.000

X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	755.600	755.600	0.000
GR	760.000	0.000	746.000	800.000	746.000	950.000	741.000	1026.000	741.000	1027.000
GR	740.500	1029.000	740.000	1031.000	740.000	1033.000	739.000	1035.000	738.000	1037.000
GR	738.000	1039.000	738.000	1041.000	738.000	1043.000	737.600	1045.000	737.600	1047.000
GR	737.600	1048.000	738.000	1052.000	738.000	1053.000	738.000	1055.000	738.200	1057.000
GR	738.500	1059.000	738.500	1061.000	738.800	1063.000	739.000	1065.000	739.200	1067.000
GR	739.500	1069.000	740.000	1071.000	740.500	1073.000	741.000	1074.000	748.000	1085.000
GR	745.000	1105.000	745.000	1355.000	760.000	2150.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.025	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE C.O. R.R. BRIDGE #2

X1	28.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	755.600	755.600	0.000
BT	32.000	0.000	773.000	0.000	1026.000	773.000	0.000	1026.000	773.000	745.000
BT	1027.000	773.000	748.500	1029.000	773.000	751.000	1031.000	773.000	753.000	1033.000
BT	773.000	754.500	1035.000	773.000	755.000	1037.000	773.000	755.600	1039.000	773.000
BT	755.000	1041.000	773.000	754.500	1043.000	773.000	753.000	1045.000	773.000	751.000
BT	1047.000	773.000	748.500	1048.000	773.000	745.000	1048.000	773.000	0.000	1052.000
BT	773.000	0.000	1052.000	773.000	745.000	1053.000	773.000	748.500	1055.000	773.000
BT	751.000	1057.000	773.000	753.000	1059.000	773.000	754.500	1061.000	773.000	755.000
BT	1063.000	773.000	755.600	1065.000	773.000	755.000	1067.000	773.000	754.500	1069.000
BT	773.000	753.000	1071.000	773.000	751.000	1073.000	773.000	748.500	1074.000	773.000
BT	745.000	1074.000	773.000	0.000	2150.000	773.000	0.000	0.000	0.000	0.000

U/S FACE C.O. R.R. BRIDGE #2

X1	29.000	0.000	0.000	0.000	46.000	46.000	46.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	773.000	773.000	0.000

U/S C.O. R.R. BRIDGE #2

X1	29.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	773.000	773.000	0.000
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	2150.000

D/S FACE SERVICE DRIVE CORPS C.S. =18

X1	30.000	12.000	1019.000	1081.000	25.000	25.000	25.000	0.000	-2.800	0.000
X3	10.000	0.000	0.000	994.000	0.000	1106.000	0.000	753.900	753.900	0.000
GR	760.000	0.000	757.500	820.000	757.100	980.000	755.400	1019.000	743.500	1019.000
GR	743.300	1049.000	743.300	1051.000	743.500	1081.000	755.400	1081.000	756.900	1100.000
GR	757.100	1400.000	760.000	2150.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	1.250	1.570	3.000	0.000	62.000	2.000	657.000	0.000	743.300	740.500
ET	0.000	0.000	0.000	0.000	9.100	0.000	0.000	0.000	1.000	2150.000

U/S FACE SERVICE DRIVE

X1	31.000	0.000	0.000	0.000	25.000	25.000	25.000	0.000	2.800	0.000
X2	0.000	0.000	1.000	753.900	755.400	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	969.000	0.000	1131.000	0.000	755.400	755.400	0.000
BT	14.000	0.000	760.000	0.000	820.000	757.500	0.000	980.000	757.100	0.000
BT	1019.000	755.400	0.000	1019.000	755.400	753.900	1049.000	755.400	753.900	1049.000
BT	755.400	0.000	1051.000	755.400	0.000	1051.000	755.400	753.900	1081.000	755.400
BT	753.900	1081.000	755.400	0.000	1100.000	757.100	0.000	1400.000	757.100	0.000
BT	2150.000	760.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	1.400	0.000	0.000	0.000	0.000	0.000

D/S WATERFORD DAM

X1	31.900	8.000	0.000	122.000	25.000	25.000	25.000	0.000	0.000	0.000
GR	770.000	0.000	755.400	0.000	755.400	35.000	746.900	35.000	747.500	97.000
GR	755.400	97.000	755.400	122.000	770.000	122.000	0.000	0.000	0.000	0.000
BT	5.000	2420.000	3380.000	3950.000	3950.000	5470.000	0.000	0.000	0.000	0.000
SB	0.000	1.500	3.000	0.000	62.000	0.000	0.100	0.000	746.900	746.900

WATERFORD DAM CORPS C.S. #19

X1	32.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	0.000	752.800	0.000	0.000	0.000	0.000	0.000
BT	8.000	0.000	770.000	0.000	0.000	755.400	0.000	35.000	755.400	0.000
BT	35.000	752.800	0.000	97.000	752.800	0.000	97.000	755.400	0.000	122.000
BT	755.400	0.000	122.000	770.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.120	0.120	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000

MIDDLE WATERFORD POND CORPS C.S. #20

X1	33.000	13.000	80.000	765.000	550.000	1600.000	1170.000	0.000	0.000	0.000
GR	798.000	0.000	764.000	80.000	758.000	90.000	754.000	93.000	752.000	95.000
GR	749.300	125.000	751.000	185.000	751.000	535.000	750.000	735.000	754.000	740.000
GR	757.500	745.000	767.000	765.000	768.000	855.000	0.000	0.000	0.000	0.000

NORTH END WATERFORD POND CORPS C.S. #21

X1	34.000	13.000	30.000	570.000	2085.000	665.000	1530.000	0.000	0.000	0.000
GR	772.000	0.000	758.300	10.000	759.000	20.000	755.500	30.000	755.500	40.000
GR	753.000	60.000	753.000	360.000	755.500	490.000	752.000	520.000	751.000	560.000
GR	757.000	570.000	759.000	660.000	769.000	670.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	81.000	206.000

50 FT D/S R.R. SPUR LINE CORPS C.S. #23

X1	35.000	9.000	117.000	170.000	250.000	650.000	490.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	93.000	0.000	213.000	0.000	0.000	0.000	0.000
GR	760.000	0.000	756.000	20.000	754.000	117.000	751.300	125.000	752.000	165.000
GR	754.000	170.000	757.500	220.000	773.000	270.000	775.000	280.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S R.R. SPUR LINE CCRPS C.S. =22

X1	35.900	20.000	0.000	130.000	49.000	49.000	49.000	0.000	0.000	0.000
GR	774.300	0.000	767.000	0.000	758.000	13.500	758.000	14.500	750.900	28.000
GR	750.900	29.000	750.900	42.500	750.900	43.500	750.900	57.000	750.900	58.000
GR	753.500	71.500	753.500	72.500	754.000	86.000	754.000	87.000	757.500	100.500
GR	757.500	101.500	761.500	115.000	761.500	116.000	765.500	129.500	774.300	130.000

D/S FACE R.R. SPUR LINE CORPS C.S. #22

X1	36.000	42.000	0.000	130.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	772.000	775.000	0.000	0.000	0.000	0.000	0.000
GR	772.000	0.000	767.000	0.000	758.000	12.000	772.000	12.000	772.000	13.000
GR	758.000	43.000	751.000	25.000	772.000	25.000	772.000	26.000	751.000	26.000
GR	751.000	38.500	772.000	38.500	772.000	39.500	751.000	39.500	751.000	52.000
GR	772.000	52.000	772.000	53.000	751.000	53.000	751.000	55.000	750.900	58.000

GR	753.000	65.000	772.000	65.000	772.000	66.000	753.000	66.000	754.000	78.000
GR	772.000	78.000	772.000	79.000	754.000	79.000	757.500	91.000	772.000	91.000
GR	772.000	92.000	757.500	92.000	761.000	104.000	772.000	104.000	772.000	105.000
GR	761.000	105.000	766.000	117.000	772.000	117.000	772.000	118.000	766.000	118.000
GR	770.000	130.000	772.000	130.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE R.R. SPUR LINE

X1	37.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	772.000	775.000	0.000	0.000	0.000	0.000	0.000

U/S R.R. SPUR LINE

X1	37.100	20.000	0.000	130.000	1.000	1.000	1.000	0.000	0.000	0.000
GR	774.300	0.000	767.000	0.000	758.000	13.500	758.000	14.500	750.900	28.000
GR	750.900	29.000	750.900	42.500	750.900	43.500	750.900	57.000	750.900	58.000
GR	753.500	71.500	753.500	72.500	754.000	86.000	754.000	87.000	757.500	100.500
GR	757.500	101.500	761.500	115.000	761.500	116.000	765.500	129.500	774.300	130.000
NC	0.150	0.150	0.045	0.400	0.600	0.000	0.000	0.000	0.000	0.000

50 FT U/S R.R. SPUR LINE CORPS C.S. #23

X1	38.000	9.000	117.000	170.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	53.000	0.000	253.000	0.000	0.000	0.000	0.000
GR	765.000	0.000	756.000	20.000	755.000	117.000	752.300	125.000	753.000	165.000
GR	755.000	170.000	757.500	220.000	773.000	270.000	775.000	280.000	0.000	0.000
NC	0.080	0.080	0.045	0.400	0.600	0.000	0.000	0.000	0.000	0.000

50 FT D/S C.O. R.R. BRIDGE #3 CORPS C.S. #24

X1	39.000	14.000	430.000	480.000	1600.000	1600.000	1800.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	418.000	0.000	493.000	0.000	0.000	0.000	0.000
GR	770.000	0.000	767.500	180.000	758.000	230.000	758.500	430.000	758.000	435.000
GR	754.100	450.000	755.000	478.000	757.000	480.000	758.000	540.000	758.000	580.000
GR	757.000	690.000	762.500	730.000	762.500	780.000	770.000	1060.000	0.000	0.000

D/S C.O. R.R. BRIDGE #3 CORPS C.S. #25

X1	39.900	21.000	976.000	1024.000	49.000	49.000	49.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	772.400	772.400	0.000
GR	770.000	0.000	760.000	170.000	760.000	810.000	758.000	960.000	756.000	976.000
GR	756.500	979.000	755.000	983.000	755.000	987.000	754.500	991.000	754.000	995.000
GR	754.000	998.000	753.500	1002.000	753.500	1005.000	753.000	1009.000	752.800	1013.000
GR	754.000	1017.000	755.000	1021.000	756.000	1024.000	763.000	1060.000	765.000	1310.000
GR	770.000	1900.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.045	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE C.O. R.R. BRIDGE #3

X1	40.000	0.500	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	772.400	772.400	0.000
BT	20.000	0.000	788.000	0.000	976.000	788.000	0.000	976.000	788.000	765.000
BT	979.000	788.000	767.000	983.000	788.000	770.500	987.000	788.000	772.400	991.000
BT	788.000	770.500	995.000	788.000	767.000	998.000	788.000	765.000	998.000	788.000
BT	0.000	1002.000	788.000	0.000	1002.000	788.000	765.000	1005.000	788.000	767.000
BT	1009.000	788.000	770.500	1013.000	788.000	772.400	1017.000	788.000	770.500	1021.000
BT	788.000	767.000	1024.000	788.000	765.000	1024.000	788.000	0.000	1900.000	788.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE C.O. R.R. BRIDGE #3

X1	41.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	788.000	788.000	0.000

U/S C.O. R.R. BRIDGE #3

X1	41.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	788.000	788.000	0.000

VALLEY SECTION

X1	42.000	0.000	0.000	0.000	140.000	200.000	180.000	0.000	0.750	0.000
X3	0.000	0.000	0.000	910.000	0.000	1085.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

D/S NORTHVILLE RD. #5 CORPS C.S. #26

X1	43.900	18.000	1105.000	1195.000	140.000	200.000	180.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.000	768.000	0.000
GR	770.000	0.000	764.000	840.000	762.000	1105.000	762.000	1105.100	757.500	1129.990
GR	757.500	1130.000	757.500	1133.500	757.500	1133.510	754.300	1166.490	754.300	1166.500
GR	754.300	1170.000	754.300	1170.010	764.000	1194.990	764.000	1195.000	764.000	1345.000
GR	765.000	1370.000	767.000	1515.000	770.000	2250.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

D/S FACE NORTHVILLE RD. #5

X1	44.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.000	768.000	0.000
BT	10.000	0.000	770.000	0.000	840.000	769.000	0.000	1105.000	768.600	0.000
BT	1105.100	768.600	768.000	1129.990	768.600	768.000	1130.000	768.600	0.000	1133.500
BT	768.600	0.000	1133.510	768.600	768.000	1166.490	768.600	768.000	1166.500	768.600
BT	0.000	1170.000	768.600	0.000	1170.010	768.600	768.000	1194.990	768.600	768.000
BT	1195.000	768.600	0.000	1345.000	768.600	0.000	1370.000	768.600	0.000	1515.000
BT	768.600	0.000	2250.000	768.600	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

U/S FACE NORTHVILLE RD. #5

X1	45.000	0.000	0.000	0.000	60.000	60.000	60.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.600	768.600	0.000
ET	0.000	0.000	0.000	0.000	0.000	9.100	0.000	0.000	885.000	1415.000

U/S NORTHVILLE RD. #5

X1	45.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	768.600	768.600	0.000
NC	0.150	0.060	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	7.100	7.100	7.100	0.000	9.100	575.000	765.000	350.000	990.000

50 FT U/S NORTHVILLE RD. #5 CORPS C.S. #27

X1	46.000	16.000	640.000	700.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	770.000	0.000	768.500	360.000	763.000	400.000	762.000	500.000	763.000	600.000
GR	762.000	640.000	757.500	660.000	753.900	665.000	753.900	680.000	761.500	700.000
GR	764.000	730.000	761.000	740.000	759.500	830.000	766.000	850.000	766.000	1000.000
GR	770.000	1160.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

50 FT D/S PARK BRIDGE CORPS C.S. #28

X1	47.000	15.000	425.000	465.000	1000.000	1750.000	1400.000	0.000	0.000	0.000
GR	780.000	0.000	770.000	110.000	761.000	160.000	763.000	180.000	762.000	280.000
GR	762.500	410.000	759.000	425.000	757.500	430.000	756.600	440.000	758.500	465.000
GR	763.000	480.000	762.000	580.000	765.000	880.000	777.500	1255.000	779.000	1280.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

D/S PARK BRIDGE CORPS C.S. # 29

X1	47.900	15.000	275.000	310.000	49.000	49.000	49.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	761.900	761.900	0.000
GR	782.000	0.000	762.000	70.000	763.000	210.000	764.700	275.000	758.500	275.000
GR	757.000	280.000	758.000	310.000	764.700	310.000	763.000	360.000	763.000	460.000
GR	764.000	465.000	765.000	660.000	767.500	770.000	778.000	1020.000	779.500	1050.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

D/S FACE PARK BRIDGE

X1	48.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	761.900	761.900	0.000
BT	14.000	0.000	782.000	0.000	70.000	762.000	0.000	210.000	763.000	0.000
BT	275.000	764.000	0.000	275.000	764.000	761.900	310.000	764.700	761.900	310.000
BT	767.700	0.000	360.000	763.000	0.000	460.000	763.000	0.000	560.000	764.000
BT	0.000	660.000	765.000	0.000	770.000	767.500	0.000	1020.000	778.000	0.000
BT	1050.000	779.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

U/S FACE PARK BRIDGE

X1	49.000	0.000	0.000	0.000	22.000	22.000	22.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	762.000	762.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	122.500	462.500

U/S PARK BRIDGE

X1	49.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	762.000	762.000	0.000
ET	0.000	0.000	0.000	0.000	0.000	0.000	9.100	0.000	225.000	665.000

50 FT U/S PARK BRIDGE CORPS C.S. #28

X1	50.000	15.000	425.000	465.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	780.000	0.000	770.000	110.000	761.000	160.000	763.000	180.000	762.000	280.000
GR	763.000	410.000	759.500	425.000	758.000	430.000	757.100	440.000	759.000	465.000
GR	763.500	480.000	762.000	580.000	765.000	880.000	777.500	1255.000	779.000	1280.000

D/S 7 MILE RD.

X1	51.000	15.000	575.000	600.000	978.000	978.000	978.000	0.000	0.000	0.000
GR	780.000	0.000	767.000	0.000	769.000	310.000	766.500	350.000	765.000	500.000
GR	763.000	550.000	761.000	575.000	760.100	585.000	761.000	595.000	764.000	600.000
GR	764.000	700.000	767.000	1000.000	769.000	1100.000	772.500	1160.000	780.000	1260.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= 0.100 CEHV= 0.300

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST	
			NORTHVILLE TOWNSHIP CORPERATE BOUNDARY CORPS C.S. #2							
1.00	13.28	730.38	0.00	730.38	730.39	0.01	0.00	0.00	725.00	
4190.	3.	4161.	26.	28.	4633.	165.	0.	0.	724.50	
0.00	0.10	0.90	0.16	0.120	0.035	0.120	0.000	717.10	32.48	
0.000020	0.	0.	0.	0	0	0	0.00	493.74	526.22	

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 730.38

STA=	32.	43.	490.	510.	526.
PER Q=	0.1	99.3	0.5	0.1	
AREA=	28.3	4633.3	117.6	47.7	
VEL=	0.1	0.9	0.2	0.1	

CCHV= 0.300 CEHV= 0.500

*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 257.5 528.5 TYPE= 1 TARGET= 271.000

			INLET TO PHOENIX LAKE		CORPS C.S. #4					
2.00	10.00	730.20	0.00	0.00	730.75	0.55	0.09	0.27	724.90	
4190.	870.	2697.	624.	561.	366.	455.	98.	12.	724.60	
0.07	1.55	7.36	1.37	0.120	0.035	0.120	0.036	720.20	257.50	
0.001946	800.	1400.	1700.	2	0	0	0.00	271.00	528.50	

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 730.20

STA=	258.	370.	416.	460.	528.
PER Q=	20.8	64.4	7.3	7.6	
AREA=	560.6	366.4	202.4	252.8	
VEL=	1.6	7.4	1.5	1.3	

*SECNO 3.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 358.0 428.0 TYPE= 1 TARGET= 70.000

			50 FT D/S C.O. R.R. BRIDGE #1		CORPS C.S. #4					
3.00	9.59	730.69	0.00	0.00	732.59	1.90	1.16	0.67	725.80	
4190.	117.	3953.	120.	58.	347.	59.	106.	14.	725.50	
0.04	2.00	11.38	3.03	0.120	0.035	0.120	0.036	721.10	358.00	
0.004998	307.	395.	500.	2	0	0	0.00	70.00	428.00	

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 730.69

STA=	358.	370.	416.	428.
PER Q=	2.8	94.4	2.9	
AREA=	58.2	347.4	58.9	
VEL=	2.0	11.4	2.0	

*SECNO 3.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 737.40 ELREA= 737.40

D/S C.O. R.R. BRIDGE

3.90	9.78	730.88	0.00	0.00	732.89	2.01	0.25	0.06	725.60
4190.	0.	4190.	0.	0.	368.	0.	107.	14.	726.00
0.08	0.00	11.38	0.00	0.120	0.035	0.120	0.036	721.10	370.00
0.005245	49.	49.	49.	2	0	0	0.00	46.00	416.00

FLOW DISTRIBUTION FOR SECNO= 3.90 CWSEL= 730.88

STA=	370.	416.
PER Q=	100.0	
AREA=	368.1	
VEL=	11.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 4.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	USELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 760.00 MAX ELLC= 737.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 737.40 ELREA= 737.40

D/S FACE C.O. R.R. BRIDGE #1

4.00	9.37	730.47	0.00	0.00	733.31	2.84	0.01	0.42	725.60
4190.	0.	4190.	0.	0.	310.	0.	107.	14.	726.00
0.08	0.00	13.53	0.00	0.120	0.030	0.120	0.036	721.10	370.00
0.007506	1.	1.	1.	2	0	0	-115.91	46.00	416.00

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 730.47

STA=	370.	416.
PER Q=	100.0	
AREA=	309.7	
VEL=	13.5	

*SECNO 5.000

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 760.00 MAX ELLC= 737.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 760.00 ELREA= 760.00

U/S FACE C.O. R.R. BRIDGE #1 CORPS C.S. #5

5.00	8.74	730.94	730.67	0.00	734.40	3.46	0.78	0.31	727.00
4190.	0.	4190.	0.	0.	281.	0.	107.	14.	726.00
0.08	0.00	14.92	0.00	0.120	0.030	0.120	0.035	722.20	329.00
0.010029	90.	90.	90.	4	15	0	-293.66	46.00	375.00

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 730.94

STA= 329. 375.
PER Q= 100.0
AREA= 280.9
VEL= 14.9

CCHV= 0.300 CEHV= 0.500
*SECNO 5.100

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 760.00 ELREA= 760.00

U/S C.O. R.R. BRIDGE

5.10	11.45	733.65	0.00	0.00	735.03	1.38	0.00	0.62	727.00
4190.	0.	4190.	0.	0.	445.	0.	107.	14.	726.00
0.08	0.00	9.41	0.00	0.120	0.030	0.120	0.035	722.20	329.00
0.002083	1.	1.	1.	5	0	0	0.00	46.00	375.00

FLOW DISTRIBUTION FOR SECNO= 5.10 CWSEL= 733.65

STA= 329. 375.
PER Q= 100.0
AREA= 445.3
VEL= 9.4

*SECNO 6.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 179.0 525.0 TYPE= 1 TARGET= 346.000

VALLEY SECTION

6.01	13.05	735.40	0.00	0.00	735.48	0.08	0.07	0.39	727.15
4190.	1253.	1748.	1189.	1239.	519.	1200.	113.	14.	726.15
0.11	1.01	3.37	0.99	0.080	0.030	0.080	0.035	722.35	179.00
0.000189	150.	150.	150.	2	0	0	0.00	346.00	525.00

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 735.40

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 STA=     179.      225.      325.      329.      375.      525.
   PER Q=     8.7      20.5       0.7      41.7      28.4
    AREA=   383.1     824.9      31.0     518.6    1199.8
     VEL=     0.9       1.0       1.0       3.4       1.0

*SECNO 6.900

3470 ENCROACHMENT STATIONS=      125.0      535.0  TYPE=      1  TARGET=      410.000

        D/S NORTHVILLE RD. #1                        CORPS C.S. # 6

     6.90     12.87    735.37      0.00      0.00    735.58      0.21      0.03      0.06    724.50
     4190.      834.     3936.      320.      819.      707.      498.      122.       16.    725.00
     0.12      1.02      4.29      0.64     0.080     0.030     0.080     0.034    722.50    126.11
 0.000281      250.      133.       50.         2         0         0      0.00    408.89    535.00

FLOW DISTRIBUTION FOR SECNO=      6.90          CWSEL=     735.37

 STA=     126.      145.      200.      244.      270.      330.      355.      455.      505.      535.
   PER Q=     1.2      11.4       3.6       3.7      72.5       3.3       2.9       1.3       0.1
    AREA=    69.6     405.2     187.7     156.4     707.3     144.2     226.7     105.8      21.0
     VEL=     0.7       1.2       0.8       1.0       4.3       1.0       0.5       0.5       0.2

 CCHV=   0.300 CEHV=   0.500
 *SECNO 7.000

 3301 HV CHANGED MORE THAN HVINS

    SECNO      DEPTH     CWSEL     CRIWS     WSELK        EG        HV        HL     OLOSS   BANK ELEV
    Q          QLOB      QCH       QROB      ALOB       ACH       AROB      VOL       TWA   LEFT/RIGHT
    TIME       VLOB      VCH       VROB      XNL        XNCH      XNR       WTH     ELMIN        SSTA
    SLOPE      XLOBL     XLCH      XLOBR     ITRIAL     IM2       ICONT     CORAR   TOPWID       ENDST

 3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD=  734.20 MAX ELLC=  732.40

 3470 ENCROACHMENT STATIONS=      125.0      535.0  TYPE=      1  TARGET=      410.000

        D/S FACE NORTHVILLE RD. #1

     7.00     12.41    734.91    729.27      0.00    736.04      1.13      0.00      0.46    724.50
     4190.      29.     3640.      521.       34.      403.      124.      122.       16.    725.00
     0.12      0.84      9.03      4.18     0.120     0.030     0.080     0.034    722.50    127.28
 0.011202         1.        1.        1.         4        16         0  -1275.75    407.72    535.00

 FLOW DISTRIBUTION FOR SECNO=      7.00          CWSEL=     734.91

 STA=     127.      244.      270.      330.      355.      455.
   PER Q=     0.2       0.4      86.9      12.1       0.3
    AREA=    15.6      18.5     403.0     104.0      20.5
     VEL=     0.7       1.0       9.0       4.9       0.7

 *SECNO 8.000

 3301 HV CHANGED MORE THAN HVINS

 3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD=  734.20 MAX ELLC=  732.40
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3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

U/S FACE NORTHVILLE RD. #1

	8.00	13.56	736.06	0.00	0.00	736.69	0.63	0.50	0.15	724.50
	4190.	140.	3325.	725.	129.	472.	274.	123.	16.	725.00
	0.12	1.09	7.05	2.65	0.120	0.030	0.080	0.034	722.50	125.00
0.005533		65.	65.	65.	3	0	0	-1430.52	410.00	535.00

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 736.06

STA=	125.	200.	244.	270.	330.	355.	455.	505.	535.
PER Q=	0.3	1.5	1.5	79.4	12.7	4.0	0.5	0.0	
AREA=	22.2	58.5	48.2	471.6	132.6	112.7	24.4	4.4	
VEL=	0.5	1.1	1.3	7.0	4.0	1.5	0.9	0.4	

*SECNO 8.100

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

U/S NORTHVILLE RD. #1

	8.10	14.16	736.66	0.00	0.00	736.83	0.17	0.00	0.14	724.50
	4190.	647.	3037.	505.	1006.	785.	762.	123.	16.	725.00
	0.12	0.64	3.87	0.66	0.120	0.030	0.080	0.034	722.50	125.00
0.000199		1.	1.	1.	2	0	0	0.00	410.00	535.00

FLOW DISTRIBUTION FOR SECNO= 8.10 CWSEL= 736.66

STA=	125.	145.	200.	244.	270.	330.	355.	455.	505.	535.
PER Q=	1.0	8.4	3.2	2.9	72.5	3.9	5.2	2.4	0.6	
AREA=	95.2	476.2	244.6	190.0	784.8	176.5	355.8	170.4	59.8	
VEL=	0.5	0.7	0.5	0.6	3.9	0.9	0.6	0.6	0.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 9.000

3470 ENCROACHMENT STATIONS= 135.0 645.0 TYPE= 1 TARGET= 510.000

50 FT U/S NORTHVILLE RD. #1

	9.00	14.33	736.83	0.00	0.00	736.87	0.04	0.01	0.04	724.50
	4190.	488.	1824.	1877.	913.	795.	2348.	127.	17.	725.00
	0.13	0.53	2.29	0.80	0.120	0.040	0.080	0.034	722.50	135.00
0.000122		49.	49.	49.	2	0	0	0.00	510.00	645.00

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 736.83

STA=	135.	200.	260.	320.	480.	645.
PER Q=	3.2	8.5	43.5	32.4	12.4	
AREA=	338.5	574.9	794.9	1493.1	855.0	
VEL=	0.4	0.6	2.3	0.9	0.6	

CCHV= 0.300 CEHV= 0.500

*SECNO 10.000

D/S ABANDONED MILL CORPS C.S. #7

	10.00	13.85	736.95	0.00	0.00	737.07	0.11	0.16	0.04	725.00
	4190.	4337.	2277.	576.	1640.	630.	881.	214.	30.	726.00
	0.2	0.81	3.61	0.65	0.080	0.030	0.080	0.033	723.10	155.92

0.000183 500. 1035. 1500. 2 0 0 0.00 598.51 754.44

FLOW DISTRIBUTION FOR SECNO= 10.00 CWSEL= 736.95

STA=	156.	250.	442.	444.	448.	450.	500.	510.	515.	640.	754.
PER Q=	4.5	25.7	0.2	1.0	0.5	54.3	2.7	0.6	8.5	1.9	
AREA=	327.0	1238.6	15.4	37.8	21.4	630.1	99.5	34.8	537.6	208.9	
VEL=	0.6	0.9	0.6	1.1	0.9	3.6	1.1	0.8	0.7	0.4	

1490 NH CARD USED
*SECNO 10.900

SECNO	DEPTH	CWSEL	CRIWS	HSELK	EG	HV	FL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST
10.90	11.90	737.00	0.00	0.00	737.09	0.08	0.01	0.01	727.50
4190.	2161.	809.	1220.	1593.	180.	861.	217.	31.	728.00
0.26	1.36	4.50	1.42	0.067	0.030	0.061	0.033	725.10	170.32
0.000376	50.	50.	50.	2	0	0	0.00	538.69	709.00

1FT D/S ABANDONED MILL CORPS C.S. #8

FLOW DISTRIBUTION FOR SECNO= 10.90 CWSEL= 737.00

STA=	170.	250.	350.	428.	450.	477.	482.	498.	535.	610.	709.
PER Q=	3.2	14.7	11.5	7.5	11.9	2.8	19.3	18.3	8.0	2.9	
AREA=	199.3	550.2	429.2	152.1	216.1	46.3	179.9	317.1	339.7	204.2	
VEL=	0.7	1.1	1.1	2.1	2.3	2.5	4.5	2.4	1.0	0.6	

*SECNO 11.000

3265 DIVIDED FLOW

D/S FACE ABANDONED MILL

11.00	8.64	737.03	0.00	0.00	737.10	0.06	0.00	0.01	740.00
4190.	2438.	495.	1257.	1485.	138.	779.	217.	31.	734.00
0.26	1.64	3.58	1.61	0.071	0.030	0.065	0.033	728.40	169.79
0.000689	1.	1.	1.	2	0	0	0.00	534.28	709.07

FLOW DISTRIBUTION FOR SECNO= 11.00 CWSEL= 737.03

STA=	170.	250.	350.	428.	467.	477.	498.	535.	610.	705.	709.
PER Q=	4.3	20.2	15.7	17.2	0.8	11.8	15.1	10.9	4.0	0.0	
AREA=	201.9	553.5	431.7	272.4	25.4	138.2	229.8	342.1	203.3	4.1	
VEL=	0.9	1.5	1.5	2.6	1.3	3.6	2.8	1.3	0.8	0.5	

*SECNO 11.500

3265 DIVIDED FLOW

U/S FACE ABANDONED MILL

11.50	8.64	737.04	0.00	0.00	737.10	0.06	0.00	0.00	740.00
4190.	2438.	494.	1257.	1486.	138.	780.	218.	31.	734.00
0.27	1.64	3.58	1.61	0.071	0.030	0.065	0.033	728.40	169.76

0.000688	5.	5.	5.	0	0	0	0.00	534.32	709.08	

FLOW DISTRIBUTION FOR SECNO= 11.50 CWSEL= 737.04

STA=	170.	250.	350.	428.	467.	477.	498.	535.	610.	705.	709.
PER Q=	4.3	20.2	15.7	17.2	0.8	11.8	15.1	10.9	4.0	0.0	
AREA=	202.1	553.8	431.9	272.5	25.4	138.2	229.9	342.3	203.6	4.2	
VEL=	0.9	1.5	1.5	2.6	1.3	3.6	2.8	1.3	0.8	0.5	

*SECNO 11.600

1 FT U/S ABANDONED MILL

11.60	11.93	737.03	0.00	0.00	737.11	0.08	0.00	0.01	727.50	
4190.	2162.	807.	1222.	1603.	180.	868.	218.	31.	728.00	
0.27	1.35	4.47	1.41	0.067	0.030	0.061	0.033	725.10	169.82	
0.000370	1.	1.	1.	1	0	0	0.00	539.25	709.07	

FLOW DISTRIBUTION FOR SECNO= 11.60 CWSEL= 737.03

STA=	170.	250.	350.	428.	450.	477.	482.	498.	535.	610.	709.
PER Q=	3.2	14.8	11.5	7.5	11.9	2.8	19.3	18.2	8.0	2.9	
AREA=	201.8	553.3	431.6	152.7	216.9	46.4	180.4	318.2	342.0	207.3	
VEL=	0.7	1.1	1.1	2.1	2.3	2.5	4.5	2.4	1.0	0.6	

*SECNO 11.900

U/S ABANDONED MILL

11.90	11.95	737.05	0.00	0.00	737.13	0.08	0.02	0.00	727.50	
4190.	2163.	805.	1223.	1609.	181.	872.	221.	32.	728.00	
0.27	1.34	4.45	1.40	0.067	0.030	0.061	0.033	725.10	169.51	
0.000367	49.	49.	49.	0	0	0	0.00	539.60	709.11	

FLOW DISTRIBUTION FOR SECNO= 11.90 CWSEL= 737.05

STA=	170.	250.	350.	428.	450.	477.	482.	498.	535.	610.	709.
PER Q=	3.2	14.8	11.5	7.5	11.8	2.8	19.2	18.2	8.0	3.0	
AREA=	203.4	555.3	433.2	153.2	217.4	46.5	180.7	319.0	343.5	209.3	
VEL=	0.7	1.1	1.1	2.0	2.3	2.5	4.5	2.4	1.0	0.6	

CCHV= 0.300 CEHV= 0.500

*SECNO 12.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IHZ	ICONT	CORAR	TOPWID	ENDST

50 FT D/S NORTHVILLE RD. #2 CORPS C.S. #9

12.00	10.09	736.99	0.00	0.00	737.62	0.62	0.22	0.27	728.20
4190.	106.	3777.	307.	102.	567.	486.	238.	37.	728.20
0.29	1.04	6.66	0.63	0.120	0.035	0.120	0.033	726.90	137.84
0.001230	200.	325.	675.	2	0	0	0.00	431.82	569.67

FLOW DISTRIBUTION FOR SECNO= 12.00 CWSEL= 736.99

STA=	138.	170.	188.	248.	260.	310.	410.	570.
PER Q=	0.1	2.4	90.1	1.5	0.9	3.3	1.6	
AREA=	14.4	87.2	567.4	57.6	69.8	199.6	159.3	
VEL=	0.3	1.2	6.7	1.1	0.5	0.7	0.4	

*SECNO 13.000

D/S FACE NORTHVILLE RD. #2

13.00	10.18	737.08	0.00	0.00	737.68	0.60	0.06	0.01	728.20
4190.	108.	3757.	325.	106.	573.	514.	239.	37.	728.20
0.29	1.02	6.56	0.63	0.120	0.035	0.120	0.033	726.90	134.75
0.001182	50.	50.	50.	2	0	0	0.00	441.81	576.56

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 737.08

STA=	135.	170.	188.	248.	260.	310.	410.	577.
PER Q=	0.1	2.5	89.7	1.5	1.0	3.4	1.8	
AREA=	17.3	88.8	572.6	58.6	74.1	208.2	173.4	
VEL=	0.3	1.2	6.6	1.1	0.6	0.7	0.4	

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.05	1.61	3.00	0.00	54.00	1.00	340.00	0.00	726.90	726.90

*SECNO 14.000

6870 D.S. ENERGY OF 737.68 HIGHER THAN COMPUTED ENERGY OF 737.55

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
740.88	737.71	0.02	2712.	1474.	340.	334.	733.20	736.10

U/S FACE NORTHVILLE RD. #2

14.00	10.18	737.08	0.00	0.00	737.68	0.60	0.00	0.00	728.20
4190.	108.	3756.	326.	106.	573.	516.	241.	38.	728.20
0.29	1.01	6.56	0.63	0.120	0.035	0.120	0.033	726.90	134.54
0.001178	60.	60.	60.	2	0	4	0.00	442.49	577.03

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 737.08

STA=	135.	170.	188.	248.	260.	310.	410.	577.
PER Q=	0.1	2.5	89.6	1.5	1.0	3.5	1.8	
AREA=	17.5	88.9	572.9	58.7	74.4	208.8	174.4	
VEL=	0.3	1.2	6.6	1.1	0.6	0.7	0.4	

CCHV= 0.400 CEHV= 0.600

*SECNO 15.000

50 FT U/S NORTHVILLE RD. #2 CORPS C.S. #10

15.00	9.39	737.39	0.00	0.00	737.82	0.43	0.07	0.07	728.00
4190.	251.	3241.	698.	232.	544.	721.	242.	39.	729.00
0.30	1.06	5.96	0.97	0.120	0.045	0.120	0.033	728.00	92.57

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 0.001727      50.       50.       50.        2         0         0      0.00    495.82    588.39

 FLOW DISTRIBUTION FOR SECNO=     15.00          CWSEL=    737.39

 STA=       93.      150.      185.      190.      250.      265.      300.      588.
  PER Q=     1.0       3.7       1.3      77.4       4.0       4.1       8.5
  AREA=     68.7     127.5      35.7     543.6      95.9     136.2     489.2
   VEL=      0.6       1.2       1.6       6.0       1.7       1.3       0.7

 *SECNO 16.000

 3301 HV CHANGED MORE THAN HVINS

          50 FT D/S NORTHVILLE RD. #3                CORPS C.S. #11

    16.00     10.49    740.49    737.22      0.00    741.52      1.02      3.34      0.36    735.00
   4190.        56.     4010.       127.      49.      483.      197.      271.       46.    734.00
     0.35      1.11      8.30      0.64     0.120     0.040     0.120     0.036    730.00    677.58
0.002751     1300.     1690.      450.         6        15         0      0.00    419.67   1097.25

 FLOW DISTRIBUTION FOR SECNO=     16.00          CWSEL=    740.49

 STA=      678.      713.      726.      780.      793.     1096.     1097.
  PER Q=     0.1       1.2      95.7       1.6       1.5       0.0
  AREA=      8.7      40.0     463.3      46.7     149.7       0.3
   VEL=      0.3       1.3       8.3       1.4       0.4       0.2

 *SECNO 17.000

   SECNO      DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q          QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       LEFT/RIGHT
   TIME       VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE      XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     CORAR     TOPWID    ENDST

          D/S FACE NORTHVILLE RD. #3                 CORPS C.S. #11

    17.00     10.69    740.69    737.41      0.00    741.66      0.96      0.11      0.02    735.00
   4190.        53.     3987.       150.      60.      494.      260.      272.       47.    734.00
     0.35      0.88      8.07      0.58     0.120     0.035     0.120     0.036    730.00    663.34
0.001936        50.       50.       50.         4        18         0      0.00    434.44   1097.79

 FLOW DISTRIBUTION FOR SECNO=     17.00          CWSEL=    740.69

 STA=      663.      713.      726.      780.      793.     1096.     1098.
  PER Q=     0.1       1.2      95.1       1.4       2.1       0.0
  AREA=     17.2      42.7     494.0      49.4     210.2       0.6
   VEL=      0.3       1.1       8.1       1.2       0.4       0.3

 SPECIAL BRIDGE

 SB   XK        XCOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      1.25      2.15      3.00      0.00     38.60      2.00    267.00      0.00    730.00    730.00

 *SECNO 18.000
 PRESSURE AND WEIR FLOW

   EGPRS     EGLWC     H3        QWEIR     QPR       BAREA     TRAREA
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						AREA		
748.92	741.85	0.19	2604.	1589.	267.	267.	737.30	740.40

U/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

18.00	11.04	741.04	0.00	0.00	741.88	0.84	0.22	0.00	735.00
4190.	65.	3897.	227.	86.	513.	371.	273.	48.	734.00
0.35	0.76	7.60	0.61	0.120	0.035	0.120	0.036	730.00	638.58
0.001636	60.	60.	60.	3	0	5	0.00	460.13	1098.71

FLOW DISTRIBUTION FOR SECNO= 18.00 CWSEL= 741.04

STA=	639.	713.	726.	780.	793.	1096.	1099.
PER Q=	0.3	1.3	93.0	1.5	3.9	0.0	
AREA=	38.6	47.3	512.5	54.0	315.4	1.4	
VEL=	0.3	1.1	7.6	1.2	0.5	0.3	

CCHV= 0.400 CEHV= 0.600

*SECNO 19.000

50 FT U/S NORTHVILLE RD. #3 CORPS C.S. #11

19.00	11.68	741.68	0.00	0.00	742.12	0.44	0.08	0.16	735.00
4190.	134.	3539.	517.	176.	614.	646.	275.	48.	734.00
0.36	0.76	5.77	0.80	0.120	0.050	0.120	0.036	730.00	665.51
0.001749	50.	50.	50.	3	0	0	0.00	569.54	1235.04

FLOW DISTRIBUTION FOR SECNO= 19.00 CWSEL= 741.68

STA=	666.	800.	815.	875.	890.	1230.	1235.
PER Q=	1.2	1.9	84.5	2.3	10.0	0.0	
AREA=	113.1	62.7	613.6	70.2	571.6	4.2	
VEL=	0.5	1.3	5.8	1.4	0.7	0.4	

*SECNO 20.000

3470 ENCROACHMENT STATIONS= 390.0 465.0 TYPE= 1 TARGET= 75.000

50 FT D/S 6 MILE RD. CORPS C.S. #13

20.00	13.37	745.27	0.00	0.00	746.12	0.85	3.75	0.25	739.00
4190.	113.	3993.	84.	62.	528.	50.	311.	59.	740.00
0.42	1.83	7.56	1.58	0.120	0.050	0.120	0.039	731.90	390.00
0.003623	750.	1550.	1750.	3	0	0	0.00	75.00	465.00

FLOW DISTRIBUTION FOR SECNO= 20.00 CWSEL= 745.27

STA=	390.	400.	455.	465.
PER Q=	2.7	95.3	2.0	
AREA=	61.7	528.4	49.8	
VEL=	1.8	7.6	1.7	

*SECNO 21.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 750.00 ELREA= 750.00

D/S 6 MILE RD. CORPS C.S. #14

21.00	12.26	745.36	0.00	0.00	746.50	1.15	0.21	0.18	740.00
4190.	0.	4190.	0.	0.	487.	0.	312.	59.	740.00
0.42	0.00	8.60	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.004703	50.	50.	50.	2	0	0	0.00	50.00	450.00

FLOW DISTRIBUTION FOR SECNO= 21.00 CWSEL= 745.36

STA= 400. 450.
PER Q= 100.0
AREA= 487.3
VEL= 8.6

*SECNO 21.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 750.00 MAX ELLC= 750.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 751.00 ELREA= 751.00

D/S FACE 6 MILE RD.

21.10	12.26	745.36	0.00	0.00	746.51	1.15	0.00	0.00	740.00
4190.	0.	4190.	0.	0.	488.	0.	312.	59.	740.00
0.42	0.00	8.59	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.004697	1.	1.	1.	0	0	0	0.00	50.00	450.00

FLOW DISTRIBUTION FOR SECNO= 21.10 CWSEL= 745.36

STA= 400. 450.
PER Q= 100.0
AREA= 487.5
VEL= 8.6

*SECNO 21.900

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 750.00 MAX ELLC= 750.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 751.00 ELREA= 751.00

U/S FACE 6 MILE RD.

21.90	12.59	745.69	0.00	0.00	746.76	1.07	0.22	0.03	740.00
4190.	0.	4190.	0.	0.	504.	0.	312.	59.	740.00
0.42	0.00	8.31	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.004230	50.	50.	50.	2	0	0	0.00	50.00	450.00

FLOW DISTRIBUTION FOR SECNO= 21.90 CWSEL= 745.69

STA= 400. 450.
PER Q= 100.0
AREA= 503.9
VEL= 8.3

*SECNO 22.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 751.00 ELREA= 751.00

U/S 6 MILE RD.

22.00	12.59	745.69	0.00	0.00	746.77	1.07	0.00	0.00	740.00	
4190.	0.	4190.	0.	0.	504.	0.	312.	59.	740.00	
0.42	0.00	8.31	0.00	0.120	0.050	0.120	0.039	733.10	400.00	
0.004225	1.	1.	1.	0	0	0	0.00	50.00	450.00	

FLOW DISTRIBUTION FOR SECNO= 22.00 CWSEL= 745.69

STA= 400. 450.
PER Q= 100.0
AREA= 504.1
VEL= 8.3

*SECNO 23.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 270.0 420.0 TYPE= 1 TARGET= 150.000

50 FT U/S 6 MILE RD.

23.00	13.63	746.73	0.00	0.00	747.15	0.42	0.13	0.26	740.00	
4190.	467.	3254.	469.	298.	556.	299.	313.	59.	740.00	
0.42	1.57	5.85	1.57	0.120	0.050	0.120	0.039	733.10	270.00	
0.001696	50.	50.	50.	3	0	0	0.00	150.00	420.00	

FLOW DISTRIBUTION FOR SECNO= 23.00 CWSEL= 746.73

STA= 270. 320. 370. 420.
PER Q= 11.1 77.7 11.2
AREA= 297.6 556.1 298.7
VEL= 1.6 5.9 1.6

*SECNO 24.000

3470 ENCROACHMENT STATIONS= 745.0 835.0 TYPE= 1 TARGET= 90.000

50 FT D/S NORTHVILLE RD. #4

24.00	11.31	748.31	0.00	0.00	748.69	0.38	1.52	0.01	740.00	
4190.	39.	4112.	39.	41.	819.	41.	337.	62.	740.00	
0.48	0.95	5.02	0.95	0.120	0.050	0.120	0.041	737.00	745.00	
0.001292	200.	1040.	1750.	2	0	0	0.00	90.00	835.00	

FLOW DISTRIBUTION FOR SECNO= 24.00 CWSEL= 748.31

STA= 745. 750. 830. 835.
PER Q= 0.9 98.1 0.9
AREA= 41.3 818.7 41.2
VEL= 1.0 5.0 1.0

*SECNO 25.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV

Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 750.80 ELREA= 750.80

D/S FACE NORTHVILLE RD. #4 CORPS C.S. #15

25.00	11.16	748.26	0.00	0.00	748.98	0.72	0.09	0.20	738.00
4190.	0.	4190.	0.	0.	617.	0.	338.	62.	742.50
0.48	0.00	6.79	0.00	0.120	0.050	0.120	0.041	737.10	1070.00
0.002525	50.	50.	50.	2	0	0	0.00	60.00	1130.00

FLOW DISTRIBUTION FOR SECNO= 25.00 CWSEL= 748.26

STA= 1070. 1130.
PER Q= 100.0
AREA= 616.6
VEL= 6.8

SPECIAL BRIDGE

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.67	3.00	0.00	56.24	1.00	590.50	0.00	737.20	737.10

*SECNO 26.000
PRESSURE FLOW

EGPRS	EGLWC	H3	QWSIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
749.57	749.05	0.03	0.	4190.	591.	580.	747.70	750.80

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 751.00 ELREA= 751.00

U/S FACE NORTHVILLE RD. #4 CORPS C.S. #16

26.00	11.69	748.89	0.00	0.00	749.57	0.68	0.59	0.00	738.00
4190.	0.	4190.	0.	0.	635.	0.	339.	62.	742.00
0.48	0.00	6.60	0.00	0.120	0.050	0.120	0.041	737.20	1070.00
0.002251	60.	60.	60.	2	0	0	0.00	60.00	1130.00

FLOW DISTRIBUTION FOR SECNO= 26.00 CWSEL= 748.89

STA= 1070. 1130.
PER Q= 100.0
AREA= 635.2
VEL= 6.6

*SECNO 27.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 755.60 ELREA= 755.60

D/S C.C. R.R. BRIDGE #2 CORPS C.S #17

	27.90	11.26	748.86	0.00	0.00	750.03	1.17	0.17	0.30	741.00
	4190.	0.	4190.	0.	0.	482.	0.	340.	62.	741.00
	0.49	0.00	8.69	0.00	0.120	0.050	0.120	0.041	737.60	1026.00
	0.004840	53.	53.	53.	2	0	0	0.00	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 27.90 CWSEL= 748.86

STA= 1026. 1074.
PER Q= 100.0
AREA= 482.0
VEL= 8.7

CCHV= 0.300 CEHV= 0.500
*SECNO 28.000

3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 773.00 MAX ELLC= 755.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 755.60 ELREA= 755.60

D/S FACE C.O. R.R. BRIDGE #2

28.00	11.13	748.73	0.00	0.00	750.16	1.43	0.00	0.13	741.00
4190.	0.	4190.	0.	0.	437.	0.	340.	62.	741.00
0.49	0.00	9.60	0.00	0.120	0.025	0.120	0.041	737.60	1026.00
0.002007	1.	1.	1.	2	0	0	-64.02	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 28.00 CWSEL= 748.73

STA= 1026. 1074.
PER Q= 100.0
AREA= 436.5
VEL= 9.6

*SECNO 29.000

3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 773.00 MAX ELLC= 755.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 773.00 ELREA= 773.00

U/S FACE C.O. R.R. BRIDGE #2

29.00	11.26	748.87	0.00	0.00	750.26	1.40	0.09	0.01	741.00
4190.	0.	4190.	0.	0.	441.	0.	340.	62.	741.00
0.49	0.00	9.49	0.00	0.120	0.025	0.120	0.041	737.60	1026.00
0.001940	46.	46.	46.	2	0	0	-66.96	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 29.00 CWSEL= 748.87

STA= 1026. 1074.
PER Q= 100.0
AREA= 441.3
VEL= 9.5

*SECNO 29.100

SECNO	DEPTH	CWSEL	CRIWS	QSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IN2	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 773.00 ELREA= 773.00

U/S C.O. R.R. BRIDGE #2

29.10	11.68	749.28	0.00	0.00	750.36	1.08	0.00	0.10	741.00
4190.	0.	4190.	0.	0.	503.	0.	340.	62.	741.00
0.49	0.00	8.34	0.00	0.120	0.023	0.120	0.041	737.60	1026.00
0.001063	1.	1.	1.	2	0	0	0.00	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 29.10 CWSEL= 749.28

STA= 1026. 1074.
PER Q= 100.0
AREA= 502.6
VEL= 8.3

*SECNO 30.000

3470 ENCROACHMENT STATIONS= 994.0 1106.0 TYPE= 1 TARGET= 112.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 753.90 ELREA= 753.90

D/S FACE SERVICE DRIVE CORPS C.S. =18

30.00	9.07	749.57	0.00	0.00	750.45	0.88	0.03	0.06	752.60
4190.	0.	4190.	0.	0.	556.	0.	340.	62.	752.60
0.49	0.00	7.53	0.00	0.120	0.025	0.120	0.041	740.50	1019.00
0.001204	25.	25.	25.	2	0	0	0.00	62.00	1081.00

FLOW DISTRIBUTION FOR SECNO= 30.00 CWSEL= 749.57

STA= 1019. 1081.
PER Q= 100.0
AREA= 556.4
VEL= 7.5

SPECIAL BRIDGE

SO XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.25	1.57	3.00	0.00	62.00	2.00	657.00	0.00	743.30	740.50

*SECNO 31.000

3301 HV CHANGED MORE THAN HVINS

CLASS A LOW FLOW

3420 BRIDGE W.S.= 750.90 BRIDGE VELOCITY= 7.76 CALCULATED CHANNEL AREA= 456.

EGPRS	EGLWC	H3	QWEIR	QBR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
0.00	751.48	0.12	.00	4190.	657.	636.	753.90	755.40

3470 ENCROACHMENT STATIONS= 969.0 1131.0 TYPE= 1 TARGET= 162.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 755.40 ELREA= 755.40

U/S FACE SERVICE DRIVE

31.00	6.38	749.68	0.00	0.00	751.48	1.79	1.03	0.00	755.40
4190.	0.	4190.	0.	0.	390.	0.	341.	62.	755.40
0.49	0.00	10.75	0.00	0.120	0.025	0.120	0.040	743.30	1019.00
0.003590	25.	25.	25.	0	0	0	0.00	62.00	1081.00

FLOW DISTRIBUTION FOR SECNO= 31.00 CWSEL= 749.68

STA= 1019. 1081.
PER Q= 100.0
AREA= 389.8
VEL= 10.7

*SECNO 31.900

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

D/S WATERFORD DAM

31.90	5.51	752.41	752.41	0.00	755.02	2.62	0.12	0.41	770.00
4190.	0.	4190.	0.	0.	323.	0.	341.	62.	770.00
0.49	0.00	12.98	0.00	0.120	0.025	0.120	0.040	746.90	35.00
0.006501	25.	25.	25.	20	11	0	0.00	62.00	97.00

FLOW DISTRIBUTION FOR SECNO= 31.90 CWSEL= 752.41

STA= 35. 122.
PER Q= 100.0
AREA= 322.8
VEL= 13.0

SPECIAL BRIDGE

SB	XK	XKOR	CDFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.50	3.00	0.00	62.00	0.00	0.10	0.00	746.90	746.90

*SECNO 32.000

3301 HV CHANGED MORE THAN HVINS

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID	ELLC	ELTRD

						AREA		
**********	754.73	0.00	3982.	2.	0.	-46308.	0.00	752.80

WATERFORD DAM					CORPS C.S. #19				
32.00	11.70	758.60	0.00	0.00	758.90	0.30	3.88	0.00	770.00
3950.	0.	3950.	0.	0.	899.	0.	341.	62.	770.00
0.49	0.00	4.39	0.00	0.120	0.025	0.120	0.040	746.90	0.00
0.000479	1.	1.	1.	2	0	7	0.00	122.00	122.00

FLOW DISTRIBUTION FOR SECNO= 32.00 CWSEL= 758.60

STA= 0. 122.

PER Q=	100.0
AREA=	899.1
VEL=	4.4

CCHV= 0.100 CEHV= 0.300

*SECNO 33.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

MIDDLE WATERFORD POND					CORPS C.S. #20				
33.00	9.68	758.98	0.00	0.00	758.99	0.01	0.06	0.03	764.00
3950.	0.	3950.	0.	0.	5346.	0.	425.	73.	767.00
0.93	0.00	0.74	0.00	0.120	0.035	0.120	0.040	749.30	88.36
0.000019	550.	1170.	1600.	3	0	0	0.00	659.76	748.12

FLOW DISTRIBUTION FOR SECNO= 33.00 CWSEL= 758.98

STA= 88. 765.

PER Q=	100.0
AREA=	5345.8
VEL=	0.7

*SECNO 34.000

NORTH END WATERFORD POND					CORPS C.S. #21				
34.00	8.03	759.03	0.00	0.00	759.05	0.03	0.05	0.01	755.50
3950.	5.	3936.	11.	22.	3069.	92.	574.	95.	757.00
1.26	0.15	1.28	0.12	0.120	0.035	0.120	0.039	751.00	9.47
0.000090	2085.	1530.	665.	2	0	0	0.00	650.55	660.03

FLOW DISTRIBUTION FOR SECNO= 34.00 CWSEL= 759.03

STA= 9. 30. 570. 650.

PER Q=	0.1	99.6	0.3
AREA=	21.7	3068.7	92.3
VEL=	0.1	1.3	0.1

CCHV= 0.300 CEHV= 0.500

*SECNO 35.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 93.0 213.0 TYPE= 1 TARGET= 120.000

50 FT D/S R.R. SPUR LINE CORPS C.S. #23

35.00	7.28	758.58	0.00	0.00	759.76	1.19	0.13	0.58	754.00
3950.	294.	3333.	323.	104.	353.	132.	595.	100.	754.00
1.28	2.83	9.45	2.44	0.080	0.035	0.080	0.039	751.30	93.00
0.004036	250.	490.	650.	2	0	0	0.00	120.00	213.00

FLOW DISTRIBUTION FOR SECNO= 35.00 CWSEL= 758.58

STA=	93.	117.	170.	213.
PER Q=	7.4	84.4	8.2	
AREA=	104.1	352.8	132.5	
VEL=	2.8	9.4	2.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 35.900

D/S R.R. SPUR LINE CORPS C.S. =22

35.90	8.35	759.25	0.00	0.00	760.05	0.79	0.17	0.12	774.30
3950.	0.	3950.	0.	0.	553.	0.	596.	100.	774.30
1.28	0.00	7.15	0.00	0.080	0.035	0.080	0.039	750.90	11.62
0.002857	49.	49.	49.	3	0	0	0.00	95.80	107.42

FLOW DISTRIBUTION FOR SECNO= 35.90 CWSEL= 759.25

STA=	12.	130.
PER Q=	100.0	
AREA=	552.6	
VEL=	7.1	

*SECNO 36.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 775.00 MAX ELLC= 772.00

D/S FACE R.R. SPUR LINE CORPS C.S. #22

36.00	8.18	759.08	0.00	0.00	760.23	1.15	0.00	0.18	772.00
3950.	0.	3950.	0.	0.	460.	0.	596.	100.	772.00
1.28	0.00	8.59	0.00	0.080	0.035	0.080	0.039	750.90	10.55
0.009973	1.	1.	1.	2	0	0	0.00	79.88	97.43

FLOW DISTRIBUTION FOR SECNO= 36.00 CWSEL= 759.08

STA=	11.	130.
PER Q=	100.0	
AREA=	459.7	
VEL=	8.6	

*SECNO 37.000

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 775.00 MAX ELLC= 772.00

U/S FACE R.R. SPUR LINE

37.00	8.82	759.72	0.00	0.00	760.64	0.92	0.35	0.07	772.00
3950.	0.	3950.	0.	0.	512.	0.	596.	100.	772.00
1.28	0.00	7.71	0.00	0.080	0.035	0.080	0.039	750.90	9.69
0.007681	40.	40.	40.	2	0	0	0.00	82.96	99.65

FLOW DISTRIBUTION FOR SECNO= 37.00 CWSEL= 759.72

STA= 10. 130.
PER Q= 100.0
AREA= 512.4
VEL= 7.7

*SECNO 37.100

U/S R.R. SPUR LINE

37.10	9.26	760.16	0.00	0.00	760.75	0.59	0.00	0.10	774.30
3950.	0.	3950.	0.	0.	642.	0.	596.	100.	774.30
1.28	0.00	6.15	0.00	0.080	0.035	0.080	0.039	750.90	10.25
0.001845	1.	1.	1.	2	0	0	0.00	100.26	110.51

FLOW DISTRIBUTION FOR SECNO= 37.10 CWSEL= 760.16

STA= 10. 130.
PER Q= 100.0
AREA= 542.3
VEL= 6.1

CCHV= 0.400 CEHV= 0.600
*SECNO 38.000

3470 ENCROACHMENT STATIONS= 53.0 253.0 TYPE= 1 TARGET= 200.000

50 FT U/S R.R. SPUR LINE CORPS C.S. #23

38.00	7.92	760.22	0.00	0.00	760.99	0.77	0.13	0.11	755.00
3950.	552.	3071.	328.	313.	387.	211.	597.	100.	755.00
1.28	1.76	7.94	1.56	0.150	0.045	0.150	0.039	752.30	53.00
0.004177	50.	50.	50.	2	0	0	0.00	175.78	228.78

FLOW DISTRIBUTION FOR SECNO= 38.00 CWSEL= 760.22

STA=	53.	117.	170.	220.	229.
PER Q=	14.0	77.7	9.1	0.2	
AREA=	313.1	386.5	198.6	11.9	
VEL=	1.3	7.9	1.6	0.3	

CCHV= 0.400 CEHV= 0.600

*SECNO 39.000

3470 ENCROACHMENT STATIONS= 418.0 493.0 TYPE= 1 TARGET= 75.000

50 FT D/S C.O. R.R. BRIDGE #3					CORPS C.S. #24				
39.00	11.29	765.39	0.00	0.00	766.07	0.68	5.04	0.04	758.50
3950.	192.	3483.	275.	83.	498.	108.	626.	104.	757.00
1.36	2.32	6.99	2.56	0.080	0.045	0.080	0.040	754.10	418.00
0.002170	1600.	1800.	1900.	2	0	0	0.00	75.00	493.00

FLOW DISTRIBUTION FOR SECNO= 39.00 CWSEL= 765.39

STA=	418.	430.	480.	493.
PER Q=		4.9	88.2	7.0
AREA=	82.8	497.9	107.6	
VEL=	2.3	7.0	2.6	

*SECNO 39.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 772.40 ELREA= 772.40

D/S C.O. R.R. BRIDGE #3					CORPS C.S. #25				
39.90	12.63	765.43	0.00	0.00	766.29	0.85	0.11	0.10	756.00
3950.	0.	3950.	0.	0.	533.	0.	627.	104.	756.00
1.36	0.00	7.41	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.002456	49.	49.	49.	2	0	0	0.00	48.00	1024.00

FLOW DISTRIBUTION FOR SECNO= 39.90 CWSEL= 765.43

STA=	976.	1024.
PER Q=	100.0	
AREA=	532.9	
VEL=	7.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 40.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NAD= 20 MIN ELTRD= 788.00 MAX ELLC= 772.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 772.40 ELREA= 772.40

D/S FACE C.O. R.R. BRIDGE #3									
40.00	12.55	765.35	0.00	0.00	766.38	1.03	0.00	0.09	756.00
3950.	0.	3950.	0.	0.	486.	0.	627.	104.	756.00
1.36	0.00	8.13	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.003833	1.	1.	1.	2	0	0	-91.83	48.00	1024.00

FLOW DISTRIBUTION FOR SECNO= 40.00 CWSEL= 765.35

STA= 976. 1024.
PER Q= 100.0
AREA= 485.6
VEL= 8.1

*SECNO 41.000

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 788.00 MAX ELLC= 772.40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 788.00 ELREA= 788.00

U/S FACE C.O. R.R. BRIDGE #3

41.00	12.74	765.54	0.00	0.00	766.54	1.00	0.15	0.01	756.00
3950.	0.	3950.	0.	0.	493.	0.	627.	104.	756.00
1.36	0.00	8.01	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.003656	40.	40.	40.	2	0	0	-100.29	48.00	1024.00

FLOW DISTRIBUTION FOR SECNO= 41.00 CWSEL= 765.54

STA= 976. 1024.
PER Q= 100.0
AREA= 493.1
VEL= 8.0

*SECNO 41.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 788.00 ELREA= 788.00

U/S C.O. R.R. BRIDGE #3

41.10	13.00	765.80	0.00	0.00	766.60	0.80	0.00	0.06	756.00
3950.	0.	3950.	0.	0.	550.	0.	627.	104.	756.00
1.36	0.00	7.18	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.002223	1.	1.	1.	2	0	0	0.00	48.00	1024.00

FLOW DISTRIBUTION FOR SECNO= 41.10 CWSEL= 765.80

STA= 976. 1024.
PER Q= 100.0
AREA= 550.4
VEL= 7.2

*SECNO 42.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 910.0 1085.0 TYPE= 1 TARGET= 175.000

VALLEY SECTION

42.00	13.21	766.76	0.00	0.00	766.98	0.21	0.20	0.18	756.75
3950.	980.	2502.	467.	528.	561.	307.	631.	105.	756.75
1.38	1.86	4.46	1.52	0.080	0.045	0.080	0.040	753.55	910.00
0.000706	165.	180.	200.	2	0	0	0.00	175.00	1085.00

FLOW DISTRIBUTION FOR SECNO= 42.00 CWSEL= 764.76

```
STA=      910.      960.      976.     1024.     1060.     1085.
  PER Q=     17.1       7.8      63.4      10.1       1.7
  AREA=     384.1     144.2     560.8     234.6      72.9
   VEL=       1.8       2.1       4.5       1.7       0.9

*SECNO 43.900

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      768.00 ELREA=      768.00

          D/S NORTHVILLE RD. #5                    CORPS C.S. #26

    43.90    12.55   766.85     0.00     0.00   767.22     0.37     0.17     0.08   762.00
    3950.       0.     3950.       0.       0.     808.       0.     636.     105.    764.00
     1.39     0.00     4.89     0.00    0.080    0.045    0.080    0.040   754.30  1105.00
0.001309      140.     180.     200.        2        0        0     0.00    90.00  1195.00


FLOW DISTRIBUTION FOR SECNO=     43.90          CWSEL=     766.85

STA=     1105.     1195.
  PER Q=     100.0
  AREA=     807.9
   VEL=       4.9

*SECNO 44.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD= 18 MIN ELTRD=  768.60 MAX ELLC=  768.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      768.00 ELREA=      768.00

          D/S FACE NORTHVILLE RD. #5

    44.00    12.51   766.81     0.00     0.00   767.27     0.46     0.00     0.04   762.00
    3950.       0.     3950.       0.       0.     728.       0.     636.     105.    764.00
     1.39     0.00     5.43     0.00    0.080    0.045    0.080    0.040   754.30  1105.00
0.001854         1.       1.       1.        2        0        0  -498.07    90.00  1195.00


FLOW DISTRIBUTION FOR SECNO=     44.00          CWSEL=     766.81

STA=     1105.     1195.
  PER Q=     100.0
  AREA=     727.6
   VEL=       5.4

*SECNO 45.000

3370 NORMAL BRIDGE,NRD= 18 MIN ELTRD=  768.60 MAX ELLC=  768.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      768.60 ELREA=      768.60

          U/S FACE NORTHVILLE RD. #5
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      45.00     12.63    766.93      0.00      0.00    767.38      0.44      0.11      0.00    762.00
      3950.        0.      3950.        0.        0.      738.        0.      637.       105.     764.00
       1.39      0.00      5.35      0.00     0.080     0.045     0.080     0.040    754.30   1105.00
   0.001772        60.       60.       60.         2         0         0   -517.62     90.00   1195.00

 FLOW DISTRIBUTION FOR SECNO=      45.00          CWSEL=     766.93

 STA=     1105.     1195.
   PER Q=     100.0
    AREA=     737.9
     VEL=       5.4

 *SECNO 45.100

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      768.60 ELREA=      768.60

          U/S NORTHVILLE RD. #5

      45.10     12.75    767.05      0.00      0.00    767.41      0.36      0.00      0.03    762.00
      3950.        0.      3950.        0.        0.      826.        0.      637.       106.     764.00
       1.39      0.00      4.78      0.00     0.080     0.045     0.080     0.040    754.30   1105.00
   0.001219         1.        1.        1.         2         0         0      0.00     90.00   1195.00

 FLOW DISTRIBUTION FOR SECNO=      45.10          CWSEL=     767.05

 STA=     1105.     1195.
   PER Q=     100.0
    AREA=     826.0
     VEL=       4.8

 CCHV=    0.300 CEHV=    0.500
 *SECNO 46.000

 3470 ENCROACHMENT STATIONS=      575.0      765.0  TYPE=       1  TARGET=      190.000

          50 FT U/S NORTHVILLE RD. #5                CORPS C.S. #27

      46.00     13.22    767.12      0.00      0.00    767.46      0.34      0.05      0.00    762.00
      3950.       210.      3096.       644.       291.       591.       336.       638.       106.     761.50
       1.39      0.72      5.24      1.92     0.150     0.035     0.060     0.040    753.90    575.00
   0.000769        50.       50.       50.         1         0         0      0.00    190.00    765.00

 FLOW DISTRIBUTION FOR SECNO=      46.00          CWSEL=     767.12

 STA=      575.      600.      640.      700.      730.      740.      765.
   PER Q=       1.7       3.6      78.4       6.1       2.2       8.1
    AREA=     106.2     184.9     591.3     131.2      46.2     158.2
     VEL=       0.6       0.8       5.2       1.8       1.9       2.0

 CCHV=    0.300 CEHV=    0.500
 *SECNO 47.000

          50 FT D/S PARK BRIDGE                      CORPS C.S. #28

      47.00     11.33    767.96      0.00      0.00    768.02      0.06      0.47      3.09    759.00
      3950.       1308.      1149.      1493.      1156.       419.      2133.       726.       123.     758.50
       1.69      0.79      2.74      0.70     0.080     0.035     0.080     0.040    756.60    121.23
   0.000184        1000.     1400.     1750.         2         0         0      0.00    848.13    969.36
```

FLOW DISTRIBUTION FOR SECNO= 47.00 CWSEL= 767.98

STA=	121.	160.	180.	280.	410.	425.	465.	480.	580.	880.	969.
PER Q=	2.0	2.5	10.9	15.2	2.5	29.1	2.5	10.9	23.3	1.1	
AREA=	135.3	119.6	547.9	744.7	108.4	418.6	108.4	547.9	1343.6	133.1	
VEL=	0.6	0.8	0.8	0.8	0.9	2.7	0.9	0.8	0.7	0.3	

*SECNO 47.900

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

D/S PARK BRIDGE CORPS C.S. # 29

47.90	10.98	767.98	0.00	0.00	768.05	0.07	0.01	0.01	764.70
3950.	1227.	1237.	1486.	1098.	366.	1599.	730.	124.	764.70
1.70	1.12	3.38	0.93	0.080	0.035	0.080	0.040	757.00	49.07
0.000425	49.	49.	49.	2	0	0	0.00	732.38	781.45

FLOW DISTRIBUTION FOR SECNO= 47.90 CWSEL= 767.98

STA=	49.	70.	210.	275.	310.	360.	460.	465.	660.	770.	781.
PER Q=	1.2	23.1	6.7	31.3	5.2	14.1	0.6	15.1	2.7	0.0	
AREA=	62.6	767.3	268.5	365.6	206.5	498.1	22.4	678.8	190.4	2.8	
VEL=	0.8	1.2	1.0	3.4	1.0	1.1	1.0	0.9	0.6	0.1	

*SECNO 48.000

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 762.00 MAX ELLC= 761.90

U/S FACE PARK BRIDGE

48.00	11.03	768.03	0.00	0.00	768.06	0.03	0.00	0.01	764.70
3950.	1591.	561.	1798.	1109.	281.	1546.	730.	124.	764.70
1.70	1.43	1.99	1.16	0.080	0.035	0.080	0.040	757.00	48.90
0.000693	1.	1.	1.	2	0	0	-160.75	733.66	782.56

FLOW DISTRIBUTION FOR SECNO= 48.00 CWSEL= 768.03

STA=	49.	70.	210.	275.	310.	360.	460.	465.	660.	770.	783.
PER Q=	1.6	30.0	8.7	14.2	3.2	18.3	0.8	19.7	3.6	0.0	
AREA=	63.6	773.9	271.5	281.5	133.9	502.8	22.6	687.9	195.5	3.3	
VEL=	1.0	1.5	1.3	2.0	0.9	1.4	1.3	1.1	0.7	0.2	

*SECNO 49.000

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 762.00 MAX ELLC= 761.90

U/S FACE PARK BRIDGE

49.00	11.04	768.04	0.00	0.00	768.07	0.03	0.02	0.00	764.70
3950.	1590.	560.	1800.	1112.	282.	1552.	732.	124.	764.70
1.70	1.43	1.99	1.16	0.080	0.035	0.080	0.040	757.00	48.86
0.000687	22.	22.	22.	0	0	0	-160.75	733.99	782.85

FLOW DISTRIBUTION FOR SECNO= 49.00 CWSEL= 768.04

STA=	49.	70.	210.	275.	310.	360.	460.	465.	660.	770.	783.
PER Q=	1.6	29.9	8.7	14.2	3.2	18.3	0.8	19.8	3.6	0.0	
AREA=	63.8	775.6	272.3	281.9	134.5	504.0	22.7	690.3	196.9	3.5	
VEL=	1.0	1.5	1.3	2.0	0.9	1.4	1.3	1.1	0.7	0.2	

*SECNO 49.100

U/S PARK BRIDGE

49.10	11.03	768.03	0.00	0.00	768.09	0.06	0.00	0.02	764.70	
3950.	1228.	1226.	1496.	1111.	367.	1625.	732.	124.	764.70	
1.70	1.11	3.34	0.92	0.080	0.035	0.080	0.040	757.00	48.88	
0.000411	1.	1.	1.	1	0	0	0.00	733.87	782.75	

FLOW DISTRIBUTION FOR SECNO= 49.10 CWSEL= 768.03

STA=	49.	70.	210.	275.	310.	360.	460.	465.	660.	770.	783.
PER Q=	1.2	23.1	6.7	31.0	5.2	14.1	0.6	15.2	2.8	0.0	
AREA=	63.7	775.0	272.1	367.5	209.3	503.5	22.7	689.4	196.4	3.4	
VEL=	0.8	1.2	1.0	3.3	1.0	1.1	1.0	0.9	0.6	0.2	

*SECNO 50.000

50 FT U/S PARK BRIDGE CORPS C.S. #28

50.00	10.97	768.07	0.00	0.00	768.11	0.04	0.01	0.01	759.50	
3950.	1318.	1100.	1532.	1642.	402.	2144.	736.	125.	759.00	
1.71	0.80	2.74	0.71	0.080	0.035	0.080	0.040	757.10	120.76	
0.000194	50.	50.	50.	1	0	0	0.00	851.16	971.92	

FLOW DISTRIBUTION FOR SECNO= 50.00 CWSEL= 768.07

STA=	121.	160.	180.	280.	410.	425.	465.	480.	580.	880.	972.
PER Q=	2.1	2.6	11.4	14.9	2.4	27.8	2.3	10.6	24.6	1.2	
AREA=	138.6	121.3	556.4	723.3	102.2	402.1	102.2	531.4	1369.2	140.8	
VEL=	0.6	0.9	0.8	0.8	0.9	2.7	0.9	0.8	0.7	0.3	

*SECNO 51.000

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	RV	RL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IHZ	ICONT	CORAR	TOPWID	ENDST

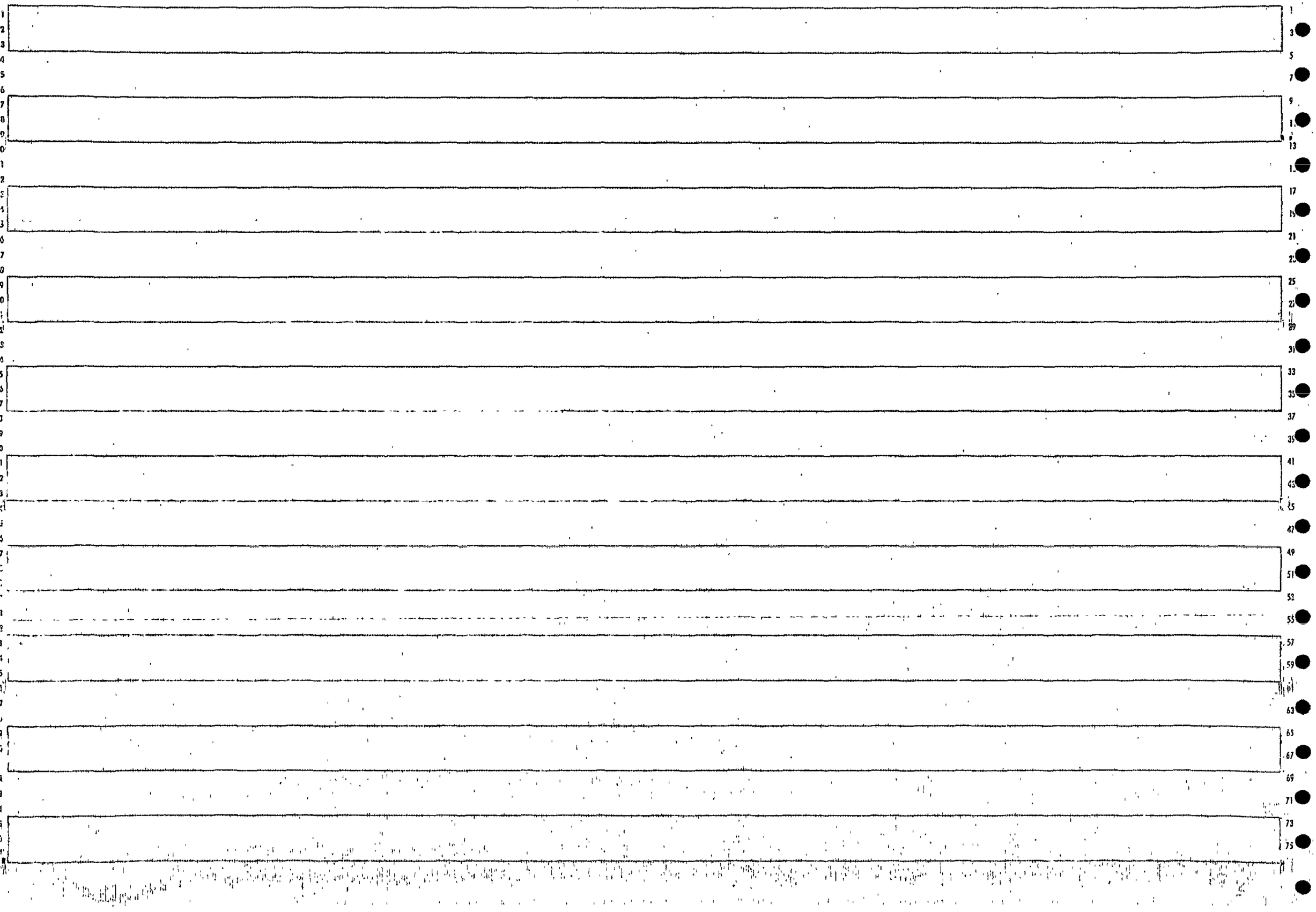
D/S 7 MILE RD.

51.00	8.30	768.40	0.00	0.00	768.52	0.12	0.37	0.04	761.00	
3950.	1222.	946.	1782.	960.	187.	1361.	811.	146.	764.00	
1.84	1.27	5.07	1.31	0.080	0.035	0.080	0.039	760.10	0.00	
0.001026	978.	978.	978.	2	0	0	0.00	968.19	1070.18	

FLOW DISTRIBUTION FOR SECNO= 51.00 CWSEL= 768.40

STA=	0.	218.	350.	500.	550.	575.	600.	700.	1000.	1070.
PER Q=	1.8	0.4	11.5	8.9	8.3	24.0	17.8	26.7	0.6	

AREA=	152.7	29.0	398.0	220.2	160.1	186.6	440.4	871.1	49.2
VEL=	0.5	0.6	1.1	1.6	2.0	5.1	1.6	1.2	0.5



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**************************************************
   HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
   ERROR CORR -  01
   MODIFICATION -  50,51,52
**************************************************

T1       CITY OF NORTHVILLE FIS WUD 2006-07
T2       MIDDLE ROUGE RIVER XSECTIONS FROM CORPS START W.S. FROM N.V. TWP. FIS
T3       MID.ROUGE R. N.VILLE C.

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
         0.        5.         0.         0.  0.000000       0.00       0.0         0.   730.480      0.000

J2  NPROF     IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
      15.000     0.000    -1.000     0.000      0.000      0.000      0.000      0.000      0.000     15.000
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*PROF 2

CCHV=   0.100 CEHV=   0.300
*SECNO 1.000
 2800 NAT Q1=   9405.25  WSEL=    730.38  ENC Q1=   9490.70  WSEL=    730.48  RATIO= -0.0091
 NAT Q1=   9558.  RATIOS LOB,CH,ROB=  0.0007  0.9929  0.0064  WSEL=    730.48
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IN2       ICONT     CORAR     TOPWID     ENDST


3470 ENCROACHMENT STATIONS=      43.0      490.0  TYPE=     4  TARGET=       0.007

         NORTHVILLE TOWNSHIP CORPERATE BOUNDARY  CORPS C.S. #2

     1.00    13.38   730.48    0.00   730.38   730.49    0.01     0.00     0.00   725.00
     4190.      0.     4190.      0.      0.     4678.      0.       0.       0.   724.50
     0.00     0.00     0.90     0.00    0.120    0.035    0.120    0.000  717.10    43.00
 0.000020       0.       0.       0.       0        0        0     0.00  447.00   490.00


FLOW DISTRIBUTION FOR SECNO=     1.00          CWSEL=   730.48

STA=      43.     490.
  PER Q=   100.0
   AREA=  4678.0
    VEL=     0.9

CCHV=   0.300 CEHV=   0.500
*SECNO 2.000
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3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=     257.5      528.5  TYPE=     1  TARGET=     271.000

         INLET TO PHOENIX LAKE                  CORPS C.S. #4

     2.00    10.11   730.31    0.00   730.20   730.84    0.53     0.09     0.26   724.90
     4190.     876.    2681.     634.     573.     372.     468.       96.     11.   724.60
     0.07     1.53     7.21     1.35    0.120    0.035    0.120    0.036  720.20   257.50
 0.001835.     800.    1400.    1700.       2        C        0     0.00  271.00   528.50

FLOW DISTRIBUTION FOR SECNO=     2.00          CWSEL=   730.31

STA=     258.     370.     416.     460.     528.
  PER Q=   20.9     64.0      7.4      7.7
   AREA=  573.2    371.6    207.3    260.5
    VEL=     1.5      7.2      1.5      1.2

*SECNO 3.000
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3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=     359.0      428.0  TYPE=     1  TARGET=      70.000

         50 FT D/S C.O. R.R. BRIDGE #1          CORPS C.S. #4

     3.00     9.65   730.75    0.00   730.69   732.62    1.87     1.11     0.67   725.80
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4190.	117.	3952.	120.	59.	350.	60.	104.	13.	725.50
0.08	1.99	11.28	2.02	0.120	0.035	0.120	0.036	721.10	358.00
0.004857	300.	395.	500.	2	0	0	0.00	70.00	428.00

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 730.75

STA=	358.	370.	416.	428.
PER Q=	2.8	94.3	2.9	
AREA=	59.0	350.3	59.7	
VEL=	2.0	11.3	2.0	

*SECNO 3.900

3470 ENCROACHMENT STATIONS= 1.0 630.0 TYPE= 1 TARGET= 629.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 737.40 ELREA= 737.40

D/S C.O. R.R. BRIDGE

3.90	9.84	730.94	0.00	730.88	732.92	1.98	0.24	0.06	725.60
4190.	0.	4190.	0.	0.	371.	0.	104.	13.	726.00
0.08	0.00	11.30	0.00	0.120	0.035	0.120	0.036	721.10	370.00
0.005135	49.	49.	49.	2	0	0	0.00	46.00	416.00

FLOW DISTRIBUTION FOR SECNO= 3.90 CWSEL= 730.94

STA=	370.	416.
PER Q=	100.0	
AREA=	370.6	
VEL=	11.3	

CCHV= 0.300 CEHV= 0.500

*SECNO 4.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	.TN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IP2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 760.00 MAX ELLC= 737.40

3470 ENCROACHMENT STATIONS= 1.0 630.0 TYPE= 1 TARGET= 629.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 737.40 ELREA= 737.40

D/S FACE C.O. R.R. BRIDGE #1

4.00	9.43	730.53	0.00	730.47	733.34	2.80	0.01	0.41	725.60
4190.	0.	4190.	0.	0.	312.	0.	104.	13.	726.00
0.08	0.00	13.43	0.00	0.120	0.030	0.120	0.036	721.10	370.00
0.007336	1.	1.	1.	2	0	0	-119.17	46.00	416.00

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 730.53

STA= 370. 416.
PER Q= 100.0
AREA= 311.9
VEL= 13.4

*SECNO 5.000

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD= 760.00 MAX ELLC= 737.40

3470 ENCROACHMENT STATIONS= 1.0 1025.0 TYPE= 1 TARGET= 1024.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 760.00 ELREA= 760.00

U/S FACE C.O. R.R. BRIDGE #1 CORPS C.S. #5

5.00	8.79	730.99	730.67	730.94	734.40	3.41	0.76	0.31	727.00
4190.	0.	4190.	0.	0.	283.	0.	105.	13.	726.00
0.09	0.00	14.83	0.00	0.120	0.030	0.120	0.035	722.20	329.00
0.009841	90.	90.	90.	4	15	0	-300.91	46.00	375.00

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 730.99

STA= 329. 375.
PER Q= 100.0
AREA= 282.6
VEL= 14.8

CCHV= 0.300 CEHV= 0.500

*SECNO 5.100

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1.0 1025.0 TYPE= 1 TARGET= 1024.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 760.00 ELREA= 760.00

U/S C.O. R.R. BRIDGE

5.10	11.44	733.64	0.00	733.65	735.02	1.38	0.00	0.61	727.00
4190.	0.	4190.	0.	0.	445.	0.	105.	13.	726.00
0.09	0.00	9.42	0.00	0.120	0.030	0.120	0.035	722.20	329.00
0.002091	1.	1.	1.	5	0	0	0.00	46.00	375.00

FLOW DISTRIBUTION FOR SECNO= 5.10 CWSEL= 733.64

STA= 329. 375.
PER Q= 100.0
AREA= 444.7
VEL= 9.4

*SECNO 6.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 179.0 525.0 TYPE= 1 TARGET= 346.000

VALLEY SECTION

6.00	13.04	735.39	0.00	735.40	735.47	0.08	0.07	0.39	727.15
4190.	1253.	1748.	1189.	1238.	518.	1199.	111.	14.	726.15
0.11	1.01	3.37	0.99	0.080	0.030	0.080	0.035	722.35	179.00
0.000189	150.	150.	150.	2	0	0	0.00	346.00	525.00

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 735.39

STA=	179.	225.	325.	329.	375.	525.
PER Q=	8.7	20.5	0.7	41.7	28.4	
AREA=	382.7	824.0	31.0	518.3	1198.6	
VEL=	0.9	1.0	1.0	3.4	1.0	

*SECNO 6.900

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

D/S NORTHVILLE RD. #1 CORPS C.S. # 6

6.90	12.86	735.36	0.00	735.37	735.57	0.21	0.03	0.06	724.50
4190.	834.	3037.	319.	818.	707.	496.	120.	15.	725.00
0.12	1.02	4.30	0.64	0.080	0.030	0.080	0.034	722.50	126.13
0.000282	250.	133.	50.	2	0	0	0.00	408.87	535.00

FLOW DISTRIBUTION FOR SECNO= 6.90 CWSEL= 735.36

STA=	126.	145.	200.	244.	270.	330.	355.	455.	505.	535.
PER Q=	1.2	11.4	3.6	3.7	72.5	3.3	2.9	1.3	0.1	
AREA=	69.4	404.7	187.4	156.2	706.8	144.0	225.9	105.4	20.8	
VEL=	0.7	1.2	0.8	1.0	4.3	1.0	0.5	0.5	0.2	

CCHV= 0.300 CEHV= 0.500

*SECNO 7.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IN2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 734.20 MAX ELLC= 732.40

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

D/S FACE NORTHVILLE RD. #1

7.00	12.40	734.90	729.27	734.91	736.03	1.14	0.00	0.46	724.50
4190.	28.	3642.	520.	34.	402.	124.	120.	15.	725.00
0.12	0.83	9.05	4.20	0.120	0.030	0.080	0.034	722.50	127.31
0.011265	1.	1.	1.	4	16	0	-1273.61	407.69	535.00

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 734.90

STA=	127.	244.	270.	330.	355.	455.

PER Q=	0.2	0.4	86.9	12.1	0.3
AREA=	15.4	18.2	402.4	103.8	20.0
VEL=	0.6	1.0	9.0	4.9	0.7

*SECNO 8.000

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD= 12 MIN ELTRD= 734.20 MAX ELLC= 732.40

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

U/S FACE NORTHVILLE RD. #1

8.00	13.55	736.05	0.00	736.06	736.68	0.63	0.50	0.15	724.50
4190.	140.	3326.	724.	129.	471.	273.	121.	15.	725.00
0.12	1.09	7.06	2.65	0.120	0.030	0.080	0.034	722.50	125.00
0.005548	65.	65.	65.	3	0	0	-1430.34	410.00	535.00

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 736.05

STA=	125.	200.	244.	270.	330.	355.	455.	505.	535.
PER Q=	0.3	1.5	1.5	79.4	12.7	4.0	0.5	0.0	
AREA=	22.1	58.4	48.1	471.4	132.5	112.3	24.2	4.3	
VEL=	0.5	1.1	1.3	7.1	4.0	1.5	0.9	0.4	

*SECNO 8.100

3470 ENCROACHMENT STATIONS= 125.0 535.0 TYPE= 1 TARGET= 410.000

U/S NORTHVILLE RD. #1

8.10	14.15	736.65	0.00	736.66	736.82	0.17	0.00	0.14	724.50
4190.	647.	3038.	505.	1006.	785.	762.	121.	15.	725.00
0.12	0.64	3.87	0.66	0.120	0.030	0.080	0.034	722.50	125.00
0.000199	1.	1.	1.	2	0	0	0.00	410.00	535.00

FLOW DISTRIBUTION FOR SECNO= 8.10 CWSEL= 736.65

STA=	125.	145.	200.	244.	270.	330.	355.	455.	505.	535.
PER Q=	1.0	8.4	3.2	2.9	72.5	3.9	5.2	2.4	0.6	
AREA=	95.1	476.1	244.5	190.0	784.7	176.4	355.7	170.3	59.7	
VEL=	0.5	0.7	0.5	0.6	3.9	0.9	0.6	0.6	0.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 9.000

2800 NAT Q1= 3789.50 WSEL= 736.83 ENC Q1= 3789.50 WSEL= 736.93 RATIO= 0.0000

NAT Q1= 3895. RATIOS LOB,CH,ROB= 0.1186 0.4289 0.4524 WSEL= 736.93

3470 ENCROACHMENT STATIONS= 163.5 630.8 TYPE= 4 TARGET= 0.027

50 FT U/S NORTHVILLE RD. #1

9.00	14.33	736.83	0.00	736.83	736.87	0.04	0.01	0.04	724.50
4190.	450.	1855.	1884.	790.	795.	2294.	124.	16.	725.00
0.13	0.57	2.33	0.82	0.120	0.040	0.080	0.034	722.50	163.53
0.000127	49.	49.	49.	2	0	0	0.00	467.23	630.76

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 736.83

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STA=      164.      200.      260.      320.      480.      631.
  PER Q=       2.2       8.6      44.3      33.0      12.0
   AREA=     215.7     574.7     794.7    1492.4     802.0
    VEL=       0.4       0.6       2.3       0.9       0.6

CCHV=   0.300 CEHV=   0.500
*SECNO 10.000
 2800 NAT Q1=   3100.35  WSEL=     736.95  ENC Q1=   3100.35  WSEL=     737.05  RATIO=  0.0000
 NAT Q1=   3166.  RATIOS LOB,CH,ROB=  0.3209  0.5392  0.1399  WSEL=     737.05

3470 ENCROACHMENT STATIONS=      215.0      662.2  TYPE=      4  TARGET=        0.021

        D/S ABANDONED MILL                          CORPS C.S. #7

    10.00     13.85    736.95      0.00    736.95    737.07      0.12      0.16      0.04    725.00
    4190.     1320.     2324.      546.     1511.      630.      745.      207.       27.    726.00
     0.25      0.87      3.69      0.73     0.080     0.030     0.080     0.033    723.10    215.05
 0.000190      500.     1035.     1500.         2         0         0      0.00    447.11    662.16

FLOW DISTRIBUTION FOR SECNO=      10.00          CWSEL=     736.95

STA=      215.      250.      442.      444.      448.      450.      500.      510.      515.      640.      662.
  PER Q=       3.5      26.2       0.2       1.0       0.5      55.5       2.8       0.7       8.7       0.9
   AREA=     197.8    1238.4      15.4      37.8      21.4     630.0      99.5      34.7     537.5      73.1
    VEL=       0.8       0.9       0.6       1.1       0.9       3.7       1.2       0.8       0.7       0.5

1490 NH CARD USED
*SECNO 10.900
 2800 NAT Q1=   2159.90  WSEL=     737.00  ENC Q1=   2159.90  WSEL=     737.10  RATIO=  0.0000
 NAT Q1=   2217.  RATIOS LOB,CH,ROB=  0.5166  0.1910  0.2923  WSEL=     737.10
   SECNO     DEPTH     CWSEL     CRINS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      AROB      ACH       AROB      VOL       TWA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID      ENDST

3470 ENCROACHMENT STATIONS=      228.7      663.3  TYPE=      4  TARGET=        0.026

        1FT D/S ABANDONED MILL                      CORPS C.S. #8

    10.90     11.90    737.00      0.00    737.00    737.09      0.09      0.01      0.01    727.50
    4190.     2161.      830.     1199.     1486.      180.      773.      210.       28.    728.00
     0.26      1.45      4.61      1.55     0.067     0.030     0.060     0.033    725.10    228.73
 0.000396       50.       50.       50.         2         0         0      0.00    434.57    663.29

FLOW DISTRIBUTION FOR SECNO=      10.90          CWSEL=     737.00

STA=      229.      350.      428.      450.      477.      482.      498.      535.      610.      663.
  PER Q=      17.1      11.8       7.7      12.2       2.9      19.8      18.7       8.2       1.7
   AREA=     642.3     429.1     152.0     216.0      46.3     179.9     317.0     339.6     116.6
    VEL=       1.1       1.2       2.1       2.4       2.6       4.6       2.5       1.0       0.6

*SECNO 11.000
 2800 NAT Q1=   1596.59  WSEL=     737.03  ENC Q1=   1596.59  WSEL=     737.14  RATIO=  0.0000
 NAT Q1=   1646.  RATIOS LOB,CH,ROB=  0.5818  0.1165  0.3017  WSEL=     737.14

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=      225.9      673.5  TYPE=      4  TARGET=        0.030
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D/S FACE ABANDONED MILL

11.00	8.63	737.03	0.00	737.03	737.10	0.07	0.00	0.01	740.00
4190.	2447.	509.	1234.	1386.	138.	705.	210.	28.	734.00
0.26	1.77	3.69	1.75	0.070	0.030	0.064	0.033	728.40	225.85
0.000730	1.	1.	1.	2	0	0	0.00	439.61	670.46

FLOW DISTRIBUTION FOR SECNO= 11.00 CWSEL= 737.03

STA=	226.	350.	428.	467.	477.	498.	535.	610.	670.
PER Q=	23.7	16.2	17.7	0.8	12.2	15.5	11.2	2.7	
AREA=	656.7	431.7	272.3	25.3	138.2	229.8	342.1	133.0	
VEL=	1.5	1.6	2.7	1.3	3.7	2.8	1.4	0.8	

*SECNO 11.500
2800 NAT Q1= 1597.78 WSEL= 737.04 ENC Q1= 1597.78 WSEL= 737.14 RATIO= 0.0000
NAT Q1= 1647. RATIOS LOB,CH,ROB= 0.5818 0.1164 0.3018 WSEL= 737.14

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 226.0 670.1 TYPE= 4 TARGET= 0.030

U/S FACE ABANDONED MILL

11.50	8.64	737.04	0.00	737.04	737.11	0.07	0.00	0.00	740.00
4190.	2447.	509.	1233.	1386.	138.	705.	210.	28.	734.00
0.26	1.77	3.68	1.75	0.070	0.030	0.064	0.033	728.40	226.00
0.000729	5.	5.	5.	0	0	0	0.00	439.09	670.09

FLOW DISTRIBUTION FOR SECNO= 11.50 CWSEL= 737.04

STA=	226.	350.	428.	467.	477.	498.	535.	610.	670.
PER Q=	23.7	16.2	17.7	0.8	12.2	15.6	11.2	2.7	
AREA=	656.6	431.9	272.5	25.4	138.2	229.9	342.3	132.4	
VEL=	1.5	1.6	2.7	1.3	3.7	2.8	1.4	0.8	

*SECNO 11.600
2800 NAT Q1= 2177.36 WSEL= 737.03 ENC Q1= 2177.36 WSEL= 737.13 RATIO= 0.0000
NAT Q1= 2231. RATIOS LOB,CH,ROB= 0.5168 0.1905 0.2926 WSEL= 737.13

3470 ENCROACHMENT STATIONS= 227.4 666.8 TYPE= 4 TARGET= 0.024

1 FT U/S ABANDONED MILL

11.60	11.93	737.03	0.00	737.03	737.12	0.09	0.00	0.01	727.50
4190.	2162.	826.	1202.	1499.	180.	786.	210.	28.	728.00
0.26	1.44	4.58	1.53	0.067	0.030	0.060	0.033	725.10	227.35
0.000388	1.	1.	1.	1	0	0	0.00	439.47	666.82

FLOW DISTRIBUTION FOR SECNO= 11.60 CWSEL= 737.03

STA=	227.	350.	428.	450.	477.	482.	498.	535.	610.	667.
PER Q=	17.2	11.8	7.7	12.1	2.9	19.7	18.7	8.2	1.8	
AREA=	651.2	431.6	152.7	216.9	46.4	180.4	318.2	342.0	125.5	
VEL=	1.1	1.1	2.1	2.3	2.6	4.6	2.5	1.0	0.6	

*SECNO 11.900
2800 NAT Q1= 2183.54 WSEL= 737.05 ENC Q1= 2188.54 WSEL= 737.15 RATIO= 0.0000
NAT Q1= 2242. RATIOS LOB,CH,ROB= 0.5170 0.1901 0.2929 WSEL= 737.15

3470 ENCROACHMENT STATIONS= 227.0 667.7 TYPE= 4 TARGET= 0.024

U/S ABANDONED MILL

11.90	11.95	737.05	0.00	737.05	737.14	0.09	0.02	0.00	727.50
4190.	2163.	824.	1203.	1503.	181.	789.	213.	28.	728.00
0.27	1.44	4.57	1.52	0.067	0.030	0.060	0.033	725.10	227.01
0.000385	49.	49.	49.	0	0	0	0.00	440.65	667.67

FLOW DISTRIBUTION FOR SECNO= 11.90 CWSEL= 737.05

STA=	227.	350.	428.	450.	477.	482.	498.	535.	610.	668.
PER Q=	17.2	11.8	7.7	12.1	2.9	19.7	18.6	8.2	1.9	
AREA=	653.8	432.5	153.0	217.2	46.5	180.6	318.7	342.9	127.9	
VEL=	1.1	1.1	2.1	2.3	2.6	4.6	2.5	1.0	0.6	

CCHV= 0.300 CEHV= 0.500

*SECNO 12.000

2800 NAT Q1= 1194.52 WSEL= 736.99 ENC Q1= 1194.52 WSEL= 737.10 RATIO= 0.0000

NAT Q1= 1223. RATIOS LOB,CH,ROB= 0.0258 0.8960 0.0781 WSEL= 737.10

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 180.5 433.7 TYPE= 4 TARGET= 0.023

50 FT D/S NORTHVILLE RD. #2 CORPS C.S. #9

12.00	10.09	736.99	0.00	736.99	737.65	0.66	0.23	0.29	728.20
4190.	59.	3861.	270.	53.	567.	369.	228.	32.	728.20
0.28	1.10	6.81	0.73	0.120	0.035	0.120	0.033	726.90	180.54
0.001289	200.	325.	675.	2	0	0	0.00	253.17	433.71

FLOW DISTRIBUTION FOR SECNO= 12.00 CWSEL= 736.99

STA=	181.	198.	248.	260.	310.	410.	434.
PER Q=	1.4	92.1	1.5	0.9	3.3	0.7	
AREA=	53.4	566.9	57.5	69.4	198.8	43.6	
VEL=	1.1	6.8	1.1	0.6	0.7	0.6	

*SECNO 13.000

2800 NAT Q1= 1218.97 WSEL= 737.08 ENC Q1= 1218.97 WSEL= 737.18 RATIO= 0.0000

NAT Q1= 1248. RATIOS LOB,CH,ROB= 0.0263 0.8913 0.0824 WSEL= 737.18

3470 ENCROACHMENT STATIONS= 180.2 438.4 TYPE= 4 TARGET= 0.023

D/S FACE NORTHVILLE RD. #2

13.00	10.18	737.08	0.00	737.08	737.72	0.64	0.06	0.01	728.20
4190.	61.	3840.	289.	56.	572.	395.	230.	32.	728.20
0.29	1.10	6.71	0.73	0.120	0.035	0.120	0.033	726.90	180.22
0.001235	50.	50.	50.	2	0	0	0.00	258.22	438.44

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 737.08

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 STA=      180.      188.      248.      260.      310.      410.      438.
   PER Q=     1.5      91.6       1.5       1.0       3.5       0.8
    AREA=    55.8     572.5      58.6      74.0     208.1      54.1
     VEL=     1.1       6.7       1.1       0.6       0.7       0.6


 SPECIAL BRIDGE

 SK  XK        XKOR      COEQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      1.05      1.61      3.00      0.00     54.00      1.00     340.00     0.00     726.90    726.90

 *SECNO 14.000
 6870 D.S. ENERGY OF  737.72 HIGHER THAN COMPUTED ENERGY OF  737.55
  2800 NAT Q1=   1220.65  WSEL=    737.08  ENC Q1=   1220.65  WSEL=    737.18  RATIO=  0.0000
  NAT Q1=   1248.  RATIOS LOB,CH,ROB=  0.0263  0.8912  0.0825  WSEL=    737.18
  WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

 3470 ENCROACHMENT STATIONS=     179.9     440.5  TYPE=     4  TARGET=      0.022

          U/S FACE NORTHVILLE RD. #2

     14.00    10.18   737.08     0.00   737.08   737.72     0.64     0.07     0.00   728.20
     4190.      64.     3835.     291.      58.     573.     399.     231.      33.    728.20
      0.29     1.11      6.70     0.73    0.120    0.035    0.120    0.033   726.90   179.87
 0.001231       60.       60.       60.        0        0        4     0.00   260.60   440.47


 FLOW DISTRIBUTION FOR SECNO=     14.00          CWSEL=    737.08

 STA=      180.      188.      248.      260.      310.      410.      440.
   PER Q=     1.5      91.5       1.5       1.0       3.5       0.9
    AREA=    57.7     572.6      58.6      74.1     208.2      57.6
     VEL=     1.1       6.7       1.1       0.6       0.7       0.6


 CCHV=   0.400 CEHV=   0.600
 *SECNO 15.000
  2800 NAT Q1=   1008.27  WSEL=    737.39  ENC Q1=   1008.27  WSEL=    737.49  RATIO=  0.0000
  NAT Q1=   1035.  RATIOS LOB,CH,ROB=  0.0613  0.7673  0.1714  WSEL=    737.49

 3470 ENCROACHMENT STATIONS=     151.3     418.9  TYPE=     4  TARGET=      0.026

          50 FT U/S NORTHVILLE RD. #2          CORPS C.S. #10

     15.00     9.41   737.41     0.00   737.39   737.87     0.46     0.07     0.07   728.00
     4190.      206.     3311.     672.     161.     545.     555.     232.      33.    729.00
      0.29     1.28      6.08     1.21    0.120    0.045    0.120    0.033   728.00   151.30
 0.001791       50.       50.       50.        2        0        0     0.00   267.56   418.87


 FLOW DISTRIBUTION FOR SECNO=     15.00          CWSEL=    737.41

 STA=      151.      185.      190.      250.      265.      300.      419.
   PER Q=     3.6       1.4      79.0       4.1       4.2       7.7
    AREA=   124.9      35.8     544.6      96.1     136.8     322.2
     VEL=     1.2       1.6       6.1       1.8       1.3       1.0


 *SECNO 16.000
  2800 NAT Q1=    798.84  WSEL=    740.59  ENC Q1=    798.84  WSEL=    740.59  RATIO=  0.0000
  NAT Q1=    819.  RATIOS LOB,CH,ROB=  0.0136  0.9511  0.0353  WSEL=    740.59

 3301 HV CHANGED MORE THAN HVINS
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3470 ENCROACHMENT STATIONS= 725.3 906.4 TYPE= 4 TARGET= 0.024

50 FT D/S NORTHVILLE RD. #3 CORPS C.S. #11

16.00	10.60	740.60	0.00	740.49	741.66	1.06	3.43	0.36	735.00	
4190.	3.	4087.	101.	5.	489.	116.	258.	37.	734.00	
0.34	0.55	8.36	0.86	0.120	0.040	0.120	0.036	730.00	725.28	
0.002747	1300.	1690.	450.	2	0	0	0.00	181.07	906.36	

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 740.60

STA=	725.	726.	780.	793.	906.
PER Q=	0.1	97.5	1.6	0.8	
AREA=	4.8	489.1	48.1	68.3	
VEL=	0.5	8.4	1.4	0.5	

*SECNO 17.000

2800 NAT Q1= 952.24 WSEL= 740.69 ENC Q1= 952.24 WSEL= 740.79 RATIO= 0.0000

NAT Q1= 975. RATIOS LOB,CH,ROB= 0.0134 0.9457 0.0410 WSEL= 740.79

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 725.1 959.6 TYPE= 4 TARGET= 0.024

D/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

17.00	10.81	740.81	0.00	740.69	741.80	0.99	0.11	0.03	735.00	
4190.	3.	4060.	127.	6.	500.	185.	259.	37.	734.00	
0.35	0.50	8.12	0.68	0.120	0.035	0.120	0.036	730.00	725.13	
0.001928	50.	50.	50.	2	0	0	0.00	234.46	959.58	

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 740.81

STA=	725.	726.	780.	793.	960.
PER Q=	0.1	96.9	1.5	1.5	
AREA=	5.8	500.1	50.9	134.6	
VEL=	0.5	8.1	1.2	0.5	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BMC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	2.15	3.00	0.00	38.60	2.00	267.00	0.00	730.00	730.00

*SECNO 18.000

2800 NAT Q1= 1035.86 WSEL= 741.04 ENC Q1= 1035.86 WSEL= 741.14 RATIO= 0.0000

NAT Q1= 1061. RATIOS LOB,CH,ROB= 0.0166 0.9236 0.0598 WSEL= 741.14

WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3470 ENCROACHMENT STATIONS= 722.7 1015.4 TYPE= 4 TARGET= 0.024

U/S FACE NORTHVILLE RD. #3 CORPS C.S. #11

18.00	11.15	741.15	0.00	741.04	742.01	0.86	0.11	0.05	735.00	
4190.	16.	3966.	208.	19.	519.	312.	260.	38.	734.00	
0.35	0.65	7.55	0.67	0.120	0.035	0.120	0.036	730.00	722.69	
0.001629	60.	60.	60.	0	0	5	0.00	292.68	1015.38	

FLOW DISTRIBUTION FOR SECNO= 18.00 CWSEL= 741.15

STA=	723.	726.	780.	793.	1015.
PER Q=	0.4	94.6	1.6	3.4	
AREA=	19.1	518.5	55.5	256.6	
VEL=	0.9	7.6	1.2	0.5	

CCHV= 0.400 CEHV= 0.600

*SECNO 19.000

2800 NAT Q1= 1001.85 WSEL= 741.68 ENC Q1= 1001.85 WSEL= 741.78 RATIO= 0.0000

NAT Q1= 1030. RATIOS LOB,CH,ROB= 0.0338 0.8353 0.1309 WSEL= 741.78

3470 ENCROACHMENT STATIONS= 798.0 1189.8 TYPE= 4 TARGET= 0.027

50 FT U/S NORTHVILLE RD. #3 CORPS C.S. #11

19.00	11.82	741.82	0.00	741.68	742.26	0.44	0.08	0.17	735.00	
4190.	87.	3587.	516.	68.	622.	618.	261.	38.	734.00	
0.35	1.27	5.77	0.84	0.120	0.050	0.120	0.036	730.00	798.00	
0.001718	50.	50.	50.	3	0	0	0.00	391.83	1189.83	

FLOW DISTRIBUTION FOR SECNO= 19.00 CWSEL= 741.82

STA=	798.	800.	815.	875.	890.	1190.
PER Q=	0.0	2.0	85.6	2.4	9.9	
AREA=	3.6	64.8	621.9	72.3	545.4	
VEL=	0.5	1.3	5.8	1.4	0.8	

*SECNO 20.000

3470 ENCROACHMENT STATIONS= 390.0 465.0 TYPE= 1 TARGET= 75.000

50 FT D/S 6 MILE RD. CORPS C.S. #13

20.00	13.45	745.35	0.00	745.27	746.18	0.83	3.68	0.23	739.00
4190.	113.	3992.	85.	62.	533.	51.	296.	47.	740.00
0.41	1.81	7.50	1.67	0.120	0.050	0.120	0.039	731.90	390.00
0.003526	750.	1550.	1750.	3	0	0	0.00	75.00	465.00

FLOW DISTRIBUTION FOR SECNO= 20.00 CWSEL= 745.35

STA=	390.	400.	455.	465.
PER Q=	2.7	95.3	2.0	
AREA=	62.5	532.6	50.6	
VEL=	1.8	7.5	1.7	

*SECNO 21.000

2800 NAT Q1= 610.96 WSEL= 745.36 ENC Q1= 620.94 WSEL= 745.46 RATIO= -0.0163

NAT Q1= 621. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 745.46

3470 ENCROACHMENT STATIONS= 400.0 450.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 750.00 ELREA= 750.00

D/S 6 MILE RD. CORPS C.S. #14

21.00	12.35	745.45	0.00	745.36	746.57	1.13	0.22	0.18	740.00
4190.	0.	4190.	0.	0.	492.	0.	297.	47.	740.00
0.41	0.00	8.52	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.005443	50.	50.	50	2	0	0	0.00	50.00	450.00

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FLOW DISTRISUTION FOR SECNO= 21.00 CWSEL= 745.45

STA= 400. 450.
PER Q= 100.0
AREA= 491.8
VEL= 8.5

*SECNO 21.100
2800 NAT Q1= 611.39 WSEL= 745.36 ENC Q1= 621.55 WSEL= 745.46 RATIO= -0.0166
NAT Q1= 622. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 745.46

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	KV	hL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST
21.10	12.35	745.45	0.00	745.36	746.58	1.13	0.01	0.00	740.00
4190.	0.	4190.	0.	0.	492.	0.	297.	47.	740.00
0.41	0.00	8.52	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.005435	1.	1.	1.	0	0	0	-0.00	50.00	450.00

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 750.00 MAX ELLC= 750.00

3470 ENCROACHMENT STATIONS= 400.0 450.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 751.00 ELREA= 751.00

D/S FACE 6 MILE RD.

FLOW DISTRIBUTION FOR SECNO= 21.10 CWSEL= 745.45

STA= 400. 450.
PER Q= 100.0
AREA= 492.0
VEL= 8.5

*SECNO 21.900
2800 NAT Q1= 644.24 WSEL= 745.69 ENC Q1= 654.32 WSEL= 745.79 RATIO= -0.0156
NAT Q1= 654. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 745.79

3370 NORMAL BRIDGE,NRD= 9 MIN ELTRD= 750.00 MAX ELLC= 750.00

3470 ENCROACHMENT STATIONS= 400.0 450.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 751.00 ELREA= 751.00

U/S FACE 6 MILE RD.

21.90	12.72	745.82	0.00	745.69	746.87	1.05	0.26	0.03	740.00
4190.	0.	4190.	0.	0.	511.	0.	298.	47.	740.00
0.41	0.00	8.20	0.00	0.120	0.050	0.120	0.039	733.10	400.00
0.004876	50.	50.	50.	2	0	0	-0.00	50.00	450.00

FLOW DISTRIBUTION FOR SECNO= 21.90 CWSEL= 745.82

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 STA=     400.      450.
  PER Q=     100.0
   AREA=     510.7
    VEL=       8.2

 *SECNO 22.000
 2800 NAT Q1=     644.64  WSEL=     745.69  ENC Q1=     654.87  WSEL=     745.79  RATIO= -0.0159
  NAT Q1=     655.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     745.79

 3470 ENCROACHMENT STATIONS=      400.0      450.0  TYPE=       4  TARGET=        0.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       751.00 ELREA=       751.00

          U/S 6 MILE RD.

      22.00     12.73    745.83      0.00    745.69    746.87      1.04      0.00      0.00    740.00
      4190.        0.     4190.        0.        0.      511.        0.       298.       47.    740.00
       0.41      0.00      8.20      0.00      0.120     0.050     0.120     0.039    733.10    400.00
   0.004870         1.        1.        1.         0         0         0      0.00     50.00    450.00

 FLOW DISTRIBUTION FOR SECNO=      22.00          CWSEL=     745.83

 STA=     400.      450.
  PER Q=     100.0
   AREA=     510.9
    VEL=       8.2

 *SECNO 23.000

 3301 HV CHANGED MORE THAN HVINS

 3470 ENCROACHMENT STATIONS=      270.0      420.0  TYPE=       1  TARGET=      150.000

          50 FT U/S 6 MILE RD.

      23.00     13.75    746.85      0.00    746.73    747.26      0.41      0.13      0.25    740.00
      4190.      472.     3244.      474.      303.      562.      305.       299.       47.    740.00
       0.42      1.55      5.77      1.56      0.120     0.050     0.120     0.039    733.10    270.00
   0.001628       50.       50.       50.         3         0         0      0.00    150.00    420.00

 FLOW DISTRIBUTION FOR SECNO=      23.00          CWSEL=     746.85

 STA=     270.      320.      370.      420.
  PER Q=      11.3      77.4      11.3
   AREA=     303.4     362.0     304.6
    VEL=       1.6       5.8       1.6

 *SECNO 24.000

 3470 ENCROACHMENT STATIONS=      745.0      835.0  TYPE=       1  TARGET=       90.000

          50 FT D/S NORTHVILLE RD. #4

      24.00     11.37    748.37      0.00    748.31    748.74      0.38      1.47      0.01    740.00
      4190.       39.     4112.       39.       42.      824.       42.       323.       50.    740.00
       0.47      0.94      4.99      0.94      0.120     0.050     0.120     0.040    737.00    745.00
   0.001263        20.      1040.      1750.         3         0         0      0.00     90.00    835.00

 FLOW DISTRIBUTION FOR SECNO=      24.00          CWSEL=     748.37
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STA=      745.      750.      830.      835.
  PER Q=       0.9      98.1       0.9
   AREA=      41.7     824.2      41.5
    VEL=       0.9       5.0       0.9

*SECNO 25.000
 2800 NAT Q1=     833.76  WSEL=     748.26  ENC Q1=     847.02  WSEL=     748.36  RATIO= -0.0159
 NAT Q1=     847.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     748.36
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID     ENDST


3470 ENCROACHMENT STATIONS=     1070.0     1130.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       750.80 ELREA=       750.80


        D/S FACE NORTHVILLE RD. #4                CORPS C.S. #15

     25.00     11.23    748.33      0.00    748.26    749.04      0.71      0.10      0.20    738.00
     4190.        0.     4190.        0.        0.      621.        0.      324.       50.    742.50
      0.48      0.00      6.75      0.00     0.120     0.050     0.120     0.040    737.10   1070.00
  0.003231       50.       50.       50.         2         0         0      0.00     60.00   1130.00


FLOW DISTRIBUTION FOR SECNO=      25.00          CWSEL=     748.33

STA=     1070.     1130.
  PER Q=     100.0
   AREA=     620.8
    VEL=       6.7


SPECIAL BRIDGE

SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05      1.67       3.00       0.00      56.24       1.00     590.50      0.00     737.20     737.10

*SECNO 26.000
CLASS A LOW FLOW

3420 BRIDGE U.S.=     748.35 BRIDGE VELOCITY=       6.77      CALCULATED CHANNEL AREA=       616.

 EGPRS      EGLWC      H3        QWEIR      QPR        BAREA    TRAPEZOID      ELLC      ELTRD
                                                                  AREA
   749.64     749.65     0.03        0.     4190.       591.       580.      747.70     750.80


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       751.00 ELREA=       751.00


        U/S FACE NORTHVILLE RD. #4                CORPS C.S. #16

     26.00     11.79    748.99      0.00    748.89    749.65      0.66      0.62      0.00    738.00
     4190.        0.     4190.        0.        0.      641.        0.      325.       50.    742.00
      0.48      0.00      6.54      0.00     0.120     0.050     0.120     0.041    737.20   1070.00
  0.002186       60.       60.       60.         0         0         0      0.00     60.00   1130.00
```

FLOW DISTRIBUTION FOR SECNO= 26.00 CWSEL= 748.99

STA= 1070. 1130.
PER Q= 100.0
AREA= 641.0
VEL= 6.5

*SECNO 27.900
2800 NAT Q1= 602.26 WSEL= 748.86 ENC Q1= 611.60 WSEL= 748.96 RATIO= -0.0155
NAT Q1= 612. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 748.96

3470 ENCROACHMENT STATIONS= 1026.0 1074.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 755.60 ELREA= 755.60

D/S C.O. R.R. BRIDGE #2 CORPS C.S. #17

27.90	11.37	748.97	0.00	748.86	750.12	1.15	0.18	0.29	741.00
4190.	0.	4190.	0.	0.	487.	0.	325.	50.	741.00
0.48	0.00	8.60	0.00	0.120	0.050	0.120	0.041	737.60	1026.00
0.005701	53.	53.	53.	2	0	0	0.00	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 27.90 CWSEL= 748.97

STA= 1026. 1074.
PER Q= 100.0
AREA= 487.5
VEL= 8.6

CCHV= 0.300 CEHV= 0.500
*SECNO 28.000
2800 NAT Q1= 935.36 WSEL= 748.73 ENC Q1= 947.47 WSEL= 748.83 RATIO= -0.0129
NAT Q1= 947. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 748.83

3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 773.00 MAX ELLC= 755.60

3470 ENCROACHMENT STATIONS= 1026.0 1074.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 755.60 ELREA= 755.60

D/S FACE C.O. R.R. BRIDGE #2

28.00	11.24	748.84	0.00	748.73	750.26	1.42	0.00	0.14	741.00
4190.	0.	4190.	0.	0.	439.	0.	325.	50.	741.00
0.48	0.00	9.55	0.00	0.120	0.025	0.120	0.041	737.60	1026.00
0.002356	1.	1.	1.	2	0	0	-42.60	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 28.00 CWSEL= 748.84

STA= 1026. 1074.
PER Q= 100.0
AREA= 438.5
VEL= 9.6

*SECNO 29.000
2800 NAT Q1= 951.19 WSEL= 748.87 ENC Q1= 963.36 WSEL= 748.97 RATIO= -0.0128
NAT Q1= 963. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 748.97

3370 NORMAL BRIDGE,NRD= 32 MIN ELTRD= 773.00 MAX ELLC= 755.60

3470 ENCROACHMENT STATIONS= 1026.0 1074.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 773.00 ELREA= 773.00

U/S FACE C.O. R.R. BRIDGE #2

29.00	11.39	748.99	0.00	748.87	750.38	1.38	0.11	0.01	741.00
4190.	0.	4190.	0.	0.	444.	0.	326.	50.	741.00
0.48	0.00	9.44	0.00	0.120	0.025	0.120	0.041	737.60	1026.00
0.002273	46.	46.	46.	2	0	0	-44.43	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 29.00 CWSEL= 748.99

STA= 1026. 1074.
PER Q= 100.0
AREA= 444.0
VEL= 9.4

*SECNO 29.100
2800 NAT Q1= 1284.94 WSEL= 749.28 ENC Q1= 1302.97 WSEL= 749.38 RATIO= -0.0140
NAT Q1= 1303. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 749.38

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 1026.0 1074.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 773.00 ELREA= 773.00

U/S C.O. R.R. BRIDGE #2

29.10	11.83	749.43	0.00	749.28	750.48	1.05	0.00	0.10	741.00
4190.	0.	4190.	0.	0.	510.	0.	326.	50.	741.00
0.48	0.00	8.22	0.00	0.120	0.025	0.120	0.040	737.60	1026.00
0.001253	1.	1.	1.	2	0	0	0.00	48.00	1074.00

FLOW DISTRIBUTION FOR SECNO= 29.10 CWSEL= 749.43

STA= 1026. 1074.
PER Q= 100.0
AREA= 509.5
VEL= 8.2

*SECNO 30.000

3470 ENCROACHMENT STATIONS= 994.0 1106.0 TYPE= 1 TARGET= 112.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 753.90 ELREA= 753.90

D/S FACE SERVICE DRIVE CORPS C.S. =18

30.00	9.21	749.71	0.00	749.57	750.57	0.85	0.03	0.06	752.60
4190.	0.	4190.	0.	0.	565.	0.	326.	50.	752.60
0.48	0.00	7.41	0.00	0.120	0.025	0.120	0.040	740.50	1019.00

0.001147	25.	25.	25.	2	0	0	0.00	62.00	1081.00

FLOW DISTRIBUTION FOR SECNO= 30.00 CWSEL= 749.71

STA= 1019. 1081.
PER Q= 100.0
AREA= 565.3
VEL= 7.4

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.57	3.00	0.00	62.00	2.00	657.00	0.00	743.30	740.50

*SECNO 31.000

3301 HV CHANGED MORE THAN HVTOL

CLASS A LOW FLOW

3420 BRIDGE W.S.= 751.04 BRIDGE VELOCITY= 7.64 CALCULATED CHANNEL AREA= 465.

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
0.00	751.54	0.11	0.	4190.	657.	636.	753.90	755.40

3470 ENCROACHMENT STATIONS= 969.0 1131.0 TYPE= 1 TARGET= 162.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 755.40 ELREA= 755.40

U/S FACE SERVICE DRIVE

31.00	6.52	749.82	0.00	749.68	751.54	1.72	0.97	0.00	755.40
4190.	0.	4190.	0.	0.	398.	0.	326.	50.	755.40
0.48	0.00	10.52	0.00	0.120	0.025	0.120	0.040	743.30	1019.00
0.003357	25.	25.	25.	0	0	0	0.00	62.00	1081.00

FLOW DISTRIBUTION FOR SECNO= 31.00 CWSEL= 749.82

STA= 1219. 1081.
PER Q= 100.0
AREA= 398.4
VEL= 10.5

*SECNO 31.900
2800 NAT Q1= 519.66 WSEL= 752.41 ENC Q1= 535.43 WSEL= 752.51 RATIO= -0.0304
NAT Q1= 535. RATIOS LOB, CH, ROB= 0.0000 1.0000 0.0000 WSEL= 752.51

3301 HV CHANGED MORE THAN HVTOL

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	IL	GLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XTCR	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL, CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

D/S WATERFORD DAM

31.90	5.52	752.42	752.42	752.41	755.02	2.61	0.11	0.44	770.00	
4190.	0.	4190.	0.	0.	323.	0.	327.	50.	770.00	
0.48	0.00	12.96	0.00	0.120	0.025	0.120	0.040	746.90	35.00	
0.006466	25.	25.	25.	20	11	0	0.00	62.00	97.00	

FLOW DISTRIBUTION FOR SECNO= 31.90 CWSEL= 752.42

STA= 35. 122.
PER Q= 100.0
AREA= 323.3
VEL= 13.0

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.50	3.00	0.00	62.00	0.00	0.10	0.00	746.90	746.90

*SECNO 32.000
2800 NAT Q1= 1805.34 WSEL= 758.60 ENC Q1= 1844.41 WSEL= 758.70 RATIO= -0.0216
NAT Q1= 1844. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 758.70
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

WATERFORD DAM CORPS C.S. #19

32.00	11.71	758.61	0.00	758.60	758.91	0.30	0.00	0.69	770.00
3950.	0.	3950.	0.	0.	900.	0.	327.	50.	770.00
0.48	0.00	4.39	0.00	0.120	0.025	0.120	0.040	746.90	0.00
0.000477	1.	1.	1.	0	0	7	0.00	122.00	122.00

FLOW DISTRIBUTION FOR SECNO= 32.00 CWSEL= 758.61

STA= 0. 122.
PER Q= 100.0
AREA= 900.1
VEL= 4.4

CCHV= 0.100 CEHV= 0.300
*SECNO 33.000
2800 NAT Q1= 9100.99 WSEL= 758.98 ENC Q1= 9285.25 WSEL= 759.08 RATIO= -0.0202
NAT Q1= 9285. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 759.08

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IN2	ICONT	CORAR	TOPWID	ENDST

34?C ENCROACHMENT STATIONS= 80.0 765.0 TYPE= 4 TARGET= 0.000

MIDDLE WATERFORD POND CORPS C.S. #20

33.00	9.69	758.99	0.00	758.98	759.00	0.01	0.06	0.03	764.00
3950.	0.	3950.	0.	0.	5351.	0.	411.	61.	767.00
0.93	3.00	0.74	0.00	0.120	0.035	0.120	0.040	749.30	88.35
0.000019	550.	1170.	1600.	2	0	0	0.00	659.79	748.14

FLOW DISTRIBUTION FOR SECNO= 33.00 CWSEL= 758.99

STA= 88. 765.
PER Q= 100.0
AREA= 5351.2
VEL= 0.7

*SECNO 34.000
2800 NAT Q1= 4153.75 WSEL= 759.03 ENC Q1= 4261.30 WSEL= 759.13 RATIO= -0.0259
NAT Q1= 4279. RATIOS LOB,CH,ROB= 0.0009 0.9959 0.0032 WSEL= 759.13

3470 ENCROACHMENT STATIONS= 30.0 570.0 TYPE= 4 TARGET= 0.004

NORTH END WATERFORD POND CORPS C.S. #21

34.00	8.03	759.03	0.00	759.03	759.06	0.03	0.05	0.01	755.50
3950.	0.	3950.	0.	0.	3073.	0.	559.	82.	757.00
1.26	0.00	1.29	0.00	0.120	0.035	0.120	0.039	751.00	30.00
0.000092	2085.	1530.	665.	2	0	0	0.00	540.00	570.00

FLOW DISTRIBUTION FOR SECNO= 34.00 CWSEL= 759.03

STA= 30. 570.
PER Q= 100.0
AREA= 3073.5
VEL= 1.3

CCHV= 0.300 CEHV= 0.500
*SECNO 35.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 93.0 213.0 TYPE= 1 TARGET= 120.000

50 FT D/S R.R. SPUR LINE CORPS C.S. #23

35.00	7.29	758.59	0.00	758.58	759.77	1.18	0.14	0.58	754.00
3950.	295.	3332.	324.	104.	354.	133.	579.	86.	754.00
1.27	2.82	9.42	2.43	0.080	0.035	0.080	0.039	751.30	93.00
0.004006	250.	490.	650.	2	0	0	0.00	120.00	213.00

FLOW DISTRIBUTION FOR SECNO= 35.00 CWSEL= 758.59

STA= 93. 117. 170. 213.
PER Q= 7.5 84.4 8.2
AREA= 104.4 353.5 133.0
VEL= 2.8 9.4 2.4

CCHV= 0.300 CEHV= 0.500
*SECNO 35.900
2800 NAT Q1= 738.97 WSEL= 759.25 ENC Q1= 758.03 WSEL= 759.35 RATIO= -0.0258
NAT Q1= 758. RATIOS LOB,CH,ROB= 0.0200 1.0000 0.0000 WSEL= 759.35

D/S R.R. SPUR LINE CORPS C.S. =22

35.90	3.36	759.26	0.00	759.25	760.09	0.79	0.16	0.12	774.30
3950.	0.	3950.	0.	0.	553.	0.	580.	86.	774.30
1.27	0.00	7.14	0.00	0.080	0.035	0.080	0.039	750.90	11.61
0.002847	49.	49.	49.	3	0	0	0.00	95.83	107.44

FLOW DISTRIBUTION FOR SECNO= 35.90 CWSEL= 759.26

STA= 12. 130.
PER Q= 100.0
AREA= 553.3
VEL= 7.1

*SECNO 36.000
2800 NAT Q1= 395.53 WSEL= 759.08 ENC Q1= 403.74 WSEL= 759.18 RATIO= -0.0208
NAT Q1= 404. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 759.18

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 775.00 MAX ELLC= 772.00

D/S FACE R.R. SPUR LINE CORPS C.S. #22

36.00	8.19	759.09	0.00	759.08	760.23	1.14	0.00	0.18	772.00
3950.	0.	3950.	0.	0.	460.	0.	580.	86.	772.00
1.27	0.00	8.58	0.00	0.080	0.035	0.080	0.039	750.90	10.55
0.009947	1.	1.	1.	2	0	0	0.00	79.91	97.45

FLOW DISTRIBUTION FOR SECNO= 36.00 CWSEL= 759.09

STA= 11. 130.
PER Q= 100.0
AREA= 460.2
VEL= 8.6

*SECNO 37.000
2800 NAT Q1= 450.69 WSEL= 759.72 ENC Q1= 458.76 WSEL= 759.82 RATIO= -0.0179
NAT Q1= 459. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 759.82

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	XL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IN2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 775.00 MAX ELLC= 772.00

U/S FACE R.R. SPUR LINE

37.00	8.83	759.73	0.00	759.72	760.65	0.92	0.35	0.07	772.00
3950.	0.	3950.	0.	0.	512.	0.	580.	86.	772.00
1.28	0.00	7.71	0.00	0.080	0.035	0.080	0.039	750.90	9.69
0.007681	40.	40.	40.	2	0	0	0.00	82.96	99.65

FLOW DISTRIBUTION FOR SECNO= 37.00 CWSEL= 759.73

STA= 10. 130.
PER Q= 100.0
AREA= 512.4
VEL= 7.7

*SECNO 37.100

2800 NAT Q1= 919.50 WSEL= 760.16 ENC Q1= 939.02 WSEL= 760.26 RATIO= -0.0212
NAT Q1= 939. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 760.26

U/S R.R. SPUR LINE

37.10	9.27	760.17	0.00	760.16	760.75	0.59	0.00	0.10	774.30
3950.	0.	3950.	0.	0.	643.	0.	580.	86.	774.30
1.28	0.00	6.14	0.00	0.080	0.035	0.080	0.039	750.90	10.24
0.001841	1.	1.	1.	2	0	0	0.00	100.28	110.52

FLOW DISTRIBUTION FOR SECNO= 37.10 CWSEL= 760.17

STA= 10. 130.
PER Q= 100.0
AREA= 642.9
VEL= 6.1

CCHV= 0.400 CEHV= 0.600
*SECNO 38.000

3470 ENCROACHMENT STATIONS= 53.0 253.0 TYPE= 1 TARGET= 200.000

50 FT U/S R.R. SPUR LINE CORPS C.S. #23

38.00	7.93	760.23	0.00	760.22	761.00	0.77	0.13	0.11	755.00
3950.	552.	3070.	328.	313.	387.	211.	581.	86.	755.00
1.28	1.76	7.94	1.56	0.150	0.045	0.150	0.039	752.30	53.00
0.004167	50.	50.	50.	2	0	0	0.00	175.79	228.79

FLOW DISTRIBUTION FOR SECNO= 38.00 CWSEL= 760.23

STA= 53. 117. 170. 220. 229.
PER Q= 14.0 77.7 8.1 0.2
AREA= 313.4 386.8 198.8 12.0
VEL= 1.8 7.9 1.6 0.8

CCHV= 0.400 CEHV= 0.600
*SECNO 39.000

3470 ENCROACHMENT STATIONS= 418.0 493.0 TYPE= 1 TARGET= 75.000

50 FT U/S C.O. R.R. BRIDGE #3 CORPS C.S. #24

39.00	11.29	765.39	0.00	765.39	766.07	0.68	5.04	0.04	758.50
3950.	192.	3483.	275.	83.	498.	108.	610.	90.	757.00
1.35	2.32	7.00	2.56	0.080	0.045	0.080	0.040	754.10	418.00
0.002171	1610.	1800.	1000.	2	0	0	0.00	75.00	493.00

FLOW DISTRIBUTION FOR SECNO= 39.00 CWSEL= 765.39

STA= 418. 430. 480. 493.
PER Q= 4.9 88.2 7.0
AREA= 82.8 497.9 107.6
VEL= 2.3 7.0 2.6

*SECNO 39.900
2800 NAT Q1= 797.04 WSEL= 765.43 ENC Q1= 808.15 WSEL= 765.53 RATIO= -0.0139
NAT Q1= 808. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 765.53

3470 ENCROACHMENT STATIONS= 976.0 1024.0 TYPE= 4 TARGET= 0.000

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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       772.40 ELREA=       772.40

        D/S C.O. R.R. BRIDGE #3                    CORPS C.S. #25

     39.90     12.65    765.45      0.00    765.43    766.30      0.85      0.13      0.10    756.00
     3950.        0.     3950.        0.        0.      534.        0.      611.       91.    756.00
      1.35      1.00      7.40      0.00     0.080     0.045     0.080     0.040    752.80    976.00
  0.003216       49.       49.       49.         2         0         0      0.00     48.00   1024.00

FLOW DISTRIBUTION FOR SECNO=      39.90          CWSEL=     765.45

STA=      976.     1024.
  PER Q=     100.0
   AREA=     533.6
    VEL=       7.4

CCHV=    0.300 CEHV=    0.500
*SECNO 40.000
 2800 NAT Q1=     637.98  WSEL=     765.35  ENC Q1=     646.01  WSEL=     765.45  RATIO= -0.0126
 NAT Q1=     646.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     765.45
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IH2       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD=  788.00 MAX ELLC=  772.40

3470 ENCROACHMENT STATIONS=      976.0     1024.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       772.40 ELREA=       772.40

        D/S FACE C.O. R.R. BRIDGE #3

     40.00     12.55    765.37      0.00    765.35    766.39      1.03      0.00      0.09    756.00
     3950.        0.     3950.        0.        0.      486.        0.      611.       91.    756.00
      1.35      0.00      8.13      0.00     0.080     0.045     0.080     0.040    752.80    976.00
  0.004912        1.        1.        1.         2         0         0    -43.90     48.00   1024.00

FLOW DISTRIBUTION FOR SECNO=      40.00          CWSEL=     765.37

STA=      976.     1024.
  PER Q=     100.0
   AREA=     485.7
    VEL=       8.1

*SECNO 41.000
 2800 NAT Q1=     653.23  WSEL=     765.54  ENC Q1=     661.30  WSEL=     765.64  RATIO= -0.0124
 NAT Q1=     661.  RATIOS LOB,CH,ROB=  0.0000  1.0000  0.0000  WSEL=     765.64

3370 NORMAL BRIDGE,NRD= 20 MIN ELTRD=  788.00 MAX ELLC=  772.40

3470 ENCROACHMENT STATIONS=      976.0     1024.0  TYPE=      4  TARGET=        0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       788.00 ELREA=       788.00
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U/S FACE C.O. R.R. BRIDGE #3

41.00	12.81	765.61	0.00	765.54	766.59	0.99	0.19	0.01	756.00
3950.	0.	3950.	0.	0.	495.	0.	612.	91.	756.00
1.35	0.00	7.98	0.00	0.090	0.045	0.080	0.040	752.80	976.00
0.004656	40.	40.	40.	2	0	0	-46.31	48.00	1024.00

FLOW DISTRIBUTION FOR SECNO= 41.00 CWSEL= 765.61

STA= 976. 1024.
PER Q= 100.0
AREA= 494.8
VEL= 8.0

*SECNO 41.100

2800 NAT Q1= 837.77 WSEL= 765.80 ENC Q1= 848.92 WSEL= 765.90 RATIO= -0.0133
NAT Q1= 849. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 765.90

3470 ENCROACHMENT STATIONS= 976.0 1024.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 788.00 ELREA= 788.00

U/S C.O. R.R. BRIDGE #3

41.10	13.07	765.87	0.00	765.80	766.66	0.79	0.00	0.06	756.00
3950.	0.	3950.	0.	0.	554.	0.	612.	91.	756.00
1.35	0.00	7.13	0.00	0.080	0.045	0.080	0.040	752.80	976.00
0.002888	1.	1.	1.	2	0	0	0.00	48.00	1024.00

FLOW DISTRIBUTION FOR SECNO= 41.10 CWSEL= 765.87

STA= 976. 1024.
PER Q= 100.0
AREA= 553.8
VEL= 7.1

*SECNO 42.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 910.0 1085.0 TYPE= 1 TARGET= 175.000

VALLEY SECTION

42.00	13.29	766.84	0.00	766.76	767.05	0.21	0.22	0.17	756.75
3950.	982.	2496.	472.	533.	564.	312.	615.	91.	756.75
1.37	1.84	4.42	1.51	0.080	0.045	0.080	0.040	753.55	910.00
0.000687	140.	180.	200.	2	0	0	0.00	175.00	1085.00

FLOW DISTRIBUTION FOR SECNO= 42.00 CWSEL= 766.84

STA= 910. 960. 976. 1024. 1060. 1085.
PER Q= 17.1 7.8 63.2 10.2 1.8
AREA= 387.9 145.5 564.5 237.3 74.8
VEL= 1.7 2.1 4.4 1.7 0.9

*SECNO 43.900

2800 NAT Q1= 1091.93 WSEL= 766.85 ENC Q1= 1111.54 WSEL= 766.95 RATIO= -0.0180
NAT Q1= 1112. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 766.95

3470 ENCROACHMENT STATIONS= 1105.0 1195.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.00 ELREA= 768.00

D/S NORTHVILLE RD. #5 CORPS C.S. #26

43.90	12.63	766.93	0.00	766.85	767.29	0.36	0.16	0.08	762.00
3950.	0.	3950.	0.	0.	815.	0.	620.	92.	764.00
1.38	0.00	4.85	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.001328	140.	180.	200.	2	0	0	0.00	90.00	1195.00

FLOW DISTRIBUTION FOR SECNO= 43.90 CWSEL= 766.93

STA= 1105. 1195.
PER Q= 100.0
AREA= 814.8
VEL= 4.8

*SECNO 44.000

2800 NAT Q1= 917.33 WSEL= 766.81 ENC Q1= 934.08 WSEL= 766.91 RATIO= -0.0183
NAT Q1= 934. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 766.91

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 18 MIN ELTRD= 768.60 MAX ELLC= 768.00

3470 ENCROACHMENT STATIONS= 1105.0 1195.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.00 ELREA= 768.00

D/S FACE NORTHVILLE RD. #5

44.00	12.59	766.89	0.00	766.81	767.34	0.45	0.00	0.04	762.00
3950.	0.	3950.	0.	0.	734.	0.	620.	92.	764.00
1.38	0.00	5.38	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.001881	1.	1.	1.	2	0	0	-77.39	90.00	1195.00

FLOW DISTRIBUTION FOR SECNO= 44.00 CWSEL= 766.89

STA= 1105. 1195.
PER Q= 100.0
AREA= 733.8
VEL= 5.4

*SECNO 45.000

2800 NAT Q1= 938.34 WSEL= 766.93 ENC Q1= 955.40 WSEL= 767.03 RATIO= -0.0182
NAT Q1= 955. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 767.03

3370 NORMAL BRIDGE,NRD= 18 MIN ELTRD= 768.60 MAX ELLC= 768.00

3470 ENCROACHMENT STATIONS= 1105.0 1195.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.60 ELREA= 768.00

U/S FACE NORTHVILLE RD. #5

45.00	12.71	767.01	0.00	766.93	767.45	0.44	0.11	0.00	762.00
3950.	0.	3950.	0.	0.	743.	0.	621.	92.	764.00
1.38	0.00	5.31	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.001807	60.	60.	60.	1	0	0	-78.21	90.00	1195.00

FLOW DISTRIBUTION FOR SECNO= 45.00 CWSEL= 767.01

STA= 1105. 1195.
PER Q= 100.0
AREA= 743.4
VEL= 5.3

*SECNO 45.100
2800 NAT Q1= 1151.56 WSEL= 767.05 ENC Q1= 1151.42 WSEL= 767.15 RATIO= -0.0175
NAT Q1= 1151. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 767.15

3470 ENCROACHMENT STATIONS= 1105.0 1195.0 TYPE= 4 TARGET= 0.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 768.60 ELREA= 768.60

U/S NORTHVILLE RD. #5

45.10	12.83	767.13	0.00	767.05	767.48	0.35	0.00	0.03	762.00
3950.	0.	3950.	0.	0.	833.	0.	621.	92.	764.00
1.38	0.00	4.74	0.00	0.080	0.045	0.080	0.040	754.30	1105.00
0.001240	1.	1.	1.	2	0	0	0.00	90.00	1195.00

FLOW DISTRIBUTION FOR SECNO= 45.10 CWSEL= 767.13

STA= 1105. 1195.
PER Q= 100.0
AREA= 833.1
VEL= 4.7

CCHV= 0.300 CEHV= 0.500
*SECNO 46.000
2800 NAT Q1= 1424.47 WSEL= 767.12 ENC Q1= 1424.47 WSEL= 767.22 RATIO= 0.0000
NAT Q1= 2263. RATIOS LOB,CH,ROB= 0.1440 0.5013 0.3547 WSEL= 767.22

3470 ENCROACHMENT STATIONS= 640.0 773.5 TYPE= 4 TARGET= 0.370

50 FT U/S NORTHVILLE RD. #5 CORPS C.S. #27

46.00	13.28	767.18	0.00	767.12	767.53	0.35	0.05	0.00	762.00
3950.	0.	3119.	831.	0.	594.	396.	622.	92.	761.50
1.39	0.00	5.25	2.10	0.150	0.035	0.060	0.040	753.90	640.00
0.000853	50.	50.	50.	1	0	0	0.00	133.55	773.55

FLOW DISTRIBUTION FOR SECNO= 46.00 CWSEL= 767.18

STA=	640.	700.	730.	740.	774.
PER Q=	71.0	6.5	2.3	12.2	
ARE=	594.3	132.7	46.7	216.5	
VEL=	5.2	1.9	2.0	2.2	

CCHV= 0.300 CEHV= 0.500

*SECNO 47.000
2800 NAT Q1= 2908.81 WSEL= 767.98 ENC Q1= 2908.81 WSEL= 768.08 RATIO= 0.0000
NAT Q1= 2993. RATIOS LOB,CH,ROB= 0.3317 0.2872 0.3811 WSEL= 768.08

3470 ENCROACHMENT STATIONS= 155.1 878.1 TYPE= 4 TARGET= 0.028

5C FT D/S PARK BRIDGE= CORPS C.S. #28

47.00	11.48	768.08	0.00	767.98	768.12	0.04	0.50	0.09	759.00
3950.	1236.	1170.	1494.	1580.	423.	2036.	705.	106.	758.50
1.68	0.81	2.77	0.73	0.080	0.035	0.080	0.040	756.60	155.08
0.000185	1000.	1400.	1750.	2	0	0	0.00	723.07	878.14

FLOW DISTRIBUTION FOR SECNO= 47.00 CWSEL= 768.08

STA=	155.	160.	180.	280.	410.	425.	465.	480.	580.	878.
PER Q=	0.4	2.6	11.2	15.7	2.6	29.6	2.6	11.2	24.0	
AREA=	32.7	121.6	557.9	757.8	109.9	422.7	109.9	557.9	1367.9	
VELF	0.5	0.8	0.8	0.8	0.9	2.8	0.9	0.8	0.7	

*SECNO 47.900
2800 NAT Q1= 1915.31 WSEL= 767.98 ENC Q1= 1915.31 WSEL= 768.08 RATIO= 0.0000
NAT Q1= 1977. RATIOS LOB,CH,ROB= 0.3109 0.3082 0.3809 WSEL= 768.08

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	CLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 68.3 685.9 TYPE= 4 TARGET= 0.031

D/S PARK BRIDGE CORPS C.S. # 29

47.90	11.08	768.08	0.00	767.98	768.15	0.07	0.01	0.01	764.70
3950.	1217.	1250.	1483.	1067.	369.	1515.	709.	107.	764.70
1.69	1.14	3.39	0.98	0.080	0.035	0.080	0.040	757.00	68.34
0.000420	49.	49.	49.	1	0	0	0.00	617.58	685.91

FLOW DISTRIBUTION FOR SECNO= 47.90 CWSEL= 768.08

STA=	68.	70.	210.	275.	310.	360.	460.	465.	660.	686.
PER Q=	0.1	23.7	6.9	31.7	5.3	14.5	0.6	15.8	1.3	
AREA=	9.7	782.1	275.4	369.3	211.8	508.6	22.9	699.4	72.4	
VEL=	0.5	1.2	1.0	3.4	1.0	1.1	1.0	0.9	0.7	

*SECNO 48.000
2800 NAT Q1= 1500.42 WSEL= 768.03 ENC Q1= 1500.42 WSEL= 768.13 RATIO= 0.0000
NAT Q1= 1557. RATIOS LOB,CH,ROB= 0.4009 0.1398 0.4593 WSEL= 768.13

3370 NORMAL BRIDGE,NRD= 14 MIM ELTRD= 762.00 MAX ELLC= 761.90

3470 ENCROACHMENT STATIONS= 67.4 691.5 TYPE= 4 TARGET= 0.036

D/S FACE PARK BRIDGE

48.00	11.13	768.13	0.00	768.03	768.16	0.03	0.00	0.01	764.70
3950.	1511.	570.	1799.	1080.	285.	1469.	709.	107.	764.70
1.69	1.46	2.00	1.22	0.080	0.035	0.080	0.040	757.00	67.40
0.000698	1.	1.	1.	2	0	0	-160.75	624.13	691.54

FLOW DISTRIBUTION FOR SECNO= 48.00 CWSEL= 768.13

STA=	67.	70.	210.	275.	310.	360.	460.	465.	660.	692.
PER Q=	0.3	30.7	9.0	14.4	3.4	18.8	0.8	20.6	2.0	
AREA=	14.9	787.6	277.9	284.9	138.8	512.5	23.1	707.0	87.3	
VEL=	0.7	1.5	1.3	2.0	1.0	1.4	1.3	1.1	0.9	

*SECNO 49.000
2800 NAT Q1= 1507.24 WSEL= 768.04 ENC Q1= 1507.24 WSEL= 768.14 RATIO= 0.0000
NAT Q1= 1566. RATIOS LOB,CH,ROB= 0.4007 0.1394 0.4599 WSEL= 768.14

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 752.00 MAX ELLC= 761.90

3470 ENCROACHMENT STATIONS= 67.6 691.0 TYPE= 4 TARGET= 0.037

U/S FACE PARK BRIDGE

49.00	11.14	768.14	0.00	768.04	768.17	0.03	0.02	0.00	764.70	
3950.	1580.	570.	1801.	1082.	285.	1473.	711.	107.	764.70	
1.69	1.46	2.00	1.22	0.080	0.035	0.080	0.039	757.00	67.60	
0.000681	22.	22.	22.	0	0	0	-160.75	623.41	691.01	

FLOW DISTRIBUTION FOR SECNO= 49.00 CWSEL= 768.14

STA=	68.	70.	210.	275.	310.	360.	460.	465.	660.	691.
PER Q=	0.2	30.7	9.0	14.4	3.4	18.8	0.8	20.6	2.0	
AREA=	13.9	789.6	278.8	285.4	139.5	514.0	23.2	709.8	86.4	
VEL=	0.7	1.5	1.3	2.0	1.0	1.4	1.3	1.1	0.9	

*SECNO 49.100
2800 NAT Q1= 1948.99 WSEL= 768.03 ENC Q1= 1948.99 WSEL= 768.13 RATIO= 0.0000
NAT Q1= 2006. RATIOS LOB,CH,ROB= 0.3110 0.3059 0.3830 WSEL= 768.13

3470 ENCROACHMENT STATIONS= 67.5 690.9 TYPE= 4 TARGET= 0.029

U/S PARK BRIDGE

49.10	11.12	768.12	0.00	768.03	768.19	0.07	0.00	0.02	764.70	
3950.	1217.	1238.	1494.	1081.	371.	1545.	711.	107.	764.70	
1.69	1.13	3.34	0.97	0.080	0.035	0.080	0.039	757.00	67.53	
0.000406	1.	1.	1.	1	0	0	0.00	623.41	690.93	

FLOW DISTRIBUTION FOR SECNO= 49.10 CWSEL= 768.12

STA=	68.	70.	210.	275.	310.	360.	460.	465.	660.	691.
PER Q=	0.2	23.7	7.0	31.3	5.4	14.5	0.6	15.9	1.5	
AREA=	14.3	788.6	278.4	370.9	214.2	513.3	23.2	708.4	86.0	
VEL=	0.6	1.2	1.0	3.3	1.0	1.1	1.0	0.9	0.7	

*SECNO 50.000
2800 NAT Q1= 2839.35 WSEL= 768.07 ENC Q1= 2839.35 WSEL= 768.17 RATIO= 0.0000
NAT Q1= 2929. RATIOS LOB,CH,ROB= 0.3341 0.2749 0.3910 WSEL= 768.17

3470 ENCROACHMENT STATIONS= 155.4 878.6 TYPE= 4 TARGET= 0.031

50 FT U/S PARK BRIDGE CORPS C.S. #28

50.00	11.07	768.17	0.00	768.07	768.21	0.04	0.01	0.01	759.50	
3950.	1294.	1122.	1534.	1566.	406.	2043.	715.	108.	759.00	
1.70	0.83	2.74	1.75	0.080	0.035	0.080	0.039	757.10	155.39	

0.000194	50.	50.	50.	2	0	0	0.00	723.25	878.64

FLOW DISTRIBUTION FOR SECNO= 50.00 CWSEL= 768.17

STA=	155.	160.	180.	280.	410.	425.	465.	480.	580.	879.
PER Q=	0.4	2.7	11.8	15.4	2.4	28.4	2.4	11.0	25.4	
AREA=	31.1	123.4	567.1	737.3	103.8	406.4	103.8	542.1	1397.1	
VEL=	0.5	0.9	0.8	0.8	0.9	2.8	0.9	0.8	0.7	

*SECNO 51.000
2800 NAT Q1= 1233.10 WSEL= 768.40 ENC Q1= 1233.10 WSEL= 768.50 RATIO= 0.0000
NAT Q1= 1290. RATIOS LOB,CH,ROB= 0.3121 0.2342 0.4538 WSEL= 768.50

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IH2	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 339.2 944.7 TYPE= 4 TARGET= 0.044

D/S 7 MILE RD.

51.00	8.40	768.50	0.00	768.40	768.62	0.12	0.37	0.04	761.00
3950.	1200.	969.	1781.	818.	189.	1251.	785.	123.	764.00
1.82	1.47	5.13	1.42	0.080	0.035	0.080	0.039	760.10	339.20
0.001032	978.	978.	978.	2	0	0	0.00	605.48	944.67

FLOW DISTRIBUTION FOR SECNO= 51.00 CWSEL= 768.50

STA=	339.	350.	500.	550.	575.	600.	700.	945.
PER Q=	0.4	12.2	9.3	8.5	24.5	18.5	26.6	
AREA=	18.0	412.4	225.0	162.5	189.0	449.9	801.5	
VEL=	0.8	1.2	1.6	2.1	5.1	1.6	1.3	

****
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
1.000	730.38	0.00	730.39	493.74	2.79	4160.89	26.32	0.00	0.00	43.00	490.00	0.00
1.000	730.48	0.10	730.49	447.00	0.00	4190.00	0.00	0.01	43.00	43.00	490.00	490.00
2.000	730.20	0.00	730.75	271.00	869.62	2696.54	623.84	271.00	257.50	370.00	416.00	528.50
2.000	730.31	0.11	730.84	271.00	875.95	2680.53	633.53	271.00	257.50	370.00	416.00	528.50
3.000	730.69	0.00	732.59	70.00	116.65	3953.47	119.88	70.00	358.00	370.00	416.00	428.00
3.000	730.75	0.06	732.62	70.00	117.23	3952.34	120.44	70.00	358.00	370.00	416.00	428.00
3.900	730.88	0.00	732.89	46.00	0.00	4190.00	0.00	0.00	0.00	370.00	416.00	0.00
3.900	730.94	0.05	732.92	46.00	0.00	4190.00	0.00	629.00	1.00	370.00	416.00	630.00
4.000	730.47	0.00	733.31	46.00	0.00	4190.00	0.00	0.00	0.00	370.00	416.00	0.00
4.000	730.53	0.06	733.34	46.00	0.00	4190.00	0.00	629.00	1.00	370.00	416.00	630.00
5.000	730.94	0.00	734.40	46.00	0.00	4190.00	0.00	0.00	0.00	329.00	375.00	0.00
5.000	730.99	0.05	734.40	46.00	0.00	4190.00	0.00	1024.00	1.00	329.00	375.00	1025.00
5.100	733.65	0.00	735.03	46.00	0.00	4190.00	0.00	0.00	0.00	329.00	375.00	0.00
5.100	733.64	-0.01	735.02	46.00	0.00	4190.00	0.00	1024.00	1.00	329.00	375.00	1025.00
6.000	735.40	0.00	735.48	346.00	1253.09	1747.83	1189.08	346.00	179.00	329.00	375.00	525.00
6.000	735.39	-0.01	735.47	346.00	1252.89	1748.28	1188.83	346.00	179.00	329.00	375.00	525.00
6.900	735.37	0.00	735.58	408.89	834.34	3036.01	319.65	410.00	125.00	270.00	330.00	535.00
6.900	735.36	-0.01	735.57	408.87	833.86	3037.43	318.71	410.00	125.00	270.00	330.00	535.00
7.000	734.91	0.00	736.04	407.72	28.63	3640.42	520.95	410.00	125.00	270.00	330.00	535.00
7.000	734.90	-0.01	736.03	407.69	28.07	3642.00	519.93	410.00	125.00	270.00	330.00	535.00
8.000	736.06	0.00	736.69	410.00	140.09	3324.84	725.07	410.00	125.00	270.00	330.00	535.00
8.000	736.05	-0.00	736.68	410.00	139.63	3326.35	724.02	410.00	125.00	270.00	330.00	535.00
8.100	736.66	0.00	736.83	410.00	647.41	3037.30	505.29	410.00	125.00	270.00	330.00	535.00
8.100	736.65	-0.00	736.82	410.00	647.35	3037.56	505.09	410.00	125.00	270.00	330.00	535.00
9.000	736.83	0.00	736.87	510.00	488.39	1824.22	1877.39	510.00	135.00	260.00	320.00	645.00
9.000	736.83	-0.00	736.87	467.23	450.34	1855.42	1884.24	0.03	163.53	260.00	320.00	630.76

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
10.000	736.95	0.00	737.07	598.51	1336.53	2277.17	576.30	0.00	0.00	450.00	500.00	0.00
10.000	736.95	-0.00	737.07	447.11	1320.28	2323.57	546.15	0.02	215.05	450.00	500.00	662.16
10.900	737.00	0.00	737.09	538.69	2160.55	809.42	1220.03	0.00	0.00	482.00	498.00	0.00
10.900	737.00	-0.00	737.09	434.57	2161.02	830.04	1198.94	0.03	228.73	482.00	498.00	663.29
11.000	737.03	0.00	737.10	534.28	2438.13	494.60	1257.27	0.00	0.00	482.00	498.00	0.00
11.000	737.03	-0.00	737.10	439.61	2447.27	509.22	1233.51	0.03	225.85	482.00	498.00	670.46
11.500	737.04	0.00	737.10	534.32	2438.12	494.44	1257.45	0.00	0.00	482.00	498.00	0.00
11.500	737.04	-0.00	737.11	439.09	2447.35	509.18	1233.47	0.03	226.00	482.00	498.00	670.09
11.600	737.03	0.00	737.11	539.25	2161.83	806.62	1221.56	0.00	0.00	482.00	498.00	0.00
11.600	737.03	-0.00	737.12	439.47	2162.47	825.73	1201.81	0.02	227.35	482.00	498.00	666.82
11.900	737.05	0.00	737.13	539.60	2162.63	804.84	1222.52	0.00	0.00	482.00	498.00	0.00
11.900	737.05	0.00	737.14	440.65	2162.98	824.35	1202.67	0.02	227.01	482.00	498.00	667.67
12.000	736.99	0.00	737.62	431.82	105.97	3776.73	307.29	0.00	0.00	188.00	248.00	0.00
12.000	736.99	-0.01	737.65	253.17	58.85	3860.96	270.19	0.02	180.54	188.00	248.00	433.71
13.000	737.08	0.00	737.68	441.81	107.83	3757.37	324.80	0.00	0.00	188.00	248.00	0.00
13.000	737.08	-0.00	737.72	258.22	61.16	3839.84	289.00	0.02	180.22	188.00	248.00	438.44
14.000	737.08	0.00	737.68	442.49	107.96	3756.04	325.99	0.00	0.00	188.00	248.00	0.00
14.000	737.08	-0.00	737.72	260.60	63.91	3835.03	291.07	0.02	179.87	188.00	248.00	440.47
15.000	737.39	0.00	737.82	495.82	250.84	3241.46	697.70	0.00	0.00	190.00	250.00	0.00
15.000	737.41	0.02	737.87	267.56	206.40	3311.14	672.47	0.03	151.30	190.00	250.00	418.87
16.000	740.49	0.00	741.52	419.67	53.91	4009.54	126.55	0.00	0.00	726.17	779.63	0.00
16.000	740.60	0.11	741.66	181.07	2.62	4086.81	100.57	0.02	725.28	726.17	779.63	906.36
17.000	740.69	0.00	741.66	434.44	52.90	3986.70	150.39	0.00	0.00	726.17	779.63	0.00
17.000	740.81	0.11	741.80	234.46	2.94	4060.32	126.74	0.02	725.13	726.17	779.63	959.59
18.000	741.04	0.00	741.88	460.13	65.25	3897.41	227.34	0.00	0.00	726.17	779.63	0.00
18.000	741.15	0.11	742.01	292.68	16.32	3965.62	208.06	0.02	722.69	726.17	779.63	1015.38
19.000	741.68	0.00	742.12	569.54	133.54	3539.17	517.29	0.00	0.00	815.00	875.00	0.00
19.000	741.82	0.14	742.26	391.83	86.95	3586.79	516.26	0.03	798.00	815.00	875.00	1189.83
20.000	745.27	0.00	746.12	75.00	112.77	3993.43	83.80	75.00	390.00	400.00	455.00	465.00
20.000	745.35	0.08	746.18	75.00	113.21	3992.29	84.50	75.00	390.00	400.00	455.00	465.00
21.000	745.36	0.00	746.50	50.00	0.00	4190.00	0.00	0.00	0.00	400.00	450.00	0.00
21.000	745.45	0.09	746.57	50.00	0.00	4190.00	0.00	0.00	400.00	400.00	450.00	450.00
21.100	745.36	0.00	746.51	50.00	0.00	4190.00	0.00	0.00	0.00	400.00	450.00	0.00
21.100	745.45	0.09	746.58	50.00	0.00	4190.00	0.00	0.00	400.00	400.00	450.00	450.00
21.900	745.69	0.00	746.76	50.00	0.00	4190.00	0.00	0.00	0.00	400.00	450.00	0.00
21.900	745.82	0.14	746.87	50.00	0.00	4190.00	0.00	0.00	400.00	400.00	450.00	450.00
22.000	745.69	0.00	746.77	50.00	0.00	4190.00	0.00	0.00	0.00	400.00	450.00	0.00
22.000	745.83	0.14	746.87	50.00	0.00	4190.00	0.00	0.00	400.00	400.00	450.00	450.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	23.000	746.73	0.00	747.15	150.00	466.67	3253.84	469.50	150.00	270.00	320.00	370.00	420.00
	23.000	746.85	0.12	747.26	150.00	471.61	3243.99	474.41	150.00	270.00	320.00	370.00	420.00
	24.000	748.31	0.00	748.69	90.00	39.28	4111.54	39.18	90.00	745.00	750.00	830.00	835.00
	24.000	748.37	0.06	748.74	90.00	39.25	4111.60	39.15	90.00	745.00	750.00	830.00	835.00
	25.000	748.26	0.00	748.98	60.00	0.00	4190.00	0.00	0.00	0.00	1070.00	1130.00	0.00
	25.000	748.33	0.07	749.04	60.00	0.00	4190.00	0.00	0.00	1070.00	1070.00	1130.00	1130.00
	26.000	748.89	0.00	749.57	60.00	0.00	4190.00	0.00	0.00	0.00	1070.00	1130.00	0.00
	26.000	748.99	0.10	749.65	60.00	0.00	4190.00	0.00	0.00	0.00	1070.00	1130.00	0.00
	27.900	748.86	0.00	750.03	48.00	0.00	4190.00	0.00	0.00	0.00	1026.00	1074.00	0.00
	27.900	748.97	0.11	750.12	48.00	0.00	4190.00	0.00	0.00	1026.00	1026.00	1074.00	1074.00
	28.000	748.73	0.00	750.16	48.00	0.00	4190.00	0.00	0.00	0.00	1026.00	1074.00	0.00
	28.000	748.84	0.11	750.26	48.00	0.00	4190.00	0.00	0.00	1026.00	1026.00	1074.00	1074.00
	29.000	748.87	0.00	750.26	48.00	0.00	4190.00	0.00	0.00	0.00	1026.00	1074.00	0.00
	29.000	748.99	0.13	750.38	48.00	0.00	4190.00	0.00	0.00	1026.00	1026.00	1074.00	1074.00
	29.100	749.28	0.00	750.36	48.00	0.00	4190.00	0.00	0.00	0.00	1026.00	1074.00	0.00
	29.100	749.43	0.14	750.48	48.00	0.00	4190.00	0.00	0.00	1026.00	1026.00	1074.00	1074.00
	30.000	749.57	0.00	750.45	62.00	0.00	4190.00	0.00	112.00	994.00	1019.00	1081.00	1106.00
	30.000	749.71	0.14	750.57	62.00	0.00	4190.00	0.00	112.00	994.00	1019.00	1081.00	1106.00
	31.000	749.68	0.00	751.48	62.00	0.00	4190.00	0.00	162.00	969.00	1019.00	1081.00	1131.00
	31.000	749.82	0.14	751.54	62.00	0.00	4190.00	0.00	162.00	969.00	1019.00	1081.00	1131.00
*	31.900	752.41	0.00	755.02	62.00	0.00	4190.00	0.00	0.00	0.00	0.00	122.00	0.00
*	31.900	752.42	0.01	755.02	62.00	0.00	4190.00	0.00	0.00	0.00	0.00	122.00	122.00
	32.000	758.60	0.00	758.90	122.00	0.00	3950.00	0.00	0.00	0.00	0.00	122.00	0.00
	32.000	758.61	0.01	758.91	122.00	0.00	3950.00	0.00	0.00	0.00	0.00	122.00	122.00
	33.000	758.98	0.00	758.99	659.76	0.00	3950.00	0.00	0.00	0.00	80.00	765.00	0.00
	33.000	758.99	0.01	759.00	659.79	0.00	3950.00	0.00	0.00	80.00	80.00	765.00	765.00
	34.000	759.03	0.00	759.05	650.55	3.19	3935.77	11.05	0.00	0.00	30.00	570.00	0.00
	34.000	759.03	0.01	759.06	540.00	0.00	3950.00	0.00	0.00	30.00	30.00	570.00	570.00
	35.000	758.58	0.00	759.76	120.00	294.22	3333.19	322.58	120.00	93.00	117.00	170.00	213.00
	35.000	758.59	0.01	759.77	120.00	294.53	3331.84	323.62	120.00	93.00	117.00	170.00	213.00
	35.900	759.25	0.00	760.05	95.80	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	0.00
	35.900	759.26	0.01	760.05	95.83	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	130.00
	36.000	759.08	0.00	760.23	79.88	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	0.00
	36.000	759.09	0.01	760.23	79.91	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	130.00
	37.000	759.72	0.00	760.64	82.96	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	0.00
	37.000	759.73	0.00	760.65	82.96	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	130.00
	37.100	760.16	0.00	760.75	100.26	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	0.00
	37.100	760.17	0.00	760.75	100.28	0.00	3950.00	0.00	0.00	0.00	0.00	130.00	130.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
38.000	760.22	0.00	760.99	175.78	551.70	3070.57	327.73	200.00	53.00	117.00	170.00	253.00
38.000	760.23	0.00	761.00	175.79	551.88	3070.13	327.99	200.00	53.00	117.00	170.00	253.00
39.000	765.39	0.00	766.07	75.00	191.82	3482.87	275.31	75.00	418.00	430.00	480.00	493.00
39.000	765.39	-0.00	766.07	75.00	191.81	3482.88	275.31	75.00	418.00	430.00	480.00	493.00
39.900	765.43	0.00	766.29	48.00	0.00	3950.00	0.00	0.00	0.00	976.00	1024.00	0.00
39.900	765.45	0.01	766.30	48.00	0.00	3950.00	0.00	0.00	976.00	976.00	1024.00	1024.00
40.000	765.35	0.00	766.38	48.00	0.00	3950.00	0.00	0.00	0.00	976.00	1024.00	0.00
40.000	765.37	0.01	766.39	48.00	0.00	3950.00	0.00	0.00	976.00	976.00	1024.00	1024.00
41.000	765.54	0.00	766.54	48.00	0.00	3950.00	0.00	0.00	0.00	976.00	1024.00	0.00
41.000	765.61	0.06	766.59	48.00	0.00	3950.00	0.00	0.00	976.00	976.00	1024.00	1024.00
41.100	765.80	0.00	766.60	48.00	0.00	3950.00	0.00	0.00	0.00	976.00	1024.00	0.00
41.100	765.87	0.07	766.66	48.00	0.00	3950.00	0.00	0.00	976.00	976.00	1024.00	1024.00
42.000	766.76	0.00	766.98	175.00	980.41	2502.33	467.26	175.00	910.00	976.00	1024.00	1085.00
42.000	766.84	0.08	767.05	175.00	982.19	2496.14	471.67	175.00	910.00	976.00	1024.00	1085.00
43.900	766.85	0.00	767.22	90.00	0.00	3950.00	0.00	0.00	0.00	1105.00	1195.00	0.00
43.900	766.93	0.08	767.29	90.00	0.00	3950.00	0.00	0.00	1105.00	1105.00	1195.00	1195.00
44.000	766.81	0.00	767.27	90.00	0.00	3950.00	0.00	0.00	0.00	1105.00	1195.00	0.00
44.000	766.89	0.08	767.34	90.00	0.00	3950.00	0.00	0.00	1105.00	1105.00	1195.00	1195.00
45.000	766.93	0.00	767.38	90.00	0.00	3950.00	0.00	0.00	0.00	1105.00	1195.00	0.00
45.000	767.01	0.08	767.45	90.00	0.00	3950.00	0.00	0.00	1105.00	1105.00	1195.00	1195.00
45.100	767.05	0.00	767.41	90.00	0.00	3950.00	0.00	0.00	0.00	1105.00	1195.00	0.00
45.100	767.13	0.08	767.48	90.00	0.00	3950.00	0.00	0.00	1105.00	1105.00	1195.00	1195.00
46.000	767.12	0.00	767.46	190.00	209.59	3096.01	644.40	190.00	575.00	640.00	700.00	765.00
46.000	767.18	0.06	767.53	133.55	0.00	3119.19	830.81	0.37	640.00	640.00	700.00	773.55
47.000	767.98	0.00	768.02	848.13	1308.05	1148.58	1493.37	0.00	0.00	425.00	465.00	0.00
47.000	768.08	0.10	768.12	725.07	1286.21	1169.75	1494.03	0.03	155.08	425.00	465.00	878.14
47.900	767.98	0.00	768.05	732.38	1227.09	1236.89	1486.02	0.00	0.00	275.00	310.00	0.00
47.900	768.08	0.10	768.15	617.58	1216.63	1250.25	1483.12	0.03	68.34	275.00	310.00	685.92
48.000	768.03	0.00	768.06	733.66	1590.66	561.21	1798.13	0.00	0.00	275.00	310.00	0.00
48.000	768.13	0.10	768.16	624.13	1580.80	570.35	1798.85	0.04	67.40	275.00	310.00	691.54
49.000	768.04	0.00	768.07	733.99	1589.81	560.08	1800.11	0.00	0.00	275.00	310.00	0.00
49.000	768.14	0.10	768.17	623.41	1579.89	569.51	1800.60	0.04	67.60	275.00	310.00	691.01
49.100	768.03	0.00	768.09	733.87	1227.70	1226.09	1496.20	0.00	0.00	275.00	310.00	0.00
49.100	768.12	0.10	768.19	623.41	1217.42	1238.22	1494.36	0.03	67.53	275.00	310.00	690.93
50.000	768.07	0.00	768.11	851.16	1317.73	1100.03	1532.25	0.00	0.00	425.00	465.00	0.00
50.000	768.17	0.10	768.21	723.25	1293.97	1122.46	1533.56	0.03	155.39	425.00	465.00	878.64
51.000	768.40	0.00	768.52	968.19	1221.65	946.36	1782.00	0.00	0.00	575.00	600.00	0.00
51.000	768.50	0.10	768.62	605.48	1199.55	969.49	1780.96	0.04	339.20	575.00	600.00	944.68

MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
1.000	0.00	0.00	0.00	717.10	4190.00	730.38	0.00	730.39	0.20	0.90	4826.87	9405.25
1.000	0.00	0.00	0.00	717.10	4190.00	730.48	0.00	730.49	0.20	0.90	4678.05	9329.49
2.000	1400.00	0.00	0.00	720.20	4190.00	730.20	0.00	730.75	19.46	7.36	1382.18	949.72
2.000	1400.00	0.00	0.00	720.20	4190.00	730.31	0.00	730.84	18.35	7.21	1412.68	978.00
3.000	395.00	0.00	0.00	721.10	4190.00	730.69	0.00	732.59	49.98	11.38	464.55	592.67
3.000	395.00	0.00	0.00	721.10	4190.00	730.75	0.00	732.62	48.57	11.28	469.01	601.20
3.900	49.00	0.00	0.00	721.10	4190.00	730.88	0.00	732.89	52.45	11.38	368.13	578.53
3.900	49.00	0.00	0.00	721.10	4190.00	730.94	0.00	732.92	51.35	11.30	370.63	584.71
4.000	1.00	760.00	737.40	721.10	4190.00	730.47	0.00	733.31	75.06	13.53	309.67	483.62
4.000	1.00	760.00	737.40	721.10	4190.00	730.53	0.00	733.34	73.36	13.43	311.94	489.21
5.000	90.00	760.00	737.40	722.20	4190.00	730.94	730.67	734.40	100.29	14.92	280.90	418.39
5.000	90.00	760.00	737.40	722.20	4190.00	730.99	730.67	734.40	98.41	14.83	282.58	422.37
5.100	1.00	0.00	0.00	722.20	4190.00	733.65	0.00	735.03	20.83	9.41	445.25	918.10
5.100	1.00	0.00	0.00	722.20	4190.00	733.64	0.00	735.02	20.91	9.42	444.66	916.21
6.000	150.00	0.00	0.00	722.35	4190.00	735.40	0.00	735.48	1.89	3.37	2957.45	3050.07
6.000	150.00	0.00	0.00	722.35	4190.00	735.39	0.00	735.47	1.89	3.37	2954.58	3045.54
6.900	133.00	0.00	0.00	722.50	4190.00	735.37	0.00	735.58	2.81	4.29	2023.84	2498.64
6.900	133.00	0.00	0.00	722.50	4190.00	735.36	0.00	735.57	2.82	4.30	2020.65	2494.72
7.000	1.00	734.20	732.40	722.50	4190.00	734.91	729.27	736.04	112.02	9.03	561.59	395.88
7.000	1.00	734.20	732.40	722.50	4190.00	734.90	729.27	736.03	112.65	9.05	559.85	394.77
8.000	65.00	734.20	732.40	722.50	4190.00	736.06	0.00	736.69	55.33	7.05	874.56	563.28
8.000	65.00	734.20	732.40	722.50	4190.00	736.05	0.00	736.68	55.48	7.06	873.14	562.55
8.100	1.00	0.00	0.00	722.50	4190.00	736.66	0.00	736.83	1.99	3.87	2553.22	2970.22
8.100	1.00	0.00	0.00	722.50	4190.00	736.65	0.00	736.82	1.99	3.87	2552.52	2969.32
9.000	49.00	0.00	0.00	722.50	4190.00	736.83	0.00	736.87	1.22	2.29	4056.45	3789.50
9.000	49.00	0.00	0.00	722.50	4190.00	736.83	0.00	736.87	1.27	2.33	3879.53	3723.73
10.000	1035.00	0.00	0.00	723.10	4190.00	736.95	0.00	737.07	1.83	3.61	3151.09	3100.35
10.000	1035.00	0.00	0.00	723.10	4190.00	736.95	0.00	737.07	1.90	3.69	2885.56	3037.95
10.900	50.00	0.00	0.00	725.10	4190.00	737.00	0.00	737.09	3.76	4.50	2634.03	2159.90
10.900	50.00	0.00	0.00	725.10	4190.00	737.00	0.00	737.09	3.96	4.61	2438.67	2105.70
11.000	1.00	0.00	0.00	728.40	4190.00	737.03	0.00	737.10	6.89	3.58	2402.49	1596.59
11.000	1.00	0.00	0.00	728.40	4190.00	737.03	0.00	737.10	7.30	3.69	2229.09	1550.57
11.500	5.00	0.00	0.00	728.40	4190.00	737.04	0.00	737.10	6.88	3.58	2403.79	1597.78
11.500	5.00	0.00	0.00	728.40	4190.00	737.04	0.00	737.11	7.29	3.68	2229.20	1551.53
11.600	1.00	0.00	0.00	725.10	4190.00	737.03	0.00	737.11	3.70	4.47	2650.74	2177.36
11.600	1.00	0.00	0.00	725.10	4190.00	737.03	0.00	737.12	3.88	4.58	2464.76	2126.74

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
11.900	49.00	0.00	0.00	725.10	4190.00	737.05	0.00	737.13	3.67	4.45	2661.41	2188.54
11.900	49.00	0.00	0.00	725.10	4190.00	737.05	0.00	737.14	3.85	4.57	2472.97	2134.06
12.000	325.00	0.00	0.00	726.90	4190.00	736.99	0.00	737.62	12.30	6.66	1155.30	1194.52
12.000	325.00	0.00	0.00	726.90	4190.00	736.99	0.00	737.65	12.89	6.81	989.58	1166.85
13.000	50.00	0.00	0.00	726.90	4190.00	737.08	0.00	737.68	11.82	6.56	1192.94	1218.97
13.000	50.00	0.00	0.00	726.90	4190.00	737.08	0.00	737.72	12.35	6.71	1023.06	1192.48
14.000	60.00	736.10	733.20	726.90	4190.00	737.08	0.00	737.68	11.78	6.56	1195.54	1220.65
14.000	60.00	999999.00	0.00	726.90	4190.00	737.08	0.00	737.72	12.31	6.70	1028.83	1194.28
15.000	50.00	0.00	0.00	728.00	4190.00	737.39	0.00	737.82	17.27	5.96	1496.86	1008.27
15.000	50.00	0.00	0.00	728.00	4190.00	737.41	0.00	737.87	17.91	6.08	1260.50	990.15
16.000	1690.00	0.00	0.00	730.00	4190.00	740.49	737.22	741.52	27.51	8.30	728.72	798.84
16.000	1690.00	0.00	0.00	730.00	4190.00	740.60	0.00	741.66	27.47	8.36	610.28	799.42
17.000	50.00	0.00	0.00	730.00	4190.00	740.69	737.41	741.66	19.36	8.07	814.01	952.24
17.000	50.00	0.00	0.00	730.00	4190.00	740.81	0.00	741.80	19.28	8.12	691.36	954.29
18.000	60.00	740.40	737.30	730.00	4190.00	741.04	0.00	741.88	16.36	7.60	969.40	1035.86
18.000	60.00	999999.00	0.00	730.00	4190.00	741.15	0.00	742.01	16.29	7.65	849.77	1038.05
19.000	50.00	0.00	0.00	730.00	4190.00	741.68	0.00	742.12	17.49	5.77	1435.44	1001.85
19.000	50.00	0.00	0.00	730.00	4190.00	741.82	0.00	742.26	17.18	5.77	1308.00	1010.87
20.000	1550.00	0.00	0.00	731.90	4190.00	745.27	0.00	746.12	36.23	7.56	639.91	696.12
20.000	1550.00	0.00	0.00	731.90	4190.00	745.35	0.00	746.18	35.26	7.50	645.64	705.58
21.000	50.00	0.00	0.00	733.10	4190.00	745.36	0.00	746.50	47.03	8.60	487.31	610.96
21.000	50.00	0.00	0.00	733.10	4190.00	745.45	0.00	746.57	54.43	8.52	491.81	567.94
21.100	1.00	750.00	750.00	733.10	4190.00	745.36	0.00	746.51	46.97	8.59	487.53	611.39
21.100	1.00	750.00	750.00	733.10	4190.00	745.45	0.00	746.58	54.35	8.52	492.05	568.35
21.900	50.00	750.00	750.00	733.10	4190.00	745.69	0.00	746.76	42.30	8.31	503.93	644.24
21.900	50.00	750.00	750.00	733.10	4190.00	745.82	0.00	746.87	48.76	8.20	510.69	600.05
22.000	1.00	0.00	0.00	733.10	4190.00	745.69	0.00	746.77	42.25	8.31	504.13	644.64
22.000	1.00	0.00	0.00	733.10	4190.00	745.83	0.00	746.87	48.70	8.20	510.90	600.41
23.000	50.00	0.00	0.00	733.10	4190.00	746.73	0.00	747.15	16.96	5.85	1152.45	1017.32
23.000	50.00	0.00	0.00	733.10	4190.00	746.85	0.00	747.26	16.28	5.77	1169.96	1038.31
24.000	1040.00	0.00	0.00	737.00	4190.00	748.31	0.00	748.69	12.92	5.02	901.20	1165.90
24.000	1040.00	0.00	0.00	737.00	4190.00	748.37	0.00	748.74	12.63	4.99	907.44	1179.08
25.000	50.00	0.00	0.00	737.10	4190.00	748.26	0.00	748.98	25.25	6.79	616.65	833.76
25.000	50.00	0.00	0.00	737.10	4190.00	748.33	0.00	749.04	32.31	6.75	620.85	737.16
26.000	60.00	750.80	747.70	737.20	4190.00	748.89	0.00	749.57	22.51	6.60	635.19	883.17
26.000	60.00	750.80	747.70	737.20	4190.00	748.99	0.00	749.65	21.86	6.54	640.95	896.21
27.900	53.00	0.00	0.00	737.60	4190.00	748.86	0.00	750.03	48.40	8.69	481.99	602.26
27.900	53.00	0.00	0.00	737.60	4190.00	748.97	0.00	750.12	57.01	8.60	487.49	554.91

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	28.000	1.00	773.00	755.60	737.60	4190.00	748.73	0.00	750.16	20.07	9.60	436.55	935.36
	28.000	1.00	773.00	755.60	737.60	4190.00	748.84	0.00	750.26	23.56	9.55	438.55	863.27
	29.000	46.00	773.00	755.60	737.60	4190.00	748.87	0.00	750.26	19.40	9.49	441.32	951.19
	29.000	46.00	773.00	755.60	737.60	4190.00	748.99	0.00	750.38	22.73	9.44	444.02	878.86
	29.100	1.00	0.00	0.00	737.60	4190.00	749.28	0.00	750.36	10.63	8.34	502.57	1284.94
	29.100	1.00	0.00	0.00	737.60	4190.00	749.43	0.00	750.48	12.53	8.22	509.53	1183.61
	30.000	25.00	0.00	0.00	740.50	4190.00	749.57	0.00	750.45	12.04	7.53	556.42	1207.76
	30.000	25.00	0.00	0.00	740.50	4190.00	749.71	0.00	750.57	11.47	7.41	565.32	1237.17
	31.000	25.00	755.40	753.90	743.30	4190.00	749.68	0.00	751.48	35.90	10.75	389.84	699.28
	31.000	25.00	755.40	753.90	743.30	4190.00	749.82	0.00	751.54	33.57	10.52	398.36	723.16
*	31.900	25.00	0.00	0.00	746.90	4190.00	752.41	752.41	755.02	65.01	12.98	322.78	519.66
*	31.900	25.00	0.00	0.00	746.90	4190.00	752.42	752.42	755.02	64.66	12.96	323.34	521.07
	32.000	1.00	752.80	0.00	746.90	3950.00	758.60	0.00	758.90	4.79	4.39	899.06	1805.34
	32.000	1.00	999999.00	0.00	746.90	3950.00	758.61	0.00	758.91	4.77	4.39	900.07	1808.59
	33.000	1170.00	0.00	0.00	749.30	3950.00	758.98	0.00	758.99	0.19	0.74	5345.83	9100.99
	33.000	1170.00	0.00	0.00	749.30	3950.00	758.99	0.00	759.00	0.19	0.74	5351.15	9115.78
	34.000	1530.00	0.00	0.00	751.00	3950.00	759.03	0.00	759.05	0.90	1.28	3182.70	4153.75
	34.000	1530.00	0.00	0.00	751.00	3950.00	759.03	0.00	759.06	0.92	1.29	3073.46	4120.28
	35.000	490.00	0.00	0.00	751.30	3950.00	758.58	0.00	759.76	40.36	9.45	589.40	621.74
	35.000	490.00	0.00	0.00	751.30	3950.00	758.59	0.00	759.77	40.06	9.42	590.98	624.05
	35.900	49.00	0.00	0.00	750.90	3950.00	759.25	0.00	760.05	28.57	7.15	552.65	738.97
	35.900	49.00	0.00	0.00	750.90	3950.00	759.26	0.00	760.05	28.47	7.14	553.35	740.34
	36.000	1.00	775.00	772.00	750.90	3950.00	759.08	0.00	760.23	99.73	8.59	459.74	395.53
	36.000	1.00	775.00	772.00	750.90	3950.00	759.09	0.00	760.23	99.47	8.58	460.24	396.05
	37.000	40.00	775.00	772.00	750.90	3950.00	759.72	0.00	760.64	76.81	7.71	512.37	450.69
	37.000	40.00	775.00	772.00	750.90	3950.00	759.73	0.00	760.65	76.81	7.71	512.37	450.69
	37.100	1.00	0.00	0.00	750.90	3950.00	760.16	0.00	760.75	18.45	6.15	642.32	919.50
	37.100	1.00	0.00	0.00	750.90	3950.00	760.17	0.00	760.75	18.41	6.14	642.88	920.67
	38.000	50.00	0.00	0.00	752.30	3950.00	760.22	0.00	760.99	41.77	7.94	910.15	611.19
	38.000	50.00	0.00	0.00	752.30	3950.00	760.23	0.00	761.00	41.67	7.94	910.96	611.93
	39.000	1800.00	0.00	0.00	754.10	3950.00	765.39	0.00	766.07	21.70	6.99	688.37	847.87
	39.000	1800.00	0.00	0.00	754.10	3950.00	765.39	0.00	766.07	21.71	7.00	688.27	847.70
	39.900	49.00	0.00	0.00	752.80	3950.00	765.43	0.00	766.29	24.56	7.41	532.89	797.04
	39.900	49.00	0.00	0.00	752.80	3950.00	765.45	0.00	766.30	32.16	7.40	533.62	696.55
	40.000	1.00	788.00	772.40	752.80	3950.00	765.35	0.00	766.38	38.33	8.13	485.63	637.98
	40.000	1.00	788.00	772.40	752.80	3950.00	765.37	0.00	766.39	49.12	8.13	485.68	563.59
	41.000	40.00	788.00	772.40	752.80	3950.00	765.54	0.00	766.54	36.56	8.01	493.14	653.23
	41.000	40.00	788.00	772.40	752.80	3950.00	765.61	0.00	766.59	46.56	7.98	494.82	578.86

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
41.100	1.00	0.00	0.00	752.80	3950.00	765.80	0.00	766.60	22.23	7.18	550.44	837.77
41.100	1.00	0.00	0.00	752.80	3950.00	765.87	0.00	766.66	28.88	7.13	553.81	734.98
42.000	180.00	0.00	0.00	753.55	3950.00	766.76	0.00	766.98	7.06	4.46	1396.57	1486.60
42.000	180.00	0.00	0.00	753.55	3950.00	766.84	0.00	767.05	6.87	4.42	1410.03	1506.67
43.900	180.00	0.00	0.00	754.30	3950.00	766.85	0.00	767.22	13.09	4.89	807.89	1091.93
43.900	180.00	0.00	0.00	754.30	3950.00	766.93	0.00	767.29	13.28	4.85	814.82	1083.97
44.000	1.00	768.60	768.00	754.30	3950.00	766.81	0.00	767.27	18.54	5.43	727.58	917.33
44.000	1.00	768.60	768.00	754.30	3950.00	766.89	0.00	767.34	18.81	5.38	733.76	910.75
45.000	60.00	768.60	768.00	754.30	3950.00	766.93	0.00	767.38	17.72	5.35	737.91	938.34
45.000	60.00	768.60	768.00	754.30	3950.00	767.01	0.00	767.45	18.07	5.31	743.39	929.35
45.100	1.00	0.00	0.00	754.30	3950.00	767.05	0.00	767.41	12.19	4.78	826.04	1131.56
45.100	1.00	0.00	0.00	754.30	3950.00	767.13	0.00	767.48	12.40	4.74	833.06	1121.70
46.000	50.00	0.00	0.00	753.90	3950.00	767.12	0.00	767.46	7.69	5.24	1217.98	1424.47
46.000	50.00	0.00	0.00	753.90	3950.00	767.18	0.00	767.53	8.53	5.25	990.45	1352.07
47.000	1400.00	0.00	0.00	756.60	3950.00	767.98	0.00	768.02	1.84	2.74	4207.38	2908.81
47.000	1400.00	0.00	0.00	756.60	3950.00	768.08	0.00	768.12	1.85	2.77	4038.21	2901.95
47.900	49.00	0.00	0.00	757.00	3950.00	767.98	0.00	768.05	4.25	3.38	3063.03	1915.31
47.900	49.00	0.00	0.00	757.00	3950.00	768.08	0.00	768.15	4.20	3.39	2951.58	1926.84
48.000	1.00	762.00	761.90	757.00	3950.00	768.03	0.00	768.06	6.93	1.99	2936.45	1500.42
48.000	1.00	762.00	761.90	757.00	3950.00	768.13	0.00	768.16	6.88	2.00	2833.99	1506.44
49.000	22.00	762.00	761.90	757.00	3950.00	768.04	0.00	768.07	6.87	1.99	2945.41	1507.24
49.000	22.00	762.00	761.90	757.00	3950.00	768.14	0.00	768.17	6.81	2.00	2840.65	1513.11
49.100	1.00	0.00	0.00	757.00	3950.00	768.03	0.00	768.09	4.11	3.34	3102.94	1948.99
49.100	1.00	0.00	0.00	757.00	3950.00	768.12	0.00	768.19	4.06	3.34	2997.35	1959.91
50.000	50.00	0.00	0.00	757.10	3950.00	768.07	0.00	768.11	1.94	2.74	4187.48	2839.35
50.000	50.00	0.00	0.00	757.10	3950.00	768.17	0.00	768.21	1.94	2.76	4012.23	2832.34
51.000	978.00	0.00	0.00	760.10	3950.00	768.40	0.00	768.52	10.26	5.07	2507.23	1233.10
51.000	978.00	0.00	0.00	760.10	3950.00	768.50	0.00	768.62	10.32	5.13	2258.22	1229.51

MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CHSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
1.000	4190.00	730.38	0.00	0.00	0.00	493.74	0.00
1.000	4190.00	730.48	0.00	0.00	0.10	447.00	0.00
2.000	4190.00	730.20	0.00	-0.18	0.00	271.00	1400.00
2.000	4190.00	730.31	0.00	-0.17	0.11	271.00	1400.00
3.000	4190.00	730.69	0.00	0.49	0.00	70.00	395.00
3.000	4190.00	730.75	0.00	0.44	0.06	70.00	395.00
3.900	4190.00	730.88	0.00	0.20	0.00	46.00	49.00
3.900	4190.00	730.94	0.00	0.19	0.05	46.00	49.00
4.000	4190.00	730.47	0.00	-0.41	0.00	46.00	1.00
4.000	4190.00	730.53	0.00	-0.40	0.06	46.00	1.00
5.000	4190.00	730.94	0.00	0.47	0.00	46.00	90.00
5.000	4190.00	730.99	0.00	0.45	0.05	46.00	90.00
5.100	4190.00	733.65	0.00	2.71	0.00	46.00	1.00
5.100	4190.00	733.64	0.00	2.65	-0.01	46.00	1.00
6.000	4190.00	735.40	0.00	1.75	0.00	346.00	150.00
6.000	4190.00	735.39	0.00	1.75	-0.01	346.00	150.00
6.900	4190.00	735.37	0.00	-0.03	0.00	408.89	133.00
6.900	4190.00	735.36	0.00	-0.03	-0.01	408.87	133.00
7.000	4190.00	734.91	0.00	-0.46	0.00	407.72	1.00
7.000	4190.00	734.90	0.00	-0.46	-0.01	407.69	1.00
8.000	4190.00	736.06	0.00	1.15	0.00	410.00	65.00
8.000	4190.00	736.05	0.00	1.16	-0.00	410.00	65.00
8.100	4190.00	736.66	0.00	0.60	0.00	410.00	1.00
8.100	4190.00	736.65	0.00	0.60	-0.00	410.00	1.00
9.000	4190.00	736.83	0.00	0.18	0.00	510.00	49.00
9.000	4190.00	736.83	0.00	0.17	-0.00	467.23	49.00
10.000	4190.00	736.95	0.00	0.12	0.00	598.51	1035.00
10.000	4190.00	736.95	0.00	0.12	-0.00	447.11	1035.00
10.900	4190.00	737.00	0.00	0.05	0.00	538.69	50.00
10.900	4190.00	737.00	0.00	0.05	-0.00	434.57	50.00
11.000	4190.00	737.03	0.00	0.03	0.00	534.28	1.00
11.000	4190.00	737.03	0.00	0.03	-0.00	439.61	1.00
11.500	4190.00	737.04	0.00	0.00	0.00	534.32	5.00
11.500	4190.00	737.04	0.00	0.00	-0.00	439.09	5.00
11.600	4190.00	737.03	0.00	-0.01	0.00	539.25	1.00
11.600	4190.00	737.03	0.00	-0.01	-0.00	439.47	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
11.900	4190.00	737.05	0.00	0.02	0.00	539.60	49.00
11.900	4190.00	737.05	0.00	0.02	0.00	440.65	49.00
12.000	4190.00	736.99	0.00	-0.05	0.00	431.82	325.00
12.000	4190.00	736.99	0.00	-0.06	-0.01	253.17	325.00
13.000	4190.00	737.08	0.00	0.09	0.00	441.81	50.00
13.000	4190.00	737.08	0.00	0.09	-0.00	258.22	50.00
14.000	4190.00	737.08	0.00	0.00	0.00	442.49	60.00
14.000	4190.00	737.08	0.00	0.00	-0.00	260.60	60.00
15.000	4190.00	737.39	0.00	0.31	0.00	495.82	50.00
15.000	4190.00	737.41	0.00	0.33	0.02	267.56	50.00
16.000	4190.00	740.49	0.00	3.10	0.00	419.67	1690.00
16.000	4190.00	740.60	0.00	3.19	0.11	181.07	1690.00
17.000	4190.00	740.69	0.00	0.20	0.00	434.44	50.00
17.000	4190.00	740.81	0.00	0.21	0.11	234.46	50.00
18.000	4190.00	741.04	0.00	0.35	0.00	460.13	60.00
18.000	4190.00	741.15	0.00	0.35	0.11	292.68	60.00
19.000	4190.00	741.68	0.00	0.64	0.00	569.54	50.00
19.000	4190.00	741.82	0.00	0.67	0.14	391.83	50.00
20.000	4190.00	745.27	0.00	3.59	0.00	75.00	1550.00
20.000	4190.00	745.35	0.00	3.53	0.08	75.00	1550.00
21.000	4190.00	745.36	0.00	0.09	0.00	50.00	50.00
21.000	4190.00	745.45	0.00	0.10	0.09	50.00	50.00
21.100	4190.00	745.36	0.00	0.01	0.00	50.00	1.00
21.100	4190.00	745.45	0.00	0.01	0.09	50.00	1.00
21.900	4190.00	745.69	0.00	0.33	0.00	50.00	50.00
21.900	4190.00	745.82	0.00	0.37	0.14	50.00	50.00
22.000	4190.00	745.69	0.00	0.01	0.00	50.00	1.00
22.000	4190.00	745.83	0.00	0.01	0.14	50.00	1.00
23.000	4190.00	746.73	0.00	1.04	0.00	150.00	50.00
23.000	4190.00	746.85	0.00	1.02	0.12	150.00	50.00
24.000	4190.00	748.31	0.00	1.57	0.00	90.00	1040.00
24.000	4190.00	748.37	0.00	1.52	0.06	90.00	1040.00
25.000	4190.00	748.26	0.00	-0.05	0.00	60.00	50.00
25.000	4190.00	748.33	0.00	-0.04	0.07	60.00	50.00
26.000	4190.00	748.89	0.00	0.63	0.00	60.00	60.00
26.000	4190.00	748.99	0.00	0.66	0.10	60.00	60.00
27.900	4190.00	748.86	0.00	-0.03	0.00	48.00	53.00
27.900	4190.00	748.97	0.00	-0.02	0.11	48.00	53.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	28.000	4190.00	748.73	0.00	-0.13	0.00	48.00	1.00
	28.000	4190.00	748.84	0.00	-0.13	0.11	48.00	1.00
	29.000	4190.00	748.87	0.00	0.13	0.00	48.00	46.00
	29.000	4190.00	748.99	0.00	0.15	0.13	48.00	46.00
	29.100	4190.00	749.28	0.00	0.42	0.00	48.00	1.00
	29.100	4190.00	749.43	0.00	0.43	0.14	48.00	1.00
	30.000	4190.00	749.57	0.00	0.29	0.00	62.00	25.00
	30.000	4190.00	749.71	0.00	0.29	0.14	62.00	25.00
	31.000	4190.00	749.68	0.00	0.12	0.00	62.00	25.00
	31.000	4190.00	749.82	0.00	0.11	0.14	62.00	25.00
*	31.900	4190.00	752.41	0.00	2.72	0.00	62.00	25.00
*	31.900	4190.00	752.42	0.00	2.59	0.01	62.00	25.00
	32.000	3950.00	758.60	0.00	6.20	0.00	122.00	1.00
	32.000	3950.00	758.61	0.00	6.20	0.01	122.00	1.00
	33.000	3950.00	758.98	0.00	0.38	0.00	659.76	1170.00
	33.000	3950.00	758.99	0.00	0.38	0.01	659.79	1170.00
	34.000	3950.00	759.03	0.00	0.04	0.00	650.55	1530.00
	34.000	3950.00	759.03	0.00	0.04	0.01	540.00	1530.00
	35.000	3950.00	758.58	0.00	-0.45	0.00	120.00	490.00
	35.000	3950.00	758.59	0.00	-0.44	0.01	120.00	490.00
	35.900	3950.00	759.25	0.00	0.68	0.00	95.80	49.00
	35.900	3950.00	759.26	0.00	0.67	0.01	95.83	49.00
	36.000	3950.00	759.03	0.00	-0.17	0.00	79.88	1.00
	36.000	3950.00	759.09	0.00	-0.17	0.01	79.91	1.00
	37.000	3950.00	759.72	0.00	0.64	0.00	82.96	40.00
	37.000	3950.00	759.73	0.00	0.64	0.00	82.96	40.00
	37.100	3950.00	760.16	0.00	0.44	0.00	100.26	1.00
	37.100	3950.00	760.17	0.00	0.44	0.00	100.28	1.00
	38.000	3950.00	760.22	0.00	0.06	0.00	175.78	50.00
	38.000	3950.00	760.23	0.00	0.06	0.00	175.79	50.00
	39.000	3950.00	765.39	0.00	5.17	0.00	75.00	1800.00
	39.000	3950.00	765.39	0.00	5.16	-0.00	75.00	1800.00
	39.900	3950.00	765.43	0.00	0.04	0.00	48.00	49.00
	39.900	3950.00	765.45	0.00	0.06	0.01	48.00	49.00
	40.000	3950.00	765.35	0.00	-0.08	0.00	48.00	1.00
	40.000	3950.00	765.37	0.00	-0.08	0.01	48.00	1.00
	41.000	3950.00	765.54	0.00	0.19	0.00	48.00	40.00
	41.000	3950.00	765.61	0.00	0.24	0.06	48.00	40.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
41.100	3950.00	765.80	0.00	0.26	0.00	48.00	1.00
41.100	3950.00	765.87	0.00	0.26	0.07	48.00	1.00
42.000	3950.00	766.76	0.00	0.97	0.00	175.00	180.00
42.000	3950.00	766.84	0.00	0.97	0.08	175.00	180.00
43.900	3950.00	766.85	0.00	0.09	0.00	90.00	180.00
43.900	3950.00	766.93	0.00	0.09	0.08	90.00	180.00
44.000	3950.00	766.81	0.00	-0.04	0.00	90.00	1.00
44.000	3950.00	766.89	0.00	-0.04	0.08	90.00	1.00
45.000	3950.00	766.93	0.00	0.13	0.00	90.00	60.00
45.000	3950.00	767.01	0.00	0.13	0.08	90.00	60.00
45.100	3950.00	767.05	0.00	0.12	0.00	90.00	1.00
45.100	3950.00	767.13	0.00	0.12	0.08	90.00	1.00
46.000	3950.00	767.12	0.00	0.06	0.00	190.00	50.00
46.000	3950.00	767.18	0.00	0.05	0.06	133.55	50.00
47.000	3950.00	767.98	0.00	0.87	0.00	848.13	1400.00
47.000	3950.00	768.08	0.00	0.90	0.10	723.07	1400.00
47.900	3950.00	767.98	0.00	-0.00	0.00	732.38	49.00
47.900	3950.00	768.08	0.00	0.00	0.10	617.58	49.00
48.000	3950.00	768.03	0.00	0.05	0.00	733.66	1.00
48.000	3950.00	768.13	0.00	0.05	0.10	624.13	1.00
49.000	3950.00	768.04	0.00	0.02	0.00	733.99	22.00
49.000	3950.00	768.14	0.00	0.02	0.10	623.41	22.00
49.100	3950.00	768.03	0.00	-0.02	0.00	733.87	1.00
49.100	3950.00	768.12	0.00	-0.02	0.10	623.41	1.00
50.000	3950.00	768.07	0.00	0.05	0.00	851.16	50.00
50.000	3950.00	768.17	0.00	0.05	0.10	723.25	50.00
51.000	3950.00	768.40	0.00	0.33	0.00	968.19	978.00
51.000	3950.00	768.50	0.00	0.33	0.10	605.48	978.00

SUMMARY OF ERRORS

CAUTION SECNO= 31.900 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 31.900 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 31.900 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 31.900 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 31.900 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 31.900 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

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FORM E 5A-1000 PRINTED BY INSTANT MANIFOLD FORMS.

FLOODWAY DATA, MID.ROUGE R. N.VILLE TWP
PROFILE NO. 2

STATION	FLOODWAY WIDTH (FT)	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
1.000	447.	4678.	0.9	730.5	730.4	0.1
2.000	271.	1413.	3.0	730.3	730.2	0.1
3.000	70.	469.	8.9	730.8	730.7	0.1
3.900	46.	371.	11.3	731.0	730.9	0.1
4.000	46.	312.	13.4	730.6	730.5	0.1
5.000	46.	283.	14.8	730.9	730.9	0.0
5.100	46.	445.	9.4	733.7	733.7	0.0
6.000	346.	2955.	1.4	735.4	735.4	0.0
6.900	409.	2021.	2.1	735.4	735.4	0.0
7.000	408.	560.	7.5	734.9	734.9	0.0
8.000	410.	873.	4.8	736.1	736.1	0.0
8.100	410.	2553.	1.6	736.7	736.7	0.0
9.000	467.	3880.	1.1	736.8	736.8	0.0
10.000	447.	2886.	1.5	737.0	737.0	0.0
10.900	435.	2439.	1.7	737.0	737.0	0.0
11.000	440.	2229.	1.9	737.0	737.0	0.0
11.500	439.	2229.	1.9	737.0	737.0	0.0
11.600	439.	2465.	1.7	737.0	737.0	0.0
11.900	441.	2473.	1.7	737.0	737.0	0.0
12.000	253.	990.	4.2	737.0	737.0	0.0
13.000	258.	1023.	4.1	737.1	737.1	0.0
14.000	261.	1029.	4.1	737.1	737.1	0.0
15.000	268.	1261.	3.3	737.4	737.4	0.0
16.000	181.	610.	6.9	740.6	740.5	0.1
17.000	234.	691.	6.1	740.8	740.7	0.1
18.000	293.	850.	4.9	741.1	741.0	0.1
19.000	392.	1308.	3.2	741.8	741.7	0.1
20.000	75.	646.	6.5	745.4	745.3	0.1
21.000	50.	492.	8.5	745.5	745.4	0.1
21.100	50.	492.	8.5	745.5	745.4	0.1
21.900	50.	511.	8.2	745.8	745.7	0.1
22.000	50.	511.	8.2	745.8	745.7	0.1
23.000	150.	1170.	3.6	746.8	746.7	0.1
24.000	90.	907.	4.6	748.4	748.3	0.1
25.000	60.	621.	6.7	748.4	748.3	0.1
26.000	60.	641.	6.5	749.0	748.9	0.1
27.900	48.	487.	8.6	749.0	748.9	0.1
28.000	48.	439.	9.6	748.8	748.7	0.1
29.000	48.	444.	9.4	749.0	748.9	0.1
29.100	48.	510.	8.2	749.4	749.3	0.1
30.000	62.	565.	7.4	749.7	749.6	0.1
31.000	62.	398.	10.5	749.8	749.7	0.1
31.900	62.	323.	13.0	752.4	752.4	0.0
32.000	122.	900.	4.4	758.6	758.6	0.0
33.000	660.	5351.	0.7	759.0	759.0	0.0
34.000	540.	3073.	1.3	759.0	759.0	0.0
35.000	120.	591.	6.7	758.6	758.6	0.0
35.900	96.	553.	7.1	759.3	759.3	0.0
36.000	80.	460.	8.6	759.1	759.1	0.0
37.000	83.	512.	7.7	759.7	759.7	0.0

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FLOODWAY DATA, MID.ROUGE R. N.VILLE TWP
PROFILE NO. 2

STATION	FLOODWAY WIDTH (FT)	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
37.100	100.	643.	6.1	760.2	760.2	0.0
38.000	176.	911.	4.3	760.2	760.2	0.0
39.000	75.	688.	5.7	765.4	765.4	0.0
39.900	48.	534.	7.4	765.4	765.4	0.0
40.000	48.	486.	8.1	765.4	765.4	0.0
41.000	48.	495.	8.0	765.6	765.5	0.1
41.100	48.	554.	7.1	765.9	765.8	0.1
42.000	175.	1410.	2.8	766.9	766.8	0.1
43.900	90.	815.	4.8	767.0	766.9	0.1
44.000	90.	734.	5.4	766.9	766.8	0.1
45.000	90.	743.	5.3	767.0	766.9	0.1
45.100	90.	833.	4.7	767.2	767.1	0.1
46.000	134.	990.	4.0	767.2	767.1	0.1
47.000	723.	4038.	1.0	768.1	768.0	0.1
47.900	618.	2952.	1.3	768.1	768.0	0.1
48.000	624.	2834.	1.4	768.1	768.0	0.1
49.000	623.	2841.	1.4	768.1	768.0	0.1
49.100	623.	2997.	1.3	768.1	768.0	0.1
50.000	723.	4012.	1.0	768.2	768.1	0.1
51.000	605.	2258.	1.7	768.5	768.4	0.1

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Northville Twp.

3) WATERCOURSE: Middle Branch Rouge River

4) DOCUMENT TYPE: Report

00BREAK00

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors • Community Planners
Taylor, Michigan

August 14, 1979

Michigan Department of Natural Resources
Flood Insurance & Flood Plain Delineation Unit
Water Management Division
Stevens T. Mason Building
P.O. Box 30028
Lansing, Michigan 48909

Attention: Mr. Dan Morgan

Re: Engineering Contract H-4542

Gentlemen:

Enclosed is a report which describes the amended hydraulic studies associated with Northville Township - Michigan Flood Insurance Administration Study performed by our office. This report incorporates your comments of June 13, 1979. Your review and approval of this report is requested.

Please contact me or Dan Brooks if you have any questions regarding this report.

Very truly yours,

WADE, TRIM & ASSOCIATES, INC.

Glen A. Roberts

GAR:lb
HUD 2007-07
Enclosure
cc: Mr. Martin Gunn, Department of Housing & Urban Development
Mr. Wallace Weaver, Department of Housing & Urban Development

AMENDED
HYDRAULIC REPORT
NORTHVILLE TOWNSHIP
MICHIGAN

August, 1979

HUD 2007-07

HYDRAULICS REPORT
NORTHVILLE TOWNSHIP - MICHIGAN

I. INTRODUCTION

Northville Township covers approximately 16.7 square miles and is located in the northwestern portion of Wayne County, as well as, entirely within the Rouge River Basin. This report summarizes the hydraulic studies undertaken to support detail studies of approximately 3.0 miles of the Middle Branch of the Rouge River, and approximate studies of nearly 4.0 miles of the Johnson Drain.

A study was conducted by Wade, Trim & Associates, Inc., Consulting Engineers and Glen Roberts served as Project Manager.

II. ROUGE RIVER (DETAILED)

Detail studies were performed on the Middle Branch of the Rouge River from its outlet, Phoenix Lake, to the Northville Township Corporate Boundries. A total of 20 cross sections were provided by the Corps of Engineers (Reference 1). These cross sections included 8 road bridges, 3 railroad bridges, 2 lakes, 1 dam and 1 abandoned mill structure. Cross section locations are shown on Exhibit 1. Cross sections were supplemented by USGS quad maps of the study area which consists of 10' contour interval data (Reference 2). Exhibit 2 contains bridge and dam sketches.

Table 1 cross references section designations by showing which computer section number corresponds to the cross section letter shown in Exhibit 1. Table 2 lists discharges applicable to the study and have been approved by the Michigan Department of Natural Resources (MDNR).

A. Method of Analysis

The HEC-2 backwater program was used in developing water surface profiles (Reference 3). HEC-2 printouts are presented as Exhibit 3 (Exhibit 3 is contained in the 11" X 15" folder attached to this report). Water surface profiles resulting from the backwater analysis are presented as Exhibit 4.

B. Variables and Coefficients

Roughness coefficients (Mannings "n") were estimated by field inspection at each cross section. Typical roughness values for the main channel for the Rouge River ranged from 0.025 to 0.050; roughness values for the overbank area varied between 0.08 to 0.15 for the several floods investigated. Contraction and expansion coefficients for abrupt transitions and briges vary from 0.3 to 0.4 and 0.5 to 0.6, respectively, and normal channel transition coefficients are 0.1 and 0.3, respectively. Bridge loss calculations are presented in Exhibit 2. Variables and coefficients selected are indicative of summer month conditions and are consistent with values recommended and used in engineering practice.

TABLE 1
NORTHVILLE TOWNSHIP - MIDDLE ROUGE RIVER
CROSS SECTION INDEX

FLOODWAY MAP IDENTIFICATION	SECTION NUMBER HEC-2	STA	CORPS C.S.#	DESCRIPTION
A	1	0+00	2	Northville Township Corporate Boundary
B	4	18+45	4	D/S Face C.O. R.R. BR. #1
C	5	19+35	5	U/S Face C.O. R.R. BR. #1
D	7	22+20	6	D/S Face Northville Rd. #1
E	8	22+85	6	U/S Face Northville Rd. #1
F	11	34+21	8	D/S Abandoned Mill
G	11.5	34+26	8	U/S Abandoned Mill
H	13	38+51	9	D/S Face Northville Rd. #2
I	14	39+11	9	U/S Face Northville Rd. #2
J	17	57+01	11	D/S Face Northville Rd. #3
K	18	57+61	11	U/S Face Northville Rd. #3
L	21.1	74+12	14	D/S Face 6 Mile Rd.
M	21.9	74+62	14	U/S Face 6 Mile Rd.
N	25	86+03	15	D/S Face Northville Rd. #4
O	26	86+63	16	U/S Face Northville Rd. #4
P	28	87+17	17	D/S Face C.O. R.R. BR. #2
Q	29	87+63	17	U/S Face C.O. R.R. BR. #2
R	30	87+89	18	D/S Face Service Drive
S	31	87+14	18	U/S Face Service Drive

TABLE 1
NORTHVILLE TOWNSHIP - MIDDLE ROUGE RIVER
CROSS SECTION INDEX

FLOODWAY MAP IDENTIFICATION	SECTION NUMBER HEC-2	STA	CORPS C.S.#	DESCRIPTION
T	32	88+40	19	Waterford Dam
U	33	100+10	20	Waterford Pond
V	34	115+40	21	Waterford Pond
W	36	120+80	22	D/S Face Spur Line
X	37	121+20	22	U/S Face Spur Line
Y	40	140+21	24	D/S Face C.O. R.R. BR. #3
Z	41	140+61	24	U/S Face C.O. R.R. BR. #3
AA	44	144+23	26	D/S Face Northville Rd. #5
AB	45	144+83	26	U/S Face Northville Rd. #5
AC	48	159+84	29	D/S Face Park BR.
AD	49	160+06	29	U/S Face Park BR.
AE	51	170+35	30	D/S 7 Mile Rd.

TABLE 2

NORTHVILLE TOWNSHIP

FLOOD FLOW FREQUENCY DATA

MIDDLE BRANCH OF ROUGE RIVER

LOCATION	10 YR. CFS	50 YR. CFS	100 YR. CFS	500 YR. CFS
U/S Waterford Pond (To Township U/S Limit)	2420	3380	3950	5470
D/S Waterford Pond	2420	3380	3950	5470
U/S Phoenix Lake (Township D/S Limit)	2570	3590	4190	5780

C. High Water Marks

The 18 documented high water marks for the June, 1968 flood (Reference 4) in Northville Township are presented in Table 3. Verification of the HEC-2 computer model for the Middle Rouge River was accomplished by the application of the 1968 storm flow rate to the model. A flow rate of 1,610 cfs was used for the 1968 flood. This flow rate was determined by the Corps of Engineers (Reference 1). The 1968 profile produced by the computer model was then compared with the documented high water marks. All five of the documented high water marks which are listed in excellent condition were matched in the profile verification run (Exhibit 3). Many of the documented high water marks with an unknown condition designation contradict each other at various locations; therefore, these high water marks were only used as a check, where excellent high water marks are not available, to insure the model was performing in the proper range.

D. Starting Conditions

Starting water surface elevations used in all back water computations at Phoenix Lake were determined from flood routing analyses performed as part of the hydrology studies of the Rouge River for Northville Township.

E. Special Problems

No special problems were encountered in the hydraulic analysis of the Rouge River.

F. General

Computed water surface elevations were developed to an accuracy of 0.5' for floods of the selected reoccurrence intervals.

All elevations are referenced to the U.S. Geological and Coastal Survey (USGCS) Datum. This datum is equivalent to the National Geodetic Vertical Datum of 1929 (NGVD).

The hydraulic analyses for this study were based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

III. JOHNSON DRAIN (APPROXIMATE)

Approximate studies were performed on the Johnson Drain through its entire length in Northville Township. Rating curves were developed at two locations on the Johnson Drain from field observations to obtain the 100 year flood elevation. At Five Mile Road (U/S Limit) the 100 year flood elevation was taken from the Plymouth Township FIS where Johnson Drain was studied in detail (Reference 5). Table 4 lists estimated 100 year flood elevations at these selected locations.

TABLE 3
DOCUMENTED HIGH WATER MARKS - 1968 FLOOD
MIDDLE ROUGE RIVER
NORTHVILLE TOWNSHIP

LOCATION	DESCRIPTION	H.W.M. ELEV.	WTA ELEV.	CONDITION
Norhtville Rd. #1	D/S, Left Bank	730.00		Excellent
Northville Rd. #1	U/S, Right Bank	729.82		Good
Northville Rd. #1	West Side of Bridge	728.42		Unknown
Northville Rd. #1	D/S of Bridge		730.04	
Northville Rd. #1	U/S of Bridge		730.15	
Northville Rd. #2	D/S, Right Bank	733.03		Unknown
Northville Rd. #2	West Side of Bridge	732.06		Unknown
Northville Rd. #2	U/S, Right Bank	733.23		Unknown
Northville Rd. #2	±50 Ft. D/S		733.76	
Northville Rd. #2	±50 Ft. U/S		734.14	
Northville Rd. #3	West Side of Bridge	736.28		Unknown
Northville Rd. #3	U/S, Right Bank	738.41		Excellent
Northville Rd. #3	U/S, Right Bank	738.14		Good
Northville Rd. #3	±50 Ft. U/S		738.32	
6 Mile Rd.	N.E. Wingwall	744.49		Unknown
6 Mile Rd.	U/S, Left Bank	742.83		Unknown
6 Mile Rd.	U/S Face		741.68	
6 Mile Rd.	±50 Ft. U/S		741.95	

TABLE 3
DOCUMENTED HIGH WATER MARKS - 1968 FLOOD
MIDDLE ROUGE RIVER
NORTHVILLE TOWNSHIP

LOCATION	DESCRIPTION	H.W.M. ELEV.	WTA ELEV.	CONDITION
Waterford Bend Park Rd.	D/S Northville Rd. #4	743.88		Excellent
Waterford Bend Park Rd.	D/S Northville Rd. #4 on Left Bank	743.48		Good
Northville Rd. #4	West Side of Bridge	744.32		Unknown
Northville Rd. #4	D/S Face		743.95	
Northville Rd. #4	±50 Ft. D/S		743.93	
Northville Rd. #5	West Side of Bridge	760.71		Unknown
Northville Rd. #5	U/S, Right Bank	761.53		Unknown
Northville Rd. #5	D/S, Right Bank	762.72		Excellent
Northville Rd. #5	U/S, Right Bank	762.89		Excellent
Northville Rd. #5	D/S of Bridge		762.70	
Northville Rd. #5	U/S of Bridge		762.90	

TABLE 4

Location	Approximate 100 Year Flood Elevation
1. Five Mile Road	834.8
2. Beck Road	820.0
3. D/S Corporate Limit	785.0

REFERENCES

1. Corps of Engineers, U.S. Army, Flood Plain Information Middle Rouge River, Northville, Michigan, 1971.

2. U.S. Geological Survey Topographical Maps - Northville Quadrangle, Wayne - Oakland County, 7.5 Minute Series - Photo Revised 1973.

3. HEC-2 - Water Surface Profile - Users Manual - U.S. Army Corps of Engineers - 1976.

4. Post Flood Report of Southeast Michigan Flood 25-27 June 1968, U.S. Army Engineer District, Detroit Corps of Engineers, Detroit, Michigan 1969.

5. Flood Insurance Study, Plymouth Township, Michigan, Flood Insurance Administration - Currently Underway.

NORTHVILLE TOWNSHIP, MICHIGAN
MIDDLE BRANCH OF ROUGE RIVER

EXHIBIT 1

FIELD CROSS SECTION LOCATION
100 YEAR FLOOD PLAIN - FLOODWAY MAP

NORTHVILLE TOWNSHIP, MICHIGAN
MIDDLE BRANCH OF ROUGE RIVER

EXHIBIT 2

STRUCTURE SKETCHES
AND BRIDGE LOSS COMPUTATIONS

C.O. R.R. #1

RAILROAD BRIDGE

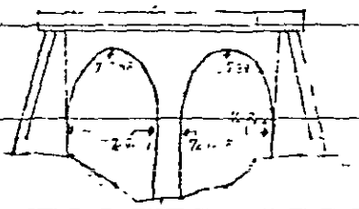
760

750

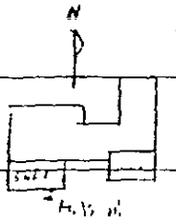
740 L R

730

720



HIGH WATER MARK @ PARAPET



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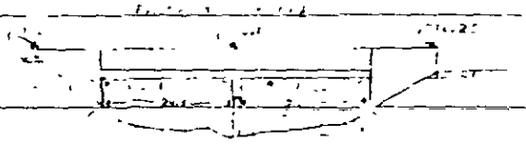

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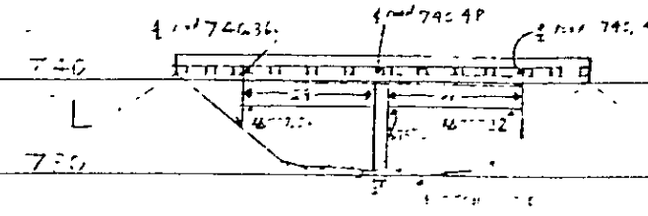
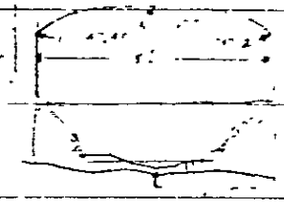


6-MILE RD.



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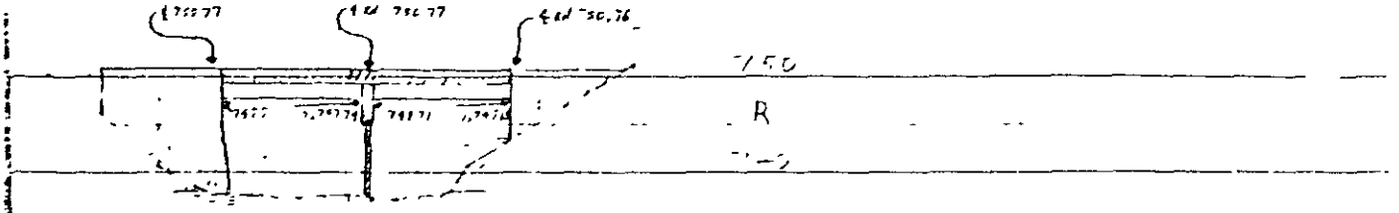

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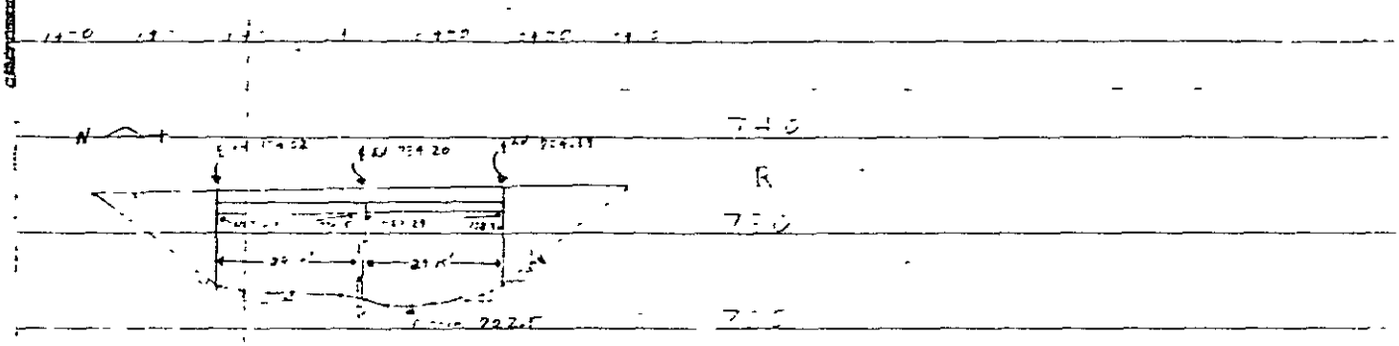

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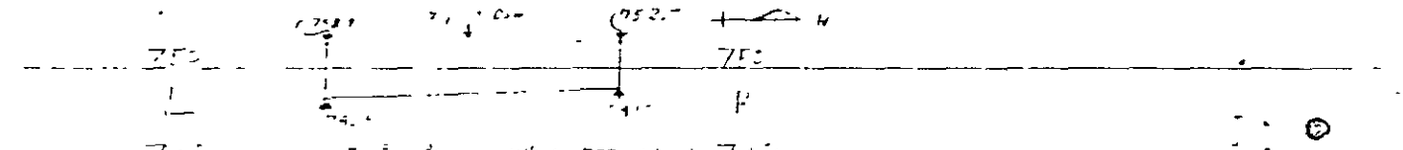
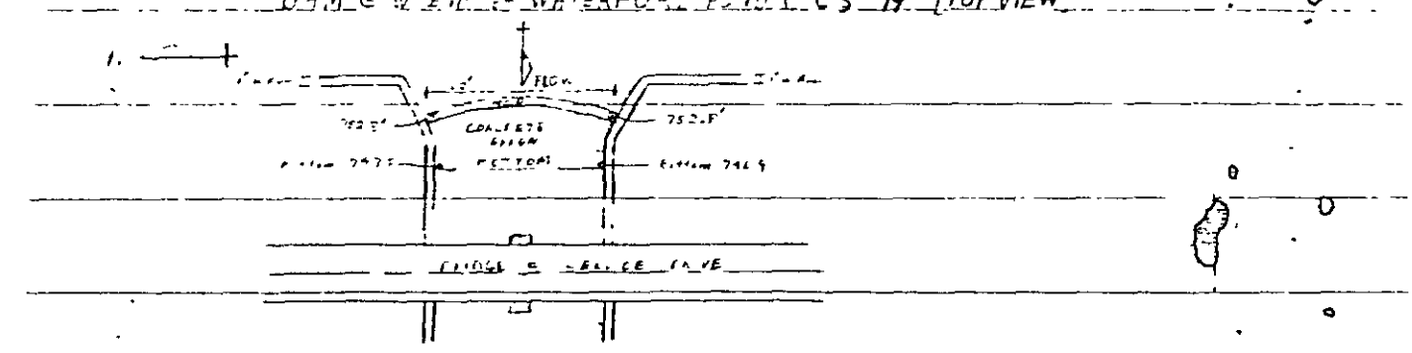
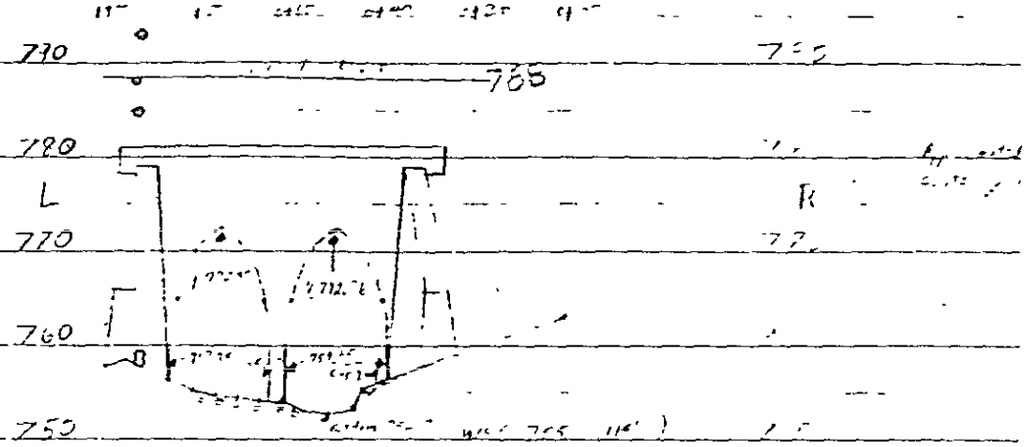


WATERFORD DAM



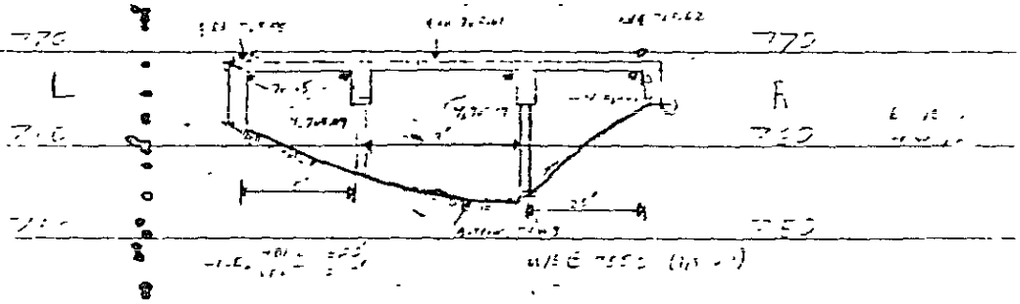
C.O. R.R. BR. #3

STA 1139+70



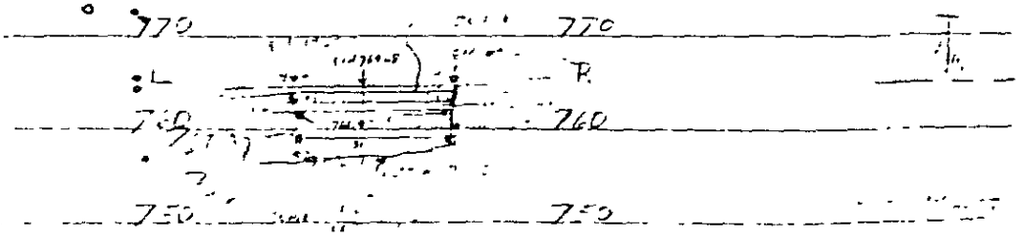
NORTHVILLE RD #5

STA. 1144+30

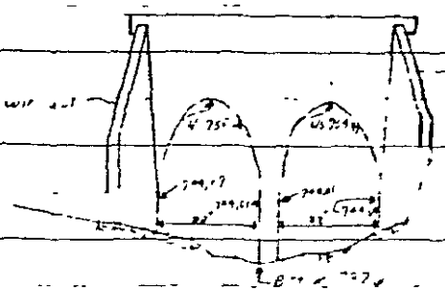


PARK BRIDGE

STA 1159+30

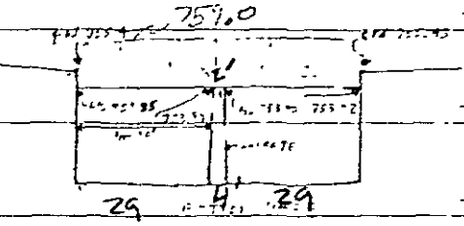


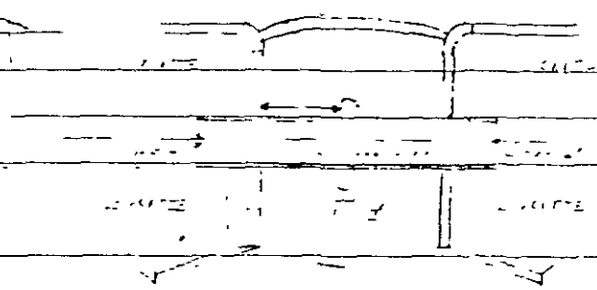
C.O. R.R. BR. #2



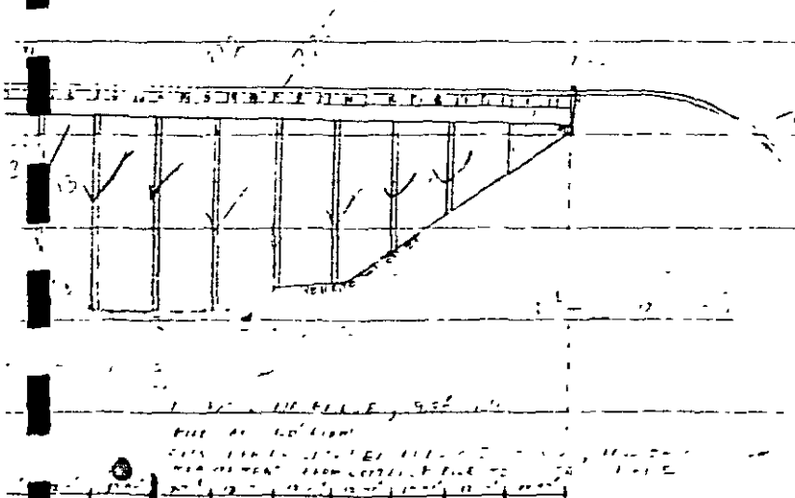
SERVICE DRIVE

SERVICE DRIVE BRIDGE C.L. "L"





SPUR LINE



MRRN 4-26

Bridge Location : ABANDONED MILL
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 manual
XKOR (Loss Coefficient) = 1.0 + Σk, $\Sigma k = k_f + k_e + k_p$
where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers
Description of Bridge :
$K_f = 29.1\, n^2 L / R^{4/3}$ for English units
Area = = WP =
$R = A/wp$ $R^{4/3}$ = L =
n (composite) =
$K_f = 29.1 \times (\quad)^2 \times \quad / \quad =$

K_e = — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 4

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + + + = 1.05
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 16.0
6. BWP = total width of obstruction = 0.0 — field data
7. BAREA = bridge opening inc. piers = 0.1
8. SS = side slope = 0.0
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 725.01
(0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 725.01
(0 if equal to minimum elevation in previous X-sect.)

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner Project Suffix
Dearborn Twp	DRB		___ OF ___	HUD • 2007 • 07
	DATE 2/24	DATE		

Bridge Location: Northville Rd #2
Bridge Losses - SB Crvt

REFERENCE

1. XK (Pier Shape Coefficient) 1.05 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk, Σk = $k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 340 Wp = 145

$R = A/wp$ 340/145 = 2.07 $R^{4/3}$ = 2.64 L = 60

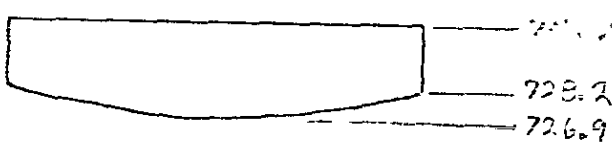
n (composite) =

$K_f = 29.1 \times (0.02)^2 \times 60 / 2.64 = 0.26$

K_c = 0.30 — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual



$A_1 = 60 \times 5 = 300$

$\frac{60 \times 1.3}{2} = 39$

340

2. XKOR = 1 + 0.26 + 0.30 + 0.05 = 1.61
3. COFQ - Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 54.0
6. BWP - total width of obstruction = 1.0 — field data
7. BAREA = bridge opening inc. piers = 340
8. SS = side slope = 0.0 (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 726.9 (0 if equal to minimum elevation in previous x-sect.)
10. ELCHD = Elevation of channel invert D/S side = 726.9 (0 if equal to minimum elevation in previous x-sect.)

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner	Project	Suffix
Northville Twp - MRR	DRB		___ OF ___	HUD	0207	07
	DATE 7/79	DATE				

FORM 25 0
(313) 291-5400
Wade Trim & Associates Inc.
Civil Engineers • Land Surveyors
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

WORK SHEET

Bridge Location: NORTHVILLE RD. #3
Bridge Losses - SB Carr

REFERENCE

1. XK (Pier Shape Coefficient) 1.25 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + ΣK, $\Sigma K = K_f + K_e + K_p$

where K_f = friction loss coefficient
K_e = entrance loss coefficient
K_p = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}_{-SKEW}$ for English units

Area = 300 (.891) = 267 $R^{4/3}$ = 2.37 Wp = 140 L = 60

R = A/wp 267/140

n (composite) = 0.029

K_f = 29.1 x $(0.029)^2$ x 60 / 2.37 = 0.55

K_e = 0.5 — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + 0.55 + 0.5 + 0.05 = 2.15
3. COFQ - Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 38.6
6. BWP = total width of obstruction = 2.0 — field data
7. BAREA = bridge opening inc. piers = 267.
8. SS = side slope = 0.0 (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 230. (0 if equal to minimum elevation in previous x-sect.)
10. ELCHD = Elevation of channel invert D/S side = 230. (0 if equal to minimum elevation in previous x-sect.)

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner Project Suffix
N.U. TWP - M.R.R.	DATE 7/79	DATE	___ OF ___	400 • 2207 • 00

FORM 25 0

(313) 291 5400

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

Bridge Location : NORTHVILLE RD BRIDGE #4
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 1.05 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk , $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge :

$k_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = = 590.5 W_p = 160.

$R = A/w_p$ 590.5/160 = 3.69 $R^{4/3}$ = 5.7 L =

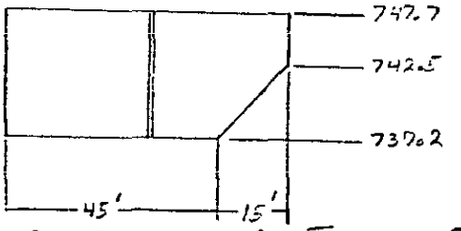
n (composite) =

$K_f = 29.1 \times (0.02)^2 \times 60 \quad / 5.7 \quad = 0.12$

$K_e = 0.5$ — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual



AREA TOTAL
45 × 10.5 = 472.5
15 × 5.2 = 78.0
1/2 (15)(5.3) = 40
590.5

2. XKOR = 1 + 0.12 + 0.5 + 0.05 = 1.67
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 56.24
6. BWP = total width of obstruction = 1. — field data
7. BAREA = bridge opening inc. piers = 590.5
8. SS = side slope = 0
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 737.2
(0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 737.1
(0 if equal to minimum elevation in previous X-sect.)

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner Project Suffix
NoUoTWP	DRB		___ OF ___	HUD 2003 07
	DATE 6/79	DATE		

FORM 25 0

(313) 291-5400

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

Bridge Location : SERVICE DRIVE
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 1.25 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk , $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge :

$k_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = = 657. Wp = 166

R = A/wp 3.96 $R^{4/3}$ = 6.26 L = 25

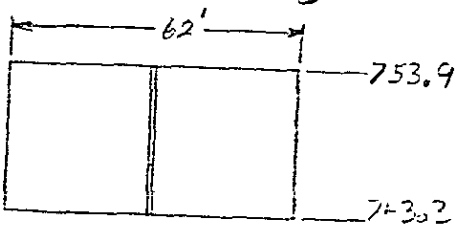
n (composite) =

$k_f = 29.1 \times (.02)^2 \times 25 / 6.26 = 0.05$

$k_e = 0.5$ — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

k_p = 0 if bridge has no intermediate piers

k_p = 0.05 if bridge has intermediate piers — HEC-2 manual



2. XKOR = 1 + 0.05 + 0.5 + 0.05 = 1.6
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 62.
6. BWP = total width of obstruction = 2. — field data
7. BAREA = bridge opening inc. piers = 657.
8. SS = side slope = 0.
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 743.3
(0 if equal to minimum elevation in previous x-sect.)
10. ELCHD = Elevation of channel invert D/S side = 740.5
(0 if equal to minimum elevation in previous x-sect.)

SUBJECT	BY	CHK	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
NoU, TWPc	DRB		___ OF ___	HUD 2007 07
	DATE 6/79	DATE		

Bridge Location: WARREN-FORD DAM

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) 0.0 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk, $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = = Wp =

$R = A/wp$ $R^{4/3}$ = L =

n (composite) =

$K_f = 29.1 \times (\quad)^2 \times \quad / \quad =$

K_e =

Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + + + = 1.5
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 62.0
6. BWP = total width of obstruction = 0.0 — field data
7. BAREA = bridge opening inc. piers = 0.1
8. SS = side slope = 0. (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 746.09 (0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 746.09 (0 if equal to minimum elevation in previous X-sect.)

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner Project Suffix
Dearborn Twp	DRB		___ OF ___	HUD 2007 07
	DATE 7/29	DATE		

NORTHVILLE TOWNSHIP, MICHIGAN
MIDDLE BRANCH ROUGE RIVER

EXHIBIT 3

COMPUTER PRINTOUTS
HEC-2 BACKWATER ANALYSIS
WITH CROSS SECTION PLOTS
(SEE SEPARATE FOLDER)

NORTHVILLE TOWNSHIP, MICHIGAN

MIDDLE BRANCH ROUGE RIVER

EXHIBIT 4

STREAM PROFILE

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Northville Twp.

3) WATERCOURSE: Middle Branch Rouge River

4) DOCUMENT TYPE: Summary

00BREAK00

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE  150
```

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	1.000	0.00	0.00	0.00	717.10	2570.00	729.66	0.00	729.67	0.10	0.59	4472.61	8334.51
	1.000	0.00	0.00	0.00	717.10	3590.00	730.24	0.00	730.25	0.15	0.78	4757.84	9193.08
	1.000	0.00	0.00	0.00	717.10	4190.00	730.38	0.00	730.39	0.20	0.90	4826.87	9405.25
	1.000	0.00	0.00	0.00	717.10	5780.00	730.75	0.00	730.77	0.34	1.20	5009.93	9976.03
	2.000	1400.00	0.00	0.00	720.20	2570.00	729.57	0.00	729.84	10.37	5.08	1211.54	798.08
	2.000	1400.00	0.00	0.00	720.20	3590.00	730.10	0.00	730.52	15.05	6.42	1355.78	925.53
	2.000	1400.00	0.00	0.00	720.20	4190.00	730.20	0.00	730.75	19.46	7.36	1382.18	949.72
	2.000	1400.00	0.00	0.00	720.20	5780.00	730.43	0.00	731.39	32.78	9.74	1446.22	1009.50
	3.000	395.00	0.00	0.00	721.10	2570.00	729.88	0.00	730.79	27.65	7.85	408.02	488.71
	3.000	395.00	0.00	0.00	721.10	3590.00	730.49	0.00	731.96	40.20	10.03	450.57	566.24
	3.000	395.00	0.00	0.00	721.10	4190.00	730.69	0.00	732.59	49.98	11.38	464.55	592.67
	3.000	395.00	0.00	0.00	721.10	5780.00	731.22	0.00	734.35	75.50	14.64	501.72	665.19
	3.900	49.00	0.00	0.00	721.10	2570.00	729.99	0.00	730.95	28.74	7.87	326.70	479.37
	3.900	49.00	0.00	0.00	721.10	3590.00	730.64	0.00	732.21	42.37	10.05	357.09	551.51
	3.900	49.00	0.00	0.00	721.10	4190.00	730.88	0.00	732.89	52.45	11.38	368.13	578.53
	3.900	49.00	0.00	0.00	721.10	5780.00	731.52	0.00	734.80	78.46	14.54	397.56	652.55
	4.000	1.00	760.00	737.40	721.10	2570.00	729.84	0.00	731.10	32.99	9.00	285.49	447.43
	4.000	1.00	760.00	737.40	721.10	3590.00	730.36	0.00	732.50	57.62	11.76	305.30	472.94
	4.000	1.00	760.00	737.40	721.10	4190.00	730.47	0.00	733.31	75.06	13.53	309.67	483.62
*	4.000	1.00	760.00	737.40	721.10	5780.00	731.16	731.16	735.78	111.68	17.26	334.95	546.95
	5.000	90.00	760.00	737.40	722.20	2570.00	730.01	0.00	731.70	57.11	10.42	246.52	340.09
	5.000	90.00	760.00	737.40	722.20	3590.00	730.69	0.00	733.40	82.09	13.23	271.40	396.23
	5.000	90.00	760.00	737.40	722.20	4190.00	730.94	730.67	734.40	100.29	14.92	280.90	418.39
*	5.000	90.00	760.00	737.40	722.20	5780.00	732.42	732.42	737.03	108.96	17.22	335.72	553.73
	5.100	1.00	0.00	0.00	722.20	2570.00	730.89	0.00	731.91	22.54	8.09	317.74	541.33
	5.100	1.00	0.00	0.00	722.20	3590.00	732.55	0.00	733.84	22.26	9.10	394.58	760.89
	5.100	1.00	0.00	0.00	722.20	4190.00	733.65	0.00	735.03	20.83	9.41	445.25	918.10
	5.100	1.00	0.00	0.00	722.20	5780.00	736.32	0.00	737.93	18.76	10.17	568.16	1334.52
	6.000	150.00	0.00	0.00	722.35	2570.00	731.90	0.00	732.29	8.67	5.64	739.26	872.82
	6.000	150.00	0.00	0.00	722.35	3590.00	734.19	0.00	734.27	2.20	3.38	2539.14	2419.08
	6.000	150.00	0.00	0.00	722.35	4190.00	735.40	0.00	735.48	1.89	3.37	2957.45	3050.07
	6.000	150.00	0.00	0.00	722.35	5780.00	738.36	0.00	738.44	1.43	3.43	3982.01	4826.30

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	6.900	133.00	0.00	0.00	722.50	2570.00	731.99	0.00	732.39	6.40	5.10	504.37	1016.01
	6.900	133.00	0.00	0.00	722.50	3590.00	734.15	0.00	734.39	3.42	4.40	1545.63	1940.64
	6.900	133.00	0.00	0.00	722.50	4190.00	735.37	0.00	735.58	2.81	4.29	2023.84	2498.64
	6.900	133.00	0.00	0.00	722.50	5780.00	738.34	0.00	738.50	1.85	4.04	3243.49	4253.57
	7.000	1.00	734.20	732.40	722.50	2570.00	731.94	0.00	732.44	9.02	5.65	454.91	855.55
	7.000	1.00	734.20	732.40	722.50	3590.00	733.69	728.72	734.85	74.61	9.00	450.74	415.63
	7.000	1.00	734.20	732.40	722.50	4190.00	734.91	729.27	736.04	112.02	9.03	561.59	395.88
	7.000	1.00	734.20	732.40	722.50	5780.00	738.25	0.00	738.59	26.70	5.77	1748.23	1118.49
	8.000	65.00	734.20	732.40	722.50	2570.00	732.01	0.00	732.50	8.82	5.61	458.09	865.39
	8.000	65.00	734.20	732.40	722.50	3590.00	734.47	728.72	735.47	106.77	8.43	482.49	347.43
	8.000	65.00	734.20	732.40	722.50	4190.00	736.06	0.00	736.69	55.33	7.05	874.56	563.28
	8.000	65.00	734.20	732.40	722.50	5780.00	738.46	0.00	738.77	23.83	5.53	1832.91	1184.08
	8.100	1.00	0.00	0.00	722.50	2570.00	732.14	0.00	732.53	6.02	5.00	513.78	1047.25
	8.100	1.00	0.00	0.00	722.50	3590.00	735.55	0.00	735.72	2.21	3.84	2097.56	2416.03
	8.100	1.00	0.00	0.00	722.50	4190.00	736.66	0.00	736.83	1.99	3.87	2553.22	2970.22
	8.100	1.00	0.00	0.00	722.50	5780.00	738.62	0.00	738.80	1.99	4.25	3355.70	4096.97
	9.000	49.00	0.00	0.00	722.50	2570.00	732.48	0.00	732.63	4.89	3.52	1153.69	1162.67
	9.000	49.00	0.00	0.00	722.50	3590.00	735.73	0.00	735.77	1.35	2.28	3495.28	3085.36
	9.000	49.00	0.00	0.00	722.50	4190.00	736.83	0.00	736.87	1.22	2.29	4056.45	3789.50
	9.000	49.00	0.00	0.00	722.50	5780.00	738.81	0.00	738.85	1.23	2.53	5064.37	5211.61
	10.000	1035.00	0.00	0.00	723.10	2570.00	732.93	0.00	733.21	5.22	4.73	1111.79	1124.53
	10.000	1035.00	0.00	0.00	723.10	3590.00	735.87	0.00	736.00	2.17	3.71	2527.46	2437.45
	10.000	1035.00	0.00	0.00	723.10	4190.00	736.95	0.00	737.07	1.83	3.61	3151.09	3100.35
	10.000	1035.00	0.00	0.00	723.10	5780.00	738.93	0.00	739.03	1.61	3.74	4420.74	4559.07
	10.900	50.00	0.00	0.00	725.10	2570.00	732.88	0.00	733.36	24.17	8.41	752.08	522.79
	10.900	50.00	0.00	0.00	725.10	3590.00	735.91	0.00	736.02	5.08	4.88	2056.07	1592.39
	10.900	50.00	0.00	0.00	725.10	4190.00	737.00	0.00	737.09	3.76	4.50	2634.03	2159.90
	10.900	50.00	0.00	0.00	725.10	5780.00	738.98	0.00	739.06	2.85	4.37	3736.19	3421.08
*	11.000	1.00	0.00	0.00	728.40	2570.00	732.80	732.80	733.53	115.52	10.68	524.98	239.11
	11.000	1.00	0.00	0.00	728.40	3590.00	735.95	0.00	736.03	10.43	4.13	1831.74	1111.40
	11.000	1.00	0.00	0.00	728.40	4190.00	737.03	0.00	737.10	6.89	3.58	2402.49	1596.59
	11.000	1.00	0.00	0.00	728.40	5780.00	739.01	0.00	739.06	4.58	3.21	3493.82	2700.45
	11.500	5.00	0.00	0.00	728.40	2570.00	733.28	0.00	733.67	63.53	8.27	689.69	322.44
	11.500	5.00	0.00	0.00	728.40	3590.00	735.95	0.00	736.03	10.41	4.12	1833.62	1112.88
	11.500	5.00	0.00	0.00	728.40	4190.00	737.04	0.00	737.10	6.88	3.58	2403.79	1597.78
	11.500	5.00	0.00	0.00	728.40	5780.00	739.01	0.00	739.06	4.58	3.21	3495.07	2701.83
	11.600	1.00	0.00	0.00	725.10	2570.00	733.40	0.00	733.70	15.29	7.01	948.35	657.30
	11.600	1.00	0.00	0.00	725.10	3590.00	735.94	0.00	736.05	4.97	4.84	2075.22	1609.98
	11.600	1.00	0.00	0.00	725.10	4190.00	737.03	0.00	737.11	3.70	4.47	2650.74	2177.36
	11.600	1.00	0.00	0.00	725.10	5780.00	739.00	0.00	739.08	2.82	4.35	3751.47	3440.00
	11.900	49.00	0.00	0.00	725.10	2570.00	733.50	0.00	733.78	14.01	6.77	988.43	686.74
	11.900	49.00	0.00	0.00	725.10	3590.00	735.97	0.00	736.07	4.90	4.81	2088.42	1622.15
	11.900	49.00	0.00	0.00	725.10	4190.00	737.05	0.00	737.13	3.67	4.45	2661.41	2188.54
	11.900	49.00	0.00	0.00	725.10	5780.00	739.02	0.00	739.09	2.81	4.34	3758.63	3448.87

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
12.000	325.00	0.00	0.00	726.90	2570.00	733.89	0.00	734.55	20.42	6.58	442.31	568.67
12.000	325.00	0.00	0.00	726.90	3590.00	735.96	0.00	736.63	14.76	6.75	769.95	934.42
12.000	325.00	0.00	0.00	726.90	4190.00	736.99	0.00	737.62	12.30	6.66	1155.30	1194.52
12.000	325.00	0.00	0.00	726.90	5780.00	738.96	0.00	739.50	9.52	6.64	2227.32	1873.02
13.000	50.00	0.00	0.00	726.90	2570.00	733.98	0.00	734.67	20.90	6.65	386.28	562.21
13.000	50.00	0.00	0.00	726.90	3590.00	736.06	0.00	736.71	14.07	6.64	801.80	956.97
13.000	50.00	0.00	0.00	726.90	4190.00	737.08	0.00	737.68	11.82	6.56	1192.94	1218.97
13.000	50.00	0.00	0.00	726.90	5780.00	739.02	0.00	739.55	9.26	6.57	2269.58	1899.58
14.000	60.00	736.10	733.20	726.90	2570.00	734.88	0.00	735.41	13.54	5.83	440.61	698.38
14.000	60.00	736.10	733.20	726.90	3590.00	736.32	0.00	736.91	12.42	6.37	890.89	1018.64
14.000	60.00	736.10	733.20	726.90	4190.00	737.08	0.00	737.68	11.78	6.56	1195.54	1220.65
14.000	60.00	736.10	733.20	726.90	5780.00	739.02	0.00	739.55	9.25	6.57	2270.72	1900.30
15.000	50.00	0.00	0.00	728.00	2570.00	735.01	0.00	735.51	25.56	5.92	580.80	508.38
15.000	50.00	0.00	0.00	728.00	3590.00	736.57	0.00	737.03	19.92	6.01	1124.53	804.26
15.000	50.00	0.00	0.00	728.00	4190.00	737.39	0.00	737.82	17.27	5.96	1496.86	1008.27
15.000	50.00	0.00	0.00	728.00	5780.00	739.35	0.00	739.68	12.12	5.69	2677.31	1660.08
16.000	1690.00	0.00	0.00	730.00	2570.00	738.82	0.00	739.44	21.63	6.42	439.33	552.64
16.000	1690.00	0.00	0.00	730.00	3590.00	739.98	0.00	740.87	25.60	7.69	528.43	709.60
16.000	1690.00	0.00	0.00	730.00	4190.00	740.49	737.22	741.52	27.51	8.30	728.72	798.84
16.000	1690.00	0.00	0.00	730.00	5780.00	741.62	738.59	742.80	29.74	9.33	1246.91	1059.97
17.000	50.00	0.00	0.00	730.00	2570.00	738.93	0.00	739.54	15.80	6.33	447.60	646.58
17.000	50.00	0.00	0.00	730.00	3590.00	740.12	0.00	740.99	18.57	7.57	551.98	833.05
17.000	50.00	0.00	0.00	730.00	4190.00	740.69	737.41	741.66	19.36	8.07	814.01	952.24
17.000	50.00	0.00	0.00	730.00	5780.00	741.79	0.00	742.94	21.56	9.18	1336.18	1244.82
18.000	60.00	740.40	737.30	730.00	2570.00	740.43	0.00	740.84	8.40	5.22	587.01	886.64
18.000	60.00	740.40	737.30	730.00	3590.00	740.86	0.00	741.56	13.66	6.86	706.52	971.22
18.000	60.00	740.40	737.30	730.00	4190.00	741.04	0.00	741.88	16.36	7.60	969.40	1035.86
18.000	60.00	740.40	737.30	730.00	5780.00	741.80	0.00	742.94	21.47	9.17	1340.59	1247.42
19.000	50.00	0.00	0.00	730.00	2570.00	740.65	0.00	740.94	12.00	4.45	728.16	742.02
19.000	50.00	0.00	0.00	730.00	3590.00	741.30	0.00	741.74	17.15	5.57	981.54	866.97
19.000	50.00	0.00	0.00	730.00	4190.00	741.68	0.00	742.12	17.49	5.77	1435.44	1001.85
19.000	50.00	0.00	0.00	730.00	5780.00	742.87	0.00	743.32	17.59	6.22	2172.24	1378.16
20.000	1550.00	0.00	0.00	731.90	2570.00	743.31	0.00	743.83	29.71	5.88	493.23	471.48
20.000	1550.00	0.00	0.00	731.90	3590.00	744.73	0.00	745.43	32.45	6.88	599.12	630.26
20.000	1550.00	0.00	0.00	731.90	4190.00	745.27	0.00	746.12	36.23	7.56	639.91	696.12
20.000	1550.00	0.00	0.00	731.90	5780.00	746.63	0.00	747.85	44.11	9.10	741.15	870.28
21.000	50.00	0.00	0.00	733.10	2570.00	743.42	0.00	744.09	35.89	6.58	390.46	429.00
21.000	50.00	0.00	0.00	733.10	3590.00	744.81	0.00	745.76	41.43	7.80	460.12	557.77
21.000	50.00	0.00	0.00	733.10	4190.00	745.36	0.00	746.50	47.03	8.60	487.31	610.96
21.000	50.00	0.00	0.00	733.10	5780.00	746.69	0.00	748.38	59.66	10.43	554.26	748.33
21.100	1.00	750.00	750.00	733.10	2570.00	743.42	0.00	744.09	35.89	6.58	390.46	429.00
21.100	1.00	750.00	750.00	733.10	3590.00	744.82	0.00	745.76	41.37	7.80	460.31	558.12
21.100	1.00	750.00	750.00	733.10	4190.00	745.36	0.00	746.51	46.97	8.59	487.53	611.39
21.100	1.00	750.00	750.00	733.10	5780.00	746.70	0.00	748.39	59.58	10.42	554.50	748.82

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
21.900	50.00	750.00	750.00	733.10	2570.00	743.64	0.00	744.28	32.77	6.40	401.68	448.96
21.900	50.00	750.00	750.00	733.10	3590.00	745.09	0.00	745.98	37.68	7.57	474.06	584.85
21.900	50.00	750.00	750.00	733.10	4190.00	745.69	0.00	746.76	42.30	8.31	503.93	644.24
21.900	50.00	750.00	750.00	733.10	5780.00	747.17	0.00	748.72	52.31	10.00	578.04	799.15
22.000	1.00	0.00	0.00	733.10	2570.00	743.65	0.00	744.28	32.73	6.40	401.81	449.20
22.000	1.00	0.00	0.00	733.10	3590.00	745.10	0.00	745.99	37.64	7.57	474.23	585.18
22.000	1.00	0.00	0.00	733.10	4190.00	745.69	0.00	746.77	42.25	8.31	504.13	644.64
22.000	1.00	0.00	0.00	733.10	5780.00	747.18	0.00	748.73	52.24	9.99	578.30	799.71
23.000	50.00	0.00	0.00	733.10	2570.00	744.18	0.00	744.52	18.11	5.08	769.36	603.84
23.000	50.00	0.00	0.00	733.10	3590.00	745.93	0.00	746.31	16.71	5.53	1032.45	878.12
23.000	50.00	0.00	0.00	733.10	4190.00	746.73	0.00	747.15	16.96	5.85	1152.45	1017.32
23.000	50.00	0.00	0.00	733.10	5780.00	748.78	0.00	749.28	16.81	6.52	1459.59	1409.85
24.000	1040.00	0.00	0.00	737.00	2570.00	745.83	0.00	746.08	12.23	4.06	678.31	734.77
24.000	1040.00	0.00	0.00	737.00	3590.00	747.48	0.00	747.82	12.53	4.68	827.15	1014.04
24.000	1040.00	0.00	0.00	737.00	4190.00	748.31	0.00	748.69	12.92	5.02	901.20	1165.90
24.000	1040.00	0.00	0.00	737.00	5780.00	750.32	0.00	750.84	13.46	5.78	1083.88	1575.40
25.000	50.00	0.00	0.00	737.10	2570.00	745.83	0.00	746.29	23.01	5.46	470.56	535.74
25.000	50.00	0.00	0.00	737.10	3590.00	747.45	0.00	748.07	24.22	6.32	568.15	729.51
25.000	50.00	0.00	0.00	737.10	4190.00	748.26	0.00	748.98	25.25	6.79	616.65	833.76
25.000	50.00	0.00	0.00	737.10	5780.00	750.24	0.00	751.20	27.16	7.86	735.30	1109.09
26.000	60.00	750.80	747.70	737.20	2570.00	745.84	0.00	746.34	25.74	5.68	452.10	506.54
26.000	60.00	750.80	747.70	737.20	3590.00	747.79	0.00	748.41	23.60	6.31	569.36	739.05
26.000	60.00	750.80	747.70	737.20	4190.00	748.89	0.00	749.57	22.51	6.60	635.19	883.17
26.000	60.00	750.80	747.70	737.20	5780.00	750.59	0.00	751.54	26.41	7.84	737.48	1124.66
27.900	53.00	0.00	0.00	737.60	2570.00	745.88	0.00	746.77	54.81	7.58	338.90	347.13
27.900	53.00	0.00	0.00	737.60	3590.00	747.78	0.00	748.86	50.51	8.34	430.40	505.14
27.900	53.00	0.00	0.00	737.60	4190.00	748.86	0.00	750.03	48.40	8.69	481.99	602.26
27.900	53.00	0.00	0.00	737.60	5780.00	750.51	0.00	752.16	57.59	10.30	561.38	761.68
28.000	1.00	773.00	755.60	737.60	2570.00	745.81	0.00	746.85	18.63	8.20	313.50	595.36
28.000	1.00	773.00	755.60	737.60	3590.00	747.68	0.00	748.97	17.87	9.13	393.16	849.35
28.000	1.00	773.00	755.60	737.60	4190.00	748.73	0.00	750.16	20.07	9.60	436.55	935.36
28.000	1.00	773.00	755.60	737.60	5780.00	750.27	0.00	752.41	26.33	11.73	492.69	1126.42
29.000	46.00	773.00	755.60	737.60	2570.00	745.94	0.00	746.94	17.63	8.06	319.04	612.05
29.000	46.00	773.00	755.60	737.60	3590.00	747.81	0.00	749.07	17.14	9.01	398.45	867.23
29.000	46.00	773.00	755.60	737.60	4190.00	748.87	0.00	750.26	19.40	9.49	441.32	951.19
29.000	46.00	773.00	755.60	737.60	5780.00	750.47	0.00	752.54	25.22	11.57	499.69	1150.99
29.100	1.00	0.00	0.00	737.60	2570.00	746.18	0.00	747.00	11.99	7.27	353.56	742.25
29.100	1.00	0.00	0.00	737.60	3590.00	748.15	0.00	749.15	11.13	8.01	448.14	1075.87
29.100	1.00	0.00	0.00	737.60	4190.00	749.28	0.00	750.36	10.63	8.34	502.57	1284.94
29.100	1.00	0.00	0.00	737.60	5780.00	751.29	0.00	752.74	11.84	9.66	598.52	1680.05
30.000	25.00	0.00	0.00	740.50	2570.00	746.21	0.00	747.05	19.22	7.38	348.14	586.20
30.000	25.00	0.00	0.00	740.50	3590.00	748.35	0.00	749.22	13.79	7.47	480.83	966.68
30.000	25.00	0.00	0.00	740.50	4190.00	749.57	0.00	750.45	12.04	7.53	556.42	1207.76
30.000	25.00	0.00	0.00	740.50	5780.00	751.80	0.00	752.88	11.73	8.31	695.15	1687.72

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	31.000	25.00	755.40	753.90	743.30	2570.00	746.35	0.00	749.41	147.80	14.03	183.17	211.39
	31.000	25.00	755.40	753.90	743.30	3590.00	748.47	0.00	750.49	51.48	11.41	314.72	500.37
	31.000	25.00	755.40	753.90	743.30	4190.00	749.68	0.00	751.48	35.90	10.75	389.84	699.28
	31.000	25.00	755.40	753.90	743.30	5780.00	751.94	0.00	753.79	26.58	10.91	529.83	1121.15
*	31.900	25.00	0.00	0.00	746.90	2570.00	750.95	750.95	752.85	68.93	11.04	232.70	309.54
*	31.900	25.00	0.00	0.00	746.90	3590.00	751.90	751.90	754.26	65.79	12.32	291.50	442.60
*	31.900	25.00	0.00	0.00	746.90	4190.00	752.41	752.41	755.02	65.01	12.98	322.78	519.66
*	31.900	25.00	0.00	0.00	746.90	5780.00	753.66	753.66	756.89	63.12	14.44	400.38	727.50
	32.000	1.00	752.80	0.00	746.90	2420.00	757.31	0.00	757.48	3.33	3.26	741.82	1326.21
	32.000	1.00	752.80	0.00	746.90	3380.00	758.13	0.00	758.38	4.33	4.02	841.66	1624.41
	32.000	1.00	752.80	0.00	746.90	3950.00	758.60	0.00	758.90	4.79	4.39	899.06	1805.34
	32.000	1.00	752.80	0.00	746.90	5470.00	759.65	0.00	760.09	6.01	5.33	1026.66	2230.86
	33.000	1170.00	0.00	0.00	749.30	2420.00	757.53	0.00	757.54	0.13	0.55	4393.24	6600.71
	33.000	1170.00	0.00	0.00	749.30	3380.00	758.45	0.00	758.46	0.17	0.68	4997.80	8153.49
	33.000	1170.00	0.00	0.00	749.30	3950.00	758.98	0.00	758.99	0.19	0.74	5345.83	9100.99
	33.000	1170.00	0.00	0.00	749.30	5470.00	760.19	0.00	760.21	0.23	0.89	6146.72	11426.09
	34.000	1530.00	0.00	0.00	751.00	2420.00	757.57	0.00	757.58	0.92	1.06	2294.74	2526.20
	34.000	1530.00	0.00	0.00	751.00	3380.00	758.50	0.00	758.52	0.92	1.21	2845.91	3522.76
	34.000	1530.00	0.00	0.00	751.00	3950.00	759.03	0.00	759.05	0.90	1.28	3182.70	4153.75
	34.000	1530.00	0.00	0.00	751.00	5470.00	760.24	0.00	760.27	0.90	1.45	3974.61	5769.86
	35.000	490.00	0.00	0.00	751.30	2420.00	757.32	0.00	758.10	33.54	7.48	437.84	417.88
	35.000	490.00	0.00	0.00	751.30	3380.00	758.12	0.00	759.17	38.75	8.82	533.82	543.01
	35.000	490.00	0.00	0.00	751.30	3950.00	758.58	0.00	759.76	40.36	9.45	589.40	621.74
	35.000	490.00	0.00	0.00	751.30	5470.00	759.60	0.00	761.19	45.72	11.05	711.01	808.96
	35.900	49.00	0.00	0.00	750.90	2420.00	757.79	0.00	758.31	23.86	5.78	418.88	495.45
	35.900	49.00	0.00	0.00	750.90	3380.00	758.73	0.00	759.43	27.60	6.72	502.74	643.37
	35.900	49.00	0.00	0.00	750.90	3950.00	759.25	0.00	760.05	28.57	7.15	552.65	738.97
	35.900	49.00	0.00	0.00	750.90	5470.00	760.53	0.00	761.54	30.23	8.06	678.29	994.85
	36.000	1.00	775.00	772.00	750.90	2420.00	757.69	0.00	758.42	70.99	6.85	353.03	287.22
	36.000	1.00	775.00	772.00	750.90	3380.00	758.58	0.00	759.58	90.75	8.05	420.03	354.81
	36.000	1.00	775.00	772.00	750.90	3950.00	759.08	0.00	760.23	99.73	8.59	459.74	395.53
	36.000	1.00	775.00	772.00	750.90	5470.00	760.30	0.00	761.78	118.66	9.76	560.39	502.15
	37.000	40.00	775.00	772.00	750.90	2420.00	758.09	0.00	758.71	58.23	6.33	382.61	317.14
	37.000	40.00	775.00	772.00	750.90	3380.00	759.14	0.00	759.96	71.23	7.28	464.52	400.49
	37.000	40.00	775.00	772.00	750.90	3950.00	759.72	0.00	760.64	76.81	7.71	512.37	450.69
	37.000	40.00	775.00	772.00	750.90	5470.00	761.12	0.00	762.28	88.78	8.65	632.04	580.55
	37.100	1.00	0.00	0.00	750.90	2420.00	758.36	0.00	758.77	17.31	5.16	469.37	581.58
	37.100	1.00	0.00	0.00	750.90	3380.00	759.52	0.00	760.05	18.25	5.84	579.14	791.17
	37.100	1.00	0.00	0.00	750.90	3950.00	760.16	0.00	760.75	18.45	6.15	642.32	919.50
	37.100	1.00	0.00	0.00	750.90	5470.00	761.69	0.00	762.42	18.96	6.83	801.07	1256.11
	38.000	50.00	0.00	0.00	752.30	2420.00	758.41	0.00	759.04	46.98	6.96	596.64	353.07
	38.000	50.00	0.00	0.00	752.30	3380.00	759.58	0.00	760.30	43.45	7.62	797.86	512.77
	38.000	50.00	0.00	0.00	752.30	3950.00	760.22	0.00	760.99	41.77	7.94	910.15	611.19
	38.000	50.00	0.00	0.00	752.30	5470.00	761.76	0.00	762.65	39.05	8.72	1183.67	875.31

SECNO	XLOC	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
39.000	1800.00	0.00	0.00	754.10	2420.00	763.39	0.00	763.80	17.39	5.40	538.88	580.27
39.000	1800.00	0.00	0.00	754.10	3380.00	764.71	0.00	765.29	20.18	6.43	637.43	752.43
39.000	1800.00	0.00	0.00	754.10	3950.00	765.39	0.00	766.07	21.70	6.99	688.37	847.87
39.000	1800.00	0.00	0.00	754.10	5470.00	767.02	0.00	767.98	25.04	8.31	810.22	1093.03
39.900	49.00	0.00	0.00	752.80	2420.00	763.45	0.00	763.92	16.98	5.53	437.65	587.27
39.900	49.00	0.00	0.00	752.80	3380.00	764.76	0.00	765.47	21.83	6.75	500.45	723.40
39.900	49.00	0.00	0.00	752.80	3950.00	765.43	0.00	766.29	24.56	7.41	532.89	797.04
39.900	49.00	0.00	0.00	752.80	5470.00	767.04	0.00	768.29	31.16	8.97	609.85	979.99
40.000	1.00	788.00	772.40	752.80	2420.00	763.41	0.00	763.97	22.73	6.04	400.86	507.57
40.000	1.00	788.00	772.40	752.80	3380.00	764.69	0.00	765.54	29.26	7.38	458.13	624.83
40.000	1.00	788.00	772.40	752.80	3950.00	765.35	0.00	766.38	38.33	8.13	485.63	637.98
40.000	1.00	788.00	772.40	752.80	5470.00	766.89	0.00	768.44	51.20	10.01	546.44	764.43
41.000	40.00	788.00	772.40	752.80	2420.00	763.51	0.00	764.07	21.91	5.97	405.60	517.00
41.000	40.00	788.00	772.40	752.80	3380.00	764.84	0.00	765.66	28.02	7.28	464.60	638.52
41.000	40.00	788.00	772.40	752.80	3950.00	765.54	0.00	766.54	36.56	8.01	493.14	653.23
41.000	40.00	788.00	772.40	752.80	5470.00	767.18	0.00	768.69	63.77	9.85	555.39	684.96
41.100	1.00	0.00	0.00	752.80	2420.00	763.64	0.00	764.10	15.92	5.42	446.82	606.61
41.100	1.00	0.00	0.00	752.80	3380.00	765.03	0.00	765.71	20.13	6.58	513.77	753.39
41.100	1.00	0.00	0.00	752.80	3950.00	765.80	0.00	766.60	22.23	7.18	550.44	837.77
41.100	1.00	0.00	0.00	752.80	5470.00	767.67	0.00	768.80	26.86	8.54	640.38	1055.53
42.000	180.00	0.00	0.00	753.55	2420.00	764.19	0.00	764.37	7.46	3.88	946.30	886.29
42.000	180.00	0.00	0.00	753.55	3380.00	765.85	0.00	766.05	7.24	4.28	1236.01	1256.20
42.000	180.00	0.00	0.00	753.55	3950.00	766.76	0.00	766.98	7.06	4.46	1396.57	1486.60
42.000	180.00	0.00	0.00	753.55	5470.00	769.03	0.00	769.28	6.63	4.87	1793.78	2125.07
43.900	180.00	0.00	0.00	754.30	2420.00	764.32	0.00	764.59	14.30	4.17	580.23	640.04
43.900	180.00	0.00	0.00	754.30	3380.00	765.95	0.00	766.29	13.47	4.65	726.73	920.96
43.900	180.00	0.00	0.00	754.30	3950.00	766.85	0.00	767.22	13.09	4.89	807.89	1091.93
43.900	180.00	0.00	0.00	754.30	5470.00	769.33	0.00	769.40	2.92	2.81	3559.02	3198.43
44.000	1.00	768.60	768.00	754.30	2420.00	764.29	0.00	764.63	20.80	4.67	518.44	530.63
44.000	1.00	768.60	768.00	754.30	3380.00	765.91	0.00	766.33	19.23	5.18	653.01	770.79
44.000	1.00	768.60	768.00	754.30	3950.00	766.81	0.00	767.27	18.54	5.43	727.58	917.33
44.000	1.00	768.60	768.00	754.30	5470.00	769.08	0.00	769.65	68.23	6.12	1045.71	662.20
45.000	60.00	768.60	768.00	754.30	2420.00	764.43	0.00	764.75	19.37	4.57	529.97	549.91
45.000	60.00	768.60	768.00	754.30	3380.00	766.04	0.00	766.44	18.24	5.09	663.77	791.36
45.000	60.00	768.60	768.00	754.30	3950.00	766.93	0.00	767.38	17.72	5.35	737.91	938.34
45.000	60.00	768.60	768.00	754.30	5470.00	769.63	0.00	770.04	48.96	5.38	1339.18	781.75
45.100	1.00	0.00	0.00	754.30	2420.00	764.52	0.00	764.77	12.95	4.05	598.14	672.36
45.100	1.00	0.00	0.00	754.30	3380.00	766.15	0.00	766.47	12.45	4.54	744.77	958.05
45.100	1.00	0.00	0.00	754.30	3950.00	767.05	0.00	767.41	12.19	4.78	826.04	1131.56
45.100	1.00	0.00	0.00	754.30	5470.00	770.09	0.00	770.15	2.15	2.51	3965.71	3732.86
46.000	50.00	0.00	0.00	753.90	2420.00	764.54	0.00	764.87	9.87	4.85	727.86	770.18
46.000	50.00	0.00	0.00	753.90	3380.00	766.19	0.00	766.53	8.38	5.12	1041.25	1167.44
46.000	50.00	0.00	0.00	753.90	3950.00	767.12	0.00	767.46	7.69	5.24	1217.98	1424.47
46.000	50.00	0.00	0.00	753.90	5470.00	770.10	0.00	770.16	1.65	2.90	4685.98	4253.44

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	47.000	1400.00	0.00	0.00	756.60	2420.00	765.63	0.00	765.70	3.42	3.15	2309.40	1307.80
1	47.000	1400.00	0.00	0.00	756.60	3380.00	767.12	0.00	767.17	2.26	2.87	3490.06	2249.78
2	47.000	1400.00	0.00	0.00	756.60	3950.00	767.98	0.00	768.02	1.84	2.74	4207.38	2908.81
3	47.000	1400.00	0.00	0.00	756.60	5470.00	770.34	0.00	770.37	1.13	2.46	6308.38	5138.94
4													
5	47.900	49.00	0.00	0.00	757.00	2420.00	765.61	0.00	765.77	10.05	4.38	1440.54	763.25
6	47.900	49.00	0.00	0.00	757.00	3380.00	767.12	0.00	767.21	5.62	3.67	2442.94	1425.45
7	47.900	49.00	0.00	0.00	757.00	3950.00	767.98	0.00	768.05	4.25	3.38	3063.03	1915.31
8	47.900	49.00	0.00	0.00	757.00	5470.00	770.34	0.00	770.38	2.25	2.82	4871.09	3650.53
9													
10	48.000	1.00	762.00	761.90	757.00	2420.00	765.75	0.00	765.80	21.46	2.81	1414.49	522.34
11	48.000	1.00	762.00	761.90	757.00	3380.00	767.18	0.00	767.22	9.91	2.21	2340.73	1073.88
12	48.000	1.00	762.00	761.90	757.00	3950.00	768.03	0.00	768.06	6.93	1.99	2936.45	1500.42
13	48.000	1.00	762.00	761.90	757.00	5470.00	770.36	0.00	770.39	3.17	1.60	4724.74	3072.71
14													
15	49.000	22.00	762.00	761.90	757.00	2420.00	765.80	0.00	765.85	20.44	2.75	1439.59	535.27
16	49.000	22.00	762.00	761.90	757.00	3380.00	767.21	0.00	767.24	9.76	2.20	2352.51	1081.76
17	49.000	22.00	762.00	761.90	757.00	3950.00	768.04	0.00	768.07	6.87	1.99	2945.41	1507.24
18	49.000	22.00	762.00	761.90	757.00	5470.00	770.37	0.00	770.39	3.16	1.60	4729.22	3077.12
19													
20	49.100	1.00	0.00	0.00	757.00	2420.00	765.76	0.00	765.90	8.80	4.15	1531.41	815.85
21	49.100	1.00	0.00	0.00	757.00	3380.00	767.18	0.00	767.27	5.37	3.60	2488.40	1459.24
22	49.100	1.00	0.00	0.00	757.00	3950.00	768.03	0.00	768.09	4.11	3.34	3102.94	1948.99
23	49.100	1.00	0.00	0.00	757.00	5470.00	770.36	0.00	770.40	2.22	2.80	4891.15	3671.93
24													
25	50.000	50.00	0.00	0.00	757.10	2420.00	765.88	0.00	765.94	3.25	3.01	2416.86	1343.02
26	50.000	50.00	0.00	0.00	757.10	3380.00	767.25	0.00	767.29	2.32	2.83	3506.04	2216.71
27	50.000	50.00	0.00	0.00	757.10	3950.00	768.07	0.00	768.11	1.94	2.74	4187.48	2839.35
28	50.000	50.00	0.00	0.00	757.10	5470.00	770.38	0.00	770.41	1.19	2.46	6250.34	5011.87
29													
30	51.000	978.00	0.00	0.00	760.10	2420.00	766.46	0.00	766.80	29.95	7.09	1032.27	442.16
31	51.000	978.00	0.00	0.00	760.10	3380.00	767.66	0.00	767.83	15.42	5.80	1846.38	860.75
32	51.000	978.00	0.00	0.00	760.10	3950.00	768.40	0.00	768.52	10.26	5.07	2507.23	1233.10
33	51.000	978.00	0.00	0.00	760.10	5470.00	770.56	0.00	770.61	3.62	3.57	4859.00	2876.40
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MID.ROUGE R. N.VILLE TWP

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CHSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	1.000	2570.00	729.66	0.00	0.00	0.00	490.34	0.00
	1.000	3590.00	730.24	0.00	0.00	0.00	493.08	0.00
	1.000	4190.00	730.38	0.00	0.00	0.00	493.74	0.00
	1.000	5780.00	730.75	0.00	0.00	0.00	495.48	0.00
	2.000	2570.00	729.57	0.00	-0.09	0.00	271.00	1400.00
	2.000	3590.00	730.10	0.00	-0.14	0.00	271.00	1400.00
	2.000	4190.00	730.20	0.00	-0.18	0.00	271.00	1400.00
	2.000	5780.00	730.43	0.00	-0.32	0.00	271.00	1400.00
	3.000	2570.00	729.88	0.00	0.31	0.00	70.00	395.00
	3.000	3590.00	730.49	0.00	0.38	0.00	70.00	395.00
	3.000	4190.00	730.69	0.00	0.49	0.00	70.00	395.00
	3.000	5780.00	731.22	0.00	0.78	0.00	70.00	395.00
	3.900	2570.00	729.99	0.00	0.11	0.00	46.00	49.00
	3.900	3590.00	730.64	0.00	0.16	0.00	46.00	49.00
	3.900	4190.00	730.88	0.00	0.20	0.00	46.00	49.00
	3.900	5780.00	731.52	0.00	0.30	0.00	46.00	49.00
	4.000	2570.00	729.84	0.00	-0.15	0.00	46.00	1.00
	4.000	3590.00	730.36	0.00	-0.28	0.00	46.00	1.00
	4.000	4190.00	730.47	0.00	-0.41	0.00	46.00	1.00
*	4.000	5780.00	731.16	0.00	-0.36	0.00	46.00	1.00
	5.000	2570.00	730.01	0.00	0.17	0.00	46.00	90.00
	5.000	3590.00	730.69	0.00	0.33	0.00	46.00	90.00
	5.000	4190.00	730.94	0.00	0.47	0.00	46.00	90.00
*	5.000	5780.00	732.42	0.00	1.26	0.00	46.00	90.00
	5.100	2570.00	730.89	0.00	0.88	0.00	46.00	1.00
	5.100	3590.00	732.55	0.00	1.86	0.00	46.00	1.00
	5.100	4190.00	733.65	0.00	2.71	0.00	46.00	1.00
	5.100	5780.00	736.32	0.00	3.90	0.00	46.00	1.00
	6.000	2570.00	731.90	0.00	1.01	0.00	126.00	150.00
	6.000	3590.00	734.19	0.00	1.64	2.29	346.00	150.00
	6.000	4190.00	735.40	0.00	1.75	3.50	346.00	150.00
	6.000	5780.00	738.36	0.00	2.04	6.46	346.00	150.00
	6.900	2570.00	731.99	0.00	0.09	0.00	60.00	133.00
	6.900	3590.00	734.15	0.00	-0.04	2.16	366.00	133.00
	6.900	4190.00	735.37	0.00	-0.03	3.38	408.89	133.00
	6.900	5780.00	738.34	0.00	-0.02	6.35	410.00	133.00
	7.000	2570.00	731.94	0.00	-0.05	0.00	60.00	1.00
	7.000	3590.00	733.69	0.00	-0.46	1.75	328.85	1.00
	7.000	4190.00	734.91	0.00	-0.46	2.96	407.72	1.00
	7.000	5780.00	738.25	0.00	-0.09	6.31	410.00	1.00
	8.000	2570.00	732.01	0.00	0.07	0.00	60.00	65.00
	8.000	3590.00	734.47	0.00	0.78	2.45	375.90	65.00
	8.000	4190.00	736.06	0.00	1.15	4.04	410.00	65.00
	8.000	5780.00	738.46	0.00	0.21	6.46	410.00	65.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	8.100	2570.00	732.14	0.00	0.13	0.00	60.00	1.00
	8.100	3590.00	735.55	0.00	1.08	3.41	409.35	1.00
	8.100	4190.00	736.66	0.00	0.60	4.51	410.00	1.00
	8.100	5780.00	738.62	0.00	0.16	6.47	410.00	1.00
	9.000	2570.00	732.48	0.00	0.34	0.00	160.00	49.00
	9.000	3590.00	735.73	0.00	0.18	3.25	510.00	49.00
	9.000	4190.00	736.83	0.00	0.18	4.35	510.00	49.00
	9.000	5780.00	738.81	0.00	0.19	6.33	510.00	49.00
	10.000	2570.00	732.93	0.00	0.45	0.00	394.12	1035.00
	10.000	3590.00	735.87	0.00	0.13	2.93	549.77	1035.00
	10.000	4190.00	736.95	0.00	0.12	4.02	598.51	1035.00
	10.000	5780.00	738.93	0.00	0.12	6.00	687.15	1035.00
	10.900	2570.00	732.88	0.00	-0.05	0.00	364.89	50.00
	10.900	3590.00	735.91	0.00	0.04	3.03	519.10	50.00
	10.900	4190.00	737.00	0.00	0.05	4.13	538.69	50.00
	10.900	5780.00	738.98	0.00	0.06	6.11	574.20	50.00
*	11.000	2570.00	732.80	0.00	-0.07	0.00	328.30	1.00
	11.000	3590.00	735.95	0.00	0.04	3.14	514.77	1.00
	11.000	4190.00	737.03	0.00	0.03	4.23	534.28	1.00
	11.000	5780.00	739.01	0.00	0.03	6.21	569.72	1.00
	11.500	2570.00	733.28	0.00	0.48	0.00	356.03	5.00
	11.500	3590.00	735.95	0.00	0.01	2.67	514.83	5.00
	11.500	4190.00	737.04	0.00	0.00	3.76	534.32	5.00
	11.500	5780.00	739.01	0.00	0.00	5.73	569.76	5.00
	11.600	2570.00	733.40	0.00	0.11	0.00	384.23	1.00
	11.600	3590.00	735.94	0.00	-0.01	2.54	519.76	1.00
	11.600	4190.00	737.03	0.00	-0.01	3.63	539.25	1.00
	11.600	5780.00	739.00	0.00	-0.01	5.61	574.68	1.00
	11.900	2570.00	733.50	0.00	0.10	0.00	386.41	49.00
	11.900	3590.00	735.97	0.00	0.03	2.47	520.21	49.00
	11.900	4190.00	737.05	0.00	0.02	3.55	539.60	49.00
	11.900	5780.00	739.02	0.00	0.01	5.52	574.90	49.00
	12.000	2570.00	733.89	0.00	0.39	0.00	81.50	325.00
	12.000	3590.00	735.96	0.00	-0.01	2.06	305.66	325.00
	12.000	4190.00	736.99	0.00	-0.05	3.10	431.82	325.00
	12.000	5780.00	738.96	0.00	-0.06	5.07	659.52	325.00
	13.000	2570.00	733.98	0.00	0.09	0.00	60.00	50.00
	13.000	3590.00	736.06	0.00	0.10	2.08	318.46	50.00
	13.000	4190.00	737.08	0.00	0.09	3.10	441.81	50.00
	13.000	5780.00	739.02	0.00	0.06	5.05	666.90	50.00
	14.000	2570.00	734.88	0.00	0.90	0.00	60.00	60.00
	14.000	3590.00	736.32	0.00	0.26	1.44	353.81	60.00
	14.000	4190.00	737.08	0.00	0.00	2.20	442.49	60.00
	14.000	5780.00	739.02	0.00	0.00	4.15	667.10	60.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
15.000	2570.00	735.01	0.00	0.13	0.00	150.13	50.00
15.000	3590.00	736.57	0.00	0.25	1.56	405.79	50.00
15.000	4190.00	737.39	0.00	0.31	2.38	495.82	50.00
15.000	5780.00	739.35	0.00	0.32	4.34	709.35	50.00
16.000	2570.00	738.82	0.00	3.81	0.00	74.42	1690.00
16.000	3590.00	739.98	0.00	3.41	1.16	80.07	1690.00
16.000	4190.00	740.49	0.00	3.10	1.68	419.67	1690.00
16.000	5780.00	741.62	0.00	2.27	2.80	502.76	1690.00
17.000	2570.00	738.93	0.00	0.11	0.00	74.96	50.00
17.000	3590.00	740.12	0.00	0.15	1.19	182.39	50.00
17.000	4190.00	740.69	0.00	0.20	1.76	434.44	50.00
17.000	5780.00	741.79	0.00	0.18	2.86	515.73	50.00
18.000	2570.00	740.43	0.00	1.50	0.00	146.60	60.00
18.000	3590.00	740.86	0.00	0.73	0.43	235.16	60.00
18.000	4190.00	741.04	0.00	0.35	0.61	460.13	60.00
18.000	5780.00	741.80	0.00	0.00	1.37	516.36	60.00
19.000	2570.00	740.65	0.00	0.21	0.00	231.66	50.00
19.000	3590.00	741.30	0.00	0.44	0.65	349.04	50.00
19.000	4190.00	741.68	0.00	0.64	1.04	569.54	50.00
19.000	5780.00	742.87	0.00	1.07	2.23	668.34	50.00
20.000	2570.00	743.31	0.00	2.67	0.00	75.00	1550.00
20.000	3590.00	744.73	0.00	3.43	1.41	75.00	1550.00
20.000	4190.00	745.27	0.00	3.59	1.96	75.00	1550.00
20.000	5780.00	746.63	0.00	3.75	3.31	75.00	1550.00
21.000	2570.00	743.42	0.00	0.10	0.00	50.00	50.00
21.000	3590.00	744.81	0.00	0.09	1.40	50.00	50.00
21.000	4190.00	745.36	0.00	0.09	1.94	50.00	50.00
21.000	5780.00	746.69	0.00	0.07	3.28	50.00	50.00
21.100	2570.00	743.42	0.00	0.00	0.00	50.00	1.00
21.100	3590.00	744.82	0.00	0.01	1.40	50.00	1.00
21.100	4190.00	745.36	0.00	0.01	1.94	50.00	1.00
21.100	5780.00	746.70	0.00	0.01	3.28	50.00	1.00
21.900	2570.00	743.64	0.00	0.22	0.00	50.00	50.00
21.900	3590.00	745.09	0.00	0.27	1.45	50.00	50.00
21.900	4190.00	745.69	0.00	0.33	2.05	50.00	50.00
21.900	5780.00	747.17	0.00	0.47	3.53	50.00	50.00
22.000	2570.00	743.65	0.00	0.00	0.00	50.00	1.00
22.000	3590.00	745.10	0.00	0.00	1.45	50.00	1.00
22.000	4190.00	745.69	0.00	0.01	2.05	50.00	1.00
22.000	5780.00	747.18	0.00	0.01	3.53	50.00	1.00
23.000	2570.00	744.18	0.00	0.53	0.00	150.00	50.00
23.000	3590.00	745.93	0.00	0.83	1.75	150.00	50.00
23.000	4190.00	746.73	0.00	1.04	2.56	150.00	50.00
23.000	5780.00	748.78	0.00	1.60	4.61	150.00	50.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	24.000	2570.00	745.83	0.00	1.65	0.00	90.00	1040.00
	24.000	3590.00	747.46	0.00	1.56	1.65	90.00	1040.00
	24.000	4190.00	748.31	0.00	1.57	2.48	90.00	1040.00
	24.000	5780.00	750.32	0.00	1.54	4.50	90.00	1040.00
	25.000	2570.00	745.83	0.00	-0.00	0.00	60.00	50.00
	25.000	3590.00	747.45	0.00	-0.03	1.63	60.00	50.00
	25.000	4190.00	748.26	0.00	-0.05	2.43	60.00	50.00
	25.000	5780.00	750.24	0.00	-0.09	4.41	60.00	50.00
	26.000	2570.00	745.84	0.00	0.02	0.00	60.00	60.00
	26.000	3590.00	747.79	0.00	0.34	1.95	60.00	60.00
	26.000	4190.00	748.89	0.00	0.63	3.05	60.00	60.00
	26.000	5780.00	750.59	0.00	0.35	4.75	60.00	60.00
	27.900	2570.00	745.88	0.00	0.04	0.00	48.00	53.00
	27.900	3590.00	747.78	0.00	-0.01	1.91	48.00	53.00
	27.900	4190.00	748.86	0.00	-0.03	2.98	48.00	53.00
	27.900	5780.00	750.51	0.00	-0.08	4.64	48.00	53.00
	28.000	2570.00	745.81	0.00	-0.07	0.00	48.00	1.00
	28.000	3590.00	747.68	0.00	-0.10	1.87	48.00	1.00
	28.000	4190.00	748.73	0.00	-0.13	2.93	48.00	1.00
	28.000	5780.00	750.27	0.00	-0.24	4.47	48.00	1.00
	29.000	2570.00	745.94	0.00	0.13	0.00	48.00	46.00
	29.000	3590.00	747.81	0.00	0.13	1.87	48.00	46.00
	29.000	4190.00	748.87	0.00	0.13	2.93	48.00	46.00
	29.000	5780.00	750.47	0.00	0.20	4.53	48.00	46.00
	29.100	2570.00	746.18	0.00	0.24	0.00	48.00	1.00
	29.100	3590.00	748.15	0.00	0.34	1.97	48.00	1.00
	29.100	4190.00	749.28	0.00	0.42	3.10	48.00	1.00
	29.100	5780.00	751.29	0.00	0.82	5.11	48.00	1.00
	30.000	2570.00	746.21	0.00	0.02	0.00	62.00	25.00
	30.000	3590.00	748.35	0.00	0.20	2.15	62.00	25.00
	30.000	4190.00	749.57	0.00	0.29	3.36	62.00	25.00
	30.000	5780.00	751.80	0.00	0.52	5.60	62.00	25.00
	31.000	2570.00	746.35	0.00	0.15	0.00	62.00	25.00
	31.000	3590.00	748.47	0.00	0.12	2.12	62.00	25.00
	31.000	4190.00	749.68	0.00	0.12	3.33	62.00	25.00
	31.000	5780.00	751.94	0.00	0.14	5.59	62.00	25.00
*	31.900	2570.00	750.95	0.00	4.60	0.00	62.00	25.00
*	31.900	3590.00	751.90	0.00	3.43	0.95	62.00	25.00
*	31.900	4190.00	752.41	0.00	2.72	1.45	62.00	25.00
*	31.900	5780.00	753.66	0.00	1.72	2.70	62.00	25.00
	32.000	2420.00	757.31	0.00	6.36	0.00	122.00	1.00
	32.000	3380.00	758.13	0.00	6.23	0.82	122.00	1.00
	32.000	3950.00	758.60	0.00	6.20	1.29	122.00	1.00
	32.000	5470.00	759.65	0.00	5.99	2.33	122.00	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
33.000	2420.00	757.53	0.00	0.22	0.00	654.72	1170.00
33.000	3380.00	758.45	0.00	0.32	0.92	657.77	1170.00
33.000	3950.00	758.98	0.00	0.38	1.45	659.76	1170.00
33.000	5470.00	760.19	0.00	0.55	2.66	664.32	1170.00
34.000	2420.00	757.57	0.00	0.03	0.00	571.44	1530.00
34.000	3380.00	758.50	0.00	0.04	0.93	618.78	1530.00
34.000	3950.00	759.03	0.00	0.04	1.46	650.55	1530.00
34.000	5470.00	760.24	0.00	0.05	2.67	652.66	1530.00
35.000	2420.00	757.32	0.00	-0.25	0.00	120.00	490.00
35.000	3380.00	758.12	0.00	-0.38	0.80	120.00	490.00
35.000	3950.00	758.58	0.00	-0.45	1.26	120.00	490.00
35.000	5470.00	759.60	0.00	-0.64	2.28	120.00	490.00
35.900	2420.00	757.79	0.00	0.47	0.00	87.64	49.00
35.900	3380.00	758.73	0.00	0.61	0.93	93.22	49.00
35.900	3950.00	759.25	0.00	0.68	1.46	95.80	49.00
35.900	5470.00	760.53	0.00	0.93	2.74	101.99	49.00
36.000	2420.00	757.69	0.00	-0.10	0.00	73.12	1.00
36.000	3380.00	758.58	0.00	-0.15	0.89	77.47	1.00
36.000	3950.00	759.08	0.00	-0.17	1.39	79.88	1.00
36.000	5470.00	760.30	0.00	-0.23	2.61	85.67	1.00
37.000	2420.00	758.09	0.00	0.40	0.00	75.14	40.00
37.000	3380.00	759.14	0.00	0.56	1.05	80.16	40.00
37.000	3950.00	759.72	0.00	0.64	1.63	82.96	40.00
37.000	5470.00	761.12	0.00	0.82	3.03	89.44	40.00
37.100	2420.00	758.36	0.00	0.27	0.00	91.46	1.00
37.100	3380.00	759.52	0.00	0.38	1.16	97.14	1.00
37.100	3950.00	760.16	0.00	0.44	1.80	100.26	1.00
37.100	5470.00	761.69	0.00	0.57	3.33	108.69	1.00
38.000	2420.00	758.41	0.00	0.05	0.00	169.93	50.00
38.000	3380.00	759.58	0.00	0.06	1.17	173.71	50.00
38.000	3950.00	760.22	0.00	0.06	1.81	175.78	50.00
38.000	5470.00	761.76	0.00	0.06	3.35	180.73	50.00
39.000	2420.00	763.39	0.00	4.99	0.00	75.00	1800.00
39.000	3380.00	764.71	0.00	5.13	1.32	75.00	1800.00
39.000	3950.00	765.39	0.00	5.17	2.00	75.00	1800.00
39.000	5470.00	767.02	0.00	5.26	3.62	75.00	1800.00
39.900	2420.00	763.45	0.00	0.06	0.00	48.00	49.00
39.900	3380.00	764.76	0.00	0.05	1.31	48.00	49.00
39.900	3950.00	765.43	0.00	0.04	1.98	48.00	49.00
39.900	5470.00	767.04	0.00	0.02	3.59	48.00	49.00
40.000	2420.00	763.41	0.00	-0.04	0.00	48.00	1.00
40.000	3380.00	764.69	0.00	-0.07	1.29	48.00	1.00
40.000	3950.00	765.35	0.00	-0.08	1.94	48.00	1.00
40.000	5470.00	766.89	0.00	-0.15	3.48	48.00	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
41.000	2420.00	763.51	0.00	0.11	0.00	48.00	40.00
41.000	3380.00	764.84	0.00	0.15	1.33	48.00	40.00
41.000	3950.00	765.54	0.00	0.19	2.03	48.00	40.00
41.000	5470.00	767.18	0.00	0.29	3.67	48.00	40.00
41.100	2420.00	763.64	0.00	0.13	0.00	48.00	1.00
41.100	3380.00	765.03	0.00	0.20	1.39	48.00	1.00
41.100	3950.00	765.80	0.00	0.26	2.16	48.00	1.00
41.100	5470.00	767.67	0.00	0.49	4.03	48.00	1.00
42.000	2420.00	764.19	0.00	0.55	0.00	175.00	180.00
42.000	3380.00	765.85	0.00	0.81	1.66	175.00	180.00
42.000	3950.00	766.76	0.00	0.97	2.57	175.00	180.00
42.000	5470.00	769.03	0.00	1.36	4.84	175.00	180.00
43.900	2420.00	764.32	0.00	0.13	0.00	90.00	180.00
43.900	3380.00	765.95	0.00	0.10	1.63	90.00	180.00
43.900	3950.00	766.85	0.00	0.09	2.53	90.00	180.00
43.900	5470.00	769.33	0.00	0.30	5.01	530.00	180.00
44.000	2420.00	764.29	0.00	-0.03	0.00	90.00	1.00
44.000	3380.00	765.91	0.00	-0.04	1.62	90.00	1.00
44.000	3950.00	766.81	0.00	-0.04	2.52	90.00	1.00
44.000	5470.00	769.08	0.00	-0.25	4.79	530.00	1.00
45.000	2420.00	764.43	0.00	0.14	0.00	90.00	60.00
45.000	3380.00	766.04	0.00	0.13	1.61	90.00	60.00
45.000	3950.00	766.93	0.00	0.13	2.51	90.00	60.00
45.000	5470.00	769.63	0.00	0.55	5.20	530.00	60.00
45.100	2420.00	764.52	0.00	0.09	0.00	90.00	1.00
45.100	3380.00	766.15	0.00	0.11	1.63	90.00	1.00
45.100	3950.00	767.05	0.00	0.12	2.53	90.00	1.00
45.100	5470.00	770.09	0.00	0.46	5.57	530.00	1.00
46.000	2420.00	764.54	0.00	0.02	0.00	190.00	50.00
46.000	3380.00	766.19	0.00	0.04	1.65	190.00	50.00
46.000	3950.00	767.12	0.00	0.06	2.57	190.00	50.00
46.000	5470.00	770.10	0.00	0.01	5.55	640.00	50.00
47.000	2420.00	765.63	0.00	1.09	0.00	764.43	1400.00
47.000	3380.00	767.12	0.00	0.93	1.49	817.50	1400.00
47.000	3950.00	767.98	0.00	0.87	2.35	848.13	1400.00
47.000	5470.00	770.34	0.00	0.24	4.71	933.88	1400.00
47.900	2420.00	765.61	0.00	-0.02	0.00	629.56	49.00
47.900	3380.00	767.12	0.00	-0.00	1.51	701.12	49.00
47.900	3950.00	767.98	0.00	-0.00	2.37	732.38	49.00
47.900	5470.00	770.34	0.00	0.00	4.73	796.96	49.00
48.000	2420.00	765.75	0.00	0.14	0.00	636.01	1.00
48.000	3380.00	767.18	0.00	0.07	1.44	704.21	1.00
48.000	3950.00	768.03	0.00	0.05	2.28	733.66	1.00
48.000	5470.00	770.36	0.00	0.02	4.62	797.45	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
49.000	2420.00	765.80	0.00	0.05	0.00	637.96	22.00
49.000	3380.00	767.21	0.00	0.02	1.41	705.03	22.00
49.000	3950.00	768.04	0.00	0.02	2.25	733.99	22.00
49.000	5470.00	770.37	0.00	0.01	4.57	797.61	22.00
49.100	2420.00	765.76	0.00	-0.04	0.00	636.38	1.00
49.100	3380.00	767.18	0.00	-0.02	1.43	704.20	1.00
49.100	3950.00	768.03	0.00	-0.02	2.27	733.87	1.00
49.100	5470.00	770.36	0.00	-0.01	4.61	797.64	1.00
50.000	2420.00	765.88	0.00	0.13	0.00	773.67	50.00
50.000	3380.00	767.25	0.00	0.07	1.37	822.20	50.00
50.000	3950.00	768.07	0.00	0.05	2.19	851.16	50.00
50.000	5470.00	770.38	0.00	0.02	4.50	935.40	50.00
51.000	2420.00	766.46	0.00	0.58	0.00	593.55	978.00
51.000	3380.00	767.66	0.00	0.41	1.20	803.30	978.00
51.000	3950.00	768.40	0.00	0.33	1.94	968.19	978.00
51.000	5470.00	770.56	0.00	0.18	4.10	1126.72	978.00

SUMMARY OF ERRORS

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CAUTION  SECNO=    4.000  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    4.000  PROFILE= 4  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=    5.000  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    5.000  PROFILE= 4  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=   11.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   11.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO=   31.900  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   31.900  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   31.900  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   31.900  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   31.900  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   31.900  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   31.900  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   31.900  PROFILE= 3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   31.900  PROFILE= 3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=   31.900  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=   31.900  PROFILE= 4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=   31.900  PROFILE= 4  20 TRIALS ATTEMPTED TO BALANCE WSEL
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FLOOD INSURANCE ZONE DATA FOR MID.ROUGE R. N.VILLE TWP

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND Ø		
		10Ø	2Ø	0.2Ø
1.000	0.	-0.7	-0.1	0.4
2.000	1400.	-0.6	-0.1	0.2
3.000	1795.	-0.8	-0.2	0.5
3.900	1844.	-0.9	-0.2	0.6
4.000	1845.	-0.6	-0.1	0.7
5.000	1935.	-0.9	-0.3	1.5
5.100	1936.	-2.8	-1.1	2.7
6.000	2086.	-3.5	-1.2	3.0
6.900	2219.	-3.4	-1.2	3.0
7.000	2220.	-3.0	-1.2	3.3
8.000	2285.	-4.0	-1.6	2.4
8.100	2286.	-4.5	-1.1	2.0
9.000	2335.	-4.3	-1.1	2.0
10.000	3370.	-4.0	-1.1	2.0
10.900	3420.	-4.1	-1.1	2.0
11.000	3421.	-4.2	-1.1	2.0
11.500	3426.	-3.8	-1.1	2.0
11.600	3427.	-3.6	-1.1	2.0
11.900	3476.	-3.5	-1.1	2.0
12.000	3801.	-3.1	-1.0	2.0
13.000	3851.	-3.1	-1.0	1.9
14.009	3911.	-2.2	-0.8	1.9
15.000	3961.	-2.4	-0.8	2.0
16.000	5651.	-1.7	-0.5	1.1
17.000	5701.	-1.8	-0.6	1.1
18.000	5761.	-0.6	-0.2	0.8
19.000	5811.	-1.0	-0.4	1.2
20.000	7361.	-2.0	-0.5	1.4
21.000	7411.	-1.9	-0.5	1.3
21.100	7412.	-1.9	-0.5	1.3
21.900	7462.	-2.0	-0.6	1.5
22.000	7463.	-2.0	-0.6	1.5
23.000	7513.	-2.6	-0.8	2.0
24.000	8553.	-2.5	-0.8	2.0
25.000	8603.	-2.4	-0.8	2.0
26.000	8663.	-3.0	-1.1	1.7
27.900	8716.	-3.0	-1.1	1.7
28.000	8717.	-2.9	-1.1	1.5
29.000	8763.	-2.9	-1.1	1.6
29.100	8764.	-3.1	-1.1	2.0
30.000	8789.	-3.4	-1.2	2.2
31.000	8814.	-3.3	-1.2	2.3
31.900	8839.	-1.5	-0.5	1.3
32.000	8840.	-1.3	-0.5	1.0
33.000	10010.	-1.4	-0.5	1.2
34.000	11540.	-1.5	-0.5	1.2
35.000	12030.	-1.3	-0.5	1.0
35.900	12079.	-1.5	-0.5	1.3
36.000	12080.	-1.4	-0.5	1.2
37.000	12120.	-1.6	-0.6	1.4
37.100	12121.	-1.8	-0.6	1.5
38.000	12171.	-1.8	-0.6	1.5
39.000	13971.	-2.0	-0.7	1.6

39.900	14020.	-2.0	-0.7	1.6
40.000	14021.	-1.9	-0.7	1.5
41.000	14061.	-2.0	-0.7	1.6
41.100	14062.	-2.2	-0.8	1.9
42.000	14242.	-2.6	-0.9	2.3
43.900	14422.	-2.5	-0.9	2.5
44.000	14423.	-2.5	-0.9	2.3
45.000	14483.	-2.5	-0.9	2.7
45.100	14484.	-2.5	-0.9	3.0
46.000	14534.	-2.6	-0.9	3.0
47.000	15934.	-2.4	-0.9	2.4
47.900	15983.	-2.4	-0.9	2.4
48.000	15984.	-2.3	-0.8	2.3
49.000	16006.	-2.2	-0.8	2.3
49.100	16007.	-2.3	-0.8	2.3
50.000	16057.	-2.2	-0.8	2.3
51.000	17035.	-1.9	-0.7	2.2
WEIGHTED AVG FOR REACH		-2.0	-0.7	1.6

FHF FOR THE REACH = 020 WITH 48.3% OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 4

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA 10%	1%	DIFF.	WTD. AVG.	FHF	PERCENT WITHIN
	0.				SEC.		1.000
1	100.	729.7	730.4	-0.7	-0.7	005	100.
2	200.	729.7	730.4	-0.7	-0.7	005	100.
3	300.	729.6	730.3	-0.7	-0.7	005	100.
4	400.	729.6	730.3	-0.7	-0.7	005	100.
5	500.	729.6	730.3	-0.7	-0.7	005	100.
6	600.	729.6	730.3	-0.7	-0.7	005	100.
7	700.	729.6	730.3	-0.7	-0.7	005	100.
8	800.	729.6	730.3	-0.7	-0.7	005	100.
9	900.	729.6	730.3	-0.7	-0.7	005	100.
10	1000.	729.6	730.3	-0.7	-0.7	005	100.
11	1100.	729.6	730.2	-0.7	-0.7	005	100.
12	1200.	729.6	730.2	-0.6	-0.7	005	100.
13	1300.	729.6	730.2	-0.6	-0.7	005	100.
	1400.				SEC.		2.000
14	1400.	729.6	730.2	-0.6	-0.7	005	100.
15	1500.	729.6	730.3	-0.7	-0.7	005	100.
16	1600.	729.7	730.4	-0.7	-0.7	005	100.
17	1700.	729.8	730.5	-0.7	-0.7	005	100.
	1795.				SEC.		3.000
18	1800.	729.8	730.6	-0.8	-0.7	005	100.
	1844.				SEC.		3.900
	1845.				SEC.		4.000
19	1900.	729.9	730.6	-0.7	-0.7	005	100.
	1935.				SEC.		5.000
	1936.				SEC.		5.100
20	2000.	731.1	734.0	-2.9	-0.8	010	95.
	2086.				SEC.		6.000
21	2100.	731.6	734.9	-3.3	-0.9	010	90.
22	2200.	731.9	735.4	-3.4	-1.7	010	86.

	2219.				SEC.	6.900		
	2220.				SEC.	7.000		
	2285.				SEC.	8.000		
	2286.				SEC.	8.100		
23	2300.	732.2	736.7	-4.5	-1.2	010	43.	
	2335.				SEC.	9.000		
24	2400.	732.4	736.8	-4.4	-1.3	015	0.	
25	2500.	732.5	736.8	-4.3	-1.4	015	0.	
26	2600.	732.6	736.9	-4.3	-1.5	015	0.	
27	2700.	732.6	736.9	-4.2	-1.6	015	0.	
28	2800.	732.7	736.9	-4.2	-1.7	015	0.	
29	2900.	732.7	736.9	-4.2	-1.8	020	0.	
30	3000.	732.7	736.9	-4.2	-1.9	020	0.	
31	3100.	732.8	736.9	-4.1	-2.0	020	0.	
32	3200.	732.8	736.9	-4.1	-2.0	020	3.	
33	3300.	732.9	736.9	-4.1	-2.1	020	3.	
	3370.				SEC.	10.000		
34	3400.	732.9	737.0	-4.1	-2.2	020	3.	
	3420.				SEC.	10.900		
	3421.				SEC.	11.000		
	3426.				SEC.	11.500		
	3427.				SEC.	11.600		
	3476.				SEC.	11.900		
35	3500.	733.5	737.0	-3.5	-2.2	020	3.	
36	3600.	733.6	737.0	-3.4	-2.2	020	3.	
37	3700.	733.7	737.0	-3.3	-2.3	025	3.	
38	3800.	733.8	737.0	-3.2	-2.3	025	8.	
	3801.				SEC.	12.000		
	3851.				SEC.	13.000		
39	3900.	734.3	737.1	-2.7	-2.3	025	10.	
	3911.				SEC.	14.000		
	3961.				SEC.	15.000		
40	4000.	735.0	737.4	-2.4	-2.3	025	13.	
41	4100.	735.2	737.6	-2.3	-2.3	025	15.	
42	4200.	735.4	737.7	-2.3	-2.3	025	17.	
43	4300.	735.7	737.9	-2.3	-2.3	025	19.	
44	4400.	735.9	738.1	-2.2	-2.3	025	20.	
45	4500.	736.1	738.3	-2.2	-2.3	025	22.	
46	4600.	736.3	738.5	-2.1	-2.3	025	24.	
47	4700.	736.6	738.7	-2.1	-2.3	025	26.	
48	4800.	736.8	738.8	-2.1	-2.3	025	25.	
49	4900.	737.0	739.0	-2.0	-2.3	025	27.	
50	5000.	737.2	739.2	-2.0	-2.3	025	28.	
51	5100.	737.5	739.4	-1.9	-2.3	025	29.	
52	5200.	737.7	739.6	-1.9	-2.3	025	31.	
53	5300.	737.9	739.8	-1.8	-2.2	020	32.	
54	5400.	738.1	739.9	-1.8	-2.2	020	33.	
55	5500.	738.4	740.1	-1.8	-2.2	020	35.	
56	5600.	738.6	740.3	-1.7	-2.2	020	36.	
	5651.				SEC.	16.000		
57	5700.	738.8	740.5	-1.7	-2.2	020	37.	
	5701.				SEC.	17.000		
	5761.				SEC.	18.000		
58	5800.	740.5	741.3	-0.8	-2.2	020	36.	
	5811.				SEC.	19.000		
59	5900.	740.7	741.7	-1.0	-2.2	020	34.	
60	6000.	740.9	742.0	-1.1	-2.2	020	33.	
61	6100.	741.1	742.2	-1.2	-2.1	020	34.	
62	6200.	741.2	742.5	-1.2	-2.1	020	35.	
63	6300.	741.4	742.7	-1.3	-2.1	020	38.	
64	6400.	741.6	742.9	-1.4	-2.1	020	39.	
65	6500.	741.7	743.2	-1.4	-2.1	020	40.	
66	6600.	741.9	743.4	-1.5	-2.1	020	41.	
67	6700	742.1	743.6	-1.5	-2.1	020	42.	

68	6800.	742.3	743.9	-1.6	-2.1	020	43.	
69	6900.	742.4	744.1	-1.7	-2.1	020	43.	
70	7000.	742.6	744.3	-1.7	-2.1	020	44.	
71	7100.	742.8	744.6	-1.8	-2.0	020	45.	
72	7200.	743.0	744.8	-1.8	-2.0	020	46.	
73	7300.	743.1	745.0	-1.9	-2.0	020	47.	
	7361.					SEC.	20.000	
74	7400.	743.3	745.2	-1.9	-2.0	020	47.	
	7411.					SEC.	21.000	
	7412.					SEC.	21.100	
	7462.					SEC.	21.900	
	7463.					SEC.	22.000	
75	7500.	743.8	746.1	-2.2	-2.0	020	48.	
	7513.					SEC.	23.000	
76	7600.	744.2	746.7	-2.5	-2.0	020	49.	
77	7700.	744.4	746.9	-2.5	-2.1	020	49.	
78	7800.	744.6	747.1	-2.5	-2.1	020	50.	
79	7900.	744.7	747.2	-2.5	-2.1	020	51.	
80	8000.	744.9	747.4	-2.5	-2.1	020	51.	
81	8100.	745.0	747.5	-2.5	-2.1	020	52.	
82	8200.	745.2	747.7	-2.5	-2.1	020	52.	
83	8300.	745.3	747.8	-2.5	-2.1	020	53.	
84	8400.	745.5	748.0	-2.5	-2.1	020	54.	
85	8500.	745.7	748.1	-2.5	-2.1	020	54.	
	8553.					SEC.	24.000	
86	8600.	745.8	748.2	-2.5	-2.1	020	55.	
	8603.					SEC.	25.000	
	8663.					SEC.	26.000	
87	8700.	745.9	748.9	-3.0	-2.1	020	55.	
	8716.					SEC.	27.900	
	8717.					SEC.	28.000	
	8763.					SEC.	29.000	
	8764.					SEC.	29.100	
	8789.					SEC.	30.000	
88	8800.	746.2	749.6	-3.4	-2.1	020	53.	
	8814.					SEC.	31.000	
	8839.					SEC.	31.900	
	8840.					SEC.	32.000	
89	8900.	757.3	758.6	-1.3	-2.1	020	55.	
90	9000.	757.3	758.6	-1.3	-2.1	020	56.	
91	9100.	757.4	758.7	-1.3	-2.1	020	56.	
92	9200.	757.4	758.7	-1.3	-2.1	020	57.	
93	9300.	757.4	758.7	-1.3	-2.1	020	57.	
94	9400.	757.4	758.8	-1.4	-2.1	020	57.	
95	9500.	757.4	758.8	-1.4	-2.1	020	58.	
96	9600.	757.4	758.8	-1.4	-2.1	020	58.	
97	9700.	757.5	758.9	-1.4	-2.1	020	59.	
98	9800.	757.5	758.9	-1.4	-2.0	020	59.	
99	9900.	757.5	758.9	-1.4	-2.0	020	60.	
100	10000.	757.5	759.0	-1.4	-2.0	020	60.	
	10010.					SEC.	33.000	
101	10100.	757.5	759.0	-1.4	-2.0	020	60.	
102	10200.	757.5	759.0	-1.5	-2.0	020	60.	
103	10300.	757.5	759.0	-1.5	-2.0	020	60.	
104	10400.	757.5	759.0	-1.5	-2.0	020	62.	
105	10500.	757.5	759.0	-1.5	-2.0	020	62.	
106	10600.	757.5	759.0	-1.5	-2.0	020	62.	
107	10700.	757.5	759.0	-1.5	-2.0	020	29.	
108	10800.	757.5	759.0	-1.5	-2.0	020	28.	
109	10900.	757.6	759.0	-1.5	-2.0	020	27.	
110	11000.	757.6	759.0	-1.5	-2.0	020	25.	
111	11100.	757.6	759.0	-1.5	-2.0	020	25.	
112	11200.	757.6	759.0	-1.5	-2.0	020	26.	
113	11300.	757.6	759.0	-1.5	-2.0	020	26.	

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114	11400.	757.6	759.0	-1.5	-2.0	020	25.
115	11500.	757.6	759.0	-1.5	-2.0	020	25.
	11540.				SEC.	34.000	
116	11600.	757.6	759.0	-1.4	-2.0	020	28.
117	11700.	757.5	758.9	-1.4	-2.0	020	36.
118	11800.	757.5	758.8	-1.4	-1.9	020	37.
119	11900.	757.4	758.7	-1.3	-1.9	020	38.
120	12000.	757.4	758.7	-1.3	-1.9	020	38.
	12030.				SEC.	35.000	
	12079.				SEC.	35.900	
	12080.				SEC.	36.000	
121	12100.	757.8	759.2	-1.5	-1.9	020	38.
	12120.				SEC.	37.000	
	12121.				SEC.	37.100	
	12171.				SEC.	38.000	
122	12200.	758.4	760.3	-1.8	-1.9	020	39.
123	12300.	758.6	760.4	-1.8	-1.9	020	39.
124	12400.	758.9	760.7	-1.8	-1.9	020	40.
125	12500.	759.2	761.0	-1.8	-1.9	020	40.
126	12600.	759.5	761.3	-1.9	-1.9	020	41.
127	12700.	759.7	761.6	-1.9	-1.9	020	42.
128	12800.	760.0	761.9	-1.9	-1.9	020	42.
129	12900.	760.3	762.2	-1.9	-1.9	020	43.
130	13000.	760.6	762.5	-1.9	-1.9	020	43.
131	13100.	760.8	762.7	-1.9	-1.9	020	44.
132	13200.	761.1	763.0	-1.9	-1.9	020	44.
133	13300.	761.4	763.3	-1.9	-1.9	020	44.
134	13400.	761.7	763.6	-1.9	-1.9	020	45.
135	13500.	761.9	763.9	-1.9	-1.9	020	45.
136	13600.	762.2	764.2	-2.0	-1.9	020	46.
137	13700.	762.5	764.5	-2.0	-1.9	020	46.
138	13800.	762.8	764.8	-2.0	-1.9	020	46.
139	13900.	763.1	765.0	-2.0	-1.9	020	47.
	13971.				SEC.	39.000	
140	14000.	763.3	765.3	-2.0	-1.9	020	47.
	14020.				SEC.	39.900	
	14021.				SEC.	40.000	
	14061.				SEC.	41.000	
	14062.				SEC.	41.100	
141	14100.	763.7	765.9	-2.2	-1.9	020	47.
142	14200.	763.9	766.3	-2.4	-1.9	020	47.
	14242.				SEC.	42.000	
143	14300.	764.1	766.7	-2.5	-1.9	020	47.
144	14400.	764.3	766.8	-2.5	-1.9	020	47.
	14422.				SEC.	43.900	
	14423.				SEC.	44.000	
	14483.				SEC.	45.000	
	14484.				SEC.	45.100	
145	14500.	764.5	767.1	-2.5	-1.9	020	46.
	14534.				SEC.	46.000	
146	14600.	764.6	767.1	-2.6	-1.9	020	45.
147	14700.	764.6	767.2	-2.6	-2.0	020	40.
148	14800.	764.7	767.2	-2.5	-2.0	020	34.
149	14900.	764.8	767.3	-2.5	-2.0	020	34.
150	15000.	764.9	767.4	-2.5	-2.0	020	33.
151	15100.	764.9	767.4	-2.5	-2.0	020	33.
152	15200.	765.0	767.5	-2.5	-2.0	020	33.
153	15300.	765.1	767.6	-2.5	-2.0	020	33.
154	15400.	765.2	767.6	-2.4	-2.0	020	34.
155	15500.	765.3	767.7	-2.4	-2.0	020	34.
156	15600.	765.3	767.7	-2.4	-2.0	020	35.
157	15700.	765.4	767.8	-2.4	-2.0	020	36.
158	15800.	765.5	767.9	-2.4	-2.0	020	37.
159	15900.	765.6	767.9	-2.4	-2.0	020	37.

	15934.				SEC.	47.000	
	15983.				SEC.	47.900	
	15984.				SEC.	48.000	
160	16000.	765.8	768.0	-2.3	-2.0	020	39.
	16006.				SEC.	49.000	
	16007.				SEC.	49.100	
	16057.				SEC.	50.000	
161	16100.	765.9	768.1	-2.2	-2.0	020	39.
162	16200.	765.9	768.1	-2.2	-2.0	020	40.
163	16300.	766.0	768.1	-2.1	-2.0	020	40.
164	16400.	766.1	768.2	-2.1	-2.0	020	40.
165	16500.	766.1	768.2	-2.1	-2.0	020	41.
166	16600.	766.2	768.2	-2.1	-2.0	020	41.
167	16700.	766.2	768.3	-2.0	-2.0	020	41.
168	16800.	766.3	768.3	-2.0	-2.0	020	42.
169	16900.	766.4	768.3	-2.0	-2.0	020	42.
170	17000.	766.4	768.4	-2.0	-2.0	020	42.
	17035.				SEC.	51.000	

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS
INPUT 20N WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE: 202 22 170
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Plymouth Twp.

3) WATERCOURSE: Johnson Drain and Tonquish Creek

4) DOCUMENT TYPE: 100 year

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**************************************************

C
T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      JOHNSON DRAIN PLY. TWP.

J1  ICHECK     INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        NSEL     FQ
        0.       5.       0.       0.  0.001100     0.0      0.0      0.    834.500     0.0

J2  NPROF     IPLOT     PRFVS    XSECV    XSECH      FN     ALLDC     IBW      CHNIM    ITRACE
    -1.000      0.0    -1.000      0.0      0.0      0.0      0.0      0.0      0.0     15.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
    110.000  150.000      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

QT    5.000  400.000  700.000  850.000  850.000 1300.000      0.0      0.0      0.0      0.0
ET    0.0      0.0      0.0      0.0    1.400      0.0      0.0      0.0      0.0      0.0
NC    0.0      0.0      0.0    0.300    0.500      0.0      0.0      0.0      0.0      0.0
NH    5.000    0.200  618.000    0.080  624.000    0.035  639.000    0.080  647.000    0.200
NR  125.000    0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

          100 FEET D/S OF R/R

X1    0.100    8.000  624.000  639.000    0.0      0.0      0.0      0.0      0.0      0.0
X3    0.0      0.0      0.0    641.000    0.0    661.000    0.0      0.0      0.0      0.0
GR  840.000    0.0    830.000  600.000  830.000  618.000  827.100  624.000  827.100  639.000
GR  830.000  647.000  830.000  665.000  640.000 1265.000    0.0      0.0      0.0      0.0
NC    0.050    0.060    0.035    0.0      0.0      0.0      0.0      0.0      0.0      0.0

          D/S FACE OF RAILROAD BRIDGE.

X1    2.000   17.000   12.000   25.000  100.000  100.000  100.000    0.0      0.0      0.0
GR  843.400    0.0    832.500    0.0    829.400   11.500  829.400   11.600  829.400   12.500
GR  829.500   12.600  827.460   19.000  829.500   23.500  829.500   23.600  829.500   24.500
GR  829.500   24.600  832.000   36.500  832.000   36.600  832.000   37.500  832.000   37.600
GR  837.900   49.100  843.400   49.100    0.0      0.0      0.0      0.0      0.0      0.0
NC    0.060    0.060    0.030    0.0      0.0      0.0      0.0      0.0      0.0      0.0

X1    2.100    0.0      0.0      0.0      1.000    1.000    1.000    0.0      0.0      0.0
ST   14.000    0.0    843.400  839.500   11.500  843.400  839.600   11.600  843.400  829.400
ST   12.500  843.400  829.400   12.500  843.400  839.600   23.500  843.400  839.600   23.600
ST  843.400  829.500   24.500  843.400  829.500   24.600  843.400  839.600   36.500  843.400
ST  839.600   36.500  843.400  832.000   37.500  843.400  832.000   37.600  843.400  839.600
ST   49.100  843.400  839.600    0.0      0.0      0.0      0.0      0.0      0.0      0.0

X1    2.900    0.0      0.0      0.0     30.000   30.000   30.000    0.0      0.0      0.0
```

XC	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.0	0.0	0.0	0.0	0.0	0.0	0.0

D/S FACE OF RAILROAD BRIDGE.

X1	3.000	0.0	0.0	0.0	1.000	1.000	1.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0

500' D/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6346.000	9.000	1432.000	1455.000	15.000	15.000	15.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1407.500	0.0	1462.500	0.0	0.0	0.0	0.0
GR	840.000	0.0	830.000	1390.000	832.700	1416.000	827.400	1432.000	827.300	1440.000
GR	827.400	1455.000	836.800	1474.000	840.000	1490.000	843.100	1590.000	0.0	0.0
ET	0.0	0.0	0.0	0.0	9.100	0.0	0.0	0.0	1.000	1530.000

D/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6346.000	16.000	1368.000	1419.500	50.000	50.000	50.000	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	837.200	837.200	0.0
GR	840.000	0.0	839.000	200.000	839.000	1358.000	832.000	1368.000	832.000	1381.750
GR	827.300	1381.750	827.300	1382.800	827.300	1384.800	827.300	1402.700	827.300	1404.700
GR	827.300	1405.750	831.800	1405.750	831.500	1419.500	839.000	1429.500	840.300	1500.000
GR	843.100	1530.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB	1.050	1.540	3.000	0.0	51.500	4.000	371.000	0.0	829.400	829.400

D/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6300.000	0.0	0.0	0.0	46.000	46.000	46.000	0.0	0.0	0.0
X2	0.0	0.0	1.000	837.200	839.000	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	839.000	839.000	0.0
BT	16.000	0.0	840.000	0.0	200.000	839.000	0.0	1368.000	839.000	0.0
BT	1368.000	839.000	837.200	1382.800	839.000	837.200	1382.800	839.000	0.0	1384.800
BT	839.000	0.0	1384.800	839.000	837.200	1402.700	839.000	837.200	1402.700	839.000
BT	0.0	1404.700	839.000	0.0	1404.700	839.000	837.200	1419.500	839.000	837.200
BT	1419.500	839.000	0.0	1500.000	840.300	0.0	1530.000	843.100	0.0	0.0
ET	0.0	0.0	0.0	0.0	1.400	0.0	0.0	0.0	0.0	0.0

500' U/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6250.000	9.000	1387.000	1400.000	50.000	50.000	50.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1361.000	0.0	1467.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	834.000	1100.000	833.800	1381.000	827.900	1387.000	827.800	1393.500
GR	827.900	1400.000	834.700	1417.000	830.000	1430.000	843.100	1690.000	0.0	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 51+00 AND QUAD MAP

X1	5100.000	11.000	1394.000	1406.000	600.000	1700.000	1150.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1364.000	0.0	1430.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	834.100	1100.000	834.400	1345.000	838.600	1364.000	830.400	1394.000
GR	830.300	1400.000	830.400	1406.000	836.900	1430.000	835.200	1448.000	834.900	1700.000
GR	840.000	2700.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

XXXX

X1	4100.000	13.000	1393.500	1406.500	1000.000	1000.000	1000.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1365.000	0.0	1432.500	0.0	0.0	0.0	0.0
GR	840.000	0.0	836.100	1000.000	835.700	1200.000	836.000	1345.000	839.600	1365.000

GR	831.100	1393.500	831.000	1400.000	831.200	1406.500	838.600	1432.500	836.100	1452.000
GR	836.200	1600.000	836.700	1800.000	840.000	3500.000	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 31+00 AND QUAD MAP

X1	3100.000	13.000	1243.000	1257.000	1000.000	1000.000	1000.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1213.000	0.0	1285.000	0.0	0.0	0.0	0.0
GR	860.000	0.0	857.100	950.000	837.500	1193.000	841.200	1213.000	831.600	1243.000
GR	831.500	1250.000	831.800	1257.000	836.900	1267.000	840.300	1285.000	837.000	1305.000
GR	837.400	1450.000	837.700	1550.000	840.000	2800.000	0.0	0.0	0.0	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

XXXX

X1	1850.000	11.000	791.500	808.500	700.000	1600.000	1250.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	765.000	0.0	835.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	838.800	600.000	837.500	750.000	841.300	765.000	832.300	791.500
GR	831.400	800.000	832.400	808.500	840.600	835.000	858.000	850.000	838.900	1050.000
GR	860.000	1950.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 5+00 AND QUAD MAP

X1	600.000	14.000	2292.000	2300.000	1400.000	1000.000	1250.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	2263.000	0.0	2333.000	0.0	0.0	0.0	0.0
GR	850.000	0.0	840.300	2000.000	840.500	2245.000	844.900	2263.000	841.200	2281.000
GR	834.000	2292.000	832.300	2300.000	834.200	2308.000	841.500	2318.000	844.300	2333.000
GR	841.300	2348.000	840.700	2400.000	840.000	2850.000	850.000	3000.000	0.0	0.0

X1	1.000	13.000	1994.000	2006.000	600.000	600.000	600.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1974.000	0.0	2040.000	0.0	0.0	0.0	0.0
GR	850.000	0.0	842.300	1700.000	841.900	1839.000	841.200	1954.000	844.200	1974.000
GR	835.800	1994.000	835.200	2000.000	835.500	2006.000	838.700	2015.000	846.000	2040.000
GR	841.000	2060.000	841.000	2300.000	850.000	3000.000	0.0	0.0	0.0	0.0

REPEAT CROSS SECTION 0+00 PLYMOUTH TWP. CORP. BOUNDARY

X1	0.0	0.0	0.0	0.0	500.000	500.000	500.000	0.0	1.200	0.0
X3	0.0	0.0	0.0	1974.000	0.0	2040.000	0.0	0.0	0.0	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

#PROF 1

CCHV= 0.500 CEHV= 0.500
1490 PR CARD USED
#SECNO 1.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	ULOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IUC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 581.0 681.0 TYPE= 1 TARGET= 100.000

100 FEET U/S OF R/R

0.10	7.00	834.10	0.0	634.50	834.36	0.27	0.0	0.0	827.10
850.	147.	540.	163.	182.	105.	182.	0.	0.	827.10
0.0	0.81	5.15	0.90	0.151	0.035	0.139	0.0	827.10	581.00
0.001097	0.	0.	0.	0	0	4	0.0	100.00	681.00

FLOW DISTRIBUTION FOR SECNO= 0.10 CWSEL= 834.10

STA=	581.	600.	618.	624.	639.	647.	665.	681.
PER Q=	4.8	5.5	7.0	63.6	9.7	5.5	4.0	
AREA=	74.9	73.8	33.3	105.0	44.4	73.8	63.4	
VEL=	0.5	0.6	1.3	5.1	1.9	0.6	0.5	

#SECNO 2.000

D/S FACE OF RAILROAD BRIDGE.

2.00	6.32	834.18	0.0	0.0	834.64	0.46	0.18	0.10	893.40
850.	0.	850.	0.	0.	156.	156.	1.	0.	893.40
0.01	0.0	5.47	0.0	0.060	0.035	0.060	0.035	827.86	0.0
0.003347	100.	100.	100.	2	0	0	0.0	41.84	41.84

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 834.18

STA=	0.	0.
PER Q=	0.0	
AREA=	0.0	
VEL=	0.0	

#SECNO 2.100

3370 NORMAL BRIDGE.NRD= 14 MIN ELTRD= 843.40 MAX ELLC= 839.60

2.10	6.28	834.14	0.0	0.0	834.69	0.55	0.00	0.05	843.40
850.	0.	850.	0.	0.	142.	142.	1.	0.	832.50
0.01	0.0	5.97	0.0	0.060	0.030	0.060	0.034	827.86	0.0
0.003240	1.	1.	1.	2	0	0	-11.51	41.76	41.76

FLOW DISTRIBUTION FOR SECNO= 2.10 CWSEL= 834.14

STA=	0.	0.
PER Q=	100.0	
AREA=	1/2.3	

VEL= 6.0

*SECNO 2.900

3370 NORMAL BRIDGE,NRD= 14 MIN ELTRD= 843.40 MAX ELLC= 839.60

2.90	6.42	834.28	0.0	0.0	834.79	0.51	0.09	0.01	843.40
850.	0.	650.	0.	0.	146.	146.	1.	0.	832.50
0.01	0.0	5.74	0.0	0.060	0.030	0.060	0.033	827.86	0.0
0.002935	30.	30.	30.	2	0	0	-11.95	42.05	42.05

FLOW DISTRIBUTION FOR SECNO= 2.90 CWSEL= 834.28

STA= 0. 0.
PER Q= 100.0
AREA= 148.1
VEL= 5.7

*SECNO 3.000

SECNO	DEPTH	C.SEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	IOPWID	ENDST

U/S FACE OF RAILROAD BRIDGE.

3.00	6.56	834.42	0.0	0.0	834.83	0.41	0.00	0.03	843.40
850.	0.	650.	0.	0.	166.	166.	1.	0.	832.50
0.01	0.0	5.12	0.0	0.060	0.035	0.060	0.033	827.86	0.0
0.002780	1.	1.	1.	2	0	0	0.0	42.32	42.32

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 834.42

STA= 0. 0.
PER Q= 100.0
AREA= 165.9
VEL= 5.1

CCHV= 0.300 CEHV= 0.500

*SECNO 6396.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 1407.5 1482.5 TYPE= 1 TARGET= 75.000

50' U/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

6396.00	7.44	834.74	0.0	0.0	834.91	0.17	0.02	0.07	827.40
850.	136.	642.	71.	96.	170.	57.	1.	0.	827.40
0.01	1.42	3.76	1.24	0.060	0.035	0.060	0.033	827.30	1407.50
0.000550	15.	15.	15.	2	0	0	0.0	65.99	1482.50

FLOW DISTRIBUTION FOR SECNO= 6396.00 CWSEL= 834.74

STA=	1407.	1416.	1432.	1455.	1470.	1482.
PER Q=	2.2	13.9	75.6	8.2	0.1	
AREA=	21.1	75.1	170.0	54.5	2.8	
VEL=	0.9	1.6	3.8	1.3	0.4	

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 837.20 ELREA= 837.20

U/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

6346.00	7.49	834.79	0.0	0.0	834.95	0.16	0.03	0.00	832.00
850.	0.	850.	0.	0.	261.	0.	2.	0.	831.50
0.01	0.0	3.25	0.0	0.060	0.035	0.060	0.033	827.30	1366.00
0.000845	50.	50.	50.	2	0	0	0.0	51.50	1413.50

FLOW DISTRIBUTION FOR SECNO= 6346.00 CWSEL= 834.79

STA= 1368. 1420.
PER Q= 100.0
AREA= 261.1
VEL= 3.3

SPECIAL BRIDGE

SP	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.54	3.00	0.0	51.50	4.00	371.00	0.0	829.40	829.40

*SECNO 6300.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 834.76 BRIDGE VELOCITY= 3.34 CALCULATED CHANNEL AREA= 255.

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
0.0	834.97	0.02	0.	850.	371.	371.	837.20	839.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 839.00 ELREA= 839.00

U/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP C

6300.00	7.51	834.81	0.0	0.0	834.97	0.16	0.02	0.0	832.00
850.	0.	850.	0.	0.	262.	0.	2.	0.	831.50
0.02	0.0	3.24	0.0	0.060	0.035	0.060	0.033	827.30	1368.00
0.000834	46.	46.	46.	0	0	0	0.0	51.50	1419.50

FLOW DISTRIBUTION FOR SECNO= 6300.00 CWSEL= 834.81

STA= 1350. 1420.
PER Q= 100.0
AREA= 262.2
VEL= 3.2

*SECNO 6250.000

3470 ENCROACHMENT STATIONS= 1381.0 1467.0 TYPE= 1 TARGET= 86.000

5.1 U/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP D

6250.00	7.04	834.84	0.0	0.0	835.03	0.19	0.04	0.01	827.90
850.	33.	423.	394.	24.	91.	237.	2.	0.	827.90
0.02	1.38	4.65	1.66	0.060	0.035	0.060	0.034	827.80	1381.00
0.000897	50.	50.	50.	1	0	0	0.0	86.00	1467.00

CWSEL= 834.84

STA=	1381.	1387.	1400.	1417.	1430.	1467.
PER Q=	3.9	49.7	11.6	5.0	29.8	
AREA=	24.0	90.9	60.2	32.4	144.7	
VEL=	1.4	4.7	1.8	1.3	1.(	

CCHV= 0.100 CEHV= 0.300

*SECNO 5100.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 1364.0 1430.0 TYPE= 1 TARGET= 66.000

E

BASED ON FIELD BOOK STA. 51+00 AND QUAD MAP

5100.00	6.12	836.42	0.0	0.0	837.22	0.80	2.01	0.18	830.40
850.	119.	611.	120.	66.	73.	67.	11.	3.	830.40
0.07	1.80	8.39	1.80	0.100	0.035	0.100	0.032	830.30	1371.98
0.003526	600.	1150.	1700.	3	0	0	0.0	56.24	1428.22

FLOW DISTRIBUTION FOR SECNO= 5100.00 CWSEL= 836.42

STA=	1372.	1394.	1406.	1428.
PER Q=	14.0	71.9	14.1	
AREA=	66.3	72.8	66.9	
VEL=	1.(	3.4	1.(	

*SECNO 4100.000

F

3470 ENCROACHMENT STATIONS= 1365.0 1432.5 TYPE= 1 TARGET= 67.500

XXXX

4100.00	7.84	838.84	0.0	0.0	839.22	0.38	1.96	0.04	831.10
851.	126.	594.	130.	100.	101.	102.	17.	4.	831.20
6.14	1.26	5.88	1.27	0.100	0.035	0.100	0.033	831.00	1367.55
0.001249	1000.	1000.	1000.	2	0	0	0.0	64.95	1432.50

FLOW DISTRIBUTION FOR SECNO= 4100.00 CWSEL= 838.84

STA=	1368.	1394.	1407.	1432.
PER Q=	14.9	69.9	15.3	
AREA=	100.4	100.9	102.4	
VEL=	1.3	5.9	1.3	

*SECNO 3100.000

3470 ENCROACHMENT STATIONS= 1213.0 1285.0 TYPE= 1 TARGET= 72.000

BASED ON FIELD BOOK STA. 31+00 AND QUAD MAP

G

3100.00	8.47	839.97	0.0	0.0	840.31	0.34	1.09	0.00	831.60
851.	126.	633.	90.	109.	117.	81.	24.	6.	831.80
0.20	1.15	5.41	1.12	0.100	0.035	0.100	0.034	831.50	1216.86
0.000956	1000.	1000.	1000.	2	0	0	0.0	66.37	1283.23

FLOW DISTRIBUTION FOR SECNO= 3100.00 CWSEL= 839.97

STA=	1217.	1243.	1257.	1267.	1283.
PER Q=	14.9	74.5	8.9	1.8	
AREA=	109.3	117.1	56.2	24.9	
VEL=	1.2	5.4	1.3	0.6	

CCHV= 0.100 CEHV= 0.300
*SECNO 1850.000
3280 CROSS SECTION 1850.00 EXTENDED 0.96 FEET

3470 ENCROACHMENT STATIONS= 765.0 835.0 TYPE= 1 TARGET= 70.000

XXXX H

1850.00	9.56	840.96	0.0	0.0	841.17	0.21	0.84	0.01	832.30
850.	96.	650.	104.	110.	154.	118.	33.	7.	832.40
0.30	0.87	4.21	0.88	0.100	0.035	0.100	0.034	831.40	766.01
0.000523	700.	1250.	1600.	2	0	0	0.0	68.98	835.00

FLOW DISTRIBUTION FOR SECNO= 1850.00 CWSEL= 840.96

STA=	766.	792.	809.	835.
PER Q=	11.3	76.4	12.3	
AREA=	110.3	154.4	118.1	
VEL=	0.9	4.2	0.9	

*SECNO 600.000

3470 ENCROACHMENT STATIONS= 2263.0 2333.0 TYPE= 1 TARGET= 70.000

BASED ON FIELD BOOK STA. 0+00 AND QUAD MAP I

600.00	9.39	841.69	0.0	0.0	842.13	0.44	0.89	0.07	834.00
850.	49.	762.	39.	46.	136.	38.	42.	9.	834.20
0.37	1.08	5.61	1.02	0.100	0.035	0.100	0.034	832.30	2278.63
0.001042	1400.	1250.	1000.	2	0	0	0.0	40.37	2319.00

FLOW DISTRIBUTION FOR SECNO= 600.00 CWSEL= 841.69

STA=	2279.	2261.	2292.	2308.	2318.
PER Q=	0.0	5.8	89.6	4.6	
AREA=	0.6	45.0	135.6	38.4	
VEL=	0.2	1.1	5.6	1.0	

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 1974.0 2040.0 TYPE= 1 TARGET= 66.000

1.00	7.22	842.42	0.0	0.0	843.12	0.69	0.91	0.08	835.80
850.	80.	641.	128.	52.	84.	72.	44.	10.	835.50
0.39	1.54	7.64	1.79	0.100	0.035	0.100	0.034	835.20	1978.23
0.002426	600.	600.	600.	2	0	0	0.0	49.52	2027.75

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 842.42

STA=	1978.	1994.	2006.	2015.	2028.
PER Q=	9.5	75.4	12.1	3.0	
AREA=	52.2	84.0	47.9	23.7	
VEL=	1.5	7.6	2.1	1.1	

*SECNO .0

3470 ENCROACHMENT STATIONS= 1974.0 2040.0 TYPE= 1 TARGET= 66.000

REPEAT CROSS SECTION 0+00 PLYMOUTH TWP. CORP. BOUNDARY

0.0	7.23	843.63	0.0	0.0	844.33	0.69	1.21	0.00	837.00
850.	81.	641.	128.	52.	84.	72.	47.	10.	836.70
0.42	1.54	7.62	1.79	0.100	0.035	0.100	0.035	836.40	1978.21
0.002412	500.	500.	500.	2	0	0	0.0	49.58	2027.79

FLOW DISTRIBUTION FOR SECNO= 0.0 CWSEL= 843.63

STA=	1978.	1994.	2006.	2015.	2028.
PER Q=	9.5	75.4	12.1	3.0	
AREA=	52.4	84.1	48.0	23.9	
VEL=	1.5	7.6	2.1	1.1	

****
HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

JOHNSON DRAIN PLY. TWP.

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
0.100	834.10	-0.40	834.36	100.00	147.12	540.29	162.59	100.00	581.00	624.00	639.00	681.00
2.000	834.18	0.0	834.64	41.84	0.0	850.00	0.0	0.0	0.0	0.0	0.0	0.0
2.100	834.14	0.0	834.69	41.76	0.0	850.00	0.0	0.0	0.0	0.0	0.0	0.0
2.900	834.28	0.0	834.79	42.05	0.0	850.00	0.0	0.0	0.0	0.0	0.0	0.0
3.000	834.42	0.0	834.83	42.32	0.0	850.00	0.0	0.0	0.0	0.0	0.0	0.0
6396.000	834.74	0.0	834.91	65.99	136.45	642.49	71.06	75.00	1407.50	1432.00	1455.00	1482.50
6346.000	834.79	0.0	834.95	51.50	0.0	850.00	0.0	0.0	0.0	1368.00	1419.50	0.0
6300.000	834.81	0.0	834.97	51.50	0.0	850.00	0.0	0.0	0.0	1368.00	1419.50	0.0
6250.000	834.84	0.0	835.03	86.00	33.03	422.79	394.18	86.00	1381.00	1387.00	1400.00	1467.00
5100.000	836.42	0.0	837.22	56.24	119.00	610.85	120.15	66.00	1364.00	1394.00	1406.00	1430.00
4100.000	838.64	0.0	839.22	64.95	126.33	593.73	129.94	67.50	1365.00	1393.50	1406.50	1432.50
3100.000	839.97	0.0	840.31	66.37	126.23	633.30	90.47	72.00	1213.00	1243.00	1257.00	1265.00
1850.000	840.96	0.0	841.17	68.98	95.96	649.57	104.47	70.00	765.00	791.50	808.50	835.00
600.000	841.69	0.0	842.13	40.37	49.06	761.80	39.13	70.00	2263.00	2292.00	2308.00	2333.00
1.000	842.42	0.0	843.12	49.52	80.44	641.22	128.33	66.00	1974.00	1994.00	2006.00	2040.00
0.0	843.63	0.0	844.33	49.58	80.55	640.96	128.49	66.00	1974.00	1994.00	2006.00	2040.00

FORM 548

JOHNSON DRAIN PLY. TWP.

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
0.100	0.0	0.0	0.0	827.10	850.00	834.10	0.0	834.36	10.97	5.15	468.56	256.59
2.000	100.00	0.0	0.0	827.86	850.00	834.18	0.0	834.64	33.47	5.47	311.07	146.93
2.100	1.00	843.40	839.60	827.86	850.00	834.14	0.0	834.69	32.90	5.97	284.62	148.19
2.900	30.00	843.40	839.60	827.86	850.00	834.28	0.0	834.79	29.35	5.74	296.11	156.90
3.000	1.00	0.0	0.0	827.86	850.00	834.42	0.0	834.83	27.80	5.12	331.74	161.21
6396.000	15.00	0.0	0.0	827.30	850.00	834.74	0.0	834.91	5.50	3.78	323.44	362.30
6346.000	50.00	0.0	0.0	827.30	850.00	834.79	0.0	834.95	8.45	3.25	261.14	292.39
6300.000	46.00	839.00	837.20	827.30	850.00	834.81	0.0	834.97	8.34	3.24	262.17	294.29
6250.000	50.00	0.0	0.0	827.80	850.00	834.84	0.0	835.03	8.97	4.65	352.22	283.77
5100.000	1150.00	0.0	0.0	830.30	850.00	836.42	0.0	837.22	35.26	8.39	205.97	143.14
4100.000	1000.00	0.0	0.0	831.00	850.00	838.84	0.0	839.22	12.49	5.88	303.75	240.52
3100.000	1000.00	0.0	0.0	831.50	850.00	839.97	0.0	840.31	9.56	5.41	307.46	274.92
1850.000	1250.00	0.0	0.0	831.40	850.00	840.96	0.0	841.17	5.23	4.21	382.73	371.78
600.000	1250.00	0.0	0.0	832.30	850.00	841.69	0.0	842.13	10.42	5.61	219.80	263.29
1.000	600.00	0.0	0.0	835.20	850.00	842.42	0.0	843.12	24.26	7.64	207.84	172.57
0.0	500.00	0.0	0.0	836.40	850.00	843.63	0.0	844.33	24.12	7.62	208.36	173.07

JOHNSON DRAIN PLY. TWP.

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.100	850.00	834.10	0.0	0.0	-0.40	100.00	0.0
2.000	850.00	834.18	0.0	0.08	0.0	41.84	100.00
2.100	850.00	834.14	0.0	-0.04	0.0	41.76	1.00
2.900	850.00	834.28	0.0	0.15	0.0	42.05	30.00
3.000	850.00	834.42	0.0	0.14	0.0	42.32	1.00
6396.000	850.00	834.74	0.0	0.32	0.0	65.99	15.00
6346.000	850.00	834.79	0.0	0.05	0.0	51.50	50.00
6300.000	850.00	834.81	0.0	0.02	0.0	51.50	46.00
6250.000	850.00	834.84	0.0	0.03	0.0	86.00	50.00
5100.000	850.00	836.42	0.0	1.58	0.0	56.24	1150.00
4100.000	850.00	838.84	0.0	2.42	0.0	64.95	1000.00
3100.000	850.00	839.97	0.0	1.13	0.0	66.37	1000.00
1850.000	850.00	840.96	0.0	0.99	0.0	68.98	1250.00
600.000	850.00	841.69	0.0	0.73	0.0	40.37	1250.00
1.000	850.00	842.42	0.0	0.73	0.0	49.52	600.00
0.0	850.00	843.63	0.0	1.21	0.0	49.58	500.00

SUMMARY OF ERRORS

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Plymouth Twp.

3) WATERCOURSE: Johnson Drain and Tonquish Creek

4) DOCUMENT TYPE: Convergence

00BREAK00

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

C
T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM 5MILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      CONVERGENCE RUN CRITICAL DEPTH

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        4.        0.        0. -1.000000      0.0       0.0       0.      0.0       0.0
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    1.000      0.0      -1.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0
J3  VARIABLE CODES FOR SUMMARY PRINTOUT
  150.000   201.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
J5  LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS********
  -10.000   -10.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
QT      5.000   400.000   700.000   850.000   850.000  1300.000     0.0       0.0       0.0       0.0
ET      0.0       0.0       0.0       0.0     1.400     0.0       0.0       0.0       0.0       0.0
NC      0.0       0.0       0.0     0.300     0.500     0.0       0.0       0.0       0.0       0.0
NH      5.000     0.200   618.000     0.080   624.000     0.035   639.000     0.080   647.000     0.200
NH   1265.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0

          100 FEET D/S OF R/R

X1      0.100     8.000   624.000   639.000     0.0       0.0       0.0       0.0       0.0       0.0
X3      0.0       0.0       0.0     581.000     0.0     681.000     0.0       0.0       0.0       0.0
GR    840.000     0.0     830.000   600.000   830.000   618.000   827.100   624.000   827.100   639.000
GR    830.000   647.000   830.000   665.000   840.000  1265.000     0.0       0.0       0.0       0.0
NC      0.060     0.060     0.035     0.0       0.0       0.0       0.0       0.0       0.0       0.0

        D/S FACE OF RAILROAD BRIDGE.

X1      2.000    17.000    12.000    26.000   100.000   100.000   100.000     0.0       0.0       0.0
GR    843.400     0.0     832.500     0.0     829.400    11.500   829.400    11.600   829.400    12.500
GR    829.400    12.600   827.860    19.000   829.500    23.500   829.500    23.600   829.500    24.500
GR    829.500    24.600   832.000    36.500   832.000    36.600   832.000    37.500   832.000    37.600
GR    837.900    49.100   843.400    49.100     0.0       0.0       0.0       0.0       0.0       0.0
NC      0.060     0.060     0.030     0.0       0.0       0.0       0.0       0.0       0.0       0.0

X1      2.100     0.0       0.0       0.0       1.000     1.000     1.000     0.0       0.0       0.0
BT     14.000     0.0     843.400   839.600    11.500   843.400   839.600    11.600   843.400   829.400
BT     12.500   843.400   829.400    12.600   843.400   839.600    23.500   843.400   839.600    23.600
BT    843.400   829.500    24.500   843.400   829.500    24.600   843.400   839.600    36.500   843.400
BT    839.600    36.600   843.400   832.000    37.500   843.400   832.000    37.600   843.400   839.600
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X1	2.900	0.0	0.0	0.0	30.000	30.000	30.000	0.0	0.0	0.0
X2	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.0	0.0	0.0	0.0	0.0	0.0	0.0

U/S FACE OF RAILROAD BRIDGE.

X1	3.000	0.0	0.0	0.0	1.000	1.000	1.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0

50' D/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6396.000	9.000	1432.000	1455.000	15.000	15.000	15.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1407.500	0.0	1482.500	0.0	0.0	0.0	0.0
GR	840.000	0.0	830.000	1390.000	832.700	1416.000	827.400	1432.000	827.300	1440.000
GR	827.400	1455.000	836.800	1474.000	830.000	1490.000	843.100	1590.000	0.0	0.0
ET	0.0	0.0	0.0	0.0	9.100	0.0	0.0	0.0	1.000	1530.000

D/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6346.000	16.000	1368.000	1419.500	50.000	50.000	50.000	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	837.200	837.200	0.0
GR	840.000	0.0	839.000	200.000	839.000	1358.000	832.000	1368.000	832.000	1381.750
GR	827.300	1381.750	827.300	1382.800	827.300	1384.800	827.300	1402.700	827.300	1404.700
GR	827.300	1405.750	831.800	1405.750	831.500	1419.500	839.000	1429.500	840.300	1500.000
GR	843.100	1530.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB	1.050	1.540	3.000	0.0	51.500	4.000	371.000	0.0	829.400	829.400

U/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6300.000	0.0	0.0	0.0	46.000	46.000	46.000	0.0	0.0	0.0
X2	0.0	0.0	1.000	837.200	839.000	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	839.000	839.000	0.0
BT	16.000	0.0	840.000	0.0	200.000	839.000	0.0	1368.000	839.000	0.0
BT	1368.000	839.000	837.200	1382.800	839.000	837.200	1382.800	839.000	0.0	1384.800
BT	839.000	0.0	1384.800	839.000	837.200	1402.700	839.000	837.200	1402.700	839.000
BT	0.0	1404.700	839.000	0.0	1404.700	839.000	837.200	1419.500	839.000	837.200
BT	1419.500	839.000	0.0	1500.000	840.300	0.0	1530.000	843.100	0.0	0.0
ET	0.0	0.0	0.0	0.0	1.400	0.0	0.0	0.0	0.0	0.0

50' U/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6250.000	9.000	1387.000	1400.000	50.000	50.000	50.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1381.000	0.0	1467.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	834.000	1100.000	833.800	1381.000	827.900	1387.000	827.800	1393.500
GR	827.900	1400.000	834.700	1417.000	830.000	1430.000	843.100	1690.000	0.0	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 51+00 AND QUAD MAP

X1	5100.000	11.000	1394.000	1406.000	600.000	1700.000	1150.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1364.000	0.0	1430.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	834.100	1100.000	834.400	1345.000	838.600	1364.000	830.400	1394.000
GR	830.300	1400.000	830.400	1406.000	836.900	1430.000	835.200	1448.000	834.900	1700.000
GR	840.000	2700.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

XXXX

X3	0.0	0.0	0.0	1365.000	0.0	1432.500	0.0	0.0	0.0	0.0
GR	840.000	0.0	836.100	1000.000	835.700	1200.000	836.000	1345.000	839.600	1365.000
GR	831.100	1393.500	831.000	1400.000	831.200	1406.500	838.600	1432.500	836.100	1452.000
GR	836.200	1600.000	836.700	1800.000	840.000	3500.000	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 31+00 AND QUAD MAP

X1	3100.000	13.000	1243.000	1257.000	1000.000	1000.000	1000.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1213.000	0.0	1285.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	837.100	950.000	837.500	1193.000	841.200	1213.000	831.600	1243.000
GR	831.500	1250.000	831.800	1257.000	836.900	1267.000	840.300	1285.000	837.000	1305.000
GR	837.400	1450.000	837.700	1550.000	840.000	2800.000	0.0	0.0	0.0	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

XXXX

X1	1850.000	11.000	791.500	808.500	700.000	1600.000	1250.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	765.000	0.0	835.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	838.800	600.000	837.500	750.000	841.300	765.000	832.300	791.500
GR	831.400	800.000	832.400	808.500	840.600	835.000	838.000	850.000	838.900	1050.000
GR	840.000	1950.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 6+00 AND QUAD MAP

X1	600.000	14.000	2292.000	2308.000	1400.000	1000.000	1250.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	2263.000	0.0	2333.000	0.0	0.0	0.0	0.0
GR	850.000	0.0	840.300	2000.000	840.500	2245.000	844.900	2263.000	841.200	2281.000
GR	834.000	2292.000	832.300	2300.000	834.200	2308.000	841.500	2318.000	844.300	2333.000
GR	841.300	2348.000	840.700	2400.000	840.000	2850.000	850.000	3000.000	0.0	0.0

X1	1.000	13.000	1994.000	2006.000	600.000	600.000	600.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1974.000	0.0	2040.000	0.0	0.0	0.0	0.0
GR	850.000	0.0	842.300	1700.000	841.900	1839.000	841.200	1954.000	844.200	1974.000
GR	835.800	1994.000	835.200	2000.000	835.500	2006.000	838.700	2015.000	846.000	2040.000
GR	841.000	2060.000	841.000	2300.000	850.000	3000.000	0.0	0.0	0.0	0.0

REPEAT CROSS SECTION 0+00 PLYMOUTH TWP. CORP. BOUNDARY

X1	0.0	0.0	0.0	0.0	500.000	500.000	500.000	0.0	1.200	0.0
X3	0.0	0.0	0.0	1974.000	0.0	2040.000	0.0	0.0	0.0	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      CONVERGENCE RUN NORMAL DEPTH

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        4.        0.        0.  0.001100      0.0       0.0       0.        0.0       0.0
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    2.000         0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0
```

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      CONVERGENCE RUN > NORMAL DEPTH

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        4.        0.        0.  0.0         0.0       0.0       0.  834.500   0.0
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBW       CHNIM     ITRACE
   15.000     0.0      -1.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0
```

HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

CONVERGENCE RUN CRITICAL

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CHSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
*	0.100	0.0	0.0	0.0	827.10	850.00	831.31	831.31	832.61	87.76	10.37	189.71	90.74
	0.100	0.0	0.0	0.0	827.10	850.00	834.11	0.0	834.38	10.88	5.13	470.12	257.72
	0.100	0.0	0.0	0.0	827.10	850.00	834.50	0.0	834.73	8.83	4.79	508.65	286.09
	2.000	100.00	0.0	0.0	827.86	850.00	832.45	0.0	833.96	191.12	9.87	172.30	61.48
	2.000	100.00	0.0	0.0	827.86	850.00	834.19	0.0	834.65	33.08	5.44	312.31	147.78
	2.000	100.00	0.0	0.0	827.86	850.00	834.56	0.0	834.94	25.13	4.95	343.61	169.56
*	2.100	1.00	843.40	839.60	827.86	850.00	832.79	832.79	834.12	118.67	9.24	184.00	78.03
	2.100	1.00	843.40	839.60	827.86	850.00	834.15	0.0	834.70	32.52	5.95	285.76	149.05
	2.100	1.00	843.40	839.60	827.86	850.00	834.53	0.0	834.98	24.47	5.39	315.42	171.84
	2.900	30.00	843.40	839.60	827.86	850.00	833.87	0.0	834.52	40.83	6.43	264.21	133.02
	2.900	30.00	843.40	839.60	827.86	850.00	834.30	0.0	834.80	29.07	5.72	297.08	157.65
	2.900	30.00	843.40	839.60	827.86	850.00	834.63	0.0	835.06	22.80	5.26	323.28	178.02
	3.000	1.00	0.0	0.0	827.86	850.00	834.08	0.0	834.57	35.96	5.60	303.42	141.74
	3.000	1.00	0.0	0.0	827.86	850.00	834.43	0.0	834.84	27.57	5.11	332.70	161.88
	3.000	1.00	0.0	0.0	827.86	850.00	834.73	0.0	835.08	22.28	4.74	358.35	180.07
	6396.000	15.00	0.0	0.0	827.30	850.00	834.48	0.0	834.67	6.33	3.96	306.58	337.96
	6396.000	15.00	0.0	0.0	827.30	850.00	834.75	0.0	834.92	5.48	3.77	324.03	363.16
	6396.000	15.00	0.0	0.0	827.30	850.00	835.00	0.0	835.15	4.82	3.62	340.41	387.19
	6346.000	50.00	0.0	0.0	827.30	850.00	834.53	0.0	834.72	10.01	3.43	248.15	268.70
	6346.000	50.00	0.0	0.0	827.30	850.00	834.80	0.0	834.96	8.40	3.25	261.58	293.20
	6346.000	50.00	0.0	0.0	827.30	850.00	835.04	0.0	835.19	7.21	3.10	274.01	316.61
	6300.000	46.00	839.00	837.20	827.30	850.00	834.56	0.0	834.74	9.85	3.41	249.38	270.90
	6300.000	46.00	839.00	837.20	827.30	850.00	834.82	0.0	834.98	8.29	3.24	262.62	295.13
	6300.000	46.00	839.00	837.20	827.30	850.00	835.05	0.0	835.20	7.13	3.09	274.88	318.27
	6250.000	50.00	0.0	0.0	827.80	850.00	834.59	0.0	834.81	10.60	4.94	331.35	261.08
	6250.000	50.00	0.0	0.0	827.80	850.00	834.85	0.0	835.03	8.92	4.64	352.96	284.60
	6250.000	50.00	0.0	0.0	827.80	850.00	835.08	0.0	835.25	7.61	4.38	373.40	308.08
	5100.000	1150.00	0.0	0.0	830.30	850.00	836.42	0.0	837.21	35.09	8.37	206.41	143.50
	5100.000	1150.00	0.0	0.0	830.30	850.00	836.42	0.0	837.22	35.25	8.39	205.99	143.16
	5100.000	1150.00	0.0	0.0	830.30	850.00	836.44	0.0	837.23	34.63	8.34	207.54	144.43

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
4100.000	1000.00	0.0	0.0	831.00	850.00	838.83	0.0	839.22	12.53	5.89	303.39	240.17
4100.000	1000.00	0.0	0.0	831.00	850.00	838.84	0.0	839.22	12.49	5.88	303.76	240.53
4100.000	1000.00	0.0	0.0	831.00	850.00	838.84	0.0	839.22	12.51	5.89	303.51	240.29
3100.000	1000.00	0.0	0.0	831.50	850.00	839.97	0.0	840.31	9.57	5.41	307.23	274.70
3100.000	1000.00	0.0	0.0	831.50	850.00	839.97	0.0	840.31	9.56	5.41	307.48	274.94
3100.000	1000.00	0.0	0.0	831.50	850.00	839.97	0.0	840.31	9.56	5.41	307.38	274.85
1850.000	1250.00	0.0	0.0	831.40	850.00	840.95	0.0	841.17	5.23	4.21	382.59	371.61
1850.000	1250.00	0.0	0.0	831.40	850.00	840.96	0.0	841.17	5.23	4.21	382.75	371.80
1850.000	1250.00	0.0	0.0	831.40	850.00	840.96	0.0	841.17	5.23	4.21	382.65	371.68
600.000	1250.00	0.0	0.0	832.30	850.00	841.69	0.0	842.13	10.43	5.61	219.73	263.20
600.000	1250.00	0.0	0.0	832.30	850.00	841.69	0.0	842.13	10.42	5.61	219.81	263.31
600.000	1250.00	0.0	0.0	832.30	850.00	841.69	0.0	842.13	10.43	5.61	219.75	263.23
1.000	600.00	0.0	0.0	835.20	850.00	842.42	0.0	843.11	24.28	7.64	207.78	172.51
1.000	600.00	0.0	0.0	835.20	850.00	842.42	0.0	843.12	24.26	7.64	207.84	172.57
1.000	600.00	0.0	0.0	835.20	850.00	842.42	0.0	843.12	24.27	7.64	207.82	172.55
0.0	500.00	0.0	0.0	836.40	850.00	843.63	0.0	844.33	24.13	7.62	208.34	173.05
0.0	500.00	0.0	0.0	836.40	850.00	843.63	0.0	844.33	24.12	7.62	208.36	173.07
0.0	500.00	0.0	0.0	836.40	850.00	843.63	0.0	844.33	24.12	7.62	208.36	173.07

CONVERGENCE RUN CRITICAL

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	0.100	850.00	831.31	0.0	0.0	0.0	100.00	0.0
	0.100	850.00	834.11	2.80	0.0	0.0	100.00	0.0
	0.100	850.00	834.50	0.39	0.0	0.0	100.00	0.0
	2.000	850.00	832.45	0.0	1.14	0.0	38.29	100.00
	2.000	850.00	834.19	1.74	0.08	0.0	41.87	100.00
	2.000	850.00	834.56	0.37	0.06	0.0	42.59	100.00
*	2.100	850.00	832.79	0.0	0.34	0.0	39.14	1.00
	2.100	850.00	834.15	1.36	-0.04	0.0	41.79	1.00
	2.100	850.00	834.53	0.38	-0.03	0.0	42.53	1.00
	2.900	850.00	833.87	0.0	1.08	0.0	41.25	30.00
	2.900	850.00	834.30	0.42	0.15	0.0	42.08	30.00
	2.900	850.00	834.63	0.33	0.10	0.0	42.72	30.00
	3.000	850.00	834.08	0.0	0.21	0.0	41.66	1.00
	3.000	850.00	834.43	0.35	0.14	0.0	42.34	1.00
	3.000	850.00	834.73	0.30	0.11	0.0	42.93	1.00
	6396.000	850.00	834.48	0.0	0.40	0.0	64.87	15.00
	6396.000	850.00	834.75	0.27	0.32	0.0	66.03	15.00
	6396.000	850.00	835.00	0.25	0.26	0.0	67.11	15.00
	6346.000	850.00	834.53	0.0	0.05	0.0	51.50	50.00
	6346.000	850.00	834.80	0.26	0.05	0.0	51.50	50.00
	6346.000	850.00	835.04	0.24	0.04	0.0	51.50	50.00
	6300.000	850.00	834.56	0.0	0.02	0.0	51.50	46.00
	6300.000	850.00	834.82	0.26	0.02	0.0	51.50	46.00
	6300.000	850.00	835.05	0.24	0.02	0.0	51.50	46.00
	6250.000	850.00	834.59	0.0	0.03	0.0	85.47	50.00
	6250.000	850.00	834.85	0.25	0.03	0.0	86.00	50.00
	6250.000	850.00	835.08	0.24	0.03	0.0	86.00	50.00
	5100.000	850.00	836.42	0.0	1.82	0.0	56.30	1150.00
	5100.000	850.00	836.42	0.00	1.57	0.0	56.24	1150.00
	5100.000	850.00	836.44	0.02	1.36	0.0	56.45	1150.00
	4100.000	850.00	838.83	0.0	2.42	0.0	64.93	1000.00
	4100.000	850.00	838.84	0.01	2.42	0.0	64.95	1000.00
	4100.000	850.00	838.84	-0.00	2.40	0.0	64.94	1000.00
	3100.000	850.00	839.97	0.0	1.13	0.0	66.34	1000.00
	3100.000	850.00	839.97	0.00	1.13	0.0	66.37	1000.00
	3100.000	850.00	839.97	-0.00	1.13	0.0	66.36	1000.00
	1850.000	850.00	840.95	0.0	0.99	0.0	68.98	1250.00
	1850.000	850.00	840.96	0.00	0.99	0.0	68.99	1250.00
	1850.000	850.00	840.96	-0.00	0.99	0.0	68.98	1250.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
600.000	850.00	841.69	0.0	0.73	0.0	40.36	1250.00
600.000	850.00	841.69	0.00	0.73	0.0	40.38	1250.00
600.000	850.00	841.69	-0.00	0.73	0.0	40.38	1250.00
1.000	850.00	842.42	0.0	0.74	0.0	49.51	600.00
1.000	850.00	842.42	0.00	0.73	0.0	49.52	600.00
1.000	850.00	842.42	-0.00	0.73	0.0	49.52	600.00
0.0	850.00	843.63	0.0	1.21	0.0	49.58	500.00
0.0	850.00	843.63	0.00	1.21	0.0	49.58	500.00
0.0	850.00	843.63	0.00	1.21	0.0	49.58	500.00

SUMMARY OF ERRORS

CAUTION SECNO= 0.100 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 2.100 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.100 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.100 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

FLOOD INSURANCE ZONE DATA FOR CONVERGENCE RUN CRITICAL

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10	2	0.2
0.100	0.	-3.19	-0.39	******
2.000	100.	-2.11	-0.37	-1.96
2.100	101.	-1.74	-0.38	******
2.900	131.	-0.75	-0.33	******
3.000	132.	-0.65	-0.30	-0.77
6396.000	147.	-0.51	-0.25	******
6346.000	197.	-0.50	-0.24	8.36
6300.000	243.	-0.50	-0.24	-0.94
6250.000	293.	-0.49	-0.24	******
5100.000	1443.	-0.02	-0.02	6.96
4100.000	2443.	-0.00	0.00	-4.32
3100.000	3443.	-0.00	0.00	******
1850.000	4693.	-0.00	0.00	******
600.000	5943.	-0.00	0.00	-7.12
1.000	6543.	-0.00	0.00	******
0.0	7043.	-0.00	-0.00	******
WEIGHTED AVG FOR REACH		-0.10	-0.03	*****

FHF FOR THE REACH = 005 WITH 98.1 OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 1

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Plymouth Twp.

3) WATERCOURSE: Johnson Drain and Tonquish Creek

4) DOCUMENT TYPE: Report

00BREAK00

PLYMOUTH TOWNSHIP, MICHIGAN
HYDRAULIC ANALYSIS

I. INTRODUCTION

Plymouth Township is located in the northwest portion of Wayne County and entirely within the Rouge River Basin. The Township contains approximately 16 square miles and has maintained its rural/residential suburban nature over the years. The population in 1970 was 17,500 while in July, 1975 it was 19,500.

This report summarizes the hydraulic studies undertaken to support detailed studies of approximately 2 miles of the Johnson Drain, over 3 miles of the Tonquish Creek and over 1 mile of the South Branch of the Tonquish Creek.

This study was conducted by Wade, Trim & Associates, Inc., Consulting Engineers, and Glen Roberts served as Project Manager.

II. TONQUISH CREEK AND SOUTH BRANCH OF THE TONQUISH CREEK (DETAILED)

Simply a plot of SCS values of Topo

Detailed studies were performed on the Tonquish Creek from Joy Road to Ann Arbor Road and from Sheldon Road to North Territorial Road. South Branch of the Tonquish Creek was studied in detail from Sheldon Road to Ann Arbor Trail. These studies were performed by the Soil Conservation Service (SCS) as part of a Flood Hazard Report. (Reference 1.) A total of 23 cross sections were obtained by the SCS. The cross sections included 9 road crossings, and 14 valley sections. Table 1 and 2 cross references section designations by showing the computer section number which corresponds to the cross section letter shown in Exhibit 1 for the Tonquish Creek and the South Branch of the Tonquish Creek, respectively. Table 3 lists discharges used by SCS which have been approved by Michigan Department of Natural Resources for this Flood Insurance Study.

A. Method of Analysis

The SCS WSP-2 backwater program (Reference 2) was used in calculating water surface profiles. WSP-2 printouts are on file with the SCS as well as the Michigan Department of Natural Resources.

B. Variables and Coefficients

Mannings "n" values used by SCS for the main channel varied from 0.04 to 0.06; roughness values for the overbanks varied between 0.05 to 0.125 and the SCS also determined all bridge data.

C. High Water Marks

A 3.9 inch rainfall in the City of Plymouth on June 25, 1968 resulted in the highest observed flood of recent years. Although flooding occurred in the Township, no documented high water marks were recorded in the Township.

It was reported by the SCS that the 1968 flood on the Tonquish Creek appeared to be between a 10 and 25 year return frequency (Reference 1).

D. Starting Conditions

Starting water surface elevations used in all backwater computations were taken from the SCS Flood Hazard Analyses on Tonquish Creek (Reference 1).

E. Special Problems

The Michigan Department of Natural Resources gave Wade, Trim & Associates, Inc. permission to delineate the floodway based on the 100-year flood plain as calculated by SCS. The proposed floodway was delineated using a conservative approach of a contraction ratio of 1:1 and an expansion ratio of 4:1 at all bridges and natural constrictions. This approach eliminates ineffective flow areas.

F. General

The resulting flood plain and floodway for the Tonquish Creek and South Branch of the Tonquish Creek are shown on Exhibit 1. Water surface profiles resulting from the backwater analyses by the SCS for the Tonquish Creek and the South Branch of the Tonquish Creek are presented as Exhibit 2 and 3, respectively.

Computed water surface elevations were developed to an accuracy of 0.5' for floods of the selected reoccurrence intervals.

All elevations are referenced to the U.S. Geological and Coastal Survey (USGCS) Datum. This datum is equivalent to the national geodetic vertical datum of 1929 (NGVD).

The hydraulic analyses for this study were based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fall.

TABLE 1

PLYMOUTH TOWNSHIP, MICHIGAN

TONQUISH CREEK

CROSS REFERENCE INDEX

SURVEYED SECTION	STATION	FW&FB NUMBER	LOCATION
20.OD*	339+62	A	Joy Road
20.OU*	339+99	B	
20.1	340+40	C	Valley Section
20.3	348+80	D	Valley Section
20.6	359+80	E	Valley Section
21.OD	367+69	F	Ann Arbor Road
21.OU	367+91	G	
28.OD	453+55	A	Sheldon Road
28.OU	454+63	B	
28.1	454+70	C	Valley Section
28.3	460+60	D	Valley Section
28.5	472+10	E	Valley Section
28.7	484+80	F	Valley Section
28.9	493+20	G	Valley Section
29.OD	494+30	H	Beacon Hill Drive
29.OU	495+11	I	
29.5	502+00	J	Valley Section
29.9	510+20	K	Valley Section
30.OD	510+30	L	N. Territorial Road
30.OU	511+19	M	

*20.OD and 20.OU represents downstream and upstream faces of bridge.

TABLE 2

PLYMOUTH TOWNSHIP, MICHIGAN

SOUTH BRANCH OF THE TONQUISH CREEK

CROSS REFERENCE INDEX

SURVEYED SECTION	STATION	FW & FB NUMBER	LOCATION
54.OD*	41.59	A	Sheldon Road
54.OU*	41+96	B	
54.1	42+35	C	Valley Section
54.5	46+50	D	Valley Section
55.OD	50+37	E	Jo Ann Lane
55.OU	51+15	F	
55.2	60+50	G	Valley Section
55.4D	77+03	H	Canton Center Drive
55.4U	78+07	I	
55.8	95+80	J	Valley Section
55.9D	110+92	K	Private Drive
55.9U	111+10	L	
56.OD	113+54	M	Ann Arbor Trail
56.OU	114+06	N	

*54.OD and 54.OU represents downstream and upsteam faces of bridge.

TABLE 3
PLYMOUTH TOWNSHIP, MICHIGAN
FLOOD FLOW FREQUENCY

STREAM	LOCATION	SURVEYED STATIONS	DISCHARGES, CFS 10 YR	50 YR	100 YR	500 YR
Tonquish Creek	Joy Road to Ann Arbor Road	20.0D - 21.0	800	1,140	1,320	1,770
Tonquish Creek	Sheldon Road to u/s Sheldon Road	28.0D - 28.1	450	610	710	950
Tonquish Creek	To North Territorial Road	28.3 - 29.5	330	465	545	720
Tonquish Creek	Through North Territorial Road	29.9 - 30.0U	210	320	380	490
South Branch Tonquish Creek	Sheldon Road to Ann Arbor Trail	54.0D - 56.0U	250	370	440	590

III. JOHNSON DRAIN (DETAILED)

Detailed studies were performed on the Johnson Drain on the entire 2 mile reach within Plymouth Township. A total of 5 cross sections were field surveyed by Wade, Trim and Associates in January, 1978. These cross sections included 1 road bridge and 4 valley sections. Cross section locations are shown on Exhibit 4 which were supplemented by a USGS Quad Map of the study area which consisted of 10' contour intervals (Reference 3). Table 4 cross references section designations by showing the computer section number which corresponds to the cross section letter shown in Exhibit 4. Table 5 lists discharges that have been approved by the Michigan Department of Natural Resources (M.D.N.R.). Exhibit 5 contains bridge sketches as well as bridge loss coefficients.

A. Method of Analysis

The HEC-2 backwater program was used in developing water surface profiles (Reference 4). HEC-2 printouts including computer cross section plots are presented as Exhibit 6. (Exhibit 6 is contained in the 11" x 15" folder enclosed with this report.) Water surface profiles resulting from the backwater analyses are presented as Exhibit 7.

B. Variables and Coefficients

Roughness coefficients (Mannings "n") were estimated by field inspection at each cross section. The typical roughness value used for the main channel of the Johnson Drain is 0.035; roughness

values for the overbank areas varied between 0.06 and 0.10 for all floods. These values are indicative of summer month conditions and are consistent with values recommended and used in engineering practice. Contraction and expansion coefficients were selected as 0.3 and 0.5 at bridge sections and 0.1 and 0.3 for gradual channel transitions.

C. High Water Marks

No documented high water marks could be found on the Johnson Drain in Plymouth Township.

D. Starting Conditions

A normal depth analysis (HEC-2 slope area method) was performed at a section located 130 feet downstream of the detailed study limit. The energy slope used in this analysis was obtained from survey data and the USGS quad map. A convergence run (Exhibit 5) was performed with the following starting water surface elevations: critical depth, normal depth and a half foot higher than normal depth. The convergence run indicates that the assumed energy slope in the normal depth analysis is accurate.

E. Special Problems

Johnson Drain has a levee system beginning approximately 600 feet upstream of 5 Mile Road which continues for the entire reach of the stream. Flood elevations caused by 5 Mile Road are able to inundate areas outside the levees; furthermore, there are three breaks in the levee where minor tributaries enter the Johnson Drain. Thus, areas outside of the levee will be inundated during major storms. The land surrounding these breaks in the levee are covered with dense brush (6 feet high), grass and trees; therefore, roughness values are very high and velocities in these overbank areas are negligible. Thus, any water reaching the areas outside of the levees are ponded and these areas become ineffective for backwater calculations.

The 100 and 500 year flood elevations remain below the top of levee elevations for the entire reach; therefore, all flow is considered to remain within the levee system. The floodway is defined at the top of the levees. An encroachment run was not performed because any encroachment within the levees would increase flood elevations beyond the increase in flood stage already caused by the levees.

F. General

Computed water surface elevations were developed to an accuracy of 0.5 feet for floods of the selected reoccurrence intervals.

All elevations are referenced to the U.S. Geological and Coastal Survey (USGCS) Datum. This datum is equivalent to the National Geodetic Vertical Datum of 1929 (NGVD).

The hydraulic analyses for this study were based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

TABLE 4

PLYMOUTH TOWNSHIP, MICHIGAN

JOHNSON DRAIN

CROSS REFERENCE INDEX

COMPUTER NUMBER	STATION	FW & FB NUMBER	DESCRIPTION
6396		A	D/S 5 Mile Road
6346		B	D/S Face 5 Mile Road
6300	63+00	C	U/S Face 5 Mile Road
6250		D	U/S 5 Mile Road
5100	51+00	E	Valley Section
4100		F	Valley Section
3100	31+00	G	Valley Section
1850		H	Valley Section
600	6+00	I	Valley Section
1	0+00	J	Valley Section
0		K	Valley Section - Plymouth Township Corporate Boundary

TABLE 5

PLYMOUTH TOWNSHIP, MICHIGAN

JOHNSON DRAIN FLOOD FLOW FREQUENCY

Location	DISCHARGES, CFS 10 Yr.	50 Yr.	100 Yr.	500 Yr.
5 Mile Road to Corporate Boundary	400	700	850	1300

REFERENCES

1. Flood Hazard Analyses, Tonquish Creek and Tributaries, U.S. Department of Agriculture Soil Conservation Service, East Lansing, Michigan, June 1978.

2. WSP-2 Computer Program, Technical Release No. 61, U.S. Department of Agriculture Soil Conservation Service, Washington, D.C., May 1976.

3. U.S. Geological Survey Topographical Maps - Wayne Quadrangle, Wayne County, 7.5 Minutes Series - Photo Revised 1973.

4. HEC-2 - Water Surface Profile - Users Manual - U.S. Army Corps of Engineers, 1976.

EXHIBIT 1

PLYMOUTH TOWNSHIP, MICHIGAN

TONQUISH CREEK
SOUTH BRANCH TONQUISH CREEK

FIELD CROSS SECTION LOCATION
100 YEAR FLOOD PLAIN - FLOODWAY MAP

EXHIBIT 4

PLYMOUTH TOWNSHIP, MICHIGAN
JOHNSON DRAIN

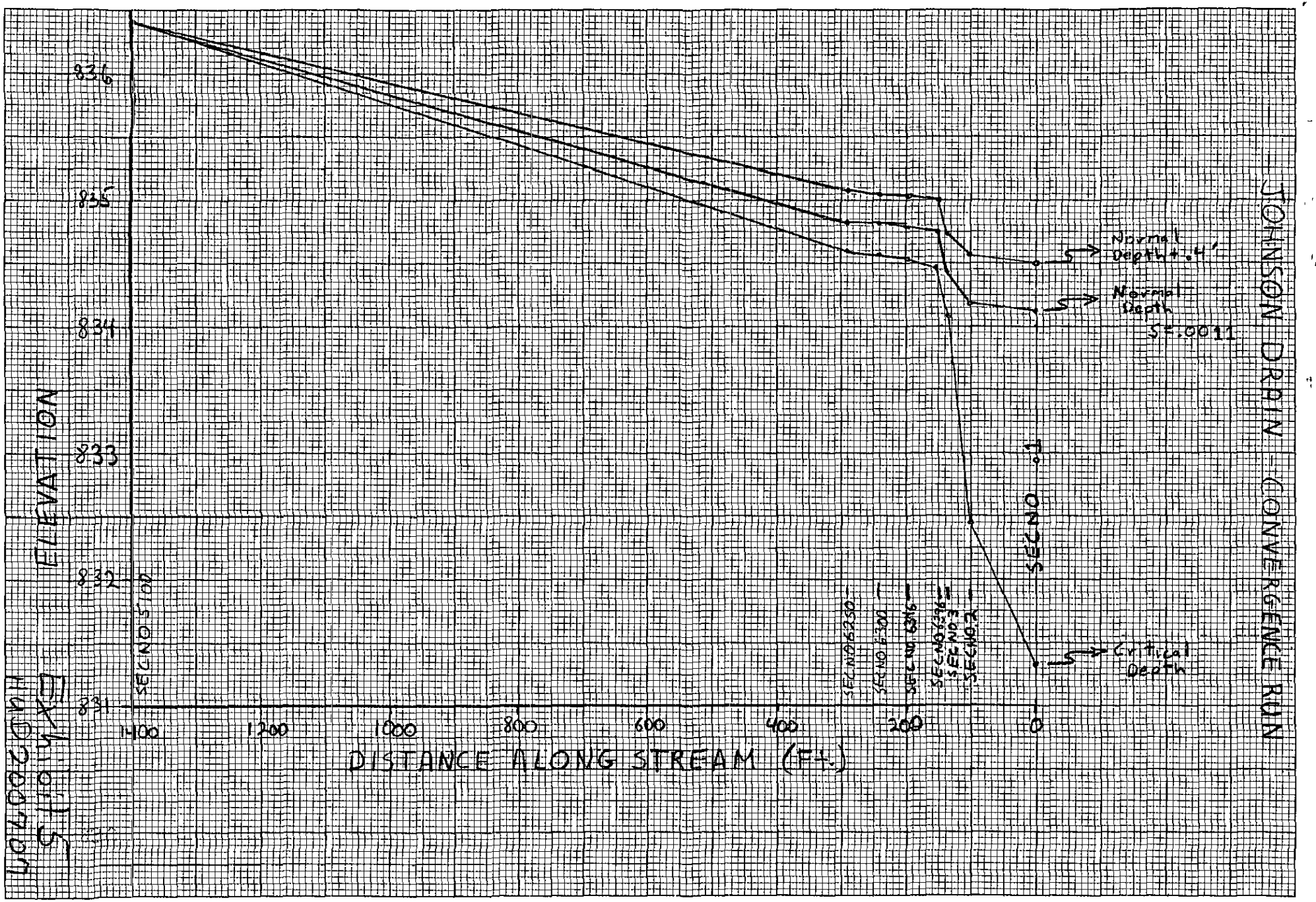
FIELD CROSS SECTION LOCATION
100 YEAR FLOOD PLAIN - FLOODWAY

EXHIBIT 5

PLYMOUTH TOWNSHIP, MICHIGAN
JOHNSON DRAIN

BRIDGE NOTES AND SKETCHES

K&E 10 X 10 TO ½ INCH 7 X 10 INCHES
KEUFFEL & ESSER CO MADE IN U.S.A.



FORM 25-0
(313) 291-5400
Wade Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

Bridge Location: 5-MILE ROAD BRIDGE

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient): 1.05 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + ΣK, $\Sigma K = K_f + K_e + K_p$

where K_f = friction loss coefficient
K_e = entrance loss coefficient
K_p = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 371.0 WP = 160

$R = A/wp$ 371/160 $R^{4/3} = 3.07$ L = 416

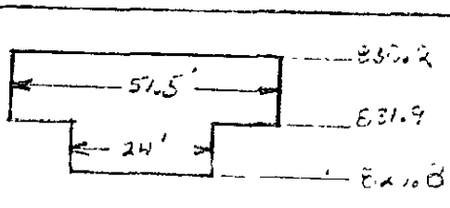
n (composite) =

$K_f = 29.1 \times (0.025)^2 \times 416 / 3.07 = 0.29$

$K_e = 0.02$ — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

$K_p = 0$ if bridge has no intermediate piers

$K_p = 0.05$ if bridge has intermediate piers — HEC-2 manual



2. XKOR = 1 + + + 0.2 = 1.054
3. COFQ - Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0.0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 5.5
6. BWP = total width of obstruction = 41.0 — field data
7. BAREA = bridge opening inc. piers = 371.0
8. SS = side slope = 0.0 (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 829.4 (0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 829.4 (0 if equal to minimum elevation in previous X-sect.)

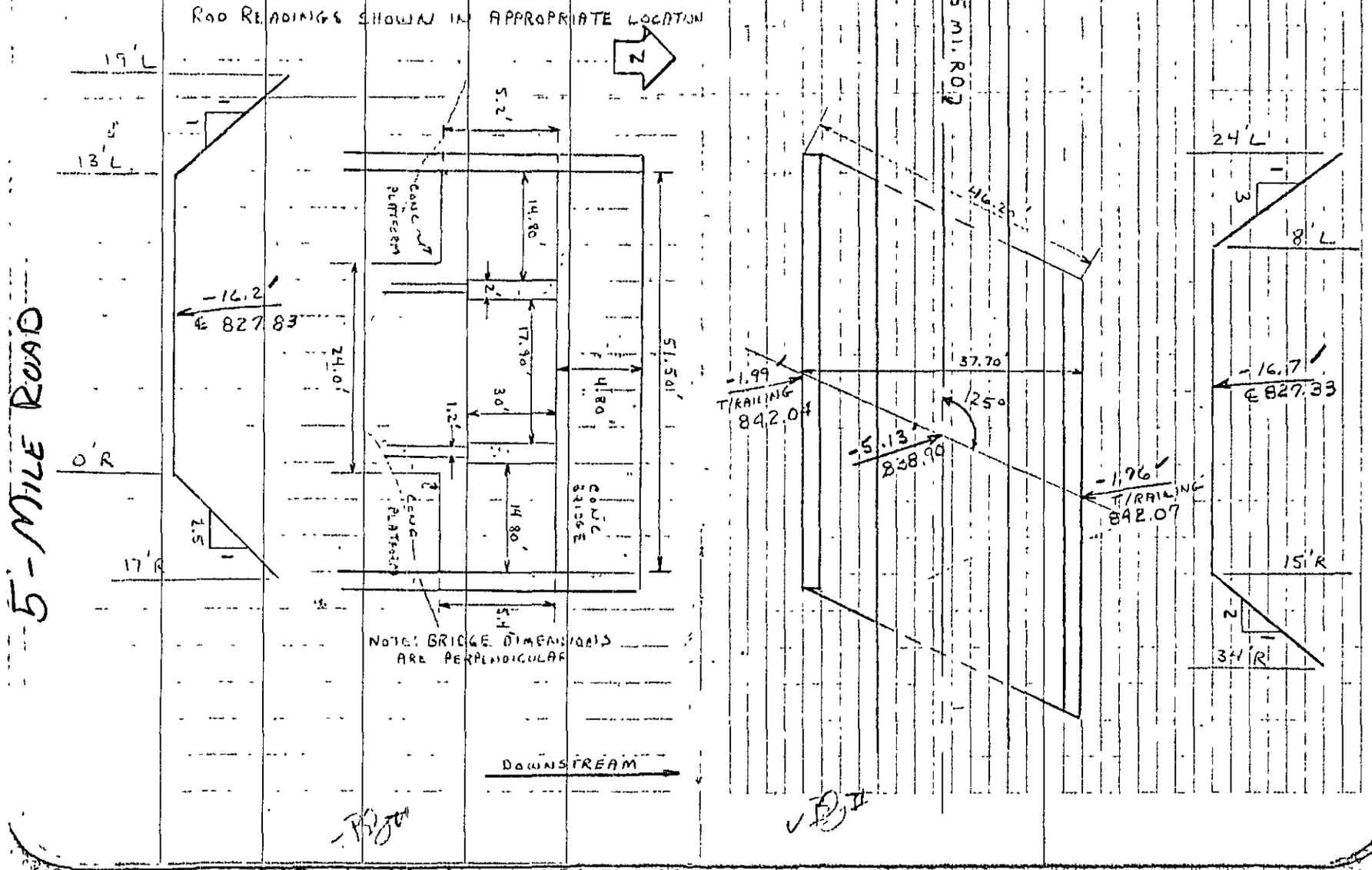
SUBJECT	BY	CHK	SHEET NO	File Code No (Job No) Owner Project Suffix
PLYMOUTH TOWNSHIP	DATE 5/10	DATE	1 OF 1	HOD 0 2005 0 07

AOD
2005 05 PLYMOUTH TWP LAND SURVEY
63+00 STRUCTURE DETAIL 5 MILE RD
(DUE E)

FB 742 MS 05 JAN. 13, 1978 12

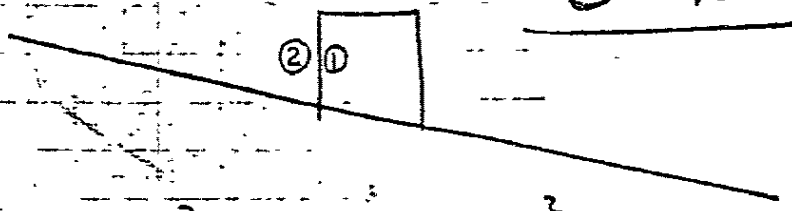
HEIGHT OF INSTRUMENT IS 844.03

ROD READINGS SHOWN IN APPROPRIATE LOCATION



REFERENCE

D U/S FACE RRBR₀



$$H_L + Z_1 + D_1 + \frac{U_1^2}{2g} = Z_2 + D_2 + \frac{U_2^2}{2g}$$

$Z_1 = Z_2 \Rightarrow$ 0 slope

$$H_L = K_e\left(\frac{U_1^2}{2g} - \frac{U_2^2}{2g}\right)$$

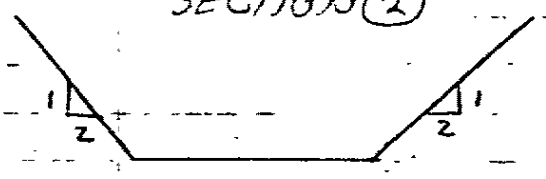
$$K_e\frac{U_2^2}{2g} + D_1 + \frac{U_1^2}{2g} = K_e\left(\frac{U_2^2}{2g}\right) + \frac{U_2}{2g} + D_2$$

D_2 = inside bridge

$1.2\left(\frac{(6.07)^2}{64.4}\right) + 6.3 = 7.0$ ← from page 2/9

D_2	A_2	U_2	$U_2^2/2g$	$D_2 + 1.2\left(\frac{U_2^2}{2g}\right)$
6	156	5.24	.43	6.5
6.5	175.5	4.8	.36	6.9
6.55	177.5	4.8	.36	7.0

SECTION (2)



$A = bD + 2D^2$

$A = 14D + 2D^2$

82.0
6.55

W.S. ELEV = 83.55

SUBJECT	BY	CHK.	SHEET NO	File Code No. (Job No.) Owner Project Suffix
PLYMOUTH TOWNSHIP	DRB		1 OF 9	HUD 2005 07
	DATE 5/29	DATE		

REFERENCE

D_N IN R.R. BR. $S_o = 0.004$

$Q = \frac{1.49}{.035} A (R)^{2/3} S^{1/2}$

Properties From Page 4/9, bridge XSEC

$A R^{2/3} = \frac{850 (.035)}{1.49 (.004)^{1/2}} = 316$

TRY $D = 6'$

$A = 130 \quad P = 41.5$

$130 \left(\frac{130}{41.5}\right)^{2/3} = 278$

TRY $D = 6.2'$

$A = 137 \quad P = 42$

$137 \left(\frac{137}{42}\right)^{2/3} = 301$

TRY $D = 6.3$

$A = 140 \quad P = 42$

$140 \left(\frac{140}{42}\right)^{2/3} = 312$ $D_N = 6.3'$

INVERT = 827.0
+ 6.3

W.S = 833.3

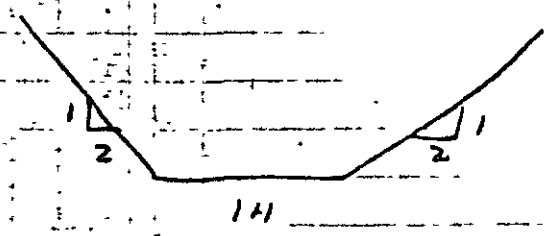
SUBJECT	BY	CHK.	SHEET NO.	File Code No (Job No.) Owner Project Suffix
PLYMOUTH TOWNSHIP	DATE 5/29	DATE	2 OF 9	HUD • 2005 • 07

REFERENCE

D_N D/S FACE RR BRIDGE

$S_o = 0.0004$

$Q = \frac{1.49}{N} A R^{2/3} S^{1/2}$



$A = bD + 2D^2$
$P = b + 2D\sqrt{1+2^2}$
$A = 14D + 2D^2$
$P = 14 + 2D\sqrt{5}$

$AR^{2/3} = \frac{850(.035)}{1.49(.0004)^{1/2}} = 316$

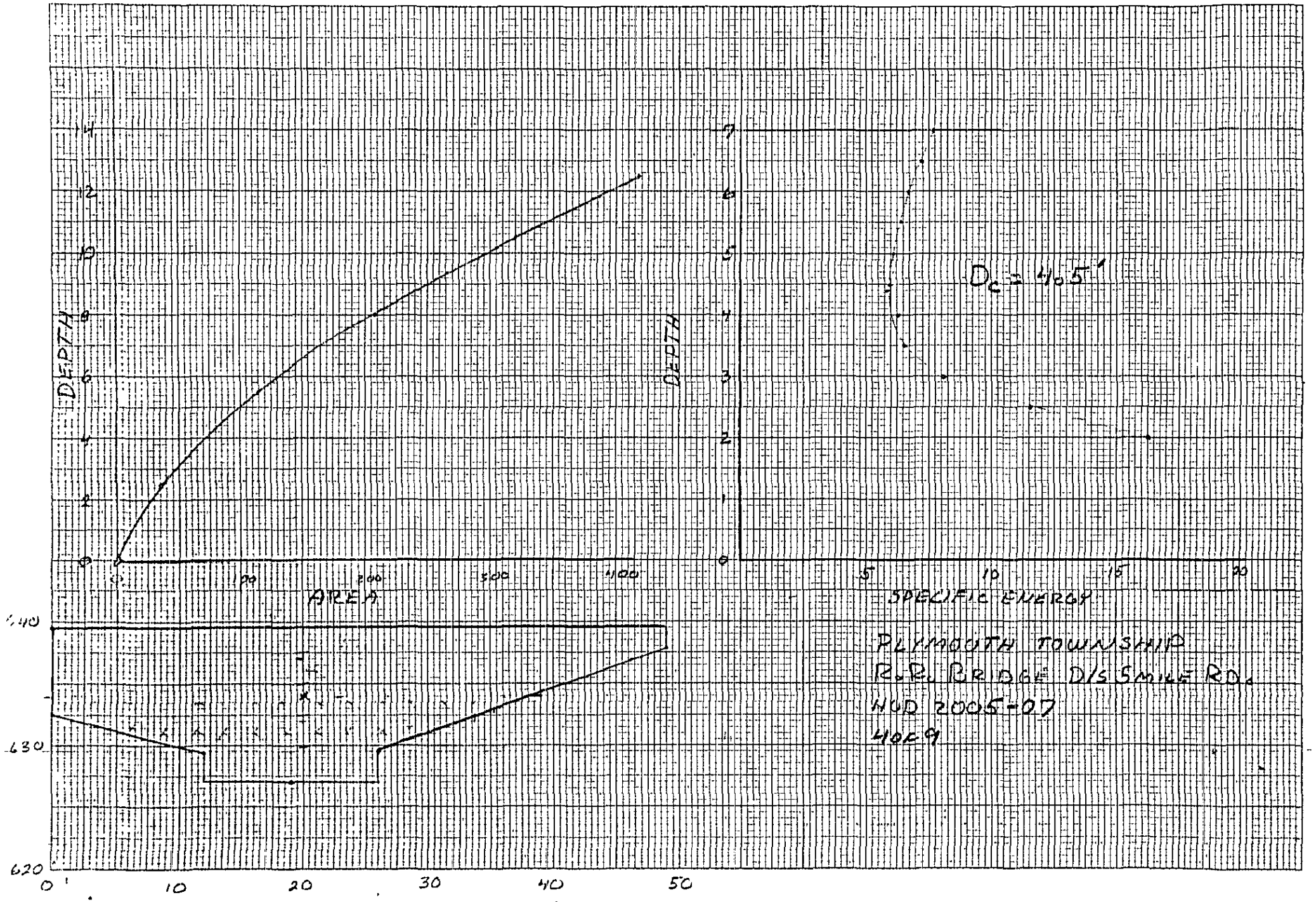
D	A	P	$(A/P)^{2/3}$	$AR^{2/3}$
6	156	40.8	2.05	385
5.5	137.5	38.6	2.03	320

$D_N = 5.5'$

ELEV = 827.0
5.5

W.S. = 832.5

SUBJECT	BY	CHK	SHEET NO.	File Code No (Job No.) Owner Project Suffix
PLYMOUTH TOWNSHIP	DRR		3 OF 9	HUD • 2005 • 07
	DATE 5/19	DATE		



46 1320
K+E 10 X 10 TO ½ INCH 7 X 10 INCHES KEUFFEL & ESSER CO. MADE IN U.S.A.

Wade Trim & Associates Inc.
Civil Engineers • Land Surveyors
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

WORK SHEET

REFERENCE

10 YR STARTING WATER SURFACE

1) DN INSIDE R.R. BRIDGE

$AR^{2/3} = \frac{400\,(.035)}{1.49\,(.004)^{1/2}} = 148$

TRY D = 3
A = 47 P = 21

$47\left(\frac{47}{21}\right)^{2/3} = 80$

TRY D = 4
A = 73 P = 29

$73\left(\frac{73}{29}\right)^{2/3} = 135$

TRY D = 4.3
A = 80 P = 30

$80\left(\frac{80}{30}\right)^{2/3} = 153$

TRY D = 4.2
A = 77 P = 30

$77\left(\frac{77}{30}\right)^{2/3} = 144$ DN = 4.2 FT

ENERGY BALANCE TO DETERMINE U/S $W.S._o$

$1.2\left(\frac{(5.2)^2}{64.4}\right) + 4.2 = 4.7$

D_2	A_2	U_2	$U_2^2/2g$	$D_2 + 1.2\left(U_2^2/2g\right)$
4.3	80	5	.39	4.76
4.25	78	5.1	.41	4.74
4.2	77	5.2		4.7

$W.S._o$ = 4.2 + 827.0 = 831.2

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
PLYMOUTH TOWNSHIP.	DATE 5/79	DATE	5 OF 9	400 • 2005 • 07

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Civil Engineers • Land Surveyors
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

WORK SHEET

REFERENCE

50 YEAR STARTING W.S.E. ELEVATION

1) D_N INSIDE R.R. BRIDGE

$$AR^{2/3} = \frac{700\ (.035)}{1049\ (.004)^{1/2}} = 260$$

TRY $D = 5.8$
$A = 125 \quad P = 40$

$$125\left(\frac{125}{40}\right)^{2/3} = 267$$

TRY $D = 5.75$
$A = 123 \quad P = 40$

$$123\left(\frac{123}{40}\right)^{2/3} = 260$$

ENERGY BALANCE TO DETERMINE U/S W.S.E.

$$1.2\left(\frac{(5.7)^2}{64.4}\right) + 5.75 = 6.35$$

D_2	A_2	U_2	$U_2^2/2g$	$D_2 + 1.2\ U_2^2/2g$
5.8	125	5.6	.049	6.38
5.9	128	5.5	.046	6.28

USE $D_2 = 5.83$

$W.S.E. = 5.83 + 827.0 = 832.83$

SUBJECT	BY	CHK	SHEET NO	File Code No (Job No.) Owner Project Suffix
PLYMOUTH TOWNSHIP	DRB		6 OF 9	HOD • 2005 • 07
	DATE 5/79	DATE		

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

REFERENCE

500 YR STARTING WATER SURFACE

1) D_N INSIDE R.R. BRIDGE

$$AR^{2/3} = \frac{1300\ (.035)}{1049\ (.0004)^{1/2}} = 483.$$

TRY $D = 7.05$
$A = 185$ $P = 46.5$

$$185\left(185/46.5\right)^{2/3} = 464$$

TRY $D = 7.075$
$A = 195$ $P = 47$

$$195\left(195/47\right)^{2/3} = 503$$

TRY $D = 7.065$

$A = 190$ $P = 47$

$$190\left(190/47\right)^{2/3} = 482.$$

$D_N = 7.065$

ENERGY BALANCE TO DETERMINE U/S W.S.

$$1.2\left((6.8)^2/64.4\right) + 7.65 = 8.5$$

D_2	A_2	U_2	$U_2^2/2g$	$D_2 + 1.2\ (U_2^2/2g)$	
7.075	195	6.67	.69	8.57	
7.7	194	6.7	.70	8.5	
				W.S. = 7.7 + 8220	83407

SUBJECT	BY	CHK	SHEET NO.	File Code No (Job No) Owner / Project / Suffix
PLYMOUTH TOWNSHIP	DATE 5/29	DATE	2 OF 9	HUD • 2005 • 07

≈100 FT D/S RR BRIDGE

[illegible] TO DETERMINE FRICT CURVE DESIRED [illegible]

[illegible]
[illegible]
[illegible]
[illegible]

[illegible] IS THE MEANING EFFECTIVE [illegible] DIFF-HW

[illegible] OF THE SLOPE OF THE DRAIN

F-FRICTION	D-TRUE	SLOPE
[illegible]	[illegible]	FT FT
[illegible]	0.080	0.00090

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]									
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]									
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]									
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]									
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

D/S @ 100' D/S RR BR.
ELEV = 630.2

830 217
? 850
840 26360

$\frac{.024}{10} = \frac{633}{26143}$

CROSS SECTION BETWEEN 5 MILE AND R.R. BRIDGE

---REPORT 1 SECTIONS AND CROSS SECTION ORDINATES---

STATION -- JOHNSON MILL
AFFLUENT = MAY (FOR SCRS-07
TYPE 5 ST. 1
RATIO CROSS NUMBER 2

WHAT IS THE INVERT ELEVATION FOR CHANNEL = OVERFLOW

WHAT IS THE SLOPE OF THE BANK

I-WIDTH	CUMULATIVE	WIDTH	HEIGHT	AREA	WETTED	N-VALUE	RATIO	I-ELEV	I-EL
SECT 4									
SECT									
SECT									
SECT									
SECT									

SHEET 9 OF 9

EXHIBIT 6

PLYMOUTH TOWNSHIP, MICHIGAN
JOHNSON DRAIN

COMPUTER PRINTOUTS
HEC-2 BACKWATER ANALYSIS
WITH
CROSS SECTION PLOTS

(SEE SEPARATE FOLDER)

EXHIBIT 7

PLYMOUTH TOWNSHIP, MICHIGAN
JOHNSON DRAIN

STREAM PROFILES

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Plymouth Twp.

3) WATERCOURSE: Johnson Drain and Tonquish Creek

4) DOCUMENT TYPE: Summary

00BREAK00

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**************************************************

C
T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      JOHNSON DRAIN PLY. TWP.

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        2.        0.        0.  0.001100      0.0       0.0       0.    833.000     0.0
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBW       CHNIM     ITRACE
    1.000       0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0
J3  VARIABLE CODES FOR SUMMARY PRINTOUT
  150.000   201.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
J5  LPRNT     NUMSEC                        *********REQUESTED SECTION NUMBERS*********
   -10.000   -10.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
QT    5.000   400.000   700.000   850.000   850.000  1300.000       0.0       0.0       0.0       0.0
ET      0.0       0.0       0.0       0.0    -1.400       0.0       0.0       0.0       0.0       0.0
NC      0.0       0.0       0.0     0.300     0.500       0.0       0.0       0.0       0.0       0.0
NH    5.000     0.200   618.000     0.080   624.000     0.035   639.000     0.080   647.000     0.200
NH 1265.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0

        100 FEET D/S OF R/R

X1    0.100     8.000   624.000   639.000       0.0       0.0       0.0       0.0       0.0       0.0
X3      0.0       0.0       0.0   581.000       0.0   681.000       0.0       0.0       0.0       0.0
GR  840.000       0.0   830.000   600.000   830.000   618.000   827.100   624.000   827.100   639.000
GR  830.000   647.000   830.000   665.000   840.000  1265.000       0.0       0.0       0.0       0.0
NC    0.060     0.060     0.035       0.0       0.0       0.0       0.0       0.0       0.0       0.0

        D/S FACE OF RAILROAD BRIDGE.

X1    2.000    17.000    12.000    26.000   100.000   100.000   100.000       0.0       0.0       0.0
GR  843.400       0.0   832.500       0.0   829.400    11.500   829.400    11.600   829.400    12.500
GR  829.400    12.600   827.860    19.000   829.500    23.500   829.500    23.600   829.500    24.500
GR  829.500    24.600   832.000    36.500   832.000    36.600   832.000    37.500   832.000    37.600
GR  837.900    49.100   843.400    49.100       0.0       0.0       0.0       0.0       0.0       0.0
NC    0.060     0.060     0.030       0.0       0.0       0.0       0.0       0.0       0.0       0.0

X1    2.100       0.0       0.0       0.0     1.000     1.000     1.000       0.0       0.0       0.0
BT   14.000       0.0   843.400   839.600    11.500   843.400   839.600    11.600   843.400   829.400
BT   12.500   843.400   829.400    12.600   843.400   839.600    23.500   843.400   839.600    23.600
BT  843.400   829.500    24.500   843.400   829.500    24.600   843.400   839.600    36.500   843.400
BT  839.600    36.600   843.400   832.000    37.500   843.400   832.000    37.600   843.400   839.600
BT   49.100   843.400   839.600       0.0       0.0       0.0       0.0       0.0       0.0       0.0
```

X1	2.900	0.0	0.0	0.0	30.000	30.000	30.000	0.0	0.0	0.0
X2	0.0	0.0	0.0	0.0	0.0	0.0	1.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.0	0.0	0.0	0.0	0.0	0.0	0.0

U/S FACE OF RAILROAD BRIDGE.

X1	3.000	0.0	0.0	0.0	1.000	1.000	1.000	0.0	0.0	0.0
NC	0.060	0.060	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0

50' U/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6396.000	9.000	1432.000	1455.000	15.000	15.000	15.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1407.500	0.0	1482.500	0.0	0.0	0.0	0.0
GR	840.000	0.0	830.000	1390.000	832.700	1416.000	827.400	1432.000	827.300	1440.000
GR	827.400	1455.000	836.800	1474.000	830.000	1490.000	843.100	1590.000	0.0	0.0
ET	0.0	0.0	0.0	0.0	9.100	0.0	0.0	0.0	1.000	1530.000

U/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6346.000	16.000	1368.000	1419.500	50.000	50.000	50.000	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	837.200	837.200	0.0
GR	840.000	0.0	839.000	200.000	839.000	1358.000	832.000	1368.000	832.000	1381.750
GR	827.300	1381.750	827.300	1382.800	827.300	1384.800	827.300	1402.700	827.300	1404.700
GR	827.300	1405.750	831.800	1405.750	831.500	1419.500	839.000	1429.500	840.300	1500.000
GR	843.100	1530.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB	1.050	1.540	3.000	0.0	51.500	4.000	371.000	0.0	829.400	829.400

U/S FACE 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6300.000	0.0	0.0	0.0	46.000	46.000	46.000	0.0	0.0	0.0
X2	0.0	0.0	1.000	837.200	839.000	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	839.000	839.000	0.0
BT	16.000	0.0	840.000	0.0	200.000	839.000	0.0	1368.000	839.000	0.0
BT	1368.000	839.000	837.200	1382.800	839.000	837.200	1382.800	839.000	0.0	1384.800
BT	839.000	0.0	1384.800	839.000	837.200	1402.700	839.000	837.200	1402.700	839.000
BT	0.0	1404.700	839.000	0.0	1404.700	839.000	837.200	1419.500	839.000	837.200
BT	1419.500	839.000	0.0	1500.000	840.300	0.0	1530.000	843.100	0.0	0.0
ET	0.0	0.0	0.0	0.0	1.400	0.0	0.0	0.0	0.0	0.0

50' U/S 5 MILE RD. BASED ON FIELD BOOK AND QUAD MAP

X1	6250.000	9.000	1387.000	1400.000	50.000	50.000	50.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1381.000	0.0	1467.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	834.000	1100.000	833.800	1381.000	827.900	1387.000	827.800	1393.500
GR	827.900	1400.000	834.700	1417.000	830.000	1430.000	843.100	1690.000	0.0	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 51+00 AND QUAD MAP

X1	5100.000	11.000	1394.000	1406.000	600.000	1700.000	1150.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1364.000	0.0	1430.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	834.100	1100.000	834.400	1345.000	838.600	1364.000	830.400	1394.000
GR	830.300	1400.000	830.400	1406.000	836.900	1430.000	835.200	1448.000	834.900	1700.000
GR	840.000	2700.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

XXXX

X1	1100.000	13.000	1393.500	1406.500	1000.000	1000.000	1000.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1365.000	0.0	1432.500	0.0	0.0	0.0	0.0
GR	840.000	0.0	836.100	1000.000	835.700	1200.000	836.000	1345.000	839.600	1365.000
GR	831.100	1393.500	831.000	1400.000	831.200	1406.500	838.600	1432.500	836.100	1452.000
GR	836.200	1600.000	836.700	1800.000	840.000	3500.000	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 31+00 AND QUAD MAP

X1	1100.000	13.000	1243.000	1257.000	1000.000	1000.000	1000.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1213.000	0.0	1285.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	837.100	950.000	837.500	1193.000	841.200	1213.000	831.600	1243.000
GR	831.500	1250.000	831.800	1257.000	836.900	1267.000	840.300	1285.000	837.000	1305.000
GR	837.400	1450.000	837.700	1550.000	840.000	2800.000	0.0	0.0	0.0	0.0
NC	0.100	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0

XXXX

X1	1850.000	11.000	791.500	808.500	700.000	1600.000	1250.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	765.000	0.0	835.000	0.0	0.0	0.0	0.0
GR	840.000	0.0	838.800	800.000	837.500	750.000	841.300	765.000	832.300	791.500
GR	831.400	800.000	832.400	808.500	840.600	835.000	838.000	850.000	838.900	1050.000
GR	840.000	1950.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BASED ON FIELD BOOK STA. 6+00 AND QUAD MAP

X1	600.000	14.000	2292.000	2300.000	1400.000	1000.000	1250.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	2263.000	0.0	2333.000	0.0	0.0	0.0	0.0
GR	850.000	0.0	840.300	2000.000	840.500	2245.000	844.900	2263.000	841.200	2281.000
GR	834.000	2292.000	832.300	2300.000	834.200	2306.000	841.500	2318.000	844.300	2333.000
GR	841.300	2348.000	840.700	2400.000	840.000	2850.000	850.000	3000.000	0.0	0.0

X1	1.000	13.000	1994.000	2006.000	600.000	600.000	600.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1974.000	0.0	2040.000	0.0	0.0	0.0	0.0
GR	850.000	0.0	842.300	1700.000	841.900	1839.000	841.200	1954.000	844.200	1974.000
GR	835.600	1994.000	835.200	2000.000	835.500	2006.000	838.700	2015.000	846.000	2040.000
GR	841.000	2060.000	841.000	2300.000	850.000	3000.000	0.0	0.0	0.0	0.0

REPEAT CROSS SECTION 0+00 PLYMOUTH TWP. CORP. BOUNDARY

X1	0.0	0.0	0.0	0.0	500.000	500.000	500.000	0.0	1.200	0.0
X3	0.0	0.0	0.0	1974.000	0.0	2040.000	0.0	0.0	0.0	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**************************************************
  REC2 RELEASE DATED NOV 76 UPDATED AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**************************************************

T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      JOHNSON DRAIN PLY. TWP.
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	NSEL	FQ
	0.	3.	0.	0.	0.001100	0.0	0.0	0.	832.830	0.0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**********************************************************
  REC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM, Q=850
T3      JOHNSON DRAIN PLY. TWP.

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.        4.        0.        0.  0.001100      0.0       0.0        0.   833.550     0.0
J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      3.000       0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0
```

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**************************************************
   HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
   ERROR CORR -  01,02
   MODIFICATION -  50,51,52,53
**************************************************

T1JOHNSON DRAIN FIS HUD 2005-07 PLYMOUTH TOWNSHIP FROM SMILE RD TO CORP. BOUND.
T2      JOHNSON DRAIN 100 YR STORM. Q=850
T3      JOHNSON DRAIN PLY. TWP.
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	6.	0.	0.	0.001100	0.0	0.0	0.	834.700	0.0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FORM 5613

****
HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

JOHNSON DR. IN PLY. TWP.

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
0.100	0.0	0.0	0.0	827.10	400.00	831.93	0.0	832.11	10.90	4.01	251.76	121.14
0.100	0.0	0.0	0.0	827.10	700.00	833.44	0.0	833.66	11.03	4.83	402.34	210.78
0.100	0.0	0.0	0.0	827.10	850.00	834.09	0.0	834.36	11.02	5.15	467.81	256.06
0.100	0.0	0.0	0.0	827.10	1300.00	835.78	0.0	836.12	11.21	6.00	636.32	388.33
2.000	100.00	0.0	0.0	827.86	400.00	831.99	0.0	832.51	75.89	5.76	138.82	45.91
2.000	100.00	0.0	0.0	827.86	700.00	833.52	0.0	833.98	39.76	5.46	256.58	111.01
2.000	100.00	0.0	0.0	827.86	850.00	834.17	0.0	834.64	33.65	5.48	310.47	146.53
2.000	100.00	0.0	0.0	827.86	1300.00	835.86	0.0	836.36	26.08	5.68	457.52	254.54
2.100	1.00	843.40	839.60	827.86	400.00	831.94	0.0	832.56	77.50	6.40	125.09	45.44
2.100	1.00	843.40	839.60	827.86	700.00	833.47	0.0	834.03	39.44	5.98	234.10	111.46
2.100	1.00	843.40	839.60	827.86	850.00	834.13	0.0	834.66	33.11	5.99	283.99	147.71
2.100	1.00	843.40	839.60	827.86	1300.00	835.82	0.0	836.41	25.27	6.18	420.50	258.59
2.900	30.00	843.40	839.60	827.86	400.00	832.41	0.0	832.81	42.57	5.12	156.39	61.30
2.900	30.00	843.40	839.60	827.86	700.00	833.66	0.0	834.15	33.21	5.64	248.26	121.48
2.900	30.00	843.40	839.60	827.86	850.00	834.28	0.0	834.79	29.46	5.75	295.70	156.59
2.900	30.00	843.40	839.60	827.86	1300.00	835.92	0.0	836.49	23.84	6.06	429.29	266.22
3.000	1.00	0.0	0.0	827.86	400.00	832.54	0.0	832.85	37.73	4.46	179.30	65.12
3.000	1.00	0.0	0.0	827.86	700.00	833.80	0.0	834.19	30.80	5.00	280.02	126.14
3.000	1.00	0.0	0.0	827.86	850.00	834.42	0.0	834.82	27.91	5.13	331.28	160.89
3.000	1.00	0.0	0.0	827.86	1300.00	836.06	0.0	836.53	23.36	5.46	475.87	268.97
6396.000	15.00	0.0	0.0	827.30	400.00	832.84	0.0	832.93	3.92	2.62	205.54	201.95
6396.000	15.00	0.0	0.0	827.30	700.00	834.12	0.0	834.28	5.25	3.48	283.65	305.51
6396.000	15.00	0.0	0.0	827.30	850.00	834.74	0.0	834.91	5.52	3.78	323.19	361.94
6396.000	15.00	0.0	0.0	827.30	1300.00	836.38	0.0	836.61	5.88	4.47	437.36	535.96
6346.000	50.00	0.0	0.0	827.30	400.00	832.88	0.0	832.96	9.15	2.47	161.98	132.27
6346.000	50.00	0.0	0.0	827.30	700.00	834.17	0.0	834.31	8.83	3.05	229.19	235.51
6346.000	50.00	0.0	0.0	827.30	850.00	834.78	0.0	834.95	8.48	3.26	260.91	291.96
6346.000	50.00	0.0	0.0	827.30	1300.00	836.43	0.0	836.65	7.83	3.76	345.67	464.49
6300.000	46.00	839.00	837.20	827.30	400.00	832.87	0.0	832.97	9.03	2.46	162.57	133.08
6300.000	46.00	839.00	837.20	827.30	700.00	834.18	0.0	834.33	8.72	3.04	230.09	237.05
6300.000	46.00	839.00	837.20	827.30	850.00	834.80	0.0	834.97	8.36	3.24	261.95	293.89
6300.000	46.00	839.00	837.20	827.30	1300.00	836.46	0.0	836.67	7.73	3.75	347.07	467.59

SECNO	XLOC	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
6250.000	50.00	0.0	0.0	827.80	400.00	832.89	0.0	833.04	9.32	3.81	193.40	131.02
6250.000	50.00	0.0	0.0	827.80	700.00	834.21	0.0	834.39	9.40	4.47	299.17	228.30
6250.000	50.00	0.0	0.0	827.80	850.00	834.83	0.0	835.02	9.00	4.66	351.88	283.38
6250.000	50.00	0.0	0.0	827.80	1300.00	836.51	0.0	836.72	7.88	5.03	495.00	462.96
5100.000	1150.00	0.0	0.0	830.30	400.00	834.56	0.0	835.06	30.98	6.19	115.34	71.87
5100.000	1150.00	0.0	0.0	830.30	700.00	835.88	0.0	836.59	34.25	7.77	176.91	119.60
5100.000	1150.00	0.0	0.0	830.30	850.00	836.42	0.0	837.22	35.27	8.39	205.95	143.13
5100.000	1150.00	0.0	0.0	830.30	1300.00	837.83	0.0	838.85	35.47	9.68	291.61	218.28
4100.000	1000.00	0.0	0.0	831.00	400.00	836.56	0.0	836.76	10.72	4.32	171.51	122.14
4100.000	1000.00	0.0	0.0	831.00	700.00	838.18	0.0	838.52	12.03	5.44	262.20	201.82
4100.000	1000.00	0.0	0.0	831.00	850.00	838.84	0.0	839.22	12.49	5.88	303.76	240.53
4100.000	1000.00	0.0	0.0	831.00	1300.00	840.45	0.0	840.95	13.54	6.94	411.15	353.33
3100.000	1000.00	0.0	0.0	831.50	400.00	837.51	0.0	837.71	8.11	3.95	169.98	140.47
3100.000	1000.00	0.0	0.0	831.50	700.00	839.27	0.0	839.57	9.17	5.00	262.80	231.13
3100.000	1000.00	0.0	0.0	831.50	850.00	839.97	0.0	840.31	9.56	5.41	307.49	274.95
3100.000	1000.00	0.0	0.0	831.50	1300.00	841.68	0.0	842.13	10.42	6.40	428.49	402.65
1850.000	1250.00	0.0	0.0	831.40	400.00	838.31	0.0	838.43	4.32	3.04	218.74	192.37
1850.000	1250.00	0.0	0.0	831.40	700.00	840.20	0.0	840.39	4.98	3.87	331.71	313.82
1850.000	1250.00	0.0	0.0	831.40	850.00	840.96	0.0	841.17	5.23	4.21	382.72	371.76
1850.000	1250.00	0.0	0.0	831.40	1300.00	842.79	0.0	843.08	5.87	5.04	511.10	536.56
600.000	1250.00	0.0	0.0	832.30	400.00	838.98	0.0	839.22	9.12	4.06	126.96	132.44
600.000	1250.00	0.0	0.0	832.30	700.00	840.92	0.0	841.29	10.01	5.16	190.88	221.26
600.000	1250.00	0.0	0.0	832.30	850.00	841.69	0.0	842.13	10.42	5.61	219.79	263.28
600.000	1250.00	0.0	0.0	832.30	1300.00	843.56	0.0	844.16	11.40	6.70	313.46	385.02
1.000	600.00	0.0	0.0	835.20	400.00	839.70	0.0	840.27	34.76	6.58	94.67	67.84
1.000	600.00	0.0	0.0	835.20	700.00	841.64	0.0	842.29	26.02	7.31	170.82	137.24
1.000	600.00	0.0	0.0	835.20	850.00	842.42	0.0	843.12	24.27	7.64	207.82	172.55
1.000	600.00	0.0	0.0	835.20	1300.00	844.34	0.0	845.15	21.90	8.52	313.40	277.80
0.0	500.00	0.0	0.0	836.40	400.00	841.30	0.0	841.76	25.22	5.94	108.05	79.65
0.0	500.00	0.0	0.0	836.40	700.00	842.93	0.0	843.56	24.74	7.19	174.53	140.74
0.0	500.00	0.0	0.0	836.40	850.00	843.63	0.0	844.33	24.12	7.62	208.35	173.07
0.0	500.00	0.0	0.0	836.40	1300.00	845.44	0.0	846.26	22.93	8.66	307.38	271.51

JOHNSON DRAIN PLY. TWP.

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CHSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
0.100	400.00	831.93	0.0	0.0	-1.07	100.00	0.0
0.100	700.00	833.44	1.51	0.0	0.61	100.00	0.0
0.100	850.00	834.09	0.65	0.0	0.54	100.00	0.0
0.100	1300.00	835.78	1.69	0.0	1.08	100.00	0.0
2.000	400.00	831.99	0.0	0.06	0.0	34.61	100.00
2.000	700.00	833.52	1.52	0.08	0.0	40.55	100.00
2.000	850.00	834.17	0.66	0.08	0.0	41.83	100.00
2.000	1300.00	835.86	1.69	0.08	0.0	45.13	100.00
2.100	400.00	831.94	0.0	-0.05	0.0	34.15	1.00
2.100	700.00	833.47	1.53	-0.04	0.0	40.47	1.00
2.100	850.00	834.13	0.66	-0.04	0.0	41.75	1.00
2.100	1300.00	835.82	1.69	-0.04	0.0	45.04	1.00
2.900	400.00	832.41	0.0	0.47	0.0	38.04	30.00
2.900	700.00	833.66	1.25	0.19	0.0	40.64	30.00
2.900	850.00	834.28	0.62	0.15	0.0	42.04	30.00
2.900	1300.00	835.92	1.64	0.10	0.0	45.24	30.00
3.000	400.00	832.54	0.0	0.13	0.0	38.65	1.00
3.000	700.00	833.80	1.26	0.14	0.0	41.11	1.00
3.000	850.00	834.42	0.61	0.14	0.0	42.31	1.00
3.000	1300.00	836.06	1.65	0.14	0.0	45.52	1.00
6396.000	400.00	832.84	0.0	0.30	0.0	58.49	15.00
6396.000	700.00	834.12	1.29	0.32	0.0	63.30	15.00
6396.000	850.00	834.74	0.61	0.32	0.0	65.98	15.00
6396.000	1300.00	836.38	1.64	0.32	0.0	73.15	15.00
6346.000	400.00	832.86	0.0	0.03	0.0	51.50	50.00
6346.000	700.00	834.17	1.30	0.04	0.0	51.50	50.00
6346.000	850.00	834.78	0.62	0.05	0.0	51.50	50.00
6346.000	1300.00	836.43	1.65	0.05	0.0	51.50	50.00
6300.000	400.00	832.87	0.0	0.01	0.0	51.50	46.00
6300.000	700.00	834.18	1.31	0.02	0.0	51.50	46.00
6300.000	850.00	834.80	0.62	0.02	0.0	51.50	46.00
6300.000	1300.00	836.46	1.65	0.03	0.0	51.50	46.00
6250.000	400.00	832.89	0.0	0.02	0.0	75.55	50.00
6250.000	700.00	834.21	1.32	0.03	0.0	83.47	50.00
6250.000	850.00	834.83	0.62	0.03	0.0	86.00	50.00
6250.000	1300.00	836.51	1.68	0.06	0.0	86.00	50.00
5100.000	400.00	834.58	0.0	1.69	0.0	42.79	1150.00
5100.000	700.00	835.88	1.30	1.67	0.0	52.31	1150.00
5100.000	850.00	836.42	0.54	1.59	0.0	56.24	1150.00
5100.000	1300.00	837.83	1.41	1.32	0.0	63.21	1150.00
4100.000	400.00	836.56	0.0	1.97	0.0	50.11	1000.00
4100.000	700.00	838.18	1.63	2.30	0.0	61.29	1000.00
4100.000	850.00	838.84	0.66	2.42	0.0	64.95	1000.00
4100.000	1300.00	840.45	1.61	2.51	0.0	67.50	1000.00

SECN.	Q	CRSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
3100.000	400.00	837.51	0.0	0.96	0.0	45.71	1000.00
3100.000	700.00	839.27	1.76	1.08	0.0	60.44	1000.00
3100.000	850.00	839.97	0.70	1.13	0.0	66.37	1000.00
3100.000	1300.00	841.68	1.71	1.24	0.0	72.00	1000.00
1850.000	400.00	838.31	0.0	0.79	0.0	53.76	1250.00
1850.000	700.00	840.20	1.89	0.93	0.0	65.47	1250.00
1850.000	850.00	840.96	0.76	0.99	0.0	68.98	1250.00
1850.000	1300.00	842.79	1.84	1.11	0.0	70.00	1250.00
600.000	400.00	838.98	0.0	0.67	0.0	30.15	1250.00
600.000	700.00	840.92	1.94	0.72	0.0	35.77	1250.00
600.000	850.00	841.69	0.77	0.73	0.0	40.37	1250.00
600.000	1300.00	843.56	1.88	0.77	0.0	59.54	1250.00
1.000	400.00	839.70	0.0	0.72	0.0	33.74	600.00
1.000	700.00	841.64	1.94	0.72	0.0	44.97	600.00
1.000	850.00	842.42	0.78	0.73	0.0	49.52	600.00
1.000	1300.00	844.34	1.92	0.78	0.0	60.31	600.00
0.0	400.00	841.30	0.0	1.60	0.0	35.97	500.00
0.0	700.00	842.93	1.63	1.29	0.0	45.45	500.00
0.0	850.00	843.63	0.70	1.21	0.0	49.56	500.00
0.0	1300.00	845.44	1.80	1.10	0.0	59.97	500.00

SUMMARY OF ERRORS

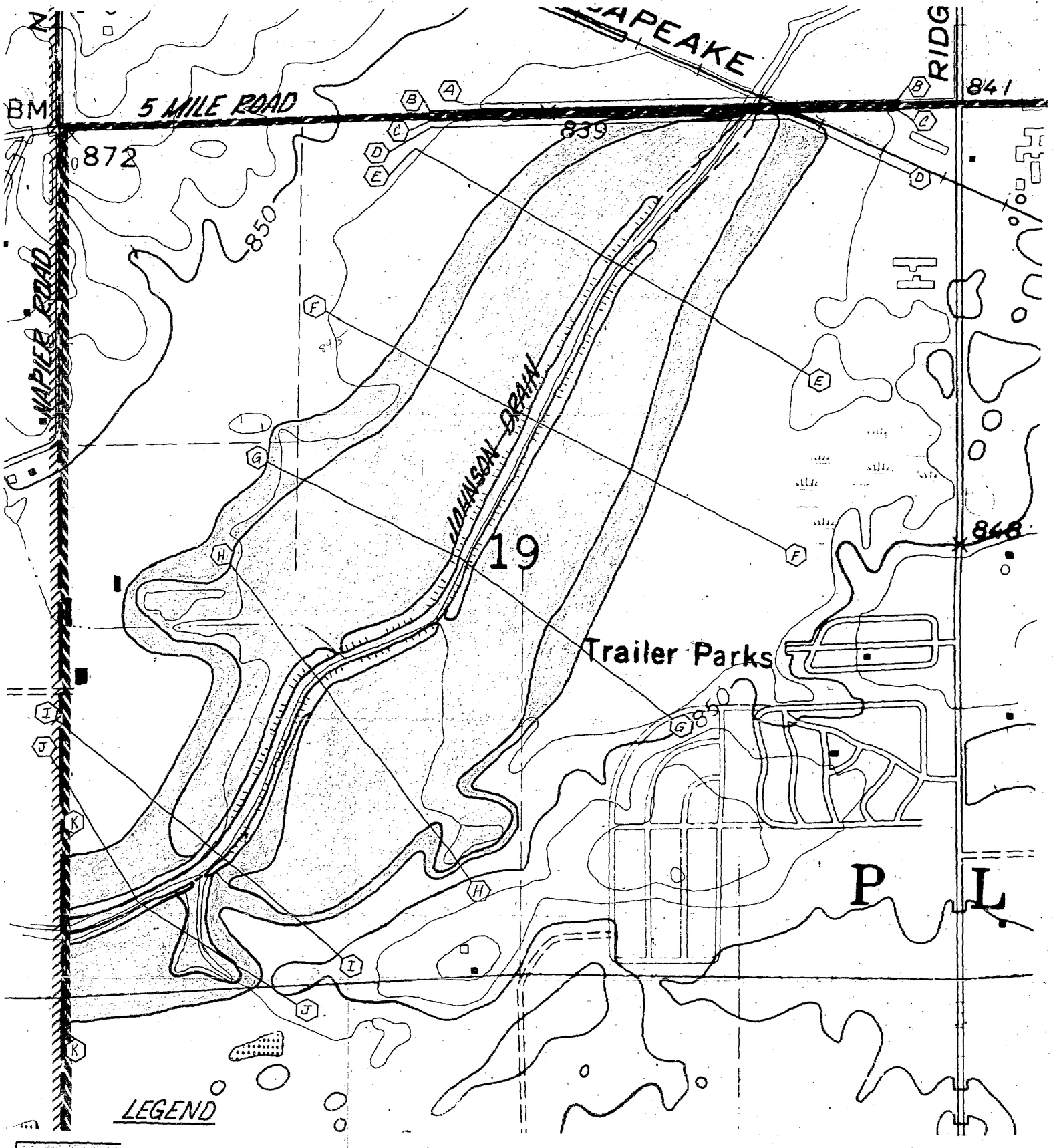
FORM E6418

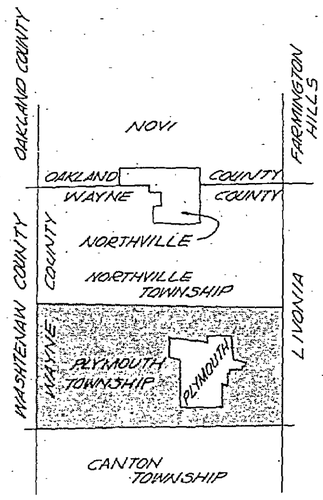
FLOOD INSURANCE ZONE DATA FOR JOHNSON DRAIN PLY. TWP.

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10	2	0.2
0.100	0.	-2.16	-0.65	1.69
2.000	100.	-2.18	-0.66	1.69
2.100	101.	-2.19	-0.66	1.69
2.900	131.	-1.87	-0.62	1.64
3.000	132.	-1.88	-0.61	1.65
6396.000	147.	-1.90	-0.61	1.64
6346.000	197.	-1.92	-0.62	1.65
6300.000	243.	-1.93	-0.62	1.65
6250.000	293.	-1.94	-0.62	1.68
5100.000	1443.	-1.54	-0.54	1.41
4100.000	2443.	-2.28	-0.66	1.61
3100.000	3443.	-2.46	-0.70	1.71
1650.000	4693.	-2.65	-0.76	1.84
600.000	5943.	-2.71	-0.77	1.88
1.000	6543.	-2.72	-0.78	1.92
0.0	7043.	-2.34	-0.70	1.80
WEIGHTED AVG FOR REACH		-2.36	-0.69	1.71

FHF FOR THE REACH = 02a WITH 100.0 OF THE REACH WITHIN 100 FEET
ZONE FOR THE REACH = A 5





VICINITY MAP

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — A CROSS SECTION

CORPORATE LIMIT

COUNTY BOUNDARY

FLOOD MAP

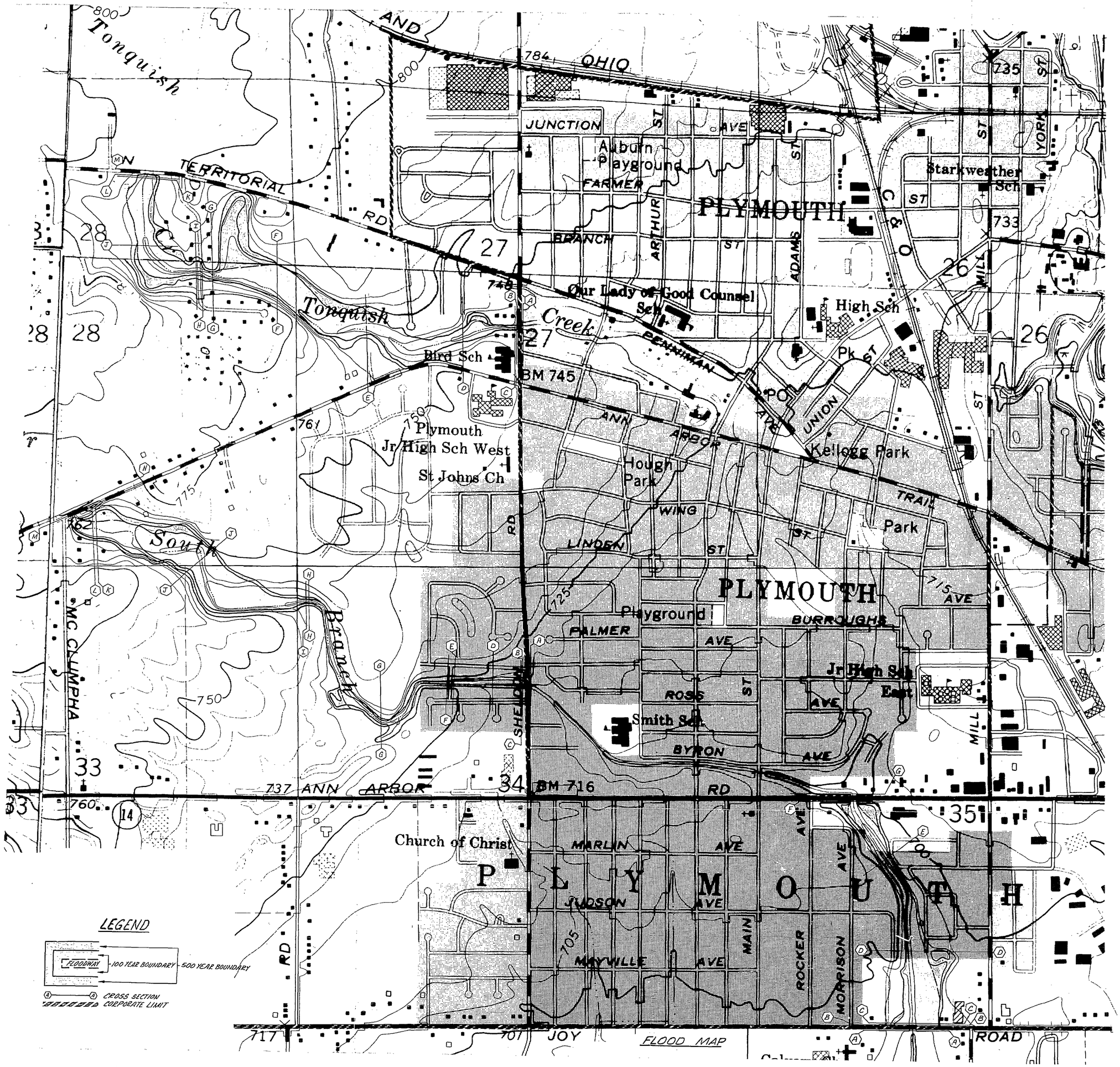
PLYMOUTH TOWNSHIP

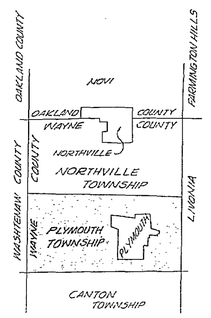
WAYNE COUNTY, MICHIGAN

SCALE: 1" = 400'

NEW

HUD 2005-10





VICINITY MAP

LEGEND

FLOODWAY — 100 YEAR BOUNDARY — 500 YEAR BOUNDARY

A — A CROSS SECTION

CORPORATE LIMIT

N

PLYMOUTH TOWNSHIP

WAYNE COUNTY, MICHIGAN

SCALE: 1" = 400'

HUD 2005-10

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Redford Twp.

3) WATERCOURSE: Bell Branch

4) DOCUMENT TYPE: Summary 10, 50, 100, 500 year

00BREAK00

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C
C     4.
C  5325.        DOWNSTREAM SECTION AT BEECH ROAD BRIDGE
C  5355.        UPSTREAM SECTION AT BEECH ROAD BRIDGE
C 10820.        DOWNSTREAM SECTION AT FENKELL ROAD BRIDGE
C 10850.        UPSTREAM SECTION AT FENKELL ROAD BRIDGE
T1      FLOOD INSURANCE STUDY
T2      REDFORD TOWNSHIP SPF
T3      BELL BRANCH
J1      2.                                                      9400.   627.6
J2    1.                                                                        15.
NC  0.070.07    0.035   0.1     0.3
X1    0.11.     110.    150.
GR  620.        605.    50.     603.    110.    595.    125.    593.6   130.
GR  595.140.    600.    150.    600.5   375.    595.5   420.    607.    520.
GR  612.650.
X1 1220.12.     380.    440.    950.    950.    1220.
GR 620.         615.    240.    605.    290.    602.5   380.    600.    390.
GR 600.5400.    594.5   425.    594.5   430.    603.    440.    605.    500.
GR 620. 560.    620.5   1160.
X1 2210.11.     560.    600.    920.    920.    990.
GR 625.         618.    280.    605.    330.    604.    550.    603.5   560.
GR 596.5575.    597.5   580.    597.    590.    604.    600.    609.    620.
GR 625. 770.
X1 3630.11.     360.    420.    1450.   1300.   1420.
GR 620.         615.    70.     614.    120.    605.    200.    604.5   360.
GR 602. 370.    601.5   380.    596.9   400.    604.    420.    620.    480.
GR 623.51050.
X1 4620.11.     160.    230.    1000.   1000.   990.
GR 620.         607.    160.    599.5   170.    598.4   180.    598.5   190.
GR 602. 200.    605.5   210.    606.    230.    606.5   430.    614.    560.
GR 620. 830.
NC                      0.6     0.8
GR 620. 830.
NC                      0.6     0.8
X1 5275.13.     480.    580.    435.    635.    655.
GR 616.         614.    300.    610.    350.    608.    480.    599.2   520.
GR 601.5530.    599.5   540.    600.5   550.    611.5   580.    612.5   600.
GR 615. 630.    620.    645.    624.    1100.
X1 5325.6.      167.    234.    50.     50.     50.
X3   10.                                        615.7   615.7
GR 619.         615.7   129.    599.4   167.    599.4   234.    615.7   272.
GR 619. 400.
SB  1.251.19    2.5     400.    66.5    3.9     1043.
X1 5355.                        30.     30.     30.
X2              1.      615.7   619.
X3   10.                                        619.    619.
NC                      0.1     0.3
X1 5405.13.     480.    580.    50.     50.     50.
GR  616.        614.    300.    610.    350.    608.    480.    599.2   520.
GR 601.5530.    599.5   540.    600.5   550.    611.5   580.    612.5   600.
GR 615. 630.    620.    645.    624.    1100.
X1 6930.11.     320.    370.    1485.   1435.   1525.
GR  625.        620.    230.    607.    320.    599.    330.    597.4   340.
GR 597.4350.    607.    370.    608.    570.    615.    680.    616.    900.
GR  620.980.
X1 8680.10.     200.    265.    1400.   1850.   1750.
GR  625.        612.    110.    610.    200.    601.    210.    601.4   220.
GR  603.250.    605.    260.    610.    265.    615.    275.    625.    350.
QT     3.8460.  3600.   1650.
X1 9135.8.      120.    215.    455.    455.    455.
GR 614.3        610.    120.    608.    139.    601.    162.    601.    176.
GR 608. 192.    610.    215.    614.3   240.
X110180.10.     220.    300.    850.    1050.   1045.
GR  625.        613.    220.    602.8   230.    604.    240.    604.    250.
GR 604.5260.    604.    270.    613.    300.    613.5   480.    625.    580.
NC                      0.6     0.8
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Bell Branch
Std Pri. Flood

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GR 620.          607.    180.    599.5   170.    598.4   180.    598.5   170.
GR 602. 200.     605.5   210.    606.    230.    606.5   430.    614.    560.
GR 620. 830.
NC                       0.6     0.8
X1 5275.13.      480.    580.    435.    635.    655.
GR 616.          614.    300.    610.    350.    608.    480.    599.2   520.
GR 601.5530.     599.5   540.    600.5   550.    611.5   580.    612.5   600.
GR 615. 630.     620.    645.    624.    1100.
X1 5325.6.       167.    234.    50.     50.     50.
X3   10.                                        615.7   615.7
GR 619.          615.7   129.    599.4   167.    599.4   234.    615.7   272.
GR 619. 400.
SB  1.251.19     2.5     400.    66.5    3.9     1043.
X1 5355.                         30.     30.     30.
X2               1.      615.7   619.
X3   10.                                        619.    619.
NC                       0.1     0.3
X1 5405.13.      480.    580.    50.     50.     50.
GR  616.         614.    300.    610.    350.    608.    480.    599.2   520.
GR 601.5530.     599.5   540.    600.5   550.    611.5   580.    612.5   600.
GR 615. 630.     620.    645.    624.    1100.
X1 6930.11.      320.    370.    1485.   1435.   1525.
GR  625.         620.    230.    607.    320.    599.    330.    597.4   340.
GR 597.4350.     607.    370.    608.    570.    615.    680.    616.    900.
GR  620.980.
X1 8680.10.      200.    265.    1400.   1850.   1750.
GR  625.         612.    110.    610.    200.    601.    210.    601.4   220.
GR  603.250.     605.    260.    610.    265.    615.    275.    625.    350.
QT    3.8460.    3600.   1650.
X1 9135.8.       120.    215.    455.    455.    455.
GR 614.3         610.    120.    608.    139.    601.    162.    601.    176.
GR 608. 192.     610.    215.    614.3   240.
X110180.10.      220.    300.    850.    1050.   1045.
GR  625.         613.    220.    602.8   230.    604.    240.    604.    250.
GR 604.5260.     604.    270.    613.    300.    613.5   480.    625.    580.
NC                       0.6     0.8
X110770.13.      370.    460.    535.    535.    590.
GR 637.5         635.    120.    613.    170.    610.    370.    601.7   390.
GR 601.7410.     606.    430.    606.    440.    607.5   450.    607.5   460.
GR 616. 500.     617.    570.    630.    1020.
X110820.6.       126.    176.    50.     50.     50.
X3   10.                                        614.6   614.6
GR 618.9         614.6   96.     601.3   126.    601.3   176.    614.6   206.
GR 618.9300.
SB  1.251.21     2.5     300.    53.3    4.2     659.
X110850.                         30.     30.     30.
X2               1.      614.6   618.9
X3   10.                                        618.9   618.9
NC                       0.1     0.3
X110900.13.      370.    460.    50.     50.     50.
GR 637.5         635.    120.    613.    170.    610.    370.    601.7   390.
GR 601.7410.     606.    430.    606.    440.    607.5   450.    607.5   460.
GR 616. 500.     617.    570.    630.    1020.
X112010.9.       360.    420.    1035.   785.    1110.
GR  624.         611.    85.     610.    360.    603.5   380.    603.    390.
GR 599.8400.     601.    410.    612.5   420.    625.    590.
X113408.8.       430.    460.    1300.   1200.   1398.
GR 625.          615.    80.     613.    430.    605.    435.    604.4   450.
GR 606. 455.     612.5   460.    631.    510.
NC                       0.6     0.8
X114735.11.      30.     65.     1035.   985.    1327.
GR 632.          615.    30.     612.    40.     608.    45.     606.    50.
GR 605.160.      608.    65.     613.5   65.     613.5   75.     629.    330.
GR 630. 620.
EJ
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Bell Branch
Std Proj. Flood

SUMMARY PRINTOUT FOR MULTIPLE PROFILES

BELL BRANCH

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	CRIWS	EG	TOPWID	10K*S	TIME	VOL
0.00	0.00	0.00	0.00	593.59	9400.00	627.59	0.00	627.60	650.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	593.59	4000.00	617.50	0.00	617.50	641.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	593.59	1840.00	605.79	0.00	605.81	462.00	0.00	0.00	0.00
12.20	1220.00	0.00	0.00	594.50	9400.00	627.60	0.00	627.62	1160.00	0.00	0.31	334.00
12.20	1220.00	0.00	0.00	594.50	4000.00	617.49	0.00	617.52	429.00	0.00	0.23	151.00
12.20	1220.00	0.00	0.00	594.50	1840.00	605.80	0.00	606.06	217.00	5.00	0.10	38.00
22.10	990.00	0.00	0.00	596.50	9400.00	627.62	0.00	627.64	770.00	0.00	0.57	599.00
22.10	990.00	0.00	0.00	596.50	4000.00	617.54	0.00	617.56	418.00	0.00	0.48	244.00
22.10	990.00	0.00	0.00	596.50	1840.00	606.51	0.00	606.75	285.00	8.00	0.17	55.00
36.30	1420.00	0.00	0.00	596.89	9400.00	627.66	0.00	627.68	1050.00	0.00	0.96	977.00
36.30	1420.00	0.00	0.00	596.89	4000.00	617.60	0.00	617.63	437.00	0.00	0.81	389.00
36.30	1420.00	0.00	0.00	596.89	1840.00	607.56	0.00	607.69	256.00	5.00	0.32	82.00
46.20	990.00	0.00	0.00	598.39	9400.00	627.68	0.00	627.70	830.00	0.00	1.29	1274.00
46.20	990.00	0.00	0.00	598.39	4000.00	617.65	0.00	617.67	695.00	0.00	1.10	499.00
46.20	990.00	0.00	0.00	598.39	1840.00	608.14	0.00	608.31	312.00	7.00	0.40	102.00
52.75	655.00	0.00	0.00	599.19	9400.00	627.69	0.00	627.71	1100.00	0.00	1.45	1447.00
52.75	655.00	0.00	0.00	599.19	4000.00	617.67	0.00	617.71	638.00	0.00	1.21	560.00
52.75	655.00	0.00	0.00	599.19	1840.00	608.59	0.00	608.77	130.00	6.00	0.46	112.00
53.25	50.00	0.00	0.00	599.39	9400.00	627.68	0.00	627.77	400.00	0.00	1.45	1458.00
53.25	50.00	0.00	0.00	599.39	4000.00	617.66	0.00	617.76	296.00	0.00	1.22	564.00
53.25	50.00	0.00	0.00	599.39	1840.00	608.68	0.00	608.81	67.00	2.00	0.46	113.00
53.55	30.00	619.00	615.69	599.39	9400.00	627.84	0.00	627.92	400.00	0.00	1.46	1462.00
53.55	30.00	619.00	615.69	599.39	4000.00	617.77	0.00	617.94	67.00	1.00	1.22	565.00
53.55	30.00	619.00	615.69	599.39	1840.00	608.69	0.00	608.83	67.00	2.00	0.47	113.00
54.05	50.00	0.00	0.00	599.19	9400.00	627.91	0.00	627.93	1100.00	0.00	1.47	1473.00
54.05	50.00	0.00	0.00	599.19	4000.00	617.92	0.00	617.95	638.00	0.00	1.23	568.00
54.05	50.00	0.00	0.00	599.19	1840.00	608.69	0.00	608.86	137.00	6.00	0.47	114.00
69.30	1525.00	0.00	0.00	597.39	9400.00	627.95	0.00	627.96	980.00	0.00	1.94	1920.00
69.30	1525.00	0.00	0.00	597.39	4000.00	618.00	0.00	618.03	696.00	0.00	1.58	716.00
69.30	1525.00	0.00	0.00	597.39	1840.00	609.46	0.00	609.62	290.00	4.00	0.61	139.00
86.80	1750.00	0.00	0.00	601.00	9400.00	627.94	0.00	628.06	350.00	1.00	2.12	2278.00
86.80	1750.00	0.00	0.00	601.00	4000.00	618.08	0.00	618.22	239.00	1.00	1.75	847.00
86.80	1750.00	0.00	0.00	601.00	1840.00	610.35	0.00	610.59	81.00	7.00	0.73	166.00
91.35	455.00	0.00	0.00	601.00	8460.00	628.01	0.00	628.10	240.00	0.00	2.18	2327.00
91.35	455.00	0.00	0.00	601.00	3600.00	618.20	0.00	618.28	240.00	1.00	1.80	867.00
91.35	455.00	0.00	0.00	601.00	1650.00	610.73	0.00	610.93	119.00	9.00	0.76	171.00
101.80	1045.00	0.00	0.00	602.79	8460.00	628.12	0.00	628.17	580.00	0.00	2.36	2459.00
101.80	1045.00	0.00	0.00	602.79	3600.00	618.35	0.00	618.44	400.00	1.00	1.93	916.00
101.80	1045.00	0.00	0.00	602.79	1650.00	611.62	0.00	611.84	74.00	7.00	0.84	182.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	CRIWS	EG	TOPWID	10K*S	TIME	VOL
107.70	590.00	0.00	0.00	601.69	8460.00	628.17	0.00	628.20	821.00	0.00	2.49	2563.00
107.70	590.00	0.00	0.00	601.69	3600.00	618.48	0.00	618.52	463.00	0.00	2.04	951.00
107.70	590.00	0.00	0.00	601.69	1650.00	612.06	0.00	612.15	249.00	2.00	0.91	190.00
108.20	50.00	0.00	0.00	601.29	8460.00	628.15	0.00	628.27	300.00	0.00	2.49	2572.00
108.20	50.00	0.00	0.00	601.29	3600.00	618.46	0.00	618.59	280.00	1.00	2.04	954.00
108.20	50.00	0.00	0.00	601.29	1650.00	612.06	0.00	612.21	50.00	2.00	0.92	191.00
108.50	30.00	618.89	614.59	601.29	8460.00	628.36	0.00	628.48	300.00	0.00	2.50	2575.00
108.50	30.00	618.89	614.59	601.29	3600.00	618.90	0.00	619.02	300.00	1.00	2.04	955.00
108.50	30.00	618.89	614.59	601.29	1650.00	612.08	0.00	612.23	50.00	2.00	0.92	192.00
109.00	50.00	0.00	0.00	601.69	8460.00	628.46	0.00	628.49	831.00	0.00	2.51	2583.00
109.00	50.00	0.00	0.00	601.69	3600.00	618.99	0.00	619.03	482.00	0.00	2.05	958.00
109.00	50.00	0.00	0.00	601.69	1650.00	612.17	0.00	612.25	256.00	2.00	0.92	192.00
120.10	1110.00	0.00	0.00	599.79	8460.00	628.49	0.00	628.52	590.00	0.00	2.76	2701.00
120.10	1110.00	0.00	0.00	599.79	3600.00	619.07	0.00	619.10	477.00	0.00	2.29	1042.00
120.10	1110.00	0.00	0.00	599.79	1650.00	612.43	0.00	612.53	344.00	2.00	1.05	216.00
134.08	1398.00	0.00	0.00	604.39	8460.00	628.55	0.00	628.59	503.00	0.00	3.02	3027.00
134.08	1398.00	0.00	0.00	604.39	3600.00	619.19	0.00	619.28	431.00	3.00	2.46	1134.00
134.08	1398.00	0.00	0.00	604.39	1650.00	613.27	0.00	614.22	79.00	34.00	1.15	239.00
147.35	1327.00	0.00	0.00	605.09	8460.00	628.69	0.00	629.01	319.00	5.00	3.10	3146.00
147.35	1327.00	0.00	0.00	605.09	3600.00	620.53	0.00	621.04	170.00	11.00	2.52	1165.00
147.35	1327.00	0.00	0.00	605.09	1650.00	616.70	0.00	617.12	100.00	13.00	1.21	248.00

SECTION NUMBER	DISCHARGE CFS	CWSEL	CWSEL DIFF EACH Q	CWSEL DIFF EACH SECTION	CWSEL-WSELK	TOPWID	T.W. DIFF	LENGTH
0.000	9400.000	627.590	0.000	0.000	0.000	650.000	0.000	0.000
0.000	4000.000	617.500	-10.090	0.000	0.000	641.000	9.000	0.000
0.000	1840.000	605.790	-11.710	0.000	0.000	462.000	188.000	0.000
1220.000	9400.000	627.600	0.000	0.010	0.000	1160.000	0.000	1220.000
1220.000	4000.000	617.490	-10.110	-.010	0.000	429.000	731.000	1220.000
1220.000	1840.000	605.880	-11.610	0.090	0.000	217.000	943.000	1220.000
2210.000	9400.000	627.620	0.000	0.020	0.000	770.000	0.000	990.000
2210.000	4000.000	617.540	-10.080	0.050	0.000	418.000	352.000	990.000
2210.000	1840.000	606.510	-11.030	0.630	0.000	285.000	485.000	990.000
3630.000	9400.000	627.660	0.000	0.040	0.000	1050.000	0.000	1420.000
3630.000	4000.000	617.600	-10.060	0.060	0.000	437.000	613.000	1420.000
3630.000	1840.000	607.560	-10.040	1.050	0.000	256.000	794.000	1420.000
4620.000	9400.000	627.680	0.000	0.020	0.000	830.000	0.000	990.000
4620.000	4000.000	617.650	-10.030	0.050	0.000	695.000	135.000	990.000
4620.000	1840.000	608.140	-9.510	0.580	0.000	312.000	518.000	990.000
5275.000	9400.000	627.690	0.000	0.010	0.000	1100.000	0.000	655.000
5275.000	4000.000	617.670	-10.020	0.020	0.000	638.000	462.000	655.000
5275.000	1840.000	608.590	-9.080	0.450	0.000	130.000	970.000	655.000
5325.000	9400.000	627.680	0.000	-.010	0.000	400.000	0.000	50.000
5325.000	4000.000	617.660	-10.020	-.010	0.000	296.000	104.000	50.000
5325.000	1840.000	608.680	-8.980	0.090	0.000	67.000	333.000	50.000
5375.000	9400.000	627.84	.00	0.160	0.00	40.000	0.000	50.000

5355.000	1840.000	608.690	-9.080	0.010	0.000	67.000	333.000	30.000
5405.000	9400.000	627.910	0.000	0.070	0.000	1100.000	0.000	50.000
5405.000	4000.000	617.920	-9.990	0.150	0.000	638.000	462.000	50.000
5405.000	1840.000	608.690	-9.230	0.000	0.000	137.000	963.000	50.000
6930.000	9400.000	627.950	0.000	0.040	0.000	980.000	0.000	1525.000
6930.000	4000.000	618.000	-9.950	0.080	0.000	696.000	284.000	1525.000
6930.000	1840.000	609.460	-8.540	0.770	0.000	290.000	690.000	1525.000
8680.000	9400.000	627.940	0.000	-.010	0.000	350.000	0.000	1750.000
8680.000	4000.000	618.080	-9.860	0.080	0.000	239.000	111.000	1750.000
8680.000	1840.000	610.350	-7.730	0.890	0.000	81.000	269.000	1750.000
9135.000	8460.000	626.010	0.000	0.070	0.000	240.000	0.000	455.000
9135.000	3600.000	618.200	-9.810	0.120	0.000	240.000	0.000	455.000
9135.000	1650.000	610.730	-7.470	0.380	0.000	119.000	121.000	455.000
10180.000	8460.000	628.120	0.000	0.110	0.000	580.000	0.000	1045.000
10180.000	3600.000	618.350	-9.770	0.190	0.000	400.000	180.000	1045.000
10180.000	1650.000	611.620	-6.730	0.890	0.000	74.000	506.000	1045.000
10770.000	8460.000	628.170	0.000	0.050	0.000	821.000	0.000	590.000
10770.000	3600.000	618.480	-9.690	0.130	0.000	463.000	358.000	590.000
10770.000	1650.000	612.060	-6.420	0.440	0.000	249.000	572.000	590.000
10820.000	8460.000	628.150	0.000	-.020	0.000	300.000	0.000	50.000
10820.000	3600.000	618.460	-9.690	-.020	0.000	280.000	20.000	50.000
10820.000	1650.000	612.060	-6.400	0.000	0.000	50.000	250.000	50.000
10850.000	8460.000	628.360	0.000	0.210	0.000	300.000	0.000	30.000
10850.000	3600.000	618.900	-9.460	0.440	0.000	300.000	0.000	30.000
10850.000	1650.000	612.080	-6.820	0.020	0.000	50.000	250.000	30.000
10900.000	8460.000	628.460	0.000	0.100	0.000	831.000	0.000	50.000
10900.000	3600.000	618.990	-9.470	0.090	0.000	482.000	349.000	50.000
10900.000	1650.000	612.170	-6.820	0.090	0.000	256.000	575.000	50.000
12010.000	8460.000	628.490	0.000	0.030	0.000	590.000	0.000	1110.000
12010.000	3600.000	619.070	-9.420	0.080	0.000	477.000	113.000	1110.000
12010.000	1650.000	612.430	-6.640	0.260	0.000	344.000	246.000	1110.000
x sec 15 13408.000	8460.000	628.550	0.000	0.060	0.000	503.000	0.000	1398.000
13408.000	3600.000	619.190	-9.360	0.120	0.000	431.000	72.000	1398.000
13408.000	1650.000	613.270	-5.920	0.840	0.000	79.000	424.000	1398.000
x sec 16 14735.000	8460.000 30%	628.690	0.000	0.140	0.000	319.000	0.000	1327.000
14735.000	3600.000 10%	620.930	-8.160	1.340	0.000	170.000	149.000	1327.000
14735.000	1650.000 10%	616.700	-3.830	3.430	0.000	100.000	219.000	1327.000

DATA FOR LAST CROSS SECTION

PROFILE	TYPE ENC	TARGET	TOP WIDTH AREA-ACRES	TOP WIDTH AREA-DIFF
1	0.000	0.000	229.341	0.000
2	0.000	0.000	144.562	-84.780
3	0.000	0.000	72.405	-156.936

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Redford Twp.

3) WATERCOURSE: Bell Branch

4) DOCUMENT TYPE: 100 year

00BREAK00

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C
C     4.
C  5325.        DOWNSTREAM SECTION AT BEECH ROAD BRIDGE
C  5355.        UPSTREAM SECTION AT BEECH ROAD BRIDGE
C 10820.        DOWNSTREAM SECTION AT FENKELL ROAD BRIDGE
C 10850.        UPSTREAM SECTION AT FENKELL ROAD BRIDGE
T1      FLOOD INSURANCE STUDY
T2      REDFORD TOWNSHIP 100 YR. NATURAL
T3      BELL BRANCH
J1      2.                                                      4000.   617.5
J2    1.                                                                15.
J3    1.34.     36.     4.      27.     28.     9.
NC  0.070.07    0.035   0.1     0.3
ET              1.4
X1     0.11.    110.    150.
GR  620.        605.    50.     603.    110.    595.    125.    593.6   130.
GR  595.140.    600.    150.    600.5   375.    595.5   420.    607.    520.
GR  612.650.
X1 1220.12.     380.    440.    950.    950.    1220.
GR 620.         615.    240.    605.    290.    602.5   380.    600.    390.
GR 600.5400.    594.5   425.    594.5   430.    603.    440.    605.    500.
GR 620. 560.    620.5   1160.
X1 2210.11.     560.    600.    920.    920.    990.
GR 625.         618.    280.    605.    330.    604.    550.    603.5   560.
GR 596.5575.    597.5   580.    597.    590.    604.    600.    609.    620.
GR 625. 770.
X1 3630.11.     360.    420.    1450.   1300.   1420.
GR 620.         615.    70.     614.    120.    605.    200.    604.5   360.
GR 602. 370.    601.5   380.    596.9   400.    604.    420.    620.    480.
GR 623.51050.
X1 4620.11.     160.    230.    1000.   1000.   990.
GR 620.         607.    160.    599.5   170.    598.4   180.    598.5   190.
GR 602. 200.    605.5   210.    606.    230.    606.5   430.    614.    560.
GR 620. 830.
NC                      0.6     0.8
X1 5275.13.     480.    580.    435.    635.    655.
GR 616.         614.    300.    610.    350.    608.    480.    599.2   520.
GR 601.5530.    599.5   540.    600.5   550.    611.5   580.    612.5   600.
GR 615. 630.    620.    645.    624.    1100.
X1 5325.6.      167.    234.    50.     50.     50.
X3   10.                                        615.7   615.7
GR 619.         615.7   129.    599.4   167.    599.4   234.    615.7   272.
GR 619. 400.
SB  1.251.19    2.5     400.    66.5    3.9     1043.
X1 5355.                        30.     30.     30.
X2              1.      615.7   619.
X3   10.                                        619.    619.
NC                      0.1     0.3
X1 5405.13.     480.    580.    50.     50.     50.
GR  616.        614.    300.    610.    350.    608.    480.    599.2   520.
GR 601.5530.    599.5   540.    600.5   550.    611.5   580.    612.5   600.
GR 615. 630.    620.    645.    624.    1100.
X1 6930.11.     320.    370.    1485.   1435.   1525.
GR  625.        620.    230.    607.    320.    599.    330.    597.4   340.
GR 597.4350.    607.    370.    608.    570.    615.    680.    616.    900.
GR  620.980.
X1 8680.10.     200.    265.    1400.   1850.   1750.
GR  625.        612.    110.    610.    200.    601.    210.    601.4   220.
GR  603.250.    605.    260.    610.    265.    615.    275.    625.    350.
QT    2.3600.   3600.
X1 9135.8.      120.    215.    455.    455.    455.
GR 614.3        610.    120.    608.    139.    601.    162.    601.    176.
GR 608. 192.    610.    215.    614.3   240.
X110180.10.     220.    300.    850.    1050.   1045.
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Bell Br.
100% Natural

	GR 620.	607.	160.	599.5	170.	598.4	180.	598.5	190.	
	GR 602. 200.	605.5	210.	606.	230.	606.5	430.	614.	560.	
	GR 620. 830.									
	NC		0.6	0.8						
	X1 5275.13.	480.	580.	435.	635.	655.				
	GR 616.	614.	300.	610.	350.	608.	480.	599.2	520.	
	GR 601.5530.	599.5	540.	600.5	550.	611.5	580.	612.5	600.	
	GR 615. 630.	620.	645.	624.	1100.					
	X1 5325.6.	167.	234.	50.	50.	50.				
	X3 10.						615.7	615.7		
	GR 619.	615.7	129.	599.4	167.	599.4	234.	615.7	272.	
	GR 619. 400.									
	SB 1.251.19	2.5	400.	66.5	3.9	1043.				
	X1 5355.			30.	30.	30.				
	X2	1.	615.7	619.						
	X3 10.						619.	619.		
	NC		0.1	0.3						
	X1 5405.13.	480.	580.	50.	50.	50.				
	GR 616.	614.	300.	610.	350.	608.	480.	599.2	520.	
	GR 601.5530.	599.5	540.	600.5	550.	611.5	580.	612.5	600.	
	GR 615. 630.	620.	645.	624.	1100.					
	X1 6930.11.	320.	370.	1485.	1435.	1525.				
	GR 625.	620.	230.	607.	320.	599.	330.	597.4	340.	
	GR 597.4350.	607.	370.	608.	570.	615.	680.	616.	900.	
	GR 620.980.									
	X1 8680.10.	200.	265.	1400.	1850.	1750.				
	GR 625.	612.	110.	610.	200.	601.	210.	601.4	220.	
	GR 603.250.	605.	260.	610.	265.	615.	275.	625.	350.	
	QT 2.3600.	3600.								
	X1 9135.8.	120.	215.	455.	455.	455.				
	GR 614.3	610.	120.	608.	139.	601.	162.	601.	176.	
	GR 608. 192.	610.	215.	614.3	240.					
	X110180.10.	220.	300.	850.	1050.	1045.				
	GR 625.	613.	220.	602.8	230.	604.	240.	604.	250.	
	GR 604.5260.	604.	270.	613.	300.	613.5	480.	625.	580.	
	NC		0.6	0.8						
	X110770.13.	370.	460.	535.	535.	590.				
	GR 637.5	635.	120.	613.	170.	610.	370.	601.7	390.	
	GR 601.7410.	606.	430.	606.	440.	607.5	450.	607.5	460.	
	GR 616. 500.	617.	570.	630.	1020.					
	X110820.6.	126.	176.	50.	50.	50.				
	X3 10.						614.6	614.6		
	GR 618.9	614.6	96.	601.3	126.	601.3	176.	614.6	206.	
	GR 618.9300.									
	SB 1.251.21	2.5	300.	53.3	4.2	659.				
	X110850.			30.	30.	30.				
	X2	1.	614.6	618.9						
	X3 10.						618.9	618.9		
	NC		0.1	0.3						
	X110900.13.	370.	460.	50.	50.	50.				
	GR 637.5	635.	120.	613.	170.	610.	370.	601.7	390.	
	GR 601.7410.	606.	430.	606.	440.	607.5	450.	607.5	460.	
	GR 616. 500.	617.	570.	630.	1020.					
	X112010.9.	360.	420.	1035.	785.	1110.				
	GR 624.	611.	85.	610.	360.	603.5	380.	603.	390.	
	GR 599.8400.	601.	410.	612.5	420.	625.	590.			
X-sec 15	X113408.8.	430.	460.	1300.	1200.	1398.				
	GR 625.	615.	80.	613.	430.	605.	435.	604.4	450.	
	GR 606. 455.	612.5	460.	631.	510.					
	NC		0.6	0.8						
X-sec 16	X114735.11.	30.	65.	1035.	985.	1327.				
	GR 632.	615.	30.	612.	40.	608.	45.	606.	50.	
	GR 605.160.	608.	65.	613.5	65.	613.5	75.	629.	330.	
	GR 630. 620.									
	EJ									

Bell Bx.
100% Natural

****
HEC2 VERSION DATED 10 SEPT.1971
ERROR CORRECTIONS 01.02.03.04
MODIFICATIONS 52,53,54,55
****

C
T1 FLOOD INSURANCE STUDY
T2 REDFORD TOWNSHIP 100 YR. NATURAL
T3 BELL BRANCH

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	0.000000	0.00	0.0	4000.	617.500	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.000

J3 VAR(I),I=1,10

1.	34.	36.	4.	27.	28.	9.	0.	0.	0.00

CCHV= 0.100 CEHV= 0.300
3280 CROSS SECTION 0.00 EXTENDED 5.50 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
0.00	23.90	617.50	0.00	617.50	617.50	0.00	0.00	0.00	603.00
4000.	341.	735.	2925.	1070.	826.	7424.	0.	0.	606.00
0.00	0.32	0.89	0.39	0.070	0.035	0.070	0.000	593.60	8.33
0.000009	0.	0.	0.	0	0	1	0.00	641.67	650.00

FLOW DISTRIBUTION

STA=	8.	50.	110.	150.	375.	420.	520.	650.	650.
PER Q=	1.3	7.2	18.4	40.5	9.9	16.2	6.5	0.0	
AREA=	260.4	810.0	825.5	3881.2	877.5	1625.0	1040.0	0.0	
VEL=	0.2	0.4	0.9	0.4	0.5	0.4	0.2	0.0	

1220.00	23.00	617.50	0.00	0.00	617.53	0.03	0.02	0.01	602.50
4000.	1167.	2077.	756.	1762.	1137.	1122.	152.	12.	603.00
0.24	0.66	1.83	0.67	0.070	0.035	0.070	0.039	594.50	120.02
0.000040	950.	1220.	950.	2	0	1	0.00	429.97	550.00

FLOW DISTRIBUTION

STA=	120.	240.	290.	380.	440.	500.	550.
PER Q=	0.6	4.8	23.8	51.9	15.4	3.5	
AREA=	149.9	375.0	1237.5	1137.5	810.0	312.5	
VEL=	0.	0.5	0.8	1.8	0.8	0.4	

2210.00	21.05	617.55	0.00	0.00	617.57	0.02	0.04	0.00	603.50
4000.	2409.	1322.	268.	3311.	739.	563.	244.	21.	604.00
0.49	0.73	1.79	0.48	0.070	0.035	0.070	0.038	596.50	281.74
0.000041	920.	990.	920.	2	0	1	0.00	418.39	700.13

FLOW DISTRIBUTION

STA=	282.	330.	550.	560.	600.	620.	700.
PER Q=	3.4	54.1	2.7	33.1	3.7	3.1	
AREA=	302.8	2870.4	136.0	739.4	220.9	342.5	
VEL=	0.5	0.8	0.8	1.8	0.7	0.4	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CONAR	TOPWID	ENDST
3630.00	20.70	617.60	0.00	0.00	617.63	0.03	0.06	0.00	604.50
4000.	2001.	1828.	171.	2908.	1013.	347.	390.	35.	604.00
0.82	0.69	1.80	0.49	0.070	0.035	0.070	0.037	596.90	33.55
0.000044	1450.	1420.	1300.	2	0	1	0.00	437.47	471.01

FLOW DISTRIBUTION

STA=	34.	70.	120.	200.	360.	420.	471.
PER Q=	0.2	1.2	9.1	39.5	45.7	4.3	
AREA=	47.5	155.2	648.3	2056.6	1013.2	347.0	
VEL=	0.2	0.3	0.6	0.8	1.8	0.5	

4620.00	19.25	617.65	0.00	0.00	617.67	0.02	0.04	0.00	607.00
4000.	278.	1675.	2047.	698.	1074.	3544.	500.	48.	606.00
1.10	0.40	1.56	0.58	0.070	0.035	0.070	0.036	598.40	28.88
0.000038	1000.	990.	1000.	2	0	1	0.00	695.53	724.41

FLOW DISTRIBUTION

STA=	29.	160.	230.	430.	560.	724.
PER Q=	6.9	41.9	37.8	11.9	1.5	
AREA=	698.5	1074.3	2280.7	962.5	300.3	
VEL=	0.4	1.6	0.7	0.5	0.2	

CCHV= 0.600 CEHV= 0.800

5275.00	18.48	617.68	0.00	0.00	617.72	0.04	0.03	0.02	608.00
4000.	1179.	2712.	109.	2215.	1435.	242.	561.	56.	611.50
1.22	0.53	1.89	0.45	0.070	0.035	0.070	0.037	599.20	0.00
0.000059	435.	655.	635.	2	0	1	0.00	638.03	638.03

FLOW DISTRIBUTION

STA=	0.	300.	350.	480.	580.	600.	630.	638.
PER Q=	6.3	3.7	19.5	67.6	1.5	1.2	0.1	
AREA=	803.1	283.8	1128.0	1435.2	113.9	117.8	10.7	
VEL=	0.3	0.5	0.7	1.9	0.5	0.4	0.2	

C DOWNSTREAM SECTION AT BEECH ROAD BRIDGE

5325.00	18.27	617.67	0.00	0.00	617.76	0.10	0.00	0.05	599.40
4000.	346.	3308.	346.	460.	1224.	460.	564.	57.	599.40
1.22	0.75	2.70	0.75	0.070	0.035	0.070	0.037	599.40	52.02
0.000084	50.	50.	50.	2	0	1	0.00	296.36	348.38

FLOW DISTRIBUTION

STA=	52.	129.	167.	234.	272.	348.
PER Q=	0.4	8.3	82.7	8.3	0.4	
AREA=	75.8	384.5	1224.0	384.5	75.2	
VEL=	0.2	0.9	1.7	0.9	0.2	

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.19	2.50	400.00	66.50	3.90	1043.00	0.00	599.40	599.40

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
617.94	617.84	0.01	0.	4000.	1043.	615.70	619.00	10.00

OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 619.00 ELREA= 619.00

C UPSTREAM SECTION AT BEECH ROAD BRIDGE

5355.00	16.38	617.78	0.00	0.00	617.94	0.16	0.18	0.00	599.40
4000.	0.	4000.	0.	0.	1231.	0.	565.	57.	599.40
1.22	0.00	3.25	0.00	0.070	0.035	0.070	0.036	599.40	167.00
0.000127	30.	30.	30.	2	0	1	0.00	67.00	234.00

FLOW DISTRIBUTION

STA=	167.	0.	234.
PER Q=	0.0	100.0	
AREA=	0.0	1231.3	
VEL=	0.0	3.2	

CCHV= 0.100 CEHV= 0.300

5405.00	18.72	617.92	0.00	0.00	617.96	0.04	0.00	0.01	608.00
4000.	1213.	2673.	114.	2332.	1460.	256.	568.	57.	611.50
1.23	0.52	1.83	0.44	0.070	0.035	0.070	0.036	599.20	0.00
0.000055	50.	50.	50.	2	0	1	0.00	638.77	638.77

FLOW DISTRIBUTION

STA=	0.	300.	350.	480.	580.	600.	630.	639.
PER Q=	7.0	3.8	19.6	66.8	1.5	1.3	0.1	
AREA=	876.5	296.1	1159.8	1459.7	118.4	125.2	12.8	
VEL=	0.3	0.5	0.7	1.8	0.5	0.4	0.2	

6930.00	20.61	618.01	0.00	0.00	618.04	0.03	0.08	0.00	607.00
4000.	201.	1693.	2106.	419.	870.	3409.	716.	80.	607.00
1.58	0.48	1.95	0.62	0.070	0.035	0.070	0.036	597.40	243.79
0.000053	1485.	1525.	1435.	2	0	1	0.00	696.37	940.16

FLOW DISTRIBUTION

STA=	244.	320.	370.	570.	680.	900.	940.
PER Q=	5.0	42.3	38.9	9.6	3.9	0.2	
AREA=	419.4	870.4	2101.6	715.9	551.7	40.3	
VEL=	0.5	1.9	0.7	0.5	0.3	0.2	

SECNO	DEPTH	CWSEL	CRIWS	WSELR	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8680.00	17.09	618.09	0.00	0.00	618.22	0.14	0.15	0.03	610.00
4000.	771.	3168.	61.	795.	966.	92.	847.	98.	610.00
1.75	0.97	3.28	0.66	0.070	0.035	0.070	0.036	601.00	58.45
0.000183	1400.	1750.	1850.	2	0	1	0.00	239.75	298.20

FLOW DISTRIBUTION

STA=	58.	110.	200.	265.	275.	298.
PER Q=	2.4	16.9	79.2	1.2	0.3	
AREA=	157.1	638.3	965.5	55.9	35.9	
VEL=	0.6	1.1	3.3	0.8	0.4	

3280 CROSS SECTION 9135.00 EXTENDED 3.91 FEET

9135.00	17.21	618.21	0.00	0.00	618.29	0.08	0.06	0.01	610.00
3600.	568.	2912.	120.	727.	1162.	151.	868.	101.	610.00
1.81	0.78	2.51	0.79	0.070	0.035	0.070	0.036	601.00	0.00
0.000128	455.	455.	455.	2	0	1	0.00	240.00	240.00

FLOW DISTRIBUTION

STA=	0.	120.	215.	240.	240.
PER Q=	15.8	80.9	3.3	0.0	
AREA=	727.0	1162.3	151.5	0.0	
VEL=	0.8	2.5	0.8	0.0	

10180.00	15.55	618.39	0.00	0.00	618.44	0.09	0.15	0.00	613.00
3600.	137.	2675.	788.	263.	975.	1021.	917.	108.	613.00
1.94	0.52	2.74	0.77	0.070	0.035	0.070	0.036	602.80	121.88
0.000163	850.	1045.	1050.	2	0	1	0.00	400.31	522.19

FLOW DISTRIBUTION

STA=	122.	220.	300.	480.	522.
PER Q=	3.8	74.3	20.5	1.4	
AREA=	262.6	975.2	918.4	102.4	
VEL=	0.5	2.7	0.8	0.5	

CCHV= 0.600 CEHV= 0.800

10770.00	16.78	618.48	0.00	0.00	618.53	0.04	0.06	0.03	610.00
3600.	918.	2469.	213.	1431.	1233.	446.	951.	114.	607.50
2.04	0.64	2.00	0.48	0.070	0.035	0.070	0.036	601.70	157.54
0.000070	539.	590.	535.	2	0	1	0.00	463.84	621.37

FLOW DISTRIBUTION

STA=	158.	170.	370.	460.	500.	570.	621.
PER Q=	0.3	25.2	68.6	4.7	1.1	0.2	
AREA=	34.2	1396.8	1233.1	269.4	138.9	38.1	
VEL=	.3	.	2	.	0.3	0.1	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

C DOWNSTREAM SECTION AT FENKELL ROAD BRIDGE

10820.00	17.17	618.47	0.00	0.00	618.60	0.13	0.00	0.07	601.30
3600.	410.	2781.	409.	483.	858.	479.	954.	114.	601.30
2.05	0.85	3.24	0.85	0.070	0.035	0.070	0.036	601.30	9.61
0.000131	50.	50.	50.	2	0	1	0.00	280.99	290.59

FLOW DISTRIBUTION

STA=	10.	96.	126.	176.	206.	291.
PER Q=	1.8	9.6	77.2	9.6	1.7	
AREA=	167.2	315.6	858.5	315.6	163.7	
VEL=	0.4	1.1	3.2	1.1	0.4	

SPECIAL BRIDGE

SB	XK	XKOR	CDFO	RDLEN	BHC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.21	2.50	300.00	53.30	4.20	659.00	0.00	601.30	601.30

3280 CROSS SECTION 10850.00 EXTENDED 0.01 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
619.03	618.76	0.02	34.	3588.	659.	614.60	618.90	30.00

C UPSTREAM SECTION AT FENKELL ROAD BRIDGE

10850.00	17.61	618.91	0.00	0.00	619.03	0.12	0.43	0.00	601.30
3600.	431.	2740.	429.	536.	880.	532.	955.	114.	601.30
2.05	0.80	3.11	0.81	0.070	0.035	0.070	0.036	601.30	0.00
0.000117	30.	30.	30.	2	0	2	0.00	300.00	300.00

FLOW DISTRIBUTION

STA=	0.	96.	126.	176.	206.	300.	300.
PER Q=	2.2	9.8	76.1	9.8	2.2	0.0	
AREA=	207.3	328.8	880.5	328.8	203.0	0.0	
VEL=	0.4	1.1	3.1	1.1	0.4	0.0	

CCHV= 0.100 CEHV= 0.300

10900.00	17.30	619.00	0.00	0.00	619.04	0.04	0.00	0.01	610.00
3600.	951.	2411.	239.	1541.	1279.	534.	958.	115.	607.50
2.06	0.62	1.88	0.45	0.070	0.035	0.070	0.036	601.70	156.36
0.000059	50.	50.	50.	2	0	1	0.00	482.87	639.23

FLOW DISTRIBUTION

STA=	156.	170.	370.	460.	500.	570.	639.
PER Q=	0.4	26.0	67.0	4.9	1.5	0.3	
AREA=	40.9	1500.0	1279.5	290.0	175.0	69.2	
VEL=	0.3	0.6	1.9	0.6	0.3	0.2	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
12010.00	19.27	619.07	0.00	0.00	619.11	0.03	0.07	0.00	610.00
3600.	1778.	1712.	111.	2570.	891.	294.	1042.	125.	612.50
2.29	0.69	1.92	0.38	0.070	0.035	0.070	0.036	599.80	32.22
0.000065	1035.	1110.	785.	2	0	1	0.00	477.17	509.39

FLOW DISTRIBUTION

STA=	32.	85.	360.	420.	509.
PER Q=	2.5	46.8	47.5	3.1	
AREA=	213.0	2357.5	8911.4	293.7	
VEL=	0.4	0.7	1.9	0.4	

13408.00	14.80	619.20	0.00	0.00	619.29	0.09	0.17	0.02	613.00
3600.	2143.	1407.	50.	1892.	388.	61.	1134.	139.	612.50
2.47	1.13	3.62	0.82	0.070	0.035	0.070	0.036	604.40	46.38
0.000327	1300.	1398.	1200.	2	0	1	0.00	431.74	478.12

X-sec 15

FLOW DISTRIBUTION

STA=	46.	80.	430.	460.	478.
PER Q=	1.2	58.3	39.1	1.4	
AREA=	70.7	1821.1	388.3	60.7	
VEL=	0.6	1.2	3.6	0.8	

CCHV= 0.600 CEHV= 0.800

1645 INT SEC ADDED BY RAISING SEC 14735.00, -.350FT AND MULTIPLYING BY 1.000

3301 HV CHANGED MORE THAN HVINS

1.01	14.72	619.47	0.00	0.00	620.12	0.64	0.39	0.44	614.65
3600.	28.	2790.	781.	21.	386.	392.	1154.	143.	613.15
2.50	1.39	7.24	1.99	0.070	0.035	0.070	0.036	604.75	21.49
0.001585	517.	663.	492.	2	0	1	0.00	157.58	179.08

FLOW DISTRIBUTION

STA=	21.	30.	65.	75.	179.
PER Q=	0.8	77.5	5.1	16.6	
AREA=	20.5	385.7	63.3	329.0	
VEL=	1.4	7.2	2.9	1.8	

1645 INT SEC ADDED BY RAISING SEC 1.01, 0.350FT AND MULTIPLYING BY 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	YNA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
14735.00	15.44	620.54	0.00	0.00	621.05	0.51	0.85	0.08	615.00
3600.	36.	2685.	879.	27.	411.	478.	1166.	145.	613.50
2.53	1.32	6.54	1.84	0.070	0.035	0.070	0.036	605.10	20.23
0.001191	517.	663.	492.	3	0	1	0.00	170.55	190.78

FLOW DISTRIBUTION

STA=	20.	30.	65.	75.	191.
PER Q=	1.0	74.6	5.3	19.2	
AREA=	27.1	410.6	70.4	407.4	
VEL=	1.3	6.5	2.7	1.7	

PROFILE FOR RIVER BELL BRANCH

PLOTTED POINTS (BY PRIORITY):E-ENERGY GRADIENT,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-MAX.

ELEVATION-FT SECNO	CUMDIS-FT		590. 595. 600. 605. 610. 615. 620. 625. 630. 635.
0.00	0.	C	I R L M E
	100.	C	I R L M E
	200.	C	I R L M E
	300.	C	I R L M E
	400.	C	I R L M E
	500.	C	I R L N E
	600.	C	I R L M E
	700.	C	I R L ME
	800.	C	I RL E
	900.	C	I RL E M
	1000.	C	I L E M
	1100.	C	I L E M
	1200.	C	I LR E M
1220.00	1300.	C	I LR E M
	1400.	C	I LR E M
	1500.	C	I LR E M
	1600.	C	I LR E M
	1700.	C	I LR E M
	1800.	C	I LR E M
	1900.	C	I LR E M
	2000.	C	I LR E M
	2100.	C	I LR E M
	2200.	C	I LR E M
2210.00	2300.	C	I LR E M
	2400.	C	I LR E M
	2500.	C	I LR E M
	2600.	C	I LR E M
	2700.	C	I L E M
	2800.	C	I L E M
	2900.	C	I L E M
	3000.	C	I L E M
	3100.	C	I L E M
	3200.	C	I L E M
	3300.	C	I L E M
	3400.	C	I RL E M
	3500.	C	I RL E M
	3600.	C	I RL E M
3630.00	3700.	C	I RL E M
	3800.	C	I R L E M
	3900.	C	I RL E M
	4000.	C	I R L E M
	4100.	C	I RL E M
	4200.	C	I R L E M
	4300.	C	I R L E M
	4400.	C	I R L E M
	4500.	C	I R L E M
	4600.	C	I R L E M
4620.00	4700.	C	I R L E M
	4800.	C	I L E M
	4900.	C	I L E M
	5000.	C	I L R E M

	5100.		
	5200.	C	
5275.00	5300.	C	
5325.00	5400.	C	
5355.00	5500.	C	
5405.00	5600.	C	
	5700.	C	
	5800.	C	
	5900.	C	
	6000.	C	
	6100.	C	
	6200.	C	
	6300.	C	
	6400.	C	
	6500.	C	
	6600.	C	
	6700.	C	
	6800.	C	
	6900.	C	
6930.00	7000.	C	
	7100.	C	
	7200.	C	
	7300.	C	
	7400.	C	
	7500.	C	
	7600.	C	
	7700.	C	
	7800.	C	
	7900.	C	
	8000.	C	
	8100.	C	
	8200.	C	
	8300.	C	
	8400.	C	
	8500.	C	
	8600.	C	
8680.00	8700.	C	
	8800.	C	
	8900.	C	
	9000.	C	
	9100.	C	
9135.00	9200.	C	
	9300.	C	
	9400.	C	
	9500.	C	
	9600.	C	
	9700.	C	
	9800.	C	
	9900.	C	
	10000.	C	
	10100.	C	
10180.00	10200.	C	
	10300.	C	
	10400.	C	
	10500.	C	
	10600.	C	
	10700.	C	
10770.00	10800.	C	
10820.00	10900.	C	
10850.00	11000.	C	
10900.00	11100.	C	
	11200.	C	
	11300.	C	
	11400.	C	
	11500.	C	
	11 0 .	C	

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                 11700.  C  .    .I   .    L     .    E .    .   M .    .    .
                 11800.  C  .    .I   .    LR    .    E .    .   M .    .    .
                 11900.  C  .    .I   .    L R   .    E .    .   M .    .    .
                 12000.  C  .    .I   .    L  R  .    E .    .   M .    .    .
12010.00         12100.  C  .    .I   .    L   R .    E .    M     .    .    .
                 12200.  C  .    .I   .    L   R .    E .    .M    .    .    .
                 12300.  C  .    .I   .    .L  R .    E .    .  M  .    .    .
                 12400.  C  .    . I   .   .L  R .    E .    .   M .    .    .
                 12500.  C  .    . I   .   . L R .    E .    .   M .    .    .
                 12600.  C  .    .  I   .  . L R .    E .    .    M .    .    .
                 12700.  C  .    .   I  .  . L R .    E .    .     M.    .    .
                 12800.  C  .    .   I  .  . L R .    E .    .     M.    .    .
                 12900.  C  .    .    I .  . L R .    E .    .      M    .    .
                 13000.  C  .    .    I .  .  LR .    E .    .      M.   .    .
                 13100.  C  .    .    I .  .  LR .    E .    .      M.   .    .
                 13200.  C  .    .     I.  .   L .    WE.    .      M.   .    .
                 13300.  C  .    .     I.  .   L .    WE.    .       M   .    .
                 13400.  C  .    .     I.  .  RL .    WE.    .       .M  .    .
13408.00         13500.  C  .    .      I  .  RL .    WE.    .        M  .    .
                 13600.  C  .    .      I  .  RL .    WE.    .        M  .    .
                 13700.  C  .    .      I  .  R L.    E.     .       .M  .    .
                 13800.  C  .    .      I  .   RL.    E.     .       .M  .    .
                 13900.  C  .    .      I  .   R L.   WE     .       M   .    .
                 14000.  C  .    .      I  .   R L.   WE     .       M   .    .
1.01             14100.  C  .    .      I  .   R  L.  WE     .       M.  .    .
                 14200.  C  .    .      I  .   R  L.  W.E    .       M.  .    .
                 14300.  C  .    .      I  .    R  L  WE     .       M   .    .
                 14400.  C  .    .      I  .    R  L  WE     .       M   .    .
                 14500.  C  .    .      I  .    R  L  WE     .       M   .    .
                 14600.  C  .    .      I  .    R  L  .WE    .       M   .    .
                 14700.  C  .    .      I  .    R  L  .WE    .       M   .    .
14735.00         14800.  C  .    .      I  .    R  L  .WE    .       M   .    .
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**********
HEC2 VERSION DATED 10 SEPT.1971
ERROR CORRECTIONS 01.02.03.04
MODIFICATIONS 52.53,54.55
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T1      FLOOD INSURANCE STUDY
T2      REDFORD TOWNSHIP 100 YR. WITH ENCROACHMENT
T3      BELL BRANCH

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

        0.        3.        0.        0.  0.000000      0.00      0.0    4000.   617.600     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000    15.000


CCHV=   0.100 CEHV=   0.300
 2800 NAT Q1=  13583.00  WSEL=    617.50  ENC Q1=  13583.00  WSEL=    617.60  RATIO=  0.0000
 NAT Q1=  13726.  RATIOS LOB,CH,ROB=  0.0855  0.1832  0.7313  WSEL=    617.60
3280 CROSS SECTION       0.00 EXTENDED       5.60 FEET

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


3470 ENCROACHMENT STATIONS=      24.1      639.7  TYPE=     4  TARGET=       0.010
      0.00     24.00    617.60      0.00    617.50    617.60      0.00      0.00      0.00    603.00
      4000.     346.      734.     2920.     1042.      829.     7414.        0.        0.    600.00
      0.00      0.33      0.89      0.39     0.070     0.035     0.070     0.000    593.60     24.09
  0.000009        0.        0.        0.         0         0         1      0.00    615.61    639.71

FLOW DISTRIBUTION

STA=       24.       50.      110.      150.      375.      420.      520.      640.
  PER Q=      1.4       7.2      18.4      40.5       9.9      16.3       6.3
   AREA=    225.7     816.0     829.5    3903.7     882.0    1635.0     993.3
    VEL=      0.3       0.4       0.9       0.4       0.4       0.4       0.3

 2800 NAT Q1=   6324.00  WSEL=    617.49  ENC Q1=   6324.00  WSEL=    617.59  RATIO=  0.0000
 NAT Q1=   6392.  RATIOS LOB,CH,ROB=  0.2928  0.5178  0.1893  WSEL=    617.59

3470 ENCROACHMENT STATIONS=      220.2      542.7  TYPE=     4  TARGET=       0.011
   1220.00     23.10    617.60      0.00    617.49    617.63      0.03      0.02      0.01    602.50
      4000.     1158.     2073.      769.     1674.     1143.     1126.      150.       11.    603.00
      0.24      0.69      1.81      0.68     0.070     0.035     0.070     0.039    594.50    220.19
 0.000039       950.      1220.      950.         2         0         1      0.00    322.53    542.72


FLOW DISTRIBUTION
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STA=	240.	240.	300.	360.	420.	480.
PER Q=	0.3	4.8	23.9	51.8	15.4	3.8
AREA=	47.4	380.0	1246.4	1143.5	816.0	310.1
VEL=	0.2	0.5	0.8	1.8	0.8	0.5

2800 NAT Q1= 6242.00 WSEL= 617.54 ENC Q1= 6242.00 WSEL= 617.64 RATIO= 0.0000
NAT Q1= 6314. RATIOS LOB,CH,ROB= 0.6027 0.3296 0.0677 WSEL= 617.64

SECNO	DEPTH	CHSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 289.5 686.1 TYPE= 4 TARGET= 0.011

22100.00	21.15	617.65	0.00	617.54	617.67	0.02	0.04	0.00	603.50
4000.	2409.	1311.	280.	3330.	743.	561.	242.	18.	604.00
0.49	0.72	1.76	0.50	0.070	0.035	0.070	0.038	596.50	289.46
0.000040	920.	990.	920.	2	0	1	0.00	396.59	686.05

FLOW DISTRIBUTION

STA=	289.	330.	550.	560.	600.	620.	686.
PER Q=	3.7	53.8	2.7	32.8	3.6	3.3	
AREA=	299.0	2892.2	139.0	743.4	222.9	338.4	
VEL=	0.5	0.7	0.8	1.8	0.7	0.4	

2500 NAT Q1= 6058.00 WSEL= 617.60 ENC Q1= 6058.00 WSEL= 617.70 RATIO= 0.0000
NAT Q1= 6135. RATIOS LOB,CH,ROB= 0.5015 0.4556 0.0429 WSEL= 617.70

3470 ENCROACHMENT STATIONS= 87.2 463.9 TYPE= 4 TARGET= 0.013

36300.00	20.80	617.70	0.00	617.60	617.73	0.03	0.06	0.00	604.50
4000.	1989.	1827.	185.	2839.	1019.	344.	387.	31.	604.00
0.82	0.70	1.79	0.54	0.070	0.035	0.070	0.037	596.90	87.18
0.000043	1490.	1420.	1300.	2	0	1	0.00	376.67	463.85

FLOW DISTRIBUTION

STA=	87.	120.	200.	360.	420.	464.
PER Q=	0.9	9.2	39.6	45.7	4.6	
AREA=	110.7	656.1	2072.2	1019.1	344.4	
VEL=	0.3	0.6	0.8	1.8	0.5	

2800 NAT Q1= 6495.00 WSEL= 617.65 ENC Q1= 6495.00 WSEL= 617.75 RATIO= 0.0000
NAT Q1= 6593. RATIOS LOB,CH,ROB= 0.0701 0.4169 0.5130 WSEL= 617.75

3470 ENCROACHMENT STATIONS= 41.8 647.5 TYPE= 4 TARGET= 0.015

46200.00	19.35	617.75	0.00	617.65	617.77	0.02	0.04	0.00	607.00
4000.	295.	1661.	2044.	703.	1061.	3518.	496.	42.	606.00
1.11	0.42	1.54	0.58	0.070	0.035	0.070	0.036	598.40	41.76
0.000037	1000.	990.	1000.	2	0	1	0.00	605.75	647.51

FLOW DISTRIBUTION

STA=	42.	160.	230.	430.	560.	648.
PER Q=	7.4	41.5	37.6	12.0	1.5	
AREA=	703.1	1081.0	2300.0	975.0	243.1	
VEL=	0.4	1.5	0.7	0.5	0.3	

CCHV= 0.600 CEHV= 0.800
2800 NAT Q1= 5190.00 WSEL= 617.67 ENC Q1= 5190.00 WSEL= 617.77 RATIO= 0.0000
NAT Q1= 5276. RATIOS LOB,CH,ROB= 0.2980 0.6742 0.0277 WSEL= 617.77

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	THA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 37.2 611.4 TYPE= 4 TARGET= 0.016

5275.00	18.57	617.77	0.00	617.67	617.81	0.04	0.03	0.02	608.00
4000.	1190.	2724.	86.	2190.	1445.	170.	557.	49.	611.50
1.22	0.54	1.89	0.50	0.070	0.035	0.070	0.037	599.20	37.23
0.000059	435.	655.	635.	2	0	1	0.00	574.15	611.38

FLOW DISTRIBUTION

STA=	37.	300.	350.	480.	580.	600.	611.
PER Q=	6.3	3.8	19.7	68.1	1.5	0.6	
AREA=	761.1	288.6	1140.4	1444.7	115.4	54.6	
VEL=	0.3	0.5	0.7	1.9	0.5	0.5	

2800 NAT Q1= 4358.00 WSEL= 617.66 ENC Q1= 4358.00 WSEL= 617.76 RATIO= 0.0000
NAT Q1= 4404. RATIOS LOB,CH,ROB= 0.0873 0.8255 0.0873 WSEL= 617.76

3470 ENCROACHMENT STATIONS= 129.5 271.5 TYPE= 4 TARGET= 0.010

C DOWNSTREAM SECTION AT BEECH ROAD BRIDGE

5325.00	18.36	617.76	0.00	617.66	617.86	0.10	0.00	0.05	599.40
4000.	337.	3326.	337.	387.	1230.	387.	560.	50.	599.40
1.23	0.87	2.70	0.87	0.070	0.035	0.070	0.037	599.40	129.51
0.000084	50.	50.	50.	2	0	1	0.00	141.96	271.47

FLOW DISTRIBUTION

STA=	130.	167.	234.	271.
PER Q=	8.4	83.2	8.4	
AREA=	387.0	1230.4	387.0	
VEL=	0.9	2.7	0.9	

SPECIAL BRIDGE

SB	XK	XKQR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.19	2.50	400.00	66.50	3.90	1043.00	0.00	599.40	599.40

2800 NAT Q1= 3553.00 WSEL= 617.77 ENC Q1= 3582.96 WSEL= 617.87 RATIO= -.0084
NAT Q1= 3583. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 617.87
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3470 ENCROACHMENT STATIONS= 167.0 234.0 TYPE= 4 TARGET= 0.000

OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 619.00 ELREA= 619.00

C UPSTREAM SECTION AT BEECH ROAD BRIDGE

5355.00	18.47	617.87	0.00	617.77	618.04	0.16	0.00	0.05	599.40
4000.	0.	4000.	0.	0.	1238.	0.	561.	50.	599.40
1.23	0.0	3.23	.0	.070	0.035	.70	.037	599.40	147.0

0.000164 50. 50. 50. 0 0 1 0.00 0.00 [illegible]

FLOW DISTRIBUTION

STA= 167. 0. 234.
PER Q= 0.0 100.0
AREA= 0.0 1237.8
VEL= 0.0 3.2

CCHV= 0.100 CEHV= 0.300
2800 NAT Q1= 5417.00 WSEL= 617.92 ENC Q1= 5417.00 WSEL= 618.02 RATIO= 0.0000
NAT Q1= 5510. RATIOS LOB,CH,ROB= 0.3067 0.6644 0.0290 WSEL= 618.02

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 34.8 612.1 TYPE= 4 TARGET= 0.017

5405.00	18.82	618.02	0.00	617.92	618.05	0.04	0.00	0.01	608.00
4000.	1224.	2687.	90.	2304.	1469.	181.	564.	50.	611.50
1.24	0.53	1.83	0.50	0.070	0.035	0.070	0.036	599.20	34.80
0.000054	50.	50.	50.	2	0	1	0.00	577.25	612.05

FLOW DISTRIBUTION

STA=	35.	300.	350.	480.	580.	600.	612.
PER Q=	6.9	3.9	19.8	67.2	1.6	0.7	
AREA=	831.0	300.9	1172.3	1469.2	120.3	60.5	
VEL=	0.3	0.5	0.7	1.8	0.5	0.5	

2800 NAT Q1= 5496.00 WSEL= 618.00 ENC Q1= 5496.00 WSEL= 618.10 RATIO= 0.0000
NAT Q1= 5581. RATIOS LOB,CH,ROB= 0.0505 0.4205 0.5290 WSEL= 618.10

3470 ENCROACHMENT STATIONS= 254.8 868.4 TYPE= 4 TARGET= 0.015

6930.00	20.70	618.10	0.00	618.00	618.13	0.03	0.08	0.00	607.00
4000.	217.	1685.	2097.	417.	875.	3350.	710.	70.	607.00
1.59	0.52	1.93	0.63	0.070	0.035	0.070	0.036	597.40	254.79
0.000052	1485.	1525.	1435.	2	0	1	0.00	613.59	868.37

FLOW DISTRIBUTION

STA=	255.	320.	370.	570.	680.	868.
PER Q=	5.4	42.1	39.0	9.7	3.7	
AREA=	416.9	875.1	2120.5	726.3	503.7	
VEL=	0.5	1.9	0.7	0.5	0.3	

2800 NAT Q1= 2955.00 WSEL= 618.08 ENC Q1= 2955.00 WSEL= 618.18 RATIO= 0.0000
NAT Q1= 2993. RATIOS LOB,CH,ROB= 0.1948 0.7897 0.0155 WSEL= 618.18

3470 ENCROACHMENT STATIONS= 71.5 272.7 TYPE= 4 TARGET= 0.013

8660.00	17.18	618.18	0.00	618.08	618.31	0.13	0.15	0.03	610.00
4000.	790.	3167.	43.	797.	971.	48.	838.	87.	610.00
1.76	0.99	3.26	0.90	0.070	0.035	0.070	0.036	601.00	71.48
0.000179	1400.	1750.	1850.	2	0	1	0.00	201.22	272.70

FLOW DISTRIBUTION

STA=	71.	110.	200.	265.	273.
PER Q=	2.6	17.1	79.2	1.1	
AREA=	150.9	646.6	971.5	48.2	
VEL=	0.7	1.1	3.3	0.9	

2800 NAT Q1= 3179.00 WSEL= 618.20 ENC Q1= 3179.00 WSEL= 618.30 RATIO= 0.0000
NAT Q1= 3227. RATIOS LOB,CH,ROB= 0.1594 0.8070 0.0336 WSEL= 618.30
3280 CROSS SECTION 9139.00 EXTENDED 4.00 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 5.6 234.5 TYPE= 4 TARGET= 0.015

9135.00	17.30	618.30	0.00	618.20	618.38	0.08	0.06	0.01	610.00
3600.	576.	2916.	107.	715.	1171.	129.	858.	89.	610.00
1.81	0.81	2.49	0.83	0.070	0.035	0.070	0.036	601.00	5.59
0.000129	455.	455.	455.	2	0	1	0.00	228.88	234.48

FLOW DISTRIBUTION

STA=	6.	120.	215.	234.
PER Q=	16.0	81.0	3.0	
AREA=	714.8	1170.8	129.0	
VEL=	0.8	2.5	0.8	

2800 NAT Q1= 2818.00 WSEL= 618.35 ENC Q1= 2818.00 WSEL= 618.45 RATIO= 0.0000
NAT Q1= 2873. RATIOS LOB,CH,ROB= 0.0392 0.7389 0.2219 WSEL= 618.45

3470 ENCROACHMENT STATIONS= 144.5 494.3 TYPE= 4 TARGET= 0.019

10180.00	15.64	618.44	0.00	618.35	618.53	0.09	0.15	0.00	613.00
3600.	153.	2661.	786.	255.	982.	993.	907.	95.	613.00
1.95	0.60	2.71	0.79	0.070	0.035	0.070	0.036	602.80	144.52
0.000158	850.	1045.	1050.	2	0	1	0.00	349.73	494.26

FLOW DISTRIBUTION

STA=	145.	220.	300.	480.	494.
PER Q=	4.3	73.9	20.7	1.1	
AREA=	255.2	982.1	934.0	58.7	
VEL=	0.6	2.7	0.8	0.7	

CCHV= 0.600 CEHV= 0.800
2800 NAT Q1= 4300.00 WSEL= 618.48 ENC Q1= 4300.00 WSEL= 618.56 RATIO= 0.0000
NAT Q1= 4370. RATIOS LOB,CH,ROB= 0.2568 0.6828 0.0604 WSEL= 618.58

3470 ENCROACHMENT STATIONS= 173.8 532.1 TYPE= 4 TARGET= 0.016

10770.00	16.86	618.56	0.00	618.48	618.61	0.05	0.06	0.02	610.00
3600.	913.	2492.	195.	1392.	1240.	347.	941.	100.	607.50
2.05	0.66	2.01	0.56	0.070	0.035	0.070	0.036	601.70	173.81
0.000070	535.	590.	535.	2	0	1	0.00	358.27	532.07

FLOW DISTRIBUTION

STA=	174.	370.	460.	500.	532.
PER Q=	25.4	69.2	4.8	0.7	
AREA=	1391.6	1240.3	272.6	74.9	
VEL=	0.7	2.0	0.6	0.3	

2800 NAT Q1= 3141.00 WSEL= 618.46 ENC Q1= 3141.00 WSEL= 618.56 RATIO= 0.0000
NAT Q1= 3178. RATIOS LOB,CH,ROB= 0.1151 0.7701 0.1148 WSEL= 618.56

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3470 ENCROACHMENT STATIONS= 35.5 264.7 TYPE= 4 TARGET= 0.012

C DOWNSTREAM SECTION AT FENKELL ROAD BRIDGE

10820.00	17.25	618.55	0.00	618.46	618.68	0.13	0.00	0.06	601.30
3600.	418.	2765.	417.	475.	863.	471.	943.	100.	601.30
2.05	0.88	3.21	0.88	0.070	0.035	0.070	0.036	601.30	35.47
0.000128	50.	50.	50.	2	0	1	0.00	229.21	264.68

FLOW DISTRIBUTION

STA=	35.	96.	126.	176.	206.	265.
PER Q=	2.0	9.6	76.8	9.6	1.9	
AREA=	157.1	318.0	862.6	318.0	153.1	
VEL=	0.5	1.1	3.2	1.1	0.5	

SPECIAL BRIDGE

SB	XK	XKQR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.29	1.21	2.50	300.00	53.30	4.20	659.00	0.00	601.30	601.30

6790 20 TRIALS OF EG NOT ENOUGH
6840,FLOW IS BY WEIR AND LOW FLOW
2800 NAT Q1= 3324.00 WSEL= 618.90 ENC Q1= 3324.00 WSEL= 619.00 RATIO= 0.0000
NAT Q1= 3366. RATIOS LOB,CH,ROB= 0.1211 0.7583 0.1206 WSEL= 619.00
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE
3280 CROSS SECTION 10850.00 EXTENDED 0.09 FEET

3470 ENCROACHMENT STATIONS= 25.4 274.6 TYPE= 4 TARGET= 0.012

C UPSTREAM SECTION AT FENKELL ROAD BRIDGE

10850.00	17.69	618.99	0.00	618.90	619.10	0.11	0.00	0.01	601.30
3600.	440.	2722.	438.	530.	885.	525.	945.	100.	601.30
2.05	0.83	3.08	0.83	0.070	0.035	0.070	0.036	601.30	25.42
0.000114	30.	30.	30.	0	0	20	0.00	249.17	274.59

FLOW DISTRIBUTION

STA=	25.	96.	126.	176.	206.	275.
PER Q=	2.5	9.7	75.6	9.7	2.4	
AREA=	198.3	331.2	884.6	331.2	193.6	
VEL=	0.5	1.1	3.1	1.1	0.5	

CCHV= 0.100 CEHV= 0.300
2800 NAT Q1= 4684.00 WSEL= 618.99 ENC Q1= 4684.00 WSEL= 619.09 RATIO= 0.0000
NAT Q1= 4753. RATIOS LOB,CH,ROB= 0.2656 0.6669 0.0675 WSEL= 619.09

3470 ENCROACHMENT STATIONS= 17.7 [illegible] TYPE= [illegible] TARGET= 0.015

10.00.00	17.[illegible]8	[illegible]	0.00	[illegible]	[illegible]	0.0[illegible]	0.00	0.01	10.00
3600.	945.	2432.	223.	1499.	1286.	435.	948.	101.	607.50
2.06	0.63	1.89	0.51	0.070	0.035	0.070	0.036	601.70	172.73
0.000059	50.	50.	50.	2	0	1	0.00	379.74	552.46

FLOW DISTRIBUTION

STA=	173.	370.	460.	500.	552.
PER Q=	26.2	67.6	4.9	1.2	
AREA=	1498.8	1286.4	293.1	141.8	
VEL=	0.6	1.9	0.6	0.3	

2800 NAT Q1= 4475.00 WSEL= 619.07 ENC Q1= 4475.00 WSEL= 619.17 RATIO= 0.0000
NAT Q1= 4548. RATIOS LOB,CH,ROB= 0.4955 0.4730 0.0315 WSEL= 619.17

SECNO	DEPTH	CHSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	RANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS=			48.2	487.5	TYPE=	4	TARGET=	0.016	
12010.00	19.35	619.15	0.00	619.07	619.18	0.03	0.06	0.00	610.00
3600.	1782.	1696.	122.	2575.	896.	281.	1030.	110.	612.50
2.30	0.69	1.89	0.43	0.070	0.035	0.070	0.036	599.80	48.23
0.000062	1039.	1110.	785.	2	0	1	0.00	439.28	487.51

FLOW DISTRIBUTION

STA=	48.	85.	360.	420.	488.
PER Q=	2.8	46.7	47.1	3.4	
AREA=	196.3	2378.6	896.0	281.3	
VEL=	0.5	0.7	1.9	0.4	

2800 NAT Q1= 1990.00 WSEL= 619.19 ENC Q1= 1990.00 WSEL= 619.29 RATIO= 0.0000
NAT Q1= 2034. RATIOS LOB,CH,ROB= 0.5993 0.3867 0.0141 WSEL= 619.29

3470 ENCROACHMENT STATIONS=			75.2	464.1	TYPE=	4	TARGET=	0.022	
13408.00	14.87	619.27	0.00	619.19	619.36	0.09	0.16	0.02	613.00
3600.	2157.	1413.	30.	1866.	391.	25.	1121.	122.	612.50
2.48	1.16	3.62	1.21	0.070	0.035	0.070	0.036	604.40	75.21
0.000324	1300.	1398.	1200.	2	0	1	0.00	388.88	464.09

FLOW DISTRIBUTION

STA=	75.	80.	430.	460.	464.
PER Q=	0.5	59.4	39.3	0.8	
AREA=	19.1	1846.7	390.5	24.6	
VEL=	1.0	1.2	3.6	1.2	

CCHV= 0.600 CEHV= 0.800
2800 NAT Q1= 1043.00 WSEL= 620.93 ENC Q1= 1043.00 WSEL= 620.63 RATIO= 0.0000
NAT Q1= 1062. RATIOS LOB,CH,ROB= 0.0102 0.7422 0.2476 WSEL= 620.63

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=			28.8	186.9	TYPE=	4	TARGET=	0.018	
14735.00	14.82	619.92	0.00	620.53	620.55	0.63	0.76	0.43	615.00
3600.	11.	2790.	799.	5.	389.	404.	1160.	129.	613.50
2.53	2.10	7.17	1.98	0.070	0.035	0.070	0.036	605.10	28.82
0.001539	1035.	1327.	985.	2	0	1	0.00	151.84	180.66

FLOW DISTRIBUTION

STA=	29.	30.	65.	75.	181.
PER Q=	0.3	77.5	5.1	17.1	
AREA=	5.4	369.0	64.2	339.3	
VEL=	2.1	7.2	2.9	1.8	

SUMMARY PRINTOUT FOR MULTIPLE PROFILES

BELL BRANCH

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	TQ	PERENC	TOPWID	STENCL	STENCR	WSELK
0.00	0.00	0.00	0.00	593.59	4000.00	617.50	13583.00	0.00	641.00	0.00	0.00	617.50
0.00	0.00	0.00	0.00	593.59	4000.00	617.59	13699.00	0.01	615.00	24.00	639.00	617.50
12.20	1220.00	0.00	0.00	594.50	4000.00	617.49	6324.00	0.00	429.00	0.00	0.00	0.00
12.20	1220.00	0.00	0.00	594.50	4000.00	617.59	6392.00	0.01	322.00	220.00	542.00	617.48
22.10	990.00	0.00	0.00	596.50	4000.00	617.54	6242.00	0.00	418.00	0.00	0.00	0.00
22.10	990.00	0.00	0.00	596.50	4000.00	617.64	6352.00	0.01	396.00	289.00	686.00	617.53
36.30	1420.00	0.00	0.00	596.89	4000.00	617.60	6058.00	0.00	437.00	0.00	0.00	0.00
36.30	1420.00	0.00	0.00	596.89	4000.00	617.70	6120.00	0.01	376.00	87.00	463.00	617.59
46.20	990.00	0.00	0.00	598.39	4000.00	617.65	6495.00	0.00	695.00	0.00	0.00	0.00
46.20	990.00	0.00	0.00	598.39	4000.00	617.74	6619.00	0.01	605.00	41.00	647.00	617.64
52.75	655.00	0.00	0.00	599.19	4000.00	617.67	5190.00	0.00	638.00	0.00	0.00	0.00
52.75	655.00	0.00	0.00	599.19	4000.00	617.77	5224.00	0.01	574.00	37.00	611.00	617.66
53.25	50.00	0.00	0.00	599.39	4000.00	617.66	4358.00	0.00	296.00	0.00	0.00	0.00
53.25	50.00	0.00	0.00	599.39	4000.00	617.76	4373.00	0.01	141.00	129.00	271.00	617.65
53.55	30.00	0.00	0.00	599.39	4000.00	617.77	3553.00	0.00	67.00	0.00	0.00	0.00
53.55	30.00	0.00	0.00	599.39	4000.00	617.87	3122.00	0.00	67.00	167.00	234.00	617.76
54.05	50.00	0.00	0.00	599.19	4000.00	617.92	5417.00	0.00	638.00	0.00	0.00	0.00
54.05	50.00	0.00	0.00	599.19	4000.00	618.01	5448.00	0.01	577.00	34.00	612.00	617.91
69.30	1525.00	0.00	0.00	597.39	4000.00	618.00	5496.00	0.00	696.00	0.00	0.00	0.00
69.30	1525.00	0.00	0.00	597.39	4000.00	618.10	5570.00	0.01	613.00	254.00	868.00	618.00
86.80	1750.00	0.00	0.00	601.00	4000.00	618.08	2955.00	0.00	239.00	0.00	0.00	0.00
86.80	1750.00	0.00	0.00	601.00	4000.00	618.17	2986.00	0.01	201.00	71.00	272.00	618.07
91.35	455.00	0.00	0.00	601.00	3600.00	618.20	3179.00	0.00	240.00	0.00	0.00	0.00
91.35	455.00	0.00	0.00	601.00	3600.00	618.29	3213.00	0.01	228.00	5.00	234.00	618.19
101.80	1045.00	0.00	0.00	602.79	3600.00	618.35	2818.00	0.00	400.00	0.00	0.00	0.00
101.80	1045.00	0.00	0.00	602.79	3600.00	618.43	2867.00	0.01	349.00	144.00	494.00	618.34
107.70	590.00	0.00	0.00	601.69	3600.00	618.48	4300.00	0.00	463.00	0.00	0.00	0.00
107.70	590.00	0.00	0.00	601.69	3600.00	618.56	4301.00	0.01	358.00	173.00	532.00	618.47
108.20	50.00	0.00	0.00	601.29	3600.00	618.46	3141.00	0.00	280.00	0.00	0.00	0.00
108.20	50.00	0.00	0.00	601.29	3600.00	618.55	3183.00	0.01	229.00	35.00	264.00	618.45
108.50	30.00	0.00	0.00	601.29	3600.00	618.90	3324.00	0.00	300.00	0.00	0.00	0.00
108.50	30.00	0.00	0.00	601.29	3600.00	618.99	3372.00	0.01	249.00	25.00	274.00	618.89
109.00	50.00	0.00	0.00	601.69	3600.00	618.99	4684.00	0.00	482.00	0.00	0.00	0.00
109.00	50.00	0.00	0.00	601.69	3600.00	619.07	4684.00	0.01	379.00	172.00	552.00	618.98
120.10	1110.00	0.00	0.00	599.79	3600.00	619.07	4475.00	0.00	477.00	0.00	0.00	0.00
12 .1	1110.0	0.00	.00	599 79	360 . 0	619.15	4554.00	.01	439.0	48.	487.0	619. 6

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	TQ	PERENC	TOPWID	STENCL	STENCR	WSELK
134.08	1398.00	0.00	0.00	604.39	3600.00	619.19	1990.00	0.00	431.00	0.00	0.00	0.00
134.08	1398.00	0.00	0.00	604.39	3600.00	619.26	2000.00	0.02	388.00	75.00	464.00	619.18
147.35	1327.00	0.00	0.00	605.09	3600.00	620.53	1043.00	0.00	170.00	0.00	0.00	0.00
147.35	1327.00	0.00	0.00	605.09	3600.00	619.92	917.00	0.01	151.00	28.00	186.00	620.52

SECTION NUMBER	DISCHARGE CFS	CWSEL	CWSEL DIFF EACH Q	CWSEL DIFF EACH SECTION	CWSEL-WSELK	TOPWID	T.W. DIFF	LENGTH
0.000	4000.000	617.500	0.000	0.000	0.000	641.000	0.000	0.000
0.000	4000.000	617.590	0.090	0.000	0.000	615.000	26.000	0.000
1220.000	4000.000	617.490	0.000	-.010	0.000	429.000	0.000	1220.000
1220.000	4000.000	617.590	0.100	0.000	0.110	322.000	107.000	1220.000
2210.000	4000.000	617.540	0.000	0.050	0.000	418.000	0.000	990.000
2210.000	4000.000	617.640	0.100	0.050	0.110	396.000	22.000	990.000
3630.000	4000.000	617.800	0.000	0.060	0.000	437.000	0.000	1420.000
3630.000	4000.000	617.700	0.100	0.060	0.110	376.000	61.000	1420.000
4620.000	4000.000	617.650	0.000	0.050	0.000	695.000	0.000	990.000
4620.000	4000.000	617.740	0.090	0.040	0.100	605.000	90.000	990.000
5275.000	4000.000	617.670	0.000	0.020	0.000	638.000	0.000	655.000
5275.000	4000.000	617.770	0.100	0.030	0.110	574.000	64.000	655.000
5325.000	4000.000	617.660	0.000	-.010	0.000	296.000	0.000	50.000
5325.000	4000.000	617.760	0.100	-.010	0.110	141.000	155.000	50.000
5355.000	4000.000	617.770	0.000	0.110	0.000	67.000	0.000	30.000
5355.000	4000.000	617.870	0.100	0.110	0.110	67.000	0.000	30.000
5405.000	4000.000	617.920	0.000	0.150	0.000	638.000	0.000	50.000
5405.000	4000.000	618.010	0.090	0.140	0.100	577.000	61.000	50.000
6930.000	4000.000	618.000	0.000	0.080	0.000	696.000	0.000	1525.000
6930.000	4000.000	618.100	0.100	0.090	0.100	613.000	83.000	1525.000
8680.000	4000.000	618.080	0.000	0.080	0.000	239.000	0.000	1750.000
8680.000	4000.000	618.170	0.090	0.070	0.100	201.000	38.000	1750.000
9135.000	3600.000	618.200	0.000	0.120	0.000	240.000	0.000	455.000
9135.000	3600.000	618.290	0.090	0.120	0.100	228.000	12.000	455.000
10180.000	3600.000	618.350	0.000	0.150	0.000	400.000	0.000	1045.000
10180.000	3600.000	618.430	0.080	0.140	0.090	349.000	51.000	1045.000
10770.000	3600.000	618.480	0.000	0.130	0.000	463.000	0.000	590.000
10770.000	3600.000	618.560	0.080	0.130	0.090	358.000	105.000	590.000
10820.000	3600.000	618.460	0.000	-.020	0.000	280.000	0.000	50.000
10820.000	3600.000	618.550	0.090	-.010	0.100	229.000	51.000	50.000
10850.000	3600.000	618.900	0.000	0.440	0.000	300.000	0.000	30.000
10850.000	3600.000	618.990	0.090	0.440	0.100	249.000	51.000	30.000
10900.000	3600.000	618.990	0.000	0.090	0.000	482.000	0.000	50.000
10900.000	3600.000	619.070	0.080	0.080	0.090	379.000	103.000	50.000

12010.000	3600.000	619.150	0.080	0.080	0.090	439.000	38.000	1110.000
13408.000	3600.000	619.190	0.000	0.120	0.000	431.000	0.000	1398.000
13408.000	3600.000	619.260	0.070	0.110	0.080	388.000	43.000	1398.000
14735.000	3600.000	620.530	0.000	1.340	0.000	170.000	0.000	1327.000
14735.000	3600.000	619.920	-.610	0.660	-.400	151.000	19.000	1327.000

DATA FOR LAST CROSS SECTION

PROFILE	TYPE ENC	TARGET	TOP WIDTH AREA-ACRES	TOP WIDTH AREA-DIFF
1	0.000	0.000	144.562	0.000
2	4.000	0.018	128.966	-15.596

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Redford Twp.

3) WATERCOURSE: Sherwood Ashcroft Drain

4) DOCUMENT TYPE: Floodway

00BREAK00

THIS RUN EXECUTED 09 NOV 78 08.07.40

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
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T1 FLOOD INSURANCE STUDY
T2 REDFORD TOWNSHIP NATURAL CHANNEL
T3 ASHCROFT SHERWOOD DRAIN

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	0.000000	0.00	.5	0.	607.250	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.078	.078	.078	.100	.300	0.000	0.000	0.000	0.000	0.000
QT	2.000	1800.000	1800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	1.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	2490.000	19.000	175.000	226.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	611.700	0.000	610.300	25.000	608.800	50.000	607.600	75.000	606.400	100.000
GR	606.400	125.000	606.500	150.000	605.700	175.000	594.100	192.000	593.400	193.000
GR	592.700	195.000	592.700	200.000	593.000	205.000	593.400	207.000	594.600	207.000
GR	605.900	226.000	607.700	250.000	608.400	286.000	604.100	314.000	0.000	0.000
X1	2756.000	20.000	200.000	244.000	260.000	270.000	266.000	0.000	0.000	0.000
GR	618.600	0.000	618.400	25.000	618.300	50.000	617.700	75.000	615.600	100.000
GR	613.600	125.000	611.300	150.000	609.900	175.000	608.500	200.000	595.300	219.000
GR	595.200	220.000	594.900	225.000	595.300	228.000	597.000	229.000	606.400	244.000
GR	609.000	275.000	610.800	300.000	611.300	325.000	611.900	350.000	611.700	375.000
X1	3226.000	12.000	21.000	79.000	500.000	420.000	470.000	0.000	0.000	0.000
GR	607.700	0.000	607.500	10.000	606.900	21.000	601.600	37.000	600.300	48.000
GR	599.200	51.000	598.500	56.000	600.300	60.000	601.900	64.000	611.200	79.000
GR	614.200	96.000	614.700	121.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	3265.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
NC	.050	.050	.040	.600	.800	0.000	0.000	0.000	0.000	0.000
X1	3306.000	35.000	370.000	429.000	150.000	50.000	100.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	350.000	0.000	450.000	0.000	0.000	0.000	0.000
GR	613.100	0.000	611.800	50.000	609.900	100.000	609.000	177.000	608.500	200.000
GR	608.100	250.000	607.800	300.000	607.700	350.000	607.800	370.000	597.500	383.000
GR	596.400	390.000	596.000	394.500	594.800	395.000	594.200	396.000	594.000	396.500
GR	594.200	397.000	594.800	398.000	596.000	398.500	596.000	401.500	594.800	402.000
?	594.200	403.000	594.000	403.500	594.200	404.000	594.800	405.000	596.000	405.500

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GR	608.700	550.000	609.600	600.000	611.900	700.000	612.800	725.000	615.200	800.000
SB	0.000	3.190	2.500	0.000	2.000	0.000	25.000	1.000	594.000	594.000
X1	3394.000	0.000	0.000	0.000	88.000	88.000	88.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	598.000	607.800	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	350.000	0.000	450.000	0.000	0.000	0.000	0.000
BT	29.000	0.000	613.100	613.100	100.000	609.900	609.900	200.000	608.500	608.500
BT	300.000	607.800	607.800	370.000	607.800	607.800	383.000	607.800	597.500	390.000
BT	607.800	596.400	394.500	607.800	596.000	395.000	607.800	597.400	396.000	607.800
BT	597.800	396.500	607.800	598.000	397.000	607.800	597.800	398.000	607.800	597.400
BT	398.500	607.800	596.000	401.500	607.800	596.000	402.000	607.800	597.400	403.000
BT	607.800	597.800	403.500	607.800	598.000	404.000	607.800	597.800	405.000	607.800
BT	597.400	405.500	607.800	596.000	410.000	607.800	598.000	415.000	607.800	598.000
BT	429.000	607.800	607.800	450.000	607.900	607.900	500.000	608.300	608.300	550.000
BT	608.700	608.700	700.000	611.900	611.900	800.000	615.200	615.200	0.000	0.000
X1	3450.000	19.000	165.000	226.000	56.000	56.000	56.000	0.000	0.000	0.000
GR	610.100	0.000	611.400	15.000	610.900	40.000	610.800	65.000	611.000	95.000
GR	610.300	115.000	609.300	140.000	608.200	165.000	600.200	181.000	599.000	185.000
GR	597.000	190.000	598.000	195.000	600.200	197.000	601.300	206.000	609.200	226.000
GR	609.900	240.000	610.100	265.000	610.600	290.000	610.500	315.000	0.000	0.000
NC	.100	.050	.100	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	3810.000	17.000	141.000	232.000	470.000	350.000	420.000	0.000	0.000	0.000
GR	614.500	0.000	613.100	22.000	613.300	35.000	613.100	48.000	613.700	66.000
GR	613.200	91.000	612.700	116.000	610.600	141.000	608.000	166.000	601.500	189.000
GR	601.200	191.000	601.100	196.000	601.500	198.000	613.400	232.000	614.200	266.000
GR	614.700	291.000	613.700	316.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4300.000	16.000	121.000	191.000	490.000	490.000	490.000	0.000	0.000	0.000
GR	613.100	0.000	613.300	13.000	613.100	26.000	613.700	44.000	613.200	69.000
GR	612.700	94.000	610.800	121.000	605.500	146.000	603.500	150.000	602.600	151.000
GR	601.600	156.000	602.900	161.000	603.500	162.000	619.000	191.000	618.900	197.000
GR	620.700	259.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	2.000	680.000	680.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4310.000	0.000	0.000	0.000	10.000	10.000	10.000	0.000	0.000	0.000
X1	4369.000	14.000	100.000	170.000	59.000	59.000	59.000	0.000	0.000	0.000
GR	616.700	0.000	616.600	25.000	616.200	50.000	616.300	75.000	616.300	100.000
GR	605.500	125.000	603.500	129.000	602.600	130.000	601.800	135.000	602.900	140.000
GR	603.500	141.000	619.000	170.000	618.900	176.000	620.700	238.000	0.000	0.000
NC	.013	.013	.060	.600	.800	0.000	0.000	0.000	0.000	0.000
X1	4469.000	27.000	274.000	337.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	617.400	0.000	616.800	96.000	616.500	146.000	616.200	196.000	616.300	243.000
GR	616.300	274.000	603.100	292.000	601.100	292.500	599.800	293.800	599.100	296.000
GR	599.800	298.200	601.100	299.500	603.100	300.000	603.100	301.000	601.100	301.500
GR	599.800	302.800	599.100	305.000	599.800	307.200	601.100	308.500	603.100	309.000
GR	618.600	337.000	619.200	355.000	620.100	405.000	620.300	455.000	620.200	505.000
GR	620.700	605.000	621.300	680.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.360	3.000	0.000	4.500	0.000	100.000	1.000	599.100	599.100
X1	4531.000	0.000	0.000	0.000	62.000	62.000	62.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	607.100	616.200	0.000	0.000	0.000	0.000	0.000
BT	21.000	0.000	617.400	617.400	96.000	616.800	616.800	246.000	616.300	616.300
BT	274.000	616.300	616.300	292.000	617.100	603.100	292.500	617.100	605.300	293.800

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BT	605.300	300.000	617.200	603.100	301.000	617.300	603.100	301.500	617.400	605.300
BT	302.800	617.400	606.500	305.000	617.400	607.100	307.200	617.400	606.500	308.500
BT	617.400	605.300	309.000	617.400	603.100	337.000	618.600	618.600	405.000	620.100
BT	620.100	680.000	621.300	621.300	0.000	0.000	0.000	0.000	0.000	0.000
X1	4581.000	14.000	100.000	170.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	616.700	0.000	616.600	25.000	616.200	50.000	616.300	75.000	616.300	100.000
GR	605.500	125.000	603.500	129.000	602.600	130.000	601.800	135.000	602.900	140.000
GR	603.500	141.000	619.000	170.000	618.900	176.000	620.700	238.000	0.000	0.000
NC	.030	.013	.060	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	5120.000	20.000	200.000	246.000	600.000	500.000	539.000	0.000	0.000	0.000
GR	614.900	0.000	614.600	25.000	614.700	50.000	614.400	75.000	614.400	100.000
GR	613.700	125.000	613.700	150.000	613.800	175.000	613.900	200.000	605.500	215.000
GR	604.400	220.000	604.700	225.000	605.500	226.000	615.900	246.000	616.700	257.000
GR	615.600	275.000	615.300	300.000	616.000	350.000	614.800	375.000	614.300	400.000
QT	2.000	1800.000	1800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5170.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	200.000	0.000	246.000	0.000	0.000	0.000	0.000
X1	5450.000	17.000	155.000	217.000	400.000	250.000	280.000	0.000	0.000	0.000
GR	615.400	0.000	615.100	25.000	615.300	30.000	614.400	55.000	614.000	80.000
GR	613.800	105.000	613.800	130.000	613.500	155.000	605.700	174.000	604.900	175.000
GR	601.900	180.000	603.800	185.000	605.700	189.000	607.500	193.000	608.200	202.000
GR	613.100	217.000	613.100	250.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5550.000	18.000	392.300	407.700	100.000	100.000	100.000	0.000	0.000	0.000
GR	613.500	0.000	612.000	100.000	611.000	200.000	609.700	250.000	609.000	300.000
GR	608.700	350.000	608.800	392.300	602.200	392.300	601.700	397.700	600.700	402.700
GR	601.200	407.700	609.900	407.700	609.500	450.000	610.600	500.000	611.800	550.000
GR	612.900	600.000	615.100	700.000	615.800	750.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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CCHV= .100 CEHV= .300
*SECNO 2490.000

3265 DIVIDED FLOW

3280 CROSS SECTION 2490.00 EXTENDED 3.15 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2490.00	14.55	607.25	0.00	607.25	607.44	.19	0.00	0.00	605.70
1800.	65.	1688.	47.	78.	473.	44.	0.	0.	605.90
0.00	.83	3.57	1.06	.078	.078	.078	0.000	592.70	82.29
.002206	0.	0.	0.	0	0	0	0.00	182.22	314.00
*SECNO 2756.000									
2756.00	13.10	608.00	0.00	0.00	608.42	.43	.92	.07	608.50
1800.	0.	1781.	19.	0.	339.	15.	3.	1.	606.40
.01	0.00	5.26	1.28	.078	.078	.078	.078	594.90	200.72
.006102	260.	266.	270.	3	0	0	0.00	62.34	263.06

*SECNO 3226.000
3280 CROSS SECTION 3226.00 EXTENDED 2.55 FEET

3226.00	11.75	610.25	0.00	0.00	610.49	.23	2.04	.02	606.90
1800.	124.	1676.	0.	60.	423.	0.	7.	1.	611.20
.05	2.06	3.96	0.00	.078	.078	.078	.078	598.50	0.00
.003243	500.	470.	420.	3	0	0	0.00	77.48	77.48

*SECNO 3265.000
3280 CROSS SECTION 3265.00 EXTENDED 2.69 FEET

3265.00	11.89	610.39	0.00	0.00	610.61	.22	.13	.00	606.90
1800.	130.	1670.	0.	63.	431.	0.	8.	2.	611.20
.05	2.06	3.88	0.00	.078	.078	.078	.078	598.50	0.00
.003050	40.	40.	40.	2	0	0	0.00	77.70	77.70

CCHV= .600 CEHV= .800
*SECNO 3306.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 350.0 450.0 TYPE= 1 TARGET= 100.000

3306.00	16.65	610.65	0.00	0.00	610.75	.10	.06	.08	607.80
1800.	49.	1703.	49.	58.	670.	59.	9.	2.	607.80
.06	.84	2.54	.83	.050	.040	.050	.073	594.00	350.00

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SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.00      3.19      2.50      0.00      2.00      0.00     25.00      1.00    594.00    594.00

*SECNO 3394.000
PRESSURE AND WEIR FLOW

 EGPRS      EGLWC      H3        QWEIR     QPR       BAREA   TRAPEZOID     ELLC      ELTRD
                                                              AREA
   867.44    610.75     0.00     1759.      39.       25.       24.      598.00    607.80


3470 ENCROACHMENT STATIONS=      350.0     450.0  TYPE=      1  TARGET=      100.000
  3394.00    16.67   610.67      0.00      0.00   610.77       .09       .02      0.00    607.80
    1800.      49.    1702.       49.       58.     672.       59.       11.        2.    607.80
      .07      .84     2.53       .83      .050     .040      .050      .070    594.00    350.00
  .000229      88.      88.       88.         2        0        11      0.00    100.00    450.00

*SECNO 3450.000

3265 DIVIDED FLOW

3280 CROSS SECTION   3450.00 EXTENDED        .58 FEET


  3450.00    13.68   610.68      0.00      0.00   610.85       .17       .02       .06    608.20
    1800.      69.    1707.       25.       74.     498.       44.       12.        2.    609.20
      .08      .92     3.43       .56      .050     .040      .050      .068    597.00      0.00
  .000575      56.      56.       56.         3        0         0      0.00    217.44    315.00

CCHV=     .100 CEHV=     .300
*SECNO 3810.000
  3810.00    10.13   611.23      0.00      0.00   611.51       .28       .63       .03    610.60
    1800.       2.    1798.        0.        2.     423.        0.       17.        4.    613.40
      .11      .69     4.25      0.00      .100     .100      .050      .077    601.10    133.48
  .010043     470.     420.      350.         3        0         0      0.00     92.33    225.81

*SECNO 4300.000
3280 CROSS SECTION   4300.00 EXTENDED       1.28 FEET


  4300.00    12.78   614.38      0.00      0.00   614.55       .16      3.02       .01    610.80
    1800.     243.    1557.        0.      178.     451.        0.       23.        5.    619.00
      .15     1.36     3.46      0.00      .100     .100      .050      .083    601.60      0.00
  .004169     490.     490.      490.         3        0         0      0.00    182.35    182.35

*SECNO 4310.000
3280 CROSS SECTION   4310.00 EXTENDED       1.46 FEET

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
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4310.00	12.96	614.56	0.00	0.00	614.58	.02	.02	.01	610.80
680.	103.	577.	0.	200.	462.	0.	23.	5.	619.00
.15	.52	1.25	0.00	.100	.100	.050	.083	601.60	0.00
.000532	10.	10.	10.	2	0	0	0.00	182.69	182.69

*SECNO 4369.000

4369.00	12.79	614.59	0.00	0.00	614.63	.05	.04	.01	616.30
680.	0.	680.	0.	0.	397.	0.	24.	5.	619.00
.16	0.00	1.71	0.00	.100	.100	.050	.084	601.80	103.97
.001157	59.	59.	59.	2	0	0	0.00	57.77	161.74

CCHV= .600 CEHV= .800

*SECNO 4469.000

4469.00	15.56	614.66	0.00	0.00	614.69	.03	.05	.01	616.30
680.	0.	680.	0.	0.	456.	0.	25.	6.	618.60
.18	0.00	1.49	0.00	.013	.060	.013	.082	599.10	276.24
.000294	100.	100.	100.	3	0	0	0.00	53.63	329.87

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.36	3.00	0.00	4.50	0.00	100.00	1.00	599.10	599.10

*SECNO 4531.000

ERROR ELTRD.LT.MIN ROAD ELEV, ELTRD SET EQUAL TO MIN ROAD ELEV

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
616.35	614.69	0.00	0.	675.	100.	100.	607.10	616.30

4531.00	17.20	616.30	0.00	0.00	616.32	.02	1.64	0.00	616.30
680.	1.	679.	0.	3.	549.	0.	25.	6.	618.60
.19	.21	1.24	0.00	.013	.060	.013	.082	599.10	179.17
.000177	62.	62.	62.	2	0	0	0.00	153.68	332.85

*SECNO 4581.000

4581.00	14.51	616.31	0.00	0.00	616.34	.03	.01	.00	616.30
680.	1.	679.	0.	3.	503.	0.	26.	6.	619.00
.20	.25	1.35	0.00	.013	.060	.013	.081	601.80	42.55
.000220	50.	50.	50.	2	0	0	0.00	122.44	164.98

CCHV= .100 CEHV= .300

*SECNO 5120.000

3265 DIVIDED FLOW

3280 CROSS SECTION 5120.00 EXTENDED 2.09 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

5120.00	11.99	616.39	0.00	0.00	616.40	.01	.06	.00	613.90

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	.40	.68	.71	1.00	.030	.060	.013	.077	604.40	0.00
	.000065	600.	539.	500.	3	0	0	0.00	390.71	400.00

*SECNO 5170.000

3280 CROSS SECTION 5170.00 EXTENDED 1.80 FEET.

3470 ENCROACHMENT STATIONS= 200.0 246.0 TYPE= 1 TARGET= 46.000

5170.00	11.70	616.10	0.00	0.00	616.56	.47	.02	.14	613.90
1800.	0.	1800.	0.	0.	328.	0.	36.	9.	100000.00
.41	0.00	5.48	0.00	.030	.060	.013	.076	604.40	200.00
.004375	50.	50.	50.	2	0	0	0.00	46.00	246.00

*SECNO 5450.000

3280 CROSS SECTION 5450.00 EXTENDED 3.58 FEET

5450.00	14.79	616.69	0.00	0.00	616.78	.09	.18	.04	613.50
1800.	507.	815.	478.	368.	539.	118.	41.	11.	613.10
.44	1.38	1.51	4.05	.030	.060	.013	.075	601.90	0.00
.000229	400.	280.	250.	3	0	0	0.00	250.00	250.00

*SECNO 5550.000

3280 CROSS SECTION 5550.00 EXTENDED 3.28 FEET

5550.00	16.08	616.78	0.00	0.00	616.79	.00	.00	.01	608.80
1800.	776.	44.	979.	2362.	237.	1482.	46.	12.	609.90
.50	.33	.19	.66	.030	.060	.013	.074	600.70	0.00
.000004	100.	100.	100.	2	0	0	0.00	750.00	750.00

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THIS RUN EXECUTED 09 NOV 78 08.07.40

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
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T1      FLOOD INSURANCE STUDY
T2      REDFORD TOWNSHIP ENCROACHMENT
T3      ASHCROFT SHERWOOD DRAIN

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

        0.         3.         0.         0.  0.000000       0.00         .5         0.   607.350      0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

      15.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
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*PROF 2

CCHV= .100 CEHV= .300

*SECNO 2490.000

2800 NAT Q1= 383.27 WSEL= 607.25 ENC Q1= 383.27 WSEL= 607.35 RATIO= 0.0000

NAT Q1= 393. RATIOS LOB,CH,ROB= .0416 .9301 .0283 WSEL= 607.35

3265 DIVIDED FLOW

3280 CROSS SECTION 2490.00 EXTENDED 3.25 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
3470 ENCROACHMENT STATIONS=			122.8	308.5	TYPE=	4	TARGET=	.026	
2490.00	14.65	607.35	0.00	607.25	607.54	.19	0.00	0.00	605.70
1800.	53.	1720.	27.	56.	478.	33.	0.	0.	605.90
0.00	.94	3.60	.83	.078	.078	.078	0.000	592.70	122.80
.002209	0.	0.	0.	0	0	0	0.00	138.17	308.48

*SECNO 2756.000

2800 NAT Q1= 230.42 WSEL= 608.00 ENC Q1= 232.28 WSEL= 608.10 RATIO= -.0081

NAT Q1= 235. RATIOS LOB,CH,ROB= 0.0000 .9875 .0125 WSEL= 608.10

3470 ENCROACHMENT STATIONS=			200.0	244.0	TYPE=	4	TARGET=	.012	
2756.00	13.21	608.11	0.00	608.00	608.54	.43	.92	.07	608.50
1800.	0.	1800.	0.	0.	344.	0.	3.	1.	606.40
.01	0.00	5.24	0.00	.078	.078	.078	.078	594.90	200.55
.006250	260.	266.	270.	2	0	0	0.00	43.45	244.00

*SECNO 3226.000

2800 NAT Q1= 316.09 WSEL= 610.25 ENC Q1= 316.09 WSEL= 610.35 RATIO= 0.0000

NAT Q1= 323. RATIOS LOB,CH,ROB= .0712 .9288 0.0000 WSEL= 610.35

3280 CROSS SECTION 3226.00 EXTENDED 2.67 FEET

3470 ENCROACHMENT STATIONS=			7.8	79.0	TYPE=	4	TARGET=	.022	
3226.00	11.87	610.37	0.00	610.25	610.61	.24	2.06	.02	606.90
1800.	89.	1711.	0.	41.	430.	0.	7.	1.	611.20
.05	2.17	3.98	0.00	.078	.078	.078	.078	598.50	7.77
.003220	500.	470.	420.	3	0	0	0.00	69.90	77.67

*SECNO 3265.000

2800 NAT Q1= 325.92 WSEL= 610.39 ENC Q1= 325.92 WSEL= 610.49 RATIO= -.0000

NAT Q1= 333. RATIOS LOB,CH,ROB= .0742 .9258 0.0000 WSEL= 610.49

3280 CROSS SECTION 3265.00 EXTENDED 2.81 FEET

3470 ENCROACHMENT STATIONS=			7.3	79.0	TYPE=	4	TARGET=	.022	
3265.00	12.01	610.51	0.00	610.39	610.74	.23	.12	.00	606.90
1800.	96.	1704.	0.	45.	438.	0.	8.	1.	611.20
.05	2.14	3.89	0.00	.078	.078	.078	.078	598.50	7.25

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CCHV= .600 CEHV= .800
*SECNO 3306.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
3470 ENCROACHMENT STATIONS=		350.0	450.0	TYPE=	1	TARGET=	100.000		
3306.00	16.78	610.78	0.00	610.65	610.87	.09	.06	.08	607.80
1800.	51.	1698.	51.	61.	678.	62.	9.	1.	607.80
.06	.84	2.50	.83	.050	.040	.050	.073	594.00	350.00
.000221	150.	100.	50.	3	0	0	0.00	100.00	450.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	3.19	2.50	0.00	2.00	0.00	25.00	1.00	594.00	594.00

*SECNO 3394.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
867.57	610.98	0.00	1763.	38.	25.	24.	598.00	607.80
3470 ENCROACHMENT STATIONS=		350.0	450.0	TYPE=	1	TARGET=	100.000		
3394.00	16.80	610.80	0.00	610.67	610.89	.09	.02	0.00	607.80
1800.	51.	1697.	52.	61.	679.	62.	11.	2.	607.80
.07	.84	2.50	.83	.050	.040	.050	.070	594.00	350.00
.000220	88.	88.	88.	2	0	11	0.00	100.00	450.00

*SECNO 3450.000
2800 NAT Q1= 750.67 WSEL= 610.68 ENC Q1= 750.67 WSEL= 610.78 RATIO= 0.0000
QNAT Q1= 771. RATIOS LOB,CH,ROB= .0415 .9415 .0171 WSEL= 610.78
3280 CROSS SECTION 3450.00 EXTENDED .70 FEET

3470 ENCROACHMENT STATIONS=		142.4	231.8	TYPE=	4	TARGET=	.027		
3450.00	13.80	610.80	0.00	610.68	610.98	.18	.02	.07	608.20
1800.	53.	1741.	7.	47.	505.	8.	12.	2.	609.20
.08	1.11	3.44	.79	.050	.040	.050	.068	597.00	142.42
.000570	56.	56.	56.	2	0	0	0.00	89.37	231.79

CCHV= .100 CEHV= .300
*SECNO 3810.000
2800 NAT Q1= 179.62 WSEL= 611.23 ENC Q1= 185.04 WSEL= 611.33 RATIO= -.0302
NAT Q1= 185. RATIOS LOB,CH,ROB= .0013 .9987 0.0000 WSEL= 611.33

3470 ENCROACHMENT STATIONS=		141.0	232.0	TYPE=	4	TARGET=	.001		
3810.00	10.26	611.36	0.00	611.23	611.63	.27	.62	.03	610.60
1800.	0.	1800.	0.	0.	433.	0.	16.	3.	613.40
.11	0.00	4.15	0.00	.100	.100	.050	.077	601.10	141.00
.009428	470.	420.	350.	3	0	0	0.00	85.17	226.17

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*SECNO 4300.000
2800 NAT Q1= 278.78 WSEL= 614.38 ENC Q1= 278.78 WSEL= 614.48 RATIO= 0.0000
NAT Q1= 288. RATIOS LOB,CH,ROB= .1444 .8556 0.0000 WSEL= 614.48
3280 CROSS SECTION 4300.00 EXTENDED 1.34 FEET

3470 ENCROACHMENT STATIONS= 46.9 191.0 TYPE= 4 TARGET= .032

4300.00	12.85	614.45	0.00	614.38	614.62	.17	2.98	.01	610.80
1800.	205.	1595.	0.	133.	455.	0.	22.	4.	619.00
.15	1.55	3.51	0.00	.100	.100	.050	.083	601.60	46.86
.004254	490.	490.	490.	3	0	0	0.00	135.62	182.48

*SECNO 4310.000
2800 NAT Q1= 294.75 WSEL= 614.56 ENC Q1= 294.75 WSEL= 614.66 RATIO= -.0000
NAT Q1= 304. RATIOS LOB,CH,ROB= .1605 .8395 0.0000 WSEL= 614.66
3280 CROSS SECTION 4310.00 EXTENDED 1.53 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 33.9 191.0 TYPE= 4 TARGET= .030

4310.00	13.03	614.63	0.00	614.56	614.65	.02	.02	.02	610.80
680.	90.	590.	0.	160.	466.	0.	22.	4.	619.00
.15	.56	1.27	0.00	.100	.100	.050	.083	601.60	33.95
.000540	10.	10.	10.	2	0	0	0.00	148.88	182.83

*SECNO 4369.000
2800 NAT Q1= 199.91 WSEL= 614.59 ENC Q1= 203.81 WSEL= 614.69 RATIO= -.0195
NAT Q1= 204. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 614.69

3470 ENCROACHMENT STATIONS= 100.0 170.0 TYPE= 4 TARGET= 0.000

4369.00	12.86	614.66	0.00	614.59	614.70	.04	.04	.01	616.30
680.	0.	680.	0.	0.	401.	0.	23.	4.	619.00
.16	0.00	1.70	0.00	.100	.100	.050	.084	601.80	103.80
.001124	59.	59.	59.	2	0	0	0.00	58.08	161.88

CCHV= .600 CEHV= .800
*SECNO 4469.000
2800 NAT Q1= 396.81 WSEL= 614.66 ENC Q1= 403.18 WSEL= 614.76 RATIO= -.0161
NAT Q1= 403. RATIOS LOB,CH,ROB= 0.0000 1.0000 0.0000 WSEL= 614.76

3470 ENCROACHMENT STATIONS= 274.0 337.0 TYPE= 4 TARGET= 0.000

4469.00	15.63	614.73	0.00	614.66	614.76	.03	.05	.01	616.30
680.	0.	680.	0.	0.	460.	0.	24.	4.	618.60
.18	0.00	1.48	0.00	.013	.060	.013	.082	599.10	276.14
.000287	100.	100.	100.	3	0	0	0.00	53.86	330.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.36	3.00	0.00	4.50	0.00	100.00	1.00	599.10	599.10

*SECNO 4531.000

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2800 NAT Q1= 510.55 WSEL= 616.30 ENC Q1= 518.26 WSEL= 616.40 RATIO= -.0151
NAT Q1= 522. RATIOS LOB,CH,ROB= .0075 .9925 0.0000 WSEL= 616.40
WATER EL=CHANGE FROM NATURAL PROFILES BRIDGE

3470 ENCROACHMENT STATIONS= 274.0 337.0 TYPE= 4 TARGET= .007

4531.00	17.27	616.37	0.00	616.30	616.40	.02	.01	.01	616.30
680.	0.	680.	0.	0.	553.	0.	25.	4.	618.60
.19	0.00	1.23	0.00	.013	.060	.013	.082	599.10	274.00
.000174	62.	62.	62.	0	0	4	0.00	58.98	332.98

*SECNO 4581.000
2800 NAT Q1= 457.94 WSEL= 616.31 ENC Q1= 465.63 WSEL= 616.41 RATIO= -.0168
NAT Q1= 468. RATIOS LOB,CH,ROB= .0052 .9948 0.0000 WSEL= 616.41

3470 ENCROACHMENT STATIONS= 100.0 170.0 TYPE= 4 TARGET= .005

4581.00	14.58	616.38	0.00	616.31	616.41	.03	.01	.00	616.30
680.	0.	680.	0.	0.	507.	0.	25.	4.	619.00
.20	0.00	1.34	0.00	.013	.060	.013	.081	601.80	100.00
.000217	50.	50.	50.	2	0	0	0.00	65.10	165.10

CCHV= .100 CEHV= .300
*SECNO 5120.000
2800 NAT Q1= 840.71 WSEL= 616.39 ENC Q1= 840.71 WSEL= 616.49 RATIO= 0.0000
NAT Q1= 902. RATIOS LOB,CH,ROB= .4394 .3407 .2199 WSEL= 616.49

3265 DIVIDED FLOW

3280 CROSS SECTION 5120.00 EXTENDED 2.16 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 24.3 393.4 TYPE= 4 TARGET= .068

5120.00	12.06	616.46	0.00	616.39	616.47	.01	.06	.00	613.90
680.	296.	251.	133.	409.	345.	135.	34.	7.	615.90
.40	.72	.73	.98	.030	.060	.013	.077	604.40	24.29
.000068	600.	539.	500.	3	0	0	0.00	362.05	393.45

*SECNO 5170.000
3280 CROSS SECTION 5170.00 EXTENDED 1.88 FEET

3470 ENCROACHMENT STATIONS= 200.0 246.0 TYPE= 1 TARGET= 46.000

5170.00	11.78	616.18	0.00	616.10	616.63	.46	.03	.13	613.90
1800.	0.	1800.	0.	0.	332.	0.	35.	7.	100000.00
.40	0.00	5.42	0.00	.030	.060	.013	.076	604.40	200.00
.004232	50.	50.	50.	2	0	0	0.00	46.00	246.00

*SECNO 5450.000
2800 NAT Q1= 1188.96 WSEL= 616.69 ENC Q1= 1188.96 WSEL= 616.79 RATIO= 0.0000
NAT Q1= 1241. RATIOS LOB,CH,ROB= .2898 .4429 .2673 WSEL= 616.79
3280 CROSS SECTION 5450.00 EXTENDED 3.66 FEET

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5450.00	14.86	616.76	0.00	616.69	616.85	.09	.18	.04	613.50
1800.	501.	837.	462.	341.	544.	119.	40.	8.	613.10
.44	1.47	1.54	3.87	.030	.060	.013	.075	601.90	25.57
.000234	400.	280.	250.	3	0	0	0.00	224.10	249.68

*SECNO 5550.000

2800 NAT Q1= 9271.98 WSEL= 616.78 ENC Q1= 9271.98 WSEL= 616.88 RATIO= 0.0000

NAT Q1= 9549. RATIOS LOB,CH,ROB= .4298 .0242 .5460 WSEL= 616.88

3280 CROSS SECTION 5550.00 EXTENDED 3.35 FEET

3470 ENCROACHMENT STATIONS= 32.1 690.6 TYPE= 4 TARGET= .029

5550.00	16.15	616.85	0.00	616.78	616.86	.00	.00	.01	608.80
1800.	771.	45.	984.	2274.	238.	1419.	45.	9.	609.90
.49	.34	.19	.69	.030	.060	.013	.074	600.70	32.12
.000004	100.	100.	100.	2	0	0	0.00	658.43	690.55

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THIS RUN EXECUTED 09 NOV 78 08.07.40

****
HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SUMMARY OF ERRORS

PRINTED IN U.S.A.

FLOODWAY DATA, ASHCROFT SHERWOOD DRAIN
PROFILE NO. 2

STATION	FLOODWAY WIDTH (FT)	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
2490.000	186.	566.	3.2	607.4	607.3	.1
2756.000	43.	344.	5.2	608.1	608.0	.1
3226.000	70.	471.	3.8	610.4	610.3	.1
3265.000	71.	482.	3.7	610.5	610.4	.1
3306.000	100.	800.	2.2	610.8	610.7	.1
3394.000	100.	802.	2.2	610.8	610.7	.1
3450.000	89.	561.	3.2	610.8	610.7	.1
3810.000	85.	433.	4.2	611.3	611.2	.1
4300.000	136.	587.	3.1	614.5	614.4	.1
4310.000	149.	626.	1.1	614.7	614.6	.1
4369.000	58.	401.	1.7	614.7	614.6	.1
4469.000	54.	460.	1.5	614.8	614.7	.1
4531.000	5 9	553.	1.2	616.4	616.3	.1
4581.000	65.	507.	1.3	616.4	616.3	.1
5120.000	369.	889.	.8	616.5	616.4	.1
5170.000	46.	332.	5.4	616.2	616.1	.1
5450.000	224.	1005.	1.8	616.8	616.7	.1
5550.000	658.	3931.	.5	616.9	616.8	.1

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THIS RUN EXECUTED 09 NOV 78 08.07.40

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**************************************************

EJ
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00BREAK00

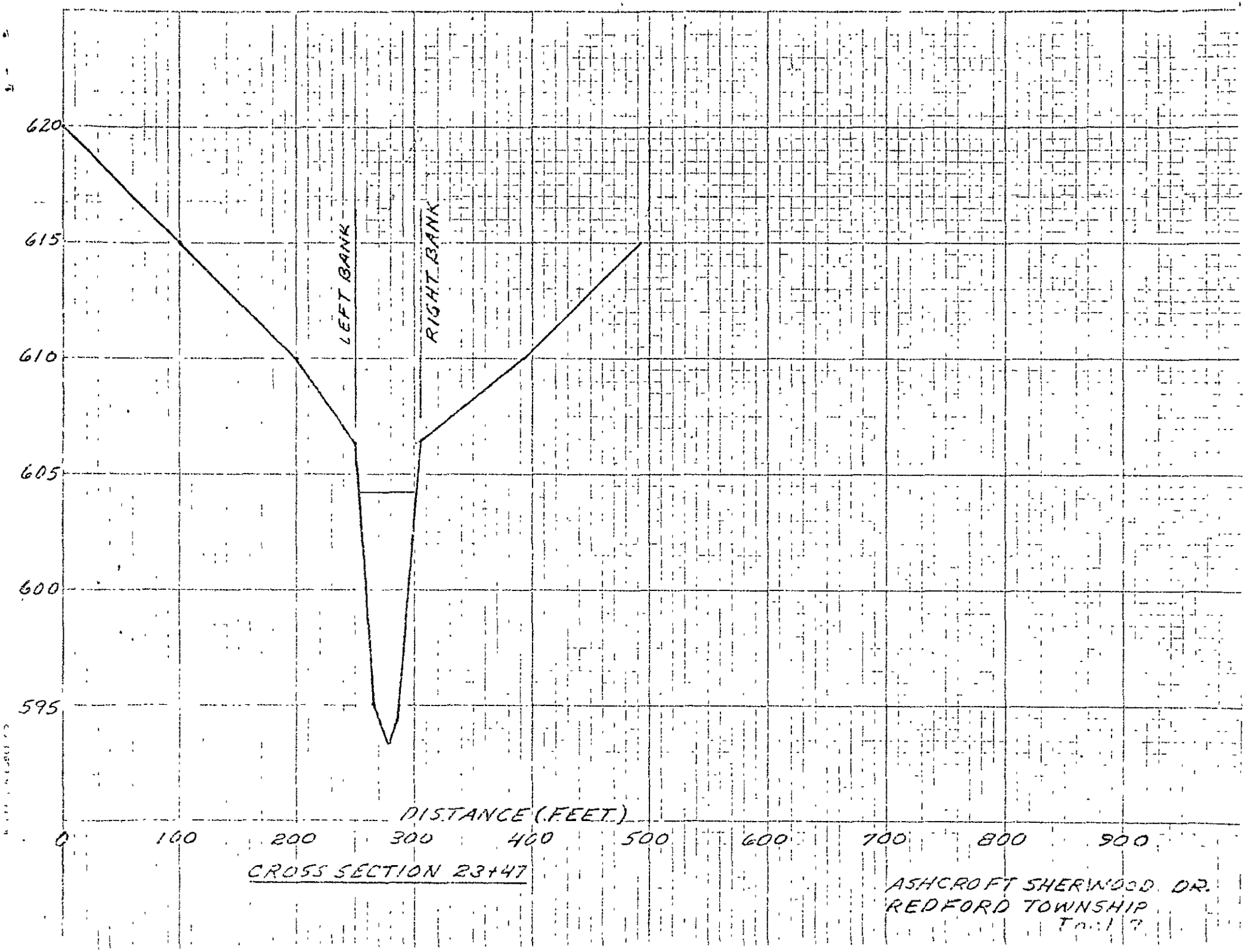
1) COUNTY: Wayne

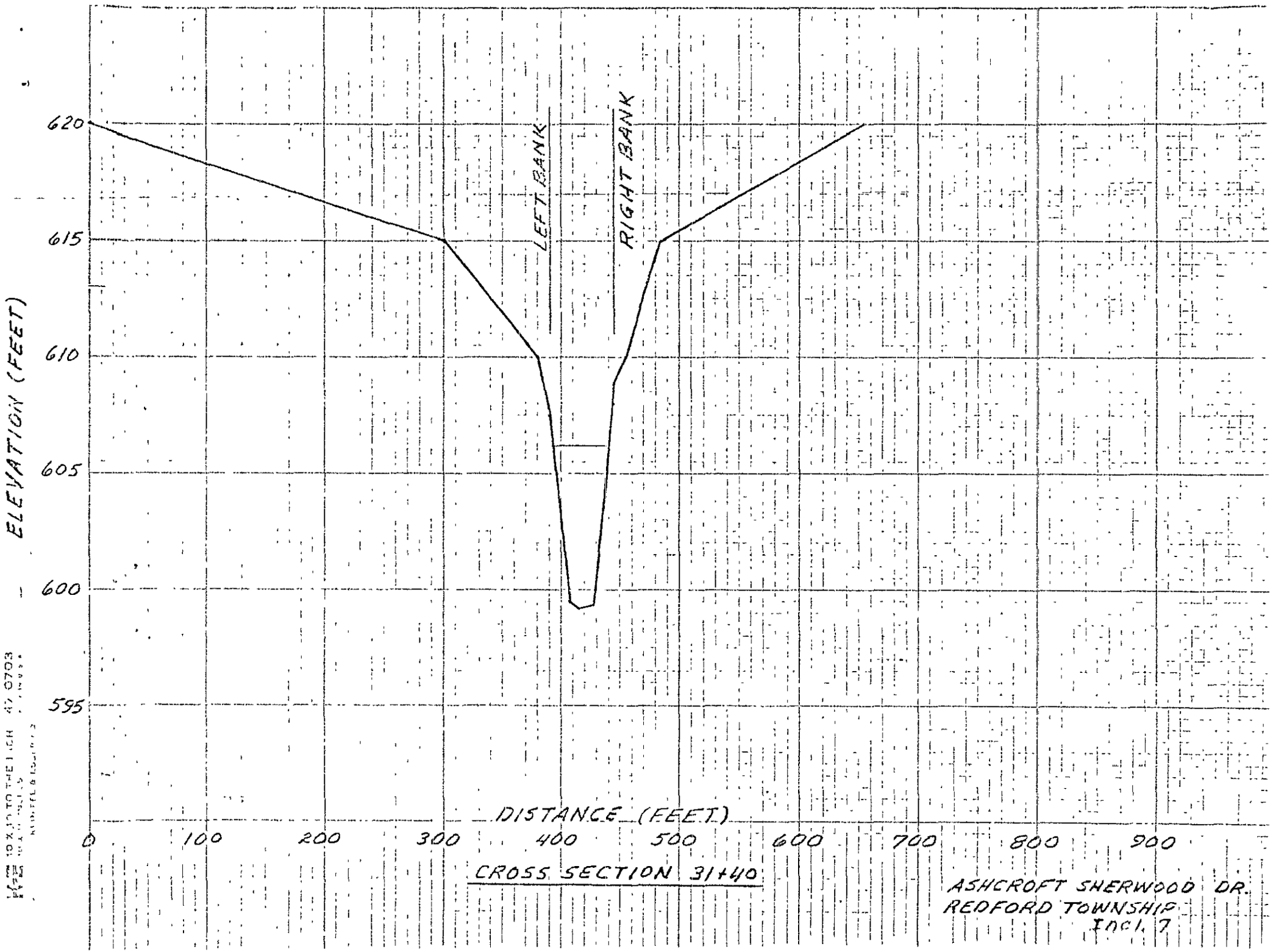
2) STUDY NAME: Redford Twp.

3) WATERCOURSE: Sherwood Ashcroft Drain

4) DOCUMENT TYPE: Report

00BREAK00


ELEVATION (FEET)
620
615
610
605
600
595
LEFT BANK
RIGHT BANK
DISTANCE (FEET)
0
100
200
300
400
500
600
700
800
900
CROSS SECTION 23+47
ASHCROFT SHERWOOD DR.
REDFORD TOWNSHIP



CROSS SECTION 31+40

ASHCROFT SHERWOOD DR.
REDFORD TOWNSHIP
Incl. 7

ASHCROFT SHERWOOD DR
REDFORD TOWNSHIP
Inc 17

CROSS SECTION 34+50

DISTANCE (FEET)

0 100

RIGHT BANK

LEFT BANK

ELEVATION (FEET)

610 605 600

10 X 10 TO INCH 47 0703

ASHCROFT SHERWOOD DR
REDFORD TOWNSHIP
T 1 1 7

CROSS SECTION 44+18

RIGHT BANK

LEFT BANK

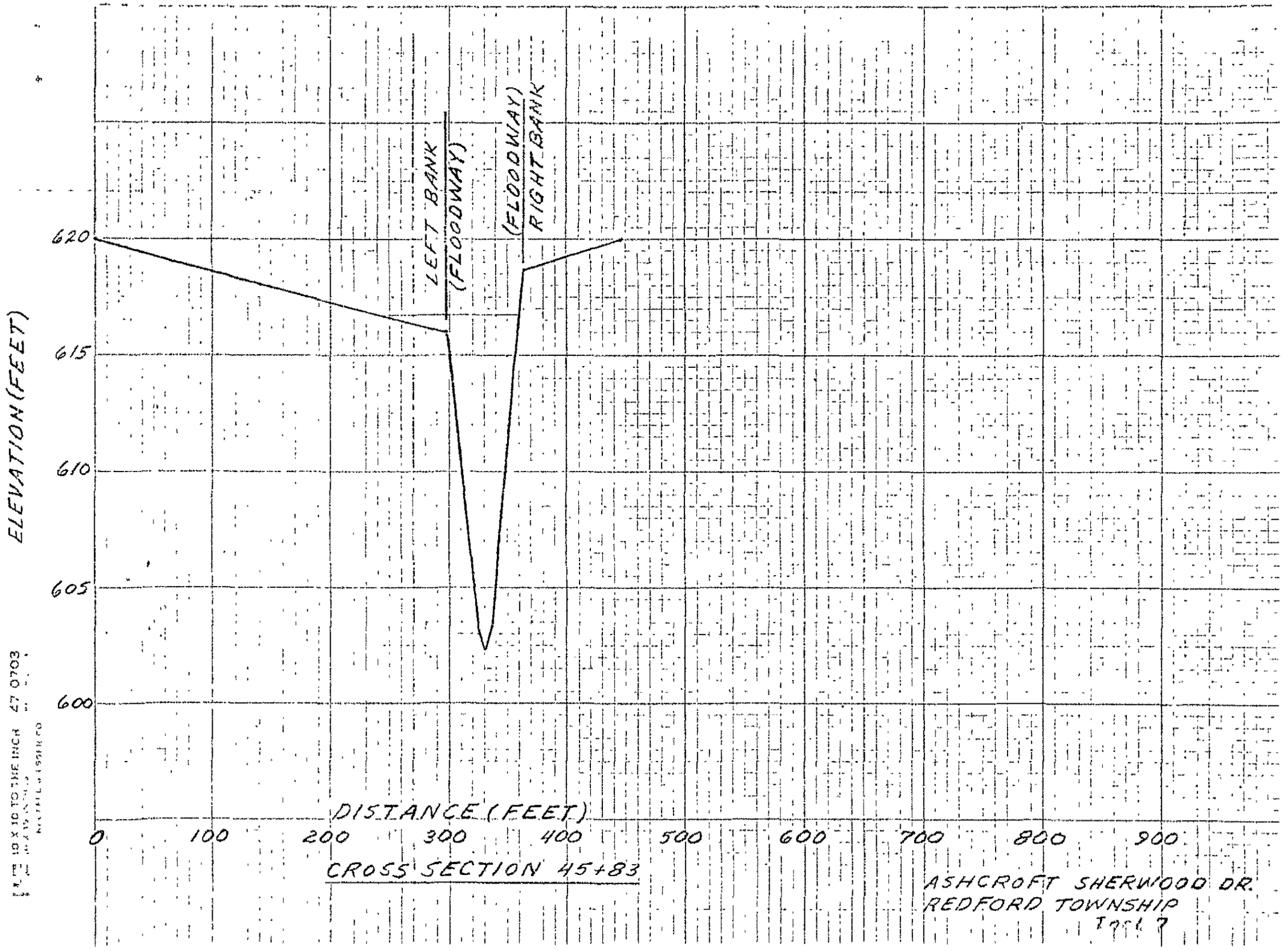
DISTANCE (FEET)

0 100 200 300 400 500 600 700 800 900

ELEVATION (FEET)

620 615 610 605 600

10 X 10 TO THE INCH 47 0703



ELEVATION (FEET)
620
615
610
605
600
LEFT BANK
(FLOODWAY)
(FLOODWAY)
RIGHT BANK
DISTANCE (FEET)
0
100
200
300
400
500
600
700
800
900
CROSS SECTION 45+83
ASHCROFT SHERWOOD DR.
REDFORD TOWNSHIP
Incl 7

ASHCROFT SHERWOOD DR.
REDFORD TOWNSHIP
FIG. 17

CROSS SECTION 50+50

DISTANCE (FEET)

0 100 200 300 400 500 600 700 800 900

ELEVATION (FEET)

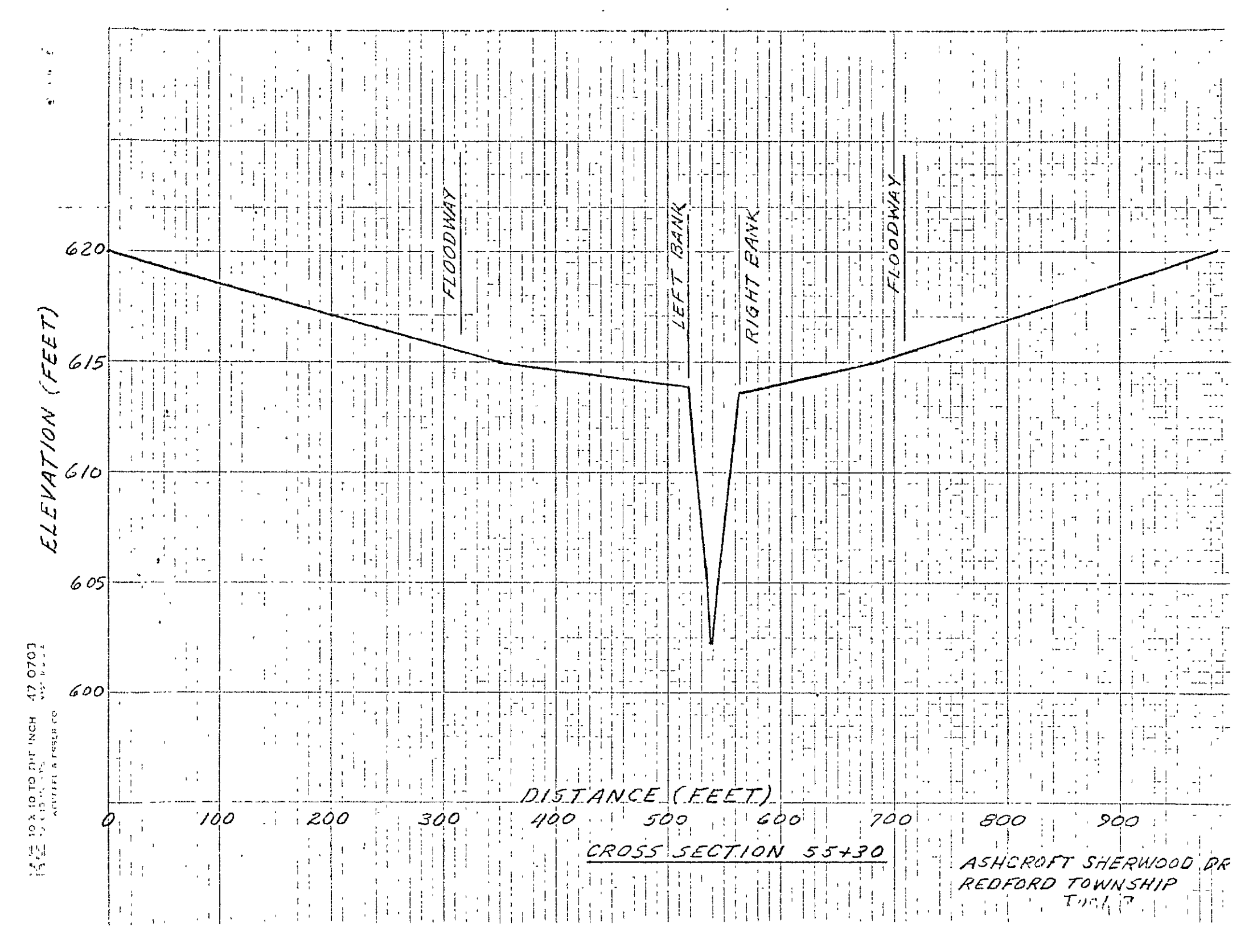
620 615 610 605 600

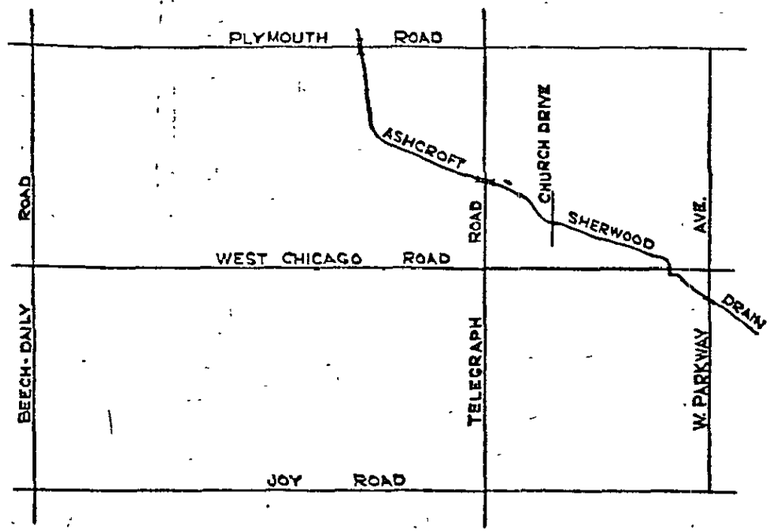
RIGHT BANK
(FLOODWAY)

LEFT BANK

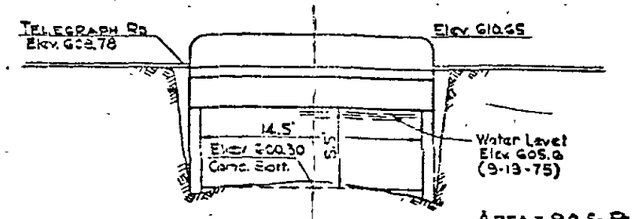
FLOODWAY

KEUFFEL & ESSER CO.
10 X 10 TO THE INCH 47 0703


FLOODWAY
LEFT BANK
RIGHT BANK
FLOODWAY
620
615
610
605
600
ELEVATION (FEET)
0
100
200
300
400
500
600
700
800
900
DISTANCE (FEET)
CROSS SECTION 55+30
ASHCROFT SHERWOOD DR
REDFORD TOWNSHIP

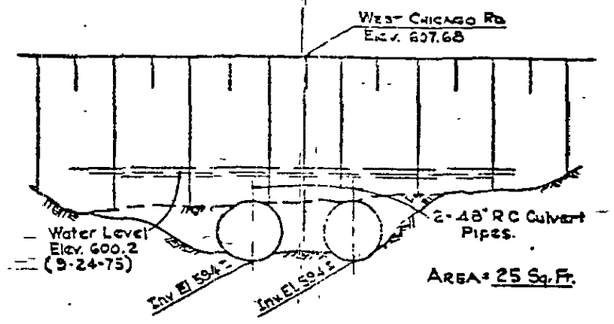


LOCATION PLAN
Scale: 6"=1 Mile



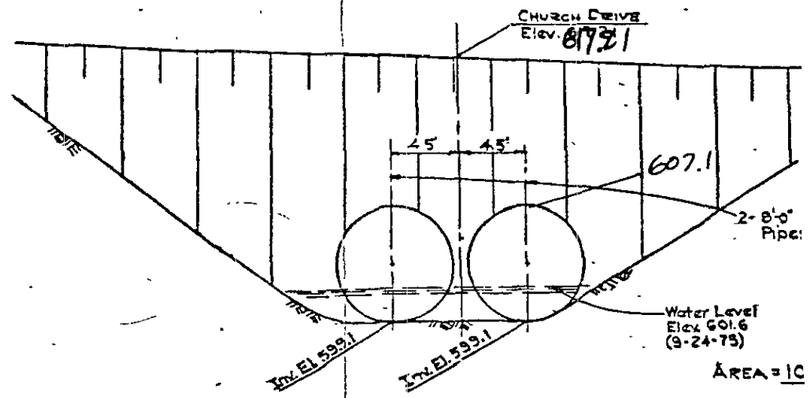
AREA = 80 Sq Ft

EXIST. CULVERT-TELEGRAPH ROAD
2370' UPSTREAM
SCALE: 1"=5'



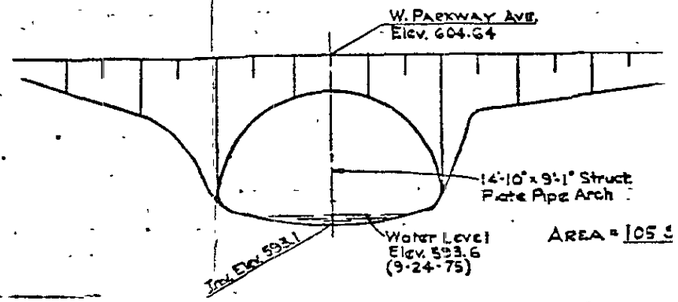
AREA = 25 Sq. Ft.

EXIST. CULVERT-WEST CHICAGO ROAD
SCALE: 1"=5'



AREA = 10

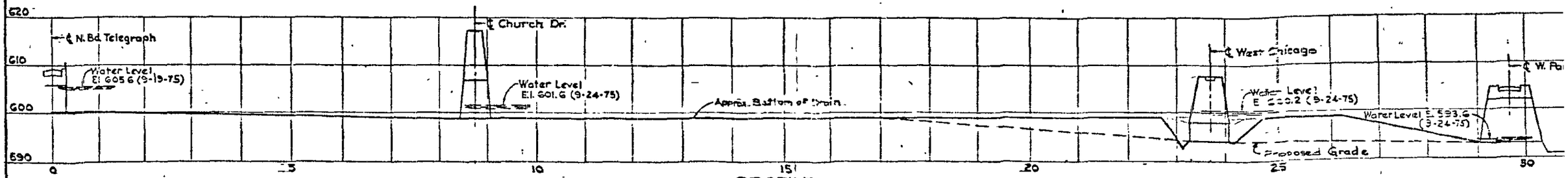
EXIST. CULVERT - CHURCH DRIVE
1500' UPSTREAM
SCALE: 1"=5'



AREA = 105 S

EXIST. CULVERT - W. PARKWAY AVE.
600' DOWNSTREAM
SCALE: 1"=5'

EXHIBIT A



PROFILE
SCALE: Horiz. 1"=100, Vert. 1"=10

REVISIONS	DRAWN BY	CHECKED BY	DATE	CORRECT
2 Added Water Level Elevs to Profile & Rvd Scale	R.W.D.	D.K.C.	10-17-75	ASSIST. ENGINEER OF DESIGN
1 Rev Drain Profile at W. Chicago	TRACED BY	CHECKED BY	DATE	
	CORRECT D.K. Compton BOARD LEADER			APPROVED ENGR. DIV. OF H.

BOARD OF
WAYNE COUNTY ROAD COMMISSIONERS
DESIGN DIVISION

WEST CHICAGO ROAD OVER
ASHCROFT-SHERWOOD DRAIN
STUDY

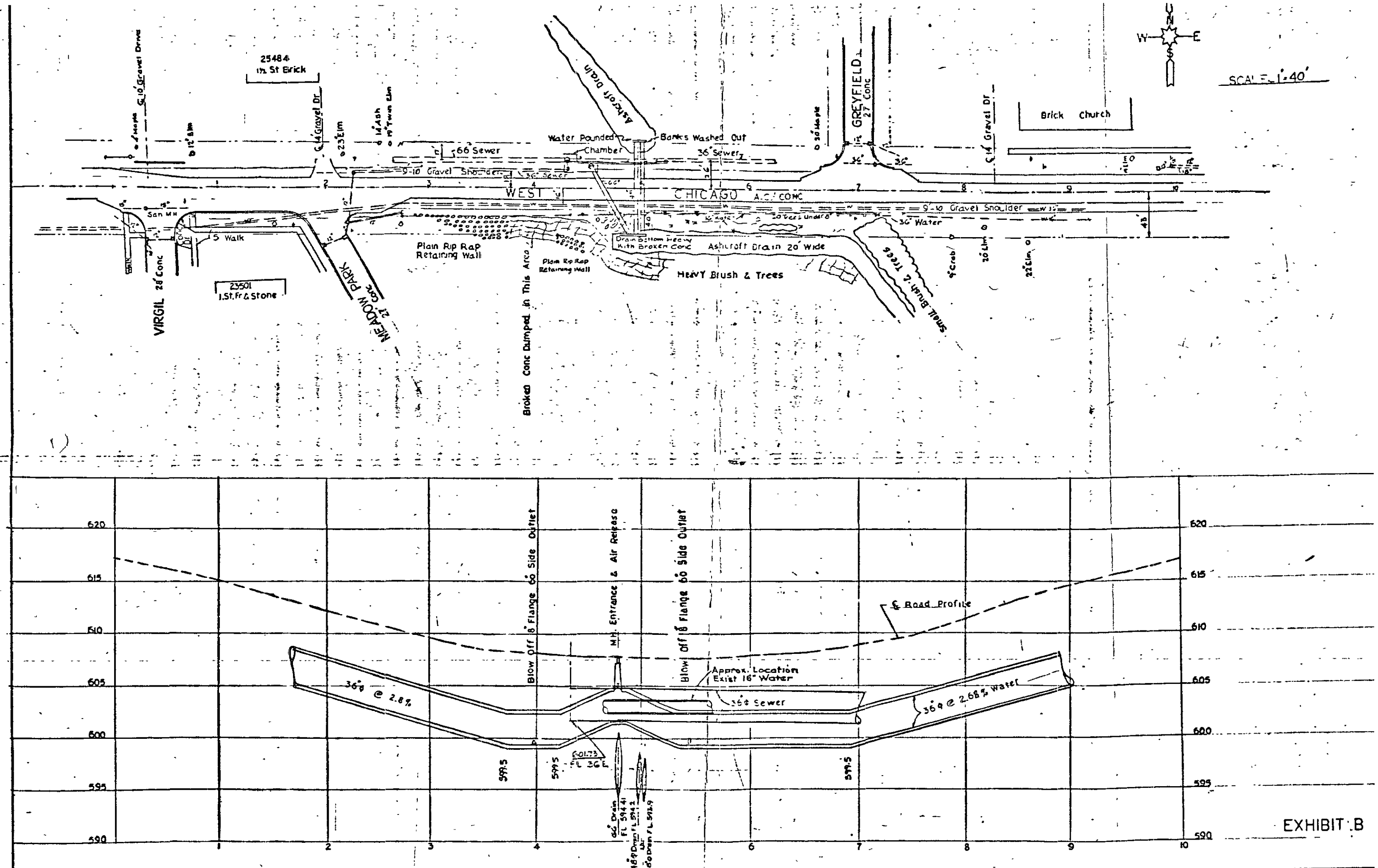


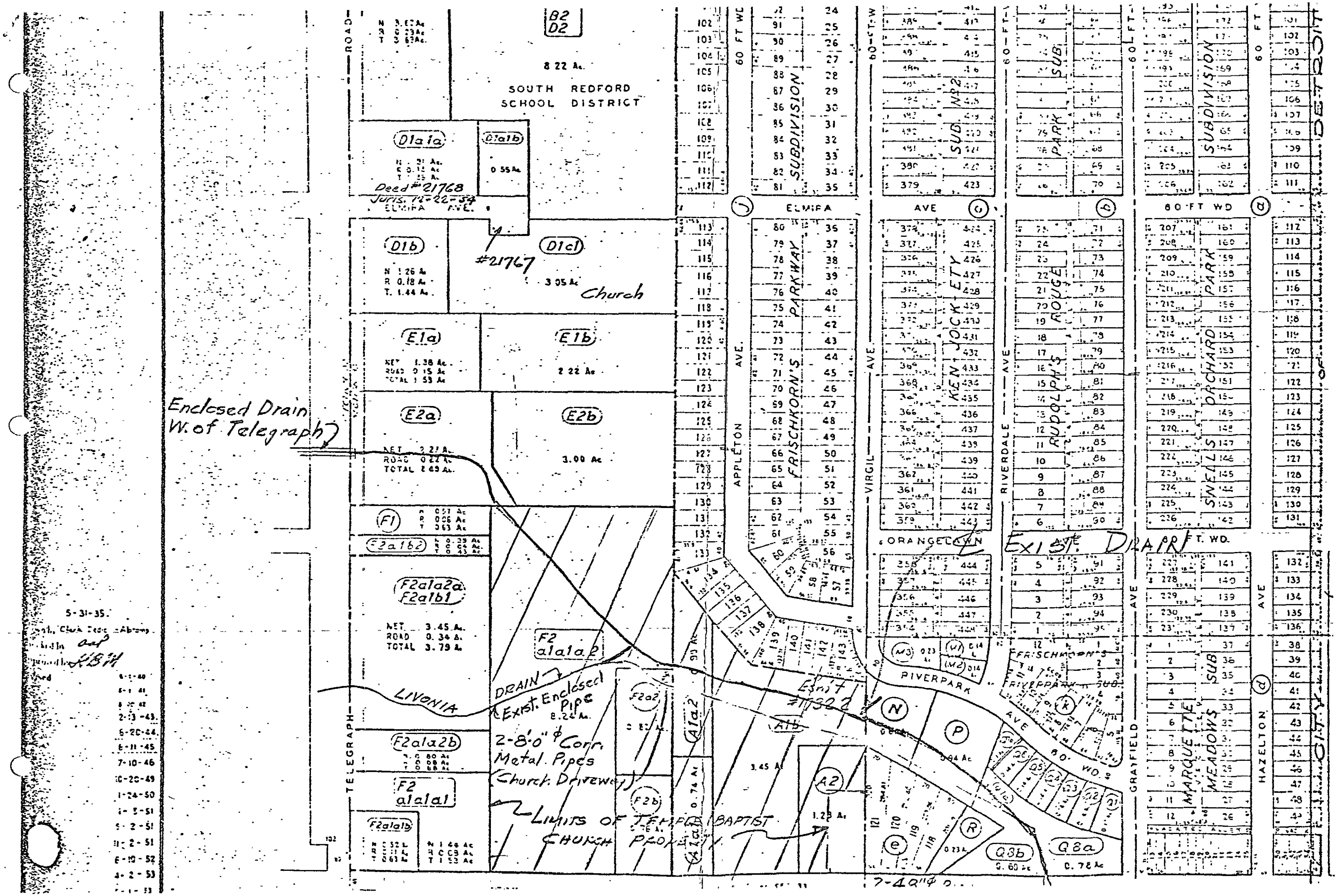
EXHIBIT B

REVISIONS	DRAWN BY	CHECKED BY	DATE	CORRECT
	JT		12-15-75	ASSIST. ENGINEER OF DESIGN
	TRACED BY	CHECKED BY	DATE	APPROVED
	CORRECT: DK Compton, SQUAD LEADER			ENGINEER OF DESIGN

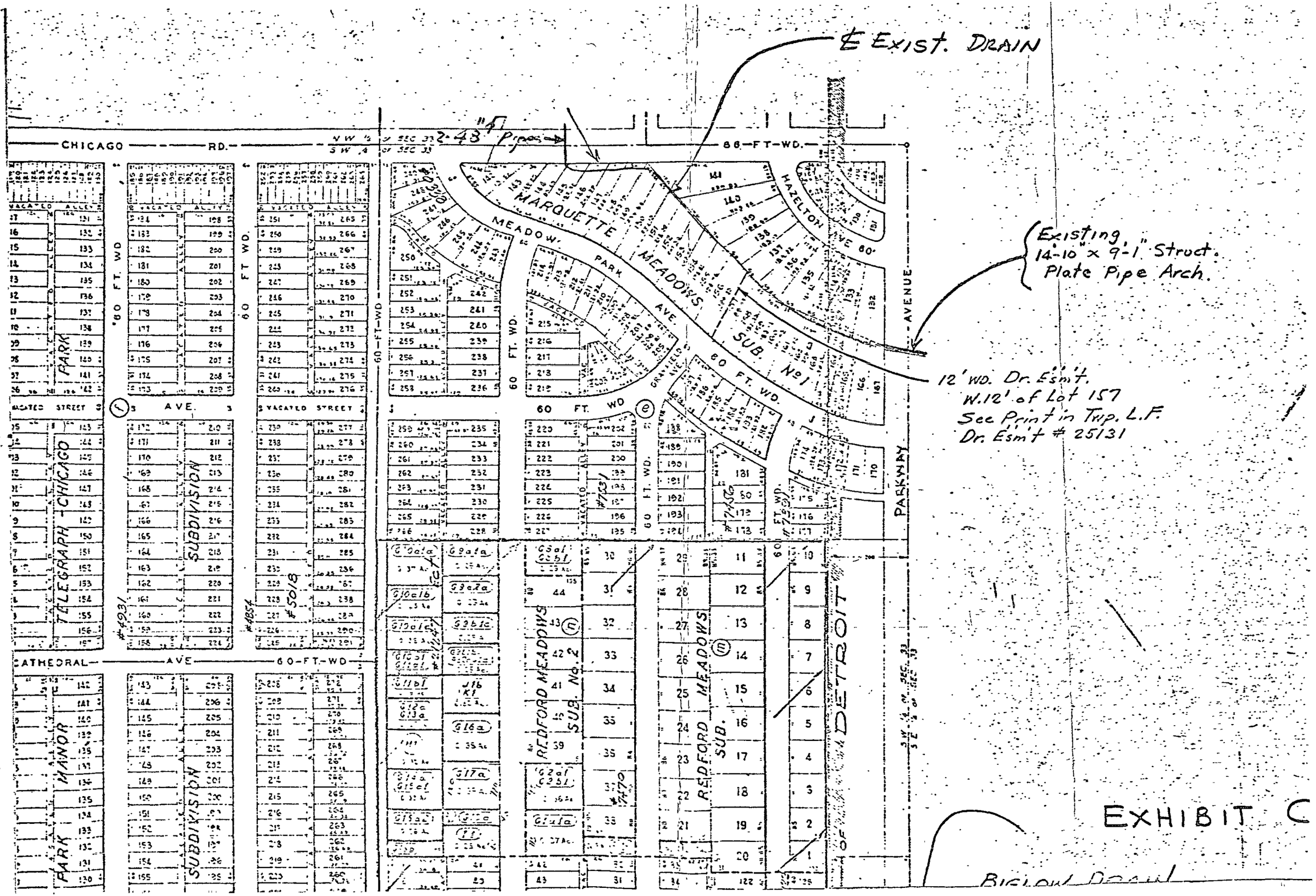
BOARD OF
WAYNE COUNTY ROAD COMMISSIONERS
DESIGN DIVISION

WEST CHICAGO ROAD OVER ASHCROFT SHERWOOD DRAIN STUDY

COUNTY
ISSUE NO.
DATE



SOUTH REDFORD SCHOOL DISTRICT
8.22 Ac.
B2
D2
D1a1a
D1a1b
0.55 Ac.
Deed #21768
Juris. 12-22-54
ELMIRA AVE.
D1b
N 1.26 Ac.
R 0.18 Ac.
T. 1.44 Ac.
#21767
D1c1
3.05 Ac.
Church
E1a
NET 1.38 Ac.
ROAD 0.15 Ac.
TOTAL 1.53 Ac.
E1b
2.22 Ac.
E2a
NET 2.27 Ac.
ROAD 0.22 Ac.
TOTAL 2.49 Ac.
E2b
3.00 Ac.
Enclosed Drain W. of Telegraph
F1
F2a1b2
F2a1a2a
F2a1b1
NET 3.45 Ac.
ROAD 0.34 Ac.
TOTAL 3.79 Ac.
F2 a1a1a2
LIVONIA
DRAIN
Exist. Enclosed Pipe
8.24 Ac.
2-8'-0" ϕ Corr. Metal Pipes (Church Driveway)
F2a1a2b
F2 a1a1a1
F2a1a1b
LIMITS OF TEMPLE BAPTIST CHURCH PROPERTY
F2a2
F2b
A1a2
A1b
A2
3.45 Ac.
1.28 Ac.
Esmt #11322
N
P
R
Q8b
Q8a
0.60 Ac.
0.78 Ac.
TELEGRAPH
ROAD
APPLETON AVE.
VIRGIL AVE.
RIVERDALE AVE.
GRAYFIELD AVE
HAZELTON AVE
60 FT WD
SUBDIVISION
FRISCHKORN'S PARKWAY
KEN JOCKETY SUB. No 2
RUDOLPH'S ROUGE PARK SUB
SNELLS ORCHARD PARK
MARQUETTE MEADOWS SUB
ORANGELAWN AVE
RIVERPARK AVE
FRISCHKORN'S RIVERPARK SUB
Exist. DRAIN
DETROIT
CITY
5-31-35.



℄ Exist. Drain
2-48" Pipes
Existing 14'-10" x 9'-1" Struct. Plate Pipe Arch.
12' WD. Dr. Esm't. W.12' of Lot 157 See Print in Twp. L.F. Dr. Esm't # 25131
CHICAGO RD.
86-FT-WD.
MARQUETTE MEADOWS SUB. No 1
MEADOW PARK AVE.
HAZELTON AVE 60'
AVENUE
PARKWAY
60 FT. WD.
VACATED STREET
VACATED ALLEY
TELEGRAPH-CHICAGO PARK
SUBDIVISION
CATHEDRAL AVE 60-FT-WD
PARK MANOR
REDFORD MEADOWS SUB. No. 2
REDFORD MEADOWS SUB.
DETROIT
#4931
#4854
#5018
#7531
#7470
EXHIBIT C
BIGLOW DRAIN

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Redford Twp.

3) WATERCOURSE: Sherwood Ashcroft Drain

4) DOCUMENT TYPE: Summary

00BREAK00

THIS RUN EXECUTED 09 NOV 78 08.09.06

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
*****************************************************

T1      FLOOD INSURANCE STUDY
T2      REDFORD TOWNSHIP 10 YR.
T3      ASHCROFT SHERWOOD DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        2.        0.        0.    .002180     0.00       .5        0.    603.000    0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

NC      .078      .078      .078      .100      .300     0.000     0.000     0.000     0.000     0.000
QT     4.000   950.000  1520.000  1800.000  2400.000     0.000     0.000     0.000     0.000     0.000

X1  2490.000    19.000   175.000   226.000     0.000     0.000     0.000     0.000     0.000     0.000
GR   611.700     0.000   610.300    25.000   608.800    50.000   607.600    75.000   606.400   100.000
GR   606.400   125.000   606.500   150.000   605.700   175.000   594.100   192.000   593.400   193.000
GR   592.700   195.000   592.700   200.000   593.000   205.000   593.400   207.000   594.600   207.000
GR   605.900   226.000   607.700   250.000   608.400   286.000   604.100   314.000     0.000     0.000

X1  2756.000    20.000   200.000   244.000   260.000   270.000   266.000     0.000     0.000     0.000
GR   618.600     0.000   618.400    25.000   618.300    50.000   617.700    75.000   615.600   100.000
GR   613.600   125.000   611.300   150.000   609.900   175.000   608.500   200.000   595.300   219.000
GR   595.200   220.000   594.900   225.000   595.300   228.000   597.000   229.000   606.400   244.000
GR   609.000   275.000   610.800   300.000   611.300   325.000   611.900   350.000   611.700   375.000

X1  3226.000    12.000    21.000    79.000   500.000   420.000   470.000     0.000     0.000     0.000
GR   607.700     0.000   607.500    10.000   606.900    21.000   601.600    37.000   600.300    48.000
GR   599.200    51.000   598.500    56.000   600.300    60.000   601.900    64.000   611.200    79.000
GR   614.200    96.000   614.700   121.000     0.000     0.000     0.000     0.000     0.000     0.000

X1  3265.000     0.000     0.000     0.000    40.000    40.000    40.000     0.000     0.000     0.000
NC      .050      .050      .040      .600      .800     0.000     0.000     0.000     0.000     0.000

X1  3306.000    35.000   370.000   429.000   150.000    50.000   100.000     0.000     0.000     0.000
X3     0.000     0.000     0.000   350.000     0.000   450.000     0.000     0.000     0.000     0.000
GR   613.100     0.000   611.800    50.000   609.900   100.000   609.000   177.000   608.500   200.000
GR   608.100   250.000   607.800   300.000   607.700   350.000   607.800   370.000   597.500   383.000
GR   596.400   390.000   596.000   394.500   594.800   395.000   594.200   396.000   594.000   396.500
GR   594.200   397.000   594.800   398.000   596.000   398.500   596.000   401.500   594.800   402.000
GR   594.200   403.000   594.000   403.500   594.200   404.000   594.800   405.000   596.000   405.500
GR   598.000   410.000   598.000   415.000   607.800   429.000   607.900   450.000   608.300   500.000
GR   608.700   550.000   609.600   600.000   611.900   700.000   612.800   725.000   615.200   800.000
SB     0.000     3.190     2.500     0.000     2.000     0.000    25.000     1.000   594.000   594.000
```

This section has been adjusted from previous submitted

Incl. 2

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X2	0.000	0.000	1.000	598.000	607.800	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	350.000	0.000	450.000	0.000	0.000	0.000	0.000
BT	29.000	0.000	613.100	613.100	100.000	609.900	609.900	200.000	608.500	608.500
BT	300.000	607.800	607.800	370.000	607.800	607.800	383.000	607.800	597.500	390.000
BT	607.800	596.400	394.500	607.800	596.000	395.000	607.800	597.400	396.000	607.800
BT	597.800	396.500	607.800	598.000	397.000	607.800	597.800	398.000	607.800	597.400
BT	398.500	607.800	596.000	401.500	607.800	596.000	402.000	607.800	597.400	403.000
BT	607.800	597.800	403.500	607.800	598.000	404.000	607.800	597.800	405.000	607.800
BT	597.400	405.500	607.800	596.000	410.000	607.800	598.000	415.000	607.800	598.000
BT	429.000	607.800	607.800	450.000	607.900	607.900	500.000	608.300	608.300	550.000
BT	608.700	608.700	700.000	611.900	611.900	800.000	615.200	615.200	0.000	0.000
X1	3450.000	19.000	165.000	226.000	56.000	56.000	56.000	0.000	0.000	0.000
GR	610.100	0.000	611.400	15.000	610.900	40.000	610.800	65.000	611.000	95.000
GR	610.300	115.000	609.300	140.000	608.200	165.000	600.200	181.000	599.000	185.000
GR	597.000	190.000	598.000	195.000	600.200	197.000	601.300	206.000	609.200	226.000
GR	609.900	240.000	610.100	265.000	610.600	290.000	610.500	315.000	0.000	0.000
NC	.100	.050	.100	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	3810.000	17.000	141.000	232.000	470.000	350.000	420.000	0.000	0.000	0.000
GR	614.500	0.000	613.100	22.000	613.300	35.000	613.100	48.000	613.700	66.000
GR	613.200	91.000	612.700	116.000	610.600	141.000	608.000	166.000	601.500	189.000
GR	601.200	191.000	601.100	196.000	601.500	198.000	613.400	232.000	614.200	266.000
GR	614.700	291.000	613.700	316.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4300.000	16.000	121.000	191.000	490.000	490.000	490.000	0.000	0.000	0.000
GR	613.100	0.000	613.300	13.000	613.100	26.000	613.700	44.000	613.200	69.000
GR	612.700	94.000	610.800	121.000	605.500	146.000	603.500	150.000	602.600	151.000
GR	601.600	156.000	602.900	161.000	603.500	162.000	619.000	191.000	618.900	197.000
GR	620.700	259.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	4.000	645.000	670.000	680.000	690.000	0.000	0.000	0.000	0.000	0.000
X1	4310.000	0.000	0.000	0.000	10.000	10.000	10.000	0.000	0.000	0.000
X1	4369.000	14.000	100.000	170.000	59.000	59.000	59.000	0.000	0.000	0.000
GR	616.700	0.000	616.600	25.000	616.200	50.000	616.300	75.000	616.300	100.000
GR	605.500	125.000	603.500	129.000	602.600	130.000	601.800	135.000	602.900	140.000
GR	603.500	141.000	619.000	170.000	618.900	176.000	620.700	238.000	0.000	0.000
NC	.013	.013	.060	.600	.800	0.000	0.000	0.000	0.000	0.000
X1	4469.000	27.000	274.000	337.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	617.400	0.000	616.800	96.000	616.500	146.000	616.200	196.000	616.300	243.000
GR	616.300	274.000	603.100	292.000	601.100	292.500	599.800	293.800	599.100	296.000
GR	599.800	298.200	601.100	299.500	603.100	300.000	603.100	301.000	601.100	301.500
GR	599.800	302.800	599.100	305.000	599.800	307.200	601.100	308.500	603.100	309.000
GR	618.600	337.000	619.200	355.000	620.100	405.000	620.300	455.000	620.200	505.000
GR	620.700	605.000	621.300	680.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	2.360	3.000	0.000	4.500	0.000	100.000	1.000	599.100	599.100
X1	4531.000	0.000	0.000	0.000	62.000	62.000	62.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	607.100	616.200	0.000	0.000	0.000	0.000	0.000
BT	21.000	0.000	617.400	617.400	96.000	616.800	616.800	246.000	616.300	616.300
BT	274.000	616.300	616.300	292.000	617.100	603.100	292.500	617.100	605.300	293.800
BT	617.100	606.500	296.000	617.100	607.100	298.200	617.100	606.500	299.500	617.200
BT	605.300	300.000	617.200	603.100	301.000	617.300	603.100	301.500	617.400	605.300
BT	302.800	617.400	606.500	305.000	617.400	607.100	307.200	617.400	606.500	308.500
BT	617.400	605.300	309.000	617.400	603.100	337.000	618.600	618.600	405.000	620.100
BT	620.100	680.000	621.300	621.300	0.000	0.000	0.000	0.000	0.000	0.000

100Y r=610

very high for channel n

parement n

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X1	4581.000	14.000	100.000	170.000	50.000	50.000	50.000	0.000	0.000	0.000	0.000
GR	616.700	0.000	616.600	25.000	616.200	50.000	616.300	75.000	616.300	100.000	
GR	605.500	125.000	603.500	129.000	602.600	130.000	601.800	135.000	602.900	140.000	
GR	603.500	141.000	619.000	170.000	618.900	176.000	620.700	238.000	0.000	0.000	
NC	.030	.013	.060	.100	.300	0.000	0.000	0.000	0.000	0.000	0.000
X1	5120.000	20.000	200.000	246.000	600.000	500.000	539.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	200.000	246.000	0.000	0.000	0.000	0.000	0.000	
GR	614.900	0.000	614.600	25.000	50.000	614.700	614.400	75.000	614.400	100.000	
GR	613.700	125.000	613.700	150.000	175.000	613.800	613.900	200.000	605.500	215.000	
GR	604.400	220.000	604.700	225.000	226.000	605.500	615.900	246.000	616.700	257.000	
GR	615.600	275.000	615.300	300.000	350.000	616.000	614.800	375.000	614.300	400.000	
QT	4.000	950.000	1520.000	1800.000	2400.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5170.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000	0.000
X1	5450.000	17.000	155.000	217.000	400.000	250.000	280.000	0.000	0.000	0.000	0.000
GR	615.400	0.000	615.100	25.000	615.300	30.000	614.400	55.000	614.000	80.000	
GR	613.800	105.000	613.800	130.000	613.500	155.000	605.700	174.000	604.900	175.000	
GR	601.900	180.000	603.800	185.000	605.700	189.000	607.500	193.000	608.200	202.000	
GR	613.100	217.000	613.100	250.000	0.000	0.000	0.000	0.000	0.000	0.000	
X1	5550.000	18.000	392.300	407.700	100.000	100.000	100.000	0.000	0.000	0.000	
GR	613.500	0.000	612.000	100.000	611.000	200.000	609.700	250.000	609.000	300.000	
GR	608.700	350.000	608.800	392.300	602.200	392.300	601.700	397.700	600.700	402.700	
GR	601.200	407.700	609.900	609.500	607.700	450.000	610.600	500.000	611.800	550.000	
GR	612.900	600.000	615.100	700.000	615.800	750.000	0.000	0.000	0.000	0.000	

PRINTED IN U.S.A.

THIS RUN EXECUTED 09 NOV 78 08.09.09

****
HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

ASHCROFT SHERWOOD DRAIN

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	2490.000	0.00	0.00	0.00	592.70	950.00	604.22	0.00	604.35	21.83	2.95	322.02	203.34
	2490.000	0.00	0.00	0.00	592.70	1520.00	606.56	0.00	606.74	22.23	3.41	479.00	322.38
A	2490.000	0.00	0.00	0.00	592.70	1800.00	607.25	0.00	607.44	22.03	3.57	595.14	383.52
	2490.000	0.00	0.00	0.00	592.70	2400.00	608.31	0.00	608.51	22.00	3.83	817.78	511.62
	2756.000	266.00	0.00	0.00	594.90	950.00	605.01	0.00	605.31	60.93	4.37	217.33	121.70
	2756.000	266.00	0.00	0.00	594.90	1520.00	607.33	0.00	607.70	57.48	4.89	315.22	200.49
B	2756.000	266.00	0.00	0.00	594.90	1800.00	608.00	0.00	608.42	60.98	5.26	353.89	230.49
	2756.000	266.00	0.00	0.00	594.90	2400.00	609.02	0.00	609.57	69.99	6.05	426.87	286.87
	3226.000	470.00	0.00	0.00	598.50	950.00	607.44	0.00	607.63	40.65	3.50	273.71	149.00
C	3226.000	470.00	0.00	0.00	598.50	1520.00	609.51	0.00	609.72	32.92	3.78	426.03	264.92
	3226.000	470.00	0.00	0.00	598.50	1800.00	610.25	0.00	610.49	32.42	3.96	483.49	316.13
	3226.000	470.00	0.00	0.00	598.50	2400.00	611.52	0.00	611.80	33.45	4.38	583.12	414.99
	3265.000	40.00	0.00	0.00	598.50	950.00	607.61	0.00	607.79	36.72	3.39	284.60	156.77
	3265.000	40.00	0.00	0.00	598.50	1520.00	609.65	0.00	609.85	30.77	3.69	436.57	274.04
	3265.000	40.00	0.00	0.00	598.50	1800.00	610.39	0.00	610.61	30.50	3.87	494.08	325.95
	3265.000	40.00	0.00	0.00	598.50	2400.00	611.66	0.00	611.93	31.51	4.30	594.60	427.56
	3306.000	100.00	0.00	0.00	594.00	950.00	607.86	0.00	607.91	1.84	1.88	507.77	699.98
	3306.000	100.00	0.00	0.00	594.00	1520.00	609.89	0.00	609.98	2.14	2.34	711.45	1038.09
	3306.000	100.00	0.00	0.00	594.00	1800.00	610.65	0.00	610.75	2.31	2.54	787.20	1184.75
	3306.000	100.00	0.00	0.00	594.00	2400.00	611.96	0.00	612.08	2.70	2.96	918.02	1459.83
	3394.000	88.00	607.80	598.00	594.00	950.00	608.95	0.00	608.99	1.19	1.64	616.86	869.71
	3394.000	88.00	607.80	598.00	594.00	1520.00	609.95	0.00	610.04	2.10	2.32	717.51	1049.47
	3394.000	88.00	607.80	598.00	594.00	1800.00	610.67	0.00	610.77	2.29	2.53	789.44	1189.22
	3394.000	88.00	607.80	598.00	594.00	2400.00	611.96	0.00	612.08	2.70	2.96	917.87	1459.49
	3450.000	56.00	0.00	0.00	597.00	950.00	608.95	0.00	609.04	3.86	2.41	399.32	483.41
D	3450.000	56.00	0.00	0.00	597.00	1520.00	609.96	0.00	610.12	5.97	3.28	495.72	622.00
	3450.000	56.00	0.00	0.00	597.00	1800.00	610.68	0.00	610.85	5.75	3.42	616.53	750.76
	3450.000	56.00	0.00	0.00	597.00	2400.00	611.97	0.00	612.13	4.77	3.44	996.31	1098.89
	3810.000	420.00	0.00	0.00	601.10	950.00	609.32	0.00	609.51	87.28	3.47	274.07	101.69
	3810.000	420.00	0.00	0.00	601.10	1520.00	610.55	0.00	610.81	112.12	4.16	365.34	143.55
E	3810.000	420.00	0.00	0.00	601.10	1800.00	611.23	0.00	611.51	100.41	4.25	425.14	179.63
	3810.000	420.00	0.00	0.00	601.10	2400.00	612.39	0.00	612.71	90.83	4.54	542.02	251.82

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	4300.000	490.00	0.00	0.00	601.60	950.00	612.24	0.00	612.37	41.57	2.90	338.12	147.35
	4300.000	490.00	0.00	0.00	601.60	1520.00	613.84	0.00	614.00	42.08	3.34	528.66	234.30
	4300.000	490.00	0.00	0.00	601.60	1800.00	614.38	0.00	614.55	41.69	3.46	628.71	278.78
	4300.000	490.00	0.00	0.00	601.60	2400.00	615.40	0.00	615.57	40.26	3.63	814.93	378.26
	4310.000	10.00	0.00	0.00	601.60	645.00	612.35	0.00	612.40	17.98	1.93	346.77	152.12
	4310.000	10.00	0.00	0.00	601.60	670.00	614.00	0.00	614.03	7.32	1.41	560.33	247.61
	4310.000	10.00	0.00	0.00	601.60	680.00	614.56	0.00	614.58	5.32	1.25	661.38	294.76
	4310.000	10.00	0.00	0.00	601.60	690.00	615.58	0.00	615.60	2.99	1.00	849.85	399.04
	4369.000	59.00	0.00	0.00	601.80	645.00	612.46	0.00	612.54	25.54	2.28	283.38	127.63
	4369.000	59.00	0.00	0.00	601.80	670.00	614.04	0.00	614.10	13.91	1.83	366.23	179.62
	4369.000	59.00	0.00	0.00	601.80	680.00	614.59	0.00	614.63	11.57	1.71	396.87	199.91
	4369.000	59.00	0.00	0.00	601.80	690.00	615.60	0.00	615.63	8.16	1.51	457.37	241.51
	4469.000	100.00	0.00	0.00	599.10	645.00	612.60	0.00	612.65	5.32	1.83	352.58	279.66
	4469.000	100.00	0.00	0.00	599.10	670.00	614.13	0.00	614.17	3.38	1.56	428.12	364.23
	4469.000	100.00	0.00	0.00	599.10	680.00	614.66	0.00	614.69	2.94	1.49	455.97	396.81
	4469.000	100.00	0.00	0.00	599.10	690.00	615.65	0.00	615.67	2.22	1.35	510.63	462.79
	4531.000	62.00	616.20	607.10	599.10	645.00	614.09	0.00	614.13	3.17	1.51	426.26	362.08
	4531.000	62.00	616.20	607.10	599.10	670.00	615.75	0.00	615.77	2.03	1.30	516.40	469.90
	4531.000	62.00	616.30	607.10	599.10	680.00	616.30	0.00	616.32	1.77	1.24	551.81	510.55
	4531.000	62.00	616.20	607.10	599.10	690.00	616.83	0.00	616.85	1.28	1.08	658.34	610.22
	4581.000	50.00	0.00	0.00	601.80	645.00	614.11	0.00	614.16	4.52	1.74	369.77	303.23
F	4581.000	50.00	0.00	0.00	601.80	670.00	615.76	0.00	615.79	2.61	1.43	467.78	414.78
	4581.000	50.00	0.00	0.00	601.80	680.00	616.31	0.00	616.34	2.20	1.35	505.97	457.94
	4581.000	50.00	0.00	0.00	601.80	690.00	616.83	0.00	616.86	1.66	1.21	580.69	535.38
	5120.000	539.00	0.00	0.00	604.40	645.00	614.44	0.00	614.54	11.58	2.54	254.08	189.53
G	5120.000	539.00	0.00	0.00	604.40	670.00	615.94	0.00	616.01	6.49	2.09	321.10	263.05
	5120.000	539.00	0.00	0.00	604.40	680.00	616.46	0.00	616.52	5.38	1.97	345.16	293.11
	5120.000	539.00	0.00	0.00	604.40	690.00	616.95	0.00	617.01	4.60	1.88	367.64	321.77
	5170.000	50.00	0.00	0.00	604.40	950.00	614.48	0.00	614.63	19.01	3.29	323.19	217.90
	5170.000	50.00	0.00	0.00	604.40	1520.00	615.98	0.00	616.04	6.06	2.08	756.38	617.44
	5170.000	50.00	0.00	0.00	604.40	1800.00	616.49	0.00	616.55	4.01	1.78	952.98	898.55
	5170.000	50.00	0.00	0.00	604.40	2400.00	616.95	0.00	617.03	3.86	1.81	1138.61	1222.17
	5450.000	280.00	0.00	0.00	601.90	950.00	614.79	0.00	614.85	3.72	1.64	570.71	492.30
	5450.000	280.00	0.00	0.00	601.90	1520.00	616.08	0.00	616.17	2.70	1.56	876.80	925.38
H	5450.000	280.00	0.00	0.00	601.90	1800.00	616.56	0.00	616.66	2.52	1.57	995.58	1133.73
	5450.000	280.00	0.00	0.00	601.90	2400.00	617.02	0.00	617.16	3.13	1.81	1110.62	1357.17
	5550.000	100.00	0.00	0.00	600.70	950.00	614.85	0.00	614.86	.04	.18	2665.07	4754.88
	5550.000	100.00	0.00	0.00	600.70	1520.00	616.17	0.00	616.18	.04	.19	3624.31	7664.18
I	5550.000	100.00	0.00	0.00	600.70	1800.00	616.66	0.00	616.67	.04	.19	3990.17	8939.97
	5550.000	100.00	0.00	0.00	600.70	2400.00	617.17	0.00	617.18	.05	.23	4371.84	10373.41

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ASHCROFT SHERWOOD DRAIN

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	2490.000	950.00	604.22	0.00	0.00	1.22	46.75	0.00
A	2490.000	1520.00	606.56	2.35	0.00	.56	154.25	0.00
	2490.000	1800.00	607.25	.69	0.00	.25	182.32	0.00
	2490.000	2400.00	608.31	1.06	0.00	.31	248.58	0.00
	2756.000	950.00	605.01	0.00	.80	0.00	36.77	266.00
B	2756.000	1520.00	607.33	2.31	.76	0.00	53.43	266.00
	2756.000	1800.00	608.00	.67	.75	0.00	62.36	266.00
	2756.000	2400.00	609.02	1.02	.71	0.00	84.64	266.00
	3226.000	950.00	607.44	0.00	2.43	0.00	61.94	470.00
C	3226.000	1520.00	609.51	2.06	2.18	0.00	76.27	470.00
	3226.000	1800.00	610.25	.75	2.26	0.00	77.48	470.00
	3226.000	2400.00	611.52	1.27	2.50	0.00	80.82	470.00
	3265.000	950.00	607.61	0.00	.17	0.00	68.87	40.00
	3265.000	1520.00	609.65	2.03	.14	0.00	76.49	40.00
	3265.000	1800.00	610.39	.75	.14	0.00	77.70	40.00
	3265.000	2400.00	611.66	1.27	.14	0.00	81.63	40.00
	3306.000	950.00	607.86	0.00	.25	0.00	90.57	100.00
	3306.000	1520.00	609.89	2.04	.25	0.00	100.00	100.00
	3306.000	1800.00	610.65	.76	.26	0.00	100.00	100.00
	3306.000	2400.00	611.96	1.31	.30	0.00	100.00	100.00
	3394.000	950.00	608.95	0.00	1.09	0.00	100.00	88.00
	3394.000	1520.00	609.95	1.01	.06	0.00	100.00	88.00
	3394.000	1800.00	610.67	.72	.02	0.00	100.00	88.00
	3394.000	2400.00	611.96	1.28	-.00	0.00	100.00	88.00
	3450.000	950.00	608.95	0.00	.00	0.00	77.40	56.00
D	3450.000	1520.00	609.96	1.01	.00	0.00	123.46	56.00
	3450.000	1800.00	610.68	.72	.00	0.00	217.46	56.00
	3450.000	2400.00	611.97	1.29	.01	0.00	315.00	56.00
	3810.000	950.00	609.32	0.00	.38	0.00	67.11	420.00
	3810.000	1520.00	610.55	1.22	.59	0.00	82.34	420.00
E	3810.000	1800.00	611.23	.69	.55	0.00	92.33	420.00
	3810.000	2400.00	612.39	1.16	.42	0.00	109.44	420.00
	4300.000	950.00	612.24	0.00	2.91	0.00	77.78	490.00
	4300.000	1520.00	613.84	1.60	3.29	0.00	181.32	490.00
	4300.000	1800.00	614.38	.54	3.15	0.00	182.35	490.00
	4300.000	2400.00	615.40	1.01	3.01	0.00	184.25	490.00
	4310.000	645.00	612.35	0.00	.11	0.00	79.55	10.00
	4310.000	670.00	614.00	1.66	.17	0.00	181.65	10.00
	4310.000	680.00	614.56	.55	.18	0.00	182.69	10.00
	4310.000	690.00	615.58	1.03	.19	0.00	184.61	10.00
	4369.000	645.00	612.46	0.00	.11	0.00	48.86	59.00
	4369.000	670.00	614.04	1.59	.04	0.00	55.51	59.00
	4369.000	680.00	614.59	.54	.03	0.00	57.77	59.00
	4369.000	690.00	615.60	1.01	.01	0.00	62.00	59.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	4469.000	645.00	612.60	0.00	.15	0.00	47.12	100.00
	4469.000	670.00	614.13	1.52	.08	0.00	51.96	100.00
	4469.000	680.00	614.66	.53	.07	0.00	53.63	100.00
	4469.000	690.00	615.65	.99	.05	0.00	56.77	100.00
	4531.000	645.00	614.09	0.00	1.49	0.00	51.84	62.00
	4531.000	670.00	615.75	1.65	1.62	0.00	57.09	62.00
	4531.000	680.00	616.30	.55	1.65	0.00	153.68	62.00
	4531.000	690.00	616.83	.53	1.18	0.00	243.71	62.00
F	4581.000	645.00	614.11	0.00	.02	0.00	55.77	50.00
	4581.000	670.00	615.76	1.65	.01	0.00	62.70	50.00
	4581.000	680.00	616.31	.55	.01	0.00	122.44	50.00
	4581.000	690.00	616.83	.52	.01	0.00	165.95	50.00
	5120.000	645.00	614.44	0.00	.33	0.00	43.19	539.00
G	5120.000	670.00	615.94	1.50	.19	0.00	46.00	539.00
	5120.000	680.00	616.46	.52	.15	0.00	46.00	539.00
	5120.000	690.00	616.95	.49	.12	0.00	46.00	539.00
	5170.000	950.00	614.48	0.00	.04	0.00	183.89	50.00
	5170.000	1520.00	615.98	1.50	.03	0.00	376.04	50.00
	5170.000	1800.00	616.49	.51	.02	0.00	393.56	50.00
	5170.000	2400.00	616.95	.47	.00	0.00	400.00	50.00
	5450.000	950.00	614.79	0.00	.31	0.00	205.88	280.00
H	5450.000	1520.00	616.08	1.29	.11	0.00	250.00	280.00
	5450.000	1800.00	616.56	.48	.07	0.00	250.00	280.00
	5450.000	2400.00	617.02	.46	.07	0.00	250.00	280.00
	5550.000	950.00	614.85	0.00	.06	0.00	688.83	100.00
I	5550.000	1520.00	616.17	1.32	.09	0.00	750.00	100.00
	5550.000	1800.00	616.66	.49	.10	0.00	750.00	100.00
	5550.000	2400.00	617.17	.51	.15	0.00	750.00	100.00

SUMMARY OF ERRORS

PRINTED IN U.S.A.

THIS RUN EXECUTED 09 NOV 78 08.09.11

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**************************************************

EJ
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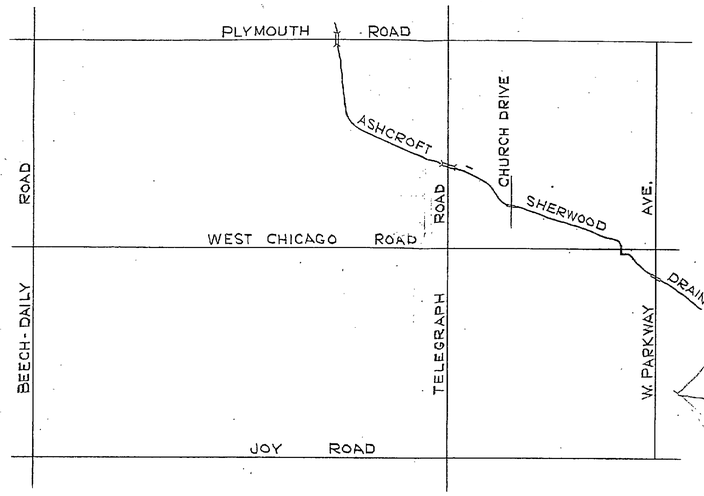
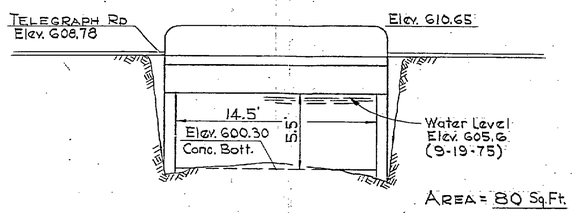
PRINTED IN U.S.A.

OCE-INDUSTRIES 9305 1M 4-74 58024*

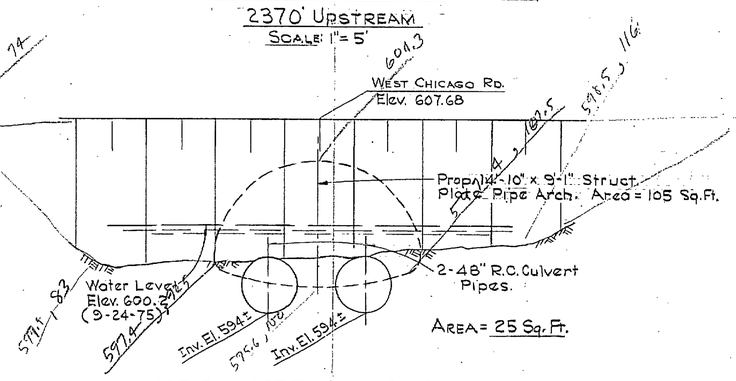


LOCATION PLAN
Scale: 6"=1 Mile



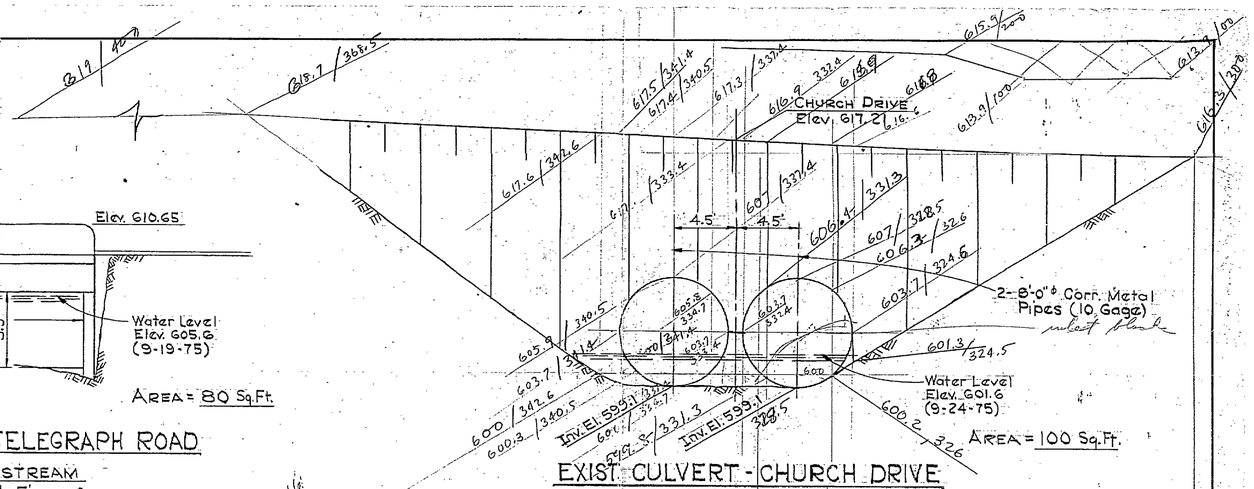
AREA = 80 Sq.Ft.

EXIST. CULVERT - TELEGRAPH ROAD
2370' Upstream
Scale: 1"=5'



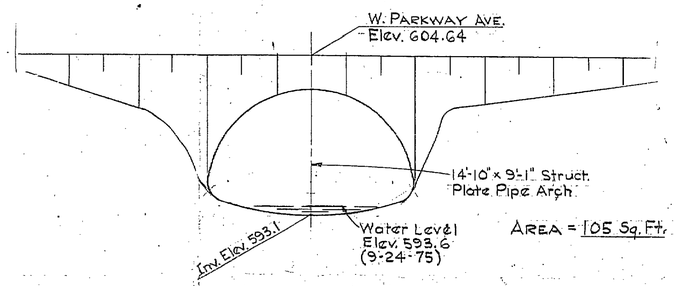
AREA = 25 Sq.Ft.

EXIST. CULVERT - WEST CHICAGO ROAD
Scale: 1"=5'



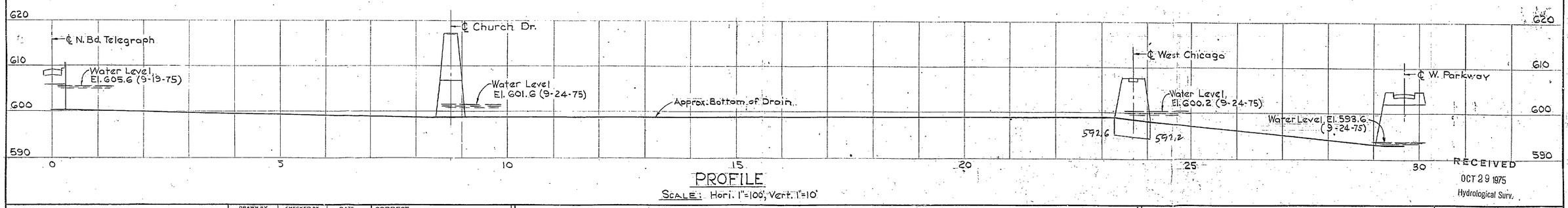
AREA = 100 Sq.Ft.

EXIST. CULVERT - CHURCH DRIVE
1500' Upstream
Scale: 1"=5'



AREA = 105 Sq.Ft.

EXIST. CULVERT - W. PARKWAY AVE.
600' Downstream
Scale: 1"=5'



PROFILE
Scale: Hori. 1"=100', Vert. 1"=10'

RECEIVED
OCT 29 1975
Hydrological Surv.

REVISIONS			DRAWN BY	CHECKED BY	DATE	CORRECT	BOARD OF	WEST CHICAGO ROAD OVER ASHCROFT-SHERWOOD DRAIN STUDY	COUNTY PROJECT	COUNTY JOB
②Added Water Level Elev. to Profile. RWD 10-24-75			R.W. Dilworth		10-17-75	ASSIST. ENGINEER OF DESIGN	WAYNE COUNTY ROAD COMMISSIONERS			9-II-2
			TRACED BY	CHECKED BY	DATE	APPROVED	DESIGN DIVISION		ISSUE NO.	SHEET NO.
			CORRECT			ENGINEER OF DESIGN			DATE	P-1
			SQUAD LEADER							

FILE

00BREAK00

1) COUNTY: Wayne

2) STUDY NAME: Redford Twp.

3) WATERCOURSE: Upper Rouge

4) DOCUMENT TYPE: Summary

00BREAK00

Recd 9/12/73
Run of 9/6
WRC Civil

Redford Twp - Upper Rouge - 3 profile
including input listing

DUPLICATE

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**********
HEC2 VERSION DATED 10 SEPT.1971
ERROR CORRECTIONS 01,02,03,04,05
MODIFICATIONS 52,53,54,55,56
**********
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JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_
JOB NAME_723F002A NO._040 DATE_09/06/73 START_ 11_45.6 CORE_76777 CPU-MILSEC_ 136 PROGRMMR_ PHONE_

```
C
T1      FLOOD INSURANCE STUDY
T2       REDFORD TOWNSHIP SPF
T3       UPPER ROUGE

J1   ICHECK      INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

          0.        2.        0.        0.  0.000000      0.00      0.5   14900.   626.500     0.000

J2   NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

         1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

NC       0.100     0.100     0.035     0.100     0.300     0.000     0.000     0.000     0.000     0.000

X1     200.000     7.000   300.000   360.000     0.000     0.000     0.000     0.000     0.000     0.000
GR     600.500     0.000   600.000   300.000   588.800   330.000   589.500   340.000   600.000   360.000
GR     605.000   545.000   615.000   590.000     0.000     0.000     0.000     0.000     0.000     0.000
NC       0.000     0.000     0.000     0.600     0.800     0.000     0.000     0.000     0.000     0.000

X1    1995.000    11.000    70.000   130.000   1805.000  1655.000  1795.000     0.000     0.000     0.000
GR     615.000     0.000   598.000    50.000   599.000    60.000   598.000    70.000   592.100    85.000
GR     592.100   100.000   595.500   110.000   598.000   130.000   609.000   155.000   610.000   280.000
GR     615.000   360.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    2045.000     8.000   137.000   223.000    50.000    50.000    50.000     0.000     0.000     0.000
X3      10.000     0.000     0.000     0.000     0.000     0.000     0.000   605.100   605.100     0.000
GR     608.300     0.000   605.100   117.000   595.500   137.000   591.400   176.000   595.000   186.000
GR     597.500   223.000   605.100   243.000   608.300   360.000     0.000     0.000     0.000     0.000
SB       1.250     1.360     2.500   360.000    86.000     4.300   836.000     5.000     0.000     0.000

X1    2135.000     0.000     0.000     0.000    90.000    90.000    90.000     0.000     0.000     0.000
X2       0.000     0.000     1.000   605.100   608.300     0.000     0.000     0.000     0.000     0.000
X3      10.000     0.000     0.000     0.000     0.000     0.000     0.000   608.300   608.300     0.000
NC       0.000     0.000     0.000     0.100     0.300     0.000     0.000     0.000     0.000     0.000

X1    2185.000    11.000    70.000   130.000    50.000    50.000    50.000     0.000     0.000     0.000
GR     615.000     0.000   598.000    50.000   599.000    60.000   598.000    70.000   592.100    85.000
GR     592.100   100.000   595.500   110.000   598.000   130.000   609.000   155.000   610.000   280.000
GR     615.000   360.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
NC       0.100     0.100     0.035     0.100     0.300     0.000     0.000     0.000     0.000     0.000
QT       3.000  5500.000  3100.000  1400.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    3400.000    14.000   190.000   245.000  1305.000  1355.000  1215.000     0.000     0.000     0.000
GR     616.000     0.000   600.000    70.000   598.000    90.000   597.500   100.000   601.500   120.000
GR     601.500   130.000   600.000   140.000   601.500   160.000   602.000   190.000   598.000   210.000
GR     596.500   230.000   602.000   245.000   602.000   360.000   615.000   410.000     0.000     0.000
NC       0.000     0.000     0.000     0.600     0.800     0.000     0.000     0.000     0.000     0.000

X1    4335.000    12.000   180.000   220.000   785.000   835.000   935.000     0.000     0.000     0.000
GR     617.000     0.000   603.000    90.000   602.000   110.000   602.500   160.000   602.000   180.000
GR     596.800   190.000   596.800   200.000   598.000   210.000   601.000   210.000   601.500   220.000
GR     602.500   300.000   618.000   380.000     0.000     0.000     0.000     0.000     0.000     0.000

X1    4385.000    10.000   157.000   222.000    50.000    50.000    50.000     0.000     0.000     0.000
X3      10.000     0.000     0.000     0.000     0.000     0.000     0.000   609.500   609.500     0.000
GR     611.000     0.000   609.500   149.000   606.000   157.000   596.000   179.000   596.000   191.000
GR     601.000   197.000   602.000   207.000   607.000   222.000   609.500   231.000   611.000   360.000
SB       1.250     1.200     2.500   380.000    65.000     3.000   539.000     2.600     0.000     0.000

X1    4415.000     0.000     0.000     0.000    30.000    30.000    30.000     0.000     0.000     0.000
X2       0.000     0.000     1.000   609.500   611.000     0.000     0.000     0.000     0.000     0.000
X3      10.000     0.000     0.000     0.000     0.000     0.000     0.000   611.000   611.000     0.000
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NC	0.000	0.000	0.00	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	4465.000	15.000	70.000	110.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	615.000	0.000	604.000	70.000	597.700	90.000	597.700	100.000	604.000	110.000
GR	604.500	120.000	603.000	140.000	601.000	150.000	604.000	170.000	603.000	200.000
GR	604.000	220.000	603.500	230.000	605.500	250.000	604.000	270.000	609.000	330.000
NC	0.000	0.000	0.000	0.600	0.800	0.000	0.000	0.000	0.000	0.000
X1	7035.000	9.000	500.000	570.000	2120.000	2070.000	2570.000	0.000	0.000	0.000
GR	620.000	0.000	616.000	85.000	616.000	350.000	610.500	410.000	610.000	500.000
GR	602.600	530.000	614.000	570.000	615.000	760.000	619.000	970.000	0.000	0.000
NC	0.015	0.015	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7085.000	7.000	230.000	269.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	613.000	0.000	613.000	230.000	603.000	230.000	602.200	250.000	604.000	269.000
GR	613.000	269.000	613.000	500.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.240	2.500	500.000	39.000	0.000	235.000	0.000	0.000	0.000
X1	7115.000	0.000	0.000	0.000	30.000	30.000	30.000	1.000	0.000	0.000
X2	0.000	0.000	1.000	608.800	613.000	0.000	0.000	0.000	0.000	0.000
NC	0.100	0.100	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	7165.000	9.000	500.000	570.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	620.000	0.000	616.000	85.000	616.000	350.000	610.500	410.000	610.000	500.000
GR	602.600	530.000	614.000	570.000	615.000	760.000	619.000	970.000	0.000	0.000
NC	0.000	0.000	0.000	0.600	0.800	0.000	0.000	0.000	0.000	0.000
X1	8587.000	7.000	160.000	200.000	1470.000	1220.000	1422.000	0.000	0.000	0.000
GR	620.000	0.000	610.000	100.000	609.000	160.000	604.200	180.000	608.000	200.000
GR	610.500	280.000	620.000	370.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8637.000	8.000	155.000	216.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	611.300	611.300	0.000
GR	614.200	0.000	609.500	155.000	608.000	165.000	603.500	179.000	603.500	191.000
GR	606.500	197.000	609.500	216.000	614.200	370.000	0.000	0.000	0.000	0.000
SB	1.250	1.360	2.500	370.000	61.000	4.000	291.000	4.000	0.000	0.000
X1	8667.000	0.000	0.000	0.000	30.000	30.000	30.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	611.300	614.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	614.200	614.200	0.000
NC	0.000	0.000	0.000	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	8717.000	7.000	160.000	200.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	620.000	0.000	610.000	100.000	609.000	160.000	604.200	180.000	608.000	200.000
GR	610.500	280.000	620.000	370.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	9290.000	6.000	210.000	235.000	535.000	535.000	573.000	0.000	0.000	0.000
GR	620.000	0.000	608.000	210.000	603.500	220.000	603.500	225.000	608.500	235.000
GR	620.000	400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10965.000	6.000	200.000	225.000	1600.000	1700.000	1675.000	0.000	0.000	0.000
GR	620.000	0.000	610.000	200.000	604.400	210.000	606.000	220.000	610.000	225.000
GR	620.000	330.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.600	0.800	0.000	0.000	0.000	0.000	0.000
X1	11535.000	9.000	300.000	350.000	685.000	435.000	570.000	0.000	0.000	0.000
GR	624.000	0.000	618.500	145.000	615.000	180.000	613.000	300.000	605.200	320.000
GR	605.200	325.000	608.000	340.000	613.000	350.000	621.000	560.000	0.000	0.000
NC	0.015	0.015	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11585.000	7.000	265.000	295.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	620.100	0.000	620.100	265.000	607.300	265.000	605.000	280.000	607.300	295.000
GR	620.100	295.000	620.100	560.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.170	2.500	560.000	30.000	0.000	398.000	0.000	0.000	0.000
X1	11615.00	1.000	0.000	0.000	30.000	30.000	30.000	1.000	0.000	0.000

NC	0.100	0.100	0.035	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	11665.000	9.000	300.000	350.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	624.000	0.000	618.500	145.000	615.000	180.000	613.000	300.000	605.200	320.000
GR	605.200	325.000	608.000	340.000	613.000	350.000	621.000	560.000	0.000	0.000
NC	0.000	0.000	0.040	0.600	0.800	0.000	0.000	0.000	0.000	0.000
QT	3.000	5500.000	2690.000	1160.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13685.000	7.000	280.000	330.000	1735.000	1935.000	2020.000	0.000	0.000	0.000
GR	620.000	0.000	614.500	280.000	605.800	300.000	605.800	308.000	613.500	320.000
GR	614.500	330.000	620.000	600.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.015	0.015	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13735.000	8.000	286.000	314.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	621.200	0.000	621.200	286.000	610.000	286.000	606.000	292.000	606.000	308.000
GR	610.000	314.000	621.200	314.000	621.200	600.000	0.000	0.000	0.000	0.000
SB	0.000	1.170	2.500	600.000	28.000	0.000	330.000	0.000	0.000	0.000
X1	13765.000	0.000	0.000	0.000	30.000	30.000	30.000	1.000	0.000	0.000
X2	0.000	0.000	1.000	618.300	621.200	0.000	0.000	0.000	0.000	0.000
NC	0.100	0.100	0.040	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	13815.000	7.000	280.000	330.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	620.000	0.000	614.500	280.000	605.800	300.000	605.800	308.000	613.500	320.000
GR	614.500	330.000	620.000	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	15120.000	8.000	45.000	75.000	1135.000	1135.000	1305.000	0.000	0.000	0.000
GR	631.500	0.000	624.000	30.000	616.000	45.000	608.500	60.000	608.500	65.000
GR	616.000	75.000	620.000	230.000	632.500	350.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.600	0.800	0.000	0.000	0.000	0.000	0.000
X1	16365.000	7.000	290.000	320.000	935.000	1235.000	1245.000	0.000	0.000	0.000
GR	625.000	0.000	620.000	30.000	619.000	290.000	612.900	300.000	612.900	305.000
GR	619.000	320.000	623.000	450.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.015	0.015	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	16415.000	8.000	210.000	240.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	624.900	0.000	624.900	210.000	614.000	210.000	612.500	220.000	612.500	230.000
GR	614.000	240.000	624.900	240.000	624.900	450.000	0.000	0.000	0.000	0.000
SB	0.000	1.190	2.500	450.000	30.000	0.000	260.000	0.000	0.000	0.000
X1	16445.000	0.000	0.000	0.000	30.000	30.000	30.000	1.000	0.000	0.000
X2	0.000	0.000	1.000	621.200	624.900	0.000	0.000	0.000	0.000	0.000
NC	0.100	0.100	0.040	0.100	0.300	0.000	0.000	0.000	0.000	0.000
X1	16495.000	7.000	290.000	320.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	625.000	0.000	620.000	30.000	619.000	290.000	612.900	300.000	612.900	305.000
GR	619.000	320.000	623.000	450.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	18100.000	7.000	425.000	520.000	1585.000	1335.000	1605.000	0.000	0.000	0.000
GR	628.000	0.000	625.000	390.000	617.000	425.000	615.200	455.000	617.000	520.000
GR	624.500	760.000	626.000	880.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	21310.000	11.000	470.000	540.000	2000.000	2250.000	3210.000	0.000	0.000	0.000
GR	632.500	0.000	630.000	280.000	628.000	295.000	628.000	450.000	622.000	470.000
GR	619.200	495.000	622.000	540.000	628.000	560.000	628.000	670.000	630.000	700.000
GR	630.500	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	22865.000	9.000	400.000	475.000	1500.000	1100.000	1555.000	0.000	0.000	0.000
GR	638.500	0.000	635.500	25.000	635.000	320.000	624.000	360.000	620.500	400.000
GR	620.100	450.000	621.500	475.000	630.000	0.000	631.500	850.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SUMMARY PRINTOUT FOR MULTIPLE PROFILES

UPPER ROUGE

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	CRIWS	EG	TOPWID	10K*S	TIME	VOL
2.00	0.00	0.00	0.00	588.79	14900.00	626.50	0.00	626.54	590.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	588.79	6350.00	617.00	0.00	617.02	590.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	588.79	2800.00	603.39	0.00	603.55	485.00	3.00	0.00	0.00
19.95	1795.00	0.00	0.00	592.09	14900.00	626.57	0.00	626.78	360.00	1.00	0.15	447.00
19.95	1795.00	0.00	0.00	592.09	6350.00	617.06	0.00	617.19	360.00	1.00	0.18	267.00
19.95	1795.00	0.00	0.00	592.09	2800.00	604.21	0.00	604.51	112.00	5.00	0.11	51.00
20.45	50.00	0.00	0.00	591.39	14900.00	626.70	0.00	626.83	360.00	0.00	0.15	456.00
20.45	50.00	0.00	0.00	591.39	6350.00	617.17	0.00	617.24	360.00	0.00	0.19	272.00
20.45	50.00	0.00	0.00	591.39	2800.00	604.43	0.00	604.60	86.00	3.00	0.12	52.00
21.35	90.00	608.29	605.09	591.39	14900.00	626.95	0.00	627.07	360.00	0.00	0.16	473.00
21.35	90.00	608.29	605.09	591.39	6350.00	617.29	0.00	617.35	360.00	0.00	0.20	283.00
21.35	90.00	608.29	605.09	591.39	2800.00	604.44	0.00	604.61	86.00	3.00	0.12	54.00
21.85	50.00	0.00	0.00	592.09	14900.00	626.90	0.00	627.10	360.00	1.00	0.17	482.00
21.85	50.00	0.00	0.00	592.09	6350.00	617.25	0.00	617.37	360.00	1.00	0.21	288.00
21.85	50.00	0.00	0.00	592.09	2800.00	604.38	0.00	604.67	113.00	5.00	0.13	55.00
34.00	1215.00	0.00	0.00	596.50	5500.00	627.17	0.00	627.18	410.00	0.00	0.64	744.00
34.00	1215.00	0.00	0.00	596.50	3100.00	617.44	0.00	617.45	410.00	0.00	0.69	436.00
34.00	1215.00	0.00	0.00	596.50	1400.00	605.15	0.00	605.19	324.00	2.00	0.35	87.00
43.35	935.00	0.00	0.00	596.79	5500.00	627.18	0.00	627.20	380.00	0.00	0.91	917.00
43.35	935.00	0.00	0.00	596.79	3100.00	617.46	0.00	617.48	377.00	0.00	0.94	537.00
43.35	935.00	0.00	0.00	596.79	1400.00	605.45	0.00	605.58	240.00	5.00	0.45	109.00
43.85	50.00	0.00	0.00	596.00	5500.00	627.18	0.00	627.20	380.00	0.00	0.92	926.00
43.85	50.00	0.00	0.00	596.00	3100.00	617.45	0.00	617.50	380.00	0.00	0.95	541.00
43.85	50.00	0.00	0.00	596.00	1400.00	605.46	0.00	605.77	59.00	13.00	0.45	109.00
44.15	30.00	611.00	609.50	596.00	5500.00	627.29	0.00	627.31	380.00	0.00	0.92	931.00
44.15	30.00	611.00	609.50	596.00	3100.00	617.51	0.00	617.55	380.00	0.00	0.95	544.00
44.15	30.00	611.00	609.50	596.00	1400.00	605.49	0.00	605.80	59.00	13.00	0.45	109.00
44.65	50.00	0.00	0.00	597.69	5500.00	627.29	0.00	627.32	330.00	0.00	0.94	939.00
44.65	50.00	0.00	0.00	597.69	3100.00	617.53	0.00	617.56	330.00	0.00	0.97	548.00
44.65	50.00	0.00	0.00	597.69	1400.00	605.57	0.00	605.87	229.00	15.00	0.46	110.00
70.35	2570.00	0.00	0.00	602.59	5500.00	627.36	0.00	627.37	970.00	0.00	1.88	1423.00
70.35	2570.00	0.00	0.00	602.59	3100.00	617.71	0.00	617.79	854.00	1.00	1.31	726.00
70.35	2570.00	0.00	0.00	602.59	1400.00	610.61	0.00	611.12	149.00	28.00	0.58	132.00
70.85	50.00	0.00	0.00	602.19	5500.00	627.36	0.00	627.37	500.00	0.00	1.90	1434.00
70.85	50.00	0.00	0.00	602.19	3100.00	617.80	0.00	617.82	500.00	0.00	1.32	729.00
70.85	50.00	0.00	0.00	602.19	1400.00	610.99	0.00	611.29	39.00	4.00	0.58	133.00
71.15	30.00	613.00	608.79	602.19	5500.00	627.49	0.00	627.50	500.00	0.00	1.91	1439.00
71.15	30.00	613.00	608.79	602.19	3100.00	617.90	0.00	617.92	500.00	0.00	1.33	731.00
71.15	30.00	613.00	608.79	602.19	1400.00	611.40	0.00	611.67	39.00	4.00	0.58	133.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	CRIWS	EG	TOPWID	10K*S	TIME	VOL
71.65	50.00	0.00	0.00	602.59	5500.00	627.49	0.00	627.50	970.00	0.00	1.94	1451.00
71.65	50.00	0.00	0.00	602.59	3100.00	617.87	0.00	617.94	865.00	1.00	1.33	735.00
71.65	50.00	0.00	0.00	602.59	1400.00	611.40	0.00	611.72	160.00	15.00	0.59	133.00
85.87	1422.00	0.00	0.00	604.19	5500.00	627.52	0.00	627.56	370.00	0.00	2.22	1734.00
85.87	1422.00	0.00	0.00	604.19	3100.00	618.19	0.00	618.24	333.00	2.00	1.52	820.00
85.87	1422.00	0.00	0.00	604.19	1400.00	612.95	0.00	613.09	232.00	5.00	0.73	153.00
86.37	50.00	0.00	0.00	603.50	5500.00	627.53	0.00	627.57	370.00	0.00	2.23	1741.00
86.37	50.00	0.00	0.00	603.50	3100.00	618.19	0.00	618.26	370.00	1.00	1.53	823.00
86.37	50.00	0.00	0.00	603.50	1400.00	612.99	0.00	613.12	291.00	4.00	0.74	154.00
86.67	30.00	614.19	611.29	603.50	5500.00	627.68	0.00	627.71	370.00	0.00	2.23	1745.00
86.67	30.00	614.19	611.29	603.50	3100.00	618.29	0.00	618.35	370.00	1.00	1.53	825.00
86.67	30.00	614.19	611.29	603.50	1400.00	613.31	0.00	613.48	61.00	5.00	0.74	154.00
87.17	50.00	0.00	0.00	604.19	5500.00	627.68	0.00	627.72	370.00	0.00	2.24	1752.00
87.17	50.00	0.00	0.00	604.19	3100.00	618.28	0.00	618.37	336.00	2.00	1.54	827.00
87.17	50.00	0.00	0.00	604.19	1400.00	613.41	0.00	613.51	241.00	4.00	0.75	155.00
92.90	573.00	0.00	0.00	603.50	5500.00	627.71	0.00	627.75	400.00	0.00	2.35	1823.00
92.90	573.00	0.00	0.00	603.50	3100.00	618.39	0.00	618.57	348.00	4.00	1.59	854.00
92.90	573.00	0.00	0.00	603.50	1400.00	613.63	0.00	613.90	197.00	8.00	0.79	165.00
109.65	1675.00	0.00	0.00	604.39	5500.00	627.86	0.00	627.93	330.00	1.00	2.61	2014.00
109.65	1675.00	0.00	0.00	604.39	3100.00	619.23	0.00	619.50	306.00	6.00	1.72	922.00
109.65	1675.00	0.00	0.00	604.39	1400.00	615.10	0.00	615.40	180.00	9.00	0.91	190.00
115.35	570.00	0.00	0.00	605.19	5500.00	627.97	0.00	628.01	560.00	0.00	2.73	2086.00
115.35	570.00	0.00	0.00	605.19	3100.00	619.68	0.00	619.82	411.00	3.00	1.78	946.00
115.35	570.00	0.00	0.00	605.19	1400.00	615.69	0.00	615.85	247.00	4.00	0.96	198.00
115.85	50.00	0.00	0.00	605.00	5500.00	628.00	0.00	628.02	560.00	0.00	2.74	2092.00
115.85	50.00	0.00	0.00	605.00	3100.00	619.55	0.00	620.47	29.00	9.00	1.78	947.00
115.85	50.00	0.00	0.00	605.00	1400.00	615.67	0.00	616.04	30.00	5.00	0.96	199.00
116.15	30.00	620.09	617.29	605.00	5500.00	628.12	0.00	628.14	560.00	0.00	2.75	2096.00
116.15	30.00	620.09	617.29	605.00	3100.00	619.55	0.00	620.47	29.00	10.00	1.79	947.00
116.15	30.00	620.09	617.29	605.00	1400.00	615.69	0.00	616.06	30.00	5.00	0.96	199.00
116.65	50.00	0.00	0.00	605.19	5500.00	628.11	0.00	628.15	560.00	0.00	2.76	2102.00
116.65	50.00	0.00	0.00	605.19	3100.00	620.46	0.00	620.57	452.00	2.00	1.79	949.00
116.65	50.00	0.00	0.00	605.19	1400.00	615.96	0.00	616.11	257.00	4.00	0.97	200.00
136.85	2020.00	0.00	0.00	605.79	5500.00	628.26	0.00	628.28	600.00	0.00	3.25	2387.00
136.85	2020.00	0.00	0.00	605.79	2690.00	621.00	0.00	621.07	600.00	2.00	2.09	1055.00
136.85	2020.00	0.00	0.00	605.79	1160.00	616.93	0.00	617.06	293.00	5.00	1.17	230.00
137.35	50.00	0.00	0.00	606.00	5500.00	628.26	0.00	628.29	600.00	0.00	3.26	2394.00
137.35	50.00	0.00	0.00	606.00	2690.00	620.89	0.00	621.62	27.00	7.00	2.09	1056.00
137.35	50.00	0.00	0.00	606.00	1160.00	616.92	0.00	617.18	28.00	3.00	1.17	231.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE [CFS]	CWSEL	CRIWS	EG	TOPWID	10K*S	TIME	VOL
137.65	30.00	621.19	618.29	606.00	5500.00	628.39	0.00	628.41	600.00	0.00	3.26	2397.00
137.65	30.00	621.19	618.29	606.00	2690.00	620.96	0.00	621.68	27.00	7.00	2.09	1056.00
137.65	30.00	621.19	618.29	606.00	1160.00	616.93	0.00	617.20	28.00	3.00	1.17	231.00
138.15	50.00	0.00	0.00	605.79	5500.00	628.39	0.00	628.41	600.00	0.00	3.28	2404.00
138.15	50.00	0.00	0.00	605.79	2690.00	621.71	0.00	621.76	600.00	1.00	2.10	1059.00
138.15	50.00	0.00	0.00	605.79	1160.00	617.11	0.00	617.23	312.00	5.00	1.18	231.00
151.20	1305.00	0.00	0.00	608.50	5500.00	628.45	0.00	628.63	299.00	4.00	3.39	2533.00
151.20	1305.00	0.00	0.00	608.50	2690.00	621.95	0.00	622.32	214.00	13.00	2.18	1113.00
151.20	1305.00	0.00	0.00	608.50	1160.00	618.08	0.00	618.55	114.00	22.00	1.24	245.00
163.65	1245.00	0.00	0.00	612.89	5500.00	629.08	0.00	629.14	450.00	2.00	3.58	2619.00
163.65	1245.00	0.00	0.00	612.89	2690.00	623.63	0.00	623.77	441.00	9.00	2.31	1147.00
163.65	1245.00	0.00	0.00	612.89	1160.00	620.96	0.00	621.21	359.00	19.00	1.34	256.00
164.15	50.00	0.00	0.00	612.50	5500.00	629.08	0.00	629.17	450.00	0.00	3.58	2623.00
164.15	50.00	0.00	0.00	612.50	2690.00	624.51	0.00	625.45	29.00	11.00	2.32	1148.00
164.15	50.00	0.00	0.00	612.50	1160.00	620.99	0.00	621.35	30.00	5.00	1.34	257.00
164.45	30.00	624.89	621.19	612.50	5500.00	629.25	0.00	629.33	450.00	0.00	3.59	2624.00
164.45	30.00	624.89	621.19	612.50	2690.00	624.71	0.00	625.62	29.00	10.00	2.32	1148.00
164.45	30.00	624.89	621.19	612.50	1160.00	620.99	0.00	621.35	30.00	5.00	1.34	257.00
164.95	50.00	0.00	0.00	612.89	5500.00	629.29	0.00	629.34	450.00	2.00	3.60	2628.00
164.95	50.00	0.00	0.00	612.89	2690.00	625.68	0.00	625.73	450.00	2.00	2.33	1150.00
164.95	50.00	0.00	0.00	612.89	1160.00	621.23	0.00	621.42	370.00	14.00	1.35	258.00
181.00	1605.00	0.00	0.00	615.19	5500.00	629.57	0.00	629.63	880.00	1.00	3.86	2793.00
181.00	1605.00	0.00	0.00	615.19	2690.00	625.98	0.00	626.03	617.00	1.00	2.50	1239.00
181.00	1605.00	0.00	0.00	615.19	1160.00	622.06	0.00	622.10	279.00	1.00	1.64	288.00
213.10	3210.00	0.00	0.00	619.19	5500.00	630.66	0.00	631.12	744.00	12.00	4.07	2988.00
213.10	3210.00	0.00	0.00	619.19	2690.00	626.75	0.00	627.29	101.00	23.00	2.74	1331.00
213.10	3210.00	0.00	0.00	619.19	1160.00	623.51	0.00	624.00	80.00	55.00	1.79	329.00
228.65	1555.00	0.00	0.00	620.09	5500.00	632.12	0.00	632.36	519.00	5.00	4.18	3054.00
228.65	1555.00	0.00	0.00	620.09	2690.00	628.69	0.00	628.84	195.00	5.00	2.88	1359.00
228.65	1555.00	0.00	0.00	620.09	1160.00	625.78	0.00	625.87	159.00	4.00	1.98	343.00

SECTION NUMBER	DISCHARGE CFS	CWSEL	CWSEL DIFF EACH Q	CWSEL DIFF EACH SECTION	CWSEL-HSELK	TOPWID	T.W. DIFF	LENGTH
200.000	14900.000	626.500	0.000	0.000	0.000	590.000	0.000	0.000
200.000	6350.000	617.000	-9.500	0.000	0.000	590.000	0.000	0.000
200.000	2800.000	603.390	-13.610	0.000	0.000	485.000	105.000	0.000
1995.000	14900.000	626.570	0.000	0.070	0.000	360.000	0.000	1795.000
1995.000	6350.000	617.060	-9.510	0.060	0.000	360.000	0.000	1795.000
1995.000	2800.000	604.210	-12.850	0.820	0.000	112.000	248.000	1795.000
2045.000	14900.000	626.700	0.000	0.130	0.000	360.000	0.000	50.000
2045.000	6350.000	617.170	-9.530	0.110	0.000	360.000	0.000	50.000
2045.000	2800.000	604.430	-12.740	0.220	0.000	86.000	274.000	50.000
2135.000	14900.000	626.950	0.000	0.250	0.000	360.000	0.000	90.000
2135.000	6350.000	617.290	-9.660	0.120	0.000	360.000	0.000	90.000
2135.000	2800.000	604.440	-12.850	0.010	0.000	86.000	274.000	90.000
2185.000	14900.000	626.900	0.000	-.050	0.000	360.000	0.000	50.000
2185.000	6350.000	617.250	-9.650	-.040	0.000	360.000	0.000	50.000
2185. 0	28 0.00	604.380	-12.870	-.060	0.000	113.000	247.000	50.000

3400.000	5500.000	627.170	0.000	0.270	0.000	410.000	0.000	1215.000
3400.000	3100.000	617.440	-9.730	0.190	0.000	410.000	0.000	1215.000
3400.000	1400.000	605.150	-12.290	0.770	0.000	324.000	86.000	1215.000
4335.000	5500.000	627.180	0.000	0.010	0.000	380.000	0.000	935.000
4335.000	3100.000	617.460	-9.720	0.020	0.000	377.000	3.000	935.000
4335.000	1400.000	605.450	-12.010	0.300	0.000	240.000	140.000	935.000
4385.000	5500.000	627.180	0.000	0.000	0.000	380.000	0.000	50.000
4385.000	3100.000	617.450	-9.730	-.010	0.000	380.000	0.000	50.000
4385.000	1400.000	605.460	-11.990	0.010	0.000	59.000	321.000	50.000
4415.000	5500.000	627.290	0.000	0.110	0.000	380.000	0.000	30.000
4415.000	3100.000	617.510	-9.780	0.060	0.000	380.000	0.000	30.000
4415.000	1400.000	605.490	-12.020	0.030	0.000	59.000	321.000	30.000
4465.000	5500.000	627.290	0.000	0.000	0.000	330.000	0.000	50.000
4465.000	3100.000	617.530	-9.760	0.020	0.000	330.000	0.000	50.000
4465.000	1400.000	605.570	-11.960	0.080	0.000	229.000	101.000	50.000
7035.000	5500.000	627.360	0.000	0.070	0.000	970.000	0.000	2570.000
7035.000	3100.000	617.710	-9.650	0.180	0.000	854.000	116.000	2570.000
7035.000	1400.000	610.610	-7.100	5.040	0.000	149.000	821.000	2570.000
7085.000	5500.000	627.360	0.000	0.000	0.000	500.000	0.000	50.000
7085.000	3100.000	617.800	-9.560	0.090	0.000	500.000	0.000	50.000
7085.000	1400.000	610.990	-6.810	0.380	0.000	39.000	461.000	50.000
7115.000	5500.000	627.490	0.000	0.130	0.000	500.000	0.000	30.000
7115.000	3100.000	617.900	-9.590	0.100	0.000	500.000	0.000	30.000
7115.000	1400.000	611.400	-6.500	0.410	0.000	39.000	461.000	30.000
7165.000	5500.000	627.490	0.000	0.000	0.000	970.000	0.000	50.000
7165.000	3100.000	617.870	-9.620	-.030	0.000	865.000	105.000	50.000
7165.000	1400.000	611.400	-6.470	0.000	0.000	160.000	810.000	50.000
8587.000	5500.000	627.520	0.000	0.030	0.000	370.000	0.000	1422.000
8587.000	3100.000	618.150	-9.370	0.280	0.000	333.000	37.000	1422.000
8587.000	1400.000	612.950	-5.200	1.550	0.000	232.000	138.000	1422.000
8637.000	5500.000	627.530	0.000	0.010	0.000	370.000	0.000	50.000
8637.000	3100.000	618.190	-9.340	0.040	0.000	370.000	0.000	50.000
8637.000	1400.000	612.990	-5.200	0.040	0.000	291.000	79.000	50.000
8667.000	5500.000	627.680	0.000	0.150	0.000	370.000	0.000	30.000
8667.000	3100.000	618.290	-9.390	0.100	0.000	370.000	0.000	30.000
8667.000	1400.000	613.310	-4.980	0.320	0.000	61.000	309.000	30.000
8717.000	5500.000	627.680	0.000	0.000	0.000	370.000	0.000	50.000
8717.000	3100.000	618.280	-9.400	-.010	0.000	336.000	34.000	50.000
8717.000	1400.000	613.410	-4.870	0.100	0.000	241.000	129.000	50.000
9290.000	5500.000	627.710	0.000	0.030	0.000	400.000	0.000	573.000
9290.000	3100.000	618.390	-9.320	0.110	0.000	348.000	52.000	573.000
9290.000	1400.000	613.630	-4.760	0.220	0.000	197.000	203.000	573.000
10965.000	5500.000	627.860	0.000	0.150	0.000	330.000	0.000	1675.000
10965.000	3100.000	619.230	-8.630	0.840	0.000	306.000	24.000	1675.000
10965.000	1400.000	615.100	-4.130	1.470	0.000	180.000	150.000	1675.000
11535.000	5500.000	627.970	0.000	0.110	0.000	560.000	0.000	570.000
11535.000	3100.000	619.680	-8.290	0.450	0.000	411.000	149.000	570.000
11535.000	1400.000	615.690	-3.990	0.590	0.000	247.000	313.000	570.000
11585.000	5500.000	628.000	0.000	0.030	0.000	560.000	0.000	50.000

11585.000	1400.000	615.670	-3.880	-.020	0.000	30.000	530.000	50.000
11615.000	5500.000	628.120	0.000	0.120	0.000	560.000	0.000	30.000
11615.000	3100.000	619.550	-8.570	0.000	0.000	29.000	531.000	30.000
11615.000	1400.000	615.690	-3.860	0.020	0.000	30.000	530.000	30.000
11665.000	5500.000	628.110	0.000	-.010	0.000	560.000	0.000	50.000
11665.000	3100.000	620.460	-7.650	0.910	0.000	452.000	108.000	50.000
11665.000	1400.000	615.960	-4.500	0.270	0.000	257.000	303.000	50.000
13685.000	5500.000	628.260	0.000	0.150	0.000	600.000	0.000	2020.000
13685.000	2690.000	621.000	-7.260	0.540	0.000	600.000	0.000	2020.000
13685.000	1160.000	616.930	-4.070	0.970	0.000	293.000	307.000	2020.000
13735.000	5500.000	628.260	0.000	0.000	0.000	600.000	0.000	50.000
13735.000	2690.000	620.890	-7.370	-.110	0.000	27.000	573.000	50.000
13735.000	1160.000	616.920	-3.970	-.010	0.000	28.000	572.000	50.000
13765.000	5500.000	628.390	0.000	0.130	0.000	600.000	0.000	30.000
13765.000	2690.000	620.960	-7.430	0.070	0.000	27.000	573.000	30.000
13765.000	1160.000	616.930	-4.030	0.010	0.000	28.000	572.000	30.000
13815.000	5500.000	628.390	0.000	0.000	0.000	600.000	0.000	50.000
13815.000	2690.000	621.710	-6.680	0.790	0.000	600.000	0.000	50.000
13815.000	1160.000	617.110	-4.600	0.180	0.000	312.000	288.000	50.000
15120.000	5500.000	628.450	0.000	0.060	0.000	299.000	0.000	1305.000
15120.000	2690.000	621.950	-6.500	0.240	0.000	214.000	85.000	1305.000
15120.000	1160.000	618.080	-3.870	0.970	0.000	114.000	185.000	1305.000
16365.000	5500.000	629.080	0.000	0.630	0.000	450.000	0.000	1245.000
16365.000	2690.000	623.630	-5.450	1.680	0.000	441.000	9.000	1245.000
16365.000	1160.000	620.960	-2.670	2.880	0.000	359.000	91.000	1245.000
16415.000	5500.000	629.080	0.000	0.000	0.000	450.000	0.000	50.000
16415.000	2690.000	624.510	-4.570	0.880	0.000	29.000	421.000	50.000
16415.000	1160.000	620.990	-3.520	0.030	0.000	30.000	420.000	50.000
16445.000	5500.000	629.250	0.000	0.170	0.000	450.000	0.000	30.000
16445.000	2690.000	624.710	-4.540	0.200	0.000	29.000	421.000	30.000
16445.000	1160.000	620.990	-3.720	0.000	0.000	30.000	420.000	30.000
16495.000	5500.000	629.290	0.000	0.040	0.000	450.000	0.000	50.000
16495.000	2690.000	625.680	-3.610	0.970	0.000	450.000	0.000	50.000
16495.000	1160.000	621.230	-4.450	0.240	0.000	370.000	80.000	50.000
18100.000	5500.000	629.570	0.000	0.280	0.000	880.000	0.000	1605.000
18100.000	2690.000	625.980	-3.590	0.300	0.000	617.000	263.000	1605.000
18100.000	1160.000	622.060	-3.920	0.830	0.000	279.000	601.000	1605.000
21310.000	5500.000	630.660	0.000	1.090	0.000	744.000	0.000	3210.000
21310.000	2690.000	626.750	-3.910	0.770	0.000	101.000	643.000	3210.000
21310.000	1160.000	623.510	-3.240	1.450	0.000	80.000	664.000	3210.000
22865.000	5500.000	632.120	0.000	1.460	0.000	519.000	0.000	1555.000
22865.000	2690.000	628.690	-3.430	1.940	0.000	195.000	324.000	1555.000
22865.000	1160.000	625.780	-2.910	2.270	0.000	159.000	360.000	1555.000

DATA FOR LAST CROSS SECTION

PROFILE	TYPE ENC	TARGET	TOP WIDTH AREA-ACRES	TOP WIDTH AREA-DIFF
1	0.000	0.000	260.477	0.000
2	0.000	0.000	198.792	-61.684
3	0.000	0.000	105.049	-155.427

```
**********
HEC2 VERSION DATED 10 SEPT.1971
ERROR CORRECTIONS 01,02,03,04,05
MODIFICATIONS 52,53,54,55,56
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JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
JOB NAME_723F002A NO._040 DATE_09/06/73 FINISH_ 11_53.6 CORE_76777 CPU-MILSEC_  215705 ELAPSED TIME MIN_  8.0
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LISTING OF INPUT

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C
C    14.
C 2045.  DOWNSTREAM SECTION AT TELEGRAPH ROAD BRIDGE
C  2135.        UPSTREAM SECTION AT TELEGRAPH ROAD BRIDGE
C  4385.        DOWNSTREAM SECTION AT GRAHAM ST. BRIDGE
C  4415.        UPSTREAM SECTION AT GRAHAM ST. BRIDGE
C  7085.        DOWNSTREAM SECTION AT 5 MILE BRIDGE
C  7115.        UPSTREAM SECTION AT 5 MILE BRIDGE
C  8637.        DOWNSTREAM SECTION AT GARFIELD ST. BRIDGE
C  8667.        UPSTREAM SECTION AT GARFIELD ST. BRIDGE
C 11585.        DOWNSTREAM SECTION AT BEECH RD. BRIDGE
C 11615.        UPSTREAM SECTION AT BEECH RD. BRIDGE
C 13735.        DOWNSTREAM SECTION AT KINLOCH ST. BRIDGE
C 13765.        UPSTREAM SECTION AT KINLOCH ST. BRIDGE
C 16415.        DOWNSTREAM SECTION AT 6 MILE BRIDGE
C 16445.        UPSTREAM SECTION AT 6 MILE BRIDGE
T1      FLOOD INSURANCE STUDY
T2      REDFORD TOWNSHIP SPF
T3      UPPER ROUGE
J1      2.                                      0.5     14900.  626.5
J2    1.
NC  0.100.10    0.035   0.1     0.3
X1  200.7.      300.    360.
GR 600.5        600.    300.    588.8   330.    589.5   340.    600.    360.
GR 605. 545.    615.    590.
NC                      0.6     0.8
X1 1995.11.     70.     130.    1805.   1655.   1795.
GR  615.        598.    50.     599.    60.     598.    70.     592.1   85.
GR 592.1100.    595.5   110.    598.    130.    609.    155.    610.    280.
GR 615. 360.
X1 2045.8.      137.    223.    50.     50.     50.
X3   10.                                                605.1   605.1
GR 608.3        605.1   117.    595.5   137.    591.4   176.    595.    186.
GR 597.5223.    605.1   243.    608.3   360.
SB  1.251.36    2.5     360.    86.     4.3     836.    5.
X1 2135.                        90.     90.     90.
X2              1.      605.1   608.3
X3   10.                                                608.3   608.3
NC                      0.1     0.3
X1 2185.11.     70.     130.    50.     50.     50.
GR  615.        598.    50.     599.    60.     598.    70.     592.1   85.
GR 592.1100.    595.5   110.    598.    130.    609.    155.    610.    280.
GR  615.360.
NC  0.10.1      0.035   0.1     0.3
QT    3.5500.   3100.   1400.
X1 3400.14.     190.    245.    1305.   1355.   1215.
GR 616.         600.    70.     598.    90.     597.5   100.    601.5   120.
GR 601.5130.    600.    140.    601.5   160.    602.    190.    598.    210.
GR 596.5230.    602.    245.    602.    360.    615.    410.
NC                      0.6     0.8
X1 4335.12.     180.    220.    785.    835.    935.
GR  617.        603.    90.     602.    110.    602.5   160.    602.    180.
GR 596.8190.    596.8   200.    598.    210.    601.    210.    601.5   220.
GR 602.5300.    618.    380.
X1 4385.10.     157.    222.    50.     50.     50.
X3   10.                                                609.5   609.5
GR  611.        609.5   149.    606.    157.    596.    179.    596.    191.
GR 601. 197.    602.    207.    607.    222.    609.5   231.    611.    380.
SB  1.251.2     2.5     380.    65.     3.      539.    2.6
X1 4415.                        30.     30.     30.
X2              1.      609.5   611.
X3   10.                                                611.    611.
```

```
NC                          0.1     0.8
X1 4465.15.      70.      110.     50.      50.      50.
GR  615.         604.     70.      597.7    90.      597.7    100.     604.     110.
GR 604.5120.     603.     140.     601.     150.     604.     170.     603.     200.
GR 604. 220.     603.5    230.     605.5    250.     604.     270.     609.     330.
NC                          0.6      0.8
X1 7035.9.       500.     570.     2120.    2070.    2570.
GR  620.         616.     85.      616.     350.     610.5    410.     610.     500.
GR 602.6530.     614.     570.     615.     760.     619.     970.
NC 0.0150.015    0.024
X1 7085.7.       230.     269.     50.      50.      50.
GR  613.         613.     230.     603.     230.     602.2    250.     604.     269.
GR  613.269.     613.     500.
SB       1.24    2.5      500.     39.              235.
X1 7115.                           30.      30.      30.      1.       0.
X2               1.       608.8    613.
NC  0.100.10     0.035    0.1      0.3
X1 7165.9.       500.     570.     50.      50.      50.
GR  620.         616.     85.      616.     350.     610.5    410.     610.     500.
GR 602.6530.     614.     570.     615.     760.     619.     970.
NC                          0.6      0.8
X1 8587.7.       160.     200.     1470.    1220.    1422.
GR  620.         610.     100.     609.     160.     604.2    180.     608.     200.
GR 610.5280.     620.     370.
X1 8637.8.       155.     216.     50.      50.      50.
X3   10.                                                     611.3    611.3
GR 614.2         609.5    155.     608.     165.     603.5    179.     603.5    191.
GR 606.5197.     609.5    216.     614.2    370.
SB  1.251.36     2.5      370.     61.      4.       291.     4.
X1 8667.                           30.      30.      30.
X2               1.       611.3    614.2
X3   10.                                                     614.2    614.2
NC                          0.1      0.3
X1 8717.7.       160.     200.     50.      50.      50.
GR  620.         610.     100.     609.     160.     604.2    180.     608.     200.
GR 610.5280.     620.     370.
X1 9290.6.       210.     235.     535.     535.     573.
GR  620.         608.     210.     603.5    220.     603.5    225.     608.5    235.
GR  620.400.
X110965.6.       200.     225.     1600.    1700.    1675.
GR 620.          610.     200.     604.4    210.     606.     220.     610.     225.
GR 620. 330.
NC                          0.6      0.8
X111535.9.       300.     350.     685.     435.     570.
GR  624.         618.5    145.     615.     180.     613.     300.     605.2    320.
GR 605.2325.     608.     340.     613.     350.     621.     560.
NC 0.0150.015    0.023
X111585.7.       265.     295.     50.      50.      50.
GR 620.1         620.1    265.     607.3    265.     605.     280.     607.3    295.
GR 620.1295.     620.1    560.
SB       1.17    2.5      560.     30.              398.
X111615.                           30.      30.      30.      1.       0.
X2               1.       617.3    620.1
NC  0.100.10     0.035    0.1      0.3
X111665.9.       300.     350.     50.      50.      50.
GR  624.         618.5    145.     615.     180.     613.     300.     605.2    320.
GR 605.2325.     608.     340.     613.     350.     621.     560.
NC               0.040    0.6      0.8
OT   3. 5500.    2690.    1160.
X113685.7.       280.     330.     1735.    1935.    2020.
GR  620.         614.5    280.     605.8    300.     605.8    308.     613.5    320.
GR 614.5330.     620.     600.
NC 0.0150.015    0.023
X113735.8.       286.     314.     50.      50.      50.
GR 621.2         621.2    286.     610.     286.     606.     292.     606.     308.
GR 610. 314.     6 1.2    314.     [illegible]1.2   [illegible]00.
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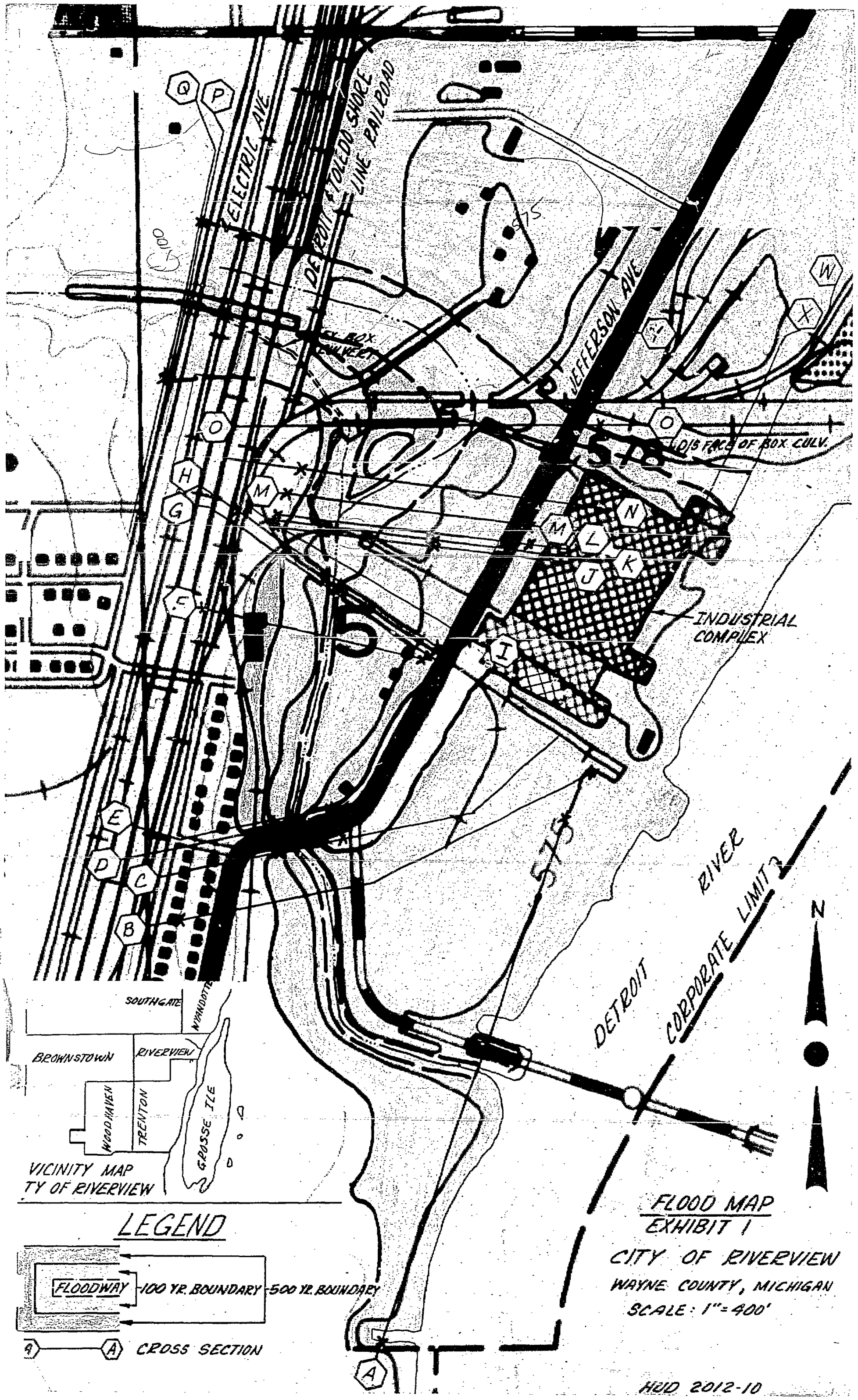

FLOOD MAP
EXHIBIT 1

CITY OF RIVERVIEW

WAYNE COUNTY, MICHIGAN

SCALE: 1"=400'

HUD 2012-10

/ 76 UPDATED AUG1977

CHECKER 01
MODIFICATION - 50,51,52,53
****

C
T1 CITY OF RIVERVIEW FIS HUD 2012 07 HUNTINGTON DRAIN FLAT AREA
T2 Q FOR RATING CURVE 10, 25, 50, 75, 100, 150, 200, 500 LFS
T3 HUNTINGTON DR. RIVERVIEW

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	0.0	0.0	0.0	0.	574.900	0.0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

	150.000	201.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

QT	8.000	10.000	25.000	50.000	75.000	100.000	150.000	200.000	500.000	0.0
NC	0.120	0.120	0.100	0.300	0.500	0.0	0.0	0.0	0.0	0.0

BEGIN FLOW DIVERSION =W

X1	0.0	5.000	1.000	200.000	0.0	0.0	0.0	0.0	0.0	0.0
GR	590.000	0.0	575.000	1.000	574.000	100.000	575.000	200.000	590.000	201.000

X1	100.000	5.000	1.000	100.000	100.000	100.000	100.000	0.0	0.0	0.0
GR	590.000	0.0	575.000	1.000	574.900	50.000	575.000	100.000	590.000	101.000
NC	0.0	0.0	0.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JEFFERSON AVE. DIVERSION Y

X1	720.000	4.000	1.000	100.000	620.000	620.000	620.000	0.0	0.0	0.0
GR	590.000	0.0	578.000	1.000	578.000	100.000	590.000	101.000	0.0	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

EXHIBIT 6
JEFF. AVE DIVERSION

EXHIBIT 6 (cont.)

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**********************************
 HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**********************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

HUNTINGTON DR. RIVERVIEW

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	0.0	0.0	0.0	0.0	574.00	10.00	574.90	0.0	574.90	2.02	0.12	80.58	7.03
	0.0	0.0	0.0	0.0	574.00	25.00	574.90	0.0	574.90	12.64	0.31	80.58	7.03
	0.0	0.0	0.0	0.0	574.00	50.00	574.90	0.0	574.91	50.58	0.62	80.58	7.03
	0.0	0.0	0.0	0.0	574.00	75.00	574.90	0.0	574.91	113.80	0.93	80.58	7.03
	0.0	0.0	0.0	0.0	574.00	100.00	574.90	0.0	574.92	202.31	1.24	80.58	7.03
	0.0	0.0	0.0	0.0	574.00	150.00	574.90	0.0	574.95	455.20	1.86	80.58	7.03
	0.0	0.0	0.0	0.0	574.00	200.00	574.90	0.0	575.00	809.25	2.48	80.58	7.03
*	0.0	0.0	0.0	0.0	574.00	500.00	575.07	575.07	575.37	1829.75	4.38	114.03	11.69
*	100.000	100.00	0.0	0.0	574.90	10.00	575.02	575.02	575.05	3619.37	1.49	6.72	0.17
	100.000	100.00	0.0	0.0	574.90	25.00	575.22	0.0	575.23	212.88	0.92	27.25	1.71
	100.000	100.00	0.0	0.0	574.90	50.00	575.52	0.0	575.53	77.49	0.89	55.95	5.68
	100.000	100.00	0.0	0.0	574.90	75.00	575.72	0.0	575.73	61.86	0.98	76.36	9.54
	100.000	100.00	0.0	0.0	574.90	100.00	575.88	0.0	575.90	57.41	1.08	92.81	13.20
	100.000	100.00	0.0	0.0	574.90	150.00	576.16	0.0	576.18	55.56	1.26	119.56	20.12
	100.000	100.00	0.0	0.0	574.90	200.00	576.39	0.0	576.42	55.88	1.41	141.86	26.75
	100.000	100.00	0.0	0.0	574.90	500.00	577.29	0.0	577.36	68.31	2.16	231.57	60.50
	720.000	620.00	0.0	0.0	578.00	10.00	578.31	578.07	578.31	14.83	0.33	30.60	2.60
	720.000	620.00	0.0	0.0	578.00	25.00	578.48	0.0	578.48	23.13	0.54	46.40	5.20
	720.000	620.00	0.0	0.0	578.00	50.00	578.63	0.0	578.64	35.17	0.81	62.04	8.43
	720.000	620.00	0.0	0.0	578.00	75.00	578.76	0.0	578.78	39.93	0.99	76.18	11.87
	720.000	620.00	0.0	0.0	578.00	100.00	578.91	0.0	578.93	41.99	1.12	89.18	15.43
	720.000	620.00	0.0	0.0	578.00	150.00	579.15	0.0	579.17	42.23	1.32	113.58	23.08
	720.000	620.00	0.0	0.0	578.00	200.00	579.37	0.0	579.40	41.84	1.48	135.38	30.92
	720.000	620.00	0.0	0.0	578.00	500.00	580.42	0.0	580.49	38.80	2.09	240.15	80.27

SHORELINE PROFILE CITY OF RIVERVIEW

SIBLEY RD - S. CORPORATE LIMIT

BRIDGE RD

PENNSYLVANIA AVE.
N. CORPORATE LIMIT

ELEVATION IN FEET (NGVD)

580
578
576
574
572

0 400 800 1200 1600 2000 2400 2800 3200 3600 4000 4400 4800 5200 5600 6000

DISTANCE IN FEET

LEGEND

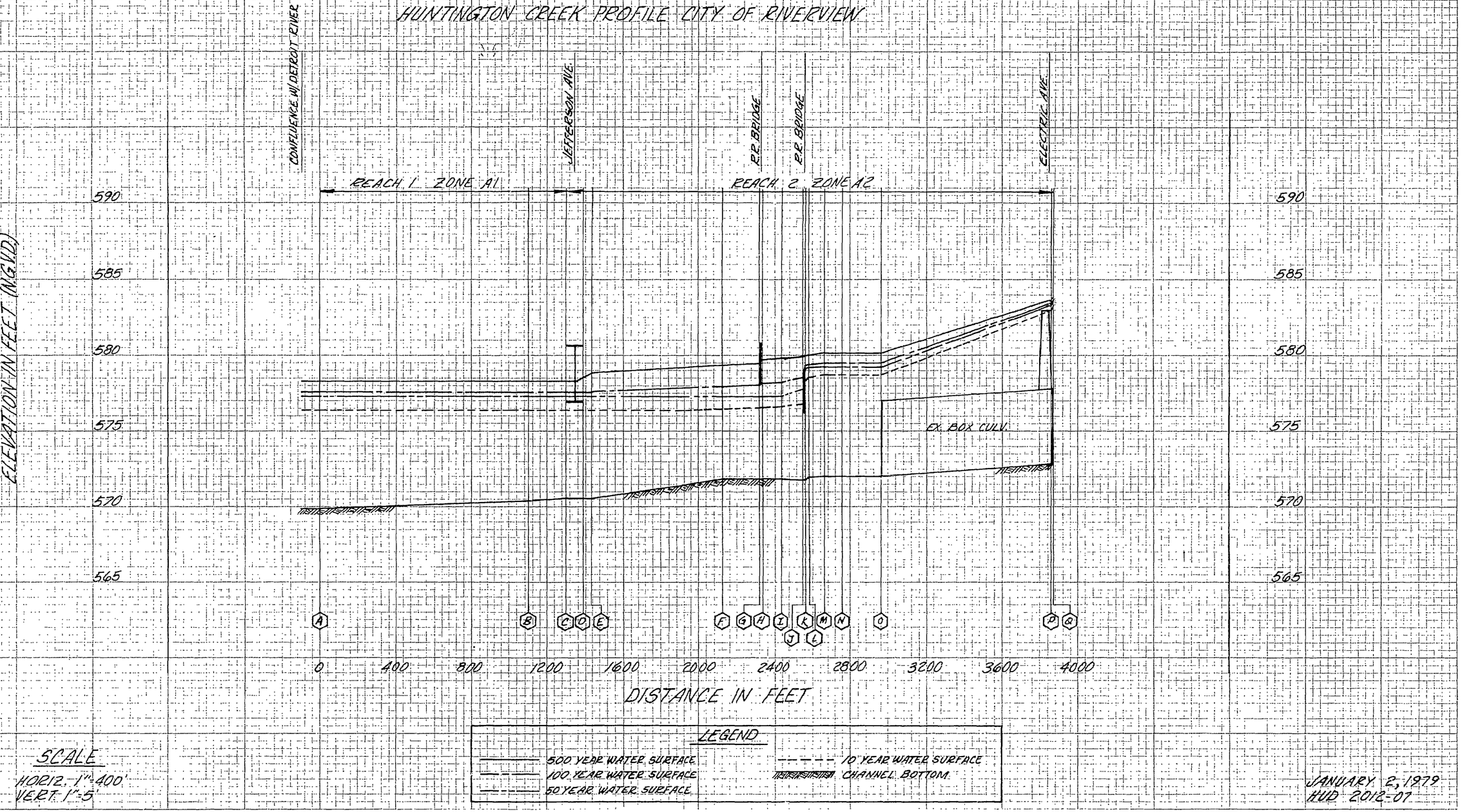
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
MEAN WATER SURFACE

SCALE
HORIZ 1"=400'
VERT 1"=2'

JANUARY 3, 1978
HUD 2012-07

HOW MUCH IS 10 X 10 TO THE INCH
KEUFFEL & ESSER CO
PRINTED IN U.S.A.

HUNTINGTON CREEK PROFILE CITY OF RIVERVIEW



LEGEND

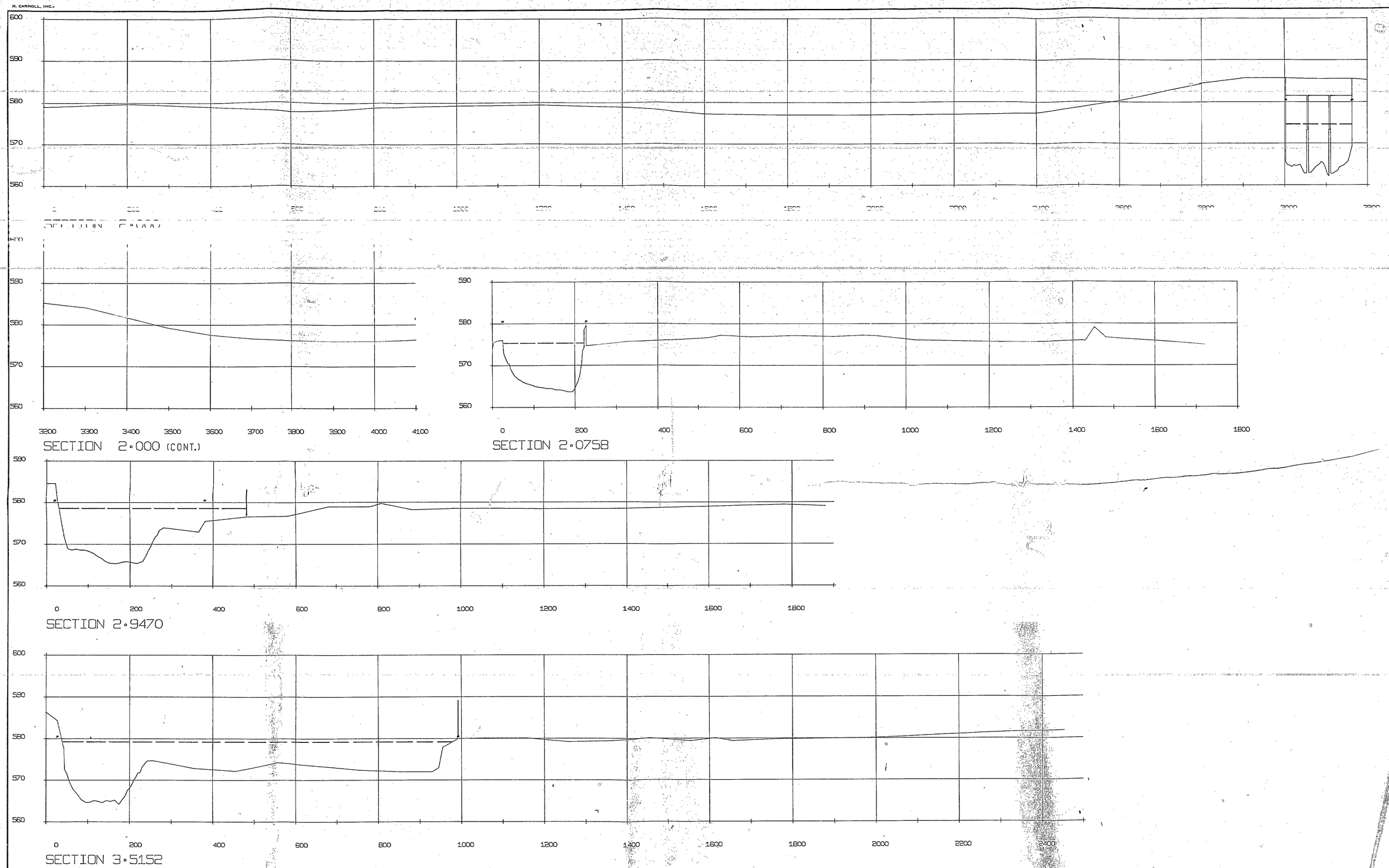
- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

SCALE

HORIZ. 1" = 400'
VERT. 1" = 5'

JANUARY 2, 1979
HUD 2012-07

R. CARROLL, INC.



DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

SCALE: VERT. 1" = 10' HORIZ. 1" = 100'

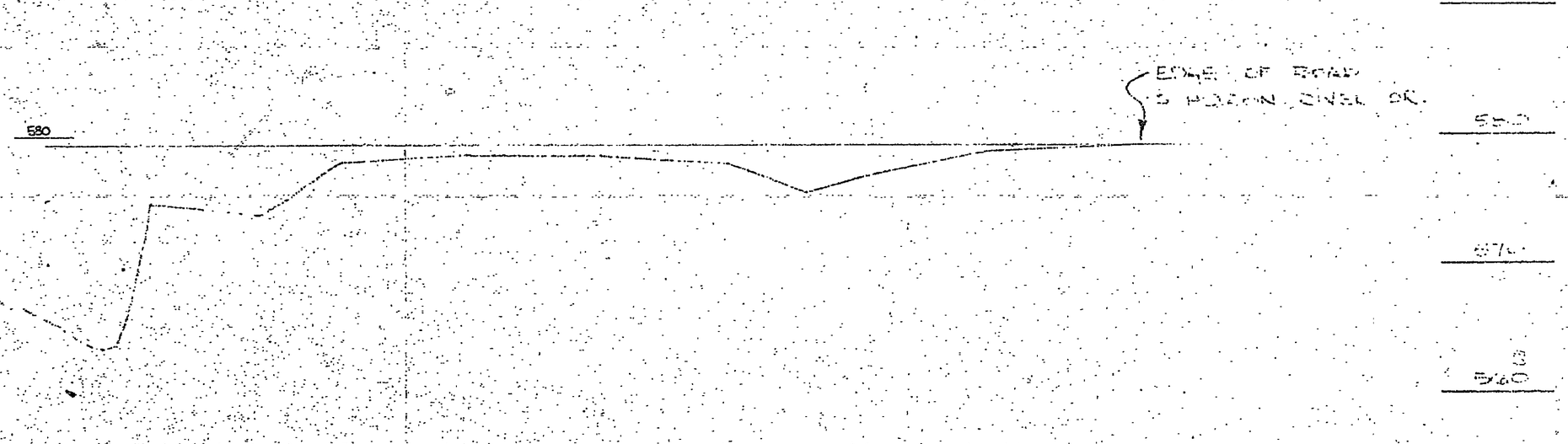
REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF ROCKWOOD, MI, FIS

HURON RIVER

JOB NO. 5555-57-1
DATE ISSUED
SHEET NO. 1 OF 6



CROSS - SECTION # 18 (9+60)
(CORPS OF ENGINNERS)

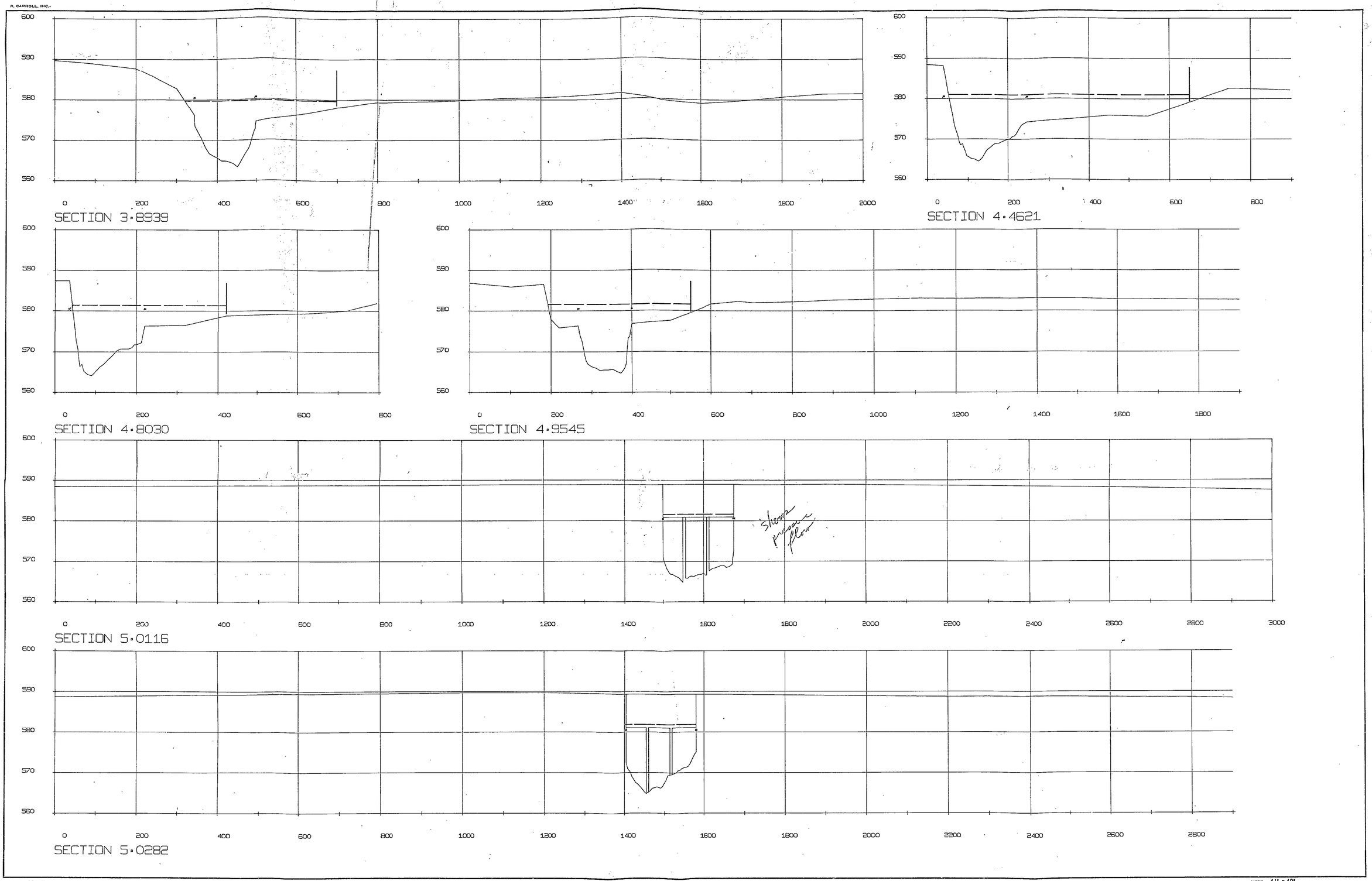
LOOKING D/S HOR. SCALE 1"=100'

REV

MARINA, INC.

WADE, TRIM & ASSOCIATES, INC.
25125 GODDARD ROAD
TAYLOR, MICHIGAN 48180

R. CARROLL, INC.



DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

SCALE: VERT. 1" = 10' HORIZ. 1" = 100'

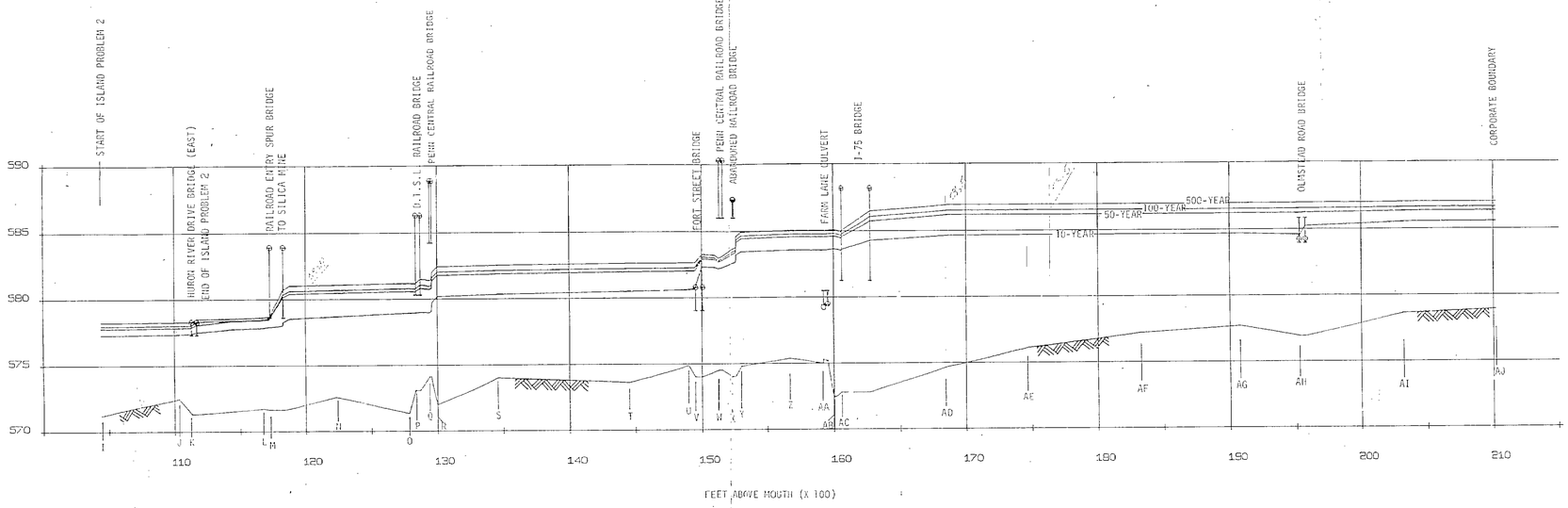
REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF ROCKWOOD, MI, FIS

HURON RIVER

JOB NO. 5555-57-1
DATE ISSUED
SHEET NO. 2 OF 6



Job No. | Contr. No. | Cost Tab No. | Type of Job No. | Sheet No. of Sheets | As Built | Section | City No. in County | Twp. No. in County | Village No. in County | County No. in State | State | Construction Contract | Job Code No.

DRAWN:
DESIGN:
CHECKED:
DATE COMPLETED: FINAL: PRELIMINARY:

VERT. 1" = 5'
SCALE:
HORIZ. 1" = 500'

REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

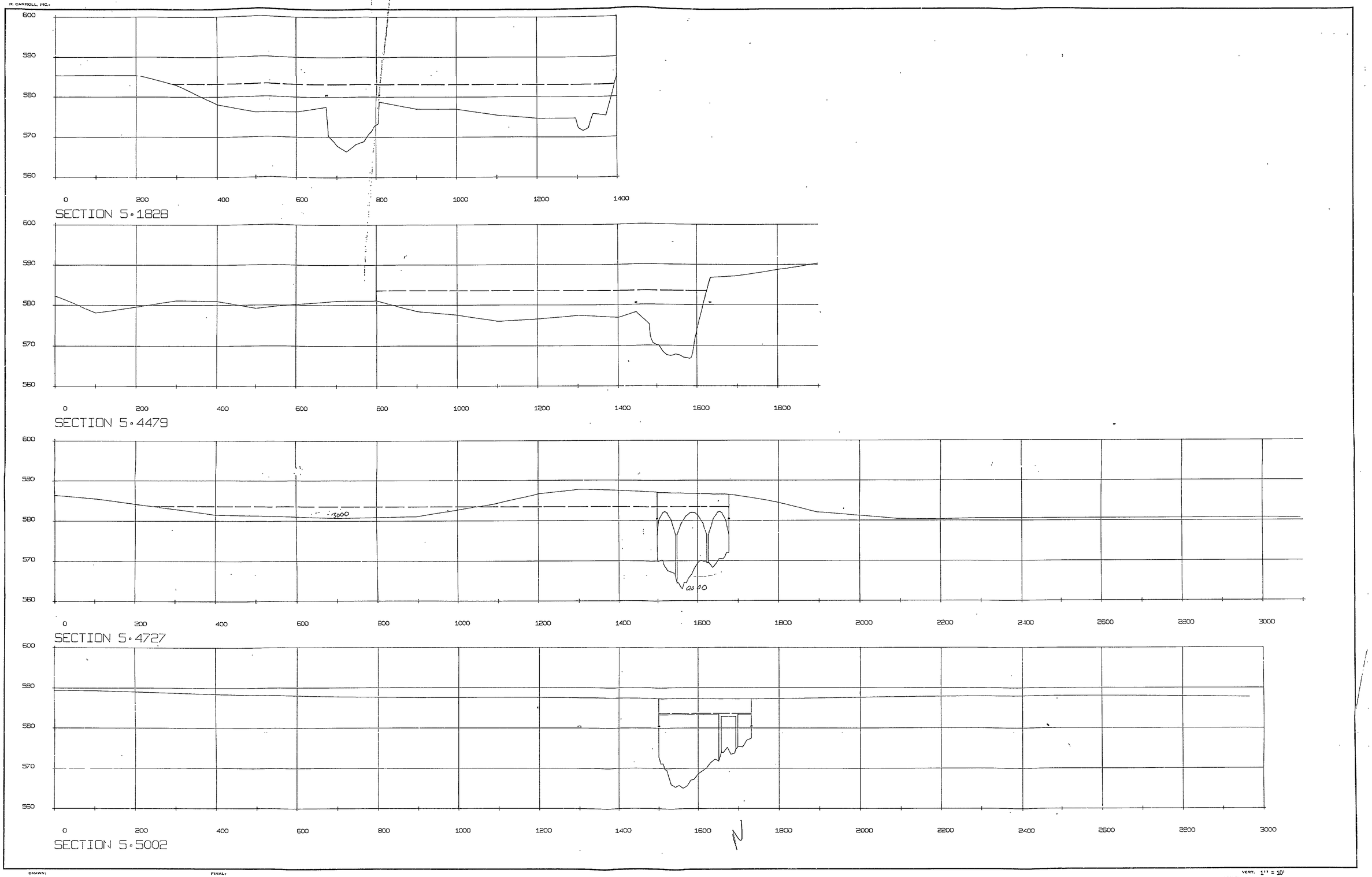
JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

SILVER CREEK

CITY OF ROCKWOOD, MI, FIS

JOB NO. 5555-57-1
DATE ISSUED 5-4-77
SHEET NO. 2 OF 2

R. CARROLL, INC.



DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

SCALE: VERT. 1" = 10' HORIZ. 1" = 100'

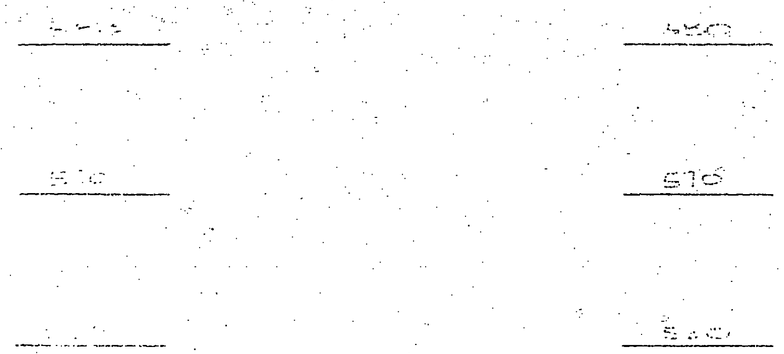
REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

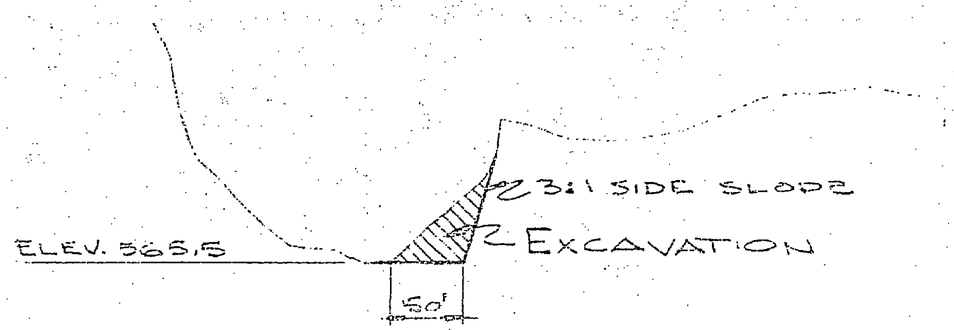
JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF ROCKWOOD, MI, FIS

HURON RIVER

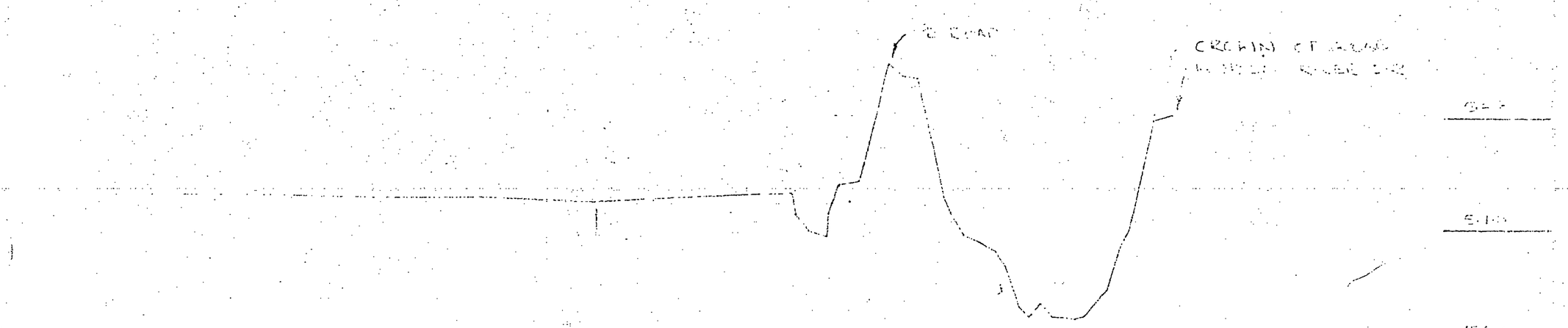
JOB NO. 5555-57-1
DATE ISSUED
SHEET NO. 3 OF 6





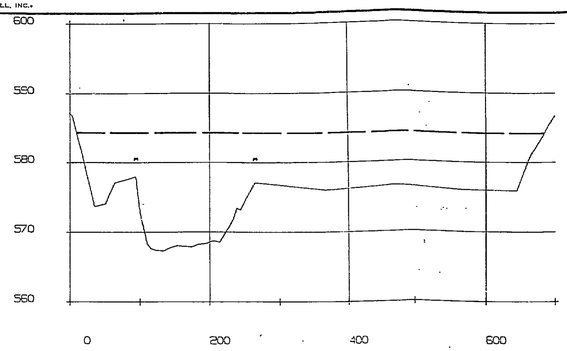
CROSS - SECTION

LOOKING D/S

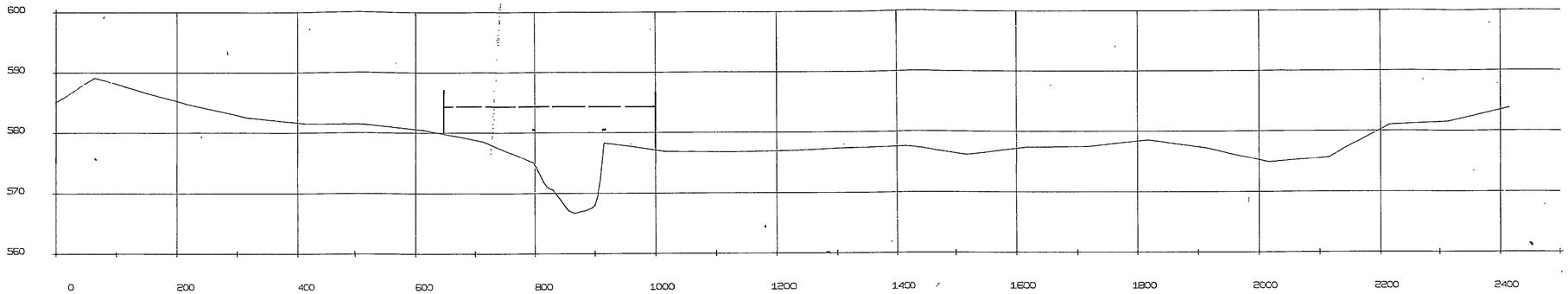


CROSS - SECTION "17 (42+60)
(CORPS OF ENGINNERS)

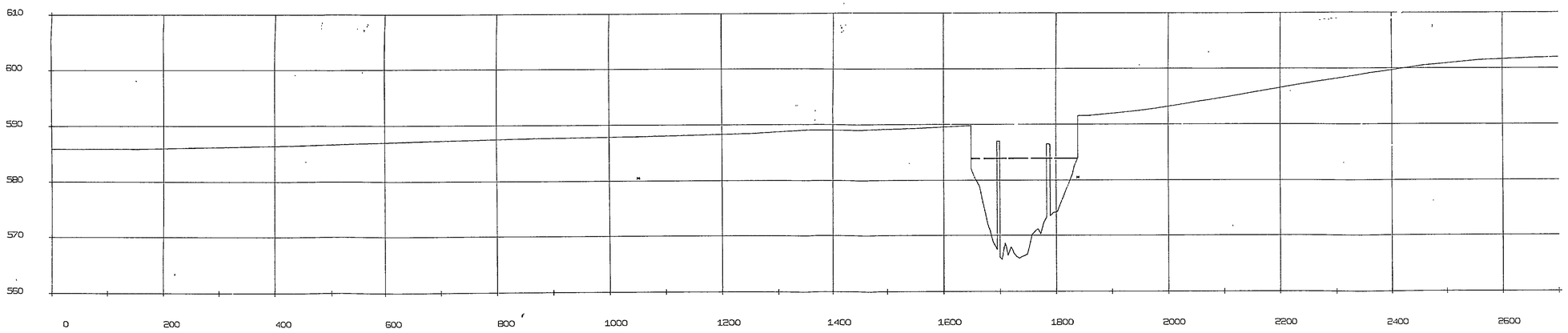
R. CARROLL, INC.



SECTION 5.6159



SECTION 5.9947



SECTION 6.0042

DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

SCALE: VERT. 1" = 10' HORIZ. 1" = 100'

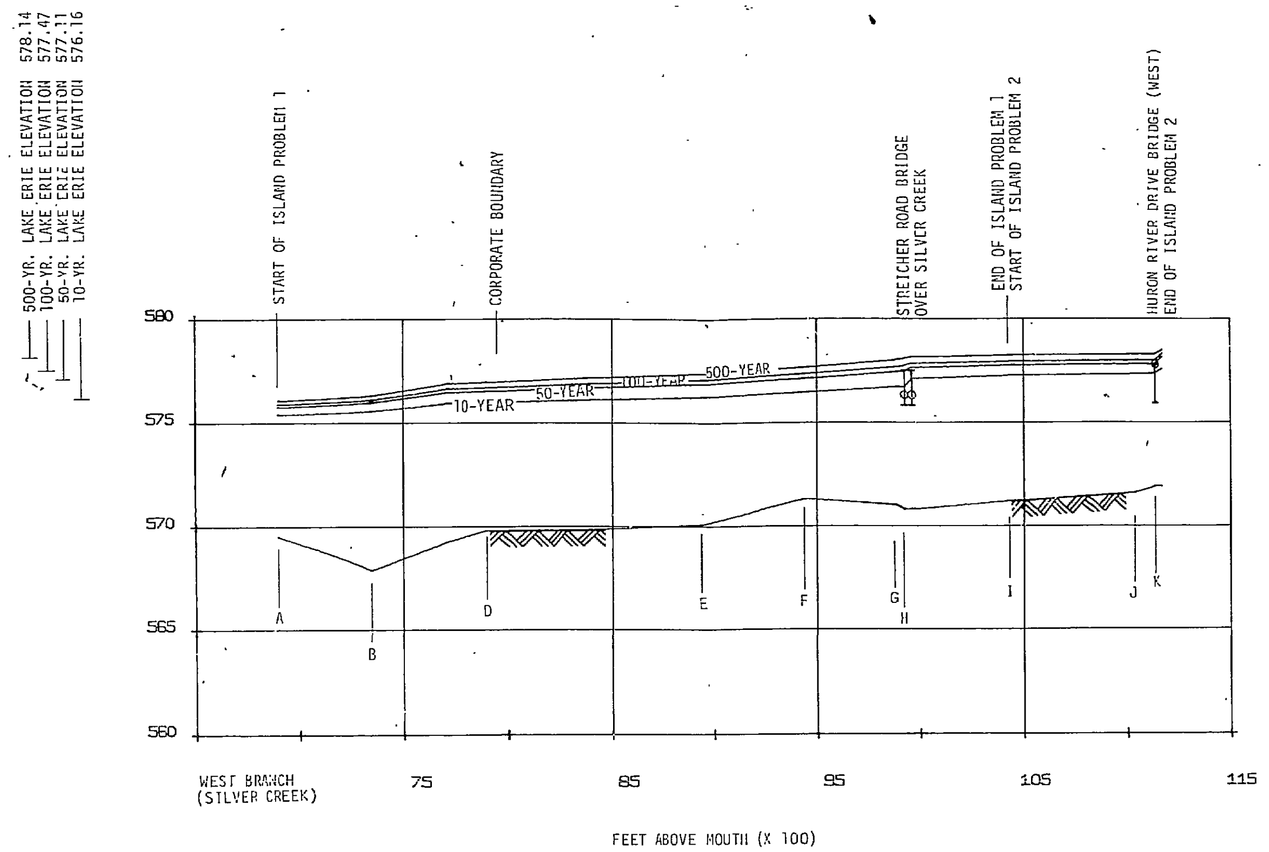
REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

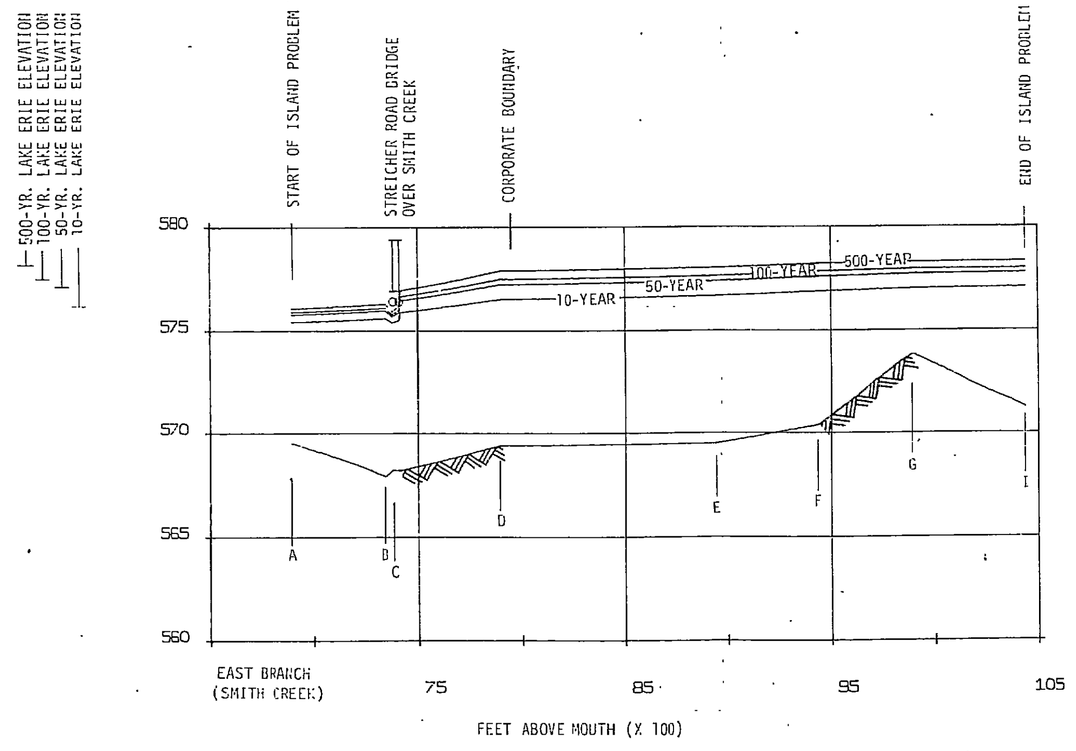
JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF ROCKWOOD, MI, FIS

HURON RIVER

JOB NO. 5555-57-1
DATE ISSUED
SHEET NO. 4 OF 6





o WEIR FLOW BEGINS

DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

SCALE: VERT. 1" = 5' HORIZ. 1" = 500'

REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

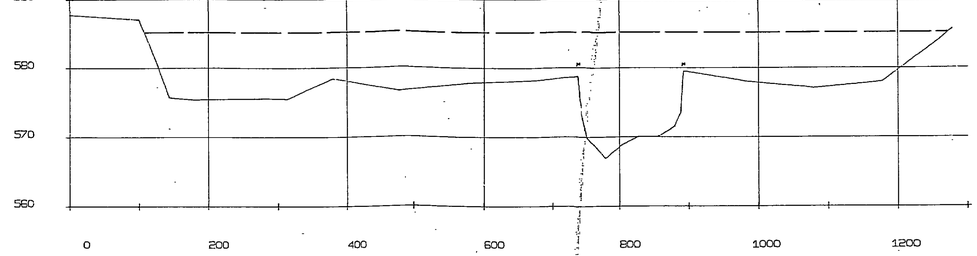
JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

SILVER CREEK

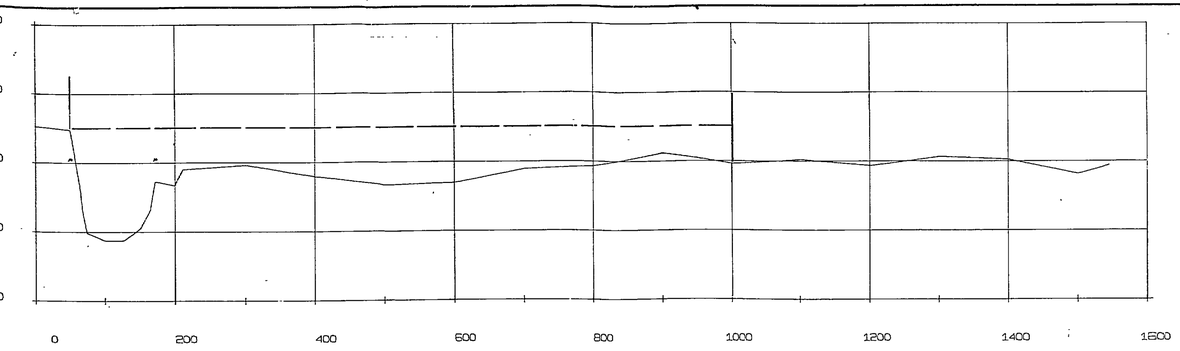
CITY OF ROCKWOOD, MI, FIS

JOB NO. 5555-57-1
DATE ISSUED 5-4-77
SHEET NO. 1 OF 2

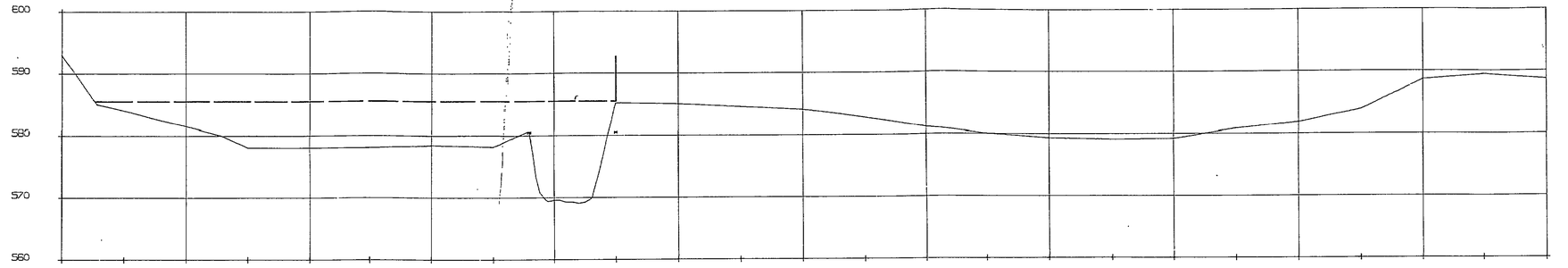
R. CARROLL, INC.



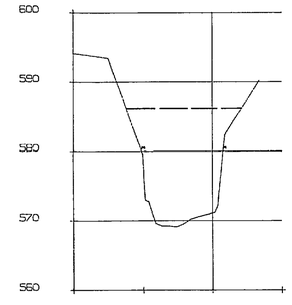
SECTION 6-1002



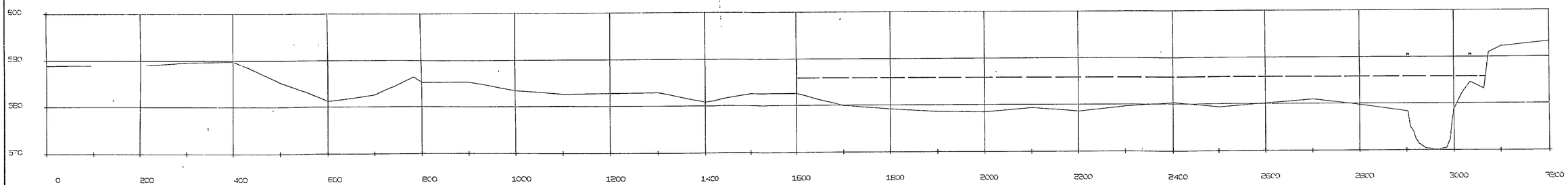
SECTION 6-4032



SECTION 6-7820



SECTION 7-8047



SECTION 7-3881

Job No.
Contr. No.
Cont. Tab No.
Type of Job No.
Sheet No. of Sheets
Alt Suffix
Section
City No. in County
Twp. No. in County
Village No. in County
County No. in State
State
Construction Contract
Job Code No.

DRAWN:
DESIGN:
CHECKED:
DATE COMPLETED:
FINAL:
PRELIMINARY:

SCALE VERT. 1" = 10'
HORIZ. 1" = 100'

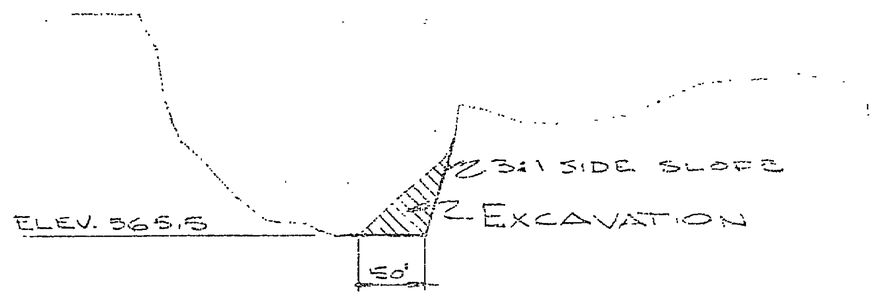
REVISIONS	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

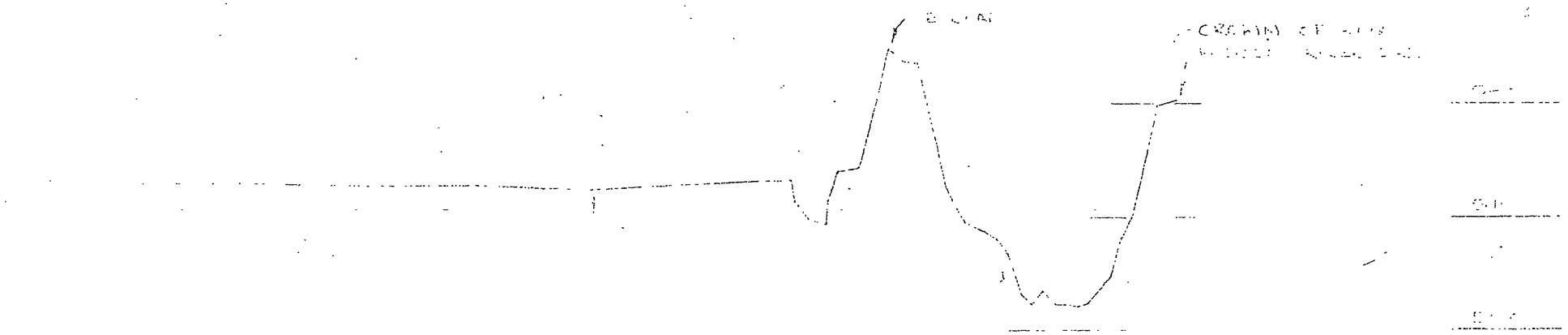
CITY OF ROCKWOOD, MI, FIS

HURON RIVER

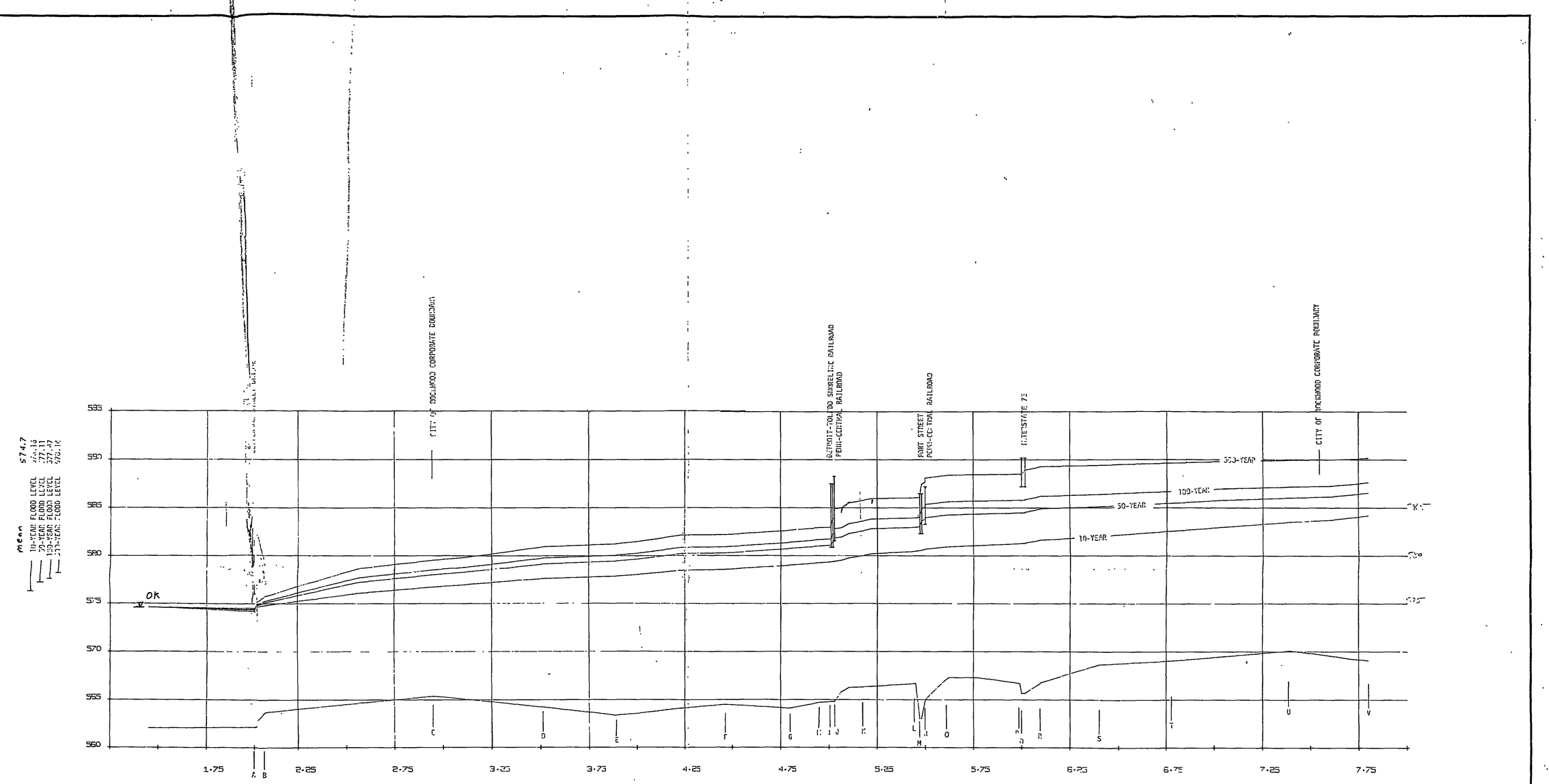
JOB NO. 5555-57-1
DATE ISSUED
SHEET NO. 5 OF 6



LOOKING D/S



CROSS SECTION "17" (22+60)
(CORPS OF ENGINNERS) Hor. Scale 1"=100'



NOTE: IN THE FINAL REPORT, LAKE ERIE FLOOD LEVELS WILL BE EXTENDED HORIZONTALLY UPSTREAM UNTIL CORRESPONDING HURON RIVER PROFILES ARE INTERSECTED.

Job No. | Cont. No. | Type of Job No. | Sheet No. | Sheet No. of Sheets | As Built | Section | City No. in County | Town No. in County | Village No. in County | County No. | State | Construction Contract | Job Code No.

DRAWN:
DESIGN:
CHECKED:
FINAL:
DATE COMPLETED:
PRELIMINARY:

VERT. 1" = 5'
SCALE:
HORIZ. 1" = 0.25'

REVISIONS	MK	BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF ROCKWOOD, MI, FIS

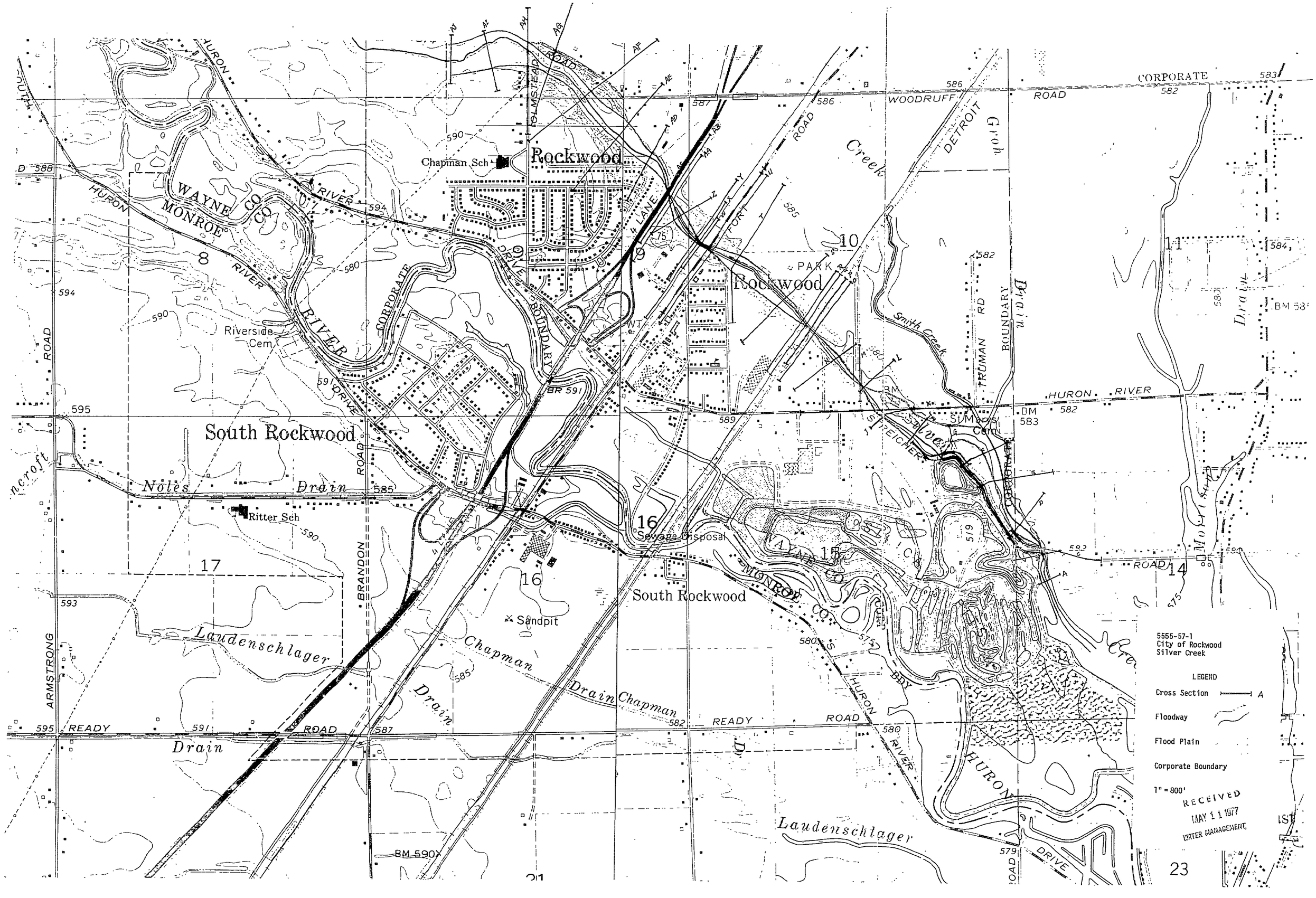
HURON RIVER

JOB NO. 5555-57-1
DATE ISSUED
SHEET NO. 1 OF 1

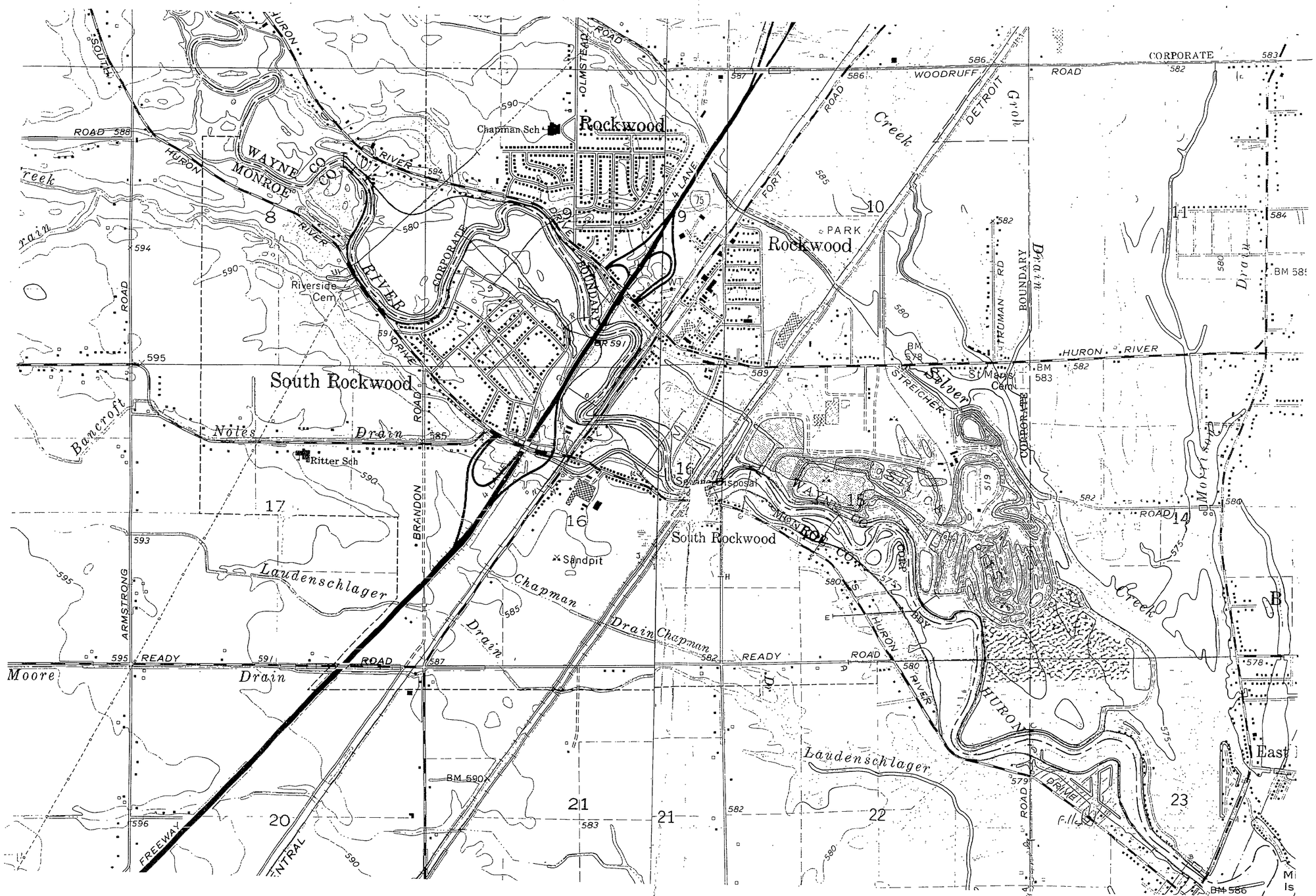


CROSS - SECTION # 18 (36+60)
(CORPS OF ENGINNERS)

LOOKING D/S



Rockwood
Chapman Sch
South Rockwood
Riverside Cem
Ritter Sch
Sewage Disposal
Sandpit
Noles Drain
Laudenschlager
Chapman Drain
Drain
Smith Creek
Creek
Groh Drain
Morrison Drain
HURON RIVER
WAYNE CO
MONROE CO
CORPORATE BOUNDARY
WOODRUFF ROAD
DETROIT ROAD
TRUMAN RD
BRANDON ROAD
ARMSTRONG ROAD
READY ROAD
HURON DRIVE
PARK
St Marys Cem
BM 590
BM 583
5555-57-1
City of Rockwood
Silver Creek
LEGEND
Cross Section
Floodway
Flood Plain
Corporate Boundary
1" = 800'
RECEIVED
MAY 11 1977
WATER MANAGEMENT



LEGEND

SCALE 1" = 800'

FLOODWAY

FLOODED OUTLINE

CROSS-SECTION (FIELD SURVEYED)

CORPORATE LIMITS

CITY OF ROCKWOOD
HURON RIVER
5555-57

RECEIVED
MAR 24 1977
WATER MANAGEMENT

Revised

SCALE 1" = 800'
BROWN = FLOODWAY FRINGE
GREEN = 100 YEAR FLOODWAY
BLACK = CORPORATE BOUNDARY

CITY OF ROCKWOOD FIS
HURON RIVER

JOB NAME: City of Southgate JOB NO. 5555 66 01

WATERCOURSE: Frank & Poet Drain CULVERT LOCATION: Dix - Toledo Highway Bridge

CULVERT DESCRIPTION: Concrete Box Culvert, With Wingwalls, Headwalls & Sandy Bottom. (12'x 4.5')

BY MSC DATE 5/10/77

n= 0.018 Q_{10}= 730 TW_{10}= 7.32 (594.62)

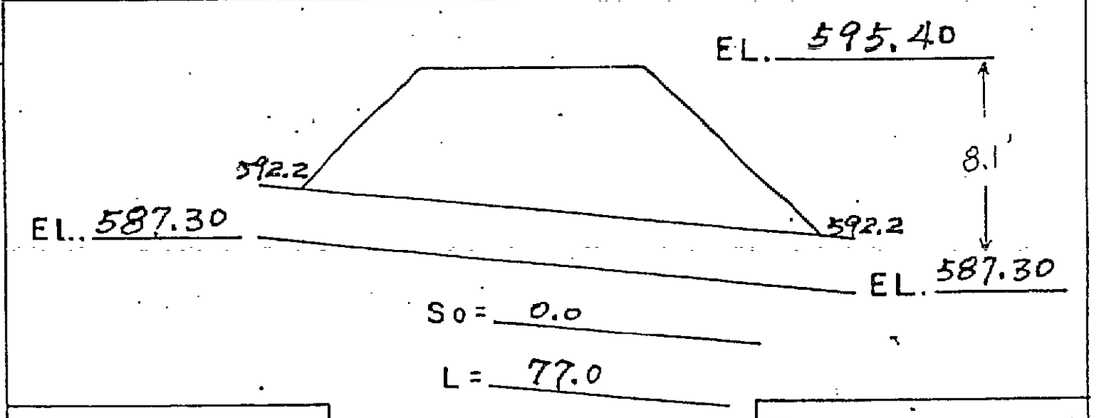
A= 56.70 ft² Q_{50}= TW_{50}=

R= 1.70 ft Q_{100}= TW_{100}=

Ke= 0.40 Q_{500}= TW_{500}=

D= 4.90 ft

LSo= 0.0



Sta. 7.8932 Sta 7.8786

HEADWATER ANALYSIS

Q	INLET CONT.		OUTLET CONT. HW = H + ho − LSo					HEC-2		FINAL HW	FINAL HW ELEV.	ΔH HEC-2
	HW/D	HW	H	dc	(dc+D)/2	ho	HW ENER.	$D+(1+Ke)\frac{V^2}{2g}$	HW			
730	2.05	10.05	4.53	—	—	7.32	11.85	Gb T¢ Weir &	Pressure	Flow		

CALCULATIONS AND COMMENTS

$K_f = \frac{29n^2L}{R^{4/3}} = 0.36$

$K_T = 1 + K_c + K_f = 1.76$

$H = K_T \frac{V^2}{2g}$

$= 1.76 \frac{V^2}{64.4}$

JOB NAME: City of Southgate JOB NO. 5555 66 01

WATERCOURSE: Frank & Poet Drain WEIR LOCATION: Dix - Toledo Highway Bridge

WEIR DESCRIPTION: Paved Road BY MSC DATE 5/10/77

1 Q_T	2 HW ENER. ELEV.	3 TW ELEV.	4 H_c (2-3)	5 $Q_c = A\sqrt{\frac{2gH_c}{1+Ke+\frac{29n^2L}{R^{4/3}}}}$	6 L	7 AVG. RD.EL	8 (6X7)	9 HW (2-7)	10 C	11 $Q_w = CLH_w^{3/2}$	12 MIN. RD.EL	13 $\frac{D}{H}\left(\frac{3-12}{2-12}\right)$	14 C_s / C_f	15 (11 X 14)	16 (5 + 15)
730	596.06	594.62	1.44	411.58	–	–	–	–	–	322.94	595.40	< 0	1.0	322.94	734.52
															(Close Enough)

CALCULATIONS AND COMMENTS

$$Q_c = A\sqrt{\frac{2gH_c}{K_T}} = 56.7\sqrt{\frac{64.4}{1.76}}\ H_c^{1/2} = 342.98\ H_c^{1/2}$$

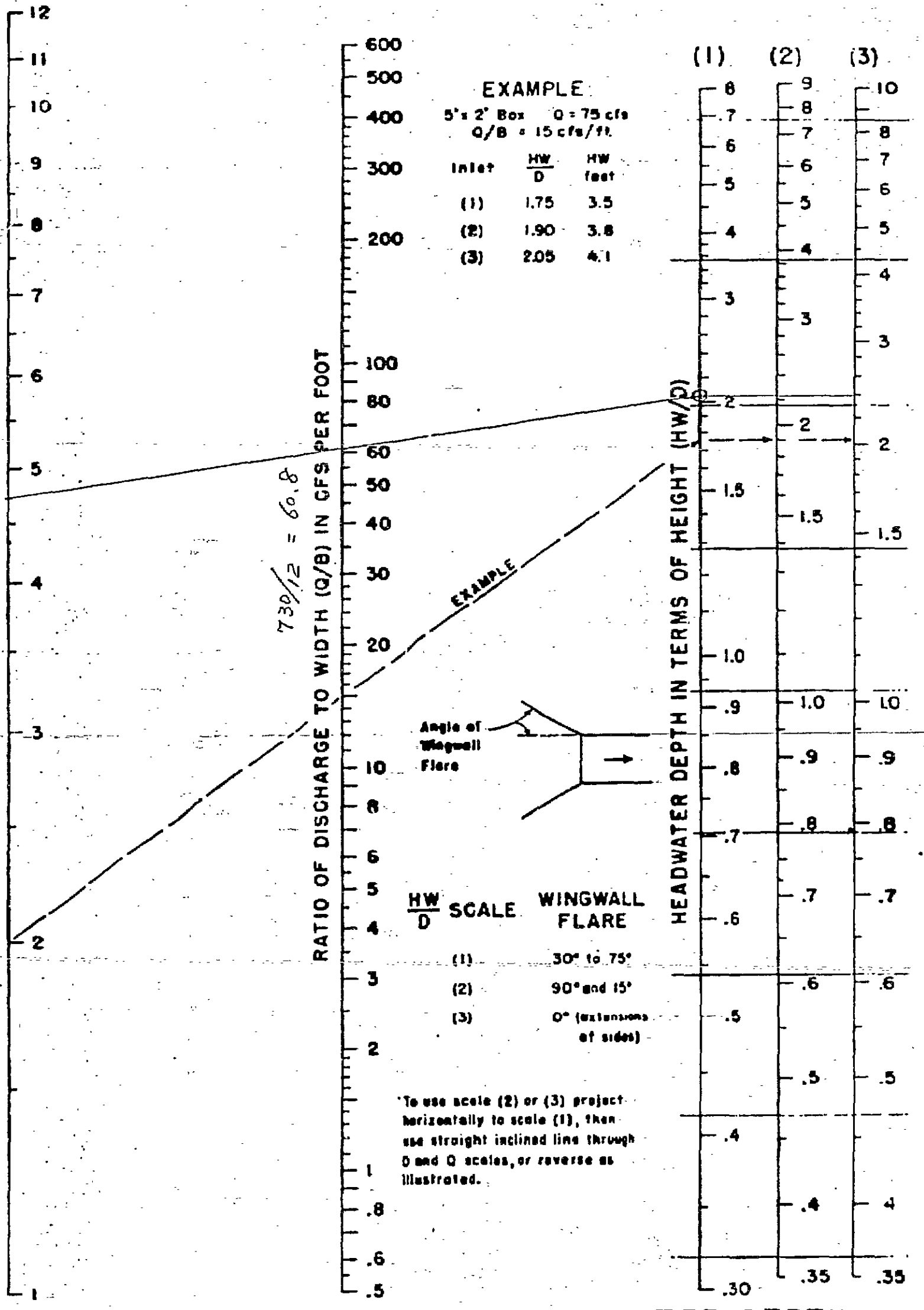
5555-66 CITY OF SOUTHGATE
FRANK & POET DRAIN
DIX-TOLEDO HIGHWAY BRIDGE
PAVED ROAD
77 FEET BREADTH
NUMBER OF POINTS= 13

STATION	ELEVATION
990.00	605.00
990.00	595.80
1000.00	595.80
1100.00	595.50
1199.00	595.40
1199.00	597.00
1200.00	597.00
1212.00	597.10
1213.00	597.10
1213.00	595.50
1300.00	595.70
1355.00	596.10
1355.00	605.00

WIDTH OF ROADWAY= 77.00
ROAD SURFACE:PAVED

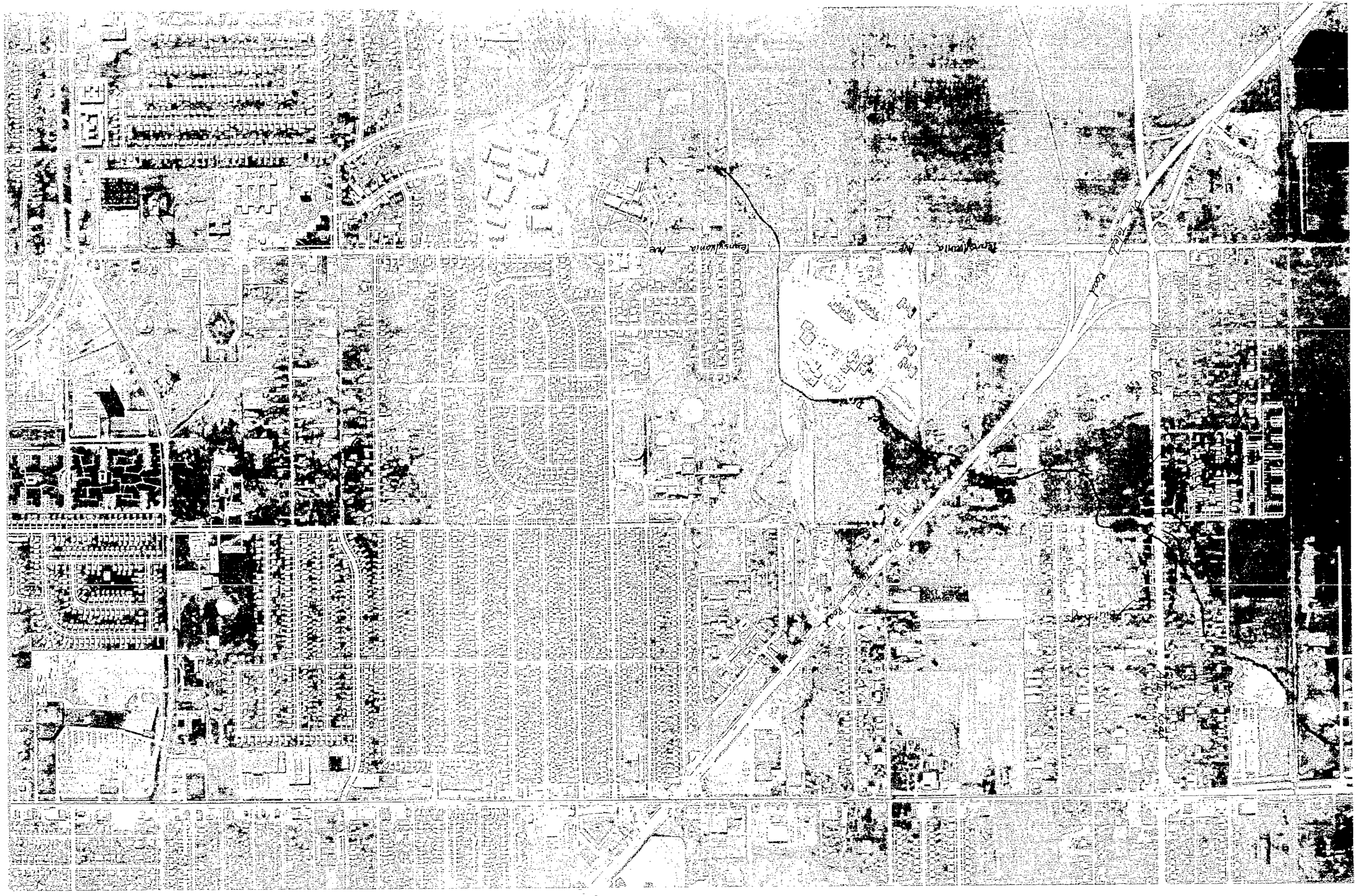
ELEVATION FEET	FLOW CFS	CAV	TOP WIDTH FEET	AREA SFT
595.40	0.0	0.0	0.	0.0
595.50	3.66	2.895	99.	4.97
595.60	19.96	2.926	190.	18.63
595.70	52.99	2.945	266.	39.97
595.80	105.27	2.966	313.	67.59
595.90	175.95	2.986	337.	99.17
596.00	262.47	3.000	351.	132.15
596.10	363.25	3.009	365.	166.50
596.20	477.08	3.019	365.	201.55
596.30	602.11	3.025	365.	236.59

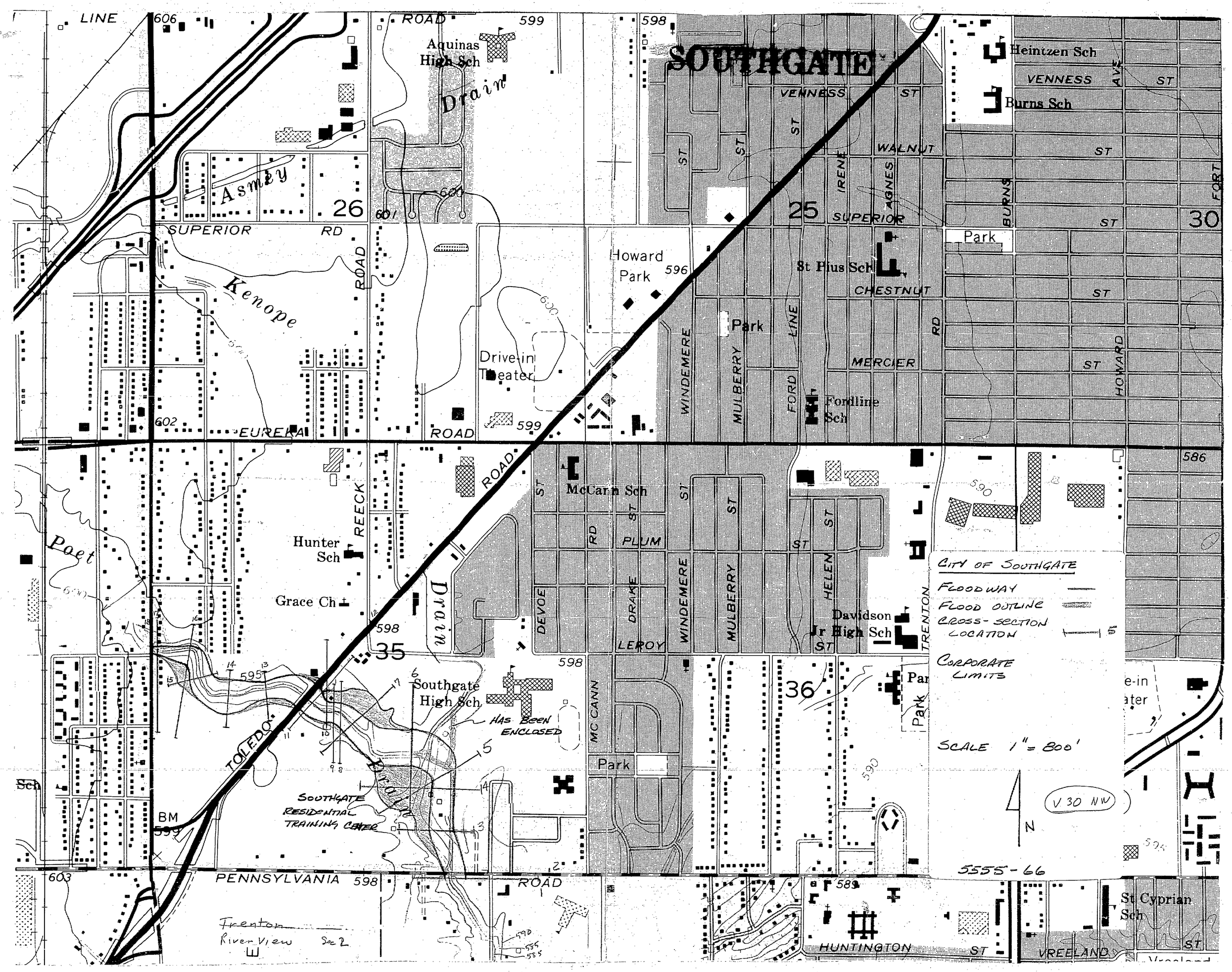
CHART 1

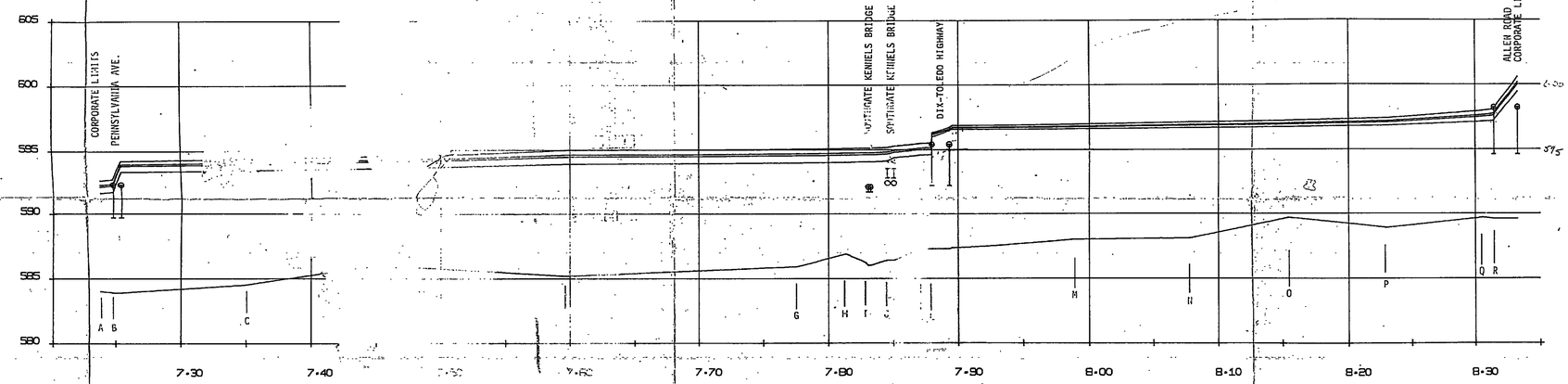


BUREAU OF PUBLIC ROADS JAN 1963

HEADWATER DEPTH FOR BOX CULVERTS WITH INLET CONTROL


Pennsylvania Ave
Pennsylvania Ave
Dix Toledo Road
Allen Road
Dix Toledo Road
Allen Road


SOUTHGATE
LINE
ROAD
Aquinas High Sch
Drain
Heintzen Sch
Burns Sch
VENNESS ST
WALNUT ST
SUPERIOR ST
CHESTNUT ST
MERCIER ST
Asmey
Kenope
SUPERIOR RD
Howard Park
St Pius Sch
Park
Drive-in Theater
Fordline Sch
EUREKA ROAD
McCann Sch
PLUM ST
LEROY ST
DEVOE ST
DRAKE ST
WINDEMERE ST
MULBERRY ST
FORD LINE
IRENE
AGNES
BURNS
HOWARD
FORT
TRENTON
Hunter Sch
Grace Ch
Poet
REECK
Davidson Jr High Sch
Southgate High Sch
HAS BEEN ENCLOSED
SOUTHGATE RESIDENTIAL TRAINING CENTER
TOLEDO
PENNSYLVANIA ROAD
HUNTINGTON ST
VREELAND ST
St Cyprian Sch
BM 599
26
25
30
35
36
CITY OF SOUTHGATE
FLOODWAY
FLOOD OUTLINE
CROSS-SECTION LOCATION
CORPORATE LIMITS
SCALE 1" = 800'
N
V 30 NW
5555-66
Trenton
River View Sec 2



FINAL:
DATE COMPLETED:
PRELIMINARY:

BULLETIN	DATE	MARK	BULLETIN	DATE	MARK	BULLETIN	DATE

JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS
PONTIAC, MICHIGAN

CITY OF SOUTHGATE, MI, FIS

FRANK & POET DRAIN

SCALE: VERT. 1" = 5'
HORIZ. 1" = 0.05 MI

JOB NO. 5555-66-1
DATE ISSUED
SHEET NO. 1 OF 1

MP&S
SH&G

2223 Packard Road
Ann Arbor, Michigan
48104
(313) 769-9220

455 W. Fort St.
Detroit, Michigan
48226
(313) 964-3000

A Joint Venture

FLOOD INSURANCE STUDY

H-4705

TRANSMITTAL

To: Michigan DNR
Water Management Division
P.O. Box 30028
Lansing, Michigan 48909

Date: October 23, 1979

Re: Sumpter Twp
N. Branch Swan Creek

Attn: Mr. Daniel Morgan, P.E.

Gentlemen:

We are enclosing herewith X

We are sending under separate cover ___

We acknowledge receipt of ___

The following: ___ Drawings ___ Specifications X

Bridge Sketches and comments on why we modelled them as we did.

For ___ Your approval ___ Your corrections ___ Your comments

___ Your use X Your files

Remarks: We reviewed Hudson and didn't feel any bridges required any additional comments. If you disagree. Please Call us.

Distribution:

~~Daryl Flatt-SH&G~~
File

Very truly yours,
McNAMEE, PORTER AND SEELEY

Duane R. Meyer P.E.
Duane R. Meyer, P.E.

HUD-FIA-H-4705

Sumpter Twp. FIS - N.B. Swan Creek

MPG 10/22/79

Bridge Modelling Notes:

Martinsville Rd - Section G (5.98-6.02)

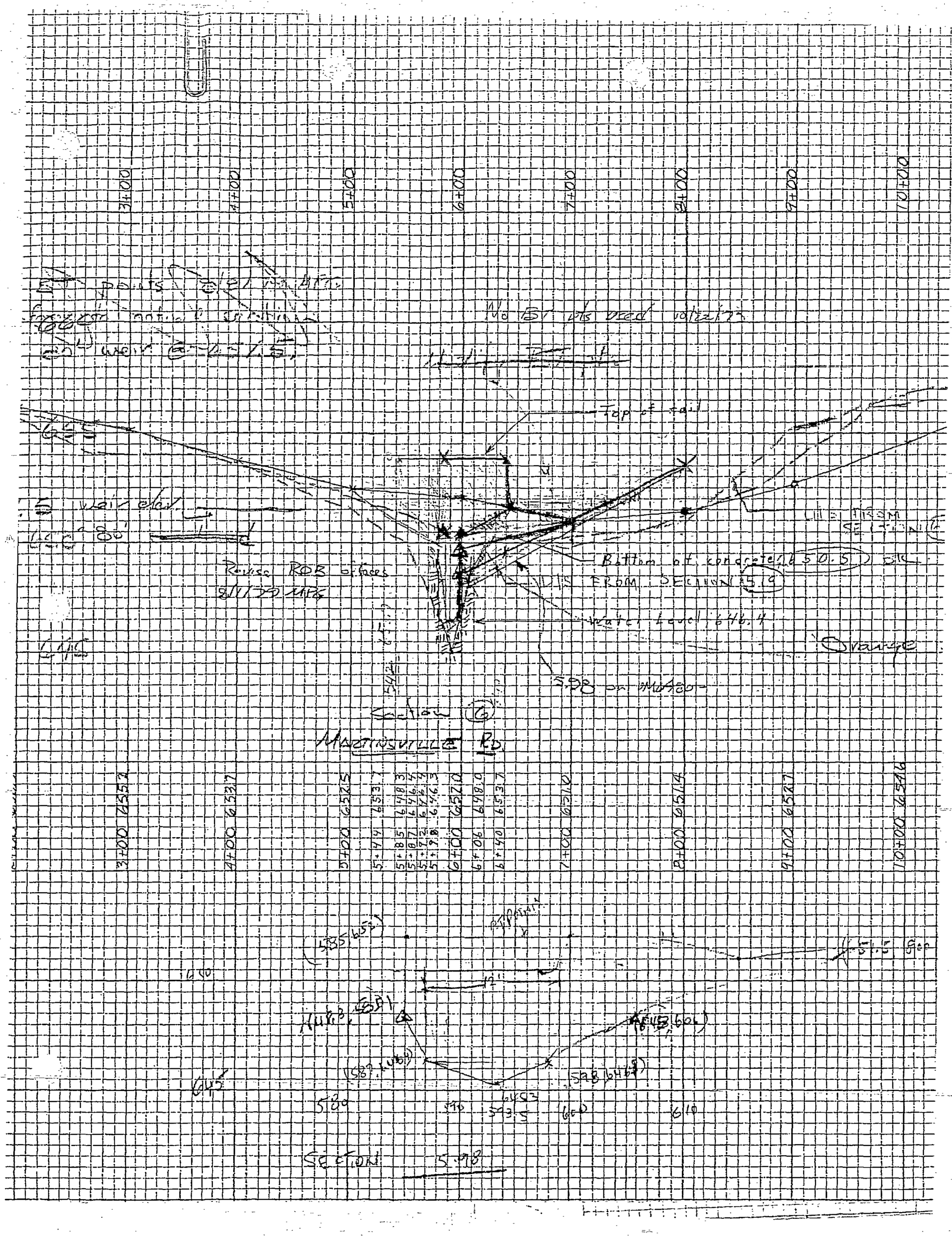
The assumption was made that weir flow will occur around the right overbank (south) side of the bridge. A metal guard rail inhibits conveyance directly over the opening. A weir of 80' Length and elevation 651.5 was used to model the available area on the south side of the bridge.

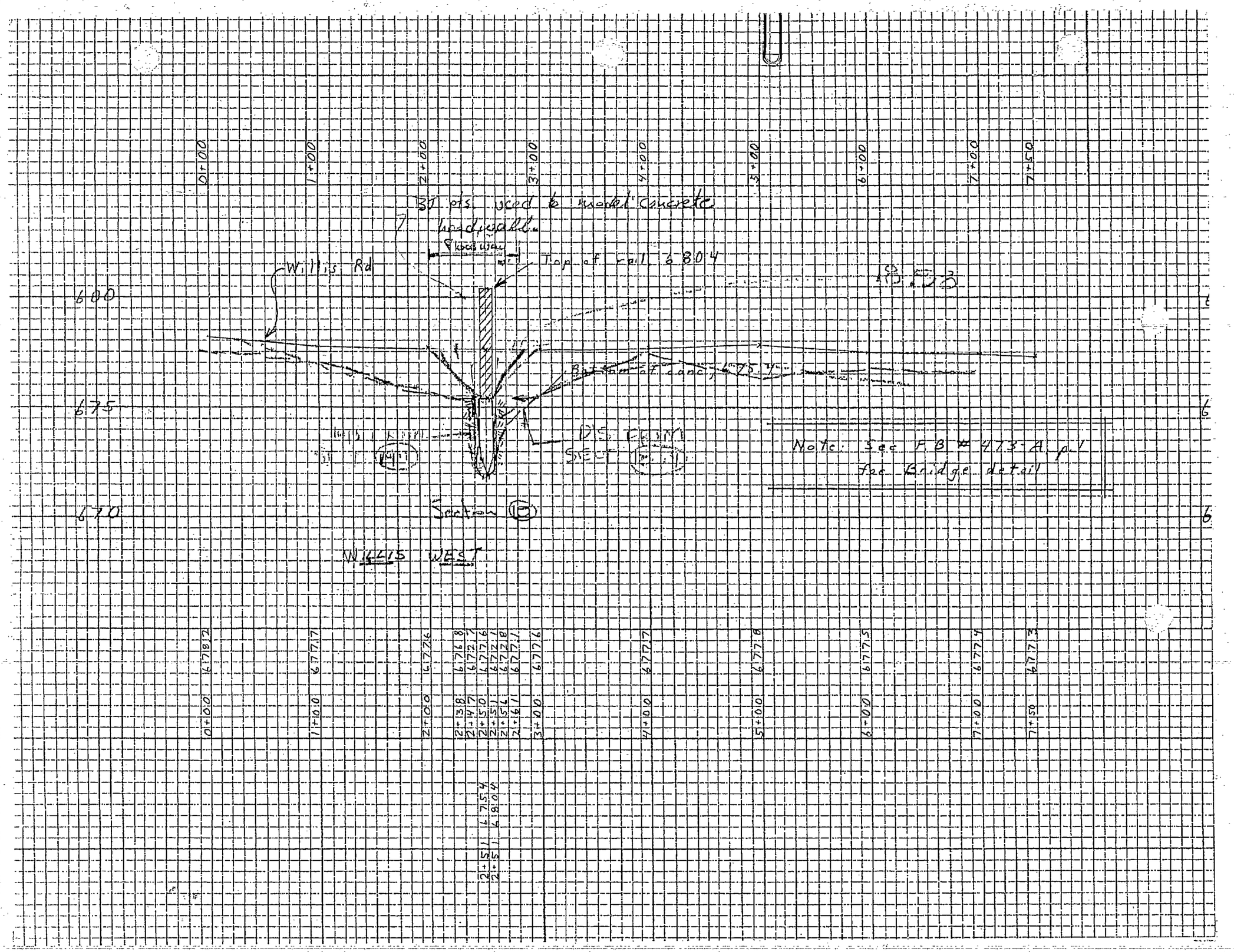
Willis Rd - Middle Crossing Section AF (14.98-15.02)

This bridge has a very restrictive opening resulting in ~ 70% of the total flow being weir flow. The floodway upstream of the bridge is limited by homes on either side of the stream. (see photos and plans). BT points were used to model the effective weir on either side of the impermeable concrete headwall.

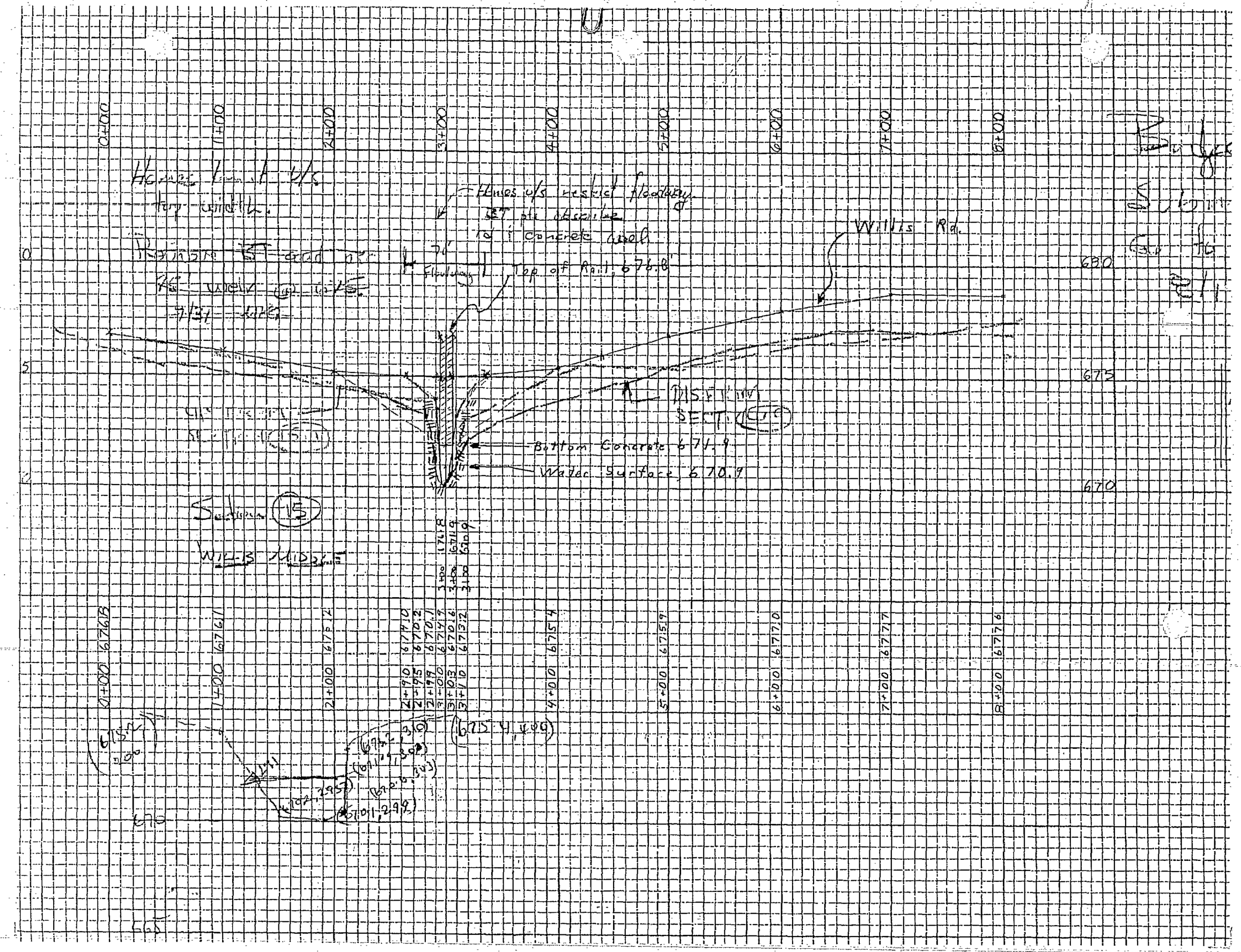
Willis Rd. - West Crossing Section AN (18.98-19.02)

This bridge is similar to willis middle in that ~ 55% of the flow is weir flow. BT points were used to model the concrete headwall. The effective weir length is consistant with the floodway upand downstream of the bridge.

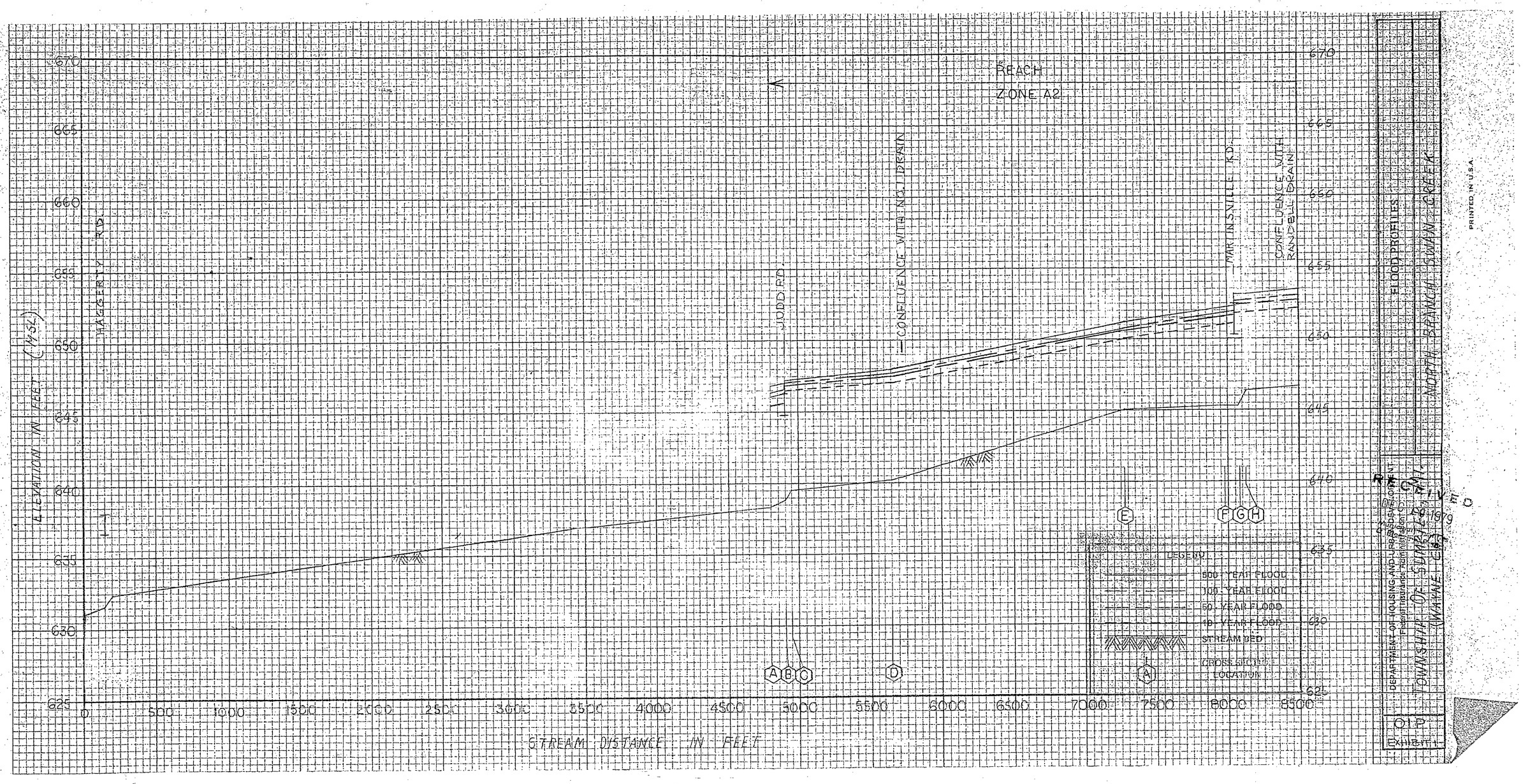

Top of rail
Bottom of concrete 450.5
Water level 446.4
Invert
Retaining wall
Retaining wall
Retaining wall



0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
7+50
BI pts. used to model concrete headwall.
Willis Rd
Top of rail 6804
600
675
670
Bottom of conc. 675.4
DS FROM SECT
Note: See FB # 473-A p.1 for Bridge detail
Section
WILLIS WEST
0+00 6782
1+00 6777
2+00 6776
2+38 6768
2+47 6727
2+50 6776
2+51 6771
2+56 6728
2+61 6771
3+00 6776
4+00 6777
5+00 6778
6+00 6775
7+00 6774
7+50 6773
2+51 6754
2+51 6804

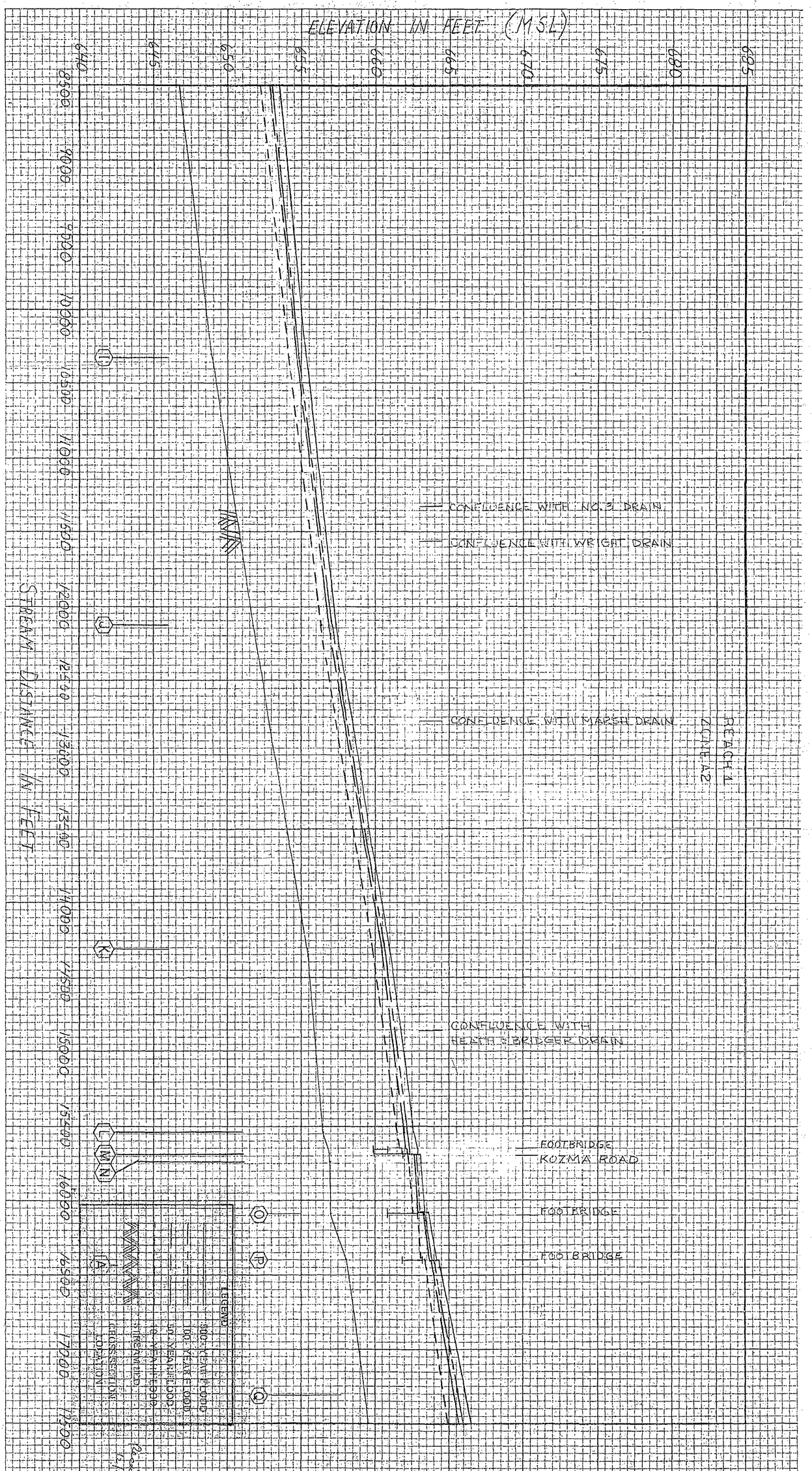


0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
Homes u/s restrict floodway
Top of Rail 676.8
Willis Rd.
Bottom Concrete 671.9
Water Surface 670.9
680
675
670
Section 15
WILLIS MIDDLE
0+00 676.8
1+00 676.1
2+00 675.2
2+90 674.0
2+95 670.2
2+99 670.1
3+00 674.9
3+03 670.6
3+10 673.2
4+00 675.4
5+00 675.9
6+00 677.0
7+00 677.7
8+00 677.6
(675.4, 400)
(670.1, 299)



REACH
ZONE A2
HAGGERTY RD.
JODD RD.
CONFLUENCE WITH NO. 1 DRAIN
MARTINSVILLE RD.
CONFLUENCE WITH RANDELL DRAIN
ELEVATION IN FEET (MSL)
STREAM DISTANCE IN FEET
LEGEND
500-YEAR FLOOD
100-YEAR FLOOD
50-YEAR FLOOD
10-YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION
FLOOD PROFILES
NORTH BRANCH SWAN CREEK
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration
TOWNSHIP OF SUMPTER
WAYNE CO.
OIP
EXHIBIT 1
RECEIVED
DEC 19 1979
PRINTED IN U.S.A.

PRINTED IN U.S.A.



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration

TOWNSHIP OF SUMPTER, MI.
(WAYNE CO.)

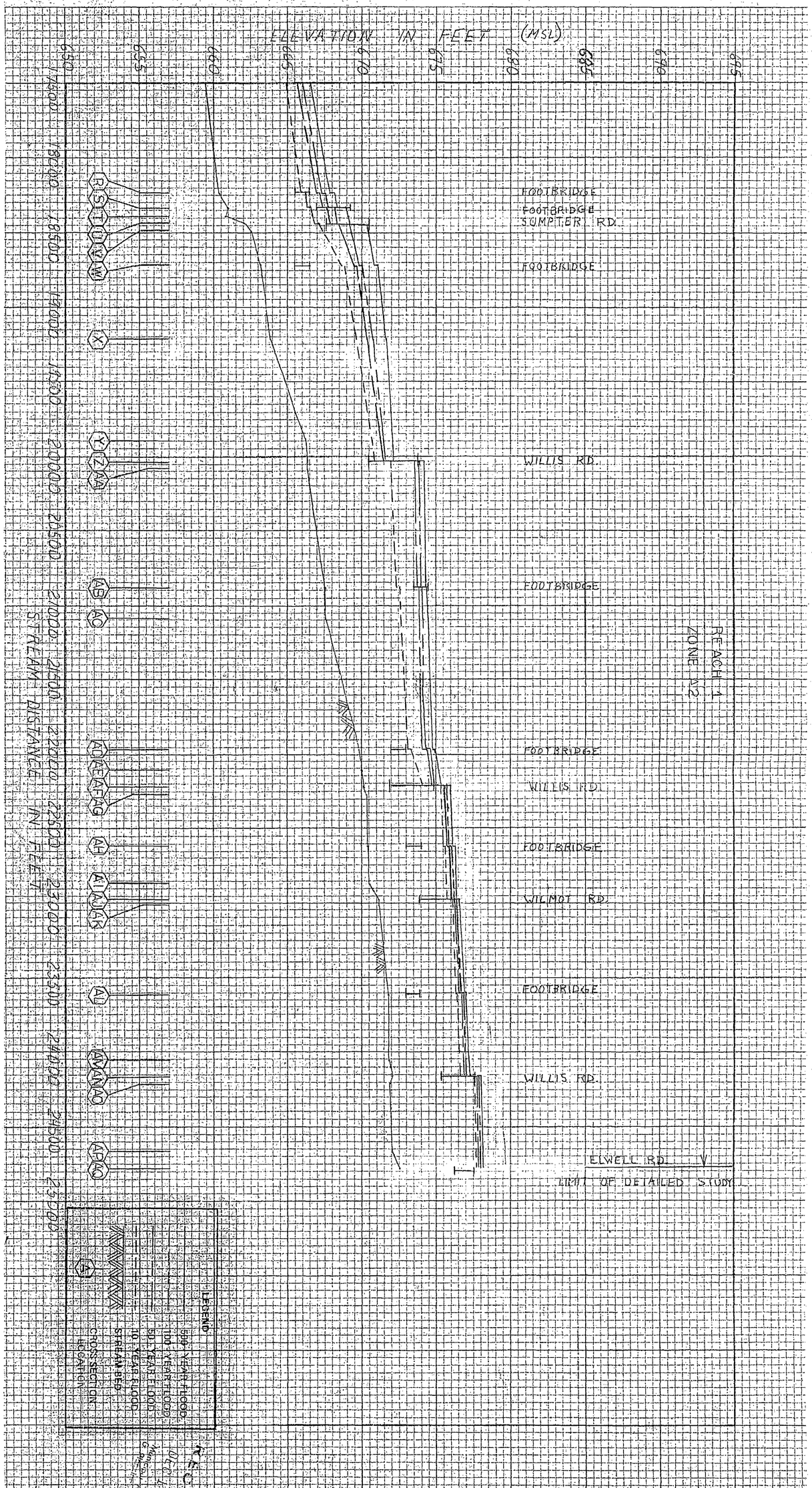
FLOOD PROFILES

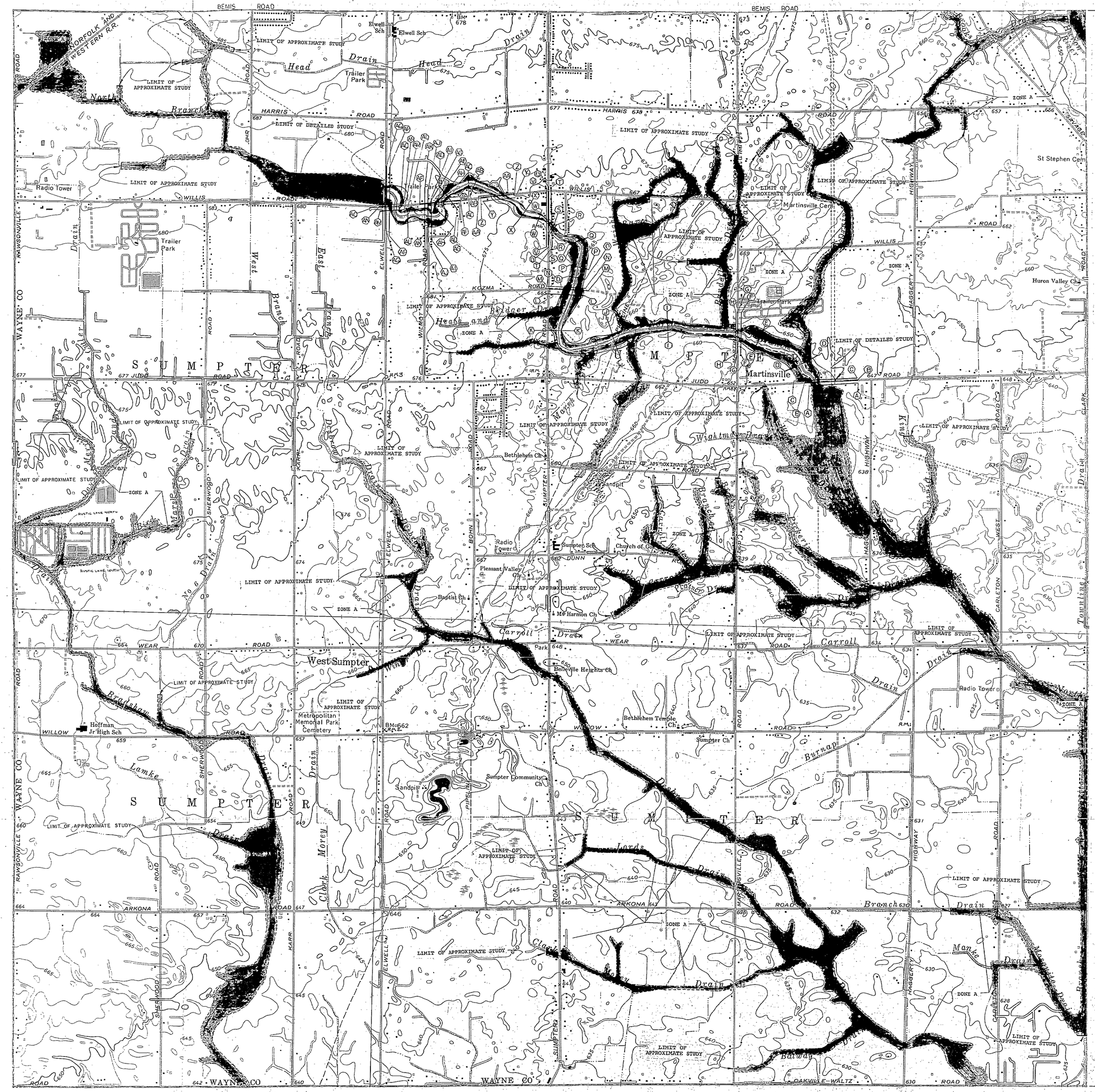
NORTH BRANCH SWAN CREEK

EXHIBIT 1

02 P

EUGENE DIETZGEN CO
10 x 10 = ONE INCH
PE CT CROSS SECTION





KEY TO MAP

500-year Flood Boundary	ZONE B
100-year Flood Boundary	
FLOODWAY FRINGE	FLOODWAY
100-year Flood Boundary	ZONE B
500-year Flood Boundary	
Elevation Reference Mark	RM7
Cross Section Line	A — A
Approximate 100-year Flood Boundary	
Zone Designation	Zone A

NOTES TO USER

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations without regard to economic, legal, or political factors.

This map was prepared to support minimum flood plain management regulations; it may not show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

EXPLANATION OF ZONE DESIGNATIONS

A flood insurance map displays the zone designations for a community according to areas of designated flood hazards. The zone designations used by FIA are:

Zone	Explanation
A	Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods, no base flood elevations shown or FHF's determined
A1-A30	Special Flood Hazard Areas inundated by the 100-year flood, determined by detailed methods; base flood elevations established, and zones assigned according to FHF's.
B	Area between Zones A1-A30 and the limits of the 500-year flood.

N

0 500 1000 2000 3000
SCALE 1"=1000

EXHIBIT 2

FLOOD HAZARD BOUNDARY MAP
FLOOD INSURANCE RATE MAP

TOWNSHIP OF SUMPTER
MICHIGAN
WAYNE COUNTY

RECEIVED
DEC 1 5 1979
NOTES MANAGEMENT

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

City of Taylor

—— streams studied by detailed methods

—— streams studied by approximate method.

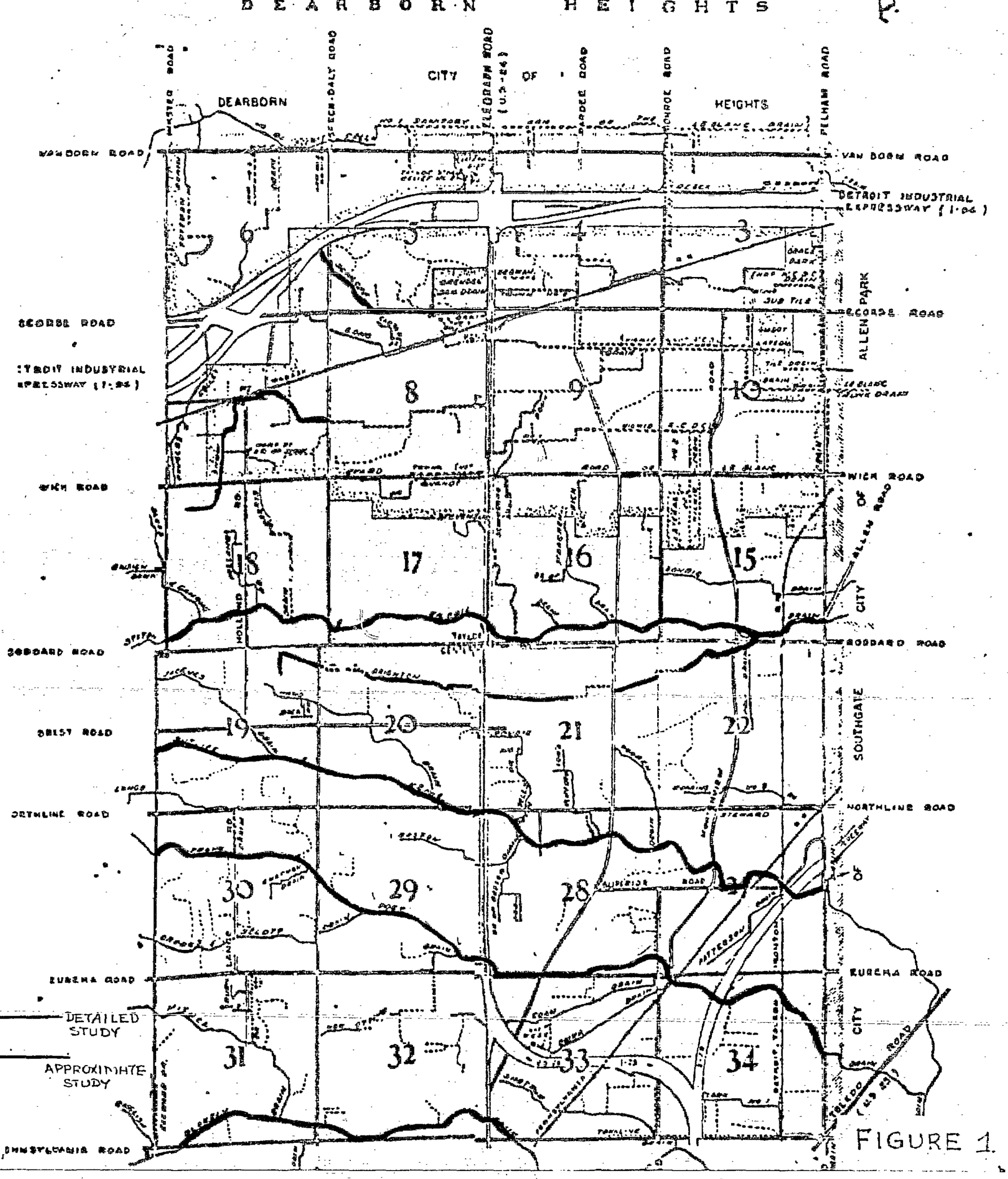
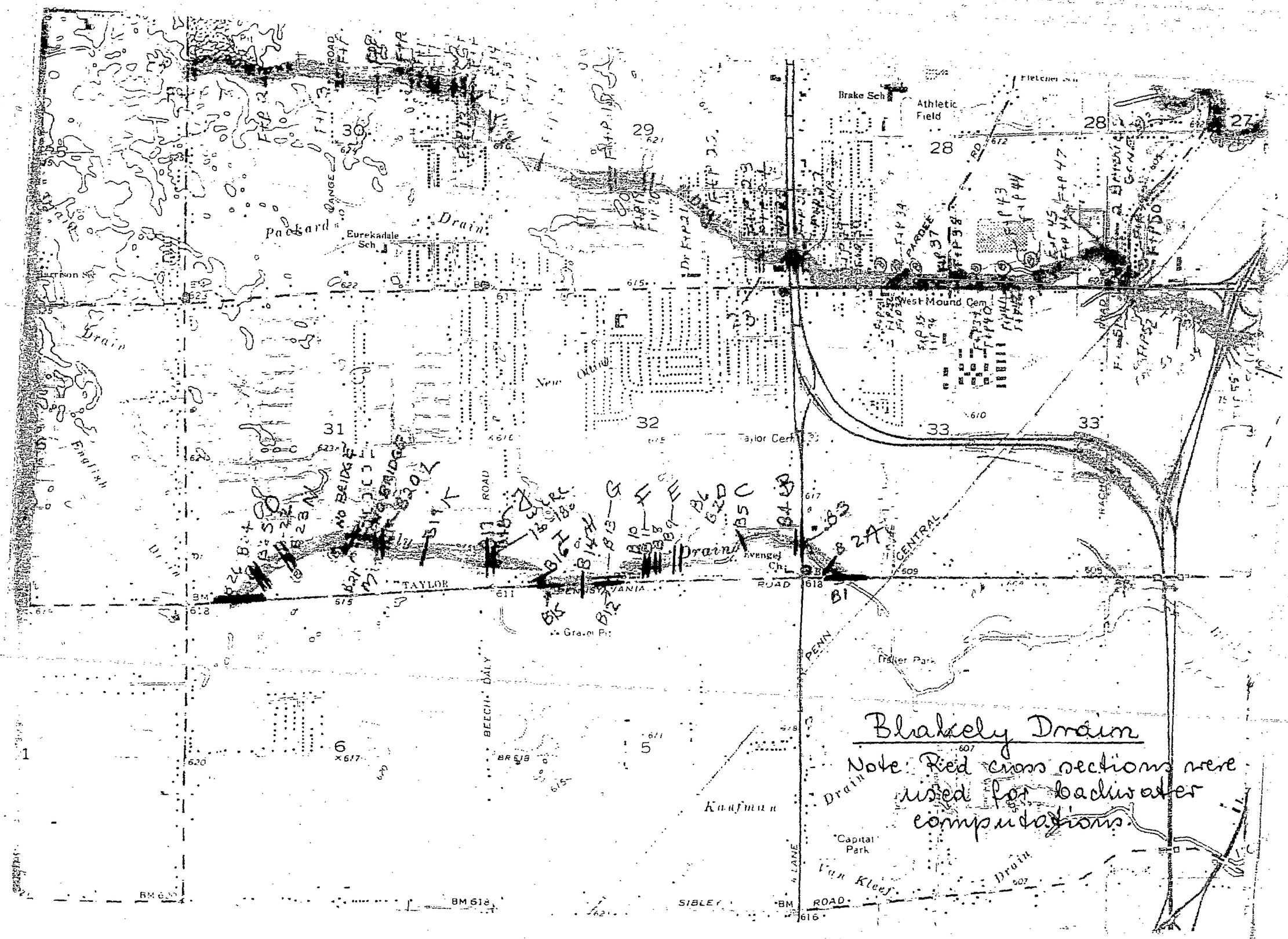
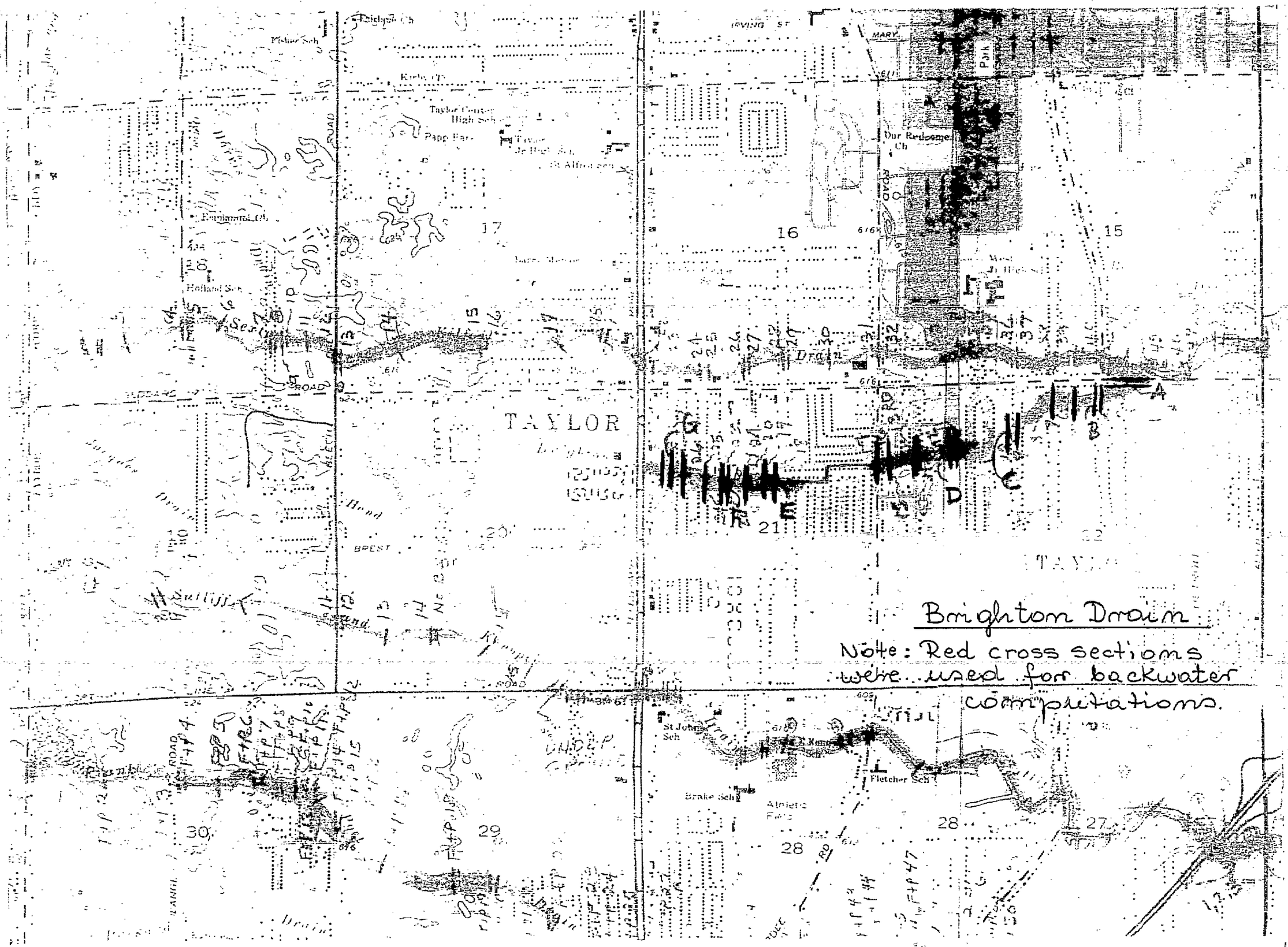
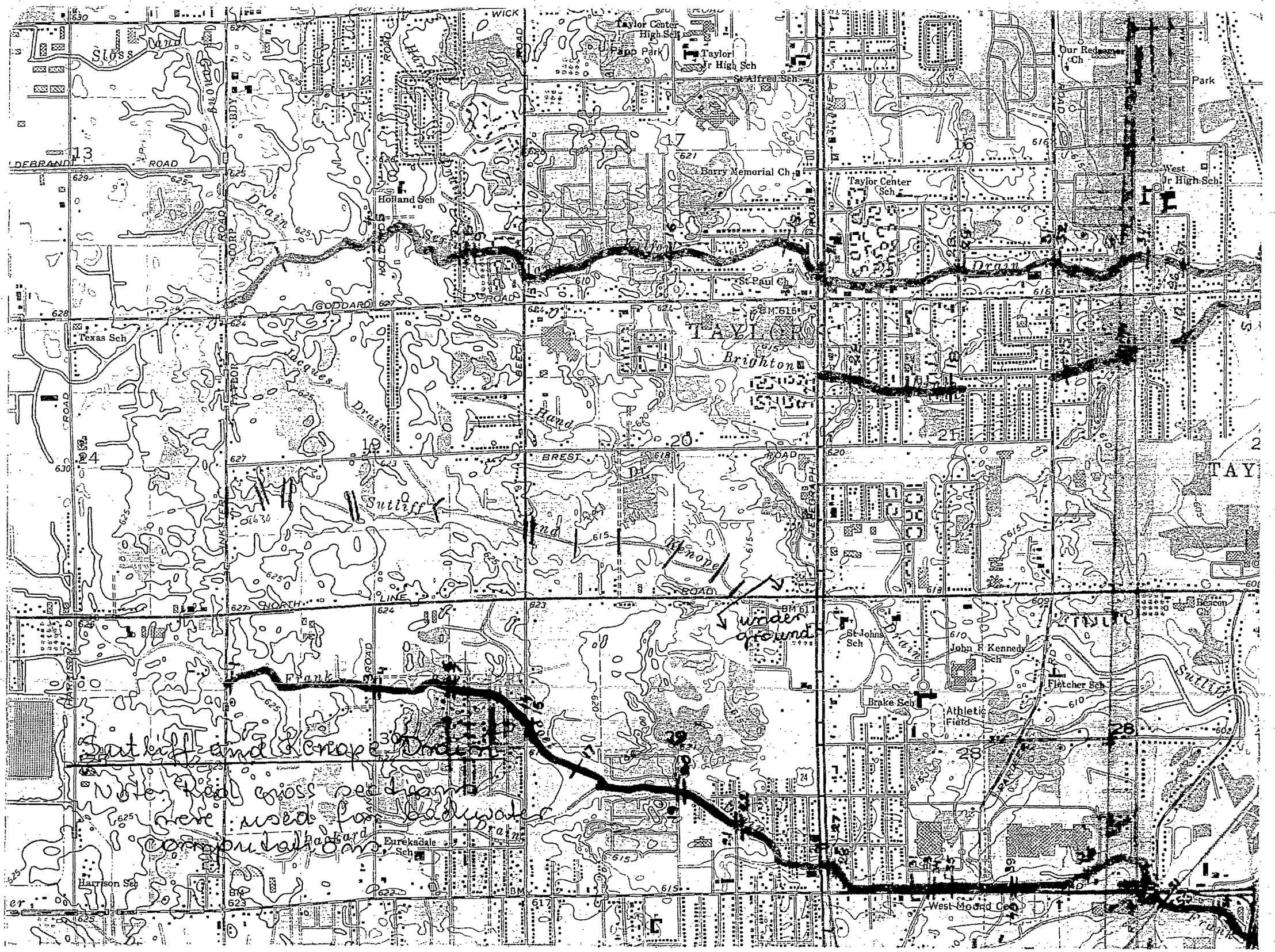
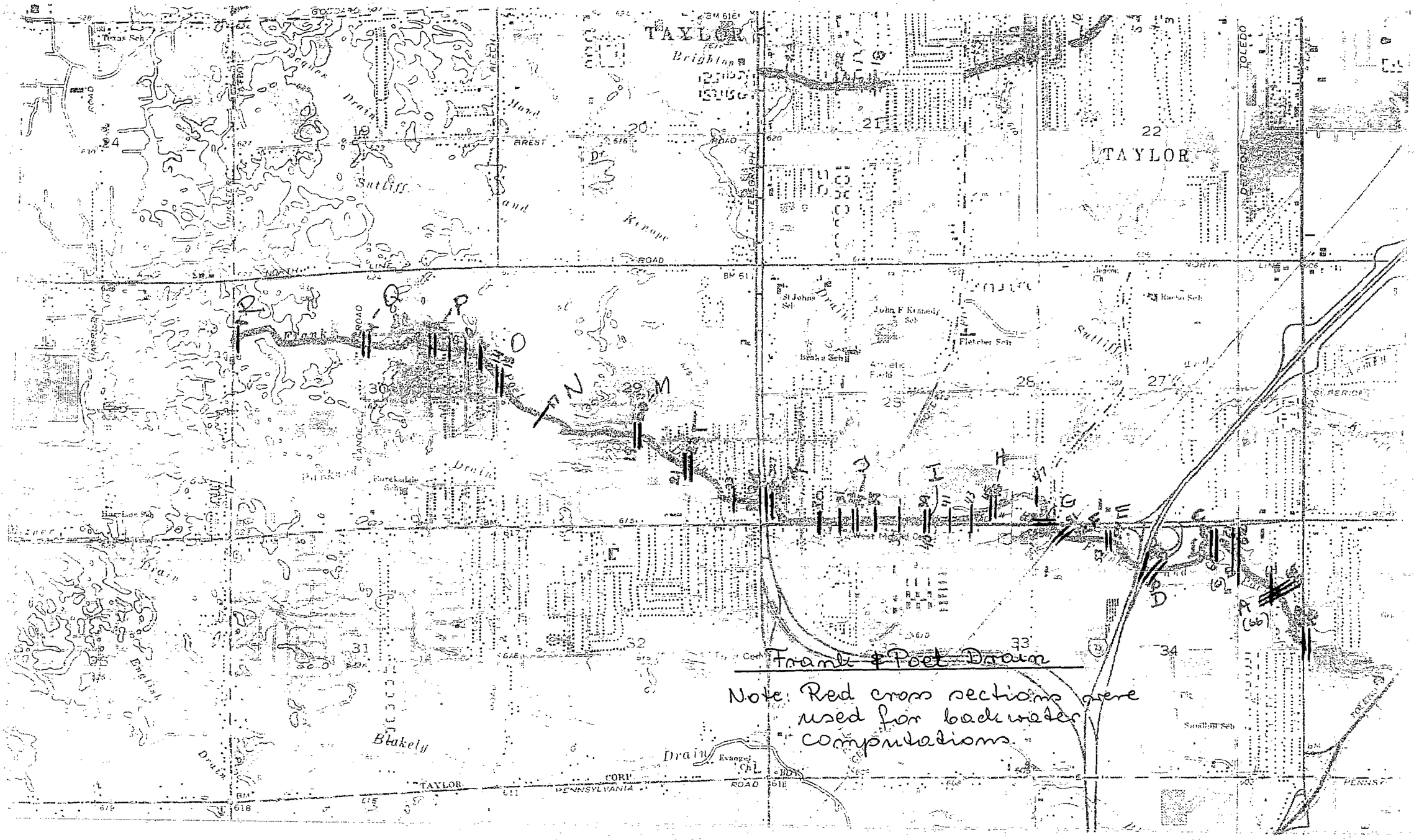


FIGURE 1.


Brake Sch
Athletic Field
Fletcher Sch
Packard Drain
Eurekadale Sch
Harrison St
West Mound Cem
New Outlet
Taylor Cem
Evengel Ch
TAYLOR ROAD
PENNSYLVANIA
CENTRAL
PENN
Gravel Pit
Trailer Park
BEECH DALY
Kaufman
Capital Park
Van Kleef Drain
SIBLEY ROAD
BM 618
Blakely Drain
Note: Red cross sections were used for backwater computations.


TAYLOR
Brighton Drain
Note: Red cross sections were used for backwater computations.


Taylor Center High Sch
Papp Park
Taylor Jr High Sch
St Alfred Sch
Our Redeemer Ch
Park
Barry Memorial Ch
Taylor Center Sch
West Jr High Sch
Holland Sch
Drain
St Paul Ch
GODDARD ROAD
Texas Sch
TAYLOR
Brighton
Jacques Drain
Hand
BREST ROAD
Sutliff
Kenope
NORTH LINE ROAD
under ground
St Johns Sch
John F Kennedy Sch
Fletcher Sch
Brake Sch
Athletic Field
Frank
Eurekadale Sch
Harrison Sch
West Mound Cem
Beacon Ch
Sutliff and Kenope Drain
Note: Red cross sections were used for backwater computations


TAYLOR
Brighton
TAYLOR
Frank & Poet Drain
Note: Red cross sections were used for backwater computations.
Sutliff
Kenope
Blakely
Drain
NORTH LINE ROAD
BREST ROAD
TAYLOR CORP
PENNSYLVANIA ROAD
DETROIT TOLEDO
SUPERIOR
Texas Sch
St Johns Sch
John F Kennedy Sch
Fletcher Sch
Racho Sch
Harrison Sch
Sandburg Sch
Evangel Ch
19
20
21
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24
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28
29
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34
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G
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I
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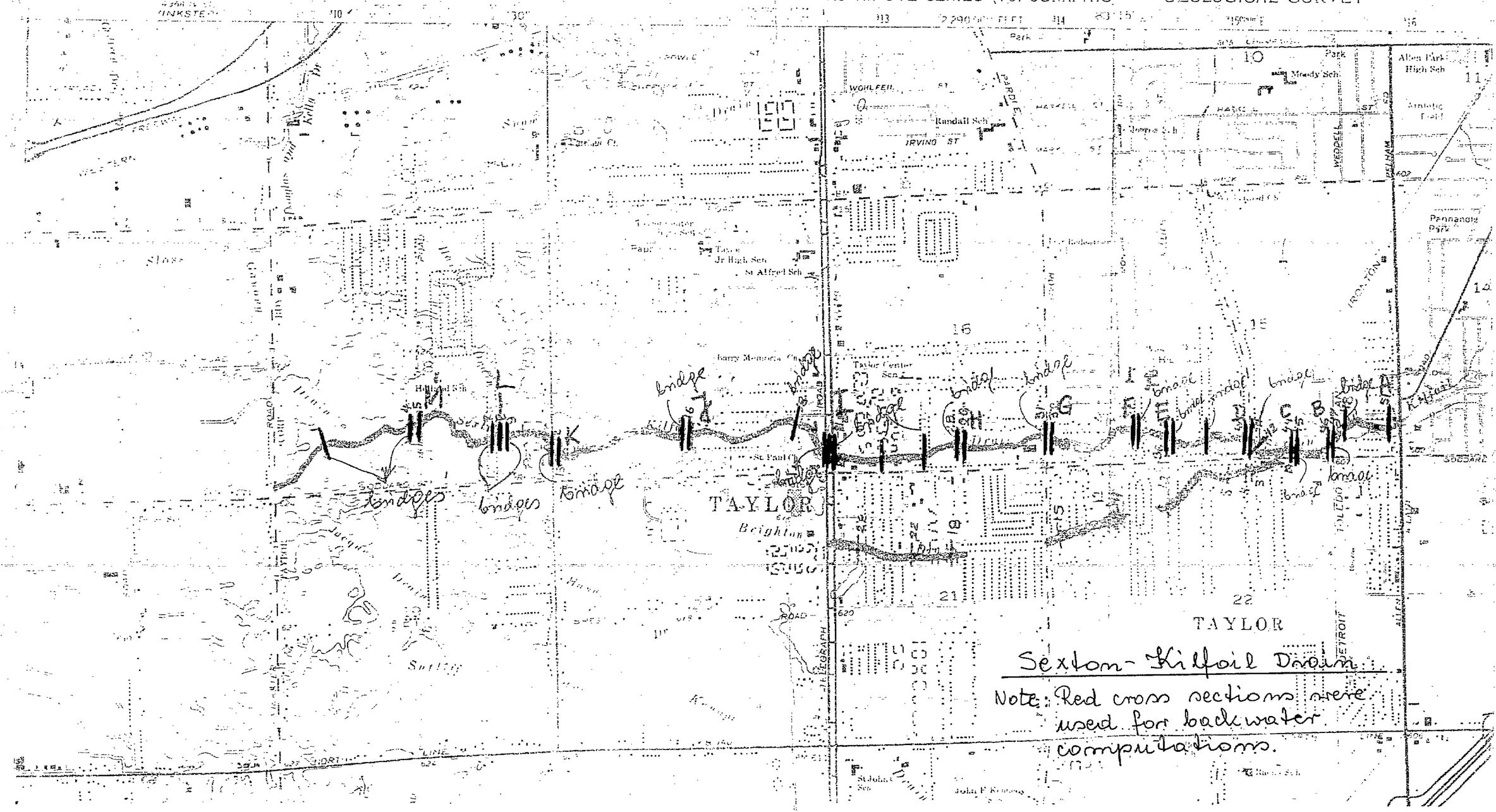
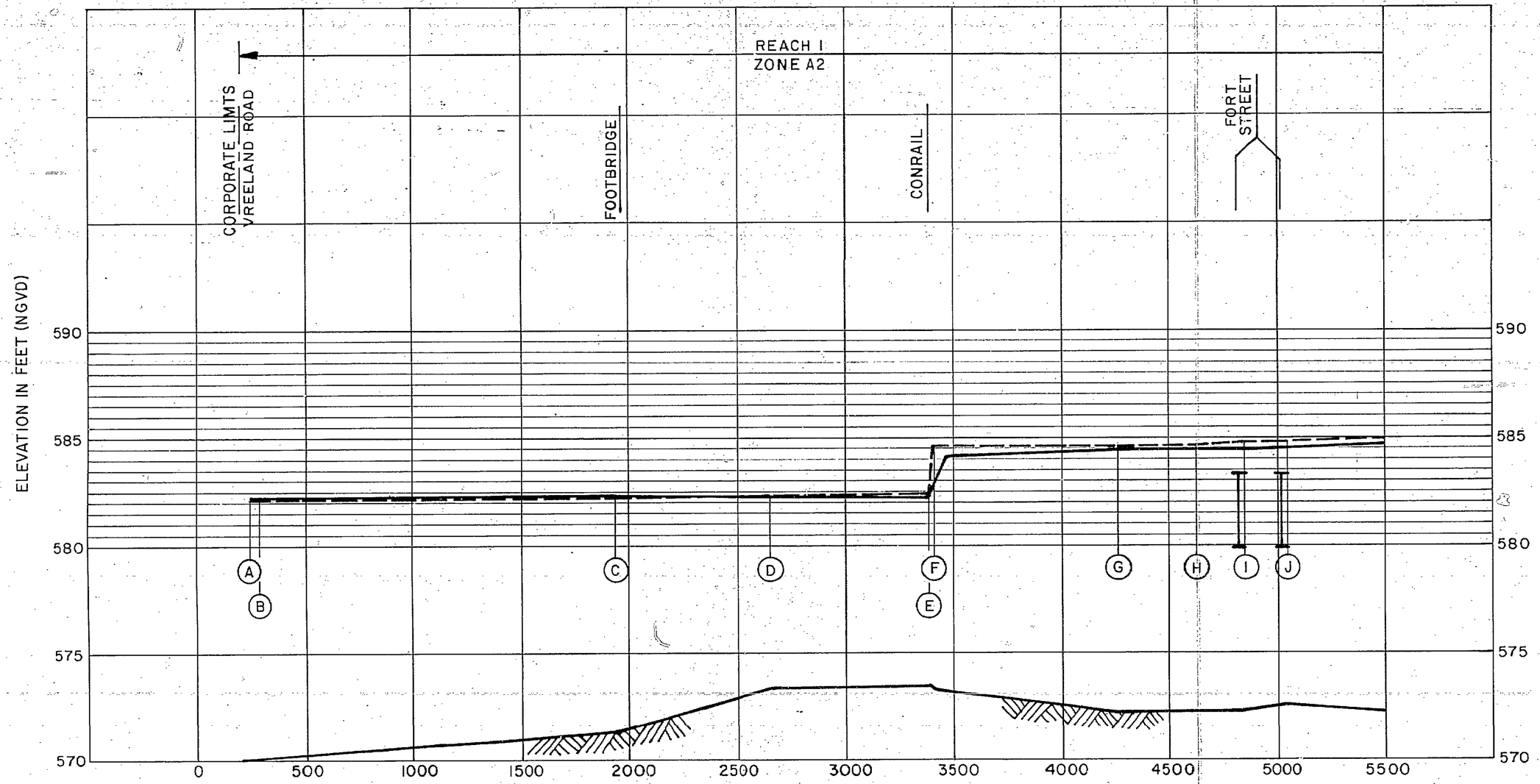
(66)

MICHIGAN—WAYNE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Note: Red cross sections were used for backwater computations.



LEGEND

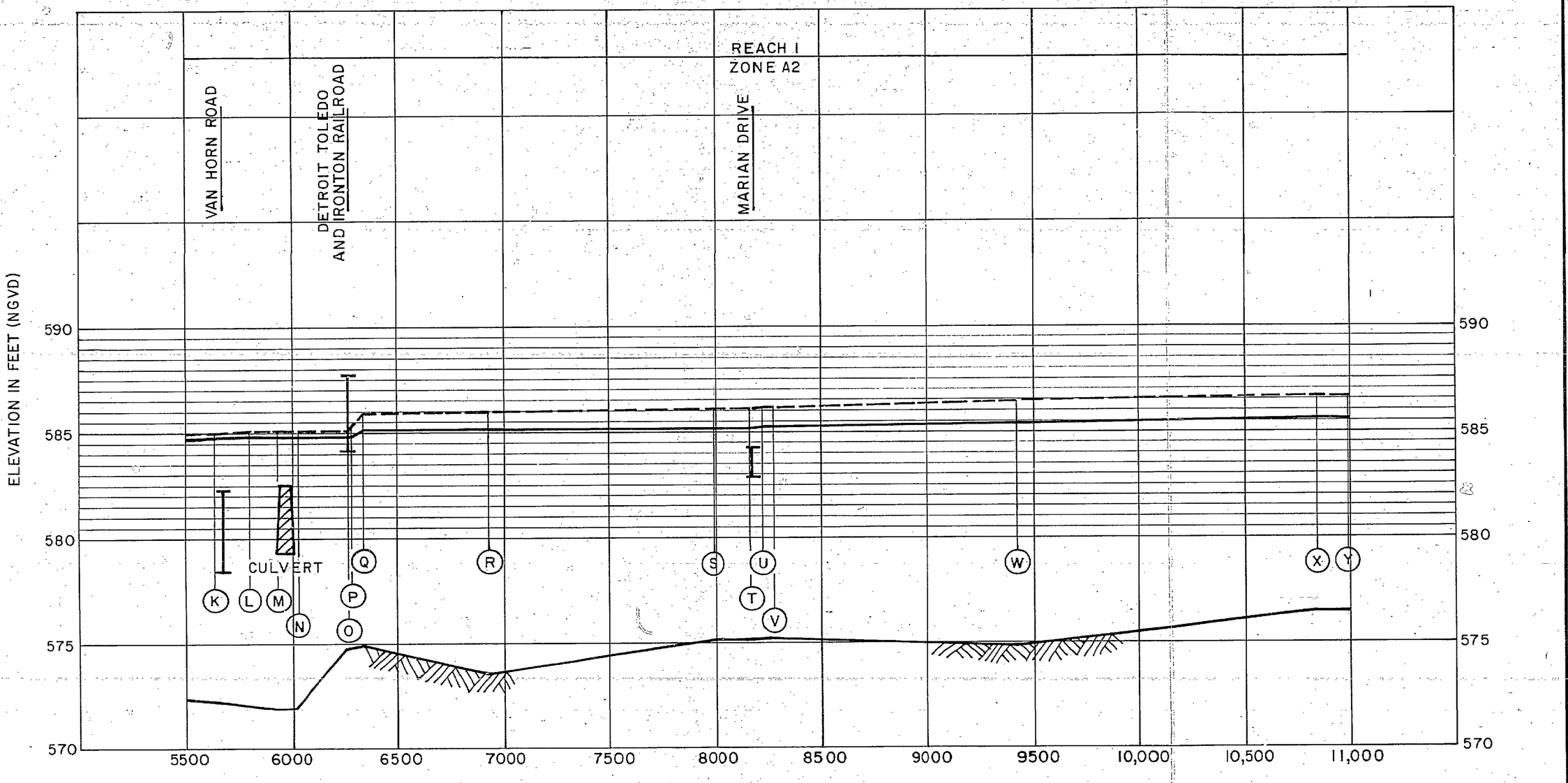
- 100-YEAR REDUCED FLOWS
- 100-YEAR F.I.S. FLOWS
- STREAM BED
- (A) CROSS SECTION LOCATION

CITY OF TRENTON, MICHIGAN

FRANK AND POET DRAIN FLOOD PROFILES

HUBBELL, ROTH & CLARK INC.
CONSULTING ENGINEERS

I



LEGEND

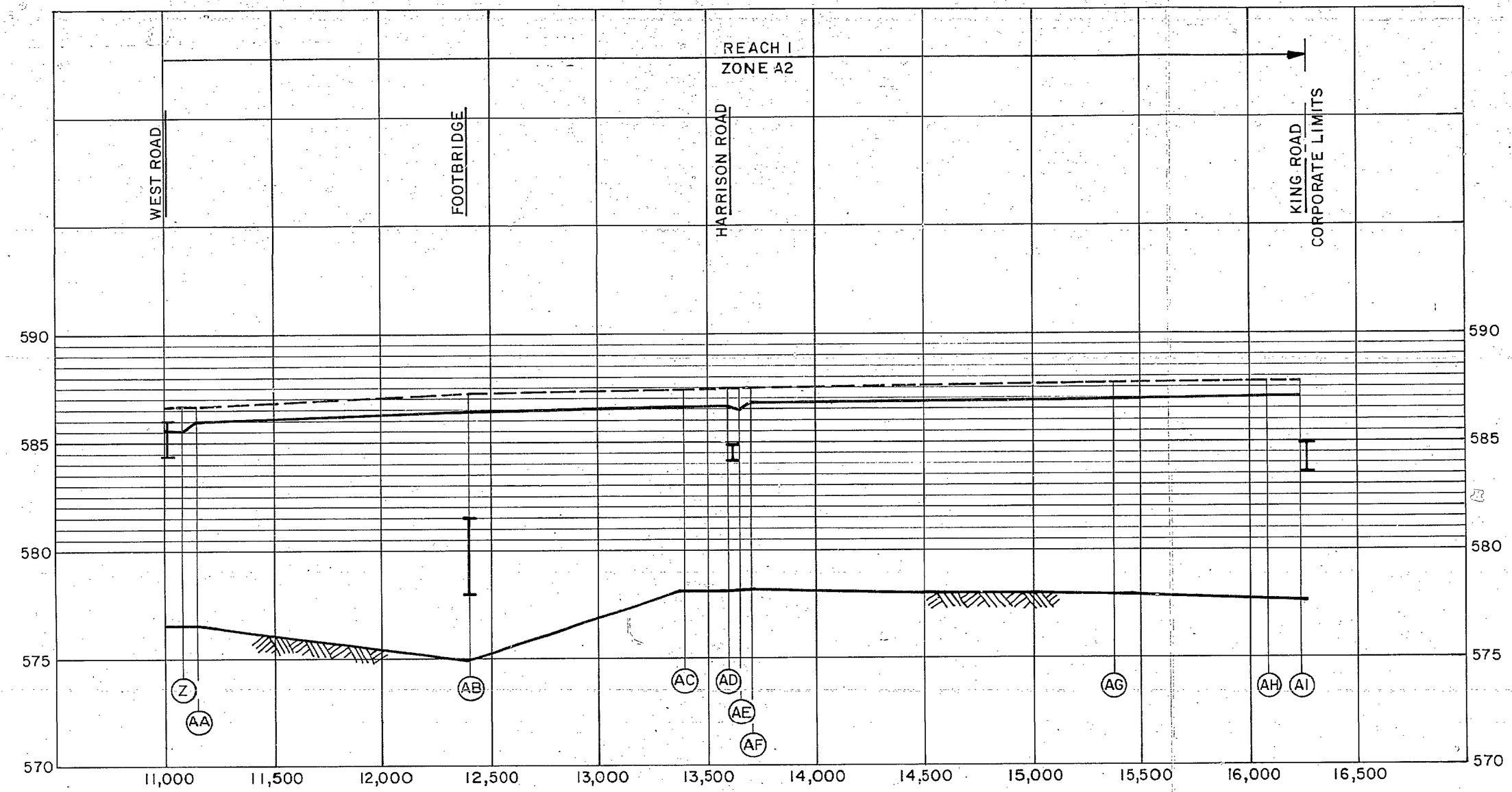
- 100-YEAR REDUCED FLOWS
- 100-YEAR F.I.S. FLOWS
- STREAM BED
- (A) CROSS SECTION LOCATION

CITY OF TRENTON, MICHIGAN

FRANK AND POET DRAIN FLOOD PROFILES

HUBBELL, ROTH & CLARK INC.
CONSULTING ENGINEERS

2



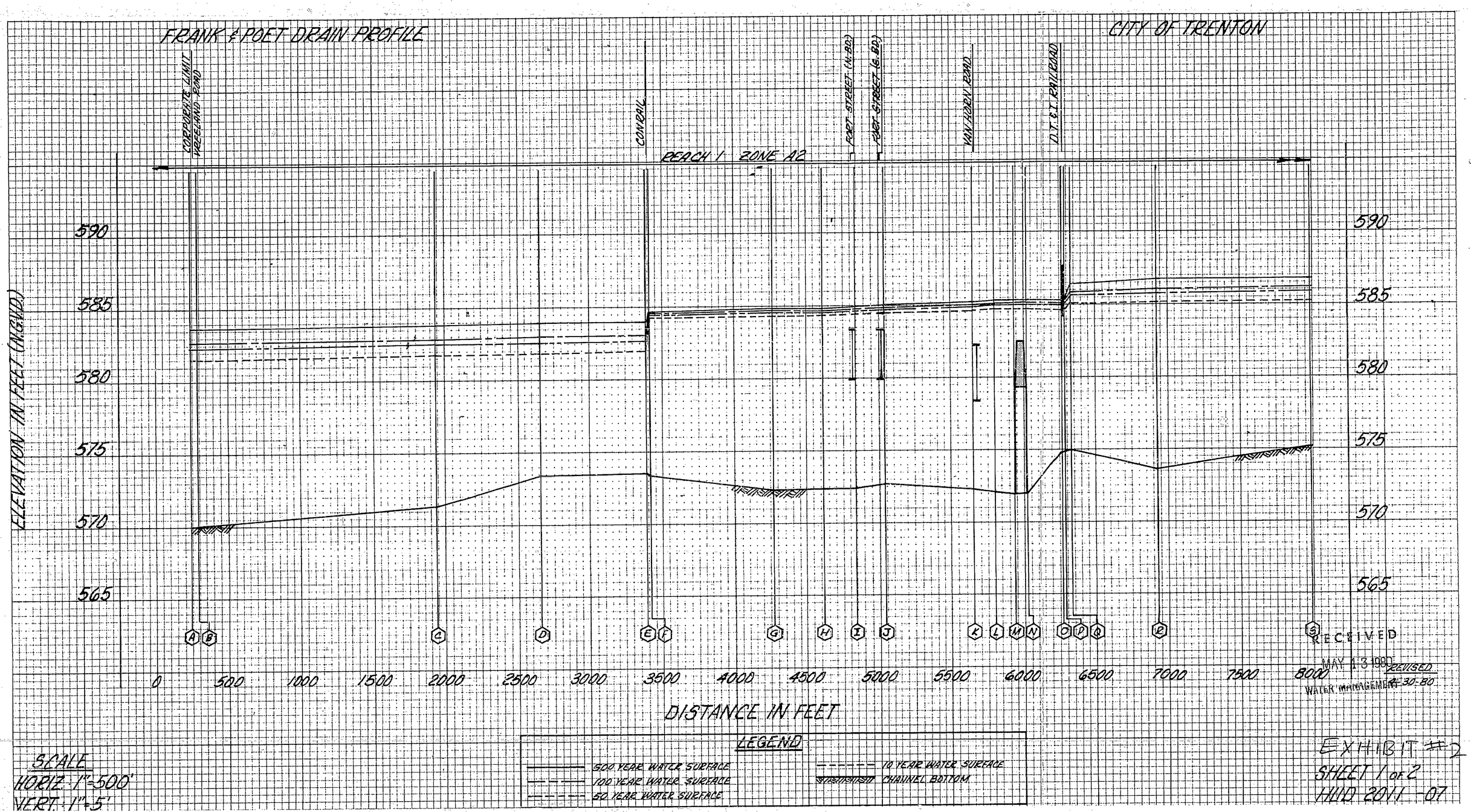
LEGEND

- 100-YEAR REDUCED FLOWS
- 100-YEAR FIS FLOWS
- STREAM BED
- (A) CROSS SECTION LOCATION

CITY OF TRENTON, MICHIGAN

FRANK AND POET DRAIN FLOOD PROFILES

HUBBELL, ROTH & CLARK INC.
CONSULTING ENGINEERS


FRANK & POET DRAIN PROFILE
CITY OF TRENTON
CORPORATE LIMIT VREELAND ROAD
CONRAIL
FORT STREET (N.BD.)
FORT STREET (S.BD.)
VAN HORN ROAD
D.T.&I. RAILROAD
REACH 1 ZONE A2
ELEVATION IN FEET (N.G.V.D.)
590
585
580
575
570
565
A B C D E F G H I J K L M N O P Q R S
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000
DISTANCE IN FEET
LEGEND
500 YEAR WATER SURFACE
100 YEAR WATER SURFACE
50 YEAR WATER SURFACE
10 YEAR WATER SURFACE
CHANNEL BOTTOM
SCALE
HORIZ. 1"=500'
VERT. 1"=5'
RECEIVED
MAY 13 1980
WATER MANAGEMENT
REVISED 4-30-80
EXHIBIT #2
SHEET 1 of 2
HUD 2011-07

FRANK & POET DRAIN PROFILE

CITY OF TRENTON

REACH 1 ZONE A2

MARIAN DRIVE | WEST ROAD | FOOT BRIDGE | HARRISON ROAD | KING ROAD | CORPORATE LIMIT

ELEVATION IN FEET (NGVD)

590
585
580
575
570
565

T U V W X Y Z AA AB AC AD AE AF AG AH AI

8000 8500 9000 9500 10000 10500 11000 11500 12000 12500 13000 13500 14000 14500 15000 15500 16000

DISTANCE IN FEET

RECEIVED
MAY 13 1980
WATER MANAGEMENT

REVISED
4-30-80

LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

SCALE
HORIZ. 1"=500'
VERT. 1"=5'

EXHIBIT #2
SHEET 2 OF 2
HUD 2011-07

FRANK & POET DRAIN PROFILE CITY OF TRENTON



LEGEND

- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

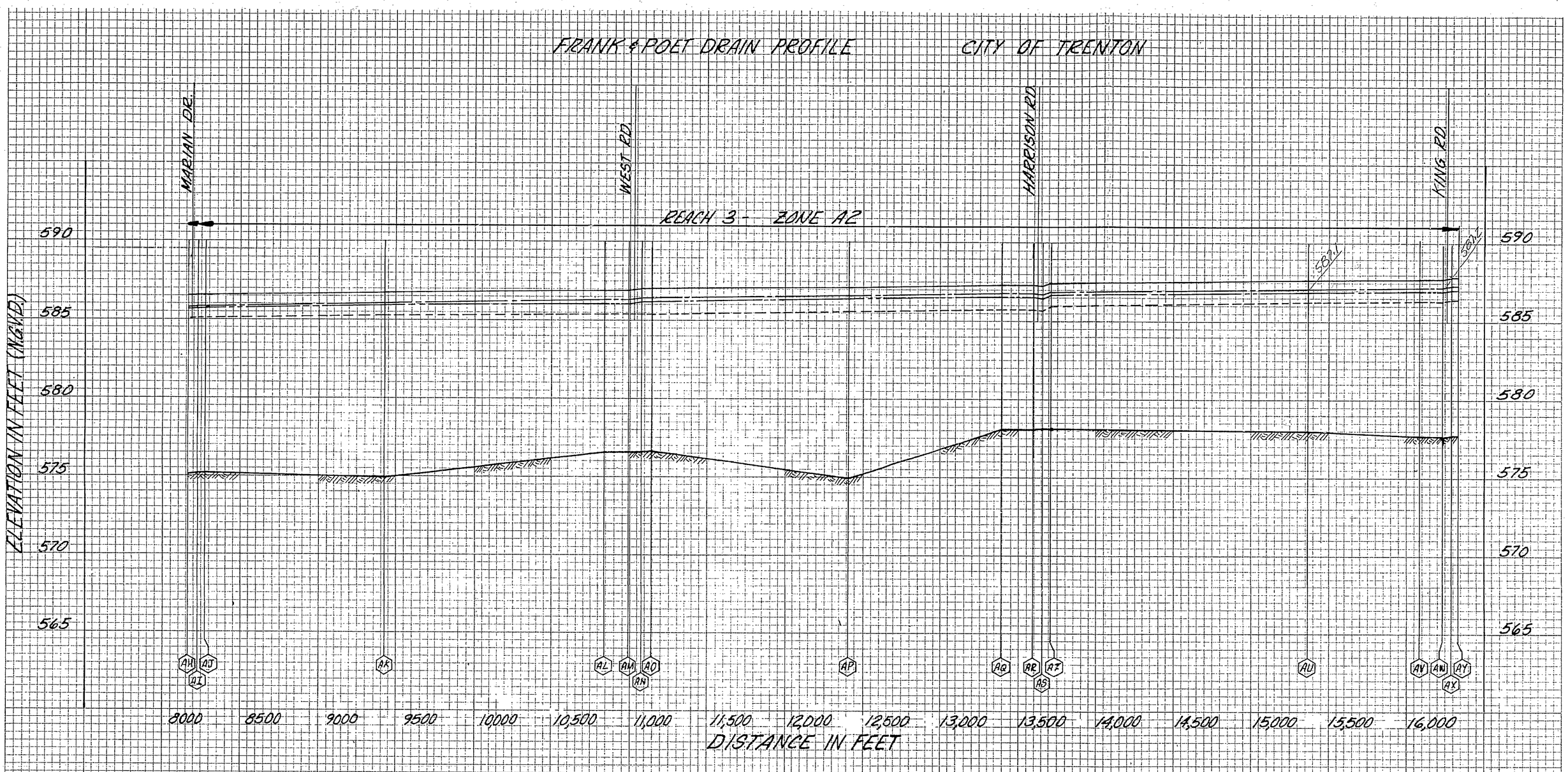
SCALE

HORIZ. 1"=500'
VERT. 1"=5'

NOVEMBER 24, 1978
SHEET 1 OF 2
HUD 2011-07

KEUFFEL & ESSER CO.
MADE IN U.S.A.

FRANK & POET DRAIN PROFILE — CITY OF TRENTON



LEGEND

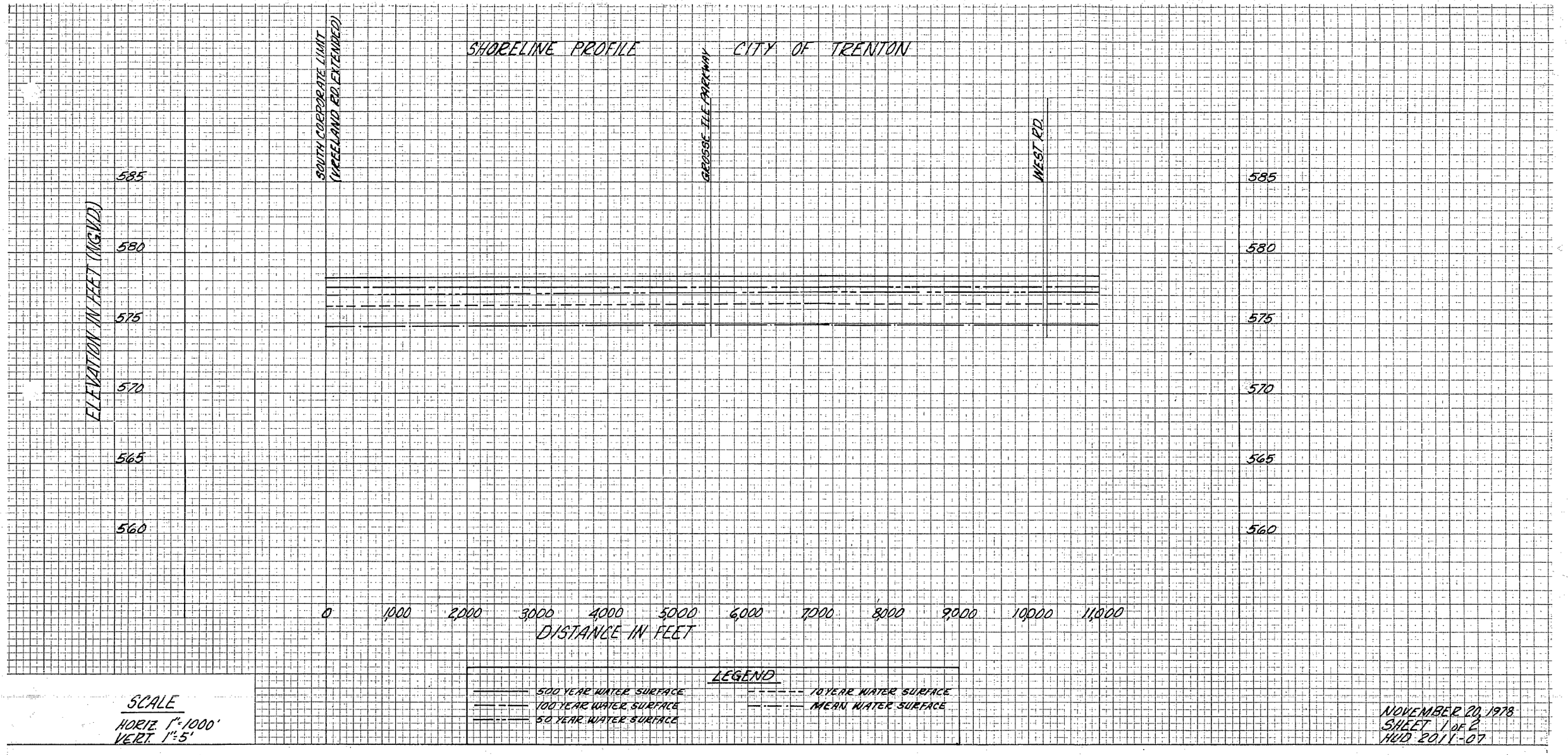
- 500 YEAR WATER SURFACE
- 100 YEAR WATER SURFACE
- 50 YEAR WATER SURFACE
- 10 YEAR WATER SURFACE
- CHANNEL BOTTOM

SCALE

HORIZ. 1"=500'
VERT. 1"=5'

NOVEMBER 24, 1978
SHEET 2 OF 2
HUD 2011-07

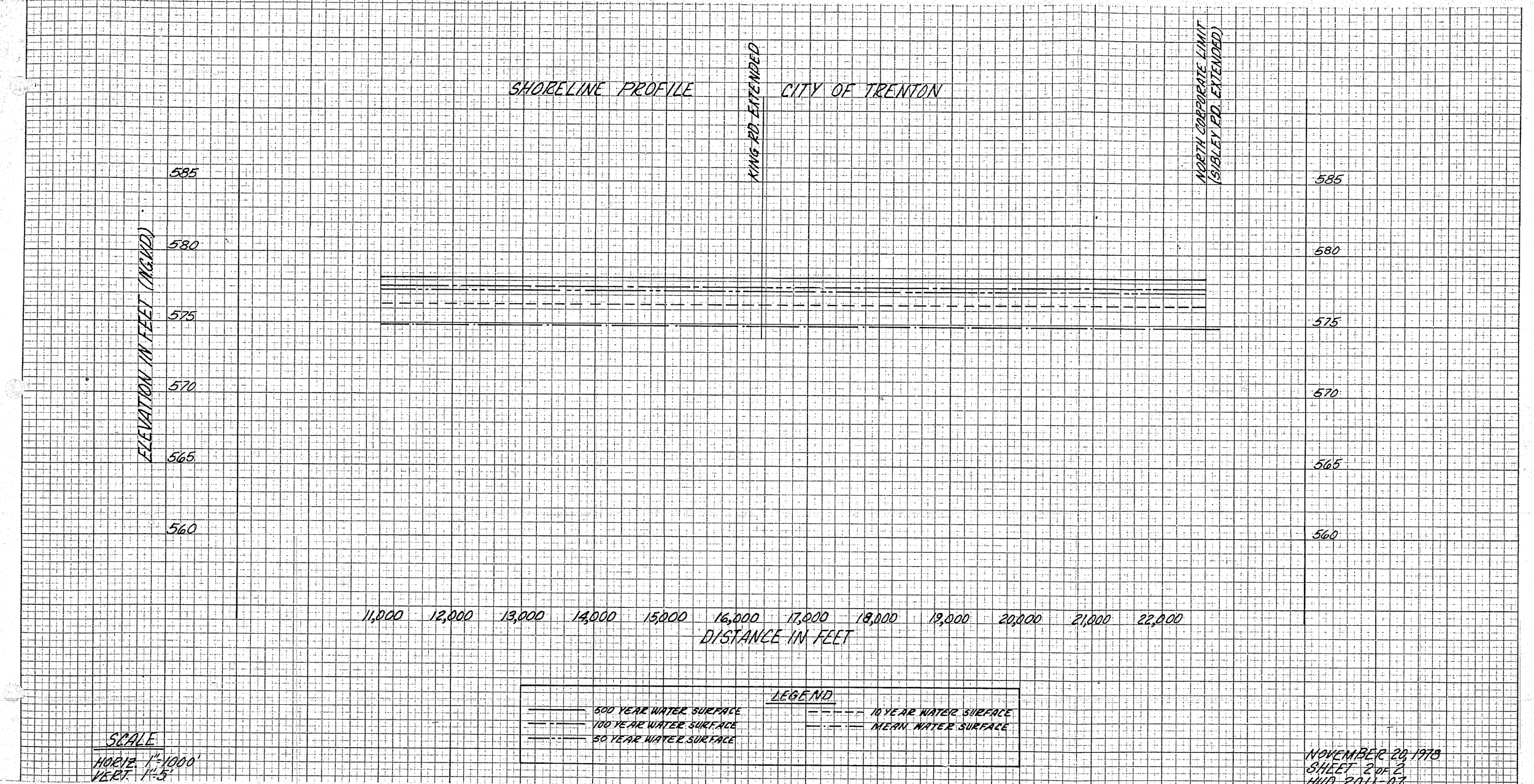
SHORELINE PROFILE CITY OF TRENTON



SCALE
HORIZ. 1"=1000'
VERT. 1"=5'

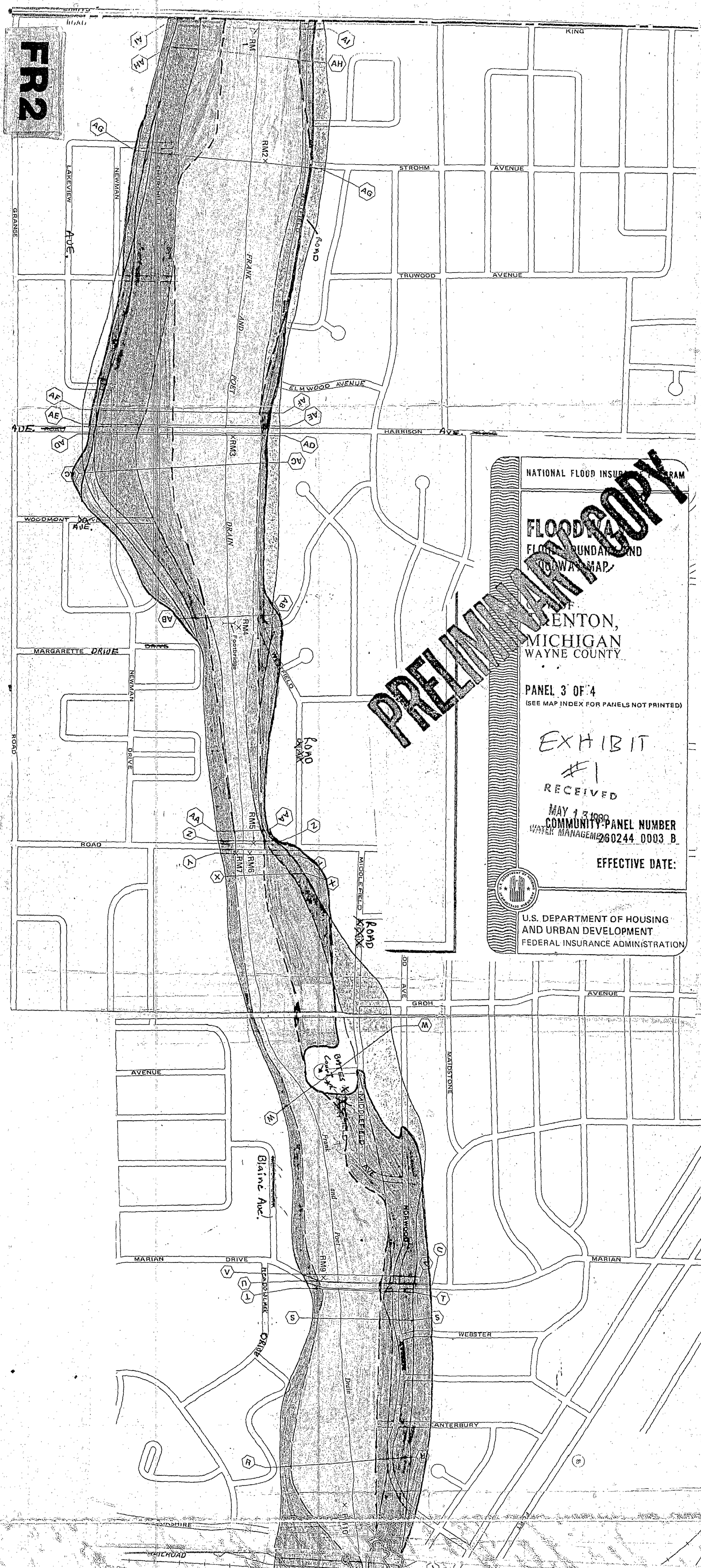
NOVEMBER 20, 1978
SHEET 1 OF 2
HUD 2011-07

SHORELINE PROFILE CITY OF TRENTON



SCALE
HORIZ. 1"=1000'
VERT. 1"=5'

NOVEMBER 28, 1978
SHEET 2 OF 2
HUD 2011-07



PRELIMINARY COPY

EXHIBIT #1

RECEIVED
MAY 13 1980
WATER MANAGEMENT

NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY BOUNDARY AND FLOODWAY MAP

CITY OF TAYLOR, MICHIGAN
WAYNE COUNTY
MAY 1 3 1980

WATER MANAGEMENT

PANEL 4 OF 4
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
260244 0004 B

EFFECTIVE DATE:

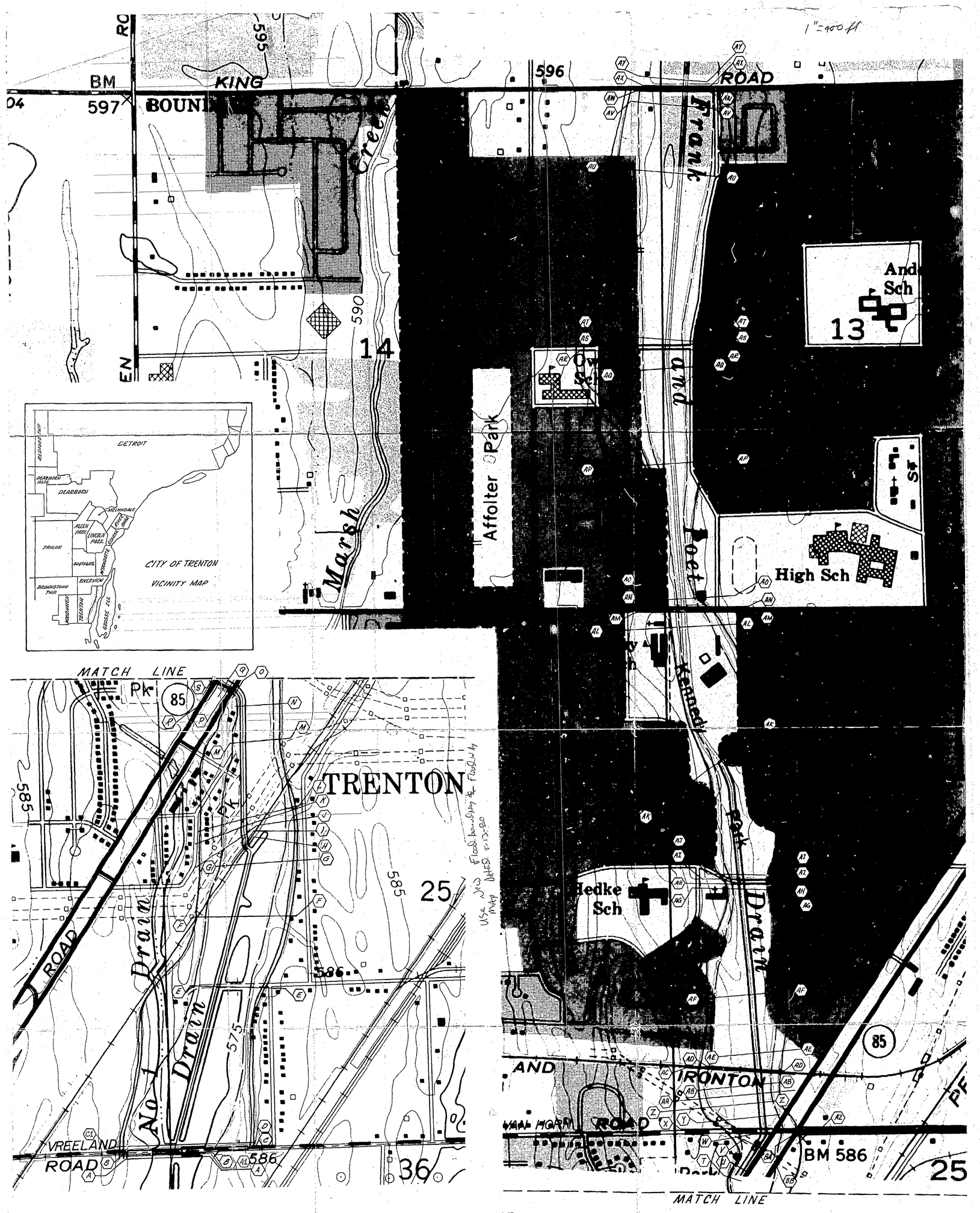
U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

PRELIMINARY COPY

HONTON
RAILROAD
PRIVATE
ROAD
CONRAIL
DRIVE
MARIAN
FORT
STREET
WEBSTER
CANTERBURY
VAN HOR
TOLEDO
WRAIL
HOOVER
SHORE
LINE
RAILROAD
VREELAND
ROAD
MAIDSTONE
LATHROP
ROAD
TOLEDO AVE.
NORWOOD
AVE.
WILSON AVE.
MIDDLEFIELD
AVE.
BATES
Court
Frank and Poet Drain
RM9
RM10
RM11
RM12
RM13
RM14
RM15
RM16
RM17
RM18
Blaine Ave.
MEADOWLARK DRIVE
AVENUE
MARIAN DRIVE
BROOKSHIRE
RITCHROAD
Drain No 1
VALLEY
FORT
CORPORATE LIMITS
Floodway
100 yr. Flood Hazard
500yr. Flood Hazard

FR1.

1"=400 ft



FLOOD MAP

LEGEND

100 AND/OR 500 YEAR BOUNDARY

FLOODWAY BOUNDARY

A—A CROSS SECTION

EXHIBIT 1

CITY OF TRENTON

WAYNE COUNTY, MICHIGAN

SCALE: 1"=400'

HUD 2011-10
REV. 3/10/79

00BREAK00

1) COUNTY: WAYNE

2) STUDY NAME: WAYNE, CITY

3) WATERCOURSE: BINGELL DRAIN

4) DOCUMENT TYPE: 100-YR ENCROACHED

00BREAK00

```
**************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**************************************************

C
T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE CO MIS
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	1.	4.	0.	0.	0.0	0.0	0.0	0.	658.330	0.0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.0	1.000	0.0	0.0	0.0	0.0	0.0	0.0	15.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

	1.000	34.000	36.000	4.000	27.000	28.000	9.000	35.000	59.000	0.0
	150.000	200.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ET	0.0	0.0	0.0	0.0	1.400	0.0	0.0	0.0	0.0	0.0
QT	5.000	140.000	250.000	300.000	300.000	430.000	0.0	0.0	0.0	0.0
NC	0.070	0.070	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

X1	7.000	12.000	195.000	205.000	0.0	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	658.000	658.000	0.0
GR	666.400	0.0	664.050	30.000	663.400	82.000	660.700	187.000	647.500	195.000
GR	650.600	200.000	647.200	205.000	649.400	212.000	651.900	255.000	662.900	287.000
GR	664.200	400.000	664.500	500.000	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.080	0.080	0.040	0.300	0.500	0.0	0.0	0.0	0.0	0.0

X-SECT. U/S OF MICH. AVE. 19+50 IN FIELD BOOK.

ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA ELEV SET AT RD. ELEV

X1	8.000	14.000	179.500	196.500	67.000	67.000	67.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	1.000	660.500	220.000	658.200	0.0	0.0	0.0
GR	660.500	0.0	659.240	60.000	658.890	156.500	649.840	175.500	649.140	179.500
GR	648.300	181.500	647.940	185.000	648.040	188.500	649.040	196.500	649.840	211.500
GR	652.800	219.500	652.540	231.500	653.240	261.500	661.690	323.500	0.0	0.0
NC	0.080	0.080	0.040	0.100	0.300	0.0	0.0	0.0	0.0	0.0

X-SECT. 15+00 IN FIELD BOOK.

X1	9.000	8.000	276.000	324.000	450.000	450.000	450.000	0.0	0.0	0.0
GR	665.400	0.0	664.600	150.000	660.250	261.000	652.900	276.000	652.700	300.000
GR	653.000	324.000	659.500	336.000	663.650	461.000	0.0	0.0	0.0	0.0

PRINTED IN U.S.A.

REPEAT OF PREVIOUS X-SECTION

X1	10.000	0.0	0.0	0.0	250.000	250.000	250.000	0.0	0.0	0.0
NC	0.100	0.100	0.045	0.100	0.300	0.0	0.0	0.0	0.0	0.0

X-SECT. 10+00 IN FIELD BOOK.

X1	11.000	12.000	194.500	210.500	250.000	250.000	250.000	0.0	0.0	0.0
GR	663.500	0.0	662.830	50.000	663.780	167.500	661.330	178.500	661.030	182.500
GR	654.500	194.500	653.230	200.000	653.530	205.500	655.430	210.500	655.530	220.500
GR	664.600	238.500	667.480	300.000	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.110	0.110	0.050	0.100	0.300	0.0	0.0	0.0	0.0	0.0

REPEAT OF PREVIOUS X-SECTION

X1	12.000	0.0	0.0	0.0	100.000	100.000	100.000	0.0	0.770	0.0

REPEAT OF PREVIOUS X-SECTION

X1	13.000	0.0	0.0	0.0	200.000	200.000	200.000	0.0	1.000	0.0
NC	0.120	0.120	0.060	0.100	0.300	0.0	0.0	0.0	0.0	0.0

X-SECT. D/S OF HANNAN ROAD 5+00 IN FIELD BOOK.

X1	14.000	13.000	98.000	107.000	200.000	200.000	200.000	0.0	0.0	0.0
GR	664.900	0.0	664.650	40.000	664.050	65.000	658.850	87.000	658.650	91.000
GR	656.200	98.000	655.650	102.500	656.150	107.000	662.650	118.000	662.850	169.000
GR	662.600	191.000	665.450	252.500	665.900	402.500	0.0	0.0	0.0	0.0

REPEAT OF PREVIOUS X-SECTION

X1	15.000	0.0	0.0	0.0	200.000	200.000	200.000	0.0	0.900	0.0
NC	0.080	0.080	0.040	0.300	0.500	0.0	0.0	0.0	0.0	0.0

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

X1	16.000	8.000	197.000	203.000	230.000	230.000	230.000	0.0	0.0	0.0
X3	10.000	0.0	90.000	0.0	0.0	0.0	0.0	658.000	658.000	0.0
GR	665.000	0.0	658.000	20.000	657.500	197.000	655.600	196.000	655.600	202.000
GR	657.500	203.000	658.000	380.000	665.000	400.000	0.0	0.0	0.0	0.0
SB	0.0	2.060	3.000	90.000	3.930	0.0	9.820	0.0	656.810	655.610

X-SECT. REPEAT OF X-SECT. #12 X-SECT. D/S OF HANNAN

X1	17.000	0.0	0.0	0.0	60.000	60.000	60.000	0.0	0.900	0.0
X2	0.0	0.0	1.000	658.720	662.260	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	90.000	0.0	0.0	0.0	0.0	662.260	662.260	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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*PROF I

CCHV=   0.300 CEHV=   0.500
*SECNO 7.000
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IOC       ICONT     CORAR     TOPWID     ENDST


          X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

      7.00     11.13    658.33      0.0    658.33    658.34      0.01       0.0       0.0    647.50
     300.        8.        87.      204.      36.       94.      461.        0.        0.    647.20
       0.0      0.24      0.93      0.44     0.070     0.035     0.070       0.0    647.20    188.44
0.000031         0.         0.        0.         0         0         0       0.0     85.27    273.71

FLOW DISTRIBUTION FOR SECNO=      7.00          CWSEL=    658.33

STA=     188.      195.      205.      212.      255.      274.
  PER Q=     2.8      29.1      12.5      50.6       5.0
    AREA=     35.5      93.6      70.2     330.2      60.1
     VEL=      0.2       0.9       0.5       0.5       0.2

CCHV=   0.300 CEHV=   0.500
*SECNO 8.000

3470 ENCROACHMENT STATIONS=       1.0     220.0  TYPE=     1  TARGET=     219.000
 ELENCL=    660.50  ELENCR=    658.20

          X-SECT. U/S OF MICH. AVE.   19+50 IN FIELD BOOK.

          ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA    ELEV SET AT RD. ELEV

      8.00     10.39    658.33      0.0       0.0    658.34      0.01      0.00      0.00    649.14
     300.        38.      175.       87.      111.      169.      198.        1.        0.    649.04
      0.02      0.34      1.03      0.44     0.080     0.040     0.080     0.039    647.94    157.67
0.000037         67.       67.       67.         0         0         0       0.0    106.17    263.85

FLOW DISTRIBUTION FOR SECNO=      8.00          CWSEL=    658.33

STA=     158.      176.      180.      197.      212.      220.      220.      232.      262.      264.
  PER Q=      7.0       5.6      58.4      21.5       7.4       0.1       0.0       0.0       0.0
    AREA=     75.7      35.4     169.5     133.4      56.1       2.8       1.5       4.0       0.2
     VEL=      0.3       0.5       1.0       0.5       0.4       0.1       0.0       0.0       0.0

CCHV=   0.100 CEHV=   0.300
*SECNO 9.000

          X-SECT.                    15+00 IN FIELD BOOK.

      9.00      5.65    658.35      0.0       0.0    658.37      0.02      0.02      0.00    652.90
     300.        9.      283.       8.        30.      265.       26.        5.        1.    653.00
      0.15      0.31      1.07      0.30     0.080     0.040     0.080     0.040    652.70    264.89
0.000085         450.      450.      450.         0         0         0       0.0     68.98    333.87

FLOW DISTRIBUTION FOR SECNO=      9.00          CWSEL=    65[illegible].35
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 STA=      265.      276.      324.      334.
   PER Q=      3.1      94.2       2.7
    AREA=     30.2     264.9      26.4
     VEL=      0.3       1.1       0.3

*SECNO 10.000

            REPEAT OF PREVIOUS X-SECTION

      10.00      5.67    658.37       0.0       0.0    658.39      0.02      0.02      0.00    652.90
      300.         9.      283.        8.        30.      266.       27.        7.        1.    653.00
       0.21      0.31      1.06      0.30     0.080     0.040     0.080     0.040    652.70    264.85
   0.000084      250.      250.      250.         0         0         0       0.0     69.05    333.90


 FLOW DISTRIBUTION FOR SECNO=      10.00          CWSEL=    658.37

 STA=      265.      276.      324.      334.
   PER Q=      3.1      94.2       2.7
    AREA=     30.5     265.9      26.6
     VEL=      0.3       1.1       0.3

 CCHV=    0.100 CEHV=    0.300
 *SECNO 11.000
    SECNO     DEPTH     CWSEL     CRIWS     WSELK      EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


            X-SECT.                    10+00 IN FIELD BOOK.

      11.00      5.09    658.32       0.0       0.0    658.49      0.16      0.06      0.04    654.50
      300.         11.      249.       39.        13.      71.       36.        8.        2.    655.43
       0.24      0.84      3.51      1.09     0.100     0.045     0.100     0.041    653.23    187.47
   0.001618      250.      250.      250.         2         0         0       0.0     38.57    226.04


 FLOW DISTRIBUTION FOR SECNO=      11.00          CWSEL=    658.32

 STA=      187.      195.      211.      221.      226.
   PER Q=      3.8      83.1      11.4       1.8
    AREA=     13.4      70.9      28.4       7.7
     VEL=      0.8       3.5       1.2       0.7

 CCHV=    0.100 CEHV=    0.300
 *SECNO 12.000

            REPEAT OF PREVIOUS X-SECTION

      12.00      4.50    658.50       0.0       0.0    658.73      0.23      0.23      0.02    655.27
      300.         10.      256.       34.        10.      61.       27.        8.        2.    656.20
       0.24      1.00      4.17      1.25     0.110     0.050     0.110     0.042    654.00    188.56
   0.003411      100.      100.      100.         2         0         0       0.0     36.30    224.87


 FLOW DISTRIBUTION FOR SECNO=      12.00          CWSEL=    658.50

 STA=      189.      195.      211.      221.      225.
   PER Q=      3.2      85.4      10.2       1.2
    AREA=      9.6      61.4      22.5       4.8
     VEL=      1.0       4.2       1.4       0.8

 *SECNO 13.000
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REPEAT OF PREVIOUS X-SECTION

13.00	4.24	659.24	0.0	0.0	659.52	0.28	0.77	0.01	656.27
300.	9.	260.	31.	8.	57.	24.	9.	2.	657.20
0.26	1.07	4.54	1.33	0.110	0.050	0.110	0.043	655.00	169.04
0.004429	200.	200.	200.	2	0	0	0.0	35.31	224.35

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 659.24

STA=	189.	195.	211.	221.	224.
PER Q=	2.9	86.6	9.4	1.0	
AREA=	8.1	57.3	19.9	3.7	
VEL=	1.1	4.5	1.4	0.8	

CCHV= 0.100 CEHV= 0.300
*SECNO 14.000

X-SECT. D/S OF HANNAN ROAD 5+00 IN FIELD BOOK.

14.00	4.64	660.29	0.0	0.0	660.68	0.38	1.12	0.03	656.20
300.	54.	223.	23.	31.	39.	15.	9.	2.	656.15
0.27	1.76	5.66	1.56	0.120	0.060	0.120	0.045	655.65	80.89
0.007361	200.	200.	200.	2	0	0	0.0	33.12	114.01

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 660.29

STA=	81.	87.	91.	98.	107.	114.
PER Q=	1.2	2.9	13.8	74.5	7.6	
AREA=	4.4	6.2	20.1	39.4	14.5	
VEL=	0.8	1.4	2.1	5.7	1.6	

*SECNO 15.000

REPEAT OF PREVIOUS X-SECTION

15.00	5.06	661.61	0.0	0.0	661.90	0.29	1.21	0.01	657.10
300.	60.	216.	24.	38.	43.	18.	10.	2.	657.05
0.28	1.57	5.00	1.38	0.120	0.060	0.120	0.047	656.55	79.14
0.005077	200.	200.	200.	2	0	0	0.0	35.58	114.72

FLOW DISTRIBUTION FOR SECNO= 15.00 CWSEL= 661.61

STA=	79.	87.	91.	98.	107.	115.
PER Q=	2.0	3.6	14.4	71.9	8.1	
AREA=	7.3	7.8	23.0	43.2	17.6	
VEL=	0.8	1.4	1.9	5.0	1.4	

CCHV= 0.300 CEHV= 0.500
*SECNO 16.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

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16.00	6.49	662.09	0.0	0.0	662.10	0.01	0.12	0.08	657.50	
300.	124.	51.	124.	190.	37.	190.	11.	3.	657.50	
0.37	0.65	1.39	0.65	0.080	0.040	0.080	0.046	655.60	155.00	
0.000189	230.	230.	230.	2	0	0	0.0	90.00	245.00	

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 662.09

STA=	155.	197.	203.	245.
PER Q=	41.4	17.1	41.4	
AREA=	190.1	37.0	190.1	
VEL=	0.7	1.4	0.7	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.06	3.00	90.00	3.93	0.0	9.82	0.0	656.81	655.61

*SECNO 17.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
691.95	663.31	0.0	243.	58.	10.	8.	658.72	662.26

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. REPEAT OF X-SECT. #12 X-SECT. U/S OF HANNAN

17.00	6.68	663.18	0.0	0.0	663.19	0.01	1.09	0.0	658.40
300.	125.	51.	125.	199.	38.	199.	12.	3.	658.40
0.39	0.63	1.32	0.63	0.080	0.040	0.080	0.046	656.50	155.00
0.000165	60.	60.	60.	0	0	7	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 663.18

STA=	155.	197.	203.	245.
PER Q=	41.6	16.9	41.6	
AREA=	198.7	38.2	198.7	
VEL=	0.6	1.3	0.6	

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PROFILE FOR STREAM BINGELL DRAIN,WAYNE F IS

PLOTTED POINTS (BY PRIORITY)-E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

ELEVATION-FT	647.	648.	649.	650.	651.	652.	653.	654.	655.	656.
SECNO CUMDIS-FT										

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**********************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**********************************************************
T1       BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2       RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3       BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
          0.        5.        0.        0.  0.0         0.0       0.0       0.   658.430     0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000       0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0    15.000
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*PROF 2

CCHV= 0.300 CEHV= 0.500
*SECNO 7.000
2800 NAT Q1= 538.39 WSEL= 658.33 ENC Q1= 538.39 WSEL= 658.43 RATIO= 0.0000
NAT Q1= 550. RATIOS LOB,CH,ROB= 0.0280 0.2903 0.6817 WSEL= 658.43

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 191.8 264.2 TYPE= 4 TARGET= 0.021

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

7.00	11.23	658.43	0.0	658.33	658.44	0.01	0.0	0.0	647.50
300.	5.	89.	206.	26.	95.	451.	0.	0.	647.20
0.0	0.20	0.94	0.46	0.070	0.035	0.070	0.0	647.20	191.82
0.000031	0.	0.	0.	0	0	0	0.0	72.35	264.17

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 658.43

STA=	192.	195.	205.	212.	255.	264.			
PER Q=	1.8	29.7	12.7	51.8	4.1				
AREA=	26.4	94.5	70.9	334.5	45.4				
VEL=	0.2	0.9	0.5	0.5	0.3				

CCHV= 0.300 CEHV= 0.500
*SECNO 8.000

3470 ENCROACHMENT STATIONS= 1.0 220.0 TYPE= 1 TARGET= 219.000
ELENCL= 660.50 ELENCR= 658.20

X-SECT. U/S OF MICH. AVE. 19+50 IN FIELD BOOK.

ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA. ELEV SET AT RD. ELEV

8.00	10.49	658.43	0.0	658.33	658.44	0.01	0.00	0.00	649.14
300.	38.	175.	87.	113.	171.	205.	1.	0.	649.04
0.02	0.34	1.02	0.43	0.080	0.040	0.080	0.039	647.94	157.46
0.000035	67.	67.	67.	0	0	0	0.0	108.16	265.62

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 658.43

STA=	157.	176.	180.	197.	212.	220.	220.	232.	262.	266.
PER Q=	7.0	5.6	58.2	21.5	7.4	0.1	0.0	0.1	0.0	
AREA=	77.5	35.8	171.2	134.9	56.9	2.8	2.7	7.0	0.5	
VEL=	0.3	0.5	1.0	0.5	0.4	0.1	0.0	0.0	0.0	

CCHV= 0.100 CEHV= 0.300
*SECNO 9.000
2800 NAT Q1= 326.26 WSEL= 658.35 ENC Q1= 326.26 WSEL= 658.45 RATIO= 0.0000
NAT Q1= 337. RATIOS LOB,CH,ROB= 0.0318 0.9411 0.0270 WSEL= 658.45

3470 ENCROACHMENT STATIONS= 272.8 326.3 TYPE= 4 TARGET= 0.032

X-SECT 15+00 IN FIELD BOOK

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     9.00      5.75   658.45      0.0    658.35   658.47      0.02      0.02      0.00   652.90
      300.       4.      293.       3.       15.      270.       11.       5.        1.   653.00
     0.14      0.27     1.08      0.24    0.080    0.040     0.080     0.040    652.70   272.82
 0.000085      450.     450.      450.        0        0         0       0.0     53.47   326.30

 FLOW DISTRIBUTION FOR SECNO=      9.00          CWSEL=     658.45

 STA=      273.      276.      324.      326.
   PER Q=      1.4      97.7       0.9
    AREA=     15.2     270.3      11.1
     VEL=      0.3       1.1       0.2

 *SECNO 10.000
  2800 NAT Q1=     328.28  WSEL=     658.37  ENC Q1=     328.28  WSEL=     658.47  RATIO=  0.0000
  NAT Q1=    339.  RATIOS LOB,CH,ROB=  0.0319  0.9409  0.0272  WSEL=     658.47

 3470 ENCROACHMENT STATIONS=      272.8      326.3  TYPE=      4  TARGET=       0.032

            REPEAT OF PREVIOUS X-SECTION

     10.00      5.77   658.47      0.0    658.37   658.49      0.02      0.02      0.00   652.90
      300.       4.      293.       3.       15.      271.       11.       7.        1.   653.00
     0.21      0.27     1.08      0.24    0.080    0.040     0.080     0.040    652.70   272.84
 0.000085      250.     250.      250.        0        0         0       0.0     53.44   326.28

 FLOW DISTRIBUTION FOR SECNO=     10.00          CWSEL=     658.47

 STA=      273.      276.      324.      326.
   PER Q=      1.4      97.8       0.9
    AREA=     15.2     270.9      11.1
     VEL=      0.3       1.1       0.2

 CCHV=   0.100 CEHV=   0.300
 *SECNO 11.000
  2800 NAT Q1=      74.57  WSEL=     658.32  ENC Q1=      74.57  WSEL=     658.42  RATIO=  0.0
  NAT Q1=     78.  RATIOS LOB,CH,ROB=  0.0389  0.8267  0.1344  WSEL=     658.42
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST

 3470 ENCROACHMENT STATIONS=      192.5      221.8  TYPE=      4  TARGET=       0.041

            X-SECT.                    10+00 IN FIELD BOOK.

     11.00      5.19   658.42      0.0    658.32   658.59      0.17      0.06      0.05   654.50
      300.       5.      257.      38.       7.       72.       33.       8.        2.   655.43
     0.23      0.71     3.55      1.15    0.100    0.045     0.100     0.041    653.23   192.54
 0.001611      250.     250.      250.        2        0         0       0.0     29.29   221.83

 FLOW DISTRIBUTION FOR SECNO=     11.00          CWSEL=     658.42

 STA=      193.      195.      211.      221.      222.
   PER Q=      1.6      85.8      12.0       0.6
    AREA=      6.6      72.4      29.4       3.4
     VEL=      0.7       3.6       1.2       0.6

 CCHV=   0.100 CEHV=   0.300
 *SECNO 12.000
  2800 NAT Q1=      51.37  WSEL=     658.50  ENC Q1=      51.37  WSEL=     658.60  RATIO=  0.0000
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NAT Q1= 34. RATIOS LOB,CH,ROB= 0.032 0.8495 0.1176 WSEL= 65..60

3470 ENCROACHMENT STATIONS= 193.6 220.8 TYPE= 4 TARGET= 0.047

REPEAT OF PREVIOUS X-SECTION

12.00	4.59	658.59	0.0	658.50	658.84	0.25	0.23	0.02	655.27
300.	2.	265.	33.	3.	63.	24.	8.	2.	656.20
0.24	0.64	4.22	1.36	0.110	0.050	0.110	0.042	654.00	193.56
0.003393	100.	100.	100.	2	0	0	0.0	27.24	220.81

FLOW DISTRIBUTION FOR SECNO= 12.00 CWSEL= 658.59

STA=	194.	195.	211.	221.	221.
PER Q=	0.6	88.5	10.8	0.1	
AREA=	2.9	62.9	23.4	0.7	
VEL=	0.6	4.2	1.4	0.3	

*SECNO 13.000

2800 NAT Q1= 45.08 WSEL= 659.24 ENC Q1= 45.08 WSEL= 659.34 RATIO= 0.0000
NAT Q1= 47. RATIOS LOB,CH,ROB= 0.0301 0.8614 0.1085 WSEL= 659.34

3470 ENCROACHMENT STATIONS= 194.0 220.2 TYPE= 4 TARGET= 0.050

REPEAT OF PREVIOUS X-SECTION

13.00	4.33	659.33	0.0	659.24	659.63	0.31	0.78	0.02	656.27
300.	1.	273.	26.	1.	59.	20.	8.	2.	657.20
0.25	0.51	4.65	1.30	0.110	0.050	0.110	0.043	655.00	194.02
0.004512	200.	200.	200.	0	0	0	0.0	26.20	220.23

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 659.33

STA=	194.	195.	211.	220.
PER Q=	0.2	91.0	8.8	
AREA=	1.4	58.7	20.2	
VEL=	0.5	4.7	1.3	

CCHV= 0.100 CEHV= 0.300

*SECNO 14.000

2800 NAT Q1= 34.97 WSEL= 660.29 ENC Q1= 34.97 WSEL= 660.39 RATIO= 0.0000
NAT Q1= 37. RATIOS LOB,CH,ROB= 0.1847 0.7382 0.0770 WSEL= 660.39

3470 ENCROACHMENT STATIONS= 87.3 110.3 TYPE= 4 TARGET= 0.045

X-SECT. D/S. OF HANNAN ROAD 5+00 IN FIELD BOOK.

14.00	4.74	660.39	0.0	660.29	660.80	0.41	1.14	0.03	656.20
300.	51.	232.	17.	27.	40.	11.	9.	2.	656.15
0.26	1.90	5.76	1.55	0.120	0.060	0.120	0.045	655.65	87.31
0.007387	200.	200.	200.	2	0	0	0.0	23.01	110.32

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 660.39

STA=	87.	91.	98.	107.	110.
PER Q=	2.4	14.6	77.4	5.6	
AREA=	6.1	20.8	40.3	10.8	
VEL=	1.2	2.1	5.8	1.6	

*SECNO 15.000

2800 NAT Q1= 42.10 WSEL= 661.61 ENC Q1= 42.10 WSEL= 661.71 RATIO= 0.0
NAT Q1= 44. RATIOS LOB,CH,ROB= 0.2045 0.7131 0.0823 WSEL= 661.71

3470 ENCROACH ENT STATIONS= 86.8 110.9 TYPE= TARGET= 0.042

REPEAT OF PREVIOUS X-SECTION

I

15.00	5.17	661.72	0.0	661.61	662.02	0.31	1.21	0.01	657.10
300.	57.	223.	19.	32.	44.	14.	9.	2.	657.05
0.27	1.77	5.06	1.40	0.120	0.060	0.120	0.047	656.55	86.79
0.005060	200.	200.	200.	2	0	0	0.0	24.14	110.94

FLOW DISTRIBUTION FOR SECNO= 15.00 CWSEL= 661.72

STA=	87.	87.	91.	98.	107.	111.
PER Q=	0.0	3.9	15.1	74.5	6.4	
AREA=	0.4	8.3	23.7	44.1	13.8	
VEL=	0.3	1.4	1.9	5.1	1.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 16.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 1 TARGET= 90.000

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

J

16.00	6.62	662.22	0.0	662.09	662.23	0.01	0.11	0.09	657.50
300.	125.	51.	125.	195.	38.	195.	10.	2.	657.50
0.36	0.64	1.35	0.64	0.080	0.040	0.080	0.046	655.60	155.00
0.000174	230.	230.	230.	2	0	0	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 662.22

STA=	155.	197.	203.	245.
PER Q=	41.5	17.0	41.5	
AREA=	195.4	37.8	195.4	
VEL=	0.6	1.3	0.6	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.06	3.00	90.00	3.93	0.0	9.82	0.0	656.81	655.61

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
692.07	663.61	0.0	246.	54.	10.	8.	658.72	662.26

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 1 TARGET= 90.000

X-SECT. REPEAT OF X-SECT. #12 X-SECT. U/S OF HANNAN

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17.0	6.69	663.1	.0	663.18	663.20	0.01	0.97	0.0	658.40	
300.	125.	51.	125.	199.	38.	199.	11.	2.	658.40	
0.38	0.63	1.32	0.63	0.080	0.040	0.080	0.046	656.50	155.00	
0.000164	60.	60.	60.	0	0	7	0.0	90.00	245.00	

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 663.19

STA=	155.	197.	203.	245.
PER Q=	41.6	16.9	41.6	
AREA=	199.1	38.3	199.1	
VEL=	0.6	1.3	0.6	

PRINTED IN U.S.A.

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

BINGELL DRAIN,WAYNE FIS

SUMMARY PRINTOUT

CWSEL	.01K	PERENC	TOPWID	STENCL	STENCR	WSELK	QCH	QLOB
658.330	538.39	0.0	85.27	0.0	0.0	658.33	2.79	68.09
658.430	538.14	0.02	72.35	191.82	264.17	658.33	1.78	68.56
658.329	494.54	219.00	106.17	1.00	220.00	0.0	12.59	29.00
658.430	504.29	219.00	108.16	1.00	220.00	658.33	12.67	29.09
658.349	326.26	0.0	68.98	0.0	0.0	0.0	3.13	2.65
658.448	325.11	0.03	53.47	272.82	326.30	658.35	1.38	0.88
658.370	328.28	0.0	69.05	0.0	0.0	0.0	3.14	2.66
658.469	326.28	0.03	53.44	272.84	326.28	658.37	1.38	0.87
658.324	74.57	0.0	38.57	0.0	0.0	0.0	3.78	13.17
658.417	74.75	0.04	29.29	192.54	221.83	658.32	1.58	12.62
658.500	51.37	0.0	36.30	0.0	0.0	0.0	3.18	11.41
658.589	51.50	0.05	27.24	193.56	220.81	658.50	0.61	10.89
659.242	45.08	0.0	35.31	0.0	0.0	0.0	2.90	10.47
659.326	44.66	0.05	26.20	194.02	220.23	659.24	0.24	8.78
660.294	34.97	0.0	33.12	0.0	0.0	0.0	17.97	7.57
660.392	34.90	0.05	23.01	87.31	110.32	660.29	17.02	5.60
661.609	42.10	0.0	35.58	0.0	0.0	0.0	19.99	8.11
661.716	42.17	0.04	24.14	86.79	110.94	661.61	19.11	6.42
662.093	217.98	90.00	90.00	155.00	245.00	0.0	41.45	41.45
662.217	227.28	90.00	90.00	155.00	245.00	662.09	41.52	41.52
663.181	233.35	90.00	90.00	155.00	245.00	0.0	41.56	41.56
663.189	233.96	90.00	90.00	155.00	245.00	663.18	41.57	41.57

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BINGELL DRAIN,WAYNE FIS

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
7.000	0.0	0.0	0.0	647.20	300.00	658.33	0.0	658.34	0.31	0.93	589.69	538.39
7.000	0.0	0.0	0.0	647.20	300.00	658.43	0.0	658.44	0.31	0.94	571.85	538.14
8.000	67.00	0.0	0.0	647.94	300.00	658.33	0.0	658.34	0.37	1.03	478.45	494.54
8.000	67.00	0.0	0.0	647.94	300.00	658.43	0.0	658.44	0.35	1.02	489.15	504.29
9.000	450.00	0.0	0.0	652.70	300.00	658.35	0.0	658.37	0.85	1.07	321.55	326.26
9.000	450.00	0.0	0.0	652.70	300.00	658.45	0.0	658.47	0.85	1.08	296.53	325.11
10.000	250.00	0.0	0.0	652.70	300.00	658.37	0.0	658.39	0.84	1.06	322.92	328.28
10.000	250.00	0.0	0.0	652.70	300.00	658.47	0.0	658.49	0.85	1.08	297.09	326.28
11.000	250.00	0.0	0.0	653.23	300.00	658.32	0.0	658.49	16.18	3.51	120.56	74.57
11.000	250.00	0.0	0.0	653.23	300.00	658.42	0.0	658.59	16.11	3.55	111.86	74.75
12.000	100.00	0.0	0.0	654.00	300.00	658.50	0.0	658.73	34.11	4.17	98.34	51.37
12.000	100.00	0.0	0.0	654.00	300.00	658.59	0.0	658.84	33.93	4.22	89.80	51.50
13.000	200.00	0.0	0.0	655.00	300.00	659.24	0.0	659.52	44.29	4.54	89.07	45.08
13.000	200.00	0.0	0.0	655.00	300.00	659.33	0.0	659.63	45.12	4.65	80.31	44.66
14.000	200.00	0.0	0.0	655.65	300.00	660.29	0.0	660.68	73.61	5.66	84.64	34.97
14.000	200.00	0.0	0.0	655.65	300.00	660.39	0.0	660.80	73.87	5.76	77.98	34.90
15.000	200.00	0.0	0.0	656.55	300.00	661.61	0.0	661.90	50.77	5.00	98.89	42.10
15.000	200.00	0.0	0.0	656.55	300.00	661.72	0.0	662.02	50.60	5.06	90.33	42.17
16.000	230.00	0.0	0.0	655.60	300.00	662.09	0.0	662.10	1.89	1.39	417.27	217.98
16.000	230.00	0.0	0.0	655.60	300.00	662.22	0.0	662.23	1.74	1.35	428.50	227.28
17.000	60.00	662.26	658.72	656.50	300.00	663.18	0.0	663.19	1.65	1.32	435.73	233.35
17.000	60.00	662.26	658.72	656.50	300.00	663.19	0.0	663.20	1.64	1.32	436.45	233.96

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BINGELL DRAIN, WAYNE FIS

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
7.000	300.00	658.33	0.0	0.0	0.0	85.27	0.0
7.000	300.00	658.43	0.10	0.0	0.10	72.35	0.0
8.000	300.00	658.33	0.0	-0.00	0.0	106.17	67.00
8.000	300.00	658.43	0.10	-0.00	0.10	108.16	67.00
9.000	300.00	658.35	0.0	0.02	0.0	68.98	450.00
9.000	300.00	658.45	0.10	0.02	0.10	53.47	450.00
10.000	300.00	658.37	0.0	0.02	0.0	69.05	250.00
10.000	300.00	658.47	0.10	0.02	0.10	53.44	250.00
11.000	300.00	658.32	0.0	-0.05	0.0	38.57	250.00
11.000	300.00	658.42	0.09	-0.05	0.09	29.29	250.00
12.000	300.00	658.50	0.0	0.18	0.0	36.30	100.00
12.000	300.00	658.59	0.09	0.17	0.09	27.24	100.00
13.000	300.00	659.24	0.0	0.74	0.0	35.31	200.00
13.000	300.00	659.33	0.08	0.74	0.08	26.20	200.00
14.000	300.00	660.29	0.0	1.05	0.0	33.12	200.00
14.000	300.00	660.39	0.10	1.07	0.10	23.01	200.00
15.000	300.00	661.61	0.0	1.32	0.0	35.58	200.00
15.000	300.00	661.72	0.11	1.32	0.11	24.14	200.00
16.000	300.00	662.09	0.0	0.48	0.0	90.00	230.00
16.000	300.00	662.22	0.12	0.50	0.12	90.00	230.00
17.000	300.00	663.18	0.0	1.09	0.0	90.00	60.00
17.000	300.00	663.19	0.01	0.97	0.01	90.00	60.00

SUMMARY OF ERRORS

PRINTED IN U.S.A.

FLOODWAY DATA, BINGELL DRAIN, WAYNE FIS
PROFILE NO. 2

STATION	FLOODWAY WIDTH (FT)	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
7.000	72.	572.	0.5	658.4	658.3	0.1
8.000	108.	489.	0.6	658.4	658.3	0.1
9.000	53.	297.	1.0	658.4	658.3	0.1
10.000	53.	297.	1.0	658.5	658.4	0.1
11.000	29.	112.	2.7	658.4	658.3	0.1
12.000	27.	90.	3.3	658.6	658.5	0.1
13.000	26.	80.	3.7	659.3	659.2	0.1
14.000	23.	78.	3.8	660.4	660.3	0.1
15.000	24.	90.	3.3	661.7	661.6	0.1
16.000	90.	429.	0.7	662.2	662.1	0.1
17.000	90.	436.	0.7	663.2	663.2	0.0

PRINTED IN U.S.A.

00BREAK00

1) COUNTY: WAYNE

2) STUDY NAME: WAYNE, CITY

3) WATERCOURSE: BINGELL DRAIN

4) DOCUMENT TYPE: HYDRAULIC REPORT

00BREAK00

Wade Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

REFERENCE

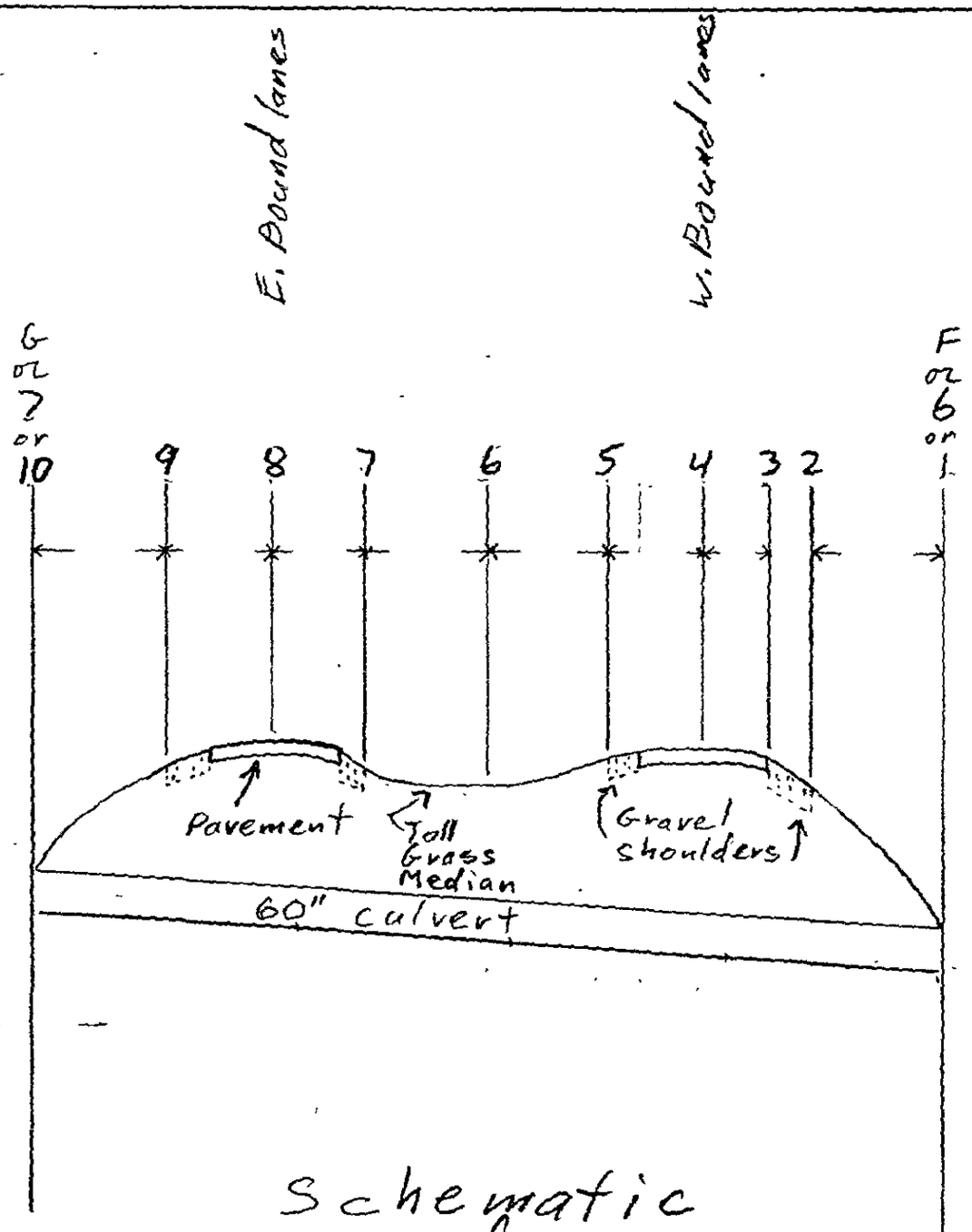
Bingell Drain
Cross Section Cross Index

Cross Sect. on Map	Cross Sect. on Profile	SECNO (HEC-2)
A	A	1
B	B	2
C	C	3
D	D	4
E	E	5
F	F_1	6 or 1
	F_2	2
	F_3	3
	F_4	4
	F_5	5
	F_6	6
	F_7	7
	F_8	8
	F_9	9
G	G	7-10
H	H	8
I	I	9
J	J	10
K	K	11
L	L	12
M	M	13
N	N	14
O	O	15
P	P	16
Q	Q	17

SUBJECT	BY	CHK.	SHEET NO.	File Code No (Job No.) Owner Project Suffix
Wayne FIS Exhibit No 2	Neal		2 OF 3	HUD • 2003 • 07
	DATE 12-78	DATE		

FORM 25-D
(313) 291-5400
Wade Trim & Associates, inc.
Civil Engineers • Land Surveyors
WORK SHEET
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

REFERENCE



Schematic of Michigan Ave. Cross Section Locations for Bingell Drain Backwater

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
Wayne FIS Exhibit #1	Neal		3 OF 3	HUD • 2002 • 07
	DATE 10-17-78	DATE		

CITY OF WAYNE, MICHIGAN

BINGELL DRAIN

EXHIBIT 2

Bridge and Culvert Data

EXHIBIT 2

TABLE OF CONTENTS

	PAGE
Michigan Avenue Field Sketch	1
Michigan Avenue Photographs	2
Michigan Avenue Computation Sheet	3
Hannan Road Field Sketch	4
Hannan Road Photographs	5
Hannan Road Computation Sheet	6

HUD 2002-05

ELEV'S AT MICH. AVE & BELLE DRAIN

BM 662.74 ℄ ON F.HYD 25'± S ℄ MICH AVE / 20'± E ℄ RANDOLPH (CURRENT W.CRC DATUM

Sta	+	HI	-	ELEV
BM				662.74
	2.92	665.66		

20+17 S. END 60" CONC CULV.

INSIDE TOP CULV	14.80	650.86
DRAIN BOTTOM	19.00	646.66

22+26 N END 60" CONC CULV

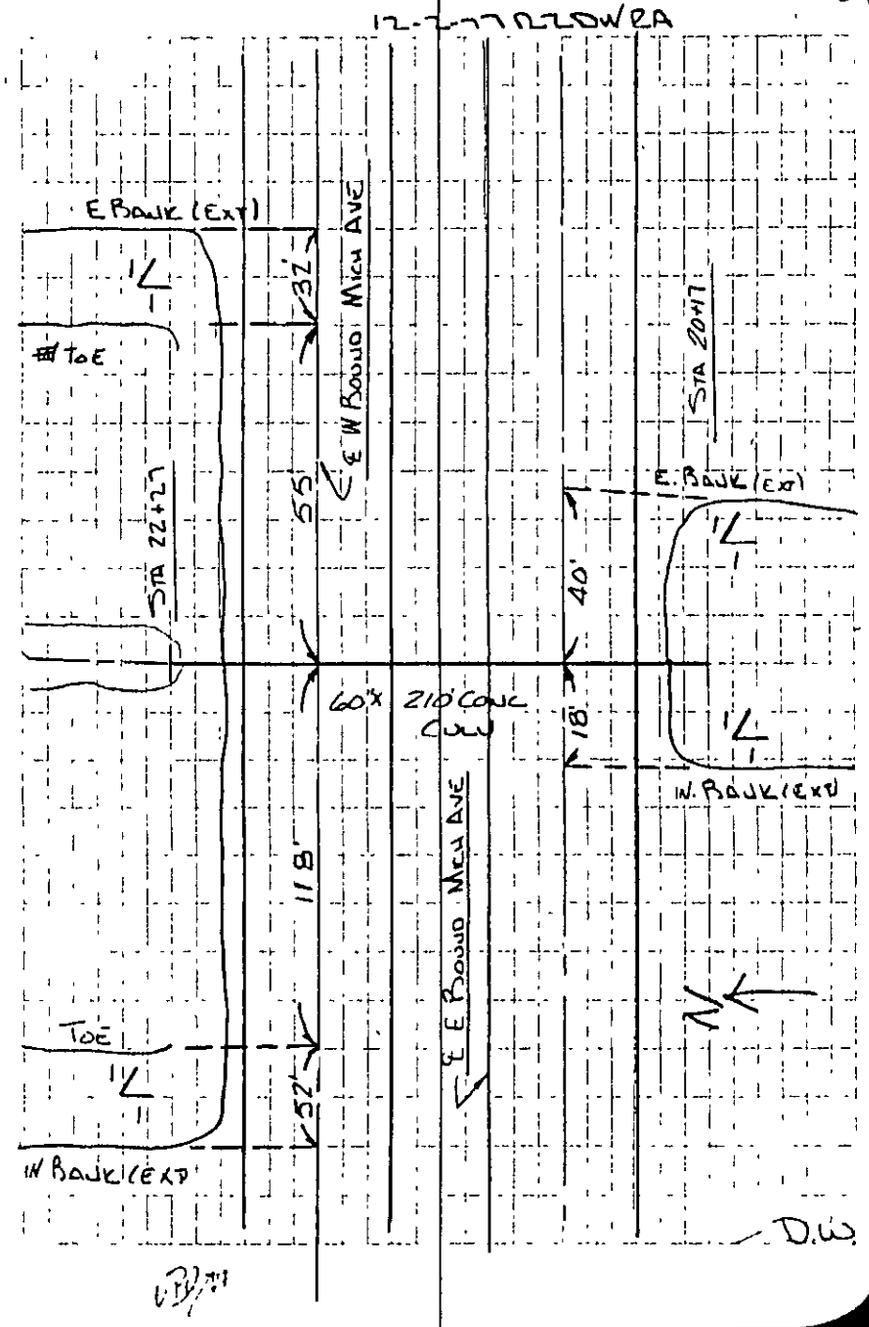
INSIDE TOP CULV	15.16	650.50
DRAIN BOTTOM	19.65	646.01
BMCK	2.92	~~664.74~~ 662.74

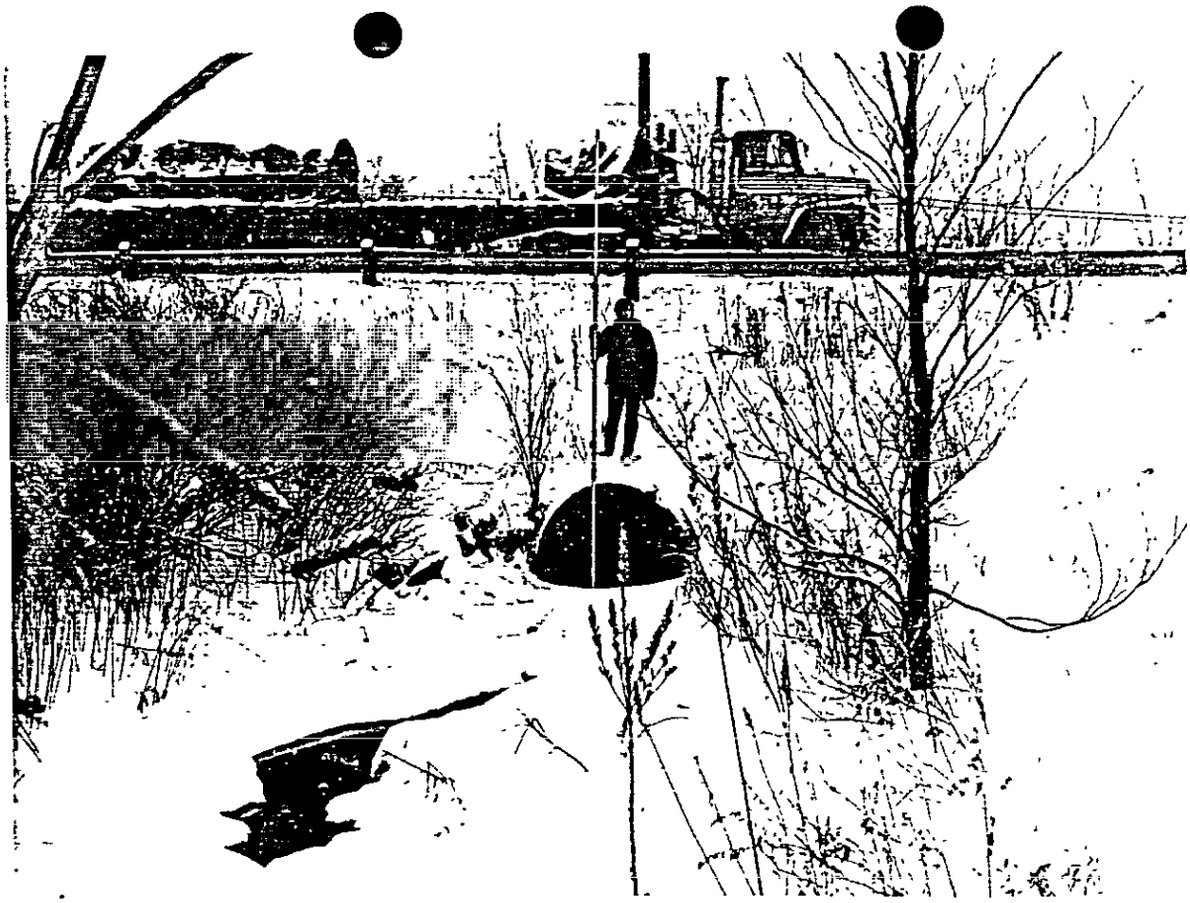
9 of 6

FB 938

12-2-77 R2 DWRA

15





Mich. ave. D/s End 9



Mich. Ave. U/s End 5

Bridge Location: Michigan Ave. – Bingel Dr.
Bridge Losses – SB Card

REFERENCE

1. XK (Pier Shape Coefficient): No Piers 0 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk, $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge: 60" Dia. conc. pipe

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = $\pi (60/12 \cdot 2)^2$ = 19.63 $W_p = \pi \frac{60}{12}$ = 15.71

$R = A/W_p$ = 1.25 $R^{4/3}$ = 1.347 L = 210'

n (composite) = 0.015

$K_f = 29.1 \times (.015)^2 \times 210 \;/\; 1.347 = 1.02$

K_e = 0.5
Bell End facing d/s
projecting from fill — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + 1.02 + 0.5 + 0 = 2.52
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = — (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 3.92
6. BWP = total width of obstruction = 0 — field data
7. BAREA = bridge opening inc. piers = 19.63
8. SS = side slope = 0
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 646.6
(0 if equal to minimum elevation in previous x-sect.)
10. ELCHD = Elevation of channel invert D/S side = 646.0
(0 if equal to minimum elevation in previous x-sect.)

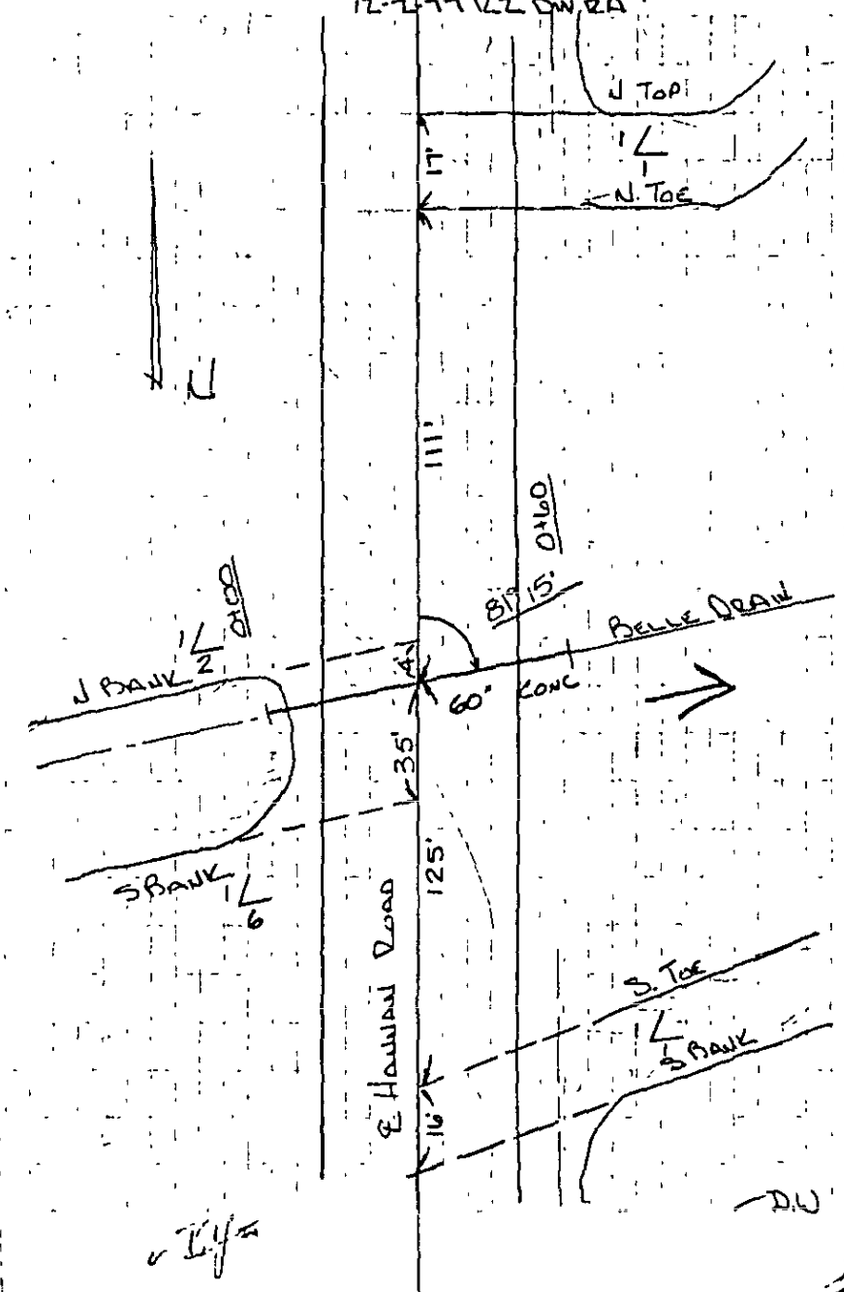
SUBJECT	BY	CHK.	SHEET NO.	File Code No (Job No.) Owner Project Suffix
Wayne FIS	Neal		3 OF 6	HUD • 2002 • 07
	DATE 12-78	DATE		

HUD
7 HUD
2002-20

DETAIL BELLE DRAIN AND
HANNAN ROAD

Sta	+	HI	−	ELEV
BM	664.21 C on F Hyd 45'± W ℄ Hannan ℄ – 350'± S ℄ Cranmore (CURRENT WCRC DATUM)			
BM				664.21
	3.00	667.21		
℄ Hannan @ ℄ Culv			495	662.26
0+00				
Inside Top 60" Culv.			8.49	658.72
Ex Drain Bottom			10.40	656.81
0+60				
Inside Top 60" Culv.			9.14	658.07
Ex Drain Bottom			11.60	655.61
BMck			3.00	664.21

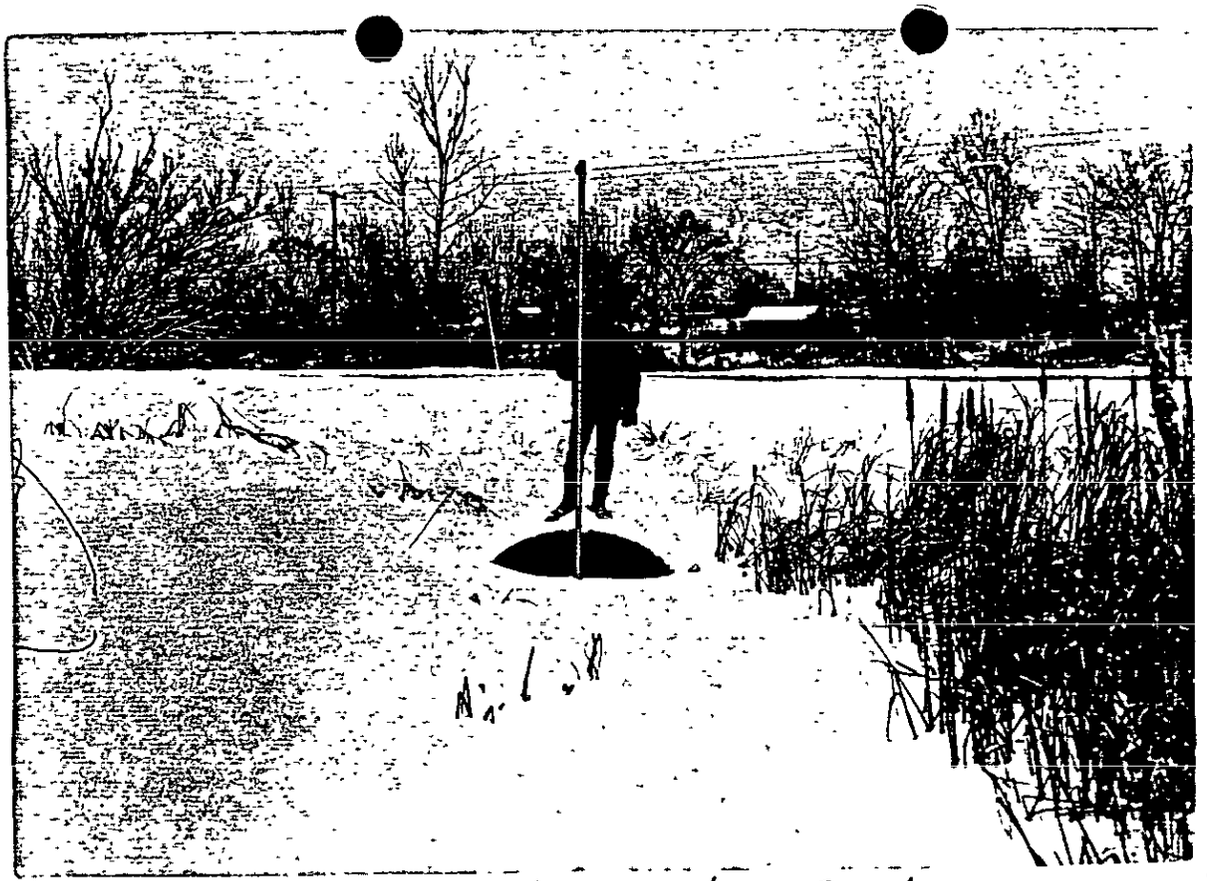
FB938
12-2-77 R2 DW RA



4 of 6



Hannan Rd. D/s End 4



Hannan Rd. u/s End 1

Bridge Location : Hannan Rd - Bingel Dr.
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient) : No Piers — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + Σk, $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge : 60" Dia. Conc. ½ silted up

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = $\pi 2.5^2/2$ = 9.82 WP = $5 + \pi \cdot 2.5$

$R = A/wp$ $R^{4/3}$ = .70 L = 60'

n (composite) = .015

$K_f = 29.1 \times (.015)^2 \times 60 / .70 = .56$

K_e = 0.5

Bell End facing d/s
projecting from fill

Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 49

K_p = 0 if bridge has no intermediate piers

K_p = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + .56 + .5 + 0 = 2.06
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 90 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 3.93
6. BWP = total width of obstruction = 9.82 — field data
7. BAREA = bridge opening inc. piers = 0
8. SS = side slope = 0
   (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 656.81
   (0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 655.67
    (0 if equal to minimum elevation in previous x-sect.)

SUBJECT	BY	CHK.	SHEET NO.	File Code No (Job No.) Project Owner Suffix
Wayne FIS	Neal		6 OF 6	HUD • 2002 • 07
	DATE 12-78	DATE		

CITY OF WAYNE, MICHIGAN

BINGELL DRAIN

Exhibit 3

Computer Printouts
HEC-2 Backwater Analysis

(Separate Folder)

CITY OF WAYNE, MICHIGAN
BINGELL DRAIN

Exhibit 4

Stream Profile

REVISED HYDRAULIC REPORT

CITY OF WAYNE - MICHIGAN

RECEIVED
DEC 27 1978
WATER MANAGEMENT

I INTRODUCTION

The City of Wayne covers approximately 6 square miles. It is a typical suburban-residential community. This report summarizes the hydraulic studies undertaken to support detailed studies of nearly a .5 mile of the Bingell Drain as well as approximate analysis of 6 miles of the Lower Rouge River.

This study was conducted by Wade, Trim & Associates, Inc., Consulting Engineers, and Glen Roberts served as Project Manager.

II BINGELL DRAIN (DETAILED)

Detailed studies of the Bingell Drain from its outlet to the Lower Rouge River to its inlet to the City at Hannan Road. A total of 13 valley and 2 bridge cross sections were field surveyed and completed in January, 1978. Field cross section location is shown in Exhibit 1. Field survey data are supplemented by USGS Quad Maps of the study area which contain 5 foot interval contour data (Reference 1 & 2). The flood plain of the Bingell Drain consists of mostly brush and high grass with some residential development. No detailed studies of the Bingell Drain have been or are being undertaken in adjoining communities. Approximate studies are being performed of the Lower Rouge River (outlet of Bingell Drain) as part of this study. Table 1 lists discharges that have been approved by the Flood Insurance Administration (FIA) and the Michigan Department of Natural Resources (MDNR) for this Drain.

A. Method of Analysis

The HEC-2 backwater program was used in developing water surface profiles (Reference 3).

Bridge and culvert data are presented as Exhibit 2.

Table 1 contains selected flood elevations from the HEC-2 printouts which are presented as Exhibit 3. Cross section plots obtained from the HEC-2 program are also presented in Exhibit 3. Water surface profiles resulting from the backwater analyses are presented as Exhibit 4.

B. Variables and Coefficients

Roughness coefficients (Mannings "n") were estimated by field inspection at each cross section. Typical roughness values for the main channel of the Bingell Drain range from .035 to .060; Roughness values for the overbank areas varied between .02 to .12 for all floods. These values are indicative of summer month conditions and are consistent with roughness values recommended and used in engineering practice.

C. High Water Marks

No documented high water data exists for flood elevations of the Bingell Drain.

D. Starting Conditions

Initially an average Lower Rouge River stage plus flows from the 10, 50, 100 and 500 year discharge from the Bingell Drain were considered applicable for starting conditions of the Bingell Drain backwater analysis. However, these stages were less than critical depths for the Bingell Drain for the

various discharges investigated. Consequently, normal depth conditions were used as starting conditions.

The method of profile convergence was not used as it was obvious that the water surface elevations calculated by the backwater analysis in the first few sections would be less than the elevations on the Lower Rouge River for the same frequency flood event. Lower Rouge River flood data was from a Flood Plain Information (FPI) Report prepared by the U.S. Army Corps of Engineers. (Reference 4).

E. Special Problems

One problem was encountered in the hydraulic analysis of the Bingell Drain. The problem encountered was in the analysis of the restrictive capacity of the Michigan Avenue culvert enclosure of the Bingell Drain in discharging the 100 and 500 year floods. This problem was resolved through use of the divided flow technique of the HEC-2 program. Computations supporting this analysis are presented in Exhibit 3.

F. General

Computed water-surface elevations were developed to an accuracy of 0.5 foot for floods of the selected recurrence intervals.

All elevations are referenced to the U.S. Geological Survey (USGS) National Geodetic Vertical Datum of 1929 (NGVD).

The hydraulic analyses for this study are based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

III LOWER ROUGE RIVER (APPROXIMATE)

Pertinent flood elevation data for the 100 year flood discharge obtained from the previously referenced FPI (Reference 4) for various locations on the Lower Rouge River within the City of Wayne are presented on Table 2.

TABLE 2

CITY OF WAYNE
LOWER ROUGE RIVER
FLOOD ELEVATIONS

Location	100 Year Frequency Flood Elevation*
u/s of Merriman Road	630.2
u/s of Venoy Road	636.5
d/s of Second Street	640.8
u/s of Wayne Road	646.3
u/s of Newburg Road	652.0
d/s of Hannan Road	656.2

*U.S.G.S. Datum.

IV REFERENCES

1. U.S. Geological Survey Topographical Maps - Wayne Quadrangle, Wayne County, Michigan, 7.5 Minute Series - Photorevised 1973.

2. U.S. Geological Survey Topographical Maps - Inkster Quadrangle, Wayne County, Michigan, 7.5 Minute Series - Photorevised 1973.

3. HEC-2 - Water Surface Profile - Users Manual - U.S. Army Corps of Engineers - 1976.

4. Flood Plain Information Report - Lower Rouge River - Wayne Michigan, U.S. Army Corps of Engineers, Detroit District - 1970.

CITY OF WAYNE, MICHIGAN
BINGELL DRAIN

Exhibit 1

Field Cross-Section Location
and 100 Year Flood Plain -
Floodway Map

TABLE 1

CITY OF WAYNE
BINGELL DRAIN - FLOOD ELEVATIONS*

Location	Discharge	Frequency in Years 10 140 CFS	50 250 CFS	100 300 CFS	500 430 CFS
At Confluence w/ Lower Rouge River		640.3	641.1	641.4	642.0
450' d/s of Michigan Avenue		647.0	647.7	648.0	648.6
d/s of Michigan Avenue		648.8	649.8	650.1	650.9
u/s of Michigan Avenue		650.6	656.0	658.3	658.8
500' u/s of Michigan Avenue		653.5	656.3	658.4	658.8
Nyman Avenue (Extended)		659.0	659.9	660.3	661.1
d/s Hannan Road		660.5	661.7	662.1	663.0
u/s Hannan Road		662.6	663.0	663.2	663.6

*U.S.G.S. Datum

00BREAK00

1) COUNTY: WAYNE

2) STUDY NAME: WAYNE, CITY

3) WATERCOURSE: BINGELL DRAIN LOWER

4) DOCUMENT TYPE: MULTIPLE PROFILES

00BREAK00

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

C
T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN, WAYNE FIS

J1  ICHECK     INQ      NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.       2.        0.        0.  0.008000       0.0      0.0        0.   642.000     0.0

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
    1.000        0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0     15.000

QT      5.000   140.000   250.000   300.000   300.000   430.000       0.0       0.0       0.0       0.0
NC      0.080     0.080     0.035     0.100     0.300       0.0       0.0       0.0       0.0       0.0

          X-SECT. AT LOWER ROUGE.NOT IN FIELD BOOK.DATA FROM QUAD

X1      1.000    13.000   505.000   515.000       0.0       0.0       0.0       0.0       0.0       0.0
GR    665.000       0.0   660.000    45.000   655.000    81.000   650.000   125.000   645.000   393.000
GR    641.000   498.000   638.400   505.000   638.200   510.000   638.400   515.000   641.000   523.000
GR    645.000   530.000   650.000   734.000   655.000   770.000       0.0       0.0       0.0       0.0

          REPEAT OF PREVIOUS X-SECT. PLUS 1.6 FT.

X1      2.000       0.0       0.0       0.0   200.000   200.000   200.000     1.000     1.600       0.0

          REPEAT OF PREVIOUS X-SECT. PLUS 2.5 FT.

X1      3.000       0.0       0.0       0.0   300.000   300.000   300.000     1.000     2.500       0.0

          X-SECT. D/S OF MICH. AVE.   24+00 IN FIELD BOOK.

X1      4.000    12.000   187.000   212.000   300.000   300.000   300.000       0.0       0.0       0.0
GR    665.300       0.0   664.180    40.000   649.900   113.000   648.500   187.000   645.300   195.000
GR    644.900   200.000   644.950   205.000   647.150   212.000   648.800   279.000   661.300   329.000
GR    663.100   400.000   663.400   500.000       0.0       0.0       0.0       0.0       0.0       0.0
NC      0.080     0.080     0.035     0.300     0.500       0.0       0.0       0.0       0.0       0.0

          X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS, QUAD MAP,& X-SECT.#4

X1      5.000    12.000   195.000   205.000    47.000    47.000    47.000       0.0       0.0       0.0
GR    665.300       0.0   662.950    30.000   662.300    82.000   659.600   187.000   646.400   195.000
GR    645.500   200.000   646.100   205.000   648.300   212.000   650.800   255.000   661.800   287.000
GR    663.100   400.000   663.400   500.000       0.0       0.0       0.0       0.0       0.0       0.0
NC      0.070     0.070     0.035     0.300     0.500       0.0       0.0       0.0       0.0       0.0
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(2)

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X-SECT. IS A DU Y. DATA F O FIELD S ETCHS,& QUAD AP.(D/S OF BRIDGE)

X1	6.000	0.0	0.0	0.0	86.000	86.000	86.000	0.0	0.500	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	649.000	649.000	0.0
SB	0.0	2.520	3.000	0.0	3.920	0.0	19.630	0.0	646.600	646.000

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

X1	7.000	0.0	0.0	0.0	210.000	210.000	210.000	0.0	0.600	0.0
X2	0.0	0.0	1.000	649.900	658.200	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	658.000	658.000	0.0
BT	12.000	0.0	665.220	665.220	100.000	662.980	662.980	200.000	660.900	660.900
BT	300.000	659.320	659.320	387.000	658.200	649.900	400.000	658.200	646.600	412.000
BT	658.200	649.900	500.000	658.200	658.200	562.000	658.730	658.730	600.000	659.140
BT	659.140	700.000	661.380	661.380	800.000	662.510	662.510	0.0	0.0	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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*PROF 1

CCHV= 0.100 CEHV= 0.300

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
			X-SECT. AT LOWER ROUGE.NOT IN FIELD BOOK.DATA FROM QUAD						
1.00	2.14	640.34	0.0	642.00	640.84	0.51	0.0	0.0	638.40
140.	8.	123.	9.	5.	20.	6.	0.	0.	638.40
0.0	1.55	6.05	1.56	0.080	0.035	0.080	0.0	638.20	499.79
0.007883	0.	0.	0.	0	0	4	0.0	21.17	520.96

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 640.34

STA=	500.	505.	515.	521.
PER Q=	5.6	88.0	6.4	
AREA=	5.0	20.4	5.8	
VEL=	1.5	6.1	1.6	

*SECNO 2.000

REPEAT OF PREVIOUS X-SECT. PLUS 1.6 FT.

2.00	2.12	641.92	0.0	0.0	642.44	0.51	1.59	0.00	640.00
140.	8.	123.	9.	5.	20.	6.	0.	0.	640.00
0.01	1.56	6.09	1.57	0.080	0.035	0.080	0.035	639.80	499.82
0.008053	200.	200.	200.	1	0	0	0.0	21.10	520.92

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 641.92

STA=	500.	505.	515.	521.
PER Q=	5.5	88.1	6.4	
AREA=	5.0	20.2	5.7	
VEL=	1.6	6.1	1.6	

*SECNO 3.000

REPEAT OF PREVIOUS X-SECT. PLUS 2.5 FT.

3.00	2.09	644.39	0.0	0.0	644.92	0.53	2.48	0.01	642.50
140.	8.	124.	9.	5.	20.	6.	0.	0.	642.50
0.02	1.58	6.20	1.60	0.080	0.035	0.080	0.035	642.30	499.90
0.008498	300.	300.	300.	2	0	0	0.0	20.93	520.83

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 644.39

STA=	500.	505.	515.	521.
PER Q=	5.5	88.3	6.3	
AREA=	4.8	19.9	5.5	
VEL=	1.6	6.2	1.6	

*SECNO 4.000

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X-SECT. D/S OF ICH. AVE. 24+00 IN FIELD BOOK.

4.00	2.10	647.00	0.0	0.0	647.33	0.33	2.39	0.02	648.50
140.	0.	140.	0.	0.	30.	0.	1.	0.	647.15
0.04	0.0	4.62	0.0	0.080	0.035	0.080	0.035	644.90	190.73
0.007480	300.	300.	300.	2	0	0	0.0	20.81	211.54

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 647.00

STA= 191. 212.
PER Q= 100.0
AREA= 30.3
VEL= 4.6

CCHV= 0.300 CEHV= 0.500
*SECNO 5.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS, QUAD MAP,& X-SECT.#4

5.00	2.16	647.66	647.66	0.0	648.47	0.81	0.47	0.24	646.40
140.	1.	132.	7.	0.	18.	4.	1.	0.	646.10
0.04	1.06	7.43	1.83	0.080	0.035	0.080	0.035	645.50	194.24
0.014397	47.	47.	47.	20	8	0	0.0	15.72	209.95

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 647.66

STA= 194. 195. 205. 210.
PER Q= 0.4 94.6 5.0
AREA= 0.5 17.8 3.9
VEL= 1.1 7.4 1.8

CCHV= 0.300 CEHV= 0.500
*SECNO 6.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 649.00 ELREA= 649.00

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(D/S OF BRIDGE)

6.00	2.82	648.82	0.0	0.0	649.33	0.51	0.77	0.09	646.90
140.	0.	140.	0.	0.	24.	0.	1.	0.	646.60
0.05	0.0	5.72	0.0	0.070	0.035	0.070	0.035	646.00	195.00
0.006077	86.	86.	86.	2	0	0	0.0	10.00	205.00

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 648.82

STA= 195. 205.
PER Q= 100.0
AREA= 24.5
VEL= 5.7

SPECIAL BRIDGE

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SB	OR	COFQ	RDLEN	B C	B P	B REA	S	ELCHU	ELCHD
0.0	2.52	3.00	0.0	3.92	0.0	19.63	0.0	646.60	646.00

*SECNO 7.000
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
650.81	649.93	0.0	0.	140.	20.	13.	649.90	658.20

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 658.00 ELREA= 658.00

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

7.00	3.98	650.58	0.0	0.0	650.81	0.23	1.48	0.0	647.50
140.	0.	140.	0.	0.	36.	0.	1.	0.	647.20
0.06	0.0	3.88	0.0	0.070	0.035	0.070	0.035	646.60	195.00
0.001807	210.	210.	210.	2	0	0	0.0	10.00	205.00

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 650.58

STA=	195.	205.
PER Q=	100.0	
AREA=	36.1	
VEL=	3.9	

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

        0.        3.        0.        0.  0.008000      0.0       0.0       0.   642.000      0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

    2.000       0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0    15.000
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*PROF 2

CCHV= 0.100 CEHV= 0.300
*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.00	2.88	641.08	0.0	642.00	641.82	0.74	0.0	0.0	638.40
250.	19.	209.	22.	10.	28.	11.	0.	0.	638.40
0.0	1.96	7.52	1.99	0.080	0.035	0.080	0.0	638.20	495.96
0.008045	0.	0.	0.	0	0	5	0.0	27.18	523.14

X-SECT. AT LOWER ROUGE.NOT IN FIELD BOOK.DATA FROM QUAD

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 641.08

STA=	496.	505.	515.	523.
PER Q=	7.6	83.6	8.8	
AREA=	9.7	27.8	11.0	
VEL=	2.0	7.5	2.0	

*SECNO 2.000

REPEAT OF PREVIOUS X-SECT. PLUS 1.6 FT.

2.00	2.88	642.68	0.0	0.0	643.42	0.74	1.60	0.00	640.00
250.	19.	209.	22.	10.	28.	11.	0.	0.	640.00
0.01	1.95	7.49	1.99	0.080	0.035	0.080	0.035	639.80	495.73
0.007949	200.	200.	200.	0	0	0	0.0	27.42	523.15

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 642.68

STA=	496.	505.	515.	523.
PER Q=	7.7	83.5	8.8	
AREA=	9.8	27.9	11.1	
VEL=	2.0	7.5	2.0	

*SECNO 3.000

REPEAT OF PREVIOUS X-SECT. PLUS 2.5 FT.

3.00	2.83	645.13	0.0	0.0	645.90	0.78	2.47	0.01	642.50
250.	19.	210.	22.	9.	27.	11.	1.	0.	642.50
0.02	1.99	7.67	2.01	0.080	0.035	0.080	0.035	642.30	497.05
0.008533	300.	300.	300.	1	0	0	0.0	26.01	523.06

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 645.13

STA=	497.	505.	515.	523.
PER Q=	7.5	83.9	8.6	
AREA=	9.4	27.4	10.7	
VEL=	2.0	7.7	2.0	

*SECNO 4.000

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X-SECT. D/S OF ICH. AVE. 24+00 IN FIELD BOOK.

4.00	2.83	647.73	0.0	0.0	648.16	0.43	2.22	0.03	648.50
250.	0.	246.	4.	0.	46.	7.	1.	1.	647.15
0.04	0.0	5.31	0.65	0.080	0.035	0.080	0.035	644.90	188.93
0.006471	300.	300.	300.	2	0	0	0.0	46.55	235.48

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 647.73

STA=	189.	212.	235.
PER Q=	98.2	1.8	
AREA=	46.3	6.8	
VEL=	5.3	0.7	

CCHV= 0.300 CEHV= 0.500
*SECNO 5.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS, QUAD MAP,& X-SECT.#4

5.00	3.00	648.50	648.50	0.0	649.56	1.06	0.40	0.32	646.40
250.	2.	227.	21.	1.	26.	9.	1.	1.	646.10
0.04	1.34	8.65	2.24	0.080	0.035	0.080	0.035	645.50	193.73
0.011624	47.	47.	47.	20	8	0	0.0	21.72	215.45

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 648.50

STA=	194.	195.	205.	212.	215.
PER Q=	0.7	90.8	8.4	0.1	
AREA=	1.3	26.3	9.1	0.3	
VEL=	1.3	8.6	2.3	0.4	

CCHV= 0.300 CEHV= 0.500
*SECNO 6.000

3301 HV CHANGED MORE THAN HVINS

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(D/S OF BRIDGE)

6.00	3.80	649.80	0.0	0.0	650.28	0.48	0.55	0.17	646.90
250.	3.	208.	39.	3.	34.	24.	1.	1.	646.60
0.04	1.11	6.06	1.66	0.070	0.035	0.070	0.035	646.00	193.24
0.003997	86.	86.	86.	2	0	0	0.0	36.11	229.35

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 649.80

STA=	193.	195.	205.	212.	229.
PER Q=	1.1	83.3	12.6	3.0	
AREA=	2.6	34.3	14.8	8.7	
VEL=	1.1	6.1	2.1	0.8	

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SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.52	3.00	0.0	3.92	0.0	19.63	0.0	646.60	646.00

*SECNO 7.000
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
656.15	651.23	0.0	0.	250.	20.	13.	649.90	658.20

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 658.00 ELREA= 658.00

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS, & QUAD MAP. (U/S OF BRIDGE)

7.00	9.43	656.03	0.0	0.0	656.15	0.12	5.86	0.0	647.50
250.	0.	250.	0.	0.	91.	0.	1.	1.	647.20
0.06	0.0	2.76	0.0	0.070	0.035	0.070	0.035	646.60	195.00
0.000409	210.	210.	210.	2	0	0	0.0	10.00	205.00

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 656.03

STA=	195.	205.
PER Q=	100.0	
AREA=	90.5	
VEL=	2.8	

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**********************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**********************************************************

T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ      NINV      IDIR      STRT     METRIC    HVINS     Q         WSEL      FQ
        0.      4.        0.        0.  0.008000     0.0       0.0       0.   642.000     0.0
J2  NPROF     IPLOT    PRFVS     XSECV     XSECH     FN       ALLDC     IBW      CHNIM     ITRACE
    3.000       0.0   -1.000       0.0       0.0      0.0       0.0       0.0       0.0    15.000
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*PROF: 3

CCHV= 0.100 CEHV= 0.300

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
1.00	3.15	641.35	641.13	642.00	642.17	0.82	0.0	0.0	638.40	
300.	27.	244.	30.	13.	30.	13.	0.	0.	638.40	
0.0	2.02	8.00	2.23	0.080	0.035	0.080	0.0	638.20	488.85	
0.008033	0.	0.	0.	0	15	0	0.0	34.76	523.61	

X-SECT. AT LOWER ROUGE.NOT IN FIELD BOOK.DATA FROM QUAD

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 641.35

STA=	489.	498.	505.	515.	523.	524.
PER Q=	0.3	8.6	81.3	9.9	0.0	
AREA=	1.6	11.5	30.5	13.2	0.1	
VEL=	0.5	2.2	8.0	2.2	0.5	

*SECNO 2.000

REPEAT OF PREVIOUS X-SECT. PLUS 1.6 FT.

2.00	3.15	642.95	642.73	0.0	643.77	0.82	1.60	0.00	640.00
300.	27.	244.	30.	13.	31.	13.	0.	0.	640.00
0.01	2.01	7.97	2.23	0.080	0.035	0.080	0.035	639.80	488.68
0.007964	200.	200.	200.	0	11	0	0.0	34.95	523.62

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 642.95

STA=	489.	498.	505.	515.	523.	524.
PER Q=	0.3	8.6	81.2	9.9	0.0	
AREA=	1.7	11.6	30.6	13.2	0.1	
VEL=	0.5	2.2	8.0	2.2	0.5	

*SECNO 3.000

REPEAT OF PREVIOUS X-SECT. PLUS 2.5 FT.

3.00	3.10	645.40	645.23	0.0	646.26	0.86	2.48	0.01	642.50
300.	26.	245.	29.	12.	30.	13.	1.	0.	642.50
0.02	2.08	8.17	2.26	0.080	0.035	0.080	0.035	642.30	490.12
0.008564	300.	300.	300.	2	11	0	0.0	33.40	523.52

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 645.40

STA=	490.	498.	505.	515.	523.	524.
PER Q=	0.2	8.4	81.7	9.7	0.0	
AREA=	1.2	11.2	30.0	12.8	0.1	
VEL=	0.5	2.3	8.2	2.3	0.0	

*SECNO 4.000

PRINTED IN U.S.A.

X-SECT. D/S OF MICH. AVE. 24+00 IN FIELD BOOK

4.00	3.10	648.00	0.0	0.0	648.45	0.45	2.15	0.04	648.50	
300.	0.	288.	12.	0.	53.	15.	1.	1.	647.15	
0.04	0.0	5.48	0.82	0.080	0.035	0.080	0.035	644.90	188.26	
0.006060	300.	300.	300.	2	0	0	0.0	58.14	246.39	

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 648.00

STA=	188.	212.	246.
PER Q=	96.0	4.0	
AREA=	52.6	14.6	
VEL=	5.5	0.8	

CCHV= 0.300 CEHV= 0.500
*SECNO 5.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS, QUAD MAP,& X-SECT.#4

5.00	3.34	648.84	648.84	0.0	649.95	1.12	0.37	0.33	646.40	
300.	3.	266.	32.	2.	30.	14.	1.	1.	646.10	
0.04	1.41	8.97	2.26	0.080	0.035	0.080	0.035	645.50	193.52	
0.010655	47.	47.	47.	20	8	0	0.0	27.73	221.26	

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 648.84

STA=	194.	195.	205.	212.	221.
PER Q=	0.8	88.6	9.9	0.7	
AREA=	1.8	29.6	11.5	2.5	
VEL=	1.4	9.0	2.6	0.8	

CCHV= 0.300 CEHV= 0.500
*SECNO 6.000

3301 HV CHANGED MORE THAN HVINS

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(D/S OF BRIDGE)

6.00	4.14	650.14	0.0	0.0	650.66	0.52	0.52	0.18	646.90	
300.	4.	241.	56.	3.	38.	32.	1.	1.	646.60	
0.04	1.19	6.40	1.71	0.070	0.035	0.070	0.035	646.00	193.04	
0.003939	86.	86.	86.	3	0	0	0.0	41.97	235.00	

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 650.14

STA=	193.	195.	205.	212.	235.
PER Q=	1.3	80.2	13.3	5.2	
AREA=	3.2	37.6	17.1	15.4	
VEL=	1.2	6.4	2.3	1.0	

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SPECIAL BRIDGE

SB	XK	XKOR	CDFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.52	3.00	0.0	3.92	0.0	19.63	0.0	646.60	646.00

*SECNO 7.000

3301 HV CHANGED MORE THAN HVINS

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
659.28	651.73	0.0	19.	284.	20.	13.	649.90	658.20

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

7.00	11.73	658.33	0.0	0.0	658.34	0.01	7.68	0.0	647.50
300.	7.	116.	176.	36.	114.	461.	3.	1.	647.20
0.13	0.20	1.02	0.38	0.070	0.035	0.070	0.035	646.60	188.43
0.000023	210.	210.	210.	0	0	5	0.0	85.29	273.73

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 658.33

STA=	188.	195.	205.	212.	255.	274.
PER Q=	2.4	38.8	10.8	43.7	4.3	
AREA=	35.6	113.6	70.3	330.5	60.3	
VEL=	0.2	1.0	0.5	0.4	0.2	

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 HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**********************************************************

T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.        6.        0.        0.  0.008000      0.0       0.0       0.   642.000      0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLOC     IBW       CHNIM     ITRACE
   15.000       0.0    -1.000       0.0       0.0       0.0       0.0       0.0       0.0    15.000
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*PROF 4

CCHV= 0.100 CEHV= 0.300

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
		X-SECT. AT LOWER ROUGE.NOT IN FIELD BOOK.DATA FROM QUAD							
1.00	3.75	641.95	641.83	642.00	642.91	0.96	0.0	0.0	638.40
430.	55.	326.	50.	28.	37.	19.	0.	0.	638.40
0.0	1.98	8.92	2.66	0.080	0.035	0.080	0.0	638.20	473.05
0.007855	0.	0.	0.	0	8	0	0.0	51.61	524.66

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 641.95

STA=	473.	498.	505.	515.	523.	525.
PER Q=	2.8	9.9	75.7	11.4	0.2	
AREA=	11.9	15.8	36.5	18.0	0.8	
VEL=	1.0	2.7	8.9	2.7	0.9	

*SECNO 2.000

REPEAT OF PREVIOUS X-SECT. PLUS 1.6 FT.

2.00	3.73	643.53	643.42	0.0	644.51	0.98	1.60	0.01	640.00
430.	54.	327.	50.	27.	36.	19.	0.	0.	640.00
0.01	2.01	9.02	2.68	0.080	0.035	0.080	0.035	639.80	473.81
0.008128	200.	200.	200.	0	8	0	0.0	50.80	524.61

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 643.53

STA=	474.	498.	505.	515.	523.	525.
PER Q=	2.6	9.9	76.0	11.4	0.2	
AREA=	11.1	15.6	36.2	17.8	0.7	
VEL=	1.0	2.7	9.0	2.8	0.9	

*SECNO 3.000

REPEAT OF PREVIOUS X-SECT. PLUS 2.5 FT.

3.00	3.69	645.99	645.92	0.0	647.00	1.01	2.48	0.01	642.50
430.	53.	328.	49.	26.	36.	18.	1.	1.	642.50
0.02	2.04	9.13	2.71	0.080	0.035	0.080	0.035	642.30	474.59
0.008417	300.	300.	300.	4	8	0	0.0	49.97	524.56

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 645.99

STA=	475.	498.	505.	515.	523.	525.
PER Q=	2.4	9.8	76.3	11.3	0.1	
AREA=	10.4	15.3	35.9	17.5	0.7	
VEL=	1.0	2.8	9.1	2.8	0.9	

*SECNO 4.000

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3301 HV CHANGED MO E THAN HVINS

X-SECT. D/S OF MICH. AVE. 24+00 IN FIELD BOOK.

4.00	3.66	648.56	0.0	0.0	649.03	0.47	1.98	0.05	648.50	
430.	0.	386.	44.	0.	67.	41.	2.	1.	647.15	
0.03	0.14	5.80	1.08	0.080	0.035	0.080	0.035	644.90	183.32	
0.005314	300.	300.	300.	1	0	0	0.0	86.33	269.65	

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 648.56

STA=	183.	187.	212.	270.
PER Q=	0.0	89.7	10.3	
AREA=	0.1	66.6	40.9	
VEL=	0.1	5.8	1.1	

CCHV= 0.300 CEHV= 0.500
*SECNO 5.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA.	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS, QUAD MAP,& X-SECT.#4

5.00	4.09	649.59	649.59	0.0	650.78	1.19	0.32	0.36	646.40
430.	5.	356.	70.	3.	37.	31.	2.	1.	646.10
0.04	1.55	9.58	2.25	0.080	0.035	0.080	0.035	645.50	193.07
0.008990	47.	47.	47.	20	8	0	0.0	41.07	234.14

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 649.59

STA=	193.	195.	205.	212.	234.
PER Q=	1.1	82.7	11.8	4.3	
AREA=	3.1	37.1	16.7	14.3	
VEL=	1.6	9.6	3.0	1.3	

CCHV= 0.300 CEHV= 0.500
*SECNO 6.000

3301 HV CHANGED MORE THAN HVINS

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(D/S OF BRIDGE)

6.00	4.87	650.87	0.0	0.0	651.44	0.57	0.48	0.19	646.90
430.	6.	315.	109.	5.	45.	59.	2.	1.	646.60
0.04	1.32	7.01	1.85	0.070	0.035	0.070	0.035	646.00	192.60
0.003741	86.	86.	86.	4	0	0	0.0	54.93	247.52

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 650.87

STA=	193.	195.	205.	212.	248.

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AREA =	4..	4.9	22..	36.7
VEL=	1.3	7.0	2.7	1.3

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.52	3.00	0.0	3.92	0.0	19.63	0.0	646.60	646.00

*SECNO 7.000

3301 HV CHANGED MORE THAN HVINS

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
669.64	652.89	0.0	155.	278.	20.	13.	649.90	658.20

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS.& QUAD MAP.(U/S OF BRIDGE)

7.00	12.08	658.68	0.0	0.0	658.70	0.01	7.26	0.0	647.50
430.	11.	164.	255.	38.	117.	485.	4.	2.	647.20
0.11	0.28	1.40	0.53	0.070	0.035	0.070	0.035	646.60	188.22
0.000042	210.	210.	210.	1	0	8	0.0	86.53	274.75

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 658.68

STA=	188.	195.	205.	212.	255.	275.
PER Q=	2.5	38.1	10.7	44.1	4.6	
AREA=	37.9	117.1	72.7	345.7	67.1	
VEL=	0.3	1.4	0.6	0.5	0.3	

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HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

BINGELL DRAIN,WAYNE FIS

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	1.000	0.0	0.0	0.0	638.20	140.00	640.34	0.0	640.84	78.83	6.05	31.17	15.77
	1.000	0.0	0.0	0.0	638.20	250.00	641.08	0.0	641.82	80.45	7.52	48.53	27.87
	1.000	0.0	0.0	0.0	638.20	300.00	641.35	641.13	642.17	80.33	8.00	56.92	33.47
	1.000	0.0	0.0	0.0	638.20	430.00	641.95	641.83	642.91	78.55	8.92	82.91	48.52
	2.000	200.00	0.0	0.0	639.80	140.00	641.92	0.0	642.44	80.53	6.09	30.91	15.60
	2.000	200.00	0.0	0.0	639.80	250.00	642.68	0.0	643.42	79.49	7.49	48.77	28.04
	2.000	200.00	0.0	0.0	639.80	300.00	642.95	642.73	643.77	79.64	7.97	57.15	33.62
	2.000	200.00	0.0	0.0	639.80	430.00	643.53	643.42	644.51	81.28	9.02	81.42	47.70
	3.000	300.00	0.0	0.0	642.30	140.00	644.39	0.0	644.92	84.98	6.20	30.28	15.19
	3.000	300.00	0.0	0.0	642.30	250.00	645.13	0.0	645.90	85.33	7.67	47.42	27.06
	3.000	300.00	0.0	0.0	642.30	300.00	645.40	645.23	646.26	85.64	8.17	55.26	32.42
	3.000	300.00	0.0	0.0	642.30	430.00	645.99	645.92	647.00	84.17	9.13	79.93	46.87
	4.000	300.00	0.0	0.0	644.90	140.00	647.00	0.0	647.33	74.80	4.62	30.30	16.19
	4.000	300.00	0.0	0.0	644.90	250.00	647.73	0.0	648.16	64.71	5.31	53.06	31.08
	4.000	300.00	0.0	0.0	644.90	300.00	648.00	0.0	648.45	60.60	5.48	67.14	38.54
	4.000	300.00	0.0	0.0	644.90	430.00	648.56	0.0	649.03	53.14	5.80	107.62	58.99
*	5.000	47.00	0.0	0.0	645.50	140.00	647.66	647.66	648.47	143.97	7.43	22.16	11.67
*	5.000	47.00	0.0	0.0	645.50	250.00	648.50	648.50	649.56	116.24	8.65	37.05	23.19
*	5.000	47.00	0.0	0.0	645.50	300.00	648.84	648.84	649.95	106.55	8.97	45.39	29.06
*	5.000	47.00	0.0	0.0	645.50	430.00	649.59	649.59	650.78	89.90	9.58	71.17	45.35
	6.000	86.00	0.0	0.0	646.00	140.00	648.82	0.0	649.33	60.77	5.72	24.48	17.96
	6.000	86.00	0.0	0.0	646.00	250.00	649.80	0.0	650.28	39.97	6.06	60.41	39.54
	6.000	86.00	0.0	0.0	646.00	300.00	650.14	0.0	650.66	39.39	6.40	73.25	47.80
	6.000	86.00	0.0	0.0	646.00	430.00	650.87	0.0	651.44	37.41	7.01	108.52	70.30
	7.000	210.00	658.20	649.90	646.60	140.00	650.58	0.0	650.81	18.07	3.88	36.06	32.93
	7.000	210.00	658.20	649.90	646.60	250.00	656.03	0.0	656.15	4.09	2.76	90.52	123.55
	7.000	210.00	658.20	649.90	646.60	300.00	658.33	0.0	658.34	0.23	1.02	610.28	624.14
	7.000	210.00	658.20	649.90	646.60	430.00	658.68	0.0	658.70	0.42	1.40	640.57	667.40

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BINGELL DRAIN, WAYNE FIS

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	1.000	140.00	640.34	0.0	0.0	-1.66	21.17	0.0
	1.000	250.00	641.08	0.74	0.0	-0.92	27.18	0.0
	1.000	300.00	641.35	0.27	0.0	-0.65	34.76	0.0
	1.000	430.00	641.95	0.60	0.0	-0.05	51.61	0.0
	2.000	140.00	641.92	0.0	1.59	0.0	21.10	200.00
	2.000	250.00	642.68	0.76	1.61	0.0	27.42	200.00
	2.000	300.00	642.95	0.27	1.60	0.0	34.95	200.00
	2.000	430.00	643.53	0.58	1.58	0.0	50.80	200.00
	3.000	140.00	644.39	0.0	2.47	0.0	20.93	300.00
	3.000	250.00	645.13	0.73	2.44	0.0	26.01	300.00
	3.000	300.00	645.40	0.27	2.45	0.0	33.40	300.00
	3.000	430.00	645.99	0.59	2.46	0.0	49.97	300.00
	4.000	140.00	647.00	0.0	2.61	0.0	20.81	300.00
	4.000	250.00	647.73	0.73	2.60	0.0	46.55	300.00
	4.000	300.00	648.00	0.27	2.60	0.0	58.14	300.00
	4.000	430.00	648.56	0.57	2.57	0.0	86.33	300.00
*	5.000	140.00	647.66	0.0	0.66	0.0	15.72	47.00
*	5.000	250.00	648.50	0.84	0.77	0.0	21.72	47.00
*	5.000	300.00	648.84	0.34	0.84	0.0	27.73	47.00
*	5.000	430.00	649.59	0.75	1.02	0.0	41.07	47.00
	6.000	140.00	648.82	0.0	1.17	0.0	10.00	86.00
	6.000	250.00	649.80	0.98	1.30	0.0	36.11	86.00
	6.000	300.00	650.14	0.34	1.30	0.0	41.97	86.00
	6.000	430.00	650.87	0.73	1.28	0.0	54.93	86.00
	7.000	140.00	650.58	0.0	1.76	0.0	10.00	210.00
	7.000	250.00	656.03	5.45	6.23	0.0	10.00	210.00
	7.000	300.00	658.33	2.30	8.19	0.0	85.29	210.00
	7.000	430.00	658.68	0.35	7.82	0.0	86.53	210.00

SUMMARY OF ERRORS

CAUTION	SECNO=	5.000	PROFILE= 1	CRITICAL DEPTH ASSUMED
CAUTION	SECNO=	5.000	PROFILE= 1	PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION	SECNO=	5.000	PROFILE= 1	20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION	SECNO=	5.000	PROFILE= 2	CRITICAL DEPTH ASSUMED
CAUTION	SECNO=	5.000	PROFILE= 2	PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION	SECNO=	5.000	PROFILE= 2	20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION	SECNO=	5.000	PROFILE= 3	CRITICAL DEPTH ASSUMED
CAUTION	SECNO=	5.000	PROFILE= 3	PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION	SECNO=	5.000	PROFILE= 3	20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION	SECNO=	5.000	PROFILE= 4	CRITICAL DEPTH ASSUMED
CAUTION	SECNO=	5.000	PROFILE= 4	PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION	SECNO=	5.000	PROFILE= 4	20 TRIALS ATTEMPTED TO BALANCE WSEL

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1) COUNTY: WAYNE

2) STUDY NAME WAYNE, CITY

3) WATERCOURSE BINGELL DRAIN

4) DOCUMENT TYPE. SPLIT FLOW



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**************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**************************************************

1    BINGELL DRAIN - MICH. AVE. WEIR - WAYNE FIS - HUD200207
2         SPLIT IN FLOW CALCULATIONS
3         MICH. AVE. WEIR Q=10
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	0.0	0.0	0.0	0.	650.140	0.0

J-	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	15.000

JT	2.000	300.000	430.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JC	0.070	0.070	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0
J1	1.000	12.000	195.000	205.000	0.0	0.0	0.0	0.0	0.0	0.0
J3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	649.000	649.000	0.0
JX	665.800	0.0	663.450	30.000	662.800	82.000	660.100	187.000	646.900	195.000
JX	650.000	200.000	646.600	205.000	648.800	212.000	651.300	255.000	662.300	287.000
JX	663.600	400.000	663.900	500.000	0.0	0.0	0.0	0.0	0.0	0.0
JT	2.000	10.000	140.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JC	0.050	0.050	0.050	0.100	0.300	0.0	0.0	0.0	0.0	0.0
J1	2.000	15.000	500.000	700.000	30.000	30.000	30.000	0.0	0.0	0.0
JX	667.320	0.0	667.050	35.000	666.200	100.000	664.670	200.000	662.560	300.000
JX	660.480	400.000	658.900	500.000	657.770	600.000	657.740	700.000	658.310	762.000
JX	658.720	800.000	659.880	900.000	660.990	1000.000	661.960	1116.000	662.390	1200.000
JC	0.020	0.020	0.020	0.0	0.0	0.0	0.0	0.0	0.0	0.0
X1	3.000	0.0	0.0	0.0	12.000	12.000	12.000	0.0	0.250	0.0
X1	4.000	0.0	0.0	0.0	11.000	11.000	11.000	0.0	0.170	0.0
JC	0.035	0.035	0.035	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NC	0.020	0.020	0.010	0.0	0.	0.0	0.0	0.0	0.	0.0
X1	8.000	0.0	0.0	0.0	15.000	15.000	15.000	0.0	0.250	0.0
NC	0.050	0.050	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0
X1	9.000	0.0	0.0	0.0	23.000	23.000	23.000	0.0	-0.420	0.0
QT	2.000	300.000	430.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.070	0.070	0.035	0.300	0.500	0.0	0.0	0.0	0.0	0.0
X1	10.000	12.000	195.000	205.000	30.000	30.000	30.000	0.0	0.0	0.0
X3	10.000	0.0	0.0	0.0	0.0	0.0	0.0	658.000	658.000	0.0
GR	666.400	0.0	664.050	30.000	663.400	82.000	660.700	187.000	647.500	195.000
GR	650.600	200.000	647.200	205.000	649.400	212.000	651.900	255.000	662.900	287.000
GR	664.200	400.000	664.500	500.000	0.0	0.0	0.0	0.0	0.0	0.0
EU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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*PROF 1

CCHV= 0.300 CEHV= 0.500
*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.00	3.54	650.14	650.09	650.14	650.86	0.72	0.0	0.0	646.90
300.	9.	152.	139.	3.	18.	33.	0.	0.	646.60
0.0	2.95	8.61	4.26	0.070	0.035	0.070	0.0	646.60	193.04
0.024403	0.	0.	0.	0	4	0	0.0	42.01	235.05

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 650.14

STA=	193.	195.	205.	212.	235.
PER Q=		3.1	50.7	33.2	13.1
AREA=		3.2	17.6	17.1	15.4
VEL=		3.0	8.6	5.8	2.5

CCHV= 0.100 CEHV= 0.300
*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2.00	0.08	657.82	657.82	0.0	657.85	0.03	0.76	0.07	658.90
10.	0.	10.	0.	0.	7.	0.	0.	0.	657.74
0.01	0.0	1.45	1.07	0.050	0.050	0.050	0.048	657.74	595.55
0.093612	30.	30.	30.	20	26	0	0.0	113.19	708.74

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 657.82

STA=	596.	700.	709.
PER Q=	96.2	3.7	
AREA=	6.6	0.4	
VEL=	1.4	1.1	

*SECNO 3.000

3.00	0.10	658.09	0.0	0.0	658.11	0.02	0.26	0.00	659.15
10.	0.	10.	0.	0.	8.	0.	0.	0.	657.99
0.01	0.0	1.25	0.91	0.020	0.020	0.020	0.040	657.99	594.68
0.009322	12.	12.	12.	6	0	0	0.0	115.12	709.80

FLOW DISTRIBUTION FOR SECNO= 3.00 CWSEL= 658.09

STA=	595.	700.	710.
PER Q=	96.0	4.0	

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VEL=	1.3	0.9								

*SECNO 4.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
4.00	0.08	658.24	658.24	0.0	658.27	0.03	0.12	0.00	659.32
10.	0.	10.	0.	0.	7.	0.	0.	0.	658.16
0.01	0.0	1.42	1.04	0.020	0.020	0.020	0.035	658.16	595.42
0.013899	11.	11.	11.	4	9	0	0.0	113.48	708.90

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 658.24

STA=	595.	700.	709.
PER Q=	96.2	3.8	
AREA=	6.8	0.4	
VEL=	1.4	1.0	

*SECNO 5.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
5.00	0.37	658.28	0.0	0.0	658.28	0.00	0.01	0.00	659.07
10.	0.	9.	1.	0.	40.	7.	0.	0.	657.91
0.03	0.0	0.22	0.15	0.035	0.035	0.035	0.035	657.91	570.01
0.000126	15.	15.	15.	2	0	0	0.0	170.11	740.12

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 658.28

STA=	570.	700.	740.
PER Q=	88.6	11.4	
AREA=	40.5	7.4	
VEL=	0.2	0.2	

*SECNO 6.000

6.00	1.38	658.28	0.0	0.0	658.28	0.00	0.00	0.00	657.80
10.	0.	9.	1.	7.	216.	53.	0.	0.	657.20
0.31	0.01	0.04	0.02	0.060	0.060	0.060	0.043	656.90	469.91
0.000002	37.	37.	37.	2	0	0	0.0	328.41	798.31

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 658.28

STA=	470.	500.	700.	798.
PER Q=	1.1	85.7	13.3	
AREA=	7.2	216.3	53.2	
VEL=	0.0	0.0	0.0	

*SECNO 7.000

7.00	0.45	658.28	0.0	0.0	658.28	0.00	0.00	0.00	658.47
10.	0.	10.	0.	0.	37.	0.	0.	1.	658.32
0.34	0.0	0.27	0.0	0.035	0.035	0.035	0.041	657.83	529.11
0.000292	37.	37.	37.	0	0	0	0.0	163.47	692.58

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STA= 529. 700.
PER Q= 100.0
AREA= 37.1
VEL= 0.3

*SECNO 8.000

8.00	0.19	658.27	0.0	0.0	658.30	0.03	0.01	0.01	658.72
10.	0.	10.	0.	0.	7.	0.	0.	1.	658.57
0.35	0.0	1.35	0.0	0.020	0.020	0.020	0.038	658.08	568.26
0.006917	15.	15.	15.	0	0	0	0.0	73.20	641.45

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 658.27

STA= 568. 700.
PER Q= 100.0
AREA= 7.4
VEL= 1.3

*SECNO 9.000

9.00	0.65	658.31	0.0	0.0	658.31	0.00	0.01	0.00	658.30
10.	0.	10.	0.	0.	74.	1.	0.	1.	658.15
0.39	0.00	0.14	0.05	0.050	0.050	0.050	0.040	657.66	499.37
0.000078	23.	23.	23.	2.	0	0	0.0	214.44	713.81

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 658.31

STA= 499. 700. 714.
PER Q= 99.5 0.5
AREA= 73.6 1.1
VEL= 0.1 0.0

CCHV= 0.300 CEHV= 0.500
*SECNO 10.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
10.00	11.11	658.31	0.0	0.0	658.31	0.01	0.00	0.00	647.50
300.	8.	87.	204.	35.	93.	459.	1.	1.	647.20
0.41	0.24	0.94	0.44	0.070	0.035	0.070	0.039	647.20	188.45
0.000031	30.	30.	30.	2	0	0	0.0	85.19	273.64

FLOW DISTRIBUTION FOR SECNO= 10.00 CWSEL= 658.31

STA= 188. 195. 205. 212. 255. 274.
PER Q= 2.8 29.1 12.5 50.6 5.0
AREA= 35.4 93.3 70.1 329.3 59.7
VEL= 0.2 0.9 0.5 0.5 0.2

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
  ERROR CORR -  01,02
  MODIFICATION - 50,51,52,53
**************************************************

T1   BINGELL DRAIN - MICH. AVE. WEIR - WAYNE FIS - HUD200207
T2        SPLIT IN FLOW CALCULATIONS
T3        MICH. AVE. WEIR Q=140

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

        0.        3.        0.        0.  0.0         0.0       0.0       0.  650.870   0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      15.000    0.0      -1.000    0.0       0.0       0.0       0.0       0.0       0.0       15.000
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*PROF 2

CCHV= 0.300 CEHV= 0.500
*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.00	4.27	650.87	0.0	650.87	651.48	0.61	0.0	0.0	646.90
430.	12.	206.	212.	5.	25.	59.	0.	0.	646.60
0.0	2.57	8.25	3.59	0.070	0.035	0.070	0.0	646.60	192.59
0.014104	0.	0.	0.	0	0	0	0.0	55.01	247.61

FLOW DISTRIBUTION FOR SECNO= 1.00 CWSEL= 650.87

STA=	193.	195.	205.	212.	248.
PER Q=	2.9	47.9	27.2	22.1	
AREA=	4.8	25.0	22.2	36.9	
VEL=	2.6	8.2	5.3	2.6	

CCHV= 0.100 CEHV= 0.300
*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2.00	0.36	658.10	658.10	0.0	658.25	0.14	0.55	0.05	658.90
140.	0.	124.	16.	0.	40.	7.	0.	0.	657.74
0.00	0.0	3.12	2.20	0.050	0.050	0.050	0.048	657.74	570.48
0.053276	30.	30.	30.	20	23	0	0.0	169.05	739.54

FLOW DISTRIBUTION FOR SECNO= 2.00 CWSEL= 658.10

STA=	570.	700.	740.
PER Q=	88.7	11.3	
AREA=	39.8	7.2	
VEL=	3.1	2.2	

*SECNO 3.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3.00	0.36	658.35	658.35	0.0	658.50	0.14	0.21	0.00	659.15
140.	0.	124.	16.	0.	40.	7.	0.	0.	657.99
0.00	0.0	3.12	2.20	0.020	0.020	0.020	0.040	657.99	570.51
0.008546	12.	12.	12.	4	5	0	0.0	169.00	739.51

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FLOW DISTRIBUTION FO SECNO= 3.00 CWSEL= 658.35

STA= 571. 700. 740.
PER Q= 88.7 11.3
AREA= 39.7 7.2
VEL= 3.1 2.2

*SECNO 4.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
4.00	0.36	658.52	658.52	0.0	658.67	0.14	0.09	0.00	659.32
140.	0.	124.	16.	0.	40.	7.	0.	0.	658.16
0.00	0.0	3.13	2.20	0.020	0.020	0.020	0.035	658.16	570.53
0.008568	11.	11.	11.	20	5	0	0.0	168.96	739.48

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 658.52

STA= 571. 700. 739.
PER Q= 88.7 11.3
AREA= 39.7 7.2
VEL= 3.1 2.2

*SECNO 5.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
5.00	0.79	658.70	0.0	0.0	658.72	0.02	0.04	0.01	659.07
140.	0.	110.	30.	0.	103.	34.	0.	0.	657.91
0.01	0.0	1.07	0.89	0.035	0.035	0.035	0.035	657.91	532.74
0.001205	15.	15.	15.	2	0	0	0.0	249.64	782.38

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 658.70

STA= 533. 700. 762. 782.
PER Q= 78.6 20.9 0.5
AREA= 103.1 31.3 2.2
VEL= 1.1 0.9 0.3

*SECNO 6.000

6.00	1.83	658.73	0.0	0.0	658.73	0.00	0.01	0.00	657.80
140.	4.	109.	27.	27.	305.	105.	0.	1.	657.20
0.04	0.16	0.36	0.25	0.060	0.060	0.060	0.043	656.90	442.10
0.000118	37.	37.	37.	2	0	0	0.0	392.00	834.10

FLOW DISTRIBUTION FOR SECNO= 6.00 CWSEL= 658.73

STA= 442. 500. 700. 800. 834.
PER Q= 3.1 77.9 18.5 0.5
AREA= 26.8 305.3 97.6 7.3
VEL= 0.2 0.4 0.3 0.1

*SECNO 7.000

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140.	1.	135.	4.	2.	123.	7.	1.	1.	658.32	
0.05	0.39	1.11	0.53	0.035	0.035	0.035	0.041	657.83	484.54	
0.001305	37.	37.	37.	2.	0.	0.	0.0	250.34	734.88	

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 658.73

STA=	485.	500.	700.	735.
PER Q=	0.5	96.8	2.7	
AREA=	2.0	122.5	7.1	
VEL=	0.4	1.1	0.5	

*SECNO 8.000

8.00	0.65	658.73	0.0	0.0	658.78	0.05	0.03	0.01	658.72
140.	0.	139.	1.	0.	75.	1.	1.	1.	658.57
0.05	0.04	1.87	0.68	0.020	0.020	0.020	0.038	658.08	499.05
0.002348	15.	15.	15.	0	0	0	0.0	215.20	714.25

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 658.73

STA=	499.	500.	700.	714.
PER Q=	0.0	99.4	0.6	
AREA=	0.0	74.6	1.2	
VEL=	0.0	1.9	0.7	

*SECNO 9.000

9.00	1.14	658.80	0.0	0.0	658.81	0.01	0.03	0.00	658.30
140.	3.	130.	7.	8.	172.	18.	1.	1.	658.15
0.06	0.33	0.75	0.40	0.050	0.050	0.050	0.040	657.66	469.40
0.000785	23.	23.	23.	2	0	0	0.0	287.00	756.39

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 658.80

STA=	469.	500.	700.	756.
PER Q=	1.8	92.9	5.2	
AREA=	7.7	172.5	18.5	
VEL=	0.3	0.8	0.4	

CCHV= 0.300 CEHV= 0.500

*SECNO 10.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
10.00	11.61	658.81	0.0	0.0	658.82	0.01	0.00	0.00	647.50
430.	12.	123.	294.	39.	98.	494.	1.	1.	647.20
0.07	0.31	1.26	0.60	0.070	0.035	0.070	0.039	647.20	188.15
0.000053	30.	30.	30.	2	0	0	0.0	86.94	275.09

FLOW DISTRIBUTION FOR SECNO= 10.00 CWSEL= 658.81

STA=	188.	195.	205.	212.	255.	275.
PER Q=	2.8	28.7	12.2	50.8	5.5	
AREA=	38.7	98.3	73.5	350.7	69.4	
VEL=	0.3	1.3	0.7	0.6	0.3	

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****
HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
ERROR CORR - 01,02
MODIFICATION - 50,51,52,53
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MICH. AVE. WEIR Q=10

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	1.000	0.0	0.0	0.0	646.60	300.00	650.14	650.09	650.86	244.03	8.61	53.35	19.20
	1.000	0.0	0.0	0.0	646.60	430.00	650.87	0.0	651.48	141.04	8.25	88.77	36.21
*	2.000	30.00	0.0	0.0	657.74	10.00	657.82	657.82	657.85	936.12	1.45	6.99	0.33
*	2.000	30.00	0.0	0.0	657.74	140.00	658.10	658.10	658.25	532.76	3.12	46.96	6.07
	3.000	12.00	0.0	0.0	657.99	10.00	658.09	0.0	658.11	93.22	1.25	8.11	1.04
*	3.000	12.00	0.0	0.0	657.99	140.00	658.35	658.35	658.50	85.46	3.12	46.92	15.14
*	4.000	11.00	0.0	0.0	658.16	10.00	658.24	658.24	658.27	138.99	1.42	7.16	0.85
*	4.000	11.00	0.0	0.0	658.16	140.00	658.52	658.52	658.67	85.68	3.13	46.88	15.12
	5.000	15.00	0.0	0.0	657.91	10.00	658.28	0.0	658.28	1.26	0.22	47.87	8.91
	5.000	15.00	0.0	0.0	657.91	140.00	658.70	0.0	658.72	12.05	1.07	136.60	40.32
	6.000	37.00	0.0	0.0	656.90	10.00	658.28	0.0	658.28	0.02	0.04	276.72	65.88
	6.000	37.00	0.0	0.0	656.90	140.00	658.73	0.0	658.73	1.18	0.36	436.98	128.64
	7.000	37.00	0.0	0.0	657.83	10.00	658.28	0.0	658.28	2.92	0.27	37.07	5.85
	7.000	37.00	0.0	0.0	657.83	140.00	658.73	0.0	658.74	13.05	1.11	131.55	38.76
	8.000	15.00	0.0	0.0	658.08	10.00	658.27	0.0	658.30	69.17	1.35	7.43	1.20
	8.000	15.00	0.0	0.0	658.08	140.00	658.73	0.0	658.78	23.48	1.87	75.80	28.89
	9.000	23.00	0.0	0.0	657.66	10.00	658.31	0.0	658.31	0.78	0.14	74.69	11.29
	9.000	23.00	0.0	0.0	657.66	140.00	658.80	0.0	658.81	7.85	0.75	198.67	49.97
	10.000	30.00	0.0	0.0	647.20	300.00	658.31	0.0	658.31	0.31	0.94	587.84	535.94
	10.000	30.00	0.0	0.0	647.20	430.00	658.81	0.0	658.82	0.53	1.26	630.62	593.42

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MICH. AVE. WEIR Q=10

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	1.000	300.00	650.14	0.0	0.0	0.0	42.01	0.0
	1.000	430.00	650.87	0.73	0.0	0.0	55.01	0.0
*	2.000	10.00	657.82	0.0	7.68	0.0	113.19	30.00
*	2.000	140.00	658.10	0.28	7.23	0.0	169.05	30.00
	3.000	10.00	658.09	0.0	0.27	0.0	115.12	12.00
*	3.000	140.00	658.35	0.27	0.25	0.0	169.00	12.00
*	4.000	10.00	658.24	0.0	0.15	0.0	113.48	11.00
*	4.000	140.00	658.52	0.28	0.17	0.0	168.96	11.00
	5.000	10.00	658.28	0.0	0.04	0.0	170.11	15.00
	5.000	140.00	658.70	0.42	0.18	0.0	249.64	15.00
	6.000	10.00	658.28	0.0	0.00	0.0	328.41	37.00
	6.000	140.00	658.73	0.44	0.03	0.0	392.00	37.00
	7.000	10.00	658.28	0.0	-0.00	0.0	163.47	37.00
	7.000	140.00	658.73	0.44	-0.00	0.0	250.34	37.00
	8.000	10.00	658.27	0.0	-0.01	0.0	73.20	15.00
	8.000	140.00	658.73	0.45	0.00	0.0	215.20	15.00
	9.000	10.00	658.31	0.0	0.04	0.0	214.44	23.00
	9.000	140.00	658.80	0.49	0.08	0.0	287.00	23.00
	10.000	300.00	658.31	0.0	-0.00	0.0	85.19	30.00
	10.000	430.00	658.81	0.50	0.00	0.0	86.94	30.00

SUMMARY OF ERRORS

CAUTION SECNO= 2.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 2.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 3.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3.000 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 4.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 4.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 4.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 4.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 4.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

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00BREAK00

1) COUNTY: WAYNE

2) STUDY NAME: WAYNE, CITY

3) WATERCOURSE: BINGELL DRAIN UPPER

4) DOCUMENT TYPE: MULTIPLE PROFILES

00BREAK00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**************************************************

C
T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
        0.      2.        0.        0.  0.0           0.0       0.0       0.   650.580     0.0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
      1.000     0.0       1.000     0.0       0.0       0.0       0.0       0.0       0.0      15.000

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000   201.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0

QT      5.000   140.000   250.000   300.000   300.000   430.000     0.0       0.0       0.0       0.0
NC      0.070     0.070     0.035     0.300     0.500     0.0       0.0       0.0       0.0       0.0

        X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

X1      7.000    12.000   195.000   205.000     0.0       0.0       0.0       0.0       0.0       0.0
X3     10.000     0.0       0.0       0.0       0.0       0.0       0.0     658.000   658.000     0.0
GR    666.400     0.0     664.050    30.000   663.400    82.000   660.700   187.000   647.500   195.000
GR    650.600   200.000   647.200   205.000   649.400   212.000   651.900   255.000   662.900   287.000
GR    664.200   400.000   664.500   500.000     0.0       0.0       0.0       0.0       0.0       0.0
NC      0.080     0.080     0.040     0.300     0.500     0.0       0.0       0.0       0.0       0.0

        X-SECT. U/S OF MICH. AVE.   19+50 IN FIELD BOOK.

        ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA.   ELEV SET AT RD. ELEV

X1      8.000    14.000   179.500   196.500    67.000    67.000    67.000     0.0       0.0       0.0
X3      0.0       0.0       0.0       1.000   660.500   220.000   658.200     0.0       0.0       0.0
GR    660.500     0.0     659.240    60.000   658.890   156.500   649.840   175.500   649.140   179.500
GR    648.300   181.500   647.940   185.000   648.040   188.500   649.040   196.500   649.840   211.500
GR    652.800   219.500   652.540   231.500   653.240   261.500   661.690   323.500     0.0       0.0
NC      0.080     0.080     0.040     0.100     0.300     0.0       0.0       0.0       0.0       0.0

        X-SECT.                   15+00 IN FIELD BOOK.

X1      9.000     8.000   276.000   324.000   450.000   450.000   450.000     0.0       0.0       0.0
GR    665.400     0.0     664.600   150.000   660.250   261.000   652.900   276.000   652.700   300.000
GR    653.000   324.000   659.500   336.000   663.650   461.000     0.0       0.0       0.0       0.0

        REPEAT OF PREVIOUS X-SECTION

X1     10.000     0.0       0.0       0.0     250.000   250.000   250.000     0.0       0.0       0.0
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NC	0.100	0.100	0.050	0.100	0.300	0.0	0.	0.0	.0	0.0

X-SECT. 10+00 IN FIELD BOOK.

X1	11.000	12.000	194.500	210.500	250.000	250.000	250.000	0.0	0.0	0.0
GR	663.500	0.0	662.830	50.000	663.780	167.500	661.330	178.500	661.030	182.500
GR	654.500	194.500	653.230	200.000	653.530	205.500	655.430	210.500	655.530	220.500
GR	664.600	238.500	667.480	300.000	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.110	0.110	0.050	0.100	0.300	0.0	0.0	0.0	0.0	0.0

REPEAT OF PREVIOUS X-SECTION.

X1	12.000	0.0	0.0	0.0	100.000	100.000	100.000	0.0	0.770	0.0

REPEAT OF PREVIOUS X-SECTION

X1	13.000	0.0	0.0	0.0	200.000	200.000	200.000	0.0	1.000	0.0
NC	0.120	0.120	0.060	0.100	0.300	0.0	0.0	0.0	0.0	0.0

X-SECT. D/S OF HANNAN ROAD 5+00 IN FIELD BOOK.

X1	14.000	13.000	98.000	107.000	200.000	200.000	200.000	0.0	0.0	0.0
GR	664.900	0.0	664.650	40.000	664.050	65.000	658.850	87.000	658.650	91.000
GR	656.200	98.000	655.650	102.500	656.150	107.000	662.650	118.000	662.850	169.000
GR	662.600	191.000	665.450	252.500	665.900	402.500	0.0	0.0	0.0	0.0

REPEAT OF PREVIOUS X-SECTION

X1	15.000	0.0	0.0	0.0	200.000	200.000	200.000	0.0	0.900	0.0
NC	0.080	0.080	0.040	0.300	0.500	0.0	0.0	0.0	0.0	0.0

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

X1	16.000	8.000	197.000	203.000	230.000	230.000	230.000	0.0	0.0	0.0
X3	10.000	0.0	90.000	0.0	0.0	0.0	0.0	658.000	658.000	0.0
GR	665.000	0.0	658.000	20.000	657.500	197.000	655.600	198.000	655.600	202.000
GR	657.500	203.000	658.000	380.000	665.000	400.000	0.0	0.0	0.0	0.0
SB	0.0	2.060	3.000	90.000	3.930	0.0	9.820	0.0	656.810	655.610

X-SECT. REPEAT OF X-SECT. #12 X-SECT. D/S OF HANNAN

X1	17.000	0.0	0.0	0.0	60.000	60.000	60.000	0.0	0.900	0.0
X2	0.0	0.0	1.000	658.720	662.260	0.0	0.0	0.0	0.0	0.0
X3	10.000	0.0	90.000	0.0	0.0	0.0	0.0	662.260	662.260	0.0
EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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*PROFIL

CCHV= 0.300 CEHV= 0.500
*SECNO 7.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 658.00 ELREA= 658.00

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

7.00	3.56	650.76	650.76	650.58	651.71	0.95	0.0	0.0	647.50
140.	0.	140.	0.	0.	18.	0.	0.	0.	647.20
0.0	0.0	7.83	0.0	0.070	0.035	0.070	0.0	647.20	195.00
0.017929	0.	0.	0.	0	7	0	0.0	10.00	205.00

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 650.76

STA=	195.	205.
PER Q=	100.0	
AREA=	17.9	
VEL=	7.8	

CCHV= 0.300 CEHV= 0.500
*SECNO 8.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1.0 220.0 TYPE= 1 TARGET= 219.000
ELENCL= 660.50 ELENCR= 658.20

X-SECT. U/S OF MICH. AVE. 19+50 IN FIELD BOOK.

ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA ELEV SET AT RD. ELEV

8.00	4.09	652.03	0.0	0.0	652.06	0.03	0.07	0.28	649.14
140.	8.	104.	28.	15.	62.	45.	0.	0.	649.04
0.01	0.55	1.66	0.62	0.080	0.040	0.080	0.039	647.94	170.90
0.000359	67.	67.	67.	2	0	0	0.0	46.52	217.42

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 652.03

STA=	171.	176.	180.	197.	212.	217.
PER Q=	1.3	4.7	73.9	18.4	1.7	
AREA=	5.0	10.2	62.4	38.9	6.5	
VEL=	0.3	0.6	1.7	0.7	0.4	

CCHV= 0.100 CEHV= 0.300
*SECNO 9.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA

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SLOPE XLOBL XLCH XLOB ITRIAL IDC ICONT CORAR TOPWID ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

X-SECT. 15+00 IN FIELD BOOK.

9.00	0.76	653.46	653.46	0.0	653.78	0.32	0.52	0.09	652.90
140.	0.	139.	0.	0.	31.	0.	1.	1.	653.00
0.04	1.23	4.56	1.06	0.080	0.040	0.080	0.040	652.70	274.85
0.027449	450.	450.	450.	20	21	0	0.0	50.00	324.85

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 653.46

STA=	275.	276.	324.	325.
PER Q=	0.3	99.6	0.1	
AREA=	0.3	30.6	0.2	
VEL=	1.2	4.6	1.1	

*SECNO 10.000

REPEAT OF PREVIOUS X-SECTION

10.00	1.81	654.51	0.0	0.0	654.55	0.04	0.74	0.03	652.90
140.	1.	138.	1.	3.	81.	2.	1.	1.	653.00
0.08	0.49	1.71	0.46	0.080	0.040	0.080	0.040	652.70	272.72
0.001059	250.	250.	250.	6	0	0	0.0	54.05	326.78

FLOW DISTRIBUTION FOR SECNO= 10.00 CWSEL= 654.51

STA=	273.	276.	324.	327.
PER Q=	0.9	98.4	0.7	
AREA=	2.6	80.6	2.1	
VEL=	0.5	1.7	0.5	

CCHV= 0.100 CEHV= 0.300
*SECNO 11.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

X-SECT. 10+00 IN FIELD BOOK.

11.00	1.97	655.20	655.20	0.0	655.88	0.68	0.74	0.19	654.50
140.	1.	139.	0.	0.	21.	0.	2.	1.	655.43
0.09	1.13	6.63	0.0	0.100	0.045	0.100	0.041	653.23	193.21
0.027705	250.	250.	250.	20	8	0	0.0	16.68	209.90

FLOW DISTRIBUTION FOR SECNO= 11.00 CWSEL= 655.20

STA=	193.	195.	211.
PER Q=	0.4	99.	

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RE=	0.3	21.0								
VEL=	1.1	6.6								

CCHV= 0.100 CEHV= 0.300

*SECNO 12.000

REPEAT OF PREVIOUS X-SECTION

12.00	2.84	656.84	0.0	0.0	657.06	0.22	1.13	0.05	655.27
140.	2.	134.	5.	2.	35.	6.	2.	1.	656.20
0.10	0.82	3.83	0.73	0.110	0.050	0.110	0.042	654.00	191.61
0.006111	100.	100.	100.	4	0	0	0.0	29.96	221.58

FLOW DISTRIBUTION FOR SECNO= 12.00 CWSEL= 656.84

STA=	192.	195.	211.	221.	222.
PER Q=	1.3	95.4	3.1	0.1	
AREA=	2.3	34.9	5.9	0.3	
VEL=	0.8	3.8	0.7	0.4	

*SECNO 13.000

REPEAT OF PREVIOUS X-SECTION

13.00	2.97	657.97	0.0	0.0	658.16	0.19	1.10	0.00	656.27
140.	2.	132.	6.	3.	37.	8.	2.	1.	657.20
0.12	0.78	3.58	0.74	0.110	0.050	0.110	0.043	655.00	191.37
0.004938	200.	200.	200.	4	0	0	0.0	30.46	221.83

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 657.97

STA=	191.	195.	211.	221.	222.
PER Q=	1.5	94.4	3.9	0.1	
AREA=	2.7	37.0	7.2	0.4	
VEL=	0.8	3.6	0.8	0.4	

CCHV= 0.100 CEHV= 0.300

*SECNO 14.000

X-SECT. D/S OF HANNAN ROAD S+00 IN FIELD BOOK.

14.00	3.39	659.04	0.0	0.0	659.27	0.23	1.10	0.01	656.20
140.	15.	117.	8.	13.	28.	7.	2.	1.	656.15
0.13	1.20	4.15	1.13	0.120	0.060	0.120	0.045	655.65	86.18
0.006179	200.	200.	200.	2	0	0	0.0	25.71	111.90

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 659.04

STA=	86.	91.	98.	107.	112.
PER Q=	0.4	10.4	83.5	5.7	
AREA=	1.3	11.3	28.2	7.1	
VEL=	0.4	1.3	4.1	1.1	

*SECNO 15.000

REPEAT OF PREVIOUS X-SECTION

15.00	3.61	660.16	0.0	0.0	660.35	0.19	1.08	0.00	657.10
140.	17.	114.	8.	15.	30.	8.	2.	1.	657.05
0.15	1.12	3.80	1.04	0.120	0.060	0.120	0.047	656.55	85.26
0.004736	200.	200.	200.	1	0	0	0.0	27.01	112.27

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FLOW DISTRIBUTION FOR SECNO= 15.00 CWSEL= 660.16

STA=	85.	87.	91.	98.	107.	112.
PER Q=	0.1	0.8	11.3	81.8	6.1	
AREA=	0.4	2.0	12.9	30.1	8.2	
VEL=	0.3	0.5	1.2	3.8	1.0	

CCHV= 0.300 CEHV= 0.500

*SECNO 16.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
16.00	4.90	660.50	0.0	0.0	660.51	0.01	0.10	0.05	657.50
140.	56.	28.	56.	124.	28.	124.	3.	2.	657.50
0.26	0.45	1.02	0.45	0.080	0.040	0.080	0.046	655.60	155.00
0.000154	230.	230.	230.	3	0	0	0.0	90.00	245.00

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 660.50

STA=	155.	197.	203.	245.
PER Q=	39.9	20.1	39.9	
AREA=	123.6	27.5	123.6	
VEL=	0.5	1.0	0.5	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.06	3.00	90.00	3.93	0.0	9.82	0.0	656.81	655.61

*SECNO 17.000

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
667.00	662.06	0.0	60.	80.	10.	8.	658.72	662.26

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. REPEAT OF X-SECT. #12 X-SECT. U/S OF HANNAN

17.00	6.12	662.62	0.0	0.0	662.63	0.00	2.12	0.0	658.40
140.	58.	25.	58.	175.	35.	175.	4.	2.	658.40
0.30	0.33	0.71	0.33	0.080	0.040	0.080	0.046	656.50	155.00
0.000053	60.	60.	60.	0	0	6	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 662.62

STA= 155. 197. 203. 245.

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A.E.= 175.0 3 .2 175.0
VEL= 0.3 0.7 0.3

PROFILE FOR STREAM BINGELL DRAIN,WAYNE FIS

PLOTTED POINTS (BY PRIORITY)-E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

ELEVATION-FT	SECNO	CUMDIS-FT	647.	648.	649.	650.	651.	652.	653.	654.	655.	656.	
	7.00	0.	I L				W	E					M
		20.	C I R L				W	E					M
		40.	C I	R L			W	E					M
		60.	C I	R L				WE					M
	8.00	80.	C I	RL				WE					M
		100.	C I	RL				E					M
		120.	C I	RL				E					M
		140.	C I	L				WE					M
		160.	C I	RL				WE					M
		180.	C I	RL				WE					M
		200.	C I	L				WE					M
		220.	C I	L				WE					M
		240.	C I	RL				W E					M
		260.	C I	L				WE					M
		280.	C I	L				WE					M
		300.	C I	L				W E					M
		320.	C I	LR				W E					M
		340.	C I	L				W E					M
		360.	C I	L				W E					M
		380.	C I	LR				W E					M
		400.	C I	LR				W E					M
		420.	C I	L				W E					M
		440.	C I	LR				W E					M
		460.	C I	LR				W E					M
		480.	C I	LR				W E					M
		500.	C I	LR				W E					M
	9.00	520.	I	LR				W E					M
		540.	C I	LR				W E					M
		560.	C I	LR				W E					M
		580.	C I	LR				W E					M
		600.	C I	LR				W E					M
		620.	C I	LR				W E					M
		640.	C I	LR				WE					M
		660.	C I	LR				W E					M
		680.	C I	LR				W E					M
		700.	C I	LR				WE					M
		720.	C I	LR				WE					M
		740.	C I	LR				WE					M
		760.	C I	LR				E					M
	10.00	780.	C I	LR				WE					M
		800.	C I	L R				WE					M
		820.	C I	L R				W E					M
		840.	C I	L R				W E					M
		860.	C I	L R				W E					M
		880.	C I	L R				W E					M
		900.	C I	L R				W E					M
		920.	C I	L R				W E					M
		940.	C I	L R				W E					M
		960.	C I	L R				W E					M
		980.	C I	L R				W E					M
		1000.	C I	L R				W E					M
	11.00	1020.	I	L R				W E					M

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
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T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON 8
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
        0.      3.       0.       0.  0.0          0.0      0.0      0.   656.030    0.0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
    2.000     0.0      -1.000   0.0      0.0      0.0      0.0      0.0      0.0      15.000
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*PROF 2

CCHV= 0.300 CEHV= 0.500

*SECNO 7.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.00	8.83	656.03	0.0	656.03	656.22	0.19	0.0	0.0	647.50
250.	0.	250.	0.	0.	71.	0.	0.	0.	647.20
0.0	0.0	3.54	0.0	0.070	0.035	0.070	0.0	647.20	195.00
0.000763	0.	0.	0.	0	0	0	0.0	10.00	205.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 658.00 ELREA= 658.00

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 656.03

STA=	195.	205.				
PER Q=	100.0					
AREA=	70.5					
VEL=	3.5					

CCHV= 0.300 CEHV= 0.500

*SECNO 8.000

3470 ENCROACHMENT STATIONS= 1.0 220.0 TYPE= 1 TARGET= 219.000
ELENCL= 660.50 ELENCR= 658.20

X-SECT. U/S OF MICH. AVE. 19+50 IN FIELD BOOK.

ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA ELEV SET AT RD. ELEV

8.00	8.34	656.28	0.0	0.0	656.29	0.01	0.01	0.05	649.14
250.	27.	154.	70.	71.	135.	144.	0.	0.	649.04
0.02	0.38	1.14	0.48	0.080	0.040	0.080	0.039	647.94	161.99
0.000061	67.	67.	67.	2	0	0	0.0	58.01	220.00

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 656.28

STA=	162.	176.	180.	197.	212.	220.	220.
PER Q=	5.1	5.6	61.4	21.4	6.4	0.1	
AREA=	43.5	27.1	134.5	102.5	39.6	1.7	
VEL=	0.3	0.5	1.1	0.5	0.4	0.1	

CCHV= 0.100 CEHV= 0.300

*SECNO 9.000

X-SECT. 15+00 IN FIELD BOOK.

9.00	3.61	656.31	0.0	0.0	656.35	0.03	0.05	0.01	652.90
250.	5.	241.	4.	12.	167.	10.	3.	1.	653.00
0.11	0.42	1.44	0.40	0.080	0.040	0.080	0.040	652.70	269.03
0.000203	450.	450.	450.	2	0	0	0.0	61.09	330.12

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FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 656.31

STA=	269.	276.	324.	330.
PER Q=	2.0	96.4	1.6	
AREA=	11.9	167.5	10.1	
VEL=	0.4	1.4	0.4	

*SECNO 10.000

REPEAT OF PREVIOUS X-SECTION

10.00	3.68	656.38	0.0	0.0	656.41	0.03	0.07	0.00	652.90
250.	5.	241.	4.	12.	171.	11.	4.	1.	653.00
0.16	0.41	1.41	0.39	0.080	0.040	0.080	0.040	652.70	268.89
0.000265	250.	250.	250.	2	0	0	0.0	61.36	330.25

FLOW DISTRIBUTION FOR SECNO= 10.00 CWSEL= 656.38

STA=	269.	276.	324.	330.
PER Q=	2.0	96.3	1.7	
AREA=	12.4	170.8	10.6	
VEL=	0.4	1.4	0.4	

CCHV= 0.100 CEHV= 0.300
*SECNO 11.000

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

X-SECT. 10+00 IN FIELD BOOK.

11.00	2.95	656.18	0.0	0.0	656.79	0.62	0.20	0.18	654.50
250.	4.	237.	10.	3.	37.	7.	5.	1.	655.43
0.17	1.40	6.47	1.31	0.100	0.045	0.100	0.041	653.23	191.42
0.013259	250.	250.	250.	3	0	0	0.0	30.37	221.79

FLOW DISTRIBUTION FOR SECNO= 11.00 CWSEL= 656.18

STA=	191.	195.	211.	221.	222.
PER Q=	1.4	94.7	3.8	0.1	
AREA=	2.6	36.6	7.0	0.4	
VEL=	1.4	6.5	1.3	0.7	

CCHV= 0.100 CEHV= 0.300
*SECNO 12.000

REPEAT OF PREVIOUS X-SECTION

12.00	3.45	657.45	0.0	0.0	657.82	0.37	1.01	0.02	655.27
250.	5.	228.	17.	4.	44.	13.	5.	1.	656.20
0.18	1.16	5.12	1.29	0.110	0.050	0.110	0.042	654.00	190.51
0.007911	100.	100.	100.	2	0	0	0.0	32.26	222.77

FLOW DISTRIBUTION FOR SECNO= 12.00 CWSEL= 657.45

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STA=	191.	195.	211.	221.	223.
PER Q=	2.0	91.1	6.4	0.4	
AREA=	4.3	44.5	11.9	1.3	
VEL=	1.2	5.1	1.4	0.8	

*SECNO 13.000

REPEAT OF PREVIOUS X-SECTION

13.00	3.80	658.80	0.0	0.0	659.08	0.27	1.24	0.01	656.27
250.	6.	222.	22.	6.	50.	18.	5.	2.	657.20
0.19	1.03	4.42	1.21	0.110	0.050	0.110	0.043	655.00	189.84
0.005002	200.	200.	200.	3	0	0	0.0	33.64	223.49

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 658.80

STA=	190.	195.	211.	221.	223.
PER Q=	2.4	88.9	8.0	0.7	
AREA=	5.9	50.3	15.5	2.2	
VEL=	1.0	4.4	1.3	0.7	

CCHV= 0.100 CEHV= 0.300

*SECNO 14.000

X-SECT. D/S OF HANNAN ROAD 5+00 IN FIELD BOOK.

14.00	4.29	659.94	0.0	0.0	660.29	0.34	1.19	0.02	656.20
250.	40.	192.	18.	25.	36.	12.	6.	2.	656.15
0.20	1.62	5.29	1.46	0.120	0.060	0.120	0.045	655.65	82.37
0.007180	200.	200.	200.	2	0	0	0.0	31.04	113.42

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 659.94

STA=	82.	87.	91.	98.	107.	113.
PER Q=	0.7	2.3	13.2	76.8	7.1	
AREA=	2.5	4.8	17.6	36.3	12.2	
VEL=	0.7	1.2	1.9	5.3	1.5	

*SECNO 15.000

REPEAT OF PREVIOUS X-SECTION

15.00	4.67	661.22	0.0	0.0	661.48	0.26	1.19	0.01	657.10
250.	45.	186.	19.	31.	40.	15.	6.	2.	657.05
0.22	1.45	4.68	1.29	0.120	0.060	0.120	0.047	656.55	80.78
0.004987	200.	200.	200.	2	0	0	0.0	33.28	114.06

FLOW DISTRIBUTION FOR SECNO= 15.00 CWSEL= 661.22

STA=	81.	87.	91.	98.	107.	114.
PER Q=	1.3	3.0	13.9	74.3	7.6	
AREA=	4.6	6.3	20.3	39.7	14.7	
VEL=	0.7	1.2	1.7	4.7	1.3	

CCHV= 0.300 CEHV= 0.500

*SECNO 16.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

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3470 ENCROACH E T STATIONS= 155.0 245.0 TYPE= 2 TARGET= 0.0 0

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

16.00	6.06	661.66	0.0	0.0	661.67	0.01	0.12	0.08	657.50
250.	103.	44.	103.	172.	34.	172.	7.	2.	657.50
0.31	0.60	1.28	0.60	0.080	0.040	0.080	0.046	655.60	155.00
0.000179	230.	230.	230.	2	0	0	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 661.66

STA=	155.	197.	203.	245.
PER Q=	41.2	17.7	41.2	
AREA=	172.1	34.4	172.1	
VEL=	0.6	1.3	0.6	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.06	3.00	90.00	3.93	0.0	9.82	0.0	656.81	655.61

*SECNO 17.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
682.40	662.88	0.0	188.	65.	10.	8.	658.72	662.26

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. REPEAT OF X-SECT. #12 X-SECT. U/S OF HANNAN

17.00	6.54	663.04	0.0	0.0	663.05	0.01	1.37	0.0	658.40
250.	104.	43.	104.	193.	37.	193.	8.	2.	658.40
0.33	0.54	1.14	0.54	0.080	0.040	0.080	0.046	656.50	155.00
0.000126	60.	60.	60.	0	0	6	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 663.04

STA=	155.	197.	203.	245.
PER Q=	41.5	17.0	41.5	
AREA=	192.6	37.4	192.6	
VEL=	0.5	1.1	0.5	

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**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED AUG1977
  ERROR CORR -  01,02
  MODIFICATION -  50,51,52,53
**********************************************************

T1      BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2      RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3      BINGELL DRAIN,WAYNE FIS

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ
        0.      4.       0.       0.  0.0          0.0      0.0      0.  658.330   0.0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE
    3.000     0.0     -1.000    0.0      0.0      0.0      0.0      0.0      0.0      15.000
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*PROF 3

CCHV= 0.300 CEHV= 0.500
*SECNO 7.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.00	11.13	658.33	0.0	658.33	658.34	0.01	0.0	0.0	647.50
300.	8.	87.	204.	36.	94.	461.	0.	0.	647.20
0.0	0.24	0.93	0.44	0.070	0.035	0.070	0.0	647.20	188.44
0.000031	0.	0.	0.	0	0	0	0.0	85.27	273.71

X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS & QUAD MAP. (U/S OF BRIDGE)

FLOW DISTRIBUTION FOR SECNO= 7.00 CWSEL= 658.33

STA=	188.	195.	205.	212.	255.	274.
PER Q=	2.8	29.1	12.5	50.6	5.0	
AREA=	35.5	93.6	70.2	330.2	60.1	
VEL=	0.2	0.9	0.5	0.5	0.2	

CCHV= 0.300 CEHV= 0.500
*SECNO 8.000

3470 ENCROACHMENT STATIONS= 1.0 220.0 TYPE= 1 TARGET= 219.000
ELENCL= 660.50 ELENCR= 658.20

X-SECT. U/S OF MICH. AVE. 19+50 IN FIELD BOOK.

ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA ELEV SET AT RD. ELEV

8.00	10.39	658.33	0.0	0.0	658.34	0.01	0.00	0.00	649.14
300.	38.	175.	87.	111.	169.	198.	1.	0.	649.04
0.02	0.34	1.03	0.44	0.080	0.040	0.080	0.039	647.94	157.67
0.000037	67.	67.	67.	0	0	0	0.0	106.17	263.85

FLOW DISTRIBUTION FOR SECNO= 8.00 CWSEL= 658.33

STA=	158.	176.	180.	197.	212.	220.	220.	232.	262.	264.
PER Q=	7.0	5.6	58.4	21.5	7.4	0.1	0.0	0.0	0.0	
AREA=	75.7	35.4	169.5	133.4	56.1	2.8	1.5	4.0	0.2	
VEL=	0.3	0.5	1.0	0.5	0.4	0.1	0.0	0.0	0.0	

CCHV= 0.100 CEHV= 0.300
*SECNO 9.000

X-SECT. 15+00 IN FIELD BOOK.

9.00	5.65	658.35	0.0	0.0	658.37	0.02	0.02	0.00	652.90
300.	9.	283.	8.	30.	265.	26.	5.	1.	653.00
0.15	0.31	1.07	0.30	0.080	0.040	0.080	0.040	652.70	264.89
0.000085	450.	450.	450.	0	0	0	0.0	68.98	333.87

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 658.35

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STA=      265.      276.      324.      334.
  PER Q=      3.1      94.2       2.7
   AREA=     30.2     264.9      26.4
    VEL=      0.3       1.1       0.3

*SECNO 10.000

              REPEAT OF PREVIOUS X-SECTION

     10.00      5.67    658.37       0.0       0.0    658.39      0.02      0.02      0.00    652.90
     300.         9.      283.        8.        30.      266.       27.        7.        1.    653.00
      0.21      0.31      1.06      0.30     0.080     0.040     0.080     0.040    652.70    264.85
 0.000084      250.      250.      250.         0         0         0       0.0     69.05    333.90


FLOW DISTRIBUTION FOR SECNO=      10.00          CWSEL=     658.37

STA=      265.      276.      324.      334.
  PER Q=      3.1      94.2       2.7
   AREA=     30.5     265.9      26.6
    VEL=      0.3       1.1       0.3

CCHV=    0.100 CEHV=    0.300
*SECNO 11.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV.
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

          X-SECT.                    10+00 IN FIELD BOOK.

     11.00      5.09    658.32       0.0       0.0    658.49      0.16      0.06      0.04    654.50
     300.        11.      249.        39.        13.      71.       36.        8.        2.    655.43
      0.24      0.84      3.51      1.09     0.100     0.045     0.100     0.041    653.23    187.47
 0.001618      250.      250.      250.         2         0         0       0.0     38.57    226.04


FLOW DISTRIBUTION FOR SECNO=      11.00          CWSEL=     658.32

STA=      187.      195.      211.      221.      226.
  PER Q=      3.8      83.1      11.4       1.8
   AREA=     13.4      70.9      28.4       7.7
    VEL=      0.8       3.5       1.2       0.7

CCHV=    0.100 CEHV=    0.300
*SECNO 12.000

              REPEAT OF PREVIOUS X-SECTION

     12.00      4.50    658.50       0.0       0.0    658.73      0.23      0.23      0.02    655.27
     300.        10.      256.        34.        10.      61.       27.        8.        2.    656.20
      0.24      1.00      4.17      1.25     0.110     0.050     0.110     0.042    654.00    188.56
 0.003411      100.      100.      100.         2         0         0       0.0     36.30    224.87


FLOW DISTRIBUTION FOR SECNO=      12.00          CWSEL=     658.50

STA=      189.      195.      211.      221.      225.
  PER Q=      3.2      85.4      10.2       1.2
   AREA=      9.6      61.4      22.5       4.8
    VEL=      1.0       4.2       1.4       0.8

*SECNO 13.000
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REPEAT OF PREVIOUS X-SECTION

13.00	4.24	659.24	0.0	0.0	659.52	0.28	0.77	0.01	656.27
300.	9.	260.	31.	8.	57.	24.	9.	2.	657.20
0.26	1.07	4.54	1.33	0.110	0.050	0.110	0.043	655.00	189.04
0.004429	200.	200.	200.	2	0	0	0.0	35.31	224.35

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 659.24

STA=	189.	195.	211.	221.	224.
PER Q=	2.9	86.6	9.4	1.0	
AREA=	8.1	57.3	19.9	3.7	
VEL=	1.1	4.5	1.4	0.8	

CCHV= 0.100 CEHV= 0.300
*SECNO 14.000

X-SECT. D/S OF HANNAN ROAD 5+00 IN FIELD BOOK.

14.00	4.64	660.29	0.0	0.0	660.68	0.38	1.12	0.03	656.20
300.	54.	223.	23.	31.	39.	15.	9.	2.	656.15
0.27	1.76	5.66	1.56	0.120	0.060	0.120	0.045	655.65	80.89
0.007361	200.	200.	200.	2	0	0	0.0	33.12	114.01

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 660.29

STA=	81.	87.	91.	98.	107.	114.
PER Q=	1.2	2.9	13.8	74.5	7.6	
AREA=	4.4	6.2	20.1	39.4	14.5	
VEL=	0.8	1.4	2.1	5.7	1.6	

*SECNO 15.000

REPEAT OF PREVIOUS X-SECTION

15.00	5.06	661.61	0.0	0.0	661.90	0.29	1.21	0.01	657.10
300.	60.	216.	24.	38.	43.	18.	10.	2.	657.05
0.28	1.57	5.00	1.38	0.120	0.060	0.120	0.047	656.55	79.14
0.005077	200.	200.	200.	2	0	0	0.0	35.58	114.72

FLOW DISTRIBUTION FOR SECNO= 15.00 CWSEL= 661.61

STA=	79.	87.	91.	98.	107.	115.
PER Q=	2.0	3.6	14.4	71.9	8.1	
AREA=	7.3	7.8	23.0	43.2	17.6	
VEL=	0.8	1.4	1.9	5.0	1.4	

CCHV= 0.300 CEHV= 0.500
*SECNO 16.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

(52)

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X SECTION - NOT SURVEYED DATA FROM FIELD BOOK SKETCH & QUAD MAP

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16.00	6.49	662.09	0.0	0.0	662.10	0.01	0.12	0.08	657.50	
300.	124.	51.	124.	190.	37.	190.	11.	3.	657.50	
0.37	0.65	1.39	0.65	0.080	0.040	0.080	0.046	655.60	155.00	
0.000189	230.	230.	230.	2	0	0	0.0	90.00	245.00	

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 662.09

STA=	155.	197.	203.	245.
PER Q=	41.4	17.1	41.4	
AREA=	190.1	37.0	190.1	
VEL=	0.7	1.4	0.7	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.06	3.00	90.00	3.93	0.0	9.82	0.0	656.81	655.61

*SECNO 17.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
691.95	663.31	0.0	243.	58.	10.	8.	658.72	662.26

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2. TARGET= 90.000

X-SECT. REPEAT OF X-SECT. #12 X-SECT. U/S OF HANNAN

17.00	6.68	663.18	0.0	0.0	663.19	0.01	1.09	0.0	658.40
300.	125.	51.	125.	199.	38.	199.	12.	3.	658.40
0.39	0.63	1.32	0.63	0.080	0.040	0.080	0.046	656.50	155.00
0.000165	60.	60.	60.	0	0	7	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 663.18

STA=	155.	197.	203.	245.
PER Q=	41.6	16.9	41.6	
AREA=	198.7	38.2	198.7	
VEL=	0.6	1.3	0.6	

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  HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
  ERROR CORR -  01,02.
  MODIFICATION -  50,51,52,53
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T1       BINGELL DRAIN FROM LOWER ROUGE R. TO HANNAN RD.    START WS EL=NORM ON B
T2       RUN#1=10YR.  RUN#2=50YR.  RUN#3=100YR.  RUN#4=100YR.E.  RUN#5=500YR.
T3       BINGELL DRAIN,WAYNE FIS
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	6.	0.	0.	0.0	0.0	0.0	0.	658.810	0.0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	0.0	-1.000	0.0	0.0	0.0	0.0	0.0	0.0	15.000

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*PROF 4

CCHV=   0.300 CEHV=   0.500
*SECNO 7.000
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


          X-SECT. IS A DUMMY. DATA FROM FIELD SKETCHS,& QUAD MAP.(U/S OF BRIDGE)

      7.00     11.61    658.81      0.0    658.81    658.82      0.01      0.0       0.0     647.50
      430.       12.      123.      294.      39.       98.      494.       0.        0.      647.20
       0.0      0.31      1.25      0.60     0.070     0.035     0.070      0.0     647.20     188.15
  0.000052        0.        0.        0.         0         0         0      0.0      86.96     275.10

FLOW DISTRIBUTION FOR SECNO=       7.00          CWSEL=    658.81

STA=      188.      195.      205.      212.      255.      275.
  PER Q=    2.8      28.7      12.2      50.8       5.5
    AREA=  38.8      98.4      73.6     350.9      69.5
     VEL=    0.3       1.3       0.7       0.6       0.3

CCHV=   0.300 CEHV=   0.500
*SECNO 8.000

3470 ENCROACHMENT STATIONS=       1.0      220.0  TYPE=      1  TARGET=      219.000
 ELENCL=     660.50  ELENCR=     658.20

          X-SECT. U/S OF MICH. AVE.   19+50 IN FIELD BOOK.

          ENCROACHMENT IN R.O.B. TO REDUCE FLOW AREA.    ELEV SET AT RD. ELEV

      8.00     10.87    658.81      0.0       0.0    658.83      0.02      0.00      0.00     649.14
      430.       56.      247.      127.      122.      178.      232.       1.        0.      649.04
       0.02      0.46      1.39      0.55     0.080     0.040     0.080     0.039     647.94     156.66
  0.000063       67.       67.       67.         0         0         0      0.0      115.74     272.40

FLOW DISTRIBUTION FOR SECNO=       8.00          CWSEL=    658.81

STA=      157.      176.      180.      197.      212.      220.      220.      232.      262.      272.
  PER Q=    7.3       5.6      57.5      21.3       7.5       0.1       0.2       0.5       0.1
    AREA=  84.5      37.3     177.7     140.6      59.9       3.0       7.1      18.4       3.3
     VEL=    0.4       0.6       1.4       0.7       0.5       0.1       0.1       0.1       0.1

CCHV=   0.100 CEHV=   0.300
*SECNO 9.000

          X-SECT.                    15+00 IN FIELD BOOK.

      9.00      6.14    658.84      0.0       0.0    658.87      0.03      0.04      0.00     652.90
      430.       15.      403.       12.       36.      288.       31.       5.        1.      653.00
       0.11      0.41      1.40      0.40     0.080     0.040     0.080     0.040     652.70     263.89
  0.000129       450.      450.      450.         0         0         0      0.0       70.88     334.77

FLOW DISTRIBUTION FOR SECNO=       9.00          CWSEL=    658.84
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 STA=      264.      276.      324.      335.
   PER Q=      3.4      93.7       2.9
    AREA=     35.9     288.5      31.4
     VEL=      0.4       1.4       0.4

*SECNO 10.000

            REPEAT OF PREVIOUS X-SECTION

     10.00     6.17   658.87      0.0       0.0   658.90      0.03      0.03      0.00   652.90
      430.      15.     403.      13.       36.     290.      32.        8.         2.    653.00
      0.16     0.40     1.39     0.39     0.080    0.040    0.080     0.040    652.70   263.82
  0.000127     250.     250.     250.         0        0        0       0.0     71.00   334.83


FLOW DISTRIBUTION FOR SECNO=     10.00          CWSEL=    658.87

 STA=      264.      276.      324.      335.
   PER Q=      3.4      93.7       2.9
    AREA=     36.3     290.0      31.8
     VEL=      0.4       1.4       0.4

 CCHV=    0.100 CEHV=    0.300
 *SECNO 11.000
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


            X-SECT.                    10+00 IN FIELD BOOK.

     11.00     5.57   658.80      0.0       0.0   659.05      0.26      0.08      0.07   654.50
      430.      18.     350.      62.       17.     79.       44.        9.         2.    655.43
      0.18     1.08     4.45     1.41     0.100    0.045    0.100     0.041    653.23   186.60
  0.002272     250.     250.     250.         2        0        0       0.0     40.38   226.99


FLOW DISTRIBUTION FOR SECNO=     11.00          CWSEL=    658.80

 STA=      187.      195.      211.      221.      227.
   PER Q=      4.3      81.3      12.2       2.2
    AREA=     17.0      78.5      33.2      10.6
     VEL=      1.1       4.5       1.6       0.9

 CCHV=    0.100 CEHV=    0.300
 *SECNO 12.000

            REPEAT OF PREVIOUS X-SECTION

     12.00     5.04   659.04      0.0       0.0   659.38      0.34      0.30      0.03   655.27
      430.      16.     357.      56.       13.     70.       35.        9.         2.    656.20
      0.19     1.24     5.10     1.60     0.110    0.050    0.110     0.042    654.00   187.57
  0.004275     100.     100.     100.         2        0        0       0.0     38.37   225.94


FLOW DISTRIBUTION FOR SECNO=     12.00          CWSEL=    659.04

 STA=      188.      195.      211.      221.      226.
   PER Q=      3.8      83.1      11.4       1.8
    AREA=     13.1      70.1      27.9       7.5
     VEL=      1.2       5.1       1.8       1.0

 *SECNO 13.0 0
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REPEAT OF PREVIOUS X-SECTION

13.00	4.92	659.92	0.0	0.0	660.29	0.37	0.90	0.01	656.27
430.	16.	359.	55.	12.	68.	34.	10.	2.	657.20
0.20	1.27	5.27	1.64	0.110	0.050	0.110	0.043	655.00	187.79
0.004737	200.	200.	200.	2	0	0	0.0	37.92	225.71

FLOW DISTRIBUTION FOR SECNO= 13.00 CWSEL= 659.92

STA=	188.	195.	211.	221.	226.
PER Q=	3.6	83.6	11.1	1.6	
AREA=	12.3	68.2	26.7	6.8	
VEL=	1.3	5.3	1.8	1.0	

CCHV= 0.100 CEHV= 0.300
*SECNO 14.000

X-SECT. D/S OF HANNAN ROAD 5+00 IN FIELD BOOK.

14.00	5.40	661.05	0.0	0.0	661.53	0.48	1.20	0.03	656.20
430.	92.	301.	37.	45.	46.	20.	10.	2.	656.15
0.21	2.07	6.51	1.81	0.120	0.060	0.120	0.045	655.65	77.71
0.007871	200.	200.	200.	2	0	0	0.0	37.58	115.29

FLOW DISTRIBUTION FOR SECNO= 14.00 CWSEL= 661.05

STA=	78.	87.	91.	98.	107.	115.
PER Q=	2.7	4.1	14.7	70.0	8.5	
AREA=	10.2	9.2	25.4	46.2	20.3	
VEL=	1.1	1.9	2.5	6.5	1.8	

*SECNO 15.000

REPEAT OF PREVIOUS X-SECTION

15.00	5.91	662.46	0.0	0.0	662.82	0.35	1.28	0.01	657.10
430.	102.	289.	39.	56.	51.	25.	11.	2.	657.05
0.22	1.82	5.69	1.58	0.120	0.060	0.120	0.047	656.55	75.53
0.005287	200.	200.	200.	2	0	0	0.0	40.63	116.16

FLOW DISTRIBUTION FOR SECNO= 15.00 CWSEL= 662.46

STA=	76.	87.	91.	98.	107.	116.
PER Q=	3.9	4.7	15.0	67.2	9.1	
AREA=	15.6	11.2	29.0	50.8	24.8	
VEL=	1.1	1.8	2.2	5.7	1.6	

CCHV= 0.300 CEHV= 0.500
*SECNO 16.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. IMDEIATELY D/S OF HANNAN RD.

DUMMY X-SECTION. NOT SURVEYED. DATA FRO FIELD BOOK SKETCH & QUAD MAP

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16.00	7.44	663.04	0.0	0.0	663.05	0.01	0.14	0.10	657.50	
430.	180.	70.	180.	230.	43.	230.	13.	3.	657.50	
0.29	0.78	1.63	0.78	0.080	0.040	0.080	0.046	655.60	155.00	
0.000217	230.	230.	230.	2	0	0	0.0	90.00	245.00	

FLOW DISTRIBUTION FOR SECNO= 16.00 CWSEL= 663.04

STA=	155.	197.	203.	245.
PER Q=	41.9	16.2	41.9	
AREA=	229.9	42.7	229.9	
VEL=	0.8	1.6	0.8	

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.0	2.06	3.00	90.00	3.93	0.0	9.82	0.0	656.81	655.61

*SECNO 17.000
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
724.37	664.26	0.0	391.	40.	10.	8.	658.72	662.26

3470 ENCROACHMENT STATIONS= 155.0 245.0 TYPE= 2 TARGET= 90.000

X-SECT. REPEAT OF X-SECT. #12 X-SECT. U/S OF HANNAN

17.00	7.06	663.56	0.0	0.0	663.58	0.02	0.53	0.0	658.40
430.	180.	71.	180.	215.	41.	215.	13.	3.	658.40
0.31	0.84	1.75	0.84	0.080	0.040	0.080	0.046	656.50	155.00
0.000267	60.	60.	60.	1	0	7	0.0	90.00	245.00

FLOW DISTRIBUTION FOR SECNO= 17.00 CWSEL= 663.56

STA=	155.	197.	203.	245.
PER Q=	41.8	16.5	41.8	
AREA=	214.8	40.5	214.8	
VEL=	0.8	1.7	0.8	

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**************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED  AUG1977
 ERROR CORR -  01,02
 MODIFICATION -  50,51,52,53
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

BINGELL DRAIN,WAYNE FIS

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
*	7.000	0.0	0.0	0.0	647.20	140.00	650.76	650.76	651.71	179.29	7.83	17.87	10.46
	7.000	0.0	0.0	0.0	647.20	250.00	656.03	0.0	656.22	7.63	3.54	70.55	90.53
	7.000	0.0	0.0	0.0	647.20	300.00	658.33	0.0	658.34	0.31	0.93	589.69	538.39
	7.000	0.0	0.0	0.0	647.20	430.00	658.81	0.0	658.82	0.52	1.25	631.02	593.96
	8.000	67.00	0.0	0.0	647.94	140.00	652.03	0.0	652.06	3.59	1.66	122.96	73.86
	8.000	67.00	0.0	0.0	647.94	250.00	656.28	0.0	656.29	0.61	1.14	349.06	320.12
	8.000	67.00	0.0	0.0	647.94	300.00	658.33	0.0	658.34	0.37	1.03	478.45	494.54
	8.000	67.00	0.0	0.0	647.94	430.00	658.81	0.0	658.83	0.63	1.39	531.86	543.70
#	9.000	450.00	0.0	0.0	652.70	140.00	653.46	653.46	653.78	274.49	4.56	31.11	8.45
	9.000	450.00	0.0	0.0	652.70	250.00	656.31	0.0	656.35	2.83	1.44	189.52	148.50
	9.000	450.00	0.0	0.0	652.70	300.00	658.35	0.0	658.37	0.85	1.07	321.55	326.26
	9.000	450.00	0.0	0.0	652.70	430.00	658.84	0.0	658.87	1.29	1.40	355.85	378.04
	10.000	250.00	0.0	0.0	652.70	140.00	654.51	0.0	654.55	10.59	1.71	85.37	43.03
	10.000	250.00	0.0	0.0	652.70	250.00	656.38	0.0	656.41	2.65	1.41	193.79	153.60
	10.000	250.00	0.0	0.0	652.70	300.00	658.37	0.0	658.39	0.84	1.06	322.92	328.28
	10.000	250.00	0.0	0.0	652.70	430.00	658.87	0.0	658.90	1.27	1.39	358.05	381.43
*	11.000	250.00	0.0	0.0	653.23	140.00	655.20	655.20	655.88	277.05	6.63	21.48	8.41
	11.000	250.00	0.0	0.0	653.23	250.00	656.18	0.0	656.79	132.59	6.47	46.58	21.71
	11.000	250.00	0.0	0.0	653.23	300.00	658.32	0.0	658.49	16.18	3.51	120.56	74.57
	11.000	250.00	0.0	0.0	653.23	430.00	658.80	0.0	659.05	22.72	4.45	139.28	90.21
	12.000	100.00	0.0	0.0	654.00	140.00	656.84	0.0	657.06	61.11	3.83	43.38	17.91
	12.000	100.00	0.0	0.0	654.00	250.00	657.45	0.0	657.82	79.11	5.12	62.04	28.11
	12.000	100.00	0.0	0.0	654.00	300.00	658.50	0.0	658.73	34.11	4.17	98.34	51.37
	12.000	100.00	0.0	0.0	654.00	430.00	659.04	0.0	659.38	42.75	5.10	118.56	65.76
	13.000	200.00	0.0	0.0	655.00	140.00	657.97	0.0	658.16	49.38	3.58	47.29	19.92
	13.000	200.00	0.0	0.0	655.00	250.00	658.80	0.0	659.08	50.02	4.42	74.01	35.35
	13.000	200.00	0.0	0.0	655.00	300.00	659.24	0.0	659.52	44.29	4.54	89.07	45.08
	13.000	200.00	0.0	0.0	655.00	430.00	659.92	0.0	660.29	47.37	5.27	114.05	62.48
	14.000	200.00	0.0	0.0	655.65	140.00	659.04	0.0	659.27	61.79	4.15	47.84	17.81
	14.000	200.00	0.0	0.0	655.65	250.00	659.94	0.0	660.29	71.80	5.29	73.38	29.50
	14.000	200.00	0.0	0.0	655.65	300.00	660.29	0.0	660.68	73.61	5.66	84.64	34.97
	14.000	200.00	0.0	0.0	655.65	430.00	661.05	0.0	661.53	78.71	6.51	111.25	48.47

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SECNO	XLCH	ELTRO	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
15.000	200.00	0.0	0.0	656.55	140.00	660.16	0.0	660.35	47.36	3.80	53.59	20.34
15.000	200.00	0.0	0.0	656.55	250.00	661.22	0.0	661.48	49.87	4.68	85.52	35.40
15.000	200.00	0.0	0.0	656.55	300.00	661.61	0.0	661.90	50.77	5.00	98.89	42.10
15.000	200.00	0.0	0.0	656.55	430.00	662.46	0.0	662.82	52.87	5.69	131.38	59.14
16.000	230.00	0.0	0.0	655.60	140.00	660.50	0.0	660.51	1.54	1.02	274.63	112.90
16.000	230.00	0.0	0.0	655.60	250.00	661.66	0.0	661.67	1.79	1.28	378.56	187.00
16.000	230.00	0.0	0.0	655.60	300.00	662.09	0.0	662.10	1.89	1.39	417.27	217.98
16.000	230.00	0.0	0.0	655.60	430.00	663.04	0.0	663.05	2.17	1.63	502.60	292.07
17.000	60.00	662.26	658.72	656.50	140.00	662.62	0.0	662.63	0.53	0.71	384.93	191.98
17.000	60.00	662.26	658.72	656.50	250.00	663.04	0.0	663.05	1.26	1.14	422.59	222.37
17.000	60.00	662.26	658.72	656.50	300.00	663.18	0.0	663.19	1.65	1.32	435.73	233.35
17.000	60.00	662.26	658.72	656.50	430.00	663.56	0.0	663.58	2.67	1.75	470.11	262.95

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BINGELL DRAIN,WAYNE FIS

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	7.000	140.00	650.76	0.0	0.0	0.18	10.00	0.0
	7.000	250.00	656.03	5.27	0.0	0.0	10.00	0.0
	7.000	300.00	658.33	2.30	0.0	0.0	85.27	0.0
	7.000	430.00	658.81	0.48	0.0	0.0	86.96	0.0
	8.000	140.00	652.03	0.0	1.27	0.0	46.52	67.00
	8.000	250.00	656.28	4.24	0.25	0.0	58.01	67.00
	8.000	300.00	658.33	2.05	-0.00	0.0	106.17	67.00
	8.000	430.00	658.81	0.48	-0.00	0.0	115.74	67.00
*	9.000	140.00	653.46	0.0	1.43	0.0	50.00	450.00
	9.000	250.00	656.31	2.85	0.04	0.0	61.09	450.00
	9.000	300.00	658.35	2.03	0.02	0.0	68.98	450.00
	9.000	430.00	658.84	0.49	0.03	0.0	70.88	450.00
	10.000	140.00	654.51	0.0	1.04	0.0	54.05	250.00
	10.000	250.00	656.38	1.88	0.07	0.0	61.36	250.00
	10.000	300.00	658.37	1.99	0.02	0.0	69.05	250.00
	10.000	430.00	658.87	0.50	0.03	0.0	71.00	250.00
*	11.000	140.00	655.20	0.0	0.69	0.0	16.68	250.00
	11.000	250.00	656.18	0.98	-0.21	0.0	30.37	250.00
	11.000	300.00	658.32	2.15	-0.05	0.0	38.57	250.00
	11.000	430.00	658.80	0.47	-0.08	0.0	40.38	250.00
	12.000	140.00	656.84	0.0	1.64	0.0	29.96	100.00
	12.000	250.00	657.45	0.61	1.27	0.0	32.26	100.00
	12.000	300.00	658.50	1.05	0.18	0.0	36.30	100.00
	12.000	430.00	659.04	0.54	0.24	0.0	38.37	100.00
	13.000	140.00	657.97	0.0	1.13	0.0	30.46	200.00
	13.000	250.00	658.80	0.83	1.35	0.0	33.64	200.00
	13.000	300.00	659.24	0.44	0.74	0.0	35.31	200.00
	13.000	430.00	659.92	0.68	0.88	0.0	37.92	200.00
	14.000	140.00	659.04	0.0	1.07	0.0	25.71	200.00
	14.000	250.00	659.94	0.90	1.14	0.0	31.04	200.00
	14.000	300.00	660.29	0.35	1.05	0.0	33.12	200.00
	14.000	430.00	661.05	0.75	1.12	0.0	37.58	200.00
	15.000	140.00	660.16	0.0	1.12	0.0	27.01	200.00
	15.000	250.00	661.22	1.06	1.28	0.0	33.28	200.00
	15.000	300.00	661.61	0.39	1.32	0.0	35.58	200.00
	15.000	430.00	662.46	0.85	1.42	0.0	40.63	200.00
	16.000	140.00	660.50	0.0	0.34	0.0	90.00	230.00
	16.000	250.00	661.66	1.16	0.44	0.0	90.00	230.00
	16.000	300.00	662.09	0.43	0.48	0.0	90.00	230.00
	16.000	430.00	663.04	0.95	0.58	0.0	90.00	230.00
	17.000	140.00	662.62	0.0	2.12	0.0	90.00	60.00
	17.000	250.00	663.04	0.41	1.37	0.0	90.00	60.00
	17.000	300.00	663.18	0.14	1.09	0.0	90.00	60.00
	17.000	430.00	663.56	0.38	0.52	0.0	90.00	60.00

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SUMMARY OF ERRORS

CAUTION SECNO= 7.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 9.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 9.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 11.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 11.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

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FLOOD INSURANCE ZONE DATA FOR BINGELLI DRAIN, WAYNE FIS

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND 10	2	0.2
7.000	0.	-7.57	-2.30	0.48
8.000	67.	-6.30	-2.05	0.48
9.000	517.	-4.89	-2.03	0.49
10.000	767.	-3.86	-1.99	0.50
11.000	1017.	-3.12	-2.15	0.47
12.000	1117.	-1.66	-1.05	0.54
13.000	1317.	-1.27	-0.44	0.68
14.000	1517.	-1.25	-0.35	0.75
15.000	1717.	-1.44	-0.39	0.85
16.000	1947.	-1.59	-0.43	0.95
17.000	2007.	-0.56	-0.14	0.38
WEIGHTED AVG FOR REACH		-3.20	-1.32	0.61

FHF FOR THE REACH = 030 WITH 17.4 OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 6

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA 10	1	DIFF.	WTD. AVG.	FHF	PERCENT WITHIN
	0.				SEC.		7.000
	67.				SEC.		8.000
1	100.	651.56	658.33	-6.77	-6.77	070	100.
2	200.	652.51	658.34	-5.83	-6.30	065	100.
3	300.	652.83	658.34	-5.51	-6.04	060	100.
4	400.	653.14	658.34	-5.20	-5.83	060	100.
5	500.	653.46	658.35	-4.89	-5.64	055	80.
	517.				SEC.		9.000
6	600.	653.85	658.36	-4.51	-5.45	055	83.
7	700.	654.30	658.37	-4.07	-5.25	055	71.
	767.				SEC.		10.000
8	800.	654.64	658.36	-3.72	-5.06	050	75.
9	900.	654.92	658.34	-3.42	-4.88	050	67.
10	1000.	655.20	658.32	-3.12	-4.70	045	60.
	1017.				SEC.		11.000
11	1100.	656.50	658.45	-1.95	-4.45	045	45.
	1117.				SEC.		12.000
12	1200.	657.67	658.82	-1.15	-4.18	040	42.
13	1300.	657.97	659.24	-1.27	-3.95	040	46.
	1317.				SEC.		13.000
14	1400.	658.51	659.73	-1.22	-3.76	040	36.
15	1500.	659.04	660.29	-1.25	-3.59	035	33.
	1517.				SEC.		14.000

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17	1700.	660.10	661.61	-1.51	-3.33	035	2.
	1717.				SEC.	15.000	
18	1800.	660.41	661.93	-1.52	-3.23	030	22.
19	1900.	660.46	662.03	-1.57	-3.14	030	21.
	1947.				SEC.	16.000	
20	2000.	662.64	663.20	-0.56	-3.01	030	15.
	2007.				SEC.	17.000	

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET FIA REQUIREMENTS
INPUT 20Ñ WHERE Ñ IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLE 202 6 20
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

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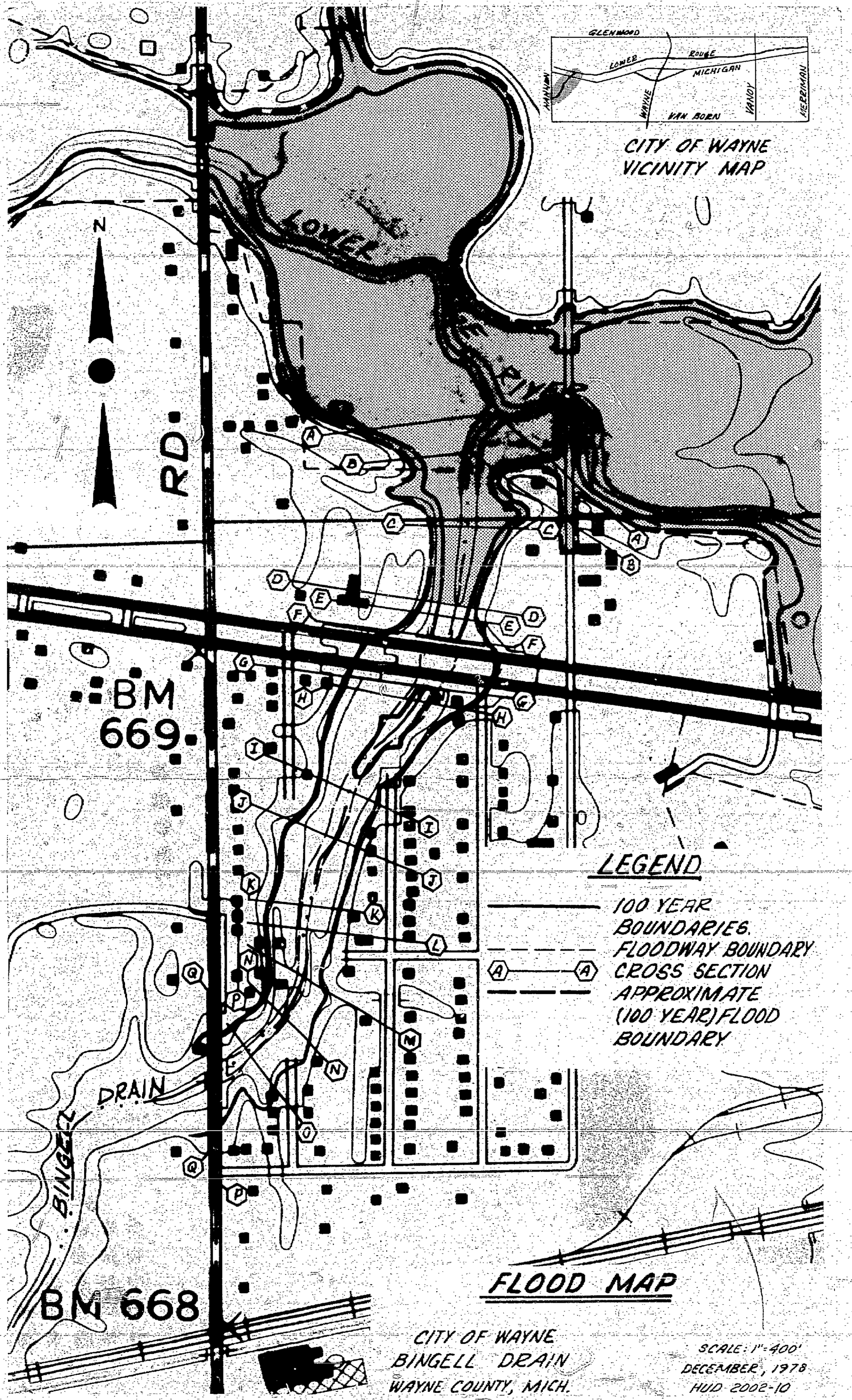
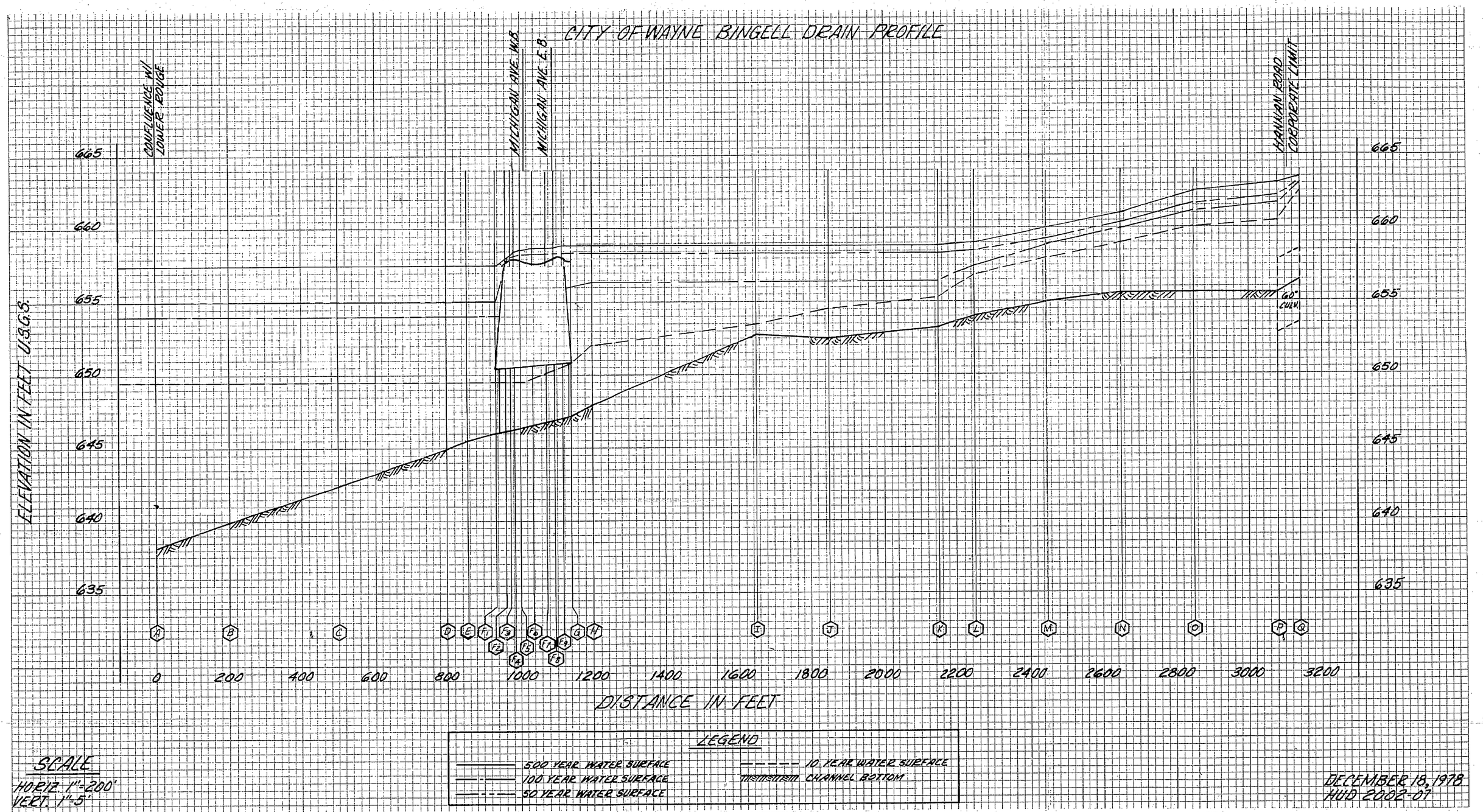
LP 4


GLENWOOD
LOWER
ROUGE
MICHIGAN
HANNAN
WAYNE
VAN BORN
VANOY
KIEFERMAN
CITY OF WAYNE
VICINITY MAP
N
LOWER
RD
BM
669
BM 668
BINGELL DRAIN
LEGEND
100 YEAR
BOUNDARIES.
FLOODWAY BOUNDARY
CROSS SECTION
APPROXIMATE
(100 YEAR) FLOOD
BOUNDARY
FLOOD MAP
CITY OF WAYNE
BINGELL DRAIN
WAYNE COUNTY, MICH.
SCALE: 1"=400'
DECEMBER, 1978
HUD 2002-10

CITY OF WAYNE BINGELL DRAIN PROFILE



SCALE
HORIZ. 1"=200'
VERT. 1"=5'

DECEMBER 18, 1978
HUD 2002-07

```
X1  16056.00        16     389.60     401.60      50.00      50.00      50.00      1.000

BT       4.00     389.60     588.20     581.20     389.60     588.20     581.20     401.60     588.20     581.20

BT     401.60     588.20     581.20

GR     588.30       0.00     588.30      77.90     588.30     155.80     588.30     233.80     588.30     311.70
GR     588.20     389.60     572.90     389.60     573.30     393.50     572.90     397.40     572.80     401.60
GR     588.20     401.60     588.10     467.50     588.10     545.50     588.10     623.40     588.10     701.30
GR     588.20     779.20
*******************LISTING OF TOP AND BOTTOM SECTIONS OF ORIFICE*******************

 389.60  581.20  389.60  581.20  401.60  581.20  401.60  581.20

 389.60  588.20  389.60  572.90  393.50  573.30  397.40  572.90  401.60  572.80
 401.60  588.20
************** LISTING OF COORDINATES OF ORIFICE*********************

 389.60  581.20  389.60  581.20  401.60  581.20  401.60  581.20  401.60  572.80
 397.40  572.90  393.50  573.30  389.60  572.90  389.60  581.20

ORIFICE AREA.       98.2 WETTED PERIMETER      40.7  29.1/P**1.333       9.0194
```

Area, $A = 98.2\ ft^2$

Wetted Perimeter, $P = 40.7\ ft$

Hydraulic Radius, $R = A/P = 2.41\ ft$

Manning Coefficient, $n = 0.020$ (Concrete with Sandy Bottom)

Entrance Loss, $K_e = 0.40$ (with [illegible])

$$K_f = \frac{29.1\, n^2 L}{R^{4/3}} = 9.0194\, n^2 L = 0.63$$

([illegible], $L = 216\ ft$)

$$\Delta K \phi R = -K_e + K_f = 2.03$$

```
*********** ********** ********** ********** **********
  USGS RELEASE DATED NOV 76 UPDATED FEB 1977
C  ST  C  IT  I  DXDYDZ  FYSKK  FSTK=.07  IOC  IPRINT  DTECH  FPC  ICURV  TO  ELTO  ELTC  FC
X2      450  FLOW  PLOT
X3      INCREMENTAL  DISCHARGE
J1  ICHECK    ITIE      NINV      IDIR      STRT      METRIC    HVINS     Q          WSEL      FQ
          2.        0.        0.    0.050000      .00       1.1          574.700    0.1000
J2  ENTRY  IPLOT  PRFVS  XSECV  XSECH  CD  ALLOC  IBW  CHNIM  ITRACE
       -1.000    0.300   -1.000    0.000    0.000    0.000    0.300    0.000    0.000   15.000
NC      5.000   550.000   725.000   900.000   800.000  1100.000    2.00     1.00     .00      .00
ET      7.000     0.100     3.000     3.000     1.410     0.600     3.000    0.000    0.000    0.000
NC      4.520     0.300     6.035     0.100     0.300     0.500     3.500    0.000    0.000    0.000

VALLEY SECTION BASED ON FIELD BOOK

X1      0.000    20.000  1054.207  1069.500     0.000     0.000     3.000    0.300    1.000    0.000
X3      0.000     3.000     0.000   700.000   500.000   350.000   382.000    0.300    1.000    0.000
GR    590.000     0.000   578.000     1.000   575.000     0.000   577.020   600.300  575.500  900.000
GR    584.240   950.000   583.650   968.000   577.000   985.000   577.000   989.000  577.000 1015.000
GR    577.200  1024.000   573.400  1034.500   569.800  1052.000   574.150  1069.500  578.300 1030.000
GR    592.500  1112.000   592.350  1512.000   582.000  1542.000   590.000  1792.100  577.500 1792.100
GR    580.000  1930.000   583.020  2051.000   593.000  2171.000   582.000  2100.670  576.500 2110.000
GR    590.000  2250.000     0.000     0.000     0.000     0.000     0.000     0.000    0.000    0.000

X-SECTION D/S OF JEFFERSON AVE.BASED ON FIELD BOOK & QUAD MAP

X1   1101.500    14.000  1151.000  1165.000  1141.500  1181.500  1161.500     0.000    0.000    0.000
X3      0.000     0.000     0.000   950.000   500.000  1360.000   500.500     0.000    0.000    0.000
GR    590.000     0.000   578.000     1.000   575.000    50.030   581.000  1000.000  578.870 1133.000
GR    570.500  1151.000   570.400  1172.000   570.500  1193.000   579.370  1208.000  580.000 1508.000
GR    590.000  1650.000   590.000  1680.000   583.000  1681.000   585.000  1800.000    0.000    0.000
SC      0.050     1.000     1.000     0.500     0.500     1.000     0.000     0.000    0.000    0.000
ET      0.000     3.000     0.000     5.000     0.100     0.000     0.000     0.000 1060.500 1335.000

D/S FACE JEFFERSON AVE. BRIDGE

X1   1301.500    11.000  1153.000   215.500   200.000   210.000   200.000     0.000    0.000    0.000
X3     10.000     0.000     0.000     0.300     0.000     0.000     0.000   578.500  578.300    0.000
GR    597.000  1060.000   579.500  1060.000   578.870  1161.000   573.870  1179.000  570.630 1135.000
GR    570.500  1200.000   570.630  1215.000   574.370  1221.000   579.370  1236.000  580.000 1335.000
GR    590.000  1335.000     0.000     0.000     0.000     0.000     0.000     0.000    0.000    0.000
SH      0.000     2.350     3.000     0.000    30.000     0.000   192.000     0.000  570.630  570.630

D/S FACE JEFFERSON AVE. BRIDGE

X1   1355.500    14.000  1147.300  1077.000    84.000    82.000    84.300     0.000    0.000    0.000
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FORM 1411-88 PRINTED BY ROTARY MANIFOLD FORMS.

X2	0.000	0.000	1.000	578.080	578.260	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	580.000	580.000	0.000
BT	0.000	950.000	590.000	0.000	950.000	590.000	0.000	1047.000	580.680	0.000
BT	1067.000	580.680	578.930	1077.000	580.680	578.930	1077.000	580.680	0.000	1180.000
BT	590.000	0.000	1180.000	590.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	590.000	950.000	578.930	950.000	578.930	1023.500	578.930	1047.000	578.930	1062.000
BT	578.930	1077.000	578.930	1106.000	580.000	1110.000	580.000	1180.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

X-SECTION U/S OF JEFFERSON AVE. SECTION 1331.5 REPEATED

X1	1435.500	12.000	1047.000	1077.000	50.000	50.000	50.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	935.000	590.000	1105.000	580.000	0.000	0.000	0.000
GR	590.000	0.000	577.000	1.000	578.000	25.000	577.000	30.000	578.020	750.000
GR	579.870	1023.500	570.680	1047.000	570.530	1062.000	570.600	1077.000	579.770	1100.000
GR	580.520	1306.000	590.000	1306.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X-SECTION U/S OF 1ST RAILROAD BRIDGE BASED ON FIELD BOOK 4.3 JUNE AP

X1	2121.000	10.000	604.000	646.000	685.500	685.500	685.500	0.000	0.000	0.000
X3	0.000	0.000	0.000	575.000	0.000	585.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	579.000	1.000	578.260	325.000	579.350	594.000	571.800	604.000
GR	571.780	605.100	571.800	644.000	579.150	864.000	580.000	685.000	590.000	685.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

U/S FACE 1ST RAILROAD BRIDGE FIELD BOOK SECTION 1335.5

X1	2331.000	12.000	605.100	644.500	200.000	200.000	200.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	5.000	0.000	0.000	0.000	578.260	580.000	0.000
GR	590.000	225.000	590.000	435.000	578.860	435.000	579.350	594.000	571.800	604.000
GR	571.780	605.100	571.780	617.500	571.780	618.600	571.780	631.000	571.780	632.100
GR	571.780	644.500	571.800	645.000	579.150	859.000	580.000	725.000	590.000	725.000
SB	4.250	7.500	3.000	0.000	39.400	2.200	234.000	0.000	571.780	571.780

U/S FACE FIRST RAILROAD BRIDGE

X1	2334.000	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	578.080	578.260	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	578.260	580.000	0.000
BT	17.000	225.000	590.000	0.000	475.000	590.000	0.000	475.000	578.860	0.000
BT	605.100	580.800	0.000	605.100	580.800	578.080	617.500	580.800	578.080	617.500
BT	580.800	0.000	618.600	580.800	0.000	618.600	580.800	578.080	631.000	580.800
BT	578.080	631.000	580.800	0.000	632.100	580.800	0.000	632.100	580.800	578.080
BT	644.500	580.800	578.030	644.500	580.800	0.000	685.000	580.000	0.000	685.000
BT	590.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

X-SECTION BETWEEN 1ST AND SECD RAILROAD BRIDGES

X1	2434.000	12.000	813.000	645.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	510.000	0.000	750.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	579.000	0.000	579.000	240.000	577.000	400.000	578.000	603.000
GR	574.400	613.000	571.780	625.000	574.400	645.000	578.000	657.000	580.000	875.000
GR	581.000	1075.000	590.000	1075.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S FACE 2ND RAILROAD BRIDGE FIELD BOOK SECTION 1507

FORM 1411-SP-PRINTED BY ROTARY MANIFOLD FORMS.

X1	2550.000	0.000	180.300	200.000	115.000	115.000	115.000	0.000	0.000	0.000
X3	10.000	0.000	0.300	0.000	0.000	0.000	0.000	577.000	577.000	0.000
GR	565.000	22.000	578.800	22.000	577.200	160.000	577.750	160.000	571.750	200.000
GR	577.500	220.000	578.800	297.000	588.000	267.000	0.000	0.000	0.000	0.000
SC	1.250	1.500	3.000	265.000	20.000	2.000	59.400	0.000	571.750	571.750

U/S FACE SECOND RAILROAD BRIDGE

X1	2563.000	0.000	0.000	0.000	13.000	13.000	13.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	576.250	576.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.300	0.000	0.000	0.000	0.000	578.800	578.800	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000
ET	0.000	7.100	0.000	0.000	0.000	0.000	720.000	780.000	0.000	0.000

XSECTION U/S OF 2ND RAILROAD BRIDGE, DRAIN CONFLUENCE

X1	2582.500	15.000	730.000	770.000	20.000	20.000	20.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	562.000	0.000	867.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	579.000	1.000	579.000	500.000	578.570	520.000	578.570	620.000
GR	577.770	720.000	574.270	730.000	571.970	750.000	574.170	770.000	577.970	782.000
GR	578.470	882.000	580.670	982.000	590.000	982.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.100	0.500	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.080	575.000	0.035	590.000	0.080	780.000	0.035	772.000	0.000
NH	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S. OF BRANCH SPLIT

X1	2652.500	16.000	750.000	772.000	30.000	0.000	10.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	440.000	0.000	930.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	578.000	1.000	578.000	400.000	578.600	520.000	578.000	660.000
GR	574.300	675.000	572.000	687.000	574.370	690.000	579.000	710.000	579.000	737.000
GR	574.370	750.000	572.000	761.000	574.170	772.000	578.000	784.000	580.000	950.000
GR	590.000	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.080	577.000	0.035	587.000	0.080	780.000	0.035	810.000	0.000
NH	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X-SECTION D/S OF BOX CULVERT

X1	2762.500	15.000	788.000	810.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	430.000	0.000	950.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	578.000	1.000	577.800	572.000	574.170	577.000	572.000	579.500
GR	574.200	587.000	582.000	607.000	582.300	650.000	582.000	775.000	574.400	788.000
GR	572.000	799.000	574.300	810.000	579.100	822.000	580.000	950.000	590.000	950.000
NC	0.000	0.000	0.000	0.300	0.500	0.000	0.000	0.000	0.000	0.000
NH	5.000	0.080	585.000	0.035	600.000	0.080	946.450	0.013	999.590	0.080
NH	1050.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	5.000	575.000	885.000	1080.000	1080.000	1480.000	0.000	0.000	0.000	0.000

D/S FACE OF CULVERT FIELD BOOK NO. 4501.5

STATIONS 3119.05785 HAVE BENDS - LOSES AT THEM CALC. BY HAND & OR Y&

X1	2962.500	15.000	986.450	999.550	200.000	200.000	200.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	577.100	577.100	0.000
GR	590.000	0.000	578.000	1.000	578.000	570.000	576.300	585.000	572.000	592.500
GR	574.300	600.000	581.000	620.000	581.000	970.000	574.600	950.500	572.000	986.450
GR	572.000	999.550	574.400	1006.000	580.260	1018.000	580.000	1050.000	590.000	1050.000
ST	0.000	4.290	5.000	0.000	15.100	0.000	65.400	0.000	572.850	572.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

FORM 1411-RE-PRINTED BY ROTARY MANIFOLD FORMS.

1/8 PAGE OF CULVERT AT ELECTRIC AVE. FIELD BOOK NO. 0

X1	3863.000	11.000	323.450	336.530	901.000	901.000	901.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	577.830	583.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	583.000	583.000	0.000
BT	0.000	0.000	590.000	0.000	0.000	583.000	0.000	323.450	583.000	0.000
BT	323.450	583.000	577.830	336.530	583.000	577.830	336.530	583.000	0.000	660.000
BT	583.000	0.000	660.000	590.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	580.000	0.000	580.000	250.000	581.960	314.000	574.820	323.450
GR	572.830	530.000	574.590	336.550	581.000	346.550	580.000	370.000	581.000	560.000
GR	590.000	660.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

BEND LOSSES IN CULVERT

X1	3863.100	0.000	0.000	0.000	0.010	0.010	0.010	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	583.000	583.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

FORM 1411-00 PRINTED BY ROTARY MANIFOLD FORMS.

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*PROF 1

CCHV=   0.300 CEHV=   0.300
*SECNO ****
   SECNO     DEPTH     CWSEL     CRIWS     WSELR     EG        HV        PL        OLOSS    BANK ELEV
   Q         WLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TXA      LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IT2       ICONT     CORAR     TOPWID     ENDST

3470 ENCROACHMENT STATIONS=      700.0     1500.0  TYPE=      1  TARGET=      800.000
 ELENCL=    590.00  ELENCR=    593.00

        VALLEY SECTION BASED ON FIELD BOOK      A

     0.00      5.10    574.90      0.00    574.90    576.65      0.95      0.00      0.00    573.40
     860.        9.     855.        1.        3.      189.        1.        0.        0.     574.15
     0.00      1.48      7.85      0.81     0.070     0.035     0.080     0.000    569.80   1030.35
 0.007775        0.        0.        0.        0         0         0      0.00     41.04   1071.40

FLOW DISTRIBUTION FOR SECNO=       0.00          CWSEL=     574.90

STA=     1030.     1035.     1070.     1071.
  PER Q=       0.5      99.4       0.1
   AREA=       3.1     108.9       0.7
    VEL=       1.5       7.8       0.8

*SECNO 1101.500

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=      700.0     1360.0  TYPE=      1  TARGET=      360.000
 ELENCL=    590.00  ELENCR=    590.00

        X-SECTION D/S OF JEFFERSON AVE.BASED ON FIELD BOOK & QUAD MAP      B

  1101.50      6.55    576.95      0.00      0.00    577.07      0.12      1.14      0.08    570.50
     860.       38.     796.       25.       45.      273.       35.        6.        1.     570.50
     0.11      0.86      3.91      0.72     0.070     0.035     0.080     0.035    570.40   1137.12
 0.000388     1102.     1102.     1102.         4         0         0      0.00     66.80   1203.92

FLOW DISTRIBUTION FOR SECNO=    1101.50          CWSEL=     576.95

STA=     1137.     1151.     1193.     1204.
  PER Q=       4.5      92.6       3.0
   AREA=      44.8     273.3      35.2
    VEL=       0.9       2.9       0.7

CCHV=   0.300 CEHV=   0.500
*SECNO 1301.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      578.50 ELREA=      578.50

        D/S FACE JEFFERSON AVE. BRIDGE      C

  1301.50      6.44    576.97      0.00      0.00    577.29      0.31      0.12      0.09    570.63
     860.        0.     860.        0.        0.      192.        0.        7.        2.     570.63
     0.12      0.00      4.48      0.00     0.060     0.035     0.060     0.035    570.53   1185.00
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0.000994     200.     200.     200.        2        0        0     0.00    30.00  1215.00

FLOW DISTRIBUTION FOR SECNO=   1301.50          CWSEL=    576.97

STA=     1185.     1215.
  PER Q=     100.0
   AREA=     191.9
    VEL=       4.5

SPECIAL BRIDGE

SP  YK        XKOR      COPC      RSLEN     BWC       BWP       BAREA     SS        ELCHL     ELCHL
    0.00      2.33      5.00      0.00      30.00     0.00      192.00    0.00      570.63    570.63

*SECNO 1385.500
PRESSURE FLOW

EGPRS     ZGLWC     MS        QWEIR     WPR       BAREA     TRAPEZOID     ELLC      ELTRD
                                                            AREA
  577.71    577.38    0.00        0.      860.      192.      189.      576.93    580.00

5495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      580.00 ELREA=      580.00

        U/S OF JEFFERSON AVE. BRIDGE

 1385.50     6.91    577.44     0.00     0.00    577.71     0.27     0.42     0.00    570.60
    860.       0.      860.       0.       0.      206.       0.       8.       2.    570.60
    0.13     0.00      4.17     0.00    0.060     0.035    0.060    0.035   570.53   1047.00
0.000789      84.       84.      84.        2         0        0     0.00    30.00   1077.00

FLOW DISTRIBUTION FOR SECNO=   1385.50          CWSEL=    577.44

STA=     1047.     1077.
  PER Q=     100.0
   AREA=     206.2
    VEL=       4.2

CCHV=    0.300 CEHV=    0.500
*SECNO 1435.500
  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       LEFT/RIGHT
  TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IHZ       ICONT     CORAR     TOPWID      ENDST

5470 ENCROACHMENT STATIONS=     935.0     1195.0  TYPE=     1  TARGET=     260.000
 ELENCL=     590.00  ELENCR=     590.00

        X-SECTION U/S OF JEFFERSON AVE. SECTION 1331.5 REPEATED

 1435.50     7.07    577.60     0.00     0.00    577.77     0.17     0.03     0.03    570.60
    860.      57.      746.      57.      67.      211.      61.       8.       2.    570.60
    0.13     0.93      3.53     0.92    0.080     0.035    0.080    0.035   570.53   1029.26
0.000514      50.       50.      50.        2         0        0     0.00    45.30   1094.55
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FLOW DISTRIBUTION FOR SECNO=   1435.50          CWSEL=    577.60

STA=     1029.     1047.     1077.     1095.
  PER Q=       6.7      86.7       6.6
   AREA=      62.1     211.0      61.4
    VEL=       0.9       3.5       0.9

CCHV=   0.100 CEHV=   0.300
*SECNO 2121.000

3470 ENCROACHMENT STATIONS=      375.0      685.0  TYPE=      1  TARGET=      310.000

        XWSECTION D/S OF 1ST RAILROAD BRIDGE BASED ON FIELD BOOK AND QUAD MAP

  2121.00      6.19    577.97      0.00      0.00    578.11      0.15      0.34      0.00    571.80
     860.       19.      815.       26.       23.      259.       34.       13.        3.    571.80
     0.20      0.74      3.14      0.79     0.080     0.035     0.080     0.035    571.78    595.83
 0.000483      685.      685.      685.         2         0         0      0.00     61.05    656.89

FLOW DISTRIBUTION FOR SECNO=   2121.00          CWSEL=    577.97

STA=      596.      604.      646.      657.
  PER Q=       2.2      94.7       3.1
   AREA=      25.2     258.4      33.8
    VEL=       0.7       3.1       0.8

CCHV=   0.300 CEHV=   0.500
*SECNO 2321.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=       578.26 ELREA=       580.00

        D/S FACE 1ST RAILROAD BRIDGE FIELD BOOK SECTION 1535.5

  2321.00      6.27    578.05      0.00      0.00    578.24      0.19      0.11      0.02    571.78
     860.        0.      860.        0.        0.      247.        0.       14.        3.    571.78
     0.21      0.09      3.48      0.00     0.080     0.035     0.080     0.035    571.78    605.10
 0.000608      200.      200.      200.         1         0         0      0.00     39.40    644.50

FLOW DISTRIBUTION FOR SECNO=   2321.00          CWSEL=    578.05

STA=      605.      645.
  PER Q=     100.0
   AREA=     247.4
    VEL=       3.5

SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.50      3.00      0.00     39.40      2.20    234.08      0.00    571.78    571.78

*SECNO 2334.000
**ERROR** ELTRD.LT.MIN ROAD ELEV, ELTRD SET EQUAL TO MIN ROAD ELEV
PRESSURE FLOW

 EGPRS      EGLOC      HS        QWEIR      QPR       BAREA     TRAPEZOID      ELLC      ELTRD
                                                                   AREA
  578.37    578.27      0.02        0.       782.      234.      234.      578.08    578.86
                                                                                        578.08
```

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEN= 576.50 ELREA= 580.00

U/S FACE FIRST RAILROAD BRIDGE

2334.00	6.41	579.19	0.00	0.00	578.37	0.18	0.18	0.00	571.76	
660.	0.	660.	0.	0.	252.	0.	14.	3.	571.76	
0.21	0.30	5.41	0.00	0.060	0.035	0.080	0.035	57.76	635.10	
0.000569	13.	13.	13.	2	0	0	0.00	89.40	644.50	

FLOW DISTRIBUTION FOR SECNO= 2334.00 CWSEL= 579.19

STA= 605. 665.
PER Q= 100.0
AREA= 252.5
VEL= 5.4

CCIV= 0.300 CGHV= 0.500
*SECNO 2434.000

3470 ENCROACHMENT STATIONS= 510.0 750.0 TYPE= 1 TARGET= 260.000

CONNECTED BETWEEN 1ST AND SECOND RAILROAD BRIDGES

2434.00	6.42	578.20	0.00	0.00	578.54	0.34	0.09	0.00	574.61
860.	38.	795.	27.	59.	163.	20.	15.	3.	574.40
0.22	0.64	4.87	1.34	0.080	0.035	0.080	0.035	571.78	510.00
0.001522	103.	103.	103.	2	0	0	0.00	156.31	575.31

FLOW DISTRIBUTION FOR SECNO= 2434.00 CWSEL= 578.20

STA= 510. 603. 613. 645. 657. 678.
PER Q= 1.2 2.3 92.4 3.1 0.9
AREA= 39.9 70.0 163.4 23.9 2.1
VEL= 0.4 1.1 4.9 1.1 0.2

*SECNO 2550.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	VLOB	VCH	VROB	FLOB	ALOB	ARCH	VOL	INA	LEFT/RIGHT
TIME	WLOB	WCH	WROB	XNL	XNCH	XNR	WTH	ELMIN	SSTA
SLOPE	XLOBL	SLCH	XLOBR	ITRIAL	IM2	ICONT	CORAR	TOPWID	ENDST

U/S FACE 2ND RAILROAD BRIDGE FIELD BOOK SECTION 1307

2550.00	6.72	578.42	0.00	0.00	578.70	0.23	0.13	0.03	571.75
860.	138.	611.	111.	149.	134.	101.	16.	4.	571.75
0.23	0.93	4.54	1.10	0.080	0.035	0.080	0.035	571.75	50.51
0.000903	115.	115.	115.	2	0	0	0.00	219.45	269.96

FLOW DISTRIBUTION FOR SECNO= 2550.00 CWSEL= 578.47

STA= 51. 160. 180. 200. 220. 270.
PER Q= 3.3 12.7 71.0 11.9 1.0
AREA= 69.3 79.9 134.4 78.9 24.2
VEL= 0.4 1.4 4.5 1.3 0.3

SPECIAL BRIDGE

```
SB  XK      XKOR     COFO     RDLEN    B.C      E.P      BAREA    SS       ELCHU    ELCHD
    1.25     1.50     5.00   265.00    22.00     2.00    59.40     0.00   571.75   571.75

*SECNO 2563.000
PRESSURE AND WEIR FLOW

 EGPRS     EGLWC     HS      WWEIR     WFR      BAREA   TRANSZOID     ELLC     ELTRD
                                                          AREA
  583.35    579.15    0.06    465.      395.      59.      81.      576.25   578.80

        U/S FACE  SECOND RAILROAD BRIDGE                    K

 2563.00    7.64   579.39    0.00     0.00   579.50    0.11     0.80     0.00   571.75
    860.     [illegible]   323.     150.     [illegible]   153.     178.     16.      4.    571.75
    0.23     0.69     [illegible]   0.78    0.080    0.035    0.080    0.035   571.75    22.00
0.000433     13.      13.      13.       2.       [illegible]      5     0.00   269.00   287.00

FLOW DISTRIBUTION FOR SECNO=   2563.00          CWSEL=    579.39

STA=      22.      140.      80.      200.      220.      287.
  PER Q=     [illegible]      [illegible]      [illegible]      11.8      4.3
   AREA=    191.5     98.2    152.7     95.2     82.6
    VEL=      0.5      1.1      3.4      1.1      0.4

CCHV=   0.500 CEHV=   0.500
*SECNO 2582.500

3470 ENCROACHMENT STATIONS=     562.0     867.0  TYPE=     1  TARGET=     305.000

        X@SECTION U/S OF 2ND RAILROAD BRIDGE, DRAIN CONFLUENCE    L

 2582.50    7.44   579.41    0.00     0.00   579.51    0.1      0.01     0.00   574.27
    860.     77.     709.     74.     178.     252.     144.     16.      4.    574.17
    0.23     0.45     2.81     0.51    0.080    0.035    0.080    0.035   571.97   562.00
0.000379     20.      20.      20.       1        0        0     0.00   305.00   867.00

FLOW DISTRIBUTION FOR SECNO=   2582.50          CWSEL=    579.41

STA=      562.      620.      720.      730.      770.      782.      867.
  PER Q=      1.1      4.8      3.1     82.4      3.6      4.9
   AREA=     36.0    108.4     33.8    252.4     40.0    103.9
    VEL=      [illegible]      [illegible]      [illegible]      [illegible]      [illegible]

CCHV=   0.100 CEHV=   0.300
1490 NH CARD USED
*SECNO 2662.500

3470 ENCROACHMENT STATIONS=     490.0     950.0  TYPE=     1  TARGET=     460.000

        U/S OF BRANCH SPLIT    M

 2662.50    7.49   579.49    0.00     0.00   579.55    0.06     0.03     0.00   574.37
    860.     426.     376.     57.     446.     140.     133.     17.      5.    574.17
    0.25     [illegible]      [illegible]      [illegible]      [illegible]      [illegible]      [illegible]      [illegible]      [illegible]
0.000351     30.      [illegible]      30.       2        [illegible]      [illegible]      [illegible]      [illegible]

FLOW DISTRIBUTION FOR SECNO=   2662.50          CWSEL=    579.49
```

Bridge changed from N.B to SB
? when

```
STA=      490.      660.      675.      687.      690.      710.      750.      772.      784.      908.
  PER Q=      3.7       4.4      23.8       5.1       4.4       3.1      43.7       3.6       3.1
   AREA=    195.3      50.1      75.1      18.9      55.1      49.6     139.8      40.8      92.3
    VEL=      0.4       0.8       2.7       2.3       0.7       0.5       2.7       0.8       0.3
```

1490 NH CARD USED
*SECNO 2762.500

3265 DIVIDED FLO.

3470 ENCROACHMENT STATIONS= 450.0 950.0 TYPE= 1 TARGET= 520.000

X-SECTION D/S OF BOX CULVERT

N

```
 2762.50      7.51    579.51      0.00      0.00    579.60      0.09      0.04      0.01    574.40
     860.      391.      441.       28.      381.      140.       45.       19.        5.    574.30
    0.26      1.13      2.16      0.67     0.058     0.035     0.080     0.035    572.00    430.00
0.000467      100.      100.      100.         1         0         0      0.00    272.66    381.28
```

FLOW DISTRIBUTION FOR SECNO= 2762.50 CWSEL= 579.51

```
STA=      430.      572.      577.      580.      587.      601.      788.      810.      822.      881.
  PER Q=      16.1       1.7       5.0      17.6       3.2       1.0      51.5       3.1       0.2
   AREA=    240.2      17.7      16.1      48.1      36.2      22.4     139.5      33.8      12.4
    VEL=      0.6       0.8       2.7       3.1       0.8       0.7       3.2       0.8       0.1
```

[illegible]
1490 NH CARD USED
*SECNO 2962.500

3265 DIVIDED FLOW

```
  SECNO    DEPTH    CWSEL    CRIBS    WSELK    EG       HV       HL       CLOSS    SANK ELEV
  Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA      LEFT/RIGHT
  TIME     WLOB     VCH      VROB     XNL      XNCH     XNR      VTN      ELMIN    SST.
  SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IH2      ICONT    CORAR    TOPWID   ENDST
```

D/S FACE OF CULVERT FIELD BOOK NO. 900.5

O

STATIONS 3110 &3783 HAVE BENDS LOSES AT THEM CALC. BY HAND & ON X2

```
 2762.50      7.49    579.49      0.00      0.00    579.71      0.22      0.05      0.07    572.00
    1060.      494.      527.       39.     1090.       58.       65.       25.        7.    572.00
    0.28      0.45      5.37      0.60     0.065     0.013     0.080     0.035    572.00      0.85
0.000151      200.      200.      200.         2         0         0      0.00    658.60   1016.36
```

FLOW DISTRIBUTION FOR SECNO= 2962.50 CWSEL= 579.49

```
STA=        1.      570.      585.      593.      600.      615.      980.      986.     1000.     1006.     1016.
  PER Q=      23.7       2.4       7.8       7.6       1.6       0.6       2.8      49.7       2.8       0.9
   AREA=    845.9      50.0      47.5      47.5      40.1      18.7      39.9      98.1      39.9      25.3
    VEL=      0.3       0.5       1.7       1.7       0.4       0.4       0.7       5.4       0.7       0.4
```

SPECIAL BRIDGE

```
SB   XK       XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
```

```
   0.00      4.29      3.00      0.00     13.10      0.00     65.40      0.00    572.83    572.00

CCHV=   0.300 CZHW=   0.500
*SECNO 3863.000
PRESSURE AND WEIR FLOW

 EGPRS      EGLWC       HS      QWEIR      QPR      BAREA   TRAPEZOID     ELLC      ELTAD
                                                              AREA
  596.99    582.65      0.00     558.      503.      65.       66.      577.83    583.00

        U/S FACE OF CULVERT AT ELECTRIC AVE. FIELD BOOK NO. 0

 3863.00    10.58    583.41      0.00      0.00    583.43      0.01      3.72      0.00    574.82
   1060.     438.     243.      380.     1059.     127.      972.       58.       21.     574.39
    0.61      0.41      1.91      0.39     0.080     0.035     0.080     0.035    572.83      0.00
0.000002     901.     901.      901.        1         0         7      0.00    660.00    660.00

FLOW DISTRIBUTION FOR SECNO=   3863.00          CWSEL=    583.41

STA=        0.      325.      514.      325.      337.      347.      370.      660.
  PER Q=     34.1       5.0       2.1      22.9       2.8       2.4      30.5
  AREA=     955.6      [illegible]     47.6     127.1      57.0      67.8     647.5
   VEL=       0.4       0.3       0.5       1.9       0.5       0.4       0.4

*SECNO 3863.100
 WATER E. CHANGE FROM 32 CASE

        BEND LOSSES IN CULVERT

 3863.10    10.88    583.71      0.00      0.00    583.73      0.01      0.00      0.00    574.82
   1060.     445.     225.      391.     1154.     131.     1067.       58.       21.     574.39
    0.61      0.39      1.72      0.37     0.080     0.035     0.080     0.035    572.83      0.00
0.000060       0.        0.        0.        0         0         0      0.00    660.00    660.00

FLOW DISTRIBUTION FOR SECNO=   3863.10          CWSEL=    583.71

STA=        0.      325.      514.      325.      337.      347.      370.      660.
  PER Q=     34.5       5.4       2.1      21.2       2.7       2.5      31.6
  AREA=     928.7     175.0      50.3     131.0      59.9      74.7     932.3
   VEL=       0.4       0.3       0.4       1.7       0.5       0.4       0.4
```

P

Q

HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977

ERROR CODE = 0

MODIFICATION = 50,51,52

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

HUNTINGTON CR, RIVERWEB

SUMMARY PRINTOUT TABLE 150

	SECNO	XLOB	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	VCH	AREA	TOPWID
	0.000	0.00	0.00	0.00	569.60	860.00	576.70	0.00	575.85	7.75	7.85	112.76	97.53
	1101.500	1101.50	0.00	0.00	570.40	860.00	576.95	0.00	577.07	3.80	2.91	353.33	436.79
	1301.500	200.00	0.00	0.00	570.53	860.00	576.97	0.00	577.25	5.94	4.46	191.90	272.76
	1385.500	84.00	580.00	576.95	570.53	860.00	577.44	0.00	577.71	7.89	4.11	205.17	306.20
	1435.500	50.00	0.00	0.00	570.53	860.00	577.60	0.00	577.77	5.14	3.53	334.53	379.29
	2121.000	685.50	0.00	0.00	571.78	860.00	577.97	0.00	576.11	4.33	3.14	315.16	397.34
	2321.000	200.00	0.00	0.00	571.78	860.00	578.05	0.00	578.24	6.08	5.48	247.44	348.64
	2334.000	13.00	578.86	578.08	571.78	860.00	578.19	0.00	578.37	5.69	3.41	252.48	360.42
	2434.000	100.00	0.00	0.00	571.78	860.00	578.20	0.00	578.54	15.22	4.87	348.65	220.46
	2550.000	115.00	0.00	0.00	571.75	860.00	578.47	0.00	578.70	9.03	4.54	564.89	286.12
	2563.000	13.00	578.80	576.25	571.75	860.00	579.39	0.00	579.50	4.33	3.43	620.24	413.32
	2582.500	20.00	0.00	0.00	571.97	860.00	579.41	0.00	579.51	3.79	2.81	574.93	442.62
	2682.500	80.00	0.00	0.00	572.00	860.00	579.49	0.00	579.55	3.51	2.69	716.72	459.05
	2762.500	100.00	0.00	0.00	572.00	860.00	579.51	0.00	579.60	4.87	3.16	566.42	389.78
	2962.500	200.00	0.00	0.00	572.00	1060.00	579.49	0.00	579.71	1.51	5.37	1253.05	862.07
	3863.000	901.00	585.00	577.65	572.83	1060.00	583.41	0.00	583.43	1.02	1.91	2156.88	1047.80
*	3863.100	0.01	0.00	0.00	572.83	1060.00	583.71	0.00	583.73	0.80	1.72	2351.92	1187.16

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HUNTINGTON DR. RIVERVIEW

SUMMARY PRINTOUT TABLE 150

SEC.D	Q	CASE	DIFSP	DIFWSP	DIFWS	TOPWID	XLCH
0.000	860.00	574.90	0.00	0.00	0.00	41.04	0.00
1101.500	860.00	576.95	0.00	2.05	0.00	66.80	1101.50
1301.500	860.00	576.97	0.00	0.02	0.00	30.00	200.00
1385.500	860.00	577.44	0.00	0.46	0.00	50.00	84.00
1435.500	860.00	577.60	0.00	0.16	0.30	65.30	50.00
2121.500	860.00	577.97	0.00	0.37	0.00	61.04	685.50
2321.000	860.00	578.05	0.00	0.09	0.00	59.40	200.00
2334.000	860.00	578.19	0.00	0.13	0.00	59.40	13.00
2434.000	860.00	578.30	0.00	0.01	0.00	168.31	100.00
2550.000	860.00	578.47	0.00	0.27	0.00	219.45	115.00
2563.000	860.00	579.39	0.00	0.92	0.00	265.00	13.00
2582.500	860.00	579.41	0.00	0.02	0.00	559.00	25.00
2662.500	860.00	579.49	0.00	0.08	0.00	417.57	80.00
2762.500	860.00	579.51	0.00	0.02	0.00	272.66	100.00
2962.500	1060.00	579.49	0.00	-0.02	0.00	650.60	200.00
3863.000	1060.00	583.41	0.00	3.93	0.00	660.00	901.00
* 3863.100	1060.00	583.71	0.00	0.30	0.00	660.00	0.01

SUMMARY OF ERRORS

NOTE SEC.D= 3863.100 PROFILE= 1 USER CASED ON X2 CARD

FORM 1411-SD PRINTED BY ROTARY MANIFOLD FORMS.

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*****************************************************
 HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
 ERROR CORR - 07
 MODIFICATION - 50,51,52
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*****************************************************************
*                                                               *
*                    E R R O R   S U M M A R Y                  *
*                                                               *
*                                                               *
*       0  ERROR(S) DETECTED BY THE USER PROGRAM                *
*       0  ERROR(S) DETECTED BY THE MATHEMATICAL PACKAGE        *
*       0  ERROR(S) DETECTED FOR INPUT/OUPUT STATEMENTS         *
*                                                               *
*****************************************************************
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FORM 1411-08 PRINTED BY ROTARY MANIFOLD FORMS. PRINTED IN U.S.A.

HYDRAULIC REPORT
CITY OF RIVERVIEW-MICHIGAN

I. INTRODUCTION

The City of Riverview covers approximately 4.5 square miles. The City is a suburban residential community located within the Metropolitan Detroit Area. This report summarizes the hydraulic studies undertaken to support detailed studies of 1 mile of Huntington Creek, and coastal analysis of 1 mile of the Detroit River shoreline and approximate analysis of 2 miles of the Frank & Poet Drain.

This study was conducted by Wade, Trim & Associates, Inc., Consulting Engineers, and Glen Roberts served as Project Manager.

II. HUNTINGTON CREEK (DETAILED)

Detailed studies of the Huntington Creek were performed from its mouth at the Detroit River through a box culvert under the Detroit Toledo Shoreline Railroad Corridor. Approximately 900 feet of the Creek is enclosed in the upstream portion of the study limits through the Detroit Toledo Shoreline Railroad Corridor. This enclosure section was also investigated to determine whether this enclosure and associated weir sections could discharge the computed design rates associated with this Flood Insurance study. A total of two (2) valley, four (4) bridge cross sections and the enclosure section were field surveyed in April, 1978. Eleven (11) additional cross sections were used in this analysis. Field cross section location data were supplemented by U.S.G.S. Quad Maps of the study area which consist of 5' interval contours (Reference 1).

The flood plain of the Huntington Creek within the study reach is mainly heavy brush. Cross section locations are shown in Exhibit 1. Table 1 cross references section designations by showing the computer section number which corresponds to the cross section letter shown in Exhibit 1. Table 2 lists discharges that have been approved by the Michigan Department of Natural Resources (M.D.N.R.) for this Creek.

Exhibit 2 contains bridge sketches as well as computations for total loss coefficients associated with the various bridges encountered in this study.

A. Method of Analysis

The HEC-2 backwater program was used in developing water surface profiles (Reference 2).

Table 2 contains selected flood elevations from the HEC-2 printouts. HEC-2 printouts including computer cross section plots are presented as Exhibit 3. Water surface profiles resulting from the backwater analyses are presented as Exhibit 4. (Exhibit 3 is contained in the 11" X 15" folder enclosed with this report.)

B. Variables and Coefficients

Roughness coefficients (Mannings "n") were estimated by field inspection at each cross section. Typical roughness values for the main channel of the Huntington Creek ranged from .013 to 0.035; roughness values for the overbank areas varied between 0.06 to 0.10 for all floods. These values are indicative of summer month conditions and are consistent with roughness values recommended and used in engineering practice.

C. High Water Marks

No documented high water data exists for flood elevations on the Huntington Creek.

D. Starting Conditions

The starting water surface elevation used in all backwater computations was the mean Detroit River elevation at the outlet of Huntington Creek. This data was obtained from an unpublished study on Lake Erie and the Detroit River levels (Reference 3) compiled by a Consulting Engineer as part of the Flood Insurance Studies (FIS) they conducted for the City of Ecorse (Reference 4) and the City of River Rouge (Reference 5). = 574.9

E. Special Problems

The backwater analysis performed for the Huntington Creek from the mouth at the Detroit River upstream to approximately Jefferson Avenue resulted in lower flood elevations than those associated with Detroit River flood stages. Consequently, the final flood elevations for this area were based on those associated with the Detroit River.

A divided flow condition exists on the Huntington Creek. This condition occurs when the headwater elevations upstream of the second railroad bridge crossing are higher than Jefferson Avenue. The location of the Jefferson Avenue diversion is north of an industrial complex which is identified on Exhibit 1. To evaluate this divided flow condition,

individual backwater analyses were performed for the Huntington Creek as well as the previously referenced Jefferson Avenue diversion. Results of the backwater analyses are presented on Exhibit 6. A review of these data indicate that the 50, 100, and 500 year flood elevations would be high enough upstream of the second railroad bridge on the Huntington Creek such that flows could be diverted across Jefferson Avenue north of the industrial complex. The Jefferson Avenue diversion section was evaluated as a typical valley section as well as a weir section. (See Exhibits 6 and 7.) The valley section analysis proved to be the most conservative insofar as flood discharges for a given elevation were concerned. Based upon results of this analysis, it was determined that the 50, 100, and 500 year flood flows are reduced downstream of section 0 due to the Jefferson Avenue diversion (Table 2). The analysis also indicates that the 100 year flood elevations are approximately 0.2 feet lower than when diversion of flow at Jefferson Avenue is neglected. Consequently, the floodway is divided between the Huntington Creek and Jefferson Avenue.

An encroachment run was not made for Huntington Creek because expansion and contraction limitations between bridges control the floodway.

F. General

Computed water-surface elevations were developed to an accuracy of 0.5 foot for floods of the selected recurrence intervals. The resulting 500 year and 100 year flood plains and floodway are presented in Exhibit 1.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). This datum is equivalent to the U.S. Geological Survey (USGS) datum.

The hydraulic analyses for this study are based only on the effects of flow unobstructed by ice or debris. The flood elevations are considered valid only if hydraulic structures, in general, remain unobstructed and do not fail.

TABLE 1
CITY OF RIVERVIEW
HUNTINGTON CREEK CROSS SECTION REFERENCE

CROSS-SECTION LETTER	COMPUTER NO.	WTA FIELD BOOK NO.	DESCRIPTION
A	0.000	3863	Valley Section
B	1101.5		Valley Section
C	1301.5		D/S Face Jefferson
		2546.5	& Jefferson Bridge
D	1385.5		U/S Face Jefferson
E	1435.5		Valley Section
F	2121		Valley Section
G	2321		D/S Face R.R. Bridge
		1535.5	& R.R. Bridge
H	2334		U/S Face R.R. Bridge
I	2434		Valley Section Between R.R. Tracks
J	2550		D/S Face R.R. Bridge
		1307	& R.R. Bridge
K	2563		U/S Face R.R. Bridge
L	2582.5	1280.5	Valley Section @ Drain Intersection
M	2662.5		Valley Section
N	2762.5		Valley Section
O	2962.5	900.5	D/S End of Box Culvert
P	3863.	0	Section To Input Losses Due To Culvert Bends
Q	3863.1		U/S End of Box Culvert

* Flow Diversion Over Jefferson Avenue

W	0	Valley Section
X	100	Valley Section
Y	720	Valley Section

* Note: See Exhibit 6 for the HEC-2 backwater analysis of this Diversion.

TABLE 2
CITY OF RIVERVIEW
HUNTINGTON CREEK FLOOD ELEVATIONS

Location	Selected Frequencies 10 Year	50 Year	100 Year	500 Year
* Flow (cfs)	535	725	860	1140
at confluence w/Detroit River (x Sect. A)	**576.4	**577.3	**577.6	**578.3
u/s of Jefferson Avenue (x Sect. D)	**576.4	**577.3	**577.6	578.8
u/s of 2nd R.R. Bridge (x Sect. M)	578.7	579.2	579.5	580.1
Flow (cfs)	575	885	1060	1460
d/s End of Box Culvert (x Sect. O)	578.7	579.2	579.5	580.1
u/s End of Box Culvert (x Sect. Q)	583.4	583.6	583.7	583.9

* Note: The lower discharges are a result of the Jefferson Avenue diversion.

**Note: Elevations are for the selected frequencies of the Detroit River.

III. RIVERVIEW SHORELINE (COASTAL)

The length of shoreline studied as part of this study is shown on Exhibit 5. Coastal studies have been performed on the Detroit River as part of the Flood Insurance Studies (FIS) conducted for the City of Wyandotte and the City of Trenton which are the communities, respectively, north and south of Riverview. The analyses reported herein reflect the still water elevations due to tidal and wind set up effects, but do not include the contributions from wave action effect such as the wave crest height and wave run-up. The water surface elevations from the previously mentioned studies are applicable and were used for Riverview.

A summary of water surface elevations for the Riverview shoreline is presented in Table 3.

TABLE 3

CITY OF RIVERVIEW

DETROIT RIVER WATER SURFACE ELEVATIONS*

LOCATION	FREQUENCY 10 Yr.	50 Yr.	100 Yr.	500 Yr.
Sibley Road	576.4	577.3	577.6	578.3
Pennsylvania Road	576.4	577.3	577.6	578.3

*NGVD

REFERENCES

1. U.S. Geological Survey Topographical Maps - Wyandotte Quadrangle, Wayne County, Michigan, 7.5 Minute Series - Photorevised, 1973.

2. HEC-2 Water Surface Profile - Users Manual - U.S. Army Corps of Engineers - 1976.

3. Johnson & Anderson Inc., Consulting Engineers, Unpublished Report - Detroit River Profile, January, 1977.

4. U.S. Department of Housing & Urban Development, Federal Insurance Administration, Flood Insurance Study, City of Ecorse Creek, Wayne County, Michigan, 1977.

5. U.S. Department of Housing & Urban Development, Federal Insurance Administration, Flood Insurance Study, City of River Rouge, Wayne County, Michigan, 1977.

6. U.S. Department of Housing and Urban Development, Flood Insurance Study - City of Wyandotte, Michigan.

CITY OF RIVERVIEW, MICHIGAN

HUNTINGTON CREEK

EXHIBIT 1

Field Cross-Section Location
and 100 Year Flood Plain-
Floodway Map

CITY OF RIVERVIEW, MICHIGAN

HUNTINGTON CREEK

EXHIBIT 2

Bridge Notes and Sketches

FORM 25-0
(313) 291-5400
Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET
25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

Bridge Location : JEFFERSON AVE. (1331)
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient): No PIERS 0 — HEC-2 manual
XKOR (Loss Coefficient) = 1.0 + Σk , $\Sigma k = k_f + k_e + k_p$
where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge:
$K_f = 29.1\, n^2 L / R^{4/3}$ for English units
Area = 30 x 6.4 = 192 $W_p = 2(30+6.4) = 72.8$
$R = A/w_p = \frac{192}{72.8} = 2.64$ $R^{4/3} = 3.64$ $L = 84'$
n (composite) = .824(0.035) + .176(0.015) = 0.031
$K_f = 29.1 \times (0.031)^2 \times 84 / 3.64 = 0.65$

K_e = Wingwalls parallel Square edged at crown = 0.7 — ~~graphs from DNR per letter dated~~

K_p = 0 if bridge has no intermediate piers — ~~Hydraulics of Bridge Waterways Bureau of Public Roads 1960. pg. 10~~

~~$J = \frac{A_p = \text{Pier area}}{A_{n2} = \text{water X-section area}}$ = use $K_p = 0.05$ if there are intermediate piers~~ — HEC-2 manual

~~M = Bridge opening ratio =~~

~~$K_p = \Delta K\, \sigma = 0$~~ — Fig. 7 pg. 10

2. XKOR = 1 + 0.65 + 0.7 + 0 = 2.35
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 30.
6. BWP = total width of obstruction = 0 — field data
7. BAREA = bridge opening inc. piers = 192. SF
8. SS = side slope = 0
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 570.53
(0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 570.53
(0 if equal to minimum elevation in previous X-sect.)

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
CITY OF RIVERVIEW	DATE	DATE	___ OF ___	HUD 2012 07

HUNTINGTON CREEK

FORM 25-0

(313) 291-5400

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

Bridge Location : R.R. BRIDGE (SECT. 2321)
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient): 1.25 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk , $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge:

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 6.3 x 39.4 = 248.22 W_p = 2(39.4+6.3) = 91.4'

$R = A/W_p = \frac{248.22}{91.4} = 2.72$ $R^{4/3} = 3.78$ $L = 13'$

n (composite) = 2(39)(0.035) + 6.3(2)(0.014) / 91.4 = 0.032

$K_f = 29.1 \times (0.032)^2 \times 13 / 3.78 = 0.10$

K_e = side or slope-tapered inlet = 0.20 — ~~graphs from DNR per letter dated~~

K_p = 0 if bridge has no intermediate piers — ~~Hydraulics of Bridge Waterways Bureau of Public Roads 1960, pg. 10~~

use

~~$J = \frac{A_p = \text{Pier area}}{A_{nz} = \text{water x-section area}}$ = $K_p = 0.05$ if there are intermediate piers~~

~~M = Bridge opening ratio =~~

~~$K_p = \Delta K\ \sigma =$~~

HEC-2 manual

Fig. 7 pg 10

2. XKOR = 1 + 0.10 + 0.20 + 0.05 = ~~1.35~~ use 1.5
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 39.4
6. BWP = total width of obstruction = 2.2 — field data
7. BAREA = bridge opening inc. piers = 234.08
8. SS = side slope = 0
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 571.78
(0 if equal to minimum elevation in previous x-sect.)
10. ELCHD = Elevation of channel invert D/S side = 571.78
(0 if equal to minimum elevation in previous x-sect.)

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
CITY OF RIVERVIEW	DATE	DATE	___ OF ___	HUD • 2012 • C7

HUNTINGTON CREEK

Bridge Location: 2nd R.R. Bridge

Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient): 1.25 — HEC-2 manual

XKOR (Loss Coefficient) = 1.0 + Σk, $\Sigma k = k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge:

$k_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = ____ = ____ Wp = ____

$R = A/wp$ $R^{4/3}$ = ____ L = ____

n (composite) = ____

$k_f = 29.1 \times (\quad)^2 \times \quad / \quad =$

k_e = ____ — Hydraulic Charts for the Selection of Highway Culverts Circular No. 5 Dec. 1965 pg. 4

k_p = 0 if bridge has no intermediate piers

k_p = 0.05 if bridge has intermediate piers — HEC-2 manual

2. XKOR = 1 + .5 + + = 1.5
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 265 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers): 20
6. BWP = total width of obstruction = 2. — field data
7. BAREA = bridge opening = 59.4
8. SS = side slope = ____ (horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 571.25 (0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 571.75 (0 if equal to minimum elevation in previous X-sect.)

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner • Project • Suffix
Riverview Hydraulics	7.6.		____ OF ____	Hud • 2012 • 07
	DATE 8-1	DATE		

Bridge Location : FOR Box Culvert
Bridge Losses - SB Card

REFERENCE

1. XK (Pier Shape Coefficient): 0.0 — HEC-2 Manual

XKOR (Loss Coefficient) = 1.0 + Σk , Σk = $k_f + k_e + k_p$

where k_f = friction loss coefficient
k_e = entrance loss coefficient
k_p = loss from intermediate piers

Description of Bridge :

$K_f = 29.1\, n^2 L / R^{4/3}$ for English units

Area = 65.4 = ____ WP = 35.24
R = A/wp 1.86 $R^{4/3}$ = 2.28 L = 900.5'
n (composite) =

$K_f = 29.1 \times (0.015)^2 \times 900.5/2.28 = 2.59$

K_e = [illegible] = 0.7 — ~~graphs from DWG per letter dated~~

K_p = 0 if bridge has no intermediate piers — Hydraulics of Bridge Waterways Bureau of Public Roads P160 pg. 10 HEC-2 manual

$J = \frac{A_p = \text{Pier area}}{A_{n_2} = \text{water X-section area}}$ = use K_p = 0.05 if there are intermediate piers

M = Bridge opening ratio =

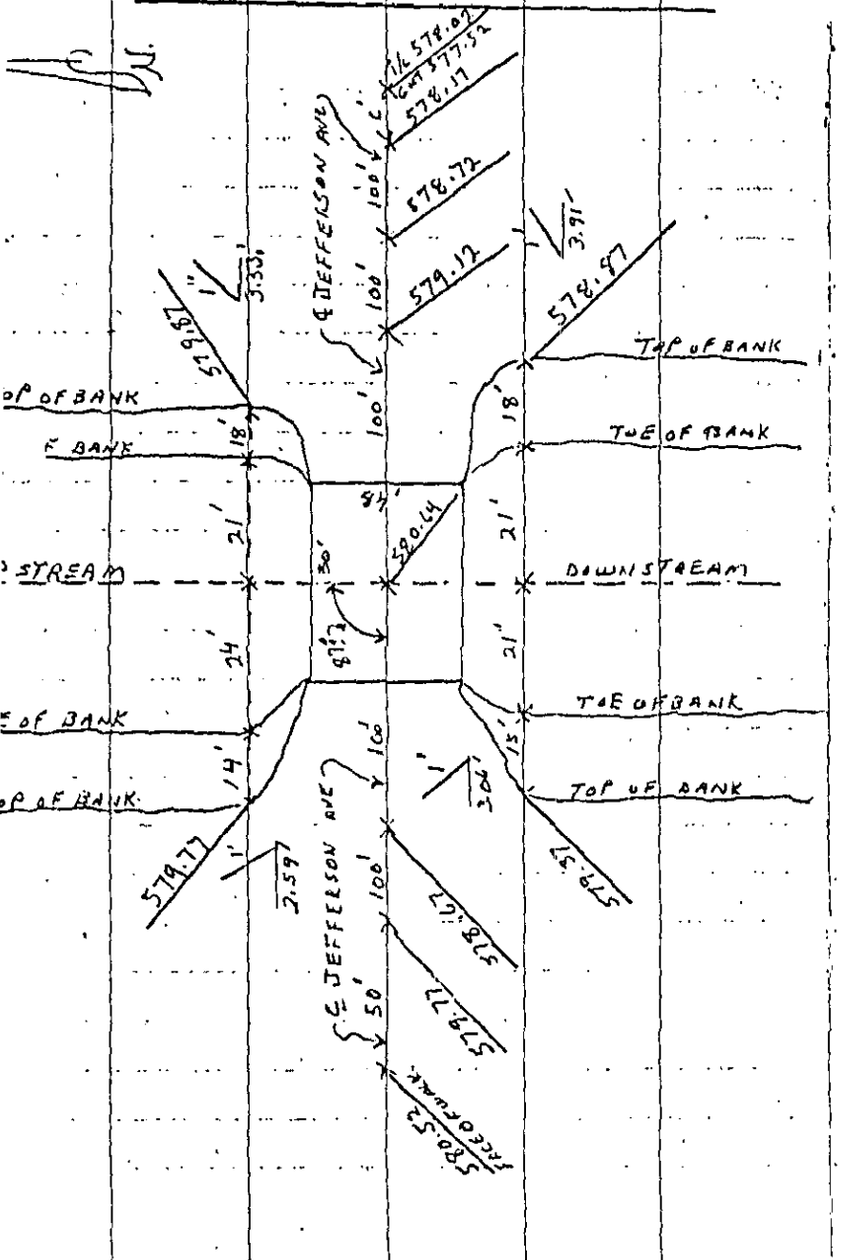
$K_p = \Delta K_o$ = — Fig. 7 pg. 10

2. XKOR = 1 + 2.59 + 0.7 + 0 = 4.29
3. COFQ = Coefficient of discharge = 3.0 — HEC-2 manual
4. RDLEN = Length of weir = 0 (0 if read off BT cards)
5. BWC = bottom width of bridge opening (inc. piers) = 13.1
6. BWP = total width of obstruction = 0 — field data
7. BAREA = bridge opening inc. piers = 65.4
8. SS = side slope = 0
(horizontal per 1 vertical unit)
9. ELCHU = Elevation of channel invert U/S side = 572.83
(0 if equal to minimum elevation in previous X-sect.)
10. ELCHD = Elevation of channel invert D/S side = 572.0
(0 if equal to minimum elevation in previous x-sect.)

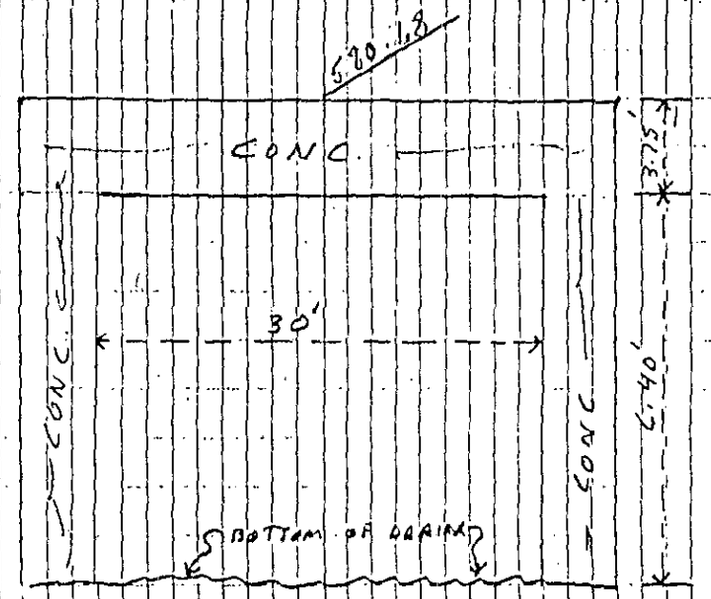
SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
CITY OF RIVERVIEW	DATE	DATE	____ OF ____	HUD 2012 07

HUNTINGTON CREEK

BRIDGE DETAIL STA. 25+46.5



BRIDGE DETAIL STA. 25+46.5



VIEW STANDING DOWNSTREAM FACING UPSTREAM

JEFFERSON AVE. BRIDGE
(SECTION 1331)

HUD 2012-05 MONGUAGON DRAIN

CONT. FROM PG. # 5

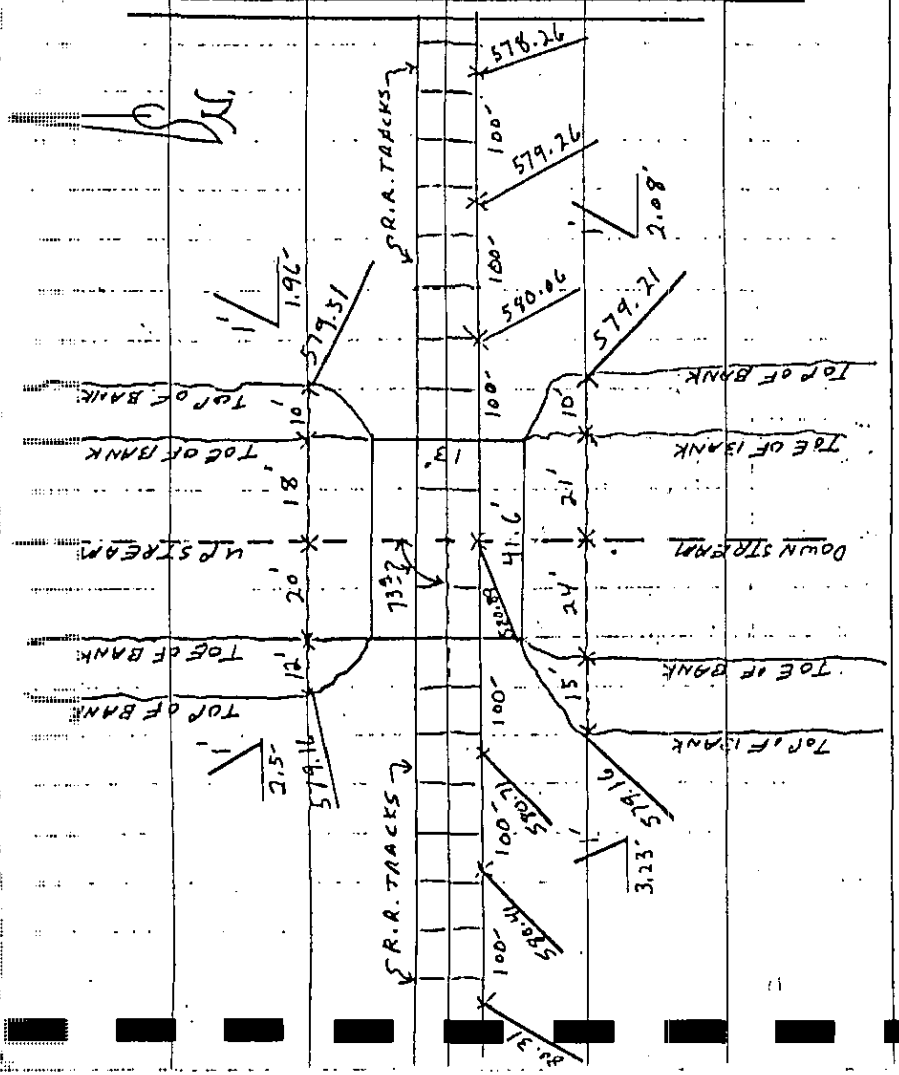
STA.	+	HI.	−	ELEV.	PLAN.
		583.50			
[illegible]			7.37	576.13	
	8.38	584.51			

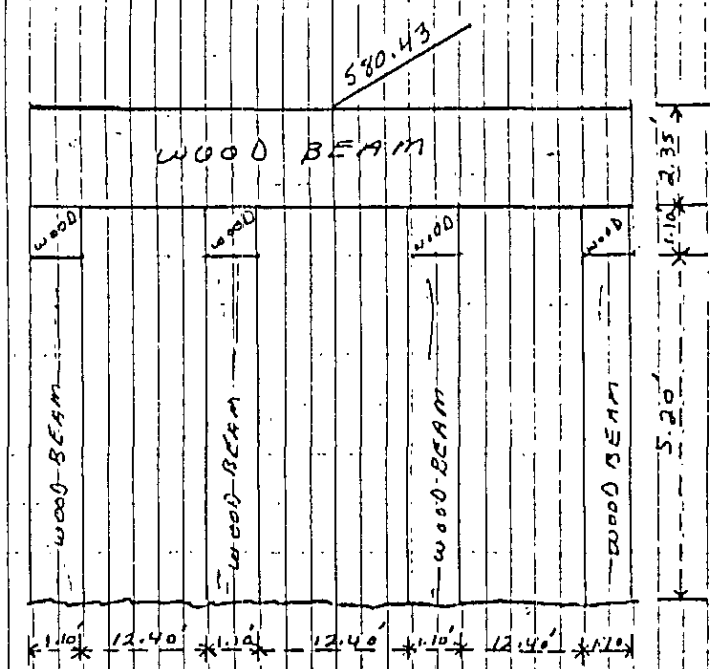
F.B. # 952 A.P. B.V. M.S. APRIL 3-1978 6.

U.S.C. & G.S. DATUM

N.W. COR. OF WEST I-BEAM AT BRIDGE STA. 13+07

BRIDGE DETAIL STA. 15+35.5





R.R. BRIDGE (SECTION 2321)

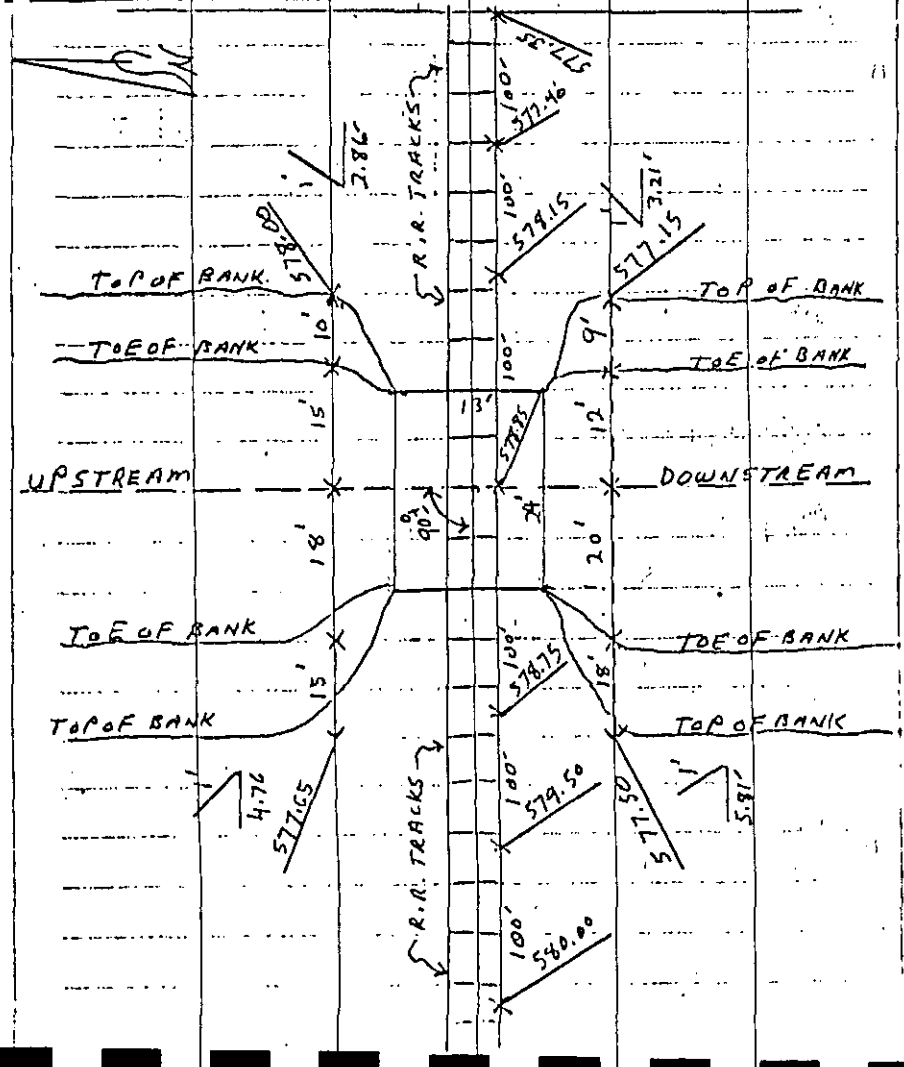
HUD 2012-05

MONGUAGON DRAIN

CONT FROM PG. # 4

STA	+	HI.	−	ELEV.	PLAN
		585.67			
T.P.			5.17	580.50	
	3.00	583.50			

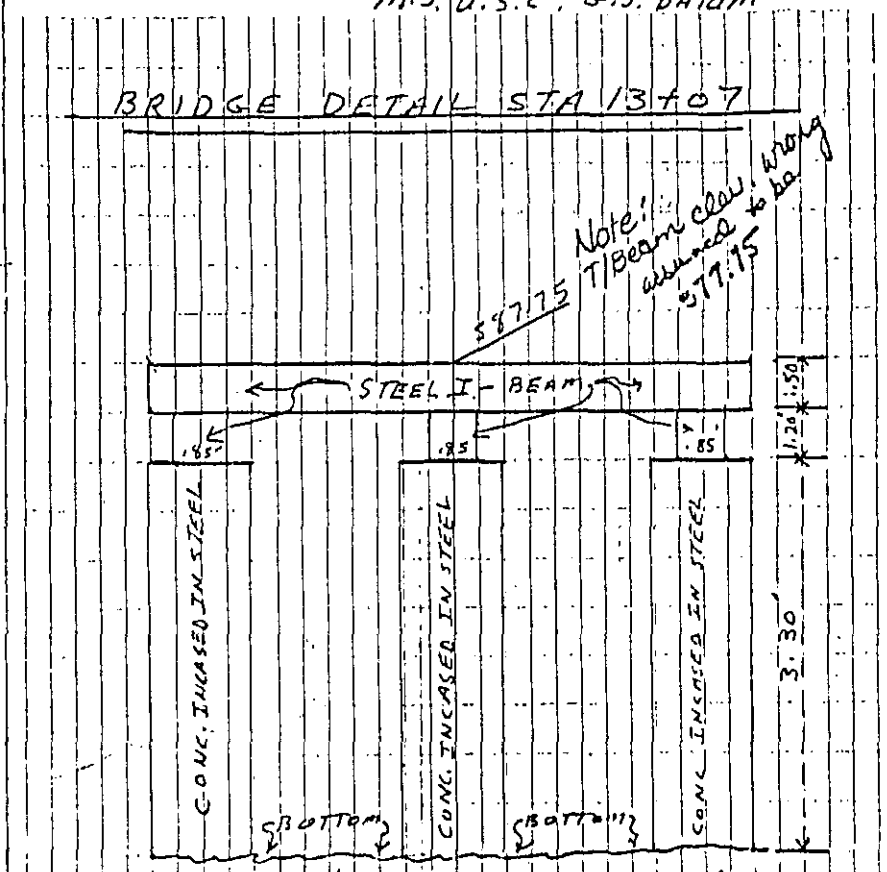
BRIDGE DETAIL AT STA. 13+07



F.A. # 952 A.P. B.V. M.S. U.S.C. & G.S. DATUM

APRIL 3-1978 5.

BRIDGE DETAIL STA 13+07



VIEW STANDING DOWNSTREAM FACING UPSTREAM

R.R. BRIDGE (SECT. 2549.5)

HUD 2012-05

MONGUAGON DRAIN

CONT. FROM PG. # 2

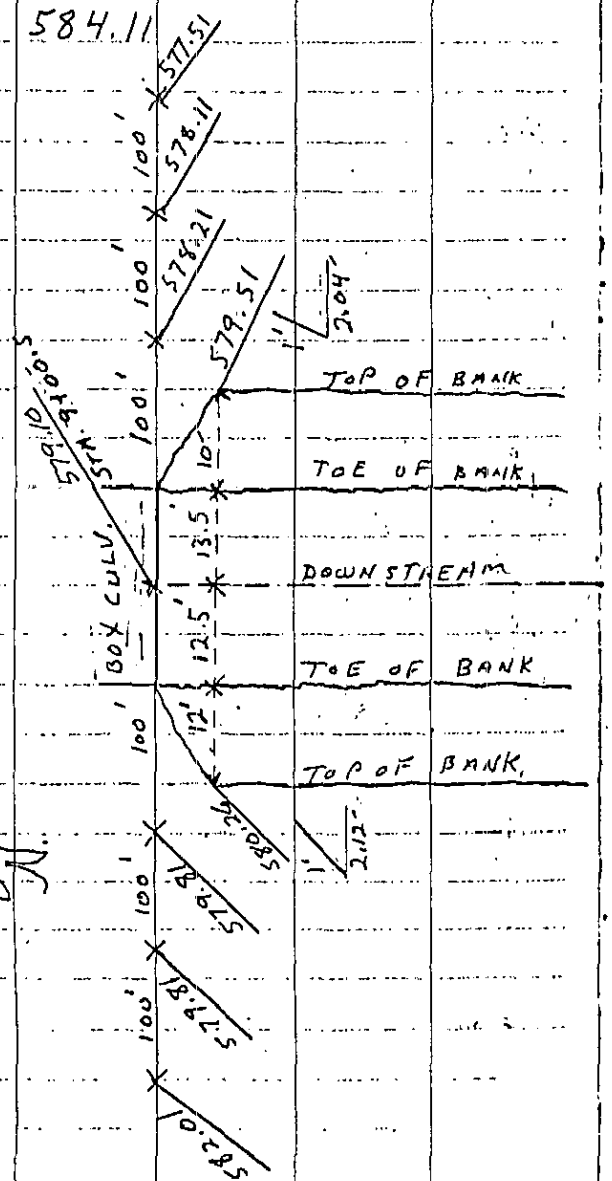
F.B. # 952

H.P. B.V. M.S. U.S.C. & G.S. DATUM

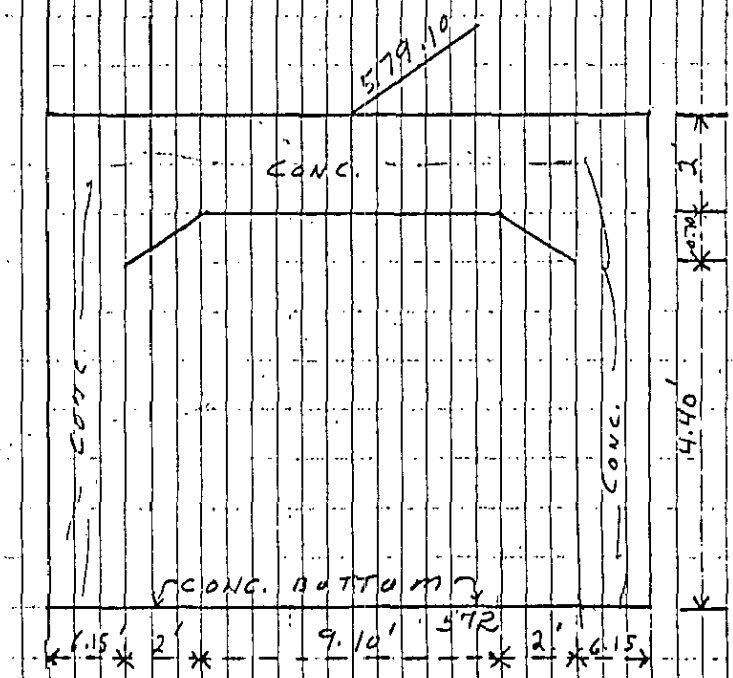
APRIL 3-1978

3.

STA.	+	HI.	−	ELEV.	PLAN.
				579.10	
	5.01	584.11			



BOX CULVER DETAIL STA. 9+00.5

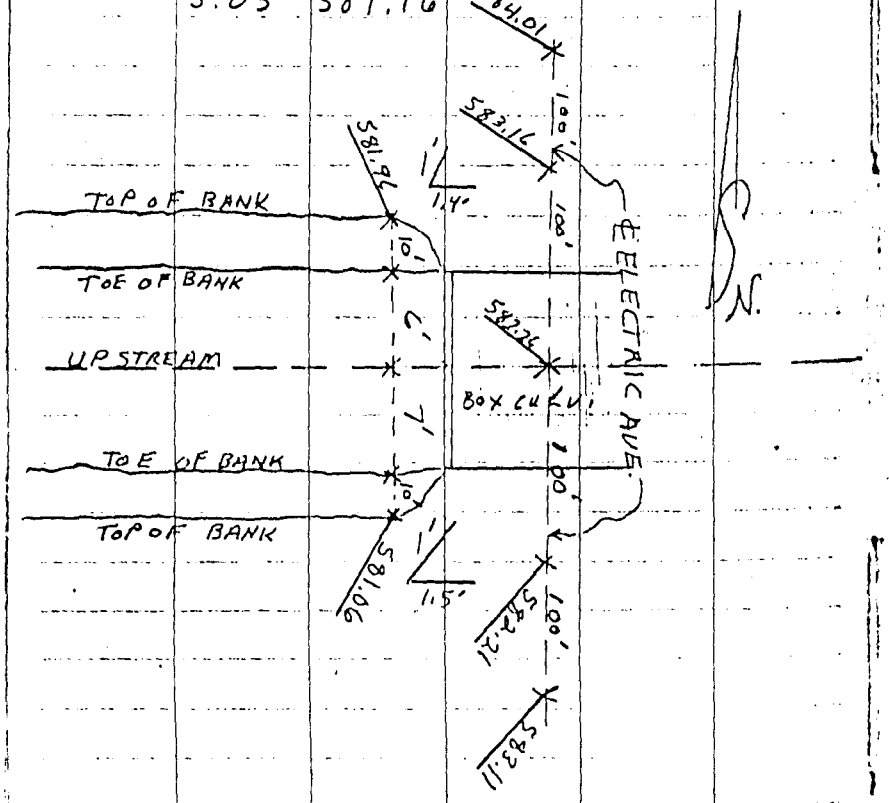


VIEW STANDING DOWNSTREAM FACING UPSTREAM

D/S END OF BOX CULVERT (SECT. 2962.5)

HUD 2012-05 DRAIN STUDY MONGUAGON DRAIN

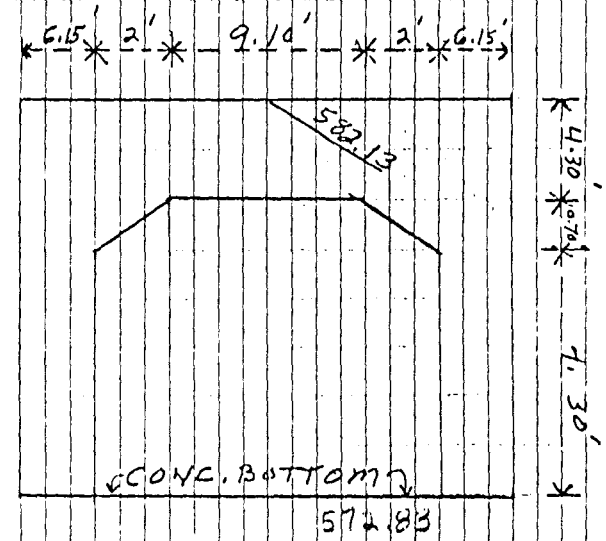
STA.	+	HI.	−	ELEV.	PLAN
(1) B.M. #52				583.94	
	4.01	587.95			
(2) B.M. #50 c.k. T.P.			4.40	583.55	583.59 ↖.04↗
	1.65	585.20			
T.P.			2.87	582.33	
	6.76	589.09			
(3) SET B.M. T.P.			6.68	582.41	
	5.05	587.46			



F.B. #952 A.P. B.V. M.S APRIL 3-1978 U.S.C. & G.S. DATUM 1.

TOP OF CURB AT ℄ BOX CULV. WEST SIDE ELECTRIC AVE.

BOX CULVER DETAIL STA 0+00



VIEW STANDING UP STREAM FACING DOWN STREAM

U/S END OF BOX CULVERT (SECT. 3863)

CITY OF RIVERVIEW, MICHIGAN

HUNTINGTON CREEK

EXHIBIT 3

Computer Printouts
HEC-2 Backwater Analysis
with
Cross Section Plots

CITY OF RIVERVIEW, MICHIGAN

HUNTINGTON CREEK

EXHIBIT 4

Stream Profile

CITY OF RIVERVIEW, MICHIGAN

RIVERVIEW SHORELINE

EXHIBIT 5

Detroit River Profile

CITY OF RIVERVIEW, MICHIGAN

HUNTINGTON CREEK

EXHIBIT 6

HEC-2 Backwater Analysis for Jefferson Avenue Diversion and Rating Curves

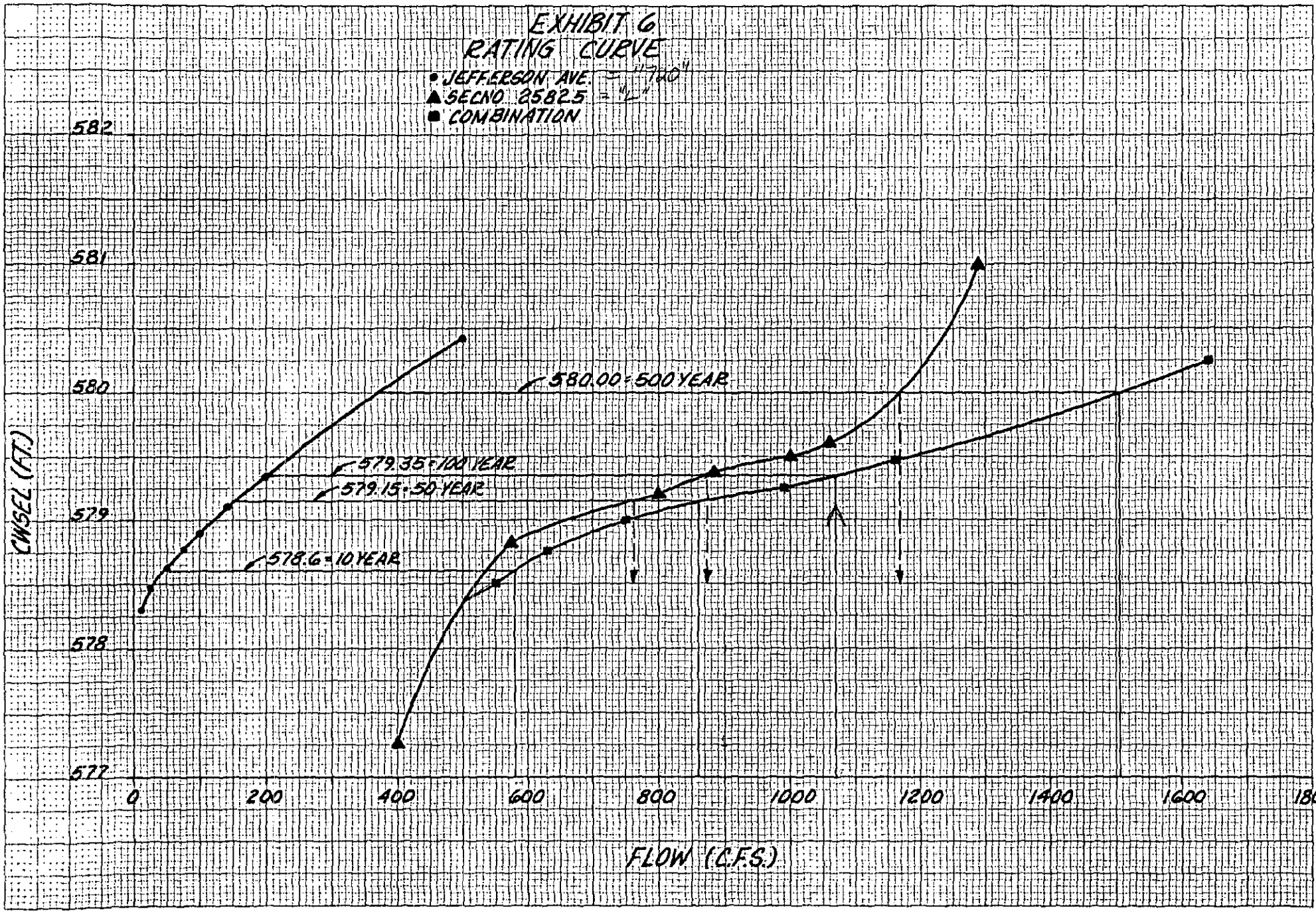


EXHIBIT G
RATING CURVE
• JEFFERSON AVE. = "M"
▲ SECNO 25825 = "L"
■ COMBINATION
582
581
580
579
578
577
580.00 = 500 YEAR
579.35 = 100 YEAR
579.15 = 50 YEAR
578.6 = 10 YEAR
CWSEL (FT.)
0
200
400
600
800
1000
1200
1400
1600
1800
FLOW (C.F.S.)

CITY OF RIVERVIEW, MICHIGAN

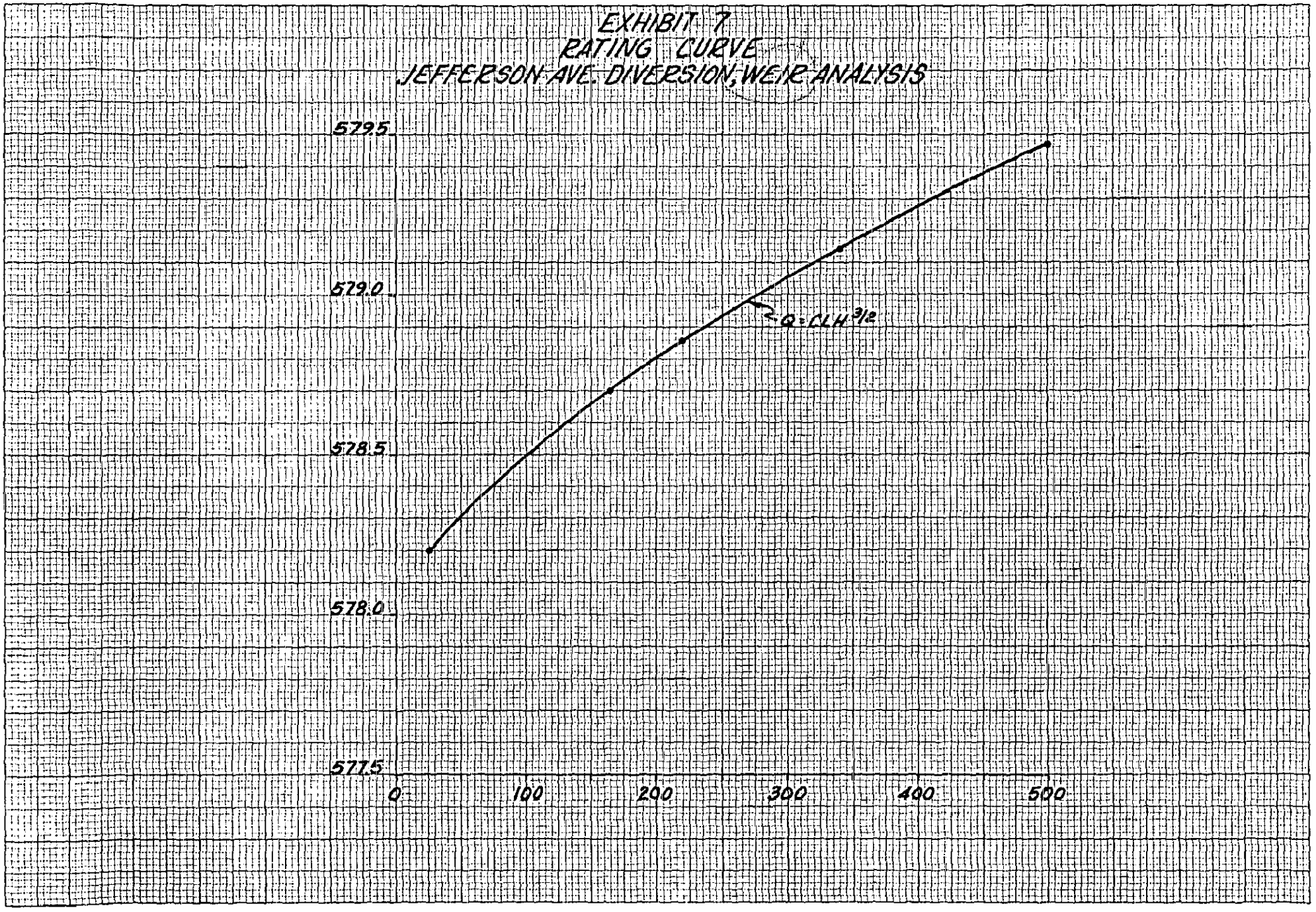
HUNTINGTON CREEK

EXHIBIT 7

Jefferson Avenue Diversion, Weir Analysis

K+E 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.

?



Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors • Community Planners
Taylor, Michigan

August 27, 1979

Michigan Department of Natural Resources
Flood Insurance and Flood Plain Delineation Unit
Water Management Division
Stevens T. Mason Building
Lansing, Michigan 48909

RECEIVED
SEP 4 1979
WATER MANAGEMENT

Attention: Mr. Dan Morgan, Chief

Re: Engineering Contract H-4542, City of Riverview
FIS Wayne County Huntington Drain

Gentlemen:

This is with reference to your comments dated August 15, 1979, regarding the possibilities of flood stage reduction caused by ponding effects upstream of Jefferson Avenue on Huntington Creek.

As discussed by telephone conversation with Suzanne Elms of your office on August 21, 1979, a flood routing analysis (see attached exhibit) was performed on the Creek. Results of this analysis indicate that the storage created by restrictive structures along the Creek will have an insignificant effect on flood stages; therefore, on this basis, we will proceed with the development of the Flood Insurance Study.

If you have any questions regarding this matter, please contact William J. Weaver of this office.

Very truly yours,

WADE, TRIM & ASSOCIATES, INC.

Glen A. Roberts

GAR:WJW:asw
HUD 2012-07
cc: Mr. Martin Gunn, Dept. of Housing & Urban Development
Washington, D.C.
Mr. Wallace Weaver, Dept. of Housing & Urban Development
Chicago, Illinois

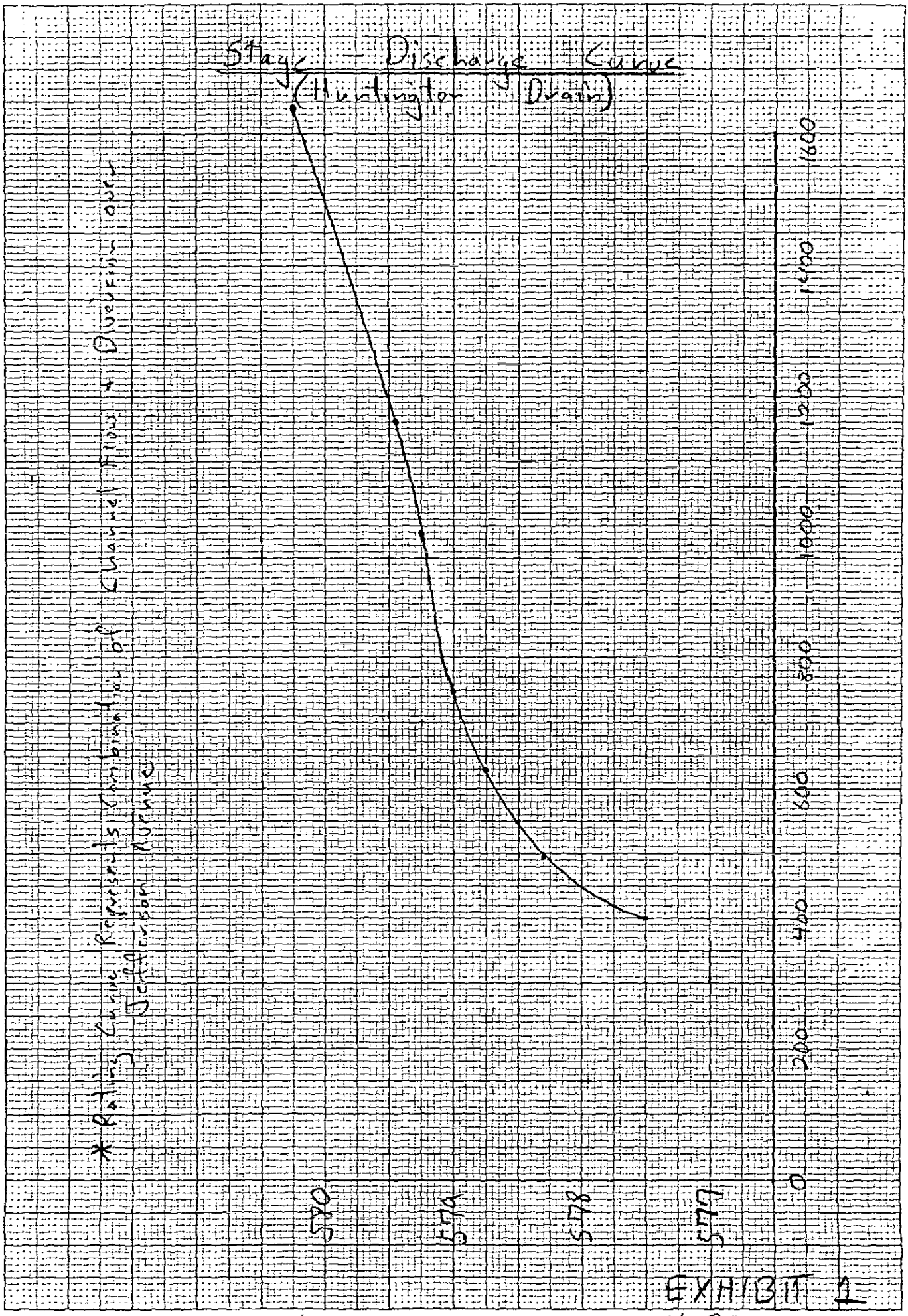


EXHIBIT 1

HUD201207
8/20/79
W.J. Weaver

Pg 1 of

K+E 10 X 10 TO ½ INCH 7 X 10 INCHES KEUFFEL & ESSER CO. MADE IN U.S.A.
46 1320

Wade, Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

REFERENCE

Storage Curve Development

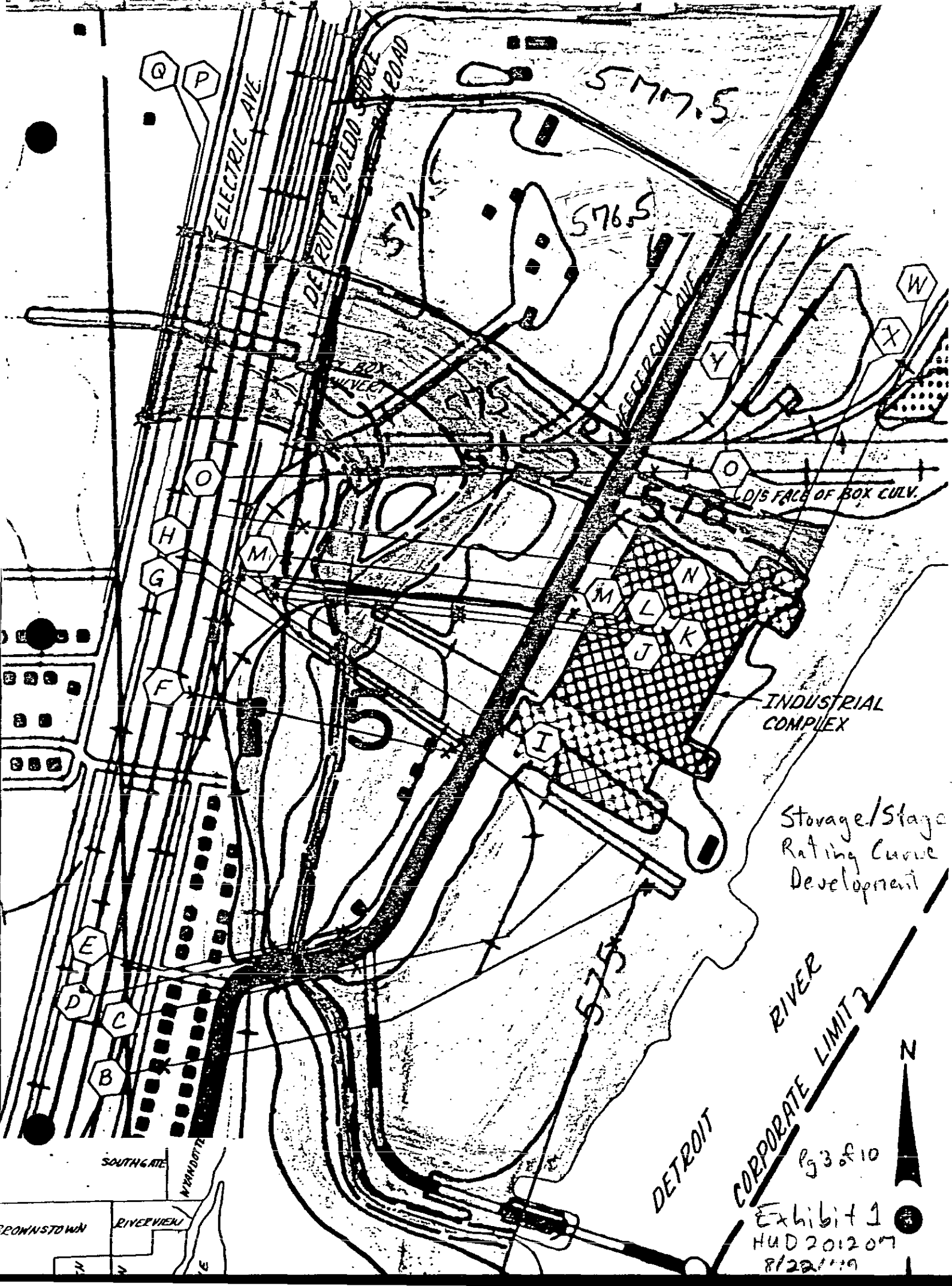
Elev. 575 to 576.5

Elev. 576.5 to 577.5

Elev. 577.5 to 580.0

Exhibit 1

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner • Project • Suffix
Riverview - Huntington Drive	W.J.W.		2 OF 10	HUD • 2012 • 05
	DATE 8/20/79	DATE		



ELECTRIC AVE.
DETROIT & TOLEDO SHORE RAILROAD
5MM.5
576.5
575
BOX CULVERT
JEFFERSON AVE.
D/S FACE OF BOX CULV.
INDUSTRIAL COMPLEX
Storage/Stage Rating Curve Development
DETROIT RIVER
CORPORATE LIMIT
N
SOUTHGATE
WYANDOTTE
BROWNSTOWN
RIVERVIEW
Pg 3 of 10
Exhibit 1
HUD 201207
8/22/19

REFERENCE

Stage Storage Curve (Huntington Drain)

Storage @ Elevation 575.0 = 0

Elev. 575 to 576.5:

Area = 19.74 acres (From Digitizer)
Depth = 1.5 ft. = 18 in.
∴ Storage = 355.3 acre-in. ≈ 355.3 cfs-hr.

Elev. 576.5 to 577.5:

Add'l Area = 22.34 acres
Depth = 1.0 ft = 12 inches
Add'l Storage = 268.1 acre-inches
Total Storage =

355.3 + (268.1) + (19.74)12

∴ Total Stor. = 860.3 acre-in ≈ 860.3 cfs-hr.

Elev. 577.5 to 580:

Area = 13.72 acres
Depth = 2.5 ft = 30 inches
Add'l Storage = 411.6 acre-in.

∴ Tot. Storage = 411.6 + 860.3 + 30(22.34) + 30(19.74)

∴ Total Storage = 2534 acre-in ≈ cfs-hr

Exhibit 1

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner • Project • Suffix
Riverview - Huntington Dr.	W J Weaver		4 OF 10	HUD • 2012 • 07
	DATE 5/20/79	DATE		

Stage Storage Curve

(Huntington Drain)

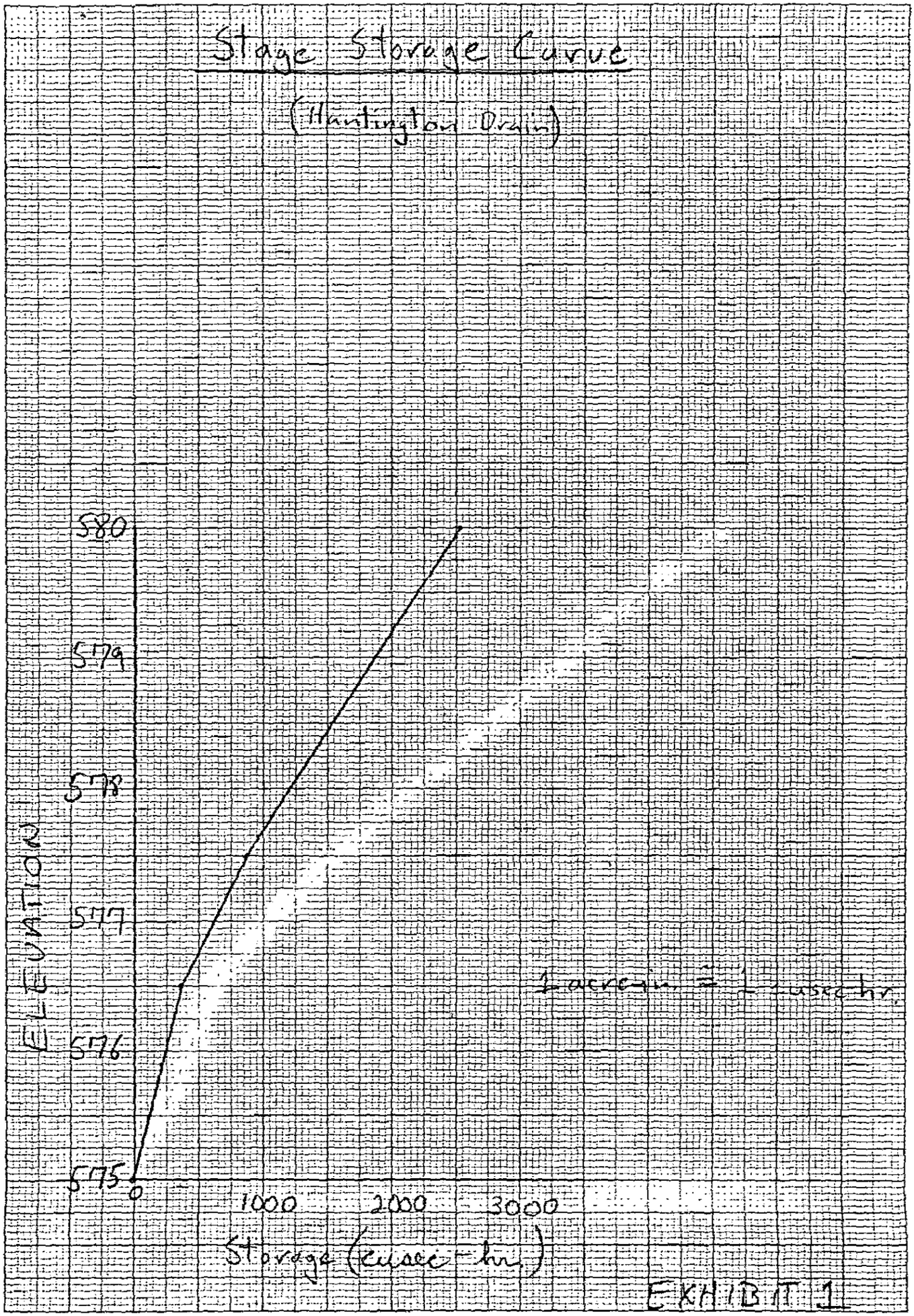


EXHIBIT 1

HUD 2012 07
8/20/07
WJ Weaver

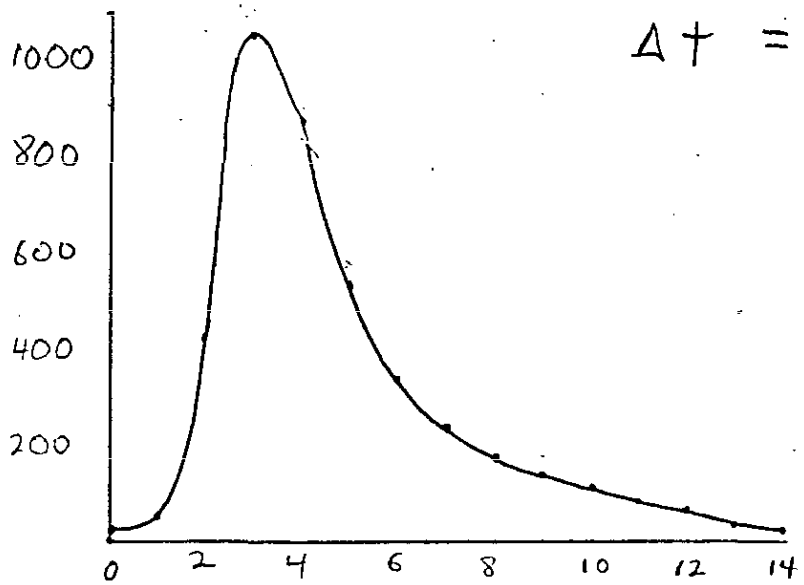
46 1320
K&E 10 X 10 TO M INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

REFERENCE

Inflow Hydrograph

100 YR. storm (1060 cfs)

Time (hrs.)	Discharge
0	25
1	52
2	430
3	1060
4	875
5	535
6	340
7	250
8	190
9	150
10	115
11	90
12	65
13	45
14	25



$\Delta t = 1$ hr.

Exhibit 1

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner · Project · Suffix
Riverview	W J. Weaver		6 OF 10	1140 • 2012 • 07
	DATE 8/20/79	DATE		

REFERENCE

Routing Curve Calculation — 100 YR. STORM

$\Delta t = 1.0$ hr.

Discharge cfs	Storage cusec-hr.	$2s/\Delta t - O$	$2s/\Delta t + O$
400	860	1320	2120
500	1400	2300	3300
600	1680	2760	3960
700	1820	2940	4340
800	1920	3040	4640
900	1975	3050	4850
1000	2050	3100	5100
1100	2120	3140	5340
1200	2200	3200	5600
1300	2320	3340	5940
1400	2440	3480	6280
1500	2535	3570	6570

EXHIBIT 1

FLOOD ROUTING CURVES

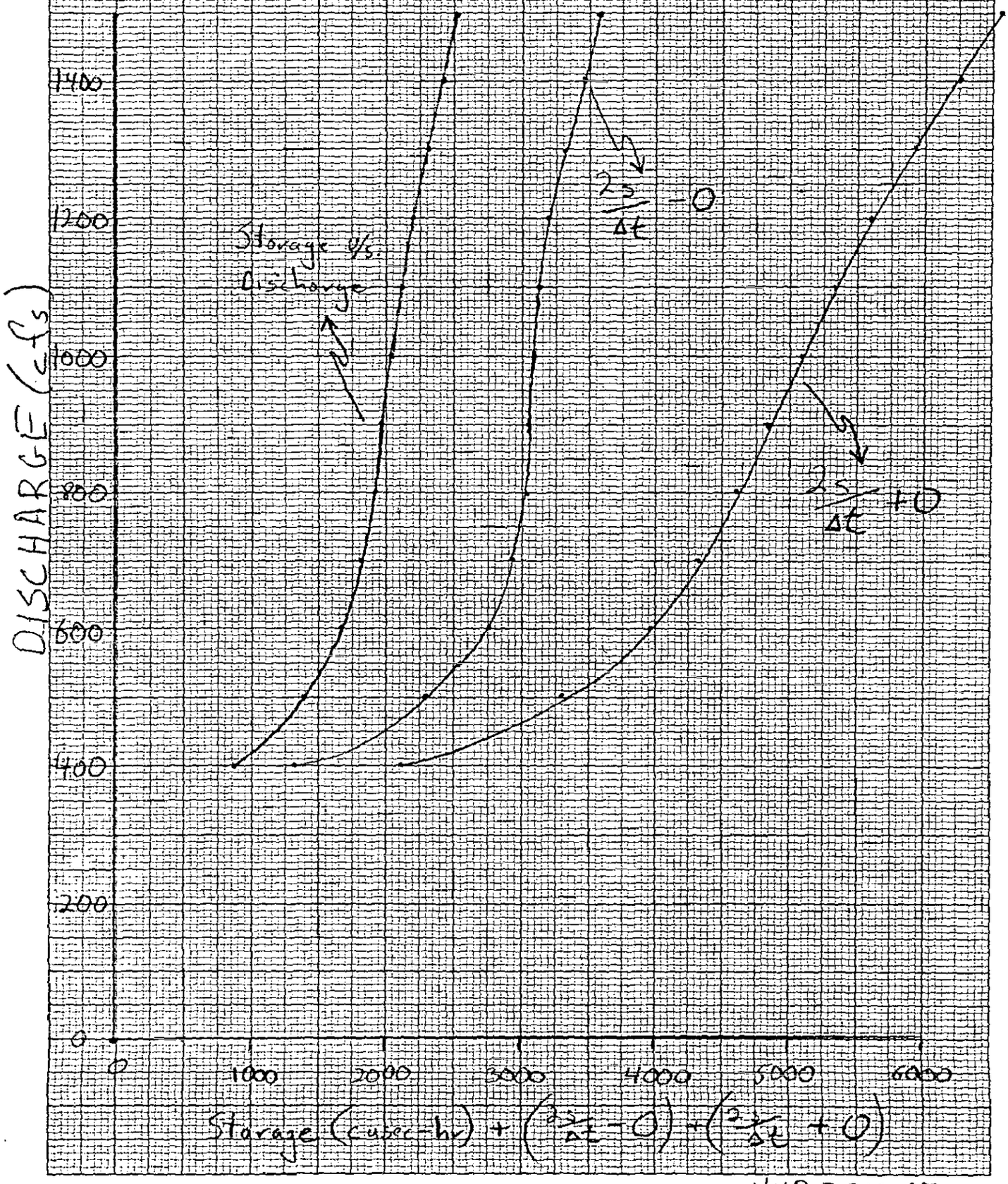


EXHIBIT 1

HUD 2012 07
8/20/79
W.T. Weaver

Pg 8 of 1

46 1320
K+E 10 X 10 TO ½ INCH 7 X 10 INCHES KEUFFEL & ESSER CO. MADE IN U.S.A.

Wade Trim & Associates, Inc.
Civil Engineers • Land Surveyors
WORK SHEET

25185 GODDARD ROAD
TAYLOR, MICHIGAN 48180

REFERENCE

FLOOD ROUTING CALCULATION

$$I_1 + I_2 + \frac{2S_1}{\Delta t} - O_1 = \frac{2S_2}{\Delta t} + O_2$$

HOUR	Inflow (cfs) 100 YR STORM	$\frac{2S}{\Delta t} - O$ (cubic-hr)	$\frac{2S}{\Delta t} + O$ (cubic-hr)	Outflow (cfs)
0	25	—	—	25
1	52	—	—	52
2	430	1800	2630	200
3	1060	3100	4360	700
4	875	3050	4625	800
5	535	2470	3805	570
6	340	—	—	
7	250			
8	190			
9	150			
10	115			
11	90			
12	65			
13	45			
14	25			

Exhibit 1

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner Project Suffix
Riverview	WJ Weaver		9 OF 10	HUD • 2012 • 07
	DATE 8/20/79	DATE		

REFERENCE

Conclusion

Results of the flood routing Analysis indicate that the 100 yr. discharge will be reduced from 1060 cfs to 800 cfs. This reduction in flow translates to a .25 feet reduction in the 100 yr. flood stage. Since much of the areas considered to act as storage are remote from the channel and subject to future development, these areas may not be available for storage in the future.

Therefore, flood stage reduction caused by ponding u/s of Jefferson Avenue will be insignificant — and will be ignored in the development of flood profiles.

* Note: Elevations used for the storage/stage curve are conservative. Elevations at the chemical plant located north of the stream vary between 578 and 579; thus effects of storage will probably be even less than shown in the calculations.

Exhibit 1

SUBJECT	BY	CHK.	SHEET NO.	File Code No. (Job No.) Owner • Project • Suffix
Riverview – Huntington Drain	WJ. Wenzler		10 OF 10	HUD • 2012 • 07
	DATE 8/07/79	DATE		

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CODE = 01
  MODIFICATION = 30.31.52
*****************************************************

C
T1  CITY OF RIVERVIEW FIS 100 2012-27 CONDITION DETAIL FOR MODEL TO CLOSE THE GAP
T2 12 YEAR FLOOD
T3     DOWNTOWN DR. RIVERVIEW
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     S         WSEL      FQ
        0.        2.        0.          0.000000    0.0       1.0       0.      277.700     0.010
J2  NPROF     IPLOT     PRFNS     XSECW     SECHI     FACT      SLOC      ZRO       CHNIM     ITRACE
      1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
J3  ENCROACHABLE CODES FOR SECTION FIXED-TEXT
    150.500   307.020     3.570     0.000     1.210     0.000     1.000     0.000     3.120     0.000
J5  LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS********
      0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
NC    3.300   585.300   705.000   970.630   650.200   140.220     0.050     0.050     0.050     0.050
ET    3.500     3.530     0.000     3.230     3.410     3.870     0.010     0.010     0.010     0.010
NC    0.070     0.080     0.035     0.100     0.300     1.000     0.300     0.000     0.000     0.000

          VALLEY SECTION BASED ON FIELD DATA

X1    0.000    26.000  1034.500  1069.550     0.000     0.000     0.000     0.000     0.000     0.000
X3    0.000     0.000     0.000   700.000   590.000  1500.000   593.000     0.000     0.000     0.000
GR  590.000     0.000   578.000     1.000   575.000    50.000   577.000   600.000   575.500   900.000
GR  584.240   950.000   583.650   968.000   577.000   983.000   577.000   999.000   577.000  1015.000
GR  577.200  1024.000   573.400  1034.500   569.800  1052.000   575.150  1064.500   578.300  1080.000
GR  592.330  1112.000   592.350  1512.000   582.000  1542.000   540.000  1792.000   581.000  1842.000
GR  580.000  1900.000   585.000  2050.000   592.000  2070.000   593.300  2100.000   586.000  2120.500
GR  590.000  2240.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

          X-SECTION D/S OF JEFFERSON AVE.BASED ON FIELD DATA + FOLD MAP

X1  1101.500    14.000  1151.000  1193.000  1101.500  1101.500  1101.500     0.000     0.000     0.000
X3    0.000     0.000     0.000   900.000   590.000  1500.000   590.000     0.000     0.000     0.000
GR  590.000     0.000   578.000     1.000   575.000    50.000   581.000  1000.000   578.870  1133.000
GR  570.500  1151.000   570.400  1172.000   570.500  1193.000   579.370  1208.000   580.090  1508.000
GR  590.000  1553.000   590.000  1560.000   583.000  1567.000   585.000  1588.000     0.000     0.000
NC    0.060     0.060     0.035     0.300     0.500     2.000     0.000     0.000     0.000     0.000
ET    0.000     0.000     0.000     0.000     9.100     0.000     0.000     0.000  1060.000  1335.000

          D/S FACE JEFFERSON AVE. BRIDGE

X1  1101.500    11.000  1165.000  1215.000   200.000   200.000   200.000     0.000     0.000     0.000
X3    10.000     0.000     0.000     0.000     1.000     1.000     0.000   570.300   570.305     0.000
GR  590.000  1160.000   570.400  1160.000   576.270  1161.000   575.870  1179.000   570.231  1185.000
GR  570.530  1200.000   570.400  1215.000   574.370  1221.000   579.370  1234.000   580.030  1335.000
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FORM 1411.08 PRINTED BY ROTARY MANIFOLD FORMS.
PRINTED IN

GR	562.000	635.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	1.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

U/S FACE JEFFERSON AVE. BRIDGE

X1	1555.000	0.000	1047.000	1077.000	0.000	54.000	44.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	576.930	580.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	580.000	580.000	0.000
BT	0.000	953.000	590.000	0.000	953.000	580.000	0.000	1047.000	580.660	0.000
BT	1047.000	580.680	576.930	1077.000	580.680	576.930	1077.000	580.660	0.000	1160.000
BT	580.000	0.000	580.000	580.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	578.000	953.000	579.500	0.000	579.870	1025.000	580.000	1047.000	580.660	1562.000
BR	575.000	1077.000	579.770	1085.000	580.000	1160.000	580.000	1160.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

RESERVED 27' OF JEFFERSON AVE. SECTION 1555.0 REPEATED

X1	1435.000	13.000	1047.000	1077.000	55.000	54.000	44.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	955.000	590.000	145.000	590.000	0.000	0.000	0.000
GR	590.000	0.000	577.000	1.000	578.000	25.000	577.000	10.000	578.000	760.000
GR	579.000	1023.500	579.000	1047.000	579.500	1062.000	579.000	1077.000	579.770	1100.000
BT	580.000	1100.000	579.000	1100.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

XSECTION D/S OF 1ST RAILROAD BRIDGE BASED ON FIELD BOOK AND QUAD MAP

X1	2421.000	15.000	606.000	644.000	580.000	580.000	580.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	575.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	579.000	1.000	579.250	525.000	579.350	594.000	571.800	604.000
BT	571.780	620.000	571.800	636.000	579.160	639.000	580.000	665.000	590.000	665.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

D/S FACE 1ST RAILROAD BRIDGE FIELD BOOK SECTION 1595.0

X1	2521.000	15.000	605.100	644.500	200.000	200.000	290.500	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	578.260	580.000	0.000
GR	590.000	225.000	590.000	435.000	578.860	435.000	579.350	594.000	571.800	604.000
BT	571.780	585.100	571.750	617.500	571.750	617.500	631.000	571.780	571.780	632.100
BR	571.780	644.300	571.800	644.500	579.160	644.500	720.000	725.000	590.000	725.000
SD	1.250	1.500	3.000	0.000	37.400	2.200	434.000	0.000	571.780	571.780

U/S FACE FIRST RAILROAD BRIDGE

X1	2334.000	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.300	1.000	571.000	579.280	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	578.300	580.000	0.000
BT	17.000	225.000	590.000	0.000	475.000	590.000	0.000	475.000	578.860	0.000
BT	605.100	580.800	0.000	605.100	580.800	578.000	617.500	580.800	578.030	617.500
BT	580.000	0.000	618.000	580.000	0.000	618.000	580.000	578.000	0.000	580.000
BT	578.080	631.000	580.810	0.000	632.100	618.000	0.000	632.100	580.000	578.000
BT	664.500	580.000	578.080	664.500	580.800	0.000	681.000	580.000	0.000	681.000
BT	590.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.080	0.080	0.035	0.300	0.500	0.000	0.000	0.000	0.000	0.000

XSECTION BETWEEN 1ST AND SECOND RAILROAD BRIDGES

X1	2434.000	12.000	613.000	645.000	580.000	580.000	702.000	0.000	0.000	0.000
X3	0.000	0.000	0.300	5			720.000	0.000	0.000	0.000

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S1	590.000	0.000	579.300	0.500	579.000	200.00	577.230	0.300	576.000	500.000
S1	574.400	675.000	571.200	0		400.000	576.300	667.300	576.000	375.000
GR	581.000	1075.300	580.300	1075.300	0.000	0.000	0.300	0.300	0.000	0.000

D/S FACE 4TH TRACK BRIDGE FIELD BOOK SECTION 1007

X1	2550.000	0.300	180.300	200.300	115.300	115.000	115.300	0.300	0.000	0.000
X3	10.000	0.300	0.300	0.300	0.300	0.000	0.000	577.000	577.000	0.000
S1	585.000	22.000	578.800	22.000	577.200	100.000	571.750	180.000	571.750	200.000
GR	577.500	220.000	576.300	297.000	585.000	297.000	0.000	0.000	0.000	0.000
S1	1.250	1.300	3.300	255.300	47.700	0.000	59.300	0.000	571.750	57.750

D/S FACE SECOND RAILROAD BRIDGE

X1	2563.000	0.000	0.000	0.000	15.000	13.000	13.000	0.000	0.000	0.000
X2	2.000	0.000	1.000	575.250	574.300	0.000	0.000	0.000	0.000	0.000
X3	15.000	0.000	0.000	0.000	0.000	0.000	0.000	577.000	575.300	0.000
S1	0.000	0.000	0.015	0.300	0.300	0.000	0.000	0.000	0.000	0.000
ET	0.000	7.100	0.000	0.000	0.000	0.000	720.000	730.000	0.000	0.000

R.R.SECTION D/S OF 2ND RAILROAD BRIDGE COMPLETED

X1	2562.500	13.000	730.000	775.000	80.000	80.000	80.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	562.000	0.000	967.000	0.000	0.000	0.000	0.000
S1	590.000	0.000	579.000	1.000	579.000	300.000	578.570	320.000	576.870	620.000
GR	577.770	720.000	574.270	730.000	571.970	750.000	574.170	775.000	577.970	782.000
S1	576.670	782.000	580.670	784.000	580.070	955.000	0.000	0.000	0.000	0.000
SC	0.000	0.000	0.035	0.100	0.300	0.300	0.000	0.000	0.000	1.000
N1	5.000	0.000	575.000	0.035	597.000	0.300	750.000	0.035	572.000	0.000
NH	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D/S OF BRANCH SPLIT

X1	2662.500	16.000	750.000	772.000	80.000	80.000	80.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	490.000	0.000	950.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	578.000	1.000	578.000	400.000	578.600	520.000	578.000	660.000
GR	574.300	675.000	572.000	687.000	574.370	690.000	579.000	710.000	579.000	757.000
GR	576.370	750.000	572.000	751.000	575.170	772.000	578.000	784.000	580.000	950.000
GR	590.000	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N1	5.000	0.000	577.000	0.035	577.000	0.000	708.000	0.035	319.000	0.000
NH	950.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X-SECTION D/S OF 10'X CULVERT

X1	2762.500	15.000	780.000	810.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	430.000	0.000	950.000	0.000	0.000	0.000	0.000
GR	590.000	0.000	578.000	1.000	577.800	572.000	574.170	577.000	572.000	579.500
GR	574.200	587.000	582.000	607.000	582.300	650.000	582.000	775.000	574.400	788.000
S1	572.000	799.000	574.300	810.000	577.100	822.000	950.000	950.000	590.000	950.000
SC	0.000	0.000	0.000	0.300	0.500	0.300	0.000	0.300	0.000	0.000
N1	5.000	0.000	585.000	0.035	600.000	0.000	986.450	0.013	999.550	0.000
NH	1050.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GT	5.000	575.000	885.000	1060.000	1060.000	1460.000	0.000	0.000	0.000	0.000

D/S FACE OF CULVERT FIELD BOOK NO. 902.5

STATIONS 3110 35703 HAVE BENDS. LOSSES AT THEM CALC. BY HAND & ON X2

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FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

X1	3962.500	15.000	946.450	999.550	200.000	300.000	200.000	0.000	0.000	0.000
X2	10.000	0.000	0.000	0.000	0.000	0.000	0.000	577.100	577.100	0.000
X3	590.000	0.000	570.000	0.000	575.000	570.000	574.330	583.000	572.000	592.500
GR	574.300	630.000	583.000	620.000	561.000	970.000	574.650	980.000	572.000	946.450
GR	572.000	999.550	574.600	1006.000	500.250	1018.000	300.000	1050.000	590.000	1030.000
[illegible]	0.000	[illegible]	0.000	0.000	[illegible]	0.000	[illegible]	0.000	[illegible]	[illegible]
NC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

U/S FACE OF CULVERT AT ELECTRIC AVE. FIELD BOOK NO. [illegible]

X1	3853.000	1.000	323.550	323.550	900.000	901.000	900.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	577.830	583.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	583.000	583.000	0.000
BT	8.000	0.000	590.000	0.000	0.000	583.000	0.000	323.450	583.000	0.000
BT	323.450	583.000	577.830	336.550	583.000	577.830	336.550	583.000	0.000	660.000
BT	583.000	0.000	660.000	590.000	0.000	0.000	0.000	0.000	0.000	0.000
[illegible]	590.000	0.000	580.000	0.000	590.000	[illegible]	[illegible]	574.000	574.000	323.450
[illegible]	572.000	330.000	574.390	336.550	581.960	336.550	520.000	370.000	561.000	660.000
[illegible]	590.000	660.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

UEND LOSSES IN CULVERT

X1	3862.100	0.000	0.000	0.000	0.010	0.000	0.010	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	583.000	583.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

FORM 1411-GB-PRINTED BY ROTARY MANIFOLD FORMS.

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*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR - 0.
  MODIFICATION - 50,51,52
*****************************************************

T1  CITY OF RIVERVIEW FIS HUD 2012-37 HUNTINGTON DRAIN FROM SOUTH TO ELECTRIC RD
T2 50 YEAR FLOOD
T3      HUNTINGTON DR, RIVERVIEW

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        USEL     FQ

      0.       3.       0.       0.  0.000000     0.00      0.0      0.   574.900    0.000

J2  NPROF    IPLOT    PRFVS    XSECV    XRCL     [illegible]   [illegible]   [illegible]   [illegible]   [illegible]

    2.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
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*****************************************************
  HEC2 RELEASE DATED NOV 75 UPDATED FEB 1977
  ERROR YEAR -  01
  MODIFICATION -  50,31,32
*****************************************************

T1  CITY OF RIVERVIEW FIS HUD 2012-07 HUNTINGTON DRAIN FROM MOUTH TO ELECTRIC RD
T2        100 YEAR FLOW
T3        HUNTINGTON DR. RIVERVIEW

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FN
       0.        4.        0.        0.  0.000000      0.00      0.0        0.   574.900     0.000

J2  NPROF     IPLOT     PRTVS     XSECV     XSECH     FN        ALLEG     IBW       CHMIN     ITRACE
     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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FORM 1411-GB-PRINTED BY ROTARY MANIFOLD FORMS.

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*****************************************************
  HEC2 RELEASE DATED NOV 75 UPDATED FEB 1977
  ERROR CODE - 01
  MODIFICATION - 50,31,32
*****************************************************

T1  CITY OF RIVERVIEW FIS HUD 2012-07 HUNTINGTON DRAIN FROM MOUTH TO ELECTRIC RD
  2 500 YEAR FLOOD
T5      HUNTINGTON DR. RIVERVIEW

J1  ICHECK    INQ      NINV     ODIN     STRT     METRIC   HVAVG    Q        WSEL     FL
       0.       6.       0.       0.  0.000000     0.00      0.0       0.  574.900    0.000

J2  NPROF    NPLOT    PRFVS    XSEQV    XSCOH     [illegible]   ALLDC    IPC      CHAIN    ITRACE
     15.000    0.000   -1.000    0.000    0.000    0.000    0.000    0.000    0.000    0.000
```

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****

MESS DEGASC DATED NOV 76 UPDATED FEB 1977

SECTION CODE = 01

MODIFICATION = 50,51,52

****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

HOTSHOT- LR, TIVE(V53P)

SUMMARY PRINTOUT TABLE 15C

0.000	0.00	0.00	0.00	569.83	535.00	574.90	0.00	575.27	50.09	4.66	112.76	97.53
0.000	0.00	0.00	0.00	569.83	725.00	574.90	0.00	575.50	55.25	6.62	112.76	97.53
0.000	0.00	0.00	0.00	569.83	860.00	574.90	0.00	575.65	77.75	7.85	192.76	97.53
* 0.000	0.00	0.00	0.00	569.83	1140.00	575.02	0.00	575.58	20.11	10.01	192.76	104.03
1101.500	1101.50	0.00	0.00	570.40	535.00	575.97	0.00	576.00	7.71	2.17	287.46	325.34
1101.500	1101.50	0.00	0.00	570.40	725.00	576.34	0.00	576.42	5.31	2.65	326.47	366.95
1101.500	1101.50	0.00	0.00	570.40	860.00	576.95	0.00	577.07	5.08	2.91	353.33	436.79
1101.500	1101.50	0.00	0.00	570.40	1140.00	577.08	0.00	576.04	4.29	3.35	416.50	550.43
1301.500	200.00	0.00	0.00	570.53	535.00	576.42	0.00	576.13	6.72	3.31	191.95	208.27
1301.500	200.00	0.00	0.00	570.53	725.00	576.95	0.00	576.30	8.06	4.05	170.33	263.64
1301.500	200.00	0.00	0.00	570.53	860.00	576.97	0.00	577.29	9.94	4.46	191.90	272.78
1301.500	200.00	0.00	0.00	570.53	1140.00	577.82	0.00	578.30	11.45	5.21	216.83	336.85
1385.500	84.00	580.00	576.93	570.53	535.00	576.21	0.00	576.18	8.42	3.27	163.73	211.17
1385.500	84.00	580.00	576.93	570.53	725.00	576.55	0.00	576.58	8.10	3.96	182.22	250.54
1385.500	84.00	580.00	576.93	570.53	860.00	577.46	0.00	577.29	7.89	4.17	209.17	316.20
1385.500	84.00	580.00	576.93	570.53	1140.00	579.84	0.00	579.17	7.66	4.59	268.24	411.77
1435.500	50.00	0.00	0.00	570.53	535.00	576.12	0.00	576.23	4.63	2.67	243.44	248.63
1435.500	50.00	0.00	0.00	570.53	725.00	576.47	0.00	576.56	5.72	3.43	282.34	303.11
1435.500	50.00	0.00	0.00	570.53	860.00	577.08	0.00	577.27	5.14	3.93	334.53	379.29
1435.500	50.00	0.00	0.00	570.53	1140.00	579.00	0.00	579.24	4.58	3.78	434.30	532.84
2121.000	685.50	0.00	0.00	571.78	535.00	576.46	0.00	576.56	4.88	2.62	229.60	242.26
2121.000	685.50	0.00	0.00	571.78	725.00	577.18	0.00	577.32	5.47	3.05	271.25	310.01
2121.000	685.50	0.00	0.00	571.78	860.00	577.97	0.00	578.11	6.03	3.16	310.16	361.34
2121.000	685.50	0.00	0.00	571.78	1140.00	579.38	0.00	579.53	3.99	3.26	411.97	520.53
2321.000	200.00	0.00	0.00	571.78	535.00	576.53	0.00	576.63	5.75	2.84	188.05	223.02
2321.000	200.00	0.00	0.00	571.78	725.00	577.29	0.00	577.46	6.59	3.34	217.28	282.39
2321.000	200.00	0.00	0.00	571.78	860.00	578.05	0.00	578.24	6.08	3.40	247.44	348.84
2321.000	200.00	0.00	0.00	571.78	1140.00	579.43	0.00	579.63	5.69	3.58	405.65	520.35
2334.000	13.00	578.26	578.08	571.78	535.00	576.57	0.00	576.69	5.69	2.84	188.66	224.19
2334.000	13.00	578.26	578.08	571.78	725.00	577.31	0.00	577.48	6.54	3.33	217.63	283.36
2334.000	13.00	578.86	578.08	571.78	860.00	578.19	0.00	578.37	5.69	3.41	252.48	360.42
2334.000	13.00	578.26	578.08	571.78	1140.00	579.75	0.00	579.92	3.99	3.39	467.68	570.55

*	3863.100	0.01	0.00	0.00	572.83	1460.00	583.91	0.00	583.95	1.29	2.22	2479.37	1283.33
*	3863.100	0.01	0.00	0.00	572.83	1060.00	583.71	0.00	583.73	0.80	1.72	2351.92	1187.16
*	3863.100	0.01	0.00	0.00	572.83	1060.00	583.62	0.00	583.63	0.60	1.44	2289.68	1141.36
*	3863.100	0.01	0.00	0.00	572.83	575.00	583.58	0.00	583.59	0.41	1.05	2120.91	1026.93
	3863.000	901.00	583.00	572.83	572.83	1060.00	583.41	0.00	583.43	1.02	1.91	2158.86	1047.66
	3863.000	901.00	583.00	572.83	572.83	885.00	583.32	0.00	583.33	0.78	1.65	2095.71	1003.96
	3863.000	901.00	583.00	572.83	572.83	575.00	583.08	0.00	583.09	0.47	1.18	1934.96	896.11
	2962.500	200.00	0.00	572.83	572.83	1460.00	583.57	0.00	583.58	1.09	2.30	1694.49	1164.23

AUSTRALIA 28, SYDNEY.

EJECTOR PILOT TABLE 150

SEC'D	H	MASS	TEMP°	PI%,$%	VIP3%	TOP 210	SEC'D
0.000	535.00	575.90	0.00	0.00	0.00	41.04	0.00
0.300	725.00	574.93	0.00	0.00	0.00	41.04	0.00
0.300	860.00	574.93	0.00	0.00	0.00	41.04	0.00
0.300	1140.00	575.00	0.00	0.00	0.00	41.04	0.00
1101.500	535.00	575.93	0.00	1.00	0.00	69.80	1101.50
1101.500	725.00	576.52	0.00	1.02	0.00	65.72	1101.50
1101.500	860.00	576.95	0.00	0.05	0.00	66.82	1101.50
1101.500	1140.00	577.89	0.00	0.36	0.00	70.54	1101.50
1301.500	535.00	575.98	0.00	0.00	0.00	30.00	200.00
1301.500	725.00	576.58	0.00	0.00	0.00	30.00	200.00
1301.500	860.00	576.97	0.00	0.02	0.00	30.00	200.00
1301.500	1140.00	577.88	0.00	0.00	0.00	30.00	200.00
1565.500	535.00	575.82	0.00	0.00	0.00	30.00	84.00
1565.500	725.00	576.61	0.00	0.00	0.00	30.00	84.00
1565.500	860.00	577.04	0.00	0.00	0.00	30.00	84.00
1565.500	1140.00	578.00	0.00	0.00	0.00	30.00	84.00
1635.500	535.00	576.12	0.00	0.00	0.00	57.64	50.00
1635.500	725.00	576.77	0.00	0.00	0.00	57.64	50.00
1635.500	860.00	577.67	0.00	0.00	0.00	57.64	50.00
1635.500	1140.00	579.05	0.00	0.00	0.00	57.64	50.00
2121.000	535.00	576.46	0.00	0.00	0.00	56.40	665.50
2121.000	725.00	577.18	0.00	0.00	0.00	58.64	665.50
2121.000	860.00	577.97	0.00	0.00	0.00	58.64	665.50
2121.000	1140.00	579.53	0.00	0.00	0.00	58.64	665.50
2321.000	535.00	576.55	0.00	0.00	0.00	39.40	200.00
2321.000	725.00	577.29	0.00	0.00	0.00	39.40	200.00
2321.000	860.00	578.05	0.00	0.00	0.00	39.40	200.00
2321.000	1140.00	579.65	0.00	0.00	0.00	39.40	200.00
2334.000	535.00	576.57	0.00	0.00	0.00	39.40	13.00
2334.000	725.00	577.31	0.00	0.00	0.00	39.40	13.00
2334.000	860.00	578.19	0.00	0.00	0.00	39.40	13.00
2334.000	1140.00	579.75	0.00	0.00	0.00	209.50	13.00
2434.000	535.00	576.57	0.00	-0.00	0.00	40.24	100.00
2434.000	725.00	577.30	0.00	-0.00	0.00	40.24	100.00
2434.000	860.00	578.20	0.00	0.00	0.00	156.51	100.00
2434.000	1140.00	579.80	0.00	0.00	0.00	240.00	100.00
2550.000	535.00	576.70	0.00	0.00	0.00	20.00	115.00
2550.000	725.00	577.45	0.00	0.00	0.00	105.00	115.00
2550.000	860.00	578.47	0.00	0.00	0.00	219.45	115.00
2550.000	1140.00	579.92	0.00	0.00	0.00	265.00	115.00
2563.000	535.00	578.39	0.00	0.00	0.00	20.00	13.00
2563.000	725.00	579.15	0.00	0.00	0.00	265.00	13.00
2563.000	860.00	579.39	0.00	0.00	0.00	265.00	13.00
2563.000	1140.00	580.32	0.00	0.00	0.00	265.00	13.00

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SECNO	Y	Q-SEL	DEPTH	FROUD	DIFLOS	TOP-WD	VEL-H
2562.500	535.00	579.64	0.00	0.00	0.00	686.05	20.00
2562.500	725.00	579.17	0.01	0.04	0.00	686.00	20.00
2562.500	930.00	579.45	0.01	0.02	0.00	686.00	20.00
2562.500	1140.00	580.05	0.01	0.03	0.00	686.00	20.00
2062.500	535.00	579.09	0.00	0.01	0.00	221.31	50.00
2062.500	725.00	579.24	0.00	0.07	0.00	240.53	50.00
2062.500	930.00	579.45	0.00	0.03	0.00	417.57	50.00
2062.500	1140.00	580.14	0.00	0.01	0.00	439.10	50.00
2762.500	535.00	579.71	0.00	0.02	0.00	227.20	100.00
2762.500	725.00	579.25	0.00	0.02	0.00	255.25	100.00
2762.500	960.00	579.51	0.00	0.02	0.00	272.66	100.00
2762.500	1180.00	580.19	0.00	0.01	0.00	344.12	100.00
2962.500	575.00	579.73	0.00	-0.01	0.00	237.65	200.00
2962.500	815.00	580.25	0.00	-0.02	0.00	344.44	200.00
2962.500	1060.00	579.49	0.00	-0.02	0.00	256.67	200.00
2962.500	1460.00	580.13	0.00	-0.02	0.00	279.16	200.00
3063.000	575.00	581.16	0.01	0.00	0.00	640.00	401.00
3063.000	685.00	581.31	0.01	0.00	0.00	640.00	401.00
3063.000	1060.00	582.44	0.02	0.03	0.00	640.00	401.00
3063.000	1460.00	583.61	0.02	0.00	0.00	640.00	401.00
* 3863.100	575.00	583.36	0.00	0.00	0.00	640.00	0.01
* 3863.100	685.00	583.52	0.00	0.00	0.00	640.00	0.01
* 3863.100	1060.00	583.91	0.00	0.00	0.00	640.00	0.01
* 3863.100	1460.00	584.01	0.00	0.00	0.00	640.00	0.01

SUMMARY OF ERRORS

CAUTION SECNO= 0.000 PROFILE= 4 CRITICAL DEPTH ASSUMED

NOTE SECNO= 3863.100 PROFILE= 1 QSEL BASED ON X2 CARD
NOTE SECNO= 3863.100 PROFILE= 2 QSEL BASED ON X2 CARD
NOTE SECNO= 3863.100 PROFILE= 3 QSEL BASED ON X2 CARD
NOTE SECNO= 3863.100 PROFILE= 4 QSEL BASED ON X2 CARD

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FLOOD DISTANCE ZONE DATA FOR HUNTINGTON CO. RIVERVIEW

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE WITH 100	BASE FLOOD AND 20	0.2
0.000	0.	[illegible]	[illegible]	[illegible]
1101.500	1100.	-1.0	[illegible]	[illegible]
1301.500	1302.	-1.0	[illegible]	[illegible]
1385.500	1386.	-1.4	[illegible]	[illegible]
1435.500	1436.	-1.5	-0.8	1.4
2121.000	2121.	-1.5	-0.8	1.4
2321.000	2321.	-1.5	[illegible]	[illegible]
2334.000	2334.	-1.6	[illegible]	[illegible]
2434.000	2434.	-1.6	[illegible]	[illegible]
2550.000	2549.	-1.7	[illegible]	[illegible]
2563.000	2562.	-1.0	-0.2	0.6
2582.500	2582.	-0.8	[illegible]	[illegible]
2662.500	2663.	[illegible]	[illegible]	[illegible]
2762.500	2762.	-0.3	[illegible]	[illegible]
2962.500	2962.	-0.3	[illegible]	[illegible]
3863.000	3863.	-0.3	[illegible]	[illegible]
3863.100	3863.	-0.3	-0.1	0.2
WEIGHTED AVG FOR REACH		-0.8	[illegible]	[illegible]

FHF FOR THE REACH = 010 WITH 69.90 OF THE REACH WITHIN 0.5 FEET
ZONE FOR THE REACH = A 2

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA 100	11	DIFF.	STD. AVG.	FHF	PERCENT WITHIN
	0.				SEC.		0.000
1	100.	574.9	575.0	-0.0	-0.0	005	100.
2	200.	575.0	575.2	-0.1	-0.1	005	100.
3	300.	575.1	575.4	-0.2	-0.1	005	100.
4	400.	575.2	575.6	-0.3	-0.2	005	100.
5	500.	575.3	575.7	-0.4	-0.2	005	100.
6	600.	575.4	575.9	-0.5	-0.3	005	100.
7	700.	575.5	576.1	-0.6	-0.3	005	100.
8	800.	575.6	576.3	-0.7	-0.4	005	100.
9	900.	575.7	576.5	-0.8	-0.4	005	100.
10	1000.	575.8	576.7	-0.9	-0.5	005	100.
11	1100.	575.9	576.9	-1.0	-0.5	005	100.
	1102.				SEC.		1101.500
12	1200.	575.9	577.0	-1.0	-0.6	005	92.
13	1300.	575.0	577.0	-1.0	-0.6	005	92.
	1302.				SEC.		1301.500
	1386.				SEC.		1385.500
14	1400.	575.0	577.5	-1.4	-0.8	005	79.
	1436.				SEC.		1435.500

[illegible]	1400.	576.[illegible]	577.[illegible]	-1.[illegible]	-[illegible]	[illegible]	[illegible]
[illegible]	1600.	576.2	577.[illegible]	-1.[illegible]	-[illegible]	[illegible]	[illegible]
17	[illegible]00.	576.2	577.7	-1.[illegible]	-[illegible]	011	[illegible]
18	[illegible]00.	576.[illegible]	577.[illegible]	-1.5	-[illegible]	012	50.
19	1900.	576.3	577.[illegible]	-[illegible]	-0.[illegible]	010	47.
20	2000.	576.[illegible]	577.[illegible]	-[illegible]	-[illegible]	[illegible]	[illegible]
21	2100.	576.4	577.[illegible]	-1.5	-[illegible]	010	[illegible]
	2121.				SEC.	2121.000	
22	2200.	576.[illegible]	578.0	-1.5	-1.0	010	[illegible]
23	2300.	576.5	578.0	-1.5	-1.0	010	[illegible]
	2321.				SEC.	2321.000	
	2324.				SEC.	2324.000	
24	2400.	576.[illegible]	578.2	-1.6	-1.[illegible]	010	[illegible]
	2434.				SEC.	2434.000	
25	2500.	576.6	578.3	-1.7	-1.0	010	66.
	2549.				SEC.	2550.000	
	2562.				SEC.	2563.000	
	2592.				SEC.	2592.000	
26	2600.	578.8	579.4	-2.6	-1.[illegible]	010	[illegible]
	2662.				SEC.	2662.500	
27	2700.	579.7	579.5	-0.[illegible]	-1.0	010	70.
	2762.				SEC.	2762.500	
28	2800.	579.7	579.5	-0.8	-1.0	010	[illegible]
29	2900.	579.7	579.[illegible]	-0.8	-1.0	010	[illegible]
	2962.				SEC.	2962.500	
30	3000.	579.8	579.6	-0.8	-[illegible]	010	[illegible]
31	3100.	579.1	579.9	-0.7	-1.0	010	52.
32	3200.	579.6	580.3	-0.7	-1.0	010	53.
33	3300.	580.1	580.7	-0.6	-1.0	010	55.
34	3400.	580.[illegible]	581.[illegible]	-0.[illegible]	-1.0	010	[illegible]
35	3500.	581.[illegible]	581.[illegible]	-0.[illegible]	-0.[illegible]	010	55.
36	3600.	581.5	582.[illegible]	-2.[illegible]	-1.[illegible]	010	[illegible]
37	3700.	582.0	582.5	-0.4	-0.9	010	57.
38	3800.	582.5	582.9	-0.4	-0.9	010	55.
	3863.				SEC.	3863.000	
	3863.				SEC.	3863.000	

THIS REACH CAN BE SUBDIVIDED BY INC NO. TO MEET ITS REQUIREMENTS
INPUT ZON WHERE N IS THE NUMBER OF REACHES AND THEN INPUT THE END
OF EACH REACH BY INC NO. FOR EXAMPLES 202 13 38
A NEGATIVE INC NO. WILL SUPPRESS INTERMEDIATE INC OUTPUT.

FORM 1411-GB PRINTED BY ROTARY MANIFOLD FORMS.

8.38

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$$$$$$$    $$$$$ $   $$$$$$   $$$$$$$$   $$$$$ $   $$$$$ $  $$$$$$$$
$$    $$  $$    $   $$    $$     $$     $$    $   $$    $        $$
$$    $$  $$   $$$  $$           $$     $$   $$$  $$   $$$      $$
$$    $$  $$  $ $$  $$           $$     $$  $ $$  $$  $ $$     $$
$$    $$  $$ $$ $$  $$           $$     $$ $$ $$  $$ $$ $$     $$
$$$$$$$   $$ $  $$  $$           $$     $$ $  $$  $$ $  $$     $$
$$  $$    $$$   $$  $$           $$     $$$   $$  $$$   $$     $$
$$   $$    $    $$  $$    $$  $$ $$      $    $$   $    $$     $$
$$    $$  $ $$$$$    $$$$$$    $$$      $ $$$$$   $ $$$$$      $$
```

AUG 08 '77

HEC-2 OUTPUT IN ANSWER TO DNR REVIEW

[CITY OF ROCKWOOD FIS
SILVER CREEK REVIEW]

PROGRAM WILL BE ENTERED AT HEC2 (373) SCM LENGTH 146670 LCM LENGTH 0

BLOCK	ADDRESS	LENGTH
/ALPHA/	100	101
HEC2	201	11606
CARD	12007	1673
SUMPO	13702	1063
CHIMP	14765	1645
DC	16632	703
FLODIS	17535	444
BLFLO	20201	1003
ADDPTS	21204	334
BWEIR	21540	1356
YCRIT	23116	122
SLARA	23240	256
SCALE	23516	246
XSEC	23764	1264
PROF	25250	1142
/STP.END/	26412	1
/FCL.C./	26413	23
/Q8.IO./	26436	140
Q8NTRY=	26576	1
COMIO=	26577	44
ENDFIL=	26643	45
FECMSK=	26710	41
FLTIN=	26751	156
FLTOUT=	27127	315
FMTAP=	27444	372
FORSYS=	30036	561
FORUTL=	30617	16
GETFIT=	30635	43
INCOM=	30700	256
INPC=	31156	173
KODER=	31351	467
KRAKER=	32040	454
/HEADING/	32514	16
OUTC=	32532	1017
OUTCOM=	33551	204
REWIND=	33755	36
GOTOER=	34013	14
ALOG	34027	77
EXP	34126	102
ITOJ*	34230	52
SYSAID=	34302	1
SYS=1ST	34303	62
XTOY*	34365	55
//	34442	112226

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HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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C
1       CITY OF ROCKWOOD,     5555-57-01          PM = RICHARD ZANOTTI
T2      10-YEAR FLOOD
T3       SILVER CREEK
J1  ICHECK      INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
        -1.        2.         0.         0.  0.000000       0.00       0.0         0.    575.400      0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH         FN      ALLDC      IBW       CHNIM      ITRACE
       1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
J3      1.000     10.000     11.000     12.000     14.000      8.000      4.000      0.000      0.000      0.000
NC       .060       .060       .030       .300       .500      0.000      0.000      0.000      0.000      0.000
QT      4.000   1340.000   1730.000   1860.000   2060.000      0.000      0.000      0.000      0.000      0.000
X1   6900.000     23.000    223.000    400.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    581.300      0.000    580.000    100.000    575.600    200.000    575.500    223.000    573.500    225.000
GR    573.300    230.000    573.000    235.000    572.200    240.000    571.700    245.000    570.900    250.000
GR    570.800    260.000    570.800    270.000    570.400    280.000    570.100    290.000    569.500    300.000
GR    569.500    310.000    570.000    320.000    571.100    330.000    572.000    335.000    572.700    340.000
GR    573.500    343.000    583.400    368.000    587.500    400.000      0.000      0.000      0.000      0.000

X1   7350.000     16.000    300.000    376.000    450.000    450.000    450.000      0.000      0.000      0.000
X3      0.000      0.000      0.000      0.000      0.000    376.000      0.000      0.000      0.000      0.000
GR    582.100      0.000    582.500    100.000    581.500    200.000    575.200    300.000    570.800    306.000
GR    568.900    320.000    567.900    330.000    570.100    350.000    572.600    365.000    574.600    376.000
GR    574.400    400.000    575.900    500.000    579.100    600.000    575.300    700.000    574.700    773.000
GR    583.600    800.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
NH      5.000       .080    595.000       .035    651.000       .080    900.000       .035    930.000       .070
NH    945.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000
QT      4.000    300.000    415.000    460.000    520.000      0.000      0.000      0.000      0.000      0.000

X1   7700.000     25.000    845.000    930.000    350.000    350.000    350.000      0.000       .550      0.000
X3      0.000      0.000      0.000    845.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    581.700      0.000    582.100    100.000    582.000    200.000    581.800    300.000    581.000    400.000
GR    579.700    500.000    578.700    525.000    573.400    547.000    574.400    595.000    571.400    605.000
GR    569.400    620.000    571.300    640.000    573.300    651.000    573.200    700.000    573.500    782.000
GR    574.600    788.000    576.800    800.000    577.700    845.000    577.600    874.000    575.100    900.000
GR    571.700    904.000    569.800    914.000    570.900    928.000    575.300    930.000    584.300    945.000

X1   7900.000      0.000      0.000      0.000    200.000    200.000    200.000      0.000       .550      0.000
X3      0.000      0.000      0.000    845.000      0.000      0.000      0.000      0.000      0.000      0.000

X1   8400.000      0.000      0.000      0.000    500.000    500.000    500.000      0.000       .050      0.000
X3      0.000      0.000      0.000    845.000      0.000      0.000      0.000      0.000      0.000      0.000
NH      5.000       .080    948.000       .035    988.000       .080   1200.000       .035   1234.000       .080
NH   1280.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1   8940.000     29.000   1200.000   1234.000    540.000    540.000    540.000      0.000      0.000      0.000
X3      0.000      0.000      0.000   1100.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    582.500      0.000    582.500    100.000    583.300    200.000    581.100    300.000    581.300    400.000
GR    580.600    500.000    578.100    600.000    579.600    700.000    578.200    800.000    572.500    900.000
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GR	573.200	948.000	571.900	949.000	570.200	955.000	569.500	965.000	569.500	975.000
GR	572.900	985.000	574.100	988.000	575.500	1000.000	581.400	1100.000	579.800	1164.000
GR	580.200	1176.000	580.900	1200.000	572.200	1211.000	570.300	1221.000	570.100	1232.000
GR	575.900	1234.000	585.500	1250.000	586.800	1260.000	593.800	1280.000	0.000	0.000
NH	5.000	.080	362.000	.035	407.000	.080	869.000	.035	943.000	.080
NH	972.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	9440.000	24.000	882.000	934.000	500.000	500.000	500.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	800.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	585.400	0.000	583.300	103.000	573.600	145.000	573.500	200.000	574.200	300.000
GR	574.700	362.000	571.100	364.000	570.400	389.000	572.300	405.000	575.700	407.000
GR	575.800	500.000	578.700	600.000	581.000	700.000	582.500	800.000	582.400	851.000
GR	580.100	869.000	580.600	882.000	579.700	900.000	572.700	910.000	571.300	921.000
GR	571.900	931.000	576.700	934.000	583.400	965.000	587.900	972.000	0.000	0.000
NH	4.000	.100	100.000	.070	579.000	.035	638.000	.080	680.000	0.000
X1	9890.000	18.000	579.000	638.000	500.000	200.000	450.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	579.000	0.000	680.000	0.000	0.000	0.000	0.000
GR	579.500	0.000	575.700	100.000	574.200	200.000	573.800	300.000	573.800	400.000
GR	573.700	500.000	574.300	562.000	576.400	566.000	576.600	579.000	574.900	600.000
GR	572.100	612.000	571.000	620.000	571.700	626.000	573.400	631.000	577.700	638.000
GR	575.300	645.000	576.400	670.000	582.200	680.000	0.000	0.000	0.000	0.000
NH	3.000	.080	600.000	.035	621.000	.080	1100.000	0.000	0.000	0.000
X1	9921.000	18.000	580.000	640.000	60.000	1.000	31.000	.860	0.000	0.000
X3	0.000	0.000	0.000	510.000	0.000	905.000	0.000	0.000	0.000	0.000
GR	580.900	0.000	580.300	100.000	579.400	200.000	578.000	300.000	576.600	400.000
GR	576.300	500.000	577.200	580.000	570.800	600.000	571.100	605.000	571.000	610.000
GR	571.100	621.000	577.200	640.000	576.600	700.000	576.500	800.000	577.400	900.000
GR	578.500	1000.000	580.400	1100.000	581.600	1200.000	0.000	0.000	0.000	0.000
NH	3.000	.080	600.000	.035	621.000	.080	1100.000	0.000	0.000	0.000
X1	9922.000	18.000	580.000	640.000	1.000	1.000	1.000	.860	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.860	0.000
X3	0.000	0.000	0.000	510.000	0.000	905.000	0.000	0.000	0.000	0.000
BT	14.000	0.000	580.900	0.000	100.000	580.300	0.000	200.000	579.400	0.000
BT	300.000	578.000	0.000	400.000	576.600	0.000	500.000	576.300	0.000	600.000
BT	577.400	575.800	621.000	577.600	575.800	700.000	576.600	0.000	800.000	576.500
BT	0.000	900.000	577.400	0.000	1000.000	578.500	0.000	1100.000	580.400	0.000
BT	1200.000	581.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	580.900	0.000	580.300	100.000	579.400	200.000	578.000	300.000	576.600	400.000
GR	576.300	500.000	577.200	580.000	570.800	600.000	571.100	605.000	571.000	610.000
GR	571.100	621.000	577.200	640.000	576.600	700.000	576.500	800.000	577.400	900.000
GR	578.500	1000.000	580.400	1100.000	581.600	1200.000	0.000	0.000	0.000	0.000
NH	3.000	.080	600.000	.035	621.000	.080	1100.000	0.000	0.000	0.000
X1	9958.000	18.000	580.000	640.000	36.000	36.000	36.000	.860	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.860	0.000
X3	0.000	0.000	0.000	510.000	0.000	905.000	0.000	0.000	0.000	0.000
BT	14.000	0.000	580.900	0.000	100.000	580.300	0.000	200.000	579.400	0.000
BT	300.000	578.000	0.000	400.000	576.600	0.000	500.000	576.300	0.000	600.000
BT	577.400	575.800	621.000	577.600	575.800	700.000	576.600	0.000	800.000	576.500
BT	0.000	900.000	577.400	0.000	1000.000	578.500	0.000	1100.000	580.400	0.000
BT	1200.000	581.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	580.900	0.000	580.300	100.000	579.400	200.000	578.000	300.000	576.600	400.000
GR	576.300	500.000	577.200	580.000	570.800	600.000	571.100	605.000	571.000	610.000
GR	571.100	621.000	577.200	640.000	576.600	700.000	576.500	800.000	577.400	900.000
GR	578.500	1000.000	580.400	1100.000	581.600	1200.000	0.000	0.000	0.000	0.000
NH	3.000	.080	600.000	.035	621.000	.080	1100.000	0.000	0.000	0.000
X1	9959.000	18.000	580.000	640.000	1.000	1.000	1.000	.860	0.000	0.000
X3	0.000	0.000	0.000	510.000	0.000	905.000	0.000	0.000	0.000	0.000
GR	580.900	0.000	580.300	100.000	579.400	200.000	578.000	300.000	576.600	400.000
GR	576.300	500.000	577.200	580.000	570.800	600.000	571.100	605.000	571.000	610.000
GR	571.100	621.000	577.200	640.000	576.600	700.000	576.500	800.000	577.400	900.000
GR	578.500	1000.000	580.400	1100.000	581.600	1200.000	0.000	0.000	0.000	0.000
NH	.060	.080	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	.080	.080	.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	4.000	580.000	740.000	775.000	820.000	0.000	0.000	0.000	0.000	0.000
X1	10440.000	15.000	465.000	500.000	481.000	481.000	481.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	85.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	580.200	0.000	574.400	100.000	574.600	200.000	574.500	300.000	573.800	400.000
GR	574.900	465.000	571.200	486.000	572.400	494.000	575.000	500.000	574.300	547.000
GR	577.700	557.000	579.600	600.000	579.000	621.000	582.000	624.000	582.100	657.000
QT	4.000	290.000	380.000	425.000	495.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	6.100	8.100	8.100	8.100	473.000	544.000	285.000	600.000	0.000
X1	11040.000	23.000	463.000	554.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	580.200	0.000	574.400	100.000	572.500	107.500	572.500	108.000	572.500	110.000
GR	572.500	112.500	574.600	120.000	574.600	200.000	574.500	300.000	574.900	360.000
GR	574.500	399.000	575.100	463.000	573.200	467.000	571.600	484.000	573.200	496.000
GR	575.100	499.000	575.200	519.000	577.700	525.000	579.200	554.000	578.500	573.000
GR	580.300	578.000	581.200	599.000	583.800	799.000	0.000	0.000	0.000	0.000
X1	11140.000	21.000	1500.000	1521.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	1300.000	0.000	1620.000	0.000	577.450	577.450	0.000
GR	578.500	1200.000	578.400	1300.000	578.100	1400.000	574.800	1500.000	572.700	1500.000
GR	571.900	1510.000	572.900	1521.000	575.000	1521.000	578.500	1600.000	581.000	1700.000
GR	582.300	1800.000	583.500	1900.000	584.000	2000.000	584.200	2100.000	584.400	2200.000
GR	585.000	2300.000	585.500	2400.000	586.100	2500.000	586.700	2600.000	587.100	2700.000
GR	587.600	2800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.080	.080	.040	.300	.500	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.730	3.050	0.000	21.000	0.000	84.000	0.000	571.900	571.900
X1	11180.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	575.900	577.800	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	1300.000	0.000	1620.000	0.000	577.800	577.800	0.000
BT	8.000	1300.000	578.400	0.000	1400.000	578.100	0.000	1500.000	577.800	574.800
BT	1500.000	577.800	575.900	1521.000	578.000	575.900	1521.000	578.000	575.000	1600.000
BT	578.500	0.000	1620.000	579.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	4.000	580.000	740.000	775.000	820.000	0.000	0.000	0.000	0.000	0.000
X1	10440.000	15.000	465.000	500.000	550.000	550.000	550.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	85.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	580.200	0.000	574.400	100.000	574.600	200.000	574.500	300.000	573.800	400.000
GR	574.900	465.000	571.200	486.000	572.400	494.000	575.000	500.000	574.300	547.000
GR	577.700	557.000	579.600	600.000	579.000	621.000	582.000	624.000	582.100	657.000
NC	.080	.080	.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	4.000	290.000	360.000	350.000	325.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	6.100	6.100	8.100	8.100	100.000	166.000	.050	285.000	0.000
X1	11041.000	23.000	100.000	200.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	580.200	0.000	574.400	100.000	572.500	107.500	572.500	108.000	572.500	110.000
GR	572.500	112.500	574.600	120.000	574.600	200.000	574.500	300.000	574.900	360.000
GR	574.500	399.000	575.100	463.000	573.200	467.000	571.600	484.000	573.200	496.000
GR	575.100	499.000	575.200	519.000	577.700	525.000	579.200	554.000	578.500	573.000
GR	580.300	578.000	581.200	599.000	583.800	799.000	0.000	0.000	0.000	0.000
NC	.055	.055	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11141.000	18.000	1052.000	1068.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	950.000	0.000	1300.000	0.000	577.880	577.880	0.000
GR	578.600	0.000	578.400	100.000	578.300	200.000	578.700	300.000	579.100	400.000
GR	579.700	500.000	579.900	600.000	579.500	700.000	579.200	800.000	578.800	900.000
GR	578.400	1000.000	571.300	1052.000	571.300	1052.000	571.300	1068.000	571.300	1068.000
GR	578.300	1100.000	578.500	1200.000	578.400	1300.000	0.000	0.000	0.000	0.000
SB	0.000	1.660	3.050	0.000	16.000	0.000	96.000	0.000	571.300	571.300
X1	11181.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	577.300	578.300	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	950.000	0.000	1300.000	0.000	578.300	578.300	0.000
BT	9.000	950.000	578.600	0.000	1000.000	578.400	0.000	1052.000	578.300	571.300
BT	1052.000	578.300	577.300	1068.000	578.300	577.300	1068.000	578.300	571.300	1100.000

BT	578.300	0.000	1200.000	578.300	0.000	1300.000	578.400	0.000	0.000	0.000
QT	4.000	580.000	740.000	775.000	820.000	0.000	0.000	0.000	0.000	0.000
NC	.080	.080	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11431.000	16.000	672.000	700.000	250.000	300.000	250.000	0.000	-.200	0.000
X3	0.000	0.000	0.000	565.000	0.000	750.000	0.000	0.000	0.000	0.000
GR	582.500	0.000	581.900	55.000	578.300	100.000	575.400	200.000	574.800	300.000
GR	575.600	400.000	575.800	500.000	574.600	600.000	574.500	672.000	572.600	677.000
GR	571.700	684.000	573.000	691.000	576.400	700.000	578.100	746.000	581.800	770.000
GR	583.400	801.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11681.000	0.000	0.000	0.000	250.000	250.000	250.000	0.000	.200	0.000
X3	0.000	0.000	0.000	661.000	0.000	711.000	0.000	0.000	0.000	0.000
X1	11730.000	15.000	553.100	676.000	100.000	1.000	49.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	614.600	0.000	637.600	0.000	0.000	0.000	0.000
GR	584.500	307.300	584.500	368.700	584.400	430.200	584.200	491.600	584.100	553.100
GR	572.600	614.600	571.600	617.100	571.600	635.100	572.600	637.600	583.700	676.000
GR	583.600	737.500	583.500	798.900	583.200	860.400	583.300	921.800	583.300	936.000
NC	.045	.045	.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11731.000	28.000	614.600	637.600	1.000	1.000	1.000	0.000	0.000	0.000
GR	585.400	0.000	585.200	61.500	585.100	122.900	584.900	184.400	584.700	245.800
GR	584.500	307.300	584.500	368.700	584.400	430.200	584.200	491.600	584.100	553.100
GR	583.900	614.600	572.600	614.600	571.600	617.100	571.600	620.100	571.600	623.100
GR	572.600	625.600	572.600	626.600	571.600	629.100	571.600	632.100	571.600	635.100
GR	572.600	637.600	583.900	637.600	583.700	676.000	583.600	737.500	583.500	798.900
GR	583.200	860.400	583.300	921.800	583.300	936.000	0.000	0.000	0.000	0.000
SB	0.000	2.980	2.630	0.000	22.000	0.000	116.000	0.000	571.600	571.600
X1	11826.000	0.000	0.000	0.000	95.000	95.000	95.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	578.600	583.900	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	614.600	0.000	637.600	0.000	0.000	0.000	0.000
BT	12.000	614.600	583.900	574.600	617.100	583.900	577.600	620.100	583.900	578.600
BT	623.100	583.900	577.600	625.600	583.900	574.600	625.600	583.900	572.600	626.600
BT	583.900	572.600	626.600	583.900	574.600	629.100	583.900	577.600	632.100	583.900
BT	578.600	635.100	583.900	577.600	637.600	583.900	574.600	0.000	0.000	0.000
NC	.055	.045	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11827.000	20.000	553.100	676.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	614.600	0.000	637.600	0.000	0.000	0.000	0.000
GR	585.400	0.000	585.200	61.500	585.100	122.900	584.900	184.400	584.700	245.800
GR	584.500	307.300	584.500	368.700	584.400	430.200	584.200	491.600	584.100	553.100
GR	572.600	614.600	571.600	617.100	571.600	635.100	572.600	637.600	583.700	676.000
GR	583.600	737.500	583.500	798.900	583.200	860.400	583.300	921.800	583.300	936.000
X1	11876.000	18.000	340.000	368.000	49.000	49.000	49.000	0.000	-.900	0.000
X3	0.000	0.000	0.000	340.000	0.000	415.000	0.000	0.000	0.000	0.000
GR	584.800	0.000	582.800	40.000	581.100	140.000	580.200	240.000	579.200	340.000
GR	572.700	354.000	572.600	358.000	572.900	361.000	574.500	368.000	576.600	440.000
GR	583.000	540.000	584.700	640.000	584.100	747.000	583.800	840.000	584.200	940.000
GR	584.200	1040.000	585.000	1140.000	585.100	1240.000	0.000	0.000	0.000	0.000
X1	12226.000	18.000	340.000	368.000	350.000	350.000	350.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	340.000	0.000	450.000	0.000	0.000	0.000	0.000
GR	584.800	0.000	582.800	40.000	581.100	140.000	580.200	240.000	579.200	340.000
GR	572.700	354.000	572.600	358.000	572.900	361.000	574.500	368.000	576.600	440.000
GR	583.000	540.000	584.700	640.000	584.100	747.000	583.800	840.000	584.200	940.000
GR	584.200	1040.000	585.000	1140.000	585.100	1240.000	0.000	0.000	0.000	0.000
X1	12776.000	28.000	1000.000	1030.000	550.000	550.000	550.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	984.000	0.000	1036.000	0.000	0.000	0.000	0.000
GR	585.000	0.000	584.400	100.000	584.200	200.000	584.900	300.000	585.500	400.000
GR	584.800	500.000	584.100	600.000	582.400	700.000	581.600	798.000	576.600	807.000
GR	576.900	900.000	576.100	1000.000	571.300	1010.000	572.100	1015.000	573.000	1023.000
GR	576.000	1030.000	579.300	1100.000	579.300	1140.000	582.000	1145.000	584.000	1200.000

GR	585.900	1300.000	585.200	1400.000	585.700	1500.000	585.200	1600.000	585.100	1700.000
GR	585.300	1800.000	585.800	1900.000	585.600	2000.000	0.000	0.000	0.000	0.000
X1	12825.000	24.000	1000.000	1028.000	49.000	49.000	49.000	0.000	0.000	0.000
GR	587.200	0.000	587.200	100.000	587.200	200.000	587.100	300.000	587.000	400.000
GR	586.800	500.000	586.800	600.000	586.700	700.000	586.800	800.000	586.600	900.000
GR	586.700	1000.000	574.300	1000.000	573.100	1012.000	573.300	1016.000	573.400	1025.000
GR	573.300	1028.000	586.800	1028.000	586.700	1100.000	586.700	1200.000	586.700	1300.000
GR	586.500	1400.000	586.500	1500.000	586.400	1600.000	586.300	1700.000	0.000	0.000
NC	.045	.045	.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12826.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
SB	1.050	1.540	2.630	0.000	28.000	3.500	171.500	0.000	573.300	573.300
X1	12860.000	0.000	0.000	0.000	34.000	34.000	34.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BT	23.000	0.000	587.200	0.000	100.000	587.200	0.000	200.000	587.200	0.000
BT	300.000	587.100	0.000	400.000	587.000	0.000	500.000	586.800	0.000	600.000
BT	586.800	0.000	700.000	586.700	0.000	800.000	586.800	0.000	900.000	586.600
BT	0.000	1000.000	586.700	580.300	1012.000	586.700	580.300	1012.000	586.700	573.100
BT	1016.000	586.700	573.300	1016.000	586.700	580.300	1028.000	586.800	580.300	1100.000
BT	586.700	0.000	1200.000	586.700	0.000	1300.000	586.700	0.000	1400.000	586.500
BT	0.000	1500.000	586.500	0.000	1600.000	586.400	0.000	1700.000	586.300	0.000
NC	.045	.045	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12861.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X1	12897.000	0.000	0.000	0.000	36.000	36.000	36.000	0.000	.500	0.000
X3	0.000	0.000	0.000	1003.000	0.000	1025.000	0.000	0.000	0.000	0.000
X1	12934.000	26.000	1000.000	1016.000	37.000	37.000	37.000	0.000	0.000	0.000
GR	589.800	0.000	589.800	100.000	589.700	200.000	589.600	300.000	589.500	400.000
GR	589.500	500.000	589.400	600.000	589.300	700.000	589.300	800.000	589.300	900.000
GR	589.200	1000.000	574.200	1000.000	574.500	1005.000	574.100	1008.000	574.100	1016.000
GR	589.200	1016.000	589.200	1100.000	589.300	1200.000	589.300	1300.000	589.200	1400.000
GR	589.400	1500.000	589.300	1600.000	589.100	1700.000	589.000	1800.000	588.900	1900.000
GR	588.900	2000.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.045	.045	.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12935.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
BT	22.000	0.000	589.800	0.000	100.000	589.800	0.000	200.000	589.700	0.000
BT	300.000	589.600	0.000	400.000	589.500	0.000	500.000	589.500	0.000	600.000
BT	589.400	0.000	700.000	589.300	0.000	800.000	589.300	0.000	900.000	589.300
BT	0.000	1000.000	589.200	584.200	1016.000	589.200	584.200	1100.000	589.200	0.000
BT	1200.000	589.300	0.000	1300.000	589.300	0.000	1400.000	589.200	0.000	1500.000
BT	589.400	0.000	1600.000	589.300	0.000	1700.000	589.100	0.000	1800.000	589.000
BT	0.000	1900.000	588.900	0.000	2000.000	588.900	0.000	0.000	0.000	0.000
X1	12951.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
NC	.050	.080	.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12952.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X1	12956.000	28.000	1000.000	1028.000	4.000	4.000	4.000	0.000	1.900	0.000
X3	0.000	0.000	0.000	1002.000	0.000	1026.000	0.000	0.000	0.000	0.000
GR	584.800	0.000	584.700	100.000	585.000	200.000	585.600	300.000	585.600	400.000
GR	585.300	500.000	584.100	600.000	583.800	700.000	583.200	800.000	582.800	900.000
GR	581.200	930.000	576.100	1000.000	573.700	1004.000	572.000	1014.000	573.700	1025.000
GR	575.500	1028.000	577.000	1100.000	577.000	1178.000	584.200	1232.000	584.900	1300.000
GR	585.000	1400.000	584.500	1500.000	584.400	1600.000	584.300	1700.000	587.000	1770.000
GR	584.800	1800.000	585.600	1900.000	585.500	2000.000	0.000	0.000	0.000	0.000
X1	13002.000	0.000	0.000	0.000	46.000	46.000	46.000	0.000	-1.900	0.000
X3	0.000	0.000	0.000	980.000	0.000	1050.000	0.000	0.000	0.000	0.000

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X1	13452.000	25.000	1000.000	1032.000	450.000	450.000	450.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	950.000	0.000	1150.000	0.000	0.000	0.000	0.000
GR	586.000	0.000	586.200	100.000	585.100	200.000	584.100	300.000	581.200	400.000
GR	583.000	500.000	583.500	600.000	583.900	700.000	584.000	800.000	580.100	900.000
GR	578.500	1000.000	574.300	1012.000	574.000	1018.000	574.100	1026.000	575.900	1032.000
GR	576.100	1100.000	576.900	1200.000	577.600	1300.000	580.500	1400.000	582.600	1500.000
GR	583.800	1600.000	585.100	1700.000	585.600	1800.000	586.100	1900.000	586.000	2000.000
X1	14452.000	30.000	1468.000	1500.000	1000.000	1000.000	1000.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1200.000	0.000	1680.000	0.000	0.000	0.000	0.000
GR	585.500	0.000	585.400	100.000	585.100	200.000	585.800	300.000	585.700	400.000
GR	585.100	500.000	584.900	600.000	585.100	700.000	585.400	800.000	584.500	900.000
GR	583.000	1000.000	585.300	1100.000	585.500	1200.000	582.500	1300.000	579.800	1400.000
GR	578.200	1468.000	574.100	1478.000	573.600	1487.000	574.100	1491.000	576.900	1500.000
GR	577.400	1600.000	578.600	1700.000	580.800	1800.000	583.900	1900.000	585.100	2000.000
GR	585.500	2100.000	586.500	2200.000	586.600	2300.000	586.500	2400.000	586.400	2500.000
NC	.040	.040	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	14902.000	35.000	1500.000	1527.000	450.000	480.000	450.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1465.000	0.000	1565.000	0.000	0.000	0.000	0.000
GR	586.500	0.000	586.600	100.000	586.400	200.000	586.000	300.000	585.900	400.000
GR	586.700	500.000	586.000	600.000	585.300	700.000	584.800	800.000	585.200	900.000
GR	585.500	1000.000	584.800	1100.000	579.200	1200.000	579.100	1300.000	580.100	1400.000
GR	578.000	1500.000	575.100	1505.000	575.100	1509.000	574.900	1519.000	578.700	1527.000
GR	581.800	1600.000	583.100	1700.000	585.700	1800.000	585.900	1900.000	586.000	2000.000
GR	586.600	2100.000	585.900	2200.000	585.900	2300.000	585.800	2400.000	585.000	2500.000
GR	585.600	2600.000	584.900	2700.000	584.900	2800.000	585.500	2900.000	584.600	3000.000
X1	14953.000	35.000	1490.000	1518.000	51.000	51.000	51.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1468.000	0.000	1540.000	0.000	0.000	0.000	0.000
GR	587.700	0.000	587.700	100.000	587.300	200.000	587.200	300.000	587.000	400.000
GR	586.800	500.000	586.400	600.000	585.900	700.000	585.400	800.000	585.000	900.000
GR	584.200	1000.000	583.000	1100.000	581.900	1200.000	581.100	1300.000	580.800	1400.000
GR	578.000	1490.000	574.000	1500.000	574.200	1502.000	574.100	1504.000	574.300	1506.000
GR	574.300	1508.000	578.000	1518.000	581.800	1600.000	583.300	1700.000	584.500	1800.000
GR	585.000	1900.000	585.400	2000.000	585.900	2100.000	586.100	2200.000	585.900	2300.000
GR	585.900	2400.000	585.600	2500.000	585.500	2600.000	585.300	2700.000	585.100	2800.000
SB	0.000	1.740	3.040	0.000	8.000	0.000	38.600	0.000	574.000	574.000
X1	15003.000	0.000	0.000	0.000	50.000	50.000	50.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	579.000	580.800	0.000	0.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1468.000	0.000	1540.000	0.000	0.000	0.000	0.000
BT	4.000	1468.000	581.000	0.000	1500.000	581.200	579.000	1508.000	581.200	579.000
BT	1540.000	581.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	15092.000	0.000	0.000	0.000	89.000	89.000	89.000	0.000	.400	0.000
X3	0.000	0.000	0.000	1490.000	0.000	1518.000	0.000	0.000	0.000	0.000
NC	.070	.070	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	15122.000	17.000	500.000	513.000	30.000	30.000	30.000	0.000	0.000	0.000
GR	590.700	0.000	590.600	100.000	590.500	200.000	590.400	300.000	590.300	400.000
GR	590.300	500.000	574.600	500.000	574.500	503.000	574.900	507.000	574.600	510.000
GR	574.600	513.000	590.300	513.000	590.300	600.000	590.300	700.000	590.300	800.000
GR	590.300	900.000	590.300	1000.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.045	.045	.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	15123.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
BT	12.000	0.000	590.700	0.000	100.000	590.600	0.000	200.000	590.500	0.000
BT	300.000	590.400	0.000	400.000	590.300	0.000	500.000	590.300	586.000	513.000
BT	590.300	586.000	600.000	590.300	0.000	700.000	590.300	0.000	800.000	590.300
BT	0.000	900.000	590.300	0.000	1000.000	590.300	0.000	0.000	0.000	0.000
X1	15148.000	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
NC	.070	.070	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	15149.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X1	15222.000	33.000	792.000	808.000	73.000	73.000	73.000	0.000	0.000	0.000
GR	587.000	0.000	587.000	100.000	587.000	200.000	587.000	300.000	586.600	400.000
GR	586.400	500.000	587.200	600.000	587.300	700.000	587.400	792.000	587.600	792.000
GR	586.000	792.000	586.000	793.500	574.600	795.000	574.000	800.000	574.900	805.000
GR	586.000	806.500	586.000	808.000	587.400	808.000	587.600	900.000	587.200	1000.000
GR	584.600	1100.000	585.600	1200.000	585.900	1300.000	586.500	1400.000	586.300	1500.000
GR	586.000	1600.000	585.500	1700.000	585.500	1800.000	585.500	1900.000	585.100	2000.000
GR	584.900	2100.000	584.900	2200.000	585.100	2300.000	0.000	0.000	0.000	0.000
NC		.070	.070	.025	0.000	0.000	0.000	0.000	0.000	0.000
X1	15223.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X1	15226.000	0.000	0.000	0.000	3.000	3.000	3.000	0.000	0.000	0.000
BT	5.000	792.000	587.600	586.000	793.500	587.600	586.000	800.000	587.500	586.000
BT	806.500	587.400	586.000	808.000	587.400	586.000	0.000	0.000	0.000	0.000
X1	15234.000	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X1	15250.000	0.000	0.000	0.000	16.000	16.000	16.000	0.000	0.000	0.000
NC		.060	.060	.040	0.000	0.000	0.000	0.000	0.000	0.000
X1	15251.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X1	15254.000	27.000	1166.000	1212.000	3.000	3.000	3.000	0.000	-.750	0.000
X3	0.000	0.000	0.000	1180.000	0.000	1198.000	0.000	0.000	0.000	0.000
GR	585.100	0.000	584.900	100.000	584.900	200.000	584.700	300.000	584.900	400.000
GR	586.000	500.000	586.400	600.000	585.100	700.000	580.500	800.000	578.600	900.000
GR	577.900	1000.000	578.800	1100.000	579.800	1166.000	575.800	1175.000	574.800	1188.000
GR	575.300	1197.000	577.100	1200.000	580.100	1212.000	577.300	1222.000	578.600	1300.000
GR	583.700	1400.000	586.200	1500.000	586.200	1600.000	586.200	1700.000	586.100	1800.000
GR	586.100	1900.000	586.200	2000.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	15294.000	0.000	0.000	0.000	40.000	40.000	40.000	0.000	.750	0.000
X3	0.000	0.000	0.000	1166.000	0.000	1212.000	0.000	0.000	0.000	0.000
X1	15657.000	18.000	575.000	600.000	363.000	363.000	363.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	480.000	0.000	690.000	0.000	0.000	0.000	0.000
GR	586.400	0.000	586.900	100.000	584.600	200.000	579.200	300.000	578.900	400.000
GR	578.700	500.000	578.500	575.000	576.100	580.000	575.400	588.000	576.200	597.000
GR	578.300	600.000	577.800	700.000	576.900	752.000	579.000	800.000	580.500	900.000
GR	584.200	1000.000	586.200	1100.000	587.200	1125.000	0.000	0.000	0.000	0.000
X1	15927.000	28.000	886.000	911.000	270.000	270.000	270.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	862.000	0.000	938.000	0.000	0.000	0.000	0.000
GR	585.900	0.000	585.600	90.000	585.100	180.000	585.500	270.000	586.500	360.000
GR	586.900	450.000	586.300	540.000	583.000	630.000	579.400	720.000	579.400	810.000
GR	579.400	886.000	575.100	894.000	575.100	900.000	575.000	908.000	579.600	911.000
GR	577.200	990.000	581.400	1080.000	585.100	1170.000	580.600	1260.000	577.900	1350.000
GR	579.300	1440.000	584.700	1530.000	586.400	1620.000	586.300	1710.000	586.300	1800.000
GR	585.800	1890.000	586.300	1980.000	586.900	2070.000	0.000	0.000	0.000	0.000
NH	3.000	.050	895.500	.025	904.500	.050	2070.000	0.000	0.000	0.000
X1	15928.000	35.000	886.000	911.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	862.000	0.000	938.000	0.000	0.000	0.000	0.000
BT	12.000	862.000	580.070	0.000	895.500	580.500	577.800	897.000	580.500	579.300
BT	898.000	580.500	579.300	899.500	580.500	577.800	899.500	580.500	576.300	900.500
BT	580.500	576.400	900.500	580.500	577.900	902.000	580.500	579.400	903.000	580.500
BT	579.400	904.500	580.500	577.900	938.000	579.210	0.000	0.000	0.000	0.000
GR	585.900	0.000	585.600	90.000	585.100	180.000	585.500	270.000	586.500	360.000
GR	586.900	450.000	586.300	540.000	583.000	630.000	579.400	720.000	579.400	810.000
GR	580.070	862.000	579.400	886.000	576.300	895.500	575.300	897.000	575.300	898.000
GR	576.300	899.500	576.400	900.500	575.400	902.000	575.400	903.000	576.400	904.500
GR	579.600	911.000	579.210	938.000	577.200	990.000	581.400	1080.000	585.100	1170.000

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GR	580.600	1260.000	577.900	1350.000	579.300	1440.000	584.700	1530.000	586.400	1620.000
GR	586.300	1710.000	586.300	1800.000	585.800	1890.000	586.300	1980.000	586.900	2070.000
NH	3.000	.050	895.500	.025	904.500	.050	2070.000	0.000	0.000	0.000
X1	15958.000	35.000	886.000	911.000	30.000	30.000	30.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	870.000	0.000	931.000	0.000	0.000	0.000	0.000
BT	12.000	870.000	580.170	0.000	895.500	580.500	577.700	897.000	580.500	579.200
BT	898.000	580.500	579.200	899.500	580.500	577.700	899.500	580.500	576.200	900.500
BT	580.500	576.200	900.500	580.500	577.700	902.000	580.500	579.200	903.000	580.500
BT	579.400	904.500	580.500	577.700	931.000	579.480	0.000	0.000	0.000	0.000
GR	585.900	0.000	585.600	90.000	585.100	180.000	585.500	270.000	586.500	360.000
GR	586.900	450.000	586.300	540.000	583.000	630.000	579.400	720.000	579.400	810.000
GR	580.170	870.000	579.400	886.000	576.200	895.500	575.200	897.000	575.200	898.000
GR	576.200	899.500	576.200	900.500	575.200	902.000	575.200	903.000	576.200	904.500
GR	579.600	911.000	579.480	931.000	577.200	990.000	581.400	1080.000	585.100	1170.000
GR	580.600	1260.000	577.900	1350.000	579.300	1440.000	584.700	1530.000	586.400	1620.000
GR	586.300	1710.000	586.300	1800.000	585.800	1890.000	586.300	1980.000	586.900	2070.000
NC	.050	.050	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	15959.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	870.000	0.000	931.000	0.000	0.000	0.000	0.000
X1	16006.000	26.000	1200.000	1225.000	47.000	47.000	47.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1194.000	0.000	1231.000	0.000	0.000	0.000	0.000
GR	580.900	0.000	580.900	100.000	579.900	200.000	580.100	300.000	580.000	400.000
GR	580.000	500.000	579.900	600.000	579.900	700.000	579.500	800.000	579.300	900.000
GR	578.700	1000.000	578.100	1100.000	577.400	1200.000	573.300	1203.000	572.400	1214.000
GR	574.400	1222.000	577.400	1225.000	578.100	1300.000	579.100	1400.000	580.700	1500.000
GR	581.800	1600.000	581.500	1700.000	581.100	1800.000	580.700	1900.000	579.600	2000.000
GR	579.400	2100.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	16056.000	16.000	389.600	401.600	50.000	50.000	50.000	0.000	0.000	0.000
GR	588.300	0.000	588.300	77.900	588.300	155.800	588.300	233.800	588.300	311.700
GR	588.200	389.600	572.900	389.600	573.300	393.500	572.900	397.400	572.800	401.600
GR	588.200	401.600	588.100	467.500	588.100	545.500	588.100	623.400	588.100	701.300
GR	588.200	779.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.030	.030	.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	4.000	530.000	675.000	705.000	735.000	0.000	0.000	0.000	0.000	0.000
X1	16057.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
SB	0.000	2.030	2.500	0.000	12.000	0.000	98.200	0.000	572.800	572.800
X1	16273.000	0.000	0.000	0.000	216.000	216.000	216.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	581.200	588.200	0.000	0.000	0.000	0.000	0.000
BT	4.000	389.600	588.200	581.200	389.600	588.200	581.200	401.600	588.200	581.200
BT	401.600	588.200	581.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.070	.030	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	16274.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
NC	.070	.070	.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	16374.000	21.000	577.000	600.000	100.000	100.000	100.000	0.000	-1.580	0.000
X3	0.000	0.000	0.000	505.000	0.000	715.000	0.000	0.000	0.000	0.000
GR	587.100	0.000	587.000	100.000	587.000	200.000	587.600	300.000	588.000	400.000
GR	586.700	500.000	579.400	510.000	579.300	577.000	575.900	580.000	574.700	586.000
GR	575.900	594.000	579.300	600.000	580.300	700.000	580.900	807.000	584.000	812.000
GR	584.800	900.000	583.000	1000.000	585.500	1100.000	584.400	1200.000	586.300	1300.000
GR	586.300	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	16873.000	0.000	0.000	0.000	580.000	460.000	499.000	0.000	1.580	0.000
X3	0.000	0.000	0.000	500.000	0.000	720.000	0.000	0.000	0.000	0.000
X1	17473.000	28.000	1100.000	1125.000	600.000	600.000	600.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	850.000	0.000	1200.000	0.000	0.000	0.000	0.000
GR	589.300	0.000	587.900	100.000	588.900	200.000	588.600	300.000	588.100	410.000
GR	588.200	500.000	588.500	600.000	588.200	700.000	580.400	800.000	580.200	900.000

GR	578.700	1000.000	579.800	1100.000	578.700	1104.000	578.100	1112.000	578.900	1118.000
GR	580.300	1125.000	580.400	1200.000	580.500	1300.000	582.100	1400.000	585.500	1500.000
GR	587.300	1600.000	586.300	1690.000	587.600	1800.000	587.700	1900.000	586.000	2000.000
GR	585.500	2100.000	585.600	2200.000	584.300	2300.000	0.000	0.000	0.000	0.000
NC	.035	.035	.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	18323.000	32.000	1500.000	1529.000	850.000	850.000	350.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1350.000	0.000	1600.000	0.000	0.000	0.000	0.000
GR	588.900	0.000	588.200	100.000	588.100	200.000	588.400	300.000	586.100	400.000
GR	584.600	500.000	586.100	600.000	587.600	700.000	587.600	800.000	587.600	900.000
GR	587.800	1000.000	588.000	1100.000	586.000	1200.000	580.600	1300.000	581.000	1400.000
GR	580.300	1500.000	577.900	1504.000	577.200	1513.000	578.500	1522.000	580.400	1529.000
GR	579.700	1600.000	582.000	1700.000	586.300	1800.000	585.900	1900.000	586.300	2000.000
GR	587.600	2100.000	588.400	2200.000	588.600	2300.000	589.100	2400.000	590.900	2500.000
GR	589.200	2600.000	589.100	2700.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	19073.000	32.000	1500.000	1532.000	750.000	750.000	750.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	1350.000	0.000	1600.000	0.000	0.000	0.000	0.000
GR	588.700	0.000	588.900	100.000	588.300	200.000	587.700	300.000	586.100	400.000
GR	584.500	500.000	585.000	600.000	585.700	700.000	586.800	800.000	587.600	900.000
GR	587.700	1000.000	588.800	1100.000	586.500	1200.000	584.900	1300.000	582.300	1400.000
GR	583.300	1419.000	579.300	1430.000	580.600	1500.000	579.000	1502.000	577.700	1514.000
GR	577.900	1523.000	581.000	1532.000	580.600	1600.000	581.800	1700.000	586.800	1800.000
GR	585.800	1900.000	585.100	2000.000	587.800	2100.000	588.800	2200.000	589.600	2300.000
GR	589.400	2400.000	589.500	2500.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	19523.000	33.000	688.000	720.000	400.000	500.000	450.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	550.000	0.000	950.000	0.000	0.000	0.000	0.000
GR	589.400	0.000	589.200	100.000	588.600	200.000	587.600	300.000	587.000	400.000
GR	586.700	430.000	586.700	500.000	586.300	600.000	585.800	688.000	577.100	692.400
GR	577.100	694.000	577.000	696.000	577.000	698.000	576.900	700.000	577.000	702.000
GR	577.000	704.000	577.100	706.000	577.100	707.600	585.700	720.000	585.200	800.000
GR	584.600	900.000	584.200	1000.000	584.700	1100.000	585.000	1200.000	586.200	1300.000
GR	587.800	1400.000	588.500	1500.000	588.000	1600.000	588.100	1700.000	588.500	1800.000
GR	588.800	1900.000	588.800	2000.000	588.400	2100.000	0.000	0.000	0.000	0.000
NC	.020	.020	.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	19524.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	550.000	0.000	950.000	0.000	0.000	0.000	0.000
BT	23.000	0.000	589.400	0.000	100.000	589.200	0.000	200.000	588.600	0.000
BT	300.000	587.600	0.000	400.000	587.000	0.000	430.000	586.700	0.000	500.000
BT	586.700	0.000	600.000	586.300	0.000	692.400	585.800	577.100	692.400	585.800
BT	577.600	694.000	585.800	581.200	696.000	585.800	582.800	698.000	585.800	583.900
BT	700.000	585.800	583.900	702.000	585.800	583.900	704.000	585.800	582.800	706.000
BT	585.800	581.200	707.600	585.800	577.600	707.600	585.800	577.100	800.000	585.200
BT	0.000	900.000	584.600	0.000	1000.000	584.200	0.000	1075.000	584.600	0.000
X1	19570.000	0.000	0.000	0.000	46.000	46.000	46.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	550.000	0.000	950.000	0.000	0.000	0.000	0.000
NC	.045	.045	.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	19571.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	550.000	0.000	950.000	0.000	0.000	0.000	0.000
X1	20321.000	18.000	210.000	230.000	775.000	725.000	750.000	0.000	0.000	0.000
GR	589.700	0.000	587.900	30.000	585.500	50.000	582.300	110.000	582.000	210.000
GR	578.600	217.000	578.600	221.000	578.900	225.000	580.600	230.000	582.000	310.000
GR	581.600	410.000	582.800	510.000	585.400	610.000	589.700	710.000	588.700	810.000
GR	588.700	910.000	589.800	1010.000	589.200	1030.000	0.000	0.000	0.000	0.000
X1	21021.000	14.000	400.000	434.000	675.000	725.000	700.000	0.000	0.000	0.000
GR	590.800	0.000	589.800	40.000	590.900	100.000	581.800	200.000	581.900	300.000
GR	583.700	400.000	579.400	417.000	578.900	424.000	579.200	428.000	582.400	434.000
GR	581.300	500.000	583.500	600.000	590.000	700.000	590.500	800.000	0.000	0.000
NC	.060	.060	.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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QT	4.000	1340.000	1730.000	1860.000	2060.000	0.000	0.000	0.000	0.000	0.000
X1	-6900.000	23.000	223.000	400.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	581.300	0.000	580.000	100.000	575.600	200.000	575.500	223.000	573.500	225.000
GR	573.300	230.000	573.000	235.000	572.200	240.000	571.700	245.000	570.900	250.000
GR	570.800	260.000	570.800	270.000	570.400	280.000	570.100	290.000	569.500	300.000
GR	569.500	310.000	570.000	320.000	571.100	330.000	572.000	335.000	572.700	340.000
GR	573.500	343.000	583.400	368.000	587.500	400.000	0.000	0.000	0.000	0.000
X1	7351.000	16.000	300.000	376.000	450.000	450.000	450.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	376.000	0.000	0.000	0.000	0.000
GR	582.100	0.000	582.500	100.000	581.500	200.000	575.200	300.000	570.800	306.000
GR	568.900	320.000	567.900	330.000	570.100	350.000	572.600	365.000	574.600	376.000
GR	574.400	400.000	575.900	500.000	579.100	600.000	575.300	700.000	574.700	773.000
GR	583.600	800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
QT	4.000	1040.000	1310.000	1400.000	1540.000	0.000	0.000	0.000	0.000	0.000
X1	7386.000	16.000	300.000	376.000	36.000	36.000	36.000	0.000	.300	0.000
X3	0.000	0.000	0.000	318.000	0.000	342.000	0.000	0.000	0.000	0.000
GR	582.100	0.000	582.500	100.000	581.500	200.000	575.200	300.000	570.800	306.000
GR	568.900	320.000	567.900	330.000	570.100	350.000	572.600	365.000	574.600	376.000
GR	574.400	400.000	575.900	500.000	579.100	600.000	575.300	700.000	574.700	773.000
GR	583.600	800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.025	.025	.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7387.000	24.000	1000.000	1024.000	1.000	1.000	1.000	0.000	0.000	0.000
BT	18.000	0.000	581.800	0.000	100.000	582.100	0.000	200.000	581.800	0.000
BT	300.000	581.800	0.000	400.000	581.900	0.000	500.000	582.000	0.000	600.000
BT	582.400	0.000	700.000	581.500	0.000	800.000	579.500	0.000	900.000	578.600
BT	0.000	1000.000	579.400	576.800	1024.000	579.400	576.900	1100.000	577.800	0.000
BT	1200.000	576.900	0.000	1300.000	576.400	0.000	1400.000	577.600	0.000	1500.000
BT	577.900	0.000	1600.000	578.900	0.000	0.000	0.000	0.000	0.000	0.000
GR	581.800	0.000	582.100	100.000	581.800	200.000	581.800	300.000	581.900	400.000
GR	582.000	500.000	582.400	600.000	581.500	700.000	579.500	800.000	578.600	900.000
GR	579.400	1000.000	569.800	1000.000	568.400	1005.000	568.200	1010.000	568.400	1015.000
GR	568.800	1020.000	570.800	1024.000	579.400	1024.000	577.800	1100.000	576.900	1200.000
GR	576.400	1300.000	577.600	1400.000	577.900	1500.000	578.900	1600.000	0.000	0.000
X1	7414.000	0.000	0.000	0.000	27.000	27.000	27.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
NC	.080	.080	.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7415.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NH	5.000	.080	595.000	.035	651.000	.080	900.000	.035	930.000	.070
NH	945.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7419.000	25.000	595.000	651.000	4.000	4.000	4.000	0.000	-1.200	0.000
X3	0.000	0.000	0.000	607.000	0.000	639.000	0.000	0.000	0.000	0.000
GR	581.700	0.000	582.100	100.000	582.000	200.000	581.800	300.000	581.000	400.000
GR	579.700	500.000	578.700	525.000	573.400	547.000	574.400	595.000	571.400	605.000
GR	569.400	620.000	571.300	640.000	573.300	651.000	573.200	700.000	573.500	782.000
GR	574.600	788.000	576.800	800.000	577.700	845.000	577.600	874.000	575.100	900.000
GR	571.700	904.000	569.800	914.000	570.900	928.000	575.300	930.000	584.300	945.000
X1	7901.000	0.000	0.000	0.000	481.000	481.000	481.000	0.000	1.200	0.000
X3	0.000	0.000	0.000	0.000	0.000	845.000	0.000	0.000	0.000	0.000
NH	5.000	.080	948.000	.035	988.000	.080	1200.000	.035	1234.000	.080
NH	1280.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8941.000	29.000	700.000	1100.000	440.000	440.000	440.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	1100.000	0.000	0.000	0.000	0.000
GR	582.500	0.000	582.500	100.000	583.300	200.000	581.100	300.000	581.300	400.000
GR	580.600	500.000	578.100	600.000	579.600	700.000	578.200	800.000	572.500	900.000
GR	573.200	948.000	571.900	949.000	570.200	955.000	569.500	965.000	569.500	975.000
GR	572.900	985.000	574.100	988.000	575.500	1000.000	581.400	1100.000	579.800	1164.000

GR	580.200	1176.000	580.900	1200.000	572.200	1211.000	570.300	1221.000	570.100	1232.000
GR	575.900	1234.000	585.500	1250.000	586.800	1260.000	593.300	1280.000	0.000	0.000
NH	5.000	.080	362.000	.035	407.000	.080	869.000	.035	943.000	.080
NH	972.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	9441.000	24.000	103.000	800.000	500.000	500.000	500.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	800.000	0.000	0.000	0.000	0.000
GR	585.400	0.000	583.300	103.000	573.600	145.000	573.500	200.000	574.200	300.000
GR	574.700	362.000	571.100	364.000	570.400	389.000	572.300	405.000	575.700	407.000
GR	575.800	500.000	578.700	600.000	581.000	700.000	582.500	800.000	582.400	851.000
GR	580.100	869.000	580.600	882.000	579.700	900.000	572.700	910.000	571.300	921.000
GR	571.900	931.000	576.700	934.000	583.400	965.000	587.900	972.000	0.000	0.000
NH	4.000	.100	100.000	.070	579.000	.035	638.000	.080	680.000	0.000
QT	4.000	280.000	325.000	315.000	300.000	0.000	0.000	0.000	0.000	0.000
X1	9891.000	18.000	0.000	566.000	800.000	300.000	450.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	0.000	0.000	300.000	0.000	0.000	0.000	0.000
GR	579.500	0.000	575.700	100.000	574.200	200.000	573.800	300.000	573.800	400.000
GR	573.700	500.000	574.300	562.000	576.400	566.000	576.600	579.000	574.900	600.000
GR	572.100	612.000	571.000	620.000	571.700	626.000	573.400	631.000	577.700	638.000
GR	575.300	645.000	576.400	670.000	582.200	680.000	0.000	0.000	0.000	0.000
NC	.080	.080	.040	.300	.500	0.000	0.000	0.000	0.000	0.000
QT	4.000	580.000	740.000	775.000	820.000	0.000	0.000	0.000	0.000	0.000
X1	10441.000	15.000	465.000	500.000	550.000	550.000	550.000	0.000	0.000	0.000
X3	0.000	0.000	0.000	85.000	0.000	0.000	0.000	0.000	0.000	0.000
GR	580.200	0.000	574.400	100.000	574.600	200.000	574.500	300.000	573.800	400.000
GR	574.900	465.000	571.200	486.000	572.400	494.000	575.000	500.000	574.300	547.000
GR	577.700	557.000	579.600	600.000	579.000	621.000	582.000	624.000	582.100	657.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Uarco Business Forms - A

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*****************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1      CITY OF ROCKWOOD,     5555-57-01          PM = RICHARD ZANOTTI
T2      100-YEAR FLOW = 1860 CFS
T3      SILVER CREEK - CITY OF ROCKWOOD, MICHIGAN - JOB NO. 5555-57

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

     -10.        4.        0.        0.  0.000000      0.00       0.0        0.   575.870     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     3.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

CCHV=     .300 CEHV=     .500
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        QLOSS   BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


        487' D/S FROM D/S FACE OF STREICHER RD BRIDGE (SMITH), VS#32   SEC. A

  6900.00      6.37    575.87      0.00    575.87    576.02       .15      0.00      0.00    575.50
    1860.        2.     1858.        0.        8.      591.        0.        0.        0.    587.50
     0.00       .25      3.15      0.00      .060      .030      .060     0.000    569.50    193.86
  .000523        0.        0.        0.         0         0         1      0.00    155.12    348.98


3470 ENCROACHMENT STATIONS=        .0      376.0  TYPE=      1  TARGET=      375.999

        36' D/S FROM D/S FACE OF STREICHER RD BRIDGE (SMITH), VS#31    SEC. B

  7350.00      8.19    576.09      0.00      0.00    576.39       .30       .29       .07    575.20
    1860.        3.     1857.        0.        6.      424.        0.        5.        1. 100000.00
      .03       .42      4.38      0.00      .060      .030      .060      .030    567.90    285.73
  .000842      450.      450.      450.         1         0         1      0.00     90.27    376.00


1490 NH CARD USED

3470 ENCROACHMENT STATIONS=      845.0      945.0  TYPE=      1  TARGET=     -845.000
  7700.00      7.36    576.61      0.00      0.00    576.69       .08       .23       .07    577.15
     460.        0.      459.        1.        0.      205.        3.        8.        2.    574.75
      .07      0.00      2.24       .32      .060      .036      .070      .030    569.25    878.57
  .000312      350.      350.      350.         2         0         1      0.00     54.53    933.10


3470 ENCROACHMENT STATIONS=      845.0      945.0  TYPE=      1  TARGET=     -845.000

        486' U/S FROM U/S FACE OF STREICHER RD BRIDGE (SMITH), VS#29   SEC. D
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 7900.00      6.87    576.67      0.00      0.00    576.77      .10       .07       .01    577.70
    460.        0.       460.        0.        0.       181.       2.        9.        2.    575.30
     .09       0.00      2.54       .30       .060     .035      .070      .030    569.80    883.67
 .000415       200.      200.       200.         2        0         1      0.00     48.62    932.28

 3470 ENCROACHMENT STATIONS=      845.0      945.0  TYPE=      1  TARGET=     -845.000
 8400.00      7.03    576.88      0.00      0.00    576.97      .09       .20       .00    577.75
    460.        0.       459.        1.        0.       188.       2.       11.        3.    575.35
     .15       0.00      2.44       .31       .060     .035      .070      .030    569.85    882.02
 .000378       500.      500.       500.         2        0         1      0.00     50.53    932.55

 1490 NH CARD USED

 3470 ENCROACHMENT STATIONS=     1100.0     1280.0  TYPE=      1  TARGET=    -1100.000

          1500' U/S FROM U/S FACE OF STREICHER RD BRIDGE (SMITH), VS#28  SEC. E

 8940.00      6.99    577.09      0.00      0.00    577.22      .13       .23       .02    580.90
    460.        0.       460.        0.        0.       158.       1.       13.        3.    575.90
     .20       0.00      2.92       .26       .060     .035      .080      .030    570.10   1204.81
 .000478       540.      540.       540.         0        0         1      0.00     31.17   1235.99

 1490 NH CARD USED
    SECNO      DEPTH     CWSEL      CRIWS     WSELK      EG        HV        HL        OLOSS    BANK ELEV
    Q          QLOB      QCH        QROB      ALOB       ACH       AROB      VOL       TWA      LEFT/RIGHT
    TIME       VLOB      VCH        VROB      XNL        XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE      XLOBL     XLCH       XLOBR     ITRIAL     IDC       ICONT     CORAR     TOPWID     ENDST

 3470 ENCROACHMENT STATIONS=      800.0      972.0  TYPE=      1  TARGET=     -800.000

          482' D/S FROM D/S FACE OF STREICHER RD BRIDGE (SILVER), VS#27  SEC. F

 9440.00      6.06    577.36      0.00      0.00    577.53      .16       .29       .02    580.60
    460.        0.       459.        1.        0.       141.       1.       15.        4.    576.70
     .25       0.00      3.25       .54       .060     .035      .035      .030    571.30    903.34
 .000727       500.      500.       500.         2        0         1      0.00     33.73    937.07

 1490 NH CARD USED

 3470 ENCROACHMENT STATIONS=      579.0      680.0  TYPE=      1  TARGET=      101.000

          32' D/S FROM D/S FACE OF STREICHER RD BRIDGE (SILVER), VS#26  SEC. G

 9890.00      6.70    577.70      0.00      0.00    577.76      .06       .20       .03    576.60
    460.        0.       434.       26.        0.       220.      56.       17.        4.    577.70
     .31       .00       1.98       .46       .070     .035      .080      .030    571.00    579.00
 .000307       500.      450.       200.         2        0         1      0.00     93.24    672.24

 1490 NH CARD USED

 3470 ENCROACHMENT STATIONS=      438.6      778.3  TYPE=      1  TARGET=      395.000
 9921.00      6.96    577.76      0.00      0.00    577.78      .02       .01       .01    577.20
    460.       25.       316.      120.       58.      245.      220.      17.        4.    577.20
     .32       .43       1.29       .54       .080     .080      .065      .030    570.80    438.60
 .000562        60.       31.        1.         2        0         1      0.00    339.70    778.30

 1490 NH CARD USED
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 NORMAL BRIDGE,NRD=14 MIN ELTRD=  576.30 MAX ELLC=  575.80

 3470 ENCROACHMENT STATIONS=     438.6     778.3  TYPE=      1  TARGET=     395.000
          D/S FACE OF STREICHER RD BRIDGE OVER SILVER CREEK, BS#23        SEC. H

          CONCRETE BOX CULVERT, WITH HEADWALLS & WINGWALLS, SKEW=0.86

          SPAN = 21 FT, LENGTH = 36.5 FT, ROAD LENGTH = 31.5 FT.

    9922.00      6.97    577.77      0.00      0.00    577.78       .02       .00       .00    577.20
        460.       45.       208.      207.       58.      185.      216.       17.        4.    577.20
         .32       .78      1.12       .96      .080      .080      .066      .030    570.80    438.60
    .001863        1.        1.        1.         0         0         1    -64.59    339.70    778.30

 1490 NH CARD USED

 NORMAL BRIDGE,NRD=14 MIN ELTRD=  576.30 MAX ELLC=  575.80

 3470 ENCROACHMENT STATIONS=     438.6     778.3  TYPE=      1  TARGET=     395.000
    9958.00      7.03    577.83      0.00      0.00    577.85       .01       .06       .00    577.20
        460.       46.       198.      215.       62.      188.      231.       17.        4.    577.20
         .33       .75      1.05       .93      .080      .080      .066      .030    570.80    438.60
    .001591       36.       36.       36.         2         0         1    -64.59    339.70    778.30

 1490 NH CARD USED

 3470 ENCROACHMENT STATIONS=     438.6     778.3  TYPE=      1  TARGET=     395.000
    9959.00      7.03    577.83      0.00      0.00    577.85       .02       .00       .00    577.20
        460.       26.       306.      128.       62.      249.      236.       17.        4.    577.20
         .33       .42      1.23       .54      .080      .080      .065      .030    570.80    438.60
    .000505        1.        1.        1.         0         0         1      0.00    339.70    778.30

 3470 ENCROACHMENT STATIONS=      85.0      657.0  TYPE=      1  TARGET=     -85.000
          482' U/S FROM U/S FACE OF STREICHER RD BRIDGE (SILVER), VS#24  SEC. I

          END OF ISLAND CALCULATION FOR AREA D/S OF HURON RIVER DRIVE

          AND BEGIN ISLAND CALCULATION FOR HURON RIVER DRIVE BRIDGE

   10440.00      6.71    577.91      0.00      0.00    577.92       .01       .07       .00    574.90
        775.      535.       177.       64.     1331.      176.      173.       30.        9.    575.00
         .58       .40      1.00       .37      .080      .040      .080      .031    571.20     85.00
    .000088       481.      481.      481.         2         0         1      0.00    476.81    561.81

      SECNO      DEPTH      CWSEL      CRIWS      WSELK         EG         HV         HL      OLOSS   BANK ELEV
          Q       QLOB        QCH       QROB       ALOB        ACH       AROB        VOL        TWA  LEFT/RIGHT
       TIME       VLOB        VCH       VROB        XNL       XNCH        XNR        WTN     ELMIN       SSTA
      SLOPE      XLOBL       XLCH      XLOBR     ITRIAL        IDC     ICONT      CORAR    TOPWID      ENDST

 3470 ENCROACHMENT STATIONS=     285.0      600.0  TYPE=      1  TARGET=     315.000
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100'~D/S FROM D/S FACE OF HURON RIVER DRIVE BRIDGE, VS#23 SEC. J

11040.00	6.37	577.97	0.00	0.00	577.97	.01	.05	.00	575.10	
425.	217.	208.	0.	578.	254.	0.	47.	14.	579.20	
.86	.38	.82	0.00	.080	.040	.080	.033	571.60	285.00	
.000085	600.	600.	600.	2	0	1	0.00	245.13	530.13	

3470 ENCROACHMENT STATIONS= 1300.0 1620.0 TYPE= 1 TARGET= 320.000

D/S FACE OF HURON RIVER DRIVE BRIDGE, BS#22 SEC. K

CONCRETE BOX CULVERT, WITH HEADWALLS @ WINGWALLS

SPAN = 21 FT, LENGTH = 39.5 FT

11140.00	6.06	577.96	0.00	0.00	578.02	.06	.02	.03	574.80	
425.	88.	282.	55.	152.	118.	99.	48.	14.	575.00	
.87	.58	2.39	.56	.080	.040	.080	.033	571.90	1404.09	
.000531	100.	100.	100.	1	0	1	0.00	183.84	1587.93	

CCHV= .300 CEHV= .500

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.73	3.05	0.00	21.00	0.00	84.00	0.00	571.90	571.90

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
578.64	578.02	0.00	109.	313.	84.	575.90	577.80	30.00

3470 ENCROACHMENT STATIONS= 1300.0 1620.0 TYPE= 1 TARGET= 320.000

U/S FACE OF HURON RIVER DRIVE BRIDGE

END OF ISLAND CALCULATION FOR HURON RIVER DRIVE BRIDGE

11180.00	6.38	578.28	0.00	0.00	578.33	.04	.31	0.00	574.80	
425.	101.	263.	62.	189.	125.	122.	49.	15.	575.00	
.88	.53	2.11	.51	.080	.040	.080	.033	571.90	1338.54	
.000384	40.	40.	40.	2	0	3	0.00	256.59	1595.13	

Unigo Business Forms - A

START TRIB COMP
-10440.000 10440.000 5791.394 577.914

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
3470 ENCROACHMENT STATIONS=		85.0	657.0	TYPE=	1	TARGET=		=85.000	
-10440.00	6.71	577.91	0.00	0.00	577.92	.01	.07	0.00	574.90
	775.	535.	177.	64.	1332.	176.	173.	62.	19. 575.00
	1.17	.40	1.00	.37	.080	.040	.080	.034	571.20 85.00
	.000087	550.	550.	550.	0	0	1	0.00	476.84 561.84
3470 ENCROACHMENT STATIONS=		.1	285.0	TYPE=	1	TARGET=		284.950	
	100' D/S FROM D/S FACE OF HURON RIVER DRIVE BRIDGE, VS#23						SEC. J		
11041.00	5.47	577.97	0.00	0.00	577.98	.00	.06	.00	574.40
	350.	31.	191.	128.	110.	364.	290.	79.	24. 574.60
	1.52	.29	.52	.44	.080	.070	.080	.038	572.50 38.51
	.000110	600.	600.	600.	0	0	1	0.00	246.49 285.00
3470 ENCROACHMENT STATIONS=		950.0	1300.0	TYPE=	1	TARGET=		350.000	
	D/S FACE OF HURON RIVER DRIVE BRIDGE, BS#22						SEC. K		
11141.00	6.68	577.98	0.00	0.00	578.00	.02	.01	.01	571.30
	350.	115.	165.	71.	163.	107.	102.	80.	25. 571.30
	1.54	.70	1.54	.70	.055	.040	.055	.038	571.30 1003.10
	.000137	100.	100.	100.	0	0	1	0.00	95.42 1098.52

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.66	3.05	0.00	16.00	0.00	96.00	0.00	571.30	571.30

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
578.32	578.14	0.00	0.	347.	96.	577.30	578.30	30.00

3470 ENCROACHMENT STATIONS= 950.0 1300.0 TYPE= 1 TARGET= 350.000

D/S FACE OF HURON RIVER DRIVE BRIDGE

END OF ISLAND CALCULATION FOR HURON RIVER DRIVE BRIDGE

11181.00	6.99	578.29	0.00	0.00	578.31	.02	.32	0.00	571.30	
350.	117.	160.	72.	180.	112.	112.	81.	25.	571.30	
1.56	.65	1.43	.65	.055	.040	.055	.038	571.30	1000.70	
.000111	40.	40.	40.	1	0	2	0.00	101.26	1101.96	

3470 ENCROACHMENT STATIONS= 565.0 750.0 TYPE= 1 TARGET= 185.000

11431.00	6.85	578.35	0.00	0.00	578.39	.04	.07	.01	574.30
775.	406.	341.	28.	418.	148.	60.	84.	26.	576.20
1.60	.97	2.31	.46	.080	.040	.080	.038	571.50	565.00
.000444	250.	250.	300.	1	0	1	0.00	183.87	748.87

3470 ENCROACHMENT STATIONS= 661.0 711.0 TYPE= 1 TARGET= 50.000

500' U/S FROM U/S FACE OF HURON RIVER DRIVE BRIDGE, VS#21 SEC. L

11681.00	6.72	578.42	0.00	0.00	578.72	.29	.20	.12	574.50
775.	85.	666.	24.	43.	144.	20.	86.	26.	576.40
1.62	1.98	4.62	1.18	.080	.040	.080	.038	571.70	661.00
.001838	250.	250.	250.	1	0	1	0.00	50.00	711.00

3470 ENCROACHMENT STATIONS= 614.6 637.6 TYPE= 1 TARGET= 23.000

11730.00	6.89	578.49	0.00	0.00	578.87	.38	.11	.05	100000.00
775.	0.	775.	0.	0.	156.	0.	86.	26.	100000.00
1.62	0.00	4.98	0.00	.080	.040	.080	.038	571.60	614.60
.002465	100.	49.	1.	1	0	1	0.00	23.00	637.60

D/S FACE OF RAILROAD ENTRY SPUR BRIDGE, BS#20 SEC. M

TWIN 10'-8" X 6'-11" MULTI-PLATE ARCH CULVERTS

PROJECTED FROM FILL, SKEW = 0.61

MULTIPLY ALL STATIONS BY 0.61, EXCEPT THOSE FOR ARCH CULVERTS

11731.00	6.88	578.48	0.00	0.00	578.88	.40	.00	.01	583.90
775.	0.	775.	0.	0.	152.	0.	86.	26.	583.90
1.62	0.00	5.09	0.00	.045	.032	.045	.038	571.60	614.60
.001682	1.	1.	1.	0	0	1	0.00	23.00	637.60

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.98	2.63	0.00	22.00	0.00	116.00	0.00	571.60	571.60

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
580.54	578.88	0.00	0.	775.	116.	578.60	583.90	10.00

3470 ENCROACHMENT STATIONS= 614.6 637.6 TYPE= 1 TARGET= 23.000

11826.00	8.70	580.30	0.00	0.00	580.54	.25	1.66	0.00100000.00	
775.	0.	775.	0.	0.	194.	0.	87.	26.	583.90
1.63	0.00	3.99	0.00	.045	.032	.045	.038	571.60	614.60
.000854	95.	95.	95.	2	0	1	0.00	23.00	637.60

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 614.6 637.6 TYPE= 1 TARGET= 23.000

11827.00	8.71	580.31	0.00	0.00	580.55	.24	.00	.00100000.00	
775.	0.	775.	0.	0.	198.	0.	87.	26.	100000.00
1.63	0.00	3.92	0.00	.055	.040	.045	.038	571.60	614.60
.001270	1.	1.	1.	1	0	1	0.00	23.00	637.60

3470 ENCROACHMENT STATIONS= 340.0 415.0 TYPE= 1 TARGET= 75.000

11876.00	8.89	580.59	0.00	0.00	580.63	.04	.02	.06	578.30
775.	0.	324.	451.	0.	194.	296.	87.	26.	573.60
1.64	0.00	1.67	1.52	.055	.040	.045	.038	571.70	340.00
.000183	49.	49.	49.	2	0	1	0.00	75.00	415.00

3470 ENCROACHMENT STATIONS= 340.0 450.0 TYPE= 1 TARGET= 110.000

600# D/S FROM D/S FACE OF D.T.S.L. RAILROAD BRIDGE, VS#19 SEC. N

12226.00	8.06	580.66	0.00	0.00	580.69	.03	.06	.00	579.20
775.	0.	260.	515.	0.	171.	406.	91.	27.	574.50
1.71	0.00	1.52	1.27	.055	.040	.045	.038	572.60	340.00
.000174	350.	350.	350.	2	0	1	0.00	110.00	450.00

3470 ENCROACHMENT STATIONS= 984.0 1036.0 TYPE= 1 TARGET= 52.000

50' D/S FROM D/S FACE OF D.T.S.L. RAILROAD BRIDGE, VS#18 SEC. O

12776.00	9.47	580.77	0.00	0.00	580.87	.10	.14	.04	576.10
775.	109.	615.	51.	74.	225.	28.	97.	28.	576.00
1.77	1.49	2.73	1.82	.055	.040	.045	.038	571.30	984.00
.000396	550.	550.	550.	0	0	1	0.00	52.00	1036.00

12825.00	7.64	580.74	0.00	0.00	580.96	.23	.03	.06	586.70
775.	0.	775.	0.	0.	203.	0.	97.	28.	586.80
1.77	0.00	3.81	0.00	.055	.040	.045	.038	573.10	1000.00
.001286	49.	49.	49.	2	0	1	0.00	28.00	1028.00

D/S FACE OF D.T.S.L. RAILROAD BRIDGE, BS#17 SEC. P

CONCRETE BRIDGE WITH ONE PIER, HEADWALLS, AND WINGWALLS

TOTAL SPAN.= 45.5 FT, LENGTH = 34 FT

12826.00	7.64	580.74	0.00	0.00	580.96	.23	.00	.00	586.70
775.	0.	775.	0.	0.	203.	0.	97.	28.	586.80
1.77	0.00	3.81	0.00	.045	.020	.045	.038	573.10	1000.00
.000321	1.	1.	1.	0	0	1	0.00	28.00	1028.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHO	ELCHD
	1.05	1.54	2.63	0.00	28.00	3.50	171.50	0.00	573.30	573.30

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
581.22	581.01	.05	0.	775.	172.	580.30	586.30	10.00

12860.00	7.92	581.02	0.00	0.00	531.22	.21	.26	0.00	586.70
775.	0.	775.	0.	0.	211.	0.	98.	28.	586.80
1.78	0.00	3.67	0.00	.045	.020	.045	.038	573.10	1000.00
.000288	34.	34.	34.	2	0	1	0.00	28.00	1028.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

12861.00	7.92	581.02	0.00	0.00	581.22	.21	.00	.00	586.70
775.	0.	775.	0.	0.	211.	0.	98.	28.	586.80
1.78	0.00	3.67	0.00	.045	.040	.045	.038	573.10	1000.00
.001153	1.	1.	1.	0	0	1	0.00	28.00	1028.00

3470 ENCROACHMENT STATIONS= 1003.0 1025.0 TYPE= 1 TARGET= 22.000

12897.00	7.39	580.99	0.00	0.00	581.37	.38	.06	.09	100000.00
775.	0.	775.	0.	0.	156.	0.	98.	28.	100000.00
1.78	0.00	4.97	0.00	.045	.040	.045	.038	573.60	1003.00
.002506	36.	36.	36.	2	0	1	0.00	22.00	1025.00

12934.00	6.82	580.92	0.00	0.00	581.73	.81	.14	.21	589.20
775.	0.	775.	0.	0.	107.	0.	98.	28.	589.20
1.78	0.00	7.23	0.00	.045	.040	.045	.038	574.10	1000.00
.006793	37.	37.	37.	2	0	1	0.00	16.00	1016.00

NORMAL BRIDGE, NRD=22 MIN ELTRD= 588.90 MAX ELLC= 584.20

D/S FACE OF PENN CENTRAL RAILROAD BRIDGE, BS#16 SEC. Q

CONCRETE & STEEL I-BEAM BRIDGE, WITH HEADWALLS & WINGWALLS

SPAN = 16 FT, LENGTH = 15.5 FT

12935.00	6.82	580.92	0.00	0.00	581.73	.81	.00	.00	589.20
775.	0.	775.	0.	0.	107.	0.	98.	28.	589.20
1.78	0.00	7.22	0.00	.045	.025	.045	.038	574.10	1000.00
.002649	1.	1.	1.	0	0	1	0.00	16.00	1016.00

NORMAL BRIDGE, NRD=22 MIN ELTRD= 588.90 MAX ELLC= 584.20

12951.00	6.89	580.99	0.00	0.00	581.78	.79	.04	.01	589.20
775.	0.	775.	0.	0.	109.	0.	98.	28.	589.20
1.78	0.00	7.14	0.00	.045	.025	.045	.038	574.10	1000.00
.002569	16.	16.	16.	0	0	1	0.00	16.00	1016.00

12952.00	6.89	580.99	0.00	0.00	581.78	.79	.00	.00	589.20
775.	0.	775.	0.	0.	109.	0.	98.	28.	589.20
1.78	0.00	7.14	0.00	.050	.045	.080	.038	574.10	1000.00
.008315	1.	1.	1.	0	0	1	0.00	16.00	1016.00

3470 ENCROACHMENT STATIONS= 1002.0 1026.0 TYPE= 1 TARGET= 24.000

12956.00	7.66	581.56	0.00	0.00	581.93	.37	.02	.13100001.90	
775.	0.	775.	0.	0.	160.	0.	98.	28.	100001.90
1.78	0.00	4.85	0.00	.050	.045	.080	.038	573.90	1002.00
.002847	4.	4.	4.	2	0	1	0.00	24.00	1025.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 980.0 1050.0 TYPE= 1 TARGET= 70.000

50' U/S FROM U/S FACE OF PENN CENTRAL RAILROAD BRIDGE, VS#15 SEC. R

13002.00	10.00	582.00	0.00	0.00	582.05	.05	.03	.09	576.10
775.	141.	501.	133.	103.	243.	138.	98.	28.	575.50
1.79	1.36	2.06	.97	.050	.045	.080	.038	572.00	980.00
.000234	46.	46.	46.	2	0	1	0.00	70.00	1050.00

3470 ENCROACHMENT STATIONS= 950.0 1150.0 TYPE= 1 TARGET= 200.000

500' U/S FROM U/S FACE OF PENN CENTRAL RAILROAD BRIDGE, VS#14 SEC. S

13452.00	8.12	582.12	0.00	0.00	582.13	.01	.06	.01	578.50
775.	101.	256.	419.	161.	224.	707.	106.	30.	575.90
1.95	.63	1.14	.59	.050	.045	.080	.038	574.00	950.00
.000094	450.	450.	450.	2	0	1	0.00	200.00	1150.00

3470 ENCROACHMENT STATIONS= 1200.0 1680.0 TYPE= 1 TARGET= 480.000

500' D/S FROM D/S FACE OF FORT ST BRIDGE, VS#13 SEC. T

14452.00	8.60	582.20	0.00	0.00	582.21	.01	.08	.00	578.20
775.	152.	237.	386.	325.	229.	851.	135.	36.	576.90
2.39	.47	1:03	.45	.050	.045	.080	.039	573.60	1311.01

.000075	1000.	1000.	1000.	2	0	1	0.00	368.99	1680.00

3470 ENCROACHMENT STATIONS= 1465.0 1565.0 TYPE= 1 TARGET= 100.000

50' D/S FROM D/S FACE OF FORT ST BRIDGE, VS#12 SEC. U

14902.00	7.34	582.24	0.00	0.00	582.30	.06	.06	.03	578.00
775.	233.	400.	142.	136.	173.	104.	145.	39.	578.70
2.45	1.72	2.31	1.36	.040	.040	.040	.039	574.90	1455.00
.000352	450.	450.	480.	0	0	1	0.00	100.00	1565.00

3470 ENCROACHMENT STATIONS= 1468.0 1540.0 TYPE= 1 TARGET= 72.000

D/S FACE OF FORT STREET BRIDGE, BS#11 SEC. V

CONCRETE BOX CULVERT, WITH WINGWALLS AND HEADWALLS

SPAN = 8 FT, LENGTH = 50 FT.

14953.00	8.25	582.25	0.00	0.00	582.33	.08	.02	.01	578.00
775.	156.	474.	145.	86.	188.	82.	145.	39.	578.00
2.46	1.82	2.52	1.76	.040	.040	.040	.039	574.00	1468.00
.000388	51.	51.	51.	0	0	1	0.00	72.00	1540.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.74	3.04	0.00	8.00	0.00	38.60	0.00	574.00	574.00

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
593.14	582.33	0.00	560.	219.	39.	579.00	580.80	30.00

3470 ENCROACHMENT STATIONS= 1468.0 1540.0 TYPE= 1 TARGET= 72.000

15003.00	9.06	583.06	0.00	0.00	583.12	.06	.79	0.00	578.00
775.	168.	449.	158.	104.	211.	100.	146.	39.	578.00
2.47	1.62	2.13	1.58	.040	.040	.040	.039	574.00	1468.00
.000239	50.	50.	50.	2	0	4	0.00	72.00	1540.00

3470 ENCROACHMENT STATIONS= 1490.0 1518.0 TYPE= 1 TARGET= 28.000

15092.00	8.61	583.01	0.00	0.00	583.25	.24	.04	.09	578.40
775.	0.	775.	0.	0.	198.	0.	146.	39.	100000.00
2.47	0.00	3.91	0.00	.040	.040	.040	.039	574.40	1490.00
.001255	89.	89.	89.	2	0	1	0.00	28.00	1518.00

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRTWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
0	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
15122.00	8.29	582.79	0.00	0.00	583.62	.83	.07	.30	590.30
775.	0.	775.	0.	0.	106.	0.	146.	39.	590.30
2.47	0.00	7.33	0.00	.070	.040	.070	.039	574.50	500.00
.007062	30.	30.	30.	2	0	1	0.00	13.00	513.00

NORMAL BRIDGE,NRD=12 MIN ELTRD= 590.30 MAX ELLC= 586.00

D/S FACE OF PENN CENTRAL RAILROAD BRIDGE, BS#10 SEC. W

STEEL, WOOD @ BLOCK BRIDGE, CONCRETE WINGWALLS @ HEADWALLS

SPAN = 13 FT, LENGTH = 25 FT

15123.00	8.30	582.80	0.00	0.00	583.63	.83	.01	.00	590.30
775.	0.	775.	0.	0.	106.	0.	146.	39.	590.30
2.47	0.00	7.32	0.00	.045	.030	.045	.039	574.50	500.00
.003967	1.	1.	1.	0	0	1	0.00	13.00	513.00

NORMAL BRIDGE,NRD=12 MIN ELTRD= 590.30 MAX ELLC= 586.00

15148.00	8.43	582.93	0.00	0.00	583.73	.81	.10	.01	590.30
775.	0.	775.	0.	0.	108.	0.	146.	39.	590.30
2.47	0.00	7.20	0.00	.045	.030	.045	.039	574.50	500.00
.003798	25.	25.	25.	0	0	1	0.00	13.00	513.00
15149.00	8.43	582.93	0.00	0.00	583.74	.80	.00	.00	590.30
775.	0.	775.	0.	0.	108.	0.	146.	39.	590.30
2.47	0.00	7.20	0.00	.070	.040	.070	.039	574.50	500.00
.006744	1.	1.	1.	0	0	1	0.00	13.00	513.00
15222.00	9.40	583.40	0.00	0.00	584.33	.93	.53	.06	587.40
775.	0.	775.	0.	0.	100.	0.	147.	39.	587.40
2.48	0.00	7.73	0.00	.070	.040	.070	.039	574.00	793.84
.007751	73.	73.	73.	2	0	1	0.00	12.31	806.15
15223.00	9.41	583.41	0.00	0.00	584.33	.93	.00	.00	587.40
775.	0.	775.	0.	0.	100.	0.	147.	39.	587.40
2.48	0.00	7.73	0.00	.070	.025	.070	.039	574.00	793.84
.003021	1.	1.	1.	0	0	1	0.00	12.31	806.15

NORMAL BRIDGE,NRD= 5 MIN ELTRD= 587.40 MAX ELLC= 586.00

D/S FACE OF ABANDONED RAILROAD BRIDGE, BS#9 SEC. X

8"X18" I-BEAMS WITH CONCRETE, WINGWALLS AND HEADWALLS

SPAN = 16 FT, LENGTH = 7.5 FT, CONCRETE WALLS EXTENDED 29 FT

15226.00	9.42	583.42	0.00	0.00	584.34	.92	.01	.00	587.40
775.	0.	775.	0.	0.	101.	0.	147.	39.	587.40
2.48	0.00	7.71	0.00	.070	.025	.070	.039	574.00	793.84
.003006	3.	3.	3.	0	0	1	0.00	12.31	806.15

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRO= 5 MIN ELTRD= 587.40 MAX ELLC= 586.00

15234.00	9.45	583.45	0.00	0.00	584.37	.92	.02	.00	587.40
775.	0.	775.	0.	0.	101.	0.	147.	39.	587.40
2.48	0.00	7.69	0.00	.070	.025	.070	.039	574.00	793.84
.002983	8.	8.	8.	0	0	1	0.00	12.32	806.16

15250.00	9.52	583.52	0.00	0.00	584.42	.90	.05	.00	587.40
775.	0.	775.	0.	0.	102.	0.	147.	39.	587.40
2.48	0.00	7.62	0.00	.070	.025	.070	.039	574.00	793.83
.002918	16.	16.	16.	2	0	1	0.00	12.34	806.16

15251.00	9.52	583.52	0.00	0.00	584.43	.90	.00	.00	587.40
775.	0.	775.	0.	0.	102.	0.	147.	39.	587.40
2.48	0.00	7.62	0.00	.060	.040	.060	.039	574.00	793.83
.007462	1.	1.	1.	0	0	1	0.00	12.34	806.17

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 1180.0 1198.0 TYPE= 1 TARGET= 18.000

15254.00	10.28	584.33	0.00	0.00	584.62	.29	.01	.18	99999.25
775.	0.	775.	0.	0.	180.	0.	147.	39.	99999.25
2.48	0.00	4.32	0.00	.060	.040	.060	.039	574.05	1180.00
.001645	3.	3.	3.	2	0	1	0.00	18.00	1198.00

3470 ENCROACHMENT STATIONS= 1166.0 1212.0 TYPE= 1 TARGET= 46.000

60' U/S FROM U/S FACE OF ABANDONED BRIDGE, VS#8 SEC. Y

15294.00	9.84	584.64	0.00	0.00	584.71	.07	.02	.07	579.80
775.	0.	775.	0.	0.	367.	0.	147.	39.	100000.00
2.48	0.00	2.11	0.00	.060	.040	.060	.039	574.80	1166.00
.000271	40.	40.	40.	2	0	1	0.00	46.00	1212.00

3470 ENCROACHMENT STATIONS= 480.0 690.0 TYPE= 1 TARGET= 210.000

400' D/S FROM D/S FACE OF I-75 BRIDGE, VS#7-2 SEC. Z

15657.00	9.35	584.75	0.00	0.00	584.75	.01	.03	.02	578.50
775.	282.	185.	308.	582.	212.	600.	154.	40.	578.30
2.65	.48	.87	.51	.060	.040	.060	.039	575.40	480.00
.000034	363.	363.	363.	2	0	1	0.00	210.00	690.00

3470 ENCROACHMENT STATIONS= 862.0 938.0 TYPE= 1 TARGET= 76.000

15927.00	9.74	584.74	0.00	0.00	584.79	.05	.02	.02	579.40	
775.	143.	461.	171.	128.	218.	150.	160.	41.	579.60	
2.70	1.11	2.12	1.14	.060	.040	.060	.039	575.00	862.00	
.000217	270.	270.	270.	2	0	1	0.00	76.00	938.00	

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=12 MIN ELTRD= 579.21 MAX ELLC= 579.40

3470 ENCROACHMENT STATIONS= 862.0 938.0 TYPE= 1 TARGET= 76.000

D/S FACE OF FARM LANE CULVERT, BS#7 SEC. AA

TWO 48" CMP CULVERT, PROJECTED FROM FILL, SKEW = 0.90

MULTIPLY ALL STATIONS BY 0.9 EXCEPT THOSE FOR CMP CULVERT

15928.00	9.44	584.74	0.00	0.00	584.80	.06	.00	.01	579.40
775.	214.	275.	286.	108.	144.	135.	160.	41.	579.60
2.70	1.97	1.92	2.11	.050	.036	.050	.039	575.30	862.00
.000589	1.	1.	1.	0	0	1	-66.77	76.00	938.00

1490 NH CARD USED

NORMAL BRIDGE,NRD=12 MIN ELTRD= 579.48 MAX ELLC= 579.40

3470 ENCROACHMENT STATIONS= 870.0 931.0 TYPE= 1 TARGET= 61.000

15958.00	9.54	584.74	0.00	0.00	584.84	.10	.02	.02	579.40
775.	175.	346.	254.	72.	144.	98.	160.	41.	579.60
2.70	2.45	2.40	2.60	.050	.036	.050	.039	575.20	870.00
.000921	30.	30.	30.	1	0	1	-62.79	61.00	931.00

3470 ENCROACHMENT STATIONS= 870.0 931.0 TYPE= 1 TARGET= 61.000

15959.00	9.57	584.77	0.00	0.00	584.84	.07	.00	.01	579.40
775.	126.	478.	171.	80.	193.	105.	160.	41.	579.60
2.70	1.58	2.48	1.63	.050	.040	.050	.039	575.20	870.00
.000332	1.	1.	1.	2	0	1	0.00	61.00	931.00

3280 CROSS SECTION 16006.00 EXTENDED 5.39 FEET

3470 ENCROACHMENT STATIONS= 1194.0 1231.0 TYPE= 1 TARGET= 37.000

50' D/S FROM D/S FACE OF I-75 BRIDGE, VS#6 SEC. AB

16006.00	12.38	584.78	0.00	0.00	584.86	.07	.01	.00	577.40
775.	68.	639.	68.	44.	277.	44.	161.	41.	577.40

2.71	1.53	2.30	1.53	.050	.040	.050	.039	572.40	1194.00
.000186	47.	47.	47.	1	0	1	0.00	37.00	1231.00

16056.00	11.80	584.60	0.00	0.00	585.08	.48	.02	.20	588.20
775.	0.	775.	0.	0.	139.	0.	161.	41.	588.20
2.71	0.00	5.57	0.00	.050	.040	.050	.039	572.80	389.60
.003649	50.	50.	50.	2	0	1	0.00	12.00	401.60

D/S FACE OF I-75 BRIDGE, BS#5 SEC. AC

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

SPAN = 15.4 FT, LENGTH = 216 FT, SKEW = 0.78

MULTIPLY ALL STATIONS BY 0.78

16057.00	11.92	584.72	0.00	0.00	585.11	.39	.00	.03	588.20
705.	0.	705.	0.	0.	141.	0.	161.	41.	588.20
2.71	0.00	5.02	0.00	.030	.020	.030	.039	572.80	389.60
.000736	1.	1.	1.	2	0	1	0.00	12.00	401.60

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	2.03	2.50	0.00	12.00	0.00	98.20	0.00	572.80	572.80

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
586.35	585.11	0.00	0.	705.	98.	581.20	588.20	10.00

16273.00	13.23	586.03	0.00	0.00	586.35	.32	1.23	0.00	588.20
705.	0.	705.	0.	0.	156.	0.	162.	41.	588.20
2.72	0.00	4.51	0.00	.030	.020	.030	.039	572.80	389.60
.000568	216.	216.	216.	2	0	1	0.00	12.00	401.60

16274.00	13.23	586.03	0.00	0.00	586.35	.32	.00	.00	588.20
705.	0.	705.	0.	0.	156.	0.	162.	41.	588.20
2.72	0.00	4.51	0.00	.070	.040	.030	.039	572.80	389.60
.002272	1.	1.	1.	0	0	1	0.00	12.00	401.60

3280 CROSS SECTION 16374.00 EXTENDED .14 FEET

3470 ENCROACHMENT STATIONS= 505.0 715.0 TYPE= 1 TARGET= 210.000

16374.00	13.32	586.44	0.00	0.00	586.45	.00	.01	.09	577.72

705.	208.	187.	309.	615.	272.	935.	164.	42.	577.72
2.79	.34	.69	.33	.070	.040	.070	.039	573.12	505.00
.000015	100.	100.	100.	2	0	1	0.00	210.00	715.00

3470 ENCROACHMENT STATIONS= 500.0 720.0 TYPE= 1 TARGET= 220.000

600' U/S FROM U/S FACE OF I-75 BRIDGE, VS#4 SEC. AD

16873.00	11.75	586.45	0.00	0.00	586.46	.00	.01	.00	579.30
705.	201.	200.	304.	510.	236.	787.	184.	44.	579.30
3.06	.39	.85	.39	.070	.040	.070	.039	574.70	500.34
.000027	580.	499.	460.	2	0	1	0.00	219.66	720.00

3280 CROSS SECTION 17473.00 EXTENDED 2.17 FEET

3470 ENCROACHMENT STATIONS= 850.0 1200.0 TYPE= 1 TARGET= 350.000

1200' U/S FROM U/S FACE OF I-75 BRIDGE, VS#3 SEC. AE

17473.00	10.37	586.47	0.00	0.00	586.47	.00	.01	.00	579.80
705.	468.	123.	114.	1734.	228.	459.	211.	48.	580.30
3.59	.27	.54	.25	.070	.040	.070	.039	576.10	850.00
.000012	600.	600.	600.	0	0	1	0.00	350.00	1200.00

3470 ENCROACHMENT STATIONS= 1350.0 1600.0 TYPE= 1 TARGET= 250.000

2050' U/S FROM U/S FACE OF I-75 BRIDGE, VS#2 SEC. AF

18323.00	9.28	586.48	0.00	0.00	586.48	.00	.01	.00	580.30
705.	369.	125.	211.	862.	237.	457.	250.	54.	580.40
4.11	.43	.53	.46	.035	.035	.035	.038	577.20	1350.00
.000010	850.	850.	850.	0	0	1	0.00	250.00	1600.00

3470 ENCROACHMENT STATIONS= 1350.0 1600.0 TYPE= 1 TARGET= 250.000

450' D/S FROM D/S FACE OF OLMSTEAD ROAD BRIDGE SEC. AG

19073.00	8.78	586.48	0.00	0.00	586.49	.00	.01	.00	580.60
705.	363.	151.	191.	762.	253.	387.	275.	58.	581.00
4.52	.48	.60	.49	.035	.035	.035	.038	577.70	1350.00
.000013	750.	750.	750.	0	0	1	0.00	250.00	1600.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 550.0 950.0 TYPE= 1 TARGET= 400.000

19523.00	9.58	586.48	0.00	0.00	586.52	.04	.01	.02	585.80
705.	14.	425.	266.	43.	229.	342.	285.	61.	585.70
4.61	.31	1.85	.78	.035	.035	.035	.038	576.90	552.52
.000186	400.	450.	500.	1	0	1	0.00	397.48	950.00

NORMAL BRIDGE,NRD=23 MIN ELTRD= 584.20 MAX ELLC= 583.90

3470 ENCROACHMENT STATIONS= 550.0 950.0 TYPE= 1 TARGET= 400.000

D/S FACE OF OLMSTEAD ROAD CULVERT, BS#1A SEC. AH

MULTI-PLATE ARCH CULVERT, PROJECTED FROM FILL

SKEW IS NEGLIGIBLE, LENGTH=46 FT. (15#4" X 9#3")

19524.00	9.58	586.48	0.00	0.00	586.52	.04	.00	.00	585.80
705.	26.	142.	537.	42.	106.	341.	285.	61.	585.70
4.61	.62	1.34	1.58	.020	.022	.020	.038	576.90	552.49
.000249	1.	1.	1.	0	0	1	-125.46	397.50	950.00

NORMAL BRIDGE,NRD=23 MIN ELTRD= 584.20 MAX ELLC= 583.90

3470 ENCROACHMENT STATIONS= 550.0 950.0 TYPE= 1 TARGET= 400.000

19570.00	9.60	586.50	0.00	0.00	586.53	.03	.01	.00	585.80
705.	27.	141.	537.	44.	106.	343.	286.	62.	585.70
4.62	.62	1.33	1.57	.020	.022	.020	.038	576.90	550.00
.000244	46.	46.	46.	0	0	1	-125.46	400.00	950.00

3470 ENCROACHMENT STATIONS= 550.0 950.0 TYPE= 1 TARGET= 400.000

19571.00	9.59	586.49	0.00	0.00	586.54	.04	.00	.00	585.80
705.	12.	465.	228.	45.	230.	344.	286.	62.	585.70
4.62	.27	2.02	.66	.045	.035	.045	.038	576.90	550.00
.000222	1.	1.	1.	0	0	1	0.00	400.00	950.00

750# U/S FROM U/S FACE OF OLMSTEAD ROAD CULVERT, VS#2A SEC. AI

20321.00	7.97	586.57	0.00	0.00	586.57	.00	.02	.01	582.00
705.	165.	71.	469.	607.	141.	1598.	311.	70.	580.60
5.28	.27	.50	.29	.045	.035	.045	.038	578.60	41.09
.000011	775.	750.	725.	2	0	1	0.00	596.11	637.20

1450# U/S FROM U/S FACE OF OLMSTEAD ROAD CULVERT, VS#3A SEC. AJ

21021.00	7.68	586.58	0.00	0.00	586.58	.00	.01	.00	583.70
705.	325.	109.	271.	976.	202.	803.	346.	79.	582.40
5.82	.33	.54	.34	.045 L	.035 ch	.045 R	.038	578.90	147.49
.000016	675.	700.	725.	2	0	1	0.00	499.87	647.36

Uarco Business Forms - A

START TRIB COMP

-6900.000 6900.000 57587.000 575.870

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
-6900.00	6.37	575.87	0.00	0.00	576.02	.15	0.00	0.00	575.50	
1860.	2.	1858.	0.	8.	591.	0.	346.	79.	587.50	
5.82	.25	3.15	0.00	.060	.030	.060	.038	569.50	193.86	
.000523	0.	0.	0.	0	0	1	0.00	155.12	348.98	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3470 ENCROACHMENT STATIONS= .0 376.0 TYPE= 1 TARGET= 375.999

SAME AS SECTION B (SECNO=7350)

7351.00	8.19	576.09	0.00	0.00	576.39	.30	.29	.07	575.20
1860.	3.	1857.	0.	6.	424.	0.	351.	81.	100000.00
5.84	.42	4.38	0.00	.060	.030	.060	.038	567.90	285.73
.000842	450.	450.	450.	1	0	1	0.00	90.27	376.00

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 318.0 342.0 TYPE= 1 TARGET= 24.000

7386.00	7.54	575.74	0.00	0.00	576.85	1.11	.05	.40100000.30	
1400.	0.	1400.	0.	0.	166.	0.	352.	81.	100000.30
5.85	0.00	8.44	0.00	.060	.030	.060	.038	568.20	318.00
.003881	36.	36.	36.	2	0	1	0.00	24.00	342.00

NORMAL BRIDGE, NRD=18 MIN ELTRD= 576.40 MAX ELLC= 576.90

D/S FACE OF STREICHER RD BRIDGE OVER SMITH CREEK, BS#30 SEC. C

CONCRETE BRIDGE, WITH HEADWALLS @ WINGWALLS

SPAN = 24 FT, LENGTH = 27 FT

7387.00	7.58	575.78	0.00	0.00	576.86	1.08	.00	.01	579.40
1400.	0.	1400.	0.	0.	168.	0.	352.	81.	579.40
5.85	0.00	8.33	0.00	.025	.035	.025	.038	568.20	1000.00
.004870	1.	1.	1.	2	0	1	0.00	24.00	1024.00

NORMAL BRIDGE, NRD=18 MIN ELTRD= 576.40 MAX ELLC= 576.90

USACE Brunner Form - A

7414.00	7.79	575.99	0.00	0.00	577.00	1.02	.13	.02	579.40
1400.	0.	1400.	0.	0.	173.	0.	352.	81.	579.40
5.85	0.00	8.09	0.00	.025	.035	.025	.038	568.20	1000.00
.004491	27.	27.	27.	2	0	1	0.00	24.00	1024.00

OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA= 579.40 ELREA= 579.40

7415.00	7.79	575.99	0.00	0.00	577.01	1.02	.00	.00	579.40
1400.	0.	1400.	0.	0.	173.	0.	352.	81.	579.40
5.85	0.00	8.09	0.00	.080	.035	.080	.038	568.20	1000.00
.004483	1.	1.	1.	0	0	1	0.00	24.00	1024.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 607.0 639.0 TYPE= 1 TARGET= 32.000

7419.00	8.45	576.65	0.00	0.00	577.17	.52	.01	.15	99998.80
1400.	0.	1400.	0.	0.	242.	0.	352.	81.	99998.80
5.85	0.00	5.79	0.00	.080	.035	.080	.038	568.20	607.00
.001264	4.	4.	4.	3	0	1	0.00	32.00	639.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 845.0 TYPE= 1 TARGET= 844.999

SAME AS SECTION D (SECNO=7900)

7901.00	8.09	577.49	0.00	0.00	577.54	.05	.23	.14	574.40
1400.	136.	819.	445.	207.	352.	600.	360.	82.	573.30
5.93	.66	2.33	.74	.080	.035	.080	.037	569.40	530.04
.000255	481.	481.	481.	2	0	1	0.00	304.21	834.25

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 1100.0 TYPE= 1 TARGET= 1099.999

SAME AS SECTION E (SECNO=8940)

8941.00	8.14	577.64	0.00	0.00	577.69	.05	.15	.00	579.60
1400.	0.	1400.	0.	0.	816.	0.	370.	85.	100000.00
6.00	0.00	1.72	0.00	.080	.050	.080	.037	569.50	809.78
.000452	440.	440.	440.	2	0	1	0.00	226.53	1036.31

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 800.0 TYPE= 1 TARGET= 799.999

SAME AS SECTION F (SECNO=9440)

9441.00	7.44	577.84	0.00	0.00	577.86	.01	.16	.01	583.30
1400.	0.	1400.	0.	0.	1449.	0.	383.	89.	100000.00
6.14	0.00	.97	0.00	.080	.058	.080	.037	570.40	126.64
.000233	500.	500.	500.	2	0	1	0.00	443.73	570.36

1490 NH CARD USED

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 3470 ENCROACHMENT STATIONS=         .0      300.0  TYPE=      1  TARGET=      299.999

          SAME AS SECTION G (SECNO=9890)

    9891.00      4.14    577.94      0.00      0.00    577.94       .00       .08       .00100000.00
        315.        0.       315.        0.        0.       759.        0.       394.       93. 100000.00
       6.44       0.00       .42       0.00      .080      .071      .080      .037    573.80     41.10
    .000081       800.      450.      300.         2         0         1      0.00    258.90    300.00

 CCHV=     .300 CEHV=     .500

 3470 ENCROACHMENT STATIONS=        85.0      657.0  TYPE=      1  TARGET=      -85.000

          SAME AS SECTION I (SECNO=10440)


          END OF ISLAND CALCULATION FOR AREA D/S OF HURON RIVER DRIVE

   10441.00      6.78    577.98      0.00      0.00    577.99       .01       .05       .00    574.90
        775.       536.      175.        64.      1358.      179.      177.      410.       97.    575.00
       6.73        .39       .98        .36      .080      .040      .080      .037    571.20     85.00
    .000082       550.      550.      550.         2         0         1      0.00    478.38    563.38
```

SUMMARY PRINTOUT FOR MULTIPLE PROFILES

SILVER CREEK - CITY OF R

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
6900.00	0.00	0.00	0.00	569.50	1340.00	575.40	.10	0.00	0.00	1340.00	5.90	124.70
6900.00	0.00	0.00	0.00	569.50	1730.00	575.75	.14	0.00	0.00	1729.11	6.25	152.09
6900.00	0.00	0.00	0.00	569.50	1860.00	575.87	.15	0.00	0.00	1857.93	6.37	155.12
6900.00	0.00	0.00	0.00	569.50	2060.00	576.05	.17	0.00	0.00	2055.22	6.55	159.67
7350.00	450.00	0.00	0.00	567.90	1340.00	575.57	.19	.21	.05	1339.78	7.67	81.89
7350.00	450.00	0.00	0.00	567.90	1730.00	575.96	.27	.28	.07	1728.29	8.06	88.16
7350.00	450.00	0.00	0.00	567.90	1860.00	576.09	.30	.29	.07	1857.30	8.19	90.27
7350.00	450.00	0.00	0.00	567.90	2060.00	576.29	.34	.32	.08	2055.20	8.39	93.40
7700.00	350.00	0.00	0.00	569.25	300.00	575.92	.05	.16	.04	299.79	6.67	46.16
7700.00	350.00	0.00	0.00	569.25	415.00	576.44	.07	.22	.06	414.32	7.19	52.46
7700.00	350.00	0.00	0.00	569.25	460.00	576.61	.08	.23	.07	459.07	7.36	54.53
7700.00	350.00	0.00	0.00	569.25	520.00	576.87	.09	.25	.08	518.61	7.62	57.67
7900.00	200.00	0.00	0.00	569.80	300.00	575.96	.06	.05	.01	299.95	6.16	40.00
7900.00	200.00	0.00	0.00	569.80	415.00	576.49	.09	.06	.01	414.69	6.69	46.48
7900.00	200.00	0.00	0.00	569.80	460.00	576.67	.10	.07	.01	459.52	6.87	48.62
7900.00	200.00	0.00	0.00	569.80	520.00	576.94	.11	.08	.01	519.20	7.14	51.82
8400.00	500.00	0.00	0.00	569.85	300.00	576.09	.06	.13	.00	299.93	6.24	40.94
8400.00	500.00	0.00	0.00	569.85	415.00	576.68	.08	.18	.00	414.60	6.83	48.15
8400.00	500.00	0.00	0.00	569.85	460.00	576.88	.09	.20	.00	459.39	7.03	50.53
8400.00	500.00	0.00	0.00	569.85	520.00	577.16	.10	.22	.00	519.00	7.31	53.97
8940.00	540.00	0.00	0.00	570.10	300.00	576.24	.08	.15	.01	300.00	6.14	28.67
8940.00	540.00	0.00	0.00	570.10	415.00	576.87	.12	.21	.02	414.83	6.77	30.54
8940.00	540.00	0.00	0.00	570.10	460.00	577.09	.13	.23	.02	459.69	6.99	31.17
8940.00	540.00	0.00	0.00	570.10	520.00	577.39	.15	.25	.02	519.41	7.29	32.07
9440.00	500.00	0.00	0.00	571.30	300.00	576.45	.11	.22	.01	300.00	5.15	29.20
9440.00	500.00	0.00	0.00	571.30	415.00	577.13	.15	.27	.02	414.83	5.83	32.32
9440.00	500.00	0.00	0.00	571.30	460.00	577.36	.16	.29	.02	459.45	6.06	33.73
9440.00	500.00	0.00	0.00	571.30	520.00	577.68	.18	.31	.02	518.40	6.38	35.66
9890.00	450.00	0.00	0.00	571.00	300.00	576.71	.05	.19	.02	292.78	5.71	87.06
9890.00	450.00	0.00	0.00	571.00	415.00	577.45	.06	.20	.03	394.77	6.45	91.67
9890.00	450.00	0.00	0.00	571.00	460.00	577.70	.06	.20	.03	434.02	6.70	93.24
9890.00	450.00	0.00	0.00	571.00	520.00	578.04	.06	.20	.04	485.41	7.04	93.83
9921.00	31.00	0.00	0.00	570.80	300.00	576.75	.04	.02	.00	295.66	5.95	194.31
9921.00	31.00	0.00	0.00	570.80	415.00	577.50	.02	.01	.01	320.07	6.70	339.70
9921.00	31.00	0.00	0.00	570.80	460.00	577.76	.02	.01	.01	315.60	6.96	339.70
9921.00	31.00	0.00	0.00	570.80	520.00	578.11	.01	.01	.01	308.89	7.31	339.70
9922.00	1.00	576.30	575.80	570.80	300.00	576.74	.05	.00	.01	291.62	5.94	194.48
9922.00	1.00	576.30	575.80	570.80	415.00	577.50	.02	.00	.00	239.22	6.70	339.70
9922.00	1.00	576.30	575.80	570.80	460.00	577.77	.02	.00	.00	207.93	6.97	339.70
9922.00	1.00	576.30	575.80	570.80	520.00	578.11	.01	.00	.00	189.17	7.31	339.70

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
9958.00	36.00	576.30	575.80	570.80	300.00	576.88	.04	.12	.00	278.14	6.08	230.93
9958.00	36.00	576.30	575.80	570.80	415.00	577.59	.02	.08	.00	221.04	6.79	339.70
9958.00	36.00	576.30	575.80	570.80	460.00	577.83	.01	.06	.00	198.33	7.03	339.70
9958.00	36.00	576.30	575.80	570.80	520.00	578.15	.01	.04	.00	185.53	7.35	339.70
9959.00	1.00	0.00	0.00	570.80	300.00	576.89	.03	.00	.00	288.20	6.09	233.44
9959.00	1.00	0.00	0.00	570.80	415.00	577.59	.02	.00	.00	306.53	6.79	339.70
9959.00	1.00	0.00	0.00	570.80	460.00	577.83	.02	.00	.00	306.10	7.03	339.70
9959.00	1.00	0.00	0.00	570.80	520.00	578.15	.01	.00	.00	304.46	7.35	339.70
10440.00	481.00	0.00	0.00	571.20	580.00	577.02	.01	.09	.01	150.57	5.82	470.00
10440.00	481.00	0.00	0.00	571.20	740.00	577.69	.01	.08	.00	173.60	6.49	471.96
10440.00	481.00	0.00	0.00	571.20	775.00	577.91	.01	.07	.00	176.85	6.71	476.81
10440.00	481.00	0.00	0.00	571.20	820.00	578.22	.01	.06	.00	180.90	7.02	483.79
11040.00	600.00	0.00	0.00	571.60	290.00	577.10	.05	.11	.02	290.00	5.50	50.57
11040.00	600.00	0.00	0.00	571.60	380.00	577.74	.01	.06	.00	192.04	6.14	240.86
11040.00	600.00	0.00	0.00	571.60	425.00	577.97	.01	.05	.00	208.05	6.37	245.13
11040.00	600.00	0.00	0.00	571.60	495.00	578.27	.01	.05	.00	233.71	6.67	251.00
11140.00	100.00	0.00	0.00	571.90	290.00	577.14	.13	.07	.04	290.00	5.24	21.00
11140.00	100.00	0.00	0.00	571.90	380.00	577.73	.06	.02	.03	262.70	5.83	172.16
11140.00	100.00	0.00	0.00	571.90	425.00	577.96	.06	.02	.03	281.63	6.06	183.84
11140.00	100.00	0.00	0.00	571.90	495.00	578.26	.06	.02	.03	307.23	6.36	251.08
11180.00	40.00	577.80	575.90	571.90	290.00	577.34	.12	.19	0.00	290.00	5.44	21.00
11180.00	40.00	577.80	575.90	571.90	380.00	578.13	.04	.38	0.00	243.83	6.23	200.73
11180.00	40.00	577.80	575.90	571.90	425.00	578.28	.04	.31	0.00	262.81	6.38	256.59
11180.00	40.00	577.80	575.90	571.90	495.00	578.47	.05	.20	0.00	292.19	6.57	299.35
-10440.00	550.00	0.00	0.00	571.20	580.00	577.02	.01	.11	0.00	150.58	5.82	470.00
-10440.00	550.00	0.00	0.00	571.20	740.00	577.69	.01	.08	0.00	173.54	6.49	471.97
-10440.00	550.00	0.00	0.00	571.20	775.00	577.91	.01	.07	0.00	176.82	6.71	476.84
-10440.00	550.00	0.00	0.00	571.20	820.00	578.22	.01	.07	0.00	180.90	7.02	483.80
11041.00	600.00	0.00	0.00	572.50	290.00	577.13	.03	.12	.01	290.00	4.63	66.00
11041.00	600.00	0.00	0.00	572.50	360.00	577.77	.04	.10	.02	360.00	5.27	66.00
11041.00	600.00	0.00	0.00	572.50	350.00	577.97	.00	.06	.00	190.78	5.47	246.49
11041.00	600.00	0.00	0.00	572.50	325.00	578.27	.00	.04	.00	175.24	5.77	251.66
11141.00	100.00	0.00	0.00	571.30	290.00	577.18	.15	.11	.06	290.00	5.88	16.00
11141.00	100.00	0.00	0.00	571.30	360.00	577.81	.19	.11	.07	360.00	6.51	16.00
11141.00	100.00	0.00	0.00	571.30	350.00	577.98	.02	.01	.01	164.63	6.68	95.42
11141.00	100.00	0.00	0.00	571.30	325.00	578.27	.02	.01	.01	149.35	6.97	98.96
11181.00	40.00	578.30	577.30	571.30	290.00	577.28	.14	.09	0.00	290.00	5.98	16.00
11181.00	40.00	578.30	577.30	571.30	360.00	578.00	.18	.18	0.00	360.00	6.70	16.00
11181.00	40.00	578.30	577.30	571.30	350.00	578.29	.02	.32	0.00	160.45	6.99	101.26
11181.00	40.00	578.30	577.30	571.30	325.00	578.49	.01	.22	0.00	145.56	7.19	317.37

Uarco Business Forms - A

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
11431.00	250.00	0.00	0.00	571.50	580.00	577.56	.04	.15	.03	275.89	6.06	171.77
11431.00	250.00	0.00	0.00	571.50	740.00	578.30	.04	.14	.04	326.73	6.80	183.63
11431.00	250.00	0.00	0.00	571.50	775.00	578.35	.04	.07	.01	340.99	6.85	183.87
11431.00	250.00	0.00	0.00	571.50	820.00	578.53	.04	.06	.02	354.81	7.03	185.00
11681.00	250.00	0.00	0.00	571.70	580.00	577.67	.24	.21	.10	510.78	5.97	50.00
11681.00	250.00	0.00	0.00	571.70	740.00	578.38	.27	.19	.12	637.03	6.68	50.00
11681.00	250.00	0.00	0.00	571.70	775.00	578.42	.29	.20	.12	666.37	6.72	50.00
11681.00	250.00	0.00	0.00	571.70	820.00	578.60	.30	.19	.13	701.57	6.90	50.00
11730.00	49.00	0.00	0.00	571.60	580.00	577.75	.27	.10	.02	580.00	6.15	23.00
11730.00	49.00	0.00	0.00	571.60	740.00	578.44	.36	.10	.04	740.00	6.84	23.00
11730.00	49.00	0.00	0.00	571.60	775.00	578.49	.38	.11	.05	775.00	6.89	23.00
11730.00	49.00	0.00	0.00	571.60	820.00	578.65	.41	.11	.05	820.00	7.05	23.00
11731.00	1.00	0.00	0.00	571.60	580.00	577.75	.28	.00	.01	580.00	6.15	23.00
11731.00	1.00	0.00	0.00	571.60	740.00	578.43	.37	.00	.01	740.00	6.83	23.00
11731.00	1.00	0.00	0.00	571.60	775.00	578.48	.40	.00	.01	775.00	6.88	23.00
11731.00	1.00	0.00	0.00	571.60	820.00	578.65	.43	.00	.01	820.00	7.05	23.00
11826.00	95.00	583.90	578.60	571.60	580.00	577.89	.41	.20	.07	580.00	6.29	23.00
11826.00	95.00	583.90	578.60	571.60	740.00	580.07	.24	1.51	0.00	740.00	8.47	23.00
11826.00	95.00	583.90	578.60	571.60	775.00	580.30	.25	1.66	0.00	775.00	8.70	23.00
11826.00	95.00	583.90	578.60	571.60	820.00	580.71	.25	1.88	0.00	820.00	9.11	23.00
11827.00	1.00	0.00	0.00	571.60	580.00	578.12	.24	.00	.05	580.00	6.52	23.00
11827.00	1.00	0.00	0.00	571.60	740.00	580.09	.23	.00	.00	740.00	8.49	23.00
11827.00	1.00	0.00	0.00	571.60	775.00	580.31	.24	.00	.00	775.00	8.71	23.00
11827.00	1.00	0.00	0.00	571.60	820.00	580.72	.24	.00	.00	820.00	9.12	23.00
11876.00	49.00	0.00	0.00	571.70	580.00	578.40	.05	.03	.06	259.87	6.70	75.00
11876.00	49.00	0.00	0.00	571.70	740.00	580.35	.04	.02	.06	310.91	8.65	75.00
11876.00	49.00	0.00	0.00	571.70	775.00	580.59	.04	.02	.06	323.63	8.89	75.00
11876.00	49.00	0.00	0.00	571.70	820.00	581.00	.04	.02	.06	338.88	9.30	75.00
12226.00	350.00	0.00	0.00	572.60	580.00	578.55	.05	.15	.00	232.53	5.95	108.61
12226.00	350.00	0.00	0.00	572.60	740.00	580.43	.03	.06	.00	251.41	7.83	110.00
12226.00	350.00	0.00	0.00	572.60	775.00	580.66	.03	.06	.00	259.87	8.06	110.00
12226.00	350.00	0.00	0.00	572.60	820.00	581.07	.03	.06	.00	269.11	8.47	110.00
12776.00	550.00	0.00	0.00	571.30	580.00	578.84	.12	.32	.04	494.61	7.54	52.00
12776.00	550.00	0.00	0.00	571.30	740.00	580.54	.10	.14	.03	591.29	9.24	52.00
12776.00	550.00	0.00	0.00	571.30	775.00	580.77	.10	.14	.04	615.09	9.47	52.00
12776.00	550.00	0.00	0.00	571.30	820.00	581.16	.10	.12	.04	643.64	9.86	52.00
12825.00	49.00	0.00	0.00	573.10	580.00	578.83	.23	.05	.06	580.00	5.73	28.00
12825.00	49.00	0.00	0.00	573.10	740.00	580.51	.22	.03	.06	740.00	7.41	28.00
12825.00	49.00	0.00	0.00	573.10	775.00	580.74	.23	.03	.06	775.00	7.64	28.00
12825.00	49.00	0.00	0.00	573.10	820.00	581.13	.23	.03	.06	820.00	8.03	28.00

Uarco Business Forms - A

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
12826.00	1.00	0.00	0.00	573.10	580.00	578.83	.23	.00	.00	580.00	5.73	28.00
12826.00	1.00	0.00	0.00	573.10	740.00	580.51	.22	.00	.00	740.00	7.41	28.00
12826.00	1.00	0.00	0.00	573.10	775.00	580.74	.23	.00	.00	775.00	7.64	28.00
12826.00	1.00	0.00	0.00	573.10	820.00	581.13	.23	.00	.00	820.00	8.03	28.00
12860.00	34.00	586.30	580.30	573.10	580.00	578.89	.23	.05	0.00	580.00	5.79	28.00
12860.00	34.00	586.30	580.30	573.10	740.00	580.75	.20	.23	0.00	740.00	7.65	28.00
12860.00	34.00	586.30	580.30	573.10	775.00	581.02	.21	.26	0.00	775.00	7.92	28.00
12860.00	34.00	586.30	580.30	573.10	820.00	581.47	.21	.32	0.00	820.00	8.37	28.00
12861.00	1.00	0.00	0.00	573.10	580.00	578.89	.23	.00	.00	580.00	5.79	28.00
12861.00	1.00	0.00	0.00	573.10	740.00	580.76	.20	.00	.00	740.00	7.66	28.00
12861.00	1.00	0.00	0.00	573.10	775.00	581.02	.21	.00	.00	775.00	7.92	28.00
12861.00	1.00	0.00	0.00	573.10	820.00	581.47	.21	.00	.00	820.00	8.37	28.00
12897.00	36.00	0.00	0.00	573.60	580.00	578.87	.44	.09	.10	580.00	5.27	22.00
12897.00	36.00	0.00	0.00	573.60	740.00	580.73	.38	.06	.09	740.00	7.13	22.00
12897.00	36.00	0.00	0.00	573.60	775.00	580.99	.38	.06	.09	775.00	7.39	22.00
12897.00	36.00	0.00	0.00	573.60	820.00	581.44	.38	.06	.09	820.00	7.84	22.00
12934.00	37.00	0.00	0.00	574.10	580.00	578.83	.96	.22	.26	580.00	4.73	16.00
12934.00	37.00	0.00	0.00	574.10	740.00	580.66	.80	.15	.21	740.00	6.56	16.00
12934.00	37.00	0.00	0.00	574.10	775.00	580.92	.81	.14	.21	775.00	6.82	16.00
12934.00	37.00	0.00	0.00	574.10	820.00	581.36	.80	.14	.21	820.00	7.26	16.00
12935.00	1.00	588.90	584.20	574.10	580.00	578.85	.95	.01	.00	580.00	4.75	16.00
12935.00	1.00	588.90	584.20	574.10	740.00	580.67	.80	.00	.00	740.00	6.57	16.00
12935.00	1.00	588.90	584.20	574.10	775.00	580.92	.81	.00	.00	775.00	6.82	16.00
12935.00	1.00	588.90	584.20	574.10	820.00	581.37	.80	.00	.00	820.00	7.27	16.00
12951.00	16.00	588.90	584.20	574.10	580.00	578.97	.91	.06	.01	580.00	4.87	16.00
12951.00	16.00	588.90	584.20	574.10	740.00	580.74	.78	.04	.01	740.00	6.64	16.00
12951.00	16.00	588.90	584.20	574.10	775.00	580.99	.79	.04	.01	775.00	6.89	16.00
12951.00	16.00	588.90	584.20	574.10	820.00	581.43	.78	.04	.00	820.00	7.33	16.00
12952.00	1.00	0.00	0.00	574.10	580.00	578.98	.90	.01	.00	580.00	4.88	16.00
12952.00	1.00	0.00	0.00	574.10	740.00	580.74	.78	.00	.00	740.00	6.64	16.00
12952.00	1.00	0.00	0.00	574.10	775.00	580.99	.79	.00	.00	775.00	6.89	16.00
12952.00	1.00	0.00	0.00	574.10	820.00	581.43	.78	.00	.00	820.00	7.33	16.00
12956.00	4.00	0.00	0.00	573.90	580.00	579.66	.40	.03	.15	580.00	5.76	24.00
12956.00	4.00	0.00	0.00	573.90	740.00	581.30	.36	.02	.13	740.00	7.40	24.00
12956.00	4.00	0.00	0.00	573.90	775.00	581.56	.37	.02	.13	775.00	7.66	24.00
12956.00	4.00	0.00	0.00	573.90	820.00	582.00	.36	.02	.13	820.00	8.10	24.00
13002.00	46.00	0.00	0.00	572.00	580.00	580.15	.06	.04	.10	407.94	8.15	70.00
13002.00	46.00	0.00	0.00	572.00	740.00	581.73	.05	.03	.09	483.23	9.73	70.00
13002.00	46.00	0.00	0.00	572.00	775.00	582.00	.05	.03	.09	501.05	10.00	70.00
13002.00	46.00	0.00	0.00	572.00	820.00	582.42	.05	.02	.09	522.42	10.42	70.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
13452.00	450.00	0.00	0.00	574.00	580.00	580.31	.01	.11	.01	219.18	6.31	200.00
13452.00	450.00	0.00	0.00	574.00	740.00	581.85	.01	.07	.01	248.07	7.85	200.00
13452.00	450.00	0.00	0.00	574.00	775.00	582.12	.01	.06	.01	255.72	8.12	200.00
13452.00	450.00	0.00	0.00	574.00	820.00	582.53	.01	.06	.01	264.45	5.53	200.00
14452.00	1000.00	0.00	0.00	573.60	580.00	580.50	.01	.18	.00	236.23	6.90	305.86
14452.00	1000.00	0.00	0.00	573.60	740.00	581.95	.01	.09	.00	234.71	8.35	359.45
14452.00	1000.00	0.00	0.00	573.60	775.00	582.20	.01	.08	.00	236.93	8.60	368.99
14452.00	1000.00	0.00	0.00	573.60	820.00	582.61	.01	.07	.00	237.09	9.01	383.63
14902.00	450.00	0.00	0.00	574.90	580.00	580.61	.11	.16	.05	384.21	5.71	100.00
14902.00	450.00	0.00	0.00	574.90	740.00	581.99	.07	.07	.03	393.88	7.09	100.00
14902.00	450.00	0.00	0.00	574.90	775.00	582.24	.06	.06	.03	400.12	7.34	100.00
14902.00	450.00	0.00	0.00	574.90	820.00	582.64	.06	.05	.03	405.40	7.74	100.00
14953.00	51.00	0.00	0.00	574.00	580.00	580.65	.11	.04	.00	412.88	6.55	72.00
14953.00	51.00	0.00	0.00	574.00	740.00	582.00	.08	.02	.01	461.02	8.00	72.00
14953.00	51.00	0.00	0.00	574.00	775.00	582.25	.08	.02	.01	473.67	8.25	72.00
14953.00	51.00	0.00	0.00	574.00	820.00	582.64	.08	.02	.01	487.61	8.64	72.00
15003.00	50.00	580.80	579.00	574.00	580.00	582.32	.04	1.60	0.00	352.86	8.32	72.00
15003.00	50.00	580.80	579.00	574.00	740.00	582.93	.06	.91	0.00	432.35	8.93	72.00
15003.00	50.00	580.80	579.00	574.00	775.00	583.06	.06	.79	0.00	449.40	9.06	72.00
15003.00	50.00	580.80	579.00	574.00	820.00	583.26	.06	.60	0.00	470.19	9.26	72.00
15092.00	89.00	0.00	0.00	574.40	580.00	582.29	.17	.03	.06	580.00	7.89	28.00
15092.00	89.00	0.00	0.00	574.40	740.00	582.89	.22	.04	.08	740.00	8.49	28.00
15092.00	89.00	0.00	0.00	574.40	775.00	583.01	.24	.04	.09	775.00	8.51	28.00
15092.00	89.00	0.00	0.00	574.40	820.00	583.21	.25	.04	.10	820.00	8.81	28.00
15122.00	30.00	0.00	0.00	574.50	580.00	582.15	.55	.06	.19	580.00	7.65	13.00
15122.00	30.00	0.00	0.00	574.50	740.00	582.68	.78	.07	.28	740.00	8.18	13.00
15122.00	30.00	0.00	0.00	574.50	775.00	582.79	.83	.07	.30	775.00	8.29	13.00
15122.00	30.00	0.00	0.00	574.50	820.00	582.96	.89	.08	.32	820.00	8.46	13.00
15123.00	1.00	590.30	586.00	574.50	580.00	582.16	.55	.00	.00	580.00	7.66	13.00
15123.00	1.00	590.30	586.00	574.50	740.00	582.69	.78	.00	.00	740.00	8.19	13.00
15123.00	1.00	590.30	586.00	574.50	775.00	582.80	.83	.01	.00	775.00	8.30	13.00
15123.00	1.00	590.30	586.00	574.50	820.00	582.97	.89	.01	.00	820.00	8.47	13.00
15148.00	25.00	590.30	586.00	574.50	580.00	582.24	.54	.07	.00	580.00	7.74	13.00
15148.00	25.00	590.30	586.00	574.50	740.00	582.81	.76	.09	.01	740.00	8.31	13.00
15148.00	25.00	590.30	586.00	574.50	775.00	582.93	.81	.10	.01	775.00	8.43	13.00
15148.00	25.00	590.30	586.00	574.50	820.00	583.11	.86	.10	.01	820.00	8.61	13.00
15149.00	1.00	0.00	0.00	574.50	580.00	582.25	.54	.00	.00	580.00	7.75	13.00
15149.00	1.00	0.00	0.00	574.50	740.00	582.82	.75	.00	.00	740.00	8.32	13.00
15149.00	1.00	0.00	0.00	574.50	775.00	582.93	.80	.00	.00	775.00	8.43	13.00
15149.00	1.00	0.00	0.00	574.50	820.00	583.12	.86	.01	.00	820.00	8.62	13.00

Uarco Business Forms - A

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
15222.00	73.00	0.00	0.00	574.00	580.00	582.57	.64	.38	.05	580.00	8.57	12.09
15222.00	73.00	0.00	0.00	574.00	740.00	583.26	.88	.50	.06	740.00	9.26	12.27
15222.00	73.00	0.00	0.00	574.00	775.00	583.40	.93	.53	.06	775.00	9.40	12.31
15222.00	73.00	0.00	0.00	574.00	820.00	583.61	.99	.56	.06	820.00	9.61	12.36
15223.00	1.00	0.00	0.00	574.00	580.00	582.57	.64	.00	.00	580.00	8.57	12.09
15223.00	1.00	0.00	0.00	574.00	740.00	583.26	.88	.00	.00	740.00	9.26	12.27
15223.00	1.00	0.00	0.00	574.00	775.00	583.41	.93	.00	.00	775.00	9.41	12.31
15223.00	1.00	0.00	0.00	574.00	820.00	583.62	.99	.00	.00	820.00	9.62	12.36
15226.00	3.00	587.40	586.00	574.00	580.00	582.58	.64	.01	.00	580.00	8.58	12.09
15226.00	3.00	587.40	586.00	574.00	740.00	583.28	.87	.01	.00	740.00	9.28	12.27
15226.00	3.00	587.40	586.00	574.00	775.00	583.42	.92	.01	.00	775.00	9.42	12.31
15226.00	3.00	587.40	586.00	574.00	820.00	583.63	.98	.01	.00	820.00	9.63	12.37
15234.00	8.00	587.40	586.00	574.00	580.00	582.61	.64	.02	.00	580.00	8.61	12.09
15234.00	8.00	587.40	586.00	574.00	740.00	583.31	.87	.02	.00	740.00	9.31	12.28
15234.00	8.00	587.40	586.00	574.00	775.00	583.45	.92	.02	.00	775.00	9.45	12.32
15234.00	8.00	587.40	586.00	574.00	820.00	583.67	.98	.03	.00	820.00	9.67	12.38
15250.00	16.00	0.00	0.00	574.00	580.00	582.65	.63	.03	.00	580.00	8.65	12.10
15250.00	16.00	0.00	0.00	574.00	740.00	583.37	.86	.05	.00	740.00	9.37	12.29
15250.00	16.00	0.00	0.00	574.00	775.00	583.52	.90	.05	.00	775.00	9.52	12.34
15250.00	16.00	0.00	0.00	574.00	820.00	583.74	.96	.05	.01	820.00	9.74	12.40
15251.00	1.00	0.00	0.00	574.00	580.00	582.65	.63	.00	.00	580.00	8.65	12.10
15251.00	1.00	0.00	0.00	574.00	740.00	583.37	.85	.00	.00	740.00	9.37	12.30
15251.00	1.00	0.00	0.00	574.00	775.00	583.52	.90	.00	.00	775.00	9.52	12.34
15251.00	1.00	0.00	0.00	574.00	820.00	583.74	.96	.00	.00	820.00	9.74	12.40
15254.00	3.00	0.00	0.00	574.05	580.00	583.21	.21	.01	.13	580.00	9.16	18.00
15254.00	3.00	0.00	0.00	574.05	740.00	584.13	.27	.01	.17	740.00	10.08	18.00
15254.00	3.00	0.00	0.00	574.05	775.00	584.33	.29	.01	.18	775.00	10.28	18.00
15254.00	3.00	0.00	0.00	574.05	820.00	584.60	.31	.01	.20	820.00	10.55	18.00
15294.00	40.00	0.00	0.00	574.80	580.00	583.43	.05	.02	.05	580.00	8.63	46.00
15294.00	40.00	0.00	0.00	574.80	740.00	584.43	.07	.02	.06	740.00	9.63	46.00
15294.00	40.00	0.00	0.00	574.80	775.00	584.64	.07	.02	.07	775.00	9.84	46.00
15294.00	40.00	0.00	0.00	574.80	820.00	584.93	.07	.02	.07	820.00	10.13	46.00
15657.00	363.00	0.00	0.00	575.40	580.00	583.52	.01	.03	.01	149.02	8.12	210.00
15657.00	363.00	0.00	0.00	575.40	740.00	584.53	.01	.03	.02	178.99	9.13	210.00
15657.00	363.00	0.00	0.00	575.40	775.00	584.75	.01	.03	.02	185.45	9.35	210.00
15657.00	363.00	0.00	0.00	575.40	820.00	585.04	.01	.03	.02	193.53	9.64	210.00
15927.00	270.00	0.00	0.00	575.00	580.00	583.52	.04	.02	.02	368.28	8.52	76.00
15927.00	270.00	0.00	0.00	575.00	740.00	584.53	.05	.02	.02	444.46	9.53	76.00
15927.00	270.00	0.00	0.00	575.00	775.00	584.74	.05	.02	.02	460.80	9.74	76.00
15927.00	270.00	0.00	0.00	575.00	820.00	585.03	.05	.02	.02	481.23	10.03	76.00

Usace Business Forms - A

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
15928.00	1.00	579.21	579.40	575.30	580.00	583.51	.06	.00	.01	221.39	8.21	76.00
15928.00	1.00	579.21	579.40	575.30	740.00	584.52	.06	.00	.01	265.60	9.22	76.00
15928.00	1.00	579.21	579.40	575.30	775.00	584.74	.06	.00	.01	275.35	9.44	76.00
15928.00	1.00	579.21	579.40	575.30	820.00	585.03	.06	.00	.01	287.68	9.73	76.00
15958.00	30.00	579.48	579.40	575.20	580.00	583.53	.09	.03	.02	276.75	8.33	61.00
15958.00	30.00	579.48	579.40	575.20	740.00	584.53	.09	.02	.02	333.52	9.33	61.00
15958.00	30.00	579.48	579.40	575.20	775.00	584.74	.10	.02	.02	345.97	9.54	61.00
15958.00	30.00	579.48	579.40	575.20	820.00	585.03	.10	.02	.02	361.73	9.83	61.00
15959.00	1.00	0.00	0.00	575.20	580.00	583.56	.07	.00	.01	380.05	8.36	61.00
15959.00	1.00	0.00	0.00	575.20	740.00	584.56	.07	.00	.01	460.85	9.36	61.00
15959.00	1.00	0.00	0.00	575.20	775.00	584.77	.07	.00	.01	478.26	9.57	61.00
15959.00	1.00	0.00	0.00	575.20	820.00	585.06	.08	.00	.01	500.35	9.86	61.00
16006.00	47.00	0.00	0.00	572.40	580.00	583.59	.05	.01	.00	487.03	11.19	37.00
16006.00	47.00	0.00	0.00	572.40	740.00	584.57	.07	.01	.00	612.24	12.17	37.00
16006.00	47.00	0.00	0.00	572.40	775.00	584.78	.07	.01	.00	639.37	12.38	37.00
16006.00	47.00	0.00	0.00	572.40	820.00	585.07	.08	.01	.00	673.98	12.67	37.00
16056.00	50.00	0.00	0.00	572.80	580.00	583.47	.33	.02	.14	580.00	10.67	12.00
16056.00	50.00	0.00	0.00	572.80	740.00	584.40	.45	.02	.19	740.00	11.60	12.00
16056.00	50.00	0.00	0.00	572.80	775.00	584.60	.48	.02	.20	775.00	11.80	12.00
16056.00	50.00	0.00	0.00	572.80	820.00	584.88	.52	.03	.22	820.00	12.08	12.00
16057.00	1.00	0.00	0.00	572.80	530.00	583.55	.27	.00	.02	530.00	10.75	12.00
16057.00	1.00	0.00	0.00	572.80	675.00	584.51	.37	.00	.03	675.00	11.71	12.00
16057.00	1.00	0.00	0.00	572.80	705.00	584.72	.39	.00	.03	705.00	11.92	12.00
16057.00	1.00	0.00	0.00	572.80	735.00	585.02	.40	.00	.03	735.00	12.22	12.00
16273.00	216.00	588.20	581.20	572.80	530.00	584.22	.24	.65	0.00	530.00	11.42	12.00
16273.00	216.00	588.20	581.20	572.80	675.00	585.70	.31	1.12	0.00	675.00	12.90	12.00
16273.00	216.00	588.20	581.20	572.80	705.00	586.03	.32	1.23	0.00	705.00	13.23	12.00
16273.00	216.00	588.20	581.20	572.80	735.00	586.47	.32	1.36	0.00	735.00	13.67	12.00
16274.00	1.00	0.00	0.00	572.80	530.00	584.22	.24	.00	.00	530.00	11.42	12.00
16274.00	1.00	0.00	0.00	572.80	675.00	585.70	.31	.00	.00	675.00	12.90	12.00
16274.00	1.00	0.00	0.00	572.80	705.00	586.03	.32	.00	.00	705.00	13.23	12.00
16274.00	1.00	0.00	0.00	572.80	735.00	586.47	.32	.00	.00	735.00	13.67	12.00
16374.00	100.00	0.00	0.00	573.12	530.00	584.54	.00	.01	.07	155.66	11.42	210.00
16374.00	100.00	0.00	0.00	573.12	675.00	586.10	.00	.01	.09	181.98	12.98	210.00
16374.00	100.00	0.00	0.00	573.12	705.00	586.44	.00	.01	.09	187.12	13.32	210.00
16374.00	100.00	0.00	0.00	573.12	735.00	586.89	.00	.00	.10	191.51	13.77	210.00
16873.00	499.00	0.00	0.00	574.70	530.00	584.55	.01	.01	.00	173.85	9.85	217.06
16873.00	499.00	0.00	0.00	574.70	675.00	586.11	.00	.01	.00	195.37	11.41	219.19
16873.00	499.00	0.00	0.00	574.70	705.00	586.45	.00	.01	.00	199.59	11.75	219.66
16873.00	499.00	0.00	0.00	574.70	735.00	586.90	.00	.01	.00	202.72	12.20	220.00

Uarco Business Forms - A

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
17473.00	600.00	0.00	0.00	576.10	530.00	584.57	.00	.02	.00	105.38	8.47	350.00
17473.00	600.00	0.00	0.00	576.10	675.00	586.12	.00	.01	.00	120.13	10.02	350.00
17473.00	600.00	0.00	0.00	576.10	705.00	586.47	.00	.01	.00	123.12	10.37	350.00
17473.00	600.00	0.00	0.00	576.10	735.00	586.91	.00	.01	.00	125.57	10.81	350.00
18323.00	850.00	0.00	0.00	577.20	530.00	584.59	.00	.02	.00	110.01	7.39	250.00
18323.00	850.00	0.00	0.00	577.20	675.00	586.13	.00	.01	.00	122.49	8.93	250.00
18323.00	850.00	0.00	0.00	577.20	705.00	586.48	.00	.01	.00	125.13	9.28	250.00
18323.00	850.00	0.00	0.00	577.20	735.00	586.92	.00	.01	.00	127.19	9.72	250.00
19073.00	750.00	0.00	0.00	577.70	530.00	584.60	.01	.02	.00	136.84	6.90	250.00
19073.00	750.00	0.00	0.00	577.70	675.00	586.14	.00	.01	.00	148.87	8.44	250.00
19073.00	750.00	0.00	0.00	577.70	705.00	586.48	.00	.01	.00	151.41	8.78	250.00
19073.00	750.00	0.00	0.00	577.70	735.00	586.92	.00	.01	.00	153.12	9.22	250.00
19523.00	450.00	0.00	0.00	576.90	530.00	584.56	.15	.03	.07	529.29	7.66	70.46
19523.00	450.00	0.00	0.00	576.90	675.00	586.14	.05	.02	.02	464.89	9.24	322.60
19523.00	450.00	0.00	0.00	576.90	705.00	586.48	.04	.01	.02	425.17	9.58	397.48
19523.00	450.00	0.00	0.00	576.90	735.00	586.93	.02	.01	.01	372.31	10.03	400.00
19524.00	1.00	584.20	583.90	576.90	530.00	584.32	.64	.00	.24	530.00	7.42	29.25
19524.00	1.00	584.20	583.90	576.90	675.00	586.13	.06	.00	.00	168.20	9.23	321.68
19524.00	1.00	584.20	583.90	576.90	705.00	586.48	.04	.00	.00	141.59	9.58	397.50
19524.00	1.00	584.20	583.90	576.90	735.00	586.93	.02	.00	.00	117.04	10.03	400.00
19570.00	46.00	584.20	583.90	576.90	530.00	584.55	.63	.22	.00	527.46	7.65	67.03
19570.00	46.00	584.20	583.90	576.90	675.00	586.16	.05	.02	.00	166.26	9.26	324.82
19570.00	46.00	584.20	583.90	576.90	705.00	586.50	.03	.01	.00	140.77	9.60	400.00
19570.00	46.00	584.20	583.90	576.90	735.00	586.93	.02	.01	.00	116.75	10.03	400.00
19571.00	1.00	0.00	0.00	576.90	530.00	585.24	.10	.00	.16	497.15	8.34	187.02
19571.00	1.00	0.00	0.00	576.90	675.00	586.16	.06	.00	.00	497.41	9.26	324.90
19571.00	1.00	0.00	0.00	576.90	705.00	586.49	.04	.00	.00	464.67	9.59	400.00
19571.00	1.00	0.00	0.00	576.90	735.00	586.93	.03	.00	.00	417.41	10.03	400.00
20321.00	750.00	0.00	0.00	578.60	530.00	585.41	.00	.04	.03	65.72	6.81	558.01
20321.00	750.00	0.00	0.00	578.60	675.00	586.26	.00	.03	.02	71.29	7.66	586.29
20321.00	750.00	0.00	0.00	578.60	705.00	586.57	.00	.02	.01	70.98	7.97	596.11
20321.00	750.00	0.00	0.00	578.60	735.00	586.98	.00	.02	.01	69.91	8.38	609.11
21021.00	700.00	0.00	0.00	578.90	530.00	585.42	.00	.01	.00	95.19	6.52	469.36
21021.00	700.00	0.00	0.00	578.90	675.00	586.27	.00	.01	.00	108.24	7.37	491.72
21021.00	700.00	0.00	0.00	578.90	705.00	586.58	.00	.01	.00	109.32	7.68	499.87
21021.00	700.00	0.00	0.00	578.90	735.00	586.99	.00	.01	.00	109.51	8.09	510.68
-6900.00	0.00	0.00	0.00	569.50	1340.00	575.40	.10	0.00	0.00	1340.00	5.90	124.70
-6900.00	0.00	0.00	0.00	569.50	1730.00	575.75	.14	0.00	0.00	1729.11	6.25	152.09
-6900.00	0.00	0.00	0.00	569.50	1860.00	575.87	.15	0.00	0.00	1857.93	6.37	155.12
-6900.00	0.00	0.00	0.00	569.50	2060.00	576.05	.17	0.00	0.00	2055.22	6.55	159.67

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7351.00	450.00	0.00	0.00	567.90	1340.00	575.57	.19	.21	.05	1339.78	7.67	81.89
7351.00	450.00	0.00	0.00	567.90	1730.00	575.96	.27	.28	.07	1728.29	8.06	88.16
7351.00	450.00	0.00	0.00	567.90	1860.00	576.09	.30	.29	.07	1857.30	8.19	90.27
7351.00	450.00	0.00	0.00	567.90	2060.00	576.29	.34	.32	.08	2055.20	8.39	93.40
7386.00	36.00	0.00	0.00	568.20	1040.00	575.36	.69	.04	.25	1040.00	7.16	24.00
7386.00	36.00	0.00	0.00	568.20	1310.00	575.65	1.00	.05	.36	1310.00	7.45	24.00
7386.00	36.00	0.00	0.00	568.20	1400.00	575.74	1.11	.05	.40	1400.00	7.54	24.00
7386.00	36.00	0.00	0.00	568.20	1540.00	575.87	1.29	.06	.48	1540.00	7.67	24.00
7387.00	1.00	576.40	576.90	568.20	1040.00	575.38	.67	.00	.00	1040.00	7.18	24.00
7387.00	1.00	576.40	576.90	568.20	1310.00	575.68	.97	.00	.01	1310.00	7.48	24.00
7387.00	1.00	576.40	576.90	568.20	1400.00	575.78	1.08	.00	.01	1400.00	7.58	24.00
7387.00	1.00	576.40	576.90	568.20	1540.00	575.92	1.25	.00	.01	1540.00	7.72	24.00
7414.00	27.00	576.40	576.90	568.20	1040.00	575.49	.65	.08	.01	1040.00	7.29	24.00
7414.00	27.00	576.40	576.90	568.20	1310.00	575.86	.92	.12	.01	1310.00	7.66	24.00
7414.00	27.00	576.40	576.90	568.20	1400.00	575.99	1.02	.13	.02	1400.00	7.79	24.00
7414.00	27.00	576.40	576.90	568.20	1540.00	576.18	1.17	.14	.03	1540.00	7.98	24.00
7415.00	1.00	0.00	0.00	568.20	1040.00	575.50	.65	.00	.00	1040.00	7.30	24.00
7415.00	1.00	0.00	0.00	568.20	1310.00	575.87	.92	.00	.00	1310.00	7.67	24.00
7415.00	1.00	0.00	0.00	568.20	1400.00	575.99	1.02	.00	.00	1400.00	7.79	24.00
7415.00	1.00	0.00	0.00	568.20	1540.00	576.18	1.17	.01	.00	1540.00	7.98	24.00
7419.00	4.00	0.00	0.00	568.20	1040.00	575.88	.36	.01	.09	1040.00	7.68	32.00
7419.00	4.00	0.00	0.00	568.20	1310.00	576.45	.48	.01	.13	1310.00	8.25	32.00
7419.00	4.00	0.00	0.00	568.20	1400.00	576.65	.52	.01	.15	1400.00	8.45	32.00
7419.00	4.00	0.00	0.00	568.20	1540.00	576.95	.58	.01	.18	1540.00	8.75	32.00
7901.00	481.00	0.00	0.00	569.40	1040.00	576.51	.05	.23	.09	660.18	7.11	264.32
7901.00	481.00	0.00	0.00	569.40	1310.00	577.24	.05	.24	.13	781.43	7.84	290.85
7901.00	481.00	0.00	0.00	569.40	1400.00	577.49	.05	.23	.14	819.46	8.09	304.21
7901.00	481.00	0.00	0.00	569.40	1540.00	577.87	.05	.23	.16	876.39	8.47	316.54
8941.00	440.00	0.00	0.00	569.50	1040.00	576.68	.04	.16	.00	1040.00	7.18	193.22
8941.00	440.00	0.00	0.00	569.50	1310.00	577.40	.05	.15	.00	1310.00	7.90	218.14
8941.00	440.00	0.00	0.00	569.50	1400.00	577.64	.05	.15	.00	1400.00	8.14	226.53
8941.00	440.00	0.00	0.00	569.50	1540.00	578.02	.05	.14	.00	1540.00	8.52	239.48
9441.00	500.00	0.00	0.00	570.40	1040.00	576.89	.02	.18	.01	1040.00	6.49	406.95
9441.00	500.00	0.00	0.00	570.40	1310.00	577.60	.01	.16	.01	1310.00	7.20	434.52
9441.00	500.00	0.00	0.00	570.40	1400.00	577.84	.01	.16	.01	1400.00	7.44	443.73
9441.00	500.00	0.00	0.00	570.40	1540.00	578.21	.01	.15	.01	1540.00	7.81	457.57
9891.00	450.00	0.00	0.00	573.80	280.00	577.02	.00	.11	.00	280.00	3.22	234.78
9891.00	450.00	0.00	0.00	573.80	325.00	577.71	.00	.09	.00	325.00	3.91	252.88
9891.00	450.00	0.00	0.00	573.80	315.00	577.94	.00	.08	.00	315.00	4.14	258.90
9891.00	450.00	0.00	0.00	573.80	300.00	578.29	.00	.07	.00	300.00	4.49	268.27

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
10441.00	550.00	0.00	0.00	571.20	580.00	577.09	.01	.07	.00	148.64	5.89	470.21
10441.00	550.00	0.00	0.00	571.20	740.00	577.76	.01	.05	.00	171.97	6.56	473.39
10441.00	550.00	0.00	0.00	571.20	775.00	577.98	.01	.05	.00	175.45	6.78	478.38
10441.00	550.00	0.00	0.00	571.20	820.00	578.33	.00	.04	.00	178.97	7.13	486.21

SECTION NUMBER	DISCHARGE CFS	CWSEL	CWSEL DIFF EACH Q	CWSEL DIFF EACH SECTION	CWSEL-WSELK	TOPWID	T.W. DIFF	LENGTH
6900.000	1340.000	575.400	0.000	0.000	0.000	124.598	0.000	0.000
6900.000	1730.000	575.750	.350	0.000	0.000	152.091	-27.393	0.000
6900.000	1860.000	575.870	.120	0.000	0.000	155.121	-30.423	0.000
6900.000	2060.000	576.050	.180	0.000	0.000	159.667	-34.969	0.000
7350.000	1340.000	575.568	0.000	.168	0.000	81.894	0.000	450.000
7350.000	1730.000	575.961	.393	.211	0.000	88.164	-6.271	450.000
7350.000	1860.000	576.092	.131	.222	0.000	90.268	-8.374	450.000
7350.000	2060.000	576.288	.195	.238	0.000	93.404	-11.511	450.000
7700.000	300.000	575.917	0.000	.349	0.000	46.158	0.000	350.000
7700.000	415.000	576.439	.522	.478	0.000	52.464	-6.306	350.000
7700.000	460.000	576.610	.171	.518	0.000	54.533	-8.376	350.000
7700.000	520.000	576.870	.259	.582	0.000	57.667	-11.509	350.000
7900.000	300.000	575.956	0.000	.039	0.000	39.996	0.000	200.000
7900.000	415.000	576.493	.537	.054	0.000	46.480	-6.484	200.000
7900.000	460.000	576.671	.177	.060	0.000	48.619	-8.624	200.000
7900.000	520.000	576.936	.266	.067	0.000	51.823	-11.828	200.000
8400.000	300.000	576.094	0.000	.138	0.000	40.942	0.000	500.000
8400.000	415.000	576.681	.588	.188	0.000	48.147	-7.205	500.000
8400.000	460.000	576.879	.197	.208	0.000	50.526	-9.584	500.000
8400.000	520.000	577.164	.285	.228	0.000	53.969	-13.027	500.000
8940.000	300.000	576.244	0.000	.150	0.000	28.666	0.000	540.000
8940.000	415.000	576.874	.630	.193	0.000	30.540	-1.873	540.000
8940.000	460.000	577.087	.213	.209	0.000	31.174	-2.507	540.000
8940.000	520.000	577.387	.300	.223	0.000	32.066	-3.399	540.000
9440.000	300.000	576.448	0.000	.204	0.000	29.198	0.000	500.000
9440.000	415.000	577.131	.682	.256	0.000	32.323	-3.125	500.000
9440.000	460.000	577.363	.232	.276	0.000	33.729	-4.532	500.000
9440.000	520.000	577.682	.319	.295	0.000	35.661	-6.463	500.000
9890.000	300.000	576.713	0.000	.265	0.000	87.056	0.000	450.000
9890.000	415.000	577.449	.735	.318	0.000	91.666	-4.610	450.000
9890.000	460.000	577.701	.252	.338	0.000	93.243	-6.187	450.000
9890.000	520.000	578.039	.338	.357	0.000	93.826	-6.770	450.000
9921.000	300.000	576.747	0.000	.034	0.000	194.307	0.000	31.000
9921.000	415.000	577.502	.755	.053	0.000	339.699	-145.392	31.000
9921.000	460.000	577.762	.260	.061	0.000	339.699	-145.392	31.000
9921.000	520.000	578.107	.345	.068	0.000	339.699	-145.392	31.000
9922.000	300.000	576.742	0.000	-.005	0.000	194.480	0.000	1.000
9922.000	415.000	577.505	.763	.003	0.000	339.699	-145.219	1.000
9922.000	460.000	577.767	.262	.005	0.000	339.699	-145.219	1.000
9922.000	520.000	578.110	.344	.003	0.000	339.699	-145.219	1.000
9958.000	300.000	576.876	0.000	.134	0.000	230.929	0.000	36.000
9958.000	415.000	577.595	.719	.090	0.000	339.699	-108.770	36.000
9958.000	460.000	577.831	.236	.064	0.000	339.699	-108.770	36.000
9958.000	520.000	578.150	.320	.040	0.000	339.699	-108.770	36.000

9959.000	300.000	576.892	0.000	.016	0.000	233.440	0.000	1.000
9959.000	415.000	577.595	.703	.000	0.000	339.699	-106.259	1.000
9959.000	460.000	577.830	.235	-.000	0.000	339.699	-106.259	1.000
9959.000	520.000	578.150	.320	-.000	0.000	339.699	-106.259	1.000
10440.000	580.000	577.018	0.000	.127	0.000	469.996	0.000	481.000
10440.000	740.000	577.690	.671	.095	0.000	471.961	-1.966	481.000
10440.000	775.000	577.914	.224	.084	0.000	475.810	-6.815	481.000
10440.000	820.000	578.221	.308	.071	0.000	483.791	-13.796	481.000
11040.000	290.000	577.105	0.000	.086	0.000	50.571	0.000	600.000
11040.000	380.000	577.745	.640	.055	0.000	240.862	-190.291	600.000
11040.000	425.000	577.966	.221	.052	0.000	245.134	-194.563	600.000
11040.000	495.000	578.269	.304	.048	0.000	251.002	-200.431	600.000
11140.000	290.000	577.139	0.000	.034	0.000	21.000	0.000	100.000
11140.000	380.000	577.735	.596	-.010	0.000	172.162	-151.162	100.000
11140.000	425.000	577.956	.221	-.010	0.000	183.837	-162.837	100.000
11140.000	495.000	578.260	.304	-.009	0.000	251.078	-230.078	100.000
11180.000	290.000	577.340	0.000	.201	0.000	21.000	0.000	40.000
11180.000	380.000	578.127	.787	.393	0.000	200.731	-179.731	40.000
11180.000	425.000	578.284	.157	.329	0.000	256.593	-235.593	40.000
11180.000	495.000	578.471	.187	.211	0.000	299.352	-278.352	40.000
-10440.000	580.000	577.018	0.000	-.322	0.000	469.995	0.000	550.000
-10440.000	740.000	577.690	.671	-.438	0.000	471.970	-1.975	550.000
-10440.000	775.000	577.914	.224	-.370	0.000	476.842	-6.847	550.000
-10440.000	820.000	578.221	.308	-.250	0.000	483.802	-13.806	550.000
11041.000	290.000	577.128	0.000	.110	0.000	65.999	0.000	600.000
11041.000	360.000	577.773	.646	.084	0.000	65.999	-.000	600.000
11041.000	350.000	577.973	.199	.059	0.000	246.488	-180.489	600.000
11041.000	325.000	578.269	.296	.048	0.000	251.663	-185.664	600.000
11141.000	290.000	577.185	0.000	.057	0.000	16.000	0.000	100.000
11141.000	360.000	577.808	.624	.035	0.000	16.000	0.000	100.000
11141.000	350.000	577.976	.167	.003	0.000	95.417	-79.417	100.000
11141.000	325.000	578.271	.295	.002	0.000	98.956	-82.956	100.000
11181.000	290.000	577.277	0.000	.092	0.000	16.000	0.000	40.000
11181.000	360.000	577.996	.718	.187	0.000	16.000	0.000	40.000
11181.000	350.000	578.295	.299	.319	0.000	101.255	-85.255	40.000
11181.000	325.000	578.489	.194	.218	0.000	317.368	-301.368	40.000
11431.000	580.000	577.559	0.000	.282	0.000	171.773	0.000	250.000
11431.000	740.000	578.305	.746	.309	0.000	183.626	-11.853	250.000
11431.000	775.000	578.348	.043	.053	0.000	183.869	-12.096	250.000
11431.000	820.000	578.533	.185	.044	0.000	184.999	-13.226	250.000
11681.000	580.000	577.675	0.000	.115	0.000	49.999	0.000	250.000
11681.000	740.000	578.377	.703	.072	0.000	49.999	-.000	250.000
11681.000	775.000	578.423	.046	.075	0.000	49.999	-.000	250.000
11681.000	820.000	578.598	.175	.065	0.000	49.999	-.000	250.000
11730.000	580.000	577.754	0.000	.080	0.000	22.999	0.000	49.000
11730.000	740.000	578.436	.682	.059	0.000	22.999	-.000	49.000
11730.000	775.000	578.485	.049	.062	0.000	22.999	-.000	49.000
11730.000	820.000	578.654	.169	.056	0.000	22.999	-.000	49.000
11731.000	580.000	577.749	0.000	-.005	0.000	23.000	0.000	1.000
11731.000	740.000	578.430	.681	-.006	0.000	23.000	0.000	1.000
11731.000	775.000	578.479	.049	-.007	0.000	23.000	0.000	1.000
11731.000	820.000	578.647	.169	-.007	0.000	23.000	0.000	1.000

11826.000	580.000	577.688	0.000	.139	0.000	23.000	0.000	95.000
11826.000	740.000	580.075	2.187	1.645	0.000	23.000	-.000	95.000
11826.000	775.000	580.296	.221	1.818	0.000	23.000	-.000	95.000
11826.000	820.000	580.708	.411	2.060	0.000	23.000	-.000	95.000
11827.000	580.000	578.117	0.000	.229	0.000	22.999	0.000	1.000
11827.000	740.000	580.088	1.971	.013	0.000	22.999	-.000	1.000
11827.000	775.000	580.309	.222	.013	0.000	22.999	-.000	1.000
11827.000	820.000	580.720	.411	.012	0.000	22.999	-.000	1.000
11876.000	580.000	578.398	0.000	.281	0.000	74.999	0.000	49.000
11876.000	740.000	580.355	1.957	.267	0.000	74.999	-.000	49.000
11876.000	775.000	580.588	.233	.278	0.000	74.999	-.000	49.000
11876.000	820.000	581.004	.416	.284	0.000	74.999	-.000	49.000
12226.000	580.000	578.553	0.000	.155	0.000	108.606	0.000	350.000
12226.000	740.000	580.432	1.879	.077	0.000	109.999	-1.393	350.000
12226.000	775.000	580.663	.231	.076	0.000	109.999	-1.393	350.000
12226.000	820.000	581.074	.411	.070	0.000	109.999	-1.393	350.000
12776.000	580.000	578.836	0.000	.283	0.000	51.999	0.000	550.000
12776.000	740.000	580.542	1.706	.109	0.000	51.999	-.000	550.000
12776.000	775.000	580.766	.225	.103	0.000	51.999	-.000	550.000
12776.000	820.000	581.163	.396	.088	0.000	51.999	-.000	550.000
12825.000	580.000	578.830	0.000	-.005	0.000	28.000	0.000	49.000
12825.000	740.000	580.514	1.683	-.025	0.000	28.000	0.000	49.000
12825.000	775.000	580.735	.222	-.031	0.000	28.000	0.000	49.000
12825.000	820.000	581.128	.393	-.035	0.000	28.000	0.000	49.000
12826.000	580.000	578.831	0.000	.001	0.000	28.000	0.000	1.000
12826.000	740.000	580.515	1.683	.001	0.000	28.000	0.000	1.000
12826.000	775.000	580.736	.222	.001	0.000	28.000	0.000	1.000
12826.000	820.000	581.129	.393	.001	0.000	28.000	0.000	1.000
12860.000	580.000	578.886	0.000	.055	0.000	28.000	0.000	34.000
12860.000	740.000	580.755	1.869	.240	0.000	28.000	0.000	34.000
12860.000	775.000	581.015	.260	.279	0.000	28.000	0.000	34.000
12860.000	820.000	581.467	.452	.338	0.000	28.000	0.000	34.000
12861.000	580.000	578.887	0.000	.001	0.000	28.000	0.000	1.000
12861.000	740.000	580.755	1.869	.001	0.000	28.000	0.000	1.000
12861.000	775.000	581.016	.260	.001	0.000	28.000	0.000	1.000
12861.000	820.000	581.467	.452	.001	0.000	28.000	0.000	1.000
12897.000	580.000	578.870	0.000	-.016	0.000	21.999	0.000	36.000
12897.000	740.000	580.729	1.858	-.027	0.000	21.999	-.000	36.000
12897.000	775.000	580.987	.258	-.028	0.000	21.999	-.000	36.000
12897.000	820.000	581.437	.450	-.030	0.000	21.999	-.000	36.000
12934.000	580.000	578.835	0.000	-.035	0.000	16.000	0.000	37.000
12934.000	740.000	580.663	1.828	-.065	0.000	16.000	0.000	37.000
12934.000	775.000	580.917	.254	-.070	0.000	16.000	0.000	37.000
12934.000	820.000	581.363	.446	-.074	0.000	16.000	0.000	37.000
12935.000	580.000	578.845	0.000	.010	0.000	16.000	0.000	1.000
12935.000	740.000	580.669	1.824	.006	0.000	16.000	0.000	1.000
12935.000	775.000	580.923	.254	.005	0.000	16.000	0.000	1.000
12935.000	820.000	581.368	.446	.005	0.000	16.000	0.000	1.000
12951.000	580.000	578.971	0.000	.126	0.000	16.000	0.000	16.000
12951.000	740.000	580.735	1.764	.066	0.000	16.000	0.000	16.000
12951.000	775.000	580.988	.252	.065	0.000	16.000	0.000	16.000
12951.000	820.000	581.426	.439	.058	0.000	16.000	0.000	16.000
12952.000	580.000	578.983	0.000	.012	0.000	16.000	0.000	1.000

12952.000	740.000	580.740	1.758	.005	0.000	18.000	0.000	1.000
12952.000	775.000	580.993	.252	.005	0.000	16.000	0.000	1.000
12952.000	820.000	581.431	.438	.005	0.000	16.000	0.000	1.000
12956.000	580.000	579.656	0.000	.674	0.000	23.999	0.000	4.000
12956.000	740.000	581.301	1.644	.560	0.000	23.999	-.000	4.000
12956.000	775.000	581.564	.263	.571	0.000	23.999	-.000	4.000
12956.000	820.000	581.995	.431	.564	0.000	23.999	-.000	4.000
13002.000	580.000	580.149	0.000	.492	0.000	69.999	0.000	46.000
13002.000	740.000	581.733	1.584	.432	0.000	69.999	-.000	46.000
13002.000	775.000	582.000	.268	.436	0.000	69.999	-.000	46.000
13002.000	820.000	582.425	.425	.429	0.000	69.999	-.000	46.000
13452.000	580.000	580.313	0.000	.165	0.000	199.999	0.000	450.000
13452.000	740.000	581.851	1.537	.118	0.000	199.999	-.000	450.000
13452.000	775.000	582.115	.265	.115	0.000	199.999	-.000	450.000
13452.000	820.000	582.533	.418	.109	0.000	199.999	-.000	450.000
14452.000	580.000	580.498	0.000	.185	0.000	305.857	0.000	1000.000
14452.000	740.000	581.945	1.447	.094	0.000	359.446	-53.588	1000.000
14452.000	775.000	582.203	.258	.087	0.000	368.989	-63.132	1000.000
14452.000	820.000	582.609	.406	.076	0.000	383.634	-77.777	1000.000
14902.000	580.000	580.609	0.000	.111	0.000	99.999	0.000	450.000
14902.000	740.000	581.988	1.378	.043	0.000	99.999	-.000	450.000
14902.000	775.000	582.240	.252	.037	0.000	99.999	-.000	450.000
14902.000	820.000	582.638	.398	.029	0.000	99.999	-.000	450.000
14953.000	580.000	580.652	0.000	.043	0.000	71.999	0.000	51.000
14953.000	740.000	582.000	1.348	.013	0.000	71.999	-.000	51.000
14953.000	775.000	582.250	.250	.010	0.000	71.999	-.000	51.000
14953.000	820.000	582.644	.395	.007	0.000	71.999	-.000	51.000
15003.000	580.000	582.316	0.000	1.664	0.000	71.999	0.000	50.000
15003.000	740.000	582.934	.618	.934	0.000	71.999	-.000	50.000
15003.000	775.000	583.062	.128	.812	0.000	71.999	-.000	50.000
15003.000	820.000	583.260	.198	.616	0.000	71.999	-.000	50.000
15092.000	580.000	582.290	0.000	-.026	0.000	27.999	0.000	89.000
15092.000	740.000	582.889	.599	-.044	0.000	27.999	-.000	89.000
15092.000	775.000	583.013	.124	-.049	0.000	27.999	-.000	89.000
15092.000	820.000	583.206	.193	-.054	0.000	27.999	-.000	89.000
15122.000	580.000	582.153	0.000	-.137	0.000	13.000	0.000	30.000
15122.000	740.000	582.682	.530	-.207	0.000	13.000	0.000	30.000
15122.000	775.000	582.789	.107	-.224	0.000	13.000	0.000	30.000
15122.000	820.000	582.962	.173	-.244	0.000	13.000	0.000	30.000
15123.000	580.000	582.157	0.000	.004	0.000	13.000	0.000	1.000
15123.000	740.000	582.688	.531	.006	0.000	13.000	0.000	1.000
15123.000	775.000	582.796	.107	.006	0.000	13.000	0.000	1.000
15123.000	820.000	582.969	.173	.007	0.000	13.000	0.000	1.000
15148.000	580.000	582.242	0.000	.085	0.000	13.000	0.000	25.000
15148.000	740.000	582.812	.570	.124	0.000	13.000	0.000	25.000
15148.000	775.000	582.928	.117	.133	0.000	13.000	0.000	25.000
15148.000	820.000	583.112	.183	.143	0.000	13.000	0.000	25.000
15149.000	580.000	582.246	0.000	.004	0.000	13.000	0.000	1.000
15149.000	740.000	582.818	.571	.006	0.000	13.000	0.000	1.000
15149.000	775.000	582.934	.117	.006	0.000	13.000	0.000	1.000
15149.000	820.000	583.118	.183	.006	0.000	13.000	0.000	1.000
15222.000	580.000	582.570	0.000	.324	0.000	12.085	0.000	73.000
15222.000	740.000	583.257	.687	.439	0.000	12.268	-.183	73.000

15222.000	775.000	583.400	.143	.465	0.000	12.306	-.221	73.000
15222.000	820.000	583.611	.211	.493	0.000	12.363	-.278	73.000
15223.000	580.000	582.574	0.000	.005	0.000	12.087	0.000	1.000
15223.000	740.000	583.263	.688	.006	0.000	12.270	-.184	1.000
15223.000	775.000	583.406	.143	.007	0.000	12.308	-.222	1.000
15223.000	820.000	583.618	.212	.007	0.000	12.365	-.278	1.000
15226.000	580.000	582.584	0.000	.009	0.000	12.090	0.000	3.000
15226.000	740.000	583.276	.692	.013	0.000	12.274	-.185	3.000
15226.000	775.000	583.420	.144	.014	0.000	12.313	-.223	3.000
15226.000	820.000	583.633	.213	.015	0.000	12.369	-.280	3.000
15234.000	580.000	582.605	0.000	.022	0.000	12.094	0.000	8.000
15234.000	740.000	583.305	.700	.029	0.000	12.280	-.186	8.000
15234.000	775.000	583.451	.146	.031	0.000	12.319	-.225	8.000
15234.000	820.000	583.665	.214	.033	0.000	12.376	-.282	8.000
15250.000	580.000	582.648	0.000	.043	0.000	12.104	0.000	16.000
15250.000	740.000	583.365	.717	.060	0.000	12.295	-.191	16.000
15250.000	775.000	583.519	.154	.068	0.000	12.338	-.234	16.000
15250.000	820.000	583.738	.219	.073	0.000	12.397	-.293	16.000
15251.000	580.000	582.652	0.000	.004	0.000	12.104	0.000	1.000
15251.000	740.000	583.372	.720	.007	0.000	12.297	-.193	1.000
15251.000	775.000	583.524	.152	.005	0.000	12.339	-.235	1.000
15251.000	820.000	583.744	.219	.006	0.000	12.398	-.293	1.000
15254.000	580.000	583.212	0.000	.560	0.000	17.999	0.000	3.000
15254.000	740.000	584.134	.922	.762	0.000	17.999	-.000	3.000
15254.000	775.000	584.329	.195	.805	0.000	17.999	-.000	3.000
15254.000	820.000	584.599	.270	.855	0.000	17.999	-.000	3.000
15294.000	580.000	583.428	0.000	.216	0.000	45.999	0.000	40.000
15294.000	740.000	584.426	.997	.291	0.000	45.999	-.000	40.000
15294.000	775.000	584.637	.211	.308	0.000	45.999	-.000	40.000
15294.000	820.000	584.926	.289	.327	0.000	45.999	-.000	40.000
15657.000	580.000	583.520	0.000	.091	0.000	209.999	0.000	363.000
15657.000	740.000	584.532	1.012	.106	0.000	209.999	-.000	363.000
15657.000	775.000	584.746	.214	.110	0.000	209.999	-.000	363.000
15657.000	820.000	585.039	.292	.113	0.000	209.999	-.000	363.000
15927.000	580.000	583.521	0.000	.001	0.000	75.999	0.000	270.000
15927.000	740.000	584.530	1.009	-.002	0.000	75.999	-.000	270.000
15927.000	775.000	584.743	.214	-.003	0.000	75.999	-.000	270.000
15927.000	820.000	585.035	.291	-.004	0.000	75.999	-.000	270.000
15928.000	580.000	583.513	0.000	-.008	0.000	75.999	0.000	1.000
15928.000	740.000	584.523	1.011	-.006	0.000	75.999	-.000	1.000
15928.000	775.000	584.737	.214	-.006	0.000	75.999	-.000	1.000
15928.000	820.000	585.029	.292	-.006	0.000	75.999	-.000	1.000
15958.000	580.000	583.527	0.000	.014	0.000	60.999	0.000	30.000
15958.000	740.000	584.530	1.003	.007	0.000	60.999	-.000	30.000
15958.000	775.000	584.743	.213	.005	0.000	60.999	-.000	30.000
15958.000	820.000	585.033	.290	.004	0.000	60.999	-.000	30.000
15959.000	580.000	583.560	0.000	.033	0.000	60.999	0.000	1.000
15959.000	740.000	584.559	.998	.029	0.000	60.999	-.000	1.000
15959.000	775.000	584.771	.212	.028	0.000	60.999	-.000	1.000
15959.000	820.000	585.059	.289	.027	0.000	60.999	-.000	1.000
16006.000	580.000	583.587	0.000	.026	0.000	36.999	0.000	47.000
16006.000	740.000	584.573	.986	.014	0.000	36.999	-.000	47.000
16006.000	775.000	584.782	.209	.011	0.000	36.999	-.000	47.000

16008.000	820.000	585.069	.287	.010	0.000	3[illegible].999	-.000	47.000
16056.000	580.000	583.468	0.000	-.118	0.000	12.000	0.000	50.000
16056.000	740.000	584.405	.936	-.168	0.000	12.000	0.000	50.000
16056.000	775.000	584.603	.198	-.179	0.000	12.000	0.000	50.000
16056.000	820.000	584.877	.274	-.193	0.000	12.000	0.000	50.000
16057.000	530.000	583.546	0.000	.078	0.000	12.000	0.000	1.000
16057.000	675.000	584.515	.969	.110	0.000	12.000	0.000	1.000
16057.000	705.000	584.723	.208	.120	0.000	12.000	0.000	1.000
16057.000	735.000	585.023	.300	.146	0.000	12.000	0.000	1.000
16273.000	530.000	584.223	0.000	.677	0.000	12.000	0.000	216.000
16273.000	675.000	585.699	1.476	1.184	0.000	12.000	0.000	216.000
16273.000	705.000	586.031	.333	1.308	0.000	12.000	0.000	216.000
16273.000	735.000	586.467	.435	1.444	0.000	12.000	0.000	216.000
16274.000	530.000	584.224	0.000	.001	0.000	12.000	0.000	1.000
16274.000	675.000	585.700	1.476	.001	0.000	12.000	0.000	1.000
16274.000	705.000	586.033	.333	.001	0.000	12.000	0.000	1.000
16274.000	735.000	586.468	.435	.001	0.000	12.000	0.000	1.000
16374.000	530.000	584.539	0.000	.315	0.000	209.999	0.000	100.000
16374.000	675.000	586.098	1.559	.398	0.000	209.999	-.000	100.000
16374.000	705.000	586.444	.347	.412	0.000	209.999	-.000	100.000
16374.000	735.000	586.887	.442	.419	0.000	209.999	-.000	100.000
16873.000	530.000	584.551	0.000	.012	0.000	217.055	0.000	499.000
16873.000	675.000	586.107	1.556	.010	0.000	219.187	-2.132	499.000
16873.000	705.000	586.453	.346	.009	0.000	219.661	-2.606	499.000
16873.000	735.000	586.895	.442	.008	0.000	219.999	-2.944	499.000
17473.000	530.000	584.572	0.000	.021	0.000	349.999	0.000	600.000
17473.000	675.000	586.123	1.551	.016	0.000	349.999	-.000	600.000
17473.000	705.000	586.468	.345	.015	0.000	349.999	-.000	600.000
17473.000	735.000	586.908	.440	.013	0.000	349.999	-.000	600.000
18323.000	530.000	584.587	0.000	.015	0.000	249.999	0.000	850.000
18323.000	675.000	586.132	1.545	.009	0.000	249.999	-.000	850.000
18323.000	705.000	586.476	.344	.009	0.000	249.999	-.000	850.000
18323.000	735.000	586.916	.439	.007	0.000	249.999	-.000	850.000
19073.000	530.000	584.603	0.000	.016	0.000	249.999	0.000	750.000
19073.000	675.000	586.141	1.538	.009	0.000	249.999	-.000	750.000
19073.000	705.000	586.485	.343	.008	0.000	249.999	-.000	750.000
19073.000	735.000	586.923	.438	.007	0.000	249.999	-.000	750.000
19523.000	530.000	584.563	0.000	-.040	0.000	70.463	0.000	450.000
19523.000	675.000	586.135	1.572	-.006	0.000	322.597	-252.135	450.000
19523.000	705.000	586.484	.349	-.001	0.000	397.479	-327.017	450.000
19523.000	735.000	586.925	.442	.003	0.000	399.999	-329.536	450.000
19524.000	530.000	584.321	0.000	-.242	0.000	29.251	0.000	1.000
19524.000	675.000	586.134	1.813	-.002	0.000	321.682	-292.431	1.000
19524.000	705.000	586.485	.351	.001	0.000	397.504	-368.253	1.000
19524.000	735.000	586.927	.443	.002	0.000	399.999	-370.748	1.000
19570.000	530.000	584.554	0.000	.233	0.000	67.029	0.000	46.000
19570.000	675.000	586.159	1.604	.025	0.000	324.816	-257.787	46.000
19570.000	705.000	586.497	.338	.012	0.000	399.999	-332.970	46.000
19570.000	735.000	586.933	.436	.005	0.000	399.999	-332.970	46.000
19571.000	530.000	585.243	0.000	.689	0.000	187.023	0.000	1.000
19571.000	675.000	586.155	.913	-.003	0.000	324.904	-137.881	1.000
19571.000	705.000	586.492	.337	-.005	0.000	399.999	-212.976	1.000
19571.000	735.000	586.929	.437	-.004	0.000	399.999	-212.976	1.000

Uarco Business Forms - A

20321.000	530.000	585.408	0.000	.165	0.000	558.014	0.000	750.000
20321.000	675.000	586.259	.851	.104	0.000	586.295	-28.281	750.000
20321.000	705.000	586.570	.311	.077	0.000	596.113	-36.099	750.000
20321.000	735.000	586.981	.411	.052	0.000	609.107	-51.094	750.000
21021.000	530.000	585.422	0.000	.014	0.000	469.364	0.000	700.000
21021.000	675.000	586.269	.848	.011	0.000	491.721	-22.357	700.000
21021.000	705.000	586.579	.309	.009	0.000	499.874	-30.510	700.000
21021.000	735.000	586.988	.410	.007	0.000	510.675	-41.311	700.000
-6900.000	1340.000	575.400	0.000	-10.022	0.000	124.698	0.000	0.000
-6900.000	1730.000	575.750	.350	-10.519	0.000	152.091	-27.393	0.000
-6900.000	1860.000	575.870	.120	-10.709	0.000	155.121	-30.423	0.000
-6900.000	2060.000	576.050	.180	-10.938	0.000	159.667	-34.969	0.000
7351.000	1340.000	575.568	0.000	.168	0.000	81.894	0.000	450.000
7351.000	1730.000	575.961	.393	.211	0.000	88.164	-6.271	450.000
7351.000	1860.000	576.092	.131	.222	0.000	90.268	-8.374	450.000
7351.000	2060.000	576.288	.195	.238	0.000	93.404	-11.511	450.000
7386.000	1040.000	575.356	0.000	-.212	0.000	23.999	0.000	36.000
7386.000	1310.000	575.646	.290	-.315	0.000	23.999	-.000	36.000
7386.000	1400.000	575.739	.093	-.354	0.000	23.999	-.000	36.000
7386.000	1540.000	575.869	.130	-.419	0.000	23.999	-.000	36.000
7387.000	1040.000	575.376	0.000	.020	0.000	24.000	0.000	1.000
7387.000	1310.000	575.683	.308	.037	0.000	24.000	0.000	1.000
7387.000	1400.000	575.782	.098	.043	0.000	24.000	0.000	1.000
7387.000	1540.000	575.922	.141	.053	0.000	24.000	0.000	1.000
7414.000	1040.000	575.492	0.000	.117	0.000	24.000	0.000	27.000
7414.000	1310.000	575.862	.369	.178	0.000	24.000	0.000	27.000
7414.000	1400.000	575.987	.125	.205	0.000	24.000	0.000	27.000
7414.000	1540.000	576.175	.189	.253	0.000	24.000	0.000	27.000
7415.000	1040.000	575.496	0.000	.004	0.000	24.000	0.000	1.000
7415.000	1310.000	575.867	.371	.006	0.000	24.000	0.000	1.000
7415.000	1400.000	575.993	.125	.006	0.000	24.000	0.000	1.000
7415.000	1540.000	576.183	.190	.007	0.000	24.000	0.000	1.000
7419.000	1040.000	575.881	0.000	.385	0.000	31.999	0.000	4.000
7419.000	1310.000	576.450	.569	.583	0.000	31.999	-.000	4.000
7419.000	1400.000	576.645	.195	.652	0.000	31.999	-.000	4.000
7419.000	1540.000	576.953	.308	.770	0.000	31.999	-.000	4.000
7901.000	1040.000	576.510	0.000	.629	0.000	264.317	0.000	481.000
7901.000	1310.000	577.240	.730	.790	0.000	290.846	-26.529	481.000
7901.000	1400.000	577.487	.247	.842	0.000	304.209	-39.891	481.000
7901.000	1540.000	577.869	.382	.916	0.000	316.539	-52.222	481.000
8941.000	1040.000	576.677	0.000	.167	0.000	193.222	0.000	440.000
8941.000	1310.000	577.399	.723	.159	0.000	218.145	-24.923	440.000
8941.000	1400.000	577.642	.243	.155	0.000	226.526	-33.304	440.000
8941.000	1540.000	578.018	.375	.149	0.000	239.478	-46.256	440.000
9441.000	1040.000	576.893	0.000	.216	0.000	406.954	0.000	500.000
9441.000	1310.000	577.603	.710	.204	0.000	434.524	-27.570	500.000
9441.000	1400.000	577.841	.237	.198	0.000	443.726	-36.772	500.000
9441.000	1540.000	578.207	.366	.189	0.000	457.569	-50.615	500.000
9891.000	280.000	577.022	0.000	.128	0.000	234.779	0.000	450.000
9891.000	325.000	577.709	.688	.106	0.000	252.878	-18.098	450.000
9891.000	315.000	577.938	.229	.098	0.000	258.899	-24.120	450.000
9891.000	300.000	578.294	.356	.087	0.000	268.270	-33.490	450.000

Unisco Business Forms - A

10441.000	580.000	577.092	0.000	.070	0.000	470.212	0.000	550.000
10441.000	740.000	577.761	.669	.052	0.000	473.387	-3.175	550.000
10441.000	775.000	577.982	.221	.044	0.000	478.381	-8.169	550.000
10441.000	820.000	578.328	.346	.034	0.000	486.210	-15.998	550.000

DATA FOR LAST CROSS SECTION

PROFILE	TYPE ENC	TARGET	TOP WIDTH AREA-ACRES	TOP WIDTH AREA-DIFF
1	1.000	-85.000	82.757	0.000
2	1.000	-85.000	92.740	9.983
3	1.000	-85.000	97.247	14.490
4	1.000	-85.000	100.105	17.348

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HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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**** 7000 SCOPE 2.1 LVL 221  06/28/77  21.15.38  08/08/77        77220

SYS DEVICES 819/ 4/PF FLS=200K FLL=764K MXS=160K MXL=456K MXB=4563

 HH.MM.SS CPU SECOND ORIGIN
          11.43.17.MFA. ::     20PPU CBR73 B+N LYN ECS-2CPUS 02/15/77
 11.44.30 00000.015 MFZ.      -ROCJ057,T10,CP70.    ROCKWOOD FIS
 11.44.30 00000.016 JOB.      -CHARGE.810-0037-45-78-5557,JANDA,001,0,JANDA.
 11.44.35 00000.062 JOB.      -ATTACH(HEC2,HEC2PROD,ID=HEC,CY=1)
 11.44.35 00000.067 MFZ.        PF254 - CYCLE    1 ATTACHED FROM SN=SYSTEM
 11.44.35 00000.068 LOD.      -HEC2(PL=99999).
 11.45.36 00000.461 MFZ.        LD610 - FLS REQUIRED TO LOAD - 0025243 OU.COG
 11.45.36 00000.471 MFZ.        LD603 - EXECUTION INITIATED OS.EXP
 11.45.36 00000.472 USR.       FORTRAN LIBRARY 439          06/17/77
 11.47.18 00004.135 USR.          STOP
 11.47.18 00004.135 USR.            3.663 CP SECONDS EXECUTION TIME
 11.47.18 00004.138 MFZ.          RM770 - MAXIMUM ACTIVE FILES                  3
 11.47.18 00004.138 MFZ.          RM771 - OPEN/CLOSE CALLS                     22
 11.47.18 00004.138 MFZ.          RM772 - DATA TRANSFER CALLS              10,419
 11.47.18 00004.138 MFZ.          RM773 - CONTROL/POSITIONING CALLS            26
 11.47.18 00004.139 MFZ.          RM774 - BM DATA TRANSFER CALLS              520
 11.47.18 00004.139 MFZ.          RM775 - BM CONTROL/POSITIONING CALLS         54
 11.47.18 00004.139 MFZ.          RM776 - QUEUE MANAGER CALLS                 103
 11.47.18 00004.139 MFZ.          RM777 - RECALL CALLS                         61
 11.47.18 00004.139 MFZ.          BWMSG - NUMBER OF TAPES MOUNTED
 11.47.18 00004.140 MFZ.          SRU                 4.987  SRU
 11.47.18 00004.140 MFZ.          SCM               200.305  KWS
 11.47.18 00004.140 MFZ.          I/O                 0.102  MW
 11.47.18 00004.141 MFZ.          RMS                 0.154  MWS
 11.47.18 00004.141 MFZ.          USER                2.868  SEC
 11.47.18 00004.141 MFZ.          JOB                 4.143  SEC
 11.47.18 00004.141 MFZ.          SC050 - 000042 SC/LC SWAPS
 11.47.18 00004.141 MFZ.       ROCJ007    ROCJ007
 11.47.18.EJ  END OF JOB
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 $$$$$$    $$$$$ $  $$    $$  $$$$$$$$   $$$$$ $  $$    $$  $$$$$$$
$$    $$  $$    $   $$    $$     $$     $$    $   $$    $$  $$    $$
$$        $$   $$$  $$    $$     $$     $$   $$$  $$    $$  $$    $$
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      $$  $$$   $$  $$    $$     $$     $$$   $$   $$  $$   $$    $$
$$    $$   $    $$  $$    $$  $$ $$      $    $$    $$$$    $$    $$
 $$$$$$   $ $$$$$    $$$$$$    $$$       $ $$$$$     $$     $$$$$$$
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Base Control Depth

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 $$$$$$    $$$$$ $  $$    $$  $$$$$$$$   $$$$$ $  $$    $$  $$$$$$$
$$    $$  $$    $   $$    $$     $$     $$    $   $$    $$  $$    $$
$$        $$   $$$  $$    $$     $$     $$   $$$  $$    $$  $$    $$
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       $$ $$$   $$  $$    $$     $$     $$$   $$   $$  $$   $$    $$
$$    $$   $    $$  $$    $$  $$ $$      $    $$    $$$$    $$    $$
 $$$$$$   $ $$$$$    $$$$$$    $$$      $ $$$$$     $$     $$$$$$$
SOUJOVB  JANDA                04/01/77  08.22.47  7600    JO
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S C O P E 2 L O A D M A P LOADER VERSION 1.0 04/01/77 08.22.48 PAGE 1

PROGRAM WILL BE ENTERED AT HEC2 (373) SCM LENGTH 146657 LCM LENGTH 0

BLOCK	ADDRESS	LENGTH
/ALPHA/	100	101
HEC2	201	11606
CARD	12007	1673
SUMPO	13702	1063
CHIMP	14765	1645
DC	16632	703
FLODIS	17535	444
BLFLO	20201	1003
ADDPTS	21204	334
BWEIR	21540	1356
YCRIT	23116	122
SLARA	23240	256
SCALE	23516	246
XSEC	23764	1264
PROF	25250	1142
EXP	26412	102
/FCL.C./	26514	23
/Q8.IO./	26537	137
/HEADING/	26676	16
OUTC=	26714	1017
Q8NTRY=	27733	1
COMIO=	27734	44
ENDFIL=	30000	45
FECMSK=	30045	41
FLTIN=	30106	154
FLTOUT=	30262	314
FMTAP=	30576	372
FORSYS=	31170	556
FORUTL=	31746	16
GETFIT=	31764	43
INCOM=	32027	257
INPC=	32306	173
KODER=	32501	467
KRAKER=	33170	454
OUTCOM=	33644	203
REWIND=	34047	35
GOTOER=	34104	14
ALOG	34120	77
ITOJ*	34217	52
SYSAID=	34271	1
SYS=1ST	34272	62
XTOY*	34354	55
//	34431	112226

```
**********************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
**********************************************
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C
1       CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2       10-YR FLOOD 1100 CFS
T3       FRANK AND POET DRAIN
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-0.	2.	-0.	-0.	-1.000000	-0.00	-0.0	-0.	591.720	-0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

J3	1.000	10.000	11.000	12.000	14.000	8.000	4.000	-0.000	-0.000	-0.000
NC	.050	.050	.037	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
QT	4.000	1100.000	1510.000	1640.000	1980.000	-0.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.035	1000.000	.050	1067.000	.037	1085.000	.050	1100.000	.035
NH	1500.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.239	20.000	1064.000	1100.000	100.000	100.000	100.000	-0.000	-0.000	-0.000
GR	595.100	0.000	594.900	100.000	593.300	200.000	594.200	300.000	594.500	400.000
GR	594.500	500.000	594.000	600.000	595.000	700.000	594.000	800.000	591.900	900.000
GR	589.800	1000.000	588.700	1064.000	584.400	1067.000	584.000	1078.000	584.200	1085.000
GR	593.000	1100.000	594.600	1200.000	594.600	1300.000	595.200	1400.000	595.300	1500.000
NC	.035	.037	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.248	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	-.100	-0.000
SB	-0.000	1.500	2.600	-0.000	16.480	-0.000	95.600	0.000	583.900	583.900
X1	7.254	32.000	1200.000	1219.000	30.000	30.000	30.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	589.700	592.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	970.000	-0.000	1256.000	-0.000	-0.000	-0.000	-0.000
BT	11.000	970.000	600.000	0.000	970.000	593.300	0.000	1000.000	593.500	0.000
BT	1064.000	593.200	0.000	1130.000	592.800	0.000	1200.000	592.400	585.100	1200.000
BT	592.400	589.600	1219.000	592.500	589.700	1219.000	592.500	583.900	1256.000	592.700
BT	0.000	1256.000	600.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	595.700	0.000	595.700	100.000	595.300	200.000	594.700	300.000	594.500	400.000
GR	594.500	500.000	594.500	600.000	594.500	700.000	594.500	800.000	594.200	900.000
GR	594.000	940.000	593.300	970.000	591.900	1030.000	589.800	1130.000	588.700	1194.000
GR	585.100	1200.000	585.000	1204.000	584.800	1205.000	584.600	1210.000	584.400	1215.000
GR	583.900	1219.000	592.600	1230.000	592.700	1256.000	592.900	1300.000	593.900	1400.000
GR	594.500	1500.000	595.300	1600.000	595.400	1700.000	595.600	1800.000	596.700	2000.000
GR	597.500	2100.000	598.000	2200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.263	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	.060	-0.000
X3	-0.000	-0.000	-0.000	1020.000	-0.000	1306.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.035	280.000	.030	292.000	.032	900.000	-0.000	-0.000	-0.000
X1	7.348	14.000	253.000	300.000	450.000	450.000	450.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	-0.000	-0.000	550.000	-0.000	-0.000	-0.000	-0.000
GR	595.800	0.000	596.100	100.000	596.400	200.000	596.100	253.000	585.100	280.000
GR	584.500	286.000	585.100	292.000	587.400	300.000	592.600	400.000	593.000	500.000
GR	593.100	600.000	593.500	700.000	594.300	800.000	595.300	900.000	-0.000	-0.000

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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100yr Convergence

THE UNIVERSITY OF MICHIGAN COMPUTING CENTER

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                                                                  $$$$$$$
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1.24

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       $$  $$$   $$  $$    $$     $$     $$$   $$   $$    $$       $$
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  $$$$$$   $ $$$$$   $$$$$$   $$$        $ $$$$$   $$$$$$   $$$$$$
SOUJ085  JANDA                05/23/77  08.41.23  7600   JO
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S C O P E 2 L O A D M A P

LOADER VERSION 1.0 05/23/77 08.41.24 PAGE 1

PROGRAM WILL BE ENTERED AT HEC2 (373)

SCM LENGTH 146657 LCM LENGTH 0

BLOCK	ADDRESS	LENGTH
/ALPHA/	100	101
HEC2	201	11606
CARD	12007	1673
SUMPO	13702	1063
CHIMP	14765	1645
DC	16632	703
FLODIS	17535	444
BLFLO	20201	1003
ADDPTS	21204	334
BWEIR	21540	1356
YCRIT	23116	122
SLARA	23240	256
SCALE	23516	246
XSEC	23764	1264
PROF	25250	1142
EXP	26412	102
/FCL.C./	26514	23
/Q8.IO./	26537	137
/HEADING/	26676	16
OUTC=	26714	1017
Q8NTRY=	27733	1
COMIO=	27734	44
ENDFIL=	30000	45
FECMSK=	30045	41
FLTIN=	30106	154
FLTOUT=	30262	314
FMTAP=	30576	372
FORSYS=	31170	556
FORUTL=	31746	16
GETFIT=	31764	43
INCOM=	32027	257
INPC=	32306	173
KODER=	32501	467
KRAKER=	33170	454
OUTCOM=	33644	203
REWIND=	34047	35
GOTOER=	34104	14
ALOG	34120	77
ITOJ*	34217	52
SYSAID=	34271	1
SYS=1ST	34272	62
XTOY*	34354	55
//	34431	112226

```
**********************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
**********************************************
```

```
C
1       CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2       10-YR FLOOD 1100 CFS
T3       FRANK AND POET DRAIN
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-0.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	591.720	-0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

J3	1.000	10.000	11.000	12.000	14.000	8.000	4.000	-0.000	-0.000	-0.000
NC	.050	.050	.037	.300	.500	-0.000	-0.000	-0.000	-0.000	-0.000
QT	4.000	1100.000	1510.000	1640.000	1980.000	-0.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.035	1000.000	.050	1067.000	.037	1085.000	.050	1100.000	.035
NH	1500.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.239	20.000	1064.000	1100.000	100.000	100.000	100.000	-0.000	-0.000	-0.000
GR	595.100	0.000	594.900	100.000	593.300	200.000	594.200	300.000	594.500	400.000
GR	594.500	500.000	594.000	600.000	595.000	700.000	594.000	800.000	591.900	900.000
GR	589.800	1000.000	588.700	1064.000	584.400	1067.000	584.000	1078.000	584.200	1085.000
GR	593.000	1100.000	594.600	1200.000	594.600	1300.000	595.200	1400.000	595.300	1500.000
NC	.035	.037	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.248	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	-.100	-0.000
SB	-0.000	1.500	2.600	-0.000	16.480	-0.000	95.600	0.000	583.900	583.900
X1	7.254	32.000	1200.000	1219.000	30.000	30.000	30.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	589.700	592.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	970.000	-0.000	1256.000	-0.000	-0.000	-0.000	-0.000
BT	11.000	970.000	600.000	0.000	970.000	593.300	0.000	1000.000	593.500	0.000
BT	1064.000	593.200	0.000	1130.000	592.800	0.000	1200.000	592.400	585.100	1200.000
BT	592.400	589.600	1219.000	592.500	589.700	1219.000	592.500	583.900	1256.000	592.700
BT	0.000	1256.000	600.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	595.700	0.000	595.700	100.000	595.300	200.000	594.700	300.000	594.500	400.000
GR	594.500	500.000	594.500	600.000	594.500	700.000	594.500	800.000	594.200	900.000
GR	594.000	940.000	593.300	970.000	591.900	1030.000	589.800	1130.000	588.700	1194.000
GR	585.100	1200.000	585.000	1204.000	584.800	1205.000	584.600	1210.000	584.400	1215.000
GR	583.900	1219.000	592.600	1230.000	592.700	1256.000	592.900	1300.000	593.900	1400.000
GR	594.500	1500.000	595.300	1600.000	595.400	1700.000	595.600	1800.000	596.700	2000.000
GR	597.500	2100.000	598.000	2200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.263	-0.000	-0.000	-0.000	50.000	50.000	50.000	-0.000	.060	-0.000
X3	-0.000	-0.000	-0.000	1020.000	-0.000	1306.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.035	280.000	.030	292.000	.032	900.000	-0.000	-0.000	-0.000
X1	7.348	14.000	253.000	300.000	450.000	450.000	450.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	-0.000	-0.000	400.000	-0.000	-0.000	-0.000	-0.000
GR	595.800	0.000	596.100	100.000	596.400	200.000	596.100	253.000	585.100	280.000
GR	584.500	286.000	585.100	292.000	587.400	300.000	592.600	400.000	593.000	500.000
GR	593.100	600.000	593.500	700.000	594.300	800.000	595.300	900.000	-0.000	-0.000
NH	3.000	.035	374.000	.030	392.000	.032	1400.000	-0.000	-0.000	-0.000

X1	7.396	20.000	340.000	400.000	250.000	250.000	250.000	-0.000	-.700	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	500.000	-0.000	-0.000	-0.000	-0.000
GR	595.900	0.000	595.800	100.000	595.800	200.000	596.600	300.000	597.300	340.000
GR	586.200	374.000	586.000	385.000	585.900	392.000	589.500	400.000	597.700	500.000
GR	592.400	600.000	594.600	700.000	592.700	800.000	592.100	900.000	592.700	1000.000
GR	589.900	1100.000	592.900	1200.000	594.700	1300.000	595.900	1400.000	596.400	1500.000
NH	3.000	.035	374.000	.030	392.000	.032	1400.000	-0.000	-0.000	-0.000
X1	7.443	20.000	340.000	400.000	250.000	250.000	250.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	465.000	-0.000	-0.000	-0.000	-0.000
GR	595.900	0.000	595.800	100.000	595.800	200.000	596.600	300.000	597.300	340.000
GR	586.200	374.000	586.000	385.000	585.900	392.000	589.500	400.000	593.700	500.000
GR	592.400	600.000	594.600	700.000	592.700	800.000	592.100	900.000	592.700	1000.000
GR	589.900	1100.000	592.900	1200.000	594.700	1300.000	595.900	1400.000	596.400	1500.000
NH	5.000	.035	345.000	.025	360.000	.030	385.000	.025	400.000	.032
NH	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.491	19.000	345.000	400.000	350.000	150.000	250.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	345.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
GR	596.500	0.000	596.200	100.000	595.200	200.000	594.500	300.000	593.400	345.000
GR	586.300	360.000	585.800	375.000	586.200	385.000	591.100	400.000	593.400	500.000
GR	593.200	600.000	592.600	700.000	592.800	800.000	593.100	900.000	593.500	1000.000
GR	593.100	1100.000	593.200	1200.000	595.500	1300.000	596.500	1400.000	-0.000	-0.000
X1	7.519	-0.000	-0.000	-0.000	250.000	50.000	150.000	-0.000	-.160	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	500.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.035	800.000	.050	883.000	.037	897.000	.050	900.000	.032
NH	1600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	4.000	730.000	990.000	1080.000	1310.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.595	21.000	872.000	900.000	550.000	350.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	600.000	-0.000	1000.000	-0.000	-0.000	-0.000	-0.000
GR	596.000	0.000	596.200	100.000	595.200	200.000	596.200	300.000	595.800	400.000
GR	595.400	500.000	593.500	600.000	591.700	700.000	590.400	800.000	591.100	872.000
GR	586.000	883.000	585.200	890.000	585.700	897.000	590.800	900.000	593.700	1000.000
GR	593.500	1100.000	593.500	1200.000	593.700	1300.000	591.700	1400.000	593.700	1500.000
GR	595.100	1600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.642	-0.000	-0.000	-0.000	250.000	250.000	250.000	-0.000	.180	-0.000
X3	-0.000	-0.000	-0.000	572.000	-0.000	1200.000	-0.000	-0.000	-0.000	-0.000
X1	7.689	-0.000	-0.000	-0.000	1.000	350.000	250.000	-0.000	.180	-0.000
X3	-0.000	-0.000	-0.000	596.000	-0.000	1176.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.035	500.000	.060	681.000	.040	692.000	.048	800.000	.032
NH	1200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.775	17.000	675.000	700.000	450.000	450.000	450.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	450.000	-0.000	800.000	-0.000	-0.000	-0.000	-0.000
GR	597.200	0.000	597.000	100.000	596.500	200.000	593.700	300.000	590.900	400.000
GR	590.800	500.000	590.700	600.000	591.900	675.000	586.800	681.000	585.900	686.000
GR	586.700	692.000	591.400	700.000	592.400	800.000	596.200	900.000	595.900	1000.000
GR	596.700	1100.000	598.500	1200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.055	384.000	.040	394.000	.050	400.000	.035	1000.000	-0.000
X1	7.812	18.000	377.000	400.000	300.000	100.000	200.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	261.000	-0.000	516.000	-0.000	-0.000	-0.000	-0.000
GR	597.700	0.000	597.400	50.000	596.300	72.000	594.300	78.000	593.800	100.000
GR	592.700	200.000	591.700	300.000	591.800	377.000	586.900	384.000	587.000	390.000
GR	587.700	394.000	590.500	400.000	594.100	500.000	593.400	600.000	595.600	700.000
GR	596.800	800.000	597.300	900.000	597.500	1000.000	-0.000	-0.000	-0.000	-0.000
NC	.040	.037	.032	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.828	-0.000	-0.000	-0.000	80.000	80.000	80.000	-0.000	-.700	-0.000
X3	-0.000	-0.000	-0.000	281.000	-0.000	496.000	-0.000	-0.000	-0.000	-0.000

X1	7.829	17.000	350.000	359.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	250.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
BT	7.000	250.000	592.700	0.000	350.000	592.100	591.400	352.000	592.300	591.600
BT	354.500	592.300	591.700	357.000	592.200	591.600	359.000	592.100	591.400	460.000
BT	593.100	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	595.700	0.000	594.900	50.000	593.000	150.000	592.700	250.000	592.100	350.000
GR	587.200	350.000	586.600	352.000	586.300	354.500	586.100	357.000	586.000	359.000
GR	592.100	359.000	593.100	460.000	595.700	550.000	594.300	650.000	595.300	750.000
GR	596.400	850.000	597.700	950.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.831	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	250.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
X1	7.838	-0.000	-0.000	-0.000	35.000	35.000	35.000	-0.000	.200	-0.000
X3	-0.000	-0.000	-0.000	250.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
X1	7.846	23.000	895.000	905.000	40.000	40.000	40.000	-0.000	-0.000	-0.000
X3	-0.000	586.400	-0.000	795.000	-0.000	1005.000	-0.000	-0.000	-0.000	-0.000
BT	13.000	795.000	593.500	0.000	795.000	592.400	0.000	895.000	593.500	587.800
BT	895.300	593.500	590.600	896.300	593.500	591.500	897.800	593.500	592.500	900.000
BT	593.500	592.800	902.200	593.500	592.500	903.000	593.500	591.500	904.700	593.500
BT	590.600	905.000	593.500	587.800	1000.000	594.500	0.000	1005.000	594.700	0.000
GR	599.200	0.000	597.700	100.000	596.100	200.000	595.700	300.000	595.700	400.000
GR	595.700	500.000	594.100	600.000	593.000	700.000	592.400	795.000	593.500	895.000
GR	587.800	895.000	585.600	895.300	584.100	896.300	583.100	897.800	582.800	900.000
GR	583.100	902.200	584.100	903.000	585.600	904.700	587.800	905.000	593.500	905.000
GR	594.500	1000.000	594.700	1005.000	596.700	1100.000	-0.000	-0.000	-0.000	-0.000
X1	7.850	-0.000	-0.000	-0.000	25.000	25.000	25.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	586.400	-0.000	795.000	-0.000	1005.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.035	400.000	.050	780.000	.037	792.000	.040	1200.000	-0.000
X1	7.869	17.000	774.000	800.000	1.000	250.000	100.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	525.000	-0.000	935.000	-0.000	-0.000	-0.000	-0.000
GR	599.200	0.000	597.700	100.000	596.100	200.000	595.700	300.000	595.700	400.000
GR	595.700	500.000	594.100	600.000	593.400	700.000	593.200	774.000	587.300	780.000
GR	587.300	786.000	587.700	792.000	591.900	800.000	594.100	900.000	597.100	1000.000
GR	597.300	1100.000	600.000	1200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.040	.040	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.878	-0.000	-0.000	-0.000	49.000	49.000	49.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	560.000	-0.000	943.000	-0.000	-0.000	-0.000	-0.000
NC	.016	.016	.018	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.879	29.000	1200.000	1212.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	990.000	-0.000	1355.000	-0.000	-0.000	-0.000	-0.000
BT	13.000	990.000	600.000	0.000	990.000	595.800	0.000	1000.000	595.800	0.000
BT	1100.000	595.500	0.000	1199.000	595.400	0.000	1199.000	597.000	0.000	1200.000
BT	597.000	592.200	1212.000	597.100	592.200	1213.000	597.100	0.000	1213.000	595.500
BT	0.000	1300.000	595.700	0.000	1355.000	596.100	0.000	1355.000	600.000	0.000
GR	598.000	0.000	597.800	100.000	597.500	200.000	597.300	300.000	597.100	400.000
GR	596.800	500.000	596.500	600.000	596.400	700.000	596.200	800.000	596.000	900.000
GR	595.800	990.000	595.800	1000.000	595.500	1100.000	595.400	1190.000	597.000	1199.000
GR	597.000	1200.000	587.700	1200.000	587.500	1205.000	587.300	1210.000	587.400	1212.000
GR	597.100	1212.000	597.100	1213.000	595.500	1213.000	595.700	1300.000	596.100	1355.000
GR	596.400	1400.000	597.100	1500.000	597.800	1600.000	598.600	1700.000	-0.000	-0.000
X1	7.893	-0.000	-0.000	-0.000	77.000	77.000	77.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	950.000	-0.000	1355.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.035	209.000	.040	219.000	.050	300.000	.015	600.000	-0.000
X1	7.903	13.000	200.000	225.000	50.000	50.000	50.000	-0.000	-.630	-0.000
X5	4.000	-596.080	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

GR	599.200	0.000	597.200	100.000	598.900	130.000	593.100	147.000	593.500	200.000
GR	588.000	209.000	588.000	214.000	588.100	219.000	592.700	225.000	595.000	300.000
GR	596.800	400.000	597.600	500.000	598.800	600.000	-0.000	-0.000	-0.000	-0.000
X1	7.931	-0.000	-0.000	-0.000	260.000	85.000	150.000	-0.000	.210	-0.000
X3	-0.000	-0.000	-0.000	-0.000	-0.000	475.000	-0.000	-0.000	-0.000	-0.000
X1	7.988	-0.000	-0.000	-0.000	350.000	250.000	300.000	-0.000	.420	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	325.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.060	300.000	.040	330.000	.060	700.000	-0.000	-0.000	-0.000
X1	8.078	12.000	300.000	330.000	400.000	400.000	400.000	-0.000	-0.000	-0.000
GR	599.000	0.000	596.600	100.000	593.800	200.000	592.700	300.000	588.500	305.000
GR	588.100	311.000	588.500	317.000	593.400	330.000	592.800	400.000	594.800	500.000
GR	598.200	600.000	599.400	700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.060	230.000	.040	251.000	.060	700.000	-0.000	-0.000	-0.000
X1	8.154	14.000	230.000	251.000	250.000	650.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	-0.000	-0.000	350.000	-0.000	-0.000	-0.000	-0.000
GR	600.000	0.000	598.700	30.000	593.800	130.000	593.400	230.000	590.400	236.000
GR	590.000	241.000	589.700	247.000	592.000	251.000	594.800	263.000	593.700	330.000
GR	596.100	430.000	597.000	530.000	598.600	600.000	599.000	630.000	-0.000	-0.000
NH	4.000	.045	306.000	.040	320.000	.060	1300.000	.035	1400.000	-0.000
X1	8.229	20.000	300.000	320.000	600.000	100.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	130.000	-0.000	482.000	-0.000	-0.000	-0.000	-0.000
GR	601.600	0.000	599.700	100.000	598.600	200.000	597.400	288.000	593.600	300.000
GR	589.400	306.000	588.900	309.000	589.300	313.000	594.900	320.000	594.400	400.000
GR	596.100	500.000	595.000	600.000	595.600	700.000	597.400	800.000	598.600	900.000
GR	599.100	1000.000	598.600	1100.000	598.800	1200.000	599.000	1300.000	599.900	1400.000
NH	5.000	.035	400.000	.050	409.000	.037	420.000	.050	435.000	.035
NH	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	8.305	19.000	400.000	435.000	400.000	400.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	300.000	-0.000	535.000	-0.000	-0.000	-0.000	-0.000
GR	601.100	0.000	600.000	100.000	599.800	200.000	600.100	300.000	594.600	400.000
GR	590.100	409.000	589.700	415.000	589.900	420.000	597.500	435.000	598.100	500.000
GR	599.200	600.000	599.500	700.000	599.300	800.000	599.700	900.000	599.100	1000.000
GR	599.000	1100.000	599.400	1200.000	599.800	1300.000	600.000	1400.000	-0.000	-0.000
NC	.035	.037	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	8.314	-0.000	-0.000	-0.000	49.000	49.000	49.000	-0.000	-.100	-0.000
X3	-0.000	-0.000	-0.000	300.000	-0.000	600.000	-0.000	-0.000	-0.000	-0.000
NC	.016	.016	.018	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	8.315	30.000	886.000	900.000	1.000	1.000	1.000	.870	-0.000	-0.000
X3	10.000	-0.000	-0.000	807.000	-0.000	952.000	-0.000	596.400	596.400	-0.000
GR	600.700	0.000	600.300	100.000	599.600	200.000	599.200	300.000	598.800	400.000
GR	598.400	500.000	598.100	600.000	598.400	700.000	598.700	790.000	594.600	872.000
GR	594.600	872.000	589.700	886.000	589.600	886.000	589.700	893.000	590.100	900.000
GR	590.100	900.000	597.500	914.000	597.500	914.000	598.200	1000.000	598.200	1035.000
GR	598.100	1100.000	598.500	1200.000	598.700	1300.000	598.800	1400.000	598.400	1500.000
GR	598.000	1600.000	598.100	1700.000	598.400	1800.000	598.700	1900.000	599.000	2000.000
SB	-0.000	1.930	3.000	-0.000	11.690	-0.000	58.460	-0.000	589.600	589.600
X1	8.333	30.000	886.000	900.000	95.000	95.000	95.000	.870	-0.000	-0.000
X2	-0.000	-0.000	1.000	594.600	598.200	-0.000	-0.000	-0.000	.870	-0.000
X3	10.000	-0.000	-0.000	740.000	-0.000	1035.000	-0.000	598.200	598.200	-0.000
BT	12.000	740.000	605.000	0.000	740.000	598.500	0.000	872.000	598.600	0.000
BT	872.000	601.200	0.000	886.000	601.200	589.600	886.000	601.200	594.600	900.000
BT	601.200	594.600	900.000	601.200	590.100	914.000	601.200	0.000	914.000	598.600
BT	0.000	1000.000	598.200	0.000	1035.000	598.200	0.000	-0.000	-0.000	-0.000
GR	600.700	0.000	600.300	100.000	599.600	200.000	599.200	300.000	598.800	400.000
GR	598.400	500.000	598.100	600.000	598.400	700.000	598.500	740.000	594.600	872.000
GR	594.600	872.000	589.700	886.000	589.600	886.000	589.700	893.000	590.100	900.000
GR	590.100	900.000	597.300	914.000	598.500	952.000	598.200	1000.000	598.200	1035.000

GR	598.100	1100.000	598.300	1200.000	598.700	1300.000	598.800	1400.000	598.400	1500.000
GR	598.000	1600.000	598.100	1700.000	598.400	1800.000	598.700	1900.000	599.000	2000.000
EJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

CCHV= .300 CEHV= .500
1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

50 FT D/S OF PENNSYLVANIA RD. BRIDGE VS-1 SEC. A

7.24	7.72	591.72	0.00	591.72	591.87	.15	0.00	0.00	588.70
1100.	360.	740.	0.	246.	200.	0.	0.	0.	593.00
0.00	1.46	3.71	0.00	.046	.039	0.000	0.000	584.00	908.57
.000868	100.	100.	100.	0	0	1	0.00	189.25	1097.82

D/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2 SEC. B

BOX CULVERT WITH WINGWALLS AND HEADWALLS

APPROX. SIZE = 19" X 5.8", LENGTH = 30"

7.25	7.92	591.82	0.00	0.00	591.92	.11	.04	.01	588.60
1100.	451.	649.	0.	277.	206.	0.	1.	0.	592.90
.01	1.63	3.14	0.00	.035	.035	.037	.034	583.90	899.22
.000584	50.	50.	50.	2	0	1	0.00	198.93	1098.15

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.50	2.60	-0.00	16.48	-0.00	95.60	0.00	583.90	583.90

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
594.90	591.95	0.00	307.	794.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	9.49	593.39	0.00	0.00	593.42	.04	1.50	0.00	585.10
1100.	666.	358.	76.	604.	167.	76.	1.	0.	583.90
.01	1.10	2.15	1.00	.035	.035	.037	.034	583.90	970.00
.000142	30.	30.	30.	2	0	4	0.00	286.00	1256.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	9.43	593.39	0.00	0.00	593.43	.04	.01	.00	585.16
1100.	653.	363.	84.	562.	166.	100.	2.	1.	583.96
.02	1.16	2.19	.84	.035	.035	.037	.034	583.96	1020.00

.000149 50. 50. 50. 1 0 1 0.00 288.00 1308.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 400.0 TYPE= 1 TARGET= 399.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3 SEC. C

7.35	8.96	593.46	0.00	0.00	593.52	.06	.08	.01	596.10
1100.	0.	576.	524.	0.	248.	346.	9.	3.	587.40
.09	0.00	2.33	1.51	.035	.032	.032	.035	584.50	259.47
.000203	450.	450.	450.	0	0	1	0.00	140.53	400.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.40	8.29	593.49	0.00	0.00	593.61	.12	.07	.03	596.60
1100.	0.	893.	207.	0.	297.	135.	12.	4.	588.80
.11	0.00	3.01	1.54	.035	.031	.032	.035	585.20	349.49
.000353	250.	250.	250.	1	0	1	0.00	107.83	457.33

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 465.0 TYPE= 1 TARGET= 464.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4 SEC. D

7.44	7.70	593.60	0.00	0.00	593.71	.11	.09	.00	597.30
1100.	0.	789.	311.	0.	267.	178.	15.	4.	589.50
.14	0.00	2.96	1.75	.035	.031	.032	.035	585.90	351.34
.000372	250.	250.	250.	2	0	1	0.00	113.66	465.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 345.0 460.0 TYPE= 1 TARGET= 115.000

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5 SEC. E

7.49	7.87	593.67	0.00	0.00	593.79	.12	.07	.01	593.40
1100.	0.	966.	134.	0.	323.	113.	17.	5.	591.10
.16	.01	2.99	1.19	.035	.028	.032	.035	585.80	345.00
.000286	350.	250.	150.	2	0	1	0.00	115.00	460.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	8.09	593.73	0.00	0.00	593.83	.11	.04	.01	593.24
1100.	1.	936.	162.	5.	335.	163.	18.	5.	590.94
.18	.25	2.79	1.00	.035	.028	.032	.036	585.64	325.36
.000240	250.	150.	50.	1	0	1	0.00	174.64	500.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 600.0 1000.0 TYPE= 1 TARGET= 400.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6 SEC. F

7.59	8.71	593.91	0.00	0.00	593.92	.01	.06	.03	591.10
730.	407.	227.	96.	645.	193.	166.	26.	8.	590.80
.33	.63	1.17	.58	.040	.040	.032	.035	585.20	600.00
.000079	550.	400.	350.	2	0	1	0.00	400.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	8.55	593.93	0.00	0.00	593.94	.01	.02	.00	591.28
730.	397.	237.	96.	606.	189.	193.	32.	11.	590.98
.41	.66	1.25	.50	.040	.040	.032	.035	585.38	586.24
.000093	250.	250.	250.	1	0	1	0.00	613.75	1200.00

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	8.38	593.94	0.00	0.00	593.96	.01	.01	.00	591.46
730.	392.	254.	84.	558.	184.	143.	34.	13.	591.16
.45	.70	1.38	.59	.040	.040	.032	.037	585.56	596.00
.000115	1.	250.	350.	1	0	1	0.00	521.76	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 450.0 800.0 TYPE= 1 TARGET= 350.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7 SEC. G

7.77	8.10	594.00	0.00	0.00	594.01	.01	.05	.00	591.90
730.	440.	178.	112.	686.	152.	210.	44.	18.	591.40
.62	.64	1.17	.53	.051	.043	.048	.036	585.90	450.00
.000110	450.	450.	450.	0	0	1	0.00	350.00	800.00

1490 NH CARD USED

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8 SEC. H

7.81	7.13	594.03	0.00	0.00	594.07	.04	.04	.01	591.80
730.	238.	278.	214.	258.	131.	172.	49.	19.	590.50
.66	.92	2.11	1.24	.055	.044	.035	.036	586.90	261.00
.000404	300.	200.	100.	0	0	1	0.00	241.42	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	7.86	594.06	0.00	0.00	594.09	.02	.02	.00	591.10
730.	259.	260.	211.	288.	148.	243.	50.	20.	589.80
.68	.90	1.75	.87	.040	.032	.037	.036	586.20	281.00
.000134	80.	80.	80.	2	0	1	0.00	215.00	496.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

ABANDONED CONCRETE DRIVE-WAY BRIDGE

APPROX. SIZE = 9" X 0.6", LENGTH = 10"

7.83	8.05	594.05	0.00	0.00	594.11	.06	.00	.02	592.10
730.	310.	147.	273.	166.	63.	147.	50.	20.	592.10
.68	1.87	2.33	1.85	.040	.032	.037	.036	586.00	250.00
.001288	10.	10.	10.	1	0	1	-5.82	210.00	460.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

7.83	8.06	594.06	0.00	0.00	594.12	.06	.01	.00	592.10
730.	310.	147.	273.	167.	63.	148.	50.	20.	592.10
.68	1.86	2.32	1.85	.040	.032	.037	.036	586.00	250.00
.001271	10.	10.	10.	0	0	1	-5.82	210.00	460.00

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

7.84	7.89	594.09	0.00	0.00	594.19	.10	.04	.02	592.30
730.	258.	252.	221.	149.	67.	130.	50.	20.	592.30
.68	1.73	3.73	1.70	.040	.032	.037	.036	586.20	250.00
.001286	35.	35.	35.	2	0	1	0.00	210.00	460.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	7.71	594.11	0.00	0.00	594.37	.26	.10	.08	593.50
730.	406.	297.	27.	116.	60.	18.	50.	20.	593.50
.69	3.50	4.92	1.55	.040	.032	.037	.036	586.40	795.00
.007295	40.	40.	40.	2	0	1	-16.39	167.90	962.90

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

7.85	7.97	594.37	0.00	0.00	594.53	.16	.14	.03	593.50
730.	434.	241.	55.	143.	63.	36.	51.	20.	593.50
.69	3.04	3.83	1.50	.040	.032	.037	.036	586.40	795.00
.004181	25.	25.	25.	2	0	1	-16.39	193.24	988.24

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11 SEC. K

7.87	7.28	594.58	0.00	0.00	594.66	.07	.10	.03	593.20
730.	129.	416.	185.	187.	151.	163.	51.	21.	591.90
.70	.69	2.76	1.13	.050	.039	.040	.036	587.30	569.43
.000519	1.	100.	250.	2	0	1	0.00	346.87	916.30

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	7.32	594.62	0.00	0.00	594.68	.07	.02	.00	593.20
730.	155.	400.	175.	193.	151.	166.	52.	21.	591.90
.71	.80	2.64	1.05	.040	.035	.040	.036	587.30	567.55
.000437	49.	49.	49.	2	0	1	0.00	349.76	917.31

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.792 WSEL= 592.067

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.781 WSEL= 592.134

3301 HV CHANGED MORE THAN HVINS

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	6.07	593.37	592.20	0.00	595.94	2.57	.00	1.25	597.00
730.	0.	730.	0.	0.	57.	0.	52.	21.	597.10
.71	0.00	12.87	0.00	.016	.018	.016	.036	587.30	1200.00
.013096	1.	1.	1.	4	20	1	-13.99	12.00	1212.00

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.792 WSEL= 592.087

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.781 WSEL= 592.134

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

7.89	7.11	594.41	592.20	0.00	596.99	2.57	1.05	.00	597.00
730.	0.	730.	0.	0.	57.	0.	52.	21.	597.10
.71	0.00	12.87	0.00	.016	.018	.016	.035	587.30	1200.00
.014132	77.	77.	77.	4	20	1	-26.56	12.00	1212.00

1490 NH CARD USED
WATER EL=X5 CARD= 596.080

REPEATED SECTION FROM SECTION 7.9879

7.90	8.71	596.08	0.00	0.00	596.10	.02	.02	.77	592.87
730.	223.	274.	233.	210.	178.	296.	53.	21.	592.07
.72	1.06	1.54	.79	.035	.040	.037	.035	587.37	130.85
.000135	50.	50.	50.	0	0	1	0.00	264.15	395.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	8.52	596.10	0.00	0.00	596.13	.03	.02	.00	593.08
730.	223.	291.	216.	197.	174.	265.	55.	22.	592.28
.76	1.13	1.68	.81	.035	.040	.039	.034	587.58	131.68
.000165	260.	150.	85.	2	0	1	0.00	252.96	384.64

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13 SEC. M

7.99	8.16	596.16	0.00	0.00	596.20	.04	.06	.01	593.50
730.	223.	330.	177.	172.	164.	195.	59.	24.	592.70
.81	1.30	2.01	.90	.035	.040	.043	.033	588.00	133.36
.000254	350.	300.	250.	0	0	1	0.00	191.64	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14 SEC. N

8.08	8.16	596.26	0.00	0.00	596.27	.01	.07	.01	592.70
730.	204.	268.	258.	409.	193.	498.	66.	27.	593.40
.95	.50	1.39	.52	.060	.040	.060	.031	588.10	112.22
.000121	400.	400.	400.	2	0	1	0.00	430.66	542.88

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15 SEC. O

8.15	6.63	596.33	0.00	0.00	596.36	.03	.08	.01	593.40
730.	289.	259.	182.	340.	118.	223.	75.	30.	592.00
1.04	.85	2.19	.81	.060	.040	.060	.030	589.70	78.18
.000362	250.	400.	650.	0	0	1	0.00	271.82	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16 SEC. P

8.23	7.59	596.49	0.00	0.00	596.61	.13	.20	.05	593.60
730.	18.	412.	300.	13.	112.	261.	79.	32.	594.90
1.07	1.37	3.68	1.15	.045	.041	.060	.030	588.90	290.89
.001120	600.	400.	100.	2	0	1	0.00	191.11	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17 SEC. Q

8.31	7.23	596.93	0.00	0.00	597.14	.21	.49	.04	594.60
730.	84.	646.	0.	49.	168.	0.	82.	33.	597.50
1.10	1.71	3.85	0.00	.035	.042	.060	.029	589.70	357.62
.001322	400.	400.	400.	2	0	1	0.00	76.25	433.88

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	7.41	597.01	0.00	0.00	597.20	.19	.06	.00	594.50
730.	87.	643.	0.	57.	174.	0.	82.	33.	597.40
1.11	1.53	3.71	0.00	.035	.035	.037	.029	589.60	354.58
.000970	49.	49.	49.	1	0	1	0.00	79.63	434.21

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	7.43	597.03	0.00	0.00	597.20	.17	.00	.01	589.70
730.	271.	359.	100.	111.	88.	40.	82.	33.	590.10
1.11	2.45	4.06	2.53	.016	.018	.016	.029	589.60	716.34
.000174	1.	1.	1.	2	0	1	0.00	78.07	794.41

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
601.70	598.09	0.00	264.	472.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 643.8 900.5 TYPE= 1 TARGET= 295.000

U/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

8.33	9.36	598.96	0.00	0.00	598.99	.03	1.78	0.00	589.70
730.	389.	216.	124.	359.	112.	147.	83.	33.	590.10
1.13	1.08	1.93	.84	.016	.018	.016	.029	589.60	643.80
.000029	95.	95.	95.	2	0	4	0.00	256.65	900.45

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HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1      CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2      50-YEAR FLOOD 1510 CFS
T3      FRANK AND POET DRAIN

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
      -10.       3.         -0.        -0. -0.000000      -0.00      -0.0        -0.    592.240     -0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
      2.000     -0.000     -1.000     -0.000     -0.000     -0.000     -0.000     -0.000     -0.000     -0.000


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

                50 FT D/S OF PENNSYLVANIA RD. BRIDGE              VS-1      SEC. A

     7.24      8.24    592.24      0.00    592.24    592.42       .18      0.00      0.00    588.70
     1510.      609.      901.        0.      333.      218.        0.        0.        0.     593.00
     0.00      1.83      4.14      0.00      .044      .039     0.000     0.000    584.00    883.81
   .001008      100.      100.      100.         0         0         1      0.00    214.90   1098.70


                D/S FACE OF PENNSYLVANIA RD. BRIDGE               BS-2      SEC. B

                BOX CULVERT WITH WINGWALLS AND HEADWALLS

                APPROX. SIZE = 19" X 5.8", LENGTH = 30"

     7.25      8.45    592.35      0.00      0.00    592.48       .13       .04       .02    588.60
     1510.      728.      782.        0.      372.      225.        0.        1.        0.     592.90
      .01      1.96      3.48      0.00      .035      .035      .037      .034    583.90    873.79
   .000661      50.       50.       50.         2         0         1      0.00    225.28   1099.06


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     -0.00       1.50       2.60      -0.00      16.48      -0.00      95.60       0.00     583.90     583.90

PRESSURE AND WEIR FLOW
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EGPRS	EGLWC	HS	QWEIR	QPR	BAREA	ELEC	ELTRD	CLASS
598.16	592.51	0.00	736.	779.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	9.95	593.85	0.00	0.00	593.90	.05	1.42	0.00	585.10
1510.	957.	444.	109.	710.	175.	93.	1.	0.	583.90
.01	1.35	2.53	1.18	.035	.035	.037	.034	583.90	970.00
.000184	30.	30.	30.	2	0	4	0.00	286.00	1256.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	9.90	593.86	0.00	0.00	593.91	.05	.01	.00	585.16
1510.	924.	450.	136.	646.	175.	140.	2.	1.	583.96
.02	1.43	2.58	.97	.035	.035	.037	.034	583.96	1020.00
.000192	50.	50.	50.	1	0	1	0.00	286.00	1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 400.0 TYPE= 1 TARGET= 399.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3 SEC. C

7.35	9.44	593.94	0.00	0.00	594.03	.09	.10	.02	596.10
1510.	0.	749.	761.	0.	267.	395.	11.	3.	587.40
.07	0.00	2.80	1.93	.035	.032	.032	.035	584.50	258.29
.000277	450.	450.	450.	0	0	1	0.00	141.71	400.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.40	8.78	593.98	0.00	0.00	594.16	.18	.09	.05	596.60
1510.	0.	1190.	320.	0.	322.	164.	14.	4.	588.80
.09	0.00	3.70	1.95	.035	.031	.032	.035	585.20	348.01
.000499	250.	250.	250.	2	0	1	0.00	115.22	463.23

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 465.0 TYPE= 1 TARGET= 464.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4 SEC. D

7.44	8.24	594.14	0.00	0.00	594.29	.16	.12	.01	597.30
1510.	0.	1031.	479.	0.	294.	213.	17.	4.	589.50
.11	0.00	3.51	2.25	.035	.031	.032	.035	585.90	349.68
.000484	250.	250.	250.	2	0	1	0.00	115.32	465.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 345.0 460.0 TYPE= 1 TARGET= 115.000

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5 SEC. E

7.49	8.42	594.22	0.00	0.00	594.40	.18	.10	.01	593.40
1510.	0.	1273.	237.	0.	354.	146.	19.	5.	591.10
.13	.01	3.60	1.62	.035	.028	.032	.035	585.80	345.00
.000371	350.	250.	150.	2	0	1	0.00	115.00	460.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	8.68	594.32	0.00	0.00	594.46	.14	.04	.01	593.24
1510.	11.	1198.	301.	24.	368.	223.	21.	5.	590.94
.15	.48	3.25	1.35	.035	.028	.032	.036	585.64	300.83
.000290	250.	150.	50.	2	0	1	0.00	199.17	500.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 600.0 1000.0 TYPE= 1 TARGET= 400.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6 SEC. F

7.59	9.35	594.55	0.00	0.00	594.56	.01	.07	.04	591.10
990.	577.	252.	160.	818.	211.	230.	31.	8.	590.80
.29	.71	1.19	.70	.039	.040	.032	.035	585.20	600.00
.000075	550.	400.	350.	2	0	1	0.00	400.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	9.19	594.57	0.00	0.00	594.58	.01	.02	.00	591.28
990.	539.	247.	204.	792.	207.	381.	38.	11.	590.98
.38	.68	1.19	.54	.039	.040	.032	.035	585.38	572.00
.000076	250.	250.	250.	2	0	1	0.00	628.00	1200.00

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	9.02	594.58	0.00	0.00	594.59	.01	.01	.00	591.46
990.	543.	266.	181.	732.	202.	315.	42.	14.	591.16
.42	.74	1.32	.58	.040	.040	.032	.037	585.56	596.00
.000095	1.	250.	350.	0	0	1	0.00	580.00	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 450.0 800.0 TYPE= 1 TARGET= 350.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7 SEC. G

7.77	8.73	594.63	0.00	0.00	594.64	.01	.05	.00	591.90
990.	606.	209.	175.	826.	167.	272.	55.	19.	591.40
.58	.73	1.25	.64	.051	.044	.048	.036	585.90	450.00
.000113	450.	450.	450.	0	0	1	0.00	350.00	800.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8 SEC. H

7.81	7.75	594.65	0.00	0.00	594.69	.04	.04	.01	591.80
990.	341.	309.	340.	331.	146.	244.	60.	20.	590.50
.62	1.03	2.12	1.39	.055	.044	.035	.036	586.90	261.00
.000360	300.	200.	100.	1	0	1	0.00	255.00	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	8.48	594.68	0.00	0.00	594.71	.03	.02	.00	591.10
990.	364.	313.	312.	347.	162.	302.	62.	21.	589.80
.63	1.05	1.93	1.03	.040	.032	.037	.036	586.20	281.00
.000144	80.	80.	80.	1	0	1	0.00	215.00	496.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

ABANDONED CONCRETE DRIVE-WAY BRIDGE

APPROX. SIZE = 9" X 0.6", LENGTH = 10"

7.83	8.67	594.67	0.00	0.00	594.73	.06	.00	.01	592.10
990.	438.	142.	410.	228.	69.	210.	62.	21.	592.10
.63	1.92	2.06	1.96	.040	.032	.037	.036	586.00	250.00
.000895	10.	10.	10.	0	0	1	-5.82	210.00	460.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

7.83	8.68	594.68	0.00	0.00	594.74	.06	.01	.00	592.10
990.	438.	141.	411.	228.	69.	210.	62.	21.	592.10
.64	1.92	2.05	1.95	.040	.032	.037	.036	586.00	250.00
.000889	10.	10.	10.	0	0	1	-5.82	210.00	460.00

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

7.84	8.50	594.70	0.00	0.00	594.78	.08	.03	.01	592.30
990.	389.	242.	359.	211.	73.	193.	63.	21.	592.30
.64	1.84	3.31	1.87	.040	.032	.037	.036	586.20	250.00
.000913	35.	35.	35.	1	0	1	0.00	210.00	460.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	8.32	594.72	0.00	0.00	594.89	.17	.07	.05	593.50
990.	599.	254.	138.	177.	66.	69.	63.	21.	593.50
.64	3.38	3.82	2.00	.040	.032	.037	.036	586.40	795.00
.003874	40.	40.	40.	2	0	1	-16.39	210.00	1005.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

7.85	8.44	594.84	0.00	0.00	594.99	.15	.09	.01	593.50
990.	597.	233.	160.	189.	68.	81.	63.	21.	593.50
.65	3.15	3.45	1.97	.040	.032	.037	.036	586.40	795.00
.003077	25.	25.	25.	2	0	1	-16.39	210.00	1005.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11 SEC. K

7.87	7.74	595.04	0.00	0.00	595.11	.07	.10	.02	593.20
990.	239.	467.	284.	285.	162.	218.	64.	22.	591.90
.66	.84	2.88	1.30	.050	.039	.040	.036	587.30	541.46
.000517	1.	100.	250.	2	0	1	0.00	389.77	931.22

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	7.77	595.07	0.00	0.00	595.13	.06	.02	.00	593.20
990.	282.	445.	264.	289.	163.	223.	65.	22.	591.90
.67	.98	2.72	1.18	.040	.035	.040	.036	587.30	560.00
.000421	49.	49.	49.	2	0	1	0.00	372.34	932.34

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	8.85	596.15	596.15	0.00	596.48	.33	.00	0.00	597.00
990.	449.	339.	202.	117.	57.	61.	65.	22.	597.10
.67	3.83	5.98	3.29	.016	.018	.016	.036	587.30	990.00
.003427	1.	1.	1.	2	14	1	-47.80	358.20	1355.00

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

7.89	9.25	596.55	0.00	0.00	596.66	.10	.11	.07	597.00
990.	539.	164.	287.	211.	57.	120.	66.	23.	597.10
.68	2.55	2.89	2.40	.016	.018	.016	.035	587.30	950.00
.000822	77.	77.	77.	2	0	1	-71.72	400.52	1355.00

1490 NH CARD USED

REPEATED SECTION FROM SECTION 7.9879

7.90	9.30	596.67	0.00	0.00	596.69	.02	.01	.02	592.87
990.	288.	303.	399.	258.	193.	413.	66.	24.	592.07
.69	1.12	1.57	.96	.035	.040	.032	.035	587.37	95.25
.000127	50.	50.	50.	0	0	1	0.00	366.63	461.88

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	9.11	596.69	0.00	0.00	596.72	.03	.02	.00	593.08
990.	293.	324.	373.	240.	188.	372.	69.	25.	592.28
.72	1.22	1.72	1.00	.035	.040	.034	.034	587.58	108.92
.000157	260.	150.	85.	2	0	1	0.00	329.93	438.85

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13 SEC. M

7.99	8.74	596.74	0.00	0.00	596.79	.04	.06	.01	593.50
990.	314.	385.	290.	212.	179.	254.	74.	26.	592.70
.77	1.49	2.15	1.14	.035	.040	.040	.033	588.00	130.75
.000262	350.	300.	250.	0	0	1	0.00	194.25	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14 SEC. N

8.08	8.75	596.85	0.00	0.00	596.87	.01	.07	.01	592.70
990.	300.	317.	373.	527.	211.	630.	83.	29.	593.40
.90	.57	1.50	.59	.060	.040	.060	.032	588.10	89.52
.000127	400.	400.	400.	2	0	1	0.00	470.81	560.34

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15 SEC. O

8.15	7.23	596.93	0.00	0.00	596.96	.04	.09	.01	593.40
990.	415.	306.	268.	434.	131.	282.	94.	33.	592.00
.98	.96	2.34	.95	.060	.040	.060	.030	589.70	66.01
.000363	250.	400.	650.	0	0	1	0.00	283.99	350.00

1490 NH CARD USED

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16 SEC. P

8.23	8.17	597.07	0.00	0.00	597.20	.12	.19	.04	593.60
990.	29.	471.	490.	19.	124.	356.	99.	35.	594.90
1.02	1.51	3.80	1.38	.045	.041	.060	.030	588.90	289.03
.001067	600.	400.	100.	2	0	1	0.00	192.97	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17 SEC. Q

8.31	7.82	597.52	0.00	0.00	597.78	.26	.51	.07	594.60
990.	167.	823.	0.	77.	188.	0.	103.	36.	597.50
1.05	2.16	4.38	.02	.035	.042	.035	.029	589.70	346.95
.001561	400.	400.	400.	2	0	1	0.00	89.96	436.92

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.01	597.61	0.00	0.00	597.85	.24	.06	.01	594.50
990.	167.	822.	1.	88.	195.	2.	103.	36.	597.40
1.05	1.90	4.22	.30	.035	.035	.037	.029	589.60	343.50
.001116	49.	49.	49.	2	0	1	0.00	113.98	457.48

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.03	597.63	0.00	0.00	597.85	.22	.00	.01	589.70
990.	405.	447.	138.	147.	96.	48.	103.	36.	590.10
1.05	2.76	4.67	2.89	.016	.018	.016	.029	589.60	705.84
.000207	1.	1.	1.	2	0	1	0.00	103.72	809.56

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 CROSS SECTION 8.33 EXTENDED .29 FEET

SECNO	OEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
606.23	599.30	0.00	553.	440.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 643.8 900.5 TYPE= 1 TARGET= 295.000

U/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

8.33	9.69	599.29	0.00	0.00	599.33	.04	1.48	0.00	589.70
990.	535.	266.	188.	402.	116.	187.	104.	37.	590.10
1.07	1.33	2.30	1.01	.016	.018	.016	.029	589.60	643.80
.000039	95.	95.	95.	2	0	5	0.00	256.65	900.45

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*****************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1      CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2      100-YEAR FLOOD 1640 CFS
T3      FRANK AND POET DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

     -10.       4.       -0.       -0. -0.000000     -0.00      -0.0      -0.    592.370    -0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      3.000     1.000    -1.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


              50 FT D/S OF PENNSYLVANIA RD. BRIDGE            VS-1      SEC. A

     7.24      8.37    592.37      0.00    592.37    592.56       .19      0.00      0.00    588.70
    1640.      691.      949.        0.      357.      222.        0.        0.        0.    593.00
     0.00      1.94      4.27      0.00      .044      .039     0.000     0.000    584.00    877.62
  .001055      100.      100.      100.         0         0         1      0.00    221.31   1098.93


              D/S FACE OF PENNSYLVANIA RD. BRIDGE             BS-2      SEC. B

              BOX CULVERT WITH WINGWALLS AND HEADWALLS

              APPROX. SIZE = 19" X 5.8", LENGTH = 30"

     7.25      8.58    592.48      0.00      0.00    592.62       .13       .04       .02    588.60
    1640.      816.      824.        0.      398.      230.        0.        1.        0.    592.90
      .00      2.05      3.59      0.00      .035      .035      .037      .034    583.90    867.40
  .000690       50.       50.       50.         2         0         1      0.00    231.90   1099.29


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
    -0.00      1.50      2.60      -0.00     16.48     -0.00     95.60      0.00    583.90    583.90

PRESSURE AND WEIR FLOW
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EGPRS	EGLWC	HS	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
599.34	592.62	0.00	872.	776.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	10.07	593.97	0.00	0.00	594.02	.05	1.40	0.00	585.10
1640.	1050.	471.	120.	738.	178.	97.	1.	0.	583.90
.01	1.42	2.65	1.24	.035	.035	.037	.034	583.90	970.00
.000198	30.	30.	30.	2	0	4	0.00	286.00	1256.00

8930,RDST NOT ON GR CARD 969.99
8930,RDST NOT ON GR CARD 1000.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	10.01	593.97	0.00	0.00	594.03	.06	.01	.00	585.16
1640.	1009.	477.	154.	667.	177.	151.	2.	1.	583.96
.02	1.51	2.70	1.02	.035	.035	.037	.034	583.96	1020.00
.000207	50.	50.	50.	1	0	1	0.00	286.00	1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 400.0 TYPE= 1 TARGET= 399.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3 SEC. C

7.35	9.56	594.06	0.00	0.00	594.16	.10	.11	.02	596.10
1640.	0.	803.	837.	0.	273.	407.	11.	3.	587.40
.07	0.00	2.95	2.06	.035	.032	.032	.035	584.50	257.98
.000302	450.	450.	450.	0	0	1	0.00	142.02	400.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.40	8.91	594.11	0.00	0.00	594.31	.20	.10	.05	596.60
1640.	0.	1282.	358.	0.	328.	172.	14.	4.	588.80
.09	0.00	3.90	2.08	.035	.031	.032	.035	585.20	347.62
.000547	250.	250.	250.	2	0	1	0.00	117.18	464.79

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 465.0 TYPE= 1 TARGET= 464.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4 SEC. D

7.44	8.38	594.28	0.00	0.00	594.45	.17	.13	.01	597.30
1640.	0.	1106.	534.	0.	301.	222.	17.	4.	589.50
.11	0.00	3.67	2.40	.035	.031	.032	.035	585.90	349.24
.000520	250.	250.	250.	2	0	1	0.00	115.76	465.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 345.0 460.0 TYPE= 1 TARGET= 115.000

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5 SEC. E

7.49	8.58	594.38	0.00	0.00	594.57	.19	.10	.01	593.40
1640.	0.	1369.	271.	0.	362.	155.	20.	5.	591.10
.13	.01	3.78	1.75	.035	.028	.032	.035	585.80	345.00
.000398	350.	250.	150.	2	0	1	0.00	115.00	460.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	8.84	594.48	0.00	0.00	594.63	.15	.05	.01	593.24
1640.	18.	1275.	346.	33.	377.	239.	22.	5.	590.94
.14	.56	3.38	1.45	.035	.028	.032	.036	585.64	279.53
.000304	250.	150.	50.	2	0	1	0.00	220.47	500.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 600.0 1000.0 TYPE= 1 TARGET= 400.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6 SEC. F

7.59	9.52	594.72	0.00	0.00	594.74	.01	.07	.04	591.10
1080.	636.	262.	182.	866.	216.	247.	32.	9.	590.80
.28	.73	1.21	.74	.039	.040	.032	.035	585.20	600.00
.000075	550.	400.	350.	2	0	1	0.00	400.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	9.36	594.74	0.00	0.00	594.75	.01	.02	.00	591.28
1080.	586.	251.	243.	845.	212.	434.	40.	12.	590.98
.37	.69	1.19	.56	.039	.040	.032	.035	585.38	572.00
.000074	250.	250.	250.	2	0	1	0.00	628.00	1200.00

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	9.19	594.75	0.00	0.00	594.77	.01	.01	.00	591.46
1080.	591.	271.	218.	781.	207.	363.	44.	14.	591.16
.41	.76	1.31	.60	.039	.040	.032	.037	585.56	596.00
.000092	1.	250.	350.	0	0	1	0.00	580.00	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 450.0 800.0 TYPE= 1 TARGET= 350.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7 SEC. G

7.77	8.90	594.80	0.00	0.00	594.81	.01	.05	.00	591.90
1080.	663.	221.	196.	865.	172.	290.	58.	19.	591.40
.56	.77	1.29	.68	.051	.044	.048	.036	585.90	450.00
.000116	450.	450.	450.	0	0	1	0.00	350.00	800.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8 SEC. H

7.81	7.93	594.83	0.00	0.00	594.87	.04	.04	.01	591.80
1080.	375.	322.	384.	351.	150.	265.	64.	20.	590.50
.60	1.07	2.15	1.45	.055	.044	.035	.036	586.90	261.00
.000357	300.	200.	100.	1	0	1	0.00	255.00	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	8.66	594.86	0.00	0.00	594.89	.03	.02	.00	591.10
1080.	401.	332.	347.	364.	166.	319.	65.	21.	589.80
.62	1.10	1.99	1.09	.040	.032	.037	.036	586.20	281.00
.000149	80.	80.	80.	1	0	1	0.00	215.00	496.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

ABANDONED CONCRETE DRIVE-WAY BRIDGE

APPROX. SIZE = 9" X 0.6", LENGTH = 10"

7.83	8.84	594.84	0.00	0.00	594.91	.06	.00	.01	592.10
1080.	481.	143.	456.	245.	70.	227.	65.	21.	592.10
.62	1.96	2.03	2.01	.040	.032	.037	.036	586.00	250.00
.000845	10.	10.	10.	0	0	1	-5.82	210.00	460.00

8930,RDST NOT ON GR CARD 249.99

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

7.83	8.85	594.85	0.00	0.00	594.91	.06	.01	.00	592.10
1080.	481.	142.	456.	246.	70.	228.	66.	21.	592.10
.62	1.96	2.02	2.00	.040	.032	.037	.036	586.00	250.00
.000839	10.	10.	10.	0	0	1	-5.82	210.00	460.00

8930,RDST NOT ON GR CARD 249.99

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

7.84	8.67	594.87	0.00	0.00	594.95	.08	.03	.01	592.30
1080.	432.	244.	404.	228.	75.	210.	66.	21.	592.30
.62	1.89	3.27	1.93	.040	.032	.037	.036	586.20	250.00
.000866	35.	35.	35.	1	0	1	0.00	210.00	460.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	8.49	594.89	0.00	0.00	595.06	.16	.06	.04	593.50
1080.	650.	246.	184.	194.	68.	86.	66.	21.	593.50
.63	3.34	3.61	2.13	.040	.032	.037	.036	586.40	795.00
.003342	40.	40.	40.	2	0	1	-16.39	210.00	1005.00

8930,RDST NOT ON GR CARD 794.99

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

7.85	8.60	595.00	0.00	0.00	595.14	.14	.08	.01	593.50
1080.	647.	231.	202.	205.	69.	97.	67.	21.	593.50
.63	3.16	3.33	2.10	.040	.032	.037	.036	586.40	795.00
.002793	25.	25.	25.	2	0	1	-16.39	210.00	1005.00

8930,RDST NOT ON GR CARD 794.99
1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11 SEC. K

7.87	7.88	595.18	0.00	0.00	595.25	.07	.09	.02	593.20
1080.	281.	480.	319.	320.	166.	238.	68.	22.	591.90
.64	.88	2.89	1.34	.050	.039	.040	.036	587.30	532.17
.000507	1.	100.	250.	2	0	1	0.00	402.83	935.00

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	7.92	595.22	0.00	0.00	595.28	.06	.02	.00	593.20
1080.	329.	457.	295.	321.	167.	243.	69.	23.	591.90
.65	1.02	2.74	1.21	.040	.035	.040	.036	587.30	560.00
.000411	49.	49.	49.	2	0	1	0.00	377.27	937.27

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	8.91	596.21	596.21	0.00	596.52	.31	.00	0.00	597.00
1080.	513.	327.	240.	130.	57.	70.	69.	23.	597.10
.65	3.95	5.77	3.43	.016	.018	.016	.036	587.30	990.00
.003201	1.	1.	1.	2	8	1	-48.54	358.55	1355.00

8930,RDST NOT ON GR CARD 989.99

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

7.89	9.28	596.58	0.00	0.00	596.70	.12	.12	.06	597.00
1080.	591.	171.	317.	217.	57.	124.	69.	23.	597.10
.66	2.72	3.02	2.57	.016	.018	.016	.035	587.30	950.00
.000901	77.	77.	77.	2	0	1	-72.76	400.68	1355.00

8930,RDST NOT ON GR CARD 989.99
1490 NH CARD USED

REPEATED SECTION FROM SECTION 7.9879

7.90	9.34	596.71	0.00	0.00	596.74	.03	.01	.03	592.87
1080.	313.	325.	442.	264.	194.	425.	70.	24.	592.07
.67	1.19	1.67	1.04	.035	.040	.032	.035	587.37	92.80
.000143	50.	50.	50.	2	0	1	0.00	375.21	468.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	9.16	596.74	0.00	0.00	596.77	.03	.02	.00	593.08

1080.	319.	348.	414.	244.	190.	382.	73.	25.	592.26
.70	1.30	1.83	1.08	.035	.040	.033	.034	587.58	104.38
.000177	260.	150.	85.	2	0	1	0.00	340.15	444.53

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13 SEC. M

7.99	8.79	596.79	0.00	0.00	596.85	.05	.07	.01	593.50
1080.	344.	415.	321.	215.	180.	259.	78.	27.	592.70
.75	1.60	2.30	1.24	.035	.040	.040	.033	588.00	130.52
.000298	350.	300.	250.	0	0	1	0.00	194.48	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14 SEC. N

8.08	8.82	596.92	0.00	0.00	596.94	.02	.08	.01	592.70
1080.	330.	340.	409.	541.	213.	645.	87.	30.	593.40
.87	.61	1.60	.63	.060	.040	.060	.032	588.10	86.74
.000142	400.	400.	400.	2	0	1	0.00	475.57	562.30

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15 SEC. O

8.15	7.30	597.00	0.00	0.00	597.04	.04	.10	.01	593.40
1080.	456.	329.	295.	446.	132.	289.	99.	34.	592.00
.95	1.02	2.49	1.02	.060	.040	.060	.030	589.70	64.54
.000404	250.	400.	650.	1	0	1	0.00	285.46	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16 SEC. P

8.23	8.27	597.17	0.00	0.00	597.30	.13	.21	.05	593.60
1080.	32.	502.	546.	20.	126.	371.	104.	35.	594.90
.98	1.60	4.00	1.47	.045	.041	.060	.030	588.90	288.74
.001157	600.	400.	100.	2	0	1	0.00	193.26	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17 SEC. Q

8.31	7.94	597.64	0.00	0.00	597.93	.28	.55	.08	594.60
1080.	194.	886.	0.	84.	192.	1.	107.	37.	597.50
1.01	2.30	4.60	.30	.035	.042	.035	.029	589.70	344.66
.001686	400.	400.	400.	2	0	1	0.00	105.93	450.59

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.14	597.74	0.00	0.00	598.00	.26	.07	.01	594.50
1080.	193.	884.	3.	96.	199.	6.	108.	37.	597.40

1.01	2.02	4.43	.43	.035	.035	.037	.029	589.60	541.05
.001191	49.	49.	49.	2	0	1	0.00	131.06	472.11

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.18	597.78	0.00	0.00	598.01	.24	.00	.01	589.70
1080.	450.	477.	153.	156.	97.	52.	108.	37.	590.10
1.01	2.88	4.89	2.92	.016	.018	.016	.029	589.60	703.39
.000222	1.	1.	1.	2	0	1	0.00	121.19	824.58

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 CROSS SECTION 8.33 EXTENDED .39 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
608.00	599.68	0.00	650.	435.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 643.8 900.5 TYPE= 1 TARGET= 295.000

U/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

8.33	9.79	599.39	0.00	0.00	599.44	.04	1.42	0.00	589.70
1080.	586.	283.	212.	415.	117.	199.	109.	37.	590.10
1.03	1.41	2.41	1.07	.016	.018	.016	.029	589.60	643.80
.000042	95.	95.	95.	2	0	5	0.00	256.65	900.45

8930,RDST NOT ON GR CARD 643.79
8930,RDST NOT ON GR CARD 783.00
8930,RDST NOT ON GR CARD 795.18
8930,RDST NOT ON GR CARD 870.00
8930,RDST NOT ON GR CARD 900.45

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*****************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1      CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2      500-YEAR FLOOD 1980 CFS
T3      FRANK AND POET DRAIN

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

     -10.       5.       -0.       -0. -0.000000     -0.00      -0.0      -0.    592.720    -0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15.000    -0.000    -1.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

CCHV=     .300 CEHV=     .500
1490 NH CARD USED
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


              50 FT D/S OF PENNSYLVANIA RD. BRIDGE            VS-1      SEC. A

     7.24      8.72    592.72      0.00    592.72    592.92       .20      0.00      0.00    588.70
    1980.      923.     1057.        0.      425.      234.        0.        0.        0.    593.00
     0.00      2.17      4.51      0.00      .043      .039     0.000     0.000    584.00    860.95
  .001123      100.      100.      100.         0         0         1      0.00    238.57   1099.52


              D/S FACE OF PENNSYLVANIA RD. BRIDGE             BS-2      SEC. B

              BOX CULVERT WITH WINGWALLS AND HEADWALLS

              APPROX. SIZE = 19" X 5.8", LENGTH = 30"

     7.25      8.94    592.84      0.00      0.00    592.98       .15       .04       .02    588.60
    1980.     1061.      919.        0.      471.      242.        0.        1.        0.    592.90
      .00      2.25      3.79      0.00      .035      .035      .037      .034    583.90    850.54
  .000736       50.       50.       50.         2         0         1      0.00    249.35   1099.90


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
    -0.00      1.50      2.60     -0.00     16.48     -0.00     95.60      0.00    583.90    583.90

PRESSURE AND WEIR FLOW
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EGPRS	EGLWC	HS	GWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
602.83	592.98	0.00	1222.	759.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	10.34	594.24	0.00	0.00	594.31	.07	1.32	0.00	585.10
1980.	1293.	538.	149.	801.	183.	107.	1.	0.	583.90
.01	1.61	2.94	1.39	.035	.035	.037	.034	583.90	970.00
.000236	30.	30.	30.	2	0	5	0.00	286.00	1256.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	10.29	594.25	0.00	0.00	594.32	.07	.01	.00	585.16
1980.	1232.	545.	203.	717.	182.	175.	3.	1.	583.96
.02	1.72	2.99	1.16	.035	.035	.037	.034	583.96	1020.00
.000245	50.	50.	50.	1	0	1	0.00	286.00	1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 400.0 TYPE= 1 TARGET= 399.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3 SEC. C

7.35	9.85	594.35	0.00	0.00	594.48	.13	.13	.03	596.10
1980.	0.	944.	1036.	0.	285.	436.	12.	3.	587.40
.06	0.00	3.31	2.38	.035	.032	.032	.035	584.50	257.27
.000369	450.	450.	450.	1	0	1	0.00	142.73	400.00

1490 NH CARD USED

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.40	9.21	594.41	0.00	0.00	594.67	.25	.12	.06	596.60
1980.	0.	1520.	460.	0.	344.	192.	16.	4.	588.80
.08	0.00	4.42	2.39	.035	.031	.032	.035	585.20	346.70
.000674	250.	250.	250.	2	0	1	0.00	121.76	468.46

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 465.0 TYPE= 1 TARGET= 464.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4 SEC. D

7.44	8.73	594.63	0.00	0.00	594.84	.21	.16	.01	597.30
1980.	0.	1300.	680.	0.	319.	245.	19.	4.	589.50
.10	0.00	4.08	2.78	.035	.031	.032	.035	585.90	348.18
.000612	250.	250.	250.	2	0	1	0.00	116.82	465.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 345.0 460.0 TYPE= 1 TARGET= 115.000

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5 SEC. E

7.49	8.93	594.73	0.00	0.00	594.97	.24	.12	.01	593.40
1980.	0.	1616.	364.	0.	382.	177.	21.	5.	591.10
.11	.01	4.23	2.06	.035	.028	.032	.036	585.80	345.00
.000467	350.	250.	150.	2	0	1	0.00	115.00	460.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	9.24	594.88	0.00	0.00	595.05	.17	.05	.02	593.24
1980.	47.	1464.	469.	70.	399.	279.	23.	6.	590.94
.12	.67	3.67	1.68	.035	.028	.032	.036	585.64	222.74
.000333	250.	150.	50.	2	0	1	0.00	277.26	500.00

1490 NH CARD USED
3280 CROSS SECTION 7.59 EXTENDED .05 FEET

3470 ENCROACHMENT STATIONS= 600.0 1000.0 TYPE= 1 TARGET= 400.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6 SEC. F

7.59	9.95	595.15	0.00	0.00	595.16	.01	.07	.05	591.10
1310.	785.	287.	238.	981.	228.	290.	35.	9.	590.80
.26	.80	1.26	.82	.039	.040	.032	.035	585.20	600.00
.000076	550.	400.	350.	2	0	1	0.00	400.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	9.79	595.17	0.00	0.00	595.18	.01	.02	.00	591.28
1310.	702.	263.	345.	973.	224.	562.	44.	12.	590.98
.35	.72	1.18	.61	.039	.040	.032	.035	585.38	572.00
.000068	250.	250.	250.	2	0	1	0.00	628.00	1200.00

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	9.62	595.18	0.00	0.00	595.19	.01	.01	.00	591.46
1310.	710.	283.	317.	899.	219.	481.	50.	15.	591.16
.39	.79	1.29	.66	.039	.040	.032	.037	585.56	596.00
.000084	1.	250.	350.	0	0	1	0.00	580.00	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 450.0 800.0 TYPE= 1 TARGET= 350.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7 SEC. G

7.77	9.32	595.22	0.00	0.00	595.24	.01	.05	.00	591.90
1310.	809.	249.	253.	961.	182.	332.	66.	20.	591.40
.53	.84	1.36	.76	.051	.044	.048	.036	585.90	450.00
.000122	450.	450.	450.	0	0	1	0.00	350.00	800.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8 SEC. H

7.81	8.35	595.25	0.00	0.00	595.30	.04	.04	.01	591.80
1310.	461.	352.	497.	400.	160.	314.	72.	21.	590.50
.57	1.15	2.20	1.59	.055	.044	.035	.036	586.90	261.00
.000349	300.	200.	100.	1	0	1	0.00	255.00	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	9.08	595.28	0.00	0.00	595.31	.04	.02	.00	591.10
1310.	494.	377.	439.	404.	176.	359.	74.	21.	589.80
.58	1.22	2.14	1.22	.040	.032	.037	.036	586.20	281.00
.000159	80.	80.	80.	1	0	1	0.00	215.00	496.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

ABANDONED CONCRETE DRIVE-WAY BRIDGE

APPROX. SIZE = 9" X 0.6", LENGTH = 10"

7.83	9.27	595.27	0.00	0.00	595.33	.07	.00	.01	592.10
1310.	591.	147.	572.	287.	74.	270.	74.	22.	592.10
.58	2.06	1.98	2.12	.040	.032	.037	.036	586.00	250.00
.000750	10.	10.	10.	0	0	1	-5.82	210.00	460.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9 SEC. I

7.83	9.27	595.27	0.00	0.00	595.34	.07	.01	.00	592.10
1310.	591.	147.	572.	288.	74.	271.	74.	22.	592.10
.58	2.05	1.98	2.12	.040	.032	.037	.036	586.00	250.00
.000746	10.	10.	10.	0	0	1	-5.82	210.00	460.00

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

7.84	9.09	595.29	0.00	0.00	595.37	.08	.03	.01	592.30
1310.	540.	251.	519.	270.	78.	252.	74.	22.	592.30
.59	2.00	3.20	2.06	.040	.032	.037	.036	586.20	250.00
.000773	35.	35.	35.	1	0	1	0.00	210.00	460.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	8.91	595.31	0.00	0.00	595.46	.15	.05	.03	593.50
1310.	773.	232.	305.	237.	72.	129.	75.	22.	593.50
.59	3.26	3.21	2.36	.040	.032	.037	.036	586.40	795.00
.002436	40.	40.	40.	1	0	1	-16.39	210.00	1005.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10 SEC. J

7.85	8.98	595.38	0.00	0.00	595.52	.14	.06	.00	593.50
1310.	771.	227.	313.	242.	73.	134.	75.	22.	593.50
.59	3.19	3.11	2.33	.040	.032	.037	.036	586.40	795.00
.002265	25.	25.	25.	1	0	1	-16.39	210.00	1005.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11 SEC. K

7.87	8.26	595.56	0.00	0.00	595.63	.06	.09	.02	593.20
1310.	396.	504.	410.	414.	176.	289.	77.	23.	591.90
.61	.96	2.86	1.42	.050	.039	.040	.036	587.30	525.00
.000466	1.	100.	250.	2	0	1	0.00	410.00	935.00

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	8.29	595.59	0.00	0.00	595.65	.06	.02	.00	593.20
1310.	451.	482.	377.	401.	177.	296.	78.	23.	591.90
.62	1.13	2.73	1.28	.040	.035	.040	.036	587.30	560.00
.000378	49.	49.	49.	2	0	1	0.00	383.00	943.00

3685 20 TRIALS USED WSEL+CWSEL

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	9.00	596.30	596.30	0.00	596.65	.35	.00	0.00	597.00
1310.	653.	337.	321.	148.	57.	82.	78.	23.	597.10
.62	4.42	5.94	3.89	.016	.018	.016	.036	587.30	990.00
.003410	1.	1.	1.	30	8	1	-49.59	359.04	1355.00

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12 SEC. L

7.89	9.40	596.70	0.00	0.00	596.84	.14	.13	.06	597.00
1310.	732.	177.	402.	243.	57.	140.	78.	24.	597.10
.62	3.01	3.12	2.87	.016	.018	.016	.035	587.30	950.00
.000965	77.	77.	77.	2	0	1	-76.98	401.32	1355.00

1490 NH CARD USED

REPEATED SECTION FROM SECTION 7.9879

7.90	9.48	596.85	0.00	0.00	596.88	.03	.02	.03	592.87
1310.	375.	375.	560.	279.	198.	459.	79.	24.	592.07
.63	1.35	1.90	1.22	.035	.040	.031	.035	587.37	85.96
.000180	50.	50.	50.	2	0	1	0.00	399.15	485.11

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	9.30	596.88	0.00	0.00	596.92	.04	.03	.00	593.08
1310.	382.	400.	528.	259.	193.	414.	82.	26.	592.28
.66	1.48	2.07	1.28	.035	.040	.032	.034	587.58	95.08
.000222	260.	150.	85.	2	0	1	0.00	367.22	462.30

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13 SEC. M

7.99	8.95	596.95	0.00	0.00	597.02	.07	.08	.01	593.50
1310.	420.	486.	404.	226.	184.	275.	87.	27.	592.70
.70	1.86	2.64	1.47	.035	.040	.040	.033	588.00	125.59
.000379	350.	300.	250.	1	0	1	0.00	199.41	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14 SEC. N

8.08	9.01	597.11	0.00	0.00	597.13	.02	.10	.01	592.70
1310.	410.	396.	504.	582.	218.	690.	97.	31.	593.40
.81	.70	1.82	.73	.060	.040	.060	.032	588.10	78.76
.000177	400.	400.	400.	2	0	1	0.00	489.18	567.94

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15 SEC. O

8.15	7.51	597.21	0.00	0.00	597.26	.05	.12	.01	593.40
1310.	562.	383.	365.	482.	137.	311.	110.	34.	592.00
.88	1.17	2.80	1.18	.060	.040	.060	.030	589.70	60.17
.000490	250.	400.	650.	1	0	1	0.00	289.83	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16 SEC. P

8.23	8.51	597.41	0.00	0.00	597.56	.16	.25	.05	593.60
1310.	41.	575.	694.	23.	131.	410.	115.	36.	594.90
.91	1.80	4.40	1.69	.045	.041	.060	.030	588.90	287.49
.001343	600.	400.	100.	2	0	1	0.00	194.51	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17 SEC. Q

8.31	8.26	597.96	0.00	0.00	598.29	.34	.64	.09	594.60
1310.	270.	1032.	8.	102.	203.	11.	119.	38.	597.50
.93	2.64	5.07	.70	.035	.042	.035	.029	589.70	338.96
.001938	400.	400.	400.	2	0	1	0.00	145.59	484.54

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.48	598.08	0.00	0.00	598.38	.30	.08	.01	594.50
1310.	265.	1026.	19.	116.	211.	25.	120.	38.	597.40
.94	2.28	4.86	.76	.035	.035	.037	.029	589.60	334.94
.001326	49.	49.	49.	2	0	1	0.00	172.15	507.10

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.52	598.12	0.00	0.00	598.39	.27	.00	.01	589.70
1310.	573.	540.	197.	180.	102.	68.	120.	38.	590.10
.94	3.18	5.31	2.90	.016	.018	.016	.029	589.60	702.09
.000247	1.	1.	1.	2	0	1	0.00	126.15	828.24

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 CROSS SECTION 8.33 EXTENDED .61 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
613.17	600.70	0.00	891.	420.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 643.8 900.5 TYPE= 1 TARGET= 295.000

U/S FACE OF ALLEN RD. BRIDGE BS-18 SEC. R

8.33	10.01	599.61	0.00	0.00	599.67	.05	1.28	0.00	589.70
1310.	714.	323.	273.	443.	120.	225.	121.	38.	590.10
.95	1.61	2.70	1.22	.016	.018	.016	.029	589.60	643.80
.000051	95.	95.	95.	2	0	6	0.00	256.65	900.45

SUMMARY PRINTOUT FOR MULTIPLE PROFILES

FRANK AND POET DRAIN

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7.24	100.00	0.00	0.00	584.00	1100.00	591.72	.15	0.00	0.00	740.30	7.72	189.25
7.24	100.00	0.00	0.00	584.00	1510.00	592.24	.18	0.00	0.00	900.81	8.24	214.90
7.24	100.00	0.00	0.00	584.00	1640.00	592.37	.19	0.00	0.00	948.74	8.37	221.31
7.24	100.00	0.00	0.00	584.00	1980.00	592.72	.20	0.00	0.00	1056.76	8.72	238.57
7.25	50.00	0.00	0.00	583.90	1100.00	591.82	.11	.04	.01	649.07	7.92	198.93
7.25	50.00	0.00	0.00	583.90	1510.00	592.35	.13	.04	.02	782.15	8.45	225.28
7.25	50.00	0.00	0.00	583.90	1640.00	592.48	.13	.04	.02	823.53	8.58	231.90
7.25	50.00	0.00	0.00	583.90	1980.00	592.84	.15	.04	.02	918.95	8.94	249.35
7.25	30.00	592.40	589.70	583.90	1100.00	593.39	.04	1.50	0.00	357.98	9.49	286.00
7.25	30.00	592.40	589.70	583.90	1510.00	593.85	.05	1.42	0.00	444.00	9.95	286.00
7.25	30.00	592.40	589.70	583.90	1640.00	593.97	.05	1.40	0.00	470.56	10.07	286.00
7.25	30.00	592.40	589.70	583.90	1980.00	594.24	.07	1.32	0.00	538.10	10.34	286.00
7.26	50.00	0.00	0.00	583.96	1100.00	593.39	.04	.01	.00	362.66	9.43	286.00
7.26	50.00	0.00	0.00	583.96	1510.00	593.86	.05	.01	.00	449.84	9.90	286.00
7.26	50.00	0.00	0.00	583.96	1640.00	593.97	.06	.01	.00	476.68	10.01	286.00
7.26	50.00	0.00	0.00	583.96	1980.00	594.25	.07	.01	.00	544.94	10.29	286.00
7.35	450.00	0.00	0.00	584.50	1100.00	593.46	.06	.08	.01	575.64	8.96	140.53
7.35	450.00	0.00	0.00	584.50	1510.00	593.94	.09	.10	.02	748.92	9.44	141.71
7.35	450.00	0.00	0.00	584.50	1640.00	594.06	.10	.11	.02	803.14	9.56	142.02
7.35	450.00	0.00	0.00	584.50	1980.00	594.35	.13	.13	.03	943.55	9.85	142.73
7.40	250.00	0.00	0.00	585.20	1100.00	593.49	.12	.07	.03	892.73	8.29	107.83
7.40	250.00	0.00	0.00	585.20	1510.00	593.98	.18	.09	.05	1189.68	8.78	115.22
7.40	250.00	0.00	0.00	585.20	1640.00	594.11	.20	.10	.05	1282.08	8.91	117.18
7.40	250.00	0.00	0.00	585.20	1980.00	594.41	.25	.12	.06	1520.12	9.21	121.76
7.44	250.00	0.00	0.00	585.90	1100.00	593.60	.11	.09	.00	789.09	7.70	113.66
7.44	250.00	0.00	0.00	585.90	1510.00	594.14	.16	.12	.01	1030.66	8.24	115.32
7.44	250.00	0.00	0.00	585.90	1640.00	594.28	.17	.13	.01	1106.02	8.38	115.76
7.44	250.00	0.00	0.00	585.90	1980.00	594.63	.21	.16	.01	1300.25	8.73	116.82
7.49	250.00	0.00	0.00	585.80	1100.00	593.67	.12	.07	.01	965.58	7.87	115.00
7.49	250.00	0.00	0.00	585.80	1510.00	594.22	.18	.10	.01	1273.47	8.42	115.00
7.49	250.00	0.00	0.00	585.80	1640.00	594.38	.19	.10	.01	1369.26	8.58	115.00
7.49	250.00	0.00	0.00	585.80	1980.00	594.73	.24	.12	.01	1615.97	8.93	115.00
7.52	150.00	0.00	0.00	585.64	1100.00	593.73	.11	.04	.01	936.46	8.09	174.64
7.52	150.00	0.00	0.00	585.64	1510.00	594.32	.14	.04	.01	1197.88	8.68	199.17
7.52	150.00	0.00	0.00	585.64	1640.00	594.48	.15	.05	.01	1275.37	8.84	220.47
7.52	150.00	0.00	0.00	585.64	1980.00	594.88	.17	.05	.02	1464.25	9.24	277.26
7.59	400.00	0.00	0.00	585.20	730.00	593.91	.01	.06	.03	226.66	8.71	400.00
7.59	400.00	0.00	0.00	585.20	990.00	594.55	.01	.07	.04	252.16	9.35	400.00
7.59	400.00	0.00	0.00	585.20	1080.00	594.72	.01	.07	.04	262.38	9.52	400.00
7.59	400.00	0.00	0.00	585.20	1310.00	595.15	.01	.07	.05	287.07	9.95	400.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7.64	250.00	0.00	0.00	585.38	730.00	593.93	.01	.02	.00	236.82	8.55	613.75
7.64	250.00	0.00	0.00	585.38	990.00	594.57	.01	.02	.00	246.53	9.19	628.00
7.64	250.00	0.00	0.00	585.38	1080.00	594.74	.01	.02	.00	251.33	9.36	628.00
7.64	250.00	0.00	0.00	585.38	1310.00	595.17	.01	.02	.00	262.73	9.79	628.00
7.69	250.00	0.00	0.00	585.56	730.00	593.94	.01	.01	.00	253.99	8.38	521.76
7.69	250.00	0.00	0.00	585.56	990.00	594.58	.01	.01	.00	265.76	9.02	580.00
7.69	250.00	0.00	0.00	585.56	1080.00	594.75	.01	.01	.00	270.96	9.19	580.00
7.69	250.00	0.00	0.00	585.56	1310.00	595.18	.01	.01	.00	283.17	9.62	580.00
7.77	450.00	0.00	0.00	585.90	730.00	594.00	.01	.05	.00	177.95	8.10	350.00
7.77	450.00	0.00	0.00	585.90	990.00	594.63	.01	.05	.00	209.45	8.73	350.00
7.77	450.00	0.00	0.00	585.90	1080.00	594.80	.01	.05	.00	220.84	8.90	350.00
7.77	450.00	0.00	0.00	585.90	1310.00	595.22	.01	.05	.00	248.78	9.32	350.00
7.81	200.00	0.00	0.00	586.90	730.00	594.03	.04	.04	.01	277.70	7.13	241.42
7.81	200.00	0.00	0.00	586.90	990.00	594.65	.04	.04	.01	309.40	7.75	255.00
7.81	200.00	0.00	0.00	586.90	1080.00	594.83	.04	.04	.01	321.67	7.93	255.00
7.81	200.00	0.00	0.00	586.90	1310.00	595.25	.04	.04	.01	351.62	8.35	255.00
7.83	80.00	0.00	0.00	586.20	730.00	594.06	.02	.02	.00	260.47	7.86	215.00
7.83	80.00	0.00	0.00	586.20	990.00	594.68	.03	.02	.00	313.26	8.48	215.00
7.83	80.00	0.00	0.00	586.20	1080.00	594.86	.03	.02	.00	331.74	8.66	215.00
7.83	80.00	0.00	0.00	586.20	1310.00	595.28	.04	.02	.00	377.07	9.08	215.00
7.83	10.00	592.10	591.70	586.00	730.00	594.05	.06	.00	.02	147.43	8.05	210.00
7.83	10.00	592.10	591.70	586.00	990.00	594.67	.06	.00	.01	141.52	8.67	210.00
7.83	10.00	592.10	591.70	586.00	1080.00	594.84	.06	.00	.01	142.74	8.84	210.00
7.83	10.00	592.10	591.70	586.00	1310.00	595.27	.07	.00	.01	146.82	9.27	210.00
7.83	10.00	592.10	591.70	586.00	730.00	594.06	.06	.01	.00	146.74	8.06	210.00
7.83	10.00	592.10	591.70	586.00	990.00	594.68	.06	.01	.00	141.18	8.68	210.00
7.83	10.00	592.10	591.70	586.00	1080.00	594.85	.06	.01	.00	142.43	8.85	210.00
7.83	10.00	592.10	591.70	586.00	1310.00	595.27	.07	.01	.00	146.59	9.27	210.00
7.84	35.00	0.00	0.00	586.20	730.00	594.09	.10	.04	.02	251.56	7.89	210.00
7.84	35.00	0.00	0.00	586.20	990.00	594.70	.08	.03	.01	242.09	8.50	210.00
7.84	35.00	0.00	0.00	586.20	1080.00	594.87	.08	.03	.01	244.14	8.67	210.00
7.84	35.00	0.00	0.00	586.20	1310.00	595.29	.08	.03	.01	250.56	9.09	210.00
7.85	40.00	592.40	592.80	586.40	730.00	594.11	.26	.10	.08	296.52	7.71	167.90
7.85	40.00	592.40	592.80	586.40	990.00	594.72	.17	.07	.05	253.74	8.32	210.00
7.85	40.00	592.40	592.80	586.40	1080.00	594.89	.16	.06	.04	246.03	8.49	210.00
7.85	40.00	592.40	592.80	586.40	1310.00	595.31	.15	.05	.03	232.45	8.91	210.00
7.85	25.00	592.40	592.80	586.40	730.00	594.37	.16	.14	.03	241.28	7.97	193.24
7.85	25.00	592.40	592.80	586.40	990.00	594.84	.15	.09	.01	233.17	8.44	210.00
7.85	25.00	592.40	592.80	586.40	1080.00	595.00	.14	.08	.01	230.56	8.60	210.00
7.85	25.00	592.40	592.80	586.40	1310.00	595.38	.14	.06	.00	226.66	8.98	210.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7.87	100.00	0.00	0.00	587.30	730.00	594.58	.07	.10	.03	416.40	7.28	346.87
7.87	100.00	0.00	0.00	587.30	990.00	595.04	.07	.10	.02	466.70	7.74	389.77
7.87	100.00	0.00	0.00	587.30	1080.00	595.18	.07	.09	.02	479.78	7.88	402.83
7.87	100.00	0.00	0.00	587.30	1310.00	595.56	.06	.09	.02	503.55	8.26	410.00
7.88	49.00	0.00	0.00	587.30	730.00	594.62	.07	.02	.00	399.99	7.32	349.76
7.88	49.00	0.00	0.00	587.30	990.00	595.07	.06	.02	.00	444.51	7.77	372.34
7.88	49.00	0.00	0.00	587.30	1080.00	595.22	.06	.02	.00	456.79	7.92	377.27
7.88	49.00	0.00	0.00	587.30	1310.00	595.59	.06	.02	.00	481.84	8.29	383.00
7.88	1.00	595.40	592.20	587.30	730.00	593.37	2.57	.00	1.25	730.00	6.07	12.00
7.88	1.00	595.40	592.20	587.30	990.00	596.15	.33	.00	0.00	339.01	8.85	358.20
7.88	1.00	595.40	592.20	587.30	1080.00	596.21	.31	.00	0.00	327.00	8.91	358.55
7.88	1.00	595.40	592.20	587.30	1310.00	596.30	.35	.00	0.00	336.56	9.00	359.04
7.89	77.00	595.40	592.20	587.30	730.00	594.41	2.57	1.05	.00	730.00	7.11	12.00
7.89	77.00	595.40	592.20	587.30	990.00	596.55	.10	.11	.07	163.81	9.25	400.52
7.89	77.00	595.40	592.20	587.30	1080.00	596.58	.12	.12	.06	171.35	9.28	400.68
7.89	77.00	595.40	592.20	587.30	1310.00	596.70	.14	.13	.06	176.72	9.40	401.32
7.90	50.00	0.00	0.00	587.37	730.00	596.08	.02	.02	.77	274.43	8.71	264.15
7.90	50.00	0.00	0.00	587.37	990.00	596.67	.02	.01	.02	303.03	9.30	366.63
7.90	50.00	0.00	0.00	587.37	1080.00	596.71	.03	.01	.03	324.75	9.34	375.21
7.90	50.00	0.00	0.00	587.37	1310.00	596.85	.03	.02	.03	374.77	9.48	399.15
7.93	150.00	0.00	0.00	587.58	730.00	596.10	.03	.02	.00	290.99	8.52	252.96
7.93	150.00	0.00	0.00	587.58	990.00	596.69	.03	.02	.00	323.83	9.11	329.93
7.93	150.00	0.00	0.00	587.58	1080.00	596.74	.03	.02	.00	347.56	9.16	340.15
7.93	150.00	0.00	0.00	587.58	1310.00	596.88	.04	.03	.00	400.49	9.30	367.22
7.99	300.00	0.00	0.00	588.00	730.00	596.16	.04	.06	.01	330.03	8.16	191.64
7.99	300.00	0.00	0.00	588.00	990.00	596.74	.04	.06	.01	385.19	8.74	194.25
7.99	300.00	0.00	0.00	588.00	1080.00	596.79	.05	.07	.01	415.25	8.79	194.48
7.99	300.00	0.00	0.00	588.00	1310.00	596.95	.07	.08	.01	485.66	8.95	199.41
8.08	400.00	0.00	0.00	588.10	730.00	596.26	.01	.07	.01	267.75	8.16	430.66
8.08	400.00	0.00	0.00	588.10	990.00	596.85	.01	.07	.01	316.52	8.75	470.81
8.08	400.00	0.00	0.00	588.10	1080.00	596.92	.02	.08	.01	340.28	8.82	475.57
8.08	400.00	0.00	0.00	588.10	1310.00	597.11	.02	.10	.01	396.35	9.01	489.18
8.15	400.00	0.00	0.00	589.70	730.00	596.33	.03	.08	.01	259.32	6.63	271.82
8.15	400.00	0.00	0.00	589.70	990.00	596.93	.04	.09	.01	306.31	7.23	283.99
8.15	400.00	0.00	0.00	589.70	1080.00	597.00	.04	.10	.01	329.25	7.30	285.46
8.15	400.00	0.00	0.00	589.70	1310.00	597.21	.05	.12	.01	383.00	7.51	289.83
8.23	400.00	0.00	0.00	588.90	730.00	596.49	.13	.20	.05	412.29	7.59	191.11
8.23	400.00	0.00	0.00	588.90	990.00	597.07	.12	.19	.04	471.40	8.17	192.97
8.23	400.00	0.00	0.00	588.90	1080.00	597.17	.13	.21	.05	502.39	8.27	193.26
8.23	400.00	0.00	0.00	588.90	1310.00	597.41	.16	.25	.05	574.71	8.51	194.51

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
8.31	400.00	0.00	0.00	589.70	730.00	596.93	.21	.49	.04	645.65	7.23	76.25
8.31	400.00	0.00	0.00	589.70	990.00	597.52	.26	.51	.07	823.18	7.82	89.96
8.31	400.00	0.00	0.00	589.70	1080.00	597.64	.28	.55	.08	885.58	7.94	105.93
8.31	400.00	0.00	0.00	589.70	1310.00	597.96	.34	.64	.09	1031.86	8.26	145.59
8.31	49.00	0.00	0.00	589.60	730.00	597.01	.19	.06	.00	643.06	7.41	79.63
8.31	49.00	0.00	0.00	589.60	990.00	597.61	.24	.06	.01	822.43	8.01	113.98
8.31	49.00	0.00	0.00	589.60	1080.00	597.74	.26	.07	.01	884.20	8.14	131.06
8.31	49.00	0.00	0.00	589.60	1310.00	598.08	.30	.08	.01	1026.27	8.48	172.15
8.31	1.00	0.00	0.00	589.60	730.00	597.03	.17	.00	.01	358.79	7.43	78.07
8.31	1.00	0.00	0.00	589.60	990.00	597.63	.22	.00	.01	446.76	8.03	103.72
8.31	1.00	0.00	0.00	589.60	1080.00	597.78	.24	.00	.01	476.65	8.18	121.19
8.31	1.00	0.00	0.00	589.60	1310.00	598.12	.27	.00	.01	539.68	8.52	126.15
8.33	95.00	598.20	594.60	589.60	730.00	598.96	.03	1.78	0.00	216.38	9.36	256.65
8.33	95.00	598.20	594.60	589.60	990.00	599.29	.04	1.48	0.00	266.36	9.69	256.65
8.33	95.00	598.20	594.60	589.60	1080.00	599.39	.04	1.42	0.00	282.86	9.79	256.65
8.33	95.00	598.20	594.60	589.60	1310.00	599.61	.05	1.28	0.00	323.49	10.01	256.65

SECTION NUMBER	DISCHARGE CFS	CWSEL	CWSEL DIFF EACH Q	CWSEL DIFF EACH SECTION	CWSEL-WSELK	TOPWID	T.W. DIFF	LENGTH
7.239	1100.000	591.720	0.000	0.000	0.000	189.247	0.000	100.000
7.239	1510.000	592.240	.520	0.000	0.000	214.895	-25.648	100.000
7.239	1640.000	592.370	.130	0.000	0.000	221.307	-32.060	100.000
7.239	1980.000	592.720	.350	0.000	0.000	238.570	-49.324	100.000
7.248	1100.000	591.816	0.000	.096	0.000	198.929	0.000	50.000
7.248	1510.000	592.350	.534	.110	0.000	225.277	-26.348	50.000
7.248	1640.000	592.485	.134	.115	0.000	231.895	-32.966	50.000
7.248	1980.000	592.838	.354	.118	0.000	249.352	-50.423	50.000
7.254	1100.000	593.386	0.000	1.570	0.000	285.999	0.000	30.000
7.254	1510.000	593.847	.461	1.497	0.000	285.999	-.000	30.000
7.254	1640.000	593.966	.118	1.481	0.000	285.999	-.000	30.000
7.254	1980.000	594.240	.274	1.401	0.000	285.999	-.000	30.000
7.263	1100.000	593.392	0.000	.006	0.000	285.999	0.000	50.000
7.263	1510.000	593.855	.463	.008	0.000	285.999	-.000	50.000
7.263	1640.000	593.974	.119	.009	0.000	285.999	-.000	50.000
7.263	1980.000	594.250	.276	.010	0.000	285.999	-.000	50.000
7.348	1100.000	593.458	0.000	.066	0.000	140.528	0.000	450.000
7.348	1510.000	593.939	.481	.084	0.000	141.713	-1.185	450.000
7.348	1640.000	594.064	.125	.090	0.000	142.022	-1.494	450.000
7.348	1980.000	594.355	.291	.105	0.000	142.728	-2.201	450.000
7.396	1100.000	593.494	0.000	.036	0.000	107.833	0.000	250.000
7.396	1510.000	593.985	.491	.046	0.000	115.219	-7.386	250.000
7.396	1640.000	594.113	.128	.049	0.000	117.177	-9.343	250.000
7.396	1980.000	594.414	.301	.059	0.000	121.762	-13.929	250.000
7.443	1100.000	593.598	0.000	.104	0.000	113.659	0.000	250.000
7.443	1510.000	594.140	.542	.155	0.000	115.319	-1.660	250.000
7.443	1640.000	594.285	.145	.171	0.000	115.763	-2.104	250.000
7.443	1980.000	594.629	.345	.215	0.000	116.818	-3.160	250.000
7.491	1100.000	593.666	0.000	.068	0.000	114.999	0.000	250.000
7.491	1510.000	594.225	.559	.085	0.000	114.999	-.000	250.000
7.491	1640.000	594.375	.150	.091	0.000	114.999	-.000	250.000
7.491	1980.000	594.734	.359	.105	0.000	114.999	-.000	250.000

7.519	1100.000	593.726	0.000	.060	0.000	174.643	0.000	150.000
7.519	1510.000	594.320	.594	.095	0.000	199.173	-24.530	150.000
7.519	1640.000	594.483	.163	.108	0.000	220.466	-45.823	150.000
7.519	1980.000	594.881	.397	.147	0.000	277.258	-102.615	150.000
7.595	730.000	593.911	0.000	.185	0.000	399.999	0.000	400.000
7.595	990.000	594.548	.637	.228	0.000	399.999	-.000	400.000
7.595	1080.000	594.724	.176	.240	0.000	399.999	-.000	400.000
7.595	1310.000	595.149	.425	.268	0.000	399.999	-.000	400.000
7.642	730.000	593.932	0.000	.021	0.000	613.754	0.000	250.000
7.642	990.000	594.568	.636	.020	0.000	627.999	-14.245	250.000
7.642	1080.000	594.744	.177	.021	0.000	627.999	-14.245	250.000
7.642	1310.000	595.171	.426	.022	0.000	627.999	-14.245	250.000
7.689	730.000	593.944	0.000	.012	0.000	521.765	0.000	250.000
7.689	990.000	594.578	.634	.010	0.000	579.999	-58.234	250.000
7.689	1080.000	594.754	.176	.010	0.000	579.999	-58.234	250.000
7.689	1310.000	595.180	.426	.009	0.000	579.999	-58.234	250.000
7.775	730.000	594.001	0.000	.058	0.000	349.999	0.000	450.000
7.775	990.000	594.626	.625	.048	0.000	349.999	-.000	450.000
7.775	1080.000	594.801	.175	.047	0.000	349.999	-.000	450.000
7.775	1310.000	595.224	.423	.044	0.000	349.999	-.000	450.000
7.812	730.000	594.030	0.000	.029	0.000	241.415	0.000	200.000
7.812	990.000	594.654	.625	.028	0.000	254.999	-13.584	200.000
7.812	1080.000	594.829	.175	.028	0.000	254.999	-13.584	200.000
7.812	1310.000	595.253	.423	.028	0.000	254.999	-13.584	200.000
7.828	730.000	594.064	0.000	.034	0.000	214.999	0.000	80.000
7.828	990.000	594.682	.618	.028	0.000	214.999	-.000	80.000
7.828	1080.000	594.856	.174	.027	0.000	214.999	-.000	80.000
7.828	1310.000	595.278	.422	.025	0.000	214.999	-.000	80.000
7.829	730.000	594.049	0.000	-.014	0.000	209.999	0.000	10.000
7.829	990.000	594.670	.621	-.012	0.000	209.999	-.000	10.000
7.829	1080.000	594.844	.174	-.012	0.000	209.999	-.000	10.000
7.829	1310.000	595.266	.421	-.012	0.000	209.999	-.000	10.000
7.831	730.000	594.063	0.000	.013	0.000	209.999	0.000	10.000
7.831	990.000	594.679	.617	.009	0.000	209.999	-.000	10.000
7.831	1080.000	594.853	.174	.009	0.000	209.999	-.000	10.000
7.831	1310.000	595.274	.420	.008	0.000	209.999	-.000	10.000
7.838	730.000	594.085	0.000	.022	0.000	209.999	0.000	35.000
7.838	990.000	594.699	.614	.020	0.000	209.999	-.000	35.000
7.838	1080.000	594.873	.173	.020	0.000	209.999	-.000	35.000
7.838	1310.000	595.292	.420	.019	0.000	209.999	-.000	35.000
7.846	730.000	594.109	0.000	.024	0.000	167.904	0.000	40.000
7.846	990.000	594.720	.610	.020	0.000	209.999	-42.095	40.000
7.846	1080.000	594.893	.173	.020	0.000	209.999	-42.095	40.000
7.846	1310.000	595.311	.418	.019	0.000	209.999	-42.095	40.000
7.850	730.000	594.370	0.000	.261	0.000	193.241	0.000	25.000
7.850	990.000	594.842	.472	.122	0.000	209.999	-16.758	25.000
7.850	1080.000	594.995	.153	.102	0.000	209.999	-16.758	25.000
7.850	1310.000	595.379	.384	.068	0.000	209.999	-16.758	25.000
7.869	730.000	594.585	0.000	.214	0.000	346.874	0.000	100.000
7.869	990.000	595.036	.451	.194	0.000	389.766	-42.892	100.000
7.869	1080.000	595.185	.149	.189	0.000	402.831	-55.957	100.000
7.869	1310.000	595.564	.379	.185	0.000	409.999	-63.125	100.000

7.878	730.000	594.619	0.000	.034	0.000	349.782	0.000	49.000
7.878	990.000	595.070	.451	.034	0.000	372.341	-22.578	49.000
7.878	1080.000	595.218	.148	.033	0.000	377.271	-27.508	49.000
7.878	1310.000	595.592	.374	.029	0.000	382.999	-33.237	49.000
7.879	730.000	593.366	0.000	-1.253	0.000	12.000	0.000	1.000
7.879	990.000	596.148	2.782	1.078	0.000	358.205	-346.205	1.000
7.879	1080.000	596.210	.062	.992	0.000	358.553	-346.553	1.000
7.879	1310.000	596.297	.087	.704	0.000	359.043	-347.043	1.000
7.893	730.000	594.413	0.000	1.047	0.000	12.000	0.000	77.000
7.893	990.000	596.555	2.142	.407	0.000	400.517	-388.517	77.000
7.893	1080.000	596.584	.029	.374	0.000	400.675	-388.675	77.000
7.893	1310.000	596.697	.114	.401	0.000	401.317	-389.317	77.000
7.903	730.000	596.080	0.000	1.667	0.000	264.150	0.000	50.000
7.903	990.000	596.671	.591	.116	0.000	366.633	-102.483	50.000
7.903	1080.000	596.714	.043	.130	0.000	375.206	-111.056	50.000
7.903	1310.000	596.851	.137	.153	0.000	399.153	-135.003	50.000
7.931	730.000	596.102	0.000	.022	0.000	252.959	0.000	150.000
7.931	990.000	596.691	.589	.020	0.000	329.935	-76.976	150.000
7.931	1080.000	596.736	.045	.022	0.000	340.147	-87.188	150.000
7.931	1310.000	596.878	.142	.028	0.000	367.221	-114.262	150.000
7.988	730.000	596.157	0.000	.055	0.000	191.637	0.000	300.000
7.988	990.000	596.742	.585	.051	0.000	194.254	-2.617	300.000
7.988	1080.000	596.794	.052	.057	0.000	194.481	-2.844	300.000
7.988	1310.000	596.950	.156	.071	0.000	199.410	-7.773	300.000
8.078	730.000	596.258	0.000	.101	0.000	430.663	0.000	400.000
8.078	990.000	596.851	.594	.110	0.000	470.814	-40.151	400.000
8.078	1080.000	596.918	.067	.125	0.000	475.569	-44.906	400.000
8.078	1310.000	597.110	.191	.160	0.000	489.179	-58.516	400.000
8.154	730.000	596.330	0.000	.072	0.000	271.815	0.000	400.000
8.154	990.000	596.926	.596	.075	0.000	283.993	-12.178	400.000
8.154	1080.000	597.002	.076	.084	0.000	285.463	-13.648	400.000
8.154	1310.000	597.213	.211	.103	0.000	289.826	-18.010	400.000
8.229	730.000	596.485	0.000	.155	0.000	191.110	0.000	400.000
8.229	990.000	597.074	.589	.148	0.000	192.970	-1.860	400.000
8.229	1080.000	597.165	.091	.163	0.000	193.258	-2.148	400.000
8.229	1310.000	597.407	.242	.194	0.000	194.512	-3.402	400.000
8.305	730.000	596.931	0.000	.445	0.000	76.252	0.000	400.000
8.305	990.000	597.517	.587	.443	0.000	89.964	-13.712	400.000
8.305	1080.000	597.644	.126	.478	0.000	105.932	-29.680	400.000
8.305	1310.000	597.957	.313	.550	0.000	145.587	-69.336	400.000
8.314	730.000	597.007	0.000	.076	0.000	79.629	0.000	49.000
8.314	990.000	597.607	.601	.090	0.000	113.981	-34.352	49.000
8.314	1080.000	597.742	.135	.099	0.000	131.061	-51.432	49.000
8.314	1310.000	598.078	.335	.121	0.000	172.152	-92.524	49.000
8.315	730.000	597.031	0.000	.024	0.000	78.068	0.000	1.000
8.315	990.000	597.635	.603	.027	0.000	103.720	-25.651	1.000
8.315	1080.000	597.775	.141	.033	0.000	121.186	-43.117	1.000
8.315	1310.000	598.124	.349	.046	0.000	126.149	-48.081	1.000
8.333	730.000	598.957	0.000	1.926	0.000	256.649	0.000	95.000
8.333	990.000	599.295	.338	1.660	0.000	256.649	-.000	95.000
8.333	1080.000	599.392	.098	1.617	0.000	256.649	-.000	95.000
8.333	1310.000	599.614	.221	1.489	0.000	256.649	-.000	95.000

DATA FOR LAST CROSS SECTION

PROFILE	TYPE ENC	TARGET	TOP WIDTH AREA-ACRES	TOP WIDTH AREA-DIFF
1	0.000	295.000	33.425	0.000
2	0.000	295.000	36.654	3.230
3	0.000	295.000	37.145	3.720
4	0.000	295.000	38.384	4.959

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**********************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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**** 7000 SCOPE 2.1 LVL  221  05/06/77  02.54.41  05/23/77      77143

SYS DEVICES 819/ 4/PF FLS=200K FLL=764K MXS=160K MXL=456K MXB=456B

HH.MM.SS CPU SECOND ORIGIN
          08.41.33.MFA. ::    20PPU CBR73 B*W LYN ECS-2CPUS R.D 06.43
08.41.20 00000.007 MFZ.     -SOUJ066,T10,CP70.   SOUTHGATE FIS
08.41.20 00000.008 JOB.     -CHARGE.810-0037-45-78-5566,JANDA,001,D,JANDA.
08.41.23 00000.052 JOB.     -ATTACH(HEC2,HEC2PROD,ID=HEC,CY=1)
08.41.23 00000.057 MFZ.        PF254 - CYCLE    1 ATTACHED FROM SN=SYSTEM
08.41.23 00000.057 LOD.     -HEC2(PL=99999).
08.41.24 00000.478 MFZ.        LD610 - FLS REQUIRED TO LOAD - 0025222 OU.COG
08.41.24 00000.488 MFZ.        LD603 - EXECUTION INITIATED OS.EXP
08.41.24 00000.489 USR.       FORTRAN LIBRARY 217-MODIFIED 03/16/76
08.41.51 00003.531 USR.          STOP
08.41.51 00003.531 USR.           3.041 CP SECONDS EXECUTION TIME
08.41.51 00003.534 MFZ.        RM770 - MAXIMUM ACTIVE FILES                    4
08.41.51 00003.534 MFZ.        RM771 - OPEN/CLOSE CALLS                       24
08.41.51 00003.534 MFZ.        RM772 - DATA TRANSFER CALLS                 9,439
08.41.51 00003.535 MFZ.        RM773 - CONTROL/POSITIONING CALLS              26
08.41.51 00003.535 MFZ.        RM774 - BM DATA TRANSFER CALLS                499
08.41.51 00003.535 MFZ.        RM775 - BM CONTROL/POSITIONING CALLS           51
08.41.51 00003.535 MFZ.        RM776 - QUEUE MANAGER CALLS                   100
08.41.51 00003.535 MFZ.        RM777 - RECALL CALLS                           53
08.41.51 00003.536 MFZ.        BWMSG - NUMBER OF TAPES MOUNTED
08.41.51 00003.536 MFZ.        SRU                   4.310  SRU
08.41.51 00003.536 MFZ.        SCM                 167.305  KWS
08.41.51 00003.537 MFZ.        I/O                   0.106  MW
08.41.51 00003.537 MFZ.        RMS                   0.171  MWS
08.41.51 00003.537 MFZ.        USER                  2.315  SEC
08.41.51 00003.537 MFZ.        JOB                   3.539  SEC
08.41.51 00003.538 MFZ.        SC050 - 000044 SC/LC SWAPS
08.41.51 00003.538 MFZ.     SOUJ085   SOUJ085
08.41.51.EJ  END OF JOB
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CITY OF SOUTHGATE

FLOOD INSURANCE STUDY

HYDRAULIC ANALYSIS OF FRANK & POET DRAIN

February 2, 1977

J&A File #5555-66

HYDRAULIC ANALYSIS

Introduction

The Frank & Poet Drain carries discharge from the Detroit Metropolitan Wayne County Airport and Romulus Township before reaching the southwest section of the City of Southgate. It has a drainage area of approximately 12.80 square miles as it approaches the western boundary of Southgate at Allen Road. The study includes approximately one mile of the Frank & Poet from Allen Road at the western corporate boundary of Pennsylvania Road to the southern corporate boundary. The flows were determined by analysis of drainage and retention patterns from the Detroit Metropolitan Wayne County Airport to Lake Erie. The flows have been approved by the Michigan Department of Natural Resources.

Method of Analysis

The flood profiles were calculated by the HEC-2 computer program developed by the U.S. Corps of Engineers. All bridges have been modeled by the requirements of the HEC-2 normal and special bridge routines.

Variables and Coefficients

The roughness factors (Manning's "n") were determined by comparing descriptions in V. T. Chow's Open-Channel Hydraulics (Reference 1) with photographs and field descriptions taken in Southgate by survey crews in October, 1975. These descriptions were supplemented by field reconnaissance in March, 1976, and September, 1976, and are indicative of summer conditions.

In order to reflect the generally gradual changes in cross-section geometry, the expansion and contraction coefficients used in this study were .3 and .5, respectively.

Starting Conditions

A convergence method was utilized to generate a starting water-surface elevation. These starting profiles were begun .1 miles downstream of the Pennsylvania Road Bridge and inserted at the downstream face for the principal HEC-2 run. Station was recorded in river miles from the mouth of the Frank & Poet Drain at the Detroit River.

why not 2000 or 2500 ft or 500 ft D/S of Grange Rd.

Discussion

The flood plain along the Frank & Poet Drain within the corporate boundaries of Southgate is principally occupied by residential development. The Southgate Residential Training Center has been constructed just north of Pennsylvania Road with the Frank & Poet Drain relocated to the east. The new buildings were considered as encroachments in the flood plain to the west of the drain. The confluence of the Sutliff-Kenope Drain has also been relocated and the drain recently enclosed. The Southgate Kennels occupy the flood plain downstream of the Dix-Toledo Highway with overland rather than weir flow occurring at Dix-Toledo Highway. Scattered commercial development as well as residential dwellings occupy the remaining land west of Dix-Toledo Highway and east of Allen Road. The study ends at the western boundary of Southgate at Allen Road.

Special Problems

The special problems encountered in Southgate on the Frank & Poet Drain exist at the Dix-Toledo Bridge and the Allen Road Bridge. These two structures are quite long, 77 feet and 95 feet, respectively. Due to the large breadth of weir, it was decided to use the normal bridge routine in order to model the overland flow rather than weir flow. The HEC-2 program, therefore, determined that critical depth existed at the downstream face. This determination seems quite reasonable considering the behavior of flow at the downstream edge of the bridges where critical depth appears above the roadway elevation. The continuity discrepancy can be explained by considering the bank stationing of the one-foot downstream section and the stationing of the bridge face. The topwidth is consistent with both sections thereby verifying continuity of weir flow and overland flow.

City of Southgate
Frank & Poet Drain
5555-66-1
MSC 1-3-77

Cross Section Location

Cross Section	SECNO	J&A SECNO	Location
A	7.2386	VS-1	50' d/s of Pennsylvania Road Bridge
B	7.2481	BS-2	d/s Face of Pennsylvania Road Bridge
C	7.3484	VS-3	500' ± u/s of Pennsylvanie Road Bridge
D	7.4431	VS-4	1000' ± u/s of Pennsylvania Road Bridge
E	7.4905	VS-5	50' d/s of Intersection of Sutliff-Kenope Drain
F	7.5946	VS-6	500' ± u/s of Intersection of Sutliff-Kenope Drain
G	7.7745	VS-7	290' ± d/s of Southgate Kennel Bridge #1
H	7.8124	VS-8	90' d/s of Southgate Kennel Bridge #1
I	7.8294	BS-9	d/s Face of Southgate Kennel Bridge #1
J	7.8455	BS-10	d/s Face of Southgate Kennel Bridge #2
K	7.8692	VS-11	50' d/s of Dix-Toledo Highway Bridge
L	7.8786	BS-12	d/s Face of Dix-Toledo Highway Bridge
M	7.9879	VS-13	500' ± u/s of Dix-Toledo Highway Bridge
N	8.0779	VS-14	975' ± u/s of Dix-Toledo Highway Bridge
O	8.1536	VS-15	850' ± d/s of Allen Road Bridge
P	8.2294	VS-16	450' d/s of Allen Road Bridge
Q	8.3052	VS-17	50' d/s of Allen Road Bridge
R	8.3146	BS-18	d/s Face of Allen Road Bridge

References

1. Chow, Ven Te, Open-Channel Hydraulics, pp 101-123, McGraw-Hill, 1959.

Johnson & Anderson, Inc.
Consulting Engineers
P.O. Box 1166 2300 Dixie Highway Pontiac, Michigan 48056

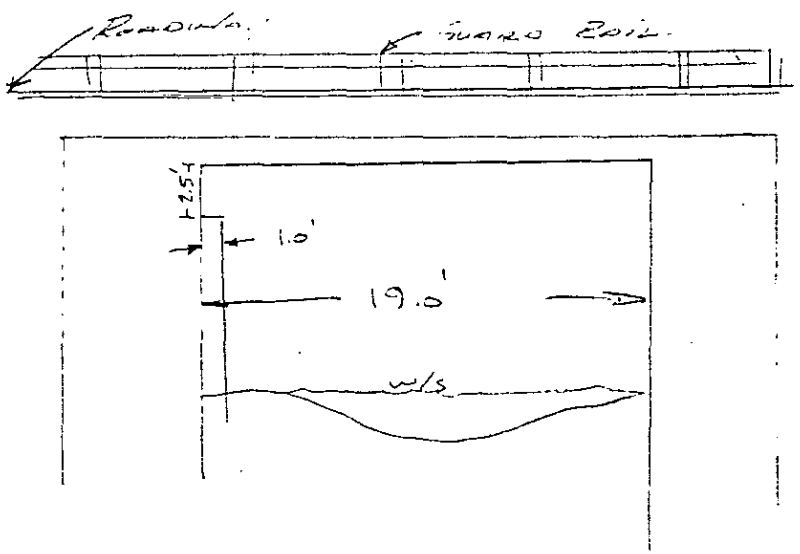
HYDRAULIC STRUCTURAL DATA

Code No. 5555-66-01-

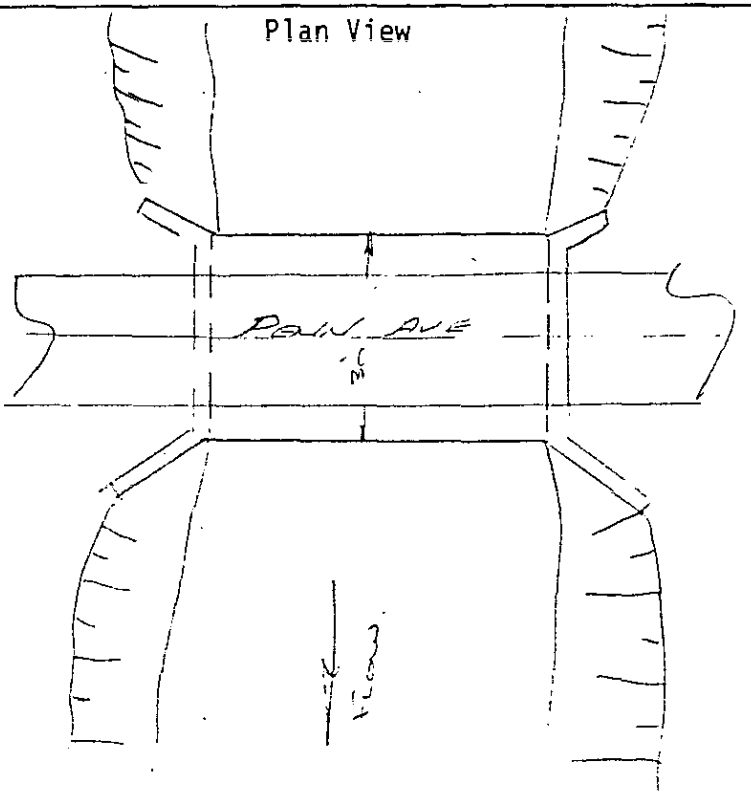
Job Name: CITY OF SOUTHGATE F.I.S.			By: Mc INNES
Date: 10-24-75	Feature: Box Culv		Water Course: FRANK & POET
Remarks: CONC. BOX CULV. WITH ARMCO STEEL GUARD RAIL			
PENNSYLVANIA ROAD			
			Plat, "A" - S-8
Width of Piers: —	Pier Shape: —	No. of Piers: —	Area:
Water Elevation: 585.01	Length: 19'	Width of Deck: 30'	Skew: 0°

FIELD SKETCH

Profile View

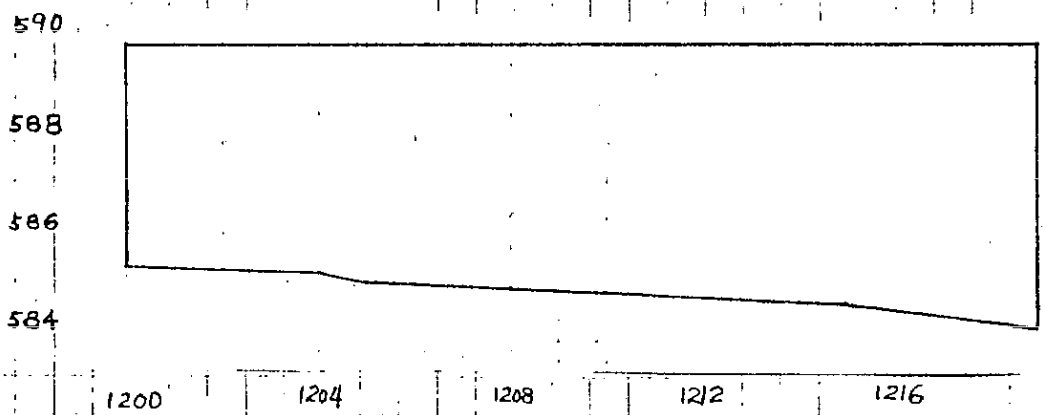


Plan View



JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS

BY MSC DATE 13/12/26 JOB DESCRIPTION EIS - City of Southgate SHEET 1 OF
SUBJECT Penn Ave. Culvert (BS # 2) JOB NO. 5555-66-01



Area :- $A = 95.6 \text{ ft}^2$

Wetted Perimeter :- $P = 43.9 \text{ ft}$

Hydraulic Radius :- $R = A/P = 2.18 \text{ ft.}$

Max. Depth :- $D = 5.8 \text{ ft.}$

Bottom Width :- $BWC = 95.6/5.8 = 16.48 \text{ ft.}$

Length :- $L = 30.0 \text{ ft.}$

Manning Coeff. :- $n = 0.018$ (with Sand Bottom)

Entrance Loss :- $K_e = 0.40$

$$K_f = \frac{29 n^2 L}{R^{4/3}} = 0.10$$

$$\Sigma KOR = 1 + K_e + K_f = 1 + 0.4 + 0.1 = 1.50$$

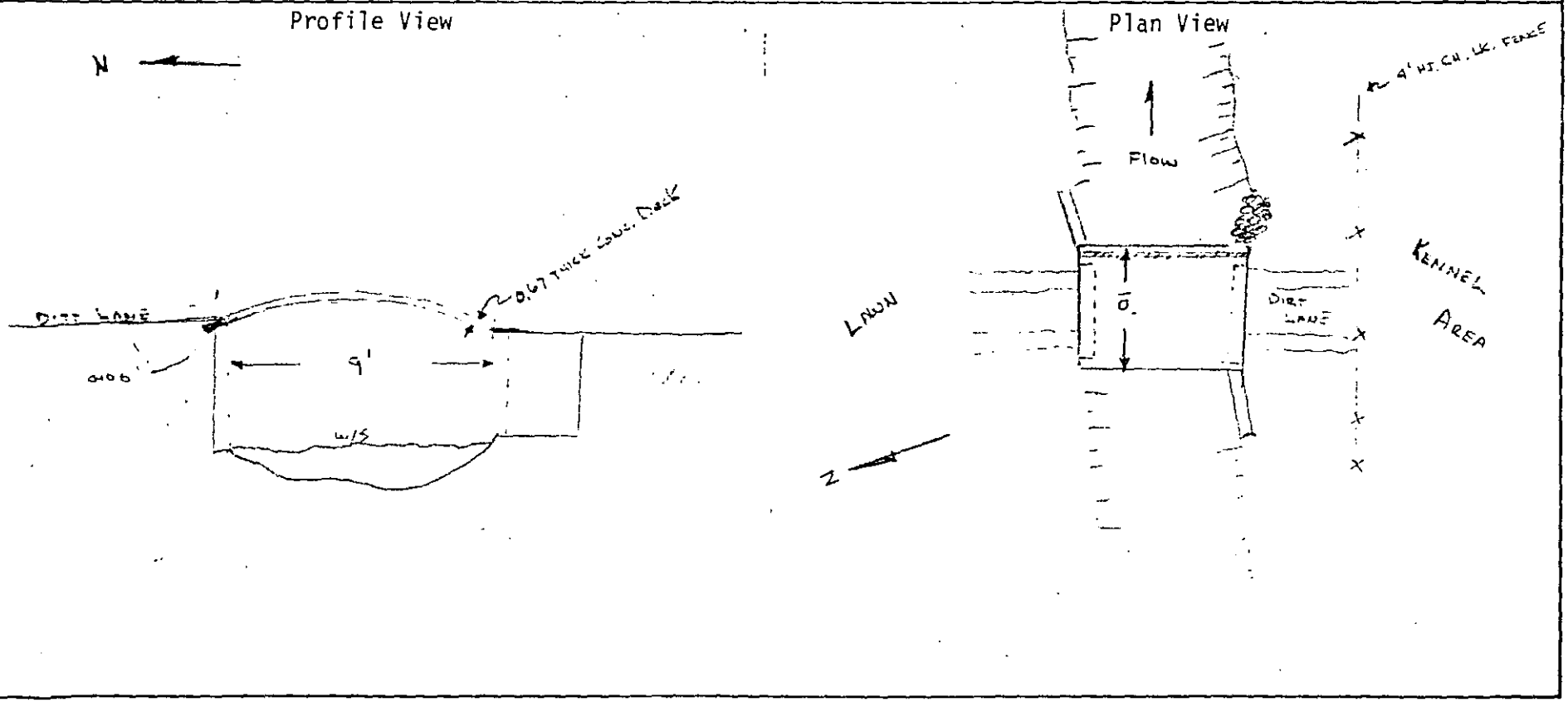
Johnson & Anderson, Inc.
Consulting Engineers
P.O. Box 1166 2300 Dixie Highway Pontiac, Michigan 48056

HYDRAULIC STRUCTURAL DATA

Code No. 5555-66-01 #9

Job Name: City of Southgate F.I.S Frank & Poet Drain			By: R. Moses
Date: 10-30-75	Feature: Abandoned Concrete Drive-way Bridge		Water Course: Frank & Poet Drain
Remarks: Left - Lawn Area Right - Field & Lawn, This is Southgate Kennels			
Hi Water Mark Has been over the top of this Bridge			
Per Owner - This Bridge is not used now. Photo: 33-36 Roll "A"			
Width of Piers: —	Pier Shape: —	No. of Piers: —	Area: —
Water Elevation: 587.5	Length: 9' 10"	Width of Deck: 20' 9"	Skew: —

FIELD SKETCH



Johnson & Anderson, Inc.
Consulting Engineers
P.O. Box 1166 2300 Dixie Highway Pontiac, Michigan 48056

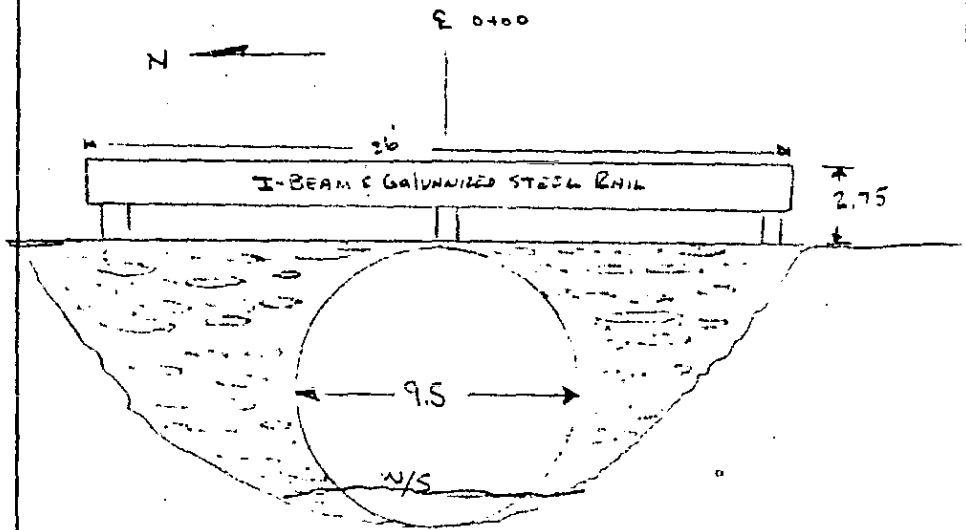
HYDRAULIC STRUCTURAL DATA

Code No. 5555-66-01 10

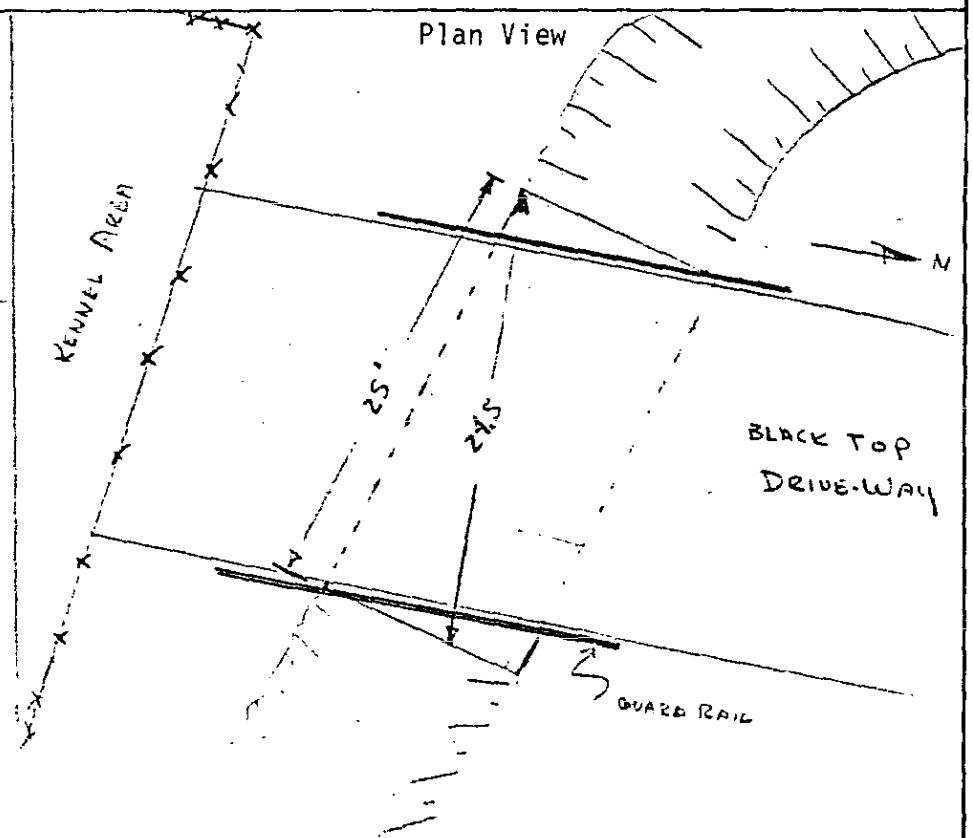
Job Name: City of Southgate F.I.S. Frank & Post Drain			By: R. Moses
Date: 10-20-75	Feature: Round Concrete Culv.		Water Course: Frank & Post Drain
Remarks: 150'± East of Dix Hwy on Southgate Kennel Property			
			Photo "2" 1" = 4"
Width of Piers:	Pier Shape: —	No. of Piers: —	Area: —
Water Elevation: 587.6	Length: 25'	Width of Deck: —	Skew:

FIELD SKETCH

Profile View



Plan View



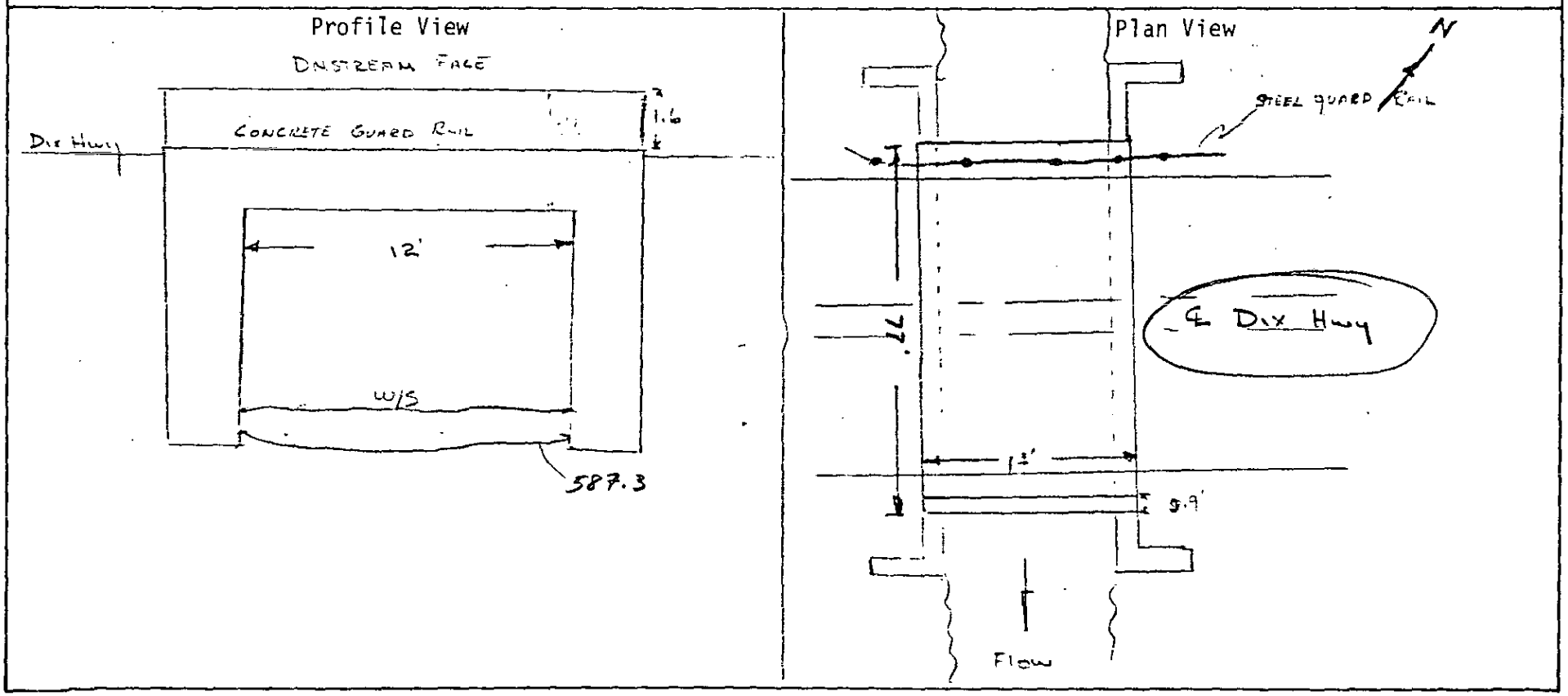
Johnson & Anderson, Inc.
Consulting Engineers
P. O. Box 1166 2300 Dixie Highway Pontiac, Michigan, 48056

HYDRAULIC STRUCTURAL DATA

Code No. 5555-66-01-12

Job Name: City of Southgate RT 5.			By: R. Moses
Date: Oct 27-75	Feature: Concrete Box Culvert		Water Course: Frank & Poet Drain
Remarks: Concrete Box Culvert with Concrete Guard Rail on Downstream Face			
Steel Guard Rail on Upstream Face			
			Photo "B" 9-12
Width of Piers: —	Pier Shape: —	No. of Piers: —	Area: —
Water Elevation: 588.1	Length: 12'	Width of Deck: 77'	Skew: — 0°

FIELD SKETCH



Johnson & Anderson, Inc.
Consulting Engineers
P.O. Box 1166 2300 Dixie Highway Pontiac, Michigan 48056

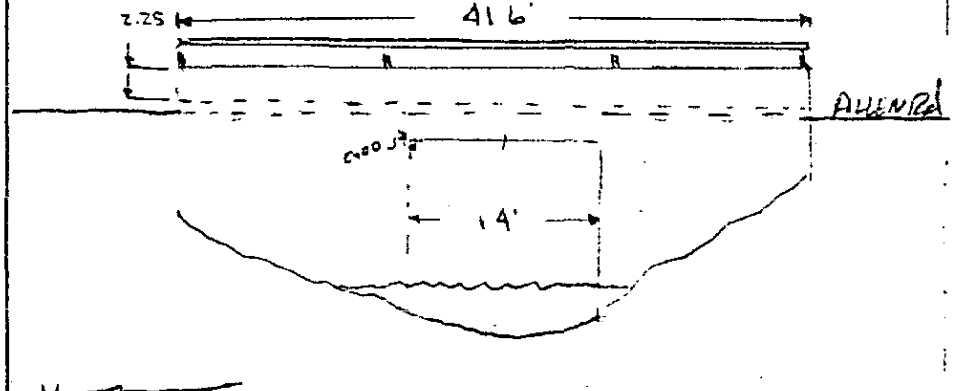
HYDRAULIC STRUCTURAL DATA

Code No. 5555-66-01-16

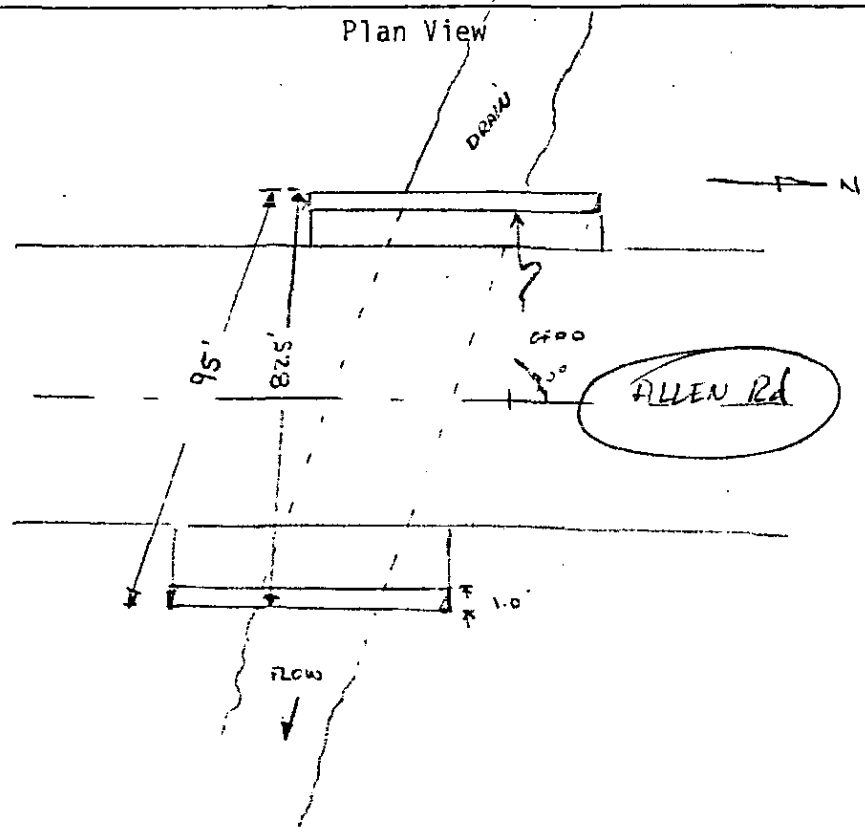
Job Name: City of Southgate F.I.S			By: R. Moses
Date: Nov. 1-75	Feature: Concrete Box Culvert		Water Course: French & Poet Drain
Remarks: Bridge North of Leroy St on Allen Rd.			
			Photo: "B" 33-36
Width of Piers: —	Pier Shape: —	No. of Piers: —	Area: —
Water Elevation: 590.4	Length: 14'	Width of Deck: 82.5'	Skew:

FIELD SKETCH

Profile View

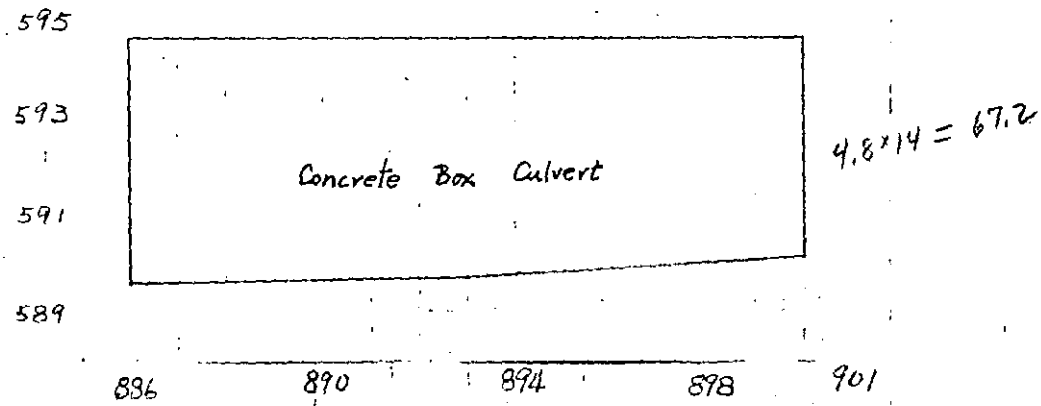


Plan View



JOHNSON & ANDERSON, INC.
CONSULTING ENGINEERS

BY MSC DATE 12/15/76 JOB DESCRIPTION FIS - Southgate SHEET 1 OF
SUBJECT Allen Rd. Bridge CBS-182 JOB NO. 5555-66-01



Skew :- Skew = 0.87

Area :- $A = 67.2 \times 0.87 = 58.46 \text{ ft}^2$

Wetted Perimeter :- $P = 33.97$ ft (after skew)

Hydraulic Radius :- $R = A/P = 1.72$ ft.

Max. Depth :- $D = 5.0$ ft.

Length :- $L = 95$ ft.

Bottom Width :- $BWC = 58.46/5.0 = 11.69$ ft

Manning Coefficient :- $n = 0.018$ (with sand bottom)

Entrance Loss :- $K_e = 0.50$

$$K_f = \frac{29n^2L}{R^{4/3}} = 0.43$$

$$\Sigma K\Phi R = 1 + K_e + K_f = 1 + 0.5 + 0.43 = 1.93$$

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 $$$$$$    $$$$$ $  $$    $$  $$$$$$$$   $$$$$ $  $$$$$$$$   $$$$$$
$$    $$  $$    $   $$    $$     $$     $$    $        $$  $$    $$
$$        $$   $$$  $$    $$     $$     $$   $$$       $$        $$
 $$$$$$   $$  $ $$  $$    $$     $$     $$  $ $$       $$       $$$$
       $$ $$ $$ $$  $$    $$     $$     $$ $$ $$      $$          $$
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       $$ $$$   $$  $$    $$     $$     $$$   $$    $$          $$
$$    $$   $    $$  $$    $$  $$ $$      $    $$   $$          $$    $$
 $$$$$$   $ $$$$$    $$$$$$    $$$       $ $$$$$   $$$$$$$$   $$$$$$
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6.63

Encroachments for SECNO 7.775 fit 1:4 Expansion and 1:1 Contraction
(Section 7)

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 $$$$$$    $$$$$ $  $$    $$  $$$$$$$$   $$$$$ $  $$$$$$$$   $$$$$$
$$    $$  $$    $   $$    $$     $$     $$    $         $$  $$    $$
$$        $$   $$$  $$    $$     $$     $$   $$$       $$         $$
 $$$$$$   $$  $ $$  $$    $$     $$     $$  $ $$      $$       $$$$
      $$  $$ $$ $$  $$    $$     $$     $$ $$ $$     $$           $$
      $$  $$ $  $$  $$    $$     $$     $$ $  $$    $$            $$
      $$  $$$   $$  $$    $$     $$     $$$   $$   $$             $$
$$    $$   $    $$  $$    $$  $$ $$      $    $$  $$        $$    $$
 $$$$$$   $ $$$$$    $$$$$$    $$$      $ $$$$$   $$$$$$$$   $$$$$$
SOUJOZ3  JANDA              04/01/77  09.23.34  7600   JO
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PROGRAM WILL BE ENTERED AT HEC2 (373) SCM LENGTH 146657 LCM LENGTH 0

BLOCK	ADDRESS	LENGTH
/ALPHA/	100	101
HEC2	201	11606
CARD	12007	1673
SUMPO	13702	1063
CHIMP	14765	1645
DC	16632	703
FLODIS	17535	444
BLFLO	20201	1003
ADDPTS	21204	334
BWEIR	21540	1356
YCRIT	23116	122
SLARA	23240	256
SCALE	23516	246
XSEC	23764	1264
PROF	25250	1142
EXP	26412	102
/FCL.C./	26514	23
/Q8.IO./	26537	137
/HEADING/	26676	16
OUTC=	26714	1017
Q8NTRY=	27733	1
COMIO=	27734	44
ENDFIL=	30000	45
FECMSK=	30045	41
FLTIN=	30106	154
FLTOUT=	30262	314
FMTAP=	30576	372
FORSYS=	31170	556
FORUTL=	31746	16
GETFIT=	31764	43
INCOM=	32027	257
INPC=	32306	173
KODER=	32501	467
KRAKER=	33170	454
OUTCOM=	33644	203
REWIND=	34047	35
GOTOER=	34104	14
ALOG	34120	77
ITOJ*	34217	52
SYSAID=	34271	1
SYS=1ST	34272	62
XTOY*	34354	55
//	34431	112226

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HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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C
1       CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2       10-YR FLOOD 1100 CFS
T3       FRANK AND POET DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -0.       2.       -0.       -0. -0.000000     -0.00     -0.0      -0.    591.720    -0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1.000    -0.000    -1.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

J3      1.000    10.000    11.000    12.000    14.000     8.000     4.000    -0.000    -0.000    -0.000
NC       .050      .050      .037      .300      .500    -0.000    -0.000    -0.000    -0.000    -0.000
QT      4.000  1100.000  1510.000  1640.000  1980.000    -0.000    -0.000    -0.000    -0.000    -0.000
NH      5.000      .035  1000.000      .050  1067.000      .037  1085.000      .050  1100.000      .035
NH   1500.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

X1      7.239    20.000  1064.000  1100.000   100.000   100.000   100.000    -0.000    -0.000    -0.000
GR    595.100     0.000   594.900   100.000   593.300   200.000   594.200   300.000   594.500   400.000
GR    594.500   500.000   594.000   600.000   595.000   700.000   594.000   800.000   591.900   900.000
GR    589.800  1000.000   588.700  1064.000   584.400  1067.000   584.000  1078.000   584.200  1085.000
GR    593.000  1100.000   594.600  1200.000   594.600  1300.000   595.200  1400.000   595.300  1500.000
NC       .035      .037      .035    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

X1      7.248    -0.000    -0.000    -0.000    50.000    50.000    50.000    -0.000      -.100   -0.000
SB     -0.000     1.500     2.600    -0.000    16.480    -0.000    95.600     0.000   583.900   583.900

X1      7.254    32.000  1200.000  1219.000    30.000    30.000    30.000    -0.000    -0.000    -0.000
X2     -0.000    -0.000     1.000   589.700   592.400    -0.000    -0.000    -0.000    -0.000    -0.000
X3     -0.000    -0.000    -0.000   970.000    -0.000  1256.000    -0.000    -0.000    -0.000    -0.000
BT     11.000   970.000   600.000     0.000   970.000   593.300     0.000  1000.000   593.500     0.000
BT   1064.000   593.200     0.000  1130.000   592.800     0.000  1200.000   592.400   585.100  1200.000
BT    592.400   589.600  1219.000   592.500   589.700  1219.000   592.500   583.900  1256.000   592.700
BT      0.000  1256.000   600.000     0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000
GR    595.700     0.000   595.700   100.000   595.300   200.000   594.700   300.000   594.500   400.000
GR    594.500   500.000   594.500   600.000   594.500   700.000   594.500   800.000   594.200   900.000
GR    594.000   940.000   593.300   970.000   591.900  1030.000   589.800  1130.000   588.700  1194.000
GR    585.100  1200.000   585.000  1204.000   584.800  1205.000   584.600  1210.000   584.400  1215.000
GR    583.900  1219.000   592.600  1230.000   592.700  1256.000   592.900  1300.000   593.900  1400.000
GR    594.500  1500.000   595.300  1600.000   595.400  1700.000   595.600  1800.000   596.700  2000.000
GR    597.500  2100.000   598.000  2200.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

X1      7.263    -0.000    -0.000    -0.000    50.000    50.000    50.000    -0.000      .060    -0.000
X3     -0.000    -0.000    -0.000  1020.000    -0.000  1306.000    -0.000    -0.000    -0.000    -0.000
NH      3.000      .035   280.000      .030   292.000      .032   900.000    -0.000    -0.000    -0.000

X1      7.348    14.000   253.000   300.000   450.000   450.000   450.000    -0.000    -0.000    -0.000
X3     -0.000    -0.000    -0.000    -0.000    -0.000   550.000    -0.000    -0.000    -0.000    -0.000
GR    595.800     0.000   596.100   100.000   596.400   200.000   596.100   253.000   585.100   280.000
GR    584.500   286.000   585.100   292.000   587.400   300.000   592.600   400.000   593.000   500.000
GR    593.100   600.000   593.500   700.000   594.300   800.000   595.300   900.000    -0.000    -0.000
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X1	7.396	-0.000	-0.000	-0.000	250.000	250.000	250.000	-0.000	.700	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	632.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.035	374.000	.030	392.000	.032	1400.000	-0.000	-0.000	-0.000
X1	7.443	20.000	340.000	400.000	250.000	250.000	250.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	600.000	-0.000	-0.000	-0.000	-0.000
GR	595.900	0.000	595.800	100.000	595.800	200.000	596.600	300.000	597.300	340.000
GR	586.200	374.000	586.000	385.000	585.900	392.000	589.500	400.000	593.700	500.000
GR	592.400	600.000	594.600	700.000	592.700	800.000	592.100	900.000	592.700	1000.000
GR	589.900	1100.000	592.900	1200.000	594.700	1300.000	595.900	1400.000	596.400	1500.000
NH	5.000	.035	345.000	.025	360.000	.030	385.000	.025	400.000	.032
NH	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.491	19.000	345.000	400.000	350.000	150.000	250.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	600.000	-0.000	-0.000	-0.000	-0.000
GR	596.500	0.000	596.200	100.000	595.200	200.000	594.500	300.000	593.400	345.000
GR	586.300	360.000	585.800	375.000	586.200	385.000	591.100	400.000	593.400	500.000
GR	593.200	600.000	592.600	700.000	592.800	800.000	593.100	900.000	593.500	1000.000
GR	593.100	1100.000	593.200	1200.000	595.500	1300.000	596.500	1400.000	-0.000	-0.000
X1	7.519	-0.000	-0.000	-0.000	250.000	50.000	150.000	-0.000	-.160	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	500.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.035	800.000	.050	883.000	.037	897.000	.050	900.000	.032
NH	1600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	4.000	730.000	990.000	1080.000	1310.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.595	21.000	872.000	900.000	550.000	350.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	572.000	-0.000	1000.000	-0.000	-0.000	-0.000	-0.000
GR	596.000	0.000	596.200	100.000	595.200	200.000	596.200	300.000	595.800	400.000
GR	595.400	500.000	593.500	600.000	591.700	700.000	590.400	800.000	591.100	872.000
GR	586.000	883.000	585.200	890.000	585.700	897.000	590.800	900.000	593.700	1000.000
GR	593.500	1100.000	593.500	1200.000	593.700	1300.000	591.700	1400.000	593.700	1500.000
GR	595.100	1600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.642	-0.000	-0.000	-0.000	250.000	250.000	250.000	-0.000	.180	-0.000
X3	-0.000	-0.000	-0.000	572.000	-0.000	1200.000	-0.000	-0.000	-0.000	-0.000
X1	7.689	-0.000	-0.000	-0.000	1.000	350.000	250.000	-0.000	.180	-0.000
X3	-0.000	-0.000	-0.000	596.000	-0.000	1176.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.035	500.000	.060	681.000	.040	692.000	.048	800.000	.032
NH	1200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.775	17.000	675.000	700.000	450.000	450.000	450.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	400.000	-0.000	865.000	-0.000	-0.000	-0.000	-0.000
GR	597.200	0.000	597.000	100.000	596.500	200.000	593.700	300.000	590.900	400.000
GR	590.800	500.000	590.700	600.000	591.900	675.000	586.800	681.000	585.900	686.000
GR	586.700	692.000	591.400	700.000	592.400	800.000	596.200	900.000	595.900	1000.000
GR	596.700	1100.000	598.500	1200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.055	384.000	.040	394.000	.050	400.000	.035	1000.000	-0.000
X1	7.812	18.000	377.000	400.000	300.000	100.000	200.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	261.000	-0.000	516.000	-0.000	-0.000	-0.000	-0.000
GR	597.700	0.000	597.400	50.000	596.300	72.000	594.300	78.000	593.800	100.000
GR	592.700	200.000	591.700	300.000	591.800	377.000	586.900	384.000	587.000	390.000
GR	587.700	394.000	590.500	400.000	594.100	500.000	593.400	600.000	595.600	700.000
GR	596.800	800.000	597.300	900.000	597.500	1000.000	-0.000	-0.000	-0.000	-0.000
NC	.040	.037	.032	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.828	-0.000	-0.000	-0.000	80.000	80.000	80.000	-0.000	-.700	-0.000
X3	-0.000	-0.000	-0.000	281.000	-0.000	496.000	-0.000	-0.000	-0.000	-0.000
X1	7.829	17.000	350.000	359.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	250.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
BT	7.000	250.000	592.700	0.000	350.000	592.100	591.400	352.000	592.300	591.600
BT	354.500	592.300	591.700	357.000	592.200	591.600	359.000	592.100	591.400	460.000
BT	593.100	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

GR	595.700	0.000	594.900	50.000	593.000	150.000	592.700	250.000	592.100	350.000
GR	587.200	350.000	586.600	352.000	586.300	354.500	586.100	357.000	586.000	359.000
GR	592.100	359.000	593.100	460.000	595.700	550.000	594.300	650.000	595.300	750.000
GR	596.400	850.000	597.700	950.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.831	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	250.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
X1	7.838	-0.000	-0.000	-0.000	35.000	35.000	35.000	-0.000	.200	-0.000
X3	-0.000	-0.000	-0.000	250.000	-0.000	460.000	-0.000	-0.000	-0.000	-0.000
X1	7.846	23.000	895.000	905.000	40.000	40.000	40.000	-0.000	-0.000	-0.000
X3	-0.000	586.400	-0.000	795.000	-0.000	1005.000	-0.000	-0.000	-0.000	-0.000
BT	13.000	795.000	593.500	0.000	795.000	592.400	0.000	895.000	593.500	587.800
BT	895.300	593.500	590.600	896.300	593.500	591.500	897.800	593.500	592.500	900.000
BT	593.500	592.800	902.200	593.500	592.500	903.000	593.500	591.500	904.700	593.500
BT	590.600	905.000	593.500	587.800	1000.000	594.500	0.000	1005.000	594.700	0.000
GR	599.200	0.000	597.700	100.000	596.100	200.000	595.700	300.000	595.700	400.000
GR	595.700	500.000	594.100	600.000	593.000	700.000	592.400	795.000	593.500	895.000
GR	587.800	895.000	585.600	895.300	584.100	896.300	583.100	897.800	582.800	900.000
GR	583.100	902.200	584.100	903.000	585.600	904.700	587.800	905.000	593.500	905.000
GR	594.500	1000.000	594.700	1005.000	596.700	1100.000	-0.000	-0.000	-0.000	-0.000
X1	7.850	-0.000	-0.000	-0.000	25.000	25.000	25.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	586.400	-0.000	795.000	-0.000	1005.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.035	400.000	.050	780.000	.037	792.000	.040	1200.000	-0.000
X1	7.869	17.000	774.000	800.000	1.000	250.000	100.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	525.000	-0.000	935.000	-0.000	-0.000	-0.000	-0.000
GR	599.200	0.000	597.700	100.000	596.100	200.000	595.700	300.000	595.700	400.000
GR	595.700	500.000	594.100	600.000	593.400	700.000	593.200	774.000	587.300	780.000
GR	587.300	786.000	587.700	792.000	591.900	800.000	594.100	900.000	597.100	1000.000
GR	597.300	1100.000	600.000	1200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.035	.037	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.878	-0.000	-0.000	-0.000	49.000	49.000	49.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	560.000	-0.000	943.000	-0.000	-0.000	-0.000	-0.000
NC	.016	.016	.018	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	7.879	29.000	1200.000	1212.000	1.000	1.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	990.000	-0.000	1355.000	-0.000	-0.000	-0.000	-0.000
BT	13.000	990.000	600.000	0.000	990.000	595.800	0.000	1000.000	595.800	0.000
BT	1100.000	595.500	0.000	1199.000	595.400	0.000	1199.000	597.000	0.000	1200.000
BT	597.000	592.200	1212.000	597.100	592.200	1213.000	597.100	0.000	1213.000	595.500
BT	0.000	1300.000	595.700	0.000	1355.000	596.100	0.000	1355.000	600.000	0.000
GR	598.000	0.000	597.800	100.000	597.500	200.000	597.300	300.000	597.100	400.000
GR	596.800	500.000	596.500	600.000	596.400	700.000	596.200	800.000	596.000	900.000
GR	595.800	990.000	595.800	1000.000	595.500	1100.000	595.400	1199.000	597.000	1199.000
GR	597.000	1200.000	587.700	1200.000	587.500	1205.000	587.300	1210.000	587.400	1212.000
GR	597.100	1212.000	597.100	1213.000	595.500	1213.000	595.700	1300.000	596.100	1355.000
GR	596.400	1400.000	597.100	1500.000	597.800	1600.000	598.600	1700.000	-0.000	-0.000
X1	7.893	-0.000	-0.000	-0.000	77.000	77.000	77.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	950.000	-0.000	1355.000	-0.000	-0.000	-0.000	-0.000
NH	4.000	.035	209.000	.040	219.000	.050	300.000	.015	600.000	-0.000
X1	7.903	13.000	200.000	225.000	50.000	50.000	50.000	-0.000	-.630	-0.000
GR	599.200	0.000	597.200	100.000	596.900	130.000	593.100	147.000	593.500	200.000
GR	588.000	209.000	588.000	214.000	588.100	219.000	592.700	225.000	595.000	300.000
GR	596.800	400.000	597.600	500.000	598.800	600.000	-0.000	-0.000	-0.000	-0.000
X1	7.931	-0.000	-0.000	-0.000	260.000	85.000	150.000	-0.000	.210	-0.000
X3	-0.000	-0.000	-0.000	-0.000	-0.000	475.000	-0.000	-0.000	-0.000	-0.000

X1	7.988	-0.000	-0.000	-0.000	350.000	250.000	300.000	-0.000	.420	-0.000
X3	-0.000	-0.000	-0.000	0.000	-0.000	325.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.060	300.000	.040	330.000	.060	700.000	-0.000	-0.000	-0.000
X1	8.078	12.000	300.000	330.000	400.000	400.000	400.000	-0.000	-0.000	-0.000
GR	599.000	0.000	596.600	100.000	593.800	200.000	592.700	300.000	588.500	305.000
GR	588.100	311.000	588.500	317.000	593.400	330.000	592.800	400.000	594.800	500.000
GR	598.200	600.000	599.400	700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NH	3.000	.060	230.000	.040	251.000	.060	700.000	-0.000	-0.000	-0.000
X1	8.154	14.000	230.000	251.000	250.000	650.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	-0.000	-0.000	350.000	-0.000	-0.000	-0.000	-0.000
GR	600.000	0.000	598.700	30.000	593.800	130.000	593.400	230.000	590.400	236.000
GR	590.000	241.000	589.700	247.000	592.000	251.000	594.800	263.000	593.700	330.000
GR	596.100	430.000	597.000	530.000	598.600	600.000	599.000	630.000	-0.000	-0.000
NH	4.000	.045	306.000	.040	320.000	.060	1300.000	.035	1400.000	-0.000
X1	8.229	20.000	300.000	320.000	600.000	100.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	130.000	-0.000	482.000	-0.000	-0.000	-0.000	-0.000
GR	601.600	0.000	599.700	100.000	598.600	200.000	597.400	288.000	593.600	300.000
GR	589.400	306.000	588.900	309.000	589.300	313.000	594.900	320.000	594.400	400.000
GR	596.100	500.000	595.000	600.000	595.600	700.000	597.400	800.000	598.600	900.000
GR	599.100	1000.000	598.600	1100.000	598.800	1200.000	599.000	1300.000	599.900	1400.000
NH	5.000	.035	400.000	.050	409.000	.037	420.000	.050	435.000	.035
NH	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	8.305	19.000	400.000	435.000	400.000	400.000	400.000	-0.000	-0.000	-0.000
X3	-0.000	-0.000	-0.000	300.000	-0.000	535.000	-0.000	-0.000	-0.000	-0.000
GR	601.100	0.000	600.000	100.000	599.800	200.000	600.100	300.000	594.600	400.000
GR	590.100	409.000	589.700	415.000	589.900	420.000	597.500	435.000	598.100	500.000
GR	599.200	600.000	599.500	700.000	599.300	800.000	599.700	900.000	599.100	1000.000
GR	599.000	1100.000	599.400	1200.000	599.800	1300.000	600.000	1400.000	-0.000	-0.000
NC	.035	.037	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	8.314	-0.000	-0.000	-0.000	49.000	49.000	49.000	-0.000	-.100	-0.000
X3	-0.000	-0.000	-0.000	300.000	-0.000	600.000	-0.000	-0.000	-0.000	-0.000
NC	.016	.016	.018	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	8.315	30.000	886.000	900.000	1.000	1.000	1.000	.870	-0.000	-0.000
X3	10.000	-0.000	-0.000	807.000	-0.000	952.000	-0.000	597.000	597.000	-0.000
GR	600.700	0.000	600.300	100.000	599.600	200.000	599.200	300.000	598.800	400.000
GR	598.400	500.000	598.100	600.000	598.400	700.000	598.700	790.000	594.600	872.000
GR	594.600	872.000	589.700	886.000	589.600	886.000	589.700	893.000	590.100	900.000
GR	590.100	900.000	597.500	914.000	597.500	914.000	598.200	1000.000	598.200	1035.000
GR	598.100	1100.000	598.500	1200.000	598.700	1300.000	598.800	1400.000	598.400	1500.000
GR	598.000	1600.000	598.100	1700.000	598.400	1800.000	598.700	1900.000	599.000	2000.000
SB	-0.000	1.930	3.000	-0.000	11.690	-0.000	58.460	-0.000	589.600	589.600
X1	8.333	30.000	886.000	900.000	95.000	95.000	95.000	.870	-0.000	-0.000
X2	-0.000	-0.000	1.000	594.600	598.200	-0.000	-0.000	-0.000	.870	-0.000
X3	10.000	-0.000	-0.000	807.000	-0.000	952.000	-0.000	598.200	598.200	-0.000
BT	12.000	807.000	605.000	0.000	807.000	598.700	0.000	872.000	598.600	0.000
BT	872.000	601.200	0.000	886.000	601.200	589.600	886.000	601.200	594.600	900.000
BT	601.200	594.600	900.000	601.200	590.100	914.000	601.200	0.000	914.000	598.600
BT	0.000	952.000	598.500	0.000	952.000	605.000	0.000	-0.000	-0.000	-0.000
GR	600.700	0.000	600.300	100.000	599.600	200.000	599.200	300.000	598.800	400.000
GR	598.400	500.000	598.100	600.000	598.400	700.000	598.700	807.000	594.600	872.000
GR	594.600	872.000	589.700	886.000	589.600	886.000	589.700	893.000	590.100	900.000
GR	590.100	900.000	597.300	914.000	598.500	952.000	598.200	1000.000	598.200	1035.000
GR	598.100	1100.000	598.500	1200.000	598.700	1300.000	598.800	1400.000	598.400	1500.000
GR	598.000	1600.000	598.100	1700.000	598.400	1800.000	598.700	1900.000	599.000	2000.000
EJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

CCHV= .300 CEHV= .500
1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
			50 FT D/S OF PENNSYLVANIA RD. BRIDGE				VS-1		
7.24	7.72	591.72	0.00	591.72	591.87	.15	0.00	0.00	588.70
1100.	360.	740.	0.	246.	200.	0.	0.	0.	593.00
0.00	1.46	3.71	0.00	.046	.039	0.000	0.000	584.00	908.57
.000868	100.	100.	100.	0	0	1	0.00	189.25	1097.82
			D/S FACE OF PENNSYLVANIA RD. BRIDGE				BS-2		
			BOX CULVERT WITH WINGWALLS AND HEADWALLS						
			APPROX. SIZE = 19" X 5.8", LENGTH = 30"						
7.25	7.92	591.82	0.00	0.00	591.92	.11	.04	.01	588.60
1100.	451.	649.	0.	277.	206.	0.	1.	0.	592.90
.01	1.63	3.14	0.00	.035	.035	.037	.034	583.90	899.22
.000584	50.	50.	50.	2	0	1	0.00	198.93	1098.15

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.50	2.60	-0.00	16.48	-0.00	95.60	0.00	583.90	583.90

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
594.90	591.95	0.00	307.	794.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

			U/S FACE OF PENNSYLVANIA RD. BRIDGE				BS-2		
7.25	9.49	593.39	0.00	0.00	593.42	.04	1.50	0.00	585.10
1100.	666.	358.	76.	604.	167.	76.	1.	0.	583.90
.01	1.10	2.15	1.00	.035	.035	.037	.034	583.90	970.00
.000142	30.	30.	30.	2	0	4	0.00	286.00	1256.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	9.43	593.39	0.00	0.00	593.43	.04	.01	.00	585.16
1100.	653.	363.	84.	562.	166.	100.	2.	1.	583.96
.02	1.16	2.19	.84	.035	.035	.037	.034	583.96	1020.00

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.000149      50.      50.      50.        1        0        1     0.00   286.00  1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS=        .0     550.0  TYPE=     1  TARGET=     549.999

                500 FT U/S OF PENNSYLVANIA RD. BRIDGE          VS-3

     7.35     8.96   593.46     0.00     0.00   593.51      .05      .08      .01   596.10
     1100.       0.     555.     545.       0.     248.     435.      10.       4.    587.40
      .09     0.00     2.24     1.25     .035     .032     .032     .035   584.50   259.47
  .000189     450.     450.     450.        0        0        1     0.00   290.53   550.00


   SECNO    DEPTH    CWSEL    CRIWS    WSELK       EG       HV       HL     OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB        ACH      AROB     VOL    TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL         XNCH     XNR      WTN    ELMIN     SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL      IDC      ICONT    CORAR  TOPWID    ENDST


3470 ENCROACHMENT STATIONS=        .0     632.0  TYPE=     1  TARGET=     631.999
     7.40     8.30   593.50     0.00     0.00   593.59      .09      .06      .02   596.80
     1100.       0.     628.     472.       0.     221.     286.      13.       5.    588.10
      .12     0.00     2.84     1.65     .035     .032     .032     .035   585.20   261.09
  .000331     250.     250.     250.        0        0        1     0.00   190.34   451.42


1490 NH CARD USED

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=        .0     600.0  TYPE=     1  TARGET=     599.999

                1000 FT U/S OF PENNSYLVANIA RD. BRIDGE          VS-4

     7.44     7.68   593.58     0.00     0.00   593.69      .10      .09      .01   597.30
     1100.       0.     783.     317.       0.     266.     251.      16.       6.    589.50
      .15     0.00     2.94     1.26     .035     .031     .032     .035   585.90   351.40
  .000370     250.     250.     250.        1        0        1     0.00   236.20   600.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS=        .0     600.0  TYPE=     1  TARGET=     599.999

                50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5

     7.49     7.85   593.65     0.00     0.00   593.77      .12      .07      .01   593.40
     1100.       0.     949.     151.       1.     323.     176.      19.       7.    591.10
      .17      .18     2.94      .85     .035     .028     .032     .035   585.80   334.49
  .000278     350.     250.     150.        1        0        1     0.00   265.51   600.00


3470 ENCROACHMENT STATIONS=        .0     500.0  TYPE=     1  TARGET=     499.999
     7.52     8.06   593.70     0.00     0.00   593.80      .11      .04      .00   593.24
     1100.       1.     938.     161.       4.     334.     162.      20.       8.    590.94
      .19      .25     2.81     1.00     .035     .028     .032     .036   585.64   325.96
  .000242     250.     150.      50.        0        0        1     0.00   174.04   500.00

1490 NH CARD USED
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3470 ENCROACHMENT STATIONS= 572.0 1000.0 TYPE= 1 TARGET= 428.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6

7.59	8.69	593.89	0.00	0.00	593.90	.01	.06	.03	591.10
730.	406.	229.	95.	642.	193.	164.	28.	11.	590.80
.34	.63	1.19	.58	.040	.040	.032	.035	585.20	579.68
.000081	550.	400.	350.	2	0	1	0.00	420.32	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	8.53	593.91	0.00	0.00	593.92	.01	.02	.00	591.28
730.	397.	239.	94.	599.	188.	186.	33.	14.	590.98
.42	.66	1.27	.50	.040	.040	.032	.035	585.38	587.53
.000096	250.	250.	250.	1	0	1	0.00	612.47	1200.00

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	8.36	593.92	0.00	0.00	593.93	.02	.01	.00	591.46
730.	390.	256.	83.	551.	184.	138.	36.	16.	591.16
.46	.71	1.40	.60	.040	.040	.032	.037	585.56	596.47
.000119	1.	250.	350.	1	0	1	0.00	508.46	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 400.0 865.0 TYPE= 1 TARGET= 465.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7

7.77	8.07	593.97	0.00	0.00	593.98	.01	.04	.00	591.90
730.	481.	146.	102.	836.	151.	240.	47.	21.	591.40
.66	.58	.97	.43	.047	.043	.046	.036	585.90	400.00
.000076	450.	450.	450.	0	0	1	0.00	441.45	841.45

1490 NH CARD USED

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8

7.81	7.09	593.99	0.00	0.00	594.03	.04	.03	.02	591.80
730.	237.	280.	213.	255.	131.	170.	51.	23.	590.50
.70	.93	2.14	1.26	.055	.044	.035	.036	586.90	261.00
.000416	300.	200.	100.	0	0	1	0.00	237.03	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	7.83	594.03	0.00	0.00	594.05	.03	.02	.00	591.10
730.	258.	263.	209.	284.	147.	239.	53.	23.	589.80

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      .72       .91      1.78       .87      .040      .032      .037      .036    586.20    281.00
  .000140       80.       80.       80.         1         0         1      0.00    215.00    496.00


 NORMAL BRIDGE,NRD= 7 MIN ELTRD=  592.10 MAX ELLC=  591.70

 3470 ENCROACHMENT STATIONS=     250.0     460.0  TYPE=     1  TARGET=     210.000
                D/S FACE OF SOUTHGATE KENNEL BRIDGE #1          BS-9

                ABANDONED CONCRETE DRIVE-WAY BRIDGE

                APPROX. SIZE = 9" X 0.6", LENGTH = 10"

      7.83      8.01   594.01      0.00      0.00   594.07       .06       .00       .02    592.10
      730.       308.      152.      270.      162.       63.      143.       53.       23.     592.10
       .72      1.91      2.41      1.89      .040      .032      .037      .036    586.00    250.00
  .001389       10.       10.       10.         1         0         1     -5.82    210.00    460.00


 NORMAL BRIDGE,NRD= 7 MIN ELTRD=  592.10 MAX ELLC=  591.70

 3470 ENCROACHMENT STATIONS=     250.0     460.0  TYPE=     1  TARGET=     210.000
                U/S FACE OF SOUTHGATE KENNEL BRIDGE #1          BS-9

      7.83      8.02   594.02      0.00      0.00   594.09       .06       .01       .00    592.10
      730.       309.      151.      271.      162.       63.      144.       53.       23.     592.10
       .72      1.90      2.40      1.88      .040      .032      .037      .036    586.00    250.00
  .001370       10.       10.       10.         0         0         1     -5.82    210.00    460.00


 3470 ENCROACHMENT STATIONS=     250.0     460.0  TYPE=     1  TARGET=     210.000
      7.84      7.85   594.05      0.00      0.00   594.16       .11       .05       .02    592.30
      730.       255.      258.      217.      145.       67.      126.       53.       23.     592.30
       .73      1.76      3.84      1.72      .040      .032      .037      .036    586.20    250.00
  .001371       35.       35.       35.         2         0         1      0.00    210.00    460.00


 NORMAL BRIDGE,NRD=13 MIN ELTRD=  592.40 MAX ELLC=  592.80

 3470 ENCROACHMENT STATIONS=     795.0    1005.0  TYPE=     1  TARGET=     210.000
                D/S FACE OF SOUTHGATE KENNEL BRIDGE #2          BS-10

                ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

                LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

      7.85      7.67   594.07      0.00      0.00   594.35       .28       .11       .08    593.50
      730.       401.      305.       24.      112.       60.       16.       53.       24.     593.50
       .73      3.56      5.09      1.55      .040      .032      .037      .036    586.40    795.00
  .007868       40.       40.       40.         2         0         1    -16.39    164.58    959.58
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NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

7.85	7.96	594.36	0.00	0.00	594.53	.17	.14	.03	593.50
730.	434.	243.	54.	142.	63.	36.	53.	24.	593.50
.73	3.06	3.86	1.50	.040	.032	.037	.036	586.40	795.00
.004243	25.	25.	25.	2	0	1	-16.39	192.56	987.56

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11

7.87	7.28	594.58	0.00	0.00	594.65	.07	.10	.03	593.20
730.	128.	418.	184.	186.	150.	162.	54.	24.	591.90
.74	.69	2.78	1.14	.050	.039	.040	.036	587.30	569.81
.000524	1.	100.	250.	2	0	1	0.00	346.29	916.10

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	7.32	594.62	0.00	0.00	594.68	.06	.02	.00	593.20
730.	169.	381.	180.	194.	151.	167.	55.	25.	591.90
.75	.88	2.51	1.08	.035	.035	.037	.036	587.30	567.38
.000395	49.	49.	49.	2	0	1	0.00	350.01	917.39

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.792 WSEL= 592.067

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.781 WSEL= 592.134

3301 HV CHANGED MORE THAN HVINS

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	6.06	593.36	592.20	0.00	595.94	2.57	.00	1.26	597.00
730.	0.	730.	0.	0.	57.	0.	55.	25.	597.10
.75	0.00	12.87	0.00	.016	.018	.016	.036	587.30	1200.00
.013095	1.	1.	1.	4	20	1	-13.98	12.00	1212.00

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.792 WSEL= 592.067

4575 CRITICAL DEPTH ASSUMED BELOW ELLC OF 592.200 EGLC= 594.774 EGC= 594.781 WSEL= 592.134

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

7.89	7.11	594.41	592.20	0.00	596.99	2.57	1.05	.00	597.00
730.	0.	730.	0.	0.	57.	0.	55.	25.	597.10
.75	0.00	12.87	0.00	.016	.018	.016	.035	587.30	1200.00
.014131	77.	77.	77.	4	20	1	-26.54	12.00	1212.00

1490 NH CARD USED

3301 HV CHANGED MORE THAN HVINS

REPEATED SECTION FROM SECTION 7.9879

7.90	10.39	597.76	0.00	0.00	597.76	.00	.00	.77	592.87
730.	190.	149.	391.	402.	220.	733.	56.	25.	592.07
.78	.47	.68	.53	.035	.040	.026	.035	587.37	40.72
.000020	50.	50.	50.	3	0	1	0.00	524.74	565.47

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	10.18	597.76	0.00	0.00	597.76	.01	.00	.00	593.08
730.	196.	163.	371.	370.	215.	633.	60.	27.	592.28
.84	.53	.76	.59	.035	.040	.027	.034	587.58	51.09
.000026	260.	150.	85.	2	0	1	0.00	423.91	475.00

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13

7.99	9.77	597.77	0.00	0.00	597.78	.01	.01	.00	593.50
730.	246.	228.	257.	313.	205.	357.	67.	29.	592.70
.94	.79	1.11	.72	.035	.040	.038	.033	588.00	71.75
.000059	350.	300.	250.	0	0	1	0.00	253.25	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14

8.08	9.69	597.79	0.00	0.00	597.80	.00	.02	.00	592.70
730.	244.	194.	292.	742.	239.	858.	80.	32.	593.40
1.18	.33	.81	.34	.060	.040	.060	.032	588.10	50.51
.000032	400.	400.	400.	1	0	1	0.00	537.37	587.88

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15

8.15	8.11	597.81	0.00	0.00	597.82	.01	.02	.00	593.40
730.	325.	193.	212.	585.	149.	369.	94.	37.	592.00
1.34	.56	1.29	.58	.060	.040	.060	.030	589.70	48.22
.000094	250.	400.	650.	0	0	1	0.00	301.78	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16

8.23	8.95	597.85	0.00	0.00	597.88	.03	.05	.01	593.60
730.	28.	291.	412.	35.	139.	480.	101.	39.	594.90
1.40	.79	2.09	.86	.045	.041	.060	.030	588.90	255.78
.000280	600.	400.	100.	1	0	1	0.00	226.22	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17

8.31	8.27	597.97	0.00	0.00	598.07	.10	.16	.03	594.60
730.	151.	574.	5.	103.	204.	12.	105.	40.	597.50
1.45	1.47	2.81	.39	.035	.042	.035	.029	589.70	338.71
.000595	400.	400.	400.	2	0	1	0.00	147.32	486.03

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.40	598.00	0.00	0.00	598.10	.10	.03	.00	594.50
730.	144.	579.	7.	111.	208.	19.	106.	41.	597.40
1.45	1.29	2.78	.38	.035	.035	.037	.029	589.60	336.50
.000443	49.	49.	49.	0	0	1	0.00	162.68	499.18

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.41	598.01	0.00	0.00	598.10	.09	.00	.00	589.70
730.	315.	308.	108.	173.	100.	63.	106.	41.	590.10
1.45	1.82	3.07	1.70	.016	.018	.016	.029	589.60	702.09
.000084	1.	1.	1.	2	0	1	0.00	126.15	828.24

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD

-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 CROSS SECTION 8.33 EXTENDED .64 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
602.69	598.84	0.00	295.	435.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

U/S FACE OF ALLEN RD. BRIDGE BS-18

8.33	10.04	599.64	0.00	0.00	599.68	.04	1.57	0.00	589.70
730.	339.	243.	148.	260.	120.	130.	107.	41.	590.10
1.47	1.30	2.02	1.14	.016	.018	.016	.029	589.60	702.09
.000029	95.	95.	95.	2	0	4	0.00	126.15	828.24

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HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1      CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2      50-YEAR FLOOD 1510 CFS
T3      FRANK AND POET DRAIN

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
       -10.       3.        -0.        -0. -0.000000      -0.00      -0.0       -0.    592.240    -0.000
J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
      2.000     -0.000     -1.000     -0.000     -0.000     -0.000     -0.000     -0.000     -0.000     -0.000

CCHV=    .300 CEHV=    .500
1490 NH CARD USED
    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

                50 FT D/S OF PENNSYLVANIA RD. BRIDGE                VS-1

      7.24       8.24     592.24       0.00     592.24     592.42       .18       0.00       0.00     588.70
      1510.       609.       901.         0.       333.       218.         0.         0.         0.     593.00
       0.00       1.83       4.14       0.00       .044       .039      0.000      0.000     584.00     883.81
    .001008       100.       100.       100.          0          0          1       0.00     214.90    1098.70

                D/S FACE OF PENNSYLVANIA RD. BRIDGE                 BS-2

                BOX CULVERT WITH WINGWALLS AND HEADWALLS

                APPROX. SIZE = 19" X 5.8", LENGTH = 30"

      7.25       8.45     592.35       0.00       0.00     592.48       .13       .04        .02      588.60
      1510.       728.       782.         0.       372.       225.         0.         1.         0.     592.90
        .01       1.96       3.48       0.00       .035       .035       .037       .034     583.90     873.79
    .000661       50.        50.        50.          2          0          1       0.00     225.28    1099.06

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       -0.00       1.50       2.60      -0.00      16.48      -0.00      95.60       0.00     583.90     583.90

PRESSURE AND WEIR FLOW
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EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
598.16	592.51	0.00	736.	779.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	9.95	593.85	0.00	0.00	593.90	.05	1.42	0.00	585.10
1510.	957.	444.	109.	710.	175.	93.	1.	0.	583.90
.01	1.35	2.53	1.18	.035	.035	.037	.034	583.90	970.00
.000184	30.	30.	30.	2	0	4	0.00	286.00	1256.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	9.90	593.86	0.00	0.00	593.91	.05	.01	.00	585.16
1510.	924.	450.	136.	646.	175.	140.	2.	1.	583.96
.02	1.43	2.58	.97	.035	.035	.037	.034	583.96	1020.00
.000192	50.	50.	50.	1	0	1	0.00	286.00	1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 550.0 TYPE= 1 TARGET= 549.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3

7.35	9.44	593.94	0.00	0.00	594.01	.07	.10	.01	596.10
1510.	0.	689.	821.	0.	267.	555.	12.	4.	587.40
.08	0.00	2.58	1.48	.035	.032	.032	.035	584.50	258.29
.000235	450.	450.	450.	0	0	1	0.00	291.71	550.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 632.0 TYPE= 1 TARGET= 631.999

7.40	8.80	594.00	0.00	0.00	594.11	.11	.08	.02	596.80
1510.	0.	785.	725.	0.	241.	409.	16.	6.	588.10
.11	0.00	3.26	1.77	.035	.032	.032	.035	585.20	259.87
.000408	250.	250.	250.	0	0	1	0.00	372.13	632.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 600.0 TYPE= 1 TARGET= 599.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4

7.44	8.20	594.10	0.00	0.00	594.22	.12	.11	.01	597.30
1510.	0.	965.	545.	0.	291.	353.	19.	7.	589.50
.13	0.00	3.31	1.55	.035	.031	.032	.035	585.90	349.84
.000435	250.	250.	250.	1	0	1	0.00	250.16	600.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 600.0 TYPE= 1 TARGET= 599.999

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5

7.49	8.37	594.17	0.00	0.00	594.31	.14	.08	.01	593.40
1510.	5.	1187.	318.	12.	351.	279.	22.	9.	591.10
.16	.41	3.38	1.14	.035	.028	.032	.036	585.80	313.54
.000332	350.	250.	150.	2	0	1	0.00	286.46	600.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	8.57	594.21	0.00	0.00	594.36	.14	.04	.00	593.24
1510.	9.	1212.	289.	20.	363.	213.	24.	9.	590.94
.17	.47	3.34	1.36	.035	.028	.032	.036	585.64	304.96
.000312	250.	150.	50.	1	0	1	0.00	195.04	500.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 572.0 1000.0 TYPE= 1 TARGET= 428.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6

7.59	9.25	594.45	0.00	0.00	594.47	.01	.07	.04	591.10
990.	577.	257.	156.	812.	209.	220.	34.	12.	590.80
.31	.71	1.23	.71	.039	.040	.032	.035	585.20	572.00
.000081	550.	400.	350.	2	0	1	0.00	428.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	9.10	594.48	0.00	0.00	594.49	.01	.02	.00	591.28
990.	540.	256.	194.	764.	204.	354.	41.	15.	590.98
.40	.71	1.25	.55	.040	.040	.032	.035	585.38	572.00
.000085	250.	250.	250.	2	0	1	0.00	628.00	1200.00

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	8.93	594.49	0.00	0.00	594.50	.01	.01	.00	591.46
990.	544.	276.	171.	707.	200.	290.	45.	18.	591.16
.44	.77	1.38	.59	.040	.040	.032	.037	585.56	596.00
.000106	1.	250.	350.	0	0	1	0.00	580.00	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 400.0 865.0 TYPE= 1 TARGET= 465.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7

7.77	8.64	594.54	0.00	0.00	594.54	.01	.04	.00	591.90
990.	653.	172.	165.	990.	165.	324.	59.	23.	591.40
.61	.66	1.04	.51	.047	.044	.045	.037	585.90	400.00
.000079	450.	450.	450.	0	0	1	0.00	456.19	856.19

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8

7.81	7.65	594.55	0.00	0.00	594.59	.04	.03	.02	591.80
990.	339.	318.	333.	320.	144.	234.	64.	25.	590.50
.65	1.06	2.21	1.43	.055	.044	.035	.036	586.90	261.00
.000399	300.	200.	100.	0	0	1	0.00	255.00	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	8.38	594.58	0.00	0.00	594.62	.03	.02	.00	591.10
990.	363.	319.	309.	338.	160.	293.	66.	26.	589.80
.67	1.07	1.99	1.05	.040	.032	.037	.036	586.20	281.00
.000156	80.	80.	80.	1	0	1	0.00	215.00	496.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9

ABANDONED CONCRETE DRIVE-WAY BRIDGE

APPROX. SIZE = 9" X 0.6", LENGTH = 10"

7.83	8.57	594.57	0.00	0.00	594.64	.06	.00	.02	592.10
990.	436.	149.	405.	218.	68.	200.	66.	26.	592.10
.67	2.00	2.19	2.03	.040	.032	.037	.036	586.00	250.00
.001031	10.	10.	10.	1	0	1	-5.82	210.00	460.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9

7.83	8.58	594.58	0.00	0.00	594.65	.06	.01	.00	592.10
990.	436.	148.	406.	218.	68.	200.	66.	26.	592.10
.67	2.00	2.18	2.03	.040	.032	.037	.036	586.00	250.00
.001022	10.	10.	10.	0	0	1	-5.82	210.00	460.00

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

7.84	8.40	594.60	0.00	0.00	594.70	.09	.04	.01	592.30
990.	384.	253.	352.	201.	72.	183.	66.	26.	592.30
.68	1.91	3.51	1.93	.040	.032	.037	.036	586.20	250.00
.001041	35.	35.	35.	1	0	1	0.00	210.00	460.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	8.23	594.63	0.00	0.00	594.83	.20	.08	.05	593.50
990.	599.	271.	119.	168.	65.	60.	67.	26.	593.50
.68	3.57	4.15	2.00	.040	.032	.037	.036	586.40	795.00
.004643	40.	40.	40.	2	0	1	-16.39	208.17	1003.17

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

7.85	8.38	594.78	0.00	0.00	594.94	.16	.10	.01	593.50
990.	598.	243.	149.	183.	67.	75.	67.	26.	593.50
.68	3.26	3.63	1.98	.040	.032	.037	.036	586.40	795.00
.003447	25.	25.	25.	2	0	1	-16.39	210.00	1005.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11

7.87	7.69	594.99	0.00	0.00	595.07	.08	.10	.03	593.20
990.	234.	475.	281.	274.	161.	213.	68.	27.	591.90
.70	.85	2.95	1.32	.050	.039	.040	.036	587.30	544.19
.000548	1.	100.	250.	2	0	1	0.00	385.57	929.76

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	7.74	595.04	0.00	0.00	595.09	.06	.02	.01	593.20
990.	299.	425.	267.	282.	162.	218.	69.	27.	591.90
.70	1.06	2.62	1.22	.035	.035	.037	.036	587.30	560.00
.000390	49.	49.	49.	2	0	1	0.00	371.25	931.25

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	8.83	596.13	596.13	0.00	596.46	.33	.00	0.00	597.00
990.	456.	342.	192.	119.	57.	59.	69.	27.	597.10
.70	3.83	6.03	3.25	.016	.018	.016	.036	587.30	990.00
.003484	1.	1.	1.	2	14	1	-47.18	363.00	1355.00

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

7.89	9.25	596.55	0.00	0.00	596.65	.10	.11	.07	597.00
990.	547.	163.	280.	216.	57.	118.	69.	28.	597.10
.71	2.54	2.87	2.37	.016	.018	.016	.035	587.30	950.00
.000809	77.	77.	77.	2	0	1	-70.94	403.00	1355.00

1490 NH CARD USED

REPEATED SECTION FROM SECTION 7.9879

7.90	9.29	596.66	0.00	0.00	596.68	.02	.01	.02	592.87
990.	289.	304.	397.	258.	193.	411.	70.	28.	592.07
.72	1.12	1.58	.97	.035	.040	.032	.035	587.37	95.64
.000128	50.	50.	50.	0	0	1	0.00	365.25	460.89

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	9.10	596.68	0.00	0.00	596.71	.03	.02	.00	593.08
990.	294.	325.	371.	239.	188.	369.	73.	29.	592.28
.76	1.23	1.73	1.01	.035	.040	.034	.034	587.58	110.04
.000159	260.	150.	85.	2	0	1	0.00	327.41	437.45

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13

7.99	8.73	596.73	0.00	0.00	596.78	.05	.06	.01	593.50
990.	314.	386.	290.	211.	179.	253.	78.	31.	592.70
.81	1.49	2.16	1.14	.035	.040	.040	.033	588.00	130.79
.000265	350.	300.	250.	0	0	1	0.00	194.21	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14

8.08	8.74	596.84	0.00	0.00	596.86	.01	.07	.01	592.70
990.	300.	317.	373.	525.	210.	627.	87.	34.	593.40
.93	.57	1.51	.59	.060	.040	.060	.032	588.10	89.92
.000128	400.	400.	400.	2	0	1	0.00	470.13	560.06

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15

8.15	7.22	596.92	0.00	0.00	596.95	.04	.09	.01	593.40
990.	415.	307.	268.	432.	131.	281.	98.	38.	592.00
1.02	.96	2.35	.95	.060	.040	.060	.030	589.70	66.18
.000366	250.	400.	650.	0	0	1	0.00	283.81	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16

8.23	8.17	597.07	0.00	0.00	597.19	.12	.19	.04	593.60
990.	29.	472.	489.	19.	124.	355.	103.	40.	594.90
1.06	1.51	3.82	1.38	.045	.041	.060	.030	588.90	289.05
.001076	600.	400.	100.	2	0	1	0.00	192.95	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17

8.31	7.81	597.51	0.00	0.00	597.77	.26	.51	.07	594.60
990.	166.	824.	0.	77.	188.	0.	107.	41.	597.50
1.08	2.16	4.38	.02	.035	.042	.035	.029	589.70	347.03
.001567	400.	400.	400.	2	0	1	0.00	89.39	436.42

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.00	597.60	0.00	0.00	597.84	.24	.06	.01	594.50
990.	167.	823.	1.	88.	195.	2.	107.	41.	597.40
1.09	1.90	4.23	.29	.035	.035	.037	.029	589.60	343.57
.001120	49.	49.	49.	2	0	1	0.00	113.46	457.04

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.03	597.63	0.00	0.00	597.85	.22	.00	.01	589.70
990.	405.	447.	138.	147.	96.	48.	107.	41.	590.10
1.09	2.76	4.67	2.90	.016	.018	.016	.029	589.60	705.91
.000208	1.	1.	1.	2	0	1	0.00	103.21	809.12

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 GROSS SECTION 8.33 EXTENDED 1.01 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
606.23	599.29	0.00	471.	527.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

U/S FACE OF ALLEN RD. BRIDGE BS-18

8.33	10.41	600.01	0.00	0.00	600.07	.06	2.22	0.00	589.70
990.	469.	310.	210.	286.	125.	147.	108.	41.	590.10
1.10	1.64	2.49	1.44	.016	.018	.016	.029	589.60	702.09
.000041	95.	95.	95.	2	0	4	0.00	126.15	828.24

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**********************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1       CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2       100-YEAR FLOOD 1640 CFS
T3       FRANK AND POET DRAIN
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	4.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	592.370	-0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3.000	1.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

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CCHV=     .300 CEHV=     .500
1490 NH CARD USED
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

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                50 FT D/S OF PENNSYLVANIA RD. BRIDGE            VS-1
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7.24	8.37	592.37	0.00	592.37	592.56	.19	0.00	0.00	588.70
1640.	691.	949.	0.	357.	222.	0.	0.	0.	593.00
0.00	1.94	4.27	0.00	.044	.039	0.000	0.000	584.00	877.62
.001055	100.	100.	100.	0	0	1	0.00	221.31	1098.93

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                D/S FACE OF PENNSYLVANIA RD. BRIDGE             BS-2

                BOX CULVERT WITH WINGWALLS AND HEADWALLS

                APPROX. SIZE = 19" X 5.8", LENGTH = 30"
```

7.25	8.58	592.48	0.00	0.00	592.62	.13	.04	.02	588.60
1640.	816.	824.	0.	398.	230.	0.	1.	0.	592.90
.00	2.05	3.59	0.00	.035	.035	.037	.034	583.90	867.40
.000690	50.	50.	50.	2	0	1	0.00	231.90	1099.29

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$SPECIAL BRIDGE
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SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.50	2.60	-0.00	16.48	-0.00	95.60	0.00	583.90	583.90

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PRESSURE AND WEIR FLOW
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EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
599.34	592.62	0.00	872.	776.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	10.07	593.97	0.00	0.00	594.02	.05	1.40	0.00	585.10
1640.	1050.	471.	120.	738.	178.	97.	1.	0.	583.90
.01	1.42	2.65	1.24	.035	.035	.037	.034	583.90	970.00
.000198	30.	30.	30.	2	0	4	0.00	286.00	1256.00

8930,RDST NOT ON GR CARD 969.99
8930,RDST NOT ON GR CARD 1000.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	10.01	593.97	0.00	0.00	594.03	.06	.01	.00	585.16
1640.	1009.	477.	154.	667.	177.	151.	2.	1.	583.96
.02	1.51	2.70	1.02	.035	.035	.037	.034	583.96	1020.00
.000207	50.	50.	50.	1	0	1	0.00	286.00	1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 550.0 TYPE= 1 TARGET= 549.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3

7.35	9.57	594.07	0.00	0.00	594.14	.07	.10	.01	596.10
1640.	0.	730.	910.	0.	273.	587.	12.	4.	587.40
.08	0.00	2.68	1.55	.035	.032	.032	.035	584.50	257.98
.000249	450.	450.	450.	0	0	1	0.00	292.02	550.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 632.0 TYPE= 1 TARGET= 631.999

7.40	8.93	594.13	0.00	0.00	594.24	.11	.08	.02	596.80
1640.	0.	827.	813.	0.	246.	452.	16.	6.	588.10
.11	0.00	3.36	1.80	.035	.032	.032	.035	585.20	259.56
.000426	250.	250.	250.	0	0	1	0.00	372.44	632.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 600.0 TYPE= 1 TARGET= 599.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4

7.44	8.33	594.23	0.00	0.00	594.36	.13	.11	.01	597.30
1640.	0.	1018.	622.	0.	298.	379.	20.	7.	589.50
.13	0.00	3.42	1.64	.035	.031	.032	.035	585.90	349.43
.000454	250.	250.	250.	1	0	1	0.00	250.57	600.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 600.0 TYPE= 1 TARGET= 599.999

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5

7.49	8.51	594.31	0.00	0.00	594.46	.15	.09	.01	593.40
1640.	8.	1257.	375.	17.	359.	306.	24.	9.	591.10
.15	.47	3.51	1.23	.035	.028	.032	.036	585.80	307.97
.000348	350.	250.	150.	2	0	1	0.00	292.03	600.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	8.71	594.35	0.00	0.00	594.50	.16	.04	.00	593.24
1640.	13.	1295.	331.	25.	370.	227.	25.	9.	590.94
.16	.53	3.50	1.46	.035	.028	.032	.036	585.64	297.71
.000333	250.	150.	50.	1	0	1	0.00	202.29	500.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 572.0 1000.0 TYPE= 1 TARGET= 428.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6

7.59	9.41	594.61	0.00	0.00	594.62	.01	.07	.04	591.10
1080.	635.	269.	176.	858.	213.	236.	35.	13.	590.80
.30	.74	1.26	.75	.039	.040	.032	.035	585.20	572.00
.000082	550.	400.	350.	2	0	1	0.00	428.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	9.25	594.63	0.00	0.00	594.64	.01	.02	.00	591.28
1080.	587.	262.	230.	811.	208.	400.	43.	16.	590.98
.39	.72	1.26	.58	.039	.040	.032	.035	585.38	572.00
.000084	250.	250.	250.	2	0	1	0.00	628.00	1200.00

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	9.08	594.64	0.00	0.00	594.66	.01	.01	.00	591.46
1080.	592.	283.	205.	750.	204.	332.	47.	18.	591.16
.43	.79	1.39	.62	.040	.040	.032	.037	585.56	596.00
.000105	1.	250.	350.	0	0	1	0.00	580.00	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 400.0 865.0 TYPE= 1 TARGET= 465.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7

7.77	8.79	594.69	0.00	0.00	594.70	.01	.04	.00	591.90
1080.	712.	181.	187.	1032.	169.	348.	62.	23.	591.40
.60	.69	1.07	.54	.047	.044	.045	.037	585.90	400.00
.000082	450.	450.	450.	0	0	1	0.00	460.25	860.25

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

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 3470 ENCROACHMENT STATIONS=     261.0     516.0  TYPE=     1  TARGET=     255.000

                90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1          VS-8

      7.81      7.81    594.71      0.00      0.00    594.75      .04       .03       .02    591.80
    1080.       373.      332.      375.      337.      147.      251.       68.       25.     590.50
       .64      1.10      2.26      1.49      .055      .044      .035      .036    586.90    261.00
  .000402       300.      200.      100.         0         0         1      0.00    255.00    516.00


 3470 ENCROACHMENT STATIONS=     281.0     496.0  TYPE=     1  TARGET=     215.000
      7.83      8.54    594.74      0.00      0.00    594.77      .03       .02       .00    591.10
    1080.       399.      338.      343.      353.      164.      308.       70.       26.     589.80
       .65      1.13      2.07      1.11      .040      .032      .037      .036    586.20    281.00
  .000163        80.       80.       80.         1         0         1      0.00    215.00    496.00


 NORMAL BRIDGE,NRD= 7 MIN ELTRD=  592.10 MAX ELLC=  591.70

 3470 ENCROACHMENT STATIONS=     250.0     460.0  TYPE=     1  TARGET=     210.000

                D/S FACE OF SOUTHGATE KENNEL BRIDGE #1           BS-9

                ABANDONED CONCRETE DRIVE-WAY BRIDGE

                APPROX. SIZE = 9" X 0.6", LENGTH = 10"

      7.83      8.73    594.73      0.00      0.00    594.79      .07       .00       .02    592.10
    1080.       479.      151.      450.      233.       69.      215.       70.       26.     592.10
       .65      2.06      2.18      2.09      .040      .032      .037      .036    586.00    250.00
  .000990        10.       10.       10.         1         0         1     -5.82    210.00    460.00


 8930,RDST NOT ON GR CARD    249.99

 NORMAL BRIDGE,NRD= 7 MIN ELTRD=  592.10 MAX ELLC=  591.70

 3470 ENCROACHMENT STATIONS=     250.0     460.0  TYPE=     1  TARGET=     210.000

                U/S FACE OF SOUTHGATE KENNEL BRIDGE #1           BS-9

      7.83      8.74    594.74      0.00      0.00    594.80      .07       .01       .00    592.10
    1080.       479.      150.      451.      234.       69.      216.       70.       26.     592.10
       .66      2.05      2.17      2.09      .040      .032      .037      .036    586.00    250.00
  .000983        10.       10.       10.         0         0         1     -5.82    210.00    460.00


 8930,RDST NOT ON GR CARD    249.99

 3470 ENCROACHMENT STATIONS=     250.0     460.0  TYPE=     1  TARGET=     210.000
      7.84      8.56    594.76      0.00      0.00    594.85      .09       .03       .01    592.30
    1080.       427.      257.      396.      216.       74.      198.       70.       26.     592.30
       .66      1.97      3.49      2.00      .040      .032      .037      .036    586.20    250.00
  .001005        35.       35.       35.         1         0         1      0.00    210.00    460.00


 NORMAL BRIDGE,NRD=13 MIN ELTRD=  592.40 MAX ELLC=  592.80
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3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	8.38	594.78	0.00	0.00	594.97	.19	.07	.05	593.50
1080.	652.	265.	163.	183.	67.	75.	71.	26.	593.50
.66	3.56	3.96	2.17	.040	.032	.037	.036	586.40	795.00
.004101	40.	40.	40.	2	0	1	-16.39	210.00	1005.00

8930,RDST NOT ON GR CARD 794.99

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

7.85	8.51	594.91	0.00	0.00	595.07	.16	.09	.01	593.50
1080.	649.	243.	188.	196.	68.	88.	71.	26.	593.50
.67	3.31	3.55	2.13	.040	.032	.037	.036	586.40	795.00
.003225	25.	25.	25.	2	0	1	-16.39	210.00	1005.00

8930,RDST NOT ON GR CARD 794.99

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11

7.87	7.82	595.12	0.00	0.00	595.20	.07	.10	.03	593.20
1080.	273.	492.	315.	305.	165.	230.	72.	27.	591.90
.68	.90	2.99	1.37	.050	.039	.040	.036	587.30	535.98
.000549	1.	100.	250.	2	0	1	0.00	398.16	934.14

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	7.87	595.17	0.00	0.00	595.23	.06	.02	.01	593.20
1080.	345.	438.	297.	310.	166.	236.	73.	27.	591.90
.69	1.11	2.64	1.26	.035	.035	.037	.036	587.30	560.00
.000387	49.	49.	49.	2	0	1	0.00	375.63	935.63

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	8.90	596.20	596.20	0.00	596.51	.31	.00	0.00	597.00
1080.	521.	328.	230.	132.	57.	68.	73.	27.	597.10
.69	3.94	5.79	3.38	.016	.018	.016	.036	587.30	990.00
.003223	1.	1.	1.	2	8	1	-47.95	363.00	1355.00

8930,RDST NOT ON GR CARD 989.99

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

7.89	9.27	596.57	0.00	0.00	596.69	.11	.12	.06	597.00
1080.	600.	171.	309.	221.	57.	122.	73.	28.	597.10
.69	2.71	3.01	2.53	.016	.018	.016	.035	587.30	950.00
.000894	77.	77.	77.	2	0	1	-71.87	403.00	1355.00

8930,RDST NOT ON GR CARD 989.99
1490 NH CARD USED

REPEATED SECTION FROM SECTION 7.9879

7.90	9.33	596.70	0.00	0.00	596.73	.03	.01	.03	592.87
1080.	314.	326.	440.	262.	194.	422.	74.	29.	592.07
.71	1.20	1.68	1.04	.035	.040	.032	.035	587.37	93.50
.000145	50.	50.	50.	2	0	1	0.00	372.76	466.26

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	9.14	596.72	0.00	0.00	596.75	.03	.03	.00	593.08
1080.	319.	349.	412.	243.	189.	379.	77.	30.	592.28

.74	1.31	1.85	1.09	.035	.040	.034	.034	587.58	105.74
.000180	260.	150.	85.	2	0	1	0.00	337.09	442.83

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13

7.99	8.78	596.78	0.00	0.00	596.83	.05	.07	.01	593.50
1080.	344.	416.	320.	214.	180.	258.	82.	31.	592.70
.78	1.60	2.32	1.24	.035	.040	.040	.033	588.00	130.58
.000301	350.	300.	250.	0	0	1	0.00	194.42	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14

8.08	8.81	596.91	0.00	0.00	596.92	.02	.08	.01	592.70
1080.	330.	341.	409.	538.	212.	642.	91.	34.	593.40
.90	.61	1.61	.64	.060	.040	.060	.032	588.10	87.21
.000143	400.	400.	400.	2	0	1	0.00	474.76	561.97

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15

8.15	7.29	596.99	0.00	0.00	597.03	.04	.10	.01	593.40
1080.	455.	330.	295.	444.	132.	288.	103.	38.	592.00
.98	1.03	2.50	1.02	.060	.040	.060	.030	589.70	64.75
.000408	250.	400.	650.	1	0	1	0.00	285.25	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16

8.23	8.26	597.16	0.00	0.00	597.29	.13	.21	.05	593.60
1080.	32.	504.	544.	20.	126.	369.	108.	40.	594.90
1.02	1.60	4.01	1.47	.045	.041	.060	.030	588.90	288.77
.001168	600.	400.	100.	2	0	1	0.00	193.23	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17

8.31	7.94	597.64	0.00	0.00	597.92	.29	.56	.08	594.60
1080.	194.	886.	0.	84.	192.	1.	111.	41.	597.50
1.04	2.31	4.61	.30	.035	.042	.035	.029	589.70	344.75
.001692	400.	400.	400.	2	0	1	0.00	105.30	450.05

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.14	597.74	0.00	0.00	598.00	.26	.07	.01	594.50
1080.	193.	885.	3.	95.	199.	6.	112.	41.	597.40
1.05	2.02	4.44	.42	.035	.035	.037	.029	589.60	341.13

.001195	49.	49.	49.	2	0	1	0.00	130.48	471.61

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.17	597.77	0.00	0.00	598.01	.24	.00	.01	589.70
1080.	450.	477.	153.	156.	97.	52.	112.	41.	590.10
1.05	2.89	4.90	2.92	.016	.018	.016	.029	589.60	703.47
.000223	1.	1.	1.	2	0	1	0.00	120.62	824.09

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 CROSS SECTION 8.33 EXTENDED 1.16 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
608.00	599.68	0.00	551.	529.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

U/S FACE OF ALLEN RD. BRIDGE BS-18

8.33	10.56	600.16	0.00	0.00	600.23	.06	2.22	0.00	589.70
1080.	516.	331.	234.	296.	127.	154.	113.	42.	590.10
1.06	1.74	2.61	1.52	.016	.018	.016	.029	589.60	702.09
.000045	95.	95.	95.	2	0	5	0.00	126.15	828.24

8930,RDST NOT ON GR CARD 702.08
8930,RDST NOT ON GR CARD 702.09
8930,RDST NOT ON GR CARD 758.64
8930,RDST NOT ON GR CARD 770.82
8930,RDST NOT ON GR CARD 783.00
8930,RDST NOT ON GR CARD 795.18
8930,RDST NOT ON GR CARD 828.24
8930,RDST NOT ON GR CARD 828.24

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**********************************************
HEC2 VERSION UPDATED JAN 1976
ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
MODIFICATIONS 52,53,54,55,56,57,58
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T1      CITY OF SOUTHGATE FIS 5555-66  DICK ZANOTTI
T2      500-YEAR FLOOD 1980 CFS
T3      FRANK AND POET DRAIN

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
      -10.       5.        -0.       -0. -0.000000     -0.00     -0.0      -0.   592.720    -0.000

J2  NPROF     IPLOT     PREVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     15.000    -0.000    -1.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000    -0.000

CCHV=    .300 CEHV=    .500
1490 NH CARD USED
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA   LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

                  50 FT D/S OF PENNSYLVANIA RD. BRIDGE              VS-1

      7.24      8.72    592.72      0.00    592.72    592.92       .20      0.00      0.00    588.70
    1980.      923.      1057.        0.      425.      234.        0.        0.        0.     593.00
      0.00      2.17      4.51      0.00      .043      .039     0.000     0.000    584.00    860.95
  .001123     100.      100.      100.         0         0         1      0.00    238.57   1099.52

                  D/S FACE OF PENNSYLVANIA RD. BRIDGE               BS-2

                  BOX CULVERT WITH WINGWALLS AND HEADWALLS

                  APPROX. SIZE = 19" X 5.8", LENGTH = 30"

      7.25      8.94    592.84      0.00      0.00    592.98       .15       .04       .02    588.60
    1980.     1061.      919.        0.      471.      242.        0.        1.        0.     592.90
       .00      2.25      3.79      0.00      .035      .035      .037      .034    583.90    850.54
  .000736     50.       50.       50.          2         0         1      0.00    249.35   1099.90

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     -0.00       1.50       2.60      -0.00      16.48      -0.00      95.60      0.00      583.90     583.90

PRESSURE AND WEIR FLOW
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EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
602.83	592.98	0.00	1222.	759.	96.	589.70	592.40	30.00

3470 ENCROACHMENT STATIONS= 970.0 1256.0 TYPE= 1 TARGET= 286.000

U/S FACE OF PENNSYLVANIA RD. BRIDGE BS-2

7.25	10.34	594.24	0.00	0.00	594.31	.07	1.32	0.00	585.10
1980.	1293.	538.	149.	801.	183.	107.	1.	0.	583.90
.01	1.61	2.94	1.39	.035	.035	.037	.034	583.90	970.00
.000236	30.	30.	30.	2	0	5	0.00	286.00	1256.00

3470 ENCROACHMENT STATIONS= 1020.0 1306.0 TYPE= 1 TARGET= 286.000

7.26	10.29	594.25	0.00	0.00	594.32	.07	.01	.00	585.16
1980.	1232.	545.	203.	717.	182.	175.	3.	1.	583.96
.02	1.72	2.99	1.16	.035	.035	.037	.034	583.96	1020.00
.000245	50.	50.	50.	1	0	1	0.00	286.00	1306.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 550.0 TYPE= 1 TARGET= 549.999

500 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-3

7.35	9.86	594.36	0.00	0.00	594.45	.08	.12	.01	596.10
1980.	0.	833.	1147.	0.	285.	660.	13.	4.	587.40
.07	0.00	2.92	1.74	.035	.032	.032	.035	584.50	257.26
.000287	450.	450.	450.	0	0	1	0.00	292.74	550.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 632.0 TYPE= 1 TARGET= 631.999

7.40	9.23	594.43	0.00	0.00	594.56	.12	.09	.02	596.80
1980.	0.	926.	1054.	0.	258.	553.	18.	6.	588.10
.10	0.00	3.58	1.91	.035	.032	.032	.035	585.20	258.81
.000466	250.	250.	250.	0	0	1	0.00	373.19	632.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 600.0 TYPE= 1 TARGET= 599.999

1000 FT U/S OF PENNSYLVANIA RD. BRIDGE VS-4

7.44	8.64	594.54	0.00	0.00	594.69	.14	.12	.01	597.30
1980.	0.	1153.	827.	0.	314.	442.	23.	7.	589.50
.12	0.00	3.67	1.87	.035	.031	.032	.035	585.90	348.47
.000503	250.	250.	250.	1	0	1	0.00	251.53	600.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 600.0 TYPE= 1 TARGET= 599.999

50 FT D/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-5

7.49	8.82	594.62	0.00	0.00	594.79	.17	.09	.01	593.40
1980.	20.	1430.	530.	31.	376.	370.	26.	9.	591.10
.14	.62	3.80	1.43	.035	.028	.032	.036	585.80	282.27
.000385	350.	250.	150.	2	0	1	0.00	317.73	600.00

3470 ENCROACHMENT STATIONS= .0 500.0 TYPE= 1 TARGET= 499.999

7.52	9.02	594.66	0.00	0.00	594.85	.19	.05	.01	593.24
1980.	32.	1506.	442.	47.	387.	257.	28.	10.	590.94
.15	.68	3.89	1.72	.035	.028	.032	.036	585.64	253.71
.000389	250.	150.	50.	2	0	1	0.00	246.29	500.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 572.0 1000.0 TYPE= 1 TARGET= 428.000

500 FT U/S OF INTERSECTION OF SUTLIFF-KENOPE DRN VS-6

7.59	9.77	594.97	0.00	0.00	594.99	.01	.08	.05	591.10
1310.	785.	296.	229.	967.	223.	272.	39.	13.	590.80
.28	.81	1.33	.84	.039	.040	.032	.035	585.20	572.00
.000086	550.	400.	350.	2	0	1	0.00	428.00	1000.00

3470 ENCROACHMENT STATIONS= 572.0 1200.0 TYPE= 1 TARGET= 628.000

7.64	9.62	595.00	0.00	0.00	595.01	.01	.02	.00	591.28
1310.	706.	279.	326.	920.	219.	510.	48.	16.	590.98
.36	.77	1.27	.64	.039	.040	.032	.035	585.38	572.00
.000081	250.	250.	250.	2	0	1	0.00	628.00	1200.00

3470 ENCROACHMENT STATIONS= 596.0 1176.0 TYPE= 1 TARGET= 580.000

7.69	9.45	595.01	0.00	0.00	595.02	.01	.01	.00	591.46
1310.	713.	300.	297.	851.	214.	433.	53.	19.	591.16
.40	.84	1.40	.69	.039	.040	.032	.037	585.56	596.00
.000101	1.	250.	350.	0	0	1	0.00	580.00	1176.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 400.0 865.0 TYPE= 1 TARGET= 465.000

290 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-7

7.77	9.16	595.06	0.00	0.00	595.07	.01	.04	.00	591.90
1310.	859.	204.	248.	1132.	178.	408.	70.	24.	591.40
.56	.76	1.14	.61	.047	.044	.045	.037	585.90	400.00
.000088	450.	450.	450.	0	0	1	0.00	465.00	865.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 261.0 516.0 TYPE= 1 TARGET= 255.000

90 FT D/S OF SOUTHGATE KENNEL BRIDGE #1 VS-8

7.81	8.17	595.07	0.00	0.00	595.12	.05	.04	.02	591.80
1310.	459.	366.	485.	380.	156.	294.	77.	26.	590.50
.60	1.21	2.35	1.65	.055	.044	.035	.036	586.90	261.00
.000411	300.	200.	100.	0	0	1	0.00	255.00	516.00

3470 ENCROACHMENT STATIONS= 281.0 496.0 TYPE= 1 TARGET= 215.000

7.83	8.90	595.10	0.00	0.00	595.14	.04	.02	.00	591.10
1310.	491.	387.	432.	388.	172.	343.	78.	26.	589.80
.61	1.27	2.25	1.26	.040	.032	.037	.036	586.20	281.00
.000181	80.	80.	80.	1	0	1	0.00	215.00	496.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9

ABANDONED CONCRETE DRIVE-WAY BRIDGE

APPROX. SIZE = 9" X 0.6", LENGTH = 10"

7.83	9.09	595.09	0.00	0.00	595.17	.08	.00	.02	592.10
1310.	588.	157.	565.	270.	73.	252.	78.	26.	592.10
.62	2.18	2.16	2.24	.040	.032	.037	.036	586.00	250.00
.000920	10.	10.	10.	1	0	1	-5.82	210.00	460.00

NORMAL BRIDGE,NRD= 7 MIN ELTRD= 592.10 MAX ELLC= 591.70

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #1 BS-9

7.83	9.10	595.10	0.00	0.00	595.17	.08	.01	.00	592.10
1310.	588.	156.	565.	270.	73.	253.	79.	26.	592.10
.62	2.18	2.16	2.24	.040	.032	.037	.036	586.00	250.00
.000914	10.	10.	10.	0	0	1	-5.82	210.00	460.00

3470 ENCROACHMENT STATIONS= 250.0 460.0 TYPE= 1 TARGET= 210.000

7.84	8.92	595.12	0.00	0.00	595.22	.09	.03	.01	592.30
1310.	534.	267.	508.	253.	77.	235.	79.	27.	592.30
.62	2.11	3.48	2.16	.040	.032	.037	.036	586.20	250.00
.000940	35.	35.	35.	1	0	1	0.00	210.00	460.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

D/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

ROUND CONCRETE PIPE, DIA. = 9.5" WITH HEADWALL

LENGTH = 2.5", ABOUT 1/3 OF CULVERT IS SILT

7.85	8.74	595.14	0.00	0.00	595.32	.18	.06	.04	593.50
1310.	779.	256.	275.	219.	71.	111.	80.	27.	593.50
.62	3.55	3.62	2.46	.040	.032	.037	.036	586.40	795.00
.003206	40.	40.	40.	2	0	1	-16.39	210.00	1005.00

NORMAL BRIDGE,NRD=13 MIN ELTRD= 592.40 MAX ELLC= 592.80

3470 ENCROACHMENT STATIONS= 795.0 1005.0 TYPE= 1 TARGET= 210.000

U/S FACE OF SOUTHGATE KENNEL BRIDGE #2 BS-10

7.85	8.84	595.24	0.00	0.00	595.40	.16	.07	.01	593.50
1310.	776.	242.	292.	229.	72.	121.	80.	27.	593.50
.63	3.38	3.38	2.41	.040	.032	.037	.036	586.40	795.00
.002747	25.	25.	25.	2	0	1	-16.39	210.00	1005.00

1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 525.0 935.0 TYPE= 1 TARGET= 410.000

50 FT D/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-11

7.87	8.15	595.45	0.00	0.00	595.52	.07	.10	.03	593.20
1310.	381.	525.	404.	386.	173.	274.	81.	28.	591.90
.64	.99	3.03	1.47	.050	.039	.040	.036	587.30	525.00
.000533	1.	100.	250.	2	0	1	0.00	410.00	935.00

3470 ENCROACHMENT STATIONS= 560.0 943.0 TYPE= 1 TARGET= 383.000

7.88	8.20	595.50	0.00	0.00	595.55	.06	.02	.00	593.20
1310.	468.	466.	376.	380.	174.	282.	82.	28.	591.90
.65	1.23	2.67	1.33	.035	.035	.037	.036	587.30	560.00
.000371	49.	49.	49.	2	0	1	0.00	383.00	943.00

3685 20 TRIALS USED WSEL,CWSEL

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 990.0 1355.0 TYPE= 1 TARGET= 365.000

D/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

CONCRETE BOX CULVERT, WITH HEADWALLS AND WINGWALLS

APPROX. SIZE = 12" X 4.5", LENGTH = 77"

7.88	8.99	596.29	596.29	0.00	596.63	.34	.00	0.00	597.00
1310.	665.	335.	310.	151.	57.	81.	82.	28.	597.10
.65	4.39	5.90	3.83	.016	.018	.016	.036	587.30	990.00
.003368	1.	1.	1.	30	8	1	-49.05	363.00	1355.00

3265 DIVIDED FLOW

NORMAL BRIDGE,NRD=13 MIN ELTRD= 595.40 MAX ELLC= 592.20

3470 ENCROACHMENT STATIONS= 950.0 1355.0 TYPE= 1 TARGET= 405.000

U/S FACE OF DIX-TOLEDO HIGHWAY BRIDGE BS-12

7.89	9.38	596.68	0.00	0.00	596.82	.14	.13	.06	597.00
1310.	741.	177.	392.	246.	57.	138.	83.	29.	597.10
.65	3.01	3.12	2.85	.016	.018	.016	.035	587.30	950.00
.000968	77.	77.	77.	2	0	1	-75.94	403.00	1355.00

1490 NH CARD USED

REPEATED SECTION FROM SECTION 7.9879

7.90	9.46	596.83	0.00	0.00	596.87	.03	.02	.03	592.87
1310.	376.	377.	557.	277.	197.	455.	84.	29.	592.07
.66	1.36	1.91	1.22	.035	.040	.031	.035	587.37	86.82
.000183	50.	50.	50.	2	0	1	0.00	396.15	482.96

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= .0 475.0 TYPE= 1 TARGET= 474.999

7.93	9.28	596.86	0.00	0.00	596.90	.04	.03	.00	593.08
1310.	382.	403.	525.	257.	193.	410.	87.	30.	592.28
.69	1.49	2.09	1.28	.035	.040	.032	.034	587.58	95.91
.000226	260.	150.	85.	2	0	1	0.00	364.32	460.23

3470 ENCROACHMENT STATIONS= .0 325.0 TYPE= 1 TARGET= 324.999

500 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-13

7.99	8.93	596.93	0.00	0.00	597.00	.07	.09	.01	593.50
1310.	420.	487.	403.	225.	184.	274.	92.	32.	592.70
.73	1.86	2.65	1.47	.035	.040	.040	.033	588.00	127.12
.000385	350.	300.	250.	1	0	1	0.00	197.88	325.00

1490 NH CARD USED

975 FT U/S OF DIX-TOLEDO HIGHWAY BRIDGE VS-14

8.08	9.00	597.10	0.00	0.00	597.12	.02	.10	.01	592.70
1310.	409.	397.	503.	579.	218.	687.	102.	35.	593.40
.84	.71	1.82	.73	.060	.040	.060	.032	588.10	79.31
.000179	400.	400.	400.	2	0	1	0.00	488.24	567.55

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= .0 350.0 TYPE= 1 TARGET= 349.999

850 FT D/S OF ALLEN RD. BRIDGE VS-15

8.15	7.50	597.20	0.00	0.00	597.25	.05	.12	.01	593.40
1310.	561.	384.	365.	480.	137.	309.	114.	39.	592.00
.91	1.17	2.81	1.18	.060	.040	.060	.030	589.70	60.42
.000495	250.	400.	650.	1	0	1	0.00	289.58	350.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 130.0 482.0 TYPE= 1 TARGET= 352.000

450 FT D/S OF ALLEN RD. BRIDGE VS-16

8.23	8.50	597.40	0.00	0.00	597.56	.16	.25	.05	593.60
1310.	41.	576.	693.	23.	130.	408.	119.	41.	594.90
.94	1.81	4.42	1.70	.045	.041	.060	.030	588.90	288.01
.001356	600.	400.	100.	2	0	1	0.00	193.99	482.00

1490 NH CARD USED

3470 ENCROACHMENT STATIONS= 300.0 535.0 TYPE= 1 TARGET= 235.000

50 FT D/S OF ALLEN RD. BRIDGE VS-17

8.31	8.25	597.95	0.00	0.00	598.29	.34	.64	.09	594.60
1310.	270.	1033.	8.	102.	203.	11.	123.	43.	597.50
.96	2.64	5.08	.69	.035	.042	.035	.029	589.70	339.05
.001946	400.	400.	400.	2	0	1	0.00	144.92	483.97

3470 ENCROACHMENT STATIONS= 300.0 600.0 TYPE= 1 TARGET= 300.000

8.31	8.47	598.07	0.00	0.00	598.38	.30	.08	.01	594.50
1310.	265.	1027.	18.	116.	211.	25.	124.	43.	597.40
.97	2.28	4.87	.75	.035	.035	.037	.029	589.60	335.03
.001331	49.	49.	49.	2	0	1	0.00	171.64	506.67

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

D/S FACE OF ALLEN RD. BRIDGE BS-18

APPROX. SIZE = 14" X 5", LENGTH = 95"

CONCRETE BOX CULVERT, WITH HEADWALLS, SKEWED BY 30 DEGREES

8.31	8.52	598.12	0.00	0.00	598.39	.27	.00	.01	589.70
1310.	573.	540.	197.	180.	102.	68.	124.	43.	590.10
.97	3.18	5.31	2.90	.016	.018	.016	.029	589.60	702.09
.000248	1.	1.	1.	2	0	1	0.00	126.15	828.24

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.93	3.00	-0.00	11.69	-0.00	58.46	-0.00	589.60	589.60

3280 CROSS SECTION 8.33 EXTENDED 1.56 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	ELLC	ELTRD	CLASS
613.17	600.70	0.00	776.	536.	58.	594.60	598.20	30.00

3470 ENCROACHMENT STATIONS= 702.1 828.2 TYPE= 1 TARGET= 145.000

U/S FACE OF ALLEN RD. BRIDGE BS-18

8.33	10.96	600.56	0.00	0.00	600.64	.08	2.25	0.00	589.70
1310.	636.	379.	296.	324.	131.	172.	125.	43.	590.10
.98	1.96	2.88	1.72	.016	.018	.016	.029	589.60	702.09
.000052	95.	95.	95.	2	0	5	0.00	126.15	828.24

SUMMARY PRINTOUT FOR MULTIPLE PROFILES

FRANK AND POET DRAIN

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7.24	100.00	0.00	0.00	584.00	1100.00	591.72	.15	0.00	0.00	740.30	7.72	189.25
7.24	100.00	0.00	0.00	584.00	1510.00	592.24	.18	0.00	0.00	900.81	8.24	214.90
7.24	100.00	0.00	0.00	584.00	1640.00	592.37	.19	0.00	0.00	948.74	8.37	221.31
7.24	100.00	0.00	0.00	584.00	1980.00	592.72	.20	0.00	0.00	1056.76	8.72	238.57
7.25	50.00	0.00	0.00	583.90	1100.00	591.82	.11	.04	.01	649.07	7.92	198.93
7.25	50.00	0.00	0.00	583.90	1510.00	592.35	.13	.04	.02	782.15	8.45	225.28
7.25	50.00	0.00	0.00	583.90	1640.00	592.48	.13	.04	.02	823.53	8.58	231.90
7.25	50.00	0.00	0.00	583.90	1980.00	592.84	.15	.04	.02	918.95	8.94	249.35
7.25	30.00	592.40	589.70	583.90	1100.00	593.39	.04	1.50	0.00	357.98	9.49	286.00
7.25	30.00	592.40	589.70	583.90	1510.00	593.85	.05	1.42	0.00	444.00	9.95	286.00
7.25	30.00	592.40	589.70	583.90	1640.00	593.97	.05	1.40	0.00	470.56	10.07	286.00
7.25	30.00	592.40	589.70	583.90	1980.00	594.24	.07	1.32	0.00	538.10	10.34	286.00
7.26	50.00	0.00	0.00	583.96	1100.00	593.39	.04	.01	.00	362.66	9.43	286.00
7.26	50.00	0.00	0.00	583.96	1510.00	593.86	.05	.01	.00	449.84	9.90	286.00
7.26	50.00	0.00	0.00	583.96	1640.00	593.97	.06	.01	.00	476.68	10.01	286.00
7.26	50.00	0.00	0.00	583.96	1980.00	594.25	.07	.01	.00	544.94	10.29	286.00
7.35	450.00	0.00	0.00	584.50	1100.00	593.46	.05	.08	.01	554.57	8.96	290.53
7.35	450.00	0.00	0.00	584.50	1510.00	593.94	.07	.10	.01	689.23	9.44	291.71
7.35	450.00	0.00	0.00	584.50	1640.00	594.07	.07	.10	.01	730.12	9.57	292.02
7.35	450.00	0.00	0.00	584.50	1980.00	594.36	.08	.12	.01	833.50	9.86	292.74
7.40	250.00	0.00	0.00	585.20	1100.00	593.50	.09	.06	.02	627.91	8.30	190.34
7.40	250.00	0.00	0.00	585.20	1510.00	594.00	.11	.08	.02	784.99	8.80	372.13
7.40	250.00	0.00	0.00	585.20	1640.00	594.13	.11	.08	.02	826.76	8.93	372.44
7.40	250.00	0.00	0.00	585.20	1980.00	594.43	.12	.09	.02	926.28	9.23	373.19
7.44	250.00	0.00	0.00	585.90	1100.00	593.58	.10	.09	.01	782.54	7.68	236.20
7.44	250.00	0.00	0.00	585.90	1510.00	594.10	.12	.11	.01	964.73	8.20	250.16
7.44	250.00	0.00	0.00	585.90	1640.00	594.23	.13	.11	.01	1018.12	8.33	250.57
7.44	250.00	0.00	0.00	585.90	1980.00	594.54	.14	.12	.01	1153.10	8.64	251.53
7.49	250.00	0.00	0.00	585.80	1100.00	593.65	.12	.07	.01	949.16	7.85	265.51
7.49	250.00	0.00	0.00	585.80	1510.00	594.17	.14	.08	.01	1187.39	8.37	286.46
7.49	250.00	0.00	0.00	585.80	1640.00	594.31	.15	.09	.01	1257.28	8.51	292.03
7.49	250.00	0.00	0.00	585.80	1980.00	594.62	.17	.09	.01	1429.99	8.82	317.73
7.52	150.00	0.00	0.00	585.64	1100.00	593.70	.11	.04	.00	938.08	8.06	174.04
7.52	150.00	0.00	0.00	585.64	1510.00	594.21	.14	.04	.00	1212.19	8.57	195.04
7.52	150.00	0.00	0.00	585.64	1640.00	594.35	.16	.04	.00	1295.39	8.71	202.29
7.52	150.00	0.00	0.00	585.64	1980.00	594.66	.19	.05	.01	1505.55	9.02	246.29
7.59	400.00	0.00	0.00	585.20	730.00	593.89	.01	.06	.03	228.50	8.69	420.32
7.59	400.00	0.00	0.00	585.20	990.00	594.45	.01	.07	.04	257.37	9.25	428.00
7.59	400.00	0.00	0.00	585.20	1080.00	594.61	.01	.07	.04	268.53	9.41	428.00
7.59	400.00	0.00	0.00	585.20	1310.00	594.97	.01	.08	.05	295.65	9.77	428.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7.64	250.00	0.00	0.00	585.38	730.00	593.91	.01	.02	.00	239.36	8.53	612.47
7.64	250.00	0.00	0.00	585.38	990.00	594.48	.01	.02	.00	255.76	9.10	628.00
7.64	250.00	0.00	0.00	585.38	1080.00	594.63	.01	.02	.00	262.47	9.25	628.00
7.64	250.00	0.00	0.00	585.38	1310.00	595.00	.01	.02	.00	278.51	9.62	628.00
7.69	250.00	0.00	0.00	585.56	730.00	593.92	.02	.01	.00	256.33	8.36	508.46
7.69	250.00	0.00	0.00	585.56	990.00	594.49	.01	.01	.00	275.52	8.93	580.00
7.69	250.00	0.00	0.00	585.56	1080.00	594.64	.01	.01	.00	282.78	9.08	580.00
7.69	250.00	0.00	0.00	585.56	1310.00	595.01	.01	.01	.00	300.00	9.45	580.00
7.77	450.00	0.00	0.00	585.90	730.00	593.97	.01	.04	.00	146.40	8.07	441.45
7.77	450.00	0.00	0.00	585.90	990.00	594.54	.01	.04	.00	172.14	8.64	456.19
7.77	450.00	0.00	0.00	585.90	1080.00	594.69	.01	.04	.00	181.40	8.79	460.25
7.77	450.00	0.00	0.00	585.90	1310.00	595.06	.01	.04	.00	203.69	9.16	465.00
7.81	200.00	0.00	0.00	586.90	730.00	593.99	.04	.03	.02	279.82	7.09	237.03
7.81	200.00	0.00	0.00	586.90	990.00	594.55	.04	.03	.02	317.95	7.65	255.00
7.81	200.00	0.00	0.00	586.90	1080.00	594.71	.04	.03	.02	331.90	7.81	255.00
7.81	200.00	0.00	0.00	586.90	1310.00	595.07	.05	.04	.02	366.20	8.17	255.00
7.83	80.00	0.00	0.00	586.20	730.00	594.03	.03	.02	.00	263.02	7.83	215.00
7.83	80.00	0.00	0.00	586.20	990.00	594.58	.03	.02	.00	318.66	8.38	215.00
7.83	80.00	0.00	0.00	586.20	1080.00	594.74	.03	.02	.00	338.29	8.54	215.00
7.83	80.00	0.00	0.00	586.20	1310.00	595.10	.04	.02	.00	386.83	8.90	215.00
7.83	10.00	592.10	591.70	586.00	730.00	594.01	.06	.00	.02	151.61	8.01	210.00
7.83	10.00	592.10	591.70	586.00	990.00	594.57	.06	.00	.02	148.54	8.57	210.00
7.83	10.00	592.10	591.70	586.00	1080.00	594.73	.07	.00	.02	150.60	8.73	210.00
7.83	10.00	592.10	591.70	586.00	1310.00	595.09	.08	.00	.02	156.81	9.09	210.00
7.83	10.00	592.10	591.70	586.00	730.00	594.02	.06	.01	.00	150.83	8.02	210.00
7.83	10.00	592.10	591.70	586.00	990.00	594.58	.06	.01	.00	148.11	8.58	210.00
7.83	10.00	592.10	591.70	586.00	1080.00	594.74	.07	.01	.00	150.20	8.74	210.00
7.83	10.00	592.10	591.70	586.00	1310.00	595.10	.08	.01	.00	156.48	9.10	210.00
7.84	35.00	0.00	0.00	586.20	730.00	594.05	.11	.05	.02	257.64	7.85	210.00
7.84	35.00	0.00	0.00	586.20	990.00	594.60	.09	.04	.01	253.45	8.40	210.00
7.84	35.00	0.00	0.00	586.20	1080.00	594.76	.09	.03	.01	257.02	8.56	210.00
7.84	35.00	0.00	0.00	586.20	1310.00	595.12	.09	.03	.01	267.29	8.92	210.00
7.85	40.00	592.40	592.80	586.40	730.00	594.07	.28	.11	.08	304.97	7.67	164.58
7.85	40.00	592.40	592.80	586.40	990.00	594.63	.20	.08	.05	271.36	8.23	208.17
7.85	40.00	592.40	592.80	586.40	1080.00	594.78	.19	.07	.05	265.13	8.38	210.00
7.85	40.00	592.40	592.80	586.40	1310.00	595.14	.18	.06	.04	255.96	8.74	210.00
7.85	25.00	592.40	592.80	586.40	730.00	594.36	.17	.14	.03	242.58	7.96	192.56
7.85	25.00	592.40	592.80	586.40	990.00	594.78	.16	.10	.01	243.05	8.38	210.00
7.85	25.00	592.40	592.80	586.40	1080.00	594.91	.16	.09	.01	242.87	8.51	210.00
7.85	25.00	592.40	592.80	586.40	1310.00	595.24	.16	.07	.01	242.41	8.84	210.00

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
7.87	100.00	0.00	0.00	587.30	730.00	594.58	.07	.10	.03	417.53	7.28	346.29
7.87	100.00	0.00	0.00	587.30	990.00	594.99	.08	.10	.03	475.10	7.69	385.57
7.87	100.00	0.00	0.00	587.30	1080.00	595.12	.07	.10	.03	491.55	7.82	398.16
7.87	100.00	0.00	0.00	587.30	1310.00	595.45	.07	.10	.03	524.54	8.15	410.00
7.88	49.00	0.00	0.00	587.30	730.00	594.62	.06	.02	.00	380.54	7.32	350.01
7.88	49.00	0.00	0.00	587.30	990.00	595.04	.06	.02	.01	424.52	7.74	371.25
7.88	49.00	0.00	0.00	587.30	1080.00	595.17	.06	.02	.01	437.57	7.87	375.63
7.88	49.00	0.00	0.00	587.30	1310.00	595.50	.06	.02	.00	465.86	8.20	383.00
7.88	1.00	595.40	592.20	587.30	730.00	593.36	2.57	.00	1.26	730.00	6.06	12.00
7.88	1.00	595.40	592.20	587.30	990.00	596.13	.33	.00	0.00	341.98	8.83	363.00
7.88	1.00	595.40	592.20	587.30	1080.00	596.20	.31	.00	0.00	328.27	8.90	363.00
7.88	1.00	595.40	592.20	587.30	1310.00	596.29	.34	.00	0.00	334.58	8.99	363.00
7.89	77.00	595.40	592.20	587.30	730.00	594.41	2.57	1.05	.00	730.00	7.11	12.00
7.89	77.00	595.40	592.20	587.30	990.00	596.55	.10	.11	.07	162.57	9.25	403.00
7.89	77.00	595.40	592.20	587.30	1080.00	596.57	.11	.12	.06	170.82	9.27	403.00
7.89	77.00	595.40	592.20	587.30	1310.00	596.68	.14	.13	.06	177.09	9.38	403.00
7.90	50.00	0.00	0.00	587.37	730.00	597.76	.00	.00	.77	149.24	10.39	524.74
7.90	50.00	0.00	0.00	587.37	990.00	596.66	.02	.01	.02	303.90	9.29	365.25
7.90	50.00	0.00	0.00	587.37	1080.00	596.70	.03	.01	.03	326.40	9.33	372.76
7.90	50.00	0.00	0.00	587.37	1310.00	596.83	.03	.02	.03	377.13	9.46	396.15
7.93	150.00	0.00	0.00	587.58	730.00	597.76	.01	.00	.00	162.80	10.18	423.91
7.93	150.00	0.00	0.00	587.58	990.00	596.68	.03	.02	.00	325.13	9.10	327.41
7.93	150.00	0.00	0.00	587.58	1080.00	596.72	.03	.03	.00	349.26	9.14	337.09
7.93	150.00	0.00	0.00	587.58	1310.00	596.86	.04	.03	.00	402.90	9.28	364.32
7.99	300.00	0.00	0.00	588.00	730.00	597.77	.01	.01	.00	227.54	9.77	253.25
7.99	300.00	0.00	0.00	588.00	990.00	596.73	.05	.06	.01	386.17	8.73	194.21
7.99	300.00	0.00	0.00	588.00	1080.00	596.78	.05	.07	.01	416.49	8.78	194.42
7.99	300.00	0.00	0.00	588.00	1310.00	596.93	.07	.09	.01	487.35	8.93	197.88
8.08	400.00	0.00	0.00	588.10	730.00	597.79	.00	.02	.00	194.01	9.69	537.37
8.08	400.00	0.00	0.00	588.10	990.00	596.84	.01	.07	.01	317.19	8.74	470.13
8.08	400.00	0.00	0.00	588.10	1080.00	596.91	.02	.08	.01	341.12	8.81	474.76
8.08	400.00	0.00	0.00	588.10	1310.00	597.10	.02	.10	.01	397.44	9.00	488.24
8.15	400.00	0.00	0.00	589.70	730.00	597.81	.01	.02	.00	192.85	8.11	301.78
8.15	400.00	0.00	0.00	589.70	990.00	596.92	.04	.09	.01	306.87	7.22	283.81
8.15	400.00	0.00	0.00	589.70	1080.00	596.99	.04	.10	.01	329.95	7.29	285.25
8.15	400.00	0.00	0.00	589.70	1310.00	597.20	.05	.12	.01	383.86	7.50	289.58
8.23	400.00	0.00	0.00	588.90	730.00	597.85	.03	.05	.01	290.58	8.95	226.22
8.23	400.00	0.00	0.00	588.90	990.00	597.07	.12	.19	.04	472.34	8.17	192.95
8.23	400.00	0.00	0.00	588.90	1080.00	597.16	.13	.21	.05	503.51	8.26	193.23
8.23	400.00	0.00	0.00	588.90	1310.00	597.40	.16	.25	.05	576.06	8.50	193.99

SECTION NUMBER	CHANNEL LENGTH	MIN EL OF ROADWAY	MAX EL OF LOW CHORD	MIN EL GROUND	DISCHARGE (CFS)	CWSEL	HV	HL	OLOSS	QCH	DEPTH	TOPWID
8.31	400.00	0.00	0.00	589.70	730.00	597.97	.10	.16	.03	573.87	8.27	147.32
8.31	400.00	0.00	0.00	589.70	990.00	597.51	.26	.51	.07	823.58	7.81	89.39
8.31	400.00	0.00	0.00	589.70	1080.00	597.64	.29	.56	.08	886.09	7.94	105.30
8.31	400.00	0.00	0.00	589.70	1310.00	597.95	.34	.64	.09	1032.65	8.25	144.92
8.31	49.00	0.00	0.00	589.60	730.00	598.00	.10	.03	.00	579.30	8.40	162.68
8.31	49.00	0.00	0.00	589.60	990.00	597.60	.24	.06	.01	822.78	8.00	113.46
8.31	49.00	0.00	0.00	589.60	1080.00	597.74	.26	.07	.01	884.66	8.14	130.48
8.31	49.00	0.00	0.00	589.60	1310.00	598.07	.30	.08	.01	1027.01	8.47	171.64
8.31	1.00	0.00	0.00	589.60	730.00	598.01	.09	.00	.00	307.70	8.41	126.15
8.31	1.00	0.00	0.00	589.60	990.00	597.63	.22	.00	.01	447.05	8.03	103.21
8.31	1.00	0.00	0.00	589.60	1080.00	597.77	.24	.00	.01	477.00	8.17	120.62
8.31	1.00	0.00	0.00	589.60	1310.00	598.12	.27	.00	.01	540.17	8.52	126.15
8.33	95.00	598.20	594.60	589.60	730.00	599.64	.04	1.57	0.00	242.74	10.04	126.15
8.33	95.00	598.20	594.60	589.60	990.00	600.01	.06	2.22	0.00	310.26	10.41	126.15
8.33	95.00	598.20	594.60	589.60	1080.00	600.16	.06	2.22	0.00	330.58	10.56	126.15
8.33	95.00	598.20	594.60	589.60	1310.00	600.56	.08	2.25	0.00	378.59	10.96	126.15

SECTION NUMBER	DISCHARGE CFS	CWSEL	CWSEL DIFF EACH Q	CWSEL DIFF EACH SECTION	CWSEL-WSELK	TOPWID	T.W. DIFF	LENGTH
7.239	1100.000	591.720	0.000	0.000	0.000	189.247	0.000	100.000
7.239	1510.000	592.240	.520	0.000	0.000	214.895	-25.648	100.000
7.239	1640.000	592.370	.130	0.000	0.000	221.307	-32.060	100.000
7.239	1980.000	592.720	.350	0.000	0.000	238.570	-49.324	100.000
7.248	1100.000	591.816	0.000	.096	0.000	198.929	0.000	50.000
7.248	1510.000	592.350	.534	.110	0.000	225.277	-26.348	50.000
7.248	1640.000	592.485	.134	.115	0.000	231.895	-32.966	50.000
7.248	1980.000	592.838	.354	.118	0.000	249.352	-50.423	50.000
7.254	1100.000	593.386	0.000	1.570	0.000	285.999	0.000	30.000
7.254	1510.000	593.847	.461	1.497	0.000	285.999	-.000	30.000
7.254	1640.000	593.966	.118	1.481	0.000	285.999	-.000	30.000
7.254	1980.000	594.240	.274	1.401	0.000	285.999	-.000	30.000
7.263	1100.000	593.392	0.000	.006	0.000	285.999	0.000	50.000
7.263	1510.000	593.855	.463	.008	0.000	285.999	-.000	50.000
7.263	1640.000	593.974	.119	.009	0.000	285.999	-.000	50.000
7.263	1980.000	594.250	.276	.010	0.000	285.999	-.000	50.000
7.348	1100.000	593.460	0.000	.068	0.000	290.528	0.000	450.000
7.348	1510.000	593.943	.483	.088	0.000	291.713	-1.185	450.000
7.348	1640.000	594.069	.126	.095	0.000	292.022	-1.494	450.000
7.348	1980.000	594.362	.293	.112	0.000	292.741	-2.214	450.000
7.396	1100.000	593.503	0.000	.042	0.000	190.337	0.000	250.000
7.396	1510.000	593.997	.495	.054	0.000	372.126	-181.789	250.000
7.396	1640.000	594.128	.130	.059	0.000	372.443	-182.107	250.000
7.396	1980.000	594.432	.305	.070	0.000	373.186	-182.850	250.000
7.443	1100.000	593.583	0.000	.081	0.000	236.205	0.000	250.000
7.443	1510.000	594.096	.513	.099	0.000	250.161	-13.956	250.000
7.443	1640.000	594.230	.134	.102	0.000	250.570	-14.365	250.000
7.443	1980.000	594.542	.312	.110	0.000	251.527	-15.322	250.000
7.491	1100.000	593.649	0.000	.066	0.000	265.508	0.000	250.000
7.491	1510.000	594.169	.520	.073	0.000	286.462	-20.953	250.000
7.491	1640.000	594.305	.136	.075	0.000	292.029	-26.521	250.000
7.491	1980.000	594.624	.319	.082	0.000	317.729	-52.221	250.000

7.519	1100.000	593.698	0.000	.049	0.000	174.041	0.000	150.000
7.519	1510.000	594.211	.512	.041	0.000	195.037	-20.995	150.000
7.519	1640.000	594.346	.136	.041	0.000	202.291	-28.249	150.000
7.519	1980.000	594.664	.318	.040	0.000	246.286	-72.245	150.000
7.595	730.000	593.886	0.000	.188	0.000	420.316	0.000	400.000
7.595	990.000	594.454	.568	.244	0.000	427.999	-7.683	400.000
7.595	1080.000	594.608	.154	.262	0.000	427.999	-7.683	400.000
7.595	1310.000	594.972	.364	.308	0.000	427.999	-7.683	400.000
7.642	730.000	593.907	0.000	.021	0.000	612.467	0.000	250.000
7.642	990.000	594.476	.568	.021	0.000	627.999	-15.532	250.000
7.642	1080.000	594.630	.155	.022	0.000	627.999	-15.532	250.000
7.642	1310.000	594.996	.366	.024	0.000	627.999	-15.532	250.000
7.689	730.000	593.919	0.000	.012	0.000	508.461	0.000	250.000
7.689	990.000	594.487	.567	.011	0.000	579.999	-71.538	250.000
7.689	1080.000	594.641	.155	.011	0.000	579.999	-71.538	250.000
7.689	1310.000	595.007	.366	.011	0.000	579.999	-71.538	250.000
7.775	730.000	593.973	0.000	.053	0.000	441.454	0.000	450.000
7.775	990.000	594.536	.563	.049	0.000	456.195	-14.740	450.000
7.775	1080.000	594.690	.154	.049	0.000	460.247	-18.792	450.000
7.775	1310.000	595.056	.365	.048	0.000	464.999	-23.545	450.000
7.812	730.000	593.991	0.000	.018	0.000	237.034	0.000	200.000
7.812	990.000	594.554	.563	.018	0.000	254.999	-17.965	200.000
7.812	1080.000	594.708	.154	.018	0.000	254.999	-17.965	200.000
7.812	1310.000	595.073	.365	.018	0.000	254.999	-17.965	200.000
7.828	730.000	594.026	0.000	.035	0.000	214.999	0.000	80.000
7.828	990.000	594.585	.559	.031	0.000	214.999	-.000	80.000
7.828	1080.000	594.739	.154	.031	0.000	214.999	-.000	80.000
7.828	1310.000	595.103	.365	.030	0.000	214.999	-.000	80.000
7.829	730.000	594.010	0.000	-.015	0.000	209.999	0.000	10.000
7.829	990.000	594.571	.561	-.013	0.000	209.999	-.000	10.000
7.829	1080.000	594.725	.154	-.013	0.000	209.999	-.000	10.000
7.829	1310.000	595.089	.364	-.014	0.000	209.999	-.000	10.000
7.831	730.000	594.025	0.000	.015	0.000	209.999	0.000	10.000
7.831	990.000	594.582	.557	.011	0.000	209.999	-.000	10.000
7.831	1080.000	594.736	.154	.010	0.000	209.999	-.000	10.000
7.831	1310.000	595.099	.363	.010	0.000	209.999	-.000	10.000
7.838	730.000	594.048	0.000	.024	0.000	209.999	0.000	35.000
7.838	990.000	594.605	.556	.023	0.000	209.999	-.000	35.000
7.838	1080.000	594.758	.154	.023	0.000	209.999	-.000	35.000
7.838	1310.000	595.122	.363	.023	0.000	209.999	-.000	35.000
7.846	730.000	594.074	0.000	.026	0.000	164.580	0.000	40.000
7.846	990.000	594.627	.552	.022	0.000	208.173	-43.592	40.000
7.846	1080.000	594.781	.154	.023	0.000	209.999	-45.419	40.000
7.846	1310.000	595.144	.363	.023	0.000	209.999	-45.419	40.000
7.850	730.000	594.361	0.000	.287	0.000	192.556	0.000	25.000
7.850	990.000	594.780	.419	.153	0.000	209.999	-17.443	25.000
7.850	1080.000	594.912	.132	.131	0.000	209.999	-17.443	25.000
7.850	1310.000	595.242	.329	.097	0.000	209.999	-17.443	25.000
7.869	730.000	594.578	0.000	.217	0.000	346.292	0.000	100.000
7.869	990.000	594.991	.413	.211	0.000	385.569	-39.277	100.000
7.869	1080.000	595.123	.132	.211	0.000	398.160	-51.868	100.000
7.869	1310.000	595.453	.330	.211	0.000	409.999	-63.707	100.000

7.878	730.000	594.622	0.000	.044	0.000	350.010	0.000	49.000
7.878	990.000	595.037	.416	.046	0.000	371.248	-21.238	49.000
7.878	1080.000	595.169	.132	.046	0.000	375.631	-25.622	49.000
7.878	1310.000	595.495	.326	.043	0.000	382.999	-32.989	49.000
7.879	730.000	593.365	0.000	-1.257	0.000	12.000	0.000	1.000
7.879	990.000	596.132	2.767	1.094	0.000	362.999	-350.999	1.000
7.879	1080.000	596.195	.064	1.027	0.000	362.999	-350.999	1.000
7.879	1310.000	596.287	.092	.792	0.000	362.999	-350.999	1.000
7.893	730.000	594.412	0.000	1.047	0.000	12.000	0.000	77.000
7.893	990.000	596.546	2.134	.414	0.000	402.999	-390.999	77.000
7.893	1080.000	596.571	.026	.376	0.000	402.999	-390.999	77.000
7.893	1310.000	596.681	.110	.394	0.000	402.999	-390.999	77.000
7.903	730.000	597.756	0.000	3.344	0.000	524.744	0.000	50.000
7.903	990.000	596.660	-1.096	.114	0.000	365.252	159.493	50.000
7.903	1080.000	596.700	.040	.129	0.000	372.763	151.981	50.000
7.903	1310.000	596.834	.134	.152	0.000	396.145	128.599	50.000
7.931	730.000	597.758	0.000	.003	0.000	423.908	0.000	150.000
7.931	990.000	596.680	-1.079	.020	0.000	327.414	96.494	150.000
7.931	1080.000	596.723	.043	.023	0.000	337.094	86.814	150.000
7.931	1310.000	596.862	.139	.028	0.000	364.317	59.590	150.000
7.988	730.000	597.766	0.000	.008	0.000	253.251	0.000	300.000
7.988	990.000	596.731	-1.035	.052	0.000	194.206	59.045	300.000
7.988	1080.000	596.781	.050	.058	0.000	194.424	58.827	300.000
7.988	1310.000	596.934	.153	.073	0.000	197.880	55.370	300.000
8.078	730.000	597.794	0.000	.027	0.000	537.366	0.000	400.000
8.078	990.000	596.842	-.952	.111	0.000	470.134	67.232	400.000
8.078	1080.000	596.907	.065	.126	0.000	474.762	62.604	400.000
8.078	1310.000	597.097	.190	.162	0.000	488.236	49.130	400.000
8.154	730.000	597.812	0.000	.018	0.000	301.783	0.000	400.000
8.154	990.000	596.917	-.895	.075	0.000	283.814	17.969	400.000
8.154	1080.000	596.991	.074	.084	0.000	285.251	16.532	400.000
8.154	1310.000	597.201	.209	.104	0.000	289.583	12.200	400.000
8.229	730.000	597.848	0.000	.036	0.000	226.222	0.000	400.000
8.229	990.000	597.067	-.782	.149	0.000	192.946	33.276	400.000
8.229	1080.000	597.156	.090	.165	0.000	193.230	32.993	400.000
8.229	1310.000	597.397	.241	.196	0.000	193.990	32.233	400.000
8.305	730.000	597.971	0.000	.123	0.000	147.319	0.000	400.000
8.305	990.000	597.513	-.458	.446	0.000	89.391	57.928	400.000
8.305	1080.000	597.638	.126	.482	0.000	105.299	42.020	400.000
8.305	1310.000	597.952	.313	.555	0.000	144.918	2.400	400.000
8.314	730.000	598.000	0.000	.029	0.000	162.682	0.000	49.000
8.314	990.000	597.603	-.397	.091	0.000	113.462	49.220	49.000
8.314	1080.000	597.738	.135	.099	0.000	130.481	32.201	49.000
8.314	1310.000	598.073	.335	.122	0.000	171.639	-8.958	49.000
8.315	730.000	598.013	0.000	.013	0.000	126.149	0.000	1.000
8.315	990.000	597.630	-.383	.027	0.000	103.215	22.935	1.000
8.315	1080.000	597.770	.140	.033	0.000	120.619	5.530	1.000
8.315	1310.000	598.120	.349	.047	0.000	126.149	-.000	1.000
8.333	730.000	599.639	0.000	1.625	0.000	126.149	0.000	95.000
8.333	990.000	600.009	.370	2.378	0.000	126.149	-.000	95.000
8.333	1080.000	600.164	.155	2.393	0.000	126.149	-.000	95.000
8.333	1310.000	600.564	.400	2.444	0.000	126.149	-.000	95.000

DATA FOR LAST CROSS SECTION

PROFILE	TYPE ENC	TARGET	TOP WIDTH AREA-ACRES	TOP WIDTH AREA-DIFF
1	0.000	145.000	40.845	0.000
2	0.000	145.000	41.324	.479
3	0.000	145.000	41.735	.890
4	0.000	145.000	43.027	2.182

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**** 7000 SCOPE 2.1 LVL  221  03/20/77  10.46.23  04/01/77      77091

SYS DEVICES 819/ 4/PF FLS=200K FLL=764K MXS=160K MXL=457K MXB=457B

HH.MM.SS CPU SECOND ORIGIN
         09.22.08.MFA. ::    20PPU CBR73 B+W LYN ECS-2CPUS 02/15/77
09.23.32 00000.007 MFZ.     -SOUJ066,T10,CP70.   SOUTHGATE FIS
09.23.32 00000.008 JOB.     -CHARGE,810-0037-45-78-5566,JANDA,001,D,JANDA.
09.23.34 00000.050 JOB.     -ATTACH(HEC2,HEC2PROD,ID=MULLAN,CY=1)
09.23.34 00000.055 MFZ.       PF254 - CYCLE    1 ATTACHED FROM SN=SYSTEM
09.23.34 00000.056 LOD.     -HEC2(PL=99999).
09.23.36 00000.477 MFZ.       LD610 - FLS REQUIRED TO LOAD - 0025223 OU.COG
09.23.36 00000.487 MFZ.       LD603 - EXECUTION INITIATED OS.EXP
09.23.36 00000.488 USR.      FORTRAN LIBRARY 217-MODIFIED 03/16/76
09.23.40 00003.524 USR.         STOP
09.23.40 00003.524 USR.          3.035 CP SECONDS EXECUTION TIME
09.23.40 00003.527 MFZ.       RM770 - MAXIMUM ACTIVE FILES                    4
09.23.40 00003.527 MFZ.       RM771 - OPEN/CLOSE CALLS                       24
09.23.40 00003.528 MFZ.       RM772 - DATA TRANSFER CALLS                 9,415
09.23.40 00003.528 MFZ.       RM773 - CONTROL/POSITIONING CALLS              26
09.23.40 00003.528 MFZ.       RM774 - BM DATA TRANSFER CALLS                495
09.23.40 00003.528 MFZ.       RM775 - BM CONTROL/POSITIONING CALLS           51
09.23.40 00003.528 MFZ.       RM776 - QUEUE MANAGER CALLS                   102
09.23.40 00003.529 MFZ.       RM777 - RECALL CALLS                           57
09.23.40 00003.529 MFZ.       BWMSG - NUMBER OF TAPES MOUNTED
09.23.40 00003.529 MFZ.       SRU                   4.305  SRU
09.23.40 00003.530 MFZ.       SCM                 167.004  KWS
09.23.40 00003.530 MFZ.       I/O                   0.105  MW
09.23.40 00003.530 MFZ.       RMS                   0.172  MWS
09.23.40 00003.530 MFZ.       USER                  2.309  SEC
09.23.40 00003.530 MFZ.       JOB                   3.532  SEC
09.23.40 00003.531 MFZ.       SC050 - 000022 SC/LC SWAPS
09.23.40 00003.531 MFZ.    SOUJOZ3   SOUJOZ3
```

MP&S

SH&G

2223 Packard Road
Ann Arbor, Michigan
48104
(313) 769-9220

455 W. Fort St.
Detroit, Michigan
48226
(313) 964-3000

A Joint Venture

FLOOD INSURANCE STUDY

H-4705

TRANSMITTAL

To: Michigan DNR
Water Management Division
P.O. Box 30028
Lansing, Michigan 48909

Attn: Mr. Daniel Morgan, P.E.

Date: September 7, 1979

Re: Sumpter Township, Michigan FIS

Gentlemen:

We are enclosing herewith x

We are sending under separate cover ___

We acknowledge receipt of ___

The following: ___ Drawings ___ Specifications ___

Hydraulic data for N.B. Swan Creek including a report, computer outputs, cross-section plots, W.S. profiles, bridge sketches, XKOR computations, Floodway map and photographs.

For x Your approval ___ Your corrections ___ Your comments

___ Your use ___ Your files

Remarks: Please return cross-sections and photographs after your review.

Distribution:

Daryl Flatt-SH&G
File

Very truly yours,
McNAMEE, PORTER AND SEELEY

Duane R. Meyer P.E.
Duane R. Meyer, P.E.

9-7-79

FLOOD INSURANCE STUDY HYDRAULIC REPORT

PROJECT: HUD-FIA-H-4705 Sumpter Township, Wayne County, Michigan

CONSULTING FIRM: McNamee, Porter and Seeley/Smith, Hinchman and Grylls

WATERCOURSE: North Branch Swan Creek

STUDY LIMITS: Judd Road (downstream limit) to Elwell Road (upstream limit)

DATE OF AERIAL SURVEY: None

DATE OF LAND SURVEY: 7/11/78 - 3/5/79 McNamee, Porter and Seeley Survey Crew

SOURCE OF FLOWS: Discharges were computed by MP&S/SH&G and approved by MDNR on March 21, 1979

TOPOGRAPHIC INFORMATION: USGS topographic maps 1"=1000 ft. with 5 ft. contours

METHOD OF ANALYSIS: HEC-2 water surface profile computer program

VARIABLES AND COEFFICIENTS:
Channel "n" 0.050
Overbank "n" 0.060 - 0.095
n values thru bridges 0.020 - 0.025
Contraction Coefficients .1-.3
Expansion Coefficients .3-.5

Bridge loss coefficients were chosen per References 1 and 2. XKOR computations and bridge sketches are enclosed.

PHOTOGRAPHS: Enclosed for your review, please return.

CROSS-SECTIONS: See Table 1 for cross-section description. Cross-section plots enclosed. Please return.

REFERENCES:

1. "Hec-2 Water Surface Profiles", Users Manual, U.S. Army Corps of Engineers, Feb. 1972.
2. "Application of the Hec-2 Bridge Routines", U.S. Army Corps of Engineers, June 1974.
3. "Roughness Characteristics of Natural Channels", Barnes, Harry H. Jr., Geological Survey Water Supply Paper 1849.
4. "Floodway Determination using computer Program Hec-2", Bonner, Vernon R., U.S. Army Corps of Engineers Hec Training Document 5, May 1974.

HIGH WATER MARKS & CALIBRATION

No reliable highwater information was available and was therefore not used for model calibration.

A sensitivity analysis was performed on the 100-yr flood by raising and lowering all Manning 'n' values by 30%. (computer output is enclosed). This sensitivity analysis resulted in water surface elevations from ±0.2 ft. to ± 0.8 ft. different than the 100-yr water surfave elevation, indicating the roughness parameter has moderate impact on the computed water surface elevations. Due to lack of calibration data, the Manning 'n' values used were based on photographs, aerial data and experience in modelling similar watersheds. (See enclosed photographs).

Starting Conditions

Field information was obtained 5000 ft. downstream of the community in order to determine a good starting elevation at that location. Convergence runs (enclosed) were made for the 100-yr flow by varying the starting elevation 1500 ft. downstream of Judd Rd. by a maximum of 3 ft. This 3 ft. difference converged to a difference of 0.06 ft. at the detail study limits. Starting elevations for the remaining flows were obtained by using the slope-area method at a point 1500 ft. downstream of Judd Rd.

Designated Floodway

The floodway delineation was arrived at after studying 1) topographic information to locate any structures or other obstructions and 2) cross-section plots. The cross-sections were modified to exclude ineffective overbank areas, based on 1) velocity considerations 2) the presence of structures and 3) expansion and contraction of 1:4 and 1:1 respectively near bridges (See enclosed 1" = 1000' plan for floodway delineation).

Computer Outputs

Enclosed are complete computer outputs for, (i) 10, 50, 100 and 500 year flood plain elevations (ii) runs to determine starting elevations of the community boundary for 10, 50 and 500 yr flows (iii) convergence test for 100 yr. and (iv) sensitivity analysis for your review.

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

COMMUNITY: SUMPTER TOWNSHIP FILE NO.

WATERCOURSE: SWAN CREEK.

COMPUTED BY DATE CHK. BY DATE

TABLE 1 - SECNO

Section Types — Description

1 Surveyed (See Remarks if Other Than MPS and/or Abrams)

2 Field Survey Section, Partly modified for modelling

3 Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks)

4 Synthetic - Developed from topo, surveyed sections, or other information

SECTION NO.		SECTION TYPE	REMARKS
2.0		2	VALLEY SECTION; SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREA.
2.2		4	VALLEY SECTION DEVELOPED USING 2.0 AND 2.9 + 0.75'
2.9	A	2	VALLEY SECTION; MODIFIED BASED ON 4 ON 1 EXPANSION AT JUDD ROAD.
2.98		2	JUST DIS FACE SECTION OF MARTINSVILLE; DEVELOPED FROM
	B		BRIDGE DETAIL.
3.02		4	REPEAT 2.98.
3.1	C	2	VALLEY SECTION MODIFIED FOR 1 ON 1 CONTRACTION.
4.0	D	2	VALLEY SECTION; MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREA.
4.1		4	REPEAT 4.0 + 1.36'
4.5		4	REPEAT 4.0 + 2.87'
4.6		4	REPEAT 5.0 - .85'
5.0	E	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE AREAS
5.9	F	2	VALLEY SECTION MODIFIED FOR 4 ON 1 EXPANSION AT MARTINSVILLE ROAD

CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

COMMUNITY: SUMPTER TOWNSHIP FILE NO.
WATERCOURSE: SWAN CREEK.
COMPUTER: DATE CHK. BY DATE

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MPS and/or Abrams)
2	Field Survey Section, Partly modified for modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks)
4	Synthetic - Developed from topo, surveyed sections, or other information

SECTION NO.		SECTION TYPE	REMARKS
5.98	G	2	JUST DS FACE SECTION AT MARTINSVILLE ROAD DEVELOPED FROM BRIDGE DETAIL.
6.02		4	REPEAT 5.98 DS FACE SECTION MARTINSVILLE ROAD
6.1	H	2	VALLEY SECTION MODIFIED BASED ON 1 ON 1 CONTRACTION.
6.5		4	REPEAT 6.1 + 0.59', VALLEY SECTION.
6.6		4	VALLEY SECTION DEVELOPED USING 6.11 AND 7.0 AND USGS AND ADJUSTED FOR INVECT ELEVATION.
7.0	I	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREA.
7.01		4	VALLEY SECTION DEVELOPED USING SECTION 7, 7.5 AND USGS.
7.11		4	REPEAT 7.01 + 0.98'
7.5	J	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVER BANK AREAS
7.6		4	REPEAT 7.01 + 2.88'
7.7		4	REPEAT 7.01 + 3.13'
7.8		4	REPEAT 8 - 1.15
8.0	K	2	VALLEY SECTION.
8.5		4	VALLEY SECTION REPEAT 8.9 - .56'

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MRS and/or Abrmt)
2	Field Survey Section, Partly Modified for Modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks)
4	Synthetic - Developed from Topo, surveyed sections, or other information

SECTION NO.	SECTION TYPE	REMARKS
8.9 L	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVER BANK AREAS
8.91	4	REPEAT 8.9 + .40'
8.92	4	REPEAT 8.91; SECTION INTRODUCED TO ACCOUNT FOR LOSS USING KS.
8.98 M	2	D/S SECTION KOZMA RD USING BRIDGE DETAIL
8.99	4	REPEAT 8.98; D/S BRIDGE FACE SECTION;
9.01	4	U/S FACE SECTION; REPEAT 8.98
9.02	4	U/S VALLEY SECTION; REPEAT 8.98
9.1 N	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVER BANK AREAS
9.18	2	D/S FACE SECTION DEVELOPED FROM BRIDGE DETAIL AT KOZMA RD.
9.22 O	4	REPEAT 9.18.
9.25	4	REPEAT 9.18.
9.28	2	D/S FACE SECTION FOOT BRIDGE DEVELOPED FROM BRIDGE DETAIL.
9.32 P	4	REPEAT 9.28.
9.35	4	REPEAT 9.28 + 0.1'
9.5	4	REPEAT 10 - 10.8
10 Q	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE

CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

COMMUNITY: SUMPTER TOWNSHIP JOB NO. FILE NO.
WATERCOURSE: SWAN CREEK. CHK. BY DATE

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MRS and/or Abrams)
2	Field Survey Section, partly modified for modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks)
4	Synthetic - Developed from topo, surveyed sections, or other information

SECTION NO.	SECTION TYPE	REMARKS
		OVERBANK AREAS.
10.7	R	2 FOOT BRIDGE SECTION; REPEAT
10.71		4 10.9 + 0.5' DEVELOPED PARTLY FROM BRIDGE DETAIL. REPEAT 10.7
10.78		2 FACE SECTION OF FOOT
	S	BRIDGE DEVELOPED FROM
		BRIDGE DETAIL.
10.782		4 REPEAT 10.78.
10.9	T	2 VALLEY SECTION MODIFIED
		BASED ON 40N EXPANSION
		AT SUMPTER RD
10.98		2 FACE SECTION SUMPTER
	U	RD DEVELOPED FROM
		BRIDGE DETAIL.
11.02		4 REPEAT 10.98, U/S FACE
		SECTION OF SUMPTER RD
		BRIDGE.
11.1	V	2 VALLEY SECTION MODIFIED
		BASED ON 10N CONTRACTION
		AT SUMPTER RD BRIDGE
11.5	W	4 REPEAT 11.1 + 0.37'
11.51		4 REPEAT 11.5 W/ 4 FT OF FOOT BRIDGE TO ACCOUNT FOR LOSS USING X5 CARD.

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

WATERCOURSE: SWAN CREEK.

DATE

CHK. BY

DATE

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MAS and/or Abrams)
2	Field Survey Section, Partly modified for modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks
4	Synthetic - Developed from topo, surveyed sections, or other information

SECTION NO.	SECTION TYPE		REMARKS
12	X	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVER BANK AREAS.
12.9	Y	2	VALLEY SECTION MODIFIED BASED ON 4 ON 1 EXPANSION AT WILLIS BRIDGE.
12.98	Z	2	DISFACE OF WILLIS RD EAS (ROSSING, DEVELOPED FROM) BRIDGE DETAIL
13.02		4	REPEAT 12.98
13.10	AA	2	VALLEY SECTION MODIFIED BASED ON 1 ON 1 CONTRACTI AT BRIDGE.
13.5	AB	4	REPEAT 14
13.51		4	REPEAT 13.5, 1 1/2 FT OF FOOT BRIDGE TO ACCOUNT FOR LOSS USING X5 CARD.
14.0	AC	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVER BANK AREAS.
14.1		4	REPEAT 14+1.05'
14.5	AD	4	REPEAT 14+.21

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

WATERCOURSE: SWAN CREEK

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MRS and/or Abrams)
2	Field Survey Section, partly modified for modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks
4	Synthetic - Developed from Topo, surveyed sections, or other information

SECTION NO.	SECTION TYPE		REMARKS
14.51		4	U/S OF FOOT BRIDGE, SECTION INTRODUCED TO ACCOUNT FOR LOSS USING X5 CARD
14.90	AE	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS.
14.98			D/S FACE WILLIS ROAD MIDDLE CROSSING, SECTION
	AF		DEVELOPED USING BRIDGE DETAIL.
15.02		4	REPEAT 14.98.
15.1	AG	2	VALLEY SECTION MODIFIED TO EXCLUDE THE OVERBANK AREAS DUE TO HOMES ON BANKS
16.	AH	2	REPEAT 15.1 + 0.1', PARTLY DEVELOPED FROM BRIDGE DETAIL
16.1		4	REPEAT 15.1, SECTION U/S OF FOOT BRIDGE INTRODUCED TO ACCOUNT FOR LOSS USING X5 CARD
16.9	AI	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS
16.98		2	D/S FACE SECTION WILLIS RD DEVELOPED USING
	AJ		BRIDGE DETAIL

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

WATERCOURSE: SWAN CREEK. DATE CHK. BY DATE

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MRS and/or Abrams)
2	Field Survey Section, Partly modified for modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks)
4	Synthetic - Developed from topo, surveyed sections, or other information

SECTION NO.	SECTION TYPE	REMARKS
17.02	4	REPEAT 16.98 U/S FACE SECTION WILLIS RD BRIDGE
17.1 AK	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS
18. AL	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS.
18.1	4	REPEAT 18; SECTION 1' U/S OF FOOTBRIDGE INTRODUCED TO ACCOUNT FOR LOSS USING XSCARD
18.9 AM	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS.
18.98 AN	2	D/S FACE SECTION WILLIS RD WEST CROSSING; DEVELOPED USING BRIDGE DETAIL.
19.102	4	U/S FACE SECTION, WILLIS RD WEST CROSSING, REPEAT 18.98.
19.1 AO	2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS.

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

WATERCOURSE: SWAN CREEK DATE

CHK. BY DATE

TABLE 1 - SECNO

Section Types	Description
1	Surveyed (See Remarks if Other Than MRS and/or Abrams)
2	Field Survey Section ; Partly modified for modelling
3	Synthetic - Repeat of nearby surveyed section with an invert adjustment (See Remarks)
4	Synthetic - Developed from topo, surveyed sections, or other information

SECTION NO.	SECTION TYPE	REMARKS
19.9	AP 2	VALLEY SECTION MODIFIED TO EXCLUDE INEFFECTIVE OVERBANK AREAS.
19.98	4	REPEAT 19.9 + 0.5'

FVF

5/9/79

Hydraulic Analysis

Subject: Bridges

Project: HUD-FIA-H-4705

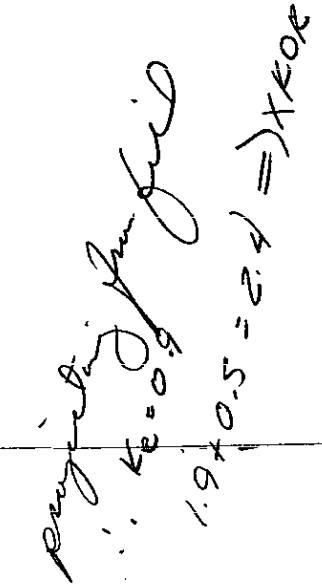
Community SUMPTER

Watercourse SWAN CREEK.

No Guardrail, use COFQ = 2.9 7/31/79

Remarks

Bridge Location JUDD ROAD. #3



$XKOR = K_e + K_f + 1$

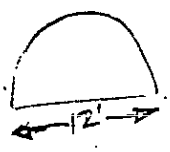
$K_f = \frac{29 n^2 L}{(R^{4/3})}$

$n = .025$, $L = 40'$, $R = 1.83$

$K_e = 0.5$

$K_f = \frac{29 \times (.025)^2 \times 40}{(1.83)^{4/3}} = \frac{0.6}{0.32}$

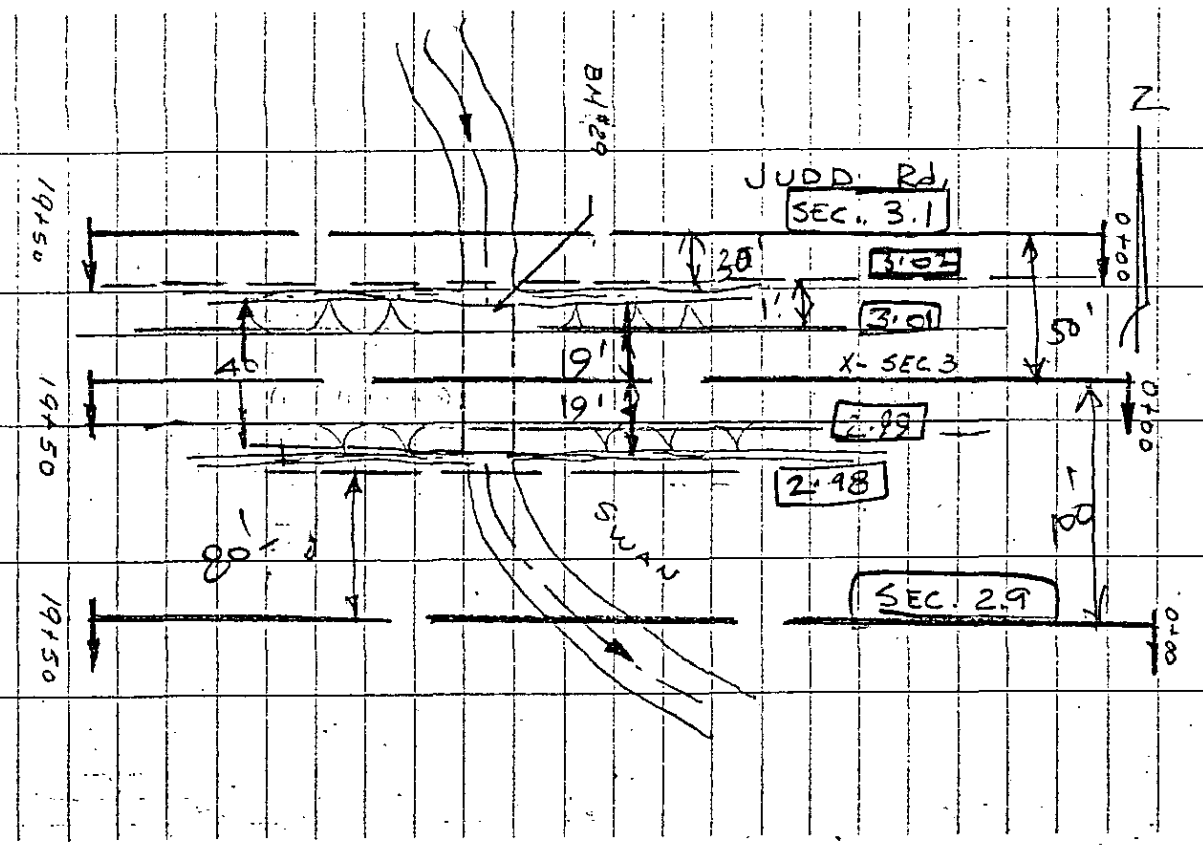
$R = \frac{\pi D^2}{4x^2} / \left(\frac{\pi D}{2} + 12\right)$



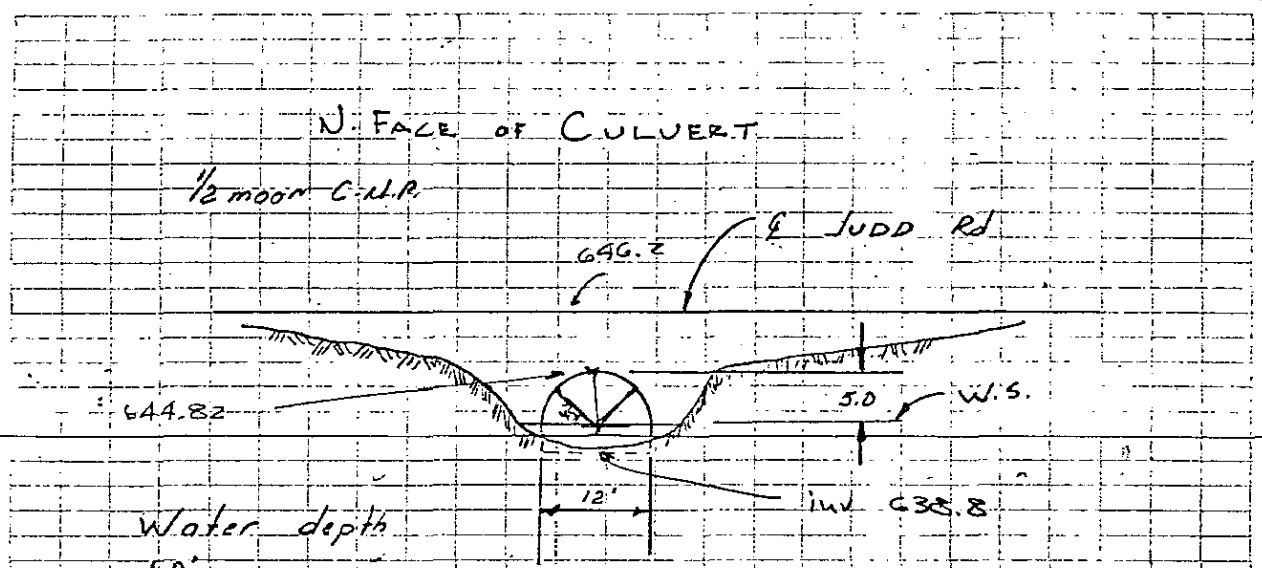
$\frac{56.52}{(18.84+12)} = \frac{56.52}{30.84} = 1.83'$

$\therefore XKOR = 0.5 + 0.32 + 1 = 1.82$

BRIDGE SKETCH FOR SECTION # 3



HUD-FIA H-4705
SUMMIT TWP.



473
21

PVP
5/9/79

Hydraulic Analysis Metal Guard rail

Subject: Bridges use

Project: HUD-FIA-H-4765

Community SUMPTER.

Watercourse SWAN CREEK.

Remarks

Bridge Location MARTINSVILLE RD. #6

Wingwall with square edge at crown
$K_e = 0.5$
Sluiting bottom suggest 0.025 to 0.03

$K_{f\,0.025} = 0.15$
$K_{f\,0.03} = 0.22$
$XK_{OR\,0.025} = 1.65$
$XK_{OR\,0.03} = 1.72$

low

$K_e = 0.1$

$K_f = \frac{29 n^2 L}{R^{4/3}}$

$n = .02$

low

$R = A/P = \frac{56.52}{(12+5)2} = 1.76$

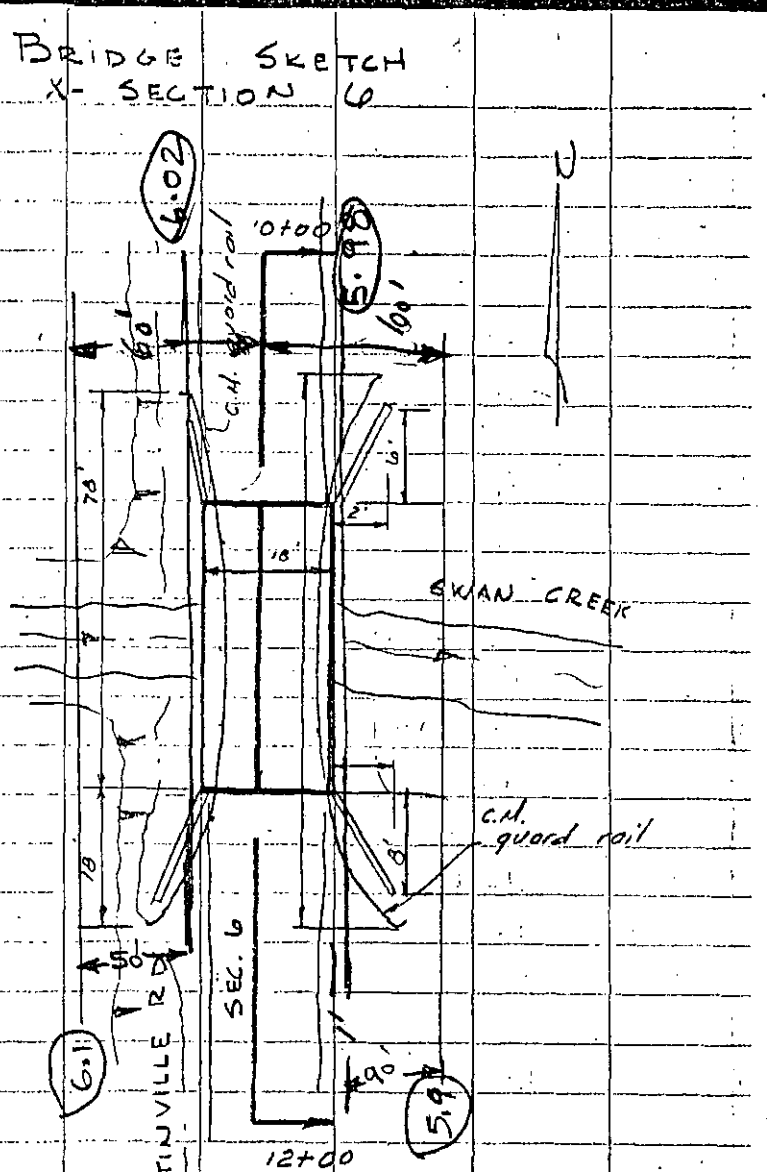
$K_f = \frac{29 \times (.02)^2 \times 18}{(1.76)^{4/3}} = 0.10$

$XK_{OR} = 0.1 + 0.1 + 1 = 1.2$ low

500' D/S Farmers field.

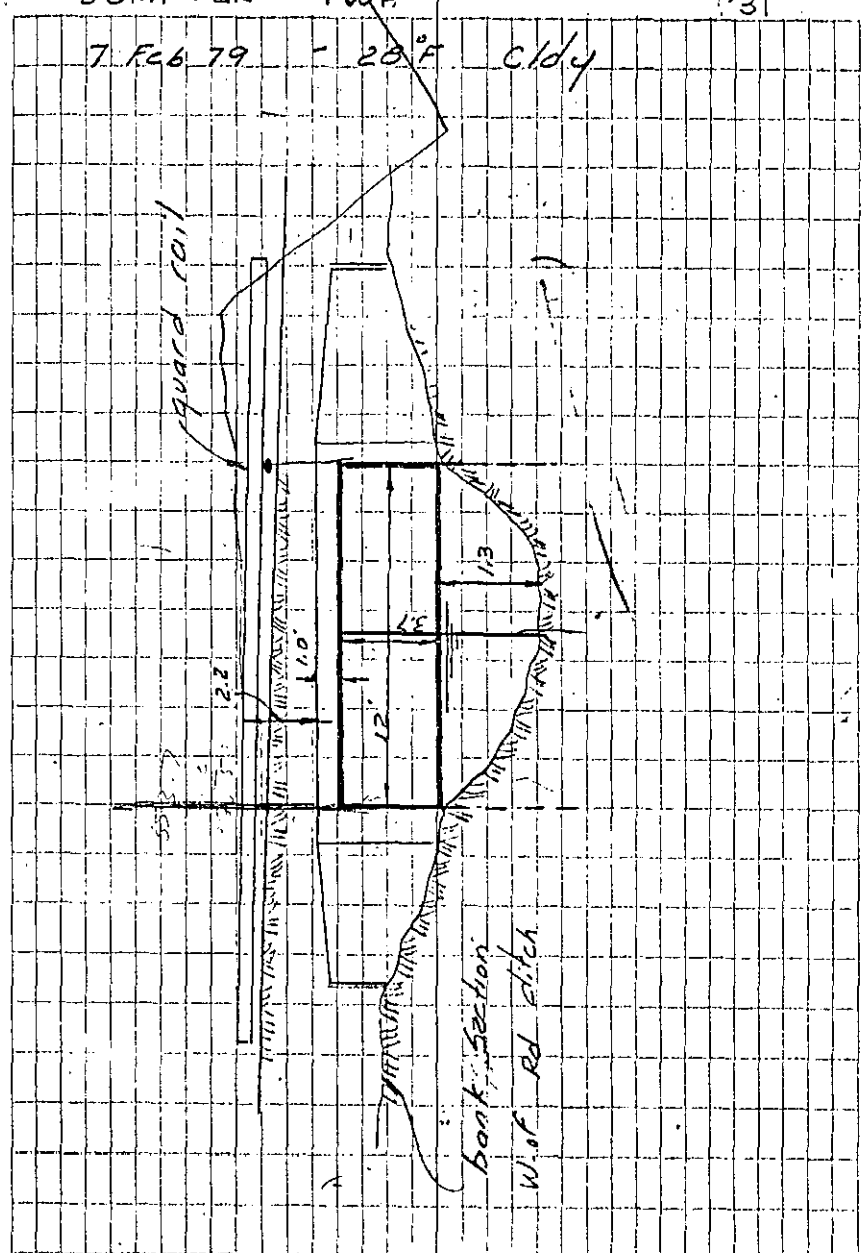
U/S wooded area
see picture
18

BRIDGE SKETCH
X- SECTION 6



HUD - FIA H-4705
SUMPTER TWP
7 Feb 79 - 20°F Cldy

473/31



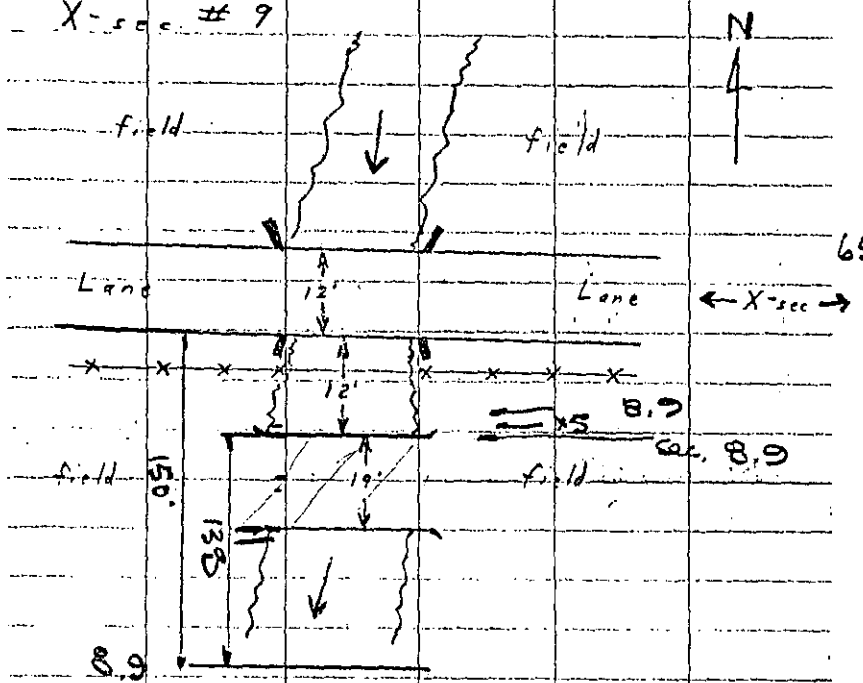
HUD-FIA H-4705

473

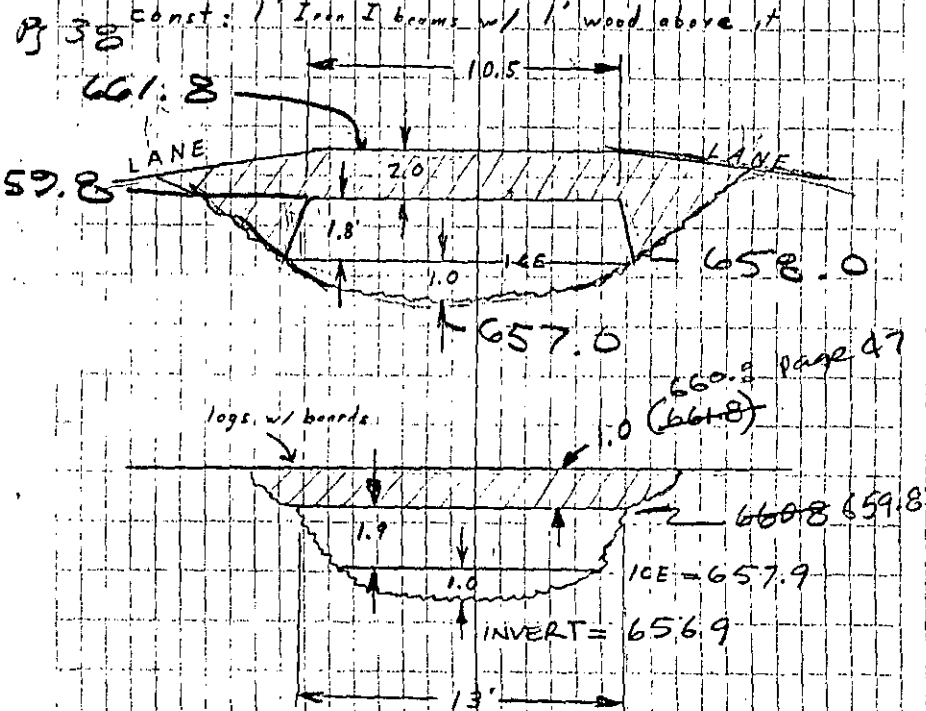
X-SECTION #9

SUMPTER TWP 45

SWAN CREEK



Model Kozuls using Normal Er.
use sec. 8.9 modified



XKOR Computations

Footbridges @ Sec. 9.2 and 9.3 (Identical)

No abutments ⇒ use $0.05 = K_c$

$K_f = 29(n^2)L / R^{4/3}$ use $n = .050$ (channel 'n')

$L = 7'$

$A = 60\ ft^2$

$P = (3.5)2 + 17 \cdot 2 = 41 \Rightarrow R = 1.46$

$K_f = 29(.050)^2\ 7 / (1.46)^{4/3} = 0.3$

$XKOR = 0.05 + 0.3 + 1.0 = \underline{\underline{1.35}}$

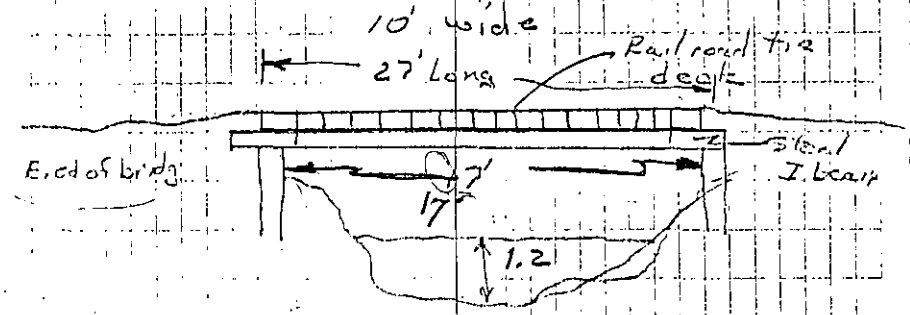
HUD-FIA H 4705 T06
SUMPTER TWP
SWAN CREEK

2-12-79

473/49

bridge 9.2

Bridges essentially same @ both locations



Chanel 7' Long

90
-63
27

~~w. end bridge~~

bridge 9.3

bott of beam

rail in tree (PK.) (662.23)

see above sketch

8' wide 17' same pe. Gry

27' long

deepth of water 0.5

Note 306 between 9.2 & 9.3

cut-off tree (see p 39) 0.03 high

MCNAMEE, PORTER & SEELEY JOB HUD-FIA H 4703 TCL

CONSULTING ENGINEERS SUBJECT FILE NO.

ANN ARBOR MICHIGAN COMPUTED BY MPG DATE 8/3/79 CHK BY DATE

XLOR COMPUTATION

FOOTBRIDGE @ 10.8

No abutments use $K_e = 0.05$

$K_f = 29(n)^2 L / R^{4/3}$

$L = 15'$

$n = .050$

$A = 93\ ft^2$

$P = 20 + 5 + 2\sqrt{6^2 + 10^2} = 54\ ft \Rightarrow R = \frac{93}{54} = 1.71$

$K_f = 29(.050)^2(15) / (1.71)^{4/3} = .53$

$XLOR = 0.05 + 0.53 + 1.0 = \underline{1.58}$

HUD-FIB. H 4705 T06
SUMPTER TWP-SWAN CREEK
Feb 12, 1979

473/59

X-SECTION 10.8.

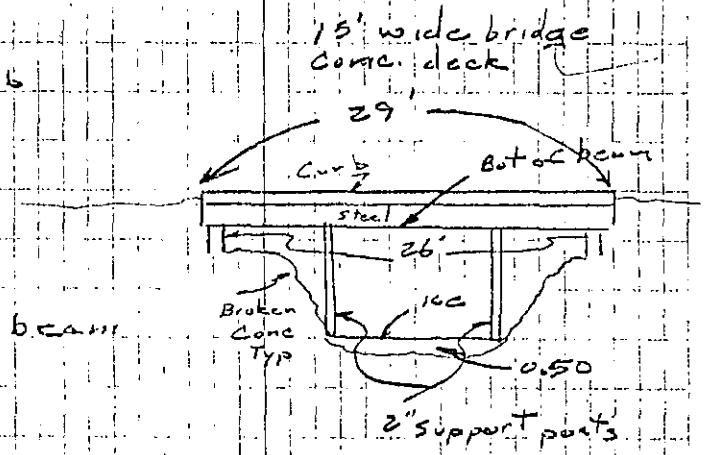
3

Top of curb

Top of curb

4

9 Bott of beam



5/9/79

Hydraulic Analysis

Subject: Bridges

Project: HUD-FIA-H-4705

Community SUMPTER

Watercourse SWAN CREEK

Remarks

Bridge Location SUMPTER RD. #11

ke = 0.1

k_f

$R = \frac{74}{2[16+4.6]} = 1.8$

L = 45'

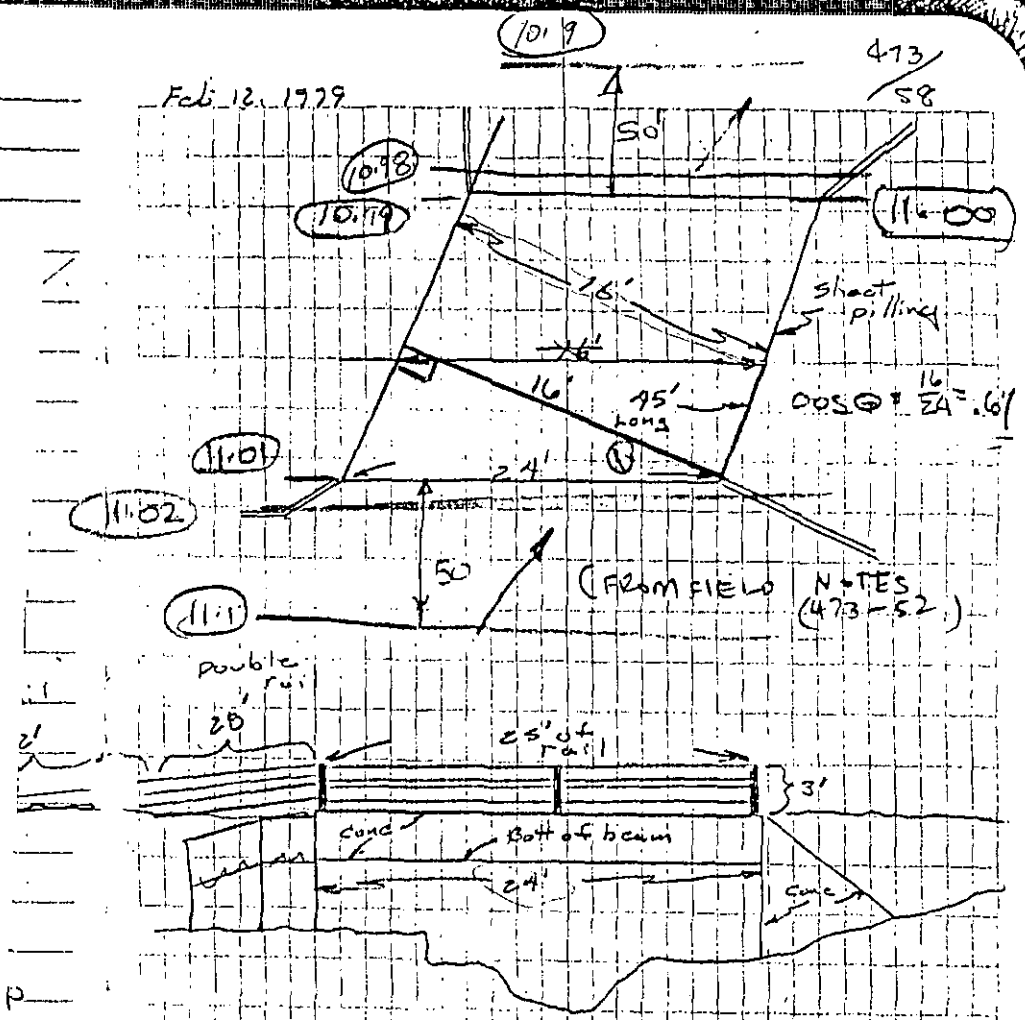
$k_f = \frac{29 \times (.025)^2 \, 45}{(1.82)^{4/3}} = .3$

XKOR = 0.1 + .37 + 1 = 1.47

HUD-FIA
1+4705.

SUMPTER TWP
SWAN CREEK.

Bridge Detail x-section #11
#7



HUD-FIA H 4705 T06
SUMPTER TWP
SWAN CREEK.

2-21-79
32° sleet

X-SEC 11.5

473/79

⊞ J. O'Neill
⊼ G. Alspach
ϕ J. Magnuson

RR spike in pp

Lawn
"
bridge deck
bot N bank
℄ stream bottom
bridge deck
bottom bridge deck
lawn
bot S bank

$B_{AREA} = 21\ ft^2$

~21'

666.5

665.5

663.2

Note: Bridge is 2 power poles w/ guards, approx. 500' downstream from X-sec # 12.

Hydraulic Analysis

Subject: Bridges

Project: HUD-FIA-H-4705

Community SUMPTER

Watercourse SWAN CREEK.

Remarks

Bridge Location WILLIS ROAD. Bridge NO 3. #13

Routine: Special Bridge.

$K = 18.8$

$XKOR = K_e + K_f + 1$

$R = A_p = \frac{12.5+4.2}{2[12.5+4.2]} = 1.57$

$n = .02$ (Conc. Box).

$K_e = 0.1$

$K_f = \frac{29 n^2 L}{R^{4/3}} = \frac{29(.02)^2 42}{(1.57)^{4/3}} = 0.27$

$\therefore XKOR = 0.1 + .27 + 1 = 1.37.$

$K_f = 29(.020)^2(42)/1.36 = .$

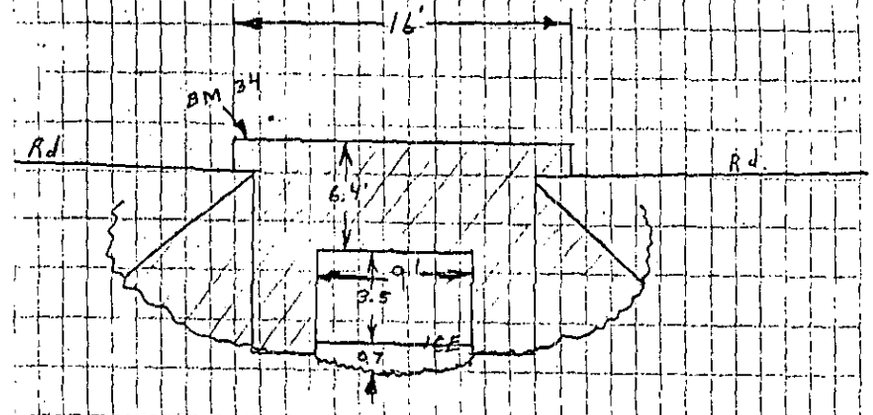
2-13-79

413/66

HUD-FIA-H 4705 T06

SUMPTER TWP - SWAN CREEK

X-SECTION #13



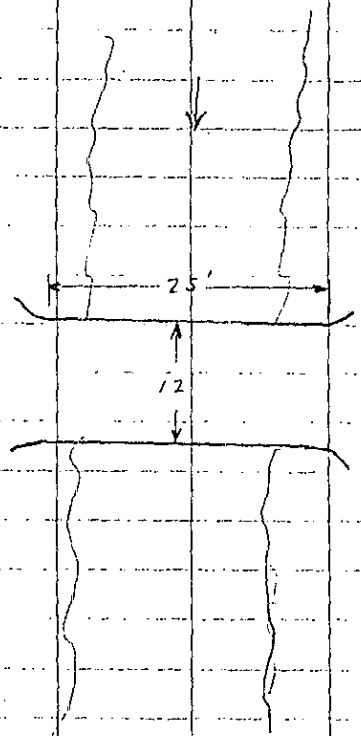
Note: Opening is 12.5' wide across face, 9.0' wide ⊥ to flow, thru channel

2-22-77

473-A/11

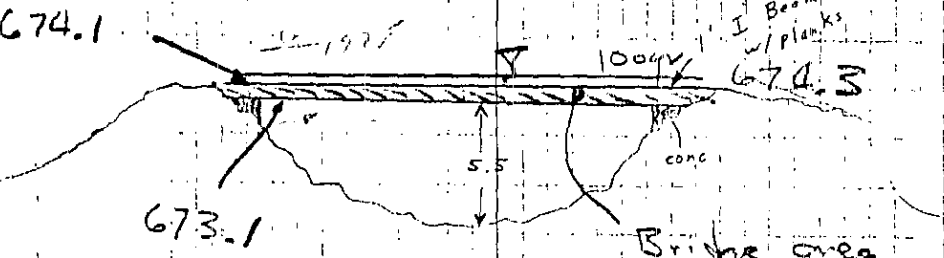
HUD-FIA H-4705

X-sec 13.5 Bridge Sketch



Note: Resident of 40 yrs stated water has never reached bridge

H.W. Level

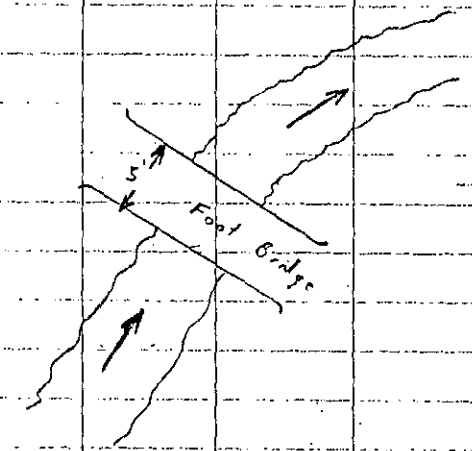


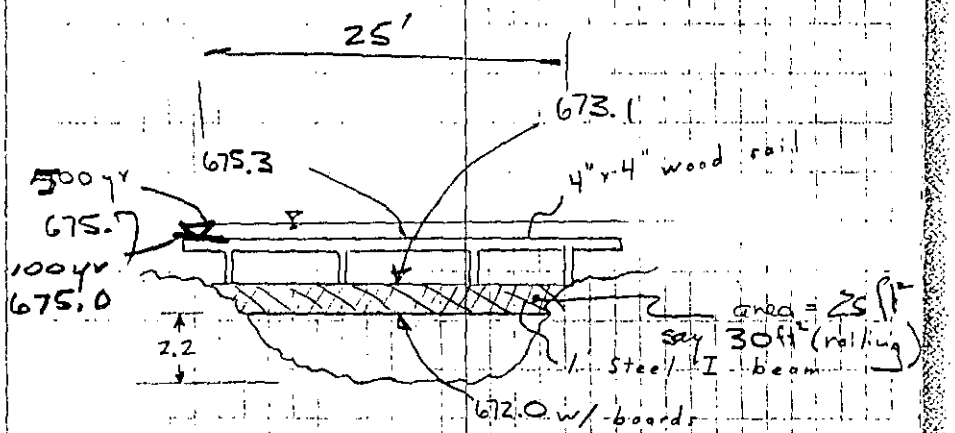
Bridge area = 25 ft²

2-13-79
10° Cloudy

473/73

X-sec # 145 Bridge Detail





For 10 yr Area = 25 ft²
10 yr WSEL not submerging rolling

5\9\79

Hydraulic Analysis

Subject: Bridges

Project: HUD-FIA-H-4705

Community SUMPTER

Watercourse SWAN CREEK

Remarks

Bridge Location WILLIS - Bridge NO. 2. #15

Routine: special Bridge

n values

$K_e = 0.1$

$K_f = \frac{29 n^2 L}{R^{4/3}}$ $n = .02$, $L = 30'$ $R = A/P = \frac{9 \times 1.8}{2[9+1.8]} = 0.75$

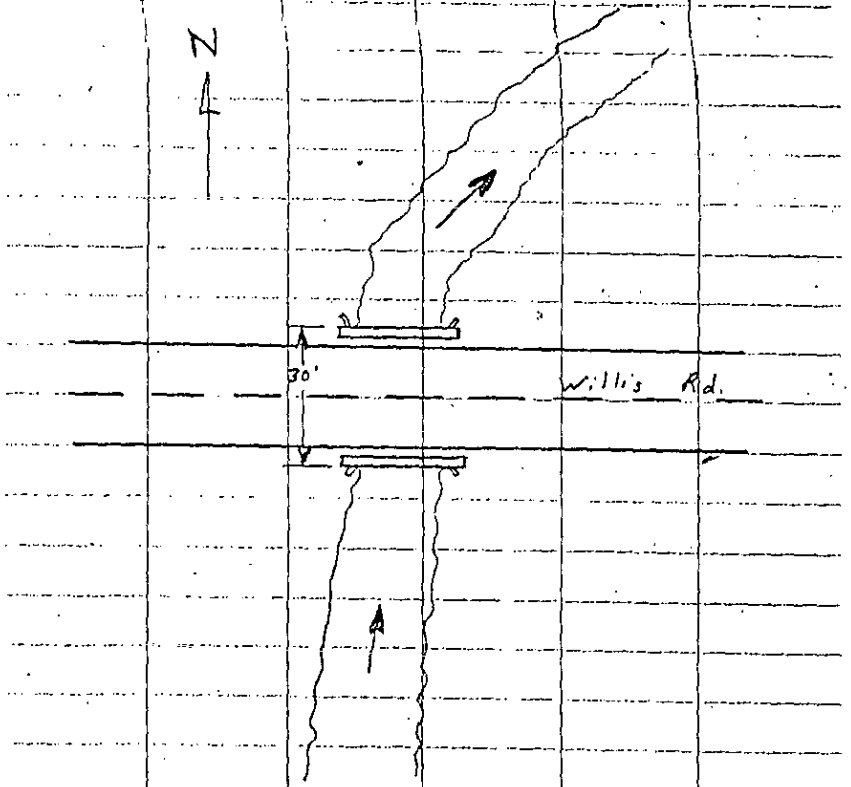
$K_f = \frac{29 (.02)^2 30}{(0.75)^{4/3}} = 0.51$

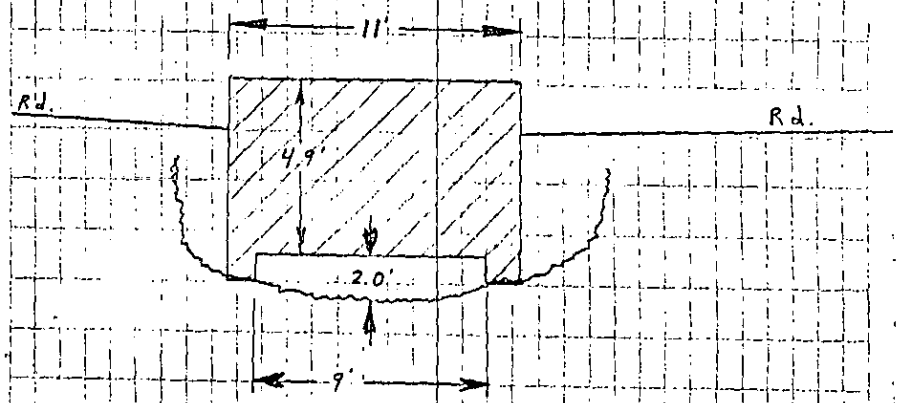
$*KOR = 0.1 + 0.51 + 1 = \underline{1.61}$

2-13-79

HUD-FIA H-4705

X-sec # 15 Bridge Detail





2-22-79

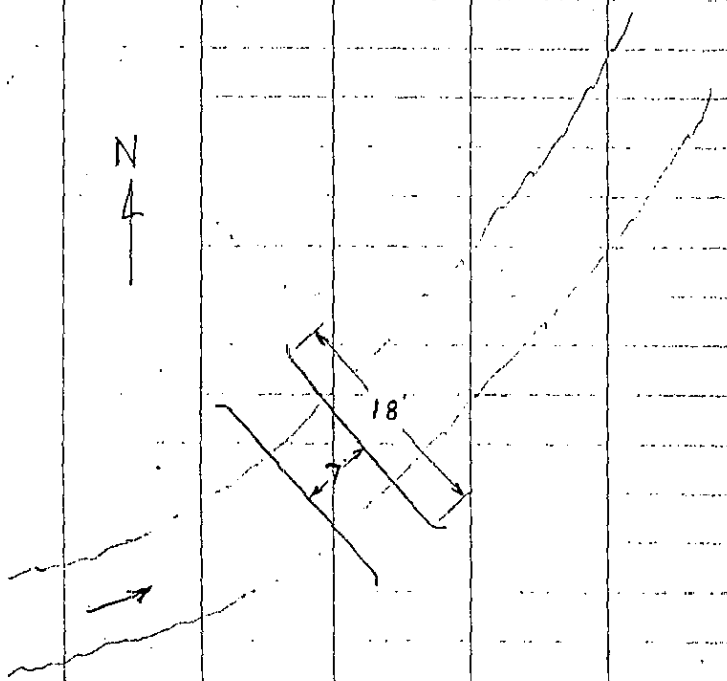
473-A/13

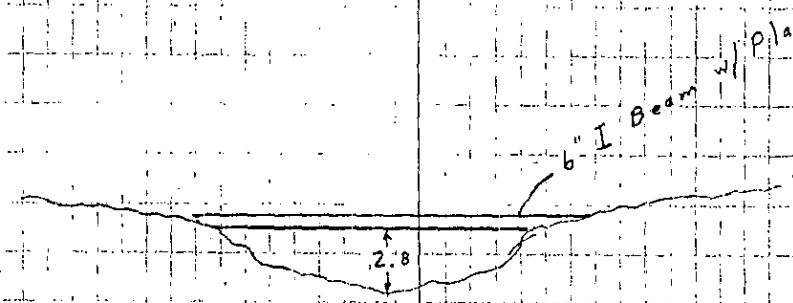
HUD - FIA H-4705

Sumpter Swan Creek

X-sec #16 Bridge Deck

Note: Footbridge coincided w/ X-sec #16





TV
5/9/79

Hydraulic Analysis

Subject: Bridges

Project: HUD-FIA-H-4705

Community SUMPTER

Watercourse SWAN CREEK

Remarks

Bridge Location WILMOT ROAD #1

Routine: Special bridge

XKOR

$k_e = 0.1$

$n = .02$

$R = \frac{3 \times 8}{2[3+8]} = 1.09$

$K_f = \frac{29 (.02)^2 25}{(1.09)^{4/3}} = .26$

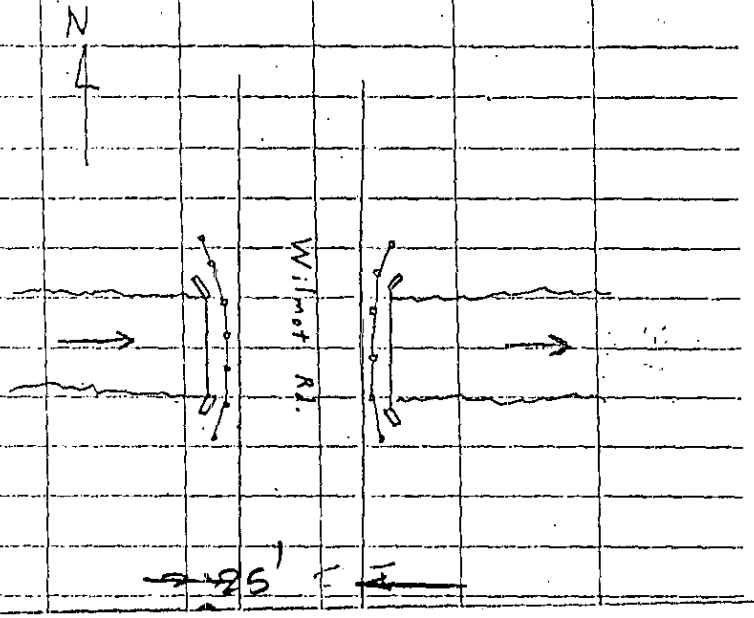
$K_{OR} = 0.1 + .26 + 1 = 1.36$

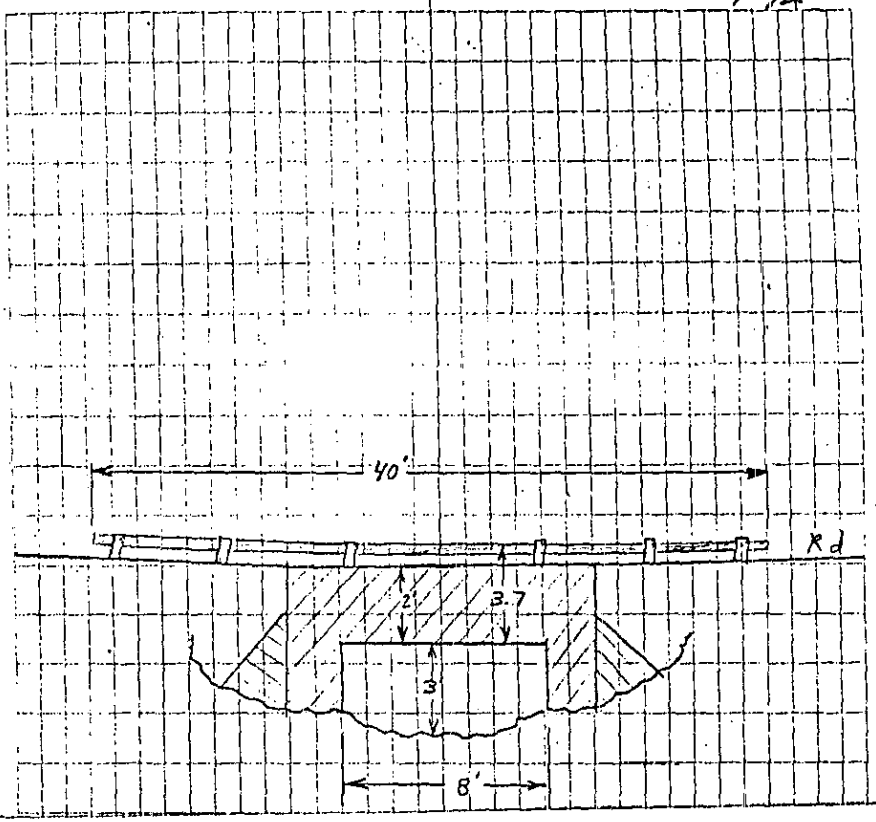
2-13-79

473/74

HUD-FIA H-4705

X-sec #17 Bridge Detail





2-22-79
30° Cloudy

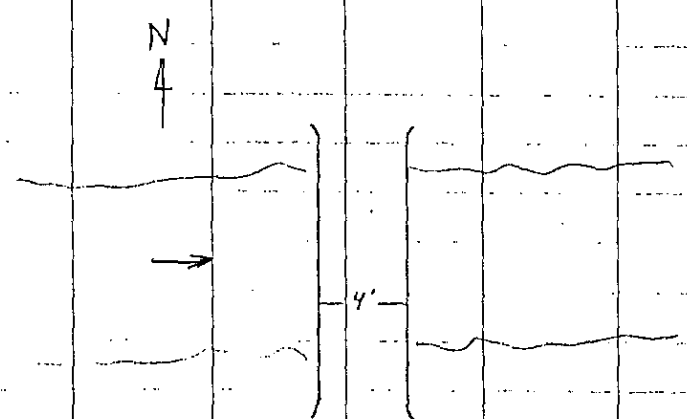
473-A/15

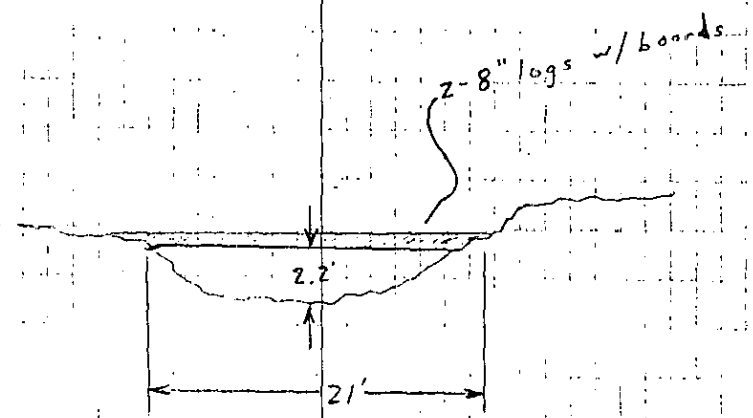
HUD-FIA H-4705
X-sec # 18 (cont'd)

Note: X-sec #18 moved 50' D.S. in order to include footbridge

Sta	+	HI	-	Rod	Elev	
		681.42				
9+00				4.4	677.0	field
10+00				4.4	677.0	
			6.77		674.65	
	7.30	681.95				
TBM_{32}			5.24		676.71	0.03 high

Plotted 3-2-79
A.O.





PVT
5/9/79

Hydraulic Analysis

Subject: Bridges

Project: HUD-FIA-H-4705

Community SUMPTER

Watercourse SWAN CREEK

Remarks

Bridge Location WILLIS ROAD. NO. 1 #19.

$K_e = 0.3$

$n = .02$

$L = 40$

$R = \frac{29.7}{2(9+3.3)} = 1.19$

$K_f = \frac{29 \times (.02)^2 (40)}{(1.19)^{4/3}} = .37$

$XKOK = .3 + .37 + 1 = 1.67$

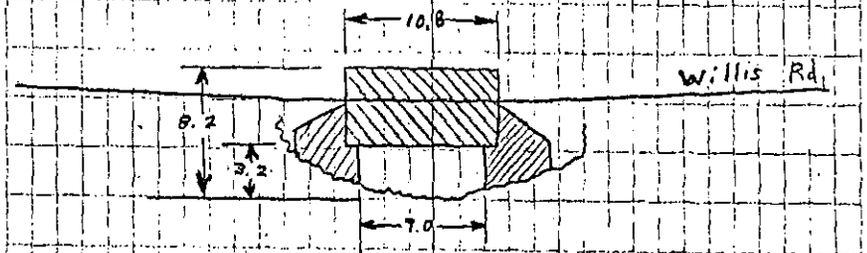
34° Rain
2-21-79

473-A 1/1

HUD-FIA H-4705
Sumpter Twp - Swan Creek
X-sec # 19 Willis Rd

J. O'Neill
G. Alspach
J. Magnusen

Bridge Sketch



181	GR	672.5	100	670.2	200	670.2	266	666.8	270	665.8	277
182	GR	665.9	281	670.4	298	670.5	400				
183	NC				.3	.5					
183.5	RT						7.1	200	600		
184	X1	12.98	7	388	400	100	100	100	.75		
185	X3	10							671.9	671.9	
186	GR	674.2	200	670.5	388	666.4	309	665.9	395	666.4	399
187	GR	670.5	400	675.0	600						
188	SB	0	1.67	2.5	0	5	0	36	0	665.9	665.9
189	X1	13.02	0			42	42	42			
190	X2			1	670.5	671.6			673.6	673.6	
191	X3	10							400	673.7	0
191.5	BT	5	200	674.3	0	300	673.6	0			
191.7	BT	500	674.3	0	600	675.	0				
192	NC	.060	.060				1.4				
192.5	RT						50	50	.75		
193	X1	13.1	10	430	458	50	400	669.5	430	666.7	438
194	GR	675.	200	672.6	300	672	458	671.5	500	674.5	600
195	GR	666.4	445	666.4	451	669.6					
196	NC				.1	.3	800	800			
197	X1	13.5	8	463	488	800	469	667.6	475	668.1	482
198	GR	675.5	300	670.5	463	668.	700				
200	GR	670.5	488	671.1	500	675.5	1	1			
201	X1	13.51	0			1					
201.5	X5	-4	0.1	0.1	0.1	0.1	200	200			
202	X1	14	8	463	488	200	469	667.6	475	668.1	482
203	GR	675.5	300	670.5	463	668.	700				
204	GR	670.5	488	671.1	500	675.5	450	450		1.05	
205	X1	14.1				450	425	425		1.05	
206	X1	14.5				425					
207	X5	-4	0.2	0.2	0.2	0.2	1	1			
208	X1	14.51	0			1					
208.5	X5	-4	0.2	0.2	0.2	0.2	150	150	.68		
209	X1	14.9	7	391	372	150	345	670.	350	670.1	355
210	GR	675.	200	673.4	331	670.1					
211	GR	672.7	372	676.5	600						
212	NC				.3	.5	1.7	200	400		
212.5	RT						100	100			
213	X1	14.98	6	291	300	100	292	670.	299.0	671.9	300
214	GR	675.	200	671.9	291	670.					
215	GR	675.	400				0	17	0	670.	670.
216	SB	0	1.6	2.3	180	9	1	1			
217	X1	15.02	0			1					
217.2	X2			1	671.9	675.0					
224	NC				0.3	0.5					
224.5	RT						1.4				
225	X1	15.1	0	277	296	50	50	50			
226	GR	675.	160	674.	250	673.8	277	670.3	279	670.3	282
227	GR	670.9	285	673.2	296	674.	325	675.5	400		
227.1	X1	15.2	11	277	296	100	100	100			
227.2	GR	676.5	0	674.	250	673.8	277	670.3	279	670.3	282
227.4	GR	670.9	285	673.2	296	674.	325	675.5	400	675.5	500
227.6	GR	676.5	600								
228	NC				.1	.3					
229	X1	16.0	10	266	285	250	250	250			
229.01	GR	676.3	0	675.1	100	675	200	673.8	266	671.	270
229.05	GR	670.5	275	671.5	280	674.	285	674.2	400	675.	415
229.2	X1	16.1	0			1	1	1			
229.4	X5	-5	0.1	0.1	0.1	0.1	0.1				
230	X1	16.9	9	395	420	250	250	250			

```
231     GR 676.4     200     676     300   674.6     393   670.7     400   670.5     408
232     GR 670.8     417   672.7     420   675.5     500    676.     600
233     NC                           .3      .5
233.5   ET                                           1.7     500     920
234     X1 16.98       8     800     808     100     100     100
235     X3    10                                                   675.0   675.0
236     GR  676.     500    676.     501    676.     502   673.9     800   671.2     802
237     GR 671.7     806   673.9     808   676.3     920
238     SB     0    1.66     2.6       0       8       0      20       0   671.2   671.2
239     X1 17.02       0                      25      25      25
240     X2                     1   673.9   675.8
241     X3    10                                                   676.0   676.0
241.5   BT     5     400   677.4       0     500   675.9       0     700   675.8       0
241.7   BT   800   676.2       0     920   676.3       0
241.8   ET                                           1.4
242     X1  17.1       8     388     419      50      50      50
243     GR 676.4     100   675.4     300   674.5     388   671.9     397   671.2     404
244     GR 671.6     411   674.2     419   675.5     500
245     NC                           .1      .3
246     X1  18.0      10     490     523     600     600     600
247     GR  677.     200   675.4     400   674.6     490   674.2     495   672.6     496
248     GR 672.5     490   671.8     504   672.3     513   675.8     523   676.9     600
248.5   X1  18.1       0                       1       1       1
248.7   X5    -5     0.1     0.1     0.1     0.1     0.1
249     X1  18.9       8     242     269     440     440     440
250     GR  677.     100   675.3     242   672.1     247   671.8     253    672.     257
251     GR 673.9     269   675.5     300   676.6     370
252     NC                           .3      .5
252.5   ET                                           1.7     100     500
253     X1 18.98       6     251     261     100     100     100
255     GR 677.7     100   675.4     251   672.1     252   672.8     256   675.4     261
256     GR 677.7     500
257     SB     0    1.67     2.3     400       9       0    29.7       0   672.1   672.1
258     X1 19.02       0                      40      40      40
259     X2                     1   675.4   677.5
260     ET                                           1.4
263     X1  19.1      10     200     234      50      50      50
264     GR 678.0       0    677.      80   675.4     200   675.1     208   672.4     210
265     GR 671.9     219   672.2     228   674.9     234   676.5     300   677.2     400
266     NC                           .1      .3
267     X1  19.9      11     490     526     475     475     475
268     GR 677.5     300    676.     400     676     490   675.7     495   672.4     500
269     GR 672.1     505   672.1     512     676     526   676.5     600   676.5     700
269.3   GR  678.     800
269.5   X1 19.98       0                     100     100     100             0.5
270     EJ
271     T1       JOB HUD-FTA H-4705  T06
272     T2       FIOOD INSURANCE STUDIES
273     T3       10 YEAR FLOW
274     J1    -1       2                   .0015                           643.5
275     J2     2              -1
276     T1       JOB HUD-FTA H-4705  T06
277     T2       FICOD INSURANCE STUDIES
278     T3       50 YEAR FLOW
279     J1    -1       3                   .0015                           643.5
280     J2     3              -1
281     T1       JOB HUD-FTA H-4705  T06
282     T2       FICOD INSURANCE STUDIES
283     T3       500 YEAR FLOW
284     J1    -1       5                   .0015                           643.5
```

NORTH BRANCH SWAN CREEK
(REVISED)

Water Management
Sumpter Twp
Wayne Co

SWAN CREEK 100 YR

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCR
100 YR	2.000	650.00	643.40	0.00	0.00	0.00	112.35	0.00
	2.000	400.00	642.28	0.00	0.00	-1.22	51.66	0.00
	2.000	570.00	643.09	0.00	0.00	-.41	95.36	0.00
	2.000	820.00	643.99	0.00	0.00	.49	144.67	0.00
	2.200	650.00	644.56	0.00	1.16	0.00	132.42	700.00
	2.200	400.00	643.43	0.00	1.15	0.00	58.55	700.00
	2.200	570.00	644.25	0.00	1.16	0.00	114.75	700.00
	2.200	820.00	645.13	0.00	1.14	0.00	164.86	700.00
	2.900	650.00	646.34	0.00	1.78	0.00	200.00	700.00
	2.900	400.00	645.48	0.00	2.05	0.00	154.80	700.00
	2.900	570.00	646.10	0.00	1.85	0.00	200.00	700.00
	2.900	820.00	646.79	0.00	1.66	0.00	200.00	700.00
	2.980	650.00	646.63	0.00	.29	0.00	200.00	80.00
	2.980	400.00	645.93	0.00	.46	0.00	192.15	80.00
	2.980	570.00	646.43	0.00	.33	0.00	200.00	80.00
	2.980	820.00	647.03	0.00	.25	0.00	200.00	80.00
	3.020	650.00	647.00	0.00	.37	0.00	200.00	40.00
	3.020	400.00	646.54	0.00	.61	0.00	200.00	40.00
	3.020	570.00	646.86	0.00	.44	0.00	200.00	40.00
	3.020	820.00	647.27	0.00	.24	0.00	200.00	40.00
	3.100	650.00	647.02	0.00	.02	0.00	200.00	30.00
	3.100	400.00	646.56	0.00	.01	0.00	200.00	30.00
	3.100	570.00	646.88	0.00	.02	0.00	200.00	30.00
	3.100	820.00	647.30	0.00	.02	0.00	200.00	30.00
	4.000	650.00	647.69	0.00	.67	0.00	220.00	700.00
	4.000	400.00	647.05	0.00	.50	0.00	220.00	700.00
	4.000	570.00	647.50	0.00	.62	0.00	220.00	700.00
	4.000	820.00	648.04	0.00	.74	0.00	220.00	700.00
	4.100	650.00	648.33	0.00	.65	0.00	216.06	450.00
	4.100	400.00	647.64	0.00	.59	0.00	110.77	450.00
	4.100	570.00	648.13	0.00	.63	0.00	185.97	450.00
	4.100	820.00	648.70	0.00	.66	0.00	220.00	450.00
	4.500	650.00	649.78	0.00	1.45	0.00	206.70	500.00
	4.500	400.00	648.96	0.00	1.32	0.00	82.46	500.00
	4.500	570.00	649.57	0.00	1.43	0.00	174.51	500.00
	4.500	820.00	650.11	0.00	1.41	0.00	220.00	500.00
	4.600	650.00	650.56	0.00	.70	0.00	200.00	400.00
	4.600	400.00	649.73	0.00	.77	0.00	192.99	400.00
	4.600	570.00	650.34	0.00	.78	0.00	200.00	400.00
	4.600	820.00	650.92	0.00	.81	0.00	200.00	400.00
X	5.000	650.00	650.85	0.00	.29	0.00	200.00	275.00
	5.000	400.00	650.05	0.00	.32	0.00	168.63	275.00

RECEIVED
DEC 9 - 1979
WATER MANAGEMENT

5.000	570.00	650.63	0.00	.29	0.00	196.79	275.00
5.000	820.00	651.23	0.00	.31	0.00	200.00	275.00

RECEIVED
DEC 10 1979
Municipal Services
& Planning Branch

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
5.900	650.00	651.84	0.00	.98	0.00	215.54	700.00
5.900	400.00	651.03	0.00	.99	0.00	142.32	700.00
5.900	570.00	651.61	0.00	.98	0.00	201.82	700.00
5.900	820.00	652.24	0.00	1.02	0.00	230.09	700.00
5.980	650.00	651.95	0.00	.12	0.00	153.52	91.00
5.980	400.00	651.11	0.00	.08	0.00	119.48	91.00
5.980	570.00	651.72	0.00	.11	0.00	144.30	91.00
5.980	820.00	652.38	0.00	.13	0.00	169.94	91.00
6.020	650.00	652.61	0.00	.65	0.00	179.28	18.00
6.020	400.00	651.68	0.00	.56	0.00	142.10	18.00
6.020	570.00	652.36	0.00	.64	0.00	169.45	18.00
6.020	820.00	653.07	0.00	.69	0.00	197.78	18.00
6.100	650.00	652.69	0.00	.09	0.00	200.00	51.00
6.100	400.00	651.81	0.00	.13	0.00	170.44	51.00
6.100	570.00	652.46	0.00	.09	0.00	198.09	51.00
6.100	820.00	653.14	0.00	.07	0.00	200.00	51.00
6.500	560.00	653.18	0.00	.49	0.00	200.00	500.00
6.500	345.00	652.31	0.00	.50	0.00	153.18	500.00
6.500	490.00	652.94	0.00	.49	0.00	193.77	500.00
6.500	700.00	653.63	0.00	.49	0.00	200.00	500.00
6.600	560.00	653.95	0.00	.76	0.00	253.97	865.00
6.600	345.00	653.15	0.00	.83	0.00	195.40	865.00
6.600	490.00	653.72	0.00	.78	0.00	234.28	865.00
6.600	700.00	654.36	0.00	.72	0.00	260.00	865.00
7.000	560.00	654.92	0.00	.97	0.00	190.62	825.00
7.000	345.00	654.20	0.00	1.05	0.00	135.41	825.00
7.000	490.00	654.71	0.00	.99	0.00	173.73	825.00
7.000	700.00	655.29	0.00	.93	0.00	203.30	825.00
7.010	450.00	655.60	0.00	.68	0.00	238.45	500.00
7.010	275.00	654.85	0.00	.65	0.00	167.25	500.00
7.010	395.00	655.38	0.00	.67	0.00	218.36	500.00
7.010	560.00	655.97	0.00	.69	0.00	273.03	500.00
7.100	450.00	656.16	0.00	.56	0.00	203.71	600.00
7.100	275.00	655.42	0.00	.57	0.00	133.05	600.00
7.100	395.00	655.95	0.00	.57	0.00	183.85	600.00
7.100	560.00	656.53	0.00	.56	0.00	238.35	600.00
7.500	450.00	657.07	0.00	.91	0.00	195.43	710.00
7.500	275.00	656.37	0.00	.95	0.00	118.83	710.00
7.500	395.00	656.88	0.00	.92	0.00	157.14	710.00
7.500	560.00	657.41	0.00	.88	0.00	217.36	710.00
7.600	450.00	657.85	0.00	.78	0.00	178.35	500.00
7.600	275.00	657.16	0.00	.79	0.00	113.00	500.00
7.600	395.00	657.66	0.00	.78	0.00	160.54	500.00
7.600	560.00	658.17	0.00	.76	0.00	209.28	500.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
7.700	450.00	658.69	0.00	.83	0.00	176.67	500.00
7.700	275.00	657.99	0.00	.84	0.00	111.81	500.00
7.700	395.00	658.49	0.00	.83	0.00	159.03	500.00
7.700	560.00	659.00	0.00	.83	0.00	207.17	500.00
7.800	450.00	659.52	0.00	.84	0.00	140.94	500.00
7.800	275.00	658.82	0.00	.82	0.00	90.67	500.00
7.800	395.00	659.32	0.00	.83	0.00	127.49	500.00
7.800	560.00	659.84	0.00	.84	0.00	162.09	500.00
8.000	450.00	660.66	0.00	1.15	0.00	141.23	680.00
8.000	275.00	659.92	0.00	1.10	0.00	86.85	680.00
8.000	395.00	660.46	0.00	1.13	0.00	126.24	680.00
8.000	560.00	661.01	0.00	1.17	0.00	163.14	680.00
8.500	450.00	661.53	0.00	.87	0.00	150.00	600.00
8.500	275.00	660.81	0.00	.89	0.00	146.40	600.00
8.500	395.00	661.33	0.00	.87	0.00	150.00	600.00
8.500	560.00	661.89	0.00	.88	0.00	150.00	600.00
8.900	450.00	662.19	0.00	.66	0.00	150.00	625.00
8.900	275.00	661.51	0.00	.70	0.00	150.00	625.00
8.900	395.00	662.00	0.00	.66	0.00	150.00	625.00
8.900	560.00	662.55	0.00	.66	0.00	150.00	625.00
8.910	450.00	662.34	0.00	.15	0.00	150.00	138.00
8.910	275.00	661.66	0.00	.15	0.00	143.59	138.00
8.910	395.00	662.14	0.00	.15	0.00	150.00	138.00
8.910	560.00	662.69	0.00	.15	0.00	150.00	138.00
8.920	450.00	662.44	0.00	.10	0.00	150.00	1.00
8.920	275.00	661.76	0.00	.10	0.00	146.17	1.00
8.920	395.00	662.24	0.00	.10	0.00	150.00	1.00
8.920	560.00	662.79	0.00	.10	0.00	150.00	1.00
8.980	450.00	662.46	0.00	.02	0.00	150.00	11.00
8.980	275.00	661.78	0.00	.02	0.00	148.51	11.00
8.980	395.00	662.26	0.00	.02	0.00	150.00	11.00
8.980	560.00	662.81	0.00	.02	0.00	150.00	11.00
8.990	450.00	662.35	0.00	-.11	0.00	150.00	1.00
8.990	275.00	661.39	0.00	-.39	0.00	127.39	1.00
8.990	395.00	662.05	0.00	-.21	0.00	150.00	1.00
8.990	560.00	662.75	0.00	-.06	0.00	150.00	1.00
9.010	450.00	662.67	0.00	.32	0.00	150.00	12.00
9.010	275.00	662.22	0.00	.82	0.00	150.00	12.00
9.010	395.00	662.69	0.00	.59	0.00	150.00	12.00
9.010	560.00	662.94	0.00	.19	0.00	150.00	12.00
9.020	450.00	662.75	0.00	.08	0.00	150.00	1.00
9.020	275.00	662.32	0.00	.10	0.00	150.00	1.00
9.020	395.00	662.70	0.00	.06	0.00	150.00	1.00
9.020	560.00	663.01	0.00	.07	0.00	150.00	1.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	9.100	450.00	662.78	0.00	.03	0.00	130.00	50.00
	9.100	275.00	662.34	0.00	.02	0.00	130.00	50.00
	9.100	395.00	662.73	0.00	.03	0.00	130.00	50.00
	9.100	560.00	663.05	0.00	.04	0.00	130.00	50.00
	9.180	450.00	663.12	0.00	.34	0.00	100.00	350.00
	9.180	275.00	662.56	0.00	.22	0.00	93.67	350.00
	9.180	395.00	663.01	0.00	.28	0.00	100.00	350.00
	9.180	560.00	663.44	0.00	.39	0.00	100.00	350.00
	9.220	450.00	663.37	0.00	.25	0.00	100.00	7.00
	9.220	275.00	662.84	0.00	.28	0.00	100.00	7.00
	9.220	395.00	663.26	0.00	.25	0.00	100.00	7.00
	9.220	560.00	663.65	0.00	.21	0.00	100.00	7.00
	9.250	450.00	663.50	0.00	.13	0.00	100.00	100.00
	9.250	275.00	662.92	0.00	.09	0.00	92.68	100.00
	9.250	395.00	663.37	0.00	.11	0.00	100.00	100.00
	9.250	560.00	663.81	0.00	.16	0.00	100.00	100.00
	9.280	450.00	663.87	0.00	.37	0.00	100.00	200.00
	9.280	275.00	663.20	0.00	.27	0.00	99.73	200.00
	9.280	395.00	663.70	0.00	.33	0.00	100.00	200.00
	9.280	560.00	664.21	0.00	.41	0.00	100.00	200.00
	9.320	450.00	663.99	0.00	.12	0.00	100.00	8.00
	9.320	275.00	663.40	0.00	.21	0.00	100.00	8.00
	9.320	395.00	663.84	0.00	.13	0.00	100.00	8.00
	9.320	560.00	664.32	0.00	.11	0.00	100.00	8.00
	9.350	450.00	664.00	0.00	.09	0.00	100.00	50.00
	9.350	275.00	663.47	0.00	.06	0.00	100.00	50.00
	9.350	395.00	663.92	0.00	.08	0.00	100.00	50.00
	9.350	560.00	664.41	0.00	.09	0.00	100.00	50.00
	9.500	450.00	664.48	0.00	.40	0.00	71.77	250.00
	9.500	275.00	663.78	0.00	.31	0.00	40.59	250.00
	9.500	395.00	664.29	0.00	.38	0.00	61.79	250.00
	9.500	560.00	664.84	0.00	.43	0.00	116.92	250.00
	10.000	450.00	665.61	0.00	1.13	0.00	103.51	830.00
	10.000	275.00	664.64	0.00	.86	0.00	37.21	830.00
	10.000	395.00	665.35	0.00	1.06	0.00	72.98	830.00
	10.000	560.00	666.07	0.00	1.22	0.00	144.11	830.00
	10.700	450.00	667.28	0.00	1.67	0.00	33.02	940.00
	10.700	275.00	666.09	0.00	1.45	0.00	21.73	940.00
	10.700	395.00	666.97	0.00	1.62	0.00	26.29	940.00
	10.700	560.00	667.79	0.00	1.72	0.00	62.54	940.00
*	10.710	450.00	667.49	0.00	.20	0.00	42.74	1.00
*	10.710	275.00	666.19	0.00	.10	0.00	21.95	1.00
*	10.710	395.00	667.17	0.00	.20	0.00	28.69	1.00
*	10.710	560.00	668.09	0.00	.30	0.00	84.71	1.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	10.780	450.00	667.74	0.00	.26	0.00	26.00	100.00
	10.780	275.00	666.48	0.00	.25	0.00	24.34	100.00
	10.780	395.00	667.42	0.00	.25	0.00	26.00	100.00
	10.780	560.00	668.34	0.00	.25	0.00	28.61	100.00
	10.820	450.00	668.11	0.00	.37	0.00	26.00	15.00
	10.820	275.00	666.49	0.00	.05	0.00	24.55	15.00
	10.820	395.00	667.67	0.00	.25	0.00	26.00	15.00
	10.820	560.00	669.99	0.00	.65	0.00	26.00	15.00
	10.900	450.00	668.23	0.00	.12	0.00	58.54	50.00
	10.900	275.00	666.65	0.00	.15	0.00	21.87	50.00
	10.900	395.00	667.79	0.00	.12	0.00	33.83	50.00
	10.900	560.00	669.14	0.00	.16	0.00	125.99	50.00
D/S FACE, SUMPTER ROAD	10.980	450.00	668.24	0.00	.02	0.00	16.08	50.00
	10.980	275.00	666.72	0.00	.07	0.00	15.25	50.00
	10.980	395.00	667.83	0.00	.04	0.00	16.08	50.00
	10.980	560.00	669.09	0.00	-.05	0.00	27.75	50.00
	11.020	450.00	669.11	0.00	.87	0.00	16.08	45.00
	11.020	275.00	667.13	0.00	.41	0.00	15.64	45.00
	11.020	395.00	668.42	0.00	.58	0.00	16.08	45.00
	11.020	560.00	670.28	0.00	1.18	0.00	34.84	45.00
	11.100	450.00	669.55	0.00	.44	0.00	80.62	50.00
	11.100	275.00	667.43	0.00	.30	0.00	20.87	50.00
	11.100	395.00	668.83	0.00	.41	0.00	57.14	50.00
	11.100	560.00	670.65	0.00	.37	0.00	116.32	50.00
	11.500	370.00	670.01	0.00	.46	0.00	93.68	225.00
	11.500	225.00	668.64	0.00	1.21	0.00	45.05	225.00
	11.500	330.00	669.54	0.00	.71	0.00	68.12	225.00
	11.500	470.00	670.91	0.00	.26	0.00	112.81	225.00
*	11.510	370.00	670.21	0.00	.20	0.00	90.20	1.00
*	11.510	225.00	668.74	0.00	.10	0.00	46.91	1.00
*	11.510	330.00	669.74	0.00	.20	0.00	74.67	1.00
*	11.510	470.00	671.21	0.00	.30	0.00	120.19	1.00
	12.000	370.00	670.74	0.00	.53	0.00	185.32	500.00
	12.000	225.00	669.56	0.00	.82	0.00	79.42	500.00
	12.000	330.00	670.40	0.00	.66	0.00	169.56	500.00
	12.000	470.00	671.55	0.00	.34	0.00	224.31	500.00
	12.900	370.00	671.53	0.00	.79	0.00	193.52	715.00
	12.900	225.00	670.69	0.00	1.13	0.00	165.97	715.00
	12.900	330.00	671.32	0.00	.92	0.00	196.62	715.00
	12.900	470.00	672.09	0.00	.54	0.00	211.61	715.00
	12.980	370.00	671.35	0.00	-.18	0.00	9.00	100.00
	12.980	225.00	670.88	0.00	.20	0.00	9.00	100.00
	12.980	330.00	671.25	0.00	-.07	0.00	9.00	100.00
	12.980	470.00	672.11	0.00	.02	0.00	124.29	100.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	13.020	370.00	673.79	0.00	2.43	0.00	243.85	42.00
	13.020	225.00	671.50	0.00	.62	0.00	9.00	42.00
	13.020	330.00	672.92	0.00	1.67	0.00	9.00	42.00
	13.020	470.00	674.16	0.00	2.04	0.00	270.19	42.00
	13.100	370.00	673.82	0.00	.03	0.00	245.93	50.00
	13.100	225.00	672.03	0.00	.52	0.00	91.39	50.00
	13.100	330.00	673.59	0.00	.67	0.00	233.38	50.00
	13.100	470.00	674.18	0.00	.03	0.00	266.62	50.00
	13.500	370.00	673.96	0.00	.14	0.00	279.72	800.00
	13.500	225.00	672.43	0.00	.41	0.00	161.18	800.00
	13.500	330.00	673.74	0.00	.15	0.00	262.68	800.00
	13.500	470.00	674.34	0.00	.15	0.00	309.38	800.00
*	13.510	370.00	674.06	0.00	.10	0.00	287.54	1.00
*	13.510	225.00	672.53	0.00	.10	0.00	168.28	1.00
*	13.510	330.00	673.84	0.00	.10	0.00	270.42	1.00
*	13.510	470.00	674.44	0.00	.10	0.00	317.20	1.00
	14.000	370.00	674.09	0.00	.03	0.00	290.31	200.00
	14.000	225.00	672.62	0.00	.09	0.00	175.71	200.00
	14.000	330.00	673.87	0.00	.03	0.00	273.27	200.00
	14.000	470.00	674.47	0.00	.04	0.00	320.13	200.00
	14.100	370.00	674.20	0.00	.10	0.00	216.30	450.00
	14.100	225.00	672.88	0.00	.26	0.00	111.18	450.00
	14.100	330.00	673.99	0.00	.11	0.00	199.52	450.00
	14.100	470.00	674.59	0.00	.11	0.00	246.46	450.00
*	14.500	370.00	674.40	0.00	.20	0.00	189.96	425.00
*	14.500	225.00	673.08	0.00	.20	0.00	50.00	425.00
*	14.500	330.00	674.19	0.00	.20	0.00	133.17	425.00
*	14.500	470.00	674.79	0.00	.20	0.00	180.11	425.00
*	14.510	370.00	674.60	0.00	.20	0.00	165.57	1.00
*	14.510	225.00	673.28	0.00	.20	0.00	62.44	1.00
*	14.510	330.00	674.38	0.00	.20	0.00	148.78	1.00
*	14.510	470.00	674.99	0.00	.20	0.00	195.72	1.00
	14.900	370.00	674.80	0.00	.20	0.00	191.28	150.00
	14.900	225.00	673.79	0.00	.50	0.00	92.92	150.00
	14.900	330.00	674.60	0.00	.22	0.00	172.27	150.00
	14.900	470.00	675.17	0.00	.19	0.00	218.11	150.00
	14.980	370.00	674.95	0.00	.16	0.00	197.19	100.00
	14.980	225.00	674.05	0.00	.28	0.00	142.08	100.00
	14.980	330.00	674.77	0.00	.17	0.00	195.82	100.00
	14.980	470.00	675.31	0.00	.14	0.00	200.00	100.00
	15.020	370.00	675.75	0.00	.79	0.00	200.00	1.00
	15.020	225.00	675.39	0.00	1.33	0.00	200.00	1.00
	15.020	330.00	675.66	0.00	.89	0.00	200.00	1.00
	15.020	470.00	675.95	0.00	.64	0.00	200.00	1.00

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SRCNO	Q	CWSEL	DIFWSP	DIFWSX	DIFWSS	TOPWID	XLCH
15.100	370.00	675.76	0.00	.01	0.00	240.00	50.00
15.100	225.00	675.39	0.00	.01	0.00	234.62	50.00
15.100	330.00	675.67	0.00	.01	0.00	240.00	50.00
15.100	470.00	675.96	0.00	.02	0.00	240.00	50.00
15.200	370.00	675.82	0.00	.06	0.00	462.21	100.00
15.200	225.00	675.44	0.00	.04	0.00	289.25	100.00
15.200	330.00	675.73	0.00	.05	0.00	443.88	100.00
15.200	470.00	676.01	0.00	.07	0.00	506.22	100.00
16.000	370.00	675.93	0.00	.11	0.00	393.90	250.00
16.000	225.00	675.52	0.00	.09	0.00	350.82	250.00
16.000	330.00	675.83	0.00	.10	0.00	375.87	250.00
16.000	470.00	676.14	0.00	.11	0.00	401.98	250.00
* 16.100	370.00	676.03	0.00	.10	0.00	392.23	1.00
* 16.100	225.00	675.62	0.00	.10	0.00	350.60	1.00
* 16.100	330.00	675.93	0.00	.10	0.00	384.21	1.00
* 16.100	470.00	676.24	0.00	.10	0.00	410.31	1.00
16.900	370.00	676.10	0.00	.07	0.00	326.34	250.00
16.900	225.00	675.68	0.00	.06	0.00	216.84	250.00
16.900	330.00	676.00	0.00	.07	0.00	301.35	250.00
16.900	470.00	676.32	0.00	.00	0.00	382.50	250.00
16.980	370.00	676.16	0.00	.06	0.00	413.59	100.00
16.980	225.00	675.72	0.00	.05	0.00	351.06	100.00
16.980	330.00	676.06	0.00	.06	0.00	408.73	100.00
16.980	470.00	676.39	0.00	.07	0.00	420.00	100.00
17.020	370.00	676.40	0.00	.24	0.00	420.00	25.00
17.020	225.00	676.20	0.00	.49	0.00	415.70	25.00
17.020	330.00	676.36	0.00	.30	0.00	420.00	25.00
17.020	470.00	676.53	0.00	.14	0.00	420.00	25.00
17.100	370.00	676.42	0.00	.01	0.00	400.00	50.00
17.100	225.00	676.21	0.00	.01	0.00	363.52	50.00
17.100	330.00	676.37	0.00	.01	0.00	394.58	50.00
17.100	470.00	676.55	0.00	.01	0.00	400.00	50.00
18.000	370.00	676.68	0.00	.26	0.00	344.50	600.00
18.000	225.00	676.36	0.00	.15	0.00	293.09	600.00
18.000	330.00	676.60	0.00	.23	0.00	329.27	600.00
18.000	470.00	676.87	0.00	.32	0.00	381.42	600.00
* 18.100	370.00	676.78	0.00	.10	0.00	364.01	1.00
* 18.100	225.00	676.46	0.00	.10	0.00	302.59	1.00
* 18.100	330.00	676.70	0.00	.10	0.00	348.78	1.00
* 18.100	470.00	676.97	0.00	.10	0.00	396.11	1.00
18.900	370.00	676.99	0.00	.21	0.00	270.00	440.00
18.900	225.00	676.61	0.00	.14	0.00	237.96	440.00
18.900	330.00	676.90	0.00	.20	0.00	251.97	440.00
18.900	470.00	677.21	0.00	.24	0.00	270.00	440.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
18.980	370.00	677.08	0.00	.09	0.00	294.68	100.00
18.980	225.00	676.66	0.00	.06	0.00	224.30	100.00
18.980	330.00	676.98	0.00	.08	0.00	277.45	100.00
18.980	470.00	677.31	0.00	.10	0.00	333.54	100.00
19.020	370.00	677.86	0.00	.78	0.00	400.00	40.00
19.020	225.00	677.63	0.00	.96	0.00	388.33	40.00
19.020	330.00	677.81	0.00	.83	0.00	400.00	40.00
19.020	470.00	677.99	0.00	.67	0.00	400.00	40.00
19.100	370.00	677.87	0.00	.01	0.00	389.97	50.00
19.100	225.00	677.63	0.00	.01	0.00	370.71	50.00
19.100	330.00	677.82	0.00	.01	0.00	385.44	50.00
19.100	470.00	678.00	0.00	.02	0.00	399.70	50.00
19.900	370.00	677.95	0.00	.07	0.00	496.54	475.00
19.900	225.00	677.68	0.00	.04	0.00	478.35	475.00
19.900	330.00	677.89	0.00	.06	0.00	492.16	475.00
19.900	470.00	678.09	0.00	.10	0.00	500.00	475.00
19.980	370.00	677.96	0.00	.01	0.00	461.73	100.00
19.980	225.00	677.68	0.00	.01	0.00	424.49	100.00
19.980	330.00	677.90	0.00	.01	0.00	452.73	100.00
19.980	470.00	678.11	0.00	.02	0.00	474.15	100.00

SUMMARY OF ERRORS

NOTE SECNO= 8.920 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 8.920 PROFILE= 2 WSEL BASED ON X5 CARD
NOTE SECNO= 8.920 PROFILE= 3 WSEL BASED ON X5 CARD
NOTE SECNO= 8.920 PROFILE= 4 WSEL BASED ON X5 CARD

CAUTION SECNO= 8.990 PROFILE= 3 WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO= 9.000 PROFILE= 3 20 TRIALS ATTEMPTED TO BALANCE WSEL

NOTE SECNO= 10.710 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 10.710 PROFILE= 2 WSEL BASED ON X5 CARD
NOTE SECNO= 10.710 PROFILE= 3 WSEL BASED ON X5 CARD
NOTE SECNO= 10.710 PROFILE= 4 WSEL BASED ON X5 CARD

NOTE SECNO= 11.510 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 11.510 PROFILE= 2 WSEL BASED ON X5 CARD
NOTE SECNO= 11.510 PROFILE= 3 WSEL BASED ON X5 CARD
NOTE SECNO= 11.510 PROFILE= 4 WSEL BASED ON X5 CARD

NOTE SECNO= 13.510 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 13.510 PROFILE= 2 WSEL BASED ON X5 CARD
NOTE SECNO= 13.510 PROFILE= 3 WSEL BASED ON X5 CARD
NOTE SECNO= 13.510 PROFILE= 4 WSEL BASED ON X5 CARD

NOTE SECNO= 14.500 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 14.500 PROFILE= 2 WSEL BASED ON X5 CARD
NOTE SECNO= 14.500 PROFILE= 3 WSEL BASED ON X5 CARD
NOTE SECNO= 14.500 PROFILE= 4 WSEL BASED ON X5 CARD

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 100-YR FLOW=650 CFS

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
       -1.       4.         0.         0.   0.CCCCC0       0.00       0.0         0.    642.000      0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSICH      FN         ALLDC      IBW        CHNIM      ITRACE
     1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

NC       .080       .080       .050       .100       .300      0.000      0.000      0.000      0.000      0.000
QT      5.000    400.000    570.000    650.000    820.000    650.000      0.000      0.000      0.000      0.000

X1      2.000      6.000    639.000    678.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    645.000    550.000    642.300    639.CCC    636.900    655.000    637.200    672.000    641.700    678.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.200      6.000    645.000    675.CCC    700.000    700.000    700.000      0.000       .750      0.000
GR    645.000    550.000    642.000    645.000    636.900    660.000    637.200    672.000    642.000    675.000
GR    645.000    750.000      0.000      C.CCC      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.900      8.000   1287.000   1300.000    700.000    700.000    700.000      0.000      0.000      0.000
GR    646.000   1200.000    645.900   1201.000    645.000   1202.000    643.900   1287.000    638.400   1295.000
GR    639.600   1297.000    644.800   1300.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .300       .500      0.000      0.000      0.000      0.000      0.000

        ** D/S FACE JUDD RD.

X1      2.980      7.000   1297.000   1308.000     80.000     80.000     80.000      0.000      0.000      0.000
X3     10.000      0.000      0.000      0.CCC      0.000      0.000      0.000    646.200    646.200      0.000
GR    646.200   1290.000    645.100   1297.000    640.100   1300.000    638.800   1302.000    639.900   1305.000
GR    643.200   1308.000    646.200   1490.CCC      0.000      0.000      0.000      0.000      0.000      0.000
EJ      0.000      0.000      0.000      0.CCC      0.000      0.000      0.000      0.000      0.000      0.000
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THE UNIVERSITY OF MICHIGAN

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICE	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICCNT	CORAR	TOPWID	ENDST
2.00	5.10	642.00	0.00	642.00	642.34	.34	0.00	0.00	642.30
650.	0.	650.	0.	0.	138.	1.	0.	0.	641.70
0.00	0.00	4.71	.37	.080	.050	.080	0.000	636.90	639.89
.004887	0.	0.	0.	0	0	0	0.00	44.66	684.55

*SECNO 2.200

2.20	6.72	644.37	0.00	0.00	644.58	.21	2.22	.01	642.75
650.	32.	594.	25.	41.	153.	33.	3.	1.	642.75
.05	.76	3.87	.76	.080	.050	.080	.050	637.65	593.76
.002230	700.	700.	700.	3	0	0	0.00	121.69	715.45

*SECNO 2.900

3280 CROSS SECTION 2.90 EXTENDED .34 FEET

2.90	7.94	646.34	0.00	0.00	646.48	.14	1.89	.01	643.90
650.	265.	288.	97.	162.	69.	94.	7.	4.	644.80
.13	1.64	4.19	1.03	.080	.050	.080	.050	638.40	1200.00
.003353	700.	700.	700.	2	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500

*SECNO 2.980

3280 CROSS SECTION 2.98 EXTENDED .43 FEET

** D/S FACE JUDD RD.

2.98	7.83	646.63	0.00	0.00	646.70	.07	.20	.02	645.10
650.	5.	206.	438.	7.	64.	352.	8.	4.	643.20
.14	.76	3.25	1.25	.080	.050	.080	.050	638.80	1290.00
.001877	80.	80.	80.	2	0	0	0.00	200.00	1490.00

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*************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
*************************************************

T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 100-YR FLOW=650 CFS

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      -1.       4.        0.        0.  0.000000      0.00       0.0        0.   644.000     0.000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      2.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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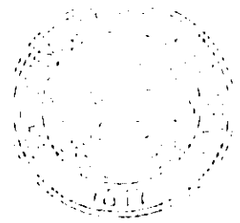

*PROF 2

CCHV= .100 CEHV= .300

*SECNO 2.000

SECNO	DEPTH	CHSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	7.10	644.00	0.00	644.00	644.11	.11	0.00	0.00	642.30
650.	24.	590.	36.	48.	216.	58.	0.	0.	641.70
0.00	.51	2.73	.62	.080	.050	.080	0.000	636.90	582.96
.000935	0.	0.	0.	0	0	0	0.00	145.22	728.18

*SECNO 2.200

2.20	7.14	644.79	0.00	0.00	644.95	.16	.83	.01	642.75
650.	49.	563.	38.	66.	166.	52.	5.	2.	642.75
.06	.74	3.39	.74	.080	.050	.080	.050	637.65	580.35
.001538	700.	700.	700.	2	0	0	0.00	145.68	726.04

*SECNO 2.900

3280 CROSS SECTION 2.90 EXTENDED .34 FEET

2.90	7.94	646.34	0.00	0.00	646.48	.14	1.53	.00	643.90
650.	265.	288.	97.	162.	69.	94.	10.	5.	644.80
.14	1.64	4.19	1.03	.080	.050	.080	.050	638.40	1200.00
.003347	700.	700.	700.	2	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500

*SECNO 2.980

3280 CROSS SECTION 2.98 EXTENDED .43 FEET

** D/S FACE JUDD RD.

2.98	7.83	646.63	0.00	0.00	646.70	.07	.20	.02	645.10
650.	5.	207.	438.	7.	64.	351.	10.	5.	643.20
.15	.76	3.26	1.25	.080	.050	.080	.050	638.80	1290.00
.001888	80.	80.	80.	2	0	0	0.00	200.00	1490.00

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SEAN CREEK 100-YR FLOW=650 CFS

J1  ICHECK     INQ       NINV      IDIR      STIT      METRIC    HVINS     Q         WSEL      FQ

      -1.       4.        0.        0.  0.000000      0.00      0.0       0.   645.000     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000
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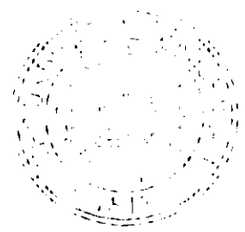

THE UNIVERSITY OF MICHIGAN

*PROF 3

CCHV= .100 CEHV= .300

*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICE	ACH	ARCE	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNE	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICCNT	CCRAR	TOPWID	ENDST
2.00	8.10	645.00	0.00	645.00	645.06	.06	0.00	0.00	642.30
650.	57.	529.	64.	120.	255.	119.	0.	0.	641.70
0.00	.47	2.08	.54	.080	.050	.080	0.000	636.90	550.00
.000433	0.	0.	0.	0	0	0	0.00	200.00	750.00

*SECNO 2.200

2.20	7.75	645.40	0.00	0.00	645.49	.10	.43	.01	642.75
650.	75.	516.	59.	111.	184.	87.	7.	3.	642.75
.08	.68	2.80	.68	.080	.050	.080	.050	637.65	561.23
.000915	700.	700.	700.	2	0	0	0.00	179.90	741.13

*SECNO 2.900

3280 CROSS SECTION 2.90 EXTENDED .43 FEET

2.90	8.03	646.43	0.00	0.00	646.55	.12	1.05	.01	643.90
650.	268.	277.	106.	170.	70.	103.	13.	6.	644.80
.16	1.58	3.96	1.02	.CEC	.050	.080	.050	638.40	1200.00
.002924	700.	700.	700.	3	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500

*SECNO 2.980

3280 CROSS SECTION 2.98 EXTENDED .49 FEET

** D/S FACE JUDD RD.

2.98	7.89	646.69	0.00	0.00	646.75	.06	.18	.02	645.10
650.	5.	202.	442.	7.	64.	361.	14.	6.	643.20
.17	.75	3.15	1.22	.CEC	.050	.080	.050	638.80	1290.00
.001746	80.	80.	80.	2	0	0	0.00	200.00	1490.00

****
HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
ERROR CORR - 01
MODIFICATION - 50,51,52
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SWAN CREEK 100-YR FLOW=6

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
2.000	0.00	0.00	0.00	636.90	650.00	642.00	0.00	642.34	48.87	4.71	138.97	92.98
2.000	0.00	0.00	0.00	636.90	650.00	644.00	0.00	644.11	9.35	2.73	321.19	212.63
2.000	0.00	0.00	0.00	636.90	650.00	645.00	0.00	645.06	4.33	2.08	493.80	312.51
2.200	700.00	0.00	0.00	637.65	650.00	644.37	0.00	644.58	22.30	3.87	227.58	137.66
2.200	700.00	0.00	0.00	637.65	650.00	644.79	0.00	644.95	15.38	3.39	284.18	165.74
2.200	700.00	0.00	0.00	637.65	650.00	645.40	0.00	645.49	9.15	2.80	382.49	214.90
2.900	700.00	0.00	0.00	638.40	650.00	646.34	0.00	646.48	33.53	4.19	324.71	112.25
2.900	700.00	0.00	0.00	638.40	650.00	646.34	0.00	646.48	33.47	4.19	324.96	112.35
2.900	700.00	0.00	0.00	638.40	650.00	646.43	0.00	646.55	29.24	3.96	342.91	120.21
2.980	80.00	0.00	0.00	638.80	650.00	646.63	0.00	646.70	18.77	3.25	422.15	150.04
2.980	80.00	0.00	0.00	638.80	650.00	646.63	0.00	646.70	18.88	3.26	421.28	149.59
2.980	80.00	0.00	0.00	638.80	650.00	646.69	0.00	646.75	17.46	3.15	432.80	155.54

THE UNIVERSITY OF MICHIGAN

SWAN CREEK 100-YR FLOW=6

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
2.000	650.00	642.00	0.00	0.00	0.00	44.66	0.00
2.000	650.00	644.00	0.00	0.00	0.00	145.22	0.00
2.000	650.00	645.00	0.00	0.00	0.00	200.00	0.00
2.200	650.00	644.37	0.00	2.37	0.00	121.69	700.00
2.200	650.00	644.79	0.00	.79	0.00	145.68	700.00
2.200	650.00	645.40	0.00	.40	0.00	179.90	700.00
2.900	650.00	646.34	0.00	1.97	0.00	200.00	700.00
2.900	650.00	646.34	0.00	1.55	0.00	200.00	700.00
2.900	650.00	646.43	0.00	1.04	0.00	200.00	700.00
2.980	650.00	646.63	0.00	.29	0.00	200.00	80.00
2.980	650.00	646.63	0.00	.29	0.00	200.00	80.00
2.980	650.00	646.69	0.00	.25	0.00	200.00	80.00

SUMMARY OF ERRORS

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CODE -  01
  MODIFICATION -  50,51,52
**************************************************
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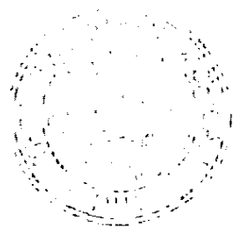

THE UNIVERSITY OF MICHIGAN

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************
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100yr.

See cautions @ Secno. 14.90

corrected data for Secno 10.98 + upstream in packet.

Secno 10.98 = SUMPTER ROAD

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 100-YR FLOW=650 CFS

J1  ICHECK     INQ        NINV       IDIR       STIT       METRIC     HVINS      Q          WSEL       FQ

      -1.        4.         0.         0.    .001500       0.00         .5         0.     643.500     0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

      1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

NC      .080       .080       .050       .100       .300     0.000      0.000      0.000      0.000      0.000
QT     5.000    400.000    570.000    650.000    820.000    650.000      0.000      0.000      0.000      0.000

X1     2.000      6.000    639.000    678.000      0.000      0.000      0.000      0.000      0.000      0.000
GR   645.000    550.000    642.300    639.000    636.900    655.000    637.200    672.000    641.700    678.000
GR   645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1     2.200      6.000    645.000    675.000    700.000    700.000    700.000      0.000       .750      0.000
GR   645.000    550.000    642.000    645.000    636.900    660.000    637.200    672.000    642.000    675.000
GR   645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1     2.900      8.000   1287.000   1300.000    700.000    700.000    700.000      0.000      0.000      0.000
GR   646.000   1200.000    645.900   1201.000    645.000   1202.000    643.900   1287.000    638.400   1295.000
GR   639.600   1297.000    644.800   1300.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC     0.000      0.000      0.000       .300       .500      0.000      0.000      0.000      0.000      0.000

       ** D/S FACE JUDD RD.

X1     2.980      7.000   1297.000   1308.000     80.000     80.000     80.000      0.000      0.000      0.000
GR   646.200   1290.000    645.100   1297.000    640.100   1300.000    638.800   1302.000    639.900   1305.000
GR   643.200   1308.000    646.200   1490.000      0.000      0.000      0.000      0.000      0.000      0.000
SB     0.000      1.820      2.900    200.000     10.000      0.000     56.520      0.000    638.800    638.800

X1     3.020      0.000      0.000      0.000     40.000     40.000     40.000      0.000      0.000      0.000
X2     0.000      0.000      1.000    644.820    646.200      0.000      0.000      0.000      0.000      0.000
NC      .070       .070      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1     3.100      8.000   1302.000   1330.000     30.000     30.000     30.000      0.000      0.000      0.000
GR   646.000   1200.000    644.500   1302.000    640.300   1305.000    639.500   1307.000    640.200   1310.000
GR   641.700   1321.000    644.700   1330.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC     0.000      0.000      0.000       .100       .300      0.000      0.000      0.000      0.000      0.000
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X1	4.000	7.000	440.000	471.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	647.000	350.000	645.700	440.000	641.000	450.000	640.200	454.000	640.900	459.000
GR	645.800	471.000	647.000	570.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.360	0.000
X1	4.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	1.510	0.000
NC	.085	-.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.600	7.000	500.000	552.000	400.000	400.000	400.000	0.000	-.830	0.000
GR	650.000	400.000	649.400	500.000	645.700	523.000	645.100	527.000	645.600	533.000
GR	649.700	552.000	650.700	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5.000	0.000	0.000	0.000	275.000	275.000	275.000	0.000	.830	0.000
X1	5.900	8.000	610.000	635.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	651.700	550.000	650.800	610.000	646.200	614.000	645.200	621.000	646.200	630.000
GR	648.200	635.000	650.000	700.000	652.800	800.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	-.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE MARTINSVILLE RD.

X1	5.980	10.000	585.000	600.000	91.000	91.000	91.000	0.000	0.000	0.000
GR	652.000	585.000	648.300	585.100	646.400	587.000	645.300	593.500	646.300	598.000
GR	648.000	398.000	648.500	595.100	649.700	600.000	651.000	700.000	653.500	800.000
SB	0.000	1.200	2.600	150.000	12.000	0.000	60.000	0.000	645.300	645.300
X1	6.020	0.000	0.000	0.000	18.000	18.000	18.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	650.500	651.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	651.000	651.000	0.000
NC	.095	.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6.100	8.000	570.000	610.000	51.000	51.000	51.000	0.000	0.000	0.000
GR	651.800	500.000	650.200	570.000	646.400	587.000	645.300	590.000	646.500	597.000
GR	648.100	600.000	650.400	610.000	652.500	700.000	0.000	0.000	0.000	0.000
QT	5.000	345.000	490.000	560.000	700.000	560.000	0.000	0.000	0.000	0.000
NC	0.000	.080	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	6.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.590	0.000
X1	6.600	8.000	460.000	525.000	865.000	865.000	865.000	0.000	-.980	0.000
GR	655.000	370.000	652.300	460.000	649.900	477.000	648.900	482.000	649.700	485.000
GR	652.500	500.000	653.000	525.000	655.000	630.000	0.000	0.000	0.000	0.000
X1	7.000	8.000	475.000	500.000	825.000	825.000	825.000	0.000	0.000	0.000
GR	655.000	360.000	654.300	480.000	651.900	475.000	649.900	477.000	648.900	482.000
GR	649.700	485.000	652.500	500.000	656.900	600.000	0.000	0.000	0.000	0.000
QT	5.000	275.000	395.000	450.000	560.000	450.000	0.000	0.000	0.000	0.000

X1	7.010	9.000	718.000	743.000	500.000	500.000	500.000	0.000	-2.030	0.000
GR	658.100	600.000	656.200	700.000	655.100	718.000	652.100	725.000	651.700	730.000
GR	652.600	736.000	654.700	743.000	655.800	786.000	658.500	900.000	0.000	0.000
NC	.070	.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7.100	0.000	0.000	0.000	600.000	600.000	600.000	0.000	.930	0.000
X1	7.500	0.000	0.000	0.000	710.000	710.000	710.000	0.000	1.100	0.000
X1	7.600	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.700	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.800	10.000	442.000	480.000	500.000	500.000	500.000	0.000	-1.150	0.000
GR	662.700	200.000	661.600	300.000	660.000	400.000	659.300	442.000	656.500	459.000
GR	655.400	467.000	655.900	473.000	658.800	480.000	660.700	500.000	661.500	501.000
X1	8.000	0.000	0.000	0.000	680.000	680.000	680.000	0.000	1.150	0.000
X1	8.500	7.000	790.000	806.000	600.000	600.000	600.000	0.000	-.560	0.000
GR	661.500	725.000	659.100	790.000	656.900	794.000	656.500	797.000	656.900	803.000
GR	659.600	806.000	661.000	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.900	0.000	0.000	0.000	625.000	625.000	625.000	0.000	.560	0.000
X1	8.900	0.000	0.000	0.000	625.000	625.000	625.000	0.000	.560	0.000

**FOOTBRIDGE-X5

X1	8.910	0.000	0.000	0.000	138.000	138.000	138.000	0.000	.400	0.000
X1	8.920	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000

**D/S FACE KOZMA

X1	8.980	7.000	790.000	806.000	11.000	11.000	11.000	0.000	0.000	0.000
GR	661.800	725.000	659.400	790.000	656.900	794.000	656.900	797.000	656.900	803.000
GR	659.400	806.000	661.800	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.990	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.010	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

X1	9.100	7.000	784.000	800.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	661.500	730.000	660.200	784.000	657.200	788.000	656.900	793.000	657.000	797.000
GR	658.800	800.000	661.700	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.200	.400	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									
X1	9.180	6.000	141.500	158.500	350.000	350.000	350.000	0.000	0.000	0.000
GR	662.700	100.000	660.800	141.500	657.000	143.000	657.000	157.000	660.800	158.500
GR	662.700	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	657.000	657.000
X1	9.220	0.000	0.000	0.000	7.000	7.000	7.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	660.800	662.700	0.000	0.000	0.000	0.000	0.000
X1	9.250	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.400	0.000
	**FOOTBRIDGE-SB									
X1	9.280	6.000	141.500	158.500	200.000	200.000	200.000	0.000	0.000	0.000
GR	663.200	100.000	661.800	141.500	658.100	143.000	658.100	157.000	661.800	158.500
GR	663.200	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	658.100	658.100
X1	9.320	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	661.800	663.200	0.000	0.000	0.000	0.000	0.000
X1	9.350	0.000	0.000	0.000	50.000	50.000	50.000	0.000	.100	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	9.500	6.000	321.000	363.000	250.000	250.000	250.000	0.000	-.800	0.000
GR	665.500	280.000	664.700	321.000	659.300	344.000	659.200	355.000	665.300	363.000
GR	667.400	570.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.000	0.000	0.000	0.000	830.000	830.000	830.000	.910	.800	0.000
	**FOOTBRIDGE-X5									
X1	10.700	11.000	1044.000	1078.000	940.000	940.000	940.000	.690	-.500	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.710	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SE									

X1	10.780	6.000	102.000	128.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.000	668.000	0.000
GR	669.100	100.000	666.900	102.000	661.000	112.500	661.000	117.500	666.900	128.000
GR	669.100	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.580	3.000	30.000	15.000	0.000	93.000	0.000	661.000	661.000
X1	10.820	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	666.900	669.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	669.100	669.100	0.000
X1	10.900	11.000	1044.000	1078.000	50.000	50.000	50.000	.690	0.000	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE SUMPTER RD.

X1	10.980	9.000	977.000	1001.000	50.000	50.000	50.000	.670	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.500	668.500	0.000
GR	670.000	950.000	667.600	977.000	664.200	981.000	662.600	983.000	662.200	985.000
GR	662.200	988.000	663.500	1000.000	667.600	1001.000	670.000	1002.000	0.000	0.000
SB	0.000	1.470	2.800	50.000	16.000	0.000	67.000	0.000	662.200	662.200
X1	11.020	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	667.000	670.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	670.000	670.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.100	10.000	950.000	979.000	50.000	50.000	50.000	.690	0.000	0.000
GR	670.700	900.000	668.700	950.000	666.800	958.000	664.300	960.000	662.600	967.000
GR	662.600	969.000	664.000	975.000	666.500	979.000	667.500	1000.000	672.000	1100.000
QT	5.000	225.000	330.000	370.000	470.000	370.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-X5

X1	11.500	0.000	0.000	0.000	225.000	225.000	225.000	0.000	.370	0.000
X1	11.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12.000	8.000	323.000	353.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	672.000	290.000	699.900	323.000	664.500	332.000	663.800	336.000	664.400	339.000
GR	665.300	347.000	669.200	353.000	672.000	400.000	0.000	0.000	0.000	0.000
X1	12.900	7.000	266.000	298.000	715.000	715.000	715.000	.750	0.000	0.000
GR	671.500	240.000	670.200	266.000	666.800	270.000	665.800	277.000	665.900	281.000
GR	670.400	298.000	671.500	323.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. EAST CROSSING									
X1	12.980	7.000	388.000	400.000	100.000	100.000	100.000	.750	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	671.900	671.900	0.000
GR	673.800	373.000	670.500	388.000	666.400	389.000	665.900	395.000	666.400	399.000
GR	670.500	400.000	673.800	415.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.370	2.500	32.000	9.000	0.000	36.000	0.000	665.900	665.900
X1	13.020	0.000	0.000	0.000	42.000	42.000	42.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	670.500	673.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	673.800	673.800	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13.100	8.000	430.000	458.000	50.000	50.000	50.000	.750	0.000	0.000
GR	675.000	400.000	675.000	400.000	669.500	430.000	666.700	438.000	666.400	445.000
GR	666.400	451.000	669.600	458.000	675.000	490.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	13.500	8.000	463.000	488.000	800.000	800.000	800.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	13.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	-.100	-.100	-.100	.100	0.000	0.000	0.000	0.000	0.000
X1	14.000	8.000	463.000	488.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
X1	14.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.050	0.000
X1	14.500	0.000	0.000	0.000	425.000	425.000	425.000	0.000	1.050	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	14.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
X1	14.900	8.000	331.000	390.000	150.000	150.000	150.000	.680	0.000	0.000
GR	677.000	260.000	673.400	331.000	670.100	345.000	670.000	350.000	670.100	355.000
GR	672.700	372.000	674.000	390.000	677.000	440.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. MIDDLE CROSSING									

X1	14.980	6.000	130.000	139.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	675.000	100.000	671.900	130.000	670.000	130.500	670.000	138.500	671.900	139.000
GR	675.000	169.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.600	2.300	0.000	9.000	0.000	17.000	0.000	670.000	670.000
X1	15.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	671.900	675.000	0.000	0.000	0.000	0.000	0.000
BT	6.000	100.000	675.000	0.000	130.000	675.000	671.900	130.500	676.800	671.900
BT	138.500	676.800	671.900	139.000	675.000	671.900	169.000	675.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
X1	15.100	7.000	277.000	296.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	674.000	250.000	673.800	277.000	670.300	279.000	670.300	282.000	670.900	285.000
GR	673.200	296.000	674.000	325.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	16.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	.100	0.000

**FOOTBRIDGE-X5

X1	16.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	16.900	8.000	393.000	420.000	250.000	250.000	250.000	0.000	0.000	0.000
GR	675.000	392.000	675.000	393.000	674.600	393.000	670.700	400.000	670.500	408.000
GR	670.800	417.000	672.700	420.000	674.500	470.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILMONT RD.

X1	16.980	8.000	800.000	808.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	675.000	675.000	0.000
GR	676.000	758.000	676.000	759.000	676.000	760.000	673.900	800.000	671.200	802.000
GR	671.700	806.000	673.900	808.000	676.300	830.000	0.000	0.000	0.000	0.000
SB	0.000	1.360	2.600	80.000	8.000	0.000	20.000	0.000	671.200	671.200
X1	17.020	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	673.900	676.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	676.200	676.200	0.000
X1	17.100	8.000	388.000	419.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.000	369.000	678.000	370.000	674.500	388.000	671.900	397.000	671.200	404.000
GR	671.600	411.000	674.200	419.000	678.000	430.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	18.000	9.000	490.000	523.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	677.000	470.000	674.600	490.000	674.200	495.000	672.600	496.000	672.500	498.000
GR	671.800	504.000	672.300	513.000	675.800	523.000	676.900	530.000	0.000	0.000

**FOOTBRIDGE-X5

X1	18.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	-.100	-.100	-.100	-.100	0.000	0.000	0.000	0.000
X1	18.900	6.000	242.000	269.000	440.000	440.000	440.000	0.000	0.000	0.000
GE	675.300	242.000	672.100	247.000	671.800	253.000	672.000	257.000	673.900	269.000
GR	675.500	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILLIS RD. WEST CROSSING

X1	18.980	6.000	251.000	261.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.200	677.200	0.000
GR	677.700	215.000	675.400	251.000	672.100	252.000	672.800	256.000	675.400	261.000
GR	677.700	290.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	2.300	0.000	9.000	0.000	29.700	0.000	672.100	672.100
X1	19.020	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	675.400	677.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.700	677.700	0.000
BT	6.000	215.000	677.700	0.000	251.000	677.700	0.000	251.100	680.400	0.000
BT	260.900	680.400	0.000	261.000	677.700	0.000	290.000	677.700	0.000	0.000
X1	19.100	9.000	200.000	234.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.500	180.000	677.000	190.000	675.400	200.000	675.100	208.000	672.400	210.000
GR	671.900	219.000	672.200	228.000	674.900	234.000	678.500	260.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	19.900	9.000	490.000	526.000	475.000	475.000	475.000	0.000	0.000	0.000
GR	679.000	470.000	678.000	480.000	676.000	490.000	675.700	495.000	672.400	500.000
GR	672.100	505.000	672.100	512.000	676.000	526.000	679.000	550.000	0.000	0.000

** D/S FACE ELWELL RD.

X1	19.980	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.500	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICE	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNB	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	6.53	643.43	0.00	643.50	643.58	.15	0.00	0.00	642.30
650.	10.	619.	21.	21.	193.	32.	0.	0.	641.70
0.00	.49	3.20	.65	.080	.050	.080	0.000	636.90	601.89
.001482	0.	0.	0.	0	0	4	0.00	113.77	715.66

*SECNO 2.200

2.20	6.92	644.57	0.00	0.00	644.75	.18	1.16	.01	642.75
650.	39.	580.	31.	52.	159.	41.	4.	2.	642.75
.06	.75	3.64	.75	.080	.050	.080	.050	637.65	587.52
.001875	700.	700.	700.	2	0	0	0.00	132.86	720.38

*SECNO 2.900

3280 CROSS SECTION 2.90 EXTENDED .34 FEET

2.90	7.94	646.34	0.00	0.00	646.48	.14	1.72	.00	643.90
650.	265.	288.	97.	162.	69.	94.	9.	5.	644.80
.13	1.64	4.21	1.03	.080	.050	.080	.050	638.40	1200.00
.003376	700.	700.	700.	3	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500

*SECNO 2.980

3280 CROSS SECTION 2.98 EXTENDED .43 FEET

** D/S FACE JUDD RD.

2.98	7.83	646.63	0.00	0.00	646.70	.07	.20	.02	645.10
650.	5.	207.	438.	7.	64.	351.	9.	5.	643.20
.14	.76	3.25	1.25	.080	.050	.080	.050	638.80	1290.00
.001887	80.	80.	80.	2	0	0	0.00	200.00	1490.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	EWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.82	2.90	200.00	10.00	0.00	56.52	0.00	638.80	638.80

*SECNO 3.020

3280 CROSS SECTION 3.02 EXTENDED .80 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIME	VLOB	VCH	VROB	XNI	XNCH	XNB	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

H = 647.04 - 646.67 = 0.41 ft

K = 2.0 instead of 1.82

$Q = 36.52\sqrt{\frac{64.4 \times 0.41}{2.04}}$

Q = 203.34 cfs

small error

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
650.37	646.70	0.00	435.	217.	57.	60.	644.82	646.20

3.02	8.20	647.00	0.00	0.00	647.04	.04	.35	0.00	645.10
650.	7.	181.	462.	9.	68.	418.	10.	5.	643.20
.15	.72	2.68	1.11	.080	.050	.080	.050	638.80	1290.00
.001174	40.	40.	40.	2	0	4	0.00	200.00	1490.00

*SECNO 3.100
3280 CROSS SECTION 3.10 EXTENDED 1.01 FEET

3.10	7.52	647.02	0.00	0.00	647.08	.06	.03	.01	644.50
650.	165.	383.	102.	180.	151.	116.	10.	5.	644.70
.15	.92	2.54	.88	.070	.050	.070	.050	639.50	1200.00
.000889	30.	30.	30.	2	0	0	0.00	200.00	1400.00

CCHV= .100 CEHV= .300
*SECNO 4.000
3280 CROSS SECTION 4.00 EXTENDED .69 FEET

4.00	7.49	647.69	0.00	0.00	647.77	.09	.68	.01	645.70
650.	101.	444.	105.	120.	159.	128.	17.	9.	645.80
.24	.84	2.78	.82	.070	.050	.070	.050	640.20	350.00
.001078	700.	700.	700.	2	0	0	0.00	220.00	570.00

*SECNO 4.100

4.10	6.77	648.33	0.00	0.00	648.55	.22	.74	.04	647.06
650.	47.	558.	45.	57.	138.	57.	20.	11.	647.16
.28	.83	4.05	.79	.070	.050	.070	.050	641.56	351.43
.002791	450.	450.	450.	2	0	0	0.00	216.87	568.30

*SECNO 4.500

4.50	6.71	649.78	0.00	0.00	650.02	.24	1.46	.01	648.57
650.	42.	568.	40.	50.	135.	51.	23.	13.	648.67
.32	.84	4.20	.79	.070	.050	.070	.050	643.07	356.39
.003054	500.	500.	500.	2	0	0	0.00	205.99	562.38

*SECNO 4.600
3280 CROSS SECTION 4.60 EXTENDED 1.39 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALCE	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNF	WTN	ELMIN	SSTA

4.60	6.29	650.56	0.00	0.00	650.63	.06	.59	.02	648.57
650.	122.	496.	32.	169.	219.	57.	26.	15.	648.87
.37	.72	2.26	.57	.085	.050	.085	.050	644.27	400.00
.000866	400.	400.	400.	2	0	0	0.00	200.00	600.00

*SECNO 5.000
3280 CROSS SECTION 5.00 EXTENDED .85 FEET

5.00	5.75	650.85	0.00	0.00	650.96	.11	.32	.01	649.40
650.	89.	544.	17.	115.	192.	31.	29.	17.	649.70
.41	.77	2.84	.53	.085	.050	.085	.050	645.10	400.00
.001639	275.	275.	275.	2	0	0	0.00	200.00	600.00

*SECNO 5.900
3280 CROSS SECTION 5.90 EXTENDED .14 FEET

5.90	6.64	651.84	0.00	0.00	651.92	.09	.96	.00	650.80
650.	15.	394.	242.	35.	135.	238.	35.	20.	648.20
.50	.42	2.92	1.02	.085	.050	.085	.050	645.20	550.00
.001168	700.	700.	700.	3	0	0	0.00	215.55	765.55

CCHV= .300 CEHV= .500
*SECNO 5.980

** D/S FACE MARTINSVILLE RD.

5.98	6.65	651.95	0.00	0.00	652.17	.22	.18	.07	652.00
650.	0.	386.	264.	0.	82.	177.	35.	20.	649.70
.50	0.00	4.72	1.49	.085	.050	.085	.050	645.30	585.00
.004357	91.	91.	91.	1	0	0	0.00	152.77	737.78

1.65 - 1.72

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.20	2.60	80.00	12.00	0.00	60.00	0.00	645.30	645.30

If the XKOR was raised to 1.65 or 1.72 this would cause a reduction of 14.8% to 16.5% in discharge for the same head.

*SECNO 6.020
3280 CROSS SECTION 6.02 EXTENDED .61 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
654.14	652.17	0.00	270.	381.	60.	62.	650.50	651.50

6.02	7.31	652.61	0.00	0.00	652.70	.10	.53	0.00	652.00
650.	0.	311.	339.	0.	92.	277.	36.	20.	649.70
.51	0.00	3.39	1.22	.085	.050	.085	.050	645.30	585.00
.002007	18.	18.	18.	2	0	3	0.00	179.26	764.26

*SECNO 6.100
3280 CROSS SECTION 6.10 EXTENDED .90 FEET

RLEN (weir L.) is ?

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
6.10	6.39	652.69	0.00	0.00	652.78	.08	.07	.00	650.20
650.	85.	499.	66.	119.	189.	113.	36.	21.	650.40
.51	.71	2.64	.58	.095	.050	.095	.050	646.30	500.00
.001036	51.	51.	51.	2	0	0	0.00	200.00	700.00

CCHV= .100 CEHV= .300
*SECNO 6.500
3280 CROSS SECTION 6.50 EXTENDED .79 FEET

6.50	6.29	653.18	0.00	0.00	653.25	.07	.47	.00	650.79
560.	68.	431.	60.	111.	184.	103.	41.	23.	650.99
.58	.61	2.34	.59	.095	.050	.080	.050	646.89	500.00
.000838	500.	500.	500.	2	0	0	0.00	200.00	700.00

*SECNO 6.600

6.60	6.03	653.95	0.00	0.00	654.00	.05	.75	.00	651.32
560.	65.	443.	53.	115.	222.	98.	49.	27.	652.02
.72	.56	2.00	.54	.095	.050	.080	.050	647.92	372.38
.000893	865.	865.	865.	2	0	0	0.00	253.88	626.25

*SECNO 7.000

7.00	6.02	654.92	0.00	0.00	655.03	.11	1.01	.02	651.90
560.	140.	360.	60.	148.	110.	67.	56.	32.	652.50
.82	.94	3.28	.90	.095	.050	.080	.050	648.90	364.09
.001801	825.	825.	825.	0	0	0	0.00	191.10	555.19

*SECNO 7.010

7.01	5.92	655.59	0.00	0.00	655.65	.05	.61	.01	653.07
450.	44.	274.	132.	89.	117.	172.	60.	34.	652.67
.90	.50	2.33	.77	.095	.050	.080	.050	649.67	625.03
.000825	500.	500.	500.	2	0	0	0.00	238.01	863.04

*SECNO 7.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.10	5.56	656.16	0.00	0.00	656.23	.07	.58	.00	654.00
450.	42.	282.	125.	58.	108.	131.	65.	37.	653.60
.99	.73	2.61	.95	.070	.050	.070	.050	650.60	644.29
.001149	600.	600.	600.	2	0	0	0.00	203.30	847.58

*SECNO 7.500

7.50	5.37	657.07	0.00	0.00	657.16	.09	.92	.01	655.10
450.	36.	298.	116.	46.	104.	112.	69.	40.	654.70
1.07	.79	2.88	1.03	.070	.050	.070	.050	651.70	654.14
.001483	710.	710.	710.	2	0	0	0.00	185.55	839.68

*SECNO 7.600

7.60	5.30	657.85	0.00	0.00	657.95	.10	.78	.00	655.95
450.	33.	305.	112.	41.	102.	105.	72.	42.	655.55
1.13	.81	2.99	1.07	.070	.050	.070	.050	652.55	658.10
.001646	500.	500.	500.	2	0	0	0.00	178.40	836.50

*SECNO 7.700

7.70	5.28	658.68	0.00	0.00	658.78	.10	.83	.00	656.80
450.	33.	306.	111.	40.	101.	104.	75.	44.	656.40
1.19	.82	3.02	1.07	.070	.050	.070	.050	653.40	658.81
.001677	500.	500.	500.	1	0	0	0.00	177.12	835.93

*SECNO 7.800

7.80	5.26	659.51	0.00	0.00	659.62	.11	.84	.00	658.15
450.	43.	392.	15.	56.	138.	18.	78.	46.	657.65
1.25	.77	2.84	.83	.070	.050	.070	.050	654.25	358.43
.001683	500.	500.	500.	1	0	0	0.00	141.21	499.63

*SECNO 8.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	ARCB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNB	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8.00	5.26	660.66	0.00	0.00	660.77	.11	1.15	.00	659.30
450.	43.	392.	15.	56.	138.	18.	81.	48.	658.80
1.52	.77	2.84	.83	.070	.050	.070	.050	655.40	358.78
.001696	680.	680.	680.	0	0	0	0.00	140.79	499.57

*SECNO 8.500
3280 CROSS SECTION 8.50 EXTENDED 1.09 FEET

8.50	5.59	661.53	0.00	0.00	661.59	.06	.82	.01	658.54
450.	121.	202.	128.	116.	76.	123.	85.	50.	659.04
1.41	1.04	2.64	1.03	.070	.050	.070	.050	655.94	725.00
.001117	600.	600.	600.	2	0	0	0.00	150.00	875.00

*SECNO 8.900
3280 CROSS SECTION 8.90 EXTENDED 1.19 FEET

8.90	5.69	662.19	0.00	0.00	662.24	.05	.65	.00	659.10
450.	124.	195.	131.	123.	78.	131.	89.	53.	659.60
1.52	1.01	2.50	1.00	.070	.050	.070	.050	656.50	725.00
.000977	625.	625.	625.	2	0	0	0.00	150.00	875.00

*SECNO 8.910
3280 CROSS SECTION 8.91 EXTENDED .94 FEET

**FOOTBRIDGE-X5

8.91	5.44	662.34	0.00	0.00	662.41	.07	.16	.01	659.50
450.	116.	212.	122.	106.	74.	113.	90.	53.	660.00
1.54	1.09	2.86	1.08	.070	.050	.070	.050	656.90	725.00
.001373	138.	138.	138.	2	0	0	0.00	150.00	875.00

*SECNO 8.920
WATER EL=X5 CARD= 662.438
3280 CROSS SECTION 8.92 EXTENDED 1.04 FEET

8.92	5.54	662.44	0.00	0.00	662.50	.06	.00	.00	659.50
450.	119.	205.	126.	113.	76.	120.	90.	53.	660.00
1.54	1.06	2.71	1.05	.070	.050	.070	.050	656.90	725.00
.001197	1.	1.	1.	0	0	0	0.00	150.00	875.00

*SECNO 8.980
3280 CROSS SECTION 8.98 EXTENDED .66 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSEIK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**D/S FACE KOZMA

8.98	5.56	662.46	0.00	0.00	662.51	.05	.01	.00	659.40
450.	120.	203.	127.	121.	80.	128.	91.	53.	659.40
1.54	.99	2.54	.99	.070	.050	.070	.050	656.90	725.00
.000966	11.	11.	11.	2	0	0	0.00	150.00	875.00

*SECNO 8.990
3280 CROSS SECTION 8.99 EXTENDED .55 FEET

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 661.80 MAX ELIC= 659.80

8.99	5.45	662.35	0.00	0.00	662.56	.21	.00	.05	659.40
450.	84.	217.	149.	49.	46.	52.	91.	53.	659.40
1.54	1.72	4.67	2.87	.070	.050	.070	.050	656.90	725.00
.026988	1.	1.	1.	2	0	0	-166.00	150.00	875.00

*SECNO 9.010
3280 CROSS SECTION 9.01 EXTENDED .87 FEET

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 661.80 MAX ELLC= 659.80

9.01	5.77	662.67	0.00	0.00	662.78	.11	.21	.01	659.40
450.	100.	172.	178.	70.	52.	74.	91.	53.	659.40
1.54	1.44	3.33	2.41	.070	.050	.070	.050	656.90	725.00
.011923	12.	12.	12.	3	0	0	-166.00	150.00	875.00

*SECNO 9.020
3280 CROSS SECTION 9.02 EXTENDED .99 FEET

9.02	5.85	662.75	0.00	0.00	662.79	.04	.00	.01	659.40
450.	127.	187.	135.	140.	85.	148.	91.	53.	659.40
1.54	.91	2.21	.91	.070	.050	.070	.050	656.90	725.00
.000679	1.	1.	1.	2	0	0	0.00	150.00	875.00

*SECNO 9.100
3280 CROSS SECTION 9.10 EXTENDED 1.28 FEET

9.10	5.88	662.78	0.00	0.00	662.83	.05	.04	.00	660.20
450.	94.	193.	164.	104.	83.	152.	91.	53.	658.80
1.55	.90	2.32	1.08	.070	.050	.070	.050	656.90	730.00
.000767	50.	50.	50.	2	0	0	0.00	130.00	860.00

CCHV= .200 CEHV= .400
*SECNO 9.180
3280 CROSS SECTION 9.18 EXTENDED .42 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**FOOTBRIDGE-SB

9.18	6.12	663.12	0.00	0.00	663.25	.13	.39	.03	660.80
450.	61.	328.	61.	57.	98.	57.	93.	54.	660.80
1.59	1.08	3.33	1.08	.070	.050	.070	.050	657.00	100.00
.001726	350.	350.	350.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	EWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	657.00	657.00

*SECNO 9.220
3280 CROSS SECTION 9.22 EXTENDED .67 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
664.30	663.25	0.00	203.	247.	60.	65.	660.80	662.70

9.22	6.37	663.37	0.00	0.00	663.47	.10	.23	0.00	660.80
450.	71.	308.	71.	67.	103.	67.	93.	54.	660.80
1.59	1.05	3.00	1.05	.070	.050	.070	.050	657.00	100.00
.001324	7.	7.	7.	2	0	3	0.00	100.00	200.00

*SECNO 9.250
3280 CROSS SECTION 9.25 EXTENDED .41 FEET

9.25	6.10	663.50	0.00	0.00	663.64	.13	.15	.01	661.20
450.	61.	329.	61.	56.	98.	56.	94.	54.	661.20
1.60	1.08	3.35	1.08	.070	.050	.070	.050	657.40	100.00
.001749	100.	100.	100.	2	0	0	0.00	100.00	200.00

*SECNO 9.280
3280 CROSS SECTION 9.28 EXTENDED .67 FEET

**FOOTBRIDGE-SB

9.28	5.77	663.87	0.00	0.00	664.01	.14	.37	.00	661.80
450.	66.	319.	66.	57.	93.	57.	95.	55.	661.80
1.62	1.15	3.44	1.15	.070	.050	.070	.050	658.10	100.00
.001973	200.	200.	200.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	658.10	658.10

*SECNO 9.320
3280 CROSS SECTION 9.32 EXTENDED .79 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
663.05	664.01	0.00	247.	203.	60.	63.	661.80	663.20

9.32	5.89	663.99	0.00	0.00	664.11	.12	.10	0.00	661.80
450.	71.	309.	71.	62.	95.	62.	95.	55.	661.80
1.62	1.14	3.26	1.14	.070	.050	.070	.050	658.10	100.00
.001722	8.	8.	8.	2	0	3	0.00	100.00	200.00

*SECNO 9.350
3280 CROSS SECTION 9.35 EXTENDED .79 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSEIK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNB	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
9.35	5.88	664.08	0.00	0.00	664.20	.12	.09	.00	661.90
450.	70.	310.	70.	62.	95.	62.	95.	55.	661.90
1.62	1.14	3.28	1.14	.070	.050	.070	.050	658.20	100.00
.001737	50.	50.	50.	1	0	0	0.00	100.00	200.00

CCHV= .100 CEHV= .300

*SECNO 9.500

9.50	6.08	664.48	0.00	0.00	664.59	.11	.39	.00	663.90
450.	3.	447.	0.	9.	166.	0.	96.	56.	664.50
1.65	.35	2.69	0.00	.070	.050	.070	.050	658.40	291.26
.001424	250.	250.	250.	2	0	0	0.00	71.72	362.97

*SECNO 10.000

3280 CROSS SECTION 10.00 EXTENDED .11 FEET

10.00	6.41	665.61	0.00	0.00	665.72	.11	1.13	.00	664.70
450.	8.	441.	1.	19.	164.	4.	100.	57.	665.30
1.74	.40	2.70	.18	.085	.050	.085	.050	659.20	280.00
.001303	830.	830.	830.	2	0	0	0.00	103.56	383.56

*SECNO 10.700

**FOOTBRIDGE-X5

10.70	6.98	667.28	0.00	0.00	667.53	.25	1.76	.04	666.70
450.	1.	449.	0.	2.	112.	0.	103.	59.	667.20
1.80	.41	4.02	.11	.085	.050	.085	.050	660.30	992.84
.002927	940.	940.	940.	2	0	0	0.00	33.00	1025.84

*SECNO 10.710

WATER EL=X5 CARD= 667.478

10.71	7.18	667.48	0.00	0.00	667.71	.23	.00	.00	666.70
450.	2.	448.	0.	3.	116.	1.	103.	59.	667.20
1.80	.47	3.85	.24	.085	.050	.085	.050	660.30	990.61
.002541	1.	1.	1.	0	0	0	0.00	42.78	1033.38

*SECNO 10.780

SECNO	DEPTH	CWSEL	CRIWS	WSEIK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	AICE	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNI	XNCH	XNB	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,EIIEA= 668.00 ELREA= 668.00

**FOOTBRIDGE-SB

10.78	6.74	667.74	0.00	0.00	667.99	.24	.27	.00	666.90
450.	0.	450.	0.	0.	113.	0.	103.	59.	666.90
1.81	0.00	3.97	0.00	.085	.050	.085	.050	661.00	102.00
.002973	100.	100.	100.	2	0	0	0.00	26.00	128.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.58	3.00	30.00	15.00	0.00	93.00	0.00	661.00	661.00

*SECNO 10.820
PRESSURE FLOW

If XKOR equals 2.0 then
M = 0.707 EG=660.97
+0.147

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
668.32	667.99	0.00	0.	450.	93.	89.	666.90	669.10

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 669.10 ELREA= 669.10

10.82	7.11	668.11	0.00	0.00	668.32	.21	.33	0.00	666.90
450.	0.	450.	0.	0.	123.	0.	103.	59.	666.90
1.81	0.00	3.66	0.00	.060	.050	.060	.050	661.00	102.00
.002289	15.	15.	15.	2	0	0	0.00	26.00	128.00

*SECNO 10.900

10.90	7.43	668.23	0.00	0.00	668.43	.20	.11	.00	667.20
450.	4.	443.	3.	6.	122.	5.	103.	59.	667.70
1.81	.73	3.63	.50	.060	.050	.060	.050	660.80	987.86
.002117	50.	50.	50.	2	0	0	0.00	57.84	1045.70

CCHV= .300 CEHV= .500
*SECNO 10.980

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 668.50 ELREA= 668.50

** D/S FACE SUMPTER RD.

10.98	6.05	668.25	0.00	0.00	668.76	.52	.18	.16	667.60
450.	0.	450.	0.	0.	78.	0.	103.	59.	667.60
1.82	0.00	5.77	0.00	.060	.050	.060	.050	662.20	968.09
.007257	50.	50.	50.	3	0	0	0.00	16.08	984.17

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.47	2.80	50.00	16.00	0.00	67.00	0.00	662.20	662.20

*SECNO 11.020
PRESSURE FLOW

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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C
T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 10 YR

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

       -1.        2.         0.         0.    .001500       0.00        .5         0.    643.500     0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

      1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

NC       .080       .080       .050       .100       .300      0.000      0.000      0.000      0.000      0.000
QT      5.000    400.000    570.000    650.000    820.000    650.000      0.000      0.000      0.000      0.000

X1      2.000      6.000    639.000    678.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    645.000    550.000    642.300    639.000    636.900    655.000    637.200    672.000    641.700    678.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.200      6.000    645.000    675.000    700.000    700.000    700.000      0.000       .750      0.000
GR    645.000    550.000    642.000    645.000    636.900    660.000    637.200    672.000    642.000    675.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.900      8.000   1287.000   1300.000    700.000    700.000    700.000      0.000      0.000      0.000
GR    646.000   1200.000    645.900   1201.000    645.000   1202.000    643.900   1287.000    638.400   1295.000
GR    639.600   1297.000    644.800   1300.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .300       .500      0.000      0.000      0.000      0.000      0.000

        ** D/S FACE JUDD RD.

X1      2.980      7.000   1297.000   1308.000     80.000     80.000     80.000      0.000      0.000      0.000
GR    646.200   1290.000    645.100   1297.000    640.100   1300.000    638.800   1302.000    639.900   1305.000
GR    643.200   1308.000    646.200   1490.000      0.000      0.000      0.000      0.000      0.000      0.000
SB      0.000      1.820      2.900    200.000     10.000      0.000     56.520      0.000    638.800    638.800

X1      3.020      0.000      0.000      0.000     40.000     40.000     40.000      0.000      0.000      0.000
X2      0.000      0.000      1.000    644.820    646.200      0.000      0.000      0.000      0.000      0.000
NC       .070       .070      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      3.100      8.000   1302.000   1330.000     30.000     30.000     30.000      0.000      0.000      0.000
GR    646.000   1200.000    644.500   1302.000    640.300   1305.000    639.500   1307.000    640.200   1310.000
GR    641.700   1321.000    644.700   1330.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .100       .300      0.000      0.000      0.000      0.000      0.000
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X1	4.000	7.000	440.000	471.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	647.000	350.000	645.700	440.000	641.000	450.000	640.200	454.000	640.900	459.000
GR	645.800	471.000	647.000	570.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.360	0.000
X1	4.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	1.510	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.600	7.000	500.000	552.000	400.000	400.000	400.000	0.000	-.830	0.000
GR	650.000	400.000	649.400	500.000	645.700	523.000	645.100	527.000	645.600	533.000
GR	649.700	552.000	650.700	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5.000	0.000	0.000	0.000	275.000	275.000	275.000	0.000	.830	0.000
X1	5.900	8.000	610.000	635.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	651.700	550.000	650.800	610.000	646.200	614.000	645.200	621.000	646.200	630.000
GR	648.200	635.000	650.000	700.000	652.800	800.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE MARTINSVILLE RD.

X1	5.980	10.000	585.000	600.000	91.000	91.000	91.000	0.000	0.000	0.000
GR	652.000	585.000	648.300	585.100	646.400	587.000	645.300	593.500	646.300	598.000
GR	648.000	598.000	648.500	598.100	649.700	600.000	651.000	700.000	653.500	800.000
SB	0.000	1.200	2.600	80.000	12.000	0.000	60.000	0.000	645.300	645.300
X1	6.020	0.000	0.000	0.000	18.000	18.000	18.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	650.500	651.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	651.000	651.000	0.000
NC	.095	.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6.100	8.000	570.000	610.000	51.000	51.000	51.000	0.000	0.000	0.000
GR	651.800	500.000	650.200	570.000	646.400	587.000	646.300	590.000	646.500	597.000
GR	648.100	600.000	650.400	610.000	652.500	700.000	0.000	0.000	0.000	0.000
QT	5.000	345.000	490.000	560.000	700.000	560.000	0.000	0.000	0.000	0.000
NC	0.000	.080	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	6.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.590	0.000
X1	6.600	8.000	460.000	525.000	865.000	865.000	865.000	0.000	-.980	0.000
GR	655.000	370.000	652.300	460.000	649.900	477.000	648.900	482.000	649.700	485.000
GR	652.500	500.000	653.000	525.000	655.000	630.000	0.000	0.000	0.000	0.000
X1	7.000	8.000	475.000	500.000	825.000	825.000	825.000	0.000	0.000	0.000
GR	655.000	360.000	654.300	400.000	651.900	475.000	649.900	477.000	648.900	482.000
GR	649.700	485.000	652.500	500.000	656.900	600.000	0.000	0.000	0.000	0.000
QT	-5.000	-275.000	-395.000	-450.000	-560.000	-450.000	0.000	0.000	0.000	0.000

X1	7.010	9.000	718.000	743.000	500.000	500.000	500.000	0.000	-2.030	0.000
GR	658.100	600.000	656.200	700.000	655.100	718.000	652.100	725.000	651.700	730.000
GR	652.600	736.000	654.700	743.000	655.800	786.000	658.500	900.000	0.000	0.000
NC	.070	.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7.100	0.000	0.000	0.000	600.000	600.000	600.000	0.000	.930	0.000
X1	7.500	0.000	0.000	0.000	710.000	710.000	710.000	0.000	1.100	0.000
X1	7.600	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.700	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.800	10.000	442.000	480.000	500.000	500.000	500.000	0.000	-1.150	0.000
GR	662.700	200.000	661.600	300.000	660.000	400.000	659.300	442.000	656.500	459.000
GR	655.400	467.000	655.900	473.000	658.800	480.000	660.700	500.000	661.500	501.000
X1	8.000	0.000	0.000	0.000	680.000	680.000	680.000	0.000	1.150	0.000
X1	8.500	7.000	790.000	806.000	600.000	600.000	600.000	0.000	-.560	0.000
GR	661.500	725.000	659.100	790.000	656.900	794.000	656.500	797.000	656.900	803.000
GR	659.600	806.000	661.000	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.900	0.000	0.000	0.000	625.000	625.000	625.000	0.000	.560	0.000

**FOOTBRIDGE-X5

X1	8.910	0.000	0.000	0.000	138.000	138.000	138.000	0.000	.400	0.000
X1	8.920	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000

**D/S FACE KOZMA

X1	8.980	7.000	790.000	806.000	11.000	11.000	11.000	0.000	0.000	0.000
GR	661.800	725.000	659.400	790.000	656.900	794.000	656.900	797.000	656.900	803.000
GR	659.400	806.000	661.800	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.990	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.010	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

X1	9.100	7.000	784.000	800.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	661.500	730.000	660.200	784.000	657.200	788.000	656.900	793.000	657.000	797.000
GR	658.800	800.000	661.700	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.200	.400	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									
X1	9.180	6.000	141.500	158.500	350.000	350.000	350.000	0.000	0.000	0.000
GR	662.700	100.000	660.800	141.500	657.000	143.000	657.000	157.000	660.800	158.500
GR	662.700	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	657.000	657.000
X1	9.220	0.000	0.000	0.000	7.000	7.000	7.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	660.800	662.700	0.000	0.000	0.000	0.000	0.000
X1	9.250	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.400	0.000
	**FOOTBRIDGE-SB									
X1	9.280	6.000	141.500	158.500	200.000	200.000	200.000	0.000	0.000	0.000
GR	663.200	100.000	661.800	141.500	658.100	143.000	658.100	157.000	661.800	158.500
GR	663.200	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	658.100	658.100
X1	9.320	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	661.800	663.200	0.000	0.000	0.000	0.000	0.000
X1	9.350	0.000	0.000	0.000	50.000	50.000	50.000	0.000	.100	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	9.500	6.000	321.000	363.000	250.000	250.000	250.000	0.000	-.800	0.000
GR	665.500	280.000	664.700	321.000	659.300	344.000	659.200	355.000	665.300	363.000
GR	667.400	570.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.000	0.000	0.000	0.000	830.000	830.000	830.000	.910	.800	0.000
	**FOOTBRIDGE-X5									
X1	10.700	11.000	1044.000	1078.000	940.000	940.000	940.000	.690	-.500	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.710	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									

X1	10.780	6.000	102.000	128.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.000	668.000	0.000
GR	669.100	100.000	666.900	102.000	661.000	112.500	661.000	117.500	666.900	128.000
GR	669.100	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.580	3.000	30.000	15.000	0.000	93.000	0.000	661.000	661.000
X1	10.820	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	666.900	669.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	669.100	669.100	0.000
X1	10.900	11.000	1044.000	1078.000	50.000	50.000	50.000	.690	0.000	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE SUMPTER RD.

X1	10.980	9.000	977.000	1001.000	50.000	50.000	50.000	.670	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.500	668.500	0.000
GR	670.000	950.000	667.600	977.000	664.200	981.000	662.600	983.000	662.200	985.000
GR	662.200	988.000	663.500	1000.000	667.600	1001.000	670.000	1002.000	0.000	0.000
SB	0.000	1.470	2.800	50.000	16.000	0.000	67.000	0.000	662.200	662.200
X1	11.020	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	667.600	670.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	670.000	670.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.100	10.000	950.000	979.000	50.000	50.000	50.000	.690	0.000	0.000
GR	670.700	900.000	668.700	950.000	666.800	958.000	664.300	960.000	662.600	967.000
GR	662.600	969.000	664.000	975.000	666.500	979.000	667.500	1000.000	672.000	1100.000
QT	5.000	225.000	330.000	370.000	470.000	370.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-X5

X1	11.500	0.000	0.000	0.000	225.000	225.000	225.000	0.000	.370	0.000
X1	11.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12.000	8.000	323.000	353.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	672.000	290.000	699.900	323.000	664.500	332.000	663.800	336.000	664.400	339.000
GR	665.300	347.000	669.200	353.000	672.000	400.000	0.000	0.000	0.000	0.000
X1	12.900	7.000	266.000	298.000	715.000	715.000	715.000	.750	0.000	0.000
GR	671.500	240.000	670.200	266.000	666.800	270.000	665.800	277.000	665.900	281.000
GR	670.400	298.000	671.500	323.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. EAST CROSSING									
X1	12.980	7.000	388.000	400.000	100.000	100.000	100.000	.750	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	671.900	671.900	0.000
GR	673.800	373.000	670.500	388.000	666.400	389.000	665.900	395.000	666.400	399.000
GR	670.500	400.000	673.800	415.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.370	2.500	32.000	9.000	0.000	36.000	0.000	665.900	665.900
X1	13.020	0.000	0.000	0.000	42.000	42.000	42.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	670.500	673.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	673.800	673.800	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13.100	8.000	430.000	458.000	50.000	50.000	50.000	.750	0.000	0.000
GR	675.000	400.000	675.000	400.000	669.500	430.000	666.700	438.000	666.400	445.000
GR	666.400	451.000	669.600	458.000	675.000	490.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	13.500	8.000	463.000	488.000	800.000	800.000	800.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	13.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000
X1	14.000	8.000	463.000	488.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
X1	14.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.050	0.000
X1	14.500	0.000	0.000	0.000	425.000	425.000	425.000	0.000	1.050	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	14.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
X1	14.900	8.000	331.000	390.000	150.000	150.000	150.000	.680	0.000	0.000
GR	677.000	260.000	673.400	331.000	670.100	345.000	670.000	350.000	670.100	355.000
GR	672.700	372.000	674.000	390.000	677.000	440.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. MIDDLE CROSSING									

X1	14.980	6.000	130.000	139.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	675.000	100.000	671.900	130.000	670.000	130.500	670.000	138.500	671.900	139.000
GR	675.000	169.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.600	2.300	0.000	9.000	0.000	17.000	0.000	670.000	670.000
X1	15.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	671.900	675.000	0.000	0.000	0.000	0.000	0.000
BT	6.000	100.000	675.000	0.000	130.000	675.000	671.900	130.500	676.800	671.900
BT	138.500	676.800	671.900	139.000	675.000	671.900	169.000	675.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
X1	15.100	7.000	277.000	296.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	674.000	250.000	673.800	277.000	670.300	279.000	670.300	282.000	670.900	285.000
GR	673.200	296.000	674.000	325.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	16.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	.100	0.000

**FOOTBRIDGE-X5

X1	16.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	16.900	8.000	393.000	420.000	250.000	250.000	250.000	0.000	0.000	0.000
GR	675.000	392.000	675.000	392.500	674.600	393.000	670.700	400.000	670.500	408.000
GR	670.800	417.000	672.700	420.000	674.500	470.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILMONT RD.

X1	16.980	8.000	800.000	808.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	675.000	675.000	0.000
GR	676.000	758.000	676.000	759.000	676.000	760.000	673.900	800.000	671.200	802.000
GR	671.700	806.000	673.900	808.000	676.300	830.000	0.000	0.000	0.000	0.000
SB	0.000	1.360	2.600	80.000	8.000	0.000	20.000	0.000	671.200	671.200
X1	17.020	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	673.900	676.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	676.200	676.200	0.000
X1	17.100	8.000	388.000	419.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.000	369.000	678.000	370.000	674.500	388.000	671.900	397.000	671.200	404.000
GR	671.600	411.000	674.200	419.000	678.000	430.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	18.000	9.000	490.000	523.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	677.000	470.000	674.600	490.000	674.200	495.000	672.600	496.000	672.500	498.000
GR	671.800	504.000	672.300	513.000	675.800	523.000	676.900	530.000	0.000	0.000

**FOOTBRIDGE-X5

X1	18.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	18.900	6.000	242.000	269.000	440.000	440.000	440.000	0.000	0.000	0.000
GR	675.300	242.000	672.100	247.000	671.800	253.000	672.000	257.000	673.900	269.000
GR	675.500	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILLIS RD. WEST CROSSING

X1	18.980	6.000	251.000	261.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.200	677.200	0.000
GR	677.700	215.000	675.400	251.000	672.100	252.000	672.800	256.000	675.400	261.000
GR	677.700	290.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	2.300	0.000	9.000	0.000	29.700	0.000	672.100	672.100
X1	19.020	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	675.400	677.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.700	677.700	0.000
BT	6.000	215.000	677.700	0.000	251.000	677.700	0.000	251.100	680.400	0.000
BT	260.900	680.400	0.000	261.000	677.700	0.000	290.000	677.700	0.000	0.000
X1	19.100	9.000	200.000	234.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.500	180.000	677.000	190.000	675.400	200.000	675.100	208.000	672.400	210.000
GR	671.900	219.000	672.200	228.000	674.900	234.000	678.500	260.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	19.900	9.000	490.000	526.000	475.000	475.000	475.000	0.000	0.000	0.000
GR	679.000	470.000	678.000	480.000	676.000	490.000	675.700	495.000	672.400	500.000
GR	672.100	505.000	672.100	512.000	676.000	526.000	679.000	550.000	0.000	0.000

** D/S FACE ELWELL RD.

X1	19.980	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.500	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= .100 CEHV= .300
*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	5.38	642.28	0.00	643.50	642.39	.11	0.00	0.00	642.30
400.	0.	399.	1.	0.	149.	4.	0.	0.	641.70
0.00	0.00	2.68	.31	.080	.050	.080	0.000	636.90	639.05
.001472	0.	0.	0.	0	0	4	0.00	51.66	690.71

*SECNO 2.200

2.20	5.78	643.43	0.00	0.00	643.58	.15	1.18	.01	642.75
400.	3.	395.	2.	7.	125.	6.	2.	1.	642.75
.06	.40	3.15	.40	.080	.050	.080	.050	637.65	623.49
.001940	700.	700.	700.	2	0	0	0.00	68.49	691.98

*SECNO 2.900

2.90	7.08	645.48	0.00	0.00	645.71	.24	2.10	.02	643.90
400.	120.	268.	12.	87.	57.	19.	5.	3.	644.80
.12	1.37	4.67	.65	.080	.050	.080	.050	638.40	1201.47
.005268	700.	700.	700.	4	0	0	0.00	154.90	1356.38

CCHV= .300 CEHV= .500
*SECNO 2.980

** D/S FACE JUDD RD.

2.98	7.13	645.93	0.00	0.00	646.00	.07	.24	.05	645.10
400.	1.	170.	229.	2.	56.	227.	5.	3.	643.20
.13	.45	3.04	1.01	.080	.050	.080	.050	638.80	1291.70
.001955	80.	80.	80.	2	0	0	0.00	182.10	1473.80

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.82	2.90	200.00	10.00	0.00	56.52	0.00	638.80	638.80

*SECNO 3.020
3280 CROSS SECTION 3.02 EXTENDED .34 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
647.35	646.00	0.00	131.	269.	57.	60.	644.82	646.20
3.02	7.74	646.54	0.00	0.00	646.57	.03	.57	0.00	645.10
400.	3.	132.	265.	6.	63.	335.	5.	3.	643.20
.14	.47	2.11	.79	.080	.050	.080	.050	638.80	1290.00
.000805	40.	40.	40.	2	0	4	0.00	200.00	1490.00

*SECNO 3.100
3280 CROSS SECTION 3.10 EXTENDED .55 FEET

3.10	7.06	646.56	0.00	0.00	646.60	.04	.02	.01	644.50
400.	82.	269.	49.	133.	138.	84.	6.	3.	644.70
.14	.61	1.96	.58	.070	.050	.070	.050	639.50	1200.00
.000593	30.	30.	30.	2	0	0	0.00	200.00	1400.00

CCHV= .100 CEHV= .300
*SECNO 4.000
3280 CROSS SECTION 4.00 EXTENDED .05 FEET

4.00	6.85	647.05	0.00	0.00	647.13	.08	.52	.01	645.70
400.	33.	335.	32.	63.	140.	65.	11.	7.	645.80
.24	.52	2.40	.49	.070	.050	.070	.050	640.20	350.00
.000956	700.	700.	700.	2	0	0	0.00	220.00	570.00

*SECNO 4.100

4.10	6.07	647.63	0.00	0.00	647.81	.17	.65	.03	647.06
400.	5.	391.	4.	12.	116.	10.	13.	8.	647.16
.27	.46	3.37	.40	.070	.050	.070	.050	641.56	399.77
.002427	450.	450.	450.	2	0	0	0.00	110.92	510.69

*SECNO 4.500

4.50	5.89	648.96	0.00	0.00	649.16	.20	1.34	.01	648.57
400.	2.	397.	1.	5.	110.	3.	14.	10.	648.67
.31	.39	3.61	.32	.070	.050	.070	.050	643.07	413.18
.002989	500.	500.	500.	2	0	0	0.00	81.52	494.71

*SECNO 4.600
3280 CROSS SECTION 4.60 EXTENDED .55 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	COBAR	TOPWID	ENDST
4.60	5.46	649.73	0.00	0.00	649.78	.06	.61	.01	648.57
400.	40.	355.	5.	85.	176.	17.	16.	11.	648.87
.37	.47	2.02	.30	.085	.050	.085	.050	644.27	400.00
.000925	400.	400.	400.	2	0	0	0.00	192.74	592.74

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*SECNO 5.000
3280 CROSS SECTION       5.00 EXTENDED        .05 FEET

     5.00      4.95    650.05      0.00      0.00    650.15       .10       .35       .01    649.40
     400.       13.      386.        1.       35.      150.        3.       18.       12.     649.70
      .40       .37      2.58       .24      .085      .050      .085      .050    645.10    400.00
  .001874      275.      275.      275.         2         0         0      0.00    168.70    568.70

*SECNO 5.900
     5.90      5.83    651.03      0.00      0.00    651.10       .07       .95       .00    650.80
     400.        0.      283.      117.        2.      115.      145.       21.       14.     648.20
      .50       .13      2.47       .81      .085      .050      .085      .050    645.20    594.37
  .001034      700.      700.      700.         3         0         0      0.00    142.57    736.94

CCHV=     .300 CEHV=     .500
*SECNO 5.980

        ** D/S FACE MARTINSVILLE RD.

     5.98      5.81    651.11      0.00      0.00    651.38       .27       .18       .10    652.00
     400.        0.      322.       78.        0.       69.       76.       22.       15.     649.70
      .51      0.00      4.63      1.03      .085      .050      .085      .050    645.30    585.02
  .004973       91.       91.       91.         2         0         0      0.00    119.45    704.47


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.00      1.20      2.60     80.00     12.00      0.00     60.00      0.00    645.30    645.30

*SECNO 6.020
PRESSURE AND WEIR FLOW

 EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC     ELTRD
                                                                 AREA
  651.94    651.38      0.00       33.      363.        60.       62.      650.50    651.50

     6.02      6.38    651.68      0.00      0.00    651.80       .12       .41      0.00    652.00
     400.        0.      261.      139.        0.       78.      142.       22.       15.     649.70
      .51      0.00      3.35       .98      .085      .050      .085      .050    645.30    585.01
  .002318       18.       18.       18.         2         0         2      0.00    142.08    727.09

*SECNO 6.100
3280 CROSS SECTION       6.10 EXTENDED        .02 FEET

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

     6.10      5.51    651.81      0.00      0.00    651.89       .08       .08       .01    650.20
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400.	25.	357.	17.	57.	153.	43.	22.	15.	650.40
.52	.45	2.33	.40	.095	.050	.095	.050	646.30	500.00
.001061	51.	51.	51.	2	0	0	0.00	170.74	670.74

CCHV= .100 CEHV= .300

*SECNO 6.500

6.50	5.42	652.31	0.00	0.00	652.37	.06	.48	.00	650.79
345.	19.	310.	16.	51.	149.	37.	25.	17.	650.99
.59	.38	2.07	.42	.095	.050	.080	.050	646.89	503.51
.000871	500.	500.	500.	2	0	0	0.00	163.05	666.56

*SECNO 6.600

6.60	5.23	653.15	0.00	0.00	653.19	.04	.82	.00	651.32
345.	26.	305.	14.	56.	169.	33.	30.	20.	652.02
.74	.47	1.80	.41	.095	.050	.080	.050	647.92	399.12
.001038	865.	865.	865.	2	0	0	0.00	185.01	584.13

*SECNO 7.000

7.00	5.30	654.20	0.00	0.00	654.30	.10	1.09	.02	651.90
345.	59.	263.	23.	83.	92.	33.	34.	23.	652.50
.83	.72	2.86	.70	.095	.050	.080	.050	648.90	403.06
.001746	825.	825.	825.	2	0	0	0.00	135.62	538.68

*SECNO 7.010

7.01	5.18	654.85	0.00	0.00	654.90	.05	.59	.00	653.07
275.	14.	202.	59.	34.	99.	95.	37.	25.	652.67
.92	.40	2.04	.63	.095	.050	.080	.050	649.67	664.25
.000796	500.	500.	500.	2	0	0	0.00	167.32	831.57

*SECNO 7.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.10	4.82	655.42	0.00	0.00	655.49	.07	.58	.01	654.00
275.	11.	213.	51.	18.	90.	65.	39.	27.	653.60
1.00	.61	2.37	.79	.070	.050	.070	.050	650.60	683.34
.001218	600.	600.	600.	2	0	0	0.00	132.91	816.25

*SECNO 7.500

7.50	4.67	656.37	0.00	0.00	656.45	.08	.96	.00	655.10
275.	9.	221.	45.	14.	86.	55.	42.	29.	654.70
1.09	.63	2.57	.82	.070	.050	.070	.050	651.70	691.07
.001512	710.	710.	710.	2	0	0	0.00	118.98	810.05

*SECNO 7.600

7.60	4.61	657.16	0.00	0.00	657.25	.09	.79	.00	655.95
275.	8.	225.	43.	12.	85.	51.	44.	31.	655.55
1.15	.64	2.66	.84	.070	.050	.070	.050	652.55	694.38
.001660	500.	500.	500.	2	0	0	0.00	113.02	807.40

*SECNO 7.700

7.70	4.59	657.99	0.00	0.00	658.09	.09	.84	.00	656.80
275.	8.	225.	42.	12.	84.	50.	45.	32.	656.40
1.21	.64	2.67	.84	.070	.050	.070	.050	653.40	694.89
.001685	500.	500.	500.	1	0	0	0.00	112.09	806.98

*SECNO 7.800

7.80	4.57	658.82	0.00	0.00	658.90	.09	.82	.00	658.15
275.	5.	265.	4.	13.	111.	7.	47.	33.	657.65
1.27	.40	2.38	.59	.070	.050	.070	.050	654.25	402.06
.001578	500.	500.	500.	2	0	0	0.00	90.21	492.27

*SECNO 8.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8.00	4.52	659.92	0.00	0.00	660.01	.09	1.11	.00	659.30
275.	5.	267.	4.	12.	110.	7.	49.	34.	658.80
1.35	.40	2.43	.59	.070	.050	.070	.050	655.40	404.84
.001678	680.	680.	680.	2	0	0	0.00	86.94	491.78

*SECNO 8.500

3280 CROSS SECTION 8.50 EXTENDED .37 FEET

8.50	4.87	660.81	0.00	0.00	660.87	.06	.86	.00	658.54
275.	56.	161.	57.	70.	65.	74.	51.	36.	659.04
1.44	.81	2.49	.78	.070	.050	.070	.050	655.94	728.61
.001238	600.	600.	600.	2	0	0	0.00	146.39	875.00

*SECNO 8.900

3280 CROSS SECTION 8.90 EXTENDED .51 FEET

8.90	5.01	661.51	0.00	0.00	661.56	.05	.69	.00	659.10
275.	60.	153.	63.	79.	67.	84.	55.	38.	659.60
1.55	.76	2.27	.75	.070	.050	.070	.050	656.50	725.00
.000984	625.	625.	625.	2	0	0	0.00	150.00	875.00

*SECNO 8.910

3280 CROSS SECTION 8.91 EXTENDED .26 FEET

**FOOTBRIDGE-X5

8.91	4.76	661.66	0.00	0.00	661.73	.07	.16	.01	659.50
275.	54.	168.	52.	63.	63.	66.	55.	39.	660.00
1.57	.86	2.67	.79	.070	.050	.070	.050	656.90	731.49
.001473	138.	138.	138.	2	0	0	0.00	143.51	875.00

*SECNO 8.920

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 WATER EL=X5 CARD=   661.759
3280 CROSS SECTION      8.92 EXTENDED       .36 FEET

      8.92      4.86    661.76      0.00      0.00    661.82       .06       .00       .00    659.50
       275.       56.       162.       57.       69.       65.       73.       55.       39.     660.00
      1.57       .81      2.50       .78      .070      .050      .070      .050    656.90    728.81
  .001252        1.         1.         1.         0         0         0      0.00    146.19    875.00

*SECNO 8.980
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

        **D/S FACE KOZMA

      8.98      4.88    661.78      0.00      0.00    661.83       .05       .01       .00    659.40
       275.       57.       158.       60.       77.       69.       82.       55.       39.     659.40
      1.57       .73      2.28       .73      .070      .050      .070      .050    656.90    725.45
  .000949         11.       11.       11.         2         0         0      0.00    149.08    874.53

*SECNO 8.990

3301 HV CHANGED MORE THAN HVINS

3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  661.80 MAX ELLC=  659.80

      8.99      4.50    661.40    659.69      0.00    662.00       .61       .00       .17    659.40
       275.       10.       248.       17.       11.       38.       11.       55.       39.     659.40
      1.57       .94      6.58      1.49      .070      .050      .070      .050    656.90    735.94
  .042157         1.         1.         1.         4        16         0   -114.48    127.45    863.39

*SECNO 9.010
3280 CROSS SECTION      9.01 EXTENDED       .42 FEET

3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  661.80 MAX ELLC=  659.80

      9.01      5.32    662.22      0.00      0.00    662.34       .12       .28       .05    659.40
       275.       45.       150.       80.       40.       44.       43.       55.       39.     659.40
      1.57      1.12      3.38      1.88      .070      .050      .070      .050    656.90    725.00
  .015003        12.       12.       12.         7         0         0   -166.00    150.00    875.00

*SECNO 9.020
3280 CROSS SECTION      9.02 EXTENDED       .52 FEET

      9.02      5.42    662.32      0.00      0.00    662.35       .02       .00       .01    659.40
       275.       70.       130.       75.      112.       78.      119.       55.       39.     659.40
      1.57       .63      1.66       .63      .070      .050      .070      .050    656.90    725.00
  .000430         1.         1.         1.         2         0         0      0.00    150.00    875.00
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*SECNO 9.100
3280 CROSS SECTION 9.10 EXTENDED .84 FEET

9.10	5.44	662.34	0.00	0.00	662.37	.03	.02	.00	660.20
275.	49.	132.	95.	81.	76.	126.	56.	39.	658.80
1.59	.60	1.73	.76	.070	.050	.070	.050	656.90	730.00
.000480	50.	50.	50.	2	0	0	0.00	130.00	860.00

CCHV= .200 CEHV= .400
*SECNO 9.180

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**FOOTBRIDGE-SB

9.18	5.56	662.56	0.00	0.00	662.65	.09	.25	.02	660.80
275.	23.	230.	23.	34.	89.	34.	57.	40.	660.80
1.63	.67	2.59	.67	.070	.050	.070	.050	657.00	103.10
.001191	350.	350.	350.	2	0	0	0.00	93.81	196.90

SPECIAL BRIDGE

SB	XK	XKOR	COPQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	657.00	657.00

*SECNO 9.220
3280 CROSS SECTION 9.22 EXTENDED .14 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
663.00	662.65	0.00	29.	244.	60.	65.	660.80	662.70

9.22	5.84	662.84	0.00	0.00	662.90	.07	.26	0.00	660.80
275.	30.	215.	30.	45.	94.	45.	57.	40.	660.80
1.63	.66	2.30	.66	.070	.050	.070	.050	657.00	100.00
.000877	7.	7.	7.	2	0	2	0.00	100.00	200.00

*SECNO 9.250

9.25	5.53	662.93	0.00	0.00	663.02	.09	.10	.01	661.20
275.	22.	231.	22.	33.	88.	33.	58.	40.	661.20
1.64	.67	2.62	.67	.070	.050	.070	.050	657.40	103.77
.001229	100.	100.	100.	2	0	0	0.00	92.45	196.23

*SECNO 9.280

**FOOTBRIDGE-SB

9.28	5.10	663.20	0.00	0.00	663.31	.11	.29	.01	661.80
275.	20.	236.	20.	29.	81.	29.	59.	40.	661.80
1.66	.68	2.91	.68	.070	.050	.070	.050	658.10	100.30
.001688	200.	200.	200.	2	0	0	0.00	99.40	199.70

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	658.10	658.10

*SECNO 9.320
3280 CROSS SECTION 9.32 EXTENDED .21 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
663.64	663.31	0.00	49.	225.	60.	63.	661.80	663.20

9.32	5.31	663.41	0.00	0.00	663.49	.09	.18	0.00	661.80
275.	27.	222.	27.	38.	85.	38.	59.	40.	661.80
1.66	.71	2.62	.71	.070	.050	.070	.050	658.10	100.00
.001283	8.	8.	8.	2	0	2	0.00	100.00	200.00

*SECNO 9.350
3280 CROSS SECTION 9.35 EXTENDED .17 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

9.35	5.27	663.47	0.00	0.00	663.56	.09	.07	.00	661.90
275.	26.	224.	26.	36.	84.	36.	59.	41.	661.90
1.67	.71	2.66	.71	.070	.050	.070	.050	658.20	100.00
.001344	50.	50.	50.	2	0	0	0.00	100.00	200.00

CCHV= .100 CEHV= .300
*SECNO 9.500

9.50	5.39	663.79	0.00	0.00	663.85	.06	.28	.00	663.90
275.	0.	275.	0.	0.	137.	0.	60.	41.	664.50
1.70	0.00	2.00	0.00	.070	.050	.070	.050	658.40	321.49
.000969	250.	250.	250.	2	0	0	0.00	40.57	362.06

*SECNO 10.000

10.00	5.45	664.65	0.00	0.00	664.72	.07	.87	.00	664.70
275.	0.	275.	0.	0.	127.	0.	62.	42.	665.30
1.81	0.00	2.16	0.00	.085	.050	.085	.050	659.20	317.52
.001131	830.	830.	830.	2	0	0	0.00	37.23	354.75

*SECNO 10.700

**FOOTBRIDGE-X5

10.70	5.79	666.09	0.00	0.00	666.26	.16	1.51	.03	666.70
275.	0.	275.	0.	0.	85.	0.	64.	42.	667.20
1.89	0.00	3.25	0.00	.085	.050	.085	.050	660.30	1000.11
.002458	940.	940.	940.	2	0	0	0.00	21.74	1021.85

*SECNO 10.710

WATER EL=X5 CARD= 666.191

10.71	5.89	666.19	0.00	0.00	666.35	.16	.00	.00	666.70
275.	0.	275.	0.	0.	87.	0.	64.	42.	667.20
1.89	0.00	3.17	0.00	.085	.050	.085	.050	660.30	999.98
.002290	1.	1.	1.	0	0	0	0.00	21.95	1021.93

*SECNO 10.780

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 668.00 ELREA= 668.00

**FOOTBRIDGE-SB

10.78	5.44	666.44	0.00	0.00	666.62	.18	.27	.01	666.90
275.	0.	275.	0.	0.	80.	0.	65.	42.	666.90
1.90	0.00	3.45	0.00	.085	.050	.085	.050	661.00	102.83
.003206	100.	100.	100.	2	0	0	0.00	24.35	127.17

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.58	3.00	30.00	15.00	0.00	93.00	0.00	661.00	661.00

*SECNO 10.820

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 666.624 ELLC= 666.900 PCWSE= 666.440 ELTRD= 669.100

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 669.10 MAX ELLC= 666.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 669.10 ELREA= 669.10

10.82	5.49	666.49	0.00	0.00	666.67	.18	.05	.00	666.90
275.	0.	275.	0.	0.	81.	0.	65.	42.	666.90
1.90	0.00	3.39	0.00	.060	.050	.060	.050	661.00	102.72
.003056	15.	15.	15.	2	0	0	0.00	24.56	127.28

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*SECNO 10.900
    10.90      5.85    666.65      0.00      0.00    666.81       .16       .13       .00    667.20
     275.        0.       275.        0.        0.       86.        0.       65.       42.    667.70
     1.91      0.00      3.21      0.00      .060      .050      .060      .050    660.80   1000.04
  .002366        50.       50.       50.         2         0         0      0.00     21.85   1021.89

CCHV=     .300 CEHV=     .500
*SECNO 10.980

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      668.50 ELREA=      668.50

        ** D/S FACE SUMPTER RD.

    10.98      4.52    666.72      0.00      0.00    667.13       .40       .20       .12    667.60
     275.        0.       275.        0.        0.       54.        0.       65.       42.    667.60
     1.91      0.00      5.11      0.00      .060      .050      .060      .050    662.20    968.78
  .007944        50.       50.       50.         3         0         0      0.00     15.25    984.03


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     0.00       1.47       2.80      50.00      16.00       0.00      67.00       0.00     662.20     662.20

*SECNO 11.020

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS=      0.000   EGLWC=    667.129   ELLC=    667.600   PCWSE=    666.724   ELTRD=    670.000

3370 NORMAL BRIDGE,NRD=   0 MIN ELTRD=  670.00 MAX ELLC=  667.60

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      670.00 ELREA=      670.00

    11.02      4.93    667.13      0.00      0.00    667.46       .32       .30       .02    667.60
     275.        0.       275.        0.        0.       60.        0.       65.       42.    667.60
     1.91      0.00      4.56      0.00      .060      .050      .060      .050    662.20    968.45
  .005802        45.       45.       45.         2         0         0      0.00     15.64    984.09


*SECNO 11.100
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS     BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA     LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

    11.10      4.83    667.43      0.00      0.00    667.83       .39       .34       .03    668.70
     275.        0.       267.        8.        0.       52.        6.       65.       43.    666.50
     1.91      0.00      5.10      1.32      .060      .050      .060      .050    662.60    938.18
  .007865        50.       50.       50.         2         0         0      0.00     29.88    968.06


CCHV=     .100 CEHV=     .300
*SECNO 11.500

        **FOOTBRIDGE-X5
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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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50 yr

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************


C
T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 50 YR

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      -1.       3.        0.        0.    .001500      0.00       .5        0.    643.500     0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

NC      .080      .080      .050      .100      .300     0.000     0.000     0.000     0.000     0.000
QT     5.000   400.000   570.000   650.000   820.000   650.000     0.000     0.000     0.000     0.000

X1     2.000     6.000   639.000   678.000     0.000     0.000     0.000     0.000     0.000     0.000
GR   645.000   550.000   642.300   639.000   636.900   655.000   637.200   672.000   641.700   678.000
GR   645.000   750.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     2.200     6.000   645.000   675.000   700.000   700.000   700.000     0.000      .750     0.000
GR   645.000   550.000   642.000   645.000   636.900   660.000   637.200   672.000   642.000   675.000
GR   645.000   750.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     2.900     8.000  1287.000  1300.000   700.000   700.000   700.000     0.000     0.000     0.000
GR   646.000  1200.000   645.900  1201.000   645.000  1202.000   643.900  1287.000   638.400  1295.000
GR   639.600  1297.000   644.800  1300.000   646.000  1400.000     0.000     0.000     0.000     0.000
NC     0.000     0.000     0.000      .300      .500     0.000     0.000     0.000     0.000     0.000

       ** D/S FACE JUDD RD.

X1     2.980     7.000  1297.000  1308.000    80.000    80.000    80.000     0.000     0.000     0.000
GR   646.200  1290.000   645.100  1297.000   640.100  1300.000   638.800  1302.000   639.900  1305.000
GR   643.200  1308.000   646.200  1490.000     0.000     0.000     0.000     0.000     0.000     0.000
SB     0.000     1.820     2.900   200.000    10.000     0.000    56.520     0.000   638.800   638.800

X1     3.020     0.000     0.000     0.000    40.000    40.000    40.000     0.000     0.000     0.000
X2     0.000     0.000     1.000   644.820   646.200     0.000     0.000     0.000     0.000     0.000
NC      .070      .070     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     3.100     8.000  1302.000  1330.000    30.000    30.000    30.000     0.000     0.000     0.000
GR   646.000  1200.000   644.500  1302.000   640.300  1305.000   639.500  1307.000   640.200  1310.000
GR   641.700  1321.000   644.700  1330.000   646.000  1400.000     0.000     0.000     0.000     0.000
NC     0.000     0.000     0.000      .100      .300     0.000     0.000     0.000     0.000     0.000
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X1	4.000	7.000	440.000	471.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	647.000	350.000	645.700	440.000	641.000	450.000	640.200	454.000	640.900	459.000
GR	645.800	471.000	647.000	570.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.360	0.000
X1	4.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	1.510	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.600	7.000	500.000	552.000	400.000	400.000	400.000	0.000	-.830	0.000
GR	650.000	400.000	649.400	500.000	645.700	523.000	645.100	527.000	645.600	533.000
GR	649.700	552.000	650.700	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5.000	0.000	0.000	0.000	275.000	275.000	275.000	0.000	.830	0.000
X1	5.900	8.000	610.000	635.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	651.700	550.000	650.800	610.000	646.200	614.000	645.200	621.000	646.200	630.000
GR	648.200	635.000	650.000	700.000	652.800	800.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE MARTINSVILLE RD.

X1	5.980	10.000	585.000	600.000	91.000	91.000	91.000	0.000	0.000	0.000
GR	652.000	585.000	648.300	585.100	646.400	587.000	645.300	593.500	646.300	598.000
GR	648.000	598.000	648.500	598.100	649.700	600.000	651.000	700.000	653.500	800.000
SB	0.000	1.200	2.600	80.000	12.000	0.000	60.000	0.000	645.300	645.300
X1	6.020	0.000	0.000	0.000	18.000	18.000	18.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	650.500	651.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	651.000	651.000	0.000
NC	.095	.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6.100	8.000	570.000	610.000	51.000	51.000	51.000	0.000	0.000	0.000
GR	651.800	500.000	650.200	570.000	646.400	587.000	646.300	590.000	646.500	597.000
GR	648.100	600.000	650.400	610.000	652.500	700.000	0.000	0.000	0.000	0.000
QT	5.000	345.000	490.000	560.000	700.000	560.000	0.000	0.000	0.000	0.000
NC	0.000	.080	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	6.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.590	0.000
X1	6.600	8.000	460.000	525.000	865.000	865.000	865.000	0.000	-.980	0.000
GR	655.000	370.000	652.300	460.000	649.900	477.000	648.900	482.000	649.700	485.000
GR	652.500	500.000	653.000	525.000	655.000	630.000	0.000	0.000	0.000	0.000
X1	7.000	8.000	475.000	500.000	825.000	825.000	825.000	0.000	0.000	0.000
GR	655.000	360.000	654.300	400.000	651.900	475.000	649.900	477.000	648.900	482.000
GR	649.700	485.000	652.500	500.000	656.900	600.000	0.000	0.000	0.000	0.000
QT	5.000	275.000	395.000	450.000	560.000	450.000	0.000	0.000	0.000	0.000

X1	7.010	9.000	718.000	743.000	500.000	500.000	500.000	0.000	-2.030	0.000
GR	658.100	600.000	656.200	700.000	655.100	718.000	652.100	725.000	651.700	730.000
GR	652.600	736.000	654.700	743.000	655.800	786.000	658.500	900.000	0.000	0.000
NC	.070	.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7.100	0.000	0.000	0.000	600.000	600.000	600.000	0.000	.930	0.000
X1	7.500	0.000	0.000	0.000	710.000	710.000	710.000	0.000	1.100	0.000
X1	7.600	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.700	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.800	10.000	442.000	480.000	500.000	500.000	500.000	0.000	-1.150	0.000
GR	662.700	200.000	661.600	300.000	660.000	400.000	659.300	442.000	656.500	459.000
GR	655.400	467.000	655.900	473.000	658.800	480.000	660.700	500.000	661.500	501.000
X1	8.000	0.000	0.000	0.000	680.000	680.000	680.000	0.000	1.150	0.000
X1	8.500	7.000	790.000	806.000	600.000	600.000	600.000	0.000	-.560	0.000
GR	661.500	725.000	659.100	790.000	656.900	794.000	656.500	797.000	656.900	803.000
GR	659.600	806.000	661.000	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.900	0.000	0.000	0.000	625.000	625.000	625.000	0.000	.560	0.000

**FOOTBRIDGE-X5

X1	8.910	0.000	0.000	0.000	138.000	138.000	138.000	0.000	.400	0.000
X1	8.920	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000

**D/S FACE KOZMA

X1	8.980	7.000	790.000	806.000	11.000	11.000	11.000	0.000	0.000	0.000
GR	661.800	725.000	659.400	790.000	656.900	794.000	656.900	797.000	656.900	803.000
GR	659.400	806.000	661.800	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.990	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.010	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

X1	9.100	7.000	784.000	800.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	661.500	730.000	660.200	784.000	657.200	788.000	656.900	793.000	657.000	797.000
GR	658.800	800.000	661.700	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.200	.400	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-SB

X1	9.180	6.000	141.500	158.500	350.000	350.000	350.000	0.000	0.000	0.000
GR	662.700	100.000	660.800	141.500	657.000	143.000	657.000	157.000	660.800	158.500
GR	662.700	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	657.000	657.000
X1	9.220	0.000	0.000	0.000	7.000	7.000	7.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	660.800	662.700	0.000	0.000	0.000	0.000	0.000
X1	9.250	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.400	0.000

**FOOTBRIDGE-SB

X1	9.280	6.000	141.500	158.500	200.000	200.000	200.000	0.000	0.000	0.000
GR	663.200	100.000	661.800	141.500	658.100	143.000	658.100	157.000	661.800	158.500
GR	663.200	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	658.100	658.100
X1	9.320	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	661.800	663.200	0.000	0.000	0.000	0.000	0.000
X1	9.350	0.000	0.000	0.000	50.000	50.000	50.000	0.000	.100	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	9.500	6.000	321.000	363.000	250.000	250.000	250.000	0.000	-.800	0.000
GR	665.500	280.000	664.700	321.000	659.300	344.000	659.200	355.000	665.300	363.000
GR	667.400	570.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.000	0.000	0.000	0.000	830.000	830.000	830.000	.910	.800	0.000

**FOOTBRIDGE-X5

X1	10.700	11.000	1044.000	1078.000	940.000	940.000	940.000	.690	-.500	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.710	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-SB

X1	10.780	6.000	102.000	128.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.000	668.000	0.000
GR	669.100	100.000	666.900	102.000	661.000	112.500	661.000	117.500	666.900	128.000
GR	669.100	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.580	3.000	30.000	15.000	0.000	93.000	0.000	661.000	661.000
X1	10.820	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	666.900	669.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	669.100	669.100	0.000
X1	10.900	11.000	1044.000	1078.000	50.000	50.000	50.000	.690	0.000	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE SUMPTER RD.

X1	10.980	9.000	977.000	1001.000	50.000	50.000	50.000	.670	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.500	668.500	0.000
GR	670.000	950.000	667.600	977.000	664.200	981.000	662.600	983.000	662.200	985.000
GR	662.200	988.000	663.500	1000.000	667.600	1001.000	670.000	1002.000	0.000	0.000
SB	0.000	1.470	2.800	50.000	16.000	0.000	67.000	0.000	662.200	662.200
X1	11.020	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	667.600	670.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	670.000	670.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.100	10.000	950.000	979.000	50.000	50.000	50.000	.690	0.000	0.000
GR	670.700	900.000	668.700	950.000	666.800	958.000	664.300	960.000	662.600	967.000
GR	662.600	969.000	664.000	975.000	666.500	979.000	667.500	1000.000	672.000	1100.000
QT	5.000	225.000	330.000	370.000	470.000	370.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-X5

X1	11.500	0.000	0.000	0.000	225.000	225.000	225.000	0.000	.370	0.000
X1	11.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12.000	8.000	323.000	353.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	672.000	290.000	699.900	323.000	664.500	332.000	663.800	336.000	664.400	339.000
GR	665.300	347.000	669.200	353.000	672.000	400.000	0.000	0.000	0.000	0.000
X1	12.900	7.000	266.000	298.000	715.000	715.000	715.000	.750	0.000	0.000
GR	671.500	240.000	670.200	266.000	666.800	270.000	665.800	277.000	665.900	281.000
GR	670.400	298.000	671.500	323.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. EAST CROSSING									
X1	12.980	7.000	388.000	400.000	100.000	100.000	100.000	.750	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	671.900	671.900	0.000
GR	673.800	373.000	670.500	388.000	666.400	389.000	665.900	395.000	666.400	399.000
GR	670.500	400.000	673.800	415.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.370	2.500	32.000	9.000	0.000	36.000	0.000	665.900	665.900
X1	13.020	0.000	0.000	0.000	42.000	42.000	42.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	670.500	673.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	673.800	673.800	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13.100	8.000	430.000	458.000	50.000	50.000	50.000	.750	0.000	0.000
GR	675.000	400.000	675.000	400.000	669.500	430.000	666.700	438.000	666.400	445.000
GR	666.400	451.000	669.600	458.000	675.000	490.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	13.500	8.000	463.000	488.000	800.000	800.000	800.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	13.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000
X1	14.000	8.000	463.000	488.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
X1	14.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.050	0.000
X1	14.500	0.000	0.000	0.000	425.000	425.000	425.000	0.000	1.050	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	14.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
X1	14.900	8.000	331.000	390.000	150.000	150.000	150.000	.680	0.000	0.000
GR	677.000	260.000	673.400	331.000	670.100	345.000	670.000	350.000	670.100	355.000
GR	672.700	372.000	674.000	390.000	677.000	440.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. MIDDLE CROSSING									

X1	14.980	6.000	130.000	139.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	675.000	100.000	671.900	130.000	670.000	130.500	670.000	138.500	671.900	139.000
GR	675.000	169.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.600	2.300	0.000	9.000	0.000	17.000	0.000	670.000	670.000
X1	15.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	671.900	675.000	0.000	0.000	0.000	0.000	0.000
BT	6.000	100.000	675.000	0.000	130.000	675.000	671.900	130.500	676.800	671.900
BT	138.500	676.800	671.900	139.000	675.000	671.900	169.000	675.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
X1	15.100	7.000	277.000	296.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	674.000	250.000	673.800	277.000	670.300	279.000	670.300	282.000	670.900	285.000
GR	673.200	296.000	674.000	325.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	16.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	.100	0.000

**FOOTBRIDGE-X5

X1	16.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	16.900	8.000	393.000	420.000	250.000	250.000	250.000	0.000	0.000	0.000
GR	675.000	392.000	675.000	392.500	674.600	393.000	670.700	400.000	670.500	408.000
GR	670.800	417.000	672.700	420.000	674.500	470.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILMONT RD.

X1	16.980	8.000	800.000	808.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	675.000	675.000	0.000
GR	676.000	758.000	676.000	759.000	676.000	760.000	673.900	800.000	671.200	802.000
GR	671.700	806.000	673.900	808.000	676.300	830.000	0.000	0.000	0.000	0.000
SB	0.000	1.360	2.600	80.000	8.000	0.000	20.000	0.000	671.200	671.200
X1	17.020	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	673.900	676.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	676.200	676.200	0.000
X1	17.100	8.000	388.000	419.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.000	369.000	678.000	370.000	674.500	388.000	671.900	397.000	671.200	404.000
GR	671.600	411.000	674.200	419.000	678.000	430.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	18.000	9.000	490.000	523.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	677.000	470.000	674.600	490.000	674.200	495.000	672.600	496.000	672.500	498.000
GR	671.800	504.000	672.300	513.000	675.800	523.000	676.900	530.000	0.000	0.000

**FOOTBRIDGE-X5

X1	18.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	18.900	6.000	242.000	269.000	440.000	440.000	440.000	0.000	0.000	0.000
GR	675.300	242.000	672.100	247.000	671.800	253.000	672.000	257.000	673.900	269.000
GR	675.500	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILLIS RD. WEST CROSSING

X1	18.980	6.000	251.000	261.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.200	677.200	0.000
GR	677.700	215.000	675.400	251.000	672.100	252.000	672.800	256.000	675.400	261.000
GR	677.700	290.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	2.300	0.000	9.000	0.000	29.700	0.000	672.100	672.100
X1	19.020	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	675.400	677.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.700	677.700	0.000
BT	6.000	215.000	677.700	0.000	251.000	677.700	0.000	251.100	680.400	0.000
BT	260.900	680.400	0.000	261.000	677.700	0.000	290.000	677.700	0.000	0.000
X1	19.100	9.000	200.000	234.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.500	180.000	677.000	190.000	675.400	200.000	675.100	208.000	672.400	210.000
GR	671.900	219.000	672.200	228.000	674.900	234.000	678.500	260.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	19.900	9.000	490.000	526.000	475.000	475.000	475.000	0.000	0.000	0.000
GR	679.000	470.000	678.000	480.000	676.000	490.000	675.700	495.000	672.400	500.000
GR	672.100	505.000	672.100	512.000	676.000	526.000	679.000	550.000	0.000	0.000

** D/S FACE ELWELL RD.

X1	19.980	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.500	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= .100 CEHV= .300
*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	6.19	643.09	0.00	643.50	643.23	.14	0.00	0.00	642.30
570.	4.	554.	12.	10.	180.	21.	0.	0.	641.70
0.00	.39	3.07	.56	.080	.050	.080	0.000	636.90	612.96
.001501	0.	0.	0.	0	0	5	0.00	95.36	708.32

*SECNO 2.200

2.20	6.60	644.25	0.00	0.00	644.42	.18	1.18	.01	642.75
570.	24.	528.	19.	35.	150.	28.	3.	2.	642.75
.06	.67	3.52	.67	.080	.050	.080	.050	637.65	597.66
.001911	700.	700.	700.	2	0	0	0.00	114.72	712.38

*SECNO 2.900
3280 CROSS SECTION 2.90 EXTENDED .10 FEET

2.90	7.70	646.10	0.00	0.00	646.26	.16	1.83	.00	643.90
570.	224.	283.	63.	141.	65.	70.	7.	4.	644.80
.13	1.59	4.32	.90	.080	.050	.080	.050	638.40	1200.00
.003794	700.	700.	700.	3	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500
*SECNO 2.980
3280 CROSS SECTION 2.98 EXTENDED .23 FEET

** D/S FACE JUDD RD.

2.98	7.63	646.43	0.00	0.00	646.50	.07	.21	.03	645.10
570.	4.	197.	369.	5.	61.	314.	8.	5.	643.20
.14	.67	3.22	1.17	.080	.050	.080	.050	638.80	1290.00
.001936	80.	80.	80.	2	0	0	0.00	200.00	1490.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.82	2.90	200.00	10.00	0.00	56.52	0.00	638.80	638.80

*SECNO 3.020
3280 CROSS SECTION 3.02 EXTENDED .66 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
649.30	646.50	0.00	338.	233.	57.	60.	644.82	646.20

	3.02	8.06	646.86	0.00	0.00	646.90	.04	.41	0.00	645.10
	570.	5.	166.	399.	9.	66.	394.	8.	5.	643.20
	.15	.64	2.51	1.01	.080	.050	.080	.050	638.80	1290.00
	.001065	40.	40.	40.	2	0	4	0.00	200.00	1490.00

*SECNO 3.100
3280 CROSS SECTION 3.10 EXTENDED .88 FEET

	3.10	7.38	646.88	0.00	0.00	646.94	.06	.03	.01	644.50
	570.	137.	348.	84.	166.	147.	107.	9.	5.	644.70
	.15	.83	2.37	.79	.070	.050	.070	.050	639.50	1200.00
	.000802	30.	30.	30.	2	0	0	0.00	200.00	1400.00

CCHV= .100 CEHV= .300
*SECNO 4.000
3280 CROSS SECTION 4.00 EXTENDED .50 FEET

	4.00	7.30	647.50	0.00	0.00	647.59	.08	.64	.01	645.70
	570.	78.	412.	80.	104.	154.	109.	15.	8.	645.80
	.24	.75	2.68	.73	.070	.050	.070	.050	640.20	350.00
	.001048	700.	700.	700.	2	0	0	0.00	220.00	570.00

*SECNO 4.100

	4.10	6.58	648.14	0.00	0.00	648.35	.21	.72	.04	647.06
	570.	30.	513.	27.	40.	131.	39.	18.	10.	647.16
	.28	.74	3.91	.69	.070	.050	.070	.050	641.56	365.56
	.002768	450.	450.	450.	3	0	0	0.00	185.90	551.46

*SECNO 4.500

	4.50	6.50	649.57	0.00	0.00	649.80	.23	1.45	.01	648.57
	570.	26.	522.	23.	35.	129.	33.	20.	12.	648.67
	.31	.74	4.05	.69	.070	.050	.070	.050	643.07	370.76
	.003033	500.	500.	500.	2	0	0	0.00	174.50	545.26

*SECNO 4.600
3280 CROSS SECTION 4.60 EXTENDED 1.17 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

4.60	6.08	650.35	0.00	0.00	650.40	.06	.58	.02	648.57
570.	96.	451.	23.	147.	208.	46.	23.	14.	648.87
.37	.65	2.17	.50	.085	.050	.085	.050	644.27	400.00
.000855	400.	400.	400.	2	0	0	0.00	200.00	600.00

*SECNO 5.000
3280 CROSS SECTION 5.00 EXTENDED .63 FEET

5.00	5.53	650.63	0.00	0.00	650.74	.10	.32	.01	649.40
570.	64.	497.	9.	93.	180.	21.	25.	15.	649.70
.40	.68	2.76	.43	.085	.050	.085	.050	645.10	400.00
.001676	275.	275.	275.	2	0	0	0.00	196.84	596.84

*SECNO 5.900

5.90	6.41	651.61	0.00	0.00	651.70	.08	.96	.00	650.80
570.	7.	361.	201.	22.	129.	210.	30.	19.	648.20
.50	.32	2.80	.96	.085	.050	.085	.050	645.20	555.76
.001133	700.	700.	700.	3	0	0	0.00	201.87	757.63

CCHV= .300 CEHV= .500
*SECNO 5.980

** D/S FACE MARTINSVILLE RD.

5.98	6.42	651.72	0.00	0.00	651.95	.23	.18	.07	652.00
570.	0.	368.	202.	0.	78.	147.	31.	19.	649.70
.50	0.00	4.68	1.38	.085	.050	.085	.050	645.30	585.01
.004489	91.	91.	91.	0	0	0	0.00	143.54	728.55

SPECIAL BRIDGE

SB	KK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.20	2.60	80.00	12.00	0.00	60.00	0.00	645.30	645.30

*SECNO 6.020
3280 CROSS SECTION 6.02 EXTENDED .36 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
653.40	651.95	0.00	195.	377.	60.	62.	650.50	651.50

6.02	7.06	652.36	0.00	0.00	652.46	.10	.51	0.00	652.00
570.	0.	295.	275.	0.	88.	238.	31.	19.	649.70
.51	0.00	3.34	1.16	.085	.050	.085	.050	645.30	585.00
.002035	18.	18.	18.	2	0	2	0.00	169.43	754.43

*SECNO 6.100

3280 CROSS SECTION 6.10 EXTENDED .67 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
6.10	6.16	652.46	0.00	0.00	652.54	.08	.07	.01	650.20
570.	66.	457.	47.	103.	179.	91.	32.	19.	650.40
.51	.64	2.55	.51	.095	.050	.095	.050	646.30	500.00
.001032	51.	51.	51.	2	0	0	0.00	198.51	698.51

CCHV= .100 CEHV= .300
*SECNO 6.500
3280 CROSS SECTION 6.50 EXTENDED .55 FEET

6.50	6.05	652.94	0.00	0.00	653.01	.06	.47	.00	650.79
490.	52.	395.	43.	95.	175.	82.	36.	22.	650.99
.58	.55	2.26	.53	.095	.050	.080	.050	646.89	500.00
.000839	500.	500.	500.	2	0	0	0.00	193.64	693.64

*SECNO 6.600

6.60	5.80	653.72	0.00	0.00	653.77	.05	.76	.00	651.32
490.	51.	400.	38.	96.	207.	76.	43.	26.	652.02
.73	.54	1.94	.51	.095	.050	.080	.050	647.92	380.06
.000923	865.	865.	865.	2	0	0	0.00	234.09	614.15

*SECNO 7.000

7.00	5.81	654.71	0.00	0.00	654.82	.11	1.04	.02	651.90
490.	111.	332.	47.	125.	105.	55.	49.	30.	652.50
.82	.89	3.17	.84	.095	.050	.080	.050	648.90	376.63
.001811	825.	825.	825.	1	0	0	0.00	173.57	550.20

*SECNO 7.010

7.01	5.72	655.39	0.00	0.00	655.44	.05	.61	.01	653.07
395.	33.	253.	108.	71.	112.	148.	53.	32.	652.67
.90	.47	2.26	.73	.095	.050	.080	.050	649.67	635.95
.000819	500.	500.	500.	2	0	0	0.00	218.33	854.28

*SECNO 7.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.10	5.36	655.96	0.00	0.00	656.03	.07	.58	.01	654.00
395.	31.	263.	101.	44.	103.	111.	57.	35.	653.60
.99	.69	2.55	.91	.070	.050	.070	.050	650.60	655.06
.001170	600.	600.	600.	2	0	0	0.00	183.89	838.94

*SECNO 7.500

7.50	5.18	656.88	0.00	0.00	656.97	.09	.94	.01	655.10
395.	26.	276.	93.	34.	99.	95.	61.	38.	654.70
1.08	.75	2.80	.98	.070	.050	.070	.050	651.70	664.24
.001493	710.	710.	710.	2	0	0	0.00	167.34	831.58

*SECNO 7.600

7.60	5.11	657.66	0.00	0.00	657.76	.10	.78	.00	655.95
395.	24.	282.	89.	31.	97.	88.	63.	39.	655.55
1.13	.77	2.91	1.01	.070	.050	.070	.050	652.55	667.98
.001651	500.	500.	500.	2	0	0	0.00	160.59	828.58

*SECNO 7.700

7.70	5.09	658.49	0.00	0.00	658.59	.10	.83	.00	656.80
395.	23.	283.	89.	30.	97.	87.	66.	41.	656.40
1.19	.78	2.92	1.02	.070	.050	.070	.050	653.40	668.63
.001680	500.	500.	500.	1	0	0	0.00	159.43	828.06

*SECNO 7.800

7.80	5.07	659.32	0.00	0.00	659.42	.10	.83	.00	658.15
395.	29.	355.	11.	42.	131.	15.	68.	43.	657.65
1.25	.69	2.71	.76	.070	.050	.070	.050	654.25	370.20
.001652	500.	500.	500.	1	0	0	0.00	127.45	497.65

*SECNO 8.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8.00	5.05	660.45	0.00	0.00	660.56	.11	1.14	.00	659.30
395.	28.	356.	11.	41.	130.	14.	71.	45.	658.80
1.32	.69	2.73	.77	.070	.050	.070	.050	655.40	371.33
.001691	680.	680.	680.	1	0	0	0.00	126.13	497.46

*SECNO 8.500
3280 CROSS SECTION 8.50 EXTENDED .89 FEET

8.50	5.39	661.33	0.00	0.00	661.39	.06	.82	.00	658.54
395.	100.	189.	106.	103.	73.	110.	74.	47.	659.04
1.42	.97	2.59	.97	.070	.050	.070	.050	655.94	725.00
.001136	600.	600.	600.	2	0	0	0.00	150.00	875.00

*SECNO 8.900
3280 CROSS SECTION 8.90 EXTENDED 1.00 FEET

8.90	5.50	662.00	0.00	0.00	662.05	.05	.66	.00	659.10
395.	103.	182.	109.	110.	75.	117.	79.	49.	659.60
1.53	.94	2.43	.93	.070	.050	.070	.050	656.50	725.00
.000975	625.	625.	625.	2	0	0	0.00	150.00	875.00

*SECNO 8.910

3280 CROSS SECTION 8.91 EXTENDED .74 FEET

**FOOTBRIDGE-X5

8.91	5.24	662.14	0.00	0.00	662.21	.07	.16	.01	659.50
395.	95.	199.	100.	94.	71.	100.	79.	49.	660.00
1.55	1.01	2.82	1.01	.070	.050	.070	.050	656.90	725.00
.001405	138.	138.	138.	2	0	0	0.00	150.00	875.00

*SECNO 8.920
WATER EL=X5 CARD= 662.243
3280 CROSS SECTION 8.92 EXTENDED .84 FEET

8.92	5.34	662.24	0.00	0.00	662.30	.06	.00	.00	659.50
395.	99.	192.	104.	100.	72.	106.	79.	49.	660.00
1.55	.98	2.65	.98	.070	.050	.070	.050	656.90	725.00
.001212	1.	1.	1.	0	0	0	0.00	150.00	875.00

*SECNO 8.980
3280 CROSS SECTION 8.98 EXTENDED .46 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**D/S PACE KOZMA

8.98	5.36	662.26	0.00	0.00	662.32	.05	.01	.00	659.40
395.	99.	190.	106.	108.	77.	115.	80.	49.	659.40
1.55	.92	2.46	.92	.070	.050	.070	.050	656.90	725.00
.000961	11.	11.	11.	2	0	0	0.00	150.00	875.00

*SECNO 8.990
3280 CROSS SECTION 8.99 EXTENDED .26 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 661.80 MAX ELLC= 659.80

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF

8.99	5.16	662.06	659.81	0.00	662.46	.40	.00	.46	659.40
395.	51.	253.	91.	30.	42.	32.	80.	49.	659.40
1.55	1.72	6.06	2.87	.070	.050	.070	.050	656.90	725.00
.052279	-1.	-1.	-1.	20	12	0	-166.00	150.00	875.00

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*SECNO 9.010
3280 CROSS SECTION      9.01 EXTENDED       .83 FEET


3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  661.80 MAX ELLC=  659.80

     9.01      5.73   662.63      0.00      0.00   662.72      .09      .23      .03   659.40
     395.       87.      155.      154.       67.      51.      71.      80.      49.    659.40
     1.55      1.29     3.03      2.15      .070     .050     .070     .050   656.90   725.00
  .010027       12.      12.       12.         3        0        0  -166.00   150.00   875.00

*SECNO 9.020
3280 CROSS SECTION      9.02 EXTENDED       .90 FEET

     9.02      5.80   662.70      0.00      0.00   662.73      .03      .00      .01   659.40
     395.      111.      167.      118.      136.      84.      145.      80.      49.    659.40
     1.55       .81     1.98       .81      .070     .050     .070     .050   656.90   725.00
  .000555        1.       1.        1.         2        0        0     0.00   150.00   875.00

*SECNO 9.100
3280 CROSS SECTION      9.10 EXTENDED      1.22 FEET

     9.10      5.82   662.72      0.00      0.00   662.76      .04      .03      .00   660.20
     395.       81.      171.      143.      101.      82.      148.      80.      50.    658.80
     1.56       .80     2.09       .96      .070     .050     .070     .050   656.90   730.00
  .000630       50.      50.       50.         2        0        0     0.00   130.00   860.00


CCHV=    .200 CEHV=    .400
*SECNO 9.180
3280 CROSS SECTION      9.18 EXTENDED       .30 FEET

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


        **FOOTBRIDGE-SB

     9.18      6.00   663.00      0.00      0.00   663.12      .11      .33      .03   660.80
     395.       50.      296.       50.       52.      96.       52.      82.      51.    660.80
     1.60       .95     3.07       .95      .070     .050     .070     .050   657.00   100.00
  .001505      350.     350.      350.         2        0        0     0.00   100.00   200.00


SPECIAL BRIDGE

SB  XK        XKOR      COPQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     0.00      1.35      3.10     100.00     17.00      0.00     60.00      0.00    657.00    657.00

*SECNO 9.220
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3280 CROSS SECTION 9.22 EXTENDED .56 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
663.91	663.12	0.00	156.	242.	60.	65.	660.80	662.70

9.22	6.26	663.26	0.00	0.00	663.34	.09	.23	0.00	660.80
395.	59.	278.	59.	63.	101.	63.	82.	51.	660.80
1.60	.94	2.76	.94	.070	.050	.070	.050	657.00	100.00
.001148	7.	7.	7.	2	0	2	0.00	100.00	200.00

*SECNO 9.250
3280 CROSS SECTION 9.25 EXTENDED .27 FEET

9.25	5.97	663.37	0.00	0.00	663.49	.12	.13	.01	661.20
395.	48.	298.	48.	51.	96.	51.	83.	51.	661.20
1.61	.95	3.11	.95	.070	.050	.070	.050	657.40	100.00
.001558	100.	100.	100.	2	0	0	0.00	100.00	200.00

*SECNO 9.280
3280 CROSS SECTION 9.28 EXTENDED .50 FEET

**FOOTBRIDGE-SB

9.28	5.60	663.70	0.00	0.00	663.83	.13	.34	.00	661.80
395.	51.	293.	51.	50.	90.	50.	84.	51.	661.80
1.63	1.02	3.27	1.02	.070	.050	.070	.050	658.10	100.00
.001853	200.	200.	200.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COPQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	658.10	658.10

*SECNO 9.320
3280 CROSS SECTION 9.32 EXTENDED .64 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
664.61	663.83	0.00	187.	204.	60.	63.	661.80	663.20

9.32	5.74	663.84	0.00	0.00	663.95	.11	.12	0.00	661.80
395.	56.	282.	56.	56.	92.	56.	84.	51.	661.80
1.63	1.01	3.07	1.01	.070	.050	.070	.050	658.10	100.00

.001580	8.	8.	8.	2	0	2	0.00	100.00	200.00

*SECNO 9.350
3280 CROSS SECTION 9.35 EXTENDED .62 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
9.35	5.72	663.92	0.00	0.00	664.03	.11	.08	.00	661.90
395.	56.	284.	56.	55.	92.	55.	84.	51.	661.90
1.64	1.02	3.10	1.02	.070	.050	.070	.050	658.20	100.00
.001620	50.	50.	50.	2	0	0	0.00	100.00	200.00

CCHV= .100 CEHV= .300
*SECNO 9.500

9.50	5.89	664.29	0.00	0.00	664.39	.10	.36	.00	663.90
395.	1.	394.	0.	4.	158.	0.	85.	52.	664.50
1.66	.26	2.49	0.00	.070	.050	.070	.050	658.40	300.82
.001288	250.	250.	250.	2	0	0	0.00	61.91	362.73

*SECNO 10.000

10.00	6.15	665.35	0.00	0.00	665.45	.10	1.06	.00	664.70
395.	3.	392.	0.	10.	154.	0.	88.	53.	665.30
1.76	.29	2.55	.05	.085	.050	.085	.050	659.20	286.93
.001267	830.	830.	830.	2	0	0	0.00	73.23	360.15

*SECNO 10.700

**FOOTBRIDGE-X5

10.70	6.67	666.97	0.00	0.00	667.19	.22	1.70	.04	666.70
395.	0.	395.	0.	0.	105.	0.	91.	54.	667.20
1.82	.24	3.78	0.00	.085	.050	.085	.050	660.30	996.33
.002788	940.	940.	940.	2	0	0	0.00	26.29	1022.62

*SECNO 10.710
WATER EL=X5 CARD= 667.166

10.71	6.87	667.17	0.00	0.00	667.37	.20	.00	.00	666.70
395.	0.	395.	0.	1.	109.	0.	91.	54.	667.20
1.82	.33	3.62	0.00	.085	.050	.085	.050	660.30	994.12
.002443	1.	1.	1.	0	0	0	0.00	28.67	1022.79

*SECNO 10.780

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 668.00 ELREA= 668.00

**FOOTBRIDGE-SB

10.78	6.42	667.42	0.00	0.00	667.64	.22	.27	.01	666.90
395.	0.	395.	0.	0.	105.	0.	91.	54.	666.90
1.83	0.00	3.77	0.00	.085	.050	.085	.050	661.00	102.00
.002940	100.	100.	100.	2	0	0	0.00	26.00	128.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.58	3.00	30.00	15.00	0.00	93.00	0.00	661.00	661.00

*SECNO 10.820
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
667.86	667.64	0.00	0.	395.	93.	89.	666.90	669.10

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 669.10 ELREA= 669.10

10.82	6.67	667.67	0.00	0.00	667.86	.20	.22	0.00	666.90
395.	0.	395.	0.	0.	111.	0.	91.	54.	666.90
1.83	0.00	3.54	0.00	.060	.050	.060	.050	661.00	102.00
.002414	15.	15.	15.	2	0	0	0.00	26.00	128.00

*SECNO 10.900

10.90	6.99	667.79	0.00	0.00	667.98	.19	.12	.00	667.20
395.	1.	394.	0.	2.	112.	0.	91.	54.	667.70
1.84	.52	3.52	.15	.060	.050	.060	.050	660.80	992.75
.002238	50.	50.	50.	2	0	0	0.00	33.42	1026.17

CCHV= .300 CEHV= .500
*SECNO 10.980

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 668.50 ELREA= 668.50

** D/S FACE SUMPTER RD.

10.98	5.63	667.83	0.00	0.00	668.31	.48	.19	.14	667.60
395.	0.	395.	0.	0.	71.	0.	91.	54.	667.60
1.84	0.00	5.54	0.00	.060	.050	.060	.050	662.20	968.09
.007376	50.	50.	50.	3	0	0	0.00	16.08	984.17

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.47	2.80	50.00	16.00	0.00	67.00	0.00	662.20	662.20

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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500 yr

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  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 500 YR

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

       -1.        5.         0.         0.    .001500       0.00        .5         0.    643.500      0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

      1.000      0.000     -1.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

NC       .080       .080       .050       .100       .300       0.000      0.000      0.000      0.000      0.000
QT      5.000    400.000    570.000    650.000    820.000    650.000      0.000      0.000      0.000      0.000

X1      2.000      6.000    639.000    678.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    645.000    550.000    642.300    639.000    636.900    655.000    637.200    672.000    641.700    678.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.200      6.000    645.000    675.000    700.000    700.000    700.000      0.000       .750      0.000
GR    645.000    550.000    642.000    645.000    636.900    660.000    637.200    672.000    642.000    675.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.900      8.000   1287.000   1300.000    700.000    700.000    700.000      0.000      0.000      0.000
GR    646.000   1200.000    645.900   1201.000    645.000   1202.000    643.900   1287.000    638.400   1295.000
GR    639.600   1297.000    644.800   1300.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .300       .500       0.000      0.000      0.000      0.000      0.000

        ** D/S FACE JUDD RD.

X1      2.980      7.000   1297.000   1308.000     80.000     80.000     80.000      0.000      0.000      0.000
GR    646.200   1290.000    645.100   1297.000    640.100   1300.000    638.800   1302.000    639.900   1305.000
GR    643.200   1308.000    646.200   1490.000      0.000      0.000      0.000      0.000      0.000      0.000
SB      0.000      1.820      2.900    200.000     10.000      0.000     56.520      0.000    638.800    638.800

X1      3.020      0.000      0.000      0.000     40.000     40.000     40.000      0.000      0.000      0.000
X2      0.000      0.000      1.000    644.820    646.200      0.000      0.000      0.000      0.000      0.000
NC       .070       .070      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      3.100      8.000   1302.000   1330.000     30.000     30.000     30.000      0.000      0.000      0.000
GR    646.000   1200.000    644.500   1302.000    640.300   1305.000    639.500   1307.000    640.200   1310.000
GR    641.700   1321.000    644.700   1330.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .100       .300       0.000      0.000      0.000      0.000      0.000
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X1	4.000	7.000	440.000	471.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	647.000	350.000	645.700	440.000	641.000	450.000	640.200	454.000	640.900	459.000
GR	645.800	471.000	647.000	570.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.360	0.000
X1	4.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	1.510	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.600	7.000	500.000	552.000	400.000	400.000	400.000	0.000	-.830	0.000
GR	650.000	400.000	649.400	500.000	645.700	523.000	645.100	527.000	645.600	533.000
GR	649.700	552.000	650.700	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5.000	0.000	0.000	0.000	275.000	275.000	275.000	0.000	.830	0.000
X1	5.900	8.000	610.000	635.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	651.700	550.000	650.800	610.000	646.200	614.000	645.200	621.000	646.200	630.000
GR	648.200	635.000	650.000	700.000	652.800	800.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE MARTINSVILLE RD.

X1	5.980	10.000	585.000	600.000	91.000	91.000	91.000	0.000	0.000	0.000
GR	652.000	585.000	648.300	585.100	646.400	587.000	645.300	593.500	646.300	598.000
GR	648.000	598.000	648.500	598.100	649.700	600.000	651.000	700.000	653.500	800.000
SB	0.000	1.200	2.600	80.000	12.000	0.000	60.000	0.000	645.300	645.300
X1	6.020	0.000	0.000	0.000	18.000	18.000	18.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	650.500	651.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	651.000	651.000	0.000
NC	.095	.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6.100	8.000	570.000	610.000	51.000	51.000	51.000	0.000	0.000	0.000
GR	651.800	500.000	650.200	570.000	646.400	587.000	646.300	590.000	646.500	597.000
GR	648.100	600.000	650.400	610.000	652.500	700.000	0.000	0.000	0.000	0.000
QT	5.000	345.000	490.000	560.000	700.000	560.000	0.000	0.000	0.000	0.000
NC	0.000	.080	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	6.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.590	0.000
X1	6.600	8.000	460.000	525.000	865.000	865.000	865.000	0.000	-.980	0.000
GR	655.000	370.000	652.300	460.000	649.900	477.000	648.900	482.000	649.700	485.000
GR	652.500	500.000	653.000	525.000	655.000	630.000	0.000	0.000	0.000	0.000
X1	7.000	8.000	475.000	500.000	825.000	825.000	825.000	0.000	0.000	0.000
GR	655.000	360.000	654.300	400.000	651.900	475.000	649.900	477.000	648.900	482.000
GR	649.700	485.000	652.500	500.000	656.900	600.000	0.000	0.000	0.000	0.000
QT	5.000	275.000	395.000	450.000	560.000	450.000	0.000	0.000	0.000	0.000

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X1      7.010     9.000   718.000   743.000   500.000   500.000   500.000     0.000    -2.030     0.000
GR    658.100   600.000   656.200   700.000   655.100   718.000   652.100   725.000   651.700   730.000
GR    652.600   736.000   654.700   743.000   655.800   786.000   658.500   900.000     0.000     0.000
NC       .070      .070     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1      7.100     0.000     0.000     0.000   600.000   600.000   600.000     0.000      .930     0.000

X1      7.500     0.000     0.000     0.000   710.000   710.000   710.000     0.000     1.100     0.000

X1      7.600     0.000     0.000     0.000   500.000   500.000   500.000     0.000      .850     0.000

X1      7.700     0.000     0.000     0.000   500.000   500.000   500.000     0.000      .850     0.000

X1      7.800    10.000   442.000   480.000   500.000   500.000   500.000     0.000    -1.150     0.000
GR    662.700   200.000   661.600   300.000   660.000   400.000   659.300   442.000   656.500   459.000
GR    655.400   467.000   655.900   473.000   658.800   480.000   660.700   500.000   661.500   501.000

X1      8.000     0.000     0.000     0.000   680.000   680.000   680.000     0.000     1.150     0.000

X1      8.500     7.000   790.000   806.000   600.000   600.000   600.000     0.000     -.560     0.000
GR    661.500   725.000   659.100   790.000   656.900   794.000   656.500   797.000   656.900   803.000
GR    659.600   806.000   661.000   875.000     0.000     0.000     0.000     0.000     0.000     0.000

X1      8.900     0.000     0.000     0.000   625.000   625.000   625.000     0.000      .560     0.000

        **FOOTBRIDGE-X5

X1      8.910     0.000     0.000     0.000   138.000   138.000   138.000     0.000      .400     0.000

X1      8.920     0.000     0.000     0.000     1.000     1.000     1.000     0.000     0.000     0.000
X5     -4.000      .100      .100      .100      .100     0.000     0.000     0.000     0.000     0.000

        **D/S FACE KOZMA

X1      8.980     7.000   790.000   806.000    11.000    11.000    11.000     0.000     0.000     0.000
GR    661.800   725.000   659.400   790.000   656.900   794.000   656.900   797.000   656.900   803.000
GR    659.400   806.000   661.800   875.000     0.000     0.000     0.000     0.000     0.000     0.000

X1      8.990     0.000     0.000     0.000     1.000     1.000     1.000     0.000     0.000     0.000
X2      0.000     0.000     0.000   659.800   661.800     0.000     0.000     0.000     0.000     0.000

X1      9.010     0.000     0.000     0.000    12.000    12.000    12.000     0.000     0.000     0.000
X2      0.000     0.000     0.000   659.800   661.800     0.000     0.000     0.000     0.000     0.000

X1      9.020     0.000     0.000     0.000     1.000     1.000     1.000     0.000     0.000     0.000
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X1	9.100	7.000	784.000	800.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	661.500	730.000	660.200	784.000	657.200	788.000	656.900	793.000	657.000	797.000
GR	658.800	800.000	661.700	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.200	.400	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									
X1	9.180	6.000	141.500	158.500	350.000	350.000	350.000	0.000	0.000	0.000
GR	662.700	100.000	660.800	141.500	657.000	143.000	657.000	157.000	660.800	158.500
GR	662.700	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	657.000	657.000
X1	9.220	0.000	0.000	0.000	7.000	7.000	7.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	660.800	662.700	0.000	0.000	0.000	0.000	0.000
X1	9.250	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.400	0.000
	**FOOTBRIDGE-SB									
X1	9.280	6.000	141.500	158.500	200.000	200.000	200.000	0.000	0.000	0.000
GR	663.200	100.000	661.800	141.500	658.100	143.000	658.100	157.000	661.800	158.500
GR	663.200	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	658.100	658.100
X1	9.320	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	661.800	663.200	0.000	0.000	0.000	0.000	0.000
X1	9.350	0.000	0.000	0.000	50.000	50.000	50.000	0.000	.100	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	9.500	6.000	321.000	363.000	250.000	250.000	250.000	0.000	-.800	0.000
GR	665.500	280.000	664.700	321.000	659.300	344.000	659.200	355.000	665.300	363.000
GR	667.400	570.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.000	0.000	0.000	0.000	830.000	830.000	830.000	.910	.800	0.000
	**FOOTBRIDGE-X5									
X1	10.700	11.000	1044.000	1078.000	940.000	940.000	940.000	.690	-.500	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.710	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	-.200	.300	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									

X1	10.780	6.000	102.000	128.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.000	668.000	0.000
GR	669.100	100.000	666.900	102.000	661.000	112.500	661.000	117.500	666.900	128.000
GR	669.100	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.580	3.000	30.000	15.000	0.000	93.000	0.000	661.000	661.000
X1	10.820	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	666.900	669.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	669.100	669.100	0.000
X1	10.900	11.000	1044.000	1078.000	50.000	50.000	50.000	.690	0.000	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE SUMPTER RD.

X1	10.980	9.000	977.000	1001.000	50.000	50.000	50.000	.670	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.500	668.500	0.000
GR	670.000	950.000	667.600	977.000	664.200	981.000	662.600	983.000	662.200	985.000
GR	662.200	988.000	663.500	1000.000	667.600	1001.000	670.000	1002.000	0.000	0.000
SB	0.000	1.470	2.800	50.000	16.000	0.000	67.000	0.000	662.200	662.200
X1	11.020	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	667.600	670.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	670.000	670.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.100	10.000	950.000	979.000	50.000	50.000	50.000	.690	0.000	0.000
GR	670.700	900.000	668.700	950.000	666.800	958.000	664.300	960.000	662.600	967.000
GR	662.600	969.000	664.000	975.000	666.500	979.000	667.500	1000.000	672.000	1100.000
QT	5.000	225.000	330.000	370.000	470.000	370.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-X5

X1	11.500	0.000	0.000	0.000	225.000	225.000	225.000	0.000	.370	0.000
X1	11.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12.000	8.000	323.000	353.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	672.000	290.000	699.900	323.000	664.500	332.000	663.800	336.000	664.400	339.000
GR	665.300	347.000	669.200	353.000	672.000	400.000	0.000	0.000	0.000	0.000
X1	12.900	7.000	266.000	298.000	715.000	715.000	715.000	.750	0.000	0.000
GR	671.500	240.000	670.200	266.000	666.800	270.000	665.800	277.000	665.900	281.000
GR	670.400	298.000	671.500	323.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. EAST CROSSING									
X1	12.980	7.000	388.000	400.000	100.000	100.000	100.000	.750	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	671.900	671.900	0.000
GR	673.800	373.000	670.500	388.000	666.400	389.000	665.900	395.000	666.400	399.000
GR	670.500	400.000	673.800	415.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.370	2.500	32.000	9.000	0.000	36.000	0.000	665.900	665.900
X1	13.020	0.000	0.000	0.000	42.000	42.000	42.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	670.500	673.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	673.800	673.800	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13.100	8.000	430.000	458.000	50.000	50.000	50.000	.750	0.000	0.000
GR	675.000	400.000	675.000	400.000	669.500	430.000	666.700	438.000	666.400	445.000
GR	666.400	451.000	669.600	458.000	675.000	490.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	13.500	8.000	463.000	488.000	800.000	800.000	800.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	13.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000
X1	14.000	8.000	463.000	488.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
X1	14.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.050	0.000
X1	14.500	0.000	0.000	0.000	425.000	425.000	425.000	0.000	1.050	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	14.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
X1	14.900	8.000	331.000	390.000	150.000	150.000	150.000	.680	0.000	0.000
GR	677.000	260.000	673.400	331.000	670.100	345.000	670.000	350.000	670.100	355.000
GR	672.700	372.000	674.000	390.000	677.000	440.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. MIDDLE CROSSING									

X1	14.980	6.000	130.000	139.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	675.000	100.000	671.900	130.000	670.000	130.500	670.000	138.500	671.900	139.000
GR	675.000	169.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.600	2.300	0.000	9.000	0.000	17.000	0.000	670.000	670.000
X1	15.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	671.900	675.000	0.000	0.000	0.000	0.000	0.000
BT	6.000	100.000	675.000	0.000	130.000	675.000	671.900	130.500	676.800	671.900
BT	138.500	676.800	671.900	139.000	675.000	671.900	169.000	675.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
X1	15.100	7.000	277.000	296.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	674.000	250.000	673.800	277.000	670.300	279.000	670.300	282.000	670.900	285.000
GR	673.200	296.000	674.000	325.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	16.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	.100	0.000

**FOOTBRIDGE-X5

X1	16.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	16.900	8.000	393.000	420.000	250.000	250.000	250.000	0.000	0.000	0.000
GR	675.000	392.000	675.000	392.500	674.600	393.000	670.700	400.000	670.500	408.000
GR	670.800	417.000	672.700	420.000	674.500	470.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILMONT RD.

X1	16.980	8.000	800.000	808.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	675.000	675.000	0.000
GR	676.000	758.000	676.000	759.000	676.000	760.000	673.900	800.000	671.200	802.000
GR	671.700	806.000	673.900	808.000	676.300	830.000	0.000	0.000	0.000	0.000
SB	0.000	1.360	2.600	80.000	8.000	0.000	20.000	0.000	671.200	671.200
X1	17.020	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	673.900	676.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	676.200	676.200	0.000
X1	17.100	8.000	388.000	419.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.000	369.000	678.000	370.000	674.500	388.000	671.900	397.000	671.200	404.000
GR	671.600	411.000	674.200	419.000	678.000	430.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	18.000	9.000	490.000	523.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	677.000	470.000	674.600	490.000	674.200	495.000	672.600	496.000	672.500	498.000
GR	671.800	504.000	672.300	513.000	675.800	523.000	676.900	530.000	0.000	0.000

**FOOTBRIDGE-X5

X1	18.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	18.900	6.000	242.000	269.000	440.000	440.000	440.000	0.000	0.000	0.000
GR	675.300	242.000	672.100	247.000	671.800	253.000	672.000	257.000	673.900	269.000
GR	675.500	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILLIS RD. WEST CROSSING

X1	18.980	6.000	251.000	261.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.200	677.200	0.000
GR	677.700	215.000	675.400	251.000	672.100	252.000	672.800	256.000	675.400	261.000
GR	677.700	290.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	2.300	0.000	9.000	0.000	29.700	0.000	672.100	672.100
X1	19.020	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	675.400	677.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.700	677.700	0.000
BT	6.000	215.000	677.700	0.000	251.000	677.700	0.000	251.100	680.400	0.000
BT	260.900	680.400	0.000	261.000	677.700	0.000	290.000	677.700	0.000	0.000
X1	19.100	9.000	200.000	234.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.500	180.000	677.000	190.000	675.400	200.000	675.100	208.000	672.400	210.000
GR	671.900	219.000	672.200	228.000	674.900	234.000	678.500	260.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	19.900	9.000	490.000	526.000	475.000	475.000	475.000	0.000	0.000	0.000
GR	679.000	470.000	678.000	480.000	676.000	490.000	675.700	495.000	672.400	500.000
GR	672.100	505.000	672.100	512.000	676.000	526.000	679.000	550.000	0.000	0.000

** D/S FACE ELWELL RD.

X1	19.980	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.500	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= .100 CEHV= .300
*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	7.09	643.99	0.00	643.50	644.16	.17	0.00	0.00	642.30
820.	30.	745.	45.	47.	215.	57.	0.	0.	641.70
0.00	.64	3.46	.79	.080	.050	.080	0.000	636.90	583.29
.001499	0.	0.	0.	0	0	5	0.00	144.67	727.96

*SECNO 2.200

2.20	7.48	645.13	0.00	0.00	645.32	.19	1.16	.01	642.75
820.	80.	677.	63.	90.	176.	71.	5.	2.	642.75
.06	.89	3.84	.89	.080	.050	.080	.050	637.65	569.64
.001826	700.	700.	700.	2	0	0	0.00	164.85	734.49

*SECNO 2.900
3280 CROSS SECTION 2.90 EXTENDED .78 FEET

2.90	8.39	646.79	0.00	0.00	646.91	.12	1.58	.01	643.90
820.	347.	303.	169.	200.	74.	138.	11.	5.	644.80
.14	1.73	4.08	1.22	.080	.050	.080	.050	638.40	1200.00
.002852	700.	700.	700.	2	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500
*SECNO 2.980
3280 CROSS SECTION 2.98 EXTENDED .83 FEET

** D/S FACE JUDD RD.

2.98	8.23	647.03	0.00	0.00	647.10	.07	.18	.02	645.10
820.	9.	226.	586.	10.	68.	424.	12.	6.	643.20
.15	.90	3.32	1.38	.080	.050	.080	.050	638.80	1290.00
.001795	80.	80.	80.	2	0	0	0.00	200.00	1490.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.82	2.90	200.00	10.00	0.00	56.52	0.00	638.80	638.80

*SECNO 3.020
3280 CROSS SECTION 3.02 EXTENDED 1.07 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIMB SLOPE	VLOB XLOBL	VCH XLCH	VROB XLOBR	XNL ITRIAL	XNCH IDC	XNR ICONT	WTN CORAR	ELMIN TOPWID	SSTA ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
652.98	647.10	0.00	634.	183.	57.	60.	644.82	646.20

3.02	8.47	647.27	0.00	0.00	647.33	.05	.23	0.00	645.10
820.	10.	209.	601.	11.	71.	469.	13.	6.	643.20
.15	.85	2.97	1.28	.080	.050	.080	.050	638.80	1290.00
.001361	40.	40.	40.	2	0	4	0.00	200.00	1490.00

*SECNO 3.100
3280 CROSS SECTION 3.10 EXTENDED 1.29 FEET

3.10	7.80	647.30	0.00	0.00	647.38	.08	.04	.01	644.50
820.	227.	450.	143.	208.	158.	136.	13.	6.	644.70
.16	1.09	2.84	1.05	.070	.050	.070	.050	639.50	1200.00
.001038	30.	30.	30.	2	0	0	0.00	200.00	1400.00

CCHV= .100 CEHV= .300
*SECNO 4.000
3280 CROSS SECTION 4.00 EXTENDED 1.04 FEET

4.00	7.84	648.04	0.00	0.00	648.14	.09	.76	.00	645.70
820.	153.	507.	160.	153.	171.	163.	21.	9.	645.80
.25	1.00	2.97	.98	.070	.050	.070	.050	640.20	350.00
.001124	700.	700.	700.	2	0	0	0.00	220.00	570.00

*SECNO 4.100
3280 CROSS SECTION 4.10 EXTENDED .35 FEET

4.10	7.14	648.70	0.00	0.00	648.92	.21	.74	.04	647.06
820.	98.	623.	99.	90.	149.	94.	25.	12.	647.16
.28	1.09	4.18	1.06	.070	.050	.070	.050	641.56	350.00
.002669	450.	450.	450.	2	0	0	0.00	220.00	570.00

*SECNO 4.500
3280 CROSS SECTION 4.50 EXTENDED .24 FEET

4.50	7.04	650.11	0.00	0.00	650.36	.24	1.43	.01	648.57
820.	88.	645.	88.	80.	146.	83.	29.	14.	648.67
.32	1.09	4.43	1.05	.070	.050	.070	.050	643.07	350.00
.003078	500.	500.	500.	2	0	0	0.00	220.00	570.00

*SECNO 4.600
3280 CROSS SECTION 4.60 EXTENDED 1.75 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
4.60	6.65	650.92	0.00	0.00	651.00	.07	.62	.02	648.57
820.	175.	592.	53.	205.	238.	74.	33.	16.	648.87
.38	.85	2.49	.71	.085	.050	.085	.050	644.27	400.00
.000939	400.	400.	400.	2	0	0	0.00	200.00	600.00

*SECNO 5.000
3280 CROSS SECTION 5.00 EXTENDED 1.23 FEET

5.00	6.13	651.23	0.00	0.00	651.34	.11	.34	.01	649.40
820.	143.	642.	35.	153.	211.	49.	36.	17.	649.70
.40	.93	3.04	.72	.085	.050	.085	.050	645.10	400.00
.001645	275.	275.	275.	2	0	0	0.00	200.00	600.00

*SECNO 5.900
3280 CROSS SECTION 5.90 EXTENDED .54 FEET

5.90	7.04	652.24	0.00	0.00	652.34	.09	.99	.00	650.80
820.	36.	456.	328.	60.	145.	294.	43.	21.	648.20
.49	.61	3.15	1.12	.085	.050	.085	.050	645.20	550.00
.001229	700.	700.	700.	3	0	0	0.00	230.11	780.11

CCHV= .300 CEHV= .500
*SECNO 5.980
3280 CROSS SECTION 5.98 EXTENDED .38 FEET

** D/S FACE MARTINSVILLE RD.

5.98	7.08	652.38	0.00	0.00	652.58	.20	.19	.05	652.00
820.	0.	422.	398.	0.	88.	240.	44.	21.	649.70
.50	0.00	4.77	1.66	.085	.050	.085	.050	645.30	585.00
.004138	91.	91.	91.	2	0	0	0.00	170.05	755.05

SPECIAL BRIDGE

SB	XK	XKOR	COPQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.20	2.60	80.00	12.00	0.00	60.00	0.00	645.30	645.30

*SECNO 6.020
3280 CROSS SECTION 6.02 EXTENDED 1.07 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIB	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
655.86	652.58	0.00	431.	390.	60.	62.	650.50	651.50

	6.02	7.77	653.07	0.00	0.00	653.16	.09	.58	0.00	652.00
	820.	0.	342.	478.	0.	99.	358.	44.	21.	649.70
	.50	0.00	3.46	1.34	.085	.050	.085	.050	645.30	585.00
	.001958	18.	18.	18.	2	0	3	0.00	197.79	782.79

*SECNO 6.100
3280 CROSS SECTION 6.10 EXTENDED 1.35 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
	6.10	6.84	653.14	0.00	0.00	653.24	.09	.07	.00	650.20
	820.	126.	584.	110.	151.	207.	153.	44.	22.	650.40
	.51	.83	2.82	.72	.095	.050	.095	.050	646.30	500.00
	.001047	51.	51.	51.	2	0	0	0.00	200.00	700.00

CCHV= .100 CEHV= .300
*SECNO 6.500
3280 CROSS SECTION 6.50 EXTENDED 1.24 FEET

	6.50	6.74	653.63	0.00	0.00	653.70	.07	.46	.00	650.79
	700.	101.	496.	103.	143.	202.	143.	50.	24.	650.99
	.58	.71	2.45	.72	.095	.050	.080	.050	646.89	500.00
	.000811	500.	500.	500.	2	0	0	0.00	200.00	700.00

*SECNO 6.600
3280 CROSS SECTION 6.60 EXTENDED .34 FEET

	6.60	6.44	654.36	0.00	0.00	654.41	.05	.71	.00	651.32
	700.	96.	513.	91.	152.	248.	140.	60.	29.	652.02
	.72	.63	2.07	.65	.095	.050	.080	.050	647.92	370.00
	.000824	865.	865.	865.	2	0	0	0.00	260.00	630.00

*SECNO 7.000
3280 CROSS SECTION 7.00 EXTENDED .29 FEET

	7.00	6.39	655.29	0.00	0.00	655.41	.12	.98	.02	651.90
	700.	198.	415.	88.	189.	119.	88.	69.	33.	652.50
	.81	1.04	3.49	.99	.095	.050	.080	.050	648.90	360.00
	.001837	825.	825.	825.	2	0	0	0.00	203.34	563.34

*SECNO 7.010

7.01	6.30	655.97	0.00	0.00	656.03	.06	.61	.01	653.07
560.	69.	310.	181.	128.	127.	221.	74.	36.	652.67

.90	.54	2.44	.82	.095	.050	.080	.050	649.67	605.21
.000816	500.	500.	500.	2	0	0	0.00	273.72	878.93

*SECNO 7.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.10	5.93	656.53	0.00	0.00	656.60	.07	.57	.00	654.00
560.	69.	316.	174.	89.	117.	172.	80.	39.	653.60
.98	.78	2.70	1.01	.070	.050	.070	.050	650.60	625.14
.001102	600.	600.	600.	2	0	0	0.00	237.80	862.94

*SECNO 7.500

7.50	5.71	657.41	0.00	0.00	657.50	.09	.90	.01	655.10
560.	60.	337.	164.	70.	112.	147.	86.	43.	654.70
1.07	.85	3.01	1.11	.070	.050	.070	.050	651.70	636.46
.001459	710.	710.	710.	2	0	0	0.00	217.40	853.86

*SECNO 7.600

7.60	5.62	658.17	0.00	0.00	658.27	.10	.77	.00	655.95
560.	56.	345.	159.	63.	110.	138.	90.	45.	655.55
1.13	.88	3.14	1.15	.070	.050	.070	.050	652.55	640.94
.001634	500.	500.	500.	2	0	0	0.00	209.33	850.27

*SECNO 7.700

7.70	5.60	659.00	0.00	0.00	659.10	.10	.83	.00	656.80
560.	55.	347.	158.	62.	109.	136.	93.	48.	656.40
1.19	.89	3.17	1.16	.070	.050	.070	.050	653.40	641.81
.001670	500.	500.	500.	1	0	0	0.00	207.77	849.57

*SECNO 7.800

7.80	5.58	659.83	0.00	0.00	659.95	.12	.85	.00	658.15
560.	77.	458.	25.	87.	150.	25.	96.	50.	657.65
1.24	.89	3.04	1.01	.070	.050	.070	.050	654.25	338.18
.001730	500.	500.	500.	1	0	0	0.00	162.18	500.36

*SECNO 8.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8.00	5.61	661.01	0.00	0.00	661.12	.12	1.17	.00	659.30
560.	78.	457.	25.	88.	151.	25.	101.	52.	658.80
1.31	.89	3.03	1.01	.070	.050	.070	.050	655.40	337.54
.001708	680.	680.	680.	1	0	0	0.00	162.83	500.37

*SECNO 8.500
3280 CROSS SECTION 8.50 EXTENDED 1.44 FEET

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      8.50      5.95    661.89      0.00      0.00    661.95       .06       .82       .01    658.54
      560.       162.      226.      171.      139.      82.      148.      105.       55.     659.04
      1.41      1.16      2.76      1.16      .070      .050      .070      .050    655.94    725.00
   .001111       600.      500.      600.         2         0         0      0.00    150.00    875.00


*SECNO 8.900
3280 CROSS SECTION       8.90 EXTENDED       1.55 FEET


      8.90      6.05    662.55      0.00      0.00    662.60       .05       .65       .00    659.10
      560.       165.      220.      175.      146.      84.      155.      110.       57.     659.60
      1.51      1.13      2.63      1.13      .070      .050      .070      .050    656.50    725.00
   .000986       625.      625.      625.         2         0         0      0.00    150.00    875.00


*SECNO 8.910
3280 CROSS SECTION       8.91 EXTENDED       1.29 FEET


         **FOOTBRIDGE-X5

      8.91      5.79    662.69      0.00      0.00    662.76       .07       .16       .00    659.50
      560.       158.      236.      167.      130.      80.      137.      111.       57.     660.00
      1.53      1.22      2.96      1.21      .070      .050      .070      .050    656.90    725.00
   .001332       138.      138.      138.         2         0         0      0.00    150.00    875.00


*SECNO 8.920
 WATER EL=X5 CARD=    662.792
3280 CROSS SECTION       8.92 EXTENDED       1.39 FEET


      8.92      5.89    662.79      0.00      0.00    662.86       .06       .00       .00    659.50
      560.       161.      229.      170.      136.      81.      144.      112.       57.     660.00
      1.53      1.18      2.83      1.18      .070      .050      .070      .050    656.90    725.00
   .001180         1.        1.        1.         0         0         0      0.00    150.00    875.00


*SECNO 8.980
3280 CROSS SECTION       8.98 EXTENDED       1.00 FEET


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


         **D/S FACE KOZMA

      8.98      5.91    662.81      0.00      0.00    662.87       .06       .01       .00    659.40
      560.       160.      230.      170.      143.      86.      152.      112.       57.     659.40
      1.53      1.12      2.68      1.12      .070      .050      .070      .050    656.90    725.00
   .000990        11.       11.       11.         1         0         0      0.00    150.00    875.00


*SECNO 8.990
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3280 CROSS SECTION      8.99 EXTENDED       .95 FEET


3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  661.80 MAX ELLC=  659.80

     8.99      5.85   662.75      0.00      0.00   662.90       .15       .00       .03   659.40
     560.      129.      203.      228.       75.      53.       79.      112.       57.    659.40
     1.53      1.72      3.85      2.87      .070     .050      .070     .050   656.90   725.00
  .015395        1.        1.        1.         2        0         0  -166.00   150.00   875.00

*SECNO 9.010
3280 CROSS SECTION      9.01 EXTENDED      1.15 FEET


3370 NORMAL BRIDGE,NRD=  0 MIN ELTRD=  661.80 MAX ELLC=  659.80

     9.01      6.04   662.94      0.00      0.00   663.05       .11       .15       .00   659.40
     560.      136.      183.      241.       87.      56.       93.      112.       57.    659.40
     1.53      1.56      3.27      2.59      .070     .050      .070     .050   656.90   725.00
  .010293        12.       12.       12.         2        0         0  -166.00   150.00   875.00

*SECNO 9.020
3280 CROSS SECTION      9.02 EXTENDED      1.21 FEET


     9.02      6.11   663.01      0.00      0.00   663.06       .05       .00       .01   659.40
     560.      166.      218.      176.      157.      89.      166.      112.       57.    659.40
     1.53      1.06      2.45      1.06      .070     .050      .070     .050   656.90   725.00
  .000786        1.        1.        1.         2        0         0      0.00   150.00   875.00

*SECNO 9.100
3280 CROSS SECTION      9.10 EXTENDED      1.55 FEET


     9.10      6.15   663.05      0.00      0.00   663.10       .06       .04       .00   660.20
     560.      125.      226.      209.      119.      87.      168.      112.       57.    658.80
     1.54      1.05      2.60      1.24      .070     .050      .070     .050   656.90   730.00
  .000896        50.       50.       50.         2        0         0      0.00   130.00   860.00

CCHV=     .200 CRHV=     .400
*SECNO 9.180
3280 CROSS SECTION      9.18 EXTENDED       .74 FEET

   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


       **FOOTBRIDGE-SB

     9.18      6.44   663.44      0.00      0.00   663.58       .15       .44       .04   660.80
     560.       91.      378.       91.       70.     104.       70.      115.       58.    660.80
```

1.57	1.30	3.64	1.30	.070	.050	.070	.050	657.00	100.00
.001920	350.	350.	350.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	657.00	657.00

*SECNO 9.220
3280 CROSS SECTION 9.22 EXTENDED .95 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
665.26	663.58	0.00	319.	240.	60.	65.	660.80	662.70

9.22	6.65	663.65	0.00	0.00	663.77	.12	.19	0.00	660.80
560.	100.	361.	100.	79.	107.	79.	115.	58.	660.80
1.57	1.27	3.36	1.27	.070	.050	.070	.050	657.00	100.00
.001560	7.	7.	7.	2	0	3	0.00	100.00	200.00

*SECNO 9.250
3280 CROSS SECTION 9.25 EXTENDED .71 FEET

9.25	6.41	663.81	0.00	0.00	663.96	.15	.18	.01	661.20
560.	90.	380.	90.	69.	103.	69.	115.	59.	661.20
1.58	1.31	3.69	1.31	.070	.050	.070	.050	657.40	100.00
.001979	100.	100.	100.	2	0	0	0.00	100.00	200.00

*SECNO 9.280
3280 CROSS SECTION 9.28 EXTENDED 1.02 FEET

**FOOTBRIDGE-SB

9.28	6.12	664.22	0.00	0.00	664.37	.15	.41	.00	661.80
560.	98.	364.	98.	71.	98.	71.	116.	59.	661.80
1.60	1.37	3.70	1.37	.070	.050	.070	.050	658.10	100.00
.002098	200.	200.	200.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	658.10	658.10

*SECNO 9.320
3280 CROSS SECTION 9.32 EXTENDED 1.12 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
666.04	664.37	0.00	357.	203.	60.	63.	661.80	663.20

9.32	6.22	664.32	0.00	0.00	664.46	.13	.09	0.00	661.80
560.	102.	356.	102.	76.	100.	76.	116.	59.	661.80
1.60	1.35	3.55	1.35	.070	.050	.070	.050	658.10	100.00
.001885	8.	8.	8.	2	0	4	0.00	100.00	200.00

*SECNO 9.350
3280 CROSS SECTION 9.35 EXTENDED 1.12 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
9.35	6.22	664.42	0.00	0.00	664.55	.13	.09	.00	661.90
560.	102.	356.	102.	76.	100.	76.	117.	59.	661.90
1.61	1.35	3.55	1.35	.070	.050	.070	.050	658.20	100.00
.001886	50.	50.	50.	0	0	0	0.00	100.00	200.00

CCHV= .100 CEHV= .300
*SECNO 9.500
3280 CROSS SECTION 9.50 EXTENDED .15 FEET

9.50	6.45	664.85	0.00	0.00	664.98	.14	.43	.00	663.90
560.	13.	546.	2.	22.	181.	6.	118.	60.	664.50
1.63	.56	3.01	.26	.070	.050	.070	.050	658.40	280.00
.001584	250.	250.	250.	2	0	0	0.00	117.08	397.08

*SECNO 10.000
3280 CROSS SECTION 10.00 EXTENDED .56 FEET

10.00	6.87	666.07	0.00	0.00	666.19	.13	1.21	.00	664.70
560.	22.	529.	9.	36.	181.	26.	122.	62.	665.30
1.71	.62	2.92	.34	.085	.050	.085	.050	659.20	280.00
.001343	830.	830.	830.	2	0	0	0.00	143.83	423.83

*SECNO 10.700

**FOOTBRIDGE-X5

10.70	7.49	667.79	0.00	0.00	668.09	.31	1.85	.05	666.70
560.	4.	552.	3.	7.	124.	7.	126.	65.	667.20
1.77	.65	4.46	.47	.085	.050	.085	.050	660.30	987.10
.003151	940.	940.	940.	2	0	0	0.00	-62.84	1049.94

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*SECNO 10.710 ----- --- ----
 WATER EL=X5 CARD=   668.089
    10.71      7.79     668.09      0.00      0.00     668.35       .26       .00       .00    666.70
     560.        7.        543.       10.       11.       131.       18.       126.       65.     667.20
     1.77       .69       4.15       .54      .085      .050      .085      .050    660.30     983.74
  .002533        1.         1.        1.         0         0         0      0.00     84.95    1068.69

*SECNO 10.780
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


        **FOOTBRIDGE-SB

    10.78      7.34     668.34      0.00      0.00     668.63       .29       .27       .01    666.90
     560.        1.        559.        1.        1.       129.        1.       127.       65.     666.90
     1.78       .58       4.34       .58      .085      .050      .085      .050    661.00     100.70
  .002939      100.      100.       100.         2         0         0      0.00     28.61     129.30


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     0.00       1.58       3.00       30.00      15.00       0.00      93.00       0.00     661.00     661.00

*SECNO 10.820
PRESSURE AND WEIR FLOW

 EGPRS       EGLWC       H3         QWEIR      QPR        BAREA     TRAPEZOID      ELLC       ELTRD
                                                                      AREA
   669.23     668.63       0.00          4.       556.        93.        89.       666.90     669.10


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=      669.10 ELREA=      669.10

    10.82      7.99     668.99      0.00      0.00     669.22       .23       .59       0.00   666.90
     560.        0.        560.        0.        0.       146.        0.       127.       65.     666.90
     1.78       0.00       3.84       0.00      .060      .050      .060      .050    661.00     102.00
  .002047       15.        15.        15.         2         0         2      0.00     26.00     128.00


*SECNO 10.900
    10.90      8.35     669.15      0.00      0.00     669.31       .17       .09       .01    667.20
     560.       20.        496.       43.       21.       144.       53.       127.       65.     667.70
     1.78       .95       3.45       .81      .060      .050      .060      .050    660.80     977.44
  .001540       50.        50.        50.         2         0         0      0.00    126.36    1103.81


CCHV=     .300 CEHV=     .500
*SECNO 10.980

        ** D/S FACE SUMPTER RD.

    10.98      6.90     669.10      0.00      0.00     669.64       .54       .14       .19    667.60
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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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Sensitivity

FN=0.7

NORTH BRANCH SWAM CREEK
(REVISED)

Sumpter Twp
FIS
Wayne Co.
DNR COPY - ✓

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C
C      19
C  2.98 ** D/S FACE JUDD RD.
C  5.98 ** D/S FACE MARTINSVILLE RD.
C   8.91**FOOTBRIDGE-X5
C   8.98**D/S FACE KOZMA
C   9.18**FOOTBRIDGE-SB
C   9.28**FOOTBRIDGE-SB
C   10.7**FOOTBRIDGE-X5
C  10.78**FOOTBRIDGE-SB
C 10.98 ** D/S FACE SUMPTER RD.
C   11.5**FOOTBRIDGE-X5
C 12.98 ** D/S FACE WILLIS RD. EAST CROSSING
C  13.51**FOOTBRIDGE-X5
C  14.51**FOOTBRIDGE-X5
C 14.98 ** D/S FACE WILLIS RD. MIDDLE CROSSING
C   16.1**FOOTBRIDGE-X5
C 16.98 ** D/S FACE WILMONT RD.
C   18.1**FOOTBRIDGE-X5
C 18.98 ** D/S FACE WILLIS RD. WEST CROSSING
C 19.98 ** D/S FACE RIVELL RD.
T1       HUD-FIA H-4705
T2       SUMTER TOWNSHIP FIS
T3       SWAN CREEK 100 YR
J1    -1       4                                        -1          669.55
J2     1              -1
J3   200       0      150
ET                                          1.4
NC   .08     .08      .05      .1      .2
OT     5     400      570      650     820     650
X1   2.0       6      639      678       0       0       0
GR  645.     550    642.3      639   636.9     655   637.2     672   641.7     678
GR   645     750
X1   2.2       6      645      675     700     700     700              .75
GR   645     550      642      645   636.9     660   637.2     672     642     675
GR   645     750
X1   2.9       8     1287     1300     700     700     700
GR 646.0    1200    645.9     1201   645.0    1202   643.9    1287   638.4    1295
GR 639.6    1297    644.8     1300   646.0    1400
NC                             .3      .5
X1  2.98       7     1297     1308      80      80      80
GR 646.2    1290    645.1     1297   640.1    1300   638.8    1302   639.9    1305
GR 643.2    1308    646.2     1490
SB          1.82      2.9      200      10           56.52           638.8   638.8
X1  3.02                              40      40      40
X2                     1   644.82   646.2
NC  .070    .070
X1   3.1       8     1302     1330      30      30      30
GR   646    1200    644.5     1302   640.3    1305   639.5    1307   640.2    1310
GR 641.7    1321    644.7     1330     646    1400
NC                             .1      .2
X1   4.0       7      440      471     700     700     700
GR  647.     250    645.7      440    641.     450   640.2     454   640.9     459
GR 645.8     471     647.      570
X1   4.1                              450     450     450             1.36
X1   4.5                              500     500     500             1.51
NC  .085    .085
X1   4.6       7      500      552     400     400     400            -0.83
GR  650.     400    649.4      500   645.7     522   645.1     527   645.6     533
GR 649.7     552    650.7      600
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62	X1	5.0				275	275	275		-.83		
63	X1	5.9	8	610	635	700	700	700				
64	GR	651.7	550	650.8	610	646.2	614	645.2	621	646.2	630	
65	GR	648.2	635	650	700	652.8	800					
66	NC				.3	-.5						
67	X1	5.98	10	585.0	600.0	91	91	91				
68	GR	652	585	648.3	585.1	646.4	587	645.3	593.5	646.3	598	
69	GR	648	598	648.5	598.1	649.7	600	651	700	653.5	800	
70	SB		1.2	2.6	80	12		60		645.3	645.3	
71	X1	6.02				18	18	18				
72	X2			1	650.5	651.5			651	651		
73	X3	10										
76	NC	-.095	.095									
77	X1	6.1	8	570	610	51	51	51				
78	GR	651.8	500	650.2	570	646.4	587	646.3	590	646.5	597	
79	GR	648.1	600	650.4	610	652.5	700					
80	OT	5	345	490	560	700	560					
81	NC		.080		-.1	.3						
82	X1	6.5	0			500	500	500		-.59		
83	X1	6.6	8	460	525	865	865	865		-.98		
84	GR	655	370	652.3	460	649.9	477	648.9	482	649.7	485	
85	GR	652.5	500	653	525	655	630					
86	X1	7.0	8	475	500	825	825	825				
87	GR	655	360	654.3	400	651.9	475	649.9	477	648.9	482	
88	GR	649.7	485	652.5	500	656.9	600					
89	QT	5	275	395	450	560	450					
90	X1	7.01	8	718	742	500	500	500		-2.03		
91	GR	658.1	600	656.2	700	655.1	718	652.1	725	651.7	730	
92	GR	652.6	736	654.7	743	655.8	786	658.5	900			
93	NC	.070	.070									
94	X1	7.1	0			600	600	600		.93		
95	X1	7.5				710	710	710		1.1		
96	X1	7.6				500	500	500		.85		
97	X1	7.7				500	500	500		.85		
98	X1	7.8	10	442	480	500	500	500		-1.15		
99	GR	662.7	200	661.6	300	660.0	400	659.3	442	656.5	459	
100	GR	655.4	467	655.9	473	658.8	480	660.7	500	661.5	501	
101	X1	8.0				680	680	680		1.15		
102	X1	8.5	7	790	806	600	600	600		-.56		
103	GR	661.5	725	659.1	790	656.9	794	656.9	797	656.9	803	
104	GR	659.6	806	661.0	875							
105	X1	8.9				625	625	625		.56		
106	X1	8.91	0			138	138	138		0.4		
108	X1	8.92	0			1	1	1				
108.5	X5	-4	0.1	0.1	0.1	0.1						
109	X1	8.98	7	790	806	11	11	11				
110	GR	661.8	725	659.4	790	656.9	794	656.9	797	656.9	803	
111	GR	659.4	806	661.8	875							
112	X1	8.99	0			1	1	1				
113	X2				659.8	661.8						
114	X1	9.01	0			12	12	12				
115	X2				659.8	661.8						
116	X1	9.02	0			1	1	1				
117	X1	9.1	7	784	800	50	50	50				
118	GR	661.5	730	660.2	784	657.2	798	656.9	793	657	797	
119	GR	658.8	800	661.7	860							
120	NC				0.3	0.4						
121	X1	9.18	6	141.5	158.5	350	350	350				
122	GR	662.7	100	660.8	141.5	657.	143	657.	157	660.8	158.5	
123	GR	662.7	200									

124	SB	0	1.35	3.1	100	17	0	60	0	657.	657.
125	X1	9.22	0			7	7	7			
126	X2			1	660.8	662.7					
127	X1	9.25	0			100	100	100		0.4	
128	X1	9.28	6	141.5	158.5	200	200	200			
129	GR	663.2	100	661.8	141.5	658.1	143	658.1	157	661.8	158.5
130	GR	663.2	200								
131	SB	0	1.35	3.1	100	17	0	60	0	658.1	658.1
132	X1	9.32	0			8	8	8			
133	X2			1	661.8	663.2					
134	X1	9.35	0			50	50	50		0.1	
135	NC				0.1	0.3					
136	X1	9.5	6	321	363	250	250	250		-0.8	
137	GR	665.5	280	664.7	321	659.3	344	659.2	355	665.3	363
138	GR	667.4	570								
139	NC	.085	.085								
140	X1	10.0				930	830	830	.91	0.8	
141	X1	10.7	11	1044	1078	940	940	940	.69	-.5	
143	GR	672.7	900	669.9	1000	667.2	1044	661	1055	660.8	1057
144	GR	662.2	1071	667.7	1078	668.1	1100	669.2	1200	669.8	1300
145	GR	670.6	1400								
146	X1	10.71	0			1	1	1			
146.5	X5	-4	0.1	0.2	0.2	0.2					
147	X1	10.78	6	102	128	100	100	100			
147.5	X3	10							668	668.	
148	GR	669.1	100	666.9	102	661.	112.5	661	117.5	666.9	128
149	GR	669.1	130								
150	NC	.060	.060								
151	SB	0	1.58	3.0	30	15	0	93	0	661.	661.
152	X1	10.82	0			15	15	15			
153	X2			1	666.9	669.1					
153.5	X3	10							669.1	669.1	
154	X1	10.9	11	1044	1078	50	50	50	.69		
155	GR	672.7	900	669.9	1000	667.2	1044	661	1055	660.8	1057
156	GR	662.2	1071	667.7	1078	668.1	1100	669.2	1200	669.8	1300
157	GR	670.6	1400								
158	NC				.3	.5					
159	X1	10.38	9	977	1001	50	50	50	.67		
160	X3	10							668.5	668.5	
161	GR	670.	950	667.6	977	664.2	981	662.6	983	662.2	985
162	GR	662.2	988	663.5	1000	667.6	1001	670.	1002		
163	SB		1.77	2.8	50	16	0	67	0	662.2	662.2
164	X1	11.02				45	45	45			
165	X2			1	667.6	670.					
166	X3	10							670	670.	
167	NC	.060	.060								
167.5	QT	5	275	395	450	560	450				
168	X1	11.1	10	950	979	0	0	0	.69		
169	GR	670.7	900	668.7	950	666.8	959	664.3	960	662.6	967
170	GR	662.6	969	664	975	666.5	979	667.5	1000	672.0	1100
171	QT	5	225	330	370	470	370				
172	NC				.1	.3					
173	X1	11.5	0			225	225	225		.37	
175	X1	11.51	0			1	1	1			
175.5	X5	-4	0.1	0.2	0.2	0.2					
176	NC	.085	.085	0.05	0.1	0.3					
177	X1	12	9	323	353	500	500	500			
178	GR	672.	200	669.9	323	664.5	332	663.8	326	664.4	339
179	GR	665.3	347	669.2	353	670.	480	672.5	600		
180	X1	12.9	8	266	298	715	715	715	.75		

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
**************************************************

C
T1      HUD-FIA H-4705
T2      SUMTER TOWNSHIP FIS
T3      SWAN CREEK 100 YR

J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      -1.       4.        0.        0.    .001500      0.00       .5        0.    643.500    0.000

J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     1.000     0.000    -1.000     0.000     0.000      .700     0.000     0.000     0.000     0.000

NC      .080      .080      .050      .100      .300     0.000     0.000     0.000     0.000     0.000
QT     5.000   400.000   570.000   650.000   820.000   650.000     0.000     0.000     0.000     0.000

X1     2.000     6.000   639.000   678.000     0.000     0.000     0.000     0.000     0.000     0.000
GR   645.000   550.000   642.300   639.000   636.900   655.000   637.200   672.000   641.700   678.000
GR   645.000   750.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     2.200     6.000   645.000   675.000   700.000   700.000   700.000     0.000      .750     0.000
GR   645.000   550.000   642.000   645.000   636.900   660.000   637.200   672.000   642.000   675.000
GR   645.000   750.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     2.900     8.000  1287.000  1300.000   700.000   700.000   700.000     0.000     0.000     0.000
GR   646.000  1200.000   645.900  1201.000   645.000  1202.000   643.900  1287.000   638.400  1295.000
GR   639.600  1297.000   644.800  1300.000   646.000  1400.000     0.000     0.000     0.000     0.000
NC     0.000     0.000     0.000      .300      .500     0.000     0.000     0.000     0.000     0.000

     ** D/S FACE JUDD RD.

X1     2.980     7.000  1297.000  1308.000    80.000    80.000    80.000     0.000     0.000     0.000
GR   646.200  1290.000   645.100  1297.000   640.100  1300.000   638.800  1302.000   639.900  1305.000
GR   643.200  1308.000   646.200  1490.000     0.000     0.000     0.000     0.000     0.000     0.000
SB     0.000     1.820     2.900   200.000    10.000     0.000    56.520     0.000   638.800   638.800

X1     3.020     0.000     0.000     0.000    40.000    40.000    40.000     0.000     0.000     0.000
X2     0.000     0.000     1.000   644.820   646.200     0.000     0.000     0.000     0.000     0.000
NC      .070      .070     0.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

X1     3.100     8.000  1302.000  1330.000    30.000    30.000    30.000     0.000     0.000     0.000
GR   646.000  1200.000   644.500  1302.000   640.300  1305.000   639.500  1307.000   640.200  1310.000
GR   641.700  1321.000   644.700  1330.000   646.000  1400.000     0.000     0.000     0.000     0.000
NC     0.000     0.000     0.000      .100      .300     0.000     0.000     0.000     0.000     0.000
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X1	4.000	7.000	440.000	471.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	647.000	350.000	645.700	440.000	641.000	450.000	640.200	454.000	640.900	459.000
GR	645.800	471.000	647.000	570.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.360	0.000
X1	4.500	0.000	0.000	0.000	500.000	500.000	500.000	-0.000	1.510	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.600	7.000	500.000	552.000	400.000	400.000	400.000	0.000	-.830	0.000
GR	650.000	400.000	649.400	500.000	645.700	523.000	645.100	527.000	645.600	533.000
GR	649.700	552.000	650.700	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5.000	0.000	0.000	0.000	275.000	275.000	275.000	0.000	.830	0.000
X1	5.900	8.000	610.000	635.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	651.700	550.000	650.800	610.000	646.200	614.000	645.200	621.000	646.200	630.000
GR	648.200	635.000	650.000	700.000	652.800	800.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** O/S FACE MARTINSVILLE RD.

X1	5.980	10.000	585.000	600.000	91.000	91.000	91.000	0.000	0.000	0.000
GR	652.000	585.000	648.300	585.100	646.400	587.000	645.300	593.500	646.300	598.000
GR	648.000	598.000	648.500	598.100	649.700	600.000	651.000	700.000	653.500	800.000
SB	0.000	1.200	2.600	80.000	12.000	0.000	60.000	0.000	645.300	645.300
X1	6.020	0.000	0.000	0.000	18.000	18.000	18.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	650.500	651.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	651.000	651.000	0.000
NC	.095	.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6.100	8.000	570.000	610.000	51.000	51.000	51.000	0.000	0.000	0.000
GR	651.800	500.000	650.200	570.000	646.400	587.000	646.300	590.000	646.500	597.000
GR	648.100	600.000	650.400	610.000	652.500	700.000	0.000	0.000	0.000	0.000
QT	5.000	345.000	490.000	560.000	700.000	560.000	0.000	0.000	0.000	0.000
NC	0.000	.080	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	6.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.590	0.000
X1	6.600	8.000	460.000	525.000	865.000	865.000	865.000	0.000	-.980	0.000
GR	655.000	370.000	652.300	460.000	649.900	477.000	648.900	482.000	649.700	485.000
GR	652.500	500.000	653.000	525.000	655.000	630.000	0.000	0.000	0.000	0.000
X1	7.000	8.000	475.000	500.000	825.000	825.000	825.000	0.000	0.000	0.000
GR	655.000	360.000	654.300	400.000	651.900	475.000	649.900	477.000	648.900	482.000
GR	649.700	485.000	652.500	500.000	656.900	600.000	0.000	0.000	0.000	0.000
QT	5.000	275.000	395.000	450.000	560.000	450.000	0.000	0.000	0.000	0.000

X1	7.010	9.000	718.000	743.000	500.000	500.000	500.000	0.000	-2.030	0.000
GR	658.100	600.000	656.200	700.000	655.100	718.000	652.100	725.000	651.700	730.000
GR	652.600	736.000	654.700	743.000	655.800	786.000	658.500	900.000	0.000	0.000
NC	.070	.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7.100	0.000	0.000	0.000	600.000	600.000	600.000	0.000	.930	0.000
X1	7.500	0.000	0.000	0.000	710.000	710.000	710.000	0.000	1.100	0.000
X1	7.600	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.700	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.800	10.000	442.000	480.000	500.000	500.000	500.000	0.000	-1.150	0.000
GR	662.700	200.000	661.600	300.000	660.000	400.000	659.300	442.000	656.500	459.000
GR	655.400	467.000	655.900	473.000	658.800	480.000	660.700	500.000	661.500	501.000
X1	8.000	0.000	0.000	0.000	680.000	680.000	680.000	0.000	1.150	0.000
X1	8.500	7.000	790.000	806.000	600.000	600.000	600.000	0.000	-.560	0.000
GR	661.500	725.000	659.100	790.000	656.900	794.000	656.500	797.000	656.900	803.000
GR	659.600	806.000	661.000	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.900	0.000	0.000	0.000	625.000	625.000	625.000	0.000	.560	0.000

**FOOTBRIDGE-X5

X1	8.910	0.000	0.000	0.000	138.000	138.000	138.000	0.000	.400	0.000
X1	8.920	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000

**D/S FACE KOZMA

X1	8.980	7.000	790.000	806.000	11.000	11.000	11.000	0.000	0.000	0.000
GR	661.800	725.000	659.400	790.000	656.900	794.000	656.900	797.000	656.900	803.000
GR	659.400	806.000	661.800	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.990	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.010	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

X1	9.100	7.000	784.000	800.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	661.500	730.000	660.200	784.000	657.200	788.000	656.900	793.000	657.000	797.000
GR	658.800	800.000	661.700	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.200	.400	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-SB

X1	9.180	6.000	141.500	158.500	350.000	350.000	350.000	0.000	0.000	0.000
GR	662.700	100.000	660.800	141.500	657.000	143.000	657.000	157.000	660.800	158.500
GR	662.700	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	657.000	657.000

X1	9.220	0.000	0.000	0.000	7.000	7.000	7.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	660.800	662.700	0.000	0.000	0.000	0.000	0.000

X1	9.250	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.400	0.000

**FOOTBRIDGE-SB

X1	9.280	6.000	141.500	158.500	200.000	200.000	200.000	0.000	0.000	0.000
GR	663.200	100.000	661.800	141.500	658.100	143.000	658.100	157.000	661.800	158.500
GR	663.200	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	658.100	658.100

X1	9.320	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	661.800	663.200	0.000	0.000	0.000	0.000	0.000

X1	9.350	0.000	0.000	0.000	50.000	50.000	50.000	0.000	.100	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

X1	9.500	6.000	321.000	363.000	250.000	250.000	250.000	0.000	-.800	0.000
GR	665.500	280.000	664.700	321.000	659.300	344.000	659.200	355.000	665.300	363.000
GR	667.400	570.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	10.000	0.000	0.000	0.000	830.000	830.000	830.000	.910	.800	0.000

**FOOTBRIDGE-X5

X1	10.700	11.000	1044.000	1078.000	940.000	940.000	940.000	.690	-.500	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	10.710	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-SB

X1	10.780	6.000	102.000	128.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.000	668.000	0.000
GR	669.100	100.000	666.900	102.000	661.000	112.500	661.000	117.500	666.900	128.000
GR	669.100	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.580	3.000	30.000	15.000	0.000	93.000	0.000	661.000	661.000
X1	10.820	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	666.900	669.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	669.100	669.100	0.000
X1	10.900	11.000	1044.000	1078.000	50.000	50.000	50.000	.690	0.000	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE SUMPTER RD.

X1	10.980	9.000	977.000	1001.000	50.000	50.000	50.000	.670	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.500	668.500	0.000
GR	670.000	950.000	667.600	977.000	664.200	981.000	662.600	983.000	662.200	985.000
GR	662.200	988.000	663.500	1000.000	667.600	1001.000	670.000	1002.000	0.000	0.000
SB	0.000	1.470	2.800	50.000	16.000	0.000	67.000	0.000	662.200	662.200
X1	11.020	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	667.600	670.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	670.000	670.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.100	10.000	950.000	979.000	50.000	50.000	50.000	.690	0.000	0.000
GR	670.700	900.000	668.700	950.000	666.800	958.000	664.300	960.000	662.600	967.000
GR	662.600	969.000	664.000	975.000	666.500	979.000	667.500	1000.000	672.000	1100.000
QT	5.000	225.000	330.000	370.000	470.000	370.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-X5

X1	11.500	0.000	0.000	0.000	225.000	225.000	225.000	0.000	.370	0.000
X1	11.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12.000	8.000	323.000	353.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	672.000	290.000	699.900	323.000	664.500	332.000	663.800	336.000	664.400	339.000
GR	665.300	347.000	669.200	353.000	672.000	400.000	0.000	0.000	0.000	0.000
X1	12.900	7.000	266.000	298.000	715.000	715.000	715.000	.750	0.000	0.000
GR	671.500	240.000	670.200	266.000	666.800	270.000	665.800	277.000	665.900	281.000
GR	670.400	298.000	671.500	323.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. EAST CROSSING									
X1	12.980	7.000	388.000	400.000	100.000	100.000	100.000	.750	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	671.900	671.900	0.000
GR	673.800	373.000	670.500	388.000	666.400	389.000	665.900	395.000	666.400	399.000
GR	670.500	400.000	673.800	415.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.370	2.500	32.000	9.000	0.000	36.000	0.000	665.900	665.900
X1	13.020	0.000	0.000	0.000	42.000	42.000	42.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	670.500	673.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	673.800	673.800	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13.100	8.000	430.000	458.000	50.000	50.000	50.000	.750	0.000	0.000
GR	675.000	400.000	675.000	400.000	669.500	430.000	666.700	438.000	666.400	445.000
GR	666.400	451.000	669.600	458.000	675.000	490.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	13.500	8.000	463.000	488.000	800.000	800.000	800.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	13.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000
X1	14.000	8.000	463.000	488.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
X1	14.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.050	0.000
X1	14.500	0.000	0.000	0.000	425.000	425.000	425.000	0.000	1.050	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	14.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
X1	14.900	8.000	331.000	390.000	150.000	150.000	150.000	.680	0.000	0.000
GR	677.000	260.000	673.400	331.000	670.100	345.000	670.000	350.000	670.100	355.000
GR	672.700	372.000	674.000	390.000	677.000	440.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. MIDDLE CROSSING									

X1	14.980	6.000	130.000	139.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	675.000	100.000	671.900	130.000	670.000	130.500	670.000	138.500	671.900	139.000
GR	675.000	169.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.600	2.300	0.000	9.000	0.000	17.000	0.000	670.000	670.000
X1	15.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	671.900	675.000	0.000	0.000	0.000	0.000	0.000
BT	6.000	100.000	675.000	0.000	130.000	675.000	671.900	130.500	676.800	671.900
BT	138.500	676.800	671.900	139.000	675.000	671.900	169.000	675.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
X1	15.100	7.000	277.000	296.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	674.000	250.000	673.800	277.000	670.300	279.000	670.300	282.000	670.900	285.000
GR	673.200	296.000	674.000	325.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	16.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	.100	0.000

**FOOTBRIDGE-X5

X1	16.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	16.900	8.000	393.000	420.000	250.000	250.000	250.000	0.000	0.000	0.000
GR	675.000	392.000	675.000	392.500	674.600	393.000	670.700	400.000	670.500	408.000
GR	670.800	417.000	672.700	420.000	674.500	470.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILMONT RD.

X1	16.980	8.000	800.000	808.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	675.000	675.000	0.000
GR	676.000	758.000	676.000	759.000	676.000	760.000	673.900	800.000	671.200	802.000
GR	671.700	806.000	673.900	808.000	676.300	830.000	0.000	0.000	0.000	0.000
SB	0.000	1.360	2.600	80.000	8.000	0.000	20.000	0.000	671.200	671.200
X1	17.020	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	673.900	676.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	676.200	676.200	0.000
X1	17.100	8.000	388.000	419.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.000	369.000	678.000	370.000	674.500	388.000	671.900	397.000	671.200	404.000
GR	671.600	411.000	674.200	419.000	678.000	430.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	18.000	9.000	490.000	523.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	677.000	470.000	674.600	490.000	674.200	495.000	672.600	496.000	672.500	498.000
GR	671.800	504.000	672.300	513.000	675.800	523.000	676.900	530.000	0.000	0.000

**FOOTBRIDGE-X5

X1	18.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	18.900	6.000	242.000	269.000	440.000	440.000	440.000	0.000	0.000	0.000
GR	675.300	242.000	672.100	247.000	671.800	253.000	672.000	257.000	673.900	269.000
GR	675.500	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILLIS RD. WEST CROSSING

X1	18.980	6.000	251.000	261.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.200	677.200	0.000
GR	677.700	215.000	675.400	251.000	672.100	252.000	672.800	256.000	675.400	261.000
GR	677.700	290.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	2.300	0.000	9.000	0.000	29.700	0.000	672.100	672.100
X1	19.020	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	675.400	677.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.700	677.700	0.000
BT	6.000	215.000	677.700	0.000	251.000	677.700	0.000	251.100	680.400	0.000
BT	260.900	680.400	0.000	261.000	677.700	0.000	290.000	677.700	0.000	0.000
X1	19.100	9.000	200.000	234.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.500	180.000	677.000	190.000	675.400	200.000	675.100	208.000	672.400	210.000
GR	671.900	219.000	672.200	228.000	674.900	234.000	678.500	260.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	19.900	9.000	490.000	526.000	475.000	475.000	475.000	0.000	0.000	0.000
GR	679.000	470.000	678.000	480.000	676.000	490.000	675.700	495.000	672.400	500.000
GR	672.100	505.000	672.100	512.000	676.000	526.000	679.000	550.000	0.000	0.000

** D/S FACE ELWELL RD.

X1	19.980	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.500	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	5.65	642.55	0.00	643.50	642.81	.25	0.00	0.00	642.30
650.	0.	645.	5.	1.	159.	8.	0.	0.	641.70
0.00	.26	4.04	.58	.056	.035	.056	0.000	636.90	630.61
.001503	0.	0.	0.	0	0	5	0.00	66.03	696.64

*SECNO 2.200

2.20	6.05	643.70	0.00	0.00	644.04	.34	1.20	.03	642.75
650.	10.	632.	8.	14.	133.	11.	3.	1.	642.75
.04	.72	4.74	.72	.056	.035	.056	.035	637.65	615.08
.001982	700.	700.	700.	2	0	0	0.00	83.55	698.62

*SECNO 2.900

1645 INT SEC ADDED BY RAISING SEC 2.90, -.563FT AND MULTIPLYING BY 2.519

1.01	6.24	644.08	0.00	0.00	644.47	.39	.42	.02	643.34
650.	40.	610.	0.	54.	117.	0.	3.	2.	644.24
.05	.75	5.20	0.00	.056	.035	.056	.035	637.84	1274.59
.002986	175.	175.	175.	2	0	0	0.00	177.09	1451.68

1645 INT SEC ADDED BY RAISING SEC 1.01, .188FT AND MULTIPLYING BY .799

1.02	6.58	644.61	0.00	0.00	645.01	.40	.53	.00	643.53
650.	89.	560.	1.	91.	103.	3.	4.	3.	644.43
.06	.98	5.46	.30	.056	.035	.056	.035	638.03	1206.99
.003098	175.	175.	175.	3	0	0	0.00	224.64	1431.62

1645 INT SEC ADDED BY RAISING SEC 1.02, .188FT AND MULTIPLYING BY .748

1.03	6.99	645.20	0.00	0.00	645.55	.35	.54	.01	643.71
650.	169.	467.	14.	120.	85.	22.	5.	3.	644.61
.07	1.40	5.51	.65	.056	.035	.056	.035	638.21	1202.36
.003026	175.	175.	175.	3	0	0	0.00	222.34	1424.70

1645 INT SEC ADDED BY RAISING SEC 1.03, .188FT AND MULTIPLYING BY .664

2.90	7.40	645.80	0.00	0.00	646.15	.34	.60	.00	643.90
650.	235.	371.	44.	116.	62.	42.	6.	4.	644.80
.08	2.03	6.01	1.05	.056	.035	.056	.035	638.40	1201.10
.003892	175.	175.	175.	3	0	0	0.00	182.90	1384.00

CCHV= .300 CEHV= .500
*SECNO 2.980
3280 CROSS SECTION 2.98 EXTENDED .09 FEET

** D/S FACE JUDD RD.

2.98	7.49	646.29	0.00	0.00	646.40	.11	.18	.07	645.10
650.	3.	239.	407.	4.	60.	289.	6.	5.	643.20
.09	.75	4.00	1.41	.056	.035	.056	.035	638.80	1290.00
.001515	80.	80.	80.	2	0	0	0.00	200.00	1490.00

SPECIAL BRIDGE

SB	XK	XKOR	COEQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.82	2.90	200.00	10.00	0.00	56.52	0.00	638.80	638.80

*SECNO 3.020
3280 CROSS SECTION 3.02 EXTENDED .70 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
650.03	646.40	0.00	379.	274.	57.	60.	644.82	646.20

3.02	8.10	646.90	0.00	0.00	646.95	.05	.55	0.00	645.10
650.	6.	187.	457.	9.	67.	401.	7.	5.	643.20
.10	.73	2.81	1.14	.056	.035	.056	.035	638.80	1290.00
.000646	40.	40.	40.	2	0	4	0.00	200.00	1490.00

*SECNO 3.100
3280 CROSS SECTION 3.10 EXTENDED .90 FEET

3.10	7.41	646.91	0.00	0.00	646.98	.07	.02	.01	644.50
650.	158.	395.	97.	168.	147.	109.	7.	5.	644.70
.11	.94	2.68	.90	.049	.035	.049	.035	639.50	1200.00
.000496	30.	30.	30.	2	0	0	0.00	200.00	1400.00

CCHV= .100 CEHV= .300
*SECNO 4.000
3280 CROSS SECTION 4.00 EXTENDED .31 FEET

4.09	7.11	647.31	0.00	0.00	647.45	.14	.45	.02	645.70

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      650.       75.      499.       76.       87.      148.       90.       13.        8.    645.80
       .17       .87     3.38       .84      .049      .035      .049      .035    640.20    350.00
  .000862      700.      700.      700.         2         0         0      0.00    220.00    570.00


*SECNO 4.100
      4.10      6.20   647.76      0.00      0.00    648.17       .41       .64       .08    647.06
      650.       13.      626.       11.       17.      120.       15.       15.       10.     647.16
       .20       .79     5.24       .71      .049      .035      .049      .035    641.56    391.54
  .002749      450.      450.      450.         3         0         0      0.00    128.96    520.50


*SECNO 4.500
      4.50      6.11   649.18      0.00      0.00    649.62       .44      1.44       .01    648.57
      650.       10.      633.        7.       13.      117.       11.       17.       11.     648.67
       .23       .76     5.42       .67      .049      .035      .049      .035    643.07    397.77
  .003041      500.      500.      500.         2         0         0      0.00    115.31    513.08


*SECNO 4.600
3280 CROSS SECTION       4.60 EXTENDED        .92 FEET

    SECNO     DEPTH     CWSEL     CRIWS     WSELK        EG        HV        HL     OLOSS   BANK ELEV
    Q         QLOB      QCH       QROB      ALOB       ACH       AROB      VOL       TWA   LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL        XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL     IDC       ICONT     CORAR     TOPWID     ENDST

      4.60      5.82   650.09      0.00      0.00    650.19       .10       .53       .03    648.57
      650.       94.      538.       19.      122.      195.       34.       19.       13.     648.87
       .27       .77     2.76       .54      .060      .035      .060      .035    644.27    400.00
  .000739      400.      400.      400.         2         0         0      0.00    200.00    600.00


*SECNO 5.000
3280 CROSS SECTION       5.00 EXTENDED        .32 FEET

      5.00      5.22   650.32      0.00      0.00    650.51       .19       .29       .03    649.40
      650.       46.      600.        4.       62.      164.        9.       21.       14.     649.70
       .29       .73     3.66       .46      .060      .035      .060      .035    645.10    400.00
  .001636      275.      275.      275.         2         0         0      0.00    181.87    581.87


*SECNO 5.900
      5.90      6.07   651.27      0.00      0.00    651.42       .15       .90       .00    650.80
      650.        2.      441.      207.        7.      120.      169.       26.       17.     648.20
       .36       .31     3.66      1.22      .060      .035      .060      .035    645.20    578.89
  .001041      700.      700.      700.         3         0         0      0.00    166.34    745.24


CCHV=     .300 CEHV=     .500
*SECNO 5.980

        ** D/S FACE MARTINSVILLE RD.

      5.98      5.92   651.22      0.00      0.00    651.83       .60       .18       .23    652.00
      650.         0.      501.      149.        0.       71.       89.       26.       17.     649.70
       .37      0.00     7.03      1.68      .060      .035      .060      .035    645.30    585.02
  .005481        91.      91.       91.         2         0         0      0.00    124.09    709.11
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SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.20	2.60	80.00	12.00	0.00	60.00	0.00	645.30	645.30

*SECNO 6.020
3280 CROSS SECTION 6.02 EXTENDED .25 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
653.41	651.83	0.00	177.	476.	60.	62.	650.50	651.50

6.02	6.95	652.25	0.00	0.00	652.40	.15	.57	0.00	652.00
650.	0.	349.	301.	0.	87.	221.	26.	17.	649.70
.37	0.00	4.03	1.36	.060	.035	.060	.035	645.30	585.00
.001476	18.	18.	18.	2	0	2	0.00	164.98	749.98

*SECNO 6.100
3280 CROSS SECTION 6.10 EXTENDED .54 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
6.10	6.04	652.34	0.00	0.00	652.46	.12	.05	.01	650.20
650.	69.	532.	48.	94.	174.	80.	26.	18.	650.40
.37	.74	3.06	.60	.067	.035	.067	.035	646.30	500.00
.000755	51.	51.	51.	3	0	0	0.00	193.05	693.05

CCHV= .100 CEHV= .300
*SECNO 6.500
3280 CROSS SECTION 6.50 EXTENDED .33 FEET

6.50	5.83	652.72	0.00	0.00	652.82	.11	.36	.00	650.79
560.	50.	469.	40.	79.	166.	64.	30.	20.	650.99
.43	.64	2.83	.63	.067	.035	.056	.035	646.89	500.00
.000694	500.	500.	500.	2	0	0	0.00	183.99	683.99

*SECNO 6.600

6.60	5.50	653.42	0.00	0.00	653.50	.09	.68	.00	651.32
560.	50.	478.	32.	73.	187.	51.	36.	24.	652.02
.53	.69	2.56	.63	.067	.035	.056	.035	647.92	390.21
.000900	865.	865.	865.	2	0	0	0.00	207.96	598.17

*SECNO 7.000

7.00	5.45	654.35	0.00	0.00	654.57	.22	1.03	.04	651.90

560.	105.	413.	42.	94.	96.	39.	42.	27.	652.50
.60	1.11	4.31	1.08	.067	.035	.056	.035	648.90	396.89
.001845	825.	825.	825.	2	0	0	0.00	145.26	542.15

*SECNO 7.010

7.01	5.41	655.08	0.00	0.00	655.18	.10	.60	.01	653.07
450.	29.	312.	109.	48.	105.	116.	44.	29.	652.67
.66	.60	2.98	.94	.067	.035	.056	.035	649.67	652.06
.000770	500.	500.	500.	2	0	0	0.00	189.29	841.35

*SECNO 7.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.10	5.02	655.62	0.00	0.00	655.76	.14	.57	.01	654.00
450.	24.	330.	96.	26.	95.	81.	48.	31.	653.60
.72	.92	3.48	1.19	.049	.035	.049	.035	650.60	672.85
.001198	600.	600.	600.	2	0	0	0.00	151.82	824.67

*SECNO 7.500

7.50	4.85	656.55	0.00	0.00	656.73	.18	.96	.01	655.10
450.	19.	345.	86.	19.	91.	68.	51.	34.	654.70
.79	.98	3.81	1.27	.049	.035	.049	.035	651.70	681.58
.001522	710.	710.	710.	2	0	0	0.00	136.09	817.67

*SECNO 7.600

7.60	4.79	657.34	0.00	0.00	657.53	.19	.80	.00	655.95
450.	17.	351.	82.	17.	89.	63.	53.	35.	655.55
.82	1.00	3.94	1.30	.049	.035	.049	.035	652.55	684.93
.001671	500.	500.	500.	2	0	0	0.00	130.05	814.98

*SECNO 7.700

7.70	4.77	658.17	0.00	0.00	658.37	.20	.84	.00	656.80
450.	17.	351.	81.	17.	89.	63.	55.	37.	656.40
.86	1.01	3.96	1.30	.049	.035	.049	.035	653.40	685.32
.001689	500.	500.	500.	1	0	0	0.00	129.35	814.67

*SECNO 7.800

7.80	4.75	659.00	0.00	0.00	659.19	.19	.82	.00	658.15
450.	17.	424.	9.	22.	119.	10.	56.	38.	657.65
.90	.75	3.57	.93	.049	.035	.049	.035	654.25	389.88
.001591	500.	500.	500.	1	0	0	0.00	104.46	494.34

*SECNO 8.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8.00	4.71	660.11	0.00	0.00	660.31	.20	1.12	.00	659.30

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      450.       15.      427.        9.       20.      117.        9.       59.       39.    658.80
       .96       .74     3.65       .94     .049      .035      .049      .035   655.40    392.90
  .001697      680.      680.      680.        2         0         0      0.00   100.93    493.83


 *SECNO 8.500
 3280 CROSS SECTION       8.50 EXTENDED        .59 FEET


      8.50      5.09    661.03      0.00     0.00    661.14       .11       .83       .01    658.54
      450.      101.      242.      107.      84.       68.       89.       61.       41.     659.04
      1.03      1.21      3.53      1.20     .049      .035      .049      .035   655.94    725.00
  .001137      600.      600.      600.        2         0         0      0.00   150.00    875.00


 *SECNO 8.900
 3280 CROSS SECTION       8.90 EXTENDED        .70 FEET


      8.90      5.20    661.70      0.00     0.00    661.80       .10       .65       .00    659.10
      450.      106.      231.      112.      91.       70.       97.       65.       43.     659.60
      1.10      1.17      3.30      1.17     .049      .035      .049      .035   656.50    725.00
  .000957      625.      625.      625.        2         0         0      0.00   150.00    875.00


 *SECNO 8.910
 3280 CROSS SECTION       8.91 EXTENDED        .43 FEET


         **FOOTBRIDGE-X5

      8.91      4.93    661.83      0.00     0.00    661.97       .15       .16       .02    659.50
      450.       94.      258.       98.      73.       66.       78.       66.       44.     660.00
      1.12      1.29      3.92      1.26     .049      .035      .049      .035   656.90    726.93
  .001470       138.      138.      138.        2         0         0      0.00   148.07    875.00


 *SECNO 8.920
  WATER EL=X5 CARD=    661.926
 3280 CROSS SECTION       8.92 EXTENDED        .53 FEET


      8.92      5.03    661.93      0.00     0.00    662.05       .13       .00       .00    659.50
      450.       98.      248.      104.      80.       67.       85.       66.       44.     660.00
      1.12      1.23      3.68      1.23     .049      .035      .049      .035   656.90    725.00
  .001261         1.        1.        1.        0         0         0      0.00   150.00    875.00


 *SECNO 8.980
 3280 CROSS SECTION       8.98 EXTENDED        .16 FEET


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


         **D/S FACE KOZMA
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      8.98       5.06     661.96       0.00       0.00     662.07        .10        .01        .00     659.40
       450.       101.       241.       108.       89.        72.       94.        66.        44.      659.40
      1.12       1.14       3.34       1.14       .049       .035       .049       .035     656.90     725.00
   .000940        11.        11.        11.          2          0          0       0.00     150.00     875.00

 *SECNO 8.990

 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE,NRD=   0 MIN ELTRD=   661.80 MAX ELLC=   659.80

      8.99       3.89     660.79     659.81       0.00     662.57       1.78        .00        .50     659.40
       450.       12.        418.       20.        8.         38.       .8.        66.        44.      659.40
      1.12       1.58      11.10       2.51       .049       .035       .049       .035     656.90     752.31
   .058788         1.         1.         1.         17         12          0     -54.39      93.70     846.01

 *SECNO 9.010

 3370 NORMAL BRIDGE,NRD=   0 MIN ELTRD=   661.80 MAX ELLC=   659.80

      9.01       4.81     661.71     659.81       0.00     663.27       1.56        .67        .02     659.40
       450.       19.        399.       32.        13.        38.       13.        66.        44.      659.40
      1.12       1.51      10.60       2.40       .049       .035       .049       .035     656.90     727.32
   .053606        12.        12.        12.          6         12          0    -154.30     145.21     872.53

 *SECNO 9.020
 3280 CROSS SECTION       9.02 EXTENDED       1.60 FEET


 3301 HV CHANGED MORE THAN HVINS

      9.02       6.50     663.40       0.00       0.00     663.42        .02        .00        .15     659.40
       450.       140.       162.       149.       182.       95.       193.       66.        44.      659.40
      1.12        .77       1.70        .77       .049       .035       .049       .035     656.90     725.00
   .000168         1.         1.         1.          3          0          0       0.00     150.00     875.00

 *SECNO 9.100
 3280 CROSS SECTION       9.10 EXTENDED       1.90 FEET


      9.10       6.51     663.41       0.00       0.00     663.43        .03        .01        .00     660.20
       450.       108.       170.       172.       138.       93.       189.       66.        44.      658.80
      1.13        .79       1.83        .91       .049       .035       .049       .035     656.90     730.00
   .000201        50.        50.        50.          0          0          0       0.00     130.00     860.00

 CCHV=     .200 CEHV=     .400
 *SECNO 9.180
 3280 CROSS SECTION       9.18 EXTENDED        .78 FEET


    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS    BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA    LEFT/RIGHT
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
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SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
**FOOTBRIDGE-SB									
9.18	6.48	663.48	0.00	0.00	663.57	.09	.11	.03	660.80
450.	75.	301.	75.	72.	104.	72.	69.	45.	660.80
1.17	1.04	2.88	1.04	.049	.035	.049	.035	657.00	100.00
.000581	350.	350.	350.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	657.00	657.00

*SECNO 9.220
3280 CROSS SECTION 9.22 EXTENDED .91 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
664.66	663.57	0.00	261.	189.	60.	65.	660.80	662.70

9.22	6.61	663.61	0.00	0.00	663.69	.08	.12	0.00	660.80
450.	79.	292.	79.	77.	107.	77.	69.	45.	660.80
1.17	1.02	2.74	1.02	.049	.035	.049	.035	657.00	100.00
.000514	7.	7.	7.	2	0	4	0.00	100.00	200.00

*SECNO 9.250
3280 CROSS SECTION 9.25 EXTENDED .55 FEET

9.25	6.25	663.65	0.00	0.00	663.76	.11	.06	.01	661.20
450.	66.	317.	66.	62.	101.	62.	70.	45.	661.20
1.18	1.07	3.15	1.07	.049	.035	.049	.035	657.40	100.00
.000735	100.	100.	100.	2	0	0	0.00	100.00	200.00

*SECNO 9.280
3280 CROSS SECTION 9.28 EXTENDED .59 FEET

**FOOTBRIDGE-SB									
9.28	5.70	663.80	0.00	0.00	663.95	.15	.18	.01	661.80
450.	62.	326.	62.	54.	91.	54.	71.	46.	661.80
1.20	1.16	3.57	1.16	.049	.035	.049	.035	658.10	100.00
.001059	200.	200.	200.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	658.10	658.10

*SECNO 9.320
3280 CROSS SECTION 9.32 EXTENDED .75 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
664.98	663.95	0.00	234.	215.	60.	63.	661.80	663.20

9.32	5.85	663.95	0.00	0.00	664.07	.13	.12	0.00	661.80
450.	69.	313.	69.	60.	94.	60.	71.	46.	661.80
1.20	1.14	3.33	1.14	.049	.035	.049	.035	658.10	100.00
.000890	8.	8.	8.	2	0	2	0.00	100.00	200.00

*SECNO 9.350
3280 CROSS SECTION 9.35 EXTENDED .69 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
9.35	5.79	663.99	0.00	0.00	664.12	.13	.05	.00	661.90
450.	66.	318.	66.	58.	93.	58.	71.	46.	661.90
1.21	1.15	3.42	1.15	.049	.035	.049	.035	658.20	100.00
.000952	50.	50.	50.	2	0	0	0.00	100.00	200.00

CCHV= .100 CEHV= .300
*SECNO 9.500

9.50	5.82	664.22	0.00	0.00	664.35	.13	.23	.00	663.90
450.	1.	449.	0.	3.	155.	0.	72.	46.	664.50
1.23	.26	2.90	0.00	.049	.035	.049	.035	658.40	304.65
.000874	250.	250.	250.	2	0	0	0.00	57.98	362.63

*SECNO 10.000

10.00	5.80	665.00	0.00	0.00	665.16	.16	.80	.01	664.70
450.	1.	449.	0.	2.	141.	0.	75.	47.	665.30
1.31	.24	3.19	0.00	.060	.035	.060	.035	659.20	302.86
.001079	830.	830.	830.	1	0	0	0.00	52.33	355.18

*SECNO 10.700

**FOOTBRIDGE-X5

10.70	6.06	666.36	0.00	0.00	666.75	.38	1.52	.07	666.70
450.	0.	450.	0.	0.	91.	0.	77.	48.	667.20
1.36	0.00	4.97	0.00	.060	.035	.060	.035	660.30	999.77
.002672	940.	940.	940.	2	0	0	0.00	22.31	1022.09

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*SECNO 10.710
 WATER EL=X5 CARD=    666.563
    10.71      6.26     666.56      0.00      0.00     666.91       .35       .00       .00     666.70
     450.        0.       450.        0.        0.       95.        0.       77.       48.      667.20
     1.36      0.00      4.73      0.00      .060      .035      .060      .035    660.30     999.53
  .002339        1.        1.        1.         0         0         0      0.00     22.73    1022.26

*SECNO 10.780
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      668.00 ELREA=      668.00

        **FOOTBRIDGE-SB

    10.78      5.80     666.80      0.00      0.00     667.20       .40       .27       .02     666.90
     450.        0.       450.        0.        0.       89.        0.       78.       48.      666.90
     1.36      0.00      5.07      0.00      .060      .035      .060      .035    661.00     102.18
  .003156       100.      100.      100.         3         0         0      0.00     25.63     127.82


SPECIAL BRIDGE

SB  XK          XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     0.00        1.58       3.00      30.00      15.00       0.00      93.00       0.00     661.00     661.00

*SECNO 10.820
PRESSURE FLOW

 EGPRS       EGLWC        H3         QWEIR       QPR        BAREA    TRAPEZOID       ELLC       ELTRD
                                                                        AREA
   667.37     667.20       0.00          0.       450.        93.        89.      666.90     669.10


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      669.10 ELREA=      669.10

    10.82      6.02     667.02      0.00      0.00     667.37       .35       .18       0.00    666.90
     450.        0.       450.        0.        0.       95.        0.       78.       48.      666.90
     1.36      0.00      4.75      0.00      .042      .035      .042      .035    661.00     102.00
  .002602        15.       15.       15.         2         0         0      0.00     26.00     128.00


*SECNO 10.900
    10.90      6.36     667.16      0.00      0.00     667.49       .33       .12       .00     667.20
     450.        0.       450.        0.        0.       97.        0.       78.       48.      667.70
     1.37      0.00      4.63      0.00      .042      .035      .042      .035    660.80     999.41
  .002204        50.       50.       50.         2         0         0      0.00     22.93    1022.34


CCHV=     .300 CEHV=     .500
*SECNO 10.980
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1645 INT SEC ADDED BY RAISING SEC 10.98, -.700FT AND MULTIPLYING BY 1.086

1.01	5.64	667.14	0.00	0.00	667.66	.52	.07	.09	666.90
450.	0.	450.	0.	0.	78.	0.	78.	48.	666.90
1.37	.53	5.80	.02	.042	.035	.042	.035	661.50	967.66
.003755	25.	25.	25.	2	0	0	0.00	19.51	987.17

1645 INT SEC ADDED BY RAISING SEC 1.01, .700FT AND MULTIPLYING BY .921

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 668.50 ELREA= 668.50

** D/S FACE SUMPTER RD.

10.98	4.88	667.08	0.00	0.00	667.97	.89	.13	.18	667.60
450.	0.	450.	0.	0.	59.	0.	78.	48.	667.60
1.37	0.00	7.58	0.00	.042	.035	.042	.035	662.20	968.50
.007930	25.	25.	25.	3	0	0	0.00	15.59	984.09

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.47	2.80	50.00	16.00	0.00	67.00	0.00	662.20	662.20

*SECNO 11.020
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
668.11	667.97	0.00	0.	450.	67.	86.	667.60	670.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 670.00 ELREA= 670.00

11.02	5.13	667.33	0.00	0.00	668.11	.79	.14	0.00	667.60
450.	0.	450.	0.	0.	63.	0.	78.	48.	667.60
1.37	0.00	7.11	0.00	.042	.035	.042	.035	662.20	968.30
.006655	45.	45.	45.	3	0	0	0.00	15.82	984.13

*SECNO 11.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
11.10	5.06	667.66	0.00	0.00	668.52	.86	.37	.04	668.70
450.	0.	427.	23.	0.	56.	10.	78.	48.	666.50
1.37	0.00	7.62	2.39	.042	.035	.042	.035	662.60	937.52
.008209	50.	50.	50.	2	0	0	0.00	33.93	971.45

CCHV= .100 CEHV= .300
*SECNO 11.500

1645 INT SEC ADDED BY RAISING SEC 11.50, -.185FT AND MULTIPLYING BY 1.000

3301 HV CHANGED MORE THAN HVINS

1.01	5.99	668.77	0.00	0.00	669.07	.30	.49	.06	668.89
410.	0.	343.	67.	0.	73.	32.	78.	48.	666.69
1.38	0.00	4.71	2.10	.042	.035	.042	.035	662.79	934.85
.002627	113.	113.	113.	3	0	0	0.00	50.73	985.58

1645 INT SEC ADDED BY RAISING SEC 1.01, .185FT AND MULTIPLYING BY 1.000

**FOOTBRIDGE-X5

11.50	6.14	669.11	0.00	0.00	669.32	.21	.24	.01	669.07
370.	0.	302.	68.	0.	76.	37.	78.	49.	666.87
1.39	.01	3.96	1.83	.042	.035	.042	.035	662.97	933.69
.001795	113.	113.	113.	2	0	0	0.00	54.44	988.12

*SECNO 11.510
WATER EL=X5 CARD= 669.315

11.51	6.34	669.31	0.00	0.00	669.49	.18	.00	.00	669.07
370.	0.	294.	76.	1.	80.	44.	78.	49.	666.87
1.39	.33	3.67	1.72	.042	.035	.042	.035	662.97	930.28
.001435	1.	1.	1.	0	0	0	0.00	60.87	991.15

*SECNO 12.000

12.00	6.17	669.97	0.00	0.00	670.17	.20	.68	.01	669.90
370.	0.	368.	2.	0.	102.	5.	80.	49.	669.20
1.43	0.00	3.60	.47	.060	.035	.060	.035	663.80	330.61
.001281	500.	500.	500.	2	0	0	0.00	35.39	366.00

*SECNO 12.900

12.90	5.27	671.07	0.00	0.00	671.35	.28	1.15	.02	670.20
370.	4.	364.	2.	6.	86.	4.	81.	50.	670.40
1.48	.65	4.25	.55	.060	.035	.060	.035	665.80	246.41
.002083	715.	715.	715.	3	0	0	0.00	48.55	294.96

CCHV= .300 CEHV= .500
*SECNO 12.980

1645 INT SEC ADDED BY RAISING SEC 12.98, -.067FT AND MULTIPLYING BY 1.702

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.01	5.25	671.08	0.00	0.00	671.50	.42	.08	.07	670.43
370.	1.	368.	1.	1.	71.	1.	82.	50.	670.43

1.48	.65	5.21	.65	.060	.035	.060	.035	665.83	388.37
.003057	33.	33.	33.	2	0	0	0.00	22.87	411.24

1645 INT SEC ADDED BY RAISING SEC 1.01, .033FT AND MULTIPLYING BY .794

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.02	5.22	671.09	0.00	0.00	671.77	.67	.13	.13	670.47
370.	1.	368.	1.	1.	56.	1.	82.	50.	670.47
1.48	.85	6.60	.85	.060	.035	.060	.035	665.87	385.32
.005594	33.	33.	33.	2	0	0	0.00	17.91	403.23

1645 INT SEC ADDED BY RAISING SEC 1.02, .033FT AND MULTIPLYING BY .740

3301 HV CHANGED MORE THAN HVINS

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 671.90 ELREA= 671.90

** D/S FACE WILLIS RD. EAST CROSSING

12.98	5.17	671.07	0.00	0.00	672.34	1.28	.28	.30	670.50
370.	0.	370.	0.	0.	41.	0.	82.	50.	670.50
1.48	0.00	9.07	0.00	.060	.035	.060	.035	665.90	384.25
.013599	33.	33.	33.	2	0	0	0.00	9.00	393.25

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.37	2.50	32.00	9.00	0.00	36.00	0.00	665.90	665.90

*SECNO 13.020

3301 HV CHANGED MORE THAN HVINS

PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
673.31	672.34	0.00	0.	370.	36.	41.	670.50	673.90

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 673.80 ELREA= 673.80

13.02	6.70	672.60	0.00	0.00	673.31	.71	.97	0.00	670.50
370.	0.	370.	0.	0.	55.	0.	82.	50.	670.50
1.48	0.00	6.77	0.00	.060	.035	.060	.035	665.90	384.25
.005788	42.	42.	42.	3	0	0	0.00	9.00	393.25

*SECNO 13.100

1645 INT SEC ADDED BY RAISING SEC 13.10, -.250FT AND MULTIPLYING BY .725

3301 HV CHANGED MORE THAN HVINS

1.01	7.24	673.39	0.00	0.00	673.52	.13	.03	.17	669.25
370.	33.	303.	34.	25.	96.	26.	82.	50.	669.35
1.48	1.31	3.14	1.29	.042	.035	.042	.035	666.15	404.02
.000553	25.	25.	25.	2	0	0	0.00	40.56	444.57

1645 INT SEC ADDED BY RAISING SEC 1.01, .250FT AND MULTIPLYING BY 1.379

13.10	7.07	673.47	0.00	0.00	673.55	.08	.01	.02	669.50
370.	31.	307.	32.	32.	129.	33.	82.	50.	669.60
1.49	.96	2.38	.95	.042	.035	.042	.035	666.40	406.25
.000307	25.	25.	25.	2	0	0	0.00	54.46	460.71

CCHV= .100 CEHV= .300

*SECNO 13.500

13.50	6.14	673.74	0.00	0.00	673.80	.06	.25	.00	670.50
370.	23.	291.	56.	27.	130.	49.	85.	51.	670.50
1.60	.86	2.23	1.15	.042	.035	.042	.035	667.60	446.47
.000323	800.	800.	800.	2	0	0	0.00	63.65	510.13

*SECNO 13.510

WATER EL=X5 CARD= 673.836

**FOOTBRIDGE-X5

13.51	6.24	673.84	0.00	0.00	673.90	.06	.00	.00	670.50
370.	24.	289.	57.	28.	133.	51.	85.	51.	670.50
1.60	.85	2.17	1.13	.042	.035	.042	.035	667.60	445.95
.000298	1.	1.	1.	0	0	0	0.00	64.57	510.52

*SECNO 14.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
14.00	6.30	673.90	0.00	0.00	673.95	.06	.06	.00	670.50
370.	25.	287.	58.	29.	134.	52.	86.	51.	670.50
1.63	.84	2.14	1.11	.042	.035	.042	.035	667.60	445.64
.000284	200.	200.	200.	2	0	0	0.00	65.11	510.75

```
*SECNO 14.100
    14.10      5.39    674.04      0.00      0.00    674.15      .10       .18       .01    671.55
     370.       16.       310.       44.       16.      112.      33.       88.       52.     671.55
     1.68      1.00      2.77      1.34      .042      .035      .042      .035    668.65    450.24
  .000607      450.      450.      450.         2         0         0      0.00     57.05    507.29

*SECNO 14.500
 WATER EL=X5 CARD=    674.245
    14.50      4.54    674.24      0.00      0.00    674.44      .19       .38       .03    672.60
     370.        8.       334.       28.        7.      91.       18.       90.       52.     672.60
     1.71      1.16      3.69      1.54      .042      .035      .042      .035    669.70    454.59
  .001427      425.      425.      425.         0         0         0      0.00     49.43    504.02

*SECNO 14.510
 WATER EL=X5 CARD=    674.445

        **FOOTBRIDGE-X5

    14.51      4.74    674.44      0.00      0.00    674.61      .17       .00       .00    672.60
     370.       10.       328.       32.        9.      96.       22.       90.       52.     672.60
     1.71      1.12      3.43      1.50      .042      .035      .042      .035    669.70    453.57
  .001151         1.        1.        1.         0         0         0      0.00     51.22    504.79

*SECNO 14.900
    14.90      4.65    674.65      0.00      0.00    674.81      .15       .19       .00    673.40
     370.       10.       358.        2.       11.      113.       2.       90.       53.     674.00
     1.73       .99      3.18       .64      .042      .035      .042      .035    670.00    291.47
  .001464      150.      150.      150.         2         0         0      0.00     64.34    355.81

CCHV=     .300 CEHV=     .500
*SECNO 14.980
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST

        ** D/S FACE WILLIS RD. MIDDLE CROSSING

    14.98      4.80    674.80      0.00      0.00    675.01      .21       .18       .03    671.90
     370.       87.       196.       87.       41.      42.       41.       90.       53.     671.90
     1.73      2.13      4.65      2.13      .042      .035      .042      .035    670.00    101.91
  .002217      100.      100.      100.         2         0         0      0.00     65.19    167.09

SPECIAL BRIDGE

SB  XK          XKOR        COFQ        RDLEN       BWC         BWP         BAREA       SS          ELCHU       ELCHD
     0.00        1.60        2.30        0.00        9.00        0.00        17.00       0.00        670.00      670.00

*SECNO 15.020
3280 CROSS SECTION      15.02 EXTENDED       1.37 FEET
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PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
686.57	675.01	0.00	234.	137.	17.	17.	671.90	675.00

15.02	6.37	676.37	0.00	0.00	676.42	.05	1.40	0.00	671.90
370.	119.	131.	119.	88.	56.	88.	90.	53.	671.90
1.73	1.36	2.33	1.36	.042	.035	.042	.035	670.00	100.00
.000380	1.	1.	1.	2	0	5	0.00	69.00	169.00

CCHV= .300 CEHV= .500
*SECNO 15.100
3280 CROSS SECTION 15.10 EXTENDED 2.39 FEET

15.10	6.09	676.39	0.00	0.00	676.44	.05	.02	.00	673.80
370.	77.	193.	100.	67.	92.	81.	91.	53.	673.20
1.74	1.14	2.10	1.24	.042	.035	.042	.035	670.30	250.00
.000347	50.	50.	50.	2	0	0	0.00	75.00	325.00

CCHV= .100 CEHV= .300
*SECNO 16.000
3280 CROSS SECTION 16.00 EXTENDED 2.41 FEET

16.00	6.11	676.51	0.00	0.00	676.56	.05	.12	.00	673.90
370.	77.	192.	100.	68.	92.	81.	93.	53.	673.30
1.80	1.14	2.08	1.23	.042	.035	.042	.035	670.40	250.00
.000340	350.	350.	350.	2	0	0	0.00	75.00	325.00

*SECNO 16.100
WATER EL=X5 CARD= 676.610
3280 CROSS SECTION 16.10 EXTENDED 2.51 FEET

**FOOTBRIDGE-X5

16.10	6.21	676.61	0.00	0.00	676.65	.04	.00	.00	673.90
370.	78.	190.	101.	70.	94.	84.	93.	53.	673.30
1.80	1.11	2.02	1.20	.042	.035	.042	.035	670.40	250.00
.000310	1.	1.	1.	0	0	0	0.00	75.00	325.00

*SECNO 16.900
3280 CROSS SECTION 16.90 EXTENDED 2.18 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

16.90	6.18	676.68	0.00	0.00	676.71	.03	.05	.00	674.60

370.	1.	229.	140.	2.	146.	154.	94.	54.	672.70
1.85	.41	1.57	.91	.042	.035	.042	.035	670.50	392.00
.000156	250.	250.	250.	2	0	0	0.00	78.00	470.00

CCHV= .300 CEHV= .500
*SECNO 16.980
3280 CROSS SECTION 16.98 EXTENDED .65 FEET

** D/S FACE WILMONT RD.

16.98	5.45	676.65	0.00	0.00	676.81	.15	.04	.06	673.90
370.	148.	154.	68.	69.	37.	34.	95.	54.	673.90
1.86	2.12	4.20	1.99	.042	.035	.042	.035	671.20	758.00
.001812	100.	100.	100.	3	0	0	0.00	72.00	830.00

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.36	2.60	80.00	8.00	0.00	20.00	0.00	671.20	671.20

*SECNO 17.020
3280 CROSS SECTION 17.02 EXTENDED 1.28 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
683.88	676.81	0.00	255.	116.	20.	22.	673.90	676.20

17.02	6.08	677.28	0.00	0.00	677.36	.08	.55	0.00	673.90
370.	166.	126.	78.	96.	42.	48.	95.	54.	673.90
1.87	1.73	3.03	1.62	.042	.035	.042	.035	671.20	758.00
.000794	25.	25.	25.	2	0	5	0.00	72.00	830.00

*SECNO 17.100

17.10	6.11	677.31	0.00	0.00	677.39	.07	.02	.00	674.50
370.	16.	342.	12.	20.	154.	14.	95.	54.	674.20
1.87	.80	2.22	.84	.042	.035	.042	.035	671.20	373.53
.000334	50.	50.	50.	2	0	0	0.00	54.49	428.01

CCHV= .100 CEHV= .300
*SECNO 18.000
3280 CROSS SECTION 18.00 EXTENDED .64 FEET

18.00	5.74	677.54	0.00	0.00	677.61	.07	.22	.00	674.60
370.	35.	329.	6.	35.	146.	8.	98.	55.	675.80
1.95	1.01	2.25	.75	.042	.035	.042	.035	671.80	470.00
.000409	600.	600.	600.	2	0	0	0.00	60.00	530.00

*SECNO 18.100
WATER EL=X5 CARD= 677.635
3280 CROSS SECTION 18.10 EXTENDED .74 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
	**FOOTBRIDGE-X5								
18.10	5.84	677.64	0.00	0.00	677.70	.07	.00	.00	674.60
370.	37.	327.	7.	37.	150.	9.	98.	55.	675.80
1.95	1.00	2.18	.75	.042	.035	.042	.035	671.80	470.00
.000374	1.	1.	1.	0	0	0	0.00	60.00	530.00

*SECNO 18.900
3280 CROSS SECTION 18.90 EXTENDED 2.50 FEET

18.90	6.00	677.80	0.00	0.00	677.84	.04	.14	.00	675.30
370.	0.	258.	112.	0.	137.	96.	100.	56.	673.90
2.03	0.00	1.88	1.17	.042	.035	.042	.035	671.80	242.00
.000265	440.	440.	440.	2	0	0	0.00	58.00	300.00

CCHV= .300 CEHV= .500
*SECNO 18.980
3280 CROSS SECTION 18.98 EXTENDED .07 FEET

** D/S FACE WILLIS RD. WEST CROSSING

18.98	5.67	677.77	0.00	0.00	677.99	.23	.06	.09	675.40
370.	90.	208.	72.	44.	44.	35.	100.	56.	675.40
2.03	2.04	4.77	2.03	.042	.035	.042	.035	672.10	215.00
.002542	100.	100.	100.	2	0	0	0.00	75.00	290.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.67	2.30	0.00	9.00	0.00	29.70	0.00	672.10	672.10

*SECNO 19.020
3280 CROSS SECTION 19.02 EXTENDED 1.06 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
681.79	677.99	0.00	180.	190.	30.	30.	675.40	677.70

19.02	6.66	678.76	0.00	0.00	678.83	.07	.84	0.00	675.40
370.	122.	151.	97.	80.	54.	64.	100.	56.	675.40
2.04	1.53	2.82	1.52	.042	.035	.042	.035	672.10	215.00
.000677	40.	40.	40.	2	0	4	0.00	75.00	290.00

*SECNO 19.100
3280 CROSS SECTION 19.10 EXTENDED .32 FEET

19.10	6.92	678.82	0.00	0.00	678.86	.03	.01	.01	675.40
370.	26.	305.	39.	37.	191.	55.	101.	56.	674.90
2.05	.71	1.59	.71	.042	.035	.042	.035	671.90	180.00
.000151	50.	50.	50.	2	0	0	0.00	80.00	260.00

CCHV= .100 CEHV= .300
*SECNO 19.900

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
19.90	6.80	678.90	0.00	0.00	678.94	.04	.08	.00	676.00
370.	16.	333.	22.	23.	188.	34.	104.	57.	676.00
2.13	.68	1.77	.64	.042	.035	.042	.035	672.10	471.02
.000202	475.	475.	475.	2	0	0	0.00	78.16	549.18

*SECNO 19.980

** D/S FACE ELWELL RD.

19.98	6.31	678.91	0.00	0.00	678.97	.06	.02	.00	676.50
370.	11.	343.	16.	15.	171.	23.	104.	57.	676.50
2.14	.73	2.01	.69	.042	.035	.042	.035	672.60	475.87
.000297	100.	100.	100.	2	0	0	0.00	69.43	545.30

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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Sensitivity

FN = 1.3

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**********************************************
  HEC2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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C
T1       HUD-FIA H-4705
T2       SUMTER TOWNSHIP FIS
T3       SWAN CREEK 100 YR

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ
       -1.        4.         0.         0.    .001500       0.00        .5         0.    643.500     0.000

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE
      1.000      0.000     -1.000      0.000      0.000      1.300      0.000      0.000      0.000      0.000

NC       .080       .080       .050       .100       .300       0.000      0.000      0.000      0.000      0.000
QT      5.000    400.000    570.000    650.000    820.000    650.000      0.000      0.000      0.000      0.000

X1      2.000      6.000    639.000    678.000      0.000      0.000      0.000      0.000      0.000      0.000
GR    645.000    550.000    642.300    639.000    636.900    655.000    637.200    672.000    641.700    678.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.200      6.000    645.000    675.000    700.000    700.000    700.000      0.000       .750      0.000
GR    645.000    550.000    642.000    645.000    636.900    660.000    637.200    672.000    642.000    675.000
GR    645.000    750.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      2.900      8.000   1287.000   1300.000    700.000    700.000    700.000      0.000      0.000      0.000
GR    646.000   1200.000    645.900   1201.000    645.000   1202.000    643.900   1287.000    638.400   1295.000
GR    639.600   1297.000    644.800   1300.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .300       .500       0.000      0.000      0.000      0.000      0.000

        ** D/S FACE JUDD RD.

X1      2.980      7.000   1297.000   1308.000     80.000     80.000     80.000      0.000      0.000      0.000
GR    646.200   1290.000    645.100   1297.000    640.100   1300.000    638.800   1302.000    639.900   1305.000
GR    643.200   1308.000    646.200   1490.000      0.000      0.000      0.000      0.000      0.000      0.000
SB      0.000      1.820      2.900    200.000     10.000      0.000     56.520      0.000    638.800    638.800

X1      3.020      0.000      0.000      0.000     40.000     40.000     40.000      0.000      0.000      0.000
X2      0.000      0.000      1.000    644.820    646.200      0.000      0.000      0.000      0.000      0.000
NC       .070       .070      0.000      0.000      0.000      0.000      0.000      0.000      0.000      0.000

X1      3.100      8.000   1302.000   1330.000     30.000     30.000     30.000      0.000      0.000      0.000
GR    646.000   1200.000    644.500   1302.000    640.300   1305.000    639.500   1307.000    640.200   1310.000
GR    641.700   1321.000    644.700   1330.000    646.000   1400.000      0.000      0.000      0.000      0.000
NC      0.000      0.000      0.000       .100       .300       0.000      0.000      0.000      0.000      0.000
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X1	4.000	7.000	440.000	471.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	647.000	350.000	645.700	440.000	641.000	450.000	640.200	454.000	640.900	459.000
GR	645.800	471.000	647.000	570.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.360	0.000
X1	4.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	1.510	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	4.600	7.000	500.000	552.000	400.000	400.000	400.000	0.000	-.830	0.000
GR	650.000	400.000	649.400	500.000	645.700	523.000	645.100	527.000	645.600	533.000
GR	649.700	552.000	650.700	600.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	5.000	0.000	0.000	0.000	275.000	275.000	275.000	0.000	.830	0.000
X1	5.900	8.000	610.000	635.000	700.000	700.000	700.000	0.000	0.000	0.000
GR	651.700	550.000	650.800	610.000	646.200	614.000	645.200	621.000	646.200	630.000
GR	648.200	635.000	650.000	700.000	652.800	800.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE MARTINSVILLE RD.

X1	5.980	10.000	585.000	600.000	91.000	91.000	91.000	0.000	0.000	0.000
GR	652.000	585.000	648.300	585.100	646.400	587.000	645.300	593.500	646.300	598.000
GR	648.000	598.000	648.500	598.100	649.700	600.000	651.000	700.000	653.500	800.000
SB	0.000	1.200	2.600	80.000	12.000	0.000	60.000	0.000	645.300	645.300
X1	6.020	0.000	0.000	0.000	18.000	18.000	18.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	650.500	651.500	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	651.000	651.000	0.000
NC	.095	.095	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	6.100	8.000	570.000	610.000	51.000	51.000	51.000	0.000	0.000	0.000
GR	651.800	500.000	650.200	570.000	646.400	587.000	646.300	590.000	646.500	597.000
GR	648.100	600.000	650.400	610.000	652.500	700.000	0.000	0.000	0.000	0.000
QT	5.000	345.000	490.000	560.000	700.000	560.000	0.000	0.000	0.000	0.000
NC	0.000	.080	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	6.500	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.590	0.000
X1	6.600	8.000	460.000	525.000	865.000	865.000	865.000	0.000	-.980	0.000
GR	655.000	370.000	652.300	460.000	649.900	477.000	648.900	482.000	649.700	485.000
GR	652.500	500.000	653.000	525.000	655.000	630.000	0.000	0.000	0.000	0.000
X1	7.000	8.000	475.000	500.000	825.000	825.000	825.000	0.000	0.000	0.000
GR	655.000	360.000	654.300	400.000	651.900	475.000	649.900	477.000	648.900	482.000
GR	649.700	485.000	652.500	500.000	656.900	600.000	0.000	0.000	0.000	0.000
QT	5.000	275.000	395.000	450.000	560.000	450.000	0.000	0.000	0.000	0.000

X1	7.010	9.000	718.000	743.000	500.000	500.000	500.000	0.000	-2.030	0.000
GR	658.100	600.000	656.200	700.000	655.100	718.000	652.100	725.000	651.700	730.000
GR	652.600	736.000	654.700	743.000	655.800	786.000	658.500	900.000	0.000	0.000
NC	.070	.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	7.100	0.000	0.000	0.000	600.000	600.000	600.000	0.000	.930	0.000
X1	7.500	0.000	0.000	0.000	710.000	710.000	710.000	0.000	1.100	0.000
X1	7.600	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.700	0.000	0.000	0.000	500.000	500.000	500.000	0.000	.850	0.000
X1	7.800	10.000	442.000	480.000	500.000	500.000	500.000	0.000	-1.150	0.000
GR	662.700	200.000	661.600	300.000	660.000	400.000	659.300	442.000	656.500	459.000
GR	655.400	467.000	655.900	473.000	658.800	480.000	660.700	500.000	661.500	501.000
X1	8.000	0.000	0.000	0.000	680.000	680.000	680.000	0.000	1.150	0.000
X1	8.500	7.000	790.000	806.000	600.000	600.000	600.000	0.000	-.560	0.000
GR	661.500	725.000	659.100	790.000	656.900	794.000	656.500	797.000	656.900	803.000
GR	659.600	806.000	661.000	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.900	0.000	0.000	0.000	625.000	625.000	625.000	0.000	.560	0.000

**FOOTBRIDGE-X5

X1	8.910	0.000	0.000	0.000	138.000	138.000	138.000	0.000	.400	0.000
X1	8.920	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000

**D/S FACE KOZMA

X1	8.980	7.000	790.000	806.000	11.000	11.000	11.000	0.000	0.000	0.000
GR	661.800	725.000	659.400	790.000	656.900	794.000	656.900	797.000	656.900	803.000
GR	659.400	806.000	661.800	875.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	8.990	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.010	0.000	0.000	0.000	12.000	12.000	12.000	0.000	0.000	0.000
X2	0.000	0.000	0.000	659.800	661.800	0.000	0.000	0.000	0.000	0.000
X1	9.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000

X1	9.100	7.000	784.000	800.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	661.500	730.000	660.200	784.000	657.200	788.000	656.900	793.000	657.000	797.000
GR	658.800	800.000	661.700	860.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.200	.400	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									
X1	9.180	6.000	141.500	158.500	350.000	350.000	350.000	0.000	0.000	0.000
GR	662.700	100.000	660.800	141.500	657.000	143.000	657.000	157.000	660.800	158.500
GR	662.700	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	657.000	657.000
X1	9.220	0.000	0.000	0.000	7.000	7.000	7.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	660.800	662.700	0.000	0.000	0.000	0.000	0.000
X1	9.250	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.400	0.000
	**FOOTBRIDGE-SB									
X1	9.280	6.000	141.500	158.500	200.000	200.000	200.000	0.000	0.000	0.000
GR	663.200	100.000	661.800	141.500	658.100	143.000	658.100	157.000	661.800	158.500
GR	663.200	200.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.350	3.100	100.000	17.000	0.000	60.000	0.000	658.100	658.100
X1	9.320	0.000	0.000	0.000	8.000	8.000	8.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	661.800	663.200	0.000	0.000	0.000	0.000	0.000
X1	9.350	0.000	0.000	0.000	50.000	50.000	50.000	0.000	.100	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	9.500	6.000	321.000	363.000	250.000	250.000	250.000	0.000	-.800	0.000
GR	665.500	280.000	664.700	321.000	659.300	344.000	659.200	355.000	665.300	363.000
GR	667.400	570.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.000	0.000	0.000	0.000	830.000	830.000	830.000	.910	.800	0.000
	**FOOTBRIDGE-X5									
X1	10.700	11.000	1044.000	1078.000	940.000	940.000	940.000	.690	-.500	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	10.710	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-SB									

X1	10.780	6.000	102.000	128.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.000	668.000	0.000
GR	669.100	100.000	666.900	102.000	661.000	112.500	661.000	117.500	666.900	128.000
GR	669.100	130.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.580	3.000	30.000	15.000	0.000	93.000	0.000	661.000	661.000
X1	10.820	0.000	0.000	0.000	15.000	15.000	15.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	666.900	669.100	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	669.100	669.100	0.000
X1	10.900	11.000	1044.000	1078.000	50.000	50.000	50.000	.690	0.000	0.000
GR	672.700	900.000	669.900	1000.000	667.200	1044.000	661.000	1055.000	660.800	1057.000
GR	662.200	1071.000	667.700	1078.000	668.100	1100.000	669.200	1200.000	669.800	1300.000
GR	670.600	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE SUMPTER RD.

X1	10.980	9.000	977.000	1001.000	50.000	50.000	50.000	.670	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	668.500	668.500	0.000
GR	670.000	950.000	667.600	977.000	664.200	981.000	662.600	983.000	662.200	985.000
GR	662.200	988.000	663.500	1000.000	667.600	1001.000	670.000	1002.000	0.000	0.000
SB	0.000	1.470	2.800	50.000	16.000	0.000	67.000	0.000	662.200	662.200
X1	11.020	0.000	0.000	0.000	45.000	45.000	45.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	667.600	670.000	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	670.000	670.000	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	11.100	10.000	950.000	979.000	50.000	50.000	50.000	.690	0.000	0.000
GR	670.700	900.000	668.700	950.000	666.800	958.000	664.300	960.000	662.600	967.000
GR	662.600	969.000	664.000	975.000	666.500	979.000	667.500	1000.000	672.000	1100.000
QT	5.000	225.000	330.000	370.000	470.000	370.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000

**FOOTBRIDGE-X5

X1	11.500	0.000	0.000	0.000	225.000	225.000	225.000	0.000	.370	0.000
X1	11.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.200	.200	.300	0.000	0.000	0.000	0.000	0.000
NC	.085	.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	12.000	8.000	323.000	353.000	500.000	500.000	500.000	0.000	0.000	0.000
GR	672.000	290.000	699.900	323.000	664.500	332.000	663.800	336.000	664.400	339.000
GR	665.300	347.000	669.200	353.000	672.000	400.000	0.000	0.000	0.000	0.000
X1	12.900	7.000	266.000	298.000	715.000	715.000	715.000	.750	0.000	0.000
GR	671.500	240.000	670.200	266.000	666.800	270.000	665.800	277.000	665.900	281.000
GR	670.400	298.000	671.500	323.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. EAST CROSSING									
X1	12.980	7.000	388.000	400.000	100.000	100.000	100.000	.750	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	671.900	671.900	0.000
GR	673.800	373.000	670.500	388.000	666.400	389.000	665.900	395.000	666.400	399.000
GR	670.500	400.000	673.800	415.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.370	2.500	32.000	9.000	0.000	36.000	0.000	665.900	665.900
X1	13.020	0.000	0.000	0.000	42.000	42.000	42.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	670.500	673.900	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	673.800	673.800	0.000
NC	.060	.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	13.100	8.000	430.000	458.000	50.000	50.000	50.000	.750	0.000	0.000
GR	675.000	400.000	675.000	400.000	669.500	430.000	666.700	438.000	666.400	445.000
GR	666.400	451.000	669.600	458.000	675.000	490.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	13.500	8.000	463.000	488.000	800.000	800.000	800.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	13.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.100	.100	.100	.100	0.000	0.000	0.000	0.000	0.000
X1	14.000	8.000	463.000	488.000	200.000	200.000	200.000	0.000	0.000	0.000
GR	675.000	440.000	670.500	463.000	668.000	469.000	667.600	475.000	668.100	482.000
GR	670.500	488.000	671.100	500.000	675.000	515.000	0.000	0.000	0.000	0.000
X1	14.100	0.000	0.000	0.000	450.000	450.000	450.000	0.000	1.050	0.000
X1	14.500	0.000	0.000	0.000	425.000	425.000	425.000	0.000	1.050	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
	**FOOTBRIDGE-X5									
X1	14.510	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-4.000	.200	.200	.200	.200	0.000	0.000	0.000	0.000	0.000
X1	14.900	8.000	331.000	390.000	150.000	150.000	150.000	.680	0.000	0.000
GR	677.000	260.000	673.400	331.000	670.100	345.000	670.000	350.000	670.100	355.000
GR	672.700	372.000	674.000	390.000	677.000	440.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
	** D/S FACE WILLIS RD. MIDDLE CROSSING									

X1	14.980	6.000	130.000	139.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	675.000	100.000	671.900	130.000	670.000	130.500	670.000	138.500	671.900	139.000
GR	675.000	169.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.600	2.300	0.000	9.000	0.000	17.000	0.000	670.000	670.000
X1	15.020	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	671.900	675.000	0.000	0.000	0.000	0.000	0.000
BT	6.000	100.000	675.000	0.000	130.000	675.000	671.900	130.500	676.800	671.900
BT	138.500	676.800	671.900	139.000	675.000	671.900	169.000	675.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000
X1	15.100	7.000	277.000	296.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	674.000	250.000	673.800	277.000	670.300	279.000	670.300	282.000	670.900	285.000
GR	673.200	296.000	674.000	325.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	16.000	0.000	0.000	0.000	350.000	350.000	350.000	0.000	.100	0.000

**FOOTBRIDGE-X5

X1	16.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	16.900	8.000	393.000	420.000	250.000	250.000	250.000	0.000	0.000	0.000
GR	675.000	392.000	675.000	392.500	674.600	393.000	670.700	400.000	670.500	408.000
GR	670.800	417.000	672.700	420.000	674.500	470.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILMONT RD.

X1	16.980	8.000	800.000	808.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	675.000	675.000	0.000
GR	676.000	758.000	676.000	759.000	676.000	760.000	673.900	800.000	671.200	802.000
GR	671.700	806.000	673.900	808.000	676.300	830.000	0.000	0.000	0.000	0.000
SB	0.000	1.360	2.600	80.000	8.000	0.000	20.000	0.000	671.200	671.200
X1	17.020	0.000	0.000	0.000	25.000	25.000	25.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	673.900	676.200	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	676.200	676.200	0.000
X1	17.100	8.000	388.000	419.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.000	369.000	678.000	370.000	674.500	388.000	671.900	397.000	671.200	404.000
GR	671.600	411.000	674.200	419.000	678.000	430.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	18.000	9.000	490.000	523.000	600.000	600.000	600.000	0.000	0.000	0.000
GR	677.000	470.000	674.600	490.000	674.200	495.000	672.600	496.000	672.500	498.000
GR	671.800	504.000	672.300	513.000	675.800	523.000	676.900	530.000	0.000	0.000

**FOOTBRIDGE-X5

X1	18.100	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
X5	-5.000	.100	.100	.100	.100	.100	0.000	0.000	0.000	0.000
X1	18.900	6.000	242.000	269.000	440.000	440.000	440.000	0.000	0.000	0.000
GR	675.300	242.000	672.100	247.000	671.800	253.000	672.000	257.000	673.900	269.000
GR	675.500	300.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.000	0.000	0.000	.300	.500	0.000	0.000	0.000	0.000	0.000

** D/S FACE WILLIS RD. WEST CROSSING

X1	18.980	6.000	251.000	261.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.200	677.200	0.000
GR	677.700	215.000	675.400	251.000	672.100	252.000	672.800	256.000	675.400	261.000
GR	677.700	290.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SB	0.000	1.670	2.300	0.000	9.000	0.000	29.700	0.000	672.100	672.100
X1	19.020	0.000	0.000	0.000	40.000	40.000	40.000	0.000	0.000	0.000
X2	0.000	0.000	1.000	675.400	677.700	0.000	0.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	0.000	0.000	0.000	0.000	677.700	677.700	0.000
BT	6.000	215.000	677.700	0.000	251.000	677.700	0.000	251.100	680.400	0.000
BT	260.900	680.400	0.000	261.000	677.700	0.000	290.000	677.700	0.000	0.000
X1	19.100	9.000	200.000	234.000	50.000	50.000	50.000	0.000	0.000	0.000
GR	678.500	180.000	677.000	190.000	675.400	200.000	675.100	208.000	672.400	210.000
GR	671.900	219.000	672.200	228.000	674.900	234.000	678.500	260.000	0.000	0.000
NC	0.000	0.000	0.000	.100	.300	0.000	0.000	0.000	0.000	0.000
X1	19.900	9.000	490.000	526.000	475.000	475.000	475.000	0.000	0.000	0.000
GR	679.000	470.000	678.000	480.000	676.000	490.000	675.700	495.000	672.400	500.000
GR	672.100	505.000	672.100	512.000	676.000	526.000	679.000	550.000	0.000	0.000

** D/S FACE ELWELL RD.

X1	19.980	0.000	0.000	0.000	100.000	100.000	100.000	0.000	.500	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF 1

CCHV= .100 CEHV= .300
*SECNO 2.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
2.00	7.17	644.07	0.00	643.50	644.17	.10	0.00	0.00	642.30
650.	26.	586.	38.	51.	218.	61.	0.	0.	641.70
0.00	.51	2.68	.62	.104	.065	.104	0.000	636.90	580.79
.001499	0.	0.	0.	0	0	5	0.00	148.84	729.62

*SECNO 2.200

2.20	7.56	645.21	0.00	0.00	645.32	.11	1.15	.00	642.75
650.	67.	531.	53.	96.	179.	76.	5.	3.	642.75
.08	.70	2.97	.70	.104	.065	.104	.065	637.65	567.16
.001813	700.	700.	700.	2	0	0	0.00	169.29	736.45

*SECNO 2.900
3280 CROSS SECTION 2.90 EXTENDED .83 FEET

2.90	8.43	646.83	0.00	0.00	646.90	.07	1.57	.00	643.90
650.	276.	237.	137.	204.	75.	143.	12.	6.	644.80
.18	1.35	3.16	.96	.104	.065	.104	.065	638.40	1200.00
.002860	700.	700.	700.	2	0	0	0.00	200.00	1400.00

CCHV= .300 CEHV= .500
*SECNO 2.980
3280 CROSS SECTION 2.98 EXTENDED .85 FEET

** D/S FACE JUDD RD.

2.98	8.25	647.05	0.00	0.00	647.09	.04	.18	.01	645.10
650.	7.	178.	465.	10.	68.	428.	13.	6.	643.20
.19	.71	2.61	1.09	.104	.065	.104	.065	638.80	1290.00
.001867	80.	80.	80.	2	0	0	0.00	200.00	1490.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.82	2.90	200.00	10.00	0.00	56.52	0.00	638.80	638.80

*SECNO 3.020
3280 CROSS SECTION 3.02 EXTENDED 1.01 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
650.79	647.09	0.00	505.	149.	57.	60.	644.82	646.20
3.02	8.41	647.21	0.00	0.00	647.25	.04	.15	0.00	645.10
650.	8.	169.	473.	11.	70.	457.	13.	6.	643.20
.20	.69	2.42	1.04	.104	.065	.104	.065	638.80	1290.00
.001552	40.	40.	40.	2	0	3	0.00	200.00	1490.00

*SECNO 3.100
3280 CROSS SECTION 3.10 EXTENDED 1.24 FEET

3.10	7.74	647.24	0.00	0.00	647.29	.05	.04	.01	644.50
650.	177.	361.	111.	203.	157.	132.	13.	6.	644.70
.20	.87	2.30	.84	.091	.065	.091	.065	639.50	1200.00
.001167	30.	30.	30.	2	0	0	0.00	200.00	1400.00

CCHV= .100 CEHV= .300
*SECNO 4.000
3280 CROSS SECTION 4.00 EXTENDED 1.06 FEET

4.00	7.86	648.06	0.00	0.00	648.12	.06	.82	.00	645.70
650.	122.	400.	128.	154.	171.	164.	21.	10.	645.80
.32	.79	2.34	.78	.091	.065	.091	.065	640.20	350.00
.001175	700.	700.	700.	2	0	0	0.00	220.00	570.00

*SECNO 4.100
3280 CROSS SECTION 4.10 EXTENDED .41 FEET

4.10	7.21	648.77	0.00	0.00	648.89	.12	.76	.02	647.06
650.	82.	484.	83.	95.	151.	100.	26.	12.	647.16
.36	.86	3.21	.84	.091	.065	.091	.065	641.56	350.00
.002618	450.	450.	450.	2	0	0	0.00	220.00	570.00

*SECNO 4.500
3280 CROSS SECTION 4.50 EXTENDED .30 FEET

4.50	7.10	650.17	0.00	0.00	650.31	.14	1.41	.01	648.57
650.	74.	502.	74.	85.	147.	89.	29.	14.	648.67
.41	.87	3.41	.84	.091	.065	.091	.065	643.07	350.00
.003041	500.	500.	500.	2	0	0	0.00	220.00	570.00

*SECNO 4.600
3280 CROSS SECTION 4.60 EXTENDED 1.74 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
4.60	6.65	650.92	0.00	0.00	650.97	.05	.65	.01	648.57
650.	138.	470.	41.	204.	238.	74.	33.	16.	648.87
.48	.68	1.98	.56	.111	.065	.111	.065	644.27	400.00
.001004	400.	400.	400.	2	0	0	0.00	200.00	600.00

*SECNO 5.000
3280 CROSS SECTION 5.00 EXTENDED 1.25 FEET

5.00	6.16	651.26	0.00	0.00	651.33	.07	.35	.01	649.40
650.	115.	507.	29.	155.	212.	51.	36.	18.	649.70
.52	.74	2.38	.57	.111	.065	.111	.065	645.10	400.00
.001699	275.	275.	275.	2	0	0	0.00	200.00	600.00

*SECNO 5.900
3280 CROSS SECTION 5.90 EXTENDED .59 FEET

5.90	7.09	652.29	0.00	0.00	652.34	.06	1.01	.00	650.80
650.	30.	358.	262.	62.	146.	300.	44.	21.	648.20
.63	.48	2.45	.87	.111	.065	.111	.065	645.20	550.00
.001252	700.	700.	700.	3	0	0	0.00	231.63	781.63

CCHV= .300 CEHV= .500
*SECNO 5.980
3280 CROSS SECTION 5.98 EXTENDED .44 FEET

** D/S FACE MARTINSVILLE RD.

5.98	7.14	652.44	0.00	0.00	652.56	.12	.19	.03	652.00
650.	0.	327.	323.	0.	89.	251.	44.	21.	649.70
.64	0.00	3.66	1.29	.111	.065	.111	.065	645.30	585.00
.004067	91.	91.	91.	2	0	0	0.00	172.76	757.76

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.20	2.60	80.00	12.00	0.00	60.00	0.00	645.30	645.30

*SECNO 6.020
3280 CROSS SECTION 6.02 EXTENDED .87 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWETR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
654.63	652.56	0.00	341.	312.	60.	62.	650.50	651.50

6.02	7.57	652.87	0.00	0.00	652.95	.07	.39	0.00	652.00
650.	0.	287.	363.	0.	96.	323.	45.	22.	649.70
.65	0.00	2.99	1.12	.111	.065	.111	.065	645.30	585.00
.002541	18.	18.	18.	2	0	2	0.00	189.99	774.99

*SECNO 6.100
3280 CROSS SECTION 6.10 EXTENDED 1.18 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

6.10	6.67	652.97	0.00	0.00	653.04	.07	.09	.00	650.20
650.	94.	476.	79.	138.	200.	138.	45.	22.	650.40
.65	.68	2.38	.58	.124	.065	.124	.065	646.30	500.00
.001319	51.	51.	51.	2	0	0	0.00	200.00	700.00

CCHV= .100 CEHV= .300
*SECNO 6.500
3280 CROSS SECTION 6.50 EXTENDED 1.17 FEET

6.50	6.67	653.56	0.00	0.00	653.60	.05	.56	.00	650.79
560.	79.	401.	79.	138.	200.	137.	51.	24.	650.99
.74	.57	2.01	.58	.124	.065	.104	.065	646.89	500.00
.000941	500.	500.	500.	0	0	0	0.00	200.00	700.00

*SECNO 6.600
3280 CROSS SECTION 6.60 EXTENDED .34 FEET

6.60	6.44	654.36	0.00	0.00	654.39	.03	.79	.00	651.32
560.	77.	410.	73.	152.	248.	141.	61.	29.	652.02
.92	.51	1.65	.52	.124	.065	.104	.065	647.92	370.00
.000887	865.	865.	865.	2	0	0	0.00	260.00	630.00

*SECNO 7.000
3280 CROSS SECTION 7.00 EXTENDED .35 FEET

7.00	6.46	655.36	0.00	0.00	655.43	.07	1.02	.01	651.90
560.	161.	327.	72.	197.	121.	92.	70.	33.	652.50
1.04	.82	2.71	.78	.124	.065	.104	.065	648.90	360.00
.001847	825.	825.	825.	1	0	0	0.00	204.78	564.78

*SECNO 7.010

7.01	6.35	656.02	0.00	0.00	656.06	.03	.63	.00	653.07
450.	57.	246.	147.	134.	128.	228.	75.	36.	652.67

1.14	.43	1.92	.65	.124	.065	.104	.065	649.67	602.51
.000840	500.	500.	500.	2	0	0	0.00	278.59	881.10

*SECNO 7.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.10	5.99	656.59	0.00	0.00	656.63	.04	.58	.00	654.00
450.	58.	250.	142.	95.	119.	180.	81.	39.	653.60
1.25	.61	2.10	.79	.091	.065	.091	.065	650.60	621.67
.001106	600.	600.	600.	2	0	0	0.00	244.05	865.73

*SECNO 7.500

7.50	5.78	657.48	0.00	0.00	657.53	.05	.90	.00	655.10
450.	50.	265.	135.	76.	114.	155.	87.	43.	654.70
1.37	.66	2.33	.87	.091	.065	.091	.065	651.70	632.74
.001451	710.	710.	710.	2	0	0	0.00	224.10	856.84

*SECNO 7.600

7.60	5.69	658.24	0.00	0.00	658.30	.06	.77	.00	655.95
450.	47.	272.	131.	69.	112.	146.	91.	46.	655.55
1.45	.69	2.43	.90	.091	.065	.091	.065	652.55	637.28
.001625	500.	500.	500.	2	0	0	0.00	215.92	853.20

*SECNO 7.700

7.70	5.66	659.06	0.00	0.00	659.12	.06	.82	.00	656.80
450.	47.	273.	130.	67.	111.	144.	95.	48.	656.40
1.52	.69	2.46	.91	.091	.065	.091	.065	653.40	638.26
.001666	500.	500.	500.	1	0	0	0.00	214.16	852.42

*SECNO 7.800

7.80	5.66	659.91	0.00	0.00	659.98	.07	.85	.00	658.15
450.	66.	363.	21.	94.	153.	26.	98.	50.	657.65
1.59	.70	2.37	.81	.091	.065	.091	.065	654.25	333.85
.001733	500.	500.	500.	1	0	0	0.00	166.60	500.45

*SECNO 8.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALCB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
8.00	5.68	661.08	0.00	0.00	661.15	.07	1.17	.00	659.30
450.	67.	362.	21.	95.	153.	27.	102.	53.	658.80
1.68	.70	2.36	.81	.091	.065	.091	.065	655.40	333.08
.001707	680.	680.	680.	1	0	0	0.00	167.39	500.46

*SECNO 8.500

3280 CROSS SECTION 8.50 EXTENDED 1.50 FEET

8.50	6.00	661.94	0.00	0.00	661.98	.04	.83	.00	658.54
450.	132.	179.	139.	143.	83.	152.	107.	55.	659.04
1.80	.92	2.16	.92	.091	.065	.091	.065	655.94	725.00
.001137	600.	600.	600.	2	0	0	0.00	150.00	875.00

*SECNO 8.900
3280 CROSS SECTION 8.90 EXTENDED 1.61 FEET

8.90	6.11	662.61	0.00	0.00	662.64	.03	.67	.00	659.10
450.	134.	174.	142.	150.	85.	159.	112.	57.	659.60
1.93	.89	2.06	.89	.091	.065	.091	.065	656.50	725.00
.001000	625.	625.	625.	2	0	0	0.00	150.00	875.00

*SECNO 8.910
3280 CROSS SECTION 8.91 EXTENDED 1.36 FEET

**FOOTBRIDGE-X5

8.91	5.86	662.76	0.00	0.00	662.81	.04	.16	.00	659.50
450.	128.	186.	136.	134.	81.	142.	113.	58.	660.00
1.96	.96	2.30	.95	.091	.065	.091	.065	656.90	725.00
.001333	138.	138.	138.	2	0	0	0.00	150.00	875.00

*SECNO 8.920
WATER EL=X5 CARD= 662.863
3280 CROSS SECTION 8.92 EXTENDED 1.46 FEET

8.92	5.96	662.86	0.00	0.00	662.90	.04	.00	.00	659.50
450.	131.	181.	138.	141.	82.	149.	113.	58.	660.00
1.96	.93	2.20	.93	.091	.065	.091	.065	656.90	725.00
.001183	1.	1.	1.	0	0	0	0.00	150.00	875.00

*SECNO 8.980
3280 CROSS SECTION 8.98 EXTENDED 1.07 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**D/S FACE KOZMA

8.98	5.98	662.88	0.00	0.00	662.91	.03	.01	.00	659.40
450.	130.	182.	138.	148.	87.	157.	114.	58.	659.40
1.96	.88	2.09	.88	.091	.065	.091	.065	656.90	725.00
.000999	11.	11.	11.	1	0	0	0.00	150.00	875.00

*SECNO 8.990

3280 CROSS SECTION 8.99 EXTENDED 1.05 FEET

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 661.80 MAX ELLC= 659.80

8.99	5.95	662.85	0.00	0.00	662.93	.08	.00	.01	659.40
450.	107.	155.	189.	81.	54.	86.	114.	58.	659.40
1.96	1.31	2.84	2.19	.091	.065	.091	.065	656.90	725.00
.013636	1.	1.	1.	2	0	0	-166.00	150.00	875.00

*SECNO 9.010
3280 CROSS SECTION 9.01 EXTENDED 1.21 FEET

3370 NORMAL BRIDGE,NRD= 0 MIN ELTRD= 661.80 MAX ELLC= 659.80

9.01	6.11	663.01	0.00	0.00	663.07	.06	.14	.00	659.40
450.	111.	143.	196.	91.	57.	97.	114.	58.	659.40
1.96	1.22	2.50	2.02	.091	.065	.091	.065	656.90	725.00
.009968	12.	12.	12.	2	0	0	-166.00	150.00	875.00

*SECNO 9.020
3280 CROSS SECTION 9.02 EXTENDED 1.25 FEET

9.02	6.15	663.05	0.00	0.00	663.08	.03	.00	.00	659.40
450.	134.	174.	142.	159.	90.	169.	114.	58.	659.40
1.96	.84	1.94	.84	.091	.065	.091	.065	656.90	725.00
.000826	1.	1.	1.	2	0	0	0.00	150.00	875.00

*SECNO 9.100
3280 CROSS SECTION 9.10 EXTENDED 1.59 FEET

9.10	6.19	663.09	0.00	0.00	663.12	.03	.04	.00	660.20
450.	101.	180.	168.	121.	88.	170.	114.	58.	658.80
1.97	.84	2.05	.99	.091	.065	.091	.065	656.90	730.00
.000940	50.	50.	50.	2	0	0	0.00	130.00	860.00

CCHV= .200 CEHV= .400
*SECNO 9.180
3280 CROSS SECTION 9.18 EXTENDED .81 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**FOOTBRIDGE-SB

9.18	6.51	663.51	0.00	0.00	663.60	.09	.46	.02	660.80
450.	76.	298.	76.	73.	105.	73.	117.	59.	660.80

2.01	1.04	2.84	1.04	.091	.065	.091	.065	657.00	100.00
.001943	350.	350.	350.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	657.00	657.00

*SECNO 9.220
3280 CROSS SECTION 9.22 EXTENDED .93 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
664.69	663.60	0.00	264.	186.	60.	65.	660.80	662.70

9.22	6.63	663.63	0.00	0.00	663.71	.08	.11	0.00	660.80
450.	80.	291.	80.	78.	107.	78.	117.	59.	660.80
2.02	1.02	2.71	1.02	.091	.065	.091	.065	657.00	100.00
.001726	7.	7.	7.	2	0	4	0.00	100.00	200.00

*SECNO 9.250
3280 CROSS SECTION 9.25 EXTENDED .72 FEET

9.25	6.42	663.82	0.00	0.00	663.91	.10	.19	.01	661.20
450.	72.	305.	72.	69.	103.	69.	117.	59.	661.20
2.03	1.05	2.95	1.05	.091	.065	.091	.065	657.40	100.00
.002140	100.	100.	100.	2	0	0	0.00	100.00	200.00

*SECNO 9.280
3280 CROSS SECTION 9.28 EXTENDED 1.06 FEET

**FOOTBRIDGE-SB

9.28	6.16	664.26	0.00	0.00	664.35	.09	.43	.00	661.80
450.	80.	290.	80.	73.	99.	73.	118.	60.	661.80
2.05	1.10	2.93	1.10	.091	.065	.091	.065	658.10	100.00
.002205	200.	200.	200.	2	0	0	0.00	100.00	200.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.35	3.10	100.00	17.00	0.00	60.00	0.00	658.10	658.10

*SECNO 9.320
3280 CROSS SECTION 9.32 EXTENDED 1.13 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
665.43	664.35	0.00	285.	164.	60.	63.	661.80	663.20

9.32	6.22	664.32	0.00	0.00	664.41	.09	.06	0.00	661.80
450.	82.	286.	82.	76.	100.	76.	118.	60.	661.80
2.05	1.08	2.85	1.08	.091	.065	.091	.065	658.10	100.00
.002052	8.	8.	8.	2	0	5	0.00	100.00	200.00

*SECNO 9.350
3280 CROSS SECTION 9.35 EXTENDED 1.12 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

9.35	6.23	664.43	0.00	0.00	664.51	.09	.10	.00	661.90
450.	82.	286.	82.	76.	100.	76.	119.	60.	661.90
2.06	1.08	2.85	1.08	.091	.065	.091	.065	658.20	100.00
.002053	50.	50.	50.	0	0	0	0.00	100.00	200.00

CCHV= .100 CEHV= .300
*SECNO 9.500
3280 CROSS SECTION 9.50 EXTENDED .19 FEET

9.50	6.49	664.89	0.00	0.00	664.97	.09	.46	.00	663.90
450.	11.	437.	2.	24.	183.	7.	120.	60.	664.50
2.09	.47	2.39	.22	.091	.065	.091	.065	658.40	280.00
.001661	250.	250.	250.	2	0	0	0.00	121.26	401.26

*SECNO 10.000
3280 CROSS SECTION 10.00 EXTENDED .64 FEET

10.00	6.94	666.14	0.00	0.00	666.22	.08	1.25	.00	664.70
450.	20.	422.	9.	39.	184.	32.	125.	63.	665.30
2.19	.50	2.29	.28	.111	.065	.111	.065	659.20	280.00
.001363	830.	830.	830.	2	0	0	0.00	150.95	430.95

*SECNO 10.700

**FOOTBRIDGE-X5

10.70	7.63	667.93	0.00	0.00	668.11	.18	1.86	.03	666.70
450.	5.	441.	5.	8.	127.	11.	129.	65.	667.20
2.27	.54	3.47	.41	.111	.065	.111	.065	660.30	985.56
.003114	940.	940.	940.	2	0	0	0.00	72.97	1058.53

*SECNO 10.710
WATER EL=X5 CARD= 668.126

10.71	7.83	668.13	0.00	0.00	668.29	.16	.00	.00	666.70
450.	6.	435.	9.	11.	132.	20.	129.	65.	667.20
2.27	.56	3.30	.44	.111	.065	.111	.065	660.30	983.32
.002688	1.	1.	1.	0	0	0	0.00	87.70	1071.02

*SECNO 10.780

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**FOOTBRIDGE-SB

10.78	7.40	668.40	0.00	0.00	668.58	.18	.29	.01	666.90
450.	0.	449.	0.	1.	130.	1.	129.	66.	666.90
2.28	.47	3.44	.47	.111	.065	.111	.065	661.00	100.64
.003073	100.	100.	100.	2	0	0	0.00	28.72	129.36

SPECIAL BRIDGE

SB	XK	XKOR	CDFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.58	3.00	30.00	15.00	0.00	93.00	0.00	661.00	661.00

*SECNO 10.820
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
668.97	668.58	0.00	0.	450.	93.	89.	666.90	669.10

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 669.10 ELREA= 669.10

10.82	7.82	668.82	0.00	0.00	668.97	.16	.39	0.00	666.90
450.	0.	450.	0.	0.	141.	0.	129.	66.	666.90
2.28	0.00	3.19	0.00	.078	.065	.078	.065	661.00	102.00
.002473	15.	15.	15.	2	0	0	0.00	26.00	128.00

*SECNO 10.900

10.90	8.16	668.96	0.00	0.00	669.09	.12	.11	.00	667.20
450.	14.	411.	26.	18.	140.	40.	129.	66.	667.70
2.29	.78	2.94	.65	.078	.065	.078	.065	660.80	979.52
.001973	50.	50.	50.	2	0	0	0.00	112.72	1092.23

CCHV= .300 CEHV= .500
*SECNO 10.980

** D/S FACE SUMPTER RD.

10.98	6.81	669.01	0.00	0.00	669.37	.36	.17	.12	667.60

450.	10.	440.	0.	8.	90.	0.	130.	66.	667.60
2.29	1.26	4.87	.53	.078	.065	.078	.065	662.20	957.36
.006931	50.	50.	50.	2	0	0	0.00	27.21	984.57

SPECIAL BRIDGE

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0.00	1.47	2.80	50.00	16.00	0.00	67.00	0.00	662.20	662.20

*SECNO 11.020
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
670.04	669.40	0.00	0.	445.	67.	86.	667.60	670.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 670.00 ELREA= 670.00

11.02	7.52	669.72	0.00	0.00	670.02	.30	.65	0.00	667.60
450.	0.	450.	0.	0.	102.	0.	130.	66.	667.60
2.29	0.00	4.43	0.00	.078	.065	.078	.065	662.20	968.09
.005458	45.	45.	45.	3	0	0	0.00	16.08	984.17

*SECNO 11.100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
11.10	7.55	670.15	0.00	0.00	670.24	.09	.16	.06	668.70
450.	13.	296.	142.	18.	104.	100.	130.	66.	666.50
2.30	.70	2.83	1.42	.078	.065	.078	.065	662.60	909.45
.002080	50.	50.	50.	2	0	0	0.00	100.23	1009.67

CCHV= .100 CEHV= .300
*SECNO 11.500

**FOOTBRIDGE-X5

11.50	7.60	670.57	0.00	0.00	670.63	.06	.38	.00	669.07
370.	11.	241.	118.	19.	105.	102.	131.	66.	666.87
2.33	.58	2.29	1.15	.078	.065	.078	.065	662.97	908.66
.001346	225.	225.	225.	2	0	0	0.00	101.70	1010.37

*SECNO 11.510
WATER EL=X5 CARD= 670.768

11.51	7.80	670.77	0.00	0.00	670.82	.05	.00	.00	669.07
370.	14.	233.	123.	25.	109.	114.	131.	66.	666.87
2.33	.57	2.13	1.08	.078	.065	.078	.065	662.97	905.21
.001110	1.	1.	1.	0	0	0	0.00	108.22	1013.43

*SECNO 12.000

12.00	7.61	671.41	0.00	0.00	671.51	.10	.67	.01	699.90
370.	0.	346.	24.	0.	134.	41.	133.	67.	669.20
2.39	0.00	2.57	.59	.111	.065	.111	.065	663.80	330.24
.001672	500.	500.	500.	2	0	0	0.00	59.85	390.09

*SECNO 12.900
3280 CROSS SECTION 12.90 EXTENDED 1.11 FEET

12.90	6.81	672.61	0.00	0.00	672.71	.09	1.20	.00	670.20
370.	27.	320.	23.	34.	123.	31.	136.	68.	670.40
2.47	.77	2.61	.74	.111	.065	.111	.065	665.80	240.00
.001681	715.	715.	715.	3	0	0	0.00	62.25	302.25

CCHV= .300 CEHV= .500
*SECNO 12.980

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

** D/S FACE WILLIS RD. EAST CROSSING

12.98	6.86	672.76	0.00	0.00	673.29	.54	.37	.22	670.50
370.	14.	342.	14.	9.	56.	9.	137.	68.	670.50
2.48	1.63	6.10	1.63	.111	.065	.111	.065	665.90	376.56
.013285	100.	100.	100.	2	0	0	0.00	24.39	400.94

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.37	2.50	32.00	9.00	0.00	36.00	0.00	665.90	665.90

*SECNO 13.020
3280 CROSS SECTION 13.02 EXTENDED .49 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
675.00	673.43	0.00	40.	329.	36.	41.	670.50	673.90

13.02	8.39	674.29	0.00	0.00	674.53	.24	1.24	0.00	670.50
370.	36.	299.	36.	24.	70.	24.	137.	68.	670.50
2.48	1.48	4.28	1.48	.111	.065	.111	.065	665.90	373.00
.004867	42.	42.	42.	2	0	2	0.00	31.50	404.50

*SECNO 13.100

13.10	8.20	674.60	0.00	0.00	674.65	.04	.06	.06	669.50
370.	42.	284.	44.	53.	153.	56.	137.	69.	669.60

2.49	.79	1.86	.78	.078	.065	.078	.065	666.40	401.63
.000515	50.	50.	50.	2	0	0	0.00	64.10	465.73

CCHV= .100 CEHV= .300

*SECNO 13.500

13.50	7.40	675.00	0.00	0.00	675.03	.03	.38	.00	670.50
370.	35.	264.	70.	52.	162.	79.	142.	70.	670.50
2.65	.68	1.63	.89	.078	.065	.078	.065	667.60	440.04
.000447	800.	800.	800.	2	0	0	0.00	74.92	514.97

*SECNO 13.510
WATER EL=X5 CARD= 675.097
3280 CROSS SECTION 13.51 EXTENDED .10 FEET

**FOOTBRIDGE-X5

13.51	7.50	675.10	0.00	0.00	675.13	.03	.00	.00	670.50
370.	36.	262.	72.	54.	164.	82.	142.	70.	670.50
2.65	.68	1.59	.87	.078	.065	.078	.065	667.60	440.00
.000415	1.	1.	1.	0	0	0	0.00	75.00	515.00

*SECNO 14.000
3280 CROSS SECTION 14.00 EXTENDED .18 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
14.00	7.58	675.18	0.00	0.00	675.21	.03	.08	.00	670.50
370.	37.	260.	72.	56.	166.	84.	144.	70.	670.50
2.69	.67	1.56	.86	.078	.065	.078	.065	667.60	440.00
.000393	200.	200.	200.	2	0	0	0.00	75.00	515.00

*SECNO 14.100

14.10	6.75	675.40	0.00	0.00	675.44	.05	.23	.00	671.55
370.	29.	277.	64.	38.	146.	63.	146.	71.	671.55
2.76	.77	1.90	1.01	.078	.065	.078	.065	668.65	443.34
.000697	450.	450.	450.	2	0	0	0.00	69.15	512.49

*SECNO 14.500
WATER EL=X5 CARD= 675.599

14.50	5.90	675.60	0.00	0.00	675.67	.07	.40	.01	672.60
370.	21.	297.	52.	23.	124.	43.	149.	72.	672.60
2.82	.91	2.39	1.21	.078	.065	.078	.065	669.70	447.67
.001349	425.	425.	425.	0	0	0	0.00	61.55	509.23

*SECNO 14.510
WATER EL=X5 CARD= 675.799

**FOOTBRIDGE-X5

14.51	6.10	675.80	0.00	0.00	675.86	.07	.00	.00	672.60
370.	23.	292.	55.	26.	129.	48.	149.	72.	672.60
2.82	.87	2.26	1.16	.078	.065	.078	.065	669.70	446.65
.001145	1.	1.	1.	0	0	0	0.00	63.34	509.99

*SECNO 14.900

14.90	5.98	675.98	0.00	0.00	676.04	.05	.17	.00	673.40
370.	34.	322.	14.	45.	166.	22.	149.	72.	674.00
2.84	.75	1.94	.63	.078	.065	.078	.065	670.00	273.62
.001120	150.	150.	150.	2	0	0	0.00	97.26	370.89

CCHV= .300 CEHV= .500
*SECNO 14.980
3280 CROSS SECTION 14.98 EXTENDED 1.12 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

** D/S FACE WILLIS RD. MIDDLE CROSSING

14.98	6.12	676.12	0.00	0.00	676.17	.06	.13	.00	671.90
370.	116.	138.	116.	80.	54.	80.	150.	72.	671.90
2.86	1.45	2.55	1.45	.078	.065	.078	.065	670.00	100.00
.001658	100.	100.	100.	2	0	0	0.00	69.00	169.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.60	2.30	0.00	9.00	0.00	17.00	0.00	670.00	670.00

*SECNO 15.020
3280 CROSS SECTION 15.02 EXTENDED 1.66 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
687.88	676.17	0.00	288.	82.	17.	17.	671.90	675.00

15.02	6.66	676.66	0.00	0.00	676.70	.04	.52	0.00	671.90
370.	122.	125.	122.	96.	59.	96.	150.	72.	671.90
2.86	1.27	2.12	1.27	.078	.065	.078	.065	670.00	100.00
.001022	1.	1.	1.	2	0	5	0.00	69.00	169.00

CCHV= .300 CEHV= .500
*SECNO 15.100
3280 CROSS SECTION 15.10 EXTENDED 2.71 FEET

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     15.10      6.41    676.71      0.00      0.00    676.75      .04       .05       .00    673.80
      370.       81.      186.       103.       76.      98.       90.      150.       72.     673.20
      2.87      1.07      1.90      1.15      .078      .065      .078      .065    670.30    250.00
   .000898       50.       50.       50.         2         0         0      0.00     75.00    325.00

 CCHV=     .100 CEHV=     .300
 *SECNO 16.000
 3280 CROSS SECTION      16.00 EXTENDED       2.90 FEET

     16.00      6.60    677.00      0.00      0.00    677.03      .03       .29       .00    673.90
      370.       83.      182.       105.       81.      102.       96.      152.       73.     673.30
      2.94      1.02      1.79      1.10      .078      .065      .078      .065    670.40    250.00
   .000764       350.      350.      350.         2         0         0      0.00     75.00    325.00

 *SECNO 16.100
  WATER EL=X5 CARD=    677.101
 3280 CROSS SECTION      16.10 EXTENDED       3.00 FEET


         **FOOTBRIDGE-X5

     16.10      6.70    677.10      0.00      0.00    677.13      .03       .00       .00    673.90
      370.       84.      180.       106.       84.      104.       99.      152.       73.     673.30
      2.94      1.00      1.74      1.07      .078      .065      .078      .065    670.40    250.00
   .000704         1.        1.        1.         0         0         0      0.00     75.00    325.00

 *SECNO 16.900
 3280 CROSS SECTION      16.90 EXTENDED       2.73 FEET

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST

     16.90      6.73    677.23      0.00      0.00    677.26      .02       .12       .00    674.60
      370.         1.      220.       149.         2.      161.       182.      154.       73.     672.70
      3.00       .38      1.37       .82      .078      .065      .078      .065    670.50    392.00
   .000357       250.      250.      250.         2         0         0      0.00     78.00    470.00

 CCHV=     .300 CEHV=     .500
 *SECNO 16.980
 3280 CROSS SECTION      16.98 EXTENDED       1.29 FEET


         ** D/S FACE WILMONT RD.

     16.98      6.08    677.28      0.00      0.00    677.36      .08       .08       .03    673.90
      370.      166.      126.        78.       96.      42.       48.      155.       73.     673.90
      3.01      1.73      3.02      1.62      .078      .065      .078      .065    671.20    758.00
   .002724       100.      100.      100.         2         0         0      0.00     72.00    830.00
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SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.36	2.60	80.00	8.00	0.00	20.00	0.00	671.20	671.20

*SECNO 17.020
3280 CROSS SECTION 17.02 EXTENDED 1.52 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
684.51	677.36	0.00	295.	75.	20.	22.	673.90	676.20

17.02	6.32	677.52	0.00	0.00	677.58	.06	.22	0.00	673.90
370.	171.	119.	80.	106.	44.	53.	155.	73.	673.90
3.01	1.61	2.73	1.51	.078	.065	.078	.065	671.20	758.00
.002094	25.	25.	25.	2	0	6	0.00	72.00	830.00

*SECNO 17.100

17.10	6.39	677.59	0.00	0.00	677.65	.06	.07	.00	674.50
370.	19.	338.	13.	25.	163.	17.	155.	73.	674.20
3.02	.77	2.08	.80	.078	.065	.078	.065	671.20	372.12
.000939	50.	50.	50.	2	0	0	0.00	56.68	428.81

CCHV= .100 CEHV= .300
*SECNO 18.000
3280 CROSS SECTION 18.00 EXTENDED 1.24 FEET

18.00	6.34	678.14	0.00	0.00	678.19	.05	.54	.00	674.60
370.	44.	317.	9.	47.	166.	13.	158.	74.	675.80
3.11	.94	1.91	.73	.078	.065	.078	.065	671.80	470.00
.000856	600.	600.	600.	2	0	0	0.00	60.00	530.00

*SECNO 18.100
WATER EL=X5 CARD= 678.239
3280 CROSS SECTION 18.10 EXTENDED 1.34 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

**FOOTBRIDGE-X5

18.10	6.44	678.24	0.00	0.00	678.29	.05	.00	.00	674.60
370.	45.	315.	10.	49.	170.	13.	158.	74.	675.80
3.11	.93	1.86	.72	.078	.065	.078	.065	671.80	470.00
.000793	1.	1.	1.	0	0	0	0.00	60.00	530.00

*SECNO 18.900
3280 CROSS SECTION 18.90 EXTENDED 3.24 FEET

18.90	6.74	678.54	0.00	0.00	678.58	.03	.29	.00	675.30
370.	0.	247.	123.	0.	157.	119.	161.	75.	673.90
3.20	0.00	1.57	1.03	.078	.065	.078	.065	671.80	242.00
.000549	440.	440.	440.	2	0	0	0.00	58.00	300.00

CCHV= .300 CEHV= .500
*SECNO 18.980
3280 CROSS SECTION 18.98 EXTENDED .92 FEET

** D/S FACE WILLIS RD. WEST CROSSING

18.98	6.52	678.62	0.00	0.00	678.71	.08	.10	.03	675.40
370.	119.	156.	95.	75.	52.	60.	161.	75.	675.40
3.22	1.59	2.99	1.58	.078	.065	.078	.065	672.10	215.00
.002725	100.	100.	100.	2	0	0	0.00	75.00	290.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.67	2.30	0.00	9.00	0.00	29.70	0.00	672.10	672.10

*SECNO 19.020
3280 CROSS SECTION 19.02 EXTENDED 1.37 FEET

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
682.65	678.71	0.00	240.	130.	30.	30.	675.40	677.70

19.02	6.97	679.07	0.00	0.00	679.12	.06	.42	0.00	675.40
370.	128.	140.	102.	91.	57.	73.	161.	75.	675.40
3.22	1.41	2.48	1.40	.078	.065	.078	.065	672.10	215.00
.001675	40.	40.	40.	2	0	4	0.00	75.00	290.00

*SECNO 19.100
3280 CROSS SECTION 19.10 EXTENDED .64 FEET

19.10	7.24	679.14	0.00	0.00	679.17	.03	.04	.01	675.40
370.	30.	297.	44.	43.	202.	63.	162.	75.	674.90
3.23	.68	1.47	.69	.078	.065	.078	.065	671.90	180.00
.000413	50.	50.	50.	2	0	0	0.00	80.00	260.00

CCHV= .100 CEHV= .300
*SECNO 19.900

3280 CROSS SECTION 19.90 EXTENDED .35 FEET

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IOC	ICONT	CORAR	TOPWID	ENDST
19.90	7.25	679.35	0.00	0.00	679.39	.03	.21	.00	676.00
370.	20.	322.	28.	32.	204.	44.	165.	76.	676.00
3.32	.64	1.57	.63	.078	.065	.078	.065	672.10	470.00
.000495	475.	475.	475.	1	0	0	0.00	80.00	550.00

*SECNO 19.980

** D/S FACE ELWELL RD.

19.98	6.80	679.40	0.00	0.00	679.45	.04	.06	.00	676.50
370.	16.	333.	22.	23.	188.	34.	165.	76.	676.50
3.34	.68	1.77	.64	.078	.065	.078	.065	672.60	470.97
.000695	100.	100.	100.	2	0	0	0.00	78.25	549.22

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  HEC 2 RELEASE DATED NOV 76 UPDATED FEB 1977
  ERROR CORR -  01
  MODIFICATION -  50,51,52
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