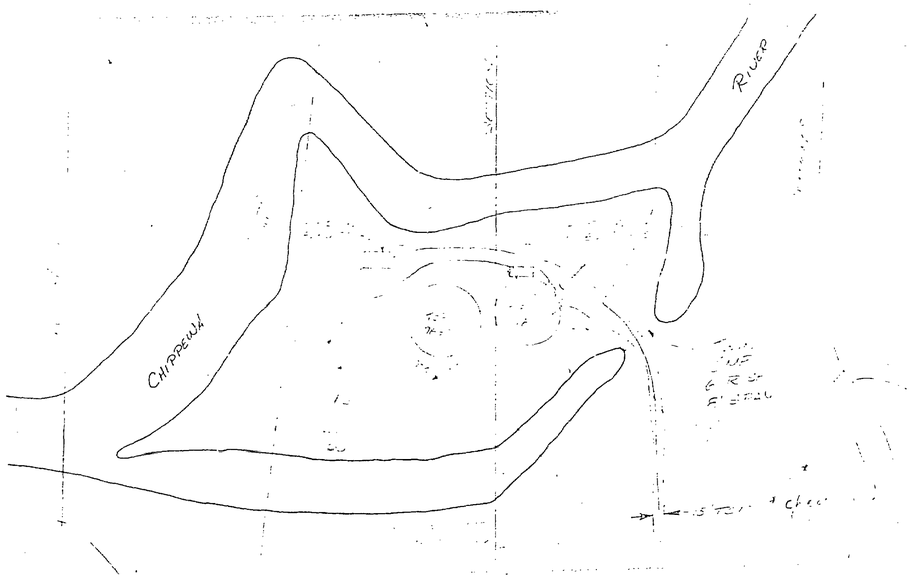
2942-32.4



CONDITIONS FOUND ON OUR RECENT FIELD RECONISANCE.
IF THERE IS ANY FURTHER CLARIFICATION NEEDED TO COMPUTE THIS FLOOD PLAIN PLEASE NOTIFY ME PROMPTLY.
THANKS
Roger

STATE OF MICHIGAN

NATURAL RESOURCES COMMISSION
CARL T. JOHNSON
E. M. LATALA
DEAN PHOENIXON
HILARY F. SNELL
HARRY N. WHITELEY
JOAN L. WOLFE
CHARLES G. YOUNGLOVE

WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF NATURAL RESOURCES
STEVENS T. MASON BUILDING, BOX 30028, LANSING, MICHIGAN 48909
HOWARD A. TANNER, Director

January 9, 1979

TO: Richard Lopax, Department of Treasury

FROM: Wallace A. Wilson, P.E., Chief, Flood Plain Management Unit RSC

SUBJECT: File No: 1243-2942-32.4

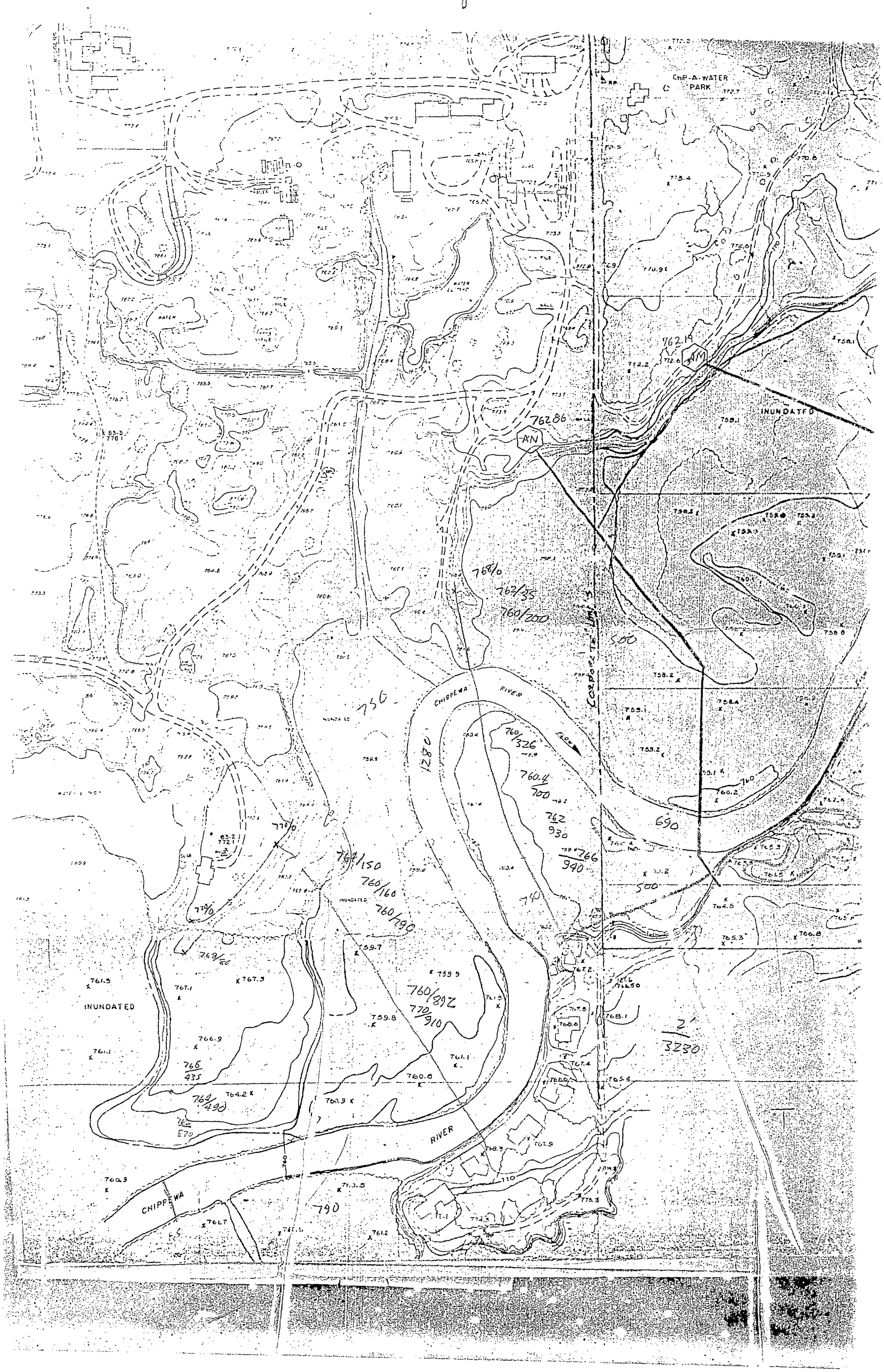
Final Plat: McGuirk Estates

County: Isabella

In accordance with Sections 116 and 117 of Act 288, Michigan Public Acts of 1967, we recommend that the above final plat be approved and recorded with the required restrictive deed covenants.

WAW/RSC:ms

```
*****************************************
 HEC2 RELEASE DATED NOV 76 UPDATED AUG 1977
 ERROR CODE = 01,02
 MODIFICATIONS = 50,51,52,53
*****************************************

T1      CONVERGENCE CHECK                    Run 10
T2
T3      CHIPPEWA RIVER  DS STA
J1  ICHECK    INQ       NINV      IDTV      TSTT      METRIC    HVINS     Q         WSEL      FN
        0.        0.        0.        0.  0.000700     0.00      0.0    5150.    765.000     0.000
J2  NPROF     IPLOT     PRINT     XSFCV     XSFCH       FN     ALLOC      IM=      CHSTM     ITRACE
     15.000     0.000    -1.000     0.000     0.000    -1.750     0.000     0.000     0.000     0.000

*PROF 10
CCHV=  0.100 CEHV=  0.300
*SECND 1.000
3280 CROSS SECTION        1.00 EXTENDED      1.96 FEET

  SECND    DEPTH    CWSEL     QTAS     WSELA     FG       HV       HL      QLOSS    BANK ELEV
    Q       QLOB     UCH      QMOB     ALOB      ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VMOB     XNL       XNCH     XNR      WTS     ELMIN      SSTA
  SLOPE     XLOBL    XLCH     XLOBR    ITRIAL    IOC      ICONT    COPAR   TOP-ID     FMOST

3470 ENCROACHMENT STATIONS=     828.0     828.0  TYPE=    1  TARGET=    130.000
        SEC NO 1, AS FT D/S OF  CENTER LINE OF LINCOLN RD.,      *S 759.5, 3/1/78
    1.00     12.30    767.16     0.00    765.00    767.85     0.29     0.00     0.00    762.30
   5150.        0.   5059.        31.        0.    1154.    132.        0.        0.    762.10
    0.00     0.00     4.39     0.00     0.150     0.042    0.150     0.000   754.80    898.00
0.000698        0.       0.       0.         0         0        3      0.00   130.00    828.00

CCHV=  0.300 CEHV=  0.500
*SECND 2.000
3470 ENCROACHMENT STATIONS=     847.0     970.0  TYPE=    1  TARGET=    120.000
 ELENCL=    768.30  ELENCR=    768.33
        SEC NO 2, 18 FT D/S                                      *S 759.4, 3/1/78
    2.00     13.02    767.22     0.00      0.00    767.50     0.28     0.00     0.00    762.30
   5150.        14.   5049.       47.        20.    1177.     87.        2.        0.    762.40
    0.00     0.49     4.29     1.00     0.090     0.042    0.090     0.001   754.20    848.00
0.000615       100.     80.     100.         0         0        0      0.00   120.00    970.00

*SECND 3.000
        SEC NO 3, D/S FACE OF LINCOLN RD. BRIDGE,*S 768.88,9/1/75, 759.6, 3/1/78
    3.00     13.94    767.34     0.30      0.00    767.53     0.19     0.00     0.03    768.30
   5150.        0.   5150.        0.        0.    1473.     0.        2.        0.    768.30
    0.00     0.00     3.50     0.00     0.090     0.042    0.090     0.000   753.40    832.00
0.000555        1.       1.       1.         2         0        0      0.00   134.00    986.00

*SECND 3.100
    3.10     13.94    767.34     0.32      0.00    767.53     0.19     0.01     0.00    768.30
   5150.        0.   5150.        0.        0.    1474.     0.        2.        0.    768.30
    0.01     0.00     3.40     0.00     0.090     0.042    0.090     0.000   753.40    832.00
0.000553       10.      10.      10.         0         0        0      0.00   134.00    986.00

*SECND 3.900
  SECND    DEPTH    CWSEL     QTAS     WSELA     FG       HV       HL      QLOSS    BANK ELEV
    Q       QLOB     UCH      QMOB     ALOB      ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VMOB     XNL       XNCH     XNR      WTS     ELMIN      SSTA
  SLOPE     XLOBL    XLCH     XLOBR    ITRIAL    IOC      ICONT    COPAR   TOP-ID     FMOST

        SEC NO 3, D/S FACE OF BRIDGE, *S 1975 FLOOD 768.00,9/1/75,  NORMAL BRID.
```


CHIP-A-WATER PARK
INUNDATED
CHIPPEWA RIVER
CHIPPEWA
RIVER
INUNDATED
762.19
AM
762.86
AN
768/0
763/35
760/200
760/326
760.4/700
762/930
766/940
768/150
760/160
760/790
768/80
760/892
770/910
766/435
764/490
766/570
770/0
770/0
2/3230
690
500
500
790
750
750
1280'

852-32D

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
Bureau of Water Management
Hydrological Survey Division

Buckusoske(?) G04002 P-V-Run

PAGE 1 OF 3

Submitted By Ted Collins
Date 2-8-71
Phone 373-2917

PUNCH, RUN & RETURN
PROGRAM NO. G04002

T1 [illegible]ENBRØØK SUBDIVISIØN FILE NØ. 852-32D 50 YEAR FLØØD PLAIN CØLLINS
T2 [illegible]T USING WATER SURFACE SLØPE BETWEEN SECTIØN Q AND R
T3 [illegible]PPEWA RIVER

0	1	2	3	4	5	6	7	8	9	10
J1	[illegible]				0.0004			5200.	773.	
NC	[illegible]	0.04	0.035	0.1	0.3					
X1	[illegible]	15.	262.	322.	0.	0.	0.			
GR	[illegible]1	0.	772.6	60.	773.1	100.	773.2	250.	765.2	260.
GR	[illegible]7	262.	759.	293.	762.7	322.	764.4	325.	767.	366.
GR	[illegible]7	422.	767.	522.	766.2	623.	764.	845.	773.	555.
NC	[illegible]	0.108	0.035							
X1	[illegible]	11.	504.	573.	500.	500.	500.			
GR	[illegible]2	0.	771.9	201.	767.5	444.	765.5	503.	762.9	504.
GR	[illegible]9	520.	762.9	573.	764.9	575.	767.1	743.	763.7	1037.
GR	[illegible]3	1099.								
X1	[illegible]	9.	556.	616.	400.	400.	450.			
GR	[illegible]1	0.	769.8	55.	767.4	555.	763.3	556.	760.1	591.
GR	[illegible]3	616.	765.9	618.	774.2	705.				
NH	[illegible]	0.08	51.	0.035	126.	0.06	572.	0.035	623.	0.06
NH	[illegible]									
X1	4.	12.	51.	126.	200.	500.	670.			
GR	756.2	0.	767.2	50.	763.6	51.	760.5	108.	763.6	126.
GR	765.	130.	764.1	572.	761.3	600.	764.	623.	764.5	625.
GR	765.5	916.	778.1	1120.						
NC	0.07	0.08	0.035							
M X1	5.	9.	611.	720.	400.	700.	880.			
X2	4100.									
GR	786.2	0.	769.8	88.	767.6	198.	766.	608.	764.2	611.
GR	760.7	668.	764.2	720.	770.6	723.	780.4	763.		
NC	0.07	0.07	0.035							
X1	[illegible]	11.	292.	[illegible]	450.	450.	740.			

R 1805 8/68

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
Bureau of Water Management
Hydrological Survey Division

PAGE 2 OF 3

Submitted By Ted Collins
Date 2-9-71
Phone 373-2917

PUNCH, RUN & RETURN
PROGRAM NO. G0 4002

0	1	2	3	4	5	6	7	8	9	10
GR	783.1	0.	767.4	32.	766.1	115.	766.5	1[illegible].	765.	1[illegible].
GR	761.2	254.	765.	292.	769.2	394.	766.2	422.	764.5	612.
GR	780.9	683.								
NC	0.08	0.08	0.035							
X1	7.	14.	396.	300.	75.	100.	110.			
GR	795.7	0.	767.4	36.	768.2	296.	765.1	300.	762.4	331.
GR	765.1	338.	765.9	354.	765.1	374.	763.2	388.	765.1	396.
GR	767.2	378.	766.2	509.	764.8	604.	760.6	656.		
X1	8.	12.	282.	378.	40.	40.	50.			
GR	795.4	0.	767.4	42.	767.8	250.	765.1	282.	763.4	320.
GR	761.5	346.	765.1	378.	762.3	382.	768.2	423.	766.	459.
GR	767.8	587.	780.4	635.						
X1	9.	14.	303.	398.	50.	50.	70.			
GR	785.3	0.	767.6	49.	768.7	301.	765.1	303.	762.8	313.
GR	765.	341.	768.2	350.	767.8	359.	765.1	361.	763.4	398.
GR	765.1	410.	768.5	411.	769.2	610.	760.2	651.		
NH	4.	0.1	55.	0.08	320.	0.035	417.	0.09	633.	
X1	10.	10.	320.	417.	50.	75.	70.			
GR	785.8	0.	769.6	55.	767.3	253.	768.7	316.	765.2	320.
GR	762.	368.	765.2	417.	767.9	433.	769.2	591.	761.1	633.
NC	0.09	0.08	0.035							
X1	11.	16.	335.	446.	75.	200.	140.			
GR	785.9	0.	771.6	66.	767.7	301.	766.	331.	765.4	375.
GR	765.9	346.	765.4	390.	767.7	391.	767.8	400.	767.1	409.
GR	765.4	421.	764.9	629.	765.4	446.	767.9	419.	767.8	489.
GR	781.1	521.								
NH	4.	0.08	350.	0.07	562.	0.035	622.	0.08	710.	
X1	12.	12.	562.	622.	250.	225.	210.			
GR	780.3	0.	768.8	55.	769.1	206.	768.1	350.	766.1	400.
GR	769.2	520.	765.8	560.	765.6	562.	763.4	590.	765.6	622.

R 1805 8/68

3 BLANK CARDS

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
Bureau of Water Management
Hydrological Survey Division

PAGE 3 OF 3

Submitted By Ted Collins
Date 2-9-71
Phone 373-2917

PUNCH, RUN & RETURN
PROGRAM NO. G0. 4002

0	1	2	3	4	5	6	7	8	9	10
GR	763.9	680.	778.5	710.						
NC	0.08	0.08	0.035							
X1	13.	9.	478.	556.	250.	400.	515.			
GR	797.8	0.	788.4	15.	784.	20.	772.9	69.	770.3	474.
GR	765.8	478.	763.3	522.	765.8	556.	760.6	597.		
NC	0.06	0.09	0.035 (M)							
X1	14.	11.	841.	909.	375.	350.	375.			
GR	793.1	0.	787.3	116.	775.6	323.	771.8	360.	770.2	423.
GR	772.8	493.	769.9	841.	765.4	846.	763.2	867.	766.3	909.
GR	763.3	946.								
NC	0.08	0.08	0.035							
X1	15.	13.	1016.	1082.	350.	350.	400.			
GR	797.6	0.	794.	16.	771.5	111.	770.6	161.	771.4	211.
GR	773.2	511.	770.2	1011.	765.7	1016.	763.2	1045.	765.4	1082.
GR	768.8	1085.	768.6	1444.	784.5	1476.				
X1	16.	16.	1005.	1070.	225.	125.	153.			
GR	790.8	0.	773.6	35.	770.3	140.	772.3	160.	775.7	560.
GR	785.1	650.	784.	750.	779.9	831.	770.4	882.	769.	1005.
GR	764.7	1007.	764.	1039.	766.5	1079.	769.6	1072.	770.8	1371.
GR	785.2	1415.								
X1	17.	21.	1110.	1139.	1.	650.	540.			
GR	787.5	0.	779.1	195.	770.2	235.	768.3	34[illegible].	771.8	357.
GR	772.7	505.	781.3	551.	784.3	557.	784.1	631.	763.5	659.
GR	769.6	717.	771.3	723.	773.1	904.	769.8	941.	766.9	943.
GR	766.2	1110.	764.9	1121.	766.9	1139.	769.5	1140.	770.4	1170.
GR	791.3	1201.								
EJ										
ER										

3 BLANK CARDS

R 1805 8/68

2942-32.4

SECTION BY RUDDELL RESTRICTED BY EFFECTIVE AREA OPTION; 3/1/78 WS 760.8

& MOVED D/S 100 FT. WS 3/1/78 CHANNEL 760.8 CANNEL TS EL 761.2

X1	11.000	17.000	1030.000	1160.000	150.000	150.000	150.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	530.000	0.000	1700.000	0.000	0.000	768.500	0.000
GR	770.000	0.000	765.000	60.000	764.400	1030.000	758.600	1040.000	758.200	1055.000
GR	757.700	1070.000	757.700	1085.000	758.400	1100.000	764.400	1108.000	765.400	1145.000
GR	773.400	1160.000	773.200	1310.000	765.200	1370.000	764.100	1460.000	763.000	1510.000
GR	763.300	1840.000	775.300	1865.000	0.000	0.000	0.000	0.000	0.000	0.000
NC	0.180	0.080	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SEC # 11 MOVED U/S 150 FT. TO U/S LIMIT OF WATER PLANT; 1975 HW =767.0

REDUCED TO REFLECT WATER TREATMENT PLANT U/S , 1975 STAGE APPROX = 767.0

X1	11.100	0.000	0.000	0.000	250.000	250.000	250.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	530.000	0.000	1700.000	0.000	0.000	768.500	0.000

SEC # 12 RESTRICTED TO REFLECT THE WATER TREATMENT PLANT;1975 HW=767.7

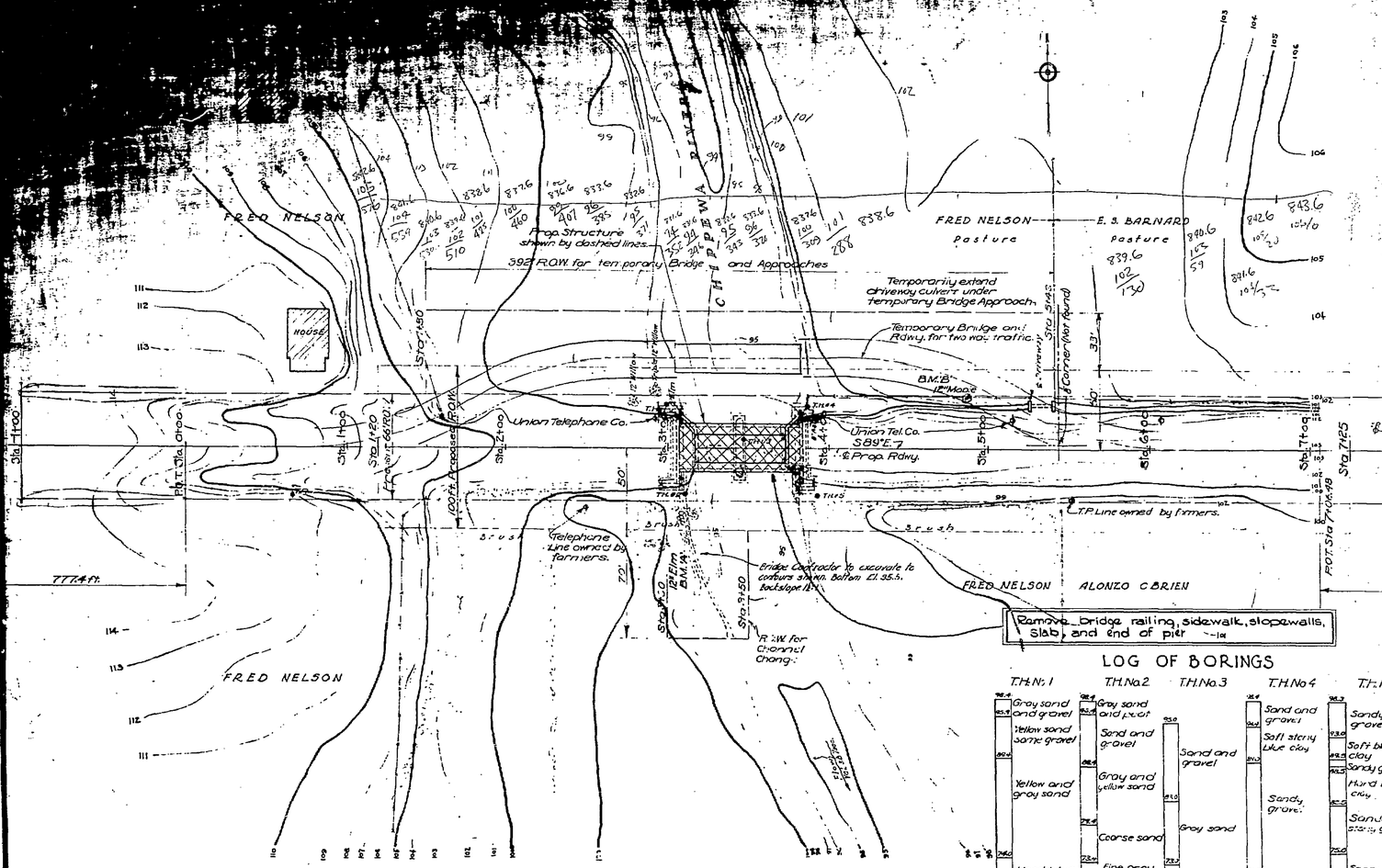
X1	12.000	17.000	530.000	800.000	100.000	100.000	100.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	330.000	0.000	1300.000	0.000	0.000	768.500	0.000
GR	782.400	0.000	772.400	20.000	772.400	160.000	765.600	180.000	763.800	530.000
GR	758.700	552.300	755.600	568.200	759.300	584.100	763.800	606.400	763.800	700.000
GR	773.000	800.000	773.000	960.000	764.000	1135.000	756.100	1175.000	762.400	1200.000
GR	761.300	1480.000	774.300	1510.000	0.000	0.000	0.000	0.000	0.000	0.000

SEC # 13 UP STREAM OF INTAKE CANAL,U/S. CANAL WS 1975= 768 *, 761.5

X1	13.000	15.000	1035.000	1155.000	600.000	300.000	700.000	0.000	0.000	0.000
X3	10.000	0.000	0.000	200.000	0.000	0.000	0.000	0.000	769.000	0.000
GR	782.400	0.000	772.400	20.000	772.400	145.000	765.600	165.000	765.600	695.000
GR	762.300	785.000	763.800	1035.000	760.300	1045.000	788.000	1070.000	757.700	1095.000
GR	758.100	1120.000	758.500	1145.000	764.800	1155.000	770.200	1205.000	773.000	1235.000
NC	0.045	0.075	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SEC #1 GREENACRES SUB UP STREAM ASSUMED TO BE IN NEAR # 13

X1	14.100	20.000	385.000	540.000	100.000	100.000	100.000	0.000	0.000	0.000
GR	770.200	23.000	769.200	102.000	766.300	185.000	764.000	212.000	763.800	245.000
GR	766.000	308.000	763.000	325.000	762.900	385.000	759.500	391.000	758.000	400.000
GR	759.500	420.000	758.500	440.000	759.700	455.000	760.600	500.000	763.000	540.000
GR	763.000	728.000	764.500	742.000	768.500	770.000	772.300	780.000	774.500	900.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

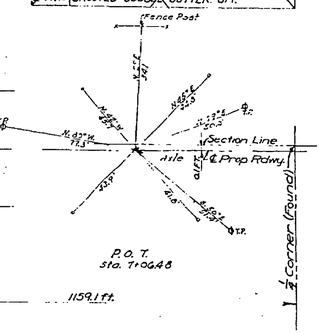


·SITUATION PLAN·
Scale: 1"=40'-0"

Existing Structure
One 60 ft. Low Pratt Truss Span
16.9' c. to c. of trusses-Floor Beams
4-12"I's, Stringers 4 rows of 5"I's
Floor-3" planks-Transverse
Masonry Abutments
Posted Load = 9600# per axle

INDEX TO SHEETS

SHEET No.	DESCRIPTION
1	GENERAL PLAN OF SITE.
2	GENERAL PLAN OF STRUCTURE.
3	SUBSTRUCTURE-Abut. Footings & Pile Plan
4	do. Abutment Details.
5	do. do.
6	do. Pier Details.
7	SUPERSTRUCTURE-Slab & Back Wall.
8	do. Wearing Surface & Curb.
9	REINFORCING STEEL DETAILS.
10	STRUCTURAL STEEL DETAILS.
11	APPROACH DETAILS.
A-1-5-35	POST-RAILING-DRAIN & CHAIR DETAILS.
E4-A-T50	STD. GUARD RAIL DETAILS.
E13-A-1A	CONCRETE HEADWALLS.
E4-A-16	GROUTED COBBLE GUTTER-6 Ft.



GENERAL NOTES

Except where otherwise indicated on these plans or in Proposal and Supplemental Specifications contained therein, materials and workmanship shall be in accordance with the Michigan State Highway Department's Standard Specifications for Roads and Bridges, 1920 Edition.

The character of all material and extent thereof as shown by borings has been obtained by methods and from sources believed to be reliable. The exactness of this information is, however, in no case guaranteed.

A temporary bridge and approaches will be required to maintain two-way traffic at all times during the reconstruction of this bridge.

The entire existing superstructure and abutments are to be removed. The broken concrete and old masonry from the existing abutments is to be disposed of as riprap and/or as directed by the Engineer. The superstructure of the existing bridge shall become the property of the Contractor and shall be completely removed from the site before completion of the contract.

The back surface of abutments, wing walls, and superstructure backwalls above elevation [illegible] which will be in contact with the earth fill shall be waterproofed with Class "A" waterproofing and all joints within this area waterproofed as specified.

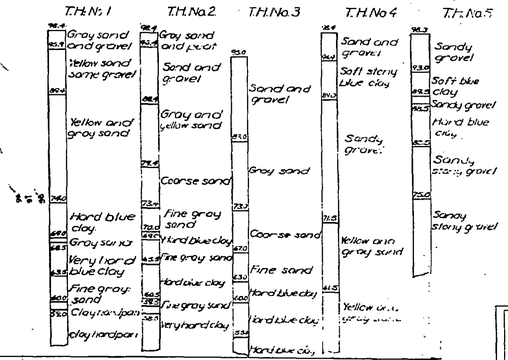
Superstructure grading, gravel surfacing, sodding, guard rail, and [illegible] on bridge structures as shown on these plans are a part of this project.

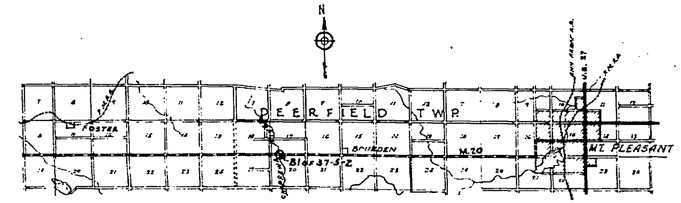
Elevation [illegible] are separate wet and dry excavation.

It is anticipated that foundation piling will be required under the east abutment only. The estimated lineal feet of piling below cut-off is based on an assumed length of 12 feet.

Proposed work to be done under Michigan Proj. F71-2(202) as indicated on this sheet is the removal of portions of the existing structure. All such work is indicated by a note enclosed in a box to differantiate it from work involved in the original Bridge Construction Contract.

LOG OF BORINGS

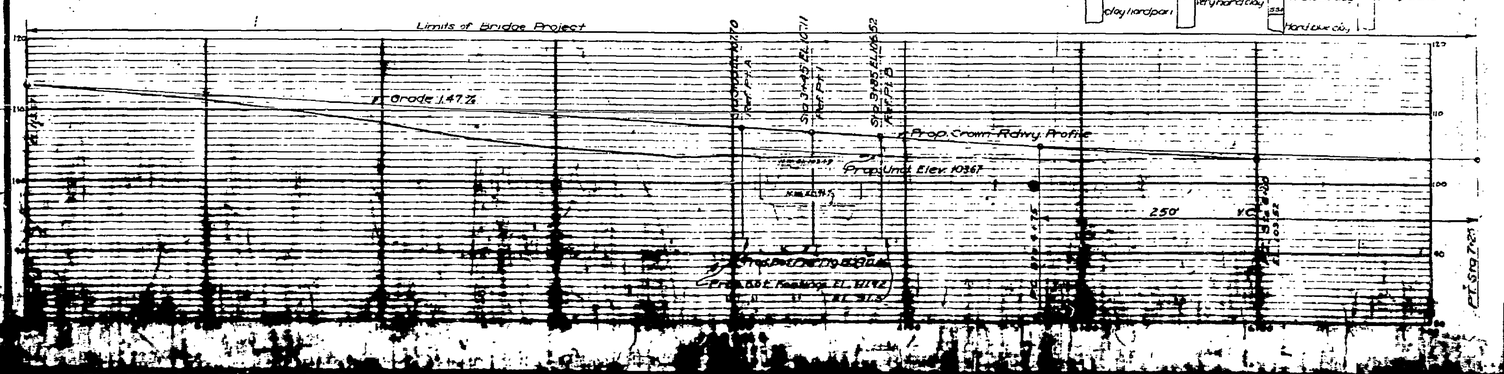




·LOCATION SKETCH·

B.M.'A' Spike in B.M. marker in root of 12" Elm 65' R. of Sta 2+92. El. 103.00
B.M.'B' Spike in B.M. marker in root of 12" Maple 31' L. of Sta 4+85. El. 102.49.5

NOTE:
Crosshatched portions of the existing structure are to be removed.



M

DEVISIONS			
No.	Description	Date	By
A	About 7' lengthened (in Pier lengthened)	[illegible]	[illegible]
B	Pier footings lowered (in Pier)	[illegible]	[illegible]

MICHIGAN STATE HIGHWAY DEPARTMENT

M-20 OVER CHIPPEWA RIVER 5 MILES WEST OF MT. PLEASANT

EXISTING BRIDGE-REMOVAL PORTION (WIDENING CONTRACT)

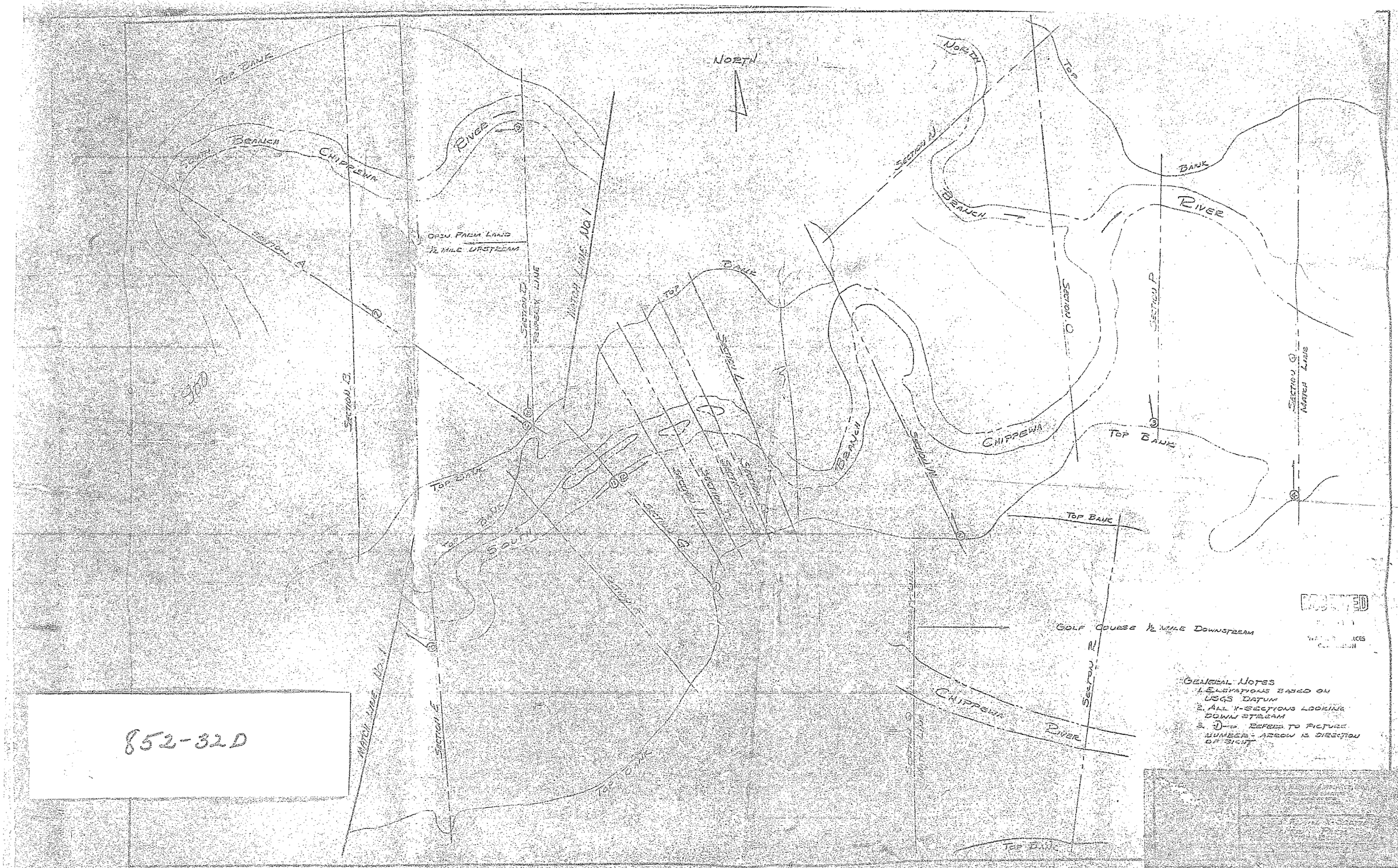
GENERAL PLAN OF SITE

2-40' DECK GIRDER SPANS, 26' ROADWAY, TWO 1'-6" SIDEWALKS, 1-PIER 13'-1", TWO ABUTMENTS 12'-8" & 11'-11", 90° CROSSING, 1.47% GRADE.

APPROVED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]

BOI of 37021A

00519A


NORTH
TOP BANK
SOUTH BRANCH CHIPPEWA RIVER
OPEN FARM LAND
1/2 MILE UPSTREAM
SECTION A
SECTION B
SECTION D
PEMBROKE LINE
MATCH LINE NO. 1
TOP BANK
SECTION L
SECTION M
SECTION N
NORTH BRANCH
TOP BANK
RIVER
SECTION O
SECTION P
SECTION Q
MATCH LINE
CHIPPEWA
TOP BANK
TOP BANK
SOUTH
SECTION G
SECTION H
SECTION J
SECTION K
GOLF COURSE 1/2 MILE DOWNSTREAM
SECTION R
CHIPPEWA RIVER
MATCH LINE NO. 1
SECTION E
TOP BANK
TOP BANK
GENERAL NOTES
1. ELEVATIONS BASED ON USGS DATUM
2. ALL X-SECTIONS LOOKING DOWN STREAM
3. D-10 REFERS TO PICTURE NUMBER - ARROW IS DIRECTION OF SIGHT

852-32D

8/19 5

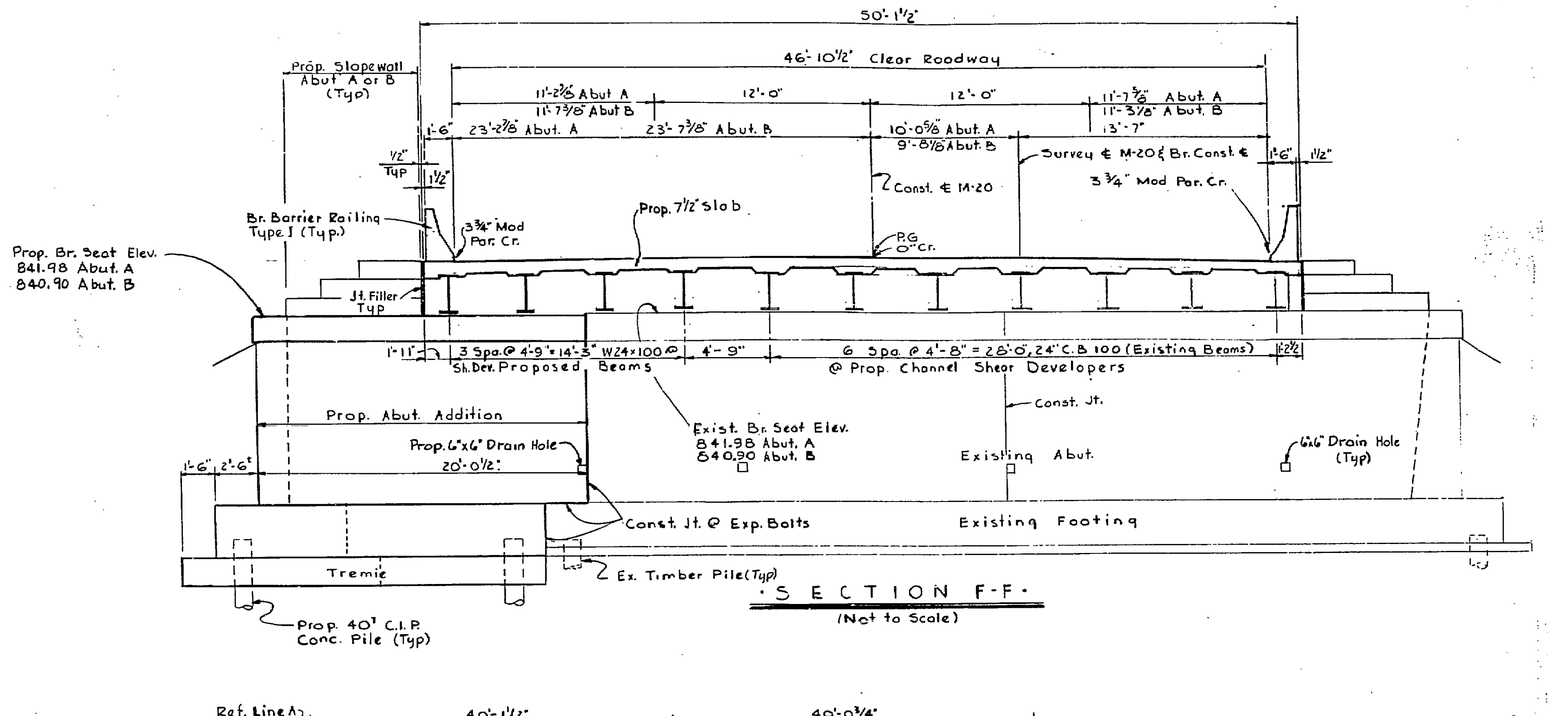
```
**********************************************
 HEC2 RELEASE DATED NOV 76 UPDATED AUG 1977
 ERROR CORR =  01,02
 MODIFICATION =  50,51,52,53
**********************************************
```

END : 9/77

EDIT : 9/77

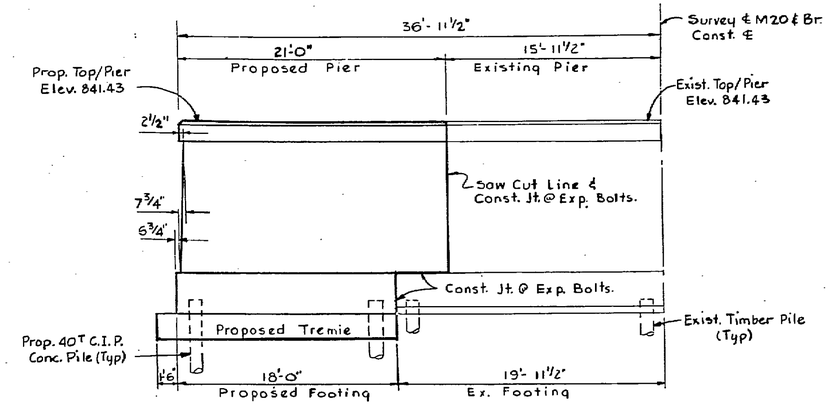
```
**********************************************
 HEC2 RELEASE DATED NOV 76 UPDATED AUG 1977
 ERROR CORR =  01,02
 MODIFICATION =  50,51,52,53
**********************************************

C
T1      CHANNEL  MODEL  EVALUATION OF CHANNEL FLOWS  AND COEFFICIENTS
T2      WATER  LEVEL AND MEASUREMENTS TAKEN BY RUDDELL ENGR ON 3/1/78
T3      CHIPPEWA  RIVER  @ 89TH  AVE GUIDE EST, UNION TWP., ISABELLA COUNTY, MI.

J1  ICHECK    INQ      NINV      IDIM      STRT     METRIC    HVINS     Q        WSEL      FC

        0.        2.        3.        0.  0.000000    0.00      0.0       0.   759.500    0.000

NC      0.150     0.150     0.020     0.100     0.100     0.000     0.000     0.000     0.000     0.000
QT      2.000   590.000  3350.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        SEC NO 1, AS FT D/S OF  CENTER LINE OF LINCOLN RD.,     WS 759.5, 3/1/78

X1      1.000    15.000   698.000   462.000     0.000     0.000     0.000     0.000     0.000     0.000
X3      0.000     0.000     0.000   694.000     0.000   424.000     0.000     0.000     0.000     0.000
GR    763.700     0.000   762.400   250.000   760.800   520.000   762.300   694.000   757.100   705.000
GR    755.900   720.000   755.300   735.000   754.800   750.000   754.800   765.000   754.000   780.000
GR    756.000   798.000   762.100   802.000   761.700  1050.000   762.000  1495.000   755.200  1415.000
NC      0.090     0.090     0.020     0.300     0.500     0.000     0.000     0.000     0.000     0.000

        SEC NO 2, 18 FT D/S                                     WS 759.4, 3/1/78

X1      2.000    16.000   838.000   952.000   100.000   100.000    60.000     0.000     0.000     0.000
X3     10.000     0.000     0.000   844.000   768.300   970.000   768.300     0.000     0.000     0.000
GR    774.300     0.000   764.000   115.000   762.400   400.000   760.700   679.000   762.100   848.000
GR    756.900   452.000   754.200   800.000   755.300   900.000   755.400   927.000   756.700   945.000
GR    762.400   952.000   761.500  1200.000   760.500  1530.000   767.000  1543.000     0.000     0.000

        SEC NO 3, D/S FACE OF LINCOLN RD. BRIDGE,WS 764.44,9/1/75, 759.6, 3/1/78

X1      3.000    19.000   832.000   966.000     1.000     1.000     1.000     0.000     0.000     0.000
GR    772.700     0.000   771.700   100.000   769.500   400.000   768.900   475.000   768.300   800.000
GR    768.500   832.000   759.100   832.000   754.200   865.000   756.200   896.100   765.800   896.100
GR    765.800   900.000   754.200   900.000   753.800   935.000   757.900   966.000   768.300   964.000
GR    768.200  1200.000   769.700  1515.000   771.400  1700.000   772.800  1400.000     0.000     0.000

X1      3.100     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   765.800     0.000     0.000     0.000     0.000     0.000     0.000
X5      2.000   759.000   764.000     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        SEC NO 3, U/S FACE OF BRIDGE, AS 1975 FLOOD 764.69,9/1/75,  NORMAL BRID.

X1      3.900     0.000     0.000     0.000    48.000    48.000    48.000     0.000     0.000     0.000
X2      0.000     0.000     0.000   765.800     0.000     0.000     0.000     0.000     0.000     0.000
NC      0.100     0.150     0.020     0.000     0.000     0.000     0.000     0.000     0.000     0.000

        SEC NO 4, U/S  40 FT.                                 WS EL 759.7  3/1/78

X1      4.000    19.000   840.000   965.000    16.000    14.000    16.000     0.000     0.000     0.000
X3     10.000     0.000     0.000   828.000   768.300   981.000   768.300     0.000     0.000     0.000
GR    771.900     0.000   771.200   100.300   768.100   455.000   759.900   484.000   760.300   650.000
GR    760.000   700.000   760.700   840.000   759.700   848.000   758.000   858.000   756.500   879.000
GR    753.700   900.000   754.200   920.000   756.200   940.000   761.700   965.000   760.600  1200.000
GR    763.300  1220.000   763.700  1500.000   763.800  1700.000   773.600  1720.000     0.000     0.000

        SEC 5  MOVED 128 FT U/S, FROM MEASURED LOCATION      WS EL 759.7, 3/1/78

X1      5.000    18.000   736.000   855.000   180.000   200.000   180.000     0.000     0.000     0.000
X3      0.000     0.000     0.000   550.000     0.000  1035.000     0.000     0.000     0.000     0.000
GR    771.200     0.000   768.500   315.000   767.100   340.000   766.300   510.000   760.600   560.000
GR    761.100   736.000   759.700   748.000   757.900   760.000   757.000   784.000   756.700   800.000
GR    756.400   820.000   756.700   840.000   761.400   855.000   763.300  1090.000   760.800  1100.000
GR    763.100  1400.000   762.900  1520.000   772.900  1550.000     0.000     0.000     0.000     0.000

        SEC 6  D/S LIMITS OF  MCCLURK ESTATES SUB            WS EL 759.91,3/1/78

X1      6.000    14.000   185.000   280.000   280.000   550.000   400.000     0.000     0.000     0.000
GR    771.300     0.000   761.270    25.000   761.900   185.000   758.200   190.000   755.500   205.000
GR    754.900   230.000   756.100   245.000   757.800   265.000   758.300   275.000   762.000   280.000
GR    760.900   520.000   765.100   535.000   766.900   580.000   765.900   595.000     0.000     0.000

        SECTION ARE  LOOKING DOWN STREAM        W/S EL 759.91 OR 3/1/78

X1      7.000    14.000    95.000   167.000   500.000   450.000   500.000     0.000     0.000     0.000
GR    774.000     0.000   769.100    15.000   768.700    80.000   769.100    95.000   758.100   110.000
GR    756.500   120.000   755.800   135.000   755.900   150.000   762.800   167.000   761.000   195.000
GR    763.450   835.000   763.800   810.000   763.800   840.000   771.300   860.000     0.000     0.000

        SEC 8                                                   WS EL 760.26 3/1/78

X1      8.000     9.000    19.000    86.000   360.000    70.000   330.000     0.000     0.000     0.000
X3      0.000     0.000     0.000     0.000     0.000   860.000     0.000     0.000     0.000     0.000
GR    770.000     0.000   759.510    19.000   758.600    35.000   754.100    50.000   754.700    65.000
GR    758.800    81.000   762.400    86.000   762.200  1350.000   773.200  1375.000     0.000     0.000

        SEC 9   USE REVISED X-SECTION RECEIVED JUNE 21,78   WS EL 760.31 3/1/78

X1      9.000    12.000   530.000   470.000   160.000   160.000   160.000     0.000     0.000     0.000
X3      0.000     0.000     0.000   400.000     0.000  1000.000     0.000     0.000     0.000     0.000
GR    776.700     0.000   764.200    40.000   762.300   530.000   758.300   540.000   757.300   570.000
GR    756.110   580.000   757.200   600.000   757.800   615.000   763.500   630.000   763.200  1080.000
GR    762.100  1240.000   773.100  1265.000     0.000     0.000     0.000     0.000     0.000     0.000

X1      9.100     0.000     0.000     0.000    10.000    10.000    10.000     0.000     0.000     0.000
X3      0.000     0.000     0.000   400.000     0.000  1000.000     0.000     0.000     0.000     0.000

        SEC 10  USE REVISED X-SECTION,  NEG  CULVER FLOW  FROM FILTER BED INC
        WATER SURFACE ELEV ON 3/1/78 IS 760.5

X1     10.000    19.000   980.000  1280.000   150.000   300.000   300.000     0.000     0.000     0.000
X3     10.000     0.000     0.000   580.000     0.000     0.000     0.000     0.000   768.500     0.000
GR    770.000     0.000   765.000    60.000   766.800   630.000   761.300   650.000   763.000   980.000
GR    759.500   990.000   759.800  1010.000   757.500  1030.000   758.000  1050.000   759.100  1070.000
GR    762.600  1080.000   761.800  1230.000   770.300  1260.000   768.600  1320.000   768.500  1380.000
GR    768.500  1745.000   769.500  1820.000   770.000  1880.000   771.500  1915.000     0.000     0.000
NC      0.180     0.080     0.000     0.300     0.500     0.000     0.000     0.000     0.000     0.000
```

EDCO- 138 R3 8-78



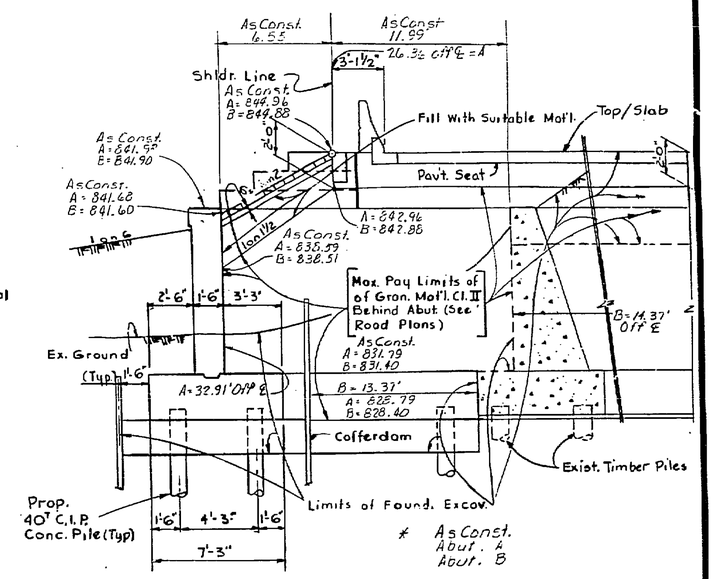
· S E C T I O N F-F ·

(Not to Scale)



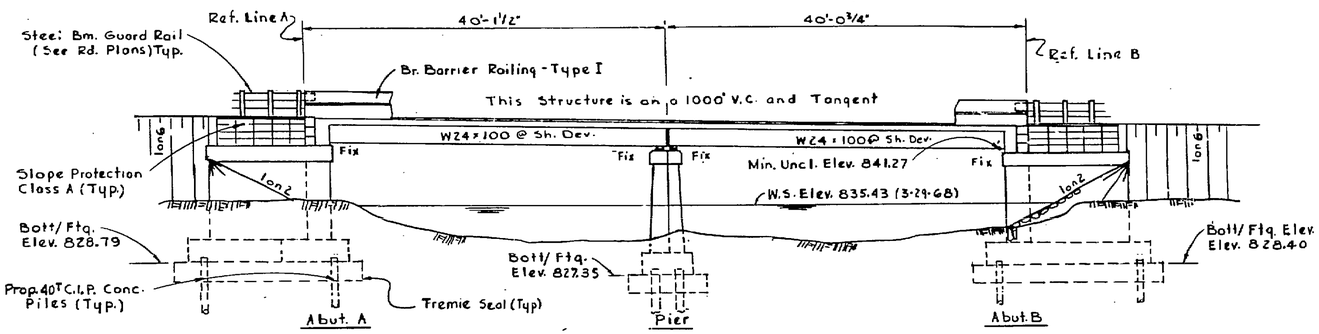
· V I E W E-E ·

Scale 3/16" = 1'-0"



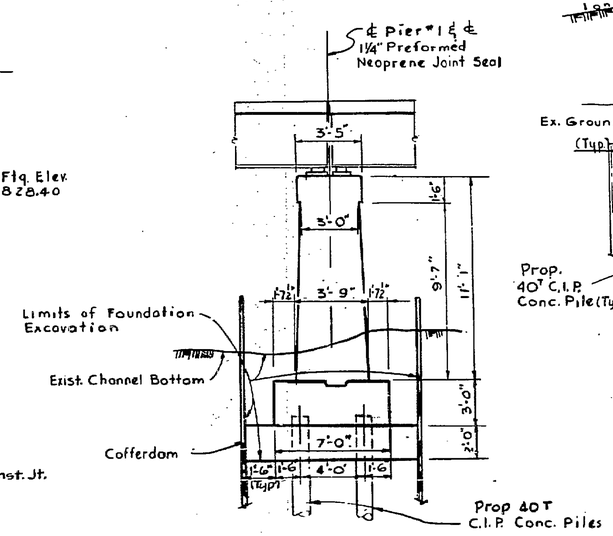
· S E C T I O N C-C ·

Scale ¼" = 1'-0"



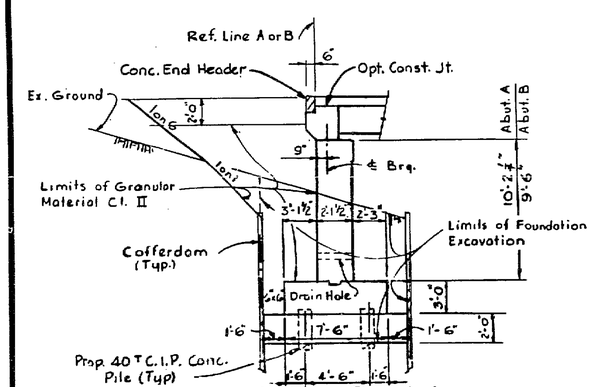
· E L E V A T I O N ·

Scale 1/16" = 1'-0"



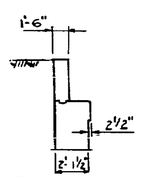
· S E C T I O N D-D ·

Scale ¼" = 1'-0"



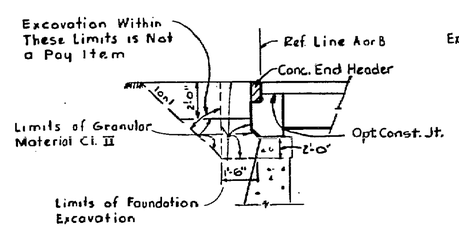
· S E C T I O N A-A ·

Scale 3/16" = 1'-0"



· S E C T I O N B-B ·

Scale 3/16" = 1'-0"



· S E C T I O N G-G ·

Scale ¼" = 1'-0"

Work This Sheet With Sheet #4

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

M-20 OVER CHIPPEWA RIVER 9 MILES WEST OF MT. PLEASANT

GENERAL PLAN OF STRUCTURE
(WIDENING AND DECK REPLACEMENT)

SUBMITTED BY	MCCE	10-7-72
DRAWN BY	Mitchell	1-12-72
TRACED BY		
CHECKED BY	Bourque	10-7-72
SHEET	3 OF 3	

APPROVED Laurence O Church 10-17-72
DESIGN SUPERVISING ENGINEER

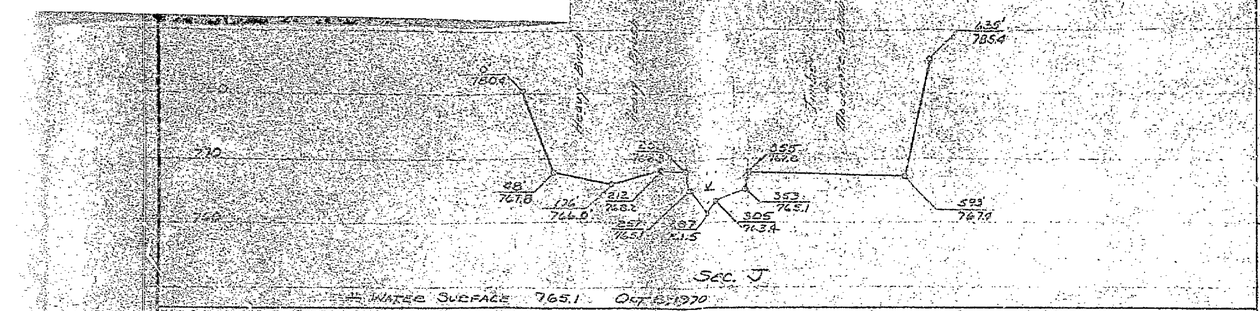
REVISIONS

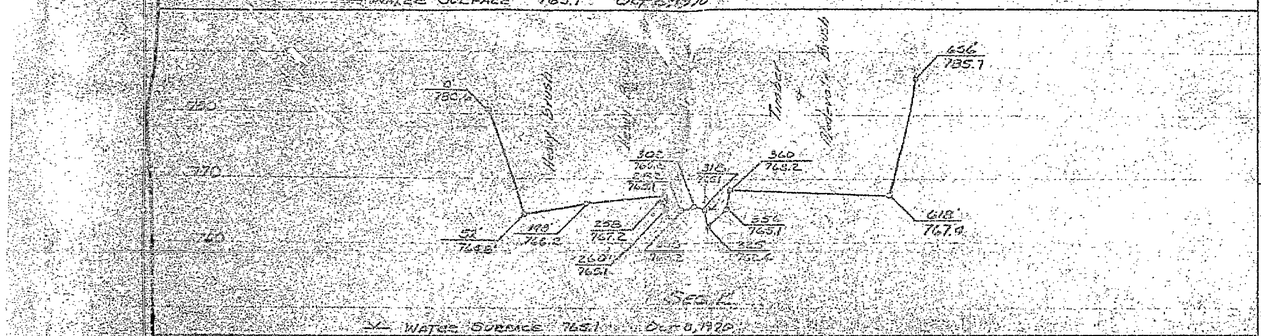
NO.	DESCRIPTION	DATE	BY
		2-8-77	E.A.C.

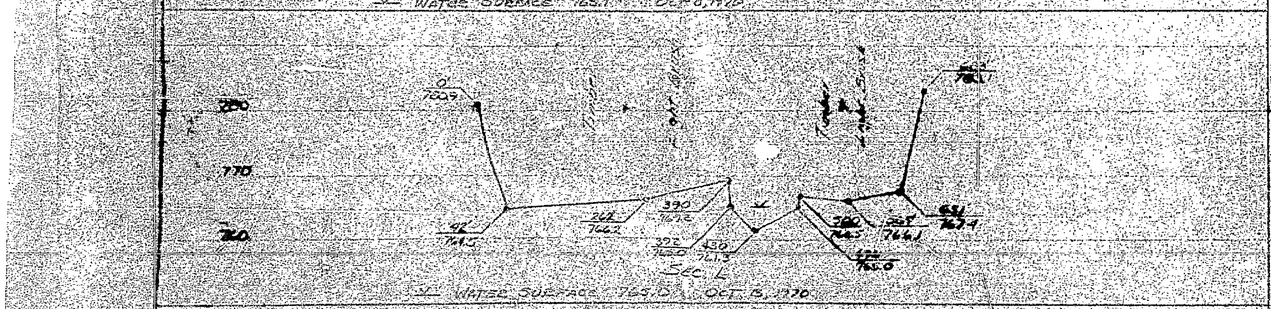
B01 of 37021A

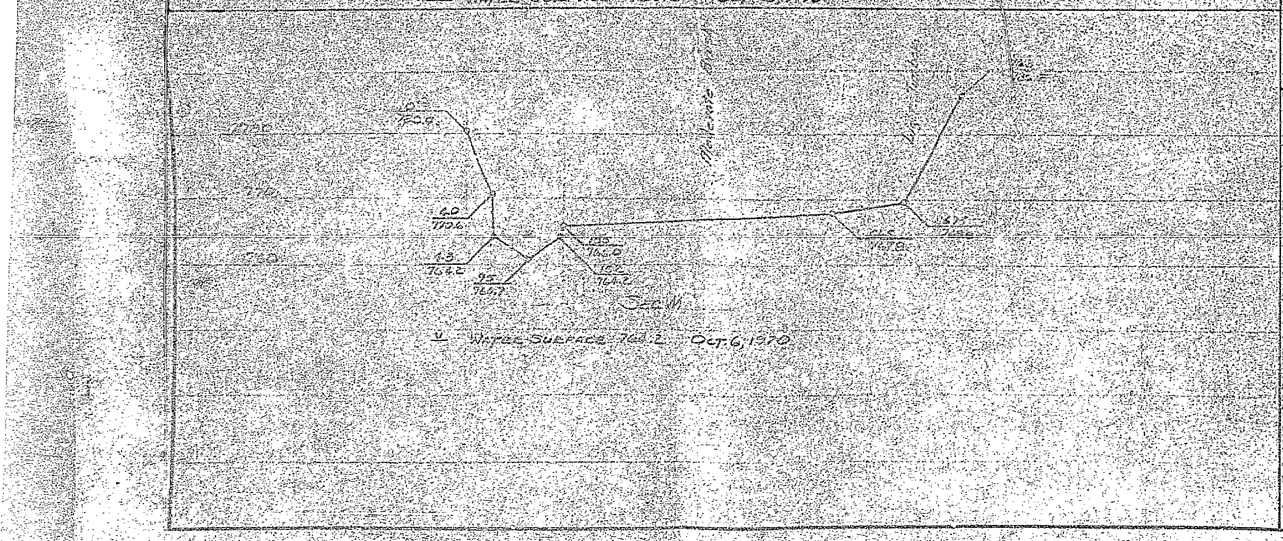
00519A

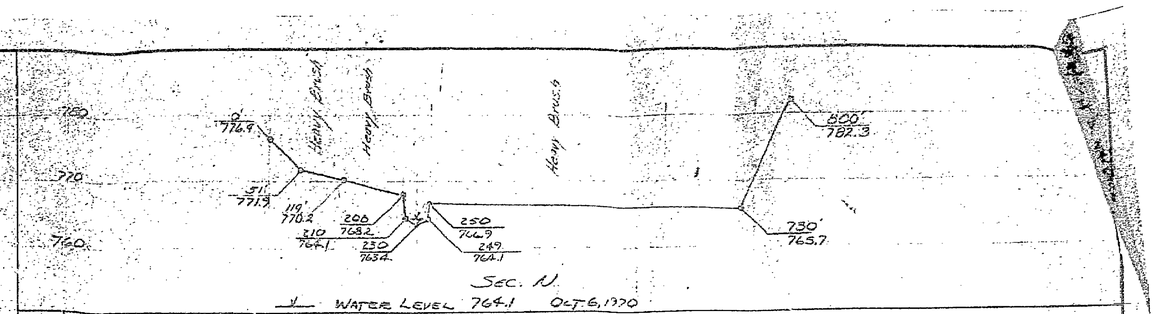
852-32D

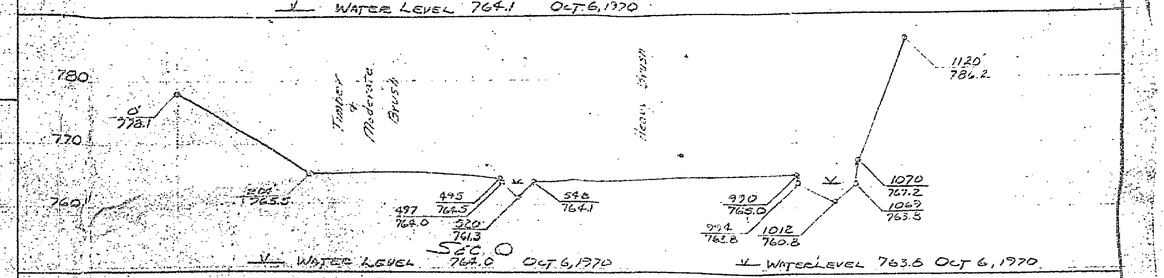


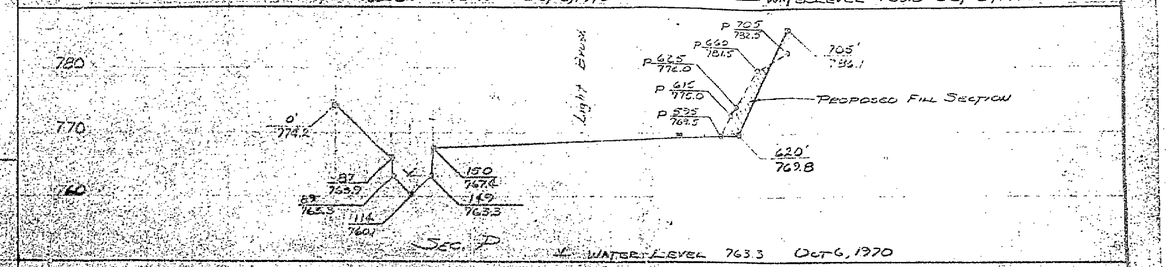


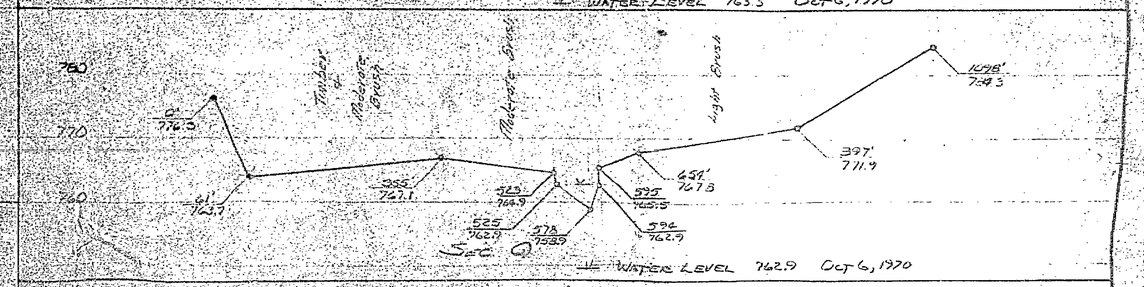


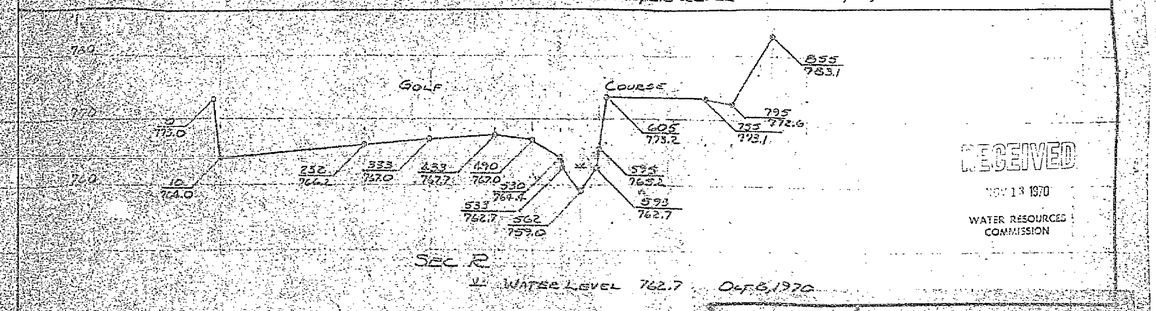








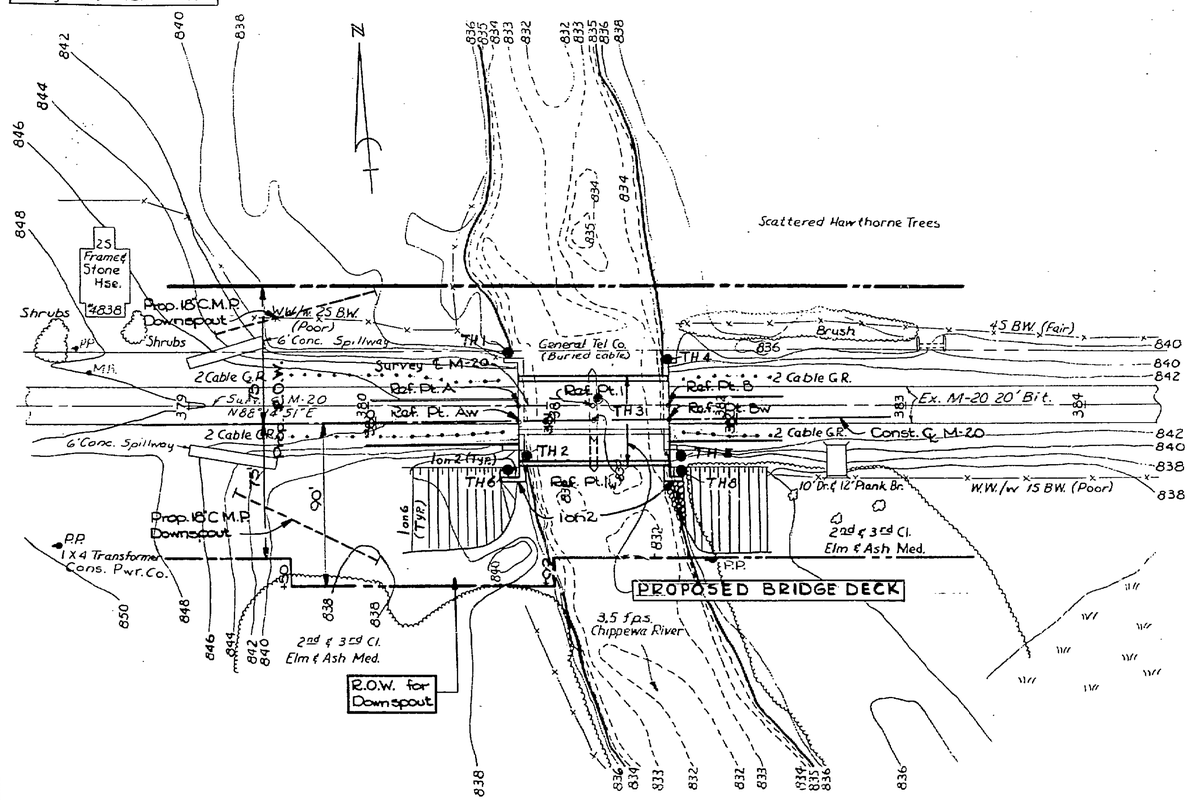




RECEIVED
NOV 13 1970
WATER RESOURCES COMMISSION

Hunter, Walther Associates, Inc.
ENGINEERS AND SURVEYORS
FLOOD FLOW PROFILES
DENVER, PART
SECTION
SHEET

EXISTING STRUCTURE	BENCH MARKS	UTILITIES
Two 40' Span Concrete deck on steel I-Beams, gravity abutments and piers on piles, 24' clear roadway & 1'-6" safety walks. This bridge is in good condition and is adequate for the stream flow. Bridge constructed in 1934	B.M. #69 Elev. 854.31 P.K. nail and cap in N. side of P.P. 87' Rt. of Sta. 374+88 B.M. #70 Elev. 844.46 Square chiseled on S.W. corner of S.E. Abutment 17' Rt. of Sta. 381+63	Consumers Power Co. line (2 wires) 85' south of M-20. General Telephone Co. buried cable 30' north of M-20.

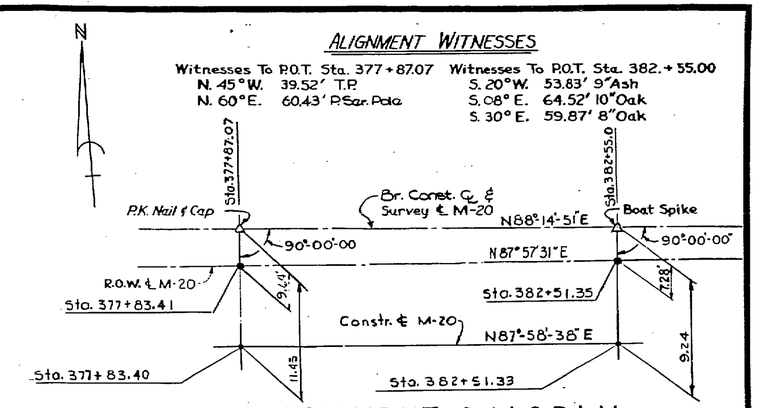


SITUATION PLAN
Scale: 1" = 40'

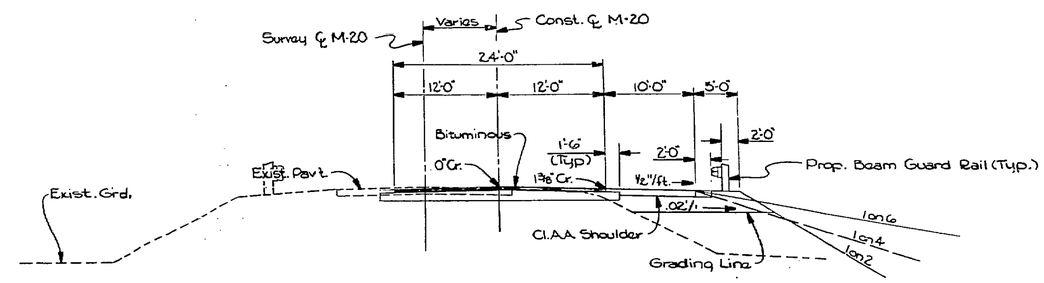
ALIGNMENT WITNESSES

Witnesses To P.O.T. Sta. 377+87.07
N. 45° W. 39.52' T.P.
N. 60° E. 60.43' P.Sar. Pole

Witnesses To P.O.T. Sta. 382+55.00
S. 20° W. 53.83' 9" Ash
S. 08° E. 64.52' 10" Oak
S. 30° E. 59.87' 8" Oak



ALIGNMENT DIAGRAM



TYPICAL APPROACH SECTION
Scale: 1/8" = 1'-0"

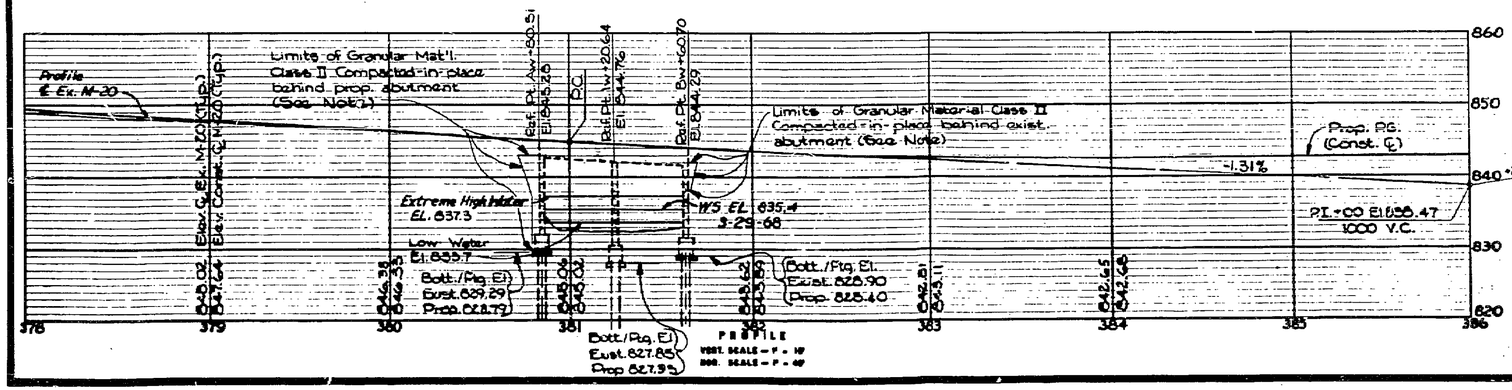
NOTES:

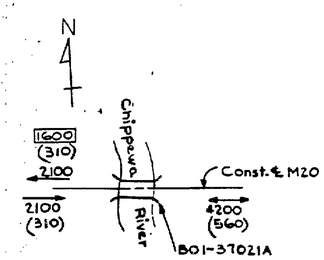
The work covered by these plans includes removal of portion of existing structure, construction of proposed widening & bridge deck and placing slope protection to the limits shown.

Granular Material Class II behind abutments is included with road plans, 66 cu. yds. behind Abutment A, and 55 cu. yds. behind Abutment B.

M-20 traffic is to be detoured over existing roads (See Rd. Plans).

The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.





1990 ESTIMATED TRAFFIC DISTRIBUTION

LEGEND

A.D.T. 0000
D.H.V. (000)
COMM 6%
A.D.T. (1964) 0000

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

M-20 OVER CHIPPEWA RIVER 9 MILES WEST OF MT. PLEASANT

GENERAL PLAN OF SITE
(WIDENING AND DECK REPLACEMENT)

APPROVED
APPROVED — DIRECTOR OF STATE HIGHWAYS

B01 of 37021A

00599A

BENCH MARKS

B.M. #20 El. 813.71
Nail & Cap in N. root 12" Beech 44' Rt. Sta. 634+47

B.M. #21 El. 791.63
Chiseled □ in N.E. wing wall of bridge 18' Lt. Sta. 643+15

EXISTING BRIDGE

50' Span - Rein. conc. deck on steel I-Beam - 26'-0" Roadway - Two 1'-6" sidewalks - Gravity Type conc. abut's, and wingwalls. The bridge was built in 1934, and is in good condition.

WIT. P.I. & 1/4 Cor. M 20

STA. 635+20.94 no curve
1/2" Pipe in Mon. Box
N 15°W - 106.06' - P.P.
S 67°W - 84.00' - 12" Beech
South - 50.44' - Top R/W marked
S 31°E - 47.45' - 21" Elm

WIT. P.O.T. STA. 639+54.43

Boat Spike (set)
N 45°W - 57.10' - L.P.
S 25°E - 48.57' - T.P.
N 45°E - 41.03' - 21" Pine

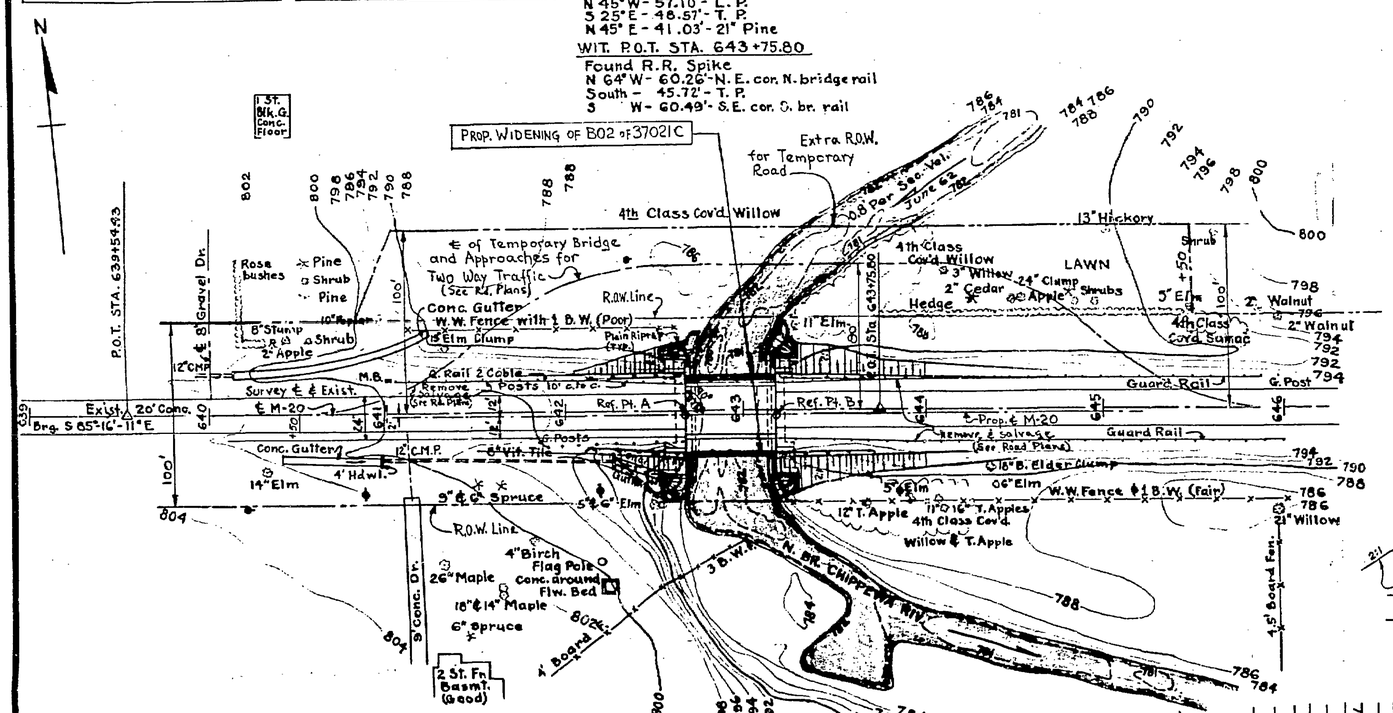
WIT. P.O.T. STA. 643+75.80

Found R.R. Spike
N 64°W - 60.26' - N.E. cor. N. bridge rail
South - 45.72' - T.P.
S W - 60.49' - S.E. cor. S. br. rail

UTILITIES

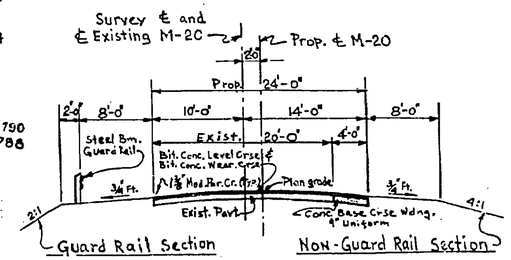
GENERAL TEL. CO. has a pole line along the south side of M-20 carrying 16 wires and one cable.

CONSUMERS POWER CO. has a pole line along the north side of M-20 carrying 2 wires.



SITUATION PLAN

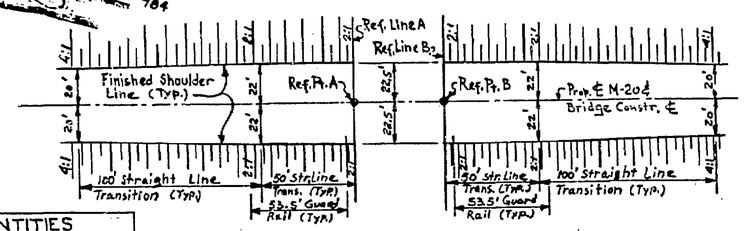
SCALE 1" = 40'



TYPICAL APPROACH SECTION

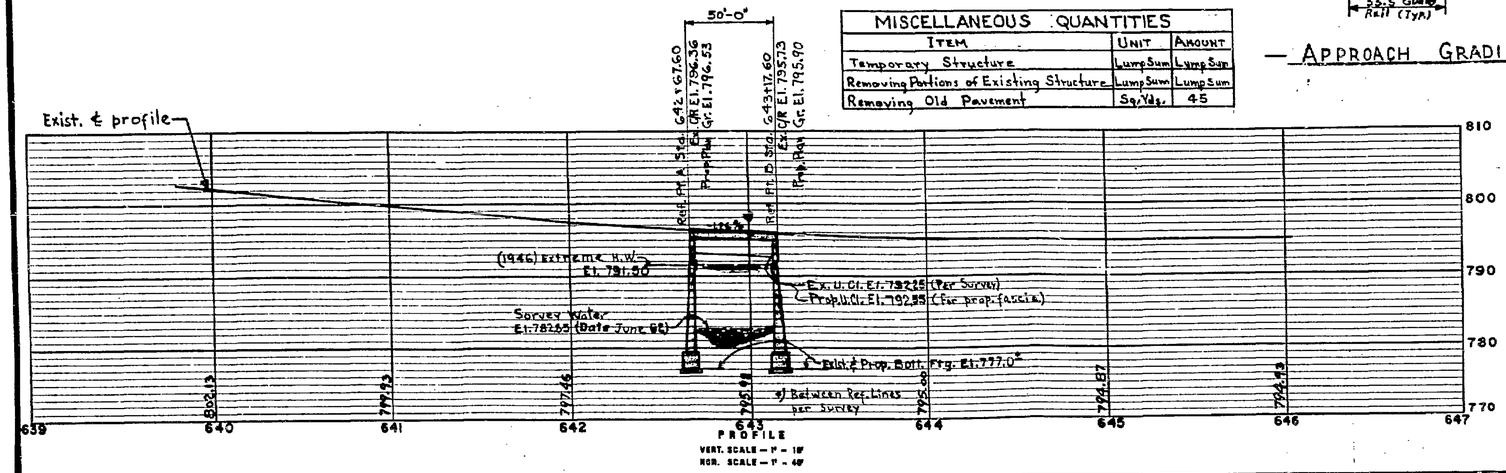
(Looking East)

Scale: 1/8" = 1'-0"



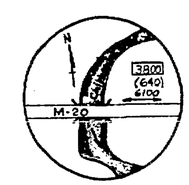
APPROACH GRADING PLAN

MISCELLANEOUS QUANTITIES		
ITEM	UNIT	AMOUNT
Temporary Structure	Lump Sum	Lump Sum
Removing Portions of Existing Structure	Lump Sum	Lump Sum
Removing Old Pavement	Sq. Yds.	45



PROFILE

VERT. SCALE — 1" = 10'
HOR. SCALE — 1" = 40'



1972 ESTIMATED TRAFFIC DISTRIBUTION

LEGEND:
ooo = Aver. Daily Volume
(oo) = Design Hour Volume
[ooo] = Aver. Daily Volume 1960

NOTES:

The work covered by these plans includes construction of the temporary bridge, removing old pavement, removal of portions of the existing structure, construction of the proposed bridge widening, including placing new bridge deck slab, placing sand-gravel material behind the abutments plain riprap to the limits shown, and removal of temp bridge.

All work not listed above is included in Road Plans.

Traffic is to be maintained over a temporary road & bridge during construction.

Fences are to be moved by owners.

The Project Engineer shall see that the front face of each abutment aligns with the front face of the adjacent abutment of the existing bridge. Minor adjustments in dimensions, stations, and elevations are to be made in the field where required.

Removal of existing pavement within limits shown on Sheet 3 is included in Bridge Plans. Proposed pavement within these limits is not a part of B02 Plans.

Construction of temporary approaches as well as obliteration of same is included in Road Plans.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN STATE HIGHWAY DEPARTMENT

M-20 CROSSING THE N. BRANCH CHIPPEWA RIVER 3 MILES W. OF MT. PLEASANT CITY LIMITS

GENERAL PLAN OF SITE

DESIGN BOOK	Bond	4-15-63
DRAWN BY	V. Wetherell	12-12-62
TRACED BY	Forman	9-27-62
CHECKED BY	WM	11-6-62

SHEET 2 OF 10

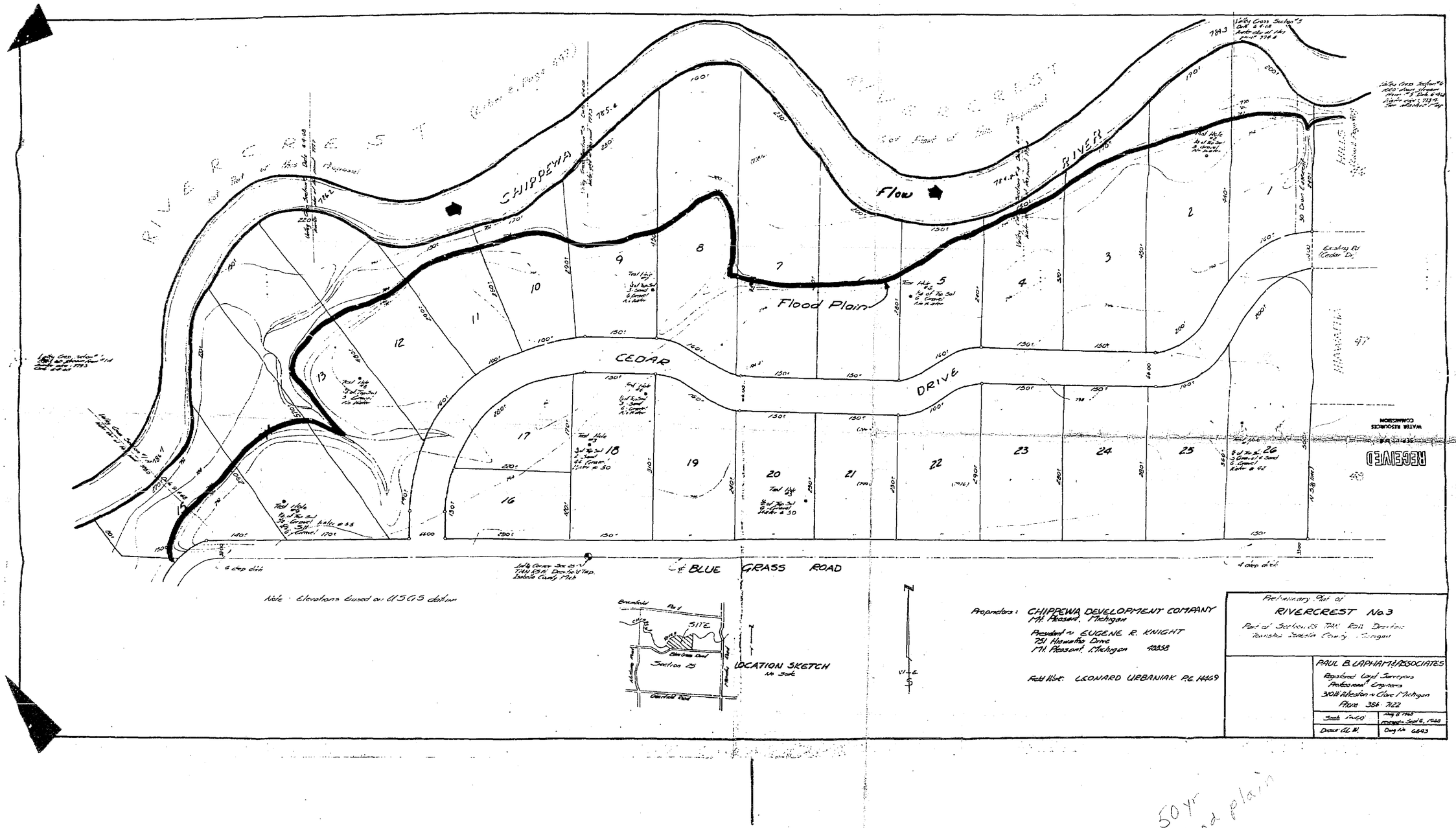
APPROVED J. C. Trakas 2.12.63 DESIGN SUPERVISING ENGINEER

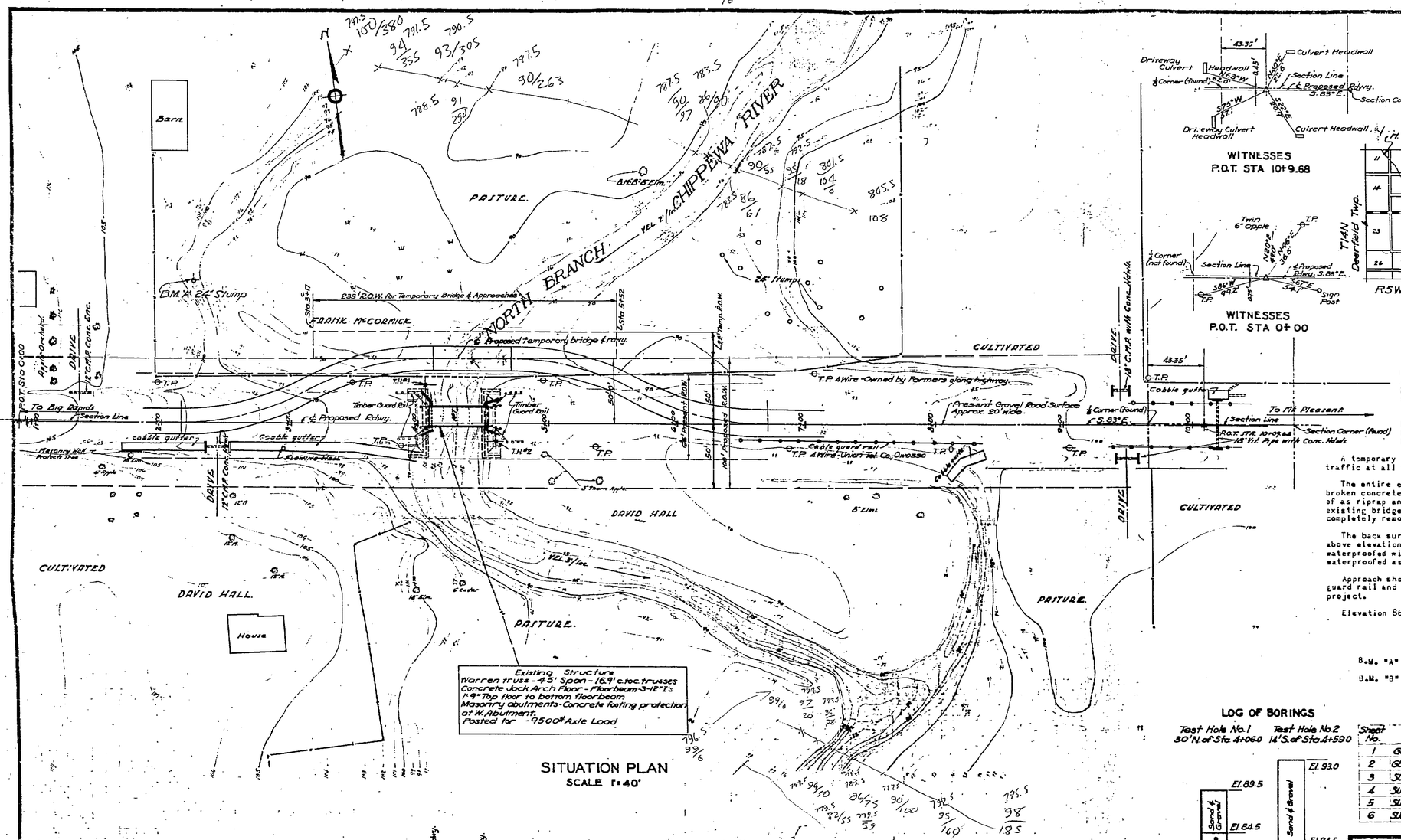
APPROVED L. G. Cole 2.12.63 ASST. ENGINEER OF DESIGN

B02 of 37021C

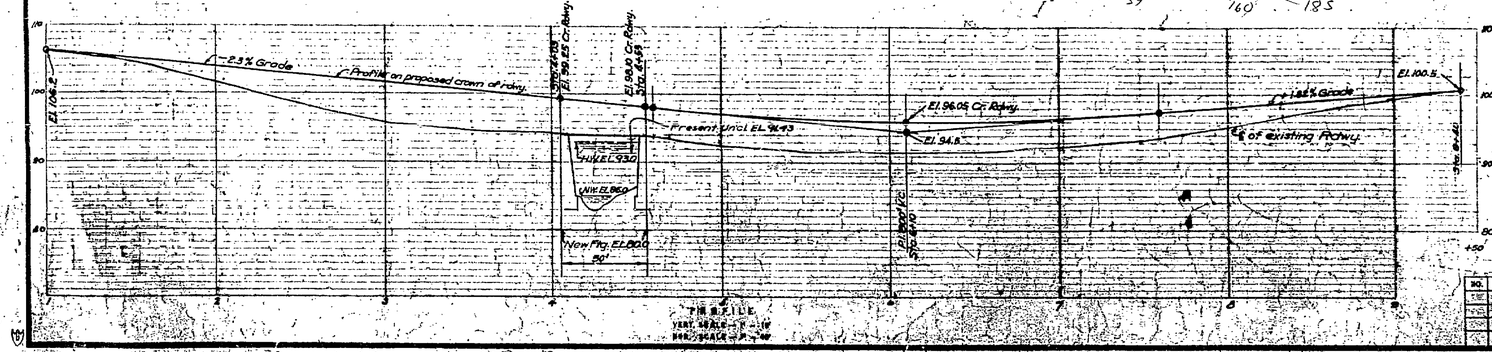
B2 OF 37-52

160-32D.1(b)


RIVERCREST
CHIPPEWA
RIVER
Flow
Flood Plain
CEDAR
DRIVE
BLUE GRASS ROAD
Note: Elevations based on USGS datum
LOCATION SKETCH
No Scale
SITE
Section 25
Proprietors: CHIPPEWA DEVELOPMENT COMPANY
Mt. Pleasant, Michigan
President is EUGENE R. KNIGHT
751 Hiawatha Drive
Mt. Pleasant, Michigan 48858
Field Work: LEONARD URBANIAK P.E. 14469
Preliminary Plat of
RIVERCREST No 3
Part of Section 25 T14N R5W Denver Township Isabella County Michigan
PAUL B. LAPHAM & ASSOCIATES
Registered Land Surveyors
Professional Engineers
3018 Johnston in Clare Michigan
Phone 386 7122
Scale 1"=60'
Date Aug 8 1968
Complete Sept 8, 1968
Drawn G.L.M.
Dwg No 6643
RECEIVED
WATER RESOURCES COMMISSION
50 yr Flood plain 1968

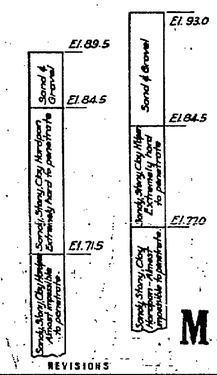


SITUATION PLAN
SCALE 1" = 40'



LOG OF BORINGS

Test Hole No. 1 — 30' N. of Sta. 4+06.0
Test Hole No. 2 — 14' S. of Sta. 4+59.0



M

REVISIONS

NO.	DESCRIPTION	DATE	BY

GENERAL NOTES

Except where otherwise indicated on these plans or in the Proposal and Supplementary Specifications contained therein, all materials and workmanship shall be in accordance with the Michigan State Highway Department's Standard Specifications for Roads and Bridges, 1926 Edition.

The character of all material and extent thereof as shown by borings has been obtained by methods and from sources believed to be reliable. The exactness of this information is, however, in no case guaranteed.

A temporary bridge and approaches will be required to maintain two-way traffic at all times during the reconstruction of this bridge.

The entire existing superstructure and abutments are to be removed. The broken concrete and old masonry from the existing abutments is to be disposed of as riprap and/or as directed by the Engineer. The superstructure of the existing bridge shall become the property of the Contractor and shall be completely removed from the site before completion of the contract.

The back surface of abutments, wingwalls, and superstructure backwalls above elevation 84.0 which will be in contact with the earth fill shall be waterproofed with Class "A" waterproofing, and all joints within this area waterproofed as specified.

Approach shoulder grading, gravel surfacing, sodding, and relocation of guard rail and drainage structures as shown on the plans are a part of this project.

Elevation 86.0 separates wet and dry excavation.

B.M. "A" - Spike in B.M. Washer in 24" stump 110 ft. N. of Sta. 2+25, Elev. 100.00
B.M. "B" - Spike in B.M. Washer in 8" elm, 195 ft. N. of Sta. 5+75, Elev. 90.343.

INDEX TO SHEETS

Sheet No.	Description	Sheet No.	Description
1	GENERAL PLAN OF SITE	7	REINFORCING STEEL DETAILS
2	GENERAL PLAN OF STRUCTURE	8	STRUCTURAL STEEL DETAILS
3	SUBSTRUCTURE - Footing Details	9	APPROACH DETAILS
4	SUBSTRUCTURE - Abutment Details	A-1-5.35	POST-RAILING-DRAIN & CHAIR DETAILS
5	SUPERSTRUCTURE - Slab & Backwall	E-6A-7.58	STD. GUARD RAIL DETAILS
6	SUPERSTRUCTURE - Wearing Surf. & Sidewalk	B-3A-1A	CONCRETE HEADWALLS
		E-6A-1.6	GROUTED COBBLE GUTTER - 6 Ft.

MICHIGAN STATE HIGHWAY DEPARTMENT

MURRAY D. VAN WAGONER — COMMISSIONER

SEC. 13 T. 14 N. R. 5 W. DEERFIELD TWP. ISABELLA CO.
BRIDGE FILE NO. B2 of 37-5-2 ROAD M20 AT STA. 4+28
CROSSING N. BRANCH OF CHIPPEWA RIVER 3 MILES W. OF MT. PLEASANT

GENERAL PLAN OF SITE

50' DECK GIRDER SPAN — 26' ROADWAY — TWO 1'-6" SIDEWALKS
TWO ABUTMENTS 16'-2 1/4" & 15'-0 1/2" — 90° ANGLE OF CROSSING

APPROVED G. M. Foster, Chief Engineer — DATE 2-2-34
APPROVED [illegible] 2/3/34 — Bridges & Grade Design
APPROVED [illegible] 2-3-34 — Bridge Engineer
APPROVED [illegible] 2-5-34 — Bridge Engineer
APPROVED H. E. Woods 2-5-34 — Deputy Commissioner

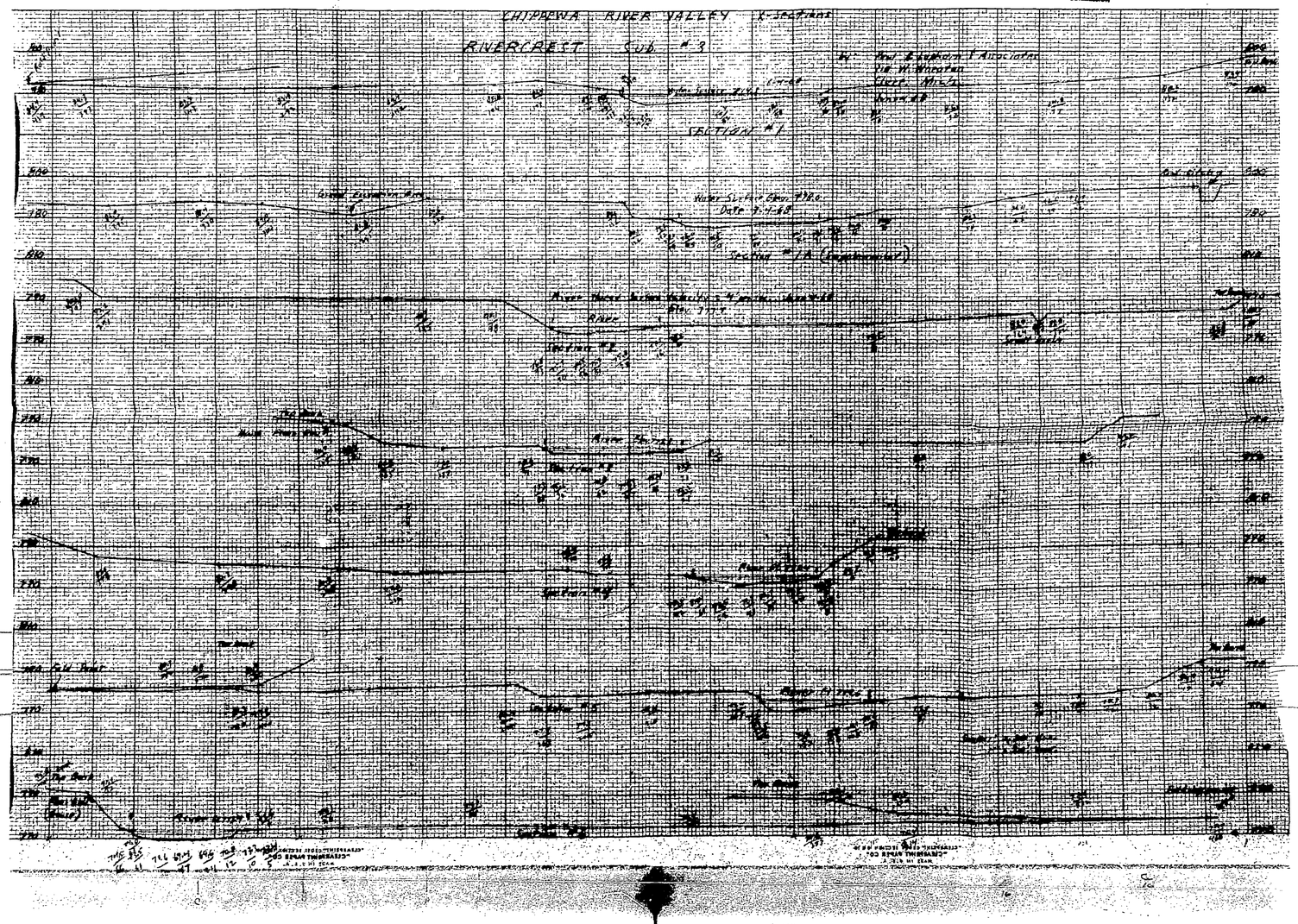
DATE 2-5-34

SQUARED BY	Endlich	
DRAWN BY	Clark	12-20-33
TRACED BY	Clark	12-20-33
CHECKED BY	Gilbreath	1-26-34
SHEET 1 OF 9		

B2 of 37-5-2

160-32D.1(b)

RECEIVED
SEP 11 1968
WATER RESOURCES COMMISSION



#5

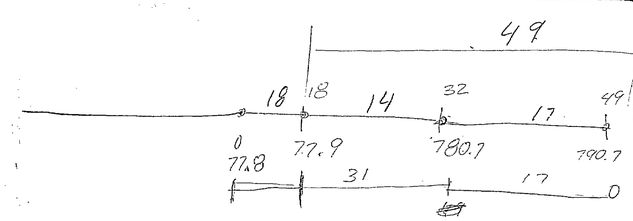
0	77.8	~~240~~	~~77.9~~
18	78.1	~~263~~	~~77.7~~
~~81~~	~~77.7~~	~~275~~	~~80.9~~
~~108~~	~~74.6~~	~~400~~	~~74.9~~
~~108~~	~~74.1~~	~~410~~	~~81.3~~
~~120~~	~~73~~	510	81.8
~~152~~	~~74.6~~	600.	82.9
~~156~~	~~74.5~~		
~~156~~	~~76.5~~		
~~163~~	~~79.0~~		
210	79.4		

790.9	0
780.7	17
777.9	31
~~779.8~~	49
778.1	67
777.7	130

774.6	150
774.1	157
773.0	169
771.6	201
774.5	205
776.5	205

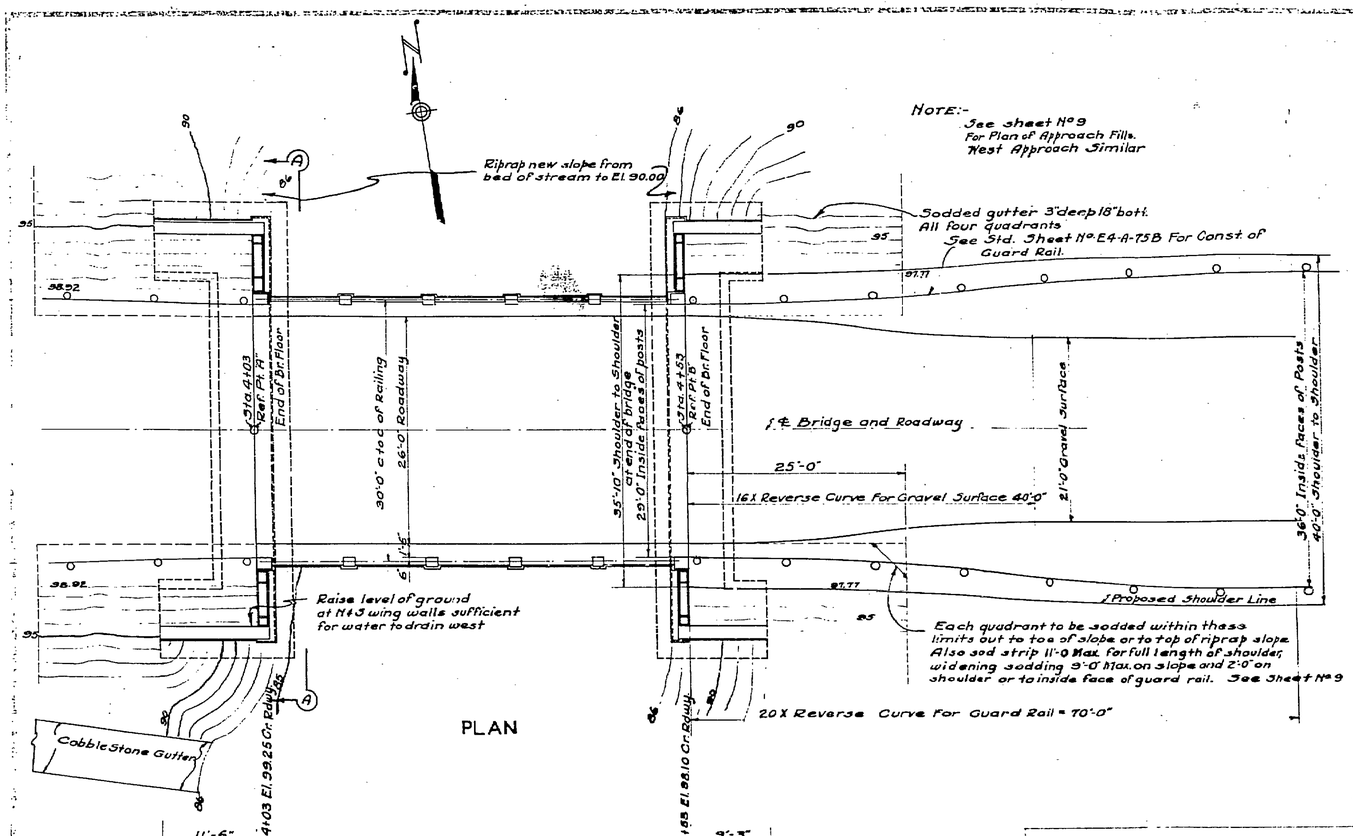
779.	212
779.4	259
771.9	289
777.7	312
780.9	324

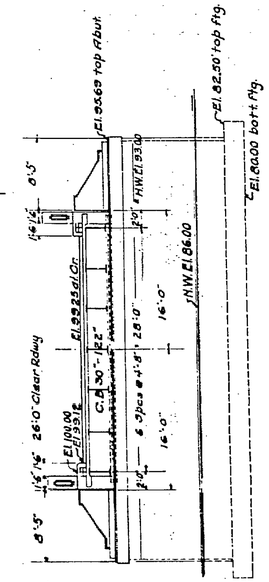
779.9	449
781.3	459.
781.8	619
782.9	649



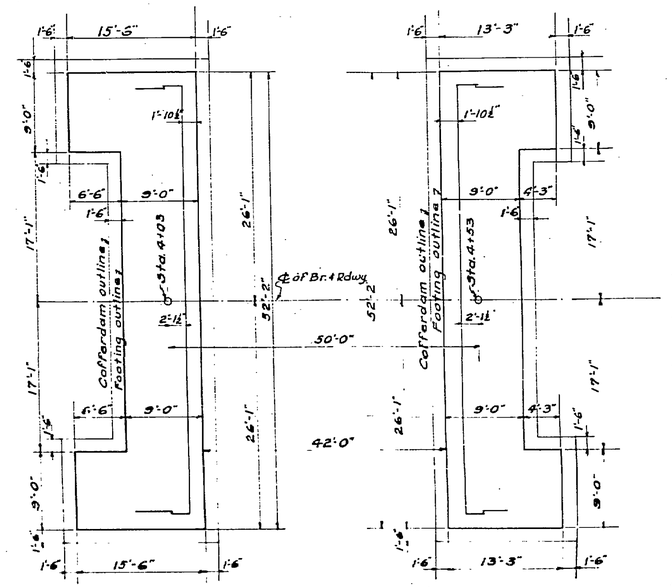
— ZERO

18	77.9
~~38~~	80.7
49	90.9
~~61~~	~~94.4~~

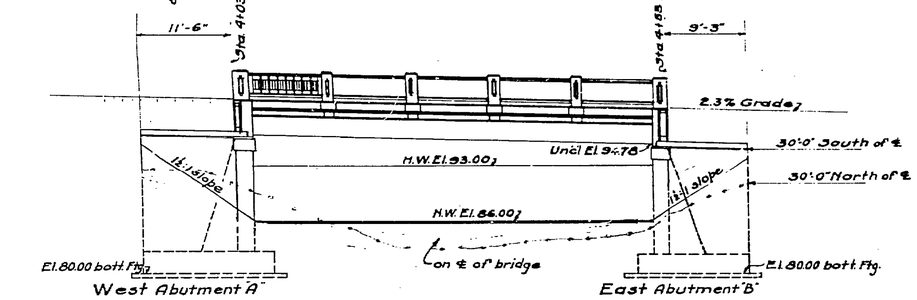




SECTION A-A
ELEVS SHOWN TAKEN AT ST. 4+03



STAKE-OUT DIAGRAM

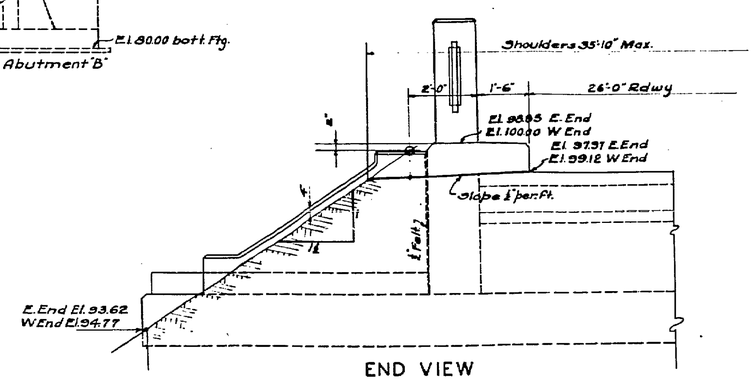


ELEVATION
Scale ⅛" = 1'-0"

BILL OF MATERIAL

	Excavation Wet Cu. Yds.	Excavation Dry Cu. Yds.	Concrete Grade A Cu. Yds.	Soft Rock Felt Sq. Ft.	Soft Rock Felt Sq. Ft.	Waterproofing Class A Sq. Ft.	Waterproofing Class B Sq. Ft.	Conc. Surf. Fin. Sq. Ft.	Gal. Soil Pipe Lin. Ft.	Cable Tile Pipe	Port'n Pipe
Abutment A	156	165	205.0	9.4	34.5	1130	176	1961			
Abutment B	184	187	180.8	9.6	34.5						
Superstructure			48.6			1460	132	296			96
Wearing Surface			16.0								
Railing											
Approaches										180	
Totals	380	355	451.4	19.0	69.0	2610	308	2257		180	96

	Railing Lin. Ft.	Reinf. Steel Lbs.	Barrier Excav. Cu. Yds.	Sodding Sq. Yds.	Box Drains Lin. Ft.	Struct. Steel Lbs.	Cob. Stone Gutter Lin. Ft.	Pipe Rail Lin. Ft.	6" Gravel Surfacing Sq. Yds.	Conc. Hand Walls No.	Hand Hole Lin. Ft.	Cable Gal. Soil Lin. Ft.	12" CM Pipe Lin. Ft.	Relocation Port'n Pipe	Drain Castings No.
Abutment A		5707			119	1039									
Abutment B					115	1034									
Superstructure		11,165				44203									4
Wearing Surface		315													
Railing	100														
Approaches			6225	1450			597	20	1870	2		725	20		
Totals	100	17,187	6225	1450	234	46,270	597	20	1870	2		725	20		4



END VIEW
SHOWING EARTH FILL AROUND THE WING WALLS AND AT END OF SIDEWALK

MICHIGAN STATE HIGHWAY COMMISSION
SEC. 13 T. 14 N. R. 5 W. DEERFIELD TWP. ISABELLA
BRIDGE FILE NO. B2 37 5 2 FOR M 20 4+28
CROSSING W BRANCH OF CHIPPEWA RIVER 3 MI. WEST MT. PLEASANT

M GENERAL PLAN OF STRUCTURE

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	352 lin. ft. 6" Cobble Gutter added	7-16-34	M.B.T.

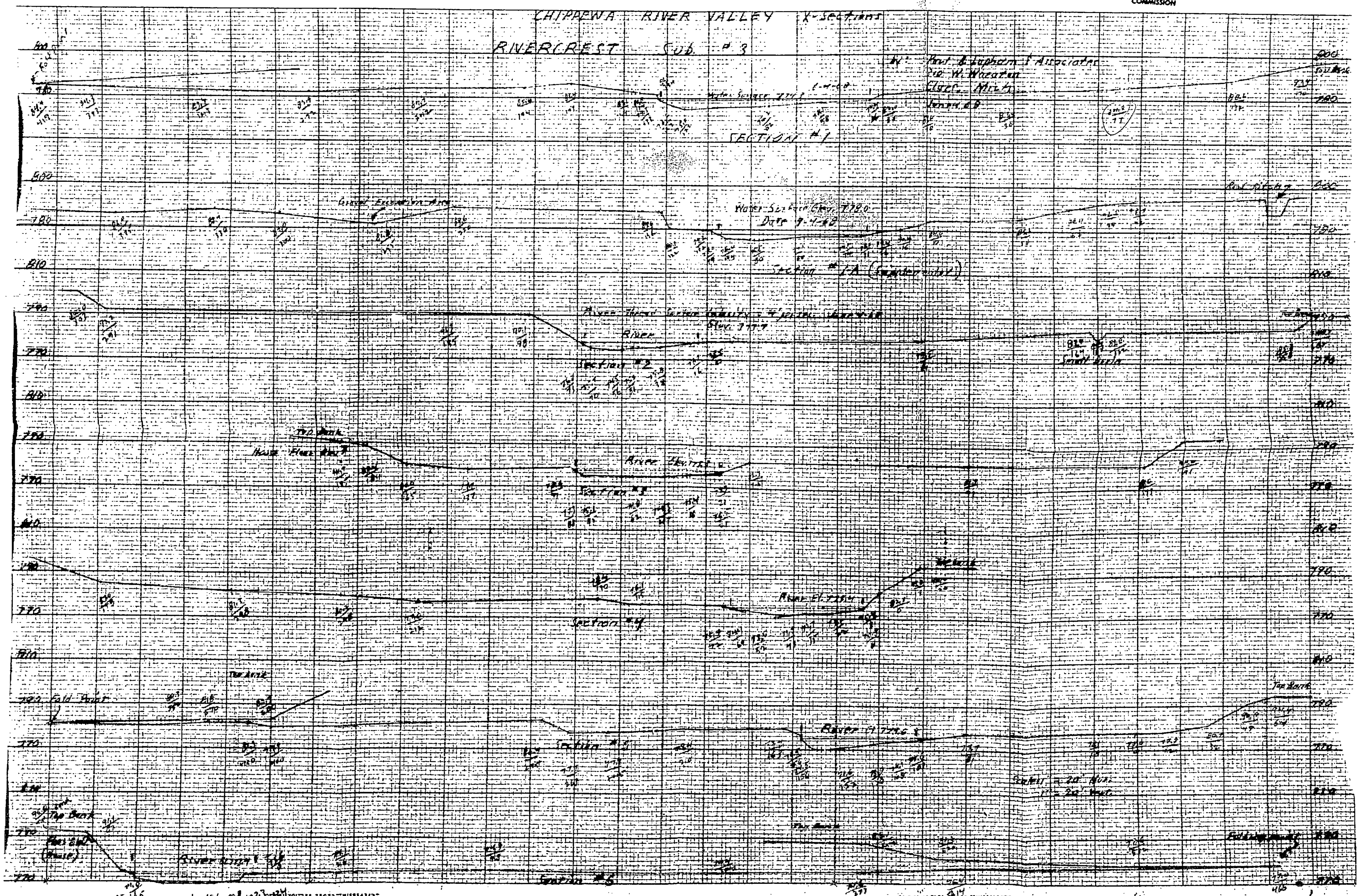
APPROVED: A. M. Foster 2-2-34
APPROVED: J. A. Comes, Engineer of Bridge Design 2-9-34

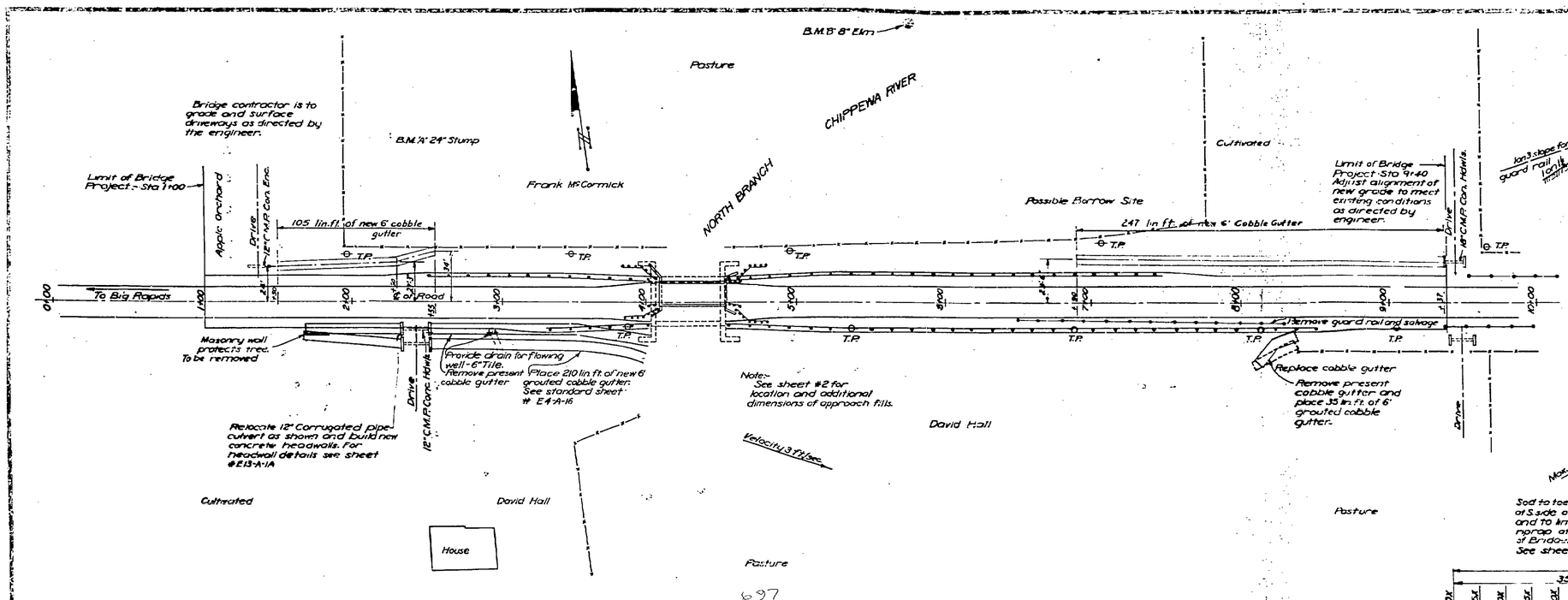
P.J. Endlich
Herman 1-18-34
Herman 1-22-34
Pfp 1-24-34
G.L.M.

FILED B 2 OF 37-5-2

160-32D.1(b)

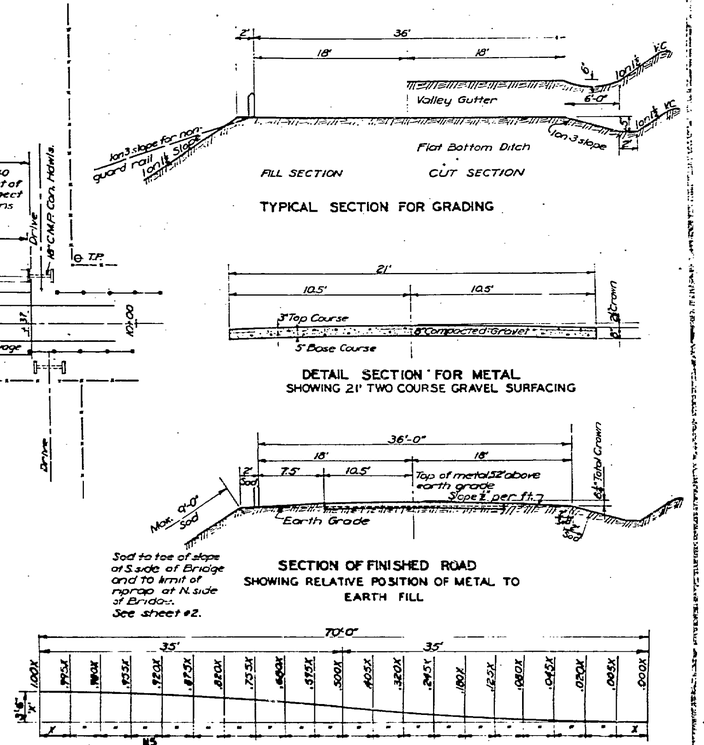
RECEIVED
SEP 11 1968
WATER RESOURCES
COMMISSION





PLAN

SCALE 1" = 40'



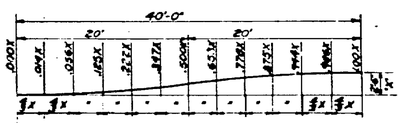
TYPICAL SECTION FOR GRADING

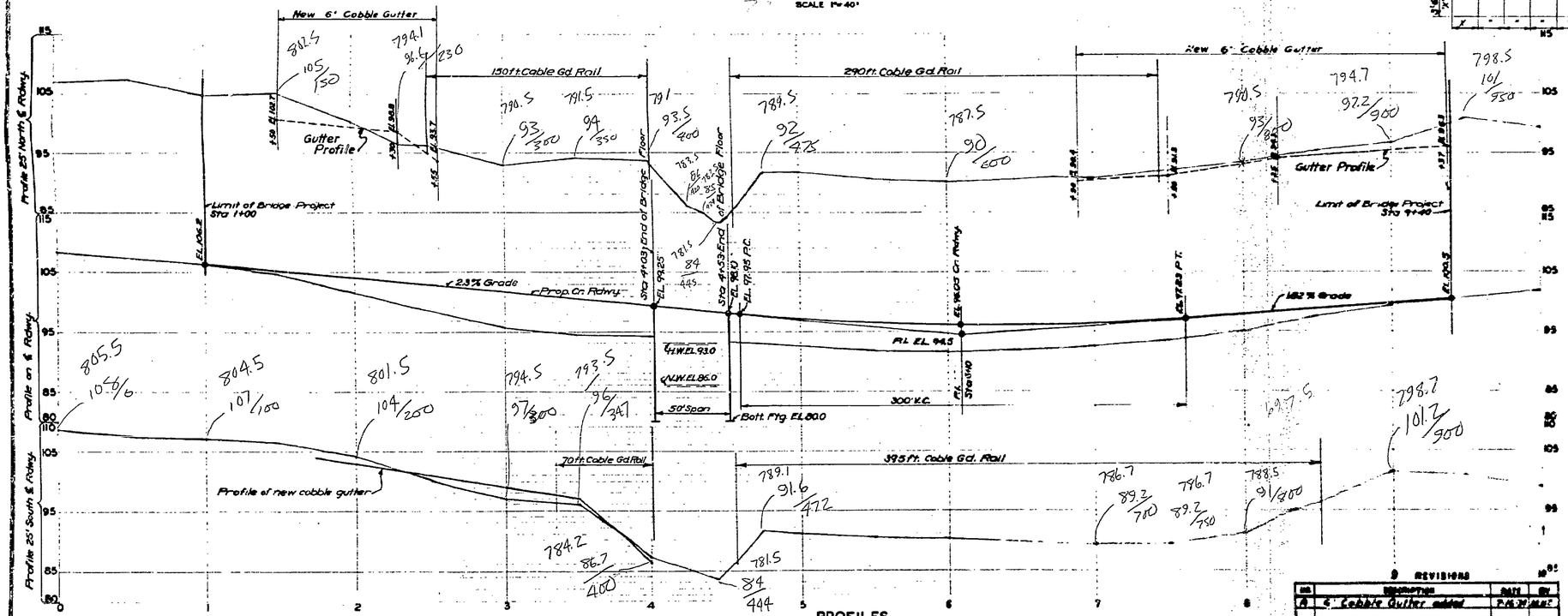
DETAIL SECTION FOR METAL

SHOWING 21' TWO COURSE GRAVEL SURFACING

SECTION OF FINISHED ROAD

SHOWING RELATIVE POSITION OF METAL TO EARTH FILL





PROFILES

SCALES HORZ. 1" = 40' VERT. 1" = 10'

QUANTITIES FOR APPROACHES

Borrow Excavation	6225 cu. yds.
Gravel Surfacing	1870 sq. yds.
Sodding	1430 sq. yds.
6" Tile outlet for well	20 Lin. ft.
Removing and Replacing 6' cobble gutter	237 Lin. ft.
New Cable Guard Rail	725 Lin. ft.
Relocating Cable Guard Rail	180 Lin. ft.
Removing and Replacing 12" C.M. Pipe	20 Lin. ft.
Concrete Headwalls	2

MICHIGAN STATE HIGHWAY DEPARTMENT

SEC. 13 T. 14 N., R. 5 W. DEERFIELD TWP. ISABELLA CO.

BRIDGE FILE NO. B2 OF 37-5-2 ROAD M 20 STATION 4+28

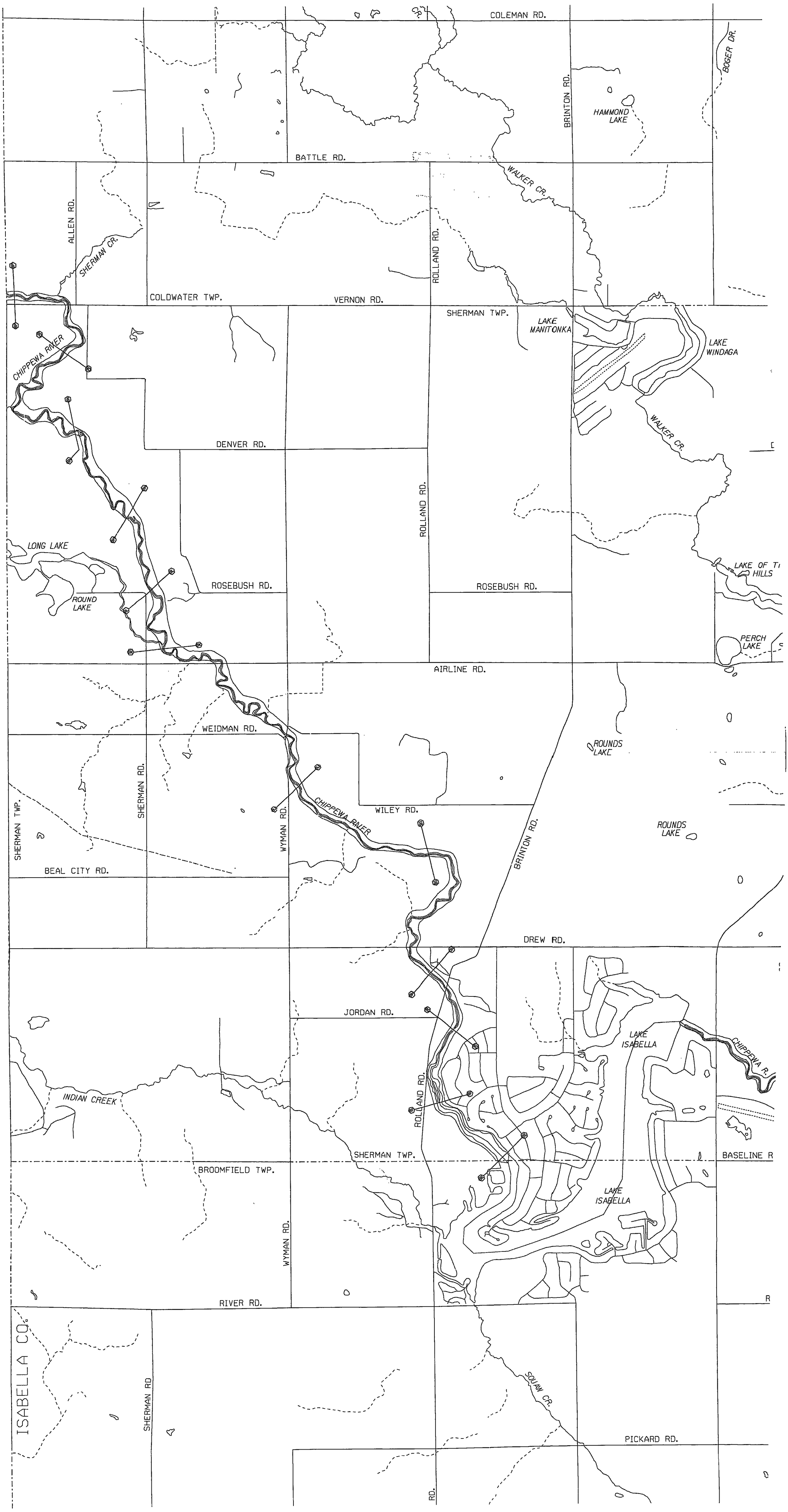
CROSSING N. BRANCH OF CHIPPEWA RIVER 3 MILES W. OF MT. PLEASANT

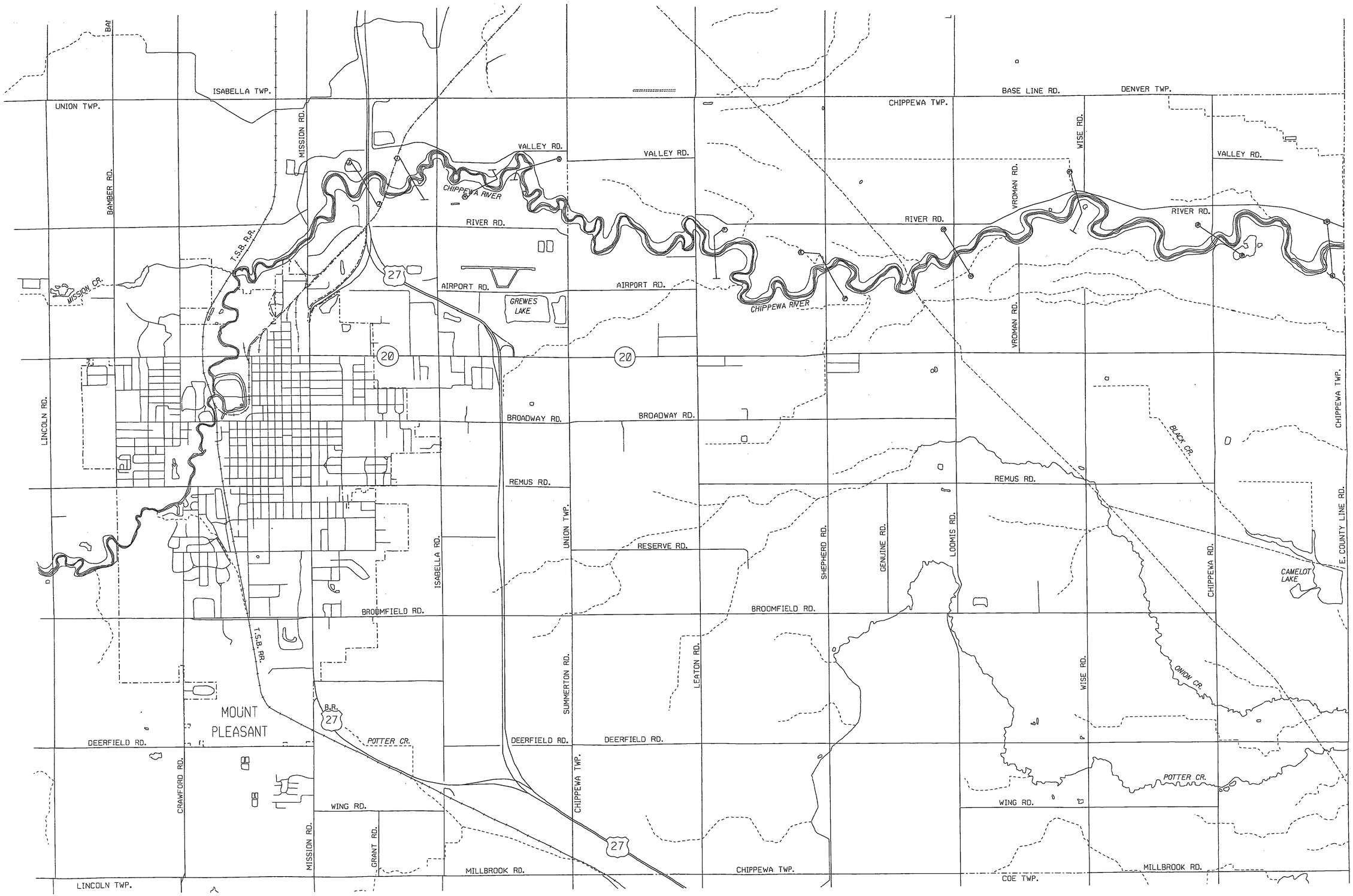
APPROACH DETAILS

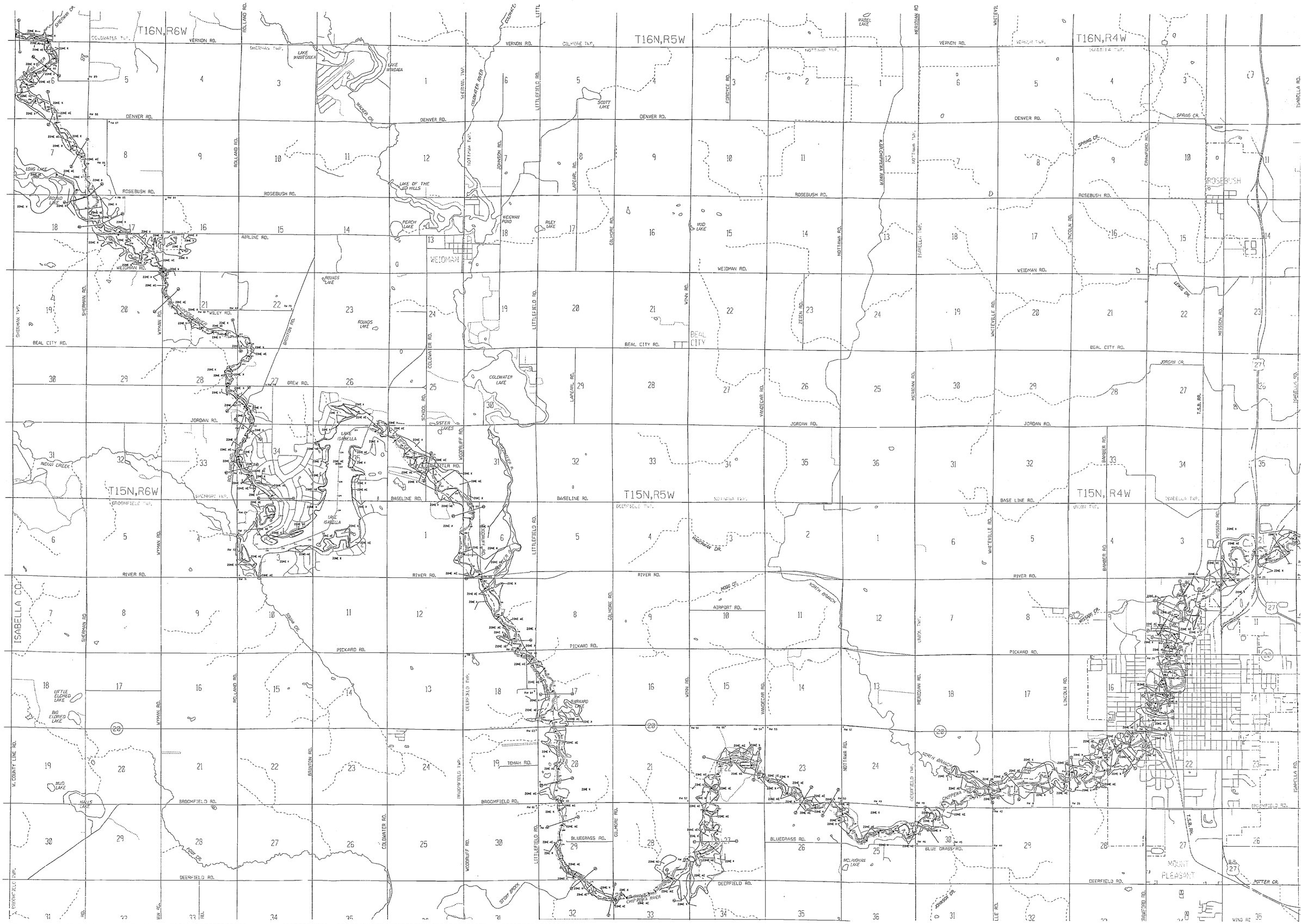
NO.	REVISIONS	DATE	BY
A	6" Cobble Gutter added	7-15-34	

R. J. Endrich

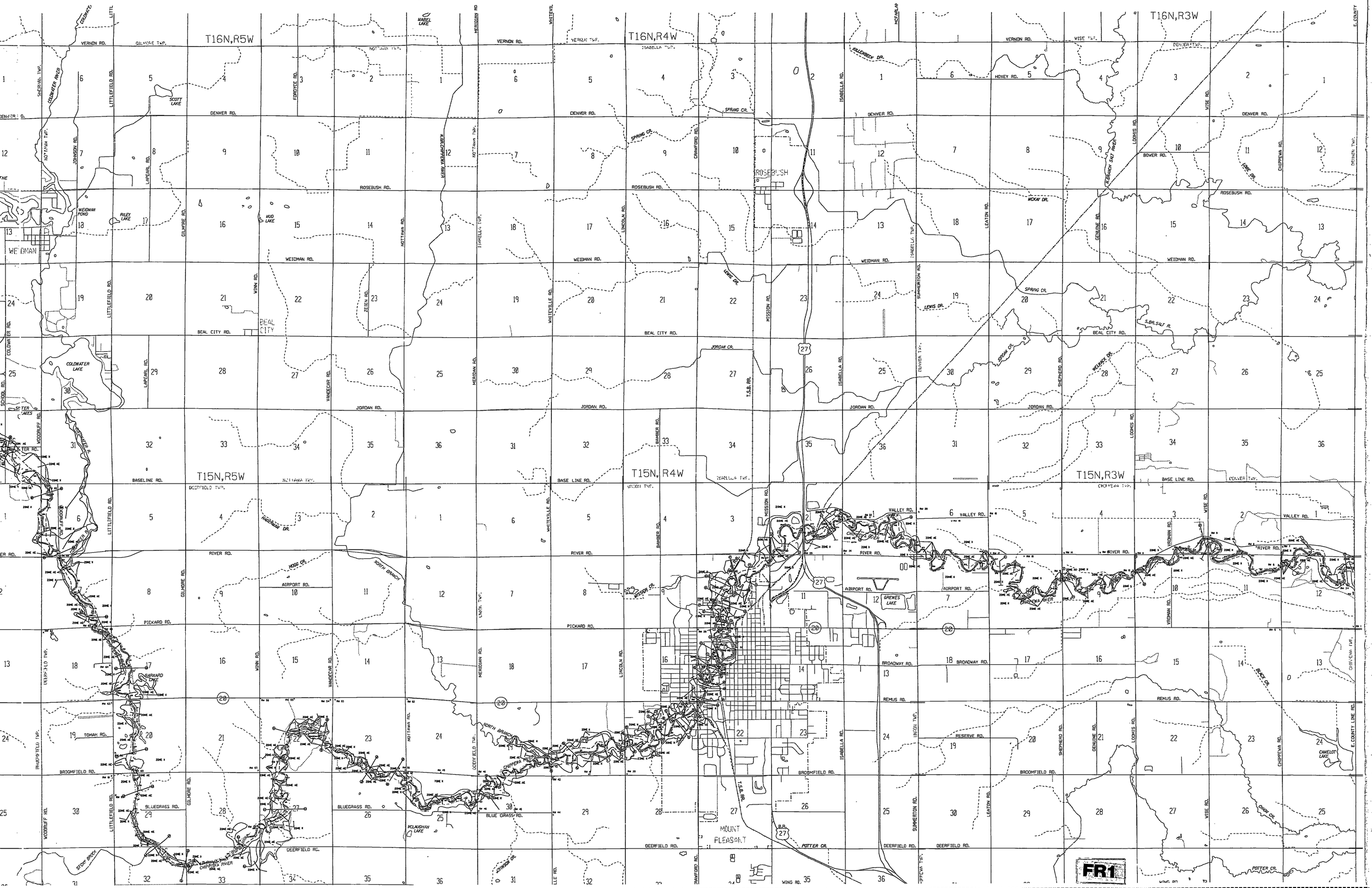
B2 OF 37-5-2

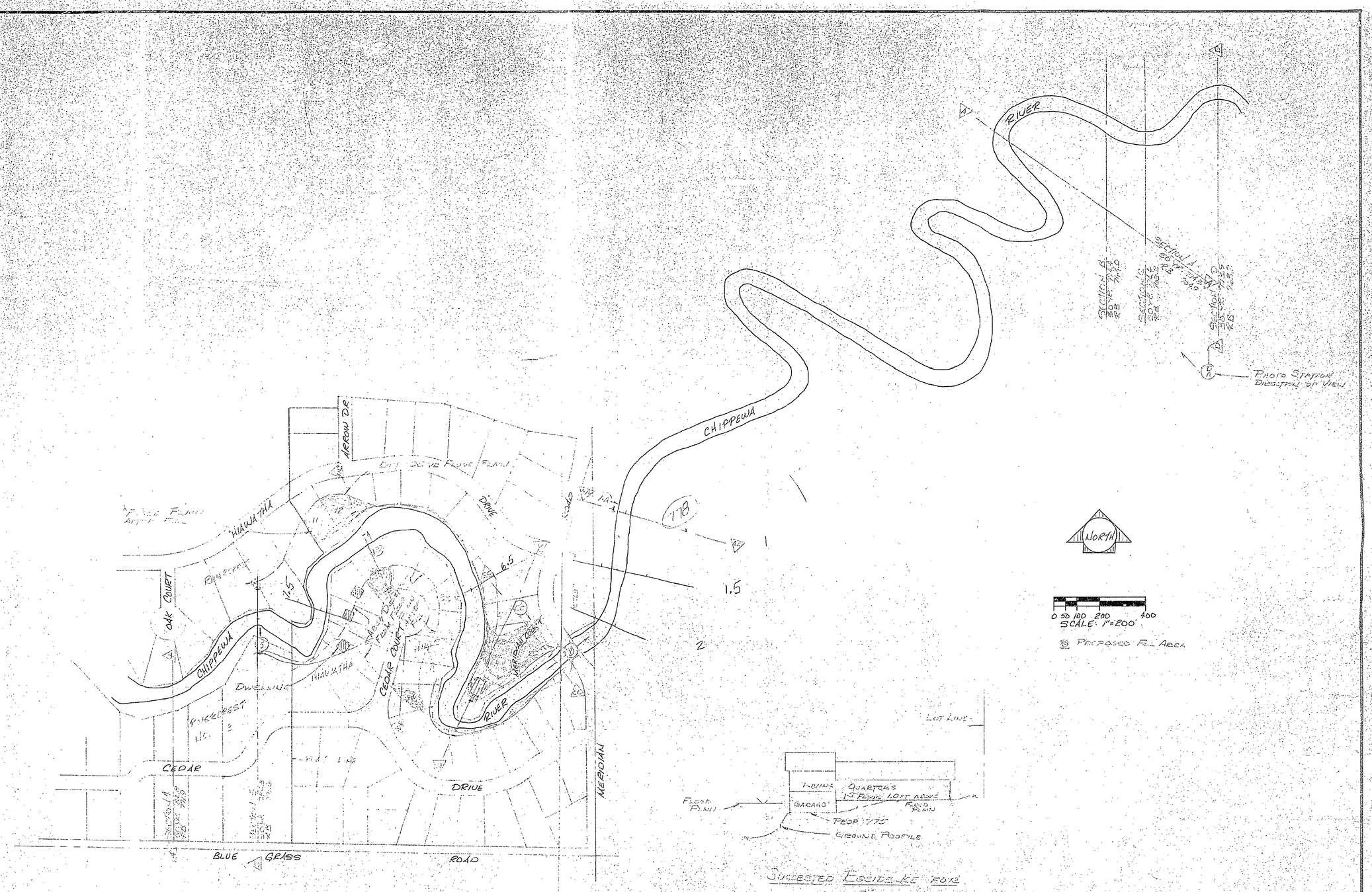

COLEMAN RD.
BOGER DR.
BRINTON RD.
HAMMOND LAKE
BATTLE RD.
WALKER CR.
ALLEN RD.
SHERMAN CR.
ROLLAND RD.
COLDWATER TWP.
VERNON RD.
SHERMAN TWP.
LAKE MANITONKA
LAKE WINDAGA
CHIPPEWA RIVER
DENVER RD.
WALKER CR.
ROLLAND RD.
LONG LAKE
ROSEBUSH RD.
ROSEBUSH RD.
ROUND LAKE
LAKE OF T
HILLS
PERCH LAKE
AIRLINE RD.
WEIDMAN RD.
ROUNDS LAKE
SHERMAN RD.
SHERMAN TWP.
WYMAN RD.
CHIPPEWA RIVER
WILEY RD.
ROUNDS LAKE
BRINTON RD.
BEAL CITY RD.
DREW RD.
JORDAN RD.
LAKE ISABELLA
CHIPPEWA R.
INDIAN CREEK
ROLLAND RD.
SHERMAN TWP.
BASELINE R
BROOMFIELD TWP.
LAKE ISABELLA
WYMAN RD.
RIVER RD.
R
ISABELLA CO.
SHERMAN RD
SQUAW CR.
PICKARD RD.
RD.


ISABELLA TWP.
UNION TWP.
CHIPPEWA TWP.
BASE LINE RD.
DENVER TWP.
BAT
BAMBER RD.
MISSION RD.
VALLEY RD.
CHIPPEWA RIVER
RIVER RD.
WISE RD.
VROMAN RD.
T.S.B. R.R.
MISSION CR.
27
AIRPORT RD.
GREWES LAKE
20
LINCOLN RD.
BROADWAY RD.
BLACK CR.
REMUS RD.
UNION TWP.
ISABELLA RD.
RESERVE RD.
SHEPHERD RD.
GENUINE RD.
LOOMIS RD.
CHIPPEWA RD.
E. COUNTY LINE RD.
CAMELOT LAKE
BROOMFIELD RD.
SUMMERTON RD.
LEATON RD.
ONION CR.
MOUNT PLEASANT
B.R.
DEERFIELD RD.
POTTER CR.
CRAWFORD RD.
WING RD.
GRANT RD.
MILLBROOK RD.
LINCOLN TWP.
COE TWP.


T16N,R6W
T16N,R5W
T16N,R4W
T15N,R6W
T15N,R5W
T15N,R4W
ISABELLA CO.
VERNON RD.
DENVER RD.
ROSEBUSH RD.
AIRLINE RD.
WEIDMAN RD.
BEAL CITY RD.
JORDAN RD.
BASELINE RD.
RIVER RD.
PICKARD RD.
BROOMFIELD RD.
BLUEGRASS RD.
DEERFIELD RD.
WEIDMAN
BEAL CITY
ROSEBUSH
MOUNT PLEASANT
LAKE MANITOWOC
LAKE WINDAGA
LAKE OF THE HILLS
PERCH LAKE
WEIDMAN POND
RILEY LAKE
MUD LAKE
SCOTT LAKE
ROUNDS LAKE
COLDWATER LAKE
LAKE ISABELLA
LONG LAKE
ROUND LAKE
LITTLE ELDRED LAKE
BIG ELDRED LAKE
MUD LAKE
HALLS LAKE
BARWARD LAKE
MCLAUGHAN LAKE
CHIPPEWA RIVER
NORTH BRANCH
SHERMAN TWP.
COLDWATER TWP.
BROOMFIELD TWP.
DEERFIELD TWP.
GILMORE TWP.
NOTTAWA TWP.
ISABELLA TWP.
UNION TWP.
SHERMAN RD.
WYMAN RD.
ROLLAND RD.
BRINTON RD.
COLDWATER RD.
WOODRUFF RD.
LITTLEFIELD RD.
LAPEARL RD.
GILMORE RD.
WINN RD.
VANDECAR RD.
NOTTAWA RD.
MERIDIAN RD.
WHITEVILLE RD.
LINCOLN RD.
BAMBER RD.
MISSION RD.
CRAWFORD RD.
ISABELLA RD.
T.S.B. RR.
W. COUNTY LINE RD.
SCHOOL RD.
FORDYCE RD.
ZEIEN RD.
SPRING CR.
LEWIS DR.
JORDAN CR.
POTTER CR.
MISSION CR.
HOGG CR.
HAGERMAN DR.
SOUAN CR.
STONY BROOK
WALKER CR.
COLDWATER RIVER
N.BR.CHIPPEWA RIVER
SISTER LAKES
INDIAN CREEK
MABEL LAKE
20
27

FR2


T16N,R5W
T16N,R4W
T16N,R3W
T15N,R5W
T15N,R4W
T15N,R3W
VERNON RD.
DENVER RD.
ROSEBUSH RD.
WEIDMAN RD.
BEAL CITY RD.
JORDAN RD.
BASELINE RD.
RIVER RD.
AIRPORT RD.
PICKARD RD.
BROADWAY RD.
REMUS RD.
BROOMFIELD RD.
BLUEGRASS RD.
DEERFIELD RD.
WING RD.
VALLEY RD.
ROSEBUSH
WEIDMAN
BEAL CITY
MOUNT PLEASANT
FR1

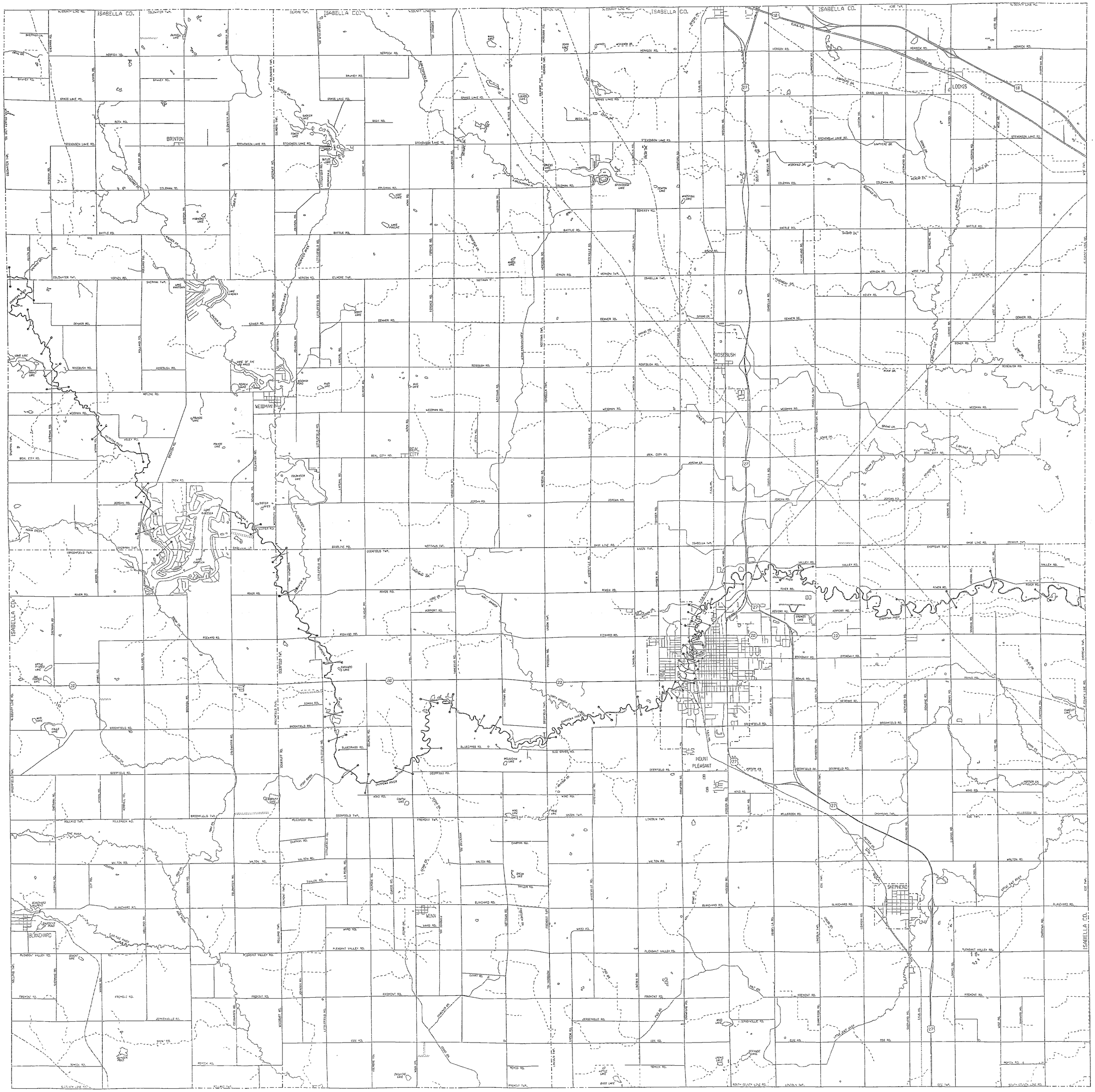


FLOOD PLAIN DETERMINATION
FOR
LEE JONES

PART SECTION 23-T16N-R5W
DEERFIELD TWP. ISABELLA CO. MICH.

RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & MT. PLEASANT, MICH.
828-5103 772-2138

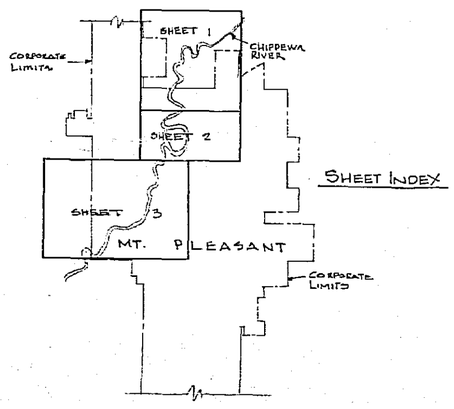
DATE: SEPT.	SCALE: 1"=200'
DRAWN BY: J.L.	JOB NO.: R-19020
REVISED:	SHEET NO.: 1 OF


ISABELLA CO.
BRINTON
LOOMIS
ROSEBUSH
WEIDMAN
BEAL CITY
MOUNT PLEASANT
SHEPHERD
WINN
BLANCHARD
ISABELLA CO.

FLOODWAY

100 YR. FLOOD

X-SECTION LOCATION



SHEET INDEX

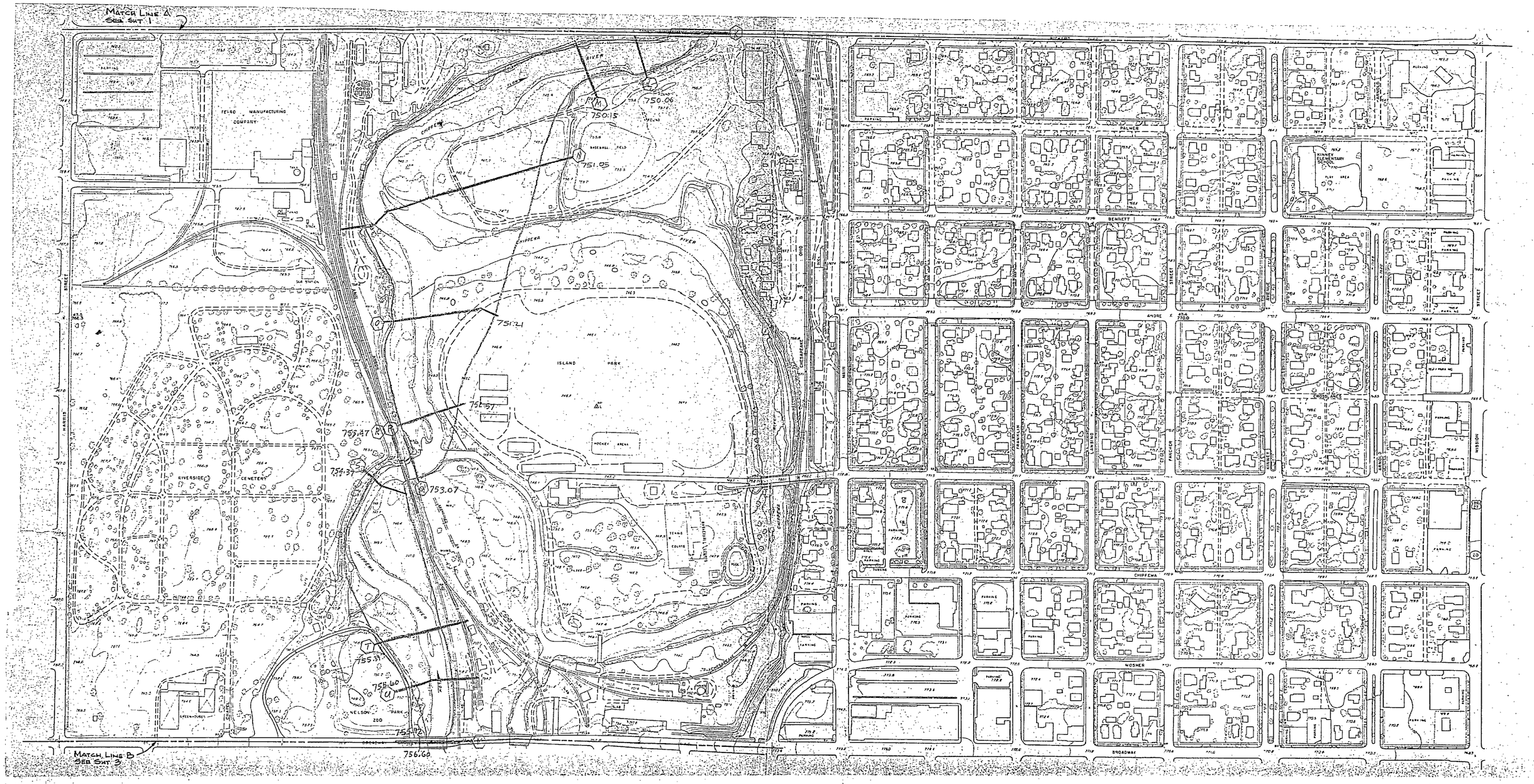
N

CITY OF MT. PLEASANT, MICHIGAN

CONTOUR INTERVAL - 2'

0 200' 400'

SHEET 1 OF 3



FLOODWAY

100 YR. FLOOD

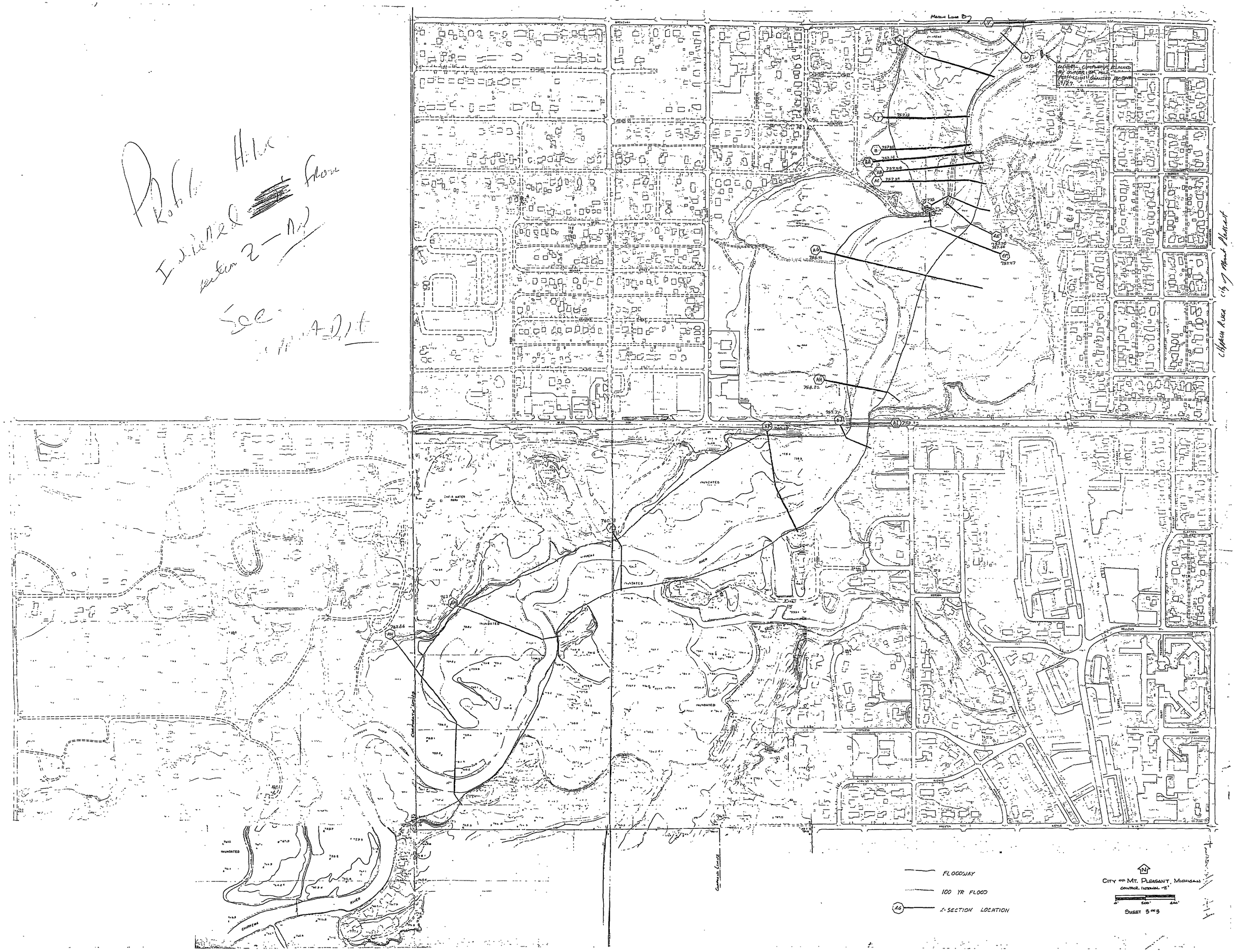
X-SECTION LOCATION

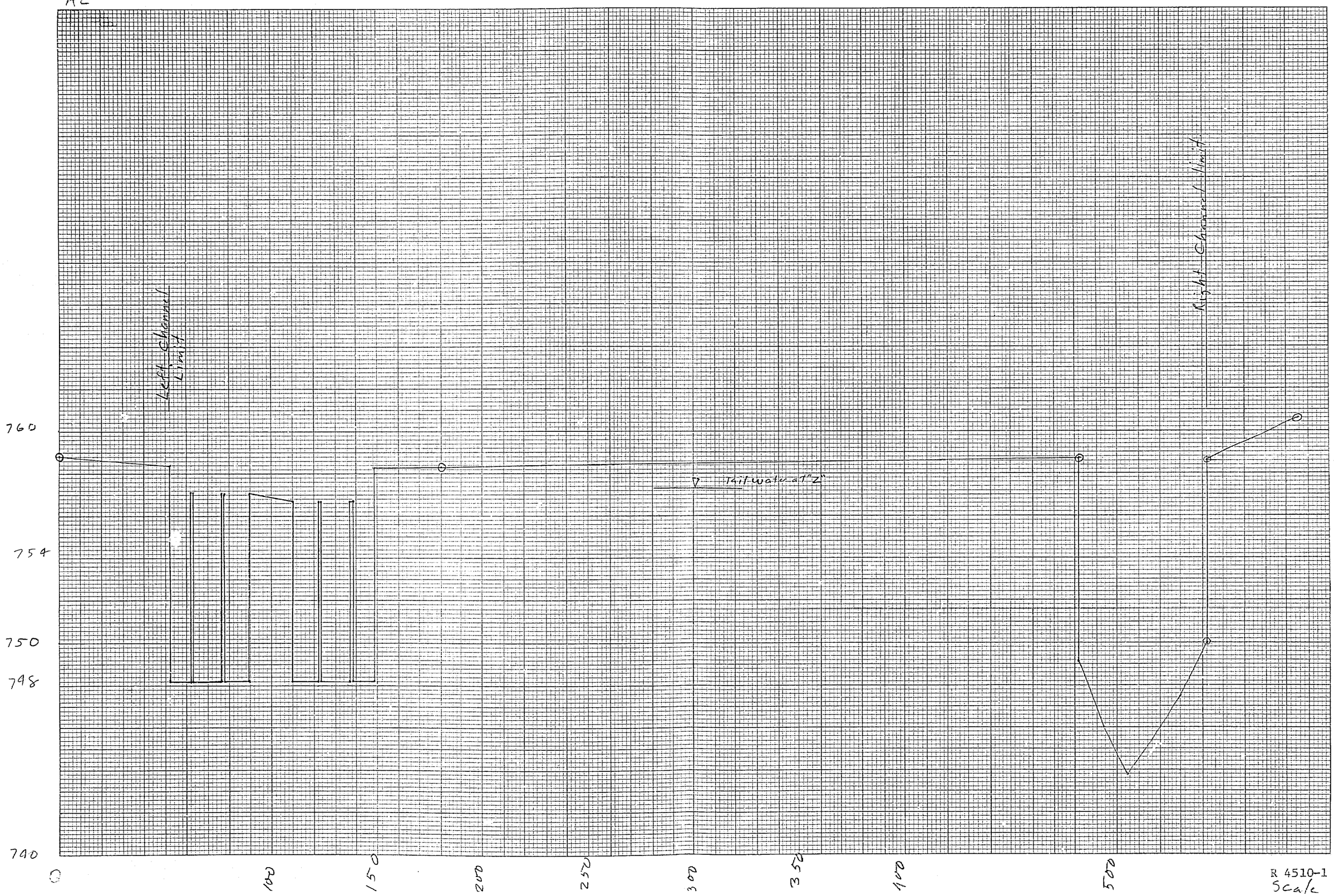
CITY OF MT. PLEASANT, MICHIGAN

CONTOUR INTERVAL - 2'

0' 200' 400'

SHEET 2 OF 3

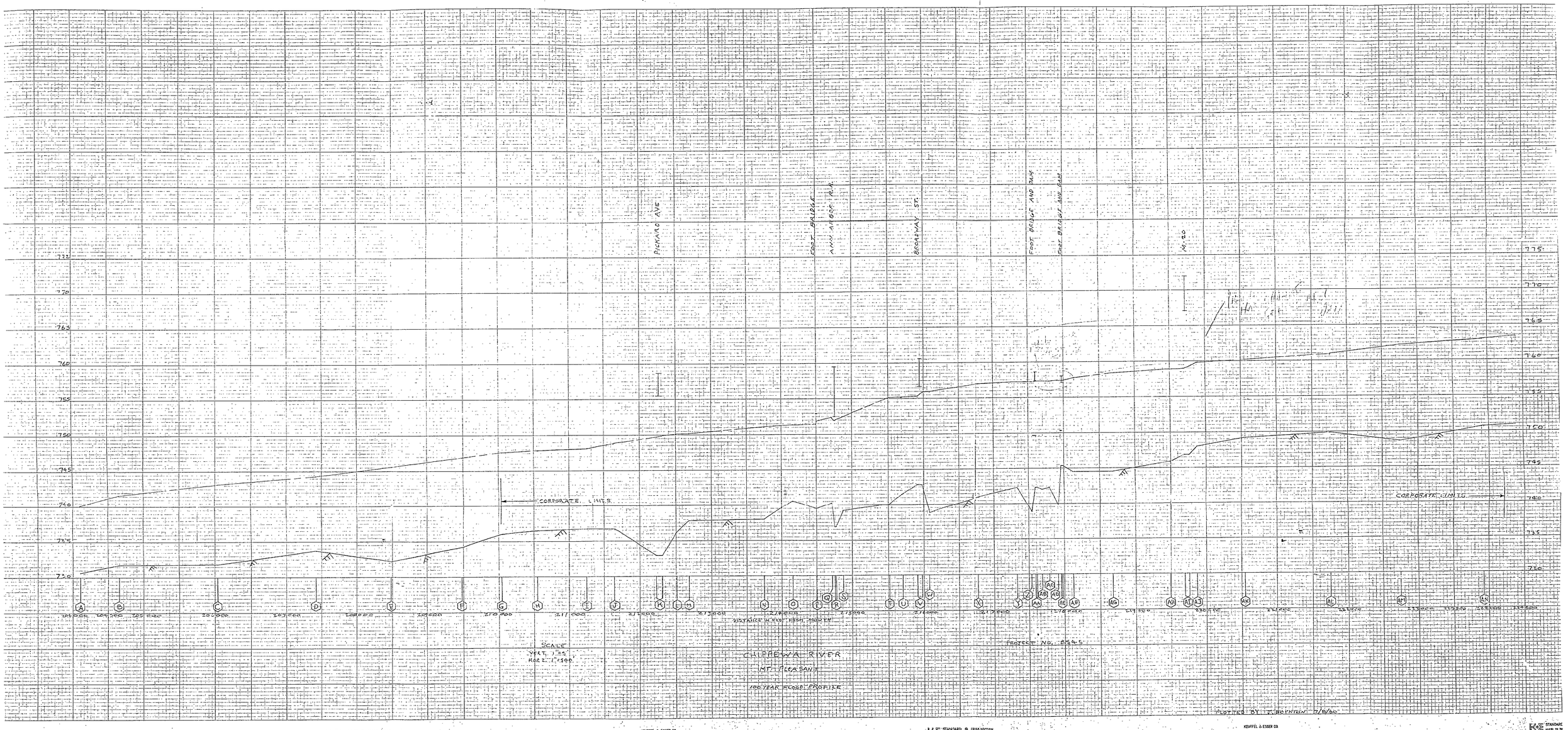

FLOODWAY
100 YR FLOOD
X-SECTION LOCATION
CITY OF MT. PLEASANT, MICHIGAN
CONTOUR INTERVAL 2'
SHEET 3 OF 3
INUNDATED
CHIPPEWA RIVER
City of Mount Pleasant



AE

760
754
750
748
740
0
100
150
200
250
300
350
400
500
Left Channel Limit
Right Channel Limit
Tailwater at "Z"

R 4510-1
Scale 1" = 40'



KEUFFEL & ESSER CO. MADE IN U.S.A.

K&E STANDARD CROSS SECTION

KEUFFEL & ESSER CO. MADE IN U.S.A.

K&E STANDARD CROSS SECTION

KEUFFEL & ESSER CO. MADE IN U.S.A.

K&E STANDARD

MT. PLEASANT
CHIPPEWA RIVER

00BREAK00

1) COUNTY: ISABELLA

2) STUDY NAME: CITY OF MOUNT PLEASANT

3) WATERCOURSE: CHIPPEWA RIVER

4) DOCUMENT TYPE: REPORT

00BREAK00

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

1601 PORTAGE STREET
KALAMAZOO, MICHIGAN 49001
(616) 385-0011

August 8, 1980

Mr. Daniel H. Morgan, P.E.
Flood Insurance Unit
Flood Plain Management Section
Water Management Division
Michigan Department of Natural Resources
P. O. Box 30028
Lansing, Michigan 48909

Re: City of Mount Pleasant Flood Insurance Study

Dear Mr. Morgan:

Enclosed for your review is our Hydraulic Analysis of the Chippewa River through the City of Mount Pleasant, Michigan.

The following information is included:

1. HEC-2 run for 100-year flood
2. Summary tables for 10-, 50-, 100- and 500-year floods
3. IPLOT for 100-year flow
4. Topographic map
5. Hydraulic Analysis Report

If you have any questions on this information, please call me.

Very truly yours,

GOVE ASSOCIATES INC.

William J. McDonough, P.E.
Associate

WJM/tk

Enclosure: as listed above

CHIPPEWA RIVER AT MOUNT PLEASANT

HYDRAULIC ANALYSIS

1. INTRODUCTION

The stream being studied is the Chippewa River in the City of Mount Pleasant, Michigan. The discharges and frequencies used in this study were obtained by analyzing the data from USGS gaging station 1540, located about 3.8 miles northeast of Mount Pleasant. The drainage area at the gaging station is 416 square miles. Because the drainage area at Lincoln Road, which is located about 5,000 feet upstream of the study limit, is about the same at the gage (400 square miles), no prorated flows were calculated. The flows which have been approved by the Michigan Department of Natural Resources are shown below: OK

Peak Flows (cfs)

10-year	50-year	100-year	500-year
3520	5130	5850	7590

oked by RCS 3/5/80

The project managers for the Flood Insurance Studies are William McDonough and Duane Ellis.

2. METHOD OF ANALYSIS

Water surface profiles for 10-, 50-, 100-, and 500-year were computed through the HEC-2 computer program, developed by U. S. Army Corps of Engineers (Ref. 1).

2.1 Cross Sections

Valley and Bridge Cross Sections used in this study were surveyed in September of 1979. Table 1 shows the locations of cross sections

used in this report. All the bridges are coded as Normal Bridge Routine because the openings are either without piers or cannot be approximated by trapizoidal shape, and the water elevations are under the low chords of the bridges.

2.2 Roughness Coefficients

The roughness coefficients were determined from field description, which was made in August of 1979. The material and photographs shown in page 101 to page 123 in Chow's Open Channel Hydraulics (Ref. 2) served as the guidance. The roughness coefficients are in the range of 0.035 to 0.05 and 0.05 to 0.12 for channel and flood plain, respectively.

2.3 Starting Point and Starting Elevation

The backwater computations started at a point about 5,900 feet downstream from the City limit in order to obtain the convergence before the City limit. Figure 1 shows the convergence test for 100-year flood. In Figure 1, the profile shows the convergence at 1,000 feet downstream from the corporate limit. Therefore, the starting elevation of 740 feet and the corresponding energy slope of 0.002828 were used in the slope-area method for all flows.

2.4 Special Considerations

2.4.1 Channel Blocking

From Section N, downstream of Island Park, to Section AA, first dam, there is an east branch channel as shown in the topographic map. In the past, the flow of the east branch passed through a culvert under a mill house and went into the east side of Island Park. The

mill house is on the upstream side of the Broadway Street Bridge. In September of 1979, the owner of the mill house obtained a permit from the Department of Natural Resources of Michigan to block the flow from flowing into the culvert under the mill house. In other words, the east branch of the Chippewa River in Mount Pleasant has been blocked permanently. Due to this blocking effect, the flow in Island Park will go to the west side mostly and no Island flow between Section N and Section AA.

2.4.2 Dams and Foot Bridges

Between the first and second dams, Section AA to AE, there is a narrow earth dyke about 300 feet long and 20 feet wide in the center. Because this island is very narrow and only 300 feet long, it is modeled by divided flow instead of island flow. Re-Modeled as one unit 10/31/80 GWT

2.5 High Water Marks

Two high water marks of the storm of September 1, 1975 are available from Riddle Engineers Inc., courtesy of DNR. However, the first high water mark at Broadway Street Bridge is lower, and the second high water mark at M-21 Bridge is higher than what was obtained from our model. The results are shown in Table 2. Because the available high water marks are not able to fit into the model by any means, they are finally rejected. No

Reference

1. HEC-2 water surface profiles, Users Manual, Hydrologic Engineering Center, U. S. Army, Corpos of Engineers, August 1979.
2. Open Channel Hydraulics, V. T. Chow, McGraw-Hill, New York, 1959.

TABLE 1

LOCATIONS OF CROSS SECTIONS

SECTION	SECNO	LOCATION AND DESCRIPTIONS
A	204095	5930' D/S from corporate limit
B	204595	5385' D/S from corporate limit
C	205985	3995' D/S from corporate limit
D	207370	2610' D/S from corporate limit
E	208600	1550' D/S from corporate limit
F	209590	550' D/S from corporate limit
G	210140	Corporate limit
H	210660	500' U/S from corporate limit
I	211360	1200' U/S from corporate limit manufactured
J	211800	1600' U/S from corporate limit manufactured
K	212000 212001 212002 212003	Pickard Avenue Bridge, width = 58', Length = 132' Normal Bridge Routine
L	212130	200' U/S from U/S face of Pickard Avenue Bridge
M	212340	390' U/S from U/S face of Pickard Avenue Bridge
N	213420	1440' U/S from U/S face of Pickard Avenue Bridge
O	213880	1840' U/S from U/S face of Pickard Avenue Bridge
P	214200 214201	Foot Bridge on west side of Island Park
R	214450 214451 214452 214453	Ann Arbor Railroad Bridge, width = 18', Length = 82' Normal Bridge Routine

SECTION	SECNO	LOCATION AND DESCRIPTIONS
S	214550	100' U/S from U/S face of Ann Arbor Railroad Bridge
T	215180	750' U/S from U/S face of Ann Arbor Railroad Bridge
U	2153+80	950' U/S from U/S face of Ann Arbor Railroad Bridge manufactured
V	215600 215601 215602 215603	Broadway Street Bridge, width = 44', Length = 110' Normal Bridge Routine
W	215700	100' U/S from U/S face of Broadway Street Bridge
X	216500	800' U/S from U/S face of Broadway Street Bridge
Y	217050	1350' U/S from U/S face of Broadway Street Bridge
Z	217150	50' D/S from First Dam
AA	217200 217201 217202 217203 217204	Dam under a foot bridge Top of Dam = 749.1 Foot Bridge by Normal Bridge Routine
AB	217265	65' U/S from the previous Foot Bridge
AC	217350	100' U/S from AB manufactured
AD	217600	50' D/S from Second Dam
AE	217650 217651 217652 217653	Dam under a Foot Bridge The Dam and Foot Bridge forms a side weir to the main flow
AF	217850	150' U/S from the previous Foot Bridge manufactured
AG	218400	550' U/S from AF
AH	219350	200' D/S from D/S face of M-20 Bridge manufactured

SECTION	SECNO	LOCATION AND DESCRIPTIONS
AI	219600 219601 219602 219603	M-20 Bridge, same as High Street Bridge width = 55', length = 130; Normal Bridge Routine
AJ	219700	110' U/S from U/S face of M-20 Bridge
AK	220400	790' U/S from U/S face of M-20 Bridge
AL	221650	1990' U/S from U/S face of M-20 Bridge
AM	222720	2990' U/S from U/S face of M-20 Bridge
AN	223990	4170' U/S from U/S face of M-20 Bridge

TABLE 2

HIGH WATER CALIBRATION

		Our Results			
SECNO	H.W.M.	nx 1	nx 1.2	nx 1.4	nx 1.6
215601 Broadway Street Bridge	751.1	752.65	753.13	753.67	754.23
219601 M-20 Bridge	758	756.61	757.31	757.90	758.40

n: n factors used in the model

Chippewa River
Mt. pleasant

052980

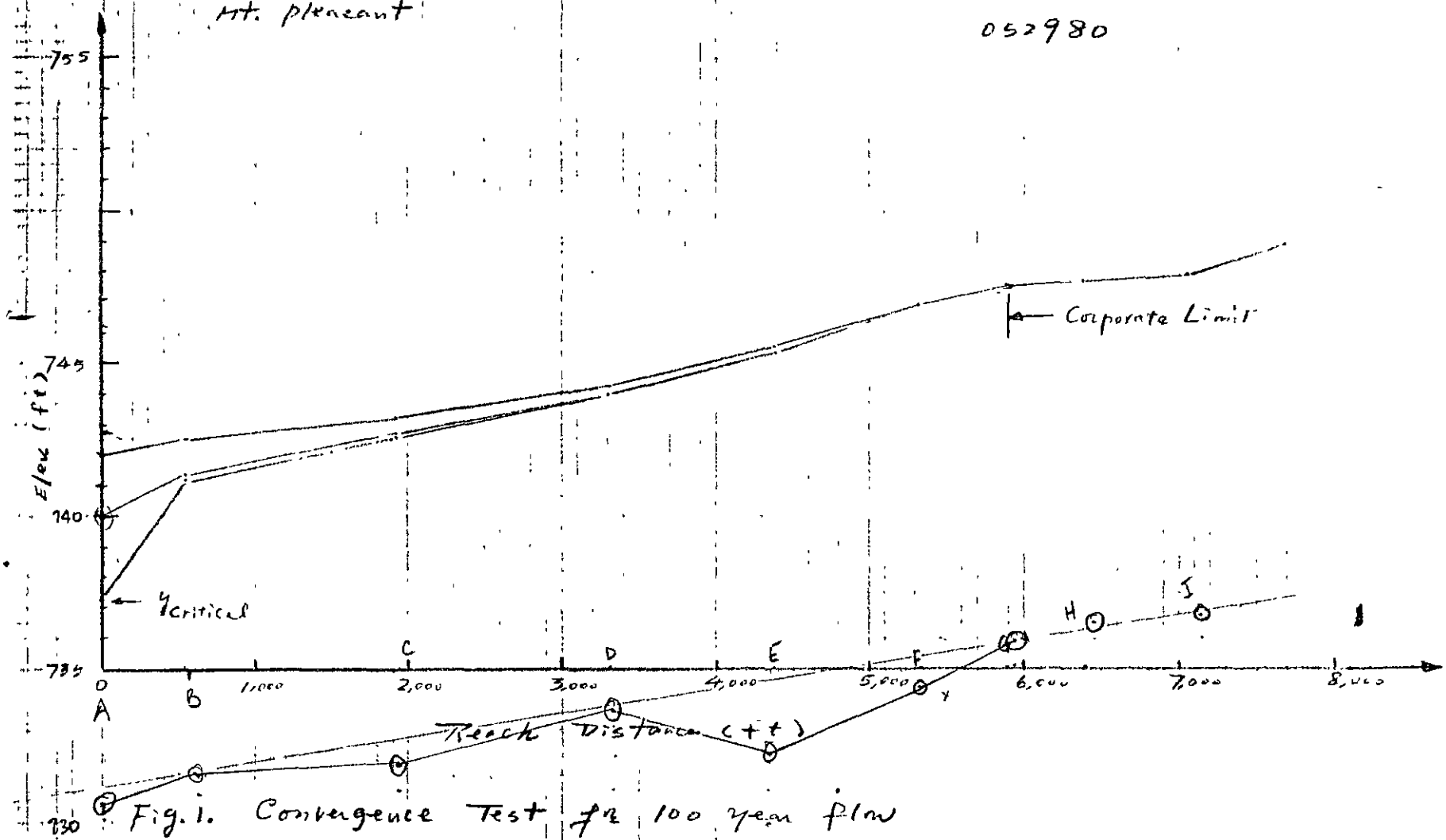
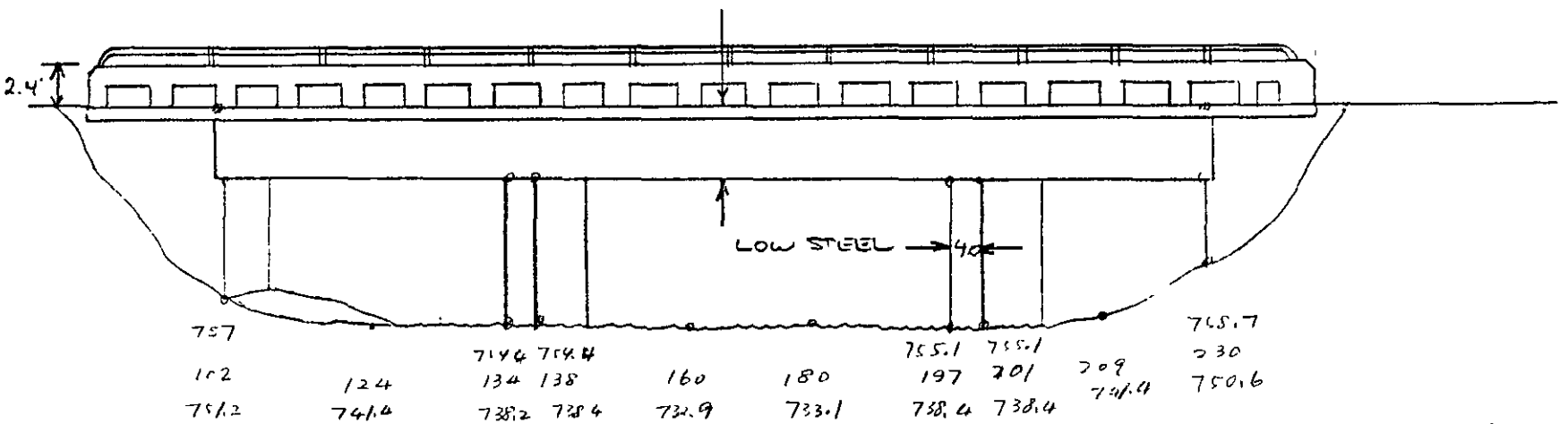


Fig. 1. Convergence Test for 100 year flow

$$\frac{736.7 - 731.7}{6600} = \text{slope} \quad 0.00076$$

BRIDGE DATA

Community: MT. PLEASANT	Structure: PICKARD AVE.	Type: CONC. w/ STEEL I-BEAM	Station: 2/20+00



PROFILE SKETCH
(Looking Downstream)

Length: 133.0 FEET	Width: 58.0 FEET	Skew: 65°	Water Elevation:
No. of Piers: 2	Width of Piers: 4.0 FEET	Shape of Piers: SQUARE	

Notes:

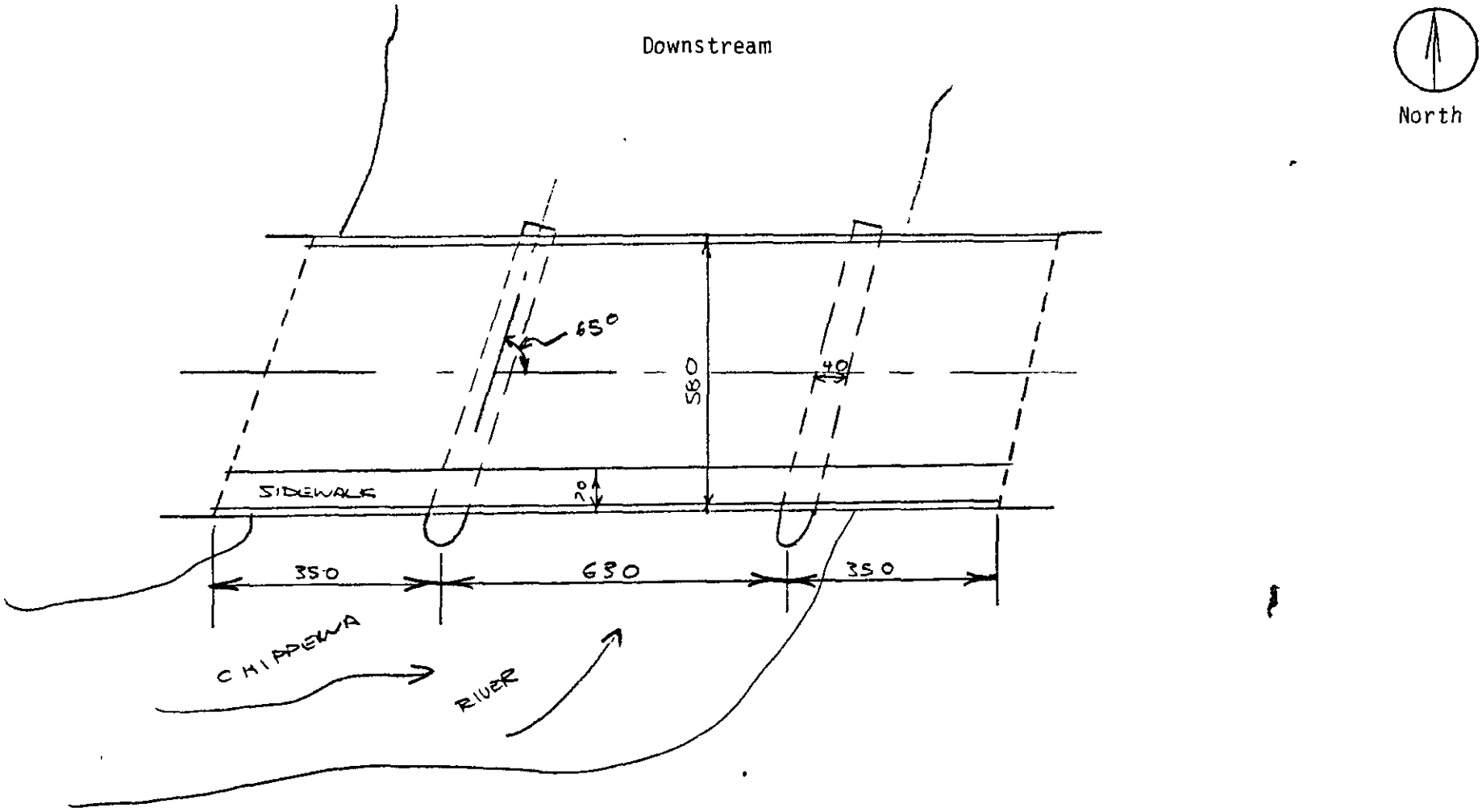
Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

By: J.S.C.

Date: 5/18/80

Community: MT PLEASANT	Structure: PICKARD ST BRIDGE	Type: CONC W/STEEL I-BEAM	Station: 2/20+00



Upstream

PLAN VIEW SKETCH

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

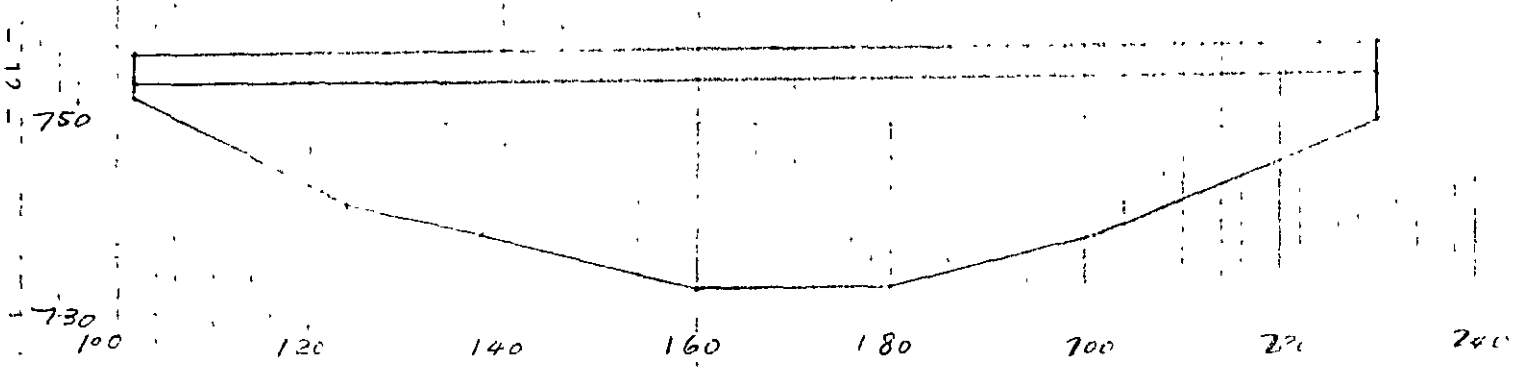
By: J.S.C.

Date: 5/18/80

Sheet 2 of 2

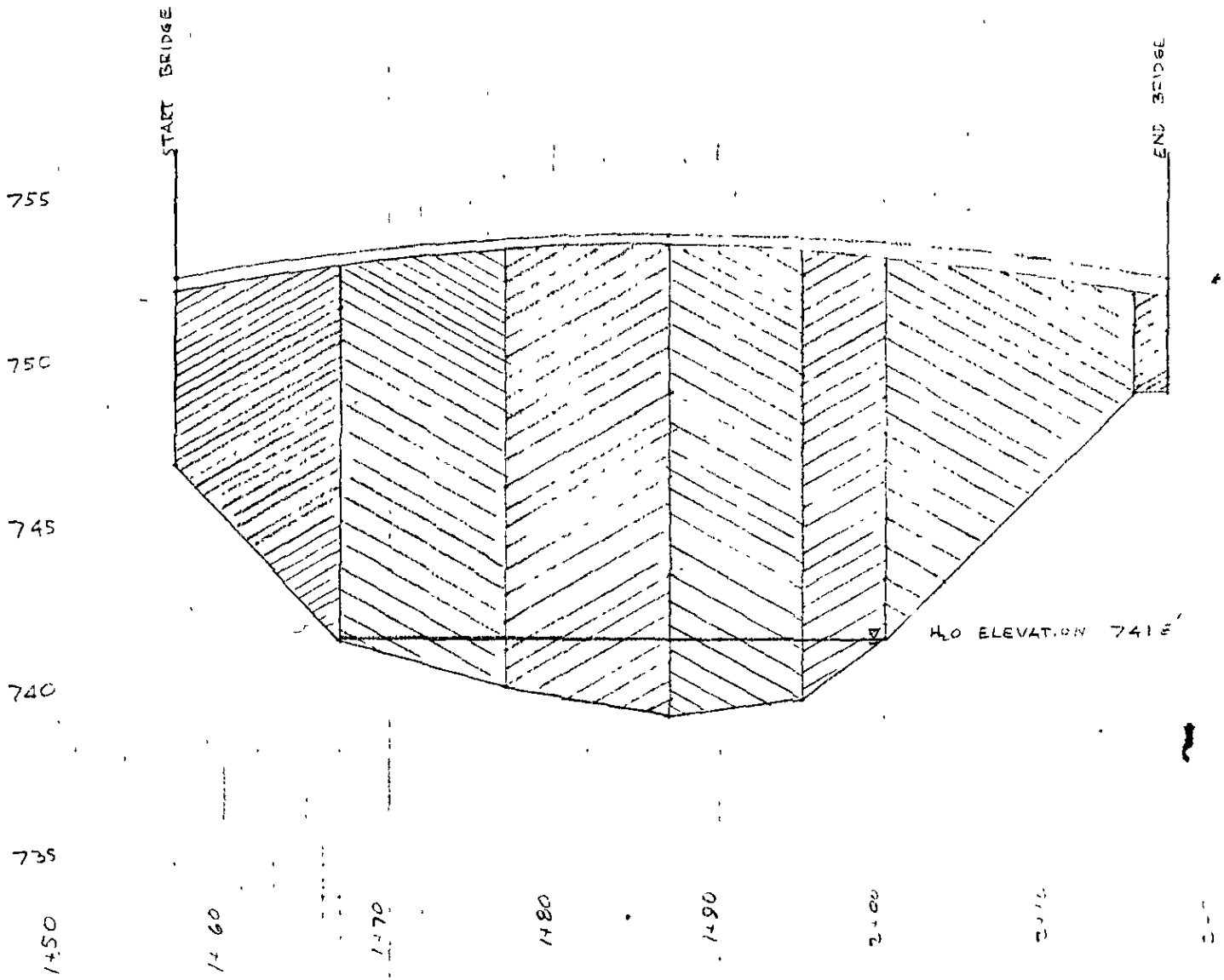
Mount pleasant.

pickard Ave Bridge 2/20+00



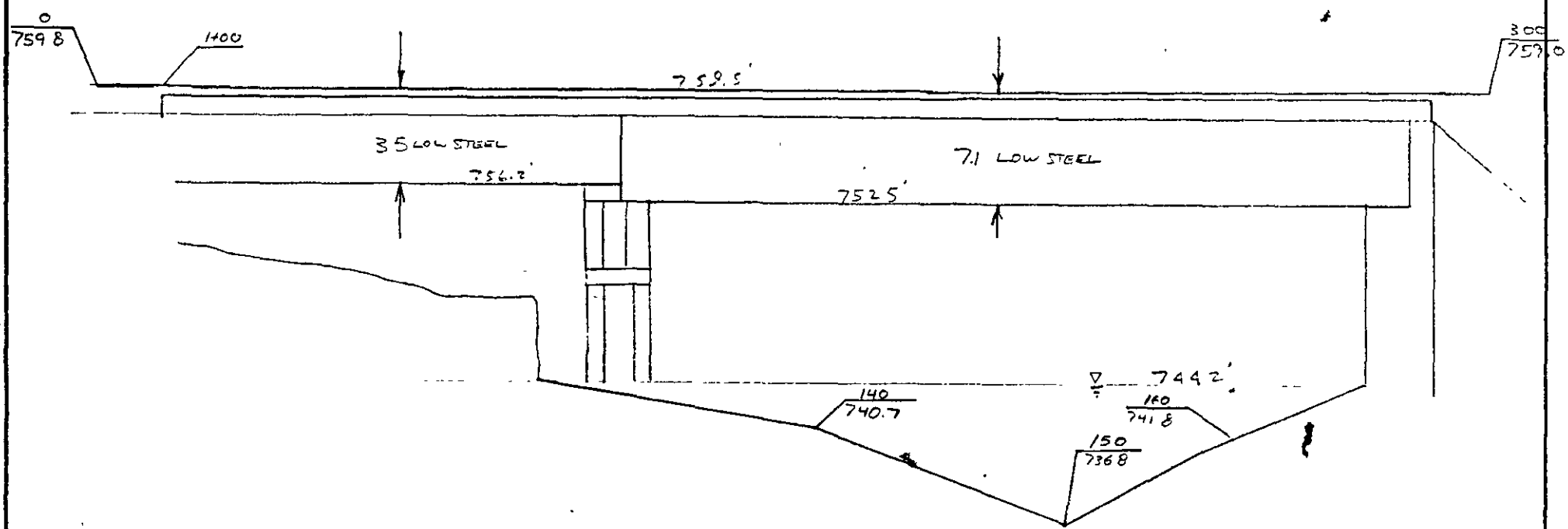
MT. PLEASANT

STA 2142+00 · FOOT BRIDGE ON WEST SIDE ISLAND PARK



$$A = \frac{1}{2}(5.3 + 11.3)\,10 + \frac{1}{2}(11.3 + 13.3)\,10 + \frac{1}{2}(13.3 + 14.5)\,10 + \frac{1}{2}(14.5 + 13.7)\,8 + \frac{1}{2}(13.7 + 11.0)\,7.5 + \frac{1}{2}(11.0 + 3.0)\,7.5$$
$$+ 3(2) = \underline{550.18}\ FT^2$$

Community: MT PLEASANT	Structure: [illegible]	Type: STEEL [illegible]	Station: [illegible]



PROFILE SKETCH
(Looking Downstream)

Length: 82.0	Width: 18.0	Skew: —	Water Elevation: 744.2
No. of Piers: 1	Width of Piers: 4.0	Shape of Piers:	

Notes:

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

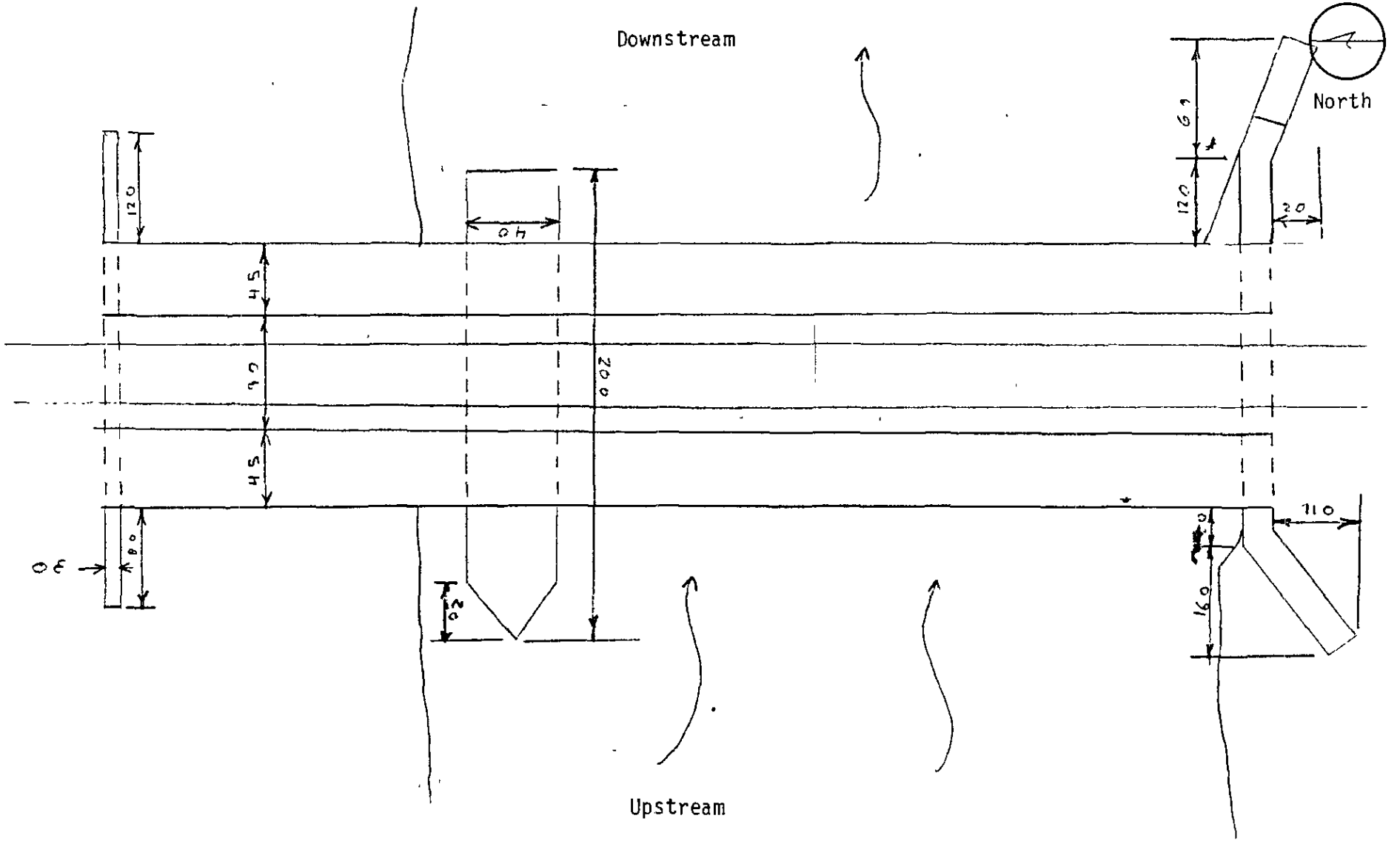
210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

By: [illegible]

Date: 5/31/79

Sheet 1 of 2

Community: MT PLEASANT	Structure: [illegible]	Type: STEEL I BEAM	Station: [illegible]



PLAN VIEW SKETCH

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS
210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

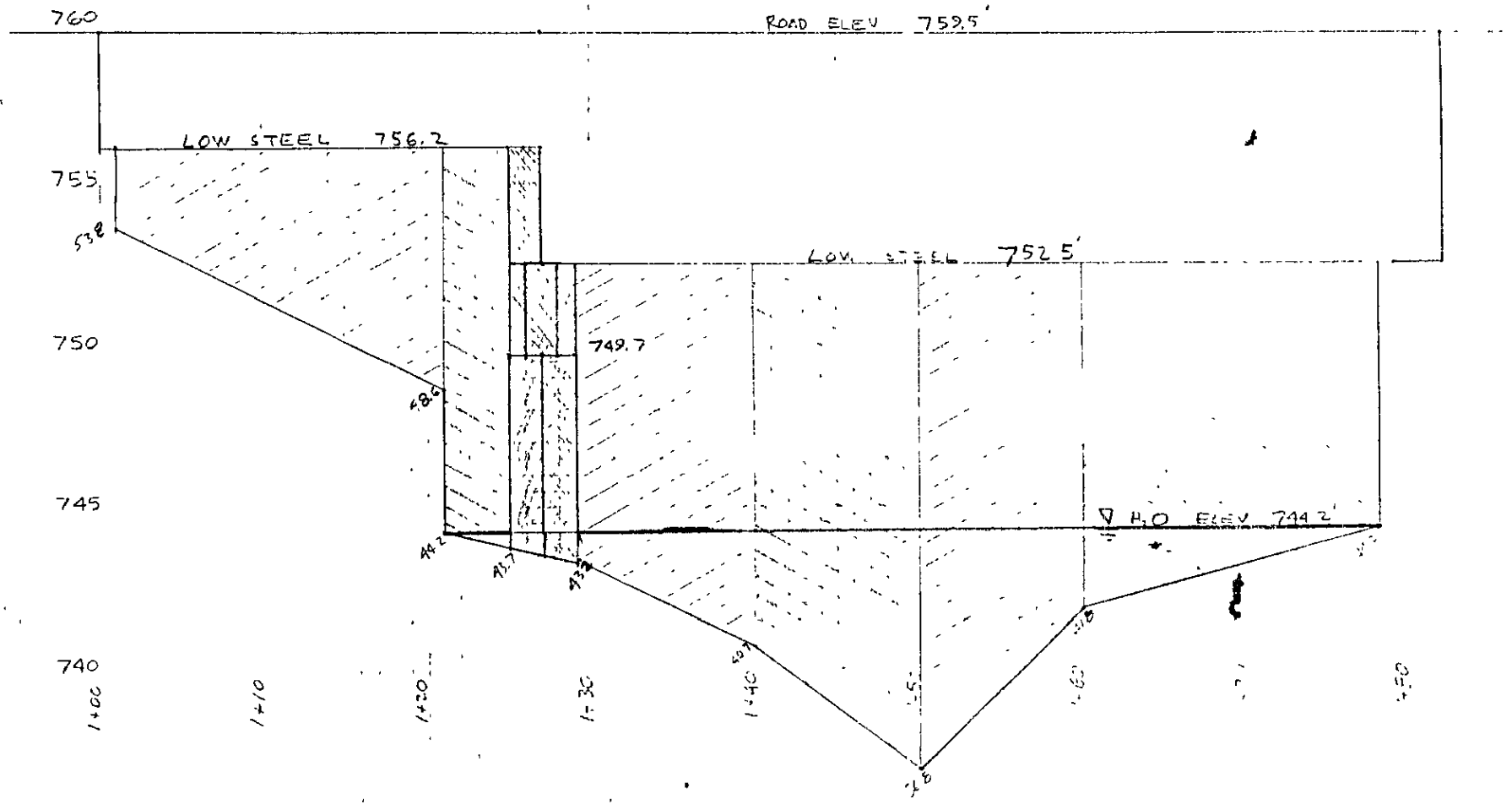
By: [illegible]

Date: [illegible]

Sheet 2 of 2

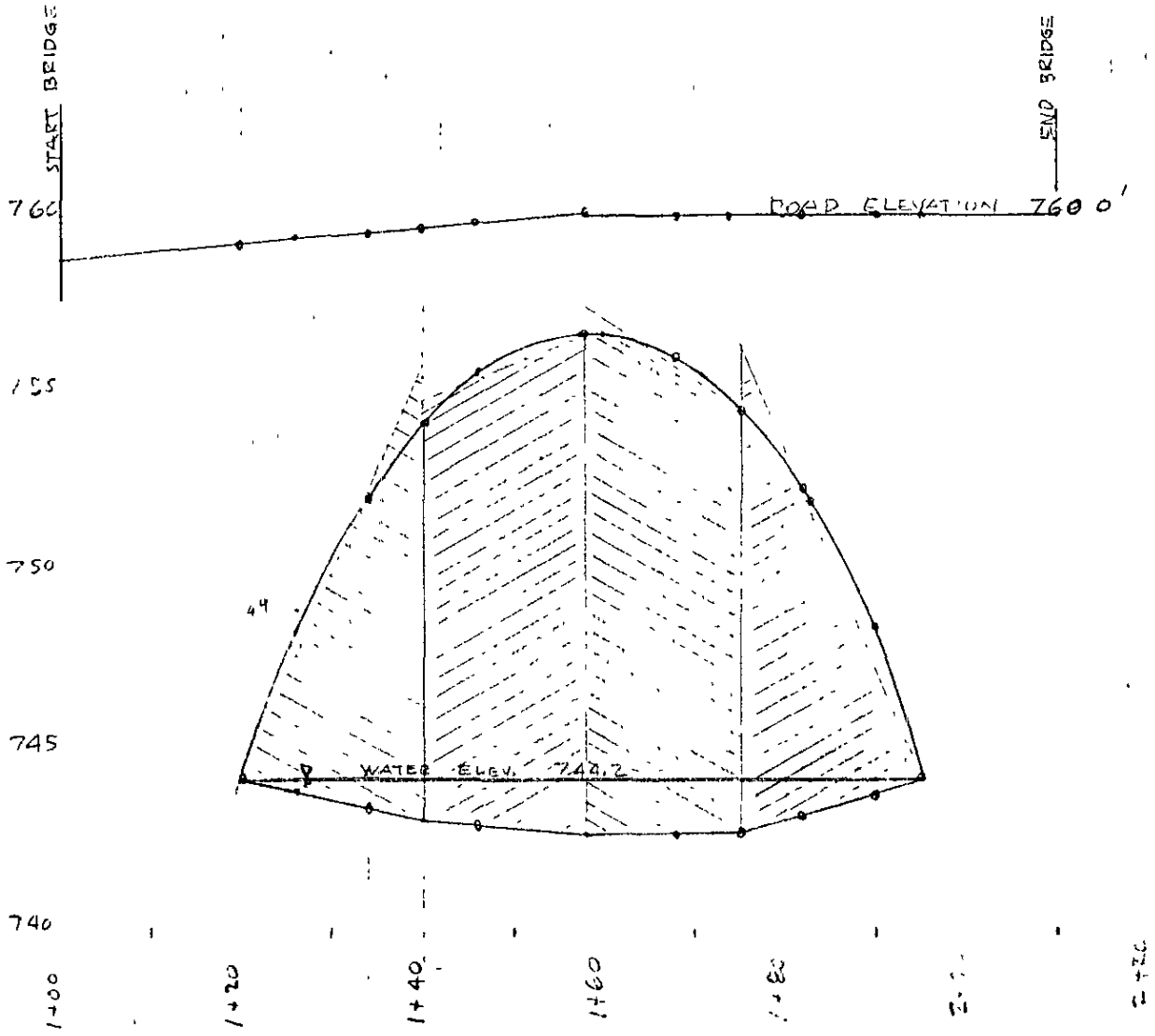
PL[redacted]AN[redacted]

2144 +50 ANN ARBOR RR BRIDGE WEST OF ISLAND PARK



$$\text{AREA} = \tfrac{1}{2}(2.4 + 7.6)20 + \tfrac{1}{2}(12 + 12.5)4 + \tfrac{1}{2}(9.3 + 11.8)11 + \tfrac{1}{2}(11.8 + 15.7)10 + \tfrac{1}{2}(15.7 + 10.7)10 + \tfrac{1}{2}(10.7 + 8.3)18$$

$$= 705.55 \ FT^2$$



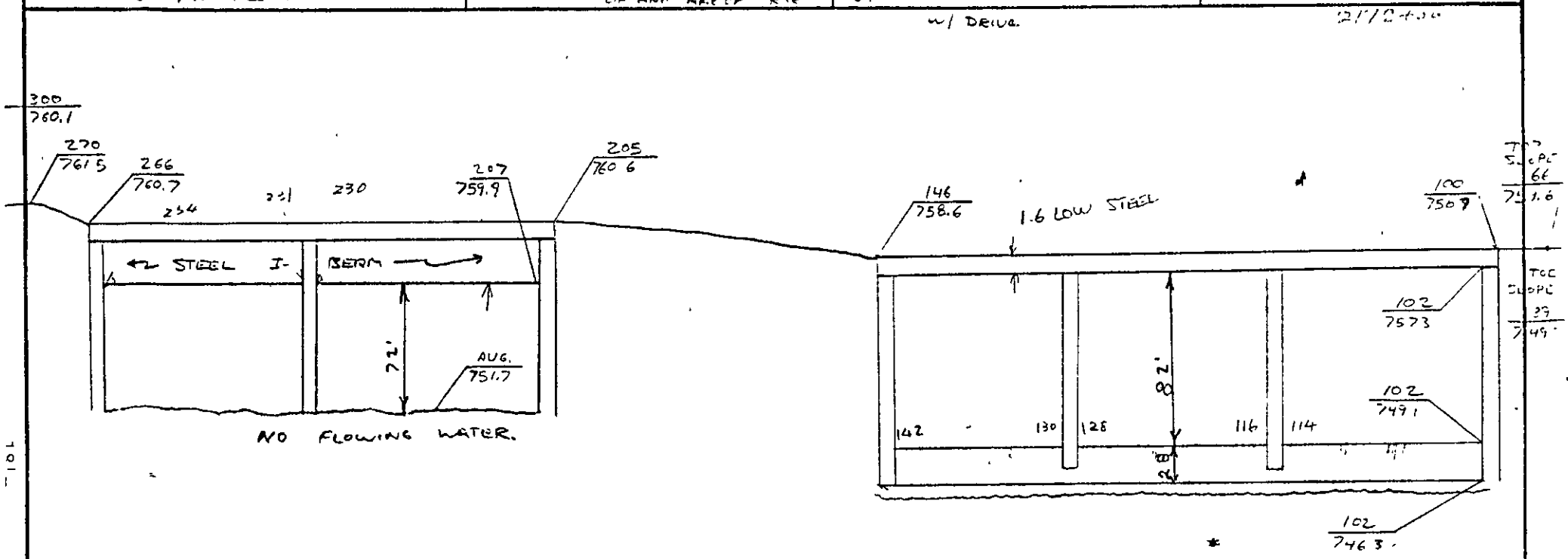
$$A = \tfrac{1}{2}(20)\,12.6 + \tfrac{1}{2}(11.7 + 14)\,20 + \tfrac{1}{2}(14 + 11.7)\,17 + \tfrac{1}{2}(5)\,13.7 = 2016.7 \text{ FT}^2$$

23.6   17.15   14.5   635.7

W.R. 137.43

R = ~~14.67~~ 4.63

Community: MT PLEASANT	Structure: LASTMOST DAM WEST OF ANN ARBOR R.R	Type: ~~STEEL~~ CONCRETE DAM w/ DRIVE	Station: ~~25+00~~ 217+00



PROFILE SKETCH
(Looking ~~Downs~~UP stream)

Length: 46 FT 61 FT	Width:	Skew:	Water Elevation: U/S 750.0
No. of Piers: 2 + 1	Width of Piers:	Shape of Piers:	D/S 749.1

Notes:

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

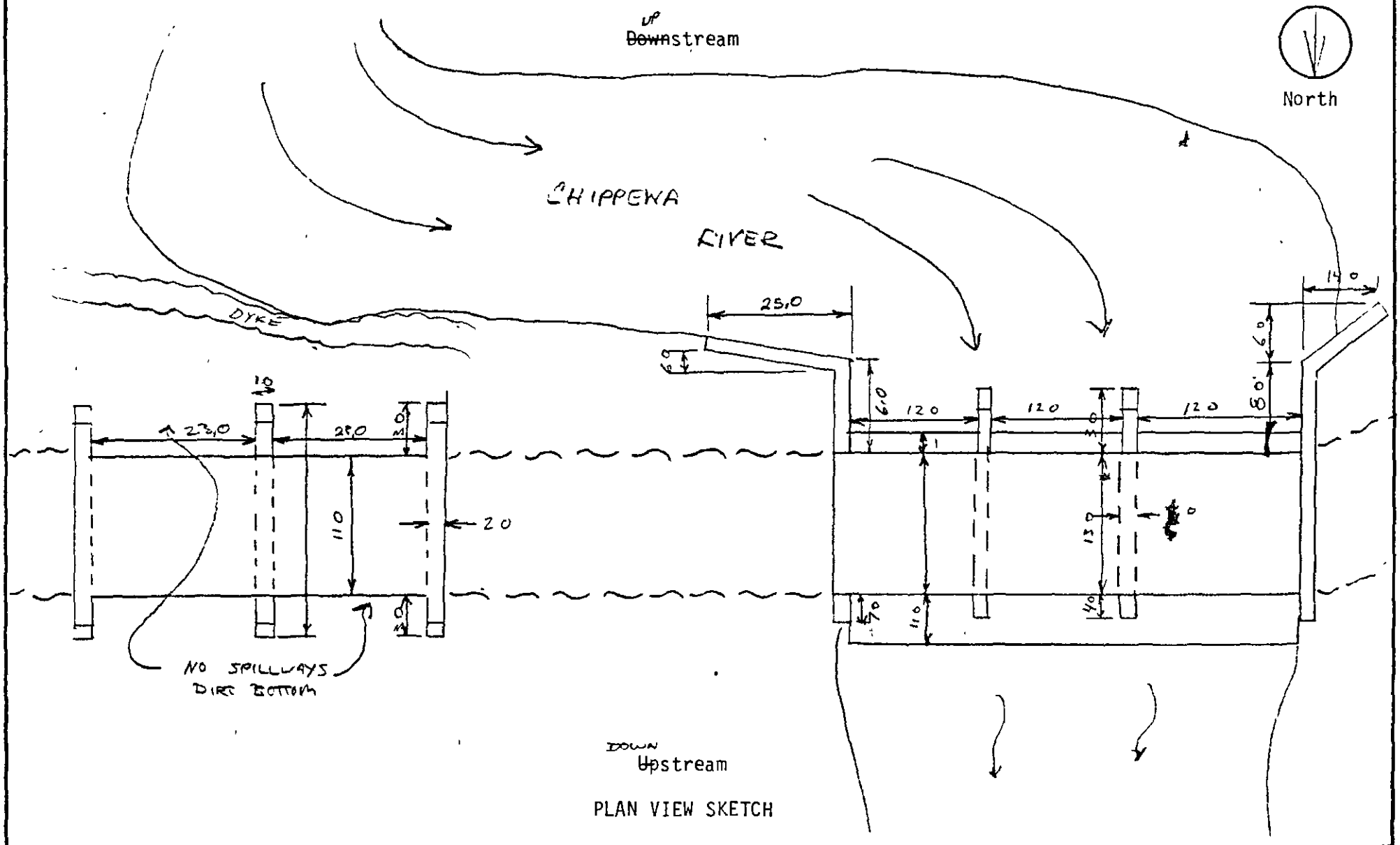
210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

By: J.S.C.

Date: 9/12/78

Sheet 1 of 2

Community: MT PLEASANT	Structure: EASTMOST DAM WEST OF ANN ARBOR RR	Type: CONCRETE DAMS 4 /DRIVE	Station: ~~25+00~~ 2172+00



PLAN VIEW SKETCH

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

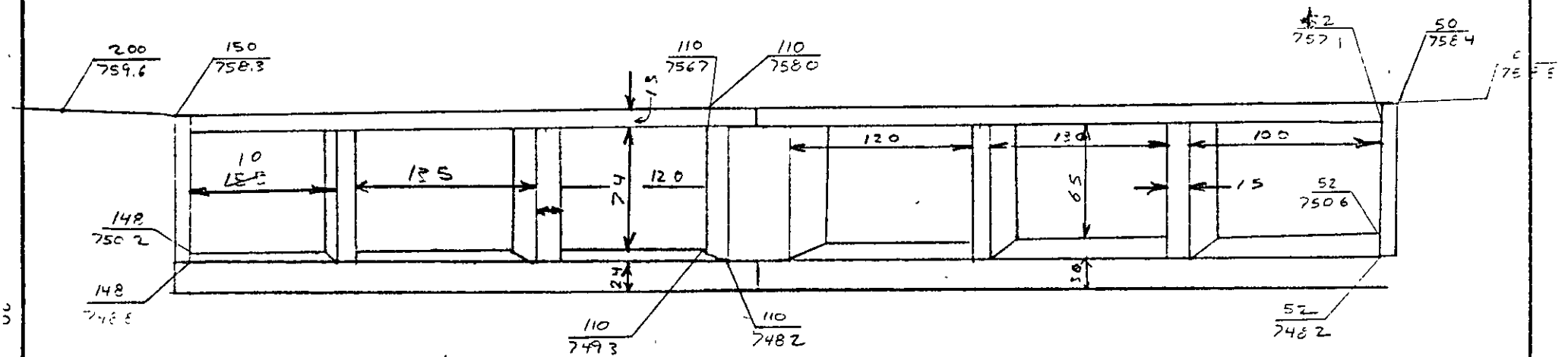
210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

By: J.S.C.

Date: 9/12/79

Sheet 2 of 2

Community: MT PLEASANT	Structure: [illegible]	Type: [illegible]	Station: 2174+50



PROFILE SKETCH
(Looking ~~Downstream~~ UPSTREAM)

Length: 220	Width: 19.5	Skew:	Water Elevation: 1/5 750.4
No. of Piers: 5	Width of Piers: VARY	Shape of Piers: VARY	

Notes:

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

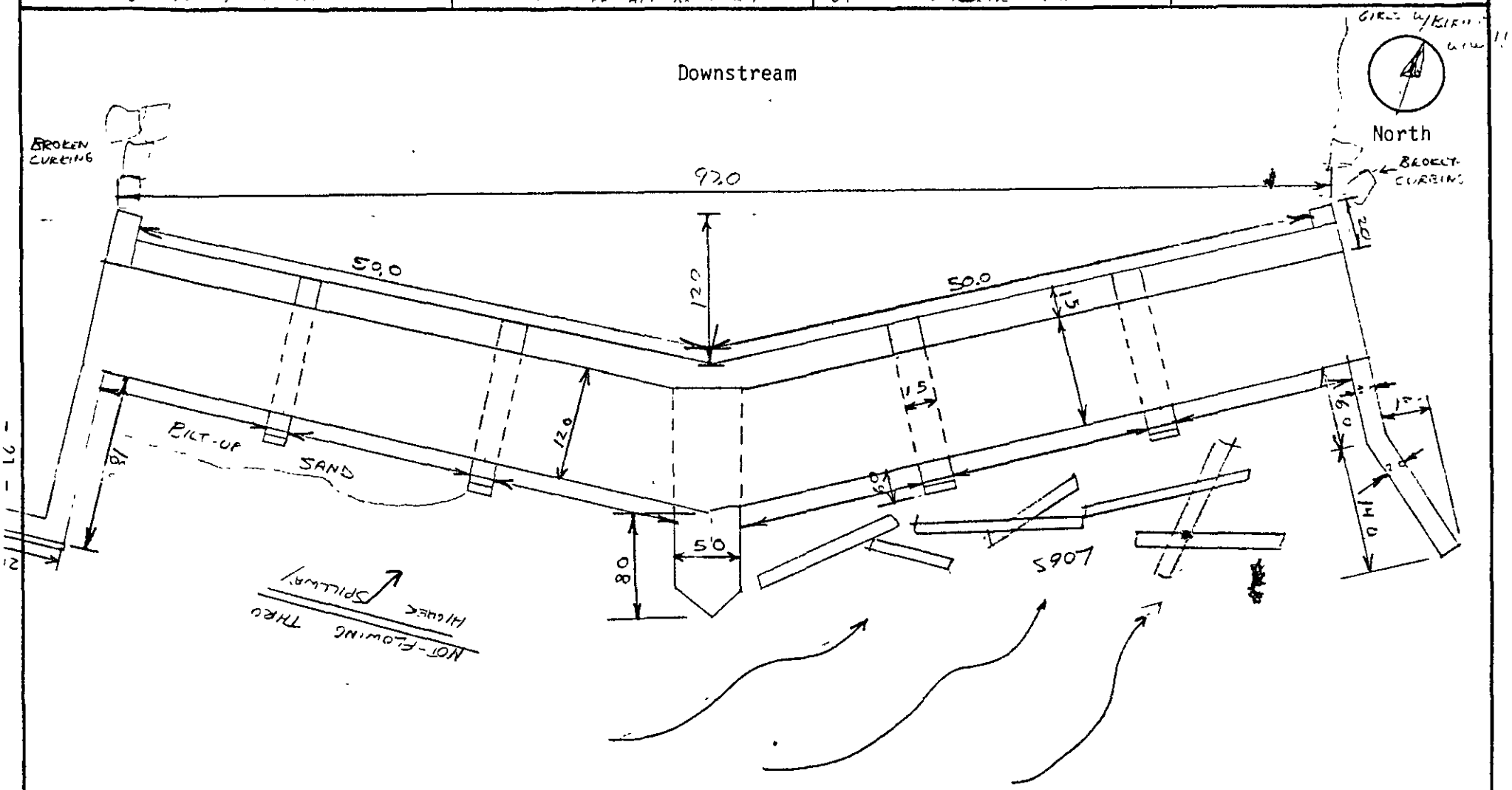
210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

By: JSC

Date: 8/30/79

Sheet 1 of 2

Community: MT PLEASANT	Structure: WESTMOST DAM, [illegible]	Type: [illegible]	Station: 2176+50



PLAN VIEW SKETCH

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

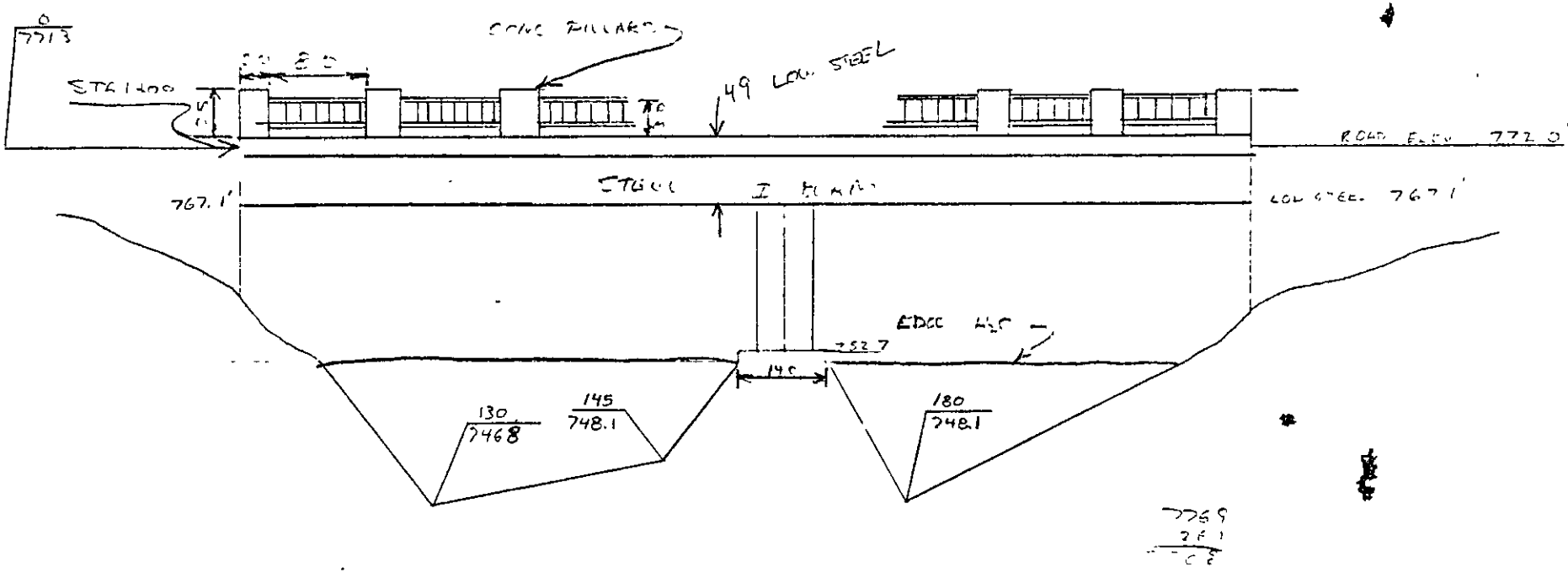
By: [signature]

Date: 8/30/79

Sheet 2 of 2

M-20

Community: AT PLATT	Structure: HIGH ST BRIDGE	Type: STEEL I BEAM SPAN	Station: 2176+00



PROFILE SKETCH
(Looking Downstream)

Length: 150	Width: 55.0	Skew: —	Water Elevation: 750.8
No. of Piers: 1	Width of Piers: 5.0	Shape of Piers:	

Notes:

Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

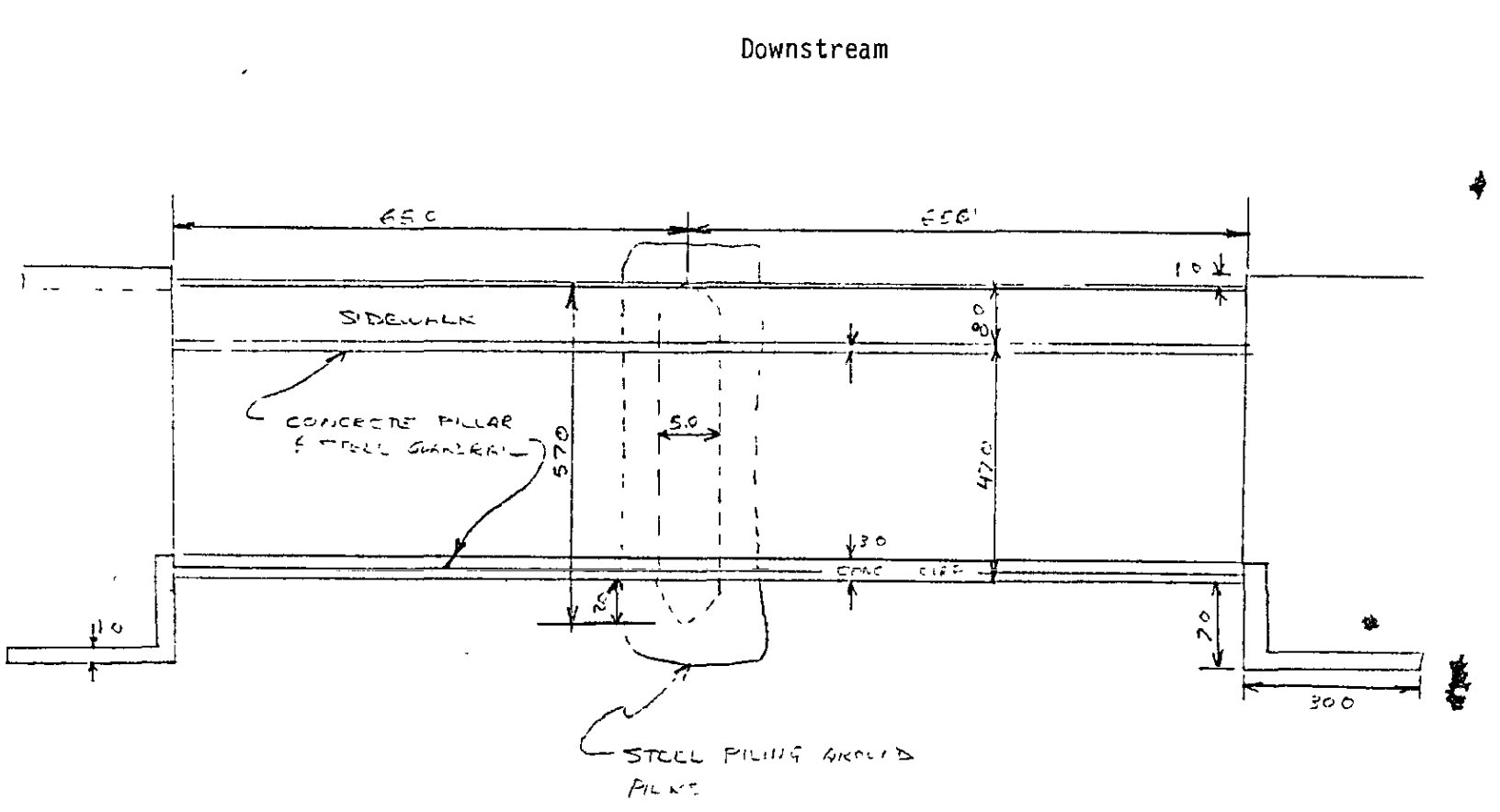
By: JSC

Date: 8/28/79

Sheet 1 of 2

Community: [illegible]	Structure: [illegible]	Type: [illegible]	Station: [illegible]

Downstream



Upstream

PLAN VIEW SKETCH

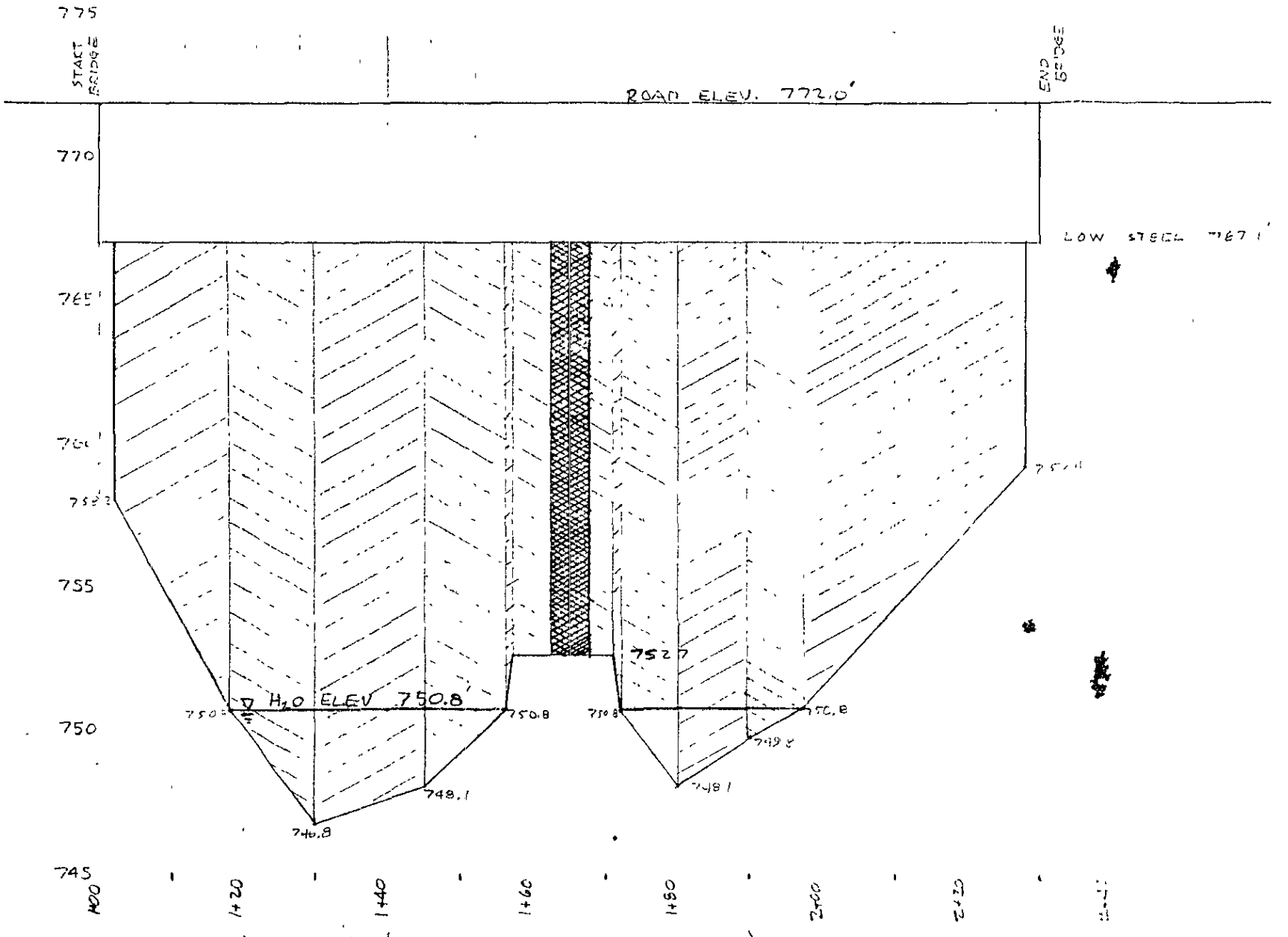
Gove Associates Inc.
ARCHITECTS/ENGINEERS/PLANNERS/SURVEYORS

210 MILL STREET
LANSING, MICHIGAN 48933
(517) 485-0555

By: [illegible]

Date: 8/28/79

Sheet 2 of 2



AREA = $\frac{1}{2}(9 + 16.3)\,16 + \frac{1}{2}(16.3 + 22.2)\,12 + \frac{1}{2}(22.2 + 19)\,15 + \frac{1}{2}(19 + 14.4)\,1 + \ldots$

$+ \frac{1}{2}(14.4 + 16.5)\,1 + \frac{1}{2}(16.5 + 19)\,8 + \frac{1}{2}(19 + 17.3)\,6 + \frac{1}{2}(17.3 + 7.7)\,31 = 1615$ [illegible]

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100-yr run

00BREAK00

THIS RUN EXECUTED 08/24/89 13:57:49

```
*****************************************
 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
*****************************************
```

```
C
T1      DEERFIELD TWP FLOODPLAIN INFORMATION
T2      INFO FROM FILE NO. 89-8-46    STARTING WSEL FROM UNION FPI
T3      CHIPPEWA RIVER          NATURAL PROFILE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0.       2.       0.       0.  .000000      .00       .0    5020.  777.590     .000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN      ALLDC    IBW      CHNIM    ITRACE

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


NC      .040     .060     .045     .300     .500     .000     .000     .000     .000     .000
ET      .000    5.100     .000     .000     .000   260.000    .000     .000     .000     .000
X1  22880.000   10.000   90.000  170.000     .000     .000     .000     .000     .000     .000
GR   786.500     .000  773.800   60.000  773.000   90.000  769.000   92.000  768.200  130.000
GR   769.000  168.000  773.800  170.000  778.300  260.000  777.200  310.000  779.800  390.000

NC      .040     .060     .040     .300     .500     .000     .000     .000     .000     .000
                DS FACE OF MERIDIAN ROAD
X1      .000   13.000  222.000  295.000  100.000  100.000  100.000     .000     .000     .000
X3    10.000     .000     .000     .000     .000     .000     .000  780.700  780.700     .000
GR   786.100     .000  782.900  100.000  781.000  200.000  773.000  213.000  769.200  222.000
GR   769.300  247.000  770.000  270.000  771.000  295.000  774.000  304.000  780.400  325.000
GR   780.700  425.000  780.900  525.000  781.200  625.000     .000     .000     .000     .000

SB     1.250    1.560    2.500     .000   73.000    4.000  730.000     .000  769.300  769.300
                US FACE OF MERIDIAN ROAD
X1      .250     .000     .000     .000   25.000   25.000   25.000     .000     .000     .000
X2      .000     .000    1.000  778.900  780.700     .000     .000     .000     .000     .000
X3    10.000     .000     .000     .000     .000     .000     .000  780.700  780.700     .000
BT    -6.000  200.000  781.000     .000  222.000  780.700     .000  395.000  780.700     .000
BT      .000  425.000  780.700     .000  525.000  780.900     .000  625.000  781.200     .000

NC      .070     .070     .035     .000     .000     .000     .000     .000     .000     .000
ET      .000     .000     .000    1.400     .000     .000     .000     .000     .000     .000
                XSEC CC    50 FT US OF MERIDIAN RD
X1      .750   10.000  220.000  300.000   50.000   50.000   50.000     .000     .000     .000
X3      .000     .000     .000  170.000     .000  340.000     .000     .000     .000     .000
GR   779.800     .000  779.000  175.000  774.600  205.000  773.800  220.000  769.300  222.000
GR   769.200  260.000  769.300  298.000  773.000  300.000  773.800  330.000  786.500  390.000
```


NC .070 .070 .035 .100 [illegible] [illegible] .030 .060 [illegible] [illegible]

XSEC 6

X1	5.750	13.000	462.000	549.000	500.000	500.000	500.000	.000	.000	.000
GR	780.200	.000	780.000	380.000	774.900	390.000	774.100	462.000	773.600	488.000
GR	773.400	498.000	770.800	500.000	769.600	512.000	769.400	535.000	771.600	548.000
GR	774.000	549.000	774.500	554.000	791.100	570.000	.000	.000	.000	.000
NC	.070	.090	.035	.000	.000	.000	.000	.000	.000	.000

MANUFACTURED XSEC

X1	10.250	19.000	280.000	367.000	300.000	450.000	450.000	.000	.000	.000
GR	781.200	.000	780.000	110.000	775.900	208.000	775.100	280.000	774.600	306.000
GR	774.400	316.000	771.800	318.000	770.600	330.000	770.400	353.000	772.600	366.000
GR	775.000	367.000	775.500	372.000	775.900	393.000	776.000	500.000	778.000	530.000
GR	779.000	550.000	780.000	600.000	781.500	650.000	783.000	700.000	.000	.000
NC	.080	.100	.035	.000	.000	.000	.000	.000	.000	.000

XSEC DD

X1	14.750	19.000	147.000	257.000	600.000	300.000	450.000	.000	.000	.000
GR	793.120	.000	793.000	57.000	779.490	65.000	776.490	110.000	774.790	147.000
GR	772.900	152.000	771.700	177.000	772.800	224.000	774.900	257.000	777.930	297.000
GR	778.430	374.000	777.530	447.000	776.430	493.000	778.730	518.000	779.000	700.000
GR	780.000	765.000	780.500	865.000	782.000	915.000	784.000	940.000	.000	.000
NC	.080	.110	.035	.000	.000	.000	.000	.000	.000	.000
X1	18.750	14.000	247.000	357.000	500.000	250.000	400.000	.000	.000	.000
GR	793.000	.000	780.100	57.000	778.000	65.000	775.000	247.000	773.000	252.000
GR	771.900	277.000	773.000	324.000	775.100	357.000	778.100	397.000	778.600	474.000
GR	779.100	547.000	780.100	593.000	780.600	618.000	782.000	700.000	.000	.000
NC	.050	.050	.035	.000	.000	.000	.000	.000	.000	.000

XSEC 5

X1	22.750	21.000	130.000	205.000	200.000	500.000	400.000	.000	.000	.000
GR	790.900	.000	780.700	17.000	777.900	31.000	777.800	49.000	778.100	67.000
GR	777.700	130.000	774.600	150.000	774.100	157.000	773.000	169.000	772.000	201.000
GR	774.500	205.000	776.500	205.000	777.000	212.000	777.400	259.000	777.400	289.000
GR	777.400	312.000	780.900	324.000	780.900	449.000	781.300	459.000	781.800	619.000
GR	782.900	649.000	.000	.000	.000	.000	.000	.000	.000	.000

XSEC 3 FROM FILE NO. 160 32D.1

X1	30.950	16.000	104.000	184.100	800.000	750.000	820.000	.000	.000	.000
X3	.000	.000	.000	.000	.000	197.000	782.700	.000	.000	.000
GR	790.400	.000	789.400	14.000	780.000	30.000	777.400	58.000	778.400	104.000
GR	777.300	107.000	775.100	110.000	774.000	133.000	774.300	146.000	775.400	159.000
GR	776.500	184.000	777.900	184.100	782.700	197.000	781.900	280.000	781.600	362.000
GR	794.000	380.000	.000	.000	.000	.000	.000	.000	.000	.000

XSEC 1 FROM FILE NO. 160 32D.1

X1	41.150	20.000	282.000	389.000	1100.000	1000.000	1020.000	.000	.000	.000
X3	.000	.000	.000	225.000	785.600	.000	.000	.000	.000	.000
GR	784.700	.000	784.300	26.000	783.700	76.000	782.900	127.000	783.900	177.000
GR	785.600	225.000	786.400	246.000	783.100	275.000	781.800	282.000	779.300	286.000
GR	776.200	292.000	775.000	297.000	776.200	337.000	778.100	361.000	779.400	383.000
GR	782.000	389.000	783.400	409.000	783.400	449.000	784.800	496.000	788.600	551.000

1

XSEC 41.15 REPEATED INVERT ADJ

X1	47.150	.000	.000	.000	600.000	600.000	600.000	.000	.600	.000
X3	.000	.000	.000	225.000	786.000	.000	.000	.000	.000	.000
NC	.080	.080	.040	.000	.000	.000	.000	.000	.000	.000

CHANNEL XSEC FROM 41.15 W INVERT ADJ OB FROM QUAD

X1	61.150	8.000	100.000	197.000	1100.000	1300.000	1400.000	.000	.000	.000
GR	790.000	.000	781.300	100.000	778.200	106.000	777.000	111.000	778.200	151.000
GR	780.100	175.000	781.600	197.000	780.000	552.000	.000	.000	.000	.000

```
X1     71.150      8.000    100.000    197.000   1000.000    900.000   1000.000       .000       .000       .000
GR    790.000       .000    782.300    100.000    779.200    106.000    779.000    111.000    779.200    151.000
GR    781.100    175.000    782.400    197.000    790.000    557.000       .000       .000       .000       .000

X1     91.150      8.000    100.000    197.000   1850.000   1600.000   2000.000       .000       .000       .000
GR    790.000     50.000    784.900    100.000    781.900    106.000    780.600    111.000    781.800    151.000
GR    783.700    175.000    785.000    197.000    790.000    497.000       .000       .000       .000       .000

X1    107.150      9.000    420.000    517.000   1200.000   1500.000   1600.000       .000       .000       .000
GR    800.000       .000    790.000    280.000    786.900    420.000    783.800    426.000    782.600    431.000
GR    783.800    471.000    785.700    495.000    787.000    517.000    790.000    600.000    800.000   1090.000

X1    119.150     10.000    395.000    494.000    980.000   1200.000   1200.000       .000       .000       .000
GR    800.000       .000    790.000    200.000    787.100    395.000    785.300    401.000    784.100    406.000
GR    785.300    446.000    787.200    472.000    788.500    494.000    790.000    590.000    800.000   1390.000

X1    136.150      9.000    400.000    520.000   1600.000   1100.000   1700.000       .000       .000       .000
GR    800.000       .000    790.000    350.000    790.000    400.000    787.500    406.000    786.300    411.000
GR    787.500    451.000    789.400    477.000    790.000    520.000    800.000    600.000       .000       .000

X1    154.150      9.000    370.000    447.000   1600.000   1700.000   1800.000       .000       .000       .000
GR    800.000       .000    790.000    350.000    790.000    370.000    788.100    376.000    786.900    381.000
GR    788.100    421.000    790.000    447.000    790.000    490.000    800.000    600.000       .000       .000
EJ       .000       .000       .000       .000       .000       .000       .000       .000       .000       .000
1
 08/24/89    13:57:49                                                                                    PAGE    4


   SECNO    DEPTH    CWSEL    CRIWS    WSELA    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .300 CEHV=    .500
#SECNO 22880.000
 22880.00     9.39   777.59      .00      .00   778.14      .55      .00      .00   773.00
    5020.     642.    4378.       0.     160.     709.       0.       0.       0.   773.80
      .00     4.02     6.18     2.94     .040     .045     .060     .000   768.20    42.09
  .002091       0.       0.       0.        0        0        0      .00   127.91   170.00
0
CCHV=    .300 CEHV=    .500
#SECNO  .000

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=     780.70 ELREA=     780.70

                DS FACE OF MERIDIAN ROAD
      .00     8.32   777.52      .00      .00   778.76     1.23      .27      .34   769.20
    5020.       0.    5020.       0.       0.     564.       0.       2.       0.   771.00
      .00      .00     8.91      .00     .040     .040     .060     .000   769.20   222.00
  .002770     100.     100.     100.        2        0        0      .00    73.00   295.00
0

SPECIAL BRIDGE

SB  XK       XKOR     COFQ     RDLEN    BWC      BWP      BAREA    SS       ELCHU    ELCHD
     1.25     1.56     2.50       .00    73.00     4.00   730.00      .00   769.30   769.30

#SECNO  .250
```

3420 BRIDGE W.S.= 777.33 BRIDGE VELOCITY=, 9.06 CALCULATED CHANNEL AREA=, 554.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD
778.67	779.01	.36	0.	5020.	730.	662.	778.90	780.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 780.70 ELREA= 780.70

US FACE OF MERIDIAN ROAD

1

08/24/89 13:57:49 PAGE 5

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
.25	8.69	777.89	.00	.00	779.01	1.12	.26	.00	769.20
5020.	0.	5020.	0.	0.	590.	0.	2.	0.	771.00
.00	.00	8.51	.00	.000	.040	.000	.000	769.20	222.00
.003235	25.	25.	25.	0	0	0	.00	73.00	295.00

0

*SECNO .750

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 170.0 340.0 TYPE= 1 TARGET= 170.000

XSEC CC 50 FT US OF MERIDIAN RD

.75	9.62	778.82	.00	.00	779.29	.47	.08	.20	773.80
5020.	198.	4425.	397.	130.	757.	202.	3.	0.	773.00
.01	1.52	5.85	1.97	.070	.035	.070	.000	769.20	176.26
.001029	50.	50.	50.	3	0	0	.00	163.74	340.00

0

CCHV= .100 CEHV= .300

*SECNO 5.750

XSEC 6

5.75	10.00	779.40	.00	.00	779.89	.48	.59	.00	774.10
5020.	829.	4117.	74.	373.	679.	37.	15.	2.	774.00
.03	2.22	6.07	1.97	.070	.035	.070	.000	769.40	381.17
.001384	500.	500.	500.	2	0	0	.00	177.55	558.73

0

*SECNO 10.250

MANUFACTURED XSEC

10.25	9.74	780.14	.00	.00	780.40	.26	.49	.02	775.10
5020.	855.	3260.	905.	549.	655.	725.	29.	5.	775.00
.06	1.56	4.97	1.25	.070	.035	.090	.000	770.40	97.37
.000974	300.	450.	450.	2	0	0	.00	507.22	604.59

0

*SECNO 14.750

XSEC DD

14.75	8.83	780.53	.00	.00	780.77	.24	.37	.00	774.79
5020.	369.	3795.	856.	296.	849.	1169.	50.	11.	774.90
.10	1.25	4.47	.73	.080	.035	.100	.000	771.70	64.38
.000730	600.	450.	300.	2	0	0	.00	801.72	866.10

0

1

08/24/89 13:57:49 PAGE 6

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV

```
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 18.750
    18.75     8.94   780.84      .00      .00   781.04      .21      .27      .00   775.00
    5020.     998.    3647.     375.     805.     862.     577.      69.      16.   775.10
      .13     1.24     4.23      .65     .080     .035     .110     .000   771.90    53.74
  .000642     500.     400.     250.        2        0        0      .00   578.13   631.87
0
 *SECNO 22.750
                XSEC 5
    22.75     9.08   781.08      .00      .00   781.43      .35      .34      .04   777.70
    5020.     788.    3091.    1141.     341.     543.     456.      84.      21.   776.50
      .15     2.31     5.70     2.50     .050     .035     .050     .000   772.00    16.35
  .001356     200.     400.     500.        0        0        0      .00   437.35   453.71
0
 *SECNO 30.950

 3470 ENCROACHMENT STATIONS=        .0     197.0  TYPE=     1  TARGET=     196.999
                XSEC 3 FROM FILE NO. 160 320.1
    30.95     8.22   782.22      .00      .00   782.85      .63     1.34      .09   778.40
    5020.    1025.    3941.      54.     302.     566.      25.     104.      26.   777.90
      .19     3.40     6.97     2.16     .050     .035     .050     .000   774.00    26.32
  .002064     800.     820.     750.        2        0        0      .00   169.49   195.71
0
 *SECNO 41.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    785.60  ELENCR= 100000.00
                XSEC 1 FROM FILE NO. 160 320.1
    41.15     9.20   784.20      .00      .00   784.84      .65     1.99      .01   781.80
    5020.      27.    4902.      91.      18.     750.      72.     125.      31.   782.00
      .24     1.52     6.54     1.26     .050     .035     .050     .000   775.00   265.37
  .001817    1100.    1020.    1000.        2        0        0      .00   210.35   475.72
0
 *SECNO 47.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    786.00  ELENCR= 100000.00
              XSEC 41.15 REPEATED INVERT ADJ
    47.15     9.67   785.27      .00      .00   785.81      .54      .96      .01   782.40
    5020.      40.    4822.     158.      26.     801.     117.     137.      34.   782.60
      .26     1.50     6.02     1.35     .050     .035     .050     .000   775.60   261.19
  .001413     600.     600.     600.        2        0        0      .00   230.48   491.67
0
1
  08/24/89    13:57:49                                                                    PAGE    7


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 61.150
              CHANNEL XSEC FROM 41.15 W INVERT ADJ  OB FROM QUAD
    61.15    10.27   787.27      .00      .00   787.69      .42     1.86      .01   781.30
    5020.     282.    4480.     259.     205.     819.     190.     171.      41.   781.40
      .34     1.37     5.47     1.36     .080     .040     .080     .000   777.00    31.37
  .001280    1100.    1400.    1300.        2        0        0      .00   230.48   261.85
0
 *SECNO 71.150
    71.15    10.40   787.40      .00      .00   788.71      .24     1.61      .02   [illegible]
```

```
    5020.     281.    3757.     982.     248.     839.     874.     206.      48.    782.40
      .42     1.13     4.48     1.12     .080     .040     .080     .000   778.00    19.80
  .000831    1000.    1000.     900.        2        0        0      .00   465.00   484.79
0
 *SECNO 91.150
 3280 CROSS SECTION     91.15 EXTENDED       .30 FEET

    91.15     9.70   790.30      .00      .00   790.59      .29     1.86      .02   784.90
    5020.     179.    3788.    1053.     142.     763.     840.     282.      66.    785.00
      .55     1.26     4.96     1.25     .080     .040     .080     .000   780.60    50.00
  .001157    1850.    2000.    1600.        2        0        0      .00   447.00   497.00
0
 *SECNO 107.150
 3280 CROSS SECTION    107.15 EXTENDED      2.12 FEET

   107.15     9.53   792.13      .00      .00   792.42      .30     1.83      .00   786.90
    5020.     834.    3735.     451.     577.     746.     301.     340.      80.    787.00
      .65     1.44     5.01     1.50     .080     .040     .080     .000   782.60   220.55
  .001212    1200.    1600.    1500.        2        0        0      .00   379.45   600.00
0
 *SECNO 119.150
   119.15     9.26   793.36      .00      .00   793.49      .13     1.05      .02   787.10
    5020.    1407.    2793.     820.    1051.     739.     846.     394.      94.    788.50
      .77     1.34     3.78      .97     .080     .040     .080     .000   784.10   132.81
  .000716     980.    1200.    1200.        2        0        0      .00   725.93   858.74
0
 *SECNO 136.150
   136.15     8.55   794.85      .00      .00   795.15      .30     1.61      .05   790.00
    5020.    1025.    3875.     120.     654.     782.      94.     467.     112.    790.00
      .88     1.57     4.95     1.28     .080     .040     .080     .000   786.30   180.23
  .001472    1600.    1700.    1100.        2        0        0      .00   378.58   558.80
0
1
  08/24/89    13:57:49                                                                    PAGE    8


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 154.150
   154.15     9.92   796.82      .00      .00   797.01      .19     1.84      .01   790.00
    5020.    1223.    2942.     855.     950.     668.     549.     539.     128.    790.00
     1.03     1.29     4.40     1.56     .080     .040     .080     .000   786.90   111.32
  .000795    1600.    1800.    1700.        2        0        0      .00   453.70   565.01
0
1
  08/24/89    13:57:49                                                                    PAGE    9


                                                                  THIS RUN EXECUTED 08/24/89   13:58:06
 ************************************************
   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
 ************************************************


 T1       FLOODWAY DETERMINATION
 T2       METHOD 4 ENCROACHMENT   .1 FOOT RISE, ENCR. AT MERIDIAN RD. BRIDGE
 T3       METHOD 4   .1 TARGET
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	4.	0.	0.	.000000	.00	.0	5020.	777.690	.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

#PROF 2

CCHV= .300 CEHV= .500
#SECNO 22880.000

3265 DIVIDED FLOW

22880.00	9.49	777.69	.00	777.69	778.15	.46	.00	.00	773.00
5020.	623.	4145.	252.	164.	717.	160.	0.	0.	773.80
.00	3.79	5.78	1.57	.040	.045	.060	.000	768.20	41.62
.001806	0.	0.	0.	0	0	0	.00	243.53	325.08

0
CCHV= .300 CEHV= .500
#SECNO .000

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 780.70 ELREA= 780.70

DS FACE OF MERIDIAN ROAD

.00	8.36	777.56	.00	.00	778.78	1.22	.25	.38	769.20
5020.	0.	5020.	0.	0.	566.	0.	2.	0.	771.00
.00	.00	9.87	.00	.040	.040	.060	.000	769.20	222.00
.003710	100.	100.	100.	2	0	0	.00	73.00	295.00

0

SPECIAL BRIDGE

SB	KK	XKOR	COFQ	RDLEN	BWC	BWF	BAREA	SS	ELCHU	ELCHD
	1.25	1.56	2.50	.00	73.00	4.00	730.00	.00	769.30	769.30

#SECNO .250
CLASS A LOW FLOW

3420 BRIDGE W.S.= 777.37 BRIDGE VELOCITY=, 9.02 CALCULATED CHANNEL AREA=, 557.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD
778.71	779.03	.36	0.	5020.	730.	662.	778.90	780.70

1

```
   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


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE.ELLEA=     780.70 ELREA=     780.70

                US FACE OF MERIDIAN ROAD
      .25     8.72   777.92      .00      .00   779.03     1.12      .25      .00   769.20
    5020.       0.    5020.       0.       0.     592.       0.       2.       0.   771.00
      .00      .00     8.48      .00     .000     .040     .000     .000   769.20   222.00
  .003196      25.      25.      25.        0        0        0      .00    73.00   295.00
0
 *SECNO  .750

3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     170.0     340.0  TYPE=     1  TARGET=     170.000
                XSEC CC    50 FT US OF MERIDIAN RD
      .75     9.64   778.84      .00   778.82   779.31      .47      .08      .19   773.80
    5020.     199.    4422.     398.     131.     759.     203.       3.       1.   773.00
      .01     1.52     5.83     1.96     .070     .035     .070     .000   769.20   176.11
  .001020      50.      50.      50.        3        0        0      .00   163.89   340.09
0
 CCHV=    .100 CEHV=    .300
 *SECNO 5.750
  2800 NAT Q1=   1349.34  WSEL=    779.40  ENC Q1=   1349.34  WSEL=    779.50  RATIO=   .0000
  NAT Q1=   1382.  RATIOS LOB,CH,ROB=   .1670   .8181   .0148  WSEL=    779.50

3470 ENCROACHMENT STATIONS=     390.0     551.3  TYPE=     4  TARGET=       .024
                XSEC 6
     5.75    10.01   779.41      .00   779.40   779.92      .51      .60      .01   774.10
    5020.     792.    4213.      16.     354.     680.      13.      15.       2.   774.00
      .03     2.24     6.20     1.17     .070     .035     .070     .000   769.40   390.03
  .001441     500.     500.     500.        1        0        0      .00   161.51   551.54
0
 *SECNO 10.250
  2800 NAT Q1=   1608.58  WSEL=    780.14  ENC Q1=   1608.58  WSEL=    780.24  RATIO=   .0000
  NAT Q1=   1658.  RATIOS LOB,CH,ROB=   .1731   .6440   .1829  WSEL=    780.24

3470 ENCROACHMENT STATIONS=     174.4     518.8  TYPE=     4  TARGET=       .030
                MANUFACTURED XSEC
    10.25     9.78   780.18      .00   780.14   780.46      .28      .51      .02   775.10
    5020.     813.    3343.     864.     457.     659.     638.      28.       5.   775.00
      .06     1.78     5.07     1.36     .070     .035     .090     .000   770.40   174.44
  .001006     300.     450.     450.        2        0        0      .00   344.36   518.89
0
1
  08/24/89    13:57:49                                                                    PAGE   12


   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


 *SECNO 14.750
  2800 NAT Q1=   1857.43  WSEL=    780.53  ENC Q1=   1857.43  WSEL=    780.63  RATIO=   .0000
  NAT Q1=   1916.  RATIOS LOB,CH,ROB=   .0743   .7486   .1771  WSEL=    780.63

3470 ENCROACHMENT STATIONS=     101.9     659.2  TYPE=     4  TARGET=       .031
                XSEC DD
    14.75     8.59   780.59      .00   780.53   780.84      .25      .78      .03   774.75
```

```
    5020.     300.    3894.     826.     214.     855.    1031.      47.       9.    774.90
      .09     1.40     4.55      .80     .080     .035     .100     .000   771.70   101.94
  .000751     600.     450.     300.        2        0        0      .00   557.27   659.22
0
 *SECNO 18.750
  2800 NAT Q1=   1981.74  WSEL=    780.84  ENC Q1=   1981.74  WSEL=    780.94  RATIO=   .0000
  NAT Q1=   2038.  RATIOS LOB,CH,ROB=   .2009   .7216   .0776  WSEL=    780.94

 3470 ENCROACHMENT STATIONS=      82.3     508.9  TYPE=     4  TARGET=        .028
    18.75     9.00   780.96      .00   780.84   781.12      .22      .28      .00   775.00
    5020.     963.    3731.     326.     749.     869.     445.      64.      12.    775.10
      .13     1.29     4.29      .73     .080     .035     .110     .000   771.90    82.27
  .000653     500.     400.     250.        2        0        0      .00   426.66   508.94
0
 *SECNO 22.750
  2800 NAT Q1=   1363.01  WSEL=    781.08  ENC Q1=   1363.01  WSEL=    781.18  RATIO=   .0000
  NAT Q1=   1408.  RATIOS LOB,CH,ROB=   .1599   .6091   .2310  WSEL=    781.18

 3470 ENCROACHMENT STATIONS=      33.8     311.9  TYPE=     4  TARGET=        .032
                XSEC 5
    22.75     9.15   781.15      .00   781.08   781.51      .37      .35      .04   777.70
    5020.     743.    3166.    1111.     312.     547.     415.      78.      15.    776.50
      .15     2.38     5.79     2.68     .050     .035     .050     .000   772.00    33.78
  .001385     200.     400.     500.        2        0        0      .00   278.11   311.89
0
 *SECNO 30.950

 3470 ENCROACHMENT STATIONS=        .0     197.0  TYPE=     1  TARGET=     196.999
                XSEC 3 FROM FILE NO. 160 32D.1
    30.95     8.30   782.30      .00   782.22   782.91      .61     1.33      .07   778.40
    5020.    1036.    3928.      56.     308.     572.      26.      98.      19.    777.90
      .19     3.37     6.86     2.14     .050     .035     .050     .000   774.00    26.08
  .001973     800.     820.     750.        2        0        0      .00   169.85   195.93
0
1
  08/24/89    13:57:49                                                                    PAGE   13


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 41.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    785.60  ELENCR= 100000.00
                XSEC 1 FROM FILE NO. 160 32D.1
    41.15     9.21   784.21      .00   784.20   784.86      .64     1.94      .01   781.80
    5020.      27.    4899.      94.      18.     752.      74.     119.      24.    782.00
      .23     1.52     6.51     1.27     .050     .035     .050     .000   775.00   265.20
  .001799    1100.    1020.    1000.        2        0        0      .00   211.15   476.35
0
 *SECNO 47.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    786.00  ELENCR= 100000.00
              XSEC 41.15 REPEATED INVERT ADJ
    47.15     9.68   785.28      .00   785.27   785.82      .54      .95      .01   782.40
    5020.      40.    4821.     159.      27.     802.     118.     131.      27.    782.60
      .26     1.50     6.01     1.35     .050     .035     .050     .000   775.60   261.12
  .001407     600.     600.     600.        2        0        0      .00   230.85   491.97
0
 *SECNO 61.150
```

```
 NAT Q1=   1435.  RATIOS LOB,CH,ROB=   .0573   .8899   .0527  WSEL=    787.37

3470 ENCROACHMENT STATIONS=      72.4     222.4  TYPE=     4  TARGET=        .022
                CHANNEL XSEC FROM 41.15 W INVERT ADJ  DB FROM QUAD
    61.15    10.28   787.28      .00   787.27   787.73      .45     1.90      .01   781.30
    5020.     234.    4577.     210.     132.     820.     120.     163.      33.   781.40
      .33     1.77     5.58     1.74     .080     .040     .080     .000   777.00    72.35
  .001330    1100.    1400.    1300.        2        0        0      .00   150.05   222.41
0
 *SECNO 71.150
 2800 NAT Q1=   1741.00  WSEL=    788.48  ENC Q1=   1741.00  WSEL=    788.58  RATIO=   .0000
 NAT Q1=   1786.  RATIOS LOB,CH,ROB=   .0569   .7439   .1992  WSEL=    788.58

3470 ENCROACHMENT STATIONS=      69.6     334.4  TYPE=     4  TARGET=        .025
    71.15    10.53   788.53      .00   788.48   788.78      .25     1.04      .02   782.30
    5020.     226.    3836.     959.     154.     844.     643.     193.      37.   782.40
      .40     1.47     4.55     1.49     .080     .040     .080     .000   778.00    69.60
  .000848    1000.    1000.     900.        2        0        0      .00   264.83   334.43
0
1
 08/24/89    13:57:49                                                                    PAGE   14


   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


 *SECNO 91.150
 2800 NAT Q1=   1475.98  WSEL=    790.30  ENC Q1=   1475.98  WSEL=    790.40  RATIO=   .0000
 NAT Q1=   1521.  RATIOS LOB,CH,ROB=   .0367   .7477   .2156  WSEL=    790.40
3280 CROSS SECTION     91.15 EXTENDED       .38 FEET


3470 ENCROACHMENT STATIONS=      85.0     357.4  TYPE=     4  TARGET=        .030
    91.15     9.78   790.38      .00   790.30   790.70      .31     1.89      .02   784.90
    5020.     108.    3877.    1035.      71.     772.     649.     259.      48.   785.00
      .53     1.52     5.02     1.59     .080     .040     .080     .000   780.60    85.00
  .001168    1850.    2000.    1600.        2        0        0      .00   272.41   357.41
0
 *SECNO 107.150
 2800 NAT Q1=   1441.83  WSEL=    792.13  ENC Q1=   1441.83  WSEL=    792.23  RATIO=   .0000
 NAT Q1=   1484.  RATIOS LOB,CH,ROB=   .1697   .7389   .0913  WSEL=    792.23
3280 CROSS SECTION    107.15 EXTENDED      2.23 FEET


3470 ENCROACHMENT STATIONS=     287.5     577.0  TYPE=     4  TARGET=        .028
   107.15     9.63   792.23      .00   792.13   792.54      .31     1.84      .00   786.90
    5020.     804.    3816.     401.     512.     756.     249.     310.      58.   787.00
      .63     1.57     5.05     1.61     .080     .040     .080     .000   782.60   287.50
  .001210    1200.    1600.    1500.        2        0        0      .00   289.51   577.01
0
 *SECNO 119.150
 2800 NAT Q1=   1876.50  WSEL=    793.36  ENC Q1=   1876.50  WSEL=    793.46  RATIO=   .0000
 NAT Q1=   1937.  RATIOS LOB,CH,ROB=   .2817   .5511   .1672  WSEL=    793.46

3470 ENCROACHMENT STATIONS=     198.7     683.7  TYPE=     4  TARGET=        .031
   119.15     9.37   793.47      .00   793.36   793.61      .14     1.05      .02   787.10
    5020.    1376.    2854.     790.     963.     749.     675.     360.      68.   788.50
      .75     1.43     3.81     1.17     .080     .040     .080     .000   784.10   198.66
  .000712     980.    1200.    1200.        2        0        0      .00   485.01   683.67
0
 *SECNO 136.150
 2800 NAT Q1=   1308.61  WSEL=    794.85  ENC Q1=   1308.61  WSEL=    794.95  RATIO=   .0000
 NAT Q1=   1378.  RATIOS LOB,CH,ROB=   .2071   .7683   .0246  WSEL=    794.95
```

```
3470 ENCROACHMENT STATIONS=     278.5     526.7  TYPE=     4  TARGET=        .030
   136.15     8.65   794.95      .00   794.85   795.27      .32     1.61      .05   790.00
    5020.     999.    3978.      43.     529.     795.      30.     427.      80.    790.00
      .85     1.89     5.01     1.41     .080     .040     .080     .000   786.30   278.46
  .001473    1600.    1700.    1100.        2        0        0      .00   248.23   526.69
0
1
 08/24/89    13:57:49                                                                          PAGE   15


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        OLOB     QCH      QROB     ALOB     ACH      AROB     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 154.150
 2800 NAT Q1=   1779.86  WSEL=    796.82  ENC Q1=   1779.86  WSEL=    796.92  RATIO=   .0000
 NAT Q1=   1825.  RATIOS LOB.CH,ROB=   .2462   .5826   .1711  WSEL=    796.92

3470 ENCROACHMENT STATIONS=     235.3     519.8  TYPE=     4  TARGET=        .025
   154.15    10.03   796.93      .00   796.82   797.13      .20     1.84      .01   790.00
    5020.    1206.    2998.     815.     745.     676.     464.     490.      90.    790.00
     1.00     1.62     4.43     1.76     .080     .040     .080     .000   786.90   235.31
  .000793    1600.    1800.    1700.        2        0        0      .00   284.44   519.75
0
1
PROFILE FOR STREAM   METHOD 4  .1 TARGET


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   765.     770.     775.     780.     785.     790.     795.     800.     805.     810.
   SECNO   CUMDIS

 22880.00     0.  C    I  .    L R .   WE   M        .        .        .        .        .        .        .
      .00   100.  C      I . R      .   W  E . M      .        .        .        .        .        .        .
      .25   200.  C      I . R      .    W E . M      .        .        .        .        .        .        .
      .75   300.  C      I .    R L .      WE.        . M      .        .        .        .        .        .
            400.  C      I .    R L .      WE.        M        .        .        .        .        .        .
            500.  C       I.     RL .      WE.      M .        .        .        .        .        .        .
            600.  C       I.     RL .      WE.   M   .        .        .        .        .        .        .
     5.75   700.  C       I.      L .       WE        .        .        .        .        .        .        .
            800.  C       I.      RL.       WEM       .        .        .        .        .        .        .
            900.  C        I       L.        EM       .        .        .        .        .        .        .
           1000.  C        I       RL        WEM      .        .        .        .        .        .        .
           1100.  C        .I       L        WEM      .        .        .        .        .        .        .
    10.25  1200.  C        .I       L        WEM      .        .        .        .        .        .        .
           1300.  C        .I       L        .E  M    .        .        .        .        .        .        .
           1400.  C        . I      L        .E   M   .        .        .        .        .        .        .
           1500.  C        .  I     L        .E    M  .        .        .        .        .        .        .
    14.75  1600.  C        .  I     L        .WE    M .        .        .        .        .        .        .
           1700.  C        .   I    L        .WE   M  .        .        .        .        .        .        .
           1800.  C        .   I    L        .WE   M  .        .        .        .        .        .        .
           1900.  C        .   I    L        . E  M   .        .        .        .        .        .        .
    18.75  2000.  C        .   I    L        . E M    .        .        .        .        .        .        .
           2100.  C        .   I    .L       . E M    .        .        .        .        .        .        .
           2200.  C        .   I    . RL     . WE M   .        .        .        .        .        .        .
           2300.  C        .   I    . R L    . WE M   .        .        .        .        .        .        .
    22.75  2400.  C        .   I    .  R L   . WE  M  .        .        .        .        .        .        .
           2500.  C        .   I    .  R  L  .  E    M.        .        .        .        .        .        .
           2600.  C        .    I   .   R L  .  WE    .M       .        .        .        .        .        .
```

```
       2800.  C        .     I   .   R L   .  WE     .      M  .        .        .        .        .        .
       2900.  C        .     I   .    RL   .   WE    .        M.        .        .        .        .        .
       3000.  C        .      I  .    RL   .   WE    .         . M      .        .        .        .        .
       3100.  C        .      I  .    R L  .   WE    .         .    M   .        .        .        .        .
30.95  3200.  C        .       I .     RL  .    WE   .         .      M .        .        .        .        .
       3300.  C        .       I .      L  .    WE   .         .     M  .        .        .        .        .
       3400.  C        .       I .      RL .    W E  .         .    M   .        .        .        .        .
       3500.  C        .        I.       RL.     WE  .         .    M   .        .        .        .        .
       3600.  C        .        I.        L.     WE  .         .   M    .        .        .        .        .
       3700.  C        .        I.         L     W E .         .  M     .        .        .        .        .
       3800.  C        .        I.         .L     WE .         . M      .        .        .        .        .
       3900.  C        .        I.         .L     WE .         .M       .        .        .        .        .
       4000.  C        .         I         . L     WE.         M        .        .        .        .        .
       4100.  C        .         I         .  L    WE.       M .        .        .        .        .        .
       4200.  C        .         I         .  LR   W E      M  .        .        .        .        .        .
41.15  4300.  C        .         I         .   L   W E      M  .        .        .        .        .        .
       4400.  C        .         I         .   L    WE      M  .        .        .        .        .        .
       4500.  C        .         I         .   L    WE       M .        .        .        .        .        .
       4600.  C        .         .I        .   LR   W.E      M .        .        .        .        .        .
       4700.  C        .         .I        .   LR    WE      M .        .        .        .        .        .
       4800.  C        .         .I        .    L    WE      M .        .        .        .        .        .
47.15  4900.  C        .         .I        .    L    .WE     M .        .        .        .        .        .
       5000.  C        .         .I        .    L    .WE      M.        .        .        .        .        .
       5100.  C        .         . I       .   LR    .WE      M.        .        .        .        .        .
       5200.  C        .         . I       .   LR    .WE      M.        .        .        .        .        .
       5300.  C        .         . I       .   LR    . WE     M.        .        .        .        .        .
       5400.  C        .         . I       .   L     . WE     M.        .        .        .        .        .
       5500.  C        .         . I       .   L     . WE     M.        .        .        .        .        .
       5600.  C        .         .  I      .   L     .  WE    M.        .        .        .        .        .
       5700.  C        .         .  I      .   L     .  WE    M.        .        .        .        .        .
       5800.  C        .         .  I      .  LR     .  WE    M.        .        .        .        .        .
       5900.  C        .         .  I      .  L      .  WE     M        .        .        .        .        .
       6000.  C        .         .  I      .  L      .   WE    M        .        .        .        .        .
       6100.  C        .         .   I     .  L      .   WE    M        .        .        .        .        .
       6200.  C        .         .   I     .  L      .   WE    M        .        .        .        .        .
61.15  6300.  C        .         .   I     .  L      .    E    M        .        .        .        .        .
       6400.  C        .         .   I     .  L      .    WE   M        .        .        .        .        .
       6500.  C        .         .   I     .  L      .    WE   M        .        .        .        .        .
       6600.  C        .         .    I    .  L      .    WE   M        .        .        .        .        .
       6700.  C        .         .    I    .  LR     .     E   M        .        .        .        .        .
       6800.  C        .         .    I    .   L     .     WE  M        .        .        .        .        .
       6900.  C        .         .    I    .   L     .     WE  M        .        .        .        .        .
       7000.  C        .         .    I    .   L     .     WE  M        .        .        .        .        .
       7100.  C        .         .     I   .   L     .      E  M        .        .        .        .        .
       7200.  C        .         .     I   .   LR    .      E  M        .        .        .        .        .
71.15  7300.  C        .         .     I   .    L    .      WE M        .        .        .        .        .
       7400.  C        .         .     I   .    L    .      WE M        .        .        .        .        .
       7500.  C        .         .      I  .    L    .      WE M        .        .        .        .        .
       7600.  C        .         .      I  .    LR   .       E M        .        .        .        .        .
       7700.  C        .         .      I  .     L   .       E M        .        .        .        .        .
       7800.  C        .         .      I  .     L   .       WEM        .        .        .        .        .
       7900.  C        .         .       I .     L   .       WEM        .        .        .        .        .
       8000.  C        .         .       I .     LR  .       WEM        .        .        .        .        .
       8100.  C        .         .       I .      L  .        EM        .        .        .        .        .
       8200.  C        .         .       I .      L  .        EM        .        .        .        .        .
       8300.  C        .         .        I.      L  .        EM        .        .        .        .        .
       8400.  C        .         .        I.      LR .        WE        .        .        .        .        .
       8500.  C        .         .        I.       L .        WE        .        .        .        .        .
       8600.  C        .         .        I.       L .        WE        .        .        .        .        .
       8700.  C        .         .         I       L .         E        .        .        .        .        .
       8800.  C        .         .         I        L.         E        .        .        .        .        .
       8900.  C        .         .         I        L.         WE       .        .        .        .        .
       9000.  C        .         .         I        L.         WE       .        .        .        .        .
       9100.  C        .         .         .I       L.         WE       .        .        .        .        .
       9200.  C        .         .         .I        L         ME       .        .        .        .        .
71.15  9300.  C                             .        .         ME
```

```
        9400.  C        .        .        .I       L        MWE      .        .        .        .        .
        9500.  C        .        .        . I      LR       MWE      .        .        .        .        .
        9600.  C        .        .        . I      .L       MWE      .        .        .        .        .
        9700.  C        .        .        . I      .L       M E      .        .        .        .        .
        9800.  C        .        .        . I      .L       M WE     .        .        .        .        .
        9900.  C        .        .        .  I     .LR      M WE     .        .        .        .        .
       10000.  C        .        .        .  I     . L      M WE     .        .        .        .        .
       10100.  C        .        .        .  I     . L      M  E     .        .        .        .        .
       10200.  C        .        .        .  I     . L      M  E     .        .        .        .        .
       10300.  C        .        .        .   I    . LR     M  WE    .        .        .        .        .
       10400.  C        .        .        .   I    .  L     M  WE    .        .        .        .        .
       10500.  C        .        .        .   I    .  L     M   E    .        .        .        .        .
       10600.  C        .        .        .   I    .  L     M   E    .        .        .        .        .
       10700.  C        .        .        .    I   .  LR    M   WE   .        .        .        .        .
       10800.  C        .        .        .    I   .   L    M   WE   .        .        .        .        .
107.15 10900.  C        .        .        .    I   .   L    M   WE   .        .        .        .        .
       11000.  C        .        .        .    I   .   L    . M  E   .        .        .        .        .
       11100.  C        .        .        .     I  .   LR   .  M E   .        .        .        .        .
       11200.  C        .        .        .     I  .   LR   .    WE  .        .        .        .        .
       11300.  C        .        .        .     I  .   LR   .    WEM .        .        .        .        .
       11400.  C        .        .        .     I  .   LR   .    WE M .        .        .        .        .
       11500.  C        .        .        .      I .   L R  .     E   M        .        .        .        .
       11600.  C        .        .        .      I .   L R  .     E   . M      .        .        .        .
       11700.  C        .        .        .      I .   L R  .     WE  .  M     .        .        .        .
       11800.  C        .        .        .      I .   L R  .     WE  .    M   .        .        .        .
       11900.  C        .        .        .       I .   L  R .      E  .      M .        .        .        .
       12000.  C        .        .        .       I .   L  R .      E  .       M .        .        .        .
119.15 12100.  C        .        .        .       I .   L  R .      E  .         M        .        .        .
       12200.  C        .        .        .       I .    L R .      E  .         M        .        .        .
       12300.  C        .        .        .        I.    L R .      WE .         M        .        .        .
       12400.  C        .        .        .        I.    L  R .     WE .         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      LR .      WE.         M        .        .        .
       12900.  C        .        .        .         I      LR .      WE.         M        .        .        .
       13000.  C        .        .        .         .I     L R.       E.         M        .        .        .
       13100.  C        .        .        .         .I      LR.       E.         M        .        .        .
       13200.  C        .        .        .         .I      LR.       E.         M        .        .        .
       13300.  C        .        .        .         .I      LR.       WE         M        .        .        .
       13400.  C        .        .        .         . I      L.       WE         M        .        .        .
       13500.  C        .        .        .         . I      L.       WE         M        .        .        .
       13600.  C        .        .        .         . I      LR        E         M        .        .        .
       13700.  C        .        .        .         . I       L        E         M        .        .        .
136.15 13800.  C        .        .        .         .  I      L        WE        M        .        .        .
       13900.  C        .        .        .         .  I      L        WE        M        .        .        .
       14000.  C        .        .        .         .  I      L        WE        M        .        .        .
       14100.  C        .        .        .         .  I      L        .E        M        .        .        .
       14200.  C        .        .        .         .  I      L        .E        M        .        .        .
       14300.  C        .        .        .         .  I      L        .WE       M        .        .        .
       14400.  C        .        .        .         .  I      L        .WE       M        .        .        .
       14500.  C        .        .        .         .  I      L        .WE       M        .        .        .
       14600.  C        .        .        .         .  I      L        . E       M        .        .        .
       14700.  C        .        .        .         .  I      L        . E       M        .        .        .
       14800.  C        .        .        .         .  I      L        . WE      M        .        .        .
       14900.  C        .        .        .         .  I      L        . WE      M        .        .        .
       15000.  C        .        .        .         .  I      L        .  E      M        .        .        .
       15100.  C        .        .        .         .  I      L        .  E      M        .        .        .
       15200.  C        .        .        .         .   I     L        .  E      M        .        .        .
       15300.  C        .        .        .         .   I     L        .  WE     M        .        .        .
       15400.  C        .        .        .         .   I     L        .  WE     M        .        .        .
       15500.  C        .        .        .         .   I     L        .   E     M        .        .        .
154.15 15600.  C        .        .        .         .   I     L        .   E     M        .        .        .
```

1

THIS RUN EXECUTED 08/24/89 13:58:23

```
*********************************************
  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
*********************************************
```

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

CHIPPEWA RIVER

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
22880.000	.00	.00	.00	768.20	5020.00	777.59	.00	778.14	20.91	6.18	868.44	1097.78
22880.000	.00	.00	.00	768.20	5020.00	777.69	.00	778.15	18.06	5.78	1041.72	1181.31
.000	100.00	.00	.00	769.20	5020.00	777.52	.00	778.76	37.70	8.91	563.56	817.62
.000	100.00	.00	.00	769.20	5020.00	777.56	.00	778.78	37.10	8.87	566.24	824.12
.250	25.00	780.70	778.90	769.20	5020.00	777.89	.00	779.01	32.35	8.51	590.02	882.59
.250	25.00	780.70	778.90	769.20	5020.00	777.92	.00	779.03	31.96	8.48	592.18	887.99
.750	50.00	.00	.00	769.20	5020.00	778.82	.00	779.29	10.29	5.85	1088.72	1564.74
.750	50.00	.00	.00	769.20	5020.00	778.84	.00	779.31	10.20	5.83	1092.29	1571.52
5.750	500.00	.00	.00	769.40	5020.00	779.40	.00	779.89	13.84	6.07	1088.72	1349.34
5.750	500.00	.00	.00	769.40	5020.00	779.41	.00	779.92	14.41	6.20	1046.99	1322.56
10.250	450.00	.00	.00	770.40	5020.00	780.14	.00	780.40	9.74	4.97	1929.48	1608.58
10.250	450.00	.00	.00	770.40	5020.00	780.18	.00	780.46	10.06	5.07	1753.26	1582.42
14.750	450.00	.00	.00	771.70	5020.00	780.53	.00	780.77	7.30	4.47	2313.54	1857.43
14.750	450.00	.00	.00	771.70	5020.00	780.59	.00	780.84	7.51	4.55	2099.65	1831.41
18.750	400.00	.00	.00	771.90	5020.00	780.84	.00	781.04	6.42	4.23	2243.49	1981.74
18.750	400.00	.00	.00	771.90	5020.00	780.90	.00	781.12	6.53	4.29	2062.42	1963.81
22.750	400.00	.00	.00	772.00	5020.00	781.08	.00	781.43	13.56	5.70	1339.22	1363.01
22.750	400.00	.00	.00	772.00	5020.00	781.15	.00	781.51	13.85	5.79	1274.11	1348.94
30.950	820.00	.00	.00	774.00	5020.00	782.22	.00	782.85	20.64	6.97	892.33	1104.91
30.950	820.00	.00	.00	774.00	5020.00	782.30	.00	782.91	19.73	6.86	906.22	1130.08
41.150	1020.00	.00	.00	775.00	5020.00	784.20	.00	784.84	18.17	6.54	839.86	1177.66
41.150	1020.00	.00	.00	775.00	5020.00	784.21	.00	784.86	17.99	6.51	843.81	1183.61

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
47.150	600.00	.00	.00	775.60	5020.00	785.27	.00	785.81	14.13	6.02	944.57	1335.36
47.150	600.00	.00	.00	775.60	5020.00	765.28	.00	785.82	14.07	6.01	946.60	1338.41
61.150	1400.00	.00	.00	777.00	5020.00	787.27	.00	787.69	12.80	5.47	1213.95	1403.05
[illegible]	[illegible]	.00	.00	777.00	5020.00	787.28	.00	787.77	[illegible]	5.58	1073.03	1376.72

71.150	1000.00	.00	.00	778.00	5020.00	788.48	.00	788.71	8.31	4.48	1960.45	1741.00
71.150	1000.00	.00	.00	778.00	5020.00	788.53	.00	788.76	8.48	4.55	1640.88	1723.61
91.150	2000.00	.00	.00	780.60	5020.00	790.30	.00	790.59	11.57	4.96	1745.14	1475.98
91.150	2000.00	.00	.00	780.60	5020.00	790.38	.00	790.70	11.68	5.02	1491.86	1468.69
107.150	1600.00	.00	.00	782.60	5020.00	792.13	.00	792.42	12.12	5.01	1624.29	1441.83
107.150	1600.00	.00	.00	782.60	5020.00	792.23	.00	792.54	12.10	5.05	1516.42	1443.26
119.150	1200.00	.00	.00	784.10	5020.00	793.36	.00	793.49	7.16	3.78	2635.19	1876.50
119.150	1200.00	.00	.00	784.10	5020.00	793.47	.00	793.61	7.12	3.81	2387.05	1880.88
136.150	1700.00	.00	.00	786.30	5020.00	794.85	.00	795.15	14.72	4.95	1530.66	1308.61
136.150	1700.00	.00	.00	786.30	5020.00	794.95	.00	795.27	14.73	5.01	1353.76	1308.20
154.150	1800.00	.00	.00	786.90	5020.00	796.82	.00	797.01	7.95	4.40	2167.27	1779.86
154.150	1800.00	.00	.00	786.90	5020.00	796.93	.00	797.13	7.93	4.43	1885.40	1783.10

1

CHIPPEWA RIVER

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
22880.000	5020.00	777.59	.00	.00	.00	127.91	.00
22880.000	5020.00	777.69	.10	.00	.00	243.53	.00
.000	5020.00	777.52	.00	-.07	.00	73.00	100.00
.000	5020.00	777.56	.04	-.13	.00	73.00	100.00
.250	5020.00	777.89	.00	.36	.00	73.00	25.00
.250	5020.00	777.92	.03	.36	.00	73.00	25.00
.750	5020.00	778.82	.00	.93	.00	163.74	50.00
.750	5020.00	778.84	.02	.92	.02	163.89	50.00
5.750	5020.00	779.40	.00	.59	.00	177.55	500.00
5.750	5020.00	779.41	.01	.57	.01	161.51	500.00
10.250	5020.00	780.14	.00	.73	.00	507.22	450.00
10.250	5020.00	780.18	.04	.77	.04	344.36	450.00
14.750	5020.00	780.53	.00	.40	.00	601.72	450.00
14.750	5020.00	780.59	.05	.41	.05	557.27	450.00
18.750	5020.00	780.84	.00	.30	.00	578.13	400.00
18.750	5020.00	780.90	.06	.32	.06	426.66	400.00
22.750	5020.00	781.08	.00	.25	.00	437.35	400.00
22.750	5020.00	781.15	.07	.25	.07	278.11	400.00
30.950	5020.00	782.22	.00	1.14	.00	169.49	820.00
30.950	5020.00	782.30	.08	1.16	.08	169.85	820.00
41.150	5020.00	784.20	.00	1.98	.00	210.35	1020.00
41.150	5020.00	784.21	.02	1.91	.02	211.15	1020.00
47.150	5020.00	785.27	.00	1.07	.00	230.48	600.00
47.150	5020.00	785.28	.01	1.06	.01	230.85	600.00

61.150	5020.00	787.27	.00	2.00	.00	230.48	1400.00
61.150	5020.00	787.28	.01	2.00	.01	150.05	1400.00
71.150	5020.00	788.48	.00	1.20	.00	465.00	1000.00
71.150	5020.00	788.53	.06	1.23	.06	264.83	1000.00
91.150	5020.00	790.30	.00	1.82	.00	447.00	2000.00
91.150	5020.00	790.38	.09	1.85	.09	272.41	2000.00
107.150	5020.00	792.13	.00	1.83	.00	379.45	1600.00
107.150	5020.00	792.23	.10	1.84	.10	289.51	1600.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFWS	TOPWID	XLCH
119.150	5020.00	793.36	.00	1.23	.00	725.93	1200.00
119.150	5020.00	793.47	.11	1.24	.11	485.01	1200.00
136.150	5020.00	794.85	.00	1.49	.00	378.58	1700.00
136.150	5020.00	794.95	.10	1.49	.10	248.23	1700.00
154.150	5020.00	796.82	.00	1.97	.00	453.70	1800.00
154.150	5020.00	796.93	.11	1.98	.11	284.44	1800.00

1

SUMMARY OF ERRORS AND SPECIAL NOTES

1

THIS RUN EXECUTED 08/24/89 13:58:25

```
**********************************************
 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
**********************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100-yr run
complete

00BREAK00

FILE: chippewa.out

```
1*********************************************                                    ***************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                    *  U.S. ARMY CORPS OF ENGINEERS
 *                                          *                                    *  HYDROLOGIC ENGINEERING CENTER
 *  Version   4.6.2;  May 1991              *                                    *  609 SECOND STREET, SUITE D
 *                                          *                                    *  DAVIS, CALIFORNIA 95616-4687
 *  RUN DATE    29DEC93    TIME   14:50:16  *                                    *          (916) 756-1104
 *********************************************                                    ***************************************
```

See diskette for input data

```
                                        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
   29DEC93      14:50:16                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 29DEC93    14:50:16
 ***************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ***************************************


T1      ISABELLA COUNTY FIS
T2      CHIPPEWA RIVER
T3      100-YEAR DISCHARGE

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0        2         0         0    .00125         0         0      6800     683.0         0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN       ALLDC     IBW       CHNIM     ITRACE

      1        0        -1


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    110       150

QT        2       6800       9390
NC      .05        .05       .035         .1         .3
              VALLEY SECTION A MOVED DOWNSTREAM TO CORPORATE
              BOUNDARY, i.e. COUNTY LINE, DOWNSTREAM STUDY LIMIT
X1        0         20        750        810          0          0          0                  -0.55
GR    690.0          0      683.5        550      682.2        600      682.8        650      683.8        700
GR    680.4        750      677.8        755      676.3        766      674.3        776      670.7        786
GR    670.4        796      675.8        806      680.9        810      683.8        822      692.4        832
GR    692.8        885      693.2        935      692.4        985      692.1       1035      691.6       1060

              VALLEY SECTION A (63)
X1      600         20       750.       810.      600.0      600.0      600.0
GR    690.0          0      683.5        550      682.2        600      682.8        650      683.8        700
GR    680.4        750      677.8        755      676.3        766      674.3        776      670.7        786
GR    670.4        796      675.8        806      680.9        810      683.8        822      692.4        832
GR    692.8        885      693.2        935      692.4        985      692.1       1035      691.6       1060

X1     3.01         45       262.       353.     3500.0     4277.0     4277.0
GR    694.4         0.      694.3        36.      694.3        52.      694.2        60.      693.6        84.
GR    693.4       105.      693.4       108.      690.6       123.      693.3       138.      689.6       157.
GR    687.8       167.      687.7       191.      688.1       210.      688.0       215.      687.3       239.
GR    685.9       262.      683.7       267.      683.1       268.      682.1       275.      681.5       282.
```

```
GR    681.2      284.      680.7      292.      680.5      294.      679.5      301.      678.8      306.
GR    678.7      309.      678.3      318.      679.2      324.      679.9      330.      680.8      337.
GR    681.5      343.      681.6      343.      684.3      351.      686.0      353.      687.4      360.
GR    688.4      363.      691.4      368.      693.4      371.      693.6      415.      693.6      428.
GR    693.8      455.      693.5      493.      693.4      496.      693.2      537.      692.9      558.
1
   29DEC93      14:50:16                                                                                PAGE    2


NC      .06       .06
X1     8854        30       275       397      3600      3400      3977                  -0.57
GR    705.0         0     705.0        38     705.2        63     704.6        88     704.6       113
GR    698.9       129     704.1       145     692.7       175     691.9       200     692.6       225
GR    692.6       250     691.5       275     688.8       280     687.3       290     686.5       300
GR    686.8       310     686.9       320     686.9       330     686.3       340     686.7       350
GR    686.8       360     687.3       370     687.3       380     688.9       393     691.2       397
GR    692.0       402     694.4       408     694.3       455     694.5       505     694.3       555

NC                                     .5       1.0
              VALLEY SECTION B (62A)
X1     9154         0         0         0       300       300       300                   0.57
X3                                    215                 465

X1     9354        39      99.9       310       200       200       200      0.71
X3                                   70.9                220.1
GR    692.7         0     691.9        25     692.6        50     692.6        75     691.5        98
GR    694.2      99.9     694.2       100     690.8       123     690.2       133     689.3       143
GR    689.2       153     688.7     161.9     688.7       162     687.8     162.9     687.8       163
GR    687.9       175     687.6       185     687.3       195     687.0       205     687.0       215
GR    687.2       225     687.2       235     686.8     243.9     686.8       244     685.2     244.9
GR    685.2       245     685.2       257     686.0       267     686.0       277     686.2       287
GR    690.8       292     694.6     309.9     694.6       310     692.0       315     694.4       325
GR    694.3       350     694.3       375     694.5       400     694.5       425

NC      .03       .03       .03
              DOWNSTREAM FACE CHIPPEWA ROAD (62B)
              COMBINED SECTIONS 62 & 62.1
X1     9355         0         0         0         1         1         1
X2                                                                                   0.71
X3                                   70.9                220.1
BT      -21         0     701.7                  25     701.9                  50     702.0
BT                 75     702.1                99.9     702.1     694.2       100     702.1     698.3
BT              161.9     702.4     698.6       162     702.4     688.7     162.9     702.4     687.8
BT                163     702.4     698.6     243.9     702.8     698.8       244     702.8     686.8
BT              244.9     702.8     685.2       245     702.8     698.8     309.9     703.2     699.1
BT                310     703.2     694.6       325     703.4                 350     703.6
BT                375     703.8                 400     704.3                 425     704.9

              UPSTREAM FACE CHIPPEWA ROAD
              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1     9400         0         0         0        45        45        45
X2                                                                   1
X3                                   70.9                220.1

NC       .1       .05      .035
X1     9401         0         0         0         1         1         1
X3                                   70.2                 221
1
   29DEC93      14:50:16                                                                                PAGE    3


              VALLEY SECTION B MOVED UPSTREAM
X1     9576        33       275       397       175       175       175                   0.25
GR    705.0         0     705.0        38     705.2        63     704.6        88     704.6       113
GR    698.9       129     704.1       145     692.7       175     691.9       200     692.6       225
GR    692.6       250     691.5       275     688.8       280     687.3       290     686.5       300
GR    686.8       310     686.9       320     686.9       330     686.3       340     686.7       350
GR    686.8       360     687.3       370     687.3       380     688.9       393     691.2       397
GR    692.0       402     694.4       408     694.3       455     694.5       505     694.3       555
GR    694.1       605     695.0       655     700.0       700

NC                                     .1        .3
X1     9.01        50      262.      365.    4135.0    4335.0    4509.0
GR    715.5        0.     715.4       36.     715.4       52.     715.5       60.     715.3        84.
GR    715.5       105.     715.5      108.     712.6      123.     715.2      138.     711.4       157.
GR    709.3       167.     708.8      183.     707.3      191.     703.6      215.     699.5       239.
GR    695.9       257.     695.4      262.     693.5      266.     691.8      272.     690.8       276.
GR    690.6       278.     690.5      284.     690.3      290.     690.0      296.     689.5       302.
```

```
GR    689.7      312.      689.7      314.      689.7      321.      689.9      325.      690.1      330.
GR    690.1      336.      690.0      339.      690.0      347.      690.1      348.      691.1      357.
GR    691.7      361.      692.7      364.      694.9      365.      695.4      370.      696.7      376.
GR    697.2      413.      697.1      422.      697.2      464.      697.3      471.      697.8      515.
GR    697.9      520.      698.8      566.      698.8      569.      699.4      617.      710.0       625

NC      .08       .08
                VALLEY SECTION C (61C)
X1    18600        23       250.      334.     4140.0     4340.0     4515.0
GR    725.8         0      725.5        50      726.1       100      726.1       150      725.2       174
GR    699.8       245      699.0       250      694.7       255      692.4       265      692.5       275
GR    692.5       285      693.0       295      692.5       305      692.5       315      693.5       325
GR    694.9       332      698.4       334      699.8       380      699.6       430      701.0       480
GR    703.2       530      703.6       580      710.0       600

X1    10.01        41       250.      346.     3240.0     3440.0     3612.0
GR    726.3        0.      726.4       25.      725.6       50.      725.0       75.      724.7      100.
GR    724.2      125.      723.9      150.      723.1      174.      722.9      175.      710.6      228.
GR    703.5      245.      701.9      250.      699.5      254.      697.4      260.      697.3      261.
GR    696.4      267.      696.2      274.      695.3      280.      695.5      290.      695.5      291.
GR    695.5      299.      695.6      302.      696.0      309.      696.0      312.      695.8      318.
GR    695.7      323.      695.8      328.      696.1      333.      696.5      337.      697.2      343.
GR    698.6      344.      702.4      346.      704.3      387.      704.5      393.      704.8      409.
GR    707.4      445.      712.0      496.      712.6      502.      714.3      548.      714.4      550.
GR    714.9      599.

NC      .09       .09
                VALLEY SECTION D (61A)
X1    25825        24       250.      358.     3240.0     3400.0     3613.0
GR    726.8         0      727.1        25      724.2        75      722.3       125      721.0       175
GR    715.3       228      704.9       250      701.7       256      699.9       266      698.9       276
GR    699.2       286      698.3       296      698.5       306      698.5       316      699.2       326
GR    698.9       336      699.2       346      699.7       355      706.4       358      708.9       400
GR    709.8       423      723.9       518      725.6       568      726.2       618
1
   29DEC93      14:50:16                                                                                PAGE    4


NC                                      .3       0.5
X1    25925        49       99.9       385      100.0      100.0      100.0      0.71
X3                                    70.9                 273.4
GR    722.1         0      721.0        25      718.2        50      715.3        75      715.3        98
GR    716.6      99.9      716.6       100      702.1       146      700.1     152.9      700.1       153
GR    699.1     153.4      699.1     153.8      699.1     154.2      699.1     155.2      699.1     155.3
GR    699.1       162      699.3       172      699.8       182      699.9       192      699.5       202
GR    699.2     211.9      699.2       212      699.0     214.2      699.0     214.3      699.4       230
GR    699.5       240      699.7       250      700.6       260      698.4     269.9      698.4       270
GR    698.6     272.2      698.6     272.3      699.7       288      700.4       298      700.5       308
GR    700.5       318      700.4     327.9      700.4       328      702.1     330.2      702.1     330.3
GR    702.1       335      717.3       380      719.8     384.9      719.8       385      706.4       388
GR    707.6       410      708.9       435      709.8       460      712.3       485

NC      .03       .03       .03
                DOWNSTREAM FACE LOOMIS ROAD
                COMBINED SECTIONS 61 & 61.1
X1    25926         0         0         0         1         1         1
X2                                                                                      0.71
X3                                    70.9                 273.4
BT      -28         0      724.6                  25      724.0                  50      723.4
BT                 75      723.1                99.9      723.1      716.6       100      723.1     720.3
BT               152.9      723.5     720.7       153      723.5      700.1     155.2      723.5     699.1
BT               155.3      723.5     720.7     211.9      723.8      721.0       212      723.8     699.2
BT               214.2      723.8     699.0     214.3      723.8      721.0     269.9      724.2     721.4
BT                 270      724.2     698.4     272.2      724.2      698.6     272.3      724.2     721.4
BT               327.9      724.5     721.7       328      724.5      700.4     330.2      724.5     702.1
BT               330.3      724.5     721.7     384.9      724.9      722.1       385      724.9     719.8
BT                 410      725.2                 435      725.6                 460      726.1
BT                 485      726.5

                UPSTREAM FACE LOOMIS ROAD (61B)
                BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1    25974         0         0         0        48        48        48
X2                                                                     1
X3                                    70.9                 273.4

NC      .04       .08      .035
X1    25975         0         0         0         1         1         1
X3                                    70.2                  274
```

```
NC      .08
                VALLEY SECTION D MOVED UPSTREAM
X1    26075        24       250       358       100       100       100                0.17
GR    726.8         0     727.1        25     724.2        75     722.3       125     721.0       175
GR    715.3       228     704.9       250     701.7       256     699.9       266     698.9       276
GR    699.2       286     698.3       296     698.5       306     698.5       316     699.2       326
GR    698.9       336     699.2       346     699.7       355     706.4       358     708.9       400
GR    709.8       423     723.9       518     725.6       568     726.2       618
1
   29DEC93      14:50:16                                                                          PAGE    5


NC                                     .1        .3
X1    16.01        42      250.      351.    3900.0    4582.0    4582.0
GR    720.1        0.     720.3       25.     719.6       50.     719.2       75.     719.0      100.
GR    718.3      125.     717.8      150.     717.4      175.     716.0      200.     714.0      228.
GR    708.3      250.     705.9      257.     704.7      264.     703.7      269.     703.4      272.
GR    702.8      281.     702.7      282.     702.7      289.     702.5      294.     702.2      298.
GR    701.5      306.     701.8      313.     702.0      320.     702.2      322.     702.6      328.
GR    702.7      335.     702.9      339.     703.1      342.     703.6      347.     704.0      348.
GR    708.1      351.     714.9      371.     715.7      392.     715.9      400.     716.9      414.
GR    716.9      415.     720.1      458.     724.7      508.     724.8      510.     725.6      559.
GR    725.6      559.     726.3      609.

NC     .045        .1
X1    20.03        52      250.      348.      1500      1400      1778
GR    717.5        0.     717.6       25.     717.2       50.     717.2       75.     717.3      100.
GR    716.7      125.     716.2      150.     716.0      175.     715.1      200.     713.4      228.
GR    709.6      250.     707.5      257.     706.2      265.     706.1      265.     705.2      270.
GR    704.8      274.     704.2      283.     704.2      283.     704.1      284.     704.0      292.
GR    703.7      297.     703.5      301.     703.4      301.     702.7      310.     703.0      316.
GR    703.3      322.     703.5      323.     703.5      324.     703.9      328.     704.1      334.
GR    704.3      338.     704.3      338.     704.6      340.     705.0      345.     705.2      345.
GR    705.4      345.     708.7      348.     717.7      368.     718.3      389.     718.5      397.
GR    718.5      397.     719.6      411.     719.6      411.     719.6      412.     721.6      455.
GR    721.6      455.     725.0      505.     725.0      505.     725.1      507.     725.6      555.
GR    725.6      556.     726.3      606.

X1    20.08        52      400.      494.    1800.0    1700.0    2170.0
GR    720.0        0.     714.0       150     714.3      200.     714.5      225.     714.9      250.
GR    714.5      275.     714.2      300.     714.1      325.     713.8      350.     712.6      378.
GR    711.3      400.     709.6      408.     708.1      416.     708.0      416.     707.1      422.
GR    706.6      426.     706.1      435.     706.0      436.     706.0      437.     705.8      445.
GR    705.4      451.     705.1      455.     705.1      456.     704.3      465.     704.7      470.
GR    705.0      474.     705.2      475.     705.2      476.     705.5      479.     706.0      484.
GR    706.2      486.     706.2      486.     706.5      488.     707.0      491.     707.1      492.
GR    707.3      492.     709.5      494.     721.4      514.     721.7      535.     721.9      543.
GR    721.9      543.     723.1      557.     723.1      557.     723.1      558.     723.5      600.
GR    723.5      601.     725.4      650.     725.4      651.     725.4      652.     725.5      701.
GR    725.5      701.     726.3      751.

NC                                     .5        1.0
X1    20.07         0         0         0     200.0     200.0     200.0
X3                                    271                 629

                VALLEY SECTION E (60A)
X1    35244        23      250.      343.     400.0     340.0     439.0
X3                                    228                 366
GR    713.3         0     713.4        50     714.5       100     713.8       150     713.6       200
GR    711.6       250     708.4       266     706.9       276     706.4       286     706.1       296
GR    705.4       306     704.6       316     705.5       326     706.6       336     707.4       341
GR    709.6       343     722.1       363     722.5       392     723.8       406     723.9       450
GR    725.5       500     725.5       550     726.3       600
1
   29DEC93      14:50:16                                                                          PAGE    6


X1    35319        23       100       200      75.0      75.0      75.0
X3                                   99.9                 200
GR    713.8         0     713.7        25     713.8        50     712.6        75     711.6        99
GR    709.9      99.9     709.9       100     708.4       111     707.0       121     707.4       126
GR    705.8       136     705.1       146     705.1       156     705.0       166     705.1       176
GR    708.4       196     708.8     199.9     708.8       200     709.6       202     721.6       225
GR    722.0       250     722.5       275     723.1       300

NC      .03       .03       .03
                DOWNSTREAM FACE SHEPHERD ROAD (60B)
                COMBINED SECTIONS 60 & 60.1
```

```
X1    35320        0        0        0        1        1        1
X3                                 99.9                200
BT      -12        0    720.4                 25    720.0                 50    720.0
BT                75    720.7                99.9    720.8    709.9      100    720.8    718.5
BT             199.9    721.0    718.8      200    721.0    708.8      225    721.6
BT               250    722.0                275    722.5                300    723.1

               UPSTREAM FACE SHEPHERD ROAD
X1    35340        0        0        0       20       20       20
X2                                                             1
X3                                 99.9                200

NC      .06     .045     .035
X1    35341        0        0        0        1        1        1
X3                                  99                201

               VALLEY SECTION E MOVED UPSTREAM
X1    35466       28      255      348      125      125      125                0.17
GR    725.0        0    724.0        1    723.0        2    722.0        3    720.0        4
GR    713.3        5    713.4       55    714.5      105    713.8      155    713.6      205
GR    711.6      255    708.4      271    706.9      281    706.4      291    706.1      301
GR    705.4      311    704.6      321    705.5      331    706.6      341    707.4      346
GR    709.6      348    722.1      368    722.5      397    723.8      411    723.9      455
GR    725.5      505    725.5      555    726.3      605

NC      .08      .07     .035       .1       .3
X1    22.01       49     243.     357.   2640.0   3100.0   3438.0
GR    720.6       0.    720.6       0.    720.9      26.    721.1      53.    721.8      79.
GR    722.1      97.    722.0     106.    720.9     132.    719.8     146.    716.2     195.
GR    715.8     198.    715.0     243.    712.2     249.    711.2     256.    710.4     263.
GR    710.4     264.    709.8     270.    709.3     276.    709.3     277.    709.0     284.
GR    708.8     289.    708.7     291.    708.6     298.    708.6     301.    708.4     305.
GR    708.7     313.    708.5     314.    707.9     320.    707.5     327.    707.9     335.
GR    708.1     338.    708.5     343.    708.9     349.    709.1     351.    709.9     355.
GR    710.0     355.    712.1     357.    720.0     376.    720.4     377.    720.9     407.
GR    721.9     421.    722.0     425.    722.1     466.    722.3     473.    723.1     517.
GR    723.1     522.    723.5     567.    723.5     570.    723.8     618.
1
   29DEC93      14:50:16                                                                PAGE    7


NC                .11
X1    22.02       50     237.     371.   2600.0   3000.0   3412.0
GR    727.7       0.    728.2      26.    728.5      47.    728.6      51.    729.3      77.
GR    729.4      95.    729.4     103.    727.6     129.    725.5     142.    718.5     189.
GR    718.0     192.    718.1     237.    713.4     244.    712.6     252.    712.1     261.
GR    712.1     261.    711.8     269.    711.5     276.    711.5     278.    711.2     286.
GR    711.0     292.    710.9     295.    710.8     303.    710.8     307.    710.7     312.
GR    711.7     320.    711.4     322.    710.5     329.    710.2     337.    710.4     346.
GR    710.5     350.    710.8     355.    711.0     362.    711.2     365.    712.3     368.
GR    712.4     368.    714.4     371.    718.4     391.    718.6     392.    719.2     422.
GR    719.9     436.    719.9     440.    720.1     482.    720.2     489.    720.6     533.
GR    720.6     538.    721.3     585.    721.3     587.    721.2     637.    730.0     650.

               VALLEY SECTION F (59A)
X1    45745       32     230.     385.   3429.0   1450.0   3429.0
GR    734.9        0    735.5       25    736.1      50    736.9      75    736.8     100
GR    734.3      125    720.2      187    721.3     230    714.7     238    714.0     248
GR    713.9      258    713.8      268    713.7     278    713.4     288    713.1     298
GR    713.1      308    713.1      318    714.7     328    713.1     338    712.9     348
GR    712.9      358    713.1      368    713.2     378    714.7     382    716.7     385
GR    716.7      405    717.9      455    718.2     505    718.0     555    719.1     605
GR    718.5      655    730.0      750

               VALLEY SECTION F MOVED UPSTREAM
X1    46623        0        0        0      878      878      878                0.39

NC                                  .5      1.0
X1    47223        0        0        0      600      600      600                0.24
X3                                 164                509    723.8

X1    47423        0        0        0      200      200      200                0.10
X3                                 264                409    723.8

X1    47473        0        0        0       50       50       50                0.02
X3                                 277                397    723.8

X1    47523        0        0        0       50       50       50                0.02
X3                                 289                384    723.8
```

```
                DOWNSTREAM FACE LEATON ROAD (59B)
                COMBINED SECTIONS 59 & 59.1
X1    47546        34        99       247        23        23        23      0.50
X3                                   50.0                 133.5     724.0
GR    733.8         0     727.3        25     721.6        50     720.8        75     716.5        99
GR    728.4      99.9     728.4       100     716.6       131     714.7       137     713.7     145.9
GR    713.7       146     711.0     148.9     711.0       149     710.7       159     710.7       169
GR    711.2       179     709.5       189     709.5     195.9     709.5       196     709.1     198.9
GR    709.1       199     709.0       210     713.7       217     715.9       220     726.7     245.9
GR    726.7       246     715.9       247     716.7       271     717.3       296     717.9       321
GR    718.0       346     720.0       520     720.0       650     720.0       780
1
   29DEC93      14:50:16                                                                          PAGE    8


SC    3.025       0.5       2.8       260     16.65     18.82        54       8.3
                UPSTREAM FACE LEATON ROAD
                BRIDGE SKEW DUE TO COMBINED RIVER, ABUTMENT AND PIER ORIENTATION
X1    47600         0         0         0        54        54        54
X2                            2     729.0     725.5
X3                                   50.0                 133.5     724.0

NC      .06        .1      .035
QT        2      6590      9110
X1    47603        32       230       385         3         3         3                0.81
X3                                    263                   353     724.5
GR    734.9         0     735.5        25     736.1        50     736.9        75     736.8       100
GR    734.3       125     720.2       187     721.3       230     714.7       238     714.0       248
GR    713.9       258     713.8       268     713.7       278     713.4       288     713.1       298
GR    713.1       308     713.1       318     714.7       328     713.1       338     712.9       348
GR    712.9       358     713.1       368     713.2       378     714.7       382     716.7       385
GR    716.7       405     717.9       455     718.2       505     718.0       555     719.1       605
GR    718.5       655     730.0       675

X1    47616         0         0         0        13        13        13                0.01
X3                                    250                   366     724.5

X1    47656         0         0         0        40        40        40                0.04
X3                                    210                   406     725.0

                VALLEY SECTION F MOVED UPSTREAM
X1    47816         0         0         0       160       160       160                0.03

NC                         .035        .1        .3
X1    29.01        51      230.      364.    3050.0    3850.0    4343.0
GR    734.8        0.     734.7       25.     734.7       25.     734.9       50.     735.3       75.
GR    735.3       75.     735.2      100.     733.3      125.     733.2      125.     724.5      176.
GR    722.6      187.     723.3      226.     723.2      230.     718.2      236.     717.5      243.
GR    717.3      251.     717.1      259.     716.9      266.     716.6      274.     716.2      282.
GR    716.1      289.     716.0      297.     717.0      304.     715.7      312.     715.4      320.
GR    715.5      326.     715.8      332.     715.8      333.     715.8      339.     715.8      344.
GR    715.8      346.     715.8      353.     715.9      356.     716.7      359.     717.3      361.
GR    718.9      364.     719.8      364.     720.0      366.     719.8      384.     719.8      388.
GR    720.5      433.     720.5      440.     720.7      467.     721.1      472.     721.1      482.
GR    720.9      525.     720.9      532.     721.8      577.     721.8      581.     721.3      630.
GR    730.0       650

X1    29.02        52      229.      344.    2700.0    2800.0    4408.0
GR    733.8        0.     733.1       25.     733.1       25.     732.9       50.     732.8       75.
GR    732.8       75.     732.7      100.     731.4      125.     731.3      125.     725.5      175.
GR    724.2      187.     724.6      225.     724.3      229.     720.8      234.     720.2      239.
GR    719.9      244.     719.6      249.     719.3      255.     718.9      260.     718.5      265.
GR    718.2      270.     718.0      276.     718.5      281.     717.5      286.     717.1      291.
GR    717.3      299.     717.7      306.     717.8      307.     717.6      315.     717.6      320.
GR    717.6      322.     717.7      330.     717.8      334.     718.4      338.     719.1      340.
GR    720.7      343.     722.0      344.     722.4      345.     722.1      363.     722.0      367.
GR    722.2      412.     722.2      419.     722.5      444.     723.2      450.     723.2      460.
GR    722.8      501.     722.9      508.     723.6      553.     723.7      557.     723.2      605.
1
   29DEC93      14:50:16                                                                          PAGE    9


GR    730.0       950     735.0      1000

NC      .05       .05
X1    29.03        52      229.      323.    2400.0    3200.0    4408.0
GR    732.8        0.     731.4       25.     731.4       25.     730.8       50.     730.3       75.
GR    730.3       75.     730.2      100.     729.5      125.     729.5      125.     726.4      175.
```

GR	725.7	186.	725.8	225.	725.3	229.	723.4	232.	722.8	234.
GR	722.4	237.	722.0	240.	721.6	243.	721.2	246.	720.7	249.
GR	720.4	252.	720.0	255.	720.0	257.	719.2	260.	718.8	263.
GR	719.0	272.	719.7	279.	719.9	281.	719.5	290.	719.5	296.
GR	719.5	299.	719.5	308.	719.6	312.	720.0	316.	720.8	319.
GR	722.4	323.	724.2	323.	724.9	324.	724.3	342.	724.2	346.
GR	723.9	390.	723.8	397.	724.3	422.	725.4	427.	725.3	437.
GR	724.8	478.	724.9	485.	725.5	529.	725.5	532.	725.2	580.
GR	730.0	670	735.0	700						

VALLEY SECTION G (58)

X1	65375	26	254.	328.	2900.0	3000.0	4400.0			
GR	735.0	0	731.8	25	729.8	50	727.8	100	727.3	200
GR	727.1	250	726.4	254	720.5	260	720.8	270	721.9	280
GR	721.4	290	721.3	300	721.3	310	721.7	320	724.1	327
GR	726.4	328	727.3	329	726.4	350	725.5	400	726.1	425
GR	727.5	430	726.8	480	727.4	530	727.1	580	730.0	1000
GR	735.0	1100								

7315

VALLEY SECTION H (57)

X1	68635	27	632.	718.	2560.0	2060.0	3260.0			
GR	735.0	0	730.0	180	726.5	380	725.7	530	725.8	580
GR	727.1	630	726.7	632	724.7	633	721.7	640	720.7	650
GR	722.1	660	721.7	670	721.7	680	721.6	680	721.4	700
GR	721.4	710	723.3	717	726.8	718	728.3	719	727.3	730
GR	727.5	780	726.8	830	726.3	880	726.7	930	727.1	980
GR	730.0	990	740.0	1020						
X1	48.01	50	1034.	1124.	830.0	830.0	1128.0			
GR	735.0	0.	730.3	100.	730.2	665.	729.1	736.	728.2	826.
GR	728.2	829.	727.6	917.	727.5	951.	727.7	992.	728.0	1007.
GR	728.6	1033.	728.4	1034.	726.6	1036.	726.1	1037.	725.8	1038.
GR	724.1	1043.	723.2	1048.	723.2	1048.	722.6	1054.	722.1	1059.
GR	721.8	1065.	722.8	1074.	722.6	1079.	722.6	1082.	722.9	1091.
GR	722.8	1091.	722.8	1093.	723.6	1104.	724.2	1105.	724.2	1106.
GR	724.3	1109.	724.4	1112.	725.2	1117.	727.3	1124.	729.7	1124.
GR	730.8	1125.	730.6	1136.	730.6	1136.	732.8	1152.	733.0	1168.
GR	733.1	1182.	732.8	1227.	732.8	1228.	732.4	1275.	732.4	1276.
GR	732.5	1321.	732.5	1346.	732.6	1368.	734.6	1377.	741.2	1405.
X1	52.01	86	712.	804.	315.0	664.0	564.0			
GR	735.0	0.	732.3	69.	730.4	227.	730.3	294.	729.9	373.
GR	730.0	458.	729.8	475.	729.8	478.	729.4	507.	728.8	569.
GR	728.8	571.	728.8	579.	728.7	617.	728.6	631.	728.7	655.
GR	728.7	664.	728.9	681.	728.9	683.	729.1	693.	729.5	711.
GR	729.5	711.	729.3	712.	727.9	714.	727.6	714.	727.2	716.
GR	727.1	716.	726.7	716.	726.5	717.	724.8	723.	724.7	723.
GR	724.2	729.	724.1	729.	724.1	729.	723.3	736.	723.3	737.

1

GR	722.8	743.	722.7	743.	722.5	750.	723.2	758.	723.2	758.
GR	723.1	763.	723.1	763.	723.1	766.	723.1	766.	723.5	773.
GR	723.5	774.	723.5	775.	723.6	776.	724.8	785.	725.3	786.
GR	725.6	786.	725.9	787.	725.9	787.	725.9	788.	726.0	789.
GR	726.1	791.	726.2	793.	726.3	793.	727.4	798.	729.5	803.
GR	731.5	804.	732.2	805.	732.5	815.	732.5	816.	736.0	830.
GR	736.0	831.	736.3	846.	736.3	846.	736.4	859.	736.4	860.
GR	736.3	902.	736.3	903.	736.3	903.	736.3	904.	735.9	948.
GR	735.9	948.	735.9	949.	735.9	959.	735.9	992.	735.9	992.
GR	735.9	1016.	735.9	1016.	735.9	1037.	737.2	1045.	737.3	1046.
GR	741.9	1072.								
X1	48.02	49	487.	581.	315.0	664.0	564.0			
GR	735.0	0.	730.5	155.	730.4	201.	729.7	255.	729.8	325.
GR	729.8	327.	729.2	396.	729.3	422.	729.5	454.	729.8	466.
GR	730.1	486.	730.0	487.	728.5	489.	727.9	491.	727.2	492.
GR	725.2	499.	724.8	506.	724.7	506.	723.8	514.	723.2	522.
GR	723.0	530.	723.5	537.	723.4	542.	723.5	545.	724.0	552.
GR	724.0	553.	725.7	563.	726.9	564.	727.1	565.	727.2	567.
GR	727.5	570.	729.0	575.	731.3	58[illegible].	732.7	581.	733.2	582.
GR	733.8	591.	733.9	592.	738.3	6[illegible].	738.6	621.	738.7	634.
GR	738.7	676.	738.7	677.	738.4	720.	738.4	730.	738.3	762.
GR	738.2	785.	738.2	805.	739.1	814.	742.4	839.		
X1	71612	28	440.	538.	620.0	721.0	721.0		-2.13	
GR	735.0	0	733.6	200	732.8	225	733.6	325	733.0	375
GR	733.6	425	733.8	440	731.7	445	730.8	446	728.4	455
GR	728.4	465	727.2	475	726.4	485	726.2	495	726.3	505

```
GR    727.4       515     730.0       523     731.7       524      732.       525     732.6       529
GR    737.7       538     739.3       548     745.8       561     746.3       575     746.8       625
GR    746.5       675     745.9       725     745.7       775

NC                                     .5       1.0
                VALLEY SECTION I MOVED DOWNSTREAM
X1    72012         0         0         0       400       400       400
X3                                    200                 775

X1    72372        28       147       251     360.0     360.0     360.0
X3                                   99.9                 251
GR    731.6         0     731.3        25     731.4        50     731.7        75     732.0        99
GR    744.5      99.9     732.0       100     727.8       135     725.8     146.9     725.8       147
GR    722.2     149.9     722.2       150     721.2       160     720.7       170     720.7       180
GR    725.5     199.9     725.5       200     725.4     202.9     725.4       203     727.7       210
GR    729.7       224     732.0       250     739.6     250.9     739.6       251     744.0       275
GR    744.6       300     744.8       325     744.9       350

NC      .03       .03       .03
                DOWNSTREAM FACE ISABELLA ROAD (56B)
X1    72373         0         0         0         1         1         1
X3                                   99.9                 251
BT      -20         0     756.8                  25     755.7                  50     754.1
BT                 75     752.7                99.9     751.2     744.5       100     751.2     749.0
BT              146.9     749.2     747.0       147     749.2     725.8     149.9     749.2     722.2
BT                150     749.2     747.0     199.9     747.1     744.9       200     747.1     725.5
1
   29DEC93      14:50:16                                                                          PAGE   11

BT              202.9     747.1     725.4       203     747.1     744.9     250.9     745.1     742.8
BT                251     745.1     739.6       275     744.0                 300     743.0
BT                325     742.1                 350     741.2

                UPSTREAM FACE ISABELLA ROAD
X1    72427         0         0         0        54        54        54
X2                                                                  1
X3                                   99.9                 251

NC      .07       .07      .035
X1    72428         0         0         0         1         1         1
X3                                    99                 252

                VALLEY SECTION I MOVED DOWNSTREAM
X1    72523        28       240       338        95        95        95                -1.70
X3                                    90
GR    733.6         0     732.8        25     732.5        75     733.6       125     733.0       175
GR    733.6       225     733.8       240     731.7       245     730.8       246     728.4       255
GR    728.4       265     727.2       275     726.4       285     726.2       295     726.3       305
GR    727.4       315     730.0       323     731.7       324      732.       325     732.6       329
GR    737.7       338     739.3       348     745.8       361     746.3       375     746.8       425
GR    746.5       475     745.9       525     745.7       575

X1    72600        28       840       938        77        77        77                -1.65
X3                                   613
GR    740.0         0     733.6       600     732.8       625     733.6       725     733.0       775
GR    733.6       825     733.8       840     731.7       845     730.8       846     728.4       855
GR    728.4       865     727.2       875     726.4       885     726.2       895     726.3       905
GR    727.4       915     730.0       923     731.7       924      732.       925     732.6       929
GR    737.7       938     739.3       948     745.8       961     746.3       975     746.8      1025
GR    746.5      1075     745.9      1125     745.7      1175

X1    72950         0         0         0       350       350       350                 0.29

NC                                     .1        .3
X1    73765         0         0         0       616       766       815                 0.68

NC                                     .5       1.0
                VALLEY SECTION I (55)
X1    74580         0         0         0       617       767       815                 0.68
X3                                   445

NC      .07       .07                  .5       1.0
                VALLEY SECTION I MOVED UPSTREAM
X1    75670         0         0         0       900      1090      1090                 0.38
X3                                   718                 1051

X1    75870         0         0         0       200       200       200                 0.07
X3                                   768                 1001
1
```

```
                REMOVED RAILROAD (54A)
X1    76070       23      255.      325.       200       200       200
GR    748.8        0     748.6        25     748.9        75     749.1       125     748.8       178
GR    732.4      228     731.3       255     729.7       260     727.2       265     726.9       275
GR    725.9      285     724.8       295     725.7       305     727.7       315     729.7       324
GR    729.7      325     735.1     325.1     749.6       355     749.6       375     749.7       425
GR    749.1      475     749.4       525     749.9       575

NC      .09      .08
X1    76120       28      240.      338.        50        50        50                0.25
X3                                  170                 400
GR    733.6        0     732.8        25     732.5        75     733.6       125     733.0       175
GR    733.6      225     733.8       240     731.7       245     730.8       246     728.4       255
GR    728.4      265     727.2       275     726.4       285     726.2       295     726.3       305
GR    727.4      315     730.0       323     731.7       324      732.       325     732.6       329
GR    737.7      338     739.3       348     745.8       361     746.3       375     746.8       425
GR    746.5      475     745.9       525     745.7       575

                VALLEY SECTION I MOVED UPSTREAM
X1    76180        0         0         0        60        60        60                0.30
X3                                  110                 575

                VALLEY SECTION J MOVED DOWNSTREAM (53)
X1    76432       23      250.      329.     252.0     252.0     252.0               -1.73
GR    735.0        0     736.4        50     737.0       100     735.6       150     736.2       200
GR    735.2      245     734.1       249     729.7       250     726.6       260     726.2       270
GR    728.1      280     729.5       290     730.1       300     731.6       310     732.4       320
GR    734.1      325     735.0       329     734.9       350     734.6       400     735.3       450
GR    735.8      500     735.1       550     735.5       575

NC      .07      .12                  .5       1.0
X1    77032        0         0         0       600       500       600                0.22
X3                                  135                 410

X1    77382       35        99       244       350       350       350      0.71
X3                                 70.9                 210
GR    735.6        0     735.9        25     736.2        50     735.7        75     735.2        99
GR    749.9     99.9     749.9       100     734.1       148     730.4       151     723.9     161.9
GR    723.9      162     723.9     165.9     723.9       166     723.4       175     724.6       185
GR    727.0      195     727.8       203     727.2     204.5     726.6       206     726.0     207.5
GR    725.5      209     726.5       219     726.6     228.9     726.6       229     727.3     232.9
GR    727.3      233     730.4       239     733.7       244     750.0     294.9     750.0       295
GR    733.7      296     734.8       320     734.7       345     734.7       370     735.1       395

NC      .04      .04       .03
                DOWNSTREAM FACE NORTH BOUND US-27 (54B)
X1    77383        0         0         0         1         1         1
X2                                                                                  0.71
X3                                 70.9                 210
BT      -20        0     755.9                  25     755.8                  50     755.7
BT                 75     755.9                99.9     756.0     749.9       100     756.0     752.6
BT              161.9     756.0     752.6       162     756.0     723.9     165.9     756.0     723.9
BT                166     756.0     752.6     228.9     756.1     752.7       229     756.1     726.6
```

1


```
BT              232.9     756.1     727.3       233     756.1     756.1     294.9     756.2     752.7
BT                295     756.2     750.0       320     756.2                 345     756.3
BT                370     756.5                 395     756.6

                UPSTREAM FACE NORTH BOUND US-27
X1    77418        0         0         0        35        35        35
X2                                                                  1
X3                                 70.9                 210

X1    77419        0         0         0         1         1         1
X3                                 70.2                 211

X1    77484        0         0         0        65        65        65
X3                                 70.9                 210

                DOWNSTREAM FACE SOUTH BOUND US-27
X1    77485        0         0         0         1         1         1
X2                                                                                  0.71
X3                                 70.9                 210
```

```
BT      -20        0     755.9                  25     755.8                  50     755.7
BT                75     755.9                99.9     756.0     749.9      100     756.0     752.6
BT             161.9     756.0     752.6       162     756.0     723.9    165.9     756.0     723.9
BT               166     756.0     752.6     228.9     756.1     752.7      229     756.1     726.6
BT             232.9     756.1     727.3       233     756.1     756.1    294.9     756.2     752.7
BT               295     756.2     750.0       320     756.2                 345     756.3
BT               370     756.5                 395     756.6

                UPSTREAM FACE SOUTH BOUND UW-27
                BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1    77520        0         0         0        35        35        35
X2                                                                  1
X3                                   70.9                 210

NC      .01      .07      .035
X1    77521        0         0         0         1         1         1
X3                                   70.2                 211

X1    77546       23       250       329        25        25        25                -1.65
X3                                   215                 365
GR    735.0        0     736.4        50     737.0       100     735.6       150     736.2       200
GR    735.2      245     734.1       249     729.7       250     726.6       260     726.2       270
GR    728.1      280     729.5       290     730.1       300     731.6       310     732.4       320
GR    734.1      325     735.0       329     734.9       350     734.6       400     735.3       450
GR    735.8      500     735.1       550     735.5       575

X1    77596        0         0         0        50        50        50                  .13
X3                                   165                 415

                VALLEY SECTION J MOVED DOWNSTREAM (53)
X1    77746        0         0         0       150       150       150                  .26
1
   29DEC93      14:50:16                                                                          PAGE   14


NC                                    .1        .3
                VALLEY SECTION J (53)
X1    81550       25      950.     1029.      3100      2800      3804
GR    750.0        0     740.0       450     735.0       700     737.0       800     736.2       900
GR    735.2      945     734.1       949     729.7       950     726.6       960     726.2       970
GR    728.1      980     729.5       990     730.1      1000     731.6      1010     732.4      1020
GR    734.1     1025     735.0      1029     734.9      1050     734.6      1100     735.3      1150
GR    735.8     1200     735.1      1250     735.5      1275     740.0      1550     750.0      2000

NC      .07      .07                   .5       1.0
X1    82639        0         0         0       700       900      1089                 1.06
X3                                   740                1240

                VALLEY SECTION J MOVED UPSTREAM (53)
X1    83339        0         0         0       500       600       700                 0.56
X3                                   878                1101

NC                                    .5       1.0
                DOWNSTREAM FACE MISSION ROAD (52B)
                COMBINED SECTIONS 53 & 52
                BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1    83610       25        95       224       271       271       271      0.77
X3                                   76.9                 164
GR    735.6        0     735.9        25     736.2        50     735.7        75     735.2        95
GR    732.7     99.9     732.7       100     731.4       120     729.9       130     729.9       140
GR    729.5    153.9     729.5       154     729.8     156.9     729.8       157     731.2       169
GR    731.2      179     731.3       189     730.9       199     732.6     212.9     732.6       213
GR    734.9      224     734.8       238     734.7       263     734.8       288     735.2       313

SB              1.58       3.0                  99                946.25
                UPSTREAM FACE MISSION ROAD
X1    83646        0         0         0        36        36        36
X2                           1     742.1     745.9                                     0.77
X3                                   76.9                 164
BT      -16        0     745.9                  25     746.0                  50     746.4
BT                75     746.6                99.9     746.7     732.7      100     746.7     742.0
BT             153.9     746.7     742.0       154     746.7     729.5    156.9     746.7     729.8
BT               157     746.7     742.1     212.9     746.6     742.1      213     746.6     732.6
BT               238     746.5                 263     746.2                 288     746.2
BT               313     746.3

NC     .035      .09      .035
X1    83677       23       250       329        31        31        31                 1.89
X3                                   216                 364
```

```
GR    735.0        0      736.4        50      737.0        100      735.6        150      736.2        200
GR    735.2      245      734.1       249      729.7        250      726.6        260      726.2        270
GR    728.1      280      729.5       290      730.1        300      731.6        310      732.4        320
GR    734.1      325      735.0       329      734.9        350      734.6        400      735.3        450
GR    735.8      500      735.1       550      735.5        575
1
   29DEC93      14:50:16                                                                                PAGE   15

              VALLEY SECTION J MOVED UPSTREAM (53)
X1    83887        0          0         0        210        210        210                  0.22

NC      .07       .1        .04        .1         .3
              VALLEY SECTION     SECTION FROM EXISTING STUDY
              LEFT ENCROACHMENT CHANGED FROM STA. 430 TO 200 BASED ON 2-FT MAP
X1    85275       21       600.      701.     1240.0     1240.0     1388.0
X3                                   200
GR    749.5        0      748.0        70      744.0        100      741.9        200      742.1        350
GR    742.0      440      738.0       460      738.0        540      739.8        570      738.0        590
GR    739.5      600      737.3       607      734.0        610      732.2        630      731.8        645
GR    730.6      665      731.7       680      734.0        698      735.7        701      737.2        714
GR    747.3      767

NC      0.1      0.1      0.045
              VALLEY SECTION K   SECTION FROM EXISTING STUDY
              LEFT ENCROACHMENT CHANGED FROM STA. 540 TO 300 BASED ON 2-FT MAP
              RIGHT ENCROACHMENT ELIMINATED
X1    85825       22       800.      887.      400.0      550.0      550.0
X3                                   300
GR    752.5        0      750.0       100      738.0        130      739.4        170      737.5        230
GR    739.8      320      738.0       370      737.5        470      738.0        550      738.0        730
GR    742.0      770      739.5       800      734.5        808      731.9        828      731.7        848
GR    731.9      868      734.5       884      737.2        887      738.5        950      739.4       1050
GR    738.0     1150      752.0      1200

NC      0.1     0.06      0.045        .2         .4
              VALLEY SECTION L   SECTION FROM EXISTING STUDY
X1    87215       17      1200.     1344.      850.0     1050.0     1390.0
X3                                   420
GR    739.0        0      740.8        50      741.6        140      740.0        230      739.8        270
GR    740.0      470      737.8       490      739.8        510      740.5       1000      737.3       1200
GR    735.4     1209      733.4      1230      732.8       1245      731.8       1265      735.4       1283
GR    737.5     1289      757.1      1344

NC      0.1      0.1      0.042        .1         .3
              VALLEY SECTION M   SECTION FROM EXISTING STUDY
              ENCROACHMENTS ADDED TO BOTH SIDES BASED ON 2-FT MAP
X1    88600       20        400       490       1000        600       1385
X3                                    50                    650
GR    744.8       40      741.5        60      740.5        230      738.5        240      740.5        250
GR    741.0      300      739.9       400      737.5        407      736.8        425      736.2        427
GR    733.7      440      734.5       450      734.4        460      735.0        465      734.2        475
GR    736.2      482      739.3       490      741.8        550      743.0        630      750.0        730

NC      .08      .08       .045
              VALLEY SECTION N   SECTION FROM EXISTING STUDY
              RIGHT ENCROACHMENT CHANGED FROM STA 670 TO 690 BASED ON 2-FT MAP
X1    89700       16       295.      375.     1040.0     1280.0     1100.0
X3                                   230                    690
GR    747.2        0      745.7         8      740.4         19      742.4         45      742.4        132
GR    742.5      224      742.7       295      736.7        298      734.9        299      732.2        320
GR    733.6      345      736.7       364      740.7        375      743.4        500      744.0        700
1
   29DEC93      14:50:16                                                                                PAGE   16

GR    749.9      775

NC      0.1      0.1      0.045
              VALLEY SECTION O   SECTION FROM EXISTING STUDY
X1    90800       27      1350.     1420.      730.0      830.0     1100.0
X3                                   720
GR    750.0      210      748.0       211      746.0        264      744.0        265      743.1        270
GR    743.1      355      744.0       360      746.0        365      746.0        400      744.8        500
GR    746.0      608      752.3       710      746.0        795      744.0        825      743.3        870
GR    744.0      923      744.0      1070      746.4       1100      744.1       1225      742.1       1350
GR    738.6     1360      736.4      1380      734.2       1400      738.6       1418      741.3       1420
GR    742.3     1430      751.6      1444
```

```
NC      0.08        0.1      0.047
                VALLEY SECTION P   SECTION FROM EXISTING STUDY
                LEFT ENCROACHMENT CHANGED FROM STA. 630 TO 600 BASED ON 2-FT MAP
X1     91350         29       725.      1013.       430.0       480.0       550.0
X3                                       600
GR     750.0         88      748.0        94       746.0         135       744.0         140       743.6         150
GR     743.6        230      750.2       250       750.0         278       748.0         279       747.2         400
GR     746.0        600      747.5       700       740.7         725       737.5         732       736.6         743
GR     736.1        754      737.5       766       738.2         770       738.4         778       743.1         790
GR     742.3        890      743.3       944       737.5         958       736.5         975       736.0         990
GR     737.5       1003      742.1      1013       746.0        1125       750.1        1162

NC       0.1        0.1      0.045
                VALLEY SECTION Q   SECTION FROM EXISTING STUDY
X1     91800         16       682.       830.       480.0       300.0       450.0
X3                                       590                     960
GR     750.0        490      748.0       560       747.0         600       744.6         682       738.2         698
GR     736.5        710      737.0       725       738.9         735       740.3         743       738.2         752
GR     738.2        826      739.5       830       744.8        1000       746.5        1200       748.2        1280
GR     750.8       1306

                INTERPOLATED SECTION ADDED
X1     92175         23       386.       506.       390.0       260.0       375.0
X3                                       288                     603
GR     751.3       270.      749.3       299.       748.5        312.       747.2        336.       746.0        357.
GR     744.2       374.      743.0       386.       739.6        401.       737.8        410.       737.4        412.
GR     736.6       428.      737.1       437.       738.1        444.       738.9        449.       738.0        455.
GR     738.1       459.      739.7       503.       740.5        506.       747.3        598.       747.4        603.
GR     748.3       717.      749.1       763.       750.4        778.

NC       0.1        0.1       0.04
                VALLEY SECTION R   SECTION FROM EXISTING STUDY
X1     92550         12        90.       182.       390.0       260.0       375.0
GR     752.6         50      750.0        60       746.0          80       743.2          86       741.4          90
GR     738.6        110      736.9       125       736.7         145       738.0         160       741.4         182
GR     750.0        205      750.0       250
1
   29DEC93      14:50:16                                                                                    PAGE   17


                VALLEY SECTION S   SECTION FROM EXISTING STUDY
X1     92900         11        90.       182.       350.0       480.0       350.0
X3                                        60
GR     750.0         20      750.0        40       748.0          55       741.4          90       738.6         110
GR     736.9        125      736.7       145       738.0         160       741.4         182       750.0         190
GR     756.0        200

NC                                        .3          .5
X1     93211         18       102        230       550.0       700.0       311.0         .91
GR     755.6          0      757.2       102       751.2         102       741.4         124       738.2         134
GR     754.4        134      754.4       138       738.4         138       732.9         160       733.1         180
GR     738.4        197      755.1       197       755.1         201       738.4         201       741.4         209
GR     750.6        230      758.7       230       760.8         332

                DOWNSTREAM FACE PICKARD AVE.   SECTION FROM EXISTING STUDY
X1     93221          0          0         0          10          10          10
X2                                                                                                  .91
BT         6          0      755.6     755.6         102       757.2       754.0         138       757.6       754.4
BT       197      758.3      755.1       230       758.7       755.5         332       760.8       760.8

                UPSTREAM FACE PICKARD AVE.     SECTION FROM EXISTING STUDY
X1     93279          0          0         0          58          58          58
X2                                                                             1

X1     93289          0          0         0          10          10          10

X1     93489         10         50       160         125         250         200
GR     756.8          0      754.4        40       741.4          50       738.2          73       736.2          93
GR     736.4        113      738.9       126       740.0         147       741.4         160       757.2         170

NC       0.1        0.1       0.04       0.1         0.3
                VALLEY SECTION T   SECTION FROM EXISTING STUDY
X1     93650         11        20.       135.       190.0       210.0       161.0
GR     755.1          0      753.3        20       739.9          45       737.7          65       738.3          85
GR     738.7        105      739.9       125       745.4         135       744.7         160       751.4         176
GR     754.5        218

NC       0.1        0.1      0.045        .2          .4
                VALLEY SECTION U   SECTION FROM EXISTING STUDY
```

```
                RIGHT ENCROACHMENT CHANGED FROM 212 TO 800 BASED ON 2-FT MAP
                LEFT ENCROACHMENT CHANGED FROM STA. 111 TO 90 BASED ON 2-FT MAP
X1    94800        18       117.       206.      1200.0      700.0      1150.0
X3                                      90                   800
GR    759.0         0      754.5        79       745.5        94       743.1       117       740.6       119
GR    738.0       140      739.6       160       739.9       180       740.6       202       743.7       206
GR    744.6       226      741.1       230       745.9       310       747.0       600       747.7       675
GR    746.0       750      746.0       850       750.0       880
1
   29DEC93      14:50:16                                                                                PAGE   18


                VALLEY SECTION V   SECTION FROM EXISTING STUDY
                SECTION EXTENDED, GR POINT ADDED AT STATION 480
X1    95200        16       100.       180.       380.0      480.0       400.0
GR    754.0         0      742.0        20       750.0        25       748.0        35       746.0        95
GR    746.7       100      741.6       111       740.9       115       740.6     123.5       741.6     135.3
GR    741.8     177.5      746.0       180       746.8       250       746.5       360       746.8       420
GR    746.8       480

                REPEATED SECTION FOR HVINS NOTE
X1    95550         0          0         0         320        290        350
X3                                      13                   278

NC     0.06      0.06       0.04        .5         1.0
                DOWNSTREAM FACE FOOT BRIDGE    SECTION FROM EXISTING STUDY
                RIGHT ENCROACHMENT REMOVED TO MATCH UPSTREAM FACE
X1    95600        16       159.       215.        50.0       50.0        50.0
GR    759.3         0      759.0         9       747.1        77       752.9       157       752.9       159
GR    747.2       159      741.9       167       740.4       177       739.5       187       740.0       195
GR    741.8       200      749.4       215       752.8       215       752.8       225       749.3       239
GR    747.0       325

                UPSTREAM FACE FOOT BRIDGE      SECTION FROM EXISTING STUDY
X1    95605         0          0         0         5.0        5.0         5.0

                VALLEY SECTION W   SECTION FROM EXISTING STUDY
                EXPANSION-CONTRACTION COEFFICIENTS MODIFIED
X1    95865         7         94       188        170        290        260
GR    750.0        94      744.2       100       743.0       120       740.2       140       741.8       160
GR    744.2       182      745.0       188

NC                                      .5         1.0
                REPEATED SECTION FOR HVINS NOTE
X1    95905         0          0         0          40         40         40
X3                                   103.5                  182.5

X1    95909        16        101       178         4.0        4.0         4.0
GR    759.8         0      759.7       101       753.6       101       748.6       121       744.2       121
GR    743.7       125      752.5       125       752.5       129       743.2       129       740.7       140
GR    736.8       150      741.8       160       744.2       178       759.5       178       759.4       182
GR    759.0       300

                DOWNSTREAM FACE ANN ARBOR RAILROAD BRIDGE  FROM EXISTING STUDY
X1    95910         0          0         0          1          1          1
BT        7         0      759.8     759.8        101      759.7      756.2       125       759.5     756.2
BT      125     759.5      752.5       178       759.5      752.5        182     759.4       759.4       300
BT    759.0     759.0

                UPSTREAM FACE ANN ARBOR RAILROAD BRIDGE    FROM EXISTING STUDY
X1    95930         0          0         0         20         20         20
X2                                                                      1
1
   29DEC93      14:50:16                                                                                PAGE   19


X1    95931         0          0         0          1          1          1

NC      0.1       0.1       0.04        .2         .4
                VALLEY SECTION X   SECTION FROM EXISTING STUDY
                EXPANSION-CONTRACTION COEFFICIENTS MODIFIED
X1    96015        13         50        90        100         50         84
GR    760.0         8      758.0        12       750.0        42       748.0        50       744.2        54
GR    742.0        62      739.2        70       742.0        78       744.1        88       748.7        90
GR    748.0       150      750.0       182       758.0       200

                INTERPOLATED SECTION ADDED FOR HVINS NOTE
X1    96122        25        71.       120.       101.6       76.2       107.0
```

```
GR    758.1       7.     756.5      12.     756.4      13.     749.6      58.     749.5      58.
GR    747.8      71.     746.6      71.     744.0      75.     743.9      76.     742.9      80.
GR    742.0      86.     742.0      86.     741.3      89.     739.4      96.     742.1     105.
GR    742.1     106.     743.1     111.     745.0     117.     745.7     118.     749.4     120.
GR    749.3     172.     749.4     173.     751.3     200.     751.4     201.     758.1     217.

                INTERPOLATED SECTION ADDED FOR HVINS NOTE
X1    96230      17       91.     149.     101.6      76.2     108.0
GR    756.2       5.     754.9      13.     749.1      74.     747.7      91.     745.9      92.
GR    743.6      97.     742.5     102.     742.0     110.     741.6     114.     739.5     122.
GR    742.2     133.     743.2     139.     746.2     147.     750.0     149.     750.7     195.
GR    752.6     219.     758.2     233.

NC                                  .1        .3
                INTERPOLATED SECTION ADDED FOR HVINS NOTE
X1    96445      17      131.     209.     203.1     152.4     215.0
GR    752.5       3.     751.7      15.     748.2     107.     747.3     131.     744.8     134.
GR    743.0     140.     741.7     147.     742.0     157.     742.1     163.     739.7     175.
GR    742.4     188.     743.5     195.     748.4     205.     751.3     209.     753.4     240.
GR    755.2     257.     758.5     266.

NC                                  .1        .3
                VALLEY SECTION Y   SECTION FROM EXISTING STUDY
                EXPANSION-CONTRACTION COEFFICIENTS MODIFIED
X1    96650       9      170.     265.     194.0     145.0     205.0
X3                                  10
GR    748.9       0     747.0     170     743.8     173     741.0     190     742.6     210
GR    740.0     225     743.8     249     752.6     265     758.7     298

NC                                  .5       1.0
X1    96850      10      144.     214.     200.0     200.0     200.0
X3                                  35
GR    750.7      60     750.0      95     748.0     142     744.2     144     742.8     160
GR    741.5     180     741.8     198     744.2     214     750.0     230     758.0     240

NC      0.1      0.1      0.04
1
   29DEC93      14:50:16                                                                  PAGE   20


                VALLEY SECTION Z   SECTION FROM EXISTING STUDY
                EXPANSION-CONTRACTION COEFFICIENTS REMOVED
X1    97050      15      120      195     200.0     200.0     200.0
GR    758.7     100     759.1     120     744.2     120     744.0     126     743.5     134
GR    743.1     140     743.0     146     742.7     158     742.7     168     742.8     175
GR    743.2     182     743.8     190     744.2     195     760.0     195     760.0     210

                DOWNSTREAM FACE BROADWAY STREET  SECTION FROM EXISTING STUDY
                CHANGED FROM NORMAL TO SPECIAL BRIDGE ROUTINE
X1    97078      15      120      195        28        28        28
GR    758.7     100     759.1     120     744.2     120     744.0     126     743.5     134
GR    743.1     140     743.0     146     742.7     158     742.7     168     742.8     175
GR    743.2     182     743.8     190     744.2     195     760.0     195     760.0     210

SB                1.6      3.0                  75                 636
                UPSTREAM FACE BROADWAY STRET     SECTION FROM EXISTING STUDY
X1    97122       0        0        0        44        44        44
X2                         1     756.6     758.7
BT       13     100     758.7     758.7       120     759.1     744.2     126     759.3     748.4
BT      134    759.5     752.1     140     759.6     754.1       146    759.8     755.6       158
BT    760.0    756.6       168     760.0     756.0       175     760.0    754.5       182     760.0
BT    752.5     190     760.0     748.5       195     760.0     744.2     210     760.0     760.0

X1    97132       0        0        0        10        10        10

                VALLEY SECTION AA  SECTION FROM EXISTING STUDY
                RIGHT ENCROACHMENT CHANGED FROM STA. 130 TO 180 BASED ON 2-FT MAP
X1    97213       9       50      109        81        81        81
X3                                                     180
GR    750.0      35     746.0      45     744.2      50     742.7      63     741.2      80
GR    738.8      93     744.2     109     750.0     115     750.2     200

NC     0.12     0.12     0.05
                VALLEY SECTION AB  SECTION FROM EXISTING STUDY
X1    97900      16       10.      84.     720.0     400.0     687.0
X3                                                     625
GR    760.0      10     744.7      28     741.0      42     741.5      55     742.2      70
GR    744.7      83     747.7      84     747.1     146     750.0     175     751.5     230
GR    750.0     290     749.3     370     750.0     460     751.9     550     752.0     660
GR    754.0     665
```

```
NC                                  .1        .3
                VALLEY SECTION AC  SECTION FROM EXISTING STUDY
X1    98400       20       308.      386.      490.0     400.0     500.0
GR    754.0        0      752.0       13      750.0        38     748.0        50     748.0        58
GR    750.0      135      750.5      200      750.0       290     749.0       308     744.9       316
GR    743.4      330      742.3      345      743.1       358     744.9       371     745.6       381
GR    749.4      386      750.3      406      750.0       500     752.0       515     756.0       525
1
   29DEC93     14:50:16                                                                          PAGE   21


X1    98575       19       330.      563.      170.0     190.0     175.0
X3                                  100
GR    750.0       30      750.0      200      751.3       250     750.0       311     746.0       325
GR    744.9      330      743.4      343      742.3       357     743.1       369     744.9       381
GR    749.8      385      750.0      410      745.1       475     742.7       495     741.0       511
GR    738.8      530      742.0      550      745.1       563     758.3       581

                RIGHT OVERBANK REACH LENGTH CORRECTED
X1    98961       34        52      522      420.0     345.0     386.0
GR    758.8        0      758.4       52      748.2        52     748.2        62     757.1        62
GR    757.1     63.5      748.2     63.5      748.2      76.5     757.1      76.5     757.1        78
GR    748.2       78      748.2       90      757.1        90     756.7       110     748.2       110
GR    748.2      122      756.7      122      756.7     123.5     748.2     123.5     748.5       137
GR    756.7      137      756.7    138.5      748.5     138.5     748.8     148.5     758.3     148.5
GR    758.3      180      758.7      482      749.1       482     746.0       493     743.8       505
GR    747.5      515      750.0    521.9      757.3       522     760.0       585

                DOWNSTREAM FACE OF FOOT BRIDGE AT DAM,SECTION FROM EXISTING STUDY
X1    98962        0         0        0          1         1         1
BT       13        0      758.8    758.8         52     758.4     757.1        62     758.3     757.1
BT       78    758.2      757.1       90      758.1     757.1       110     758.0     756.7       122
BT    758.1    756.7        137    758.2      756.6     148.5     758.3     756.7       180     758.3
BT    758.3      482      758.7    757.3        522     758.6     757.3       585     760.6     760.6

                UPSTREAM FACE OF FOOT BRIDGE AT DAM   SECTION FROM EXISTING STUDY
X1    98981       34        52      522       19.0      19.0      19.0
BT       13        0      758.8    758.8         52     758.4     757.1        62     758.3     757.1
BT       78    758.2      757.1       90      758.1     757.1       110     758.0     756.7       122
BT    758.1    756.7        137    758.2      756.7     148.5     758.3     756.7       180     758.3
BT    758.3      482      758.7    757.3        522     758.6     757.3       585     760.6     760.6
GR    758.8        0      758.4       52      750.6        52     750.6        62     757.1        62
GR    757.1     63.5      750.6     63.5      750.6      76.5     757.1      76.5     757.1        78
GR    750.6       78      750.3       90      757.1        90     756.7       110     750.2       110
GR    750.0      122      756.7      122      756.7     123.5     750.0     123.5     750.2       137
GR    756.7      137      756.7    138.5      750.2     138.5     750.2     148.5     758.3     148.5
GR    758.3      180      758.7      482      749.1       482     746.0       493     743.8       505
GR    747.5      515      750.0    521.9      757.3       522     760.6       585

X1    98982        0         0        0          1         1         1

NC     0.05     0.05      0.05
                VALLEY SECTION AD  SECTION FROM EXISTING STUDY
                RIGHT ENCROACHMENT CHANGED DUE TO BRIDGE GOING WEIR FLOW
                RIGHT OVERBANK REACH LENGTH CORRECTED
X1    99150       10        20      100        50       170       168
X3                                                     450
GR    758.2        0      750.4       20      747.0        38     744.5        61     748.0        80
GR    750.4      100      755.3      110      754.9       250     754.9       400     755.3       600
1
   29DEC93     14:50:16                                                                          PAGE   22


NC     0.05    0.065     0.055        .2        .4
                VALLEY SECTION AE  SECTION FROM EXISTING STUDY
X1    99750       15       206.      311.      630.0     380.0     600.0
X3                                  105                 740
GR    755.6        0      755.8      100      755.0       200     750.4       206     747.0       230
GR    744.5      260      748.0      285      750.4       311     756.3       400     756.0       500
GR    756.2      600      756.8      700      756.0       800     756.1       900     755.6      1100

NC     0.08     0.08      0.04        .2        .4
                VALLEY SECTION AF  SECTION FROM EXISTING STUDY
X1   100735       12       200.      303.      850.0     800.0     985.0
X3                                  140                 363
GR    760.0      100      758.0      135      756.0       196     750.8       200     745.8       223
GR    748.7      243      748.3      263      748.1       283     750.8       303     756.0       330
```

```
GR    756.9       400      756.2       500

NC      0.1      0.08       0.04        .3         .5
X1   100935        18        102       228      200.0      200.0      200.0
GR    772.0       102      758.2       102      750.8        118      746.8        130      748.1        145
GR    750.8       156      752.7       157      752.7        163      767.1        163      767.1        168
GR    752.7       168      752.7       171      750.8        172      748.1        180      749.8        190
GR    750.8       197      759.4       228      772.0        228

                DOWNSTREAM FACE HIGH STREET    SECTION FROM EXISTING STUDY
X1   100945         0          0         0         10         10         10
X2                                    767.1      772.0

                UPSTREAM FACE HIGH STREET      SECTION FROM EXISTING STUDY
X1   101000         0          0         0         55         55         55
X2                                    767.1      772.0

X1   101010         0          0         0         10         10         10

                VALLEY SECTION AG  SECTION FROM EXISTING STUDY
X1   101067        13         95       235         57         57         57
GR    770.0        25      760.0        70      758.0         85      756.0         95      750.8        100
GR    748.9       124      748.0       149      749.9        174      750.3        199      750.8        227
GR    756.0       235      760.0       248      770.0        262

NC     0.12       0.1      0.035        .1         .3
                VALLEY SECTION AH  SECTION FROM EXISTING STUDY
X1   101800        15       582.      728.      580.0      770.0        733
GR    770.0         0      760.0        50      756.0         60      755.8        200      757.0        350
GR    755.7       400      755.5       500      757.6        582      751.4        597      749.9        625
GR    749.9       650      749.2       680      751.4        708      760.6        728      762.0        750

                INTERPOLATED SECTION ADDED
X1   102350        23       349.      469.      490.0      540.0      550.0
GR    765.0       30.      760.0       57.      758.0        63.      757.9       140.      758.4       222.
GR    757.8      249.      757.7      304.      758.7       349.      753.5       361.      752.2       368.
GR    750.9      382.      750.7      385.      750.0       405.      749.9       405.      749.5       430.
GR    751.5      451.      751.7      452.      757.8       469.      759.1       517.      759.1       569.
GR    759.2      622.      759.5      649.      759.3       675.
```



```
NC     0.05      0.10      0.035
                VALLEY SECTION AI  SECTION FROM EXISTING STUDY
X1   102900        13       116.      209.      490.0      540.0      550.0
X3                                                        400
GR    760.0        60      759.8       116      753.5        131      751.8        142      750.0        160
GR    749.8       180      751.8       196      755.0        209      757.2        300      757.0        400
GR    756.8       500      757.1       550      756.5        600

NC     0.11     0.045      0.035
                VALLEY SECTION AJ  SECTION FROM EXISTING STUDY
X1   104150        15       610.      693.     1200.0      710.0     1250.0
GR    758.8         0      758.0       100      758.3        200      757.9        300      758.1        400
GR    757.9       500      758.4       570      753.0        582      753.0        610      752.4        611
GR    751.4       625      749.8       635      748.6        650      752.4        661      769.1        693

                INTERPOLATED SECTION ADDED
X1   104800        27       855.      925.      350.0      675.0      650.0
GR    764.4        0.      759.3       47.      758.2       140.      758.1       155.      758.3       280.
GR    758.1      420.      758.1      466.      758.2       544.      758.3       561.      758.2       622.
GR    758.4      700.      758.4      701.      758.6       777.      758.7       799.      756.0       816.
GR    756.0      852.      753.3      855.      752.9       856.      751.2       870.      750.5       880.
GR    750.4      885.      749.6      895.      751.9       903.      760.6       923.      761.5       925.
GR    761.5      934.      764.5      972.

NC     0.10      0.06      0.035
                VALLEY SECTION AK  SECTION FROM EXISTING STUDY
X1   105450        17      1100.     1157.      350.0      675.0      650.0
X3                                    250
GR    770.0         0      760.0        60      758.2        200      758.2        600      758.4        700
GR    758.4       800      758.9       900      759.0       1000      759.0       1096      753.5       1100
GR    750.9      1115      751.3      1130      750.6       1140      753.5       1156      753.8       1157
GR    754.0      1175      760.0      1250

X1   107.01        40       683.      750.     1960.0     1960.0     2663.0
GR    770.0        0.      765.8        20      760.7        56.      759.7       141.      759.8       167.
GR    759.7      241.      759.8      315.      760.0       382.      760.0       388.      760.4       442.
```

```
GR    760.4      462.      760.2      502.      760.1      536.      760.3      562.      760.4      609.
GR    760.5      623.      760.6      680.      757.9      683.      755.5      692.      755.5      693.
GR    754.2      695.      754.0      702.      753.3      708.      753.7      714.      754.0      720.
GR    754.1      727.      754.7      733.      754.9      739.      755.2      745.      755.3      747.
GR    755.5      749.      756.8      749.      757.4      750.      758.1      766.      758.1      783.
GR    758.3      800.      759.1      834.      759.3      869.      759.6      903.      770.0      920.

NC      .08       .09       .035
X1   110575       30       350.      427.     1760.0     1760.0     2462.0                -0.2
GR    770.0        0      761.6      125      761.1       150      761.4       175      761.5       225
GR    761.8      250      762.5      275      761.6       300      761.9       325      762.3       350
GR    760.0      354      757.4      355      756.1       360      756.4       370      756.4       380
GR    756.3      390      757.0      400      757.0       410      757.0       420      757.3       425
GR    759.9      426      761.0      427      762.3       450      762.3       475      761.9       500
GR    761.9      550      760.9      600      759.9       650      760.3       675      770.0       800
1
   29DEC93      14:50:16                                                                          PAGE   24


              VALLEY SECTION AL  (45)
X1   110775       30       350       427       200       200       200
X3                                  135                 642
GR    770.0        0      761.6      125      761.1       150      761.4       175      761.5       225
GR    761.8      250      762.5      275      761.6       300      761.9       325      762.3       350
GR    760.0      354      757.4      355      756.1       360      756.4       370      756.4       380
GR    756.3      390      757.0      400      757.0       410      757.0       420      757.3       425
GR    759.9      426      761.0      427      762.3       450      762.3       475      761.9       500
GR    761.9      550      760.9      600      759.9       650      760.3       675      770.0       800

NC                                   .5        0.8
X1   111300        0         0         0       525       525       525                 0.28
X3                                  267                 511

X1   111500        0         0         0       200       200       200                 0.11
X3                                  317                 461

X1   111521       27      499.9      612        21        21        21
X3                                  500                 634
GR    770.0        0      764.0      400    763.75       425     763.5       450    763.25       475
GR    763.5    499.9      759.1      500     759.1     514.9     760.0       515     758.8     516.9
GR    757.2      517      757.2    565.9     757.7       566     757.7     567.9     757.7       568
GR    758.6    609.9      758.6      610     758.6     611.9     758.6       612     765.1     633.9
GR    765.1      634      763.0      639    764.25       660     764.5       685    764.75       710
GR    765.0      735      770.0     1300

NC      .03       .03       .03
              DOWNSTREAM FACE LINCOLN ROAD (44B)
              ESTIMATED OVERBANK FROM TOPOGRAPHIC MAP
X1   111530        0         0         0         9         9         9
X3                                  500                 634

SB                1.2       3.0                 117                 935
X1   111562        0         0         0        32        32        32
X2                            1     766.5     768.1
X3                                  500                 634
BT      -25        0     770.0                 400     768.1                 450     768.4
BT                475     768.4               499.9     768.3     763.5       500     768.3     766.4
BT              514.9     768.3     766.4       515     768.3     760.0     516.9     768.3     758.8
BT                517     768.3     765.6     565.9     768.3     765.6       566     768.3     757.7
BT              567.9     768.3     757.7       568     768.3     765.6     609.9     768.3     765.6
BT                610     768.3     758.6     611.9     768.3     758.6       612     768.3     766.4
BT              633.9     768.2     766.5       634     768.2     765.1       660     768.1
BT                685     768.1                 710     768.1                 735     768.1
BT               1300     770.0

NC      .05      .065      .035
              UPSTREAM FACE LINCOLN ROAD
1
   29DEC93      14:50:16                                                                          PAGE   25


              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   111571        0         0         0         9         9         9
X3                                  500                 634

              VALLEY SECTION AL MOVED UPSTREAM
X1   111800       30       350       427       229       229       229                 0.16
X3                                   92                 685
GR    770.0        0      761.6      125      761.1       150      761.4       175      761.5       225
```

```
GR    761.8       250     762.5       275     761.6       300     761.9       325     762.3       350
GR    760.0       354     757.4       355     756.1       360     756.4       370     756.4       380
GR    756.3       390     757.0       400     757.0       410     757.0       420     757.3       425
GR    759.9       426     761.0       427     762.3       450     762.3       475     761.9       500
GR    761.9       550     760.9       600     759.9       650     760.3       675     770.0       800

X1   111900         0         0         0       100       100       100

NC     .035      .035                 .1        .3
                VALLEY SECTION AM (43)
X1   116500        24      830.      919.    4600.0    4100.0    4600.0
GR    770.0         0     764.6       580     764.0       680     765.5       730     764.9       780
GR    764.1       830     763.2       833     759.2       840     757.2       850     757.0       860
GR    757.1       870     758.0       880     758.8       890     759.6       900     761.5       910
GR    763.2       915     764.8       919     765.3       930     763.5       980     764.4      1030
GR    764.8      1050     771.8      1100     771.3      1150     771.6      1200

X1   135.01        44       715       802     225.0     225.0     900.0
GR     770         0     767.3       242     765.9       386       765       500     764.6       579
GR    764.5       586     765.8       629     765.8       629     764.9       715     764.1       718
GR    760.9       723     760.8       724     758.9       731     758.9       732     758.8       733
GR     758       740       758       750     758.5       757     758.8       761     759.2       767
GR    759.7       775     760.3       782     760.7       784     762.1       792     762.2       793
GR    762.6       793     764.1       797     764.3       798       766       802     766.4       812
GR    766.4       813     765.1       861     765.3       883     765.7       909     765.9       929
GR     766       929     766.9       938     769.8       966     771.1       978     771.1       978
GR     771       993     770.7      1026     771.1      1047     771.6      1075

X1   144.01        69      658.      744.     112.5     112.5     450.0
GR    770.0        0.     767.3      222.     765.9      355.     765.2      459.     765.2      460.
GR    764.9      532.     764.8      533.     764.8      539.     764.8      539.     766.0      578.
GR    766.0      579.     765.8      618.     765.7      622.     765.3      658.     764.6      660.
GR    764.4      660.     761.8      665.     761.6      665.     761.6      666.     759.8      672.
GR    759.8      672.     759.7      673.     759.7      673.     759.6      674.     758.5      680.
GR    758.5      690.     758.5      691.     758.9      697.     759.0      698.     759.2      701.
GR    759.5      707.     759.6      708.     760.0      716.     760.0      716.     760.6      723.
GR    761.0      725.     761.1      725.     762.4      733.     762.5      734.     762.7      734.
GR    762.9      734.     763.1      735.     764.6      738.     764.7      739.     764.9      739.
GR    766.7      744.     766.9      753.     766.9      754.     766.7      770.     766.1      797.
GR    766.0      802.     766.0      823.     766.0      824.     766.3      849.     766.5      868.
GR    766.5      869.     767.3      877.     769.7      905.     769.7      905.     770.7      917.
GR    770.7      917.     770.7      931.     770.6      932.     770.4      959.     770.4      964.
GR    770.5      965.     770.9      985.     770.9      985.     771.6     1013.
1
   29DEC93      14:50:16                                                                    PAGE   26


NC      .07       .07
X1   135.02        39       600       685     112.5     112.5     450.0
GR     770         0     767.3       203     765.9       324     765.4       419     765.1       486
GR    765.1       492     766.2       528     766.2       564     766.2       568     765.8       600
GR     765       602     762.4       607     760.6       613     760.5       614       759       620
GR     759       631     759.4       638     759.6       642     759.9       648     760.3       657
GR     761       664     761.4       666     762.8       675     762.9       675     763.5       676
GR    765.2       680     767.3       685     767.5       711       767       738     766.6       764
GR    767.1       808     767.7       817     769.6       844     770.4       856     770.3       870
GR    770.1       897     770.2       903     770.7       923     771.6       950

                VALLEY SECTION AN (42)
X1   120100        26      470.      550.     450.0     450.0    1800.0
GR    780.0         0     770.0       100     767.3       225     766.0       300     766.2       400
GR    767.6       450     767.4       470     763.8       477     760.9       480     761.0       500
GR    761.3       510     761.6       520     762.7       530     764.1       540     765.1       541
GR    769.7       550     770.4       575     770.3       600     769.3       625     769.8       650
GR    769.2       675     769.1       700     768.9       725     768.9       750     769.9       775
GR    771.7       800

QT        2      4930      6810
X1   115.01        52      362.      444.    2380.0    2300.0    3280.0
GR    790.0         0     780.0        50     769.8      115.     769.8      140.     769.0      189.
GR    769.0      191.     769.3      214.     768.8      233.     768.8      241.     768.6      263.
GR    768.7      288.     768.7      291.     769.1      312.     769.5      337.     769.5      342.
GR    769.0      362.     767.8      363.     765.7      368.     765.0      371.     763.0      375.
GR    763.1      385.     763.4      395.     763.4      396.     763.8      405.     763.9      406.
GR    764.3      414.     764.5      416.     765.4      423.     765.5      424.     767.6      434.
GR    768.4      435.     772.5      444.     773.2      459.     773.8      468.     774.4      486.
GR    774.6      492.     774.7      514.     774.7      515.     775.2      539.     775.2      542.
GR    774.9      563.     774.8      570.     775.0      587.     775.0      598.     775.0      610.
GR    775.0      626.     775.1      634.     775.7      654.     775.8      658.     777.1      682.
```

```
GR    780.0       700      790.0       720

X1   115.02        50       688.       773.     2380.0     2300.0     3280.0
GR    780.0         0      772.3       440.      772.1       465.      771.5       490.      771.0       514.
GR    771.1       516.     772.1       539.      771.5       564.      771.5       567.      771.1       589.
GR    771.3       614.     771.3       617.      771.5       639.      771.6       663.      771.4       668.
GR    770.6       688.     768.7       690.      766.5       697.      766.1       700.      765.1       705.
GR    765.2       715.     765.7       724.      765.8       725.      766.3       734.      766.4       735.
GR    767.0       744.     767.2       746.      768.1       753.      768.4       754.      771.1       763.
GR    771.7       764.     775.3       773.      776.3       787.      777.1       796.      778.5       813.
GR    778.8       818.     780.1       840.      780.1       841.      780.7       863.      780.7       866.
GR    780.5       886.     780.5       893.      780.8       908.      781.1       919.      781.1       931.
GR    781.2       945.     781.2       953.      781.6       972.      781.7       976.      782.5       998.

NC      .09       .12
X1   129470        29        850        937       1900       1820       2810
GR    780.0         0      774.8       600       774.5        625      773.0        675      774.8        700
GR    774.2       725      773.6       750       773.8        775      773.8        800      773.6        825
GR    772.2       850      769.6       852       767.4        860      767.2        870      767.4        880
GR    768.2       890      768.9       900       769.9        910      770.9        917      778.1        937
GR    779.4       950      782.6       975       785.5       1000      786.2       1025      786.2       1050
```

775.8

777.8


```
GR    787.1      1075      787.3      1100       787.6       1125      787.9       1150

                VALLEY SECTION AO (41A)
X1   129950         0         0         0       480.0      480.0      480.0
X3                                    600                   939

NC                                     .5        1.0
                DOWNSTREAM FACE MERIDIAN ROAD (41B)
                COMBINED SECTIONS 41 & 41A
X1   130480        28       100       175       530.0      530.0      530.0
X3                                   99.9                   175
GR    774.1         0      774.3        25       774.3         50      774.0         75      772.7         95
GR    770.7      99.9      770.7       100       769.8        110      769.7        120      769.0      123.9
GR    769.0       124      769.1     124.9       769.1        125      769.1        135      768.0        145
GR    768.4     149.9      768.4       150       768.4      150.9      768.4        151      767.1        161
GR    768.0       171      768.7     174.9       768.7        175      778.6        195      779.1        200
GR    782.0       225      784.1       250       785.6        275

X1   130488         0         0         0          8          8          8
X3                                   99.9                   175

SB                1.87       3.0                   75                   645
X1   130513         0         0         0         25         25         25
X2                                     1     777.8      780.3
X3                                   99.9                   175
BT      -20         0      780.3                   25      780.3                   50      780.4
BT                 75      780.6                 99.9      780.4      770.7        100      780.4      777.8
BT               123.9      780.5     777.7       124      780.5      769.0      124.9      780.5      769.1
BT                125      780.5     777.7     149.9      780.5      777.6        150      780.5      768.4
BT               150.9      780.5     768.4       151      780.5      777.6      174.9      780.6      777.5
BT                175      780.6     768.7       200      781.5                  225      782.8
BT                250      784.1                 275      785.6

                UPSTREAM FACE MERIDIAN ROAD
X1   130521         0         0         0          8          8          8
X3                                   99.9                   175

NC      .07       .07      .035        .3         .5
                VALLEY SECTION SUPPLIED BY MDNR
X1   130571        10       220       300         50         50         50
X3                                   170                   340
GR    779.8         0       779       175      774.6        205      773.8        220      769.3        222
GR    769.2       260      769.3       298        773        300      773.8        330      786.5        390

NC      .07       .07      .035        .1         .3
                VALLEY SECTION SUPPLIED BY MDNR
X1   131071        13       462       549        500        500        500
GR    780.2         0       780       380      774.9        390      774.1        462      773.6        488
GR    773.4       498      770.8       500      769.6        512      769.4        535      771.6        548
GR      774       549      774.5       554      791.1        570
```

```
NC      .07       .09       .035
                SECTION SUPPLIED BY MDNR, MANUFACTURED
X1   131521        19        280        367        300        450        450
GR    781.2         0        780        110      775.9        208      775.1        280      774.6        306
GR    774.4       316      771.8        318      770.6        330      770.4        353      772.6        366
GR      775       367      775.5        372      775.9        393        776        500        778        530
GR      779       550        780        600      781.5        650        783        700

NC      .08        .1       .035
                VALLEY SECTION SUPPLIED BY MDNR
X1   131971        19        147        257        600        300        450
GR   793.12         0        793         57     779.49         65     776.49        110     774.79        147
GR    772.9       152      771.7        177      772.8        224      774.9        257     777.93        297
GR   778.43       374     777.53        447     776.43        493     778.73        518        779        700
GR      780       765      780.5        865        782        915        784        940

NC      .08       .11       .035
                SECTION SUPPLIED BY MDNR, MANUFACTURED
X1   132371        14        247        357        500        250        400
GR      793         0      780.1         57        778         65        775        247        773        252
GR    771.9       277        773        324      775.1        357      778.1        397      778.6        474
GR    779.1       547      780.1        593      780.6        618        782        700

NC      .05       .05       .035
                VALLEY SECTION SUPPLIED BY MDNR
X1   132771        21        130        205        200        500        400
GR    790.9         0      780.7         17      777.9         31      777.8         49      778.1         67
GR    777.7       130      774.6        150      774.1        157        773        169        772        201
GR    774.5       205      776.5        205        777        212      777.4        259      777.4        289
GR    777.4       312      780.9        324      780.9        449      781.3        459      781.8        619
GR    782.9       649

                VALLEY SECTION SUPPLIED BY MDNR
X1   133591   16.       104.      184.1      800.       750.       820.
X3                                                     197.       782.7
GR   790.4             789.4     14.        780.       30.        777.4      58.        778.4      104.
GR   777.3   107.      775.1     110.       774.       133.       774.3      146.       775.4      159.
GR   776.5   184.      777.9     184.1      782.7      197.       781.9      280.       781.6      362.
GR   794.    380.

                VALLEY SECTION SUPPLIED BY MDNR
X1   134611   20.       282.      389.       1100.      1000.      1020.
X3                                225.       785.6
GR   784.7             784.3     26.        783.7      76.        782.9      127.       783.9      177.
GR   785.6   225.      786.4     246.       783.1      275.       781.8      282.       779.3      286.
GR   776.2   292.      775.      297.       776.2      337.       778.1      361.       779.4      383.
GR   782.    389.      783.4     409.       783.4      449.       784.8      496.       788.6      551.
```

1
29DEC93 14:50:16 PAGE 29

```
X1   178.01        39       305.       405.      1172.7     1340.2     1370.0
GR    791.2       90.      790.4       110.       790.2       117.       789.2       144.       789.0       148.
GR    786.8      187.      785.9       224.       785.9       225.       786.3       261.       786.5       277.
GR    784.9      291.      783.8       299.       782.7       305.       782.4       306.       781.1       310.
GR    780.4      313.      780.0       315.       779.2       320.       777.7       325.       777.1       330.
GR    776.6      335.      777.2       360.       777.4       366.       778.8       384.       778.9       385.
GR    780.3      401.      781.2       403.       783.3       405.       784.1       444.       784.6       453.
GR    784.9      460.      785.6       469.       786.3       481.       787.0       523.       787.3       547.
GR    787.8      565.      789.0       658.       790.2       709.       792.4       789.

X1   178.02        39       328.       422.      1172.7     1340.2     1370.0
GR    797.6      181.      796.5       194.       796.1       199.       794.6       218.       794.3       220.
GR    790.8      247.      788.0       273.       788.0       273.       787.1       298.       786.7       309.
GR    785.4      318.      784.4       324.       783.6       328.       783.3       329.       782.0       335.
GR    781.4      340.      781.1       343.       780.8       350.       779.3       358.       778.7       365.
GR    778.1      373.      778.5       390.       778.6       394.       779.6       407.       779.6       408.
GR    781.2      419.      781.8       420.       784.7       422.       785.1       482.       785.9       496.
GR    786.5      508.      787.8       523.       789.2       541.       790.5       607.       791.3       646.
GR    791.9      673.      793.2       821.       794.1       901.       796.2      1026.

NC      .07       .07
                MANUFACTURED FROM 2-FOOT TOPO MAP, CHANNEL FROM VALLEY SECTION AP
                INVERT ADJUSTED (APPROXIMATED FROM 2-FOOT TOPO MAP)
X1   138700        25        350        438       1150       1320       1349
GR    804.0       270      802.0        280      800.0        290      790.0        320      786.0        345
GR    784.5       350      784.2        352      782.8        360      782.3        370      782.5        380
GR    780.8       390      780.2        400      779.7        410      779.7        420      780.3        430
GR    782.4       437      786.0        438      786.0        520      788.0        555      790.0        575
```

```
GR    792.0       600      794.0       690      796.0       780      798.0      1090      800.0      1260

X1   179.01        41       350.       438.      970.0     970.0     1100.0
GR    802.0      135.      800.6       162.      799.1      189.      798.5      196.      797.7      212.
GR    796.4      227.      793.1       258.      791.7      269.      791.4      273.      789.1      289.
GR    787.7      304.      786.7       319.      786.2      335.      786.1      337.      785.0      350.
GR    784.7      352.      783.3       360.      782.8      370.      783.0      380.      781.3      390.
GR    780.7      400.      780.2       410.      780.2      420.      780.8      430.      782.9      437.
GR    786.5      438.      786.8       458.      786.3      497.      786.4      499.      787.4      522.
GR    788.4      537.      788.6       539.      789.5      555.      791.2      619.      791.2      621.
GR    791.7      684.      791.6       703.      791.8      785.      792.1      826.      795.1      908.
GR    800.0     1030.

              VALLEY SECTION AP (40)
X1   140900        30       350.       438.      970.0     970.0     1100.0
GR    800.0         0      798.0       100      798.2       125      797.6       150      794.7       200
GR    793.0       225      789.3       250      787.4       275      786.3       300      786.3       325
GR    785.5       350      785.2       352      783.8       360      783.3       370      783.5       380
GR    781.8       390      781.2       400      780.7       410      780.7       420      781.3       430
GR    783.4       437      787.0       438      787.5       450      786.6       475      786.8       500
GR    788.4       550      787.1       600      786.8       650      786.9       675      800.0       800
1
   29DEC93      14:50:16                                                                          PAGE   30


NC      .07       .07
X1   145.01        48       510.       594.     1025.0    1275.0     1175.0
GR    800.0         0.      795.8       146.      795.1      182.      794.0      219.      790.9      291.
GR    789.2      328.      788.2       343.      787.0      364.      785.9      401.      785.6      419.
GR    785.4      437.      785.6       457.      785.6      474.      785.3      510.      785.0      512.
GR    784.4      516.      783.3       517.      783.0      519.      782.8      521.      782.6      528.
GR    782.6      538.      782.1       543.      781.7      547.      781.2      554.      781.1      556.
GR    780.8      565.      781.0       575.      781.0      575.      781.8      584.      782.1      586.
GR    784.2      593.      786.1       594.      786.3      596.      787.6      604.      789.4      618.
GR    789.4      625.      789.6       646.      789.9      655.      790.8      686.      790.9      689.
GR    790.5      716.      790.1       731.      789.9      747.      790.1      773.      790.1      778.
GR    790.8      794.      795.5       839.      800.0      900.

X1   147.01        61       590.       672.      515.0     695.0      590.0
GR    800.0         0.      794.7       169.      793.5      211.      792.1      253.      789.0      337.
GR    787.3      379.      786.5       396.      786.5      397.      785.8      421.      785.2      464.
GR    785.0      484.      785.0       485.      785.0      506.      785.2      528.      785.3      529.
GR    785.3      548.      785.2       590.      784.9      592.      784.4      595.      783.9      596.
GR    783.1      596.      782.8       597.      782.6      599.      782.4      601.      782.3      607.
GR    782.2      617.      781.9       622.      781.6      625.      781.1      632.      781.1      634.
GR    780.8      643.      781.1       652.      781.1      653.      782.1      662.      782.1      662.
GR    782.5      664.      784.6       671.      785.7      672.      785.9      674.      785.9      674.
GR    787.7      681.      790.6       694.      790.7      694.      790.8      700.      791.0      719.
GR    791.2      727.      791.3       728.      792.1      755.      792.1      756.      792.2      758.
GR    792.0      783.      791.9       783.      791.6      796.      791.4      811.      791.7      835.
GR    791.8      839.      791.8       839.      792.8      854.      797.0      894.      797.0      895.
GR    800.0      950.

              VALLEY SECTION AQ (39)
X1   143250        23       670.       750.      515.0     685.0      585.0
GR    800.0         0      784.8       450      784.3       550      784.9       600      785.0       670
GR    784.3       675      782.4       676      782.0       680      781.7       700      781.1       710
GR    780.8       720      781.2       730      782.4       740      785.3       750      785.5       752
GR    792.0       770      792.6       800      793.4       825      793.4       850      792.9       875
GR    793.4       900      798.5       950      799.9      1000

X1   148.01        55       560.       641.      950.0    1050.0     1100.0
GR    797.5         0.      794.0       112.      790.9      224.      787.5      335.      786.4      376.
GR    786.3      376.      786.1       447.      786.1      459.      786.1      460.      786.5      501.
GR    786.5      501.      786.5       503.      786.3      560.      785.5      564.      784.6      564.
GR    784.1      564.      784.0       565.      783.5      568.      783.4      568.      783.0      581.
GR    783.0      585.      782.9       585.      782.5      593.      782.5      593.      782.3      602.
GR    782.4      608.      782.6       614.      782.7      615.      783.1      620.      783.4      626.
GR    783.6      628.      784.5       632.      785.5      638.      786.9      641.      787.0      642.
GR    790.6      656.      791.6       660.      791.7      661.      792.0      691.      792.0      691.
GR    792.3      704.      792.5       716.      792.5      717.      792.5      742.      792.5      742.
GR    792.4      752.      792.2       767.      792.2      768.      792.6      793.      792.6      793.
GR    793.1      800.      796.4       844.      796.4      844.      796.5      847.      797.4      895.
1
   29DEC93      14:50:16                                                                          PAGE   31


X1   146.01        40       449.       531.      950.0    1050.0     1100.0
```

```
GR    794.9       0.     792.6      90.     790.8     180.     788.6     269.     787.9     302.
GR    787.9     359.     787.9     369.     788.1     402.     788.1     404.     787.6     449.
GR    786.6     453.     785.6     453.     784.9     456.     784.2     466.     784.2     470.
GR    783.9     476.     783.7     483.     783.8     491.     784.1     498.     784.1     499.
GR    784.4     506.     784.6     513.     784.8     515.     785.6     521.     786.3     528.
GR    788.5     531.     788.6     533.     790.8     547.     791.5     551.     791.4     582.
GR    791.5     596.     791.7     608.     791.7     634.     791.6     644.     791.5     660.
GR    791.8     686.     792.1     693.     794.3     738.     794.4     741.     794.9     790.

X1   146623      24      300.     383.     975.0    1075.0    1173.0               -2.71
GR    800.0       0     792.0      50     791.7     100     792.2     200     792.7     250
GR    792.6     275     791.6     300     789.1     304     788.1     310     788.0     320
GR    788.0     330     788.3     340     788.4     350     788.4     360     789.2     370
GR    789.1     380     793.0     383     792.7     400     791.7     450     791.7     500
GR    792.0     550     792.2     600     792.0     650     800.0     700

NC                                .5       1.0
X1   147223       0         0       0      600     600      600                0.68
X3                               167               517

              VALLEY SECTION AR MOVED DOWNSTREAM (37)
X1   147423      24      300.     383.     200.0    200.0    200.0               -1.62
X3                               217               467
GR    800.0       0     792.0      50     791.7     100     792.2     200     792.7     250
GR    792.6     275     791.6     300     789.1     304     788.1     310     788.0     320
GR    788.0     330     788.3     340     788.4     350     788.4     360     789.2     370
GR    789.1     380     793.0     383     792.7     400     791.7     450     791.7     500
GR    792.0     550     792.2     600     792.0     650     800.0     700

NC     .035     .05
X1   147523      40       100    346.1     100.0    100.0    100.0     0.87
X3                                87               301.2
GR    790.8       0     791.0      25     791.3      50     791.2      75     790.2      99
GR    794.7     100     794.7    100.1     790.0     115     785.6     125     786.0     135
GR    786.5     145     786.8     158     786.5    160.9     786.5     161     786.5     162
GR    786.5    162.1     787.7     173     788.0     183     787.7     193     789.0     193
GR    789.0     203     790.0     213     790.1     223     790.1    223.1     790.1     224
GR    790.1    224.1     791.0     250     791.6     275     791.5    285.9     791.5     286
GR    791.2     287     791.2    287.1     792.3     324     798.6     346     798.6    346.1
GR    790.3     347     790.3     375     790.3     400     790.3     425     790.6     450

NC      .03     .03      .03
              DOWNSTREAM FACE VANDECAR ROAD (388)
X1   147524       0         0       0        1       1        1
X2                                                                           0.87
X3                                87               301.2
BT      -24       0     899.4                25     800.5                 50     800.5
BT                75     800.5               100     800.8     794.7    100.1     800.8    797.9
BT             160.9     801.3    798.3      161     801.3     786.5     162     801.3    786.5
BT             162.1     801.3    798.3      223     801.8     798.6    223.1     801.8    790.1
BT               224     801.8    790.1    224.1     801.8     798.6    285.9     802.3    799.3
BT               286     802.3    791.5      287     802.3     791.2    287.1     802.3    799.3
1
   29DEC93     14:50:16                                                                  PAGE   32

BT               346     802.7    799.7    346.1     802.7     798.6     375     802.9
BT               400     803.3               425     803.6                 450     804.0

              UPSTREAM FACE VANDECAR ROAD
              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   147556       0         0       0       32        32       32
X2                                                           1
X3                                87               301.2

NC      .07     .07      .035
X1   147557       0         0       0        1        1        1
X3                                86               302

              VALLEY SECTION AR MOVED DOWNSTREAM (37)
X1   147807      24       350     433     250      250      250               -1.03
GR    800.0       0     792.0     100     791.7     150     792.2     250     792.7     300
GR    792.6     325     791.6     350     789.1     354     788.1     360     788.0     370
GR    788.0     380     788.3     390     788.4     400     788.4     410     789.2     420
GR    789.1     430     793.0     433     792.7     450     791.7     500     791.7     550
GR    792.0     600     792.2     650     792.0     700     800.0     800

NC               .06                .1       .3
              VALLEY SECTION AR (37)
X1   148750      24      350.     433.     700.0    750.0    943.0
```

```
GR    800.0        0     792.0      100     791.7      150     792.2      250     792.7      300
GR    792.6      325     791.6      350     789.1      354     788.1      360     788.0      370
GR    788.0      380     788.3      390     788.4      400     788.4      410     789.2      420
GR    789.1      430     793.0      433     792.7      450     791.7      500     791.7      550
GR    792.0      600     792.2      650     792.0      700      800.      800

NC     .065     .065                 .1        .3
              VALLEY SECTION AS (36)
X1   152800       34      250.      400    3950.0    2450.0    4050.0
GR    819.5        0     807.0       25     807.0       50     806.7       75     805.6      100
GR    803.6      125     801.8      150     801.3      175     802.2      200     802.7      225
GR    800.0      250     792.9      258     792.7      260     791.1      270     789.9      280
GR    789.5      290     789.4      310     791.5      320     792.4      330     792.7      340
GR    792.8      370     793.3      380     793.6      390     795.4      400     795.7      405
GR    795.6      415     797.1      425     797.4      450     796.8      475     798.3      500
GR    798.6      525     798.6      600     797.7      625     800.3      650

X1   181.01       58      250.     374.     599.6     569.4     649.5
GR    820.3       0.     807.8      25.     807.8       50.     807.5      75.     806.4     100.
GR    804.4     125.     802.9     140.     802.4      150.     802.3     155.     802.6     170.
GR    802.6     175.     803.0     185.     802.9      200.     802.6     225.     800.8     250.
GR    794.0     257.     793.6     257.     793.5      258.     793.3     260.     792.0     267.
GR    791.8     268.     790.7     275.     790.7      276.     790.3     284.     790.3     284.
GR    790.2     300.     792.2     308.     792.3      309.     793.2     317.     793.2     317.
GR    793.5     325.     793.5     325.     793.6      350.     793.6     350.     794.1     358.
GR    794.1     358.     794.4     366.     794.4      367.     796.2     374.     796.5     378.
GR    796.5     378.     796.4     386.     796.4      386.     797.8     394.     797.9     395.
GR    798.2     415.     798.2     415.     797.6      434.     797.6     435.     799.0     454.
GR    799.1     455.     799.4     473.     799.4      476.     799.4     536.     799.3     538.
GR    798.5     557.     798.5     557.     801.1      577.
1
   29DEC93      14:50:16                                                                  PAGE   33


NC      .07      .07
              VALLEY SECTION AS MOVED UPSTREAM (36)
              CHANNEL SECTION REDUCED TO REFLECT LOCAL CONDITIONS
X1   154089       34      250      349     589.6     559.4     639.5                1.54
GR    819.5        0     807.0       25     807.0       50     806.7       75     805.6      100
GR    803.6      125     801.8      140     801.3      155     802.2      170     802.7      185
GR    800.0      250     792.9      256     792.7      258     791.1      265     789.9      271
GR    789.5      278     789.4      291     791.5      297     792.4      304     792.7      310
GR    792.8      330     793.3      336     793.6      343     795.4      349     795.7      352
GR    795.6      358     797.1      364     797.4      380     796.8      395     798.3      410
GR    798.6      425     798.6      475     797.7      490     800.3      505

X1   154439       34      250      340      350      350      350                1.98
GR    819.5        0     807.0       25     807.0       50     806.7       75     805.6      100
GR    803.6      125     801.8      140     801.3      155     802.2      170     802.7      185
GR    800.0      250     792.9      256     792.7      257     791.1      264     789.9      269
GR    789.5      275     789.4      287     791.5      292     792.4      299     792.7      304
GR    792.8      322     793.3      328     793.6      334     795.4      340     795.7      343
GR    795.6      349     797.1      355     797.4      371     796.8      386     798.3      401
GR    798.6      416     798.6      466     797.7      481     800.3      496

NC                                 .5       1.0
X1   154759        0        0        0      340      320      320                0.22
X3                                250                340

X1   154789        0        0        0       30       30       30                0.04
X3                                257                332

X1   154793        0        0        0        4        4        4                0.04
X3                                258                331

X1   154796        0        0        0        3        3        3                0.04
X3                              258.75              330.25

X1   154799       36      250      341        3        3        3
X3                                250                341
GR    802.6        0     800.9       50     800.9      100     800.6      150     799.1      175
GR    799.7      200     799.4      225     798.0      245     804.3      250     804.3    250.1
GR    801.0    263.4     801.0    263.5     800.6    266.4     800.6    266.5     797.7      277
GR    794.6      287     794.2      297     791.7      307     796.5      317     797.7      322
GR    800.3    325.9     800.3      326     801.6      329     801.6    329.1     808.4    340.9
GR    808.4      341     805.0      366     804.5      391     803.6      416     804.1      441
GR    804.9      466     804.7      491     805.1      516     806.0      541     807.1      566
GR    808.5      591
```

```
NC      .03       .03       .03
                DOWNSTREAM FACE OF COVERED BRIDGE (35B)
                COMBINED SECTIONS 35 & 36
X1   154800         0         0         0         1         1         1
X3                                    250                   341
BT      -29         0     809.2                  50     808.5                  100     808.1
BT                150     807.6                 175     807.7                  200     808.4
BT                225     809.7                 250     811.0     804.3     250.1     811.0     808.3
1
   29DEC93      14:50:16                                                                          PAGE   34

BT              263.4     811.0     809.2     263.5     811.0     801.0     266.4     811.0     800.6
BT              266.5     811.0     806.2     325.9     811.1     806.1       326     811.1     800.3
BT                329     811.1     801.6     329.1     811.1     809.2     340.9     811.1     808.5
BT                341     811.1     808.4       366     809.1                  391     808.0
BT                416     806.8                 441     805.7                  466     804.9
BT                491     804.7                 516     805.1                  541     806.0
BT                566     807.1                 591     808.5

                UPSTREAM FACE OF COVERED BRIDGE
X1   154812         0         0         0        12        12        12
X2                                                                  1
X3                                    250                   341

NC      .07       .07      .035
X1   154813         0         0         0         1         1         1
X3                                  250.4                 334.2

X1   154814        35       250       340         1         1         1                 2.32
X3                                    252                   338
GR    819.5         0     807.0        25     807.0        50     806.7        75     805.6       100
GR    803.6       125     801.8       140     801.3       155     802.2       170     802.7       185
GR    800.0       250     792.9       256     792.7       257     791.1       264     789.9       269
GR    789.5       275     789.4       287     791.5       292     792.4       299     792.7       304
GR    792.8       322     793.3       328     793.6       334     795.4       340     795.7       343
GR    795.6       349     797.1       355     797.4       371     796.8       386     798.3       401
GR    798.6       416     798.6       466     797.7       481     800.3       496     810.0      1200

X1   154819         0         0         0         5         5         5                 0.0
X3                                    247                   343

X1   154823         0         0         0         4         4         4                 0.0
X3                                    243                   347

X1   154923         0         0         0       100       100       100                0.10
X3                                    143                   447

                VALLEY SECTION AS MOVED UPSTREAM (36)
                CHANNEL SECTION REDUCED TO REFLECT LOCAL CONDITIONS
X1   155148        35       250       349       225       225       225                2.62
X3                                                          672
GR    819.5         0     807.0        25     807.0        50     806.7        75     805.6       100
GR    803.6       125     801.8       140     801.3       155     802.2       170     802.7       185
GR    800.0       250     792.9       256     792.7       258     791.1       265     789.9       271
GR    789.5       278     789.4       291     791.5       297     792.4       304     792.7       310
GR    792.8       330     793.3       336     793.6       343     795.4       349     795.7       352
GR    795.6       358     797.1       364     797.4       380     796.8       395     798.3       410
GR    798.6       425     798.6       475     797.7       490     800.3       505     810.0      1200

NC                                     .1        .3
X1   136.01        51      250.      369.    2250.0    3250.0    3250.0
GR    819.5        0.     813.3       25.     813.3       50.     812.8       75.     812.0      100.
GR    811.2      125.     810.8      140.     809.9      150.     808.4      175.     807.6      200.
GR    807.7      225.     805.8      250.     801.3      255.     800.1      257.     799.6      257.
GR    799.3      259.     798.8      261.     798.1      268.     797.8      272.     797.5      277.
1
   29DEC93      14:50:16                                                                          PAGE   35

GR    797.4      283.     797.2      287.     797.0      294.     797.0      305.     798.0      312.
GR    798.5      318.     798.6      324.     798.7      325.     798.9      344.     798.9      345.
GR    799.2      352.     799.4      359.     800.0      363.     800.5      366.     800.6      367.
GR    802.3      369.     802.1      379.     802.5      385.     802.8      390.     803.0      416.
GR    802.9      433.     802.8      442.     803.4      468.     803.5      481.     804.2      494.
GR    806.0      529.     803.9      573.     803.6      577.     803.1      599.     804.3      625.
GR    810.0       640

NC       .1       .09
X1   164.01        72     1026.     1127.    1500.0    1100.0    1702.0
```

```
GR    819.8       0.     816.5      103.     816.3      205.     815.9      308.     815.4      410.
GR    814.8     513.     814.5      574.     814.0      615.     813.1      718.     812.5      821.
GR    812.4     912.     812.2      923.     811.6      940.     811.8      963.     808.4      997.
GR    808.2    1011.     807.5     1026.     803.7     1030.     802.9     1031.     802.6     1031.
GR    801.8    1033.     801.6     1033.     801.1     1035.     801.1     1035.     800.8     1037.
GR    800.3    1044.     800.3     1045.     800.2     1049.     800.1     1054.     800.1     1055.
GR    799.9    1061.     799.7     1063.     799.7     1065.     799.6     1073.     799.6     1081.
GR    800.1    1086.     800.3     1089.     800.4     1090.     800.5     1094.     800.5     1095.
GR    800.7    1105.     800.8     1109.     800.8     1109.     801.0     1114.     801.1     1119.
GR    801.4    1122.     801.5     1122.     801.9     1125.     801.9     1125.     802.1     1125.
GR    804.4    1127.     804.2     1137.     804.2     1157.     804.4     1167.     804.4     1176.
GR    804.5    1191.     804.5     1197.     806.9     1226.     804.6     1256.     804.6     1271.
GR    804.4    1286.     806.5     1316.     806.5     1323.     806.7     1351.     807.7     1431.
GR    808.0    1471.     808.7     1511.     810.5     1619.     810.6     1754.     810.6     1766.
GR    810.9    1834.     812.2     1914.

              VALLEY SECTION AT (35)
X1   161800      27     1800.     1883.     700.0    1100.0    1700.0
GR    820.0       0     817.1      1600     815.9      1650     816.6      1690     810.5      1750
GR    810.3    1775     809.1      1800     805.5      1805     804.1      1806     802.9      1810
GR    802.5    1820     802.7      1830     802.2      1840     802.1      1850     802.2      1860
GR    802.6    1870     802.9      1880     803.3      1882     806.4      1883     806.1      1900
GR    806.4    1950     806.1      2000     810.9      2050     806.3      2100     805.9      2150
GR    810.0    2200     820.0      3200

X1   162700       0         0         0       800       900       900                0.31

X1   163600       0         0         0       800       750       900                0.31

              VALLEY SECTION AT MOVED UPSTREAM (35)
X1   165433       0         0         0       350      1700      1833                0.63

NC                                  .5       1.0
              DOWNSTREAM FACE WINN ROAD  (34B)
X1   165586      24       500     576.1       153       153       153      0.71
GR    820.0       0     809.1       400     809.2       425     809.8       450     809.5       475
GR    808.2     500     803.5     500.1     801.7       510     802.2       520     799.7       530
GR    799.9     536     799.9     536.1     799.9       539     799.9     539.1     801.5       550
GR    802.8     560     803.2       570     805.7       576     807.2     576.1     808.7       600
GR    810.3     625     811.2       650     812.2       675     816.0      2100
```

810.

1
29DEC93 14:50:16 PAGE 36

```
SB              1.963       3.0                  76                423.6
              UPSTREAM FACE WINN ROAD
              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   165614       0         0         0        28        28        28
X2                          1     810.6     812.2                                      0.71
BT      -20       0     820.0                 400     814.3                 425     813.9
BT              450     813.7                 475     813.5                 500     813.5     808.2
BT            500.1     813.5     810.6       510     813.5     808.2       520     813.5     810.6
BT              536     813.5     810.6     536.1     813.5     799.9       539     813.4     799.9
BT            539.1     813.4     810.5       576     813.4     810.5     576.1     813.4     807.2
BT              600     813.1                 625     813.0                 650     813.0
BT              675     812.2                2100     816.0

NC      .08      .1      .035
              VALLEY SECTION AU MOVED DOWNSTREAM (33)
X1   166154      33       250       331       540       540       540                -0.65
GR    820.0       0     808.2        30     808.3        80     808.5       105     809.2       130
GR    809.2     180     809.8       205     810.6       223     808.2       236     808.2       250
GR    807.5     251     804.7       252     801.6       260     802.3       270     802.7       280
GR    802.4     290     802.6       300     803.4       310     804.6       320     806.1       330
GR    807.2     331     807.6       333     808.7       355     810.3       380     811.2       405
GR    812.2     430     814.1       455     813.0       480     812.7       505     814.1       530
GR    816.3     555     817.1       580     820.0      2220

NC                                  .1        .3
              VALLEY SECTION AU (33)
X1   167750      33      300.      381.    1596.0    1500.0    1596.0
GR    820.0       0     808.2        80     808.3       130     808.5       155     809.2       180
GR    809.2     230     809.8       255     810.6       273     808.2       286     808.2       300
GR    807.5     301     804.7       302     801.6       310     802.3       320     802.7       330
GR    802.4     340     802.6       350     803.4       360     804.6       370     806.1       380
GR    807.2     381     807.6       383     808.7       405     810.3       430     811.2       455
GR    812.2     480     814.1       505     813.0       530     812.7       555     814.1       580
GR    816.3     605     817.1       630     820.0      1000
```

```
X1   170.01      42      265      351     787.0     787.0     787.0
GR      817       0    814.9       27     814.6        30     812.6        53       812        60
GR    811.1      71    811.1       80     811.2       115     811.3       137     811.8       203
GR    812.1     225    812.2      233     810.8       248     810.2       254     810.1       265
GR    806.8     268    806.8      268       807       268     806.6       269     806.8       269
GR    805.7     273    804.8      276     803.9       280     804.9       299     804.9       300
GR    804.9     315      805      319     805.6       329     806.5       337     809.6       351
GR    809.8     353    810.4      366     811.8       396     813.8       434     813.6       470
GR    813.9     477    814.5      488     814.7       491       818       564     818.9       636
GR    822.4     736    823.8      779

X1   207.01      75     250.     334.     394.0     394.0     394.0
GR    818.5      0.    816.0      25.     815.7       28.     813.5       50.     813.2       53.
GR    813.0     56.    812.6      67.     812.6       75.     812.6      101.     812.6      108.
GR    812.6    129.    812.7     136.     812.9      176.     812.9      191.     812.9      200.
GR    813.1    212.    813.2     219.     812.6      233.     812.3      239.     812.3      250.
GR    810.6    258.    810.7     258.     810.4      260.     810.5      260.     810.5      261.
GR    809.9    264.    809.1     269.     809.0      271.     808.5      278.     807.9      279.
1
   29DEC93     14:50:16                                                                    PAGE   37

GR    807.7    279.    806.6     281.     806.1      284.     805.6      287.     805.1      290.
GR    805.7    302.    805.7     302.     805.7      311.     805.8      314.     806.1      320.
GR    806.6    325.    808.2     334.     808.3      335.     808.6      341.     808.7      346.
GR    809.1    356.    809.3     361.     809.6      369.     809.7      371.     809.9      374.
GR    810.5    383.    810.6     384.     811.2      389.     812.0      396.     812.5      398.
GR    812.7    400.    812.9     403.     813.1      426.     813.2      430.     813.2      434.
GR    813.5    439.    813.9     449.     814.1      451.     815.6      485.     817.1      513.
GR    817.7    528.    818.8     573.     818.9      575.     819.6      595.     821.3      628.
GR    821.7    634.    823.4     657.     823.7      661.     823.9      664.     825.7      694.

X1   154.01      40      234      316     394.0     394.0     394.0
GR      820       0    814.1       50       814        95       814       128     814.1       165
GR    813.9     188    814.6      234     814.2       252     813.4       257     812.3       265
GR      812     280      811      282     810.9       282     808.6       285     807.8       290
GR    807.1     295    806.3      300     806.8       316       807       322     807.2       334
GR    807.3     338    807.6      345     807.8       349     808.5       356     808.7       357
GR    809.4     361    810.6      367     811.5       368     811.8       370     812.6       391
GR    812.7     394    814.6      439     817.1       474     818.8       512     819.4       528
GR    821.4     555      822      560     824.8       582     825.2       584     827.6       608

NC      .07     .07     .035
X1   154.02      50      240      335    1575.0    1575.0    1575.0
GR      820       0    819.9       24     819.9        27     819.7        48     819.6        55
GR    819.5      82    819.3       96     819.2       109     818.7       144     818.9       164
GR    819.2     191    819.3      192     817.1       216     816.3       225     815.8       240
GR    814.4     243    814.2      243     812.9       246     812.6       248       812       255
GR    810.9     271    811.3      280     811.3       281     811.5       289     811.7       298
GR    811.9     302    811.9      307     812.1       313     812.2       316     812.6       323
GR    812.9     325    813.5      328     815.2       334     815.8       335     815.9       337
GR    816.5     357    816.6      360     817.2       380     817.3       386       818       404
GR      820     427    821.3      437     823.7       463     824.6       474       826       489
GR    826.8     497    829.8      520     833.6       541     834.1       544     838.2       567

             VALLEY SECTION AV MOVED DOWNSTREAM (32A)
X1   172290      32     250.     351.    1100.0    1390.0    1390.0
GR    825.7       0    825.3       25     825.1        50     825.0        75     824.3       100
GR    823.8     125    823.2      150     823.6       175     823.8       200     820.7       225
GR    819.5     250    817.6      253     816.5       260     816.1       270     815.9       280
GR    815.4     290    815.6      300     815.7       310     816.4       320     816.4       330
GR    816.6     340    817.5      345     819.9       351     820.3       375     820.6       400
GR    821.5     425    825.2      450     828.6       475     832.4       500     836.2       525
GR    842.1     550    848.3      575

NC                                 .5       1.0
X1   172571       0        0        0       281       281       281
X3                                259                 336

X1   172595       0        0        0        24        24        24
X3                                265                 330
1
   29DEC93     14:50:16                                                                    PAGE   38


X1   172608       0        0        0        13        13        13
X3                              268.15                326.85

             DOWNSTREAM FACE GILMORE ROAD, BRIDGE REMOVED (32B)
```

```
X1   172610      21      250.     301.        2        2        2
GR    834.6       0     831.6       50    829.9      100    827.8      150    827.0      208
GR    825.4     223     827.8      235    826.0      250    816.5      251    816.5      260
GR    815.4     270     815.2      280    815.7      290    815.5      300    821.3      301
GR    829.3     328     830.9      350    833.2      375    836.6      400    840.0      425
GR    858.8     550

             UPSTREAM FACE GILMORE ROAD, BRIDGE REMOVED
X1   172630       0         0        0       20       20       20

QT        2    4530      6260
X1   172632      32       250      351        2        2        2
X3                               257.5                322.5
GR    825.7       0     825.3       25    825.1       50    825.0       75    824.3      100
GR    823.8     125     823.2      150    823.6      175    823.8      200    820.7      225
GR    819.5     250     817.6      253    816.5      260    816.1      270    815.9      280
GR    815.4     290     815.6      300    815.7      310    816.4      320    816.4      330
GR    816.6     340     817.5      345    819.9      351    820.3      375    820.6      400
GR    821.5     425     825.2      450    828.6      475    832.4      500    836.2      525
GR    842.1     550     848.3      575

X1   172634       0         0        0        2        2        2
X3                               255.5                324.5

X1   172670       0         0        0       36       36       36
X3                                 220                  360

             VALLEY SECTION AV (32A)
X1   172730      32       300      401       60       60       60
X3                                 210                  470
GR    840.0       0     825.7       50    825.1      100    825.0      125    824.3      150
GR    823.8     175     823.2      200    823.6      225    823.8      250    820.7      275
GR    819.5     300     817.6      303    816.5      310    816.1      320    815.9      330
GR    815.4     340     815.6      350    815.7      360    816.4      370    816.4      380
GR    816.6     390     817.5      395    819.9      401    820.3      425    820.6      450
GR    821.5     475     825.2      500    828.6      525    832.4      550    836.2      575
GR    842.1     600     848.3      625

X1   172830      32       300      401      100      100      100
GR    840.0       0     825.7       50    825.1      100    825.0      125    824.3      150
GR    823.8     175     823.2      200    823.6      225    823.8      250    820.7      275
GR    819.5     300     817.6      303    816.5      310    816.1      320    815.9      330
GR    815.4     340     815.6      350    815.7      360    816.4      370    816.4      380
GR    816.6     390     817.5      395    819.9      401    820.3      425    820.6      450
GR    821.5     475     825.2      500    828.6      525    832.4      550    836.2      575
GR    842.1     600     848.3      625
1
   29DEC93      14:50:16                                                                PAGE   39


NC                                 .1       .3
X1   220.01      53      275.     426.   1370.0   1370.0   1370.0
GR    847.0      0.     839.7      46.    839.6      55.    839.2      92.    839.1      110.
GR    839.0    115.     838.7     138.    838.4     160.    838.3     165.    837.9      183.
GR    837.9    206.     837.8     220.    837.6     229.    835.9     248.    835.5      252.
GR    834.6    275.     831.6     281.    826.3     295.    819.8     313.    819.5      314.
GR    818.7    319.     818.6     334.    818.5     340.    818.1     353.    818.1      362.
GR    818.2    365.     818.4     370.    818.3     377.    818.4     379.    818.9      388.
GR    818.9    389.     818.9     401.    819.0     412.    819.1     413.    819.7      418.
GR    820.4    422.     821.5     425.    821.9     426.    822.3     444.    823.2      462.
GR    823.3    463.     823.5     482.    823.9     499.    823.9     500.    824.6      537.
GR    826.6    574.     826.7     575.    828.0     612.    828.0     613.    830.2      650.
GR    832.4    687.     835.7     725.    839.2     763.

             VALLEY SECTION AW (31)
X1   175570      26      250.     450.   1370.0   1370.0   1370.0
GR    854.0       0     853.6       50    853.1      100    852.9      150    851.9      200
GR    850.4     225     849.7      250    823.4      306    821.4      316    821.2      346
GR    820.7     366     820.7      376    821.1      386    820.9      396    821.4      406
GR    821.4     436     822.1      446    823.4      449    823.9      450    824.4      475
GR    826.3     500     826.5      525    827.2      550    828.1      650    827.3      700
GR    830.0     900

X1   176575       0         0        0     1005     1005     1005                 1.7

X1   177575       0         0        0     1000     1000     1000                 1.7

             VALLEY SECTION AW MOVED UPSTREAM (31)
X1   179580       0         0        0     2005     2005     2005                 3.4
```

```
NC      .04       .04       .03        .1        .3
                VALLEY SECTION AX (30)
X1   180580        38       275       650      1000      1000      1000
GR    858.2         0     832.9       275     831.4       280     828.4       290     827.9       300
GR    827.9       310     826.4       330     825.0       360     822.7       380     821.2       400
GR    819.8       430     817.2       460     816.5       470     814.9       480     813.8       490
GR    813.2       500     813.8       510     813.2       520     811.7       530     812.0       540
GR    811.8       550     811.7       570     812.6       580     823.4       600     823.9       610
GR    824.9       620     824.9       630     829.0       640     831.4       645     833.0       650
GR    835.2       675     835.5       700     835.9       725     837.1       750     839.5       775
GR    843.7       850     844.8       875     844.3       900

                VALLEY SECTION AX MOVED UPSTREAM (30)
X1   181332        38       275       650       752       752       752                0.44
GR    858.2         0     832.9       275     831.4       280     828.4       290     827.9       300
GR    827.9       310     826.4       330     825.0       360     822.7       380     821.2       400
GR    819.8       430     817.2       460     816.5       470     814.9       480     813.8       490
GR    813.2       500     813.8       510     813.2       520     811.7       530     812.0       540
GR    811.8       550     811.7       570     812.6       580     823.4       600     823.9       610
GR    824.9       620     824.9       630     829.0       640     831.4       645     833.0       650
GR    835.2       675     835.5       700     835.9       725     837.1       750     839.5       775
GR    843.7       850     844.8       875     844.3       900
1
   29DEC93      14:50:16                                                                          PAGE   40


NC                                      .5       1.0
X1   181960         0         0         0       430       628       628                7.80
X3                                    515                 575

X1   181965         0         0         0         5         5         5                1.25
X3                                  516.25              573.75

X1   181970         0         0         0         5         5         5                1.25
X3                                  517.50              572.50

X1   181975         0         0         0         5         5         5                1.25
X3                                  518.75              571.25

X1   181980         0         0         0         5         5         5                1.25
X3                                    520                 570

NC      .03       .03                  .5       1.0
X1   181982        18       103       152         2         2         2
X3                                    103                 152
GR    835.0         0     834.0        25     833.0        50     832.0        75     831.0       100
GR    833.7       103     828.4       105     826.8       110     825.0       120     825.4       127
GR    825.6       130     826.3       140     830.6       150     832.6       152     833.0       175
GR    834.0       200     835.0       225     836.0       250

                DOWNSTREAM FACE BROOMFIELD ROAD (29B)
X1   181983         0         0         0         1         1         1
X3                                    103                 152
BT      -16         0     839.6                  25     839.8                  50     840.3
BT                 75     840.5                 103     840.5     833.7       110     840.5     837.6
BT                120     840.6     839.0       127     840.6     839.4       130     840.7     839.3
BT                140     840.8     838.7       150     840.8     836.1       152     840.8     832.6
BT                175     841.1                 200     841.4                 225     841.6
BT                250     841.9

                UPSTREAM FACE BROOMFIELD ROAD
X1   182000         0         0         0        17        17        17
X2                                                                  1
X3                                    103                 152

NC      .04       .04
X1   182001         0         0         0         1         1         1
X3                                    102                 153

X1   182003        38       275       650         2         2         2                12.80
X3                                    523                 577
GR    858.2         0     832.9       275     831.4       280     828.4       290     827.9       300
GR    827.9       310     826.4       330     825.0       360     822.7       380     821.2       400
GR    819.8       430     817.2       460     816.5       470     814.9       480     813.8       490
GR    813.2       500     813.8       510     813.2       520     811.7       530     812.0       540
GR    811.8       550     811.7       570     812.6       580     823.4       600     823.9       610
GR    824.9       620     824.9       630     829.0       640     831.4       645     833.0       650
GR    835.2       675     835.5       700     835.9       725     837.1       750     839.5       775
```

```
GR    843.7       850      844.8       875      844.3       900
1
   29DEC93      14:50:16                                                                                PAGE   41


X1   182007         0         0         0         4         4         4                  -1.00
X3                                    519                   581

X1   182012         0         0         0         5         5         5                  -1.25
X3                                    514                   585

X1   182101         0         0         0        89        89        89                 -10.25
X3                                    425                   675

                VALLEY SECTION AX MOVED UPSTREAM (30)
X1   182231        38       275       650       130       130       130                   0.98
GR    858.2         0     832.9       275     831.4       280     828.4       290      827.9       300
GR    827.9       310     826.4       330     825.0       360     822.7       380      821.2       400
GR    819.8       430     817.2       460     816.5       470     814.9       480      813.8       490
GR    813.2       500     813.8       510     813.2       520     811.7       530      812.0       540
GR    811.8       550     811.7       570     812.6       580     823.4       600      823.9       610
GR    824.9       620     824.9       630     829.0       640     831.4       645      833.0       650
GR    835.2       675     835.5       700     835.9       725     837.1       750      839.5       775
GR    843.7       850     844.8       875     844.3       900

NC                                     .1        .3
                VALLEY SECTION AX MOVED UPSTREAM (30)
X1   183400         0         0         0      1169      1169      1169                   1.69

NC      .06       .06      .035        .5        .8
                VALLEY SECTION AY (28)
X1   183600        32       188       300       200       200       200
GR    853.0         0     852.4        28     852.4        33     851.6        58      851.2        83
GR    850.9       108     837.8       125     836.0       150     835.4       175      835.3       188
GR    833.3       190     830.5       200     830.8       220     831.2       230      831.2       240
GR    831.0       250     830.2       270     831.1       280     830.9       290      833.2       300
GR    835.9       318     836.2       325     836.4       350     836.8       375      837.7       400
GR    837.9       425     837.7       450     838.0       475     835.5       500      836.2       525
GR    837.7       550     840.0       560

NC                                     .1        .3
X1   184862         0         0         0      1262      1262      1262                   0.45

                VALLEY SECTION AY MOVED UPSTREAM (28)
X1   186125         0         0         0      1263      1263      1263                   0.44

NC      .05       .07      .035
                VALLEY SECTION AZ MOVED DOWNSTREAM (26)
X1   186790        30       360       435       665       665       665                  -1.65
GR    895.7         0     852.6       110     846.1       135     840.2       160      839.6       185
GR    839.6       210     839.3       235     839.0       260     837.9       285      838.2       310
GR    837.2       335     837.5       360     836.0       361     835.0       365      834.1       375
GR    833.1       385     833.0       395     833.4       405     834.3       415      834.7       425
GR    836.3       429     839.5       435     840.0       460     840.8       485      841.2       510
GR    841.5       535     841.2       635     841.4       660     841.2       685      845.0       700
1
   29DEC93      14:50:16                                                                                PAGE   42


NC                                     .5       1.0
X1   187092         0         0         0       302       302       302                   0.11
X3                                    202                   591

X1   187394         0         0         0       302       302       302                   0.11
X3                                    278                   516

X1   187494         0         0         0       100       100       100                    .04
X3                                    303.7                 491.3

X1   187719        22       100       175       225       225       225
X3                                    100                 175.1
GR    838.2         0     837.1        25     837.4        50     836.4        75      833.8       100
GR    833.8     100.1     832.8       105     833.2       115     832.6       125      833.2     135.4
GR    833.2     135.5     833.6       139     833.6     139.1     833.1       145      833.0       155
GR    833.0       165     834.7       175     834.7     175.1     839.2       200      840.0       225
GR    840.4       250     840.7       275

NC      .03       .03       .03
```

```
                DOWNSTREAM FACE M-20 (27B)
                COMBINED 26 & 27
X1   187720        0         0         0         1         1         1
X3                                   100                 175.1
BT      -16        0     843.4                  25     843.7                  50     844.0
BT                75     844.4                 100     844.8     833.8     100.1     844.8     841.6
BT             135.4     845.2     842.1     135.5     845.2     833.2       139     845.2     833.6
BT             139.1     845.2     842.1       175     845.7     842.7     175.1     845.7     834.7
BT               200     846.1                 225     846.5                 250     846.8
BT               275     847.1

                UPSTREAM FACE M-20
X1   187780        0         0         0        60        60        60
X2                                                                  1
X3                                   100                 175.1

NC      .11      .04      .035
X1   187781        0         0         0         1         1         1
X3                                    99                  176

X1   187831       30       360       435        50        50        50                -1.26
X3                                   309                  486
GR    895.7        0     852.6       110     846.1       135     840.2       160     839.6       185
GR    839.6      210     839.3       235     839.0       260     837.9       285     838.2       310
GR    837.2      335     837.5       360     836.0       361     835.0       365     834.1       375
GR    833.1      385     833.0       395     833.4       405     834.3       415     834.7       425
GR    836.3      429     839.5       435     840.0       460     840.8       485     841.2       510
GR    841.5      535     841.2       635     841.4       660     841.2       685     850.0      1000
1
   29DEC93      14:50:16                                                                          PAGE   43


X1   187881        0         0         0        50        50        50                 0.02
X3                                   259                  536

                VALLEY SECTION AZ MOVED DOWNSTREAM (26)
X1   188061        0         0         0       180       180       180                 0.05

NC      .08      .08                  .1        .3
                VALLEY SECTION AZ (26)
X1   191400        0         0         0      2400      2900      3339                 1.19

X1   192728        0         0         0      1380      1210      1328                 1.24

                VALLEY SECTION AZ MOVED UPSTREAM (26)
X1   193956        0         0         0      1280      1110      1228                 1.13

NC      .08      .15                  .5       1.0
X1   194826        0         0         0       870       870       870                 0.89
X3                                   322                  474

X1   194876        0         0         0        50        50        50                 0.15
X3                                   334                  461

X1   194972        0         0         0        96        96        96                 0.30
X3                                 357.5                 437.5

X1   194976       24       100     178.1         4         4         4
X3                                   100                 178.1
GR    842.9        0     841.7        25     843.0        50     842.4        75     843.6       100
GR    843.6    100.1     841.1       113     838.7       125     838.7     125.1     838.4       126
GR    838.4    126.1     837.1       136     838.2       150     838.2     150.1     839.0       151
GR    839.0    151.1     839.7       161     841.0       163     843.9       178     843.9     178.1
GR    845.7      200     847.1       225     848.5       250     849.7       275

NC      .03      .03       .03
                DOWNSTREAM FACE LITTLEFIELD ROAD (25B)
                COMBINED 23 & 25
X1   194977        0         0         0         1         1         1
X3                                   100                 178.1
BT      -20        0     848.5                  25     848.4                  50     848.8
BT                75     849.2                 100     849.3     843.6     100.1     849.3     848.0
BT               125     849.3     848.0     125.1     849.3     838.7       126     849.3     838.4
BT             126.1     849.3     848.0       150     849.4     848.0     150.1     849.4     838.2
BT               151     849.4     839.0     151.1     849.4     847.9       178     849.5     847.9
BT             178.1     849.5     843.9       200     850.0                 225     850.4
BT               250     851.0                 275     851.7

                UPSTREAM FACE LITTLEFIELD ROAD
```

```
X1   195023        0        0        0       46       46       46
X2                                                           1
X3                                  100              178.1
1
   29DEC93      14:50:16                                                                    PAGE   44


NC      .06      .07      .035
X1   195024        0        0        0        1        1        1
X3                                   99              179

X1   195040       26      236      300       16       16       16                -2.48
X3                                  220              332
GR    846.3        0    846.5       25    847.3       50    846.7       75    846.7      100
GR    847.4      118    844.9      150    843.9      175    845.2      200    844.4      211
GR    844.6      236    844.4      239    841.3      250    839.9      260    839.3      270
GR    839.7      280    839.9      290    842.9      300    845.5      301    847.4      317
GR    849.3      350    850.7      375    851.9      400    852.4      450    852.8      500
GR    852.7      550

X1   195090        0        0        0       50       50       50                 0.07
X3                                  170              382

              VALLEY SECTION BA MOVED DOWNSTREAM (23)
X1   195170        0        0        0       80       80       80                 0.11

NC                                   .1       .3
              VALLEY SECTION BA MOVED DOWNSTREAM (23)
X1   195350       25     236.     300.    165.0    205.0    180.0                -2.13
GR    846.3        0    846.5       25    847.3       50    846.7       75    846.7      100
GR    847.4      118    844.9      150    843.9      175    845.2      200    844.4      211
GR    844.6      236    844.4      239    841.3      250    839.9      260    839.3      270
GR    839.7      280    839.9      290    842.9      300    845.5      301    847.4      317
GR    849.3      350    850.7      375    851.9      400    852.4      450    852.8      500

NC      .07       .1      .035       .3      0.5
X1   195724        0        0        0      350      400      374                 0.42

X1   195924       36      247      325    200.0    200.0    200.0
GR    845.7        0    845.8       25    846.1       50    846.1       75    846.3      100
GR    846.7      125    844.9      150    843.9      175    845.2      200    844.5      225
GR    844.4      239    844.5      247    844.5    247.1    842.7      255    840.2      263
GR    839.7    272.5    839.7    272.6    838.9      274    838.9    274.1    838.6      278
GR    839.6      288    840.7      298    840.7    298.1    840.7    299.5    840.7    299.6
GR    841.8      305    842.8      311    843.9      316    849.5      325    849.5    325.1
GR    849.3      350    850.7      375    851.9      400    852.2      425    852.4      450
GR    852.6      475

NC      .03      .03      .03
              DOWNSTREAM FACE PICKARD ROAD (24)
              COMBINED 23 & 24
X1   195925        0        0        0        1        1        1
BT      -28        0    846.5                25    846.2                 50    846.1
BT                75    846.1               100    846.3                125    846.7
BT               150    847.3               175    848.0                200    848.8
BT               225    849.5               247    850.1    844.5    247.1    850.1    849.0
BT             272.5    851.1    849.6    272.6    851.1    839.7      274    851.1    838.9
BT             274.1    851.1    849.6      298    852.1    850.2    298.1    852.1    840.7
BT             299.5    852.1    840.7    299.6    852.1    850.2      325    853.1    850.9
BT             325.1    853.1    849.5      350    854.7                375    856.6
1
   29DEC93      14:50:16                                                                    PAGE   45


BT               400    858.5               425    860.4                450    862.3
BT               475    864.3

              UPSTREAM FACE PICKARD ROAD
X1   195974        0        0        0       49       49       49
X2                                                           1

NC       .1       .1      .035
X1   195975        0        0        0        1        1        1

X1   196015       26      636      700       40       40       40                -1.22
X3                                  403
GR    860.0        0    850.0      150    846.3      400    846.5      425    846.7      500
GR    847.4      518    844.9      550    843.9      575    845.2      600    844.4      611
GR    844.6      636    844.4      639    841.3      650    839.9      660    839.3      670
```

```
GR    839.7       680      839.9       690      842.9       700      845.5       701      847.4       717
GR    849.3       750      850.7       775      851.9       800      852.4       850      852.8       900
GR    852.7       950

X1   196065         0          0         0         50        50        50                0.02
X3                                     353

                VALLEY SECTION BA MOVED DOWNSTREAM (23)
X1   196272         0          0         0        207       207       207                0.10

NC                                      .1         .3
                VALLEY SECTION BA (23)
X1   197250        26       486.       550.      578.0     572.0     978.0
GR    850.0         0      846.3       250      846.5       275      846.7       325      846.7       350
GR    847.4       368      844.9       400      843.9       425      845.2       450      844.4       461
GR    844.6       486      844.4       489      841.3       500      839.9       510      839.3       520
GR    839.7       530      839.9       540      842.9       550      845.5       551      847.4       567
GR    849.3       600      850.7       625      851.9       650      852.4       700      852.8       750
GR    852.7       800

NC      .07       .07       .035        .1         .3
X1   178.01        41       843.       920.     2565.0    2465.0    2865.0
GR    860.0        0.      849.9       600      850.0      649.      850.0      651.      849.1      677.
GR    848.7      697.      848.7       703.      848.9      721.      847.9      746.      847.7      754.
GR    847.5      780.      848.3       801.      849.1      806.      850.0      814.      849.9      817.
GR    850.2      843.      849.3       848.      844.7      864.      844.6      865.      843.6      872.
GR    842.7      879.      842.7       880.      842.6      887.      842.2      894.      842.6      903.
GR    842.8      907.      843.7       911.      844.1      913.      846.0      920.      847.3      921.
GR    848.5      937.      849.8       969.      849.8      971.      850.5      993.      851.2     1018.
GR    851.2     1022.      851.2      1067.      851.2     1073.      851.6     1116.      851.6     1124.
GR    853.2     1165.

                VALLEY SECTION BB MOVED DOWNSTREAM (22)
X1   202235        20       250.       340.     2020.0    1920.0    2120.0                -1.09
GR    853.9         0      853.2        50      851.0       100      850.6       150      852.0       207
GR    855.6       220      856.1       250      848.3       279      846.9       289      845.8       299
GR    846.0       309      845.4       319      846.1       329      848.3       334      849.5       340
GR    850.6       390      850.8       440      850.2       490      850.8       540      854.0       580
1
   29DEC93      14:50:16                                                                          PAGE   46


QT        2      3200      4430
NC                .04                   .5        1.0
X1   202936         0          0         0       600       740       701                0.60
X3                                     197                 393

X1   203036         0          0         0       100       100       100                0.08
X3                                     227                 363

X1   203176        35        250     335.1     140.0     140.0     140.0      0.77
X3                                   192.5                 258
GR    853.9         0      853.2        50      851.0       100      850.6       150      851.3       175
GR    852.0       200      855.6       225      856.1       240      853.2       250      853.2     250.1
GR    848.9       261      846.8       266      846.8     266.1      846.6       268      846.6     268.1
GR    846.4       274      846.2       279      845.8       284      845.3       289      845.3       294
GR    845.4       299      845.3       304      845.5       309      847.1       316      847.1     316.1
GR    848.0       318      848.0     318.1      848.9       325      853.7       335      853.7     335.1
GR    850.6       385      850.8       440      850.2       490      850.8       540      854.0       585

NC      .03       .03       .03
                DOWNSTREAM STREAM FACE RIVER ROAD (22B)
                COMBINED 22 & 22.1
X1   203181         0          0         0         5         5         5
X2                                                                                      0.77
X3                                   192.5                 258
BT      -19         0      865.6                 100     856.6                 175      856.7
BT                200      856.9                 225     857.0                 250      857.1     853.2
BT              250.1      857.1     855.1       266     857.1     855.1     266.1      857.1     846.8
BT                268      857.1     846.6     268.1     857.1     854.3       316      857.1     854.3
BT              316.1      857.1     847.1       318     857.1     848.0     318.1      857.1     855.1
BT                335      857.1     855.4     335.1     857.1     853.7       385      856.7
BT                585      856.7

                UPSTREAM FACE RIVER ROAD
                BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   203219         0          0         0        38        38        38
X2                                                                     1
X3                                   192.5                 258
```

```
NC      .06       .04       .035
X1   203224         0         0         0         5         5         5
X3                                   191.5                 259

NC                .06
X1   203274        21      2000      2090        50        50        50
X3                                    1959                 2130
GR    860.0         0     853.9      1750     853.2      1800     850.6      1900     852.0      1957
GR    855.6      1970     856.1      2000     848.3      2029     846.9      2039     845.8      2049
GR    846.0      2059     845.4      2069     846.1      2079     848.3      2084     849.5      2090
GR    850.6      2140     850.8      2190     850.2      2240     850.8      2290     854.0      2330
GR    860.0      3000
1
   29DEC93      14:50:16                                                                          PAGE   47


              VALLEY SECTION BB (22)
X1   203464        21      2000      2090       230       140       190
X3                                    1769                 2320
GR    860.0         0     853.9      1750     853.2      1800     850.6      1900     852.0      1957
GR    855.6      1970     856.1      2000     848.3      2029     846.9      2039     845.8      2049
GR    846.0      2059     845.4      2069     846.1      2079     848.3      2084     849.5      2090
GR    850.6      2140     850.8      2190     850.2      2240     850.8      2290     854.0      2330
GR    860.0      3000

X1   277.01        56     1247.     1330.    1637.0    1637.0    1637.0
GR    860.0        0.     857.3      630.     857.1      695.     856.8      758.     856.4      823.
GR    855.1      876.     854.3      924.     853.9      990.     853.9     1000.     854.0     1053.
GR    854.6     1091.     854.8     1118.     854.7     1122.     854.1     1141.     853.9     1174.
GR    853.6     1181.     853.5     1184.     854.4     1220.     856.2     1228.     856.6     1247.
GR    852.6     1262.     850.2     1269.     849.6     1271.     849.5     1272.     848.4     1280.
GR    848.4     1281.     847.6     1288.     847.5     1289.     847.5     1289.     847.5     1297.
GR    847.5     1298.     847.0     1307.     847.4     1314.     847.5     1317.     847.6     1318.
GR    848.5     1321.     849.2     1323.     849.4     1323.     850.3     1328.     851.2     1330.
GR    851.5     1349.     851.8     1367.     851.9     1388.     852.0     1404.     852.0     1407.
GR    851.7     1440.     852.0     1466.     852.0     1477.     852.4     1485.     853.5     1506.
GR    853.6     1544.     853.7     1563.     854.2     1624.     854.4     1639.     855.6     1702.
GR    860.0     1999.

NC      .09       .08                  .1        .3
X1   184.01        40      495.      572.    1633.0    1633.0    1633.0
GR    860.0        0.     858.2       250     858.1      276.     857.8      301.     857.4      327.
GR    855.2      348.     853.7      367.     853.4      393.     853.4      397.     853.8      418.
GR    856.3      444.     855.8      453.     856.7      466.     856.4      469.     857.0      495.
GR    853.8      508.     851.2      514.     850.7      516.     849.9      524.     849.3      530.
GR    849.2      531.     849.1      538.     848.6      546.     849.0      554.     849.0      558.
GR    849.7      562.     850.3      564.     851.5      570.     852.9      572.     852.9      584.
GR    853.1      609.     853.2      621.     853.3      659.     853.2      671.     852.8      709.
GR    852.7      721.     853.0      760.     853.1      770.     854.9      810.     860.0     1000

              VALLEY SECTION BC (21)
X1   210350        25      240.      303.    3616.0    3616.0    3616.0
GR    862.6         0     862.7        25     862.5        50     862.8        75     856.5       115
GR    856.2       140     856.4       165     860.8       190     857.2       215     857.9       240
GR    856.1       248     853.2       252     852.7       262     851.8       272     852.1       282
GR    851.8       292     853.8       301     856.3       303     856.1       315     855.8       340
GR    855.8       390     855.2       440     855.3       490     855.8       540     860.0       860

X1   185.01        39      245.      312.    3000.0    2475.0    2815.0
GR    862.6        0.     862.7       26.     862.7       49.     862.6       51.     862.7       77.
GR    861.0       98.     859.5      117.     859.3      143.     859.3      147.     859.6      168.
GR    862.0      194.     861.9      196.     860.0      219.     860.2      245.     858.2      253.
GR    856.9      255.     856.3      257.     855.4      266.     855.3      266.     853.8      276.
GR    854.0      285.     854.0      287.     853.9      294.     854.9      299.     856.1      303.
GR    857.6      309.     859.2      312.     859.1      323.     859.1      342.     859.1      348.
GR    859.3      393.     859.3      397.     859.1      443.     859.1      446.     859.5      494.
GR    859.5      496.     859.7      545.     860.0      700     863.0       850
1
   29DEC93      14:50:16                                                                          PAGE   48


              VALLEY SECTION BD (20A)
X1   215877        19      300.      370.    2600.0    2300.0    2712.0
GR    866.0         0     862.6        50     862.8       100     862.4       200     863.2       250
GR    862.5       300     859.6       310     858.0       320     855.8       330     855.9       340
GR    855.8       350     859.6       360     862.1       370     862.3       400     862.8       450
GR    863.0       500     863.7       550     863.5       560     870.0      1200
```

```
NC                                   .5        1.0
              DOWNSTREAM FACE SCHOOL ROAD (20B)
              COMBINED 20 & 20.1
              BRIDGE SKEW DUE TO ROAD ORIENTATION WITH RESPECT TO FLOODPLAIN
X1   216054       26       350     411.1      200.0      150.0      177.0       0.82
GR    866.0        0     863.0        50      862.8        175      862.8        275      863.2        300
GR    858.5      350     858.5     350.1      858.5        351      856.2        360      856.5        370
GR    855.6      380     855.6       390      856.2        400      858.9        411      858.9      411.1
GR    860.5      415     862.1       420      862.2        436      862.4        461      862.6        486
GR    862.9      511     863.1       561      863.5        586      863.6        636      863.5        661
GR    870.0     1000

SB              1.38       3.0                  50                 335.5
              UPSTREAM FACE SCHOOL ROAD
X1   216085        0         0         0         31         31         31
X2                          1     863.2      865.1                                       0.82
BT      -17        0     866.3                  50      866.3                  175      865.1
BT               275     865.6                 300      865.6                  350      865.8      858.5
BT             350.1     865.8     863.2       411      865.8      863.1      411.1      865.8      858.9
BT               436     865.8                 461      865.7                  486      865.7
BT               511     865.8                 561      866.1                  586      866.2
BT               636     866.3                 661      866.7

NC       .1       .09      .035
              GR DATA SUPPLIED BY MDNR
X1   216135        9       830       885         50         50         50
X3                                  470                   1095
GR    866.0      450     862.0       525      859.8        830      855.5        832      856.6        854
GR    858.7      882     861.8       885      866.0       1430      870.0       1460

NC                                   .3         .5
              GR DATA SUPPLIED BY MDNR
X1   216185       20       700       762          5        150         50
GR    870.0      200     868.0       310      866.0        325      867.0        350      866.0        370
GR    864.0      390     862.0       420      864.0        470      862.0        520      860.0        530
GR    860.0      545     861.5       630      861.4        700      857.3        709      856.4        733
GR    855.9      746     858.4       750      864.5        762      869.0       1220      875.0       1250

NC     .105      .105      .038
              GR DATA SUPPLIED BY MDNR
X1   216277       16       712       765        112        142         92        .95
GR    866.0      350     864.0       395      862.0        430      862.0        550      860.3        660
GR    858.8      663     856.8       674      858.7        686      860.2        688      859.6        712
GR    858.9      714     857.9       725      857.5        744      859.0        756      864.6        765
GR    866.0     1190
1
```



```
NC                                   .1         .3
              GR DATA SUPPLIED BY MDNR
X1   217062       15       678       725        515        565        785
GR    866.5        0     866.0        50      864.0        110      862.0        140      861.8        480
GR    862.0      555     862.1       580      862.0        668      860.0        678      858.5        700
GR    860.0      725     862.0       735      864.0        740      866.0        742      868.0        745

NC                                   .3         .5
              GR DATA SUPPLIED BY MDNR
X1   217537       14       350       410        525          5        475       0.78
GR    866.0        0     864.0        78      863.0        272      862.6        288      859.5        300
GR    860.9      310     861.8       335      860.0        350      856.3        379      860.0        410
GR    862.0      455     864.0       515      866.0        532      868.0        547

              GR DATA SUPPLIED BY MDNR
X1   218237       13        39        88        200        400        700
GR    870.0        0     868.0        10      866.0         30      864.0         35      862.0         39
GR    859.5       62     862.0        88      863.3        130      862.7        590      864.0        680
GR    866.0      825     868.0       838      870.0        855

NC                                   .1         .3
              GR DATA SUPPLIED BY MDNR
X1   218792       13       290       344        150        475        555
GR    870.0        0     868.0        10      866.0         19      864.0        160      864.0        285
GR    862.0      290     859.9       318      862.0        344      864.0        348      866.0        388
GR    866.0      702     868.0       743      870.0        765

NC                                   .1         .3
              GR DATA SUPPLIED BY MDNR
```

```
X1   219172        9        12        60       480       300       380
GR    870.0        0     864.0        12     860.5        35     863.0        60     864.0       130
GR    864.3      200     866.0       310     868.0      1008     870.0      1020

NC                                     .3        .5
                GR DATA SUPPLIED BY MDNR
X1   219722       13       332       380       375       325       550
GR    872.0        0     866.0        12     865.0       140     864.0       312     863.0       332
GR    861.0      360     863.0       380     864.0       385     865.0       390     869.0       450
GR    868.0      782     870.0       812     872.0       835

NC                                     .1        .3
                GR OATA SUPPLIED BY MDNR
X1   220247       14        24        82       525       625       525
GR    872.0        0     870.0         2     868.0         5     866.0         9     864.0        17
GR    863.0       24     861.4        50     863.0        82     864.0        89     866.0       170
GR    867.5      470     868.0       595     870.0       618     872.0       646

NC                                     .5       0.8
1
   29DEC93      14:50:16                                                                          PAGE   50


                GR DATA SUPPLIED BY MDNR
X1   220447       11       610       705       200       200       200       .87
X3                                   140                 720
GR    875.0        0     872.0        45     870.0       100     868.0       210     866.0       530
GR    865.1      600     863.1       610     861.3       667     862.9       705     866.9       710
GR    875.0      720

X1   220942       15       405       488       430       390       495       .96
X3                                   255                 633
GR    875.0        0     870.0        25     868.0       160     866.2       405     863.5       410
GR    862.8      445     863.7       477     865.0       488     864.3       504     866.3       510
GR    867.0      580     866.0       660     866.0       690     870.0       700     875.0       710

X1   221102       14       550       590       160       150       160       .94
X3                                   300                 600
GR    875.0        0     870.0        30     868.0       160     866.0       435     863.0       440
GR    862.5      462     865.5       470     866.2       510     865.5       550     862.5       555
GR    862.5      575     866.0       590     868.0       640     875.0       665

X1   221302       18       250       300     300.0     150.0     200.0
X3                                   250                 300.1
GR    867.0        0     866.9       125     866.9       225     864.0       250     864.0     250.1
GR    862.2      260     860.6       270     860.4       280     861.6       290     861.2       300
GR    861.2    300.1     864.0       310     866.6       325     866.7       350     867.2       400
GR    867.4      450     868.1       500     867.9       550

NC      .03      .03       .03
X1   221310        0         0         0         8         8         8
X3                                   250                 300.1
BT     -10        0     875.1                 125     874.7                 225     874.7
BT              250     874.8     864.0     250.1     874.8     872.4       300     875.3     871.9
BT            300.1     875.3     861.2       325     875.5                 400     877.0
BT              550     881.5

X1   221340        0         0         0        30        30        30
X2                                                                  1
X3                                   250                 300.1

NC      .06      .07      .035
X1   221348        0         0         0         8         8         8
X3                                   250                 300.1

X1   221353        4        30        90         5         5         5
X3                                    30                  90
GR    870.2        0     860.2        30     860.3        90     870.2       120

X1   221383        0         0         0        30        30        30

NC      .04      .04       .03        .1        .3
X1   222533        4       30.       90.      1150      1290    1150.0
GR    870.2        0     860.2        30     860.3        90     870.2       120
1
   29DEC93      14:50:16                                                                          PAGE   51


NC     .035     .055       .03
```

```
X1   237300      42     250.     869.   14767.0   14767.0   14767.0
X5        2   899.0    900.0
GR    918.7       0    919.1       50    919.7       103    895.9      250    895.7      255
GR    891.8     270    890.7      290    889.8       310    888.7      330    887.5      350
GR    887.1     370    890.7      390    890.8       410    890.6      430    890.6      450
GR    890.2     470    890.2      490    890.2       510    890.0      530    890.0      550
GR    890.3     570    890.2      590    890.5       610    890.5      670    890.4      730
GR    890.5     750    890.6      770    890.6       790    891.0      810    892.4      830
GR    893.5     850    895.6      864    896.0       869    896.8      895    897.3      920
GR    898.0     945    897.6      970    898.2       995    898.6     1020    898.8     1045
GR    898.3    1070    898.5     1095

X1   241300       0       0        0     4000      4000      4000

NC      .06     .06    .035
X1   244550      26     250      425     3170      3250      3250
GR    905.3       0    902.5      100    897.1       200    896.2      250    895.6      253
GR    892.8     270    891.1      290    890.1       310    889.6      330    889.1      340
GR    889.6     350    890.1      370    891.1       390    892.6      410    893.6      420
GR    895.6     422    897.0      425    900.4       450    905.1      500    904.2      525
GR    905.0     550    907.6      575    906.4       600    909.5      625    910.8      650
GR    913.5     675

X1   267.01      54     251.     398.    742.0     762.0     762.0
GR    904.5      0.    903.7      50.    902.5      100.    902.5     100.    900.3     150.
GR    897.5    200.    897.5     200.    896.8      225.    895.9     251.    895.3     253.
GR    895.3    253.    893.3     264.    892.8      268.    892.8     268.    891.8     280.
GR    891.4    285.    891.4     286.    890.9      298.    890.6     304.    890.5     314.
GR    890.2    321.    890.2     321.    889.8      330.    890.2     338.    890.2     338.
GR    890.6    354.    890.6     354.    891.4      369.    891.5     370.    891.8     375.
GR    892.9    385.    892.9     386.    893.9      393.    895.2     395.    895.5     395.
GR    896.5    398.    897.1     400.    899.6      421.    899.6     422.    903.4     469.
GR    903.4    469.    903.0     493.    903.0      493.    903.5     510.    904.5     517.
GR    908.9    541.    908.9     541.    910.6      565.    910.7     565.    915.5     588.
GR    915.6    589.    919.1     612.    919.1      613.    923.7     637.

NC      .07     .12    .035
X1   256.01      37     251.     370.    742.0     763.0     763.0
GR    903.8      0.    903.5      50.    902.5      100.    902.5     100.    900.7     150.
GR    897.9    200.    897.0     225.    895.5      251.    895.0     253.    893.1     263.
GR    892.8    266.    891.9     277.    891.7      281.    891.3     292.    891.1     297.
GR    891.1    306.    890.8     312.    890.4      320.    890.8     326.    891.1     338.
GR    891.8    349.    892.0     353.    893.2      361.    894.2     367.    895.3     368.
GR    896.1    370.    897.0     372.    898.8      393.    901.8     438.    901.7     461.
GR    902.2    477.    903.9     484.    910.3      507.    914.9     530.    921.5     552.
GR    927.4    575.    933.9     598.
```



```
X1   268.01      42     251.     343.    742.0     762.0     762.0
GR    903.0      0.    903.3      50.    902.5      100.    901.1     150.    898.3     200.
GR    897.1    225.    895.2     251.    894.7      253.    893.0     261.    892.9     262.
GR    892.8    264.    892.1     273.    892.1      274.    892.0     277.    891.7     286.
GR    891.7    286.    891.6     290.    891.7      298.    891.4     303.    891.1     310.
GR    891.4    314.    891.6     322.    892.1      329.    892.2     331.    892.3     332.
GR    893.5    337.    894.5     341.    895.1      341.    895.7     343.    896.8     344.
GR    896.9    345.    898.0     364.    900.2      407.    900.5     429.    900.9     444.
GR    901.0    445.    903.3     451.    911.7      473.    919.2     495.    927.5     516.
GR    935.6    538.    944.0     560.

X1   247600      16     251.     315.    742.0     763.0     763.0
GR    902.3       0    903.0      50    902.5       100    901.6      150    897.3      225
GR    894.8     251    892.8     260    892.3       270    892.1      280    892.3      290
GR    891.8     300    892.5     310    895.2       315    896.7      317    899.7      412
GR    954.2     521

X1   301.01      31     251.     313.    600.0     608.0     608.0
GR    903.3      0.    903.2      50.    903.1      50.     902.4     100.    902.3     100.
GR    901.9    150.    901.8     150.    900.1      200.    899.7     225.    899.1     240.
GR    895.6    251.    894.0     253.    893.0      258.    892.3     264.    892.2     266.
GR    892.0    274.    892.0     277.    892.0      282.    891.7     290.    892.2     298.
GR    893.1    305.    893.5     307.    895.5      313.    896.2     316.    895.9     341.
GR    896.2    376.    896.4     411.    896.9      447.    897.2     479.    897.6     482.
GR    929.5    666.

X1   248716      20     250.     310.    500.0     508.0     508.0              -2.36
X3                                        550
GR    906.6       0    905.5      50    904.4       100    904.3      150    903.8      200
```

GR	904.6	240	898.6	250	896.1	252	894.4	260	894.0	270
GR	893.8	280	894.5	290	896.1	302	898.1	310	896.8	350
GR	896.8	400	896.5	450	896.9	500	896.8	550	907.0	810
NC	.04			.5	1.0					
X1	249051	0	0	0	435	285	335		0.54	
X3				186		374				
X1	249286	0	0	0	235	235	235		0.37	
X3				245		315				
X1	249336	30	240	310	50.0	50.0	50.0	0.87		
X3				217.5		261.6				
GR	904.9	0	903.8	50	902.7	100	902.6	125	902.6	150
GR	902.3	175	902.1	200	902.6	225	902.9	240	895.4	250
GR	895.4	250.1	895.5	255	895.6	260	895.0	265	893.2	270
GR	889.8	275	889.2	280	890.3	285	891.8	290	893.2	295
GR	894.8	300.5	894.8	300.6	896.4	310	896.0	325	895.1	350
GR	895.1	400	895.0	425	894.8	450	895.2	500	895.1	550

1

SB		1.9	3.0		44		331.7			
X1	249364	0	0	0	28	28	28			
X2			1	900.4	903.5				0.87	
X3				160.0		480.0				
BT	-15	0	905.8		125	904.8		175	904.4	
BT		200	904.3		225	904.1		250	903.8	895.4
BT		250.1	903.8	900.4	300.5	903.7	900.4	300.6	903.7	894.8
BT		325	903.5		400	903.5		425	903.7	
BT		450	904.0		500	905.1		550	906.4	
NC	.05	.11	.035							
QT	2	2730	3780							
X1	249394	20	250	310	30	30	30		-1.46	
X3				91		469				
GR	906.6	0	905.5	50	904.4	100	904.3	150	903.8	200
GR	904.6	240	898.6	250	896.1	252	894.4	260	894.0	270
GR	893.8	280	894.5	290	896.1	302	898.1	310	896.8	350
GR	896.8	400	896.5	450	896.9	500	896.8	550	910.0	600
X1	249444	0	0	0	50	50	50		.11	
X3				41		519				
X1	249617	0	0	0	173	173	173		0.38	
NC				.1	.3					
X1	250140	20	250.	310.	450.0	530.0	523.0			
GR	906.6	0	905.5	50	904.4	100	904.3	150	903.8	200
GR	904.6	240	898.6	250	896.1	252	894.4	260	894.0	270
GR	893.8	280	894.5	290	896.1	302	898.1	310	896.8	350
GR	896.8	400	896.5	450	896.9	500	896.8	550	907.0	1000
NC	.08	.06								
X1	250958	20	250.	310.	740.0	860.0	818.0		1.79	
GR	906.6	0	905.5	50	904.4	100	904.3	150	903.8	200
GR	904.6	240	898.6	250	896.1	252	894.4	260	894.0	270
GR	893.8	280	894.5	290	896.1	302	898.1	310	896.8	350
GR	896.8	400	896.5	450	896.9	500	896.8	550	910.0	551
NC				.5	1.0					
X1	251253	0	0	0	225	285	295		0.57	
X3				201		359				
X1	251328	0	0	0	75	75	75		0.09	
X3				219		341				
X1	251433	0	0	0	50	105	105		0.20	
X3				245		314				

1

X1	251478	29	250.	295.9	25.0	45.0	45.0			
X3				250		296				
GR	908.7	0	908.1	25	907.6	50	907.1	75	906.5	100
GR	906.4	150	906.1	175	905.9	200	906.4	225	901.6	250

GR	901.6	250.1	900.2	254	899.4	255	899.0	260	897.2	265
GR	895.9	270	896.2	275	896.9	280	897.7	285	898.3	290
GR	899.7	295.8	899.7	295.9	900.2	310	898.8	325	898.9	350
GR	898.9	375	898.9	400	899.0	500	898.9	550		
NC	.03	.03	.03							
X1	251486	0	0	0	8	8	8			
X3				250		296				
BT	-15	0	913.5		25	913.2		50	912.9	
BT		75	912.7		175	912.3		200	912.4	
BT		225	912.7		250	912.9	901.6	250.1	912.9	910.2
BT		295.8	913.2	910.0	295.9	913.2	899.7	325	914.3	
BT		375	916.8		400	918.4		550	926.9	
X1	251514	0	0	0	28	28	28			
X2							1			
X3				250		296				
NC	.06	.08	.035							
X1	251522	0	0	0	8	8	8			
X3				250		296				
X1	251525	20	250	310	3	3	3		2.34	
X3				254		306				
GR	906.6	0	905.5	50	904.4	100	904.3	150	903.8	200
GR	904.6	240	898.6	250	896.1	252	894.4	260	894.0	270
GR	893.8	280	894.5	290	896.1	302	898.1	310	896.8	350
GR	896.8	400	896.5	450	896.9	500	896.8	550	910.0	551
X1	251537	0	0	0	12	12	12			
X3				242		318				
X1	251697	20	250	310	160	160	160		2.55	
GR	906.6	0	905.5	50	904.4	100	904.3	150	903.8	200
GR	904.6	240	898.6	250	896.1	252	894.4	260	894.0	270
GR	893.8	280	894.5	290	896.1	302	898.1	310	896.8	350
GR	896.8	400	896.5	450	896.9	500	896.8	550	910.0	551
NC				.1	.3					
X1	268.01	46	250.	319.	1280.0	1210.0	1385.0			
GR	910.2	0.	909.9	25.	909.2	50.	908.6	75.	908.2	100.
GR	908.3	125.	908.1	150.	907.8	175.	907.3	200.	907.2	225.
GR	907.3	240.	902.7	250.	900.9	252.	900.7	252.	899.3	260.
GR	899.2	261.	899.1	261.	898.7	267.	898.1	271.	898.0	272.
GR	897.8	274.	897.6	283.	898.4	289.	898.5	294.	898.5	295.
GR	898.6	295.	899.2	302.	899.4	309.	899.5	309.	900.4	316.
GR	900.9	316.	902.3	319.	901.3	358.	901.2	359.	901.2	376.
GR	902.7	401.	902.8	408.	902.8	408.	903.0	427.	902.9	457.
GR	903.1	479.	903.1	504.	903.1	507.	903.2	530.	903.3	557.

1

GR	910.0	600								
X1	215.01	39	250.	328.	1300.0	1275.0	1385.0			
GR	911.6	0.	911.5	25.	910.6	50.	910.0	75.	909.7	100.
GR	909.9	125.	909.6	150.	909.2	175.	908.4	200.	907.8	225.
GR	907.7	240.	904.5	250.	903.1	252.	901.8	261.	901.6	262.
GR	900.9	268.	899.8	273.	899.3	276.	899.1	285.	900.4	293.
GR	900.3	299.	900.3	300.	900.7	308.	900.5	316.	900.5	316.
GR	901.1	324.	902.0	325.	904.2	328.	903.4	367.	903.3	384.
GR	906.3	409.	906.5	416.	907.1	435.	907.0	465.	907.2	486.
GR	907.1	511.	907.1	514.	907.2	537.	907.4	563.		
X1	257200	BZ 29	250.	345.	2560.0	2430.0	2733.0			
GR	914.2	0	914.5	25	913.4	50	912.7	75	912.7	100
GR	913.0	125	912.6	150	911.9	175	910.6	200	909.0	225
GR	908.0	250	906.7	262	905.3	270	902.2	280	902.1	290
GR	904.3	300	903.7	310	903.7	320	902.5	330	902.5	340
GR	903.9	342	907.9	345	907.4	400	913.4	425	915.1	450
GR	915.3	500	915.0	525	915.2	550	915.6	575		
X1	216.01	38	250.	336.	2725.0	3025.0	3025.0			
GR	924.5	0.	923.8	25.	921.5	50.	920.8	75.	919.5	100.
GR	918.8	125.	917.6	150.	916.4	175.	915.4	200.	915.0	208.
GR	912.3	225.	910.7	250.	909.1	254.	908.7	261.	908.6	262.
GR	907.9	268.	906.1	276.	905.8	285.	907.0	294.	906.9	296.
GR	906.6	304.	906.6	307.	906.8	313.	906.6	318.	906.3	322.
GR	906.3	328.	906.5	331.	907.2	333.	907.6	333.	910.8	336.

```
GR    910.3      362.      912.0      385.      916.6      408.      919.2      430.      922.6      475.
GR    924.1      498.      925.9      520.      927.8      543.

NC      .07       .07
X1   263250        21       250.      327.     2725.0     3025.0     3025.0
GR    934.9         0      933.2        25      929.6        50      928.9        75      926.3       100
GR    924.6       125      920.8       175      919.9       208      915.7       225      913.3       250
GR    910.7       253      910.7       260      909.5       280      909.7       290      909.5       300
GR    910.1       310      910.0       320      910.8       324      913.8       327      913.0       350
GR    940.0       510

NC      .07       .04       .035
X1   265423        21       250.      327.     2000.0     1900.0     2173.0                 1.45
GR    934.9         0      933.2        25      929.6        50      928.9        75      926.3       100
GR    924.6       125      920.8       175      919.9       208      915.7       225      913.3       250
GR    910.7       253      910.7       260      909.5       280      909.7       290      909.5       300
GR    910.1       310      910.0       320      910.8       324      913.8       327      913.0       350
GR    940.0       510

NC      .09       .09                  .5        1.0
X1   265633        27        250     300.6      280.0       75.0      210.0
X3                                    250                  301
GR    914.3         0      914.3        50      914.3       175      914.3       200      914.3       225
GR    912.1       250      912.1     250.1      912.4       255      912.0       260      910.0       265
GR    909.3       270      907.6       275      906.9       280      907.6       285      908.8       290
GR    909.8       295      910.6     300.5      910.6     300.6      917.0       325      917.5       350
GR    918.0       375      918.5       400      919.0       425      919.5       450      920.0       475
1
   29DEC93      14:50:16                                                                          PAGE    56

GR    919.5       525      919.8       550

NC      .03       .03        .03
X1   265636         0          0         0          3         3         3
X3                                    250                  301
BT      -16         0      921.4                  50     921.3                 175      921.3
BT                200      922.3                 225     922.6                 250      922.9     912.1
BT              250.1      922.9     919.5     300.5     922.8     919.4     300.6      922.8     910.6
BT                325      922.4                 375     921.1                 400      920.7
BT                425      920.4                 450     920.2                 525      919.9
BT                550      919.8

X1   265664         0          0         0         28        28        28
X2                                                                   1
X3                                    250                  301

NC      .04       .06       .035
X1   265667         0          0         0          3         3         3
X3                                    250                  301

NC      .06                .040
X1   265797        19        285       350        130       130       130                -6.08
X3                                                          600
GR    928.5         0      927.6       150      927.8       250      927.0       285      920.4       288
GR    918.5       290      916.2       300      916.2       310      916.9       320      916.9       330
GR    916.5       340      918.2       348      920.9       350      920.1       400      919.9       450
GR    919.8       500      919.4       550      919.4       600      926.0      1500

X1   266247         0          0         0        450       450       450                 0.32

NC      .06       .06                  .1         .3
X1   223.01        19       285.      350.     1085.0     1385.0     2285.0
GR    924.4        0.      923.5      150.      923.7      250.      922.9      285.      916.3      288.
GR    914.4      290.      912.1      300.      912.1      310.      912.8      320.      912.8      330.
GR    912.4      340.      914.1      348.      916.8      350.      916.0      400.      915.8      450.
GR    915.7      500.      915.3      550.      915.3      600.      920.0      1500

X1   344.01        24       285.      350.      667.5      817.5     1267.5
GR    925.3        0.      924.4      150.      924.6      250.      923.8      285.      917.2      288.
GR    915.3      290.      913.0      300.      913.0      310.      913.7      320.      913.7      330.
GR    913.3      340.      915.0      348.      917.7      350.      917.0      392.      916.8      411.
GR    916.7      435.      916.6      472.      916.6      477.      916.4      520.      916.4      533.
GR    916.3      562.      916.2      593.      916.3      654.      919.8     1750.

X1   271067        20        285       350      667.5      817.5     1267.5                -2.34
GR    928.5         0      927.6       150      927.8       250      927.0       285      920.4       288
GR    918.5       290      916.2       300      916.2       310      916.9       320      916.9       330
GR    916.5       340      918.2       348      920.9       350      920.1       400      919.9       450
GR    919.8       500      919.4       550      919.4       600      922.0      2000      930.0      2350
```

```
X1   271167        0        0        0      100      100      100                0.07

X1   271267        0        0        0      100      100      100                0.07

X1   271370        0        0        0      103      103      103                0.05
X3                               286.75               2350

X1   271380        0        0        0       10       10       10
X3                               289.25               2350

X1   271390        0        0        0       10       10       10                0.01
X3                               291.75               2350

X1   271395        0        0        0        5        5        5
X3                                  293               2350

NC                                  .3       .5
X1   271400       27     1000   1052.1        5        5        5
X3                                 1000               2740
GR    930.0        0    920.0      750    920.0      850    920.0      950    917.3     1000
GR    917.3   1000.1    916.3     1002    915.4     1005    911.8     1010    911.4     1015
GR    911.4     1020    911.6     1025    911.6   1025.1    911.8     1027    911.8   1027.1
GR    912.7     1033    913.9     1038    916.4     1042    917.2     1047    917.8     1052
GR    917.8   1052.1    918.5     1200    918.5     1250    918.5     1300    920.0     2200
GR    920.0     3250    930.0     3600

NC      .06      .06     .025
SC     2.20      0.5      2.8                8.6    21.75       34      8.3
X1   271434        0        0        0       34       34       34
X2                          2    922.5    920.2
X3                                 1000              1052.2    921.0
BT      -16        0    930.0                750    923.0                850    923.1
BT               950    923.8               1000    923.8              1000.1    923.8
BT              1025    923.8             1025.1    923.8               1027    923.8
BT            1027.1    923.8               1052    923.8              1052.1    923.8
BT              1200    921.6               1250    921.1               1300    920.9
BT              3600    930.0

NC      .04      .06     .040       .3       .5
X1   271439       21      285      350        5        5        5               -2.06
X3                                  290               2570
GR    928.5        0    927.6      150    927.8      250    927.0      285    920.4      288
GR    918.5      290    916.2      300    916.2      310    916.9      320    916.9      330
GR    916.5      340    918.2      348    920.9      350    920.1      400    919.9      450
GR    919.8      500    919.4      550    919.4      600    920.0     1550    920.0     2050
GR    930.0     3000

X1   271444        0        0        0        5        5        5
X3                                  280               2570
```



```
X1   271659        0        0        0      300      100      215                0.11

NC      .07      .07                .1       .3
X1   274443       19     885.     950.   2000.0   2100.0   2784.0
GR    930.0        0    928.5      600    927.8      850    927.0      885    920.4      888
GR    918.5      890    916.2      900    916.2      910    916.9      920    916.9      930
GR    916.5      940    918.2      948    920.9      950    920.1     1000    919.9     1050
GR    919.8     1100    919.4     1150    919.4     1200    930.0     1700

X1   277640       25     350.     410.   2100.0   2500.0   3197.0
GR    930.0        0    922.2      100    922.4      125    922.3      200    922.1      225
GR    922.3      250    922.2      325    923.1      350    920.4      354    919.0      360
GR    918.0      380    916.0      400    919.5      408    923.3      410    923.2      435
GR    923.7      460    922.6      485    922.5      510    922.7      535    924.2      560
GR    922.9      585    923.6      610    922.5      635    922.3      660    930.0     1800

X1   280940       25     250.     364.   3150.0   3050.0   3300.0
GR    951.4        0    948.9       25    945.9       50    943.6       75    941.9      100
GR    939.4      150    930.0      175    933.0      200    930.0      225    927.3      250
GR    923.2      263    921.2      273    919.4      293    918.8      303    919.3      313
GR    918.3      323    919.6      333    923.1      339    923.6      364    925.1      389
```

GR	923.5	414	924.4	439	925.6	464	927.6	489	932.6	539
X1	303.01	55	288.	386.	920.0	720.0	1220.0			
GR	946.0	0.	943.9	29.	943.8	29.	941.2	58.	939.2	86.
GR	939.2	87.	938.0	108.	937.7	115.	936.8	144.	935.8	173.
GR	928.8	201.	928.8	202.	929.9	216.	931.0	230.	929.4	251.
GR	928.9	259.	928.8	259.	927.0	288.	925.4	290.	922.8	298.
GR	922.7	299.	921.1	307.	921.0	307.	920.9	308.	919.6	324.
GR	919.5	324.	919.3	328.	919.1	332.	919.1	333.	919.3	340.
GR	919.3	341.	918.5	350.	919.6	358.	919.7	359.	922.2	363.
GR	922.5	364.	922.6	368.	924.1	386.	923.4	386.	924.6	410.
GR	925.1	424.	925.1	424.	924.8	434.	923.9	459.	923.8	462.
GR	923.8	463.	924.1	483.	924.5	500.	924.5	501.	924.7	508.
GR	925.7	539.	925.7	539.	927.5	578.	927.6	578.	931.9	655.
X1	286.01	39	325.	407.	1020.0	1215.0	1215.0			
GR	940.7	0.	938.8	33.	936.6	65.	934.8	98.	933.7	122.
GR	933.5	130.	932.9	163.	932.2	195.	927.5	228.	928.2	244.
GR	929.0	260.	928.0	284.	927.7	293.	926.8	325.	924.4	327.
GR	922.3	334.	920.9	341.	920.7	342.	919.7	355.	919.5	359.
GR	919.3	362.	919.3	369.	918.6	377.	919.7	384.	921.8	388.
GR	922.0	392.	924.5	407.	923.1	408.	924.7	440.	925.1	459.
GR	925.0	473.	924.2	506.	924.1	511.	924.2	539.	924.6	562.
GR	924.8	572.	925.8	614.	927.5	666.	931.3	770.		
X1	304.01	47	363.	429.	870.0	1175.0	1220.0			
GR	935.3	0.	933.7	37.	932.0	73.	930.4	109.	929.3	136.
GR	929.3	136.	929.3	145.	929.0	181.	929.0	182.	928.6	218.
GR	926.2	254.	926.5	272.	926.5	272.	927.0	290.	926.6	317.
GR	926.6	317.	926.6	327.	926.5	363.	923.5	364.	923.3	364.
GR	921.9	370.	920.7	375.	920.6	376.	920.5	376.	919.9	386.
GR	919.7	389.	919.7	390.	919.5	392.	919.3	397.	918.8	404.

1

GR	919.8	409.	921.1	413.	921.4	416.	925.0	429.	923.0	429.
GR	922.8	430.	924.8	470.	925.1	494.	925.2	512.	924.5	553.
GR	924.4	559.	924.4	595.	924.7	624.	924.9	636.	925.9	689.
GR	927.4	754.	930.6	885.						
X1	285810	19	400.	450.	1315.0	975.0	1215.0			
GR	930.0	0	925.0	150	925.2	200	924.9	300	925.3	350
GR	926.2	400	922.3	401	920.4	410	919.9	420	918.9	430
GR	920.9	440	925.4	450	922.5	451	924.9	500	925.3	550
GR	924.7	600	924.5	650	924.9	700	930.0	1000		
X1	305.01	48	362.	413.	640.0	900.0	940.0			
GR	932.5	0.	931.5	36.	929.8	72.	927.1	136.	927.1	136.
GR	926.9	145.	926.5	180.	926.5	181.	926.2	217.	926.0	253.
GR	926.0	272.	926.0	272.	926.1	290.	926.3	316.	926.3	317.
GR	926.4	325.	926.9	362.	923.3	363.	921.4	372.	920.8	382.
GR	919.9	392.	921.6	402.	921.7	402.	925.2	412.	926.2	413.
GR	924.1	413.	923.9	414.	923.7	415.	924.9	441.	925.9	455.
GR	925.9	456.	927.1	488.	927.2	498.	927.2	499.	927.1	507.
GR	926.9	538.	926.9	542.	926.9	542.	926.9	585.	926.9	585.
GR	927.1	598.	927.2	601.	927.3	627.	927.3	628.	928.4	693.
GR	928.4	697.	929.9	790.	931.4	886.				
X1	287.01	37	325.	376.	730.0	630.0	930.0			
GR	935.0	0.	934.2	32.	932.3	65.	929.1	122.	928.8	130.
GR	927.7	162.	927.3	195.	927.1	227.	927.1	244.	927.1	260.
GR	927.3	284.	927.3	292.	927.6	325.	924.3	326.	922.4	335.
GR	921.7	345.	920.9	355.	922.4	365.	925.4	375.	927.0	376.
GR	925.2	377.	924.8	378.	925.7	400.	926.9	412.	928.9	440.
GR	929.0	448.	929.0	456.	929.0	482.	929.0	485.	929.3	521.
GR	929.5	532.	929.6	535.	929.7	557.	930.5	612.	930.5	616.
GR	931.6	694.	932.8	775.						
X1	354.01	51	288.	339.	585.0	790.0	940.0			
GR	937.5	0.	937.0	28.	936.9	29.	934.8	58.	931.1	108.
GR	930.6	115.	928.9	143.	928.9	144.	928.5	173.	928.2	201.
GR	928.2	201.	928.2	216.	928.1	230.	928.3	251.	928.3	258.
GR	928.3	259.	928.3	288.	925.3	289.	923.4	298.	922.6	308.
GR	921.9	318.	923.1	328.	923.2	328.	925.6	338.	927.8	339.
GR	926.4	340.	926.0	340.	926.0	341.	926.5	358.	926.6	359.
GR	927.9	368.	930.7	391.	930.7	391.	930.8	397.	930.9	404.
GR	931.0	404.	931.1	425.	931.2	425.	931.2	427.	931.7	457.
GR	931.9	465.	932.0	468.	932.1	468.	932.1	486.	932.6	530.
GR	932.7	531.	932.7	533.	932.7	534.	933.3	597.	933.4	597.

```
GR    934.2       663.

X1   233.01        29       250.       302.       585.0       790.0       940.0
GR    940.0         0.      939.7        25.       937.3         50.       932.5       100.       930.1       125.
GR    929.6       150.      929.3       175.       929.2        200.       929.2       225.       928.9       250.
GR    926.3       251.      924.3       260.       923.4        270.       922.8       280.       923.8       291.
GR    925.9       301.      928.5       302.       927.1        303.       927.4       317.       932.5       342.
GR    932.9       352.      933.3       368.       934.4        399.       934.5       401.       934.8       449.
GR    934.8       451.      935.1       500.       935.1        500.       935.5       550.
1
   29DEC93      14:50:16                                                                                    PAGE   60


X1   288.01        35       250.       303.      1590.0      1285.0      1885.0
GR    947.5         0.      947.0        25.       943.4         50.       936.3       100.       932.7       125.
GR    932.0       150.      931.5       175.       931.1        200.       930.9       225.       930.3       250.
GR    928.4       251.      926.2       260.       925.2        270.       924.8       280.       925.3       292.
GR    926.3       302.      926.4       302.       930.1        303.       929.4       304.       929.6       318.
GR    929.6       318.      936.5       343.       936.6        343.       936.9       353.       937.4       368.
GR    937.4       369.      939.0       399.       939.0        400.       939.1       402.       939.8       449.
GR    939.8       450.      939.8       451.       940.4        500.       940.4       500.       940.8       550.

NC      .07        .07       .040
X1   293340        21       250.       304.      1600.0      2000.0      1895.0
GR    954.9         0      954.2         25       935.3        125       934.3        150       933.6        175
GR    933.0       200      932.6        225       931.7        250       930.4        251       928.1        260
GR    926.9       270      926.7        280       926.7        303       931.6        304       931.7        319
GR    940.6       344      941.5        369       943.6        400       944.8        450       945.7        500
GR    946.0       550

X1   295627        21       250.       304.      2287.0      1187.0      2287.0                  2.10
GR    954.9         0      954.2         25       935.3        125       934.3        150       933.6        175
GR    933.0       200      932.6        225       931.7        250       930.4        251       928.1        260
GR    926.9       270      926.7        280       926.7        303       931.6        304       931.7        319
GR    940.6       344      941.5        369       943.6        400       944.8        450       945.7        500
GR    946.0       550

NC                                      .5        1.0
X1   295947         0         0          0        320        320        320                   .21
X3                                     252                   302

X1   295967        34      223.2      276.6       20.0       20.0       20.0        0.8
X3                                   181.6                  221.6
GR    957.8         0      956.6         25       955.9         50       951.2         75       946.5        100
GR    941.8       125      937.1        150       936.0        175       935.3        200       934.7        220
GR    933.3     223.2      931.0      223.3       930.3        227       930.5        232       929.8        237
GR    930.0       242      929.5      246.5       933.3      246.6       933.3      251.6       929.5      251.7
GR    933.2     253.2      929.5      253.3       928.2        257       928.6        262       929.6        267
GR    930.3       272      930.5      276.5       933.2      276.6       942.3        300       943.2        325
GR    945.3       350      944.6        375       943.5        425       942.4        500

NC      .03        .03        .03
X1   295968         0         0          0          1          1          1
X2                                                                                                0.8
X3                                   181.6                  221.6
BT      -29         0      958.8                    75       956.7                   100       956.3
BT                125      955.3                   150       953.9                   175       952.8
BT                200      951.3                   220       950.3                 223.2       950.2      933.3
BT                227      950.1      940.3        232       949.9      942.55       237       949.7      943.3
BT                242      949.3     942.55      246.6       949.1       940.3      251.6       949.0      933.3
BT              253.2      948.9      933.2      253.3       948.9       940.5       257       948.8     942.75
BT                262      948.6      943.5        267       948.4      942.75       272       948.1      940.5
BT              276.5      948.0      933.2      276.6       948.0      933.20       300       947.1
BT                325      946.0                   350       945.3                   375       944.6
BT                425      943.5                   500       942.4
1
   29DEC93      14:50:16                                                                                    PAGE   61


X1   296055         0         0          0         87         87         87
X2                                                                        1
X3                                   181.6                  221.6

NC      .07        .08       .040
X1   296056         0         0          0          1          1          1
X3                                   180.6                  222.6

X1   296071        21       250        304         15         15         15                  2.56
```

```
X3                                241                 313
GR    954.9        0     954.2     25     935.3      125     934.3      150     933.6      175
GR    933.0      200     932.6    225     931.7      250     930.4      251     928.1      260
GR    926.9      270     926.7    280     926.7      303     931.6      304     931.7      319
GR    940.6      344     941.5    369     943.6      400     944.8      450     945.7      500
GR    946.0      550

X1   296148        0         0      0        95       65        77

NC                .12                .1       .3
X1   298190       27      1236.   1300.   2150.0   1800.0    2042.0
GR    950.0        0     940.0    860     935.9     1000     936.2     1050     936.3     1105
GR    937.1     1130     938.4   1155     937.4     1180     935.7     1205     935.6     1236
GR    934.8     1240     933.0   1250     931.1     1260     931.1     1270     931.5     1280
GR    932.3     1290     934.8   1299     937.0     1300     936.8     1320     952.5     1360
GR    951.7     1390     947.0   1410     951.4     1435     952.3     1460     953.5     1485
GR    953.5     1510     953.9   1535

X1   298500        0         0      0       310      310       310                0.27
1
   29DEC93      14:50:16                                                                    PAGE   62
```

THIS RUN EXECUTED 29DEC93 14:51:00

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

 Version   4.6.2;  May 1991
**************************************
```

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

100-YEAR DISCHARGE

SUMMARY PRINTOUT TABLE 110

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	.000	685.36	2.36	685.95	478.10	1783.81	4911.15	105.04	.00	.00	750.00	810.00	.00
	.000	686.56	3.56	687.17	581.73	3394.63	5820.02	175.35	.00	.00	750.00	810.00	.00
	600.000	686.14	.00	686.67	498.03	1921.38	4768.57	110.05	.00	.00	750.00	810.00	.00
	600.000	687.35	.00	687.89	601.88	3558.42	5651.81	179.77	.00	.00	750.00	810.00	.00
	3.010	690.79	.00	691.39	218.16	754.01	5950.04	95.95	.00	.00	262.00	353.00	.00
	3.010	692.12	.00	692.89	241.59	1440.53	7771.71	177.76	.00	.00	262.00	353.00	.00
	8854.000	695.28	.00	695.71	388.27	666.26	5850.06	283.68	.00	.00	275.00	397.00	.00
	8854.000	696.79	.00	697.25	392.26	1176.41	7414.33	799.26	.00	.00	275.00	397.00	.00
	9154.000	695.62	.00	696.18	250.00	374.74	6283.99	141.27	250.00	215.00	275.00	397.00	465.00
	9154.000	697.12	.00	697.79	250.00	697.22	8295.99	396.79	250.00	215.00	275.00	397.00	465.00
	9354.000	695.90	.00	696.49	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
	9354.000	697.41	.00	698.18	149.20	.00	9390.00	.00	149.20	70.90	70.93	220.10	220.10
	9355.000	695.90	.00	696.50	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
	9355.000	697.41	.00	698.20	149.20	.00	9390.00	.00	149.20	70.90	70.93	220.10	220.10
	9400.000	695.99	.00	696.58	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
	9400.000	697.51	.00	698.28	149.20	.00	9390.00	.00	149.20	70.90	70.93	220.10	220.10
	9401.000	696.02	.00	696.59	150.80	.55	6798.35	1.10	150.80	70.20	70.93	220.10	221.00
	9401.000	697.54	.00	698.29	150.80	1.01	9386.53	2.46	150.80	70.20	70.93	220.10	221.00
	9576.000	696.53	.00	696.88	500.98	433.80	5663.33	702.87	.00	.00	275.00	397.00	.00
*	9576.000	698.36	.00	698.67	522.34	729.21	6811.90	1848.89	.00	.00	275.00	397.00	.00
	9.010	700.27	.00	700.68	383.13	66.28	5625.76	1107.96	.00	.00	262.00	365.00	.00
	9.010	701.59	.00	702.07	391.90	126.10	7071.35	2192.55	.00	.00	262.00	365.00	.00

SECNO CWSEL DIFKWS EG TOPWID QLOB QCH QROB PERENC STENCL STCHL STCHR STENCR

18600.000	704.22	.00	704.70	349.26	62.63	5617.31	1120.07	.00	.00	250.00	334.00	.00
18600.000	705.72	.00	706.30	358.14	117.91	7225.56	2046.53	.00	.00	250.00	334.00	.00
10.010	707.39	.00	707.94	209.24	50.34	6416.43	333.23	.00	.00	250.00	346.00	.00
10.010	709.12	.00	709.82	232.55	103.78	8545.29	740.93	.00	.00	250.00	346.00	.00
25825.000	710.44	.00	710.92	189.13	27.45	6653.43	119.11	.00	.00	250.00	358.00	.00
25825.000	712.40	.00	713.01	206.38	62.96	8981.26	345.78	.00	.00	250.00	358.00	.00
25925.000	710.78	.00	711.05	171.99	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25925.000	712.82	.00	713.16	180.86	.00	9390.00	.00	202.50	70.90	70.93	273.35	273.40
25926.000	710.77	.00	711.06	171.96	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25926.000	712.80	.00	713.18	180.83	.00	9390.00	.00	202.50	70.90	70.93	273.35	273.40
25974.000	710.80	.00	711.09	172.06	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25974.000	712.84	.00	713.22	180.93	.00	9390.00	.00	202.50	70.90	70.93	273.35	273.40
25975.000	710.84	.00	711.10	172.24	.00	6800.00	.00	203.80	70.20	70.93	273.35	274.00
25975.000	712.89	.00	713.23	181.16	.00	9390.00	.00	203.80	70.20	70.93	273.35	274.00
26075.000	710.80	.00	711.26	190.73	32.57	6620.76	146.67	.00	.00	250.00	358.00	.00
26075.000	712.83	.00	713.41	208.69	74.39	8901.25	414.37	.00	.00	250.00	358.00	.00
16.010	714.28	.00	714.82	144.93	77.12	6661.43	61.45	.00	.00	250.00	351.00	.00
16.010	716.39	.00	717.07	213.61	210.71	9016.97	162.32	.00	.00	250.00	351.00	.00
20.030	715.76	.00	716.28	181.84	284.00	6464.90	51.09	.00	.00	250.00	348.00	.00
20.030	717.92	.00	718.49	375.59	915.40	8372.59	102.01	.00	.00	250.00	348.00	.00
20.080	717.43	.00	717.72	443.14	1742.12	5015.74	42.13	.00	.00	400.00	494.00	.00
20.080	719.45	.00	719.70	496.86	3451.12	5870.87	68.01	.00	.00	400.00	494.00	.00
20.070	717.56	.00	717.94	236.55	1128.96	5622.67	48.36	358.00	271.00	400.00	494.00	629.00
20.070	719.56	.00	719.99	239.91	2119.17	7186.22	84.61	358.00	271.00	400.00	494.00	629.00
35244.000	717.89	.00	718.46	128.27	355.62	6388.00	56.39	138.00	228.00	250.00	343.00	366.00
35244.000	719.89	.00	720.64	131.46	572.59	8713.70	103.71	138.00	228.00	250.00	343.00	366.00
35319.000	717.99	.00	718.54	100.10	.17	6799.83	.00	100.10	99.90	100.00	200.00	200.00
35319.000	719.96	.00	720.72	100.10	.22	9389.78	.00	100.10	99.90	100.00	200.00	200.00
35320.000	717.99	.00	718.54	100.10	.07	6799.93	.00	100.10	99.90	100.00	200.00	200.00
* 35320.000	719.96	.00	720.90	100.10	.14	9389.86	.00	100.10	99.90	100.00	200.00	200.00
35340.000	718.00	.00	718.55	100.10	.07	6799.93	.00	100.10	99.90	100.00	200.00	200.00
35340.000	720.01	.00	720.95	100.10	.14	9389.86	.00	100.10	99.90	100.00	200.00	200.00
35341.000	718.01	.00	718.55	102.00	6.03	6786.27	7.70	102.00	99.00	100.00	200.00	201.00
* 35341.000	720.34	.00	721.06	102.00	8.65	9371.40	9.95	102.00	99.00	100.00	200.00	201.00

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
35466.000	718.54	.00	718.78	357.79	1820.67	4875.80	103.52	.00	.00	255.00	348.00	.00
* 35466.000	721.15	.00	721.37	362.70	3247.50	5961.97	180.53	.00	.00	255.00	348.00	.00
22.010	720.17	.00	720.55	235.12	376.85	6322.78	100.37	.00	.00	243.00	357.00	.00
22.010	722.41	.00	722.83	479.14	884.14	8255.72	250.14	.00	.00	243.00	357.00	.00
22.020	722.10	.00	722.38	473.47	225.56	6267.73	306.71	.00	.00	237.00	371.00	.00
22.020	724.18	.00	724.49	490.55	466.15	8088.67	835.19	.00	.00	237.00	371.00	.00
45745.000	723.54	.00	723.71	524.37	95.50	5469.30	1235.20	.00	.00	230.00	385.00	.00
45745.000	725.50	.00	725.69	549.16	234.58	7147.22	2008.19	.00	.00	230.00	385.00	.00
46623.000	723.86	.00	724.03	523.42	92.50	5482.34	1225.16	.00	.00	230.00	385.00	.00
46623.000	725.79	.00	725.98	547.92	229.79	7164.75	1995.47	.00	.00	230.00	385.00	.00
47223.000	724.10	.00	724.32	486.55	101.51	6012.48	686.01	345.00	164.00	230.00	385.00	509.00
47223.000	726.02	.00	726.28	521.73	253.15	7918.26	1218.59	345.00	164.00	230.00	385.00	509.00
47423.000	724.22	.00	724.65	396.74	.00	6567.76	232.24	145.00	264.00	230.00	385.00	409.00
47423.000	726.14	.00	726.65	423.02	.00	8665.12	724.88	145.00	264.00	230.00	385.00	409.00
47473.000	724.27	.00	724.83	384.26	.00	6670.99	129.01	120.00	277.00	230.00	385.00	397.00
47473.000	726.18	.00	726.84	410.46	.00	8745.81	644.19	120.00	277.00	230.00	385.00	397.00

	47523.000	724.33	.00	725.07	373.10	.00	6751.31	48.69	95.00	289.00	230.00	385.00	384.00
	47523.000	726.24	.00	727.07	399.22	.00	8746.21	643.79	95.00	289.00	230.00	385.00	384.00
*	47546.000	724.38	.00	725.87	331.78	.00	6619.06	180.94	83.50	50.00	49.50	123.50	133.50
*	47546.000	726.29	.00	727.83	336.68	.00	8384.21	1005.79	83.50	50.00	49.50	123.50	133.50
	47600.000	724.38	.00	725.87	331.79	.00	6618.54	181.45	83.50	50.00	49.50	123.50	133.50
	47600.000	726.30	.00	727.83	336.68	.00	8383.83	1006.17	83.50	50.00	49.50	123.50	133.50
*	47603.000	725.85	.00	726.36	396.29	.00	6351.65	238.35	90.00	263.00	230.00	385.00	353.00
*	47603.000	727.83	.00	728.35	402.53	.00	8117.17	992.83	90.00	263.00	230.00	385.00	353.00
*	47616.000	726.18	.00	726.48	410.31	.00	6356.27	233.74	116.00	250.00	230.00	385.00	366.00
	47616.000	728.10	.00	728.45	416.40	.00	8276.46	833.54	116.00	250.00	230.00	385.00	366.00
*	47656.000	726.39	.00	726.56	449.73	82.77	6226.58	280.65	196.00	210.00	230.00	385.00	406.00
*	47656.000	728.31	.00	728.53	456.31	147.10	8257.09	705.81	196.00	210.00	230.00	385.00	406.00
	47816.000	726.55	.00	726.63	504.46	222.46	4903.18	1464.36	.00	.00	230.00	385.00	.00
	47816.000	728.51	.00	728.61	516.48	419.53	6484.95	2205.52	.00	.00	230.00	385.00	.00
	29.010	727.34	.00	727.47	484.55	258.87	4834.89	1496.24	.00	.00	230.00	364.00	.00
	29.010	729.31	.00	729.46	500.57	505.99	6303.50	2300.50	.00	.00	230.00	364.00	.00
	29.020	728.60	.00	728.76	730.44	303.46	4439.67	1846.87	.00	.00	229.00	344.00	.00
	29.020	730.46	.00	730.62	822.30	571.48	5515.89	3022.64	.00	.00	229.00	344.00	.00

1

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	29.030	730.12	.00	730.25	567.71	464.90	3455.41	2669.69	.00	.00	229.00	323.00	.00
	29.030	731.75	.00	731.88	661.82	909.74	4152.66	4047.60	.00	.00	229.00	323.00	.00
	65375.000	731.45	.00	731.53	999.49	994.26	2451.17	3144.57	.00	.00	254.00	328.00	.00
	65375.000	732.85	.00	732.92	1040.18	1537.36	2739.10	4833.54	.00	.00	254.00	328.00	.00
	68635.000	732.10	.00	732.15	891.91	2721.87	2252.49	1615.63	.00	.00	632.00	718.00	.00
	68635.000	733.41	.00	733.46	943.02	4015.36	2738.75	2355.89	.00	.00	632.00	718.00	.00
*	48.010	732.31	.00	732.42	1091.14	3594.63	2972.03	23.33	.00	.00	1034.00	1124.00	.00
	48.010	733.60	.00	733.70	1343.05	5704.47	3228.98	176.55	.00	.00	1034.00	1124.00	.00
	52.010	732.50	.00	732.74	752.19	2907.82	3681.39	.79	.00	.00	712.00	804.00	.00
*	52.010	733.73	.00	733.94	788.71	4897.73	4193.17	19.10	.00	.00	712.00	804.00	.00
	48.020	732.93	.00	733.27	510.15	2478.33	4111.67	.00	.00	.00	487.00	581.00	.00
	48.020	734.03	.00	734.39	559.19	4098.69	5006.95	4.36	.00	.00	487.00	581.00	.00
	71612.000	733.82	.00	734.28	534.91	2068.03	4521.97	.00	.00	.00	440.00	538.00	.00
	71612.000	734.87	.00	735.33	536.77	3743.66	5366.34	.00	.00	.00	440.00	538.00	.00
	72012.000	734.47	.00	734.90	336.06	1936.22	4653.78	.00	575.00	200.00	440.00	538.00	775.00
	72012.000	735.49	.00	736.01	337.85	3180.52	5929.48	.00	575.00	200.00	440.00	538.00	775.00
	72372.000	734.90	.00	735.40	150.37	852.98	5737.02	.00	151.10	99.90	147.00	251.00	251.00
	72372.000	736.01	.00	736.75	150.51	1274.51	7835.49	.00	151.10	99.90	147.00	251.00	251.00
	72373.000	734.92	.00	735.41	150.37	1397.38	5192.62	.00	151.10	99.90	147.00	251.00	251.00
	72373.000	736.04	.00	736.76	150.51	2098.38	7011.62	.00	151.10	99.90	147.00	251.00	251.00
	72427.000	734.99	.00	735.47	150.38	1405.58	5184.42	.00	151.10	99.90	147.00	251.00	251.00
	72427.000	736.14	.00	736.84	150.52	2109.26	7000.74	.00	151.10	99.90	147.00	251.00	251.00
	72428.000	734.99	.00	735.52	150.59	637.20	5952.80	.00	153.00	99.00	147.00	251.00	252.00
	72428.000	736.14	.00	736.93	150.82	955.70	8154.30	.00	153.00	99.00	147.00	251.00	252.00
	72523.000	735.12	.00	735.78	246.45	1061.62	5528.38	.00	-90.00	90.00	240.00	338.00	575.00
	72523.000	736.30	.00	737.13	249.87	1821.41	728[illegible]2	.07	-90.00	90.00	240.00	338.00	575.00
	72600.000	735.57	.00	736.00	324.16	1645.58	4944.42	.00	-613.00	613.00	840.00	938.00	1175.00
	72600.000	736.90	.00	737.42	330.40	2716.07	6392.94	.99	-613.00	613.00	840.00	938.00	1175.00
	72950.000	736.17	.00	736.43	705.74	2310.94	4279.06	.00	.00	.00	840.00	938.00	.00
	72950.000	737.62	.00	737.87	850.60	3958.57	5149.29	2.14	.00	.00	840.00	938.00	.00
	73765.000	736.78	.00	737.05	699.02	2279.11	4310.89	.00	.00	.00	840.00	938.00	.00

73765.000	738.15	.00	738.41	834.91	3886.06	5222.37	1.57	.00	.00	840.00	938.00	.00
74580.000	737.42	.00	737.71	492.51	2223.86	4366.14	.00	-445.00	445.00	840.00	938.00	1175.00
74580.000	738.74	.00	739.06	499.52	3638.27	5470.36	1.37	-445.00	445.00	840.00	938.00	1175.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
75670.000	738.44	.00	738.92	222.28	1115.06	5474.84	.09	333.00	718.00	840.00	938.00	1051.00
75670.000	739.80	.00	740.44	230.25	1801.51	7302.00	6.49	333.00	718.00	840.00	938.00	1051.00
75870.000	738.67	.00	739.24	173.27	714.15	5875.60	.26	233.00	768.00	840.00	938.00	1001.00
75870.000	740.07	.00	740.84	180.63	1160.70	7939.93	9.37	233.00	768.00	840.00	938.00	1001.00
76070.000	738.90	.00	739.64	124.77	584.93	5990.04	15.02	.00	.00	255.00	325.00	.00
76070.000	740.34	.00	741.41	132.08	931.31	8139.23	39.46	.00	.00	255.00	325.00	.00
76120.000	739.31	.00	739.81	176.50	619.00	5968.49	2.50	230.00	170.00	240.00	338.00	400.00
76120.000	741.01	.00	741.67	180.93	1000.34	8085.72	23.94	230.00	170.00	240.00	338.00	400.00
76180.000	739.50	.00	739.91	235.80	1061.31	5526.81	1.88	465.00	110.00	240.00	338.00	575.00
76180.000	741.29	.00	741.80	240.89	1709.31	7379.14	21.55	465.00	110.00	240.00	338.00	575.00
* 76432.000	740.04	.00	740.16	575.00	1245.05	3591.06	1753.88	.00	.00	250.00	329.00	.00
* 76432.000	741.97	.00	742.10	575.00	1973.30	4505.26	2631.44	.00	.00	250.00	329.00	.00
77032.000	740.25	.00	740.57	275.00	1084.25	4939.87	565.88	275.00	135.00	250.00	329.00	410.00
* 77032.000	742.18	.00	742.57	275.00	1759.39	6482.46	868.15	275.00	135.00	250.00	329.00	410.00
77382.000	740.50	.00	741.17	97.19	.00	6547.44	42.56	139.10	70.90	70.29	173.24	210.00
* 77382.000	742.46	.00	743.39	105.84	.00	9017.77	92.23	139.10	70.90	70.29	173.24	210.00
77383.000	740.50	.00	741.26	97.19	.00	6419.97	170.03	139.10	70.90	70.29	173.24	210.00
77383.000	742.46	.00	743.48	105.85	.00	8739.57	370.43	139.10	70.90	70.29	173.24	210.00
77418.000	740.58	.00	741.32	97.54	.00	6416.31	173.68	139.10	70.90	70.29	173.24	210.00
77418.000	742.57	.00	743.56	106.30	.00	8732.10	377.90	139.10	70.90	70.29	173.24	210.00
* 77419.000	740.78	.00	741.39	99.73	.06	6465.71	124.22	140.80	70.20	70.29	173.24	211.00
* 77419.000	742.81	.00	743.65	108.82	.09	8843.48	266.43	140.80	70.20	70.29	173.24	211.00
77484.000	740.82	.00	741.44	98.61	.00	6472.20	117.80	139.10	70.90	70.29	173.24	210.00
77484.000	742.87	.00	743.70	107.64	.00	8858.16	251.84	139.10	70.90	70.29	173.24	210.00
* 77485.000	740.83	.00	741.54	98.61	.00	6404.75	185.25	139.10	70.90	70.29	173.24	210.00
* 77485.000	742.87	.00	743.82	107.65	.00	8709.64	400.36	139.10	70.90	70.29	173.24	210.00
77520.000	740.90	.00	741.60	98.93	.00	6401.34	188.66	139.10	70.90	70.29	173.24	210.00
77520.000	742.96	.00	743.89	108.05	.00	8702.90	407.10	139.10	70.90	70.29	173.24	210.00
77521.000	741.06	.00	741.65	100.98	.30	6500.36	89.34	140.80	70.20	70.29	173.24	211.00
77521.000	743.14	.00	743.95	110.29	.45	8919.21	190.34	140.80	70.20	70.29	173.24	211.00
* 77546.000	741.24	.00	741.72	150.00	2144.30	4087.05	358.65	150.00	215.00	250.00	329.00	365.00
* 77546.000	743.36	.00	744.04	150.00	3220.07	5356.58	533.36	150.00	215.00	250.00	329.00	365.00
* 77596.000	741.56	.00	741.83	250.00	3381.35	2602.68	605.97	250.00	165.00	250.00	329.00	415.00
* 77596.000	743.84	.00	744.20	250.00	5015.07	3232.14	862.79	250.00	165.00	250.00	329.00	415.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
* 77746.000	741.86	.00	741.94	575.00	4573.84	1231.22	784.94	.00	.00	250.00	329.00	.00
* 77746.000	744.25	.00	744.34	575.00	6588.71	1440.55	1080.74	.00	.00	250.00	329.00	.00
81550.000	741.96	.00	742.00	1276.79	4856.25	923.03	810.72	.00	.00	950.00	1029.00	.00
81550.000	744.35	.00	744.39	1491.65	7058.53	922.97	1128.51	.00	.00	950.00	1029.00	.00
* 82639.000	742.01	.00	742.18	500.00	1133.33	3808.27	1648.40	500.00	740.00	950.00	1029.00	1240.00
* 82639.000	744.38	.00	744.53	500.00	1963.87	4595.20	2550.93	500.00	740.00	950.00	1029.00	1240.00
83339.000	742.36	.00	742.79	223.00	590.34	5177.44	822.22	223.00	878.00	950.00	1029.00	1101.00
* 83339.000	744.66	.00	745.14	223.00	1042.08	6719.97	1347.96	223.00	878.00	950.00	1029.00	1101.00

	83610.000	742.62	.00	743.27	87.10	.00	6590.00	.00	87.10	76.90	73.15	172.48	164.00
	83610.000	744.92	.00	745.79	87.10	.00	9110.00	.00	87.10	76.90	73.15	172.48	164.00
	83646.000	743.22	.00	743.81	87.10	.00	6590.00	.00	87.10	76.90	73.15	172.48	164.00
	83646.000	746.29	.00	747.01	87.10	.00	9110.00	.00	87.10	76.90	73.15	172.48	164.00
	83677.000	743.42	.00	743.89	148.00	708.99	5554.00	327.01	148.00	216.00	250.00	329.00	364.00
	83677.000	746.64	.00	747.15	148.00	1208.35	7355.43	546.22	148.00	216.00	250.00	329.00	364.00
*	83887.000	744.08	.00	744.15	575.00	2562.74	2788.60	1238.66	.00	.00	250.00	329.00	.00
*	83887.000	747.35	.00	747.41	575.00	4088.03	3189.25	1832.72	.00	.00	250.00	329.00	.00
*	85275.000	744.34	.00	744.51	551.47	1757.62	4610.15	222.22	-200.00	200.00	600.00	701.00	767.00
*	85275.000	747.50	.00	747.62	567.00	3468.01	5275.02	366.97	-200.00	200.00	600.00	701.00	767.00
	85825.000	744.64	.00	744.69	873.72	2564.66	2714.28	1311.05	-300.00	300.00	800.00	887.00	1200.00
	85825.000	747.69	.00	747.73	884.60	3887.99	3157.30	2064.71	-300.00	300.00	800.00	887.00	1200.00
	87215.000	744.98	.00	745.04	889.98	3537.45	3052.55	.00	-420.00	420.00	1200.00	1344.00	1344.00
	87215.000	747.88	.00	747.93	898.14	5621.53	3488.47	.00	-420.00	420.00	1200.00	1344.00	1344.00
*	88600.000	745.51	.00	745.71	600.00	1997.38	3978.90	613.73	600.00	50.00	400.00	490.00	650.00
*	88600.000	748.17	.00	748.33	600.00	3275.30	4677.72	1156.98	600.00	50.00	400.00	490.00	650.00
	89700.000	746.44	.00	746.74	460.00	341.70	4797.02	1451.27	460.00	230.00	295.00	375.00	690.00
	89700.000	748.78	.00	749.03	460.00	634.51	5567.69	2907.80	460.00	230.00	295.00	375.00	690.00
	90800.000	747.55	.00	747.86	663.85	2387.37	4085.18	117.45	-720.00	720.00	1350.00	1420.00	1444.00
	90800.000	749.57	.00	749.81	694.11	4320.37	4614.78	174.84	-720.00	720.00	1350.00	1420.00	1444.00
*	91350.000	748.17	.00	748.28	544.61	178.79	6009.91	401.30	-600.00	600.00	725.00	1013.00	1162.00
*	91350.000	750.01	.00	750.13	561.22	449.30	7951.72	708.98	-600.00	600.00	725.00	1013.00	1162.00
	91800.000	748.36	.00	748.53	370.00	145.67	5324.67	1119.66	370.00	590.00	682.00	830.00	960.00
	91800.000	750.16	.00	750.37	370.00	364.63	7093.22	1652.15	370.00	590.00	682.00	830.00	960.00
	92175.000	748.52	.00	748.86	291.35	182.16	5835.45	572.39	315.00	288.00	386.00	506.00	603.00
	92175.000	750.31	.00	750.71	315.00	421.58	7695.92	992.50	315.00	288.00	386.00	506.00	603.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	92550.000	748.74	.00	749.42	135.30	95.34	6400.77	93.88	.00	.00	90.00	182.00	.00
	92550.000	750.42	.00	751.35	191.60	191.52	8734.59	183.89	.00	.00	90.00	182.00	.00
	92900.000	749.30	.00	749.90	129.35	220.02	6340.80	29.18	-60.00	60.00	90.00	182.00	200.00
	92900.000	751.07	.00	751.90	131.78	372.36	8680.93	56.72	-60.00	60.00	90.00	182.00	200.00
	93211.000	749.85	.00	750.39	104.90	.00	6590.00	.00	.00	.00	92.82	209.30	.00
	93211.000	751.74	.00	752.48	109.20	.00	9110.00	.00	.00	.00	92.82	209.30	.00
	93221.000	749.88	.00	750.41	104.97	.00	6590.00	.00	.00	.00	92.82	209.30	.00
	93221.000	751.77	.00	752.50	109.20	.00	9110.00	.00	.00	.00	92.82	209.30	.00
	93279.000	749.99	.00	750.52	105.45	.00	6590.00	.00	.00	.00	92.82	209.30	.00
	93279.000	751.92	.00	752.63	109.20	.00	9110.00	.00	.00	.00	92.82	209.30	.00
	93289.000	750.02	.00	750.54	105.55	.00	6590.00	.00	.00	.00	92.82	209.30	.00
	93289.000	751.94	.00	752.66	109.20	.00	9110.00	.00	.00	.00	92.82	209.30	.00
*	93489.000	750.40	.00	750.78	122.62	23.45	6548.87	17.68	.00	.00	50.00	160.00	.00
*	93489.000	752.41	.00	752.95	125.44	42.74	9035.04	32.22	.00	.00	50.00	160.00	.00
	93650.000	750.47	.00	750.95	148.50	.00	6348.59	241.41	.00	.00	20.00	135.00	.00
	93650.000	752.51	.00	753.12	169.61	.00	8657.28	452.72	.00	.00	20.00	135.00	.00
*	94800.000	751.55	.00	751.64	710.00	189.17	3442.12	2958.70	710.00	90.00	117.00	206.00	800.00
*	94800.000	753.69	.00	753.78	710.00	268.52	4181.69	4659.79	710.00	90.00	117.00	206.00	800.00
*	95200.000	751.73	.00	751.95	476.21	585.04	3806.73	2198.23	.00	.00	100.00	180.00	.00
*	95200.000	753.83	.00	754.04	479.72	957.35	4685.90	3466.74	.00	.00	100.00	180.00	.00
	95550.000	752.04	.00	752.46	265.00	739.59	4871.53	978.89	265.00	13.00	100.00	180.00	278.00
	95550.000	754.04	.00	754.51	265.00	1219.88	6331.46	1558.66	265.00	13.00	100.00	180.00	278.00
*	95600.000	752.15	.00	753.02	251.89	655.66	4715.40	1218.94	.00	.00	159.00	215.00	.00
	95600.000	754.13	.00	754.87	288.17	1462.63	5516.44	2130.93	.00	.00	159.00	215.00	.00

	95605.000	752.18	.00	753.04	252.32	659.08	4707.97	1222.95	.00	.00	159.00	215.00	.00
	95605.000	754.15	.00	754.88	288.23	1465.28	5512.16	2132.55	.00	.00	159.00	215.00	.00
*	95865.000	752.96	.00	753.70	94.00	.00	6590.00	.00	.00	.00	94.00	188.00	.00
	95865.000	754.71	.00	755.73	94.00	.00	9110.00	.00	.00	.00	94.00	188.00	.00
	95905.000	753.04	.00	753.97	79.00	.00	6590.00	.00	79.00	103.50	94.00	188.00	182.50
	95905.000	754.80	.00	756.12	79.00	.00	9110.00	.00	79.00	103.50	94.00	188.00	182.50
*	95909.000	753.06	.00	754.60	74.80	.00	6590.00	.00	.00	.00	101.00	178.00	.00
*	95909.000	754.82	.00	756.85	77.00	.00	9110.00	.00	.00	.00	101.00	178.00	.00
	95910.000	753.06	.00	754.75	74.84	.00	6590.00	.00	.00	.00	101.00	178.00	.00
*	95910.000	754.83	.00	757.66	77.00	.00	9110.00	.00	.00	.00	101.00	178.00	.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	95930.000	753.35	.00	755.00	76.02	.00	6590.00	.00	.00	.00	101.00	178.00	.00
	95930.000	755.38	.00	758.10	77.00	.00	9110.00	.00	.00	.00	101.00	178.00	.00
*	95931.000	753.93	.00	755.20	77.00	.00	6590.00	.00	.00	.00	101.00	178.00	.00
*	95931.000	757.57	.00	758.84	77.00	.00	9110.00	.00	.00	.00	101.00	178.00	.00
	96015.000	754.25	.00	755.55	165.50	160.19	4913.87	1515.94	.00	.00	50.00	90.00	.00
	96015.000	758.16	.00	759.11	188.31	419.59	5918.35	2772.05	.00	.00	50.00	90.00	.00
	96122.000	754.90	.00	755.90	186.47	322.34	5344.57	923.09	.00	.00	71.00	120.00	.00
	96122.000	758.50	.00	759.30	210.00	774.24	6525.83	1809.92	.00	.00	71.00	120.00	.00
	96230.000	755.42	.00	756.15	216.23	527.30	5529.69	533.01	.00	.00	91.00	149.00	.00
	96230.000	758.84	.00	759.47	228.00	1152.05	6817.63	1140.32	.00	.00	91.00	149.00	.00
*	96445.000	756.04	.00	756.40	256.30	1094.29	5371.36	124.35	.00	.00	131.00	209.00	.00
	96445.000	759.30	.00	759.65	263.00	1892.11	6848.67	369.22	.00	.00	131.00	209.00	.00
	96650.000	756.33	.00	756.52	275.17	1578.30	4995.30	16.39	-10.00	10.00	170.00	265.00	298.00
	96650.000	759.54	.00	759.74	288.00	2449.20	6578.33	82.47	-10.00	10.00	170.00	265.00	298.00
	96850.000	756.43	.00	756.85	178.05	798.77	5522.47	268.75	-35.00	35.00	144.00	214.00	240.00
	96850.000	759.63	.00	760.10	180.00	1376.58	7299.89	433.53	-35.00	35.00	144.00	214.00	240.00
*	97050.000	756.62	.00	757.29	75.00	.00	6590.00	.00	.00	.00	120.00	195.00	.00
*	97050.000	759.81	.00	760.64	95.00	9.25	9100.75	.00	.00	.00	120.00	195.00	.00
	97078.000	756.67	.00	757.33	75.00	.00	6590.00	.00	.00	.00	120.00	195.00	.00
	97078.000	759.85	.00	760.68	95.00	9.84	9100.16	.00	.00	.00	120.00	195.00	.00
	97122.000	758.84	.00	759.33	81.79	.03	6589.97	.00	.00	.00	120.00	195.00	.00
	97122.000	762.36	.00	762.97	110.00	62.56	9022.28	25.16	.00	.00	120.00	195.00	.00
	97132.000	758.85	.00	759.34	82.35	.04	6589.96	.00	.00	.00	120.00	195.00	.00
	97132.000	762.37	.00	762.98	110.00	62.80	9021.89	25.31	.00	.00	120.00	195.00	.00
	97213.000	759.07	.00	759.45	145.00	239.85	5497.30	852.85	180.00	.00	50.00	109.00	180.00
	97213.000	762.65	.00	763.10	145.00	340.07	7367.86	1402.06	180.00	.00	50.00	109.00	180.00
*	97900.000	759.74	.00	759.78	614.70	.00	2550.11	4039.89	625.00	.00	10.00	84.00	625.00
*	97900.000	763.42	.00	763.45	615.00	.00	3065.48	6044.52	625.00	.00	10.00	84.00	625.00
	98400.000	759.82	.00	759.88	525.00	2455.10	3121.59	1013.31	.00	.00	308.00	386.00	.00
	98400.000	763.47	.00	763.53	525.00	3649.20	3923.98	1536.83	.00	.00	308.00	386.00	.00
*	98575.000	759.87	.00	759.90	481.00	1068.77	5468.60	52.64	-100.00	100.00	330.00	563.00	581.00
*	98575.000	763.51	.00	763.54	481.00	1680.84	7346.10	83.06	-100.00	100.00	330.00	563.00	581.00
*	98961.000	759.85	.00	760.03	581.46	49.47	6481.25	59.28	.00	.00	52.00	522.00	.00
*	98961.000	763.53	.00	763.62	585.00	210.16	8644.15	255.69	.00	.00	52.00	522.00	.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	98962.000	759.82	.00	760.05	580.84	70.16	6484.56	35.27	.00	.00	52.00	522.00	.00

98962.000	763.52	.00	763.62	585.00	282.47	8694.19	133.35	.00	.00	52.00	522.00	.00
98981.000	759.93	.00	760.18	572.23	86.84	6480.79	22.37	.00	.00	52.00	522.00	.00
98981.000	763.54	.00	763.64	585.00	292.98	8566.78	250.24	.00	.00	52.00	522.00	.00
* 98982.000	760.00	.00	760.19	573.48	61.80	6469.67	58.53	.00	.00	52.00	522.00	.00
98982.000	763.55	.00	763.64	585.00	218.88	8650.10	241.02	.00	.00	52.00	522.00	.00
* 99150.000	760.24	.00	760.34	450.00	199.69	3192.09	3198.22	450.00	.00	20.00	100.00	450.00
* 99150.000	763.63	.00	763.70	450.00	286.01	3483.12	5340.87	450.00	.00	20.00	100.00	450.00
99750.000	760.45	.00	760.51	635.00	776.90	3488.03	2325.07	635.00	105.00	206.00	311.00	740.00
99750.000	763.75	.00	763.79	635.00	1278.20	3778.32	4053.48	635.00	105.00	206.00	311.00	740.00
100735.000	760.67	.00	760.97	223.00	247.80	5865.44	476.76	223.00	140.00	200.00	303.00	363.00
* 100735.000	763.82	.00	764.13	223.00	567.20	7693.27	849.53	223.00	140.00	200.00	303.00	363.00
* 100935.000	760.73	.00	761.27	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
* 100935.000	763.83	.00	764.41	121.00	.00	9110.00	.00	.00	.00	102.00	228.00	.00
100945.000	760.75	.00	761.29	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
100945.000	763.84	.00	764.42	121.00	.00	9110.00	.00	.00	.00	102.00	228.00	.00
101000.000	760.86	.00	761.39	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
101000.000	763.93	.00	764.50	121.00	.00	9110.00	.00	.00	.00	102.00	228.00	.00
101010.000	760.88	.00	761.40	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
101010.000	763.94	.00	764.52	121.00	.00	9110.00	.00	.00	.00	102.00	228.00	.00
* 101067.000	761.28	.00	761.53	185.53	57.14	6494.82	38.03	.00	.00	95.00	235.00	.00
* 101067.000	764.35	.00	764.64	203.68	177.48	8821.70	110.82	.00	.00	95.00	235.00	.00
101800.000	761.68	.00	761.79	703.35	1816.62	4771.95	1.44	.00	.00	582.00	728.00	.00
* 101800.000	764.74	.00	764.84	723.70	3093.14	5986.11	30.76	.00	.00	582.00	728.00	.00
* 102350.000	761.77	.00	762.03	627.54	756.99	5450.69	382.32	.00	.00	349.00	469.00	.00
102350.000	764.79	.00	764.99	643.88	1588.46	6516.78	1004.77	.00	.00	349.00	469.00	.00
102900.000	762.05	.00	762.42	340.00	166.53	5077.26	1346.21	400.00	.00	116.00	209.00	400.00
102900.000	764.93	.00	765.25	340.00	542.31	6357.02	2210.67	400.00	.00	116.00	209.00	400.00
104150.000	763.05	.00	763.24	681.41	3114.12	3475.88	.00	.00	.00	610.00	693.00	.00
104150.000	765.67	.00	765.81	686.42	5049.22	4060.78	.00	.00	.00	610.00	693.00	.00
104800.000	763.36	.00	763.48	947.95	3527.74	3031.00	31.26	.00	.00	855.00	925.00	.00
104800.000	765.87	.00	765.96	972.00	5481.66	3454.82	173.52	.00	.00	855.00	925.00	.00
105450.000	763.57	.00	763.66	1000.00	3136.82	2450.47	1002.71	-250.00	250.00	1100.00	1157.00	1250.00
105450.000	766.01	.00	766.07	1000.00	4992.58	2786.42	1331.01	-250.00	250.00	1100.00	1157.00	1250.00

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
107.010	764.34	.00	764.47	880.42	2343.22	2734.15	1512.63	.00	.00	683.00	750.00	.00
107.010	766.52	.00	766.62	897.71	3839.53	3126.87	2143.60	.00	.00	683.00	750.00	.00
110575.000	765.63	.00	765.85	684.05	1433.55	3484.51	1671.94	.00	.00	350.00	427.00	.00
110575.000	767.39	.00	767.59	732.94	2353.04	4154.63	2602.34	.00	.00	350.00	427.00	.00
110775.000	765.75	.00	766.08	507.00	1373.02	3925.06	1291.92	507.00	135.00	350.00	427.00	642.00
110775.000	767.46	.00	767.78	507.00	2234.82	4816.81	2058.37	507.00	135.00	350.00	427.00	642.00
111300.000	766.41	.00	767.13	244.00	679.09	5305.10	605.81	244.00	267.00	350.00	427.00	511.00
111300.000	768.02	.00	768.86	244.00	1161.44	6913.08	1035.49	244.00	267.00	350.00	427.00	511.00
111500.000	766.74	.00	767.73	144.00	300.08	5990.23	299.69	144.00	317.00	350.00	427.00	461.00
111500.000	768.33	.00	769.61	144.00	518.29	8086.04	505.67	144.00	317.00	350.00	427.00	461.00
111521.000	767.44	.00	767.98	134.00	.00	6383.63	206.37	134.00	500.00	499.90	612.00	634.00
111521.000	769.21	.00	769.92	134.00	.00	8769.61	340.39	134.00	500.00	499.90	612.00	634.00
111530.000	767.55	.00	768.02	134.00	.00	6078.65	511.35	134.00	500.00	499.90	612.00	634.00
111530.000	769.36	.00	769.98	134.00	.00	8273.58	836.42	134.00	500.00	499.90	612.00	634.00
111562.000	768.01	.00	768.43	134.00	.00	6052.22	537.78	134.00	500.00	499.90	612.00	634.00
111562.000	769.36	.00	769.98	134.00	.00	8273.46	836.54	134.00	500.00	499.90	612.00	634.00

111571.000	768.01	.00	768.47	134.00	.00	6288.95	301.05	134.00	500.00	499.90	612.00	634.00
111571.000	769.36	.00	770.03	134.00	.00	8639.45	470.55	134.00	500.00	499.90	612.00	634.00
* 111800.000	768.69	.00	768.74	593.00	2288.02	2325.31	1976.68	593.00	92.00	350.00	427.00	685.00
* 111800.000	770.35	.00	770.41	593.00	3338.87	2949.49	2821.64	593.00	92.00	350.00	427.00	685.00
111900.000	768.72	.00	768.76	759.94	2262.67	2202.65	2124.68	.00	.00	350.00	427.00	.00
111900.000	770.38	.00	770.43	800.00	3327.19	2734.18	3048.63	.00	.00	350.00	427.00	.00
116500.000	769.40	.00	769.45	1017.40	3103.29	2325.01	1161.70	.00	.00	830.00	919.00	.00
116500.000	770.97	.00	771.02	1094.09	4984.27	2527.57	1598.16	.00	.00	830.00	919.00	.00
135.010	769.48	.00	769.56	915.95	3288.71	2414.12	887.17	.00	.00	715.00	802.00	.00
135.010	771.02	.00	771.09	1032.57	5147.66	2602.61	1359.73	.00	.00	715.00	802.00	.00
144.010	769.54	.00	769.64	864.98	3333.43	2514.79	741.78	.00	.00	658.00	744.00	.00
144.010	771.06	.00	771.13	991.30	5176.62	2694.29	1239.09	.00	.00	658.00	744.00	.00
* 135.020	769.57	.00	769.84	811.29	2372.23	3803.27	414.49	.00	.00	600.00	685.00	.00
* 135.020	771.05	.00	771.27	933.61	3923.65	4336.76	849.59	.00	.00	600.00	685.00	.00
120100.000	770.85	.00	771.19	696.76	2462.99	3833.91	293.10	.00	.00	470.00	550.00	.00
120100.000	771.98	.00	772.31	719.76	3708.48	4628.95	772.57	.00	.00	470.00	550.00	.00
115.010	773.74	.00	773.95	377.28	1770.44	3152.20	7.35	.00	.00	362.00	444.00	.00
115.010	774.83	.00	775.10	443.00	2691.76	4074.92	43.32	.00	.00	362.00	444.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
115.020	775.77	.00	775.97	537.26	1825.66	3104.03	.31	.00	.00	688.00	773.00	.00
115.020	776.97	.00	777.19	621.07	2932.49	3866.84	10.67	.00	.00	688.00	773.00	.00
129470.000	777.70	.00	777.98	670.77	1500.22	3429.78	.00	.00	.00	850.00	937.00	.00
129470.000	778.84	.00	779.13	809.95	2566.30	4243.18	.52	.00	.00	850.00	937.00	.00
129950.000	778.12	.00	778.41	337.22	1353.94	3576.06	.00	339.00	600.00	850.00	937.00	939.00
129950.000	779.24	.00	779.60	339.00	2110.00	4699.37	.62	339.00	600.00	850.00	937.00	939.00
130480.000	778.69	.00	779.37	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130480.000	779.92	.00	780.95	75.10	.14	6809.86	.00	75.10	99.90	100.00	175.00	175.00
130488.000	778.70	.00	779.38	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130488.000	779.94	.00	780.97	75.10	.14	6809.86	.00	75.10	99.90	100.00	175.00	175.00
130513.000	779.84	.00	780.39	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130513.000	781.29	.00	782.11	75.10	.13	6809.87	.00	75.10	99.90	100.00	175.00	175.00
130521.000	779.85	.00	780.40	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130521.000	781.30	.00	782.12	75.10	.13	6809.87	.00	75.10	99.90	100.00	175.00	175.00
130571.000	780.18	.00	780.50	170.00	273.52	4213.31	443.17	170.00	170.00	220.00	300.00	340.00
130571.000	781.87	.00	782.29	170.00	497.51	5636.51	675.99	170.00	170.00	220.00	300.00	340.00
131071.000	780.53	.00	780.84	559.81	949.47	3899.81	80.72	.00	.00	462.00	549.00	.00
131071.000	782.34	.00	782.62	561.56	2010.34	4683.51	116.15	.00	.00	462.00	549.00	.00
131521.000	780.97	.00	781.14	611.76	952.80	2987.45	989.74	.00	.00	280.00	367.00	.00
131521.000	782.70	.00	782.84	689.85	1625.76	3599.81	1584.44	.00	.00	280.00	367.00	.00
131971.000	781.21	.00	781.37	824.64	386.49	3490.64	1052.87	.00	.00	147.00	257.00	.00
131971.000	782.88	.00	783.02	863.01	582.31	4183.34	2044.35	.00	.00	147.00	257.00	.00
132371.000	781.39	.00	781.55	613.67	1034.11	3449.79	446.10	.00	.00	247.00	357.00	.00
132371.000	783.01	.00	783.17	655.87	1572.93	4330.62	906.44	.00	.00	247.00	357.00	.00
* 132771.000	781.57	.00	781.82	527.48	837.93	2871.99	1220.08	.00	.00	130.00	205.00	.00
132771.000	783.18	.00	783.37	636.14	1284.78	3213.82	2311.40	.00	.00	130.00	205.00	.00
133591.000	782.38	.00	782.95	170.18	1027.99	3845.89	56.11	197.00	.00	104.00	184.10	197.00
* 133591.000	783.65	.00	784.30	339.73	1573.48	4932.24	304.28	197.00	.00	104.00	184.10	197.00
134611.000	784.18	.00	784.81	209.81	25.86	4815.96	88.17	-225.00	225.00	282.00	389.00	551.00
134611.000	785.40	.00	786.15	249.78	84.59	6342.27	383.14	-225.00	225.00	282.00	389.00	551.00
178.010	786.33	.00	786.82	261.14	78.37	4590.37	261.26	.00	.00	305.00	405.00	.00
178.010	787.61	.00	788.16	385.52	331.77	5862.44	615.80	.00	.00	305.00	405.00	.00

178.020	787.98	.00	788.42	251.75	122.46	4315.37	492.17	.00	.00	328.00	422.00	.00
178.020	789.25	.00	789.76	281.94	304.48	5545.34	960.18	.00	.00	328.00	422.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
138700.000	789.52	.00	789.99	247.23	82.00	4224.63	623.37	.00	.00	350.00	438.00	.00
138700.000	790.82	.00	791.37	267.63	169.65	5501.38	1138.97	.00	.00	350.00	438.00	.00
179.010	790.73	.00	791.06	323.78	361.53	3951.68	616.79	.00	.00	350.00	438.00	.00
179.010	792.10	.00	792.47	559.89	613.61	5037.32	1159.08	.00	.00	350.00	438.00	.00
140900.000	791.54	.00	791.69	484.42	600.36	3058.54	1271.10	.00	.00	350.00	438.00	.00
140900.000	792.93	.00	793.09	507.07	927.28	3839.86	2042.86	.00	.00	350.00	438.00	.00
145.010	792.01	.00	792.16	540.42	1493.46	3111.31	325.23	.00	.00	510.00	594.00	.00
145.010	793.40	.00	793.56	585.97	2204.97	3883.05	721.99	.00	.00	510.00	594.00	.00
147.010	792.25	.00	792.35	597.61	2062.67	2745.84	121.49	.00	.00	590.00	672.00	.00
147.010	793.64	.00	793.76	656.11	3015.29	3461.07	333.64	.00	.00	590.00	672.00	.00
143250.000	792.42	.00	792.48	566.59	2574.02	2296.03	59.95	.00	.00	670.00	750.00	.00
143250.000	793.82	.00	793.90	721.22	3711.69	2963.45	134.87	.00	.00	670.00	750.00	.00
148.010	792.65	.00	792.76	633.28	2265.80	2588.28	75.92	.00	.00	560.00	641.00	.00
148.010	794.06	.00	794.18	703.28	3329.07	3228.48	252.45	.00	.00	560.00	641.00	.00
146.010	793.07	.00	793.24	641.13	1832.51	2880.67	216.82	.00	.00	449.00	531.00	.00
146.010	794.46	.00	794.62	729.10	2796.75	3464.37	548.88	.00	.00	449.00	531.00	.00
146623.000	793.71	.00	793.80	655.20	1303.74	2200.19	1426.07	.00	.00	300.00	383.00	.00
146623.000	795.02	.00	795.11	671.57	1958.37	2724.08	2127.56	.00	.00	300.00	383.00	.00
* 147223.000	794.09	.00	794.36	350.00	814.65	3179.43	935.92	350.00	167.00	300.00	383.00	517.00
* 147223.000	795.37	.00	795.69	350.00	1297.06	4069.30	1443.65	350.00	167.00	300.00	383.00	517.00
147423.000	794.34	.00	794.81	250.00	552.15	3766.98	610.88	250.00	217.00	300.00	383.00	467.00
147423.000	795.62	.00	796.17	250.00	914.01	4908.74	987.25	250.00	217.00	300.00	383.00	467.00
147523.000	794.61	.00	795.01	201.59	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147523.000	795.90	.00	796.36	205.81	.00	6810.00	.00	214.20	87.00	87.00	301.11	301.20
147524.000	794.61	.00	795.02	201.59	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147524.000	795.90	.00	796.38	205.81	.00	6810.00	.00	214.20	87.00	87.00	301.11	301.20
147556.000	794.68	.00	795.08	201.93	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147556.000	795.96	.00	796.43	205.96	.00	6810.00	.00	214.20	87.00	87.00	301.11	301.20
147557.000	794.71	.00	795.09	203.72	1.09	4928.57	.34	216.00	86.00	87.00	301.11	302.00
147557.000	795.99	.00	796.44	207.74	2.09	6807.32	.59	216.00	86.00	87.00	301.11	302.00
* 147807.000	795.33	.00	795.42	709.01	1318.67	2172.55	1438.77	.00	.00	350.00	433.00	.00
* 147807.000	796.70	.00	796.79	743.30	1995.27	2654.51	2160.22	.00	.00	350.00	433.00	.00
148750.000	795.73	.00	795.85	693.23	1183.63	2231.82	1514.55	.00	.00	350.00	433.00	.00
148750.000	797.04	.00	797.15	725.89	1823.46	2675.31	2311.23	.00	.00	350.00	433.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
152800.000	798.56	.00	798.91	301.27	.00	4743.90	186.10	.00	.00	250.00	400.00	.00
* 152800.000	799.54	.00	799.99	392.13	.00	6285.57	524.43	.00	.00	250.00	400.00	.00
181.010	799.30	.00	799.83	240.58	.00	4751.68	178.32	.00	.00	250.00	374.00	.00
181.010	800.34	.00	801.00	320.65	.00	6288.56	521.44	.00	.00	250.00	374.00	.00
154089.000	800.38	.00	801.12	245.59	.00	4724.78	205.22	.00	.00	250.00	349.00	.00
154089.000	801.48	.00	802.40	252.86	.00	6234.82	575.18	.00	.00	250.00	349.00	.00
154439.000	801.15	.00	801.94	238.79	.00	4635.51	294.49	.00	.00	250.00	340.00	.00
154439.000	802.31	.00	803.25	254.00	.42	6059.58	750.00	.00	.00	250.00	340.00	.00
154759.000	801.88	.00	802.70	89.74	.00	4930.00	.00	90.00	250.00	250.00	340.00	340.00

154759.000	803.12	.00	804.28	90.00	.00	6810.00	.00	90.00	250.00	250.00	340.00	340.00
154789.000	801.95	.00	802.97	75.00	.00	4930.00	.00	75.00	257.00	250.00	340.00	332.00
154789.000	803.21	.00	804.66	75.00	.00	6810.00	.00	75.00	257.00	250.00	340.00	332.00
154793.000	801.96	.00	803.03	73.00	.00	4930.00	.00	73.00	258.00	250.00	340.00	331.00
154793.000	803.23	.00	804.75	73.00	.00	6810.00	.00	73.00	258.00	250.00	340.00	331.00
154796.000	801.97	.00	803.08	71.50	.00	4930.00	.00	71.50	258.75	250.00	340.00	330.25
154796.000	803.24	.00	804.83	71.50	.00	6810.00	.00	71.50	258.75	250.00	340.00	330.25
* 154799.000	801.99	.00	804.63	70.32	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
* 154799.000	803.39	.00	806.48	78.43	.00	6810.00	.00	91.00	250.00	250.00	341.00	341.00
154800.000	802.00	.00	804.72	70.40	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
* 154800.000	803.41	.00	806.68	78.58	.00	6810.00	.00	91.00	250.00	250.00	341.00	341.00
* 154812.000	803.98	.00	805.42	81.84	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
* 154812.000	805.95	.00	807.57	86.65	.00	6810.00	.00	91.00	250.00	250.00	341.00	341.00
154813.000	804.35	.00	805.55	83.46	.00	4930.00	.00	83.80	250.40	250.00	341.00	334.20
154813.000	806.34	.00	807.70	83.80	.00	6810.00	.00	83.80	250.40	250.00	341.00	334.20
* 154814.000	805.55	.00	805.95	86.00	.00	4930.00	.00	86.00	252.00	250.00	340.00	338.00
* 154814.000	807.56	.00	808.11	86.00	.00	6810.00	.00	86.00	252.00	250.00	340.00	338.00
154819.000	805.60	.00	805.97	96.00	6.60	4903.61	19.79	96.00	247.00	250.00	340.00	343.00
154819.000	807.63	.00	808.14	96.00	12.88	6769.99	27.13	96.00	247.00	250.00	340.00	343.00
154823.000	805.62	.00	805.98	104.00	18.67	4837.22	74.11	104.00	243.00	250.00	340.00	347.00
154823.000	807.68	.00	808.15	104.00	39.45	6660.97	109.58	104.00	243.00	250.00	340.00	347.00
154923.000	805.90	.00	806.10	304.00	127.10	3997.49	805.41	304.00	143.00	250.00	340.00	447.00
154923.000	808.12	.00	808.33	304.00	423.78	5103.00	1283.23	304.00	143.00	250.00	340.00	447.00
155148.000	806.07	.00	806.20	545.74	110.81	3726.71	1092.48	672.00	.00	250.00	349.00	672.00
155148.000	808.32	.00	808.43	574.16	384.93	4455.69	1969.38	672.00	.00	250.00	349.00	672.00

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
136.010	807.15	.00	807.34	400.19	4.33	3943.05	982.62	.00	.00	250.00	369.00	.00
136.010	809.14	.00	809.31	474.98	78.23	4909.77	1822.00	.00	.00	250.00	369.00	.00
* 164.010	808.18	.00	808.55	469.61	1.21	4083.63	845.16	.00	.00	1026.00	1127.00	.00
* 164.010	809.89	.00	810.22	600.01	38.91	5000.03	1771.06	.00	.00	1026.00	1127.00	.00
161800.000	810.19	.00	810.60	426.30	4.66	3583.03	1342.31	.00	.00	1800.00	1883.00	.00
161800.000	811.46	.00	811.88	605.40	51.42	4497.28	2261.29	.00	.00	1800.00	1883.00	.00
162700.000	811.35	.00	811.62	558.46	23.34	3367.93	1538.73	.00	.00	1800.00	1883.00	.00
162700.000	812.57	.00	812.86	692.91	89.80	4224.90	2495.30	.00	.00	1800.00	1883.00	.00
163600.000	812.08	.00	812.30	605.28	37.19	3256.01	1636.80	.00	.00	1800.00	1883.00	.00
163600.000	813.29	.00	813.53	738.15	109.65	4092.60	2607.76	.00	.00	1800.00	1883.00	.00
165433.000	813.22	.00	813.39	660.98	54.78	3128.68	1746.54	.00	.00	1800.00	1883.00	.00
165433.000	814.45	.00	814.64	796.11	134.36	3931.40	2744.24	.00	.00	1800.00	1883.00	.00
165586.000	813.33	.00	813.86	603.37	540.40	4019.98	369.62	.00	.00	355.00	409.03	.00
165586.000	814.56	.00	815.13	966.86	946.82	4888.27	974.91	.00	.00	355.00	409.03	.00
165614.000	813.95	.00	814.35	788.11	621.54	3788.17	520.29	.00	.00	355.00	409.03	.00
165614.000	814.57	.00	815.13	970.05	948.21	4881.93	979.86	.00	.00	355.00	409.03	.00
* 166154.000	814.60	.00	814.71	530.98	1366.61	3133.14	430.25	.00	.00	250.00	331.00	.00
* 166154.000	815.47	.00	815.62	543.07	1988.31	4127.03	694.65	.00	.00	250.00	331.00	.00
167750.000	814.96	.00	815.08	555.63	1385.49	3144.46	400.04	.00	.00	300.00	381.00	.00
167750.000	815.96	.00	816.12	573.75	2046.61	4096.96	666.42	.00	.00	300.00	381.00	.00
* 170.010	815.15	.00	815.41	477.08	898.39	3745.29	286.32	.00	.00	265.00	351.00	.00
* 170.010	816.20	.00	816.52	514.05	1486.88	4805.32	517.80	.00	.00	265.00	351.00	.00
207.010	815.40	.00	815.74	449.38	622.63	3641.80	665.57	.00	.00	250.00	334.00	.00
207.010	816.48	.00	816.89	481.36	1158.55	4645.68	1005.77	.00	.00	250.00	334.00	.00

*	154.010	815.98	.00	816.38	424.23	523.80	2780.03	1626.16	.00	.00	234.00	316.00	.00
*	154.010	817.08	.00	817.53	448.88	1085.31	3643.63	2081.07	.00	.00	234.00	316.00	.00
	154.020	819.26	.00	819.89	316.63	170.16	4478.16	281.67	.00	.00	240.00	335.00	.00
	154.020	820.28	.00	821.03	429.12	478.90	5791.94	539.16	.00	.00	240.00	335.00	.00
	172290.000	822.32	.00	823.16	218.58	120.75	4575.90	233.35	.00	.00	250.00	351.00	.00
	172290.000	823.41	.00	824.41	256.40	256.10	6035.98	517.92	.00	.00	250.00	351.00	.00
	172571.000	823.26	.00	824.47	77.00	.00	4930.00	.00	77.00	259.00	250.00	351.00	336.00
	172571.000	824.43	.00	826.14	77.00	.00	6810.00	.00	77.00	259.00	250.00	351.00	336.00
	172595.000	823.37	.00	824.97	65.00	.00	4930.00	.00	65.00	265.00	250.00	351.00	330.00
	172595.000	824.56	.00	826.83	65.00	.00	6810.00	.00	65.00	265.00	250.00	351.00	330.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	172608.000	823.44	.00	825.35	58.70	.00	4930.00	.00	58.70	268.15	250.00	351.00	326.85
	172608.000	824.65	.00	827.36	58.70	.00	6810.00	.00	58.70	268.15	250.00	351.00	326.85
	172610.000	823.46	.00	825.97	58.00	.00	4914.93	15.07	.00	.00	250.00	301.00	.00
	172610.000	824.67	.00	828.19	62.21	.00	6756.18	53.82	.00	.00	250.00	301.00	.00
	172630.000	824.45	.00	826.39	61.47	.00	4895.90	34.10	.00	.00	250.00	301.00	.00
*	172630.000	826.83	.00	829.00	97.24	18.94	6650.73	140.33	.00	.00	250.00	301.00	.00
*	172632.000	826.32	.00	827.02	65.00	.00	4530.00	.00	65.00	257.50	250.00	351.00	322.50
*	172632.000	828.78	.00	829.65	65.00	.00	6260.00	.00	65.00	257.50	250.00	351.00	322.50
	172634.000	826.46	.00	827.07	69.00	.00	4530.00	.00	69.00	255.50	250.00	351.00	324.50
	172634.000	828.95	.00	829.71	69.00	.00	6260.00	.00	69.00	255.50	250.00	351.00	324.50
*	172670.000	827.07	.00	827.28	140.00	279.50	4186.02	64.49	140.00	220.00	250.00	351.00	360.00
*	172670.000	829.72	.00	829.98	140.00	448.88	5717.76	93.37	140.00	220.00	250.00	351.00	360.00
	172730.000	827.21	.00	827.34	260.00	445.35	3553.18	531.48	260.00	210.00	300.00	401.00	470.00
	172730.000	829.91	.00	830.05	260.00	797.11	4637.41	825.48	260.00	210.00	300.00	401.00	470.00
	172830.000	827.28	.00	827.38	470.87	679.44	3236.08	614.48	.00	.00	300.00	401.00	.00
	172830.000	830.01	.00	830.10	499.38	1384.83	3901.56	973.61	.00	.00	300.00	401.00	.00
*	220.010	827.63	.00	827.80	309.86	.00	3911.36	618.64	.00	.00	275.00	426.00	.00
*	220.010	830.24	.00	830.39	366.19	.00	4969.85	1290.15	.00	.00	275.00	426.00	.00
	175570.000	828.36	.00	828.59	482.86	.00	4154.11	375.89	.00	.00	250.00	450.00	.00
	175570.000	830.70	.00	830.85	609.54	.00	4961.61	1298.39	.00	.00	250.00	450.00	.00
	176575.000	829.19	.00	829.52	310.74	.00	4298.29	231.71	.00	.00	250.00	450.00	.00
	176575.000	831.14	.00	831.41	565.50	.00	5387.23	872.77	.00	.00	250.00	450.00	.00
	177575.000	830.48	.00	830.88	247.47	.00	4341.81	188.19	.00	.00	250.00	450.00	.00
	177575.000	831.98	.00	832.37	499.74	.00	5671.92	588.08	.00	.00	250.00	450.00	.00
	179580.000	833.69	.00	834.12	240.18	.00	4360.28	169.72	.00	.00	250.00	450.00	.00
	179580.000	834.74	.00	835.27	423.18	.00	5852.98	407.02	.00	.00	250.00	450.00	.00
*	180580.000	834.18	.00	834.19	402.32	.77	4528.58	.65	.00	.00	275.00	650.00	.00
*	180580.000	835.35	.00	835.37	438.93	5.23	6249.68	5.09	.00	.00	275.00	650.00	.00
	181332.000	834.19	.00	834.20	392.71	.27	4529.53	.20	.00	.00	275.00	650.00	.00
	181332.000	835.36	.00	835.38	418.74	3.28	6253.72	3.00	.00	.00	275.00	650.00	.00
*	181960.000	834.21	.00	834.67	60.00	.00	4530.00	.00	60.00	515.00	275.00	650.00	575.00
*	181960.000	835.39	.00	836.13	60.00	.00	6260.00	.00	60.00	515.00	275.00	650.00	575.00
	181965.000	834.21	.00	834.81	57.50	.00	4530.00	.00	57.50	516.25	275.00	650.00	573.75
	181965.000	835.39	.00	836.35	57.50	.00	6260.00	.00	57.50	516.25	275.00	650.00	573.75

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
181970.000	834.22	.00	835.02	55.00	.00	4530.00	.00	55.00	517.50	275.00	650.00	572.50
181970.000	835.40	.00	836.66	55.00	.00	6260.00	.00	55.00	517.50	275.00	650.00	572.50

181975.000	834.23	.00	835.32	52.50	.00	4530.00	.00	52.50	518.75	275.00	650.00	571.25
181975.000	835.41	.00	837.10	52.50	.00	6260.00	.00	52.50	518.75	275.00	650.00	571.25
181980.000	834.24	.00	835.79	50.00	.00	4530.00	.00	50.00	520.00	275.00	650.00	570.00
181980.000	835.43	.00	837.75	50.00	.00	6260.00	.00	50.00	520.00	275.00	650.00	570.00
181982.000	834.25	.00	836.72	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
181982.000	835.44	.00	838.94	49.00	.00	6260.00	.00	49.00	103.00	103.00	152.00	152.00
181983.000	834.25	.00	836.74	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
181983.000	835.45	.00	839.02	49.00	.00	6260.00	.00	49.00	103.00	103.00	152.00	152.00
182000.000	834.85	.00	837.00	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
182000.000	836.71	.00	839.52	49.00	.00	6260.00	.00	49.00	103.00	103.00	152.00	152.00
182001.000	835.13	.00	837.09	51.00	2.68	4522.81	4.51	51.00	102.00	103.00	152.00	153.00
* 182001.000	837.63	.00	839.82	51.00	6.90	6244.30	8.80	51.00	102.00	103.00	152.00	153.00
* 182003.000	836.99	.00	837.72	54.00	.00	4530.00	.00	54.00	523.00	275.00	650.00	577.00
* 182003.000	839.50	.00	840.45	54.00	.00	6260.00	.00	54.00	523.00	275.00	650.00	577.00
182007.000	837.41	.00	837.86	62.00	.00	4530.00	.00	62.00	519.00	275.00	650.00	581.00
182007.000	840.03	.00	840.63	62.00	.00	6260.00	.00	62.00	519.00	275.00	650.00	581.00
182012.000	837.65	.00	837.94	71.00	.00	4530.00	.00	71.00	514.00	275.00	650.00	585.00
182012.000	840.34	.00	840.74	71.00	.00	6260.00	.00	71.00	514.00	275.00	650.00	585.00
* 182101.000	838.06	.00	838.08	250.00	.00	4508.53	21.47	250.00	425.00	275.00	650.00	675.00
* 182101.000	840.90	.00	840.92	250.00	.00	6201.60	58.40	250.00	425.00	275.00	650.00	675.00
182231.000	838.07	.00	838.08	520.69	13.18	4493.81	23.01	.00	.00	275.00	650.00	.00
182231.000	840.92	.00	840.93	584.55	54.47	6089.82	115.71	.00	.00	275.00	650.00	.00
183400.000	838.08	.00	838.09	444.80	4.02	4521.99	3.99	.00	.00	275.00	650.00	.00
183400.000	840.93	.00	840.94	545.31	30.92	6166.79	62.29	.00	.00	275.00	650.00	.00
* 183600.000	838.01	.00	838.38	426.63	164.89	3993.77	371.33	.00	.00	188.00	300.00	.00
* 183600.000	840.90	.00	841.08	439.02	451.25	4411.22	1397.53	.00	.00	188.00	300.00	.00
184862.000	839.25	.00	839.50	431.09	222.36	3735.37	572.27	.00	.00	188.00	300.00	.00
184862.000	841.44	.00	841.62	439.14	455.89	4385.65	1418.45	.00	.00	188.00	300.00	.00
186125.000	840.08	.00	840.28	433.28	246.47	3616.54	666.99	.00	.00	188.00	300.00	.00
186125.000	841.96	.00	842.13	439.26	460.46	4360.41	1439.13	.00	.00	188.00	300.00	.00
186790.000	840.50	.00	840.76	536.97	1452.18	2870.84	206.98	.00	.00	360.00	435.00	.00
186790.000	842.27	.00	842.45	551.46	2287.22	3218.71	754.07	.00	.00	360.00	435.00	.00

SECNO	CWSEL	OIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
187092.000	840.77	.00	841.05	389.00	1372.41	2966.11	191.47	389.00	202.00	360.00	435.00	591.00
187092.000	842.45	.00	842.70	389.00	2140.24	3550.08	569.68	389.00	202.00	360.00	435.00	591.00
187394.000	841.06	.00	841.42	238.00	1032.92	3310.00	187.08	238.00	278.00	360.00	435.00	516.00
187394.000	842.69	.00	843.07	238.00	1580.53	4224.60	454.87	238.00	278.00	360.00	435.00	516.00
187494.000	841.17	.00	841.60	187.60	799.73	3555.20	175.06	187.60	303.70	360.00	435.00	491.30
187494.000	842.79	.00	843.28	187.60	1227.74	4640.17	392.09	187.60	303.70	360.00	435.00	491.30
187719.000	841.50	.00	842.32	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
187719.000	843.12	.00	844.21	75.10	.00	6259.83	.17	75.10	100.00	100.00	175.00	175.10
187720.000	841.51	.00	842.40	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
* 187720.000	843.12	.00	844.61	75.10	.00	6259.78	.22	75.10	100.00	100.00	175.00	175.10
187780.000	841.69	.00	842.54	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
187780.000	843.52	.00	845.00	75.10	.00	6259.78	.22	75.10	100.00	100.00	175.00	175.10
187781.000	841.87	.00	842.61	77.00	3.88	4514.40	11.72	77.00	99.00	100.00	175.00	176.00
* 187781.000	844.49	.00	845.33	77.00	4.67	6239.78	15.56	77.00	99.00	100.00	175.00	176.00
187831.000	842.50	.00	842.85	177.00	401.02	3666.91	462.07	177.00	309.00	360.00	435.00	486.00
* 187831.000	845.29	.00	845.62	177.00	613.43	4674.32	972.25	177.00	309.00	360.00	435.00	486.00
187881.000	842.72	.00	842.95	277.00	648.45	3214.59	666.95	277.00	259.00	360.00	435.00	536.00

187881.000	845.52	.00	845.71	277.00	958.27	3869.85	1431.88	277.00	259.00	360.00	435.00	536.00
188061.000	842.98	.00	843.08	648.08	826.53	2469.61	1233.86	.00	.00	360.00	435.00	.00
* 188061.000	845.76	.00	845.81	758.94	1112.51	2511.55	2635.95	.00	.00	360.00	435.00	.00
191400.000	844.00	.00	844.14	641.38	1210.26	2691.79	627.95	.00	.00	360.00	435.00	.00
191400.000	846.27	.00	846.37	732.13	1772.97	3076.29	1410.74	.00	.00	360.00	435.00	.00
192728.000	844.58	.00	844.76	614.79	1166.58	2877.41	486.02	.00	.00	360.00	435.00	.00
192728.000	846.64	.00	846.78	697.30	1747.64	3288.34	1224.02	.00	.00	360.00	435.00	.00
193956.000	845.32	.00	845.55	599.20	1132.91	2999.36	397.73	.00	.00	360.00	435.00	.00
193956.000	847.13	.00	847.31	671.71	1720.02	3469.68	1070.30	.00	.00	360.00	435.00	.00
194826.000	846.14	.00	846.69	152.00	408.01	4038.99	83.00	152.00	322.00	360.00	435.00	474.00
* 194826.000	847.80	.00	848.50	152.00	626.71	5461.78	171.51	152.00	322.00	360.00	435.00	474.00
194876.000	846.21	.00	846.83	127.00	300.90	4168.19	60.91	127.00	334.00	360.00	435.00	461.00
194876.000	847.87	.00	848.66	127.00	472.00	5661.13	126.87	127.00	334.00	360.00	435.00	461.00
194972.000	846.36	.00	847.17	80.00	14.37	4511.54	4.09	80.00	357.50	360.00	435.00	437.50
194972.000	848.03	.00	849.10	80.00	20.47	6232.39	7.14	80.00	357.50	360.00	435.00	437.50
* 194976.000	846.37	.00	847.67	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
* 194976.000	848.04	.00	849.59	78.10	.00	6260.00	.00	78.10	100.00	100.00	178.10	178.10

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
194977.000	846.38	.00	847.76	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
* 194977.000	848.04	.00	849.73	78.10	.00	6260.00	.00	78.10	100.00	100.00	178.10	178.10
195023.000	846.91	.00	848.08	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
195023.000	848.51	.00	850.20	78.10	.00	6260.00	.00	78.10	100.00	100.00	178.10	178.10
195024.000	847.12	.00	848.16	80.00	3.92	4523.53	2.55	80.00	99.00	100.00	178.10	179.00
* 195024.000	849.32	.00	850.47	80.00	5.94	6250.03	4.04	80.00	99.00	100.00	178.10	179.00
* 195040.000	847.66	.00	848.36	112.00	215.00	4150.39	164.61	112.00	220.00	236.00	300.00	332.00
195040.000	849.88	.00	850.67	112.00	329.74	5569.09	361.17	112.00	220.00	236.00	300.00	332.00
195090.000	848.20	.00	848.57	203.54	909.67	3424.44	195.88	212.00	170.00	236.00	300.00	382.00
195090.000	850.57	.00	850.94	212.00	1385.32	4348.30	526.38	212.00	170.00	236.00	300.00	382.00
195170.000	848.57	.00	848.72	378.46	1780.78	2585.31	163.91	.00	.00	236.00	300.00	.00
* 195170.000	850.96	.00	851.09	550.00	2770.01	3045.32	444.67	.00	.00	236.00	300.00	.00
195350.000	848.64	.00	848.80	376.39	1766.41	2605.06	158.53	.00	.00	236.00	300.00	.00
195350.000	851.00	.00	851.14	500.00	2763.78	3071.39	424.83	.00	.00	236.00	300.00	.00
195724.000	848.80	.00	849.01	371.61	1581.41	2839.96	108.62	.00	.00	236.00	300.00	.00
195724.000	851.11	.00	851.29	500.00	2554.97	3408.07	296.96	.00	.00	236.00	300.00	.00
* 195924.000	848.90	.00	849.23	324.03	1439.76	3090.24	.00	.00	.00	247.00	325.00	.00
195924.000	851.18	.00	851.43	384.98	2527.37	3693.67	38.96	.00	.00	247.00	325.00	.00
195925.000	848.87	.00	849.27	323.98	1473.39	3056.61	.00	.00	.00	247.00	325.00	.00
195925.000	851.18	.00	851.43	385.06	4149.85	2110.15	.00	.00	.00	247.00	325.00	.00
195974.000	848.98	.00	849.35	324.17	1534.82	2995.18	.00	.00	.00	247.00	325.00	.00
195974.000	851.24	.00	851.49	386.09	4176.48	2083.51	.00	.00	.00	247.00	325.00	.00
195975.000	848.96	.00	849.38	324.14	1127.79	3402.21	.00	.00	.00	247.00	325.00	.00
195975.000	851.20	.00	851.53	385.32	2015.19	4199.83	44.98	.00	.00	247.00	325.00	.00
196015.000	849.15	.00	849.45	366.10	1230.72	3184.74	114.54	-403.00	403.00	636.00	700.00	950.00
196015.000	851.30	.00	851.58	462.26	2019.11	3931.35	309.54	-403.00	403.00	636.00	700.00	950.00
196065.000	849.24	.00	849.50	417.35	1372.91	3044.16	112.92	-353.00	353.00	636.00	700.00	950.00
196065.000	851.39	.00	851.62	520.66	2250.76	3710.51	298.73	-353.00	353.00	636.00	700.00	950.00
196272.000	849.43	.00	849.65	629.92	1545.44	2873.70	110.86	.00	.00	636.00	700.00	.00
196272.000	851.58	.00	851.74	774.64	2693.84	3293.27	272.89	.00	.00	636.00	700.00	.00
197250.000	849.96	.00	850.25	608.67	1390.57	3049.39	90.04	.00	.00	486.00	550.00	.00
197250.000	851.91	.00	852.13	649.99	2518.42	3515.23	226.35	.00	.00	486.00	550.00	.00

178.010	852.29	.00	852.53	683.31	1234.13	2894.10	401.78	.00	.00	843.00	920.00	.00
178.010	853.61	.00	853.81	784.97	2068.27	3364.36	827.37	.00	.00	843.00	920.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
202235.000	853.91	.00	854.04	543.72	781.44	2297.17	1451.39	.00	.00	250.00	340.00	.00
202235.000	855.02	.00	855.16	580.00	1276.64	2863.63	2119.73	.00	.00	250.00	340.00	.00
* 202936.000	854.39	.00	854.62	158.84	41.24	2435.39	723.37	196.00	197.00	250.00	340.00	393.00
* 202936.000	855.52	.00	855.83	190.37	82.87	3255.03	1092.10	196.00	197.00	250.00	340.00	393.00
203036.000	854.47	.00	854.81	108.45	.00	2833.71	366.29	136.00	227.00	250.00	340.00	363.00
203036.000	855.62	.00	856.09	131.71	.64	3885.59	543.77	136.00	227.00	250.00	340.00	363.00
* 203176.000	854.67	.00	855.40	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
* 203176.000	855.86	.00	856.89	65.50	.00	4430.00	.00	65.50	192.50	192.50	258.03	258.00
* 203181.000	854.69	.00	855.55	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
* 203181.000	855.88	.00	857.44	65.50	.00	4430.00	.00	65.50	192.50	192.50	258.03	258.00
203219.000	854.90	.00	855.74	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
203219.000	856.29	.00	857.85	65.50	.00	4430.00	.00	65.50	192.50	192.50	258.03	258.00
* 203224.000	855.23	.00	855.86	67.50	1.40	3197.00	1.60	67.50	191.50	192.50	258.03	259.00
* 203224.000	857.59	.00	858.29	67.50	3.23	4422.57	4.21	67.50	191.50	192.50	258.03	259.00
* 203274.000	855.88	.00	856.11	157.03	15.51	2737.69	446.80	171.00	1959.00	2000.00	2090.00	2130.00
* 203274.000	858.34	.00	858.56	171.00	119.74	3665.60	644.66	171.00	1959.00	2000.00	2090.00	2130.00
* 203464.000	856.22	.00	856.25	551.00	639.79	1375.52	1184.69	551.00	1769.00	2000.00	2090.00	2320.00
* 203464.000	858.66	.00	858.69	551.00	1088.85	1674.95	1666.20	551.00	1769.00	2000.00	2090.00	2320.00
277.010	856.52	.00	856.57	957.05	576.43	1402.43	1221.13	.00	.00	1247.00	1330.00	.00
277.010	858.82	.00	858.84	1643.08	1342.55	1341.20	1746.24	.00	.00	1247.00	1330.00	.00
* 184.010	857.11	.00	857.23	562.54	275.29	1763.70	1161.00	.00	.00	495.00	572.00	.00
* 184.010	859.04	.00	859.12	830.25	585.14	2051.54	1793.33	.00	.00	495.00	572.00	.00
210350.000	859.54	.00	859.64	713.02	224.37	1467.40	1508.23	.00	.00	240.00	303.00	.00
210350.000	860.65	.00	860.74	769.28	377.60	1752.65	2299.75	.00	.00	240.00	303.00	.00
185.010	861.80	.00	862.02	696.30	208.05	1957.10	1034.85	.00	.00	245.00	312.00	.00
185.010	862.61	.00	862.83	757.97	380.36	2339.03	1710.61	.00	.00	245.00	312.00	.00
215877.000	864.77	.00	865.05	668.07	488.82	2308.78	402.40	.00	.00	300.00	370.00	.00
215877.000	865.52	.00	865.82	752.04	844.50	2820.92	764.59	.00	.00	300.00	370.00	.00
216054.000	864.95	.00	865.25	589.81	571.08	2214.30	414.62	.00	.00	287.00	337.10	.00
216054.000	865.71	.00	866.05	633.24	951.97	2715.29	762.74	.00	.00	287.00	337.10	.00
* 216085.000	866.11	.00	866.25	653.56	735.10	1853.20	611.70	.00	.00	287.00	337.10	.00
216085.000	866.73	.00	866.91	680.10	1106.46	2355.66	967.88	.00	.00	287.00	337.10	.00
216135.000	866.24	.00	866.30	625.00	1279.84	1438.78	481.37	625.00	470.00	830.00	885.00	1095.00
216135.000	866.89	.00	866.98	625.00	1818.67	1876.01	735.32	625.00	470.00	830.00	885.00	1095.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
216185.000	866.22	.00	866.35	578.06	1250.59	1899.84	49.57	.00	.00	700.00	762.00	.00
216185.000	866.86	.00	867.05	677.66	1811.44	2484.61	133.95	.00	.00	700.00	762.00	.00
216277.000	866.31	.00	866.41	798.00	1638.78	1414.75	146.47	.00	.00	693.90	744.25	.00
216277.000	867.01	.00	867.14	798.00	2243.67	1801.46	384.86	.00	.00	693.90	744.25	.00
217062.000	866.67	.00	866.72	743.00	2122.08	1015.95	61.97	.00	.00	678.00	725.00	.00
217062.000	867.44	.00	867.50	744.17	3033.10	1310.24	86.66	.00	.00	678.00	725.00	.00
217537.000	866.84	.00	867.03	419.89	912.35	1841.09	446.55	.00	.00	273.00	319.80	.00
* 217537.000	867.64	.00	867.89	424.58	1400.82	2375.87	653.31	.00	.00	273.00	319.80	.00
218237.000	867.32	.00	867.37	816.85	20.92	948.47	2230.61	.00	.00	39.00	88.00	.00
218237.000	868.21	.00	868.27	830.89	37.15	1199.94	3192.90	.00	.00	39.00	88.00	.00

* 218792.000	867.54	.00	867.77	721.40	920.72	1808.54	470.74	.00	.00	290.00	344.00	.00
* 218792.000	868.43	.00	868.66	739.93	1357.59	2149.15	923.27	.00	.00	290.00	344.00	.00
219172.000	868.11	.00	868.30	1004.88	13.94	1486.48	1699.58	.00	.00	12.00	60.00	.00
219172.000	868.96	.00	869.13	1011.69	21.29	1706.73	2701.98	.00	.00	12.00	60.00	.00
219722.000	868.72	.00	868.90	686.05	1506.41	1532.81	160.78	.00	.00	332.00	380.00	.00
219722.000	869.49	.00	869.69	799.38	2120.29	1913.53	396.19	.00	.00	332.00	380.00	.00
220247.000	869.30	.00	869.49	606.82	104.77	1873.12	1222.10	.00	.00	24.00	82.00	.00
220247.000	870.12	.00	870.34	617.81	143.28	2332.46	1954.27	.00	.00	24.00	82.00	.00
220447.000	869.48	.00	869.66	480.47	779.70	2401.91	18.38	580.00	140.00	530.70	613.35	720.00
220447.000	870.31	.00	870.54	481.36	1301.55	3101.14	27.31	580.00	140.00	530.70	613.35	720.00
220942.000	869.88	.00	870.08	378.00	405.85	2188.54	605.60	378.00	255.00	388.80	468.48	633.00
220942.000	870.76	.00	871.01	378.00	643.55	2865.88	920.57	378.00	255.00	388.80	468.48	633.00
221102.000	870.08	.00	870.34	300.00	1544.49	1478.69	176.82	300.00	300.00	517.00	554.60	600.00
221102.000	870.98	.00	871.32	300.00	2215.45	1931.61	282.93	300.00	300.00	517.00	554.60	600.00
221302.000	870.41	.00	871.21	50.10	.00	3199.87	.13	50.10	250.00	250.00	300.00	300.10
221302.000	871.35	.00	872.60	50.10	.00	4429.83	.17	50.10	250.00	250.00	300.00	300.10
221310.000	870.43	.00	871.22	50.10	.00	3199.86	.14	50.10	250.00	250.00	300.00	300.10
221310.000	871.37	.00	872.62	50.10	.00	4429.84	.16	50.10	250.00	250.00	300.00	300.10
221340.000	870.48	.00	871.27	50.10	.00	3199.86	.14	50.10	250.00	250.00	300.00	300.10
221340.000	871.46	.00	872.69	50.10	.00	4429.84	.16	50.10	250.00	250.00	300.00	300.10
221348.000	870.50	.00	871.28	50.10	.00	3199.82	.17	50.10	250.00	250.00	300.00	300.10
221348.000	871.49	.00	872.71	50.10	.00	4429.77	.23	50.10	250.00	250.00	300.00	300.10
* 221353.000	871.12	.00	871.49	60.00	.00	3200.00	.00	60.00	30.00	30.00	90.00	90.00
* 221353.000	872.48	.00	873.04	60.00	.00	4430.00	.00	60.00	30.00	30.00	90.00	90.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
* 221383.000	871.37	.00	871.59	120.00	276.88	2688.85	234.28	.00	.00	30.00	90.00	.00
* 221383.000	872.89	.00	873.19	120.00	424.67	3645.05	360.29	.00	.00	30.00	90.00	.00
222533.000	871.73	.00	871.91	120.00	344.61	2514.95	340.44	.00	.00	30.00	90.00	.00
222533.000	873.34	.00	873.57	120.00	522.06	3390.91	517.03	.00	.00	30.00	90.00	.00
* 237300.000	899.00	.00	899.01	864.15	4.95	3167.89	27.15	.00	.00	250.00	869.00	.00
* 237300.000	900.00	.00	900.01	870.32	11.87	4341.11	77.02	.00	.00	250.00	869.00	.00
241300.000	899.03	.00	899.04	864.36	5.07	3166.88	28.05	.00	.00	250.00	869.00	.00
241300.000	900.05	.00	900.05	870.60	12.12	4339.00	78.89	.00	.00	250.00	869.00	.00
* 244550.000	899.06	.00	899.14	276.52	86.58	3107.97	5.45	.00	.00	250.00	425.00	.00
* 244550.000	900.07	.00	900.18	302.72	188.56	4223.94	17.51	.00	.00	250.00	425.00	.00
267.010	899.21	.00	899.33	248.33	108.50	3079.78	11.72	.00	.00	251.00	398.00	.00
267.010	900.25	.00	900.41	279.22	230.13	4163.91	35.96	.00	.00	251.00	398.00	.00
256.010	899.44	.00	899.62	230.21	125.10	3060.21	14.69	.00	.00	251.00	370.00	.00
256.010	900.52	.00	900.76	265.52	257.17	4132.14	40.69	.00	.00	251.00	370.00	.00
268.010	899.81	.00	900.07	226.17	185.60	2974.40	40.00	.00	.00	251.00	343.00	.00
268.010	900.93	.00	901.28	291.25	359.94	3965.55	104.52	.00	.00	251.00	343.00	.00
247600.000	900.37	.00	900.79	241.96	289.05	2758.87	152.08	.00	.00	251.00	315.00	.00
247600.000	901.55	.00	902.05	264.91	516.11	3595.02	318.87	.00	.00	251.00	315.00	.00
301.010	901.08	.00	901.33	331.04	96.00	2379.81	724.19	.00	.00	251.00	313.00	.00
301.010	902.34	.00	902.62	409.34	253.01	3062.93	1114.06	.00	.00	251.00	313.00	.00
248716.000	901.48	.00	901.58	314.68	15.70	1782.33	1401.96	550.00	.00	250.00	310.00	550.00
248716.000	902.77	.00	902.90	483.18	87.24	2373.95	1968.80	550.00	.00	250.00	310.00	550.00
* 249051.000	901.65	.00	902.02	132.14	36.67	2681.03	482.30	188.00	186.00	250.00	310.00	374.00
* 249051.000	902.97	.00	903.46	188.00	108.47	3624.36	697.17	188.00	186.00	250.00	310.00	374.00
249286.000	901.91	.00	902.51	70.00	36.75	3140.68	22.57	70.00	245.00	250.00	310.00	315.00

249286.000	903.26	.00	904.10	70.00	63.14	4334.29	32.58	70.00	245.00	250.00	310.00	315.00
* 249336.000	902.00	.00	902.99	44.10	.00	3200.00	.00	44.10	217.50	208.80	269.70	261.60
* 249336.000	903.37	.00	904.80	44.10	.00	4430.00	.00	44.10	217.50	208.80	269.70	261.60
* 249364.000	904.20	.00	904.27	318.50	69.39	1681.44	1449.17	320.00	160.00	208.80	269.70	480.00
* 249364.000	905.29	.00	905.38	318.50	170.43	2271.09	1988.49	320.00	160.00	208.80	269.70	480.00
249394.000	904.22	.00	904.28	378.00	138.66	1616.37	974.97	378.00	91.00	250.00	310.00	469.00
249394.000	905.31	.00	905.40	378.00	349.65	2114.93	1315.42	378.00	91.00	250.00	310.00	469.00
249444.000	904.25	.00	904.29	473.39	121.37	1448.95	1159.68	478.00	41.00	250.00	310.00	519.00
249444.000	905.36	.00	905.42	478.00	341.98	1882.71	1555.30	478.00	41.00	250.00	310.00	519.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
249617.000	904.28	.00	904.32	520.20	78.87	1348.57	1302.56	.00	.00	250.00	310.00	.00
249617.000	905.39	.00	905.45	575.11	262.76	1752.87	1764.37	.00	.00	250.00	310.00	.00
250140.000	904.35	.00	904.38	743.01	20.32	1182.74	1526.94	.00	.00	250.00	310.00	.00
250140.000	905.49	.00	905.52	881.86	113.71	1520.80	2145.49	.00	.00	250.00	310.00	.00
250958.000	904.48	.00	904.53	307.26	5.53	1101.25	1623.22	.00	.00	250.00	310.00	.00
250958.000	905.62	.00	905.69	312.90	11.24	1465.17	2303.59	.00	.00	250.00	310.00	.00
* 251253.000	904.60	.00	904.93	115.06	8.93	2195.98	525.09	158.00	201.00	250.00	310.00	359.00
* 251253.000	905.76	.00	906.21	116.99	19.74	2974.80	785.45	158.00	201.00	250.00	310.00	359.00
251328.000	904.68	.00	905.11	97.06	9.75	2403.07	317.18	122.00	219.00	250.00	310.00	341.00
251328.000	905.85	.00	906.44	99.01	21.81	3278.12	480.07	122.00	219.00	250.00	310.00	341.00
251433.000	904.83	.00	905.43	69.00	10.76	2692.83	26.41	69.00	245.00	250.00	310.00	314.00
251433.000	906.02	.00	906.86	69.00	21.81	3718.87	39.31	69.00	245.00	250.00	310.00	314.00
* 251478.000	904.94	.00	906.06	46.00	.00	2729.84	.16	46.00	250.00	250.00	295.90	296.00
* 251478.000	906.14	.00	907.71	46.00	.00	3779.79	.21	46.00	250.00	250.00	295.90	296.00
251486.000	904.97	.00	906.09	46.00	.00	2730.00	.00	46.00	250.00	250.00	295.90	296.00
251486.000	906.20	.00	907.75	46.00	.00	3780.00	.00	46.00	250.00	250.00	295.90	296.00
251514.000	905.12	.00	906.20	46.00	.00	2730.00	.00	46.00	250.00	250.00	295.90	296.00
251514.000	906.40	.00	907.88	46.00	.00	3780.00	.00	46.00	250.00	250.00	295.90	296.00
251522.000	905.16	.00	906.22	46.00	.00	2729.88	.12	46.00	250.00	250.00	295.90	296.00
251522.000	906.46	.00	907.92	46.00	.00	3779.84	.16	46.00	250.00	250.00	295.90	296.00
* 251525.000	905.96	.00	906.49	52.00	.00	2730.00	.00	52.00	254.00	250.00	310.00	306.00
* 251525.000	907.55	.00	908.29	52.00	.00	3780.00	.00	52.00	254.00	250.00	310.00	306.00
251537.000	906.21	.00	906.59	76.00	27.98	2647.23	54.80	76.00	242.00	250.00	310.00	318.00
* 251537.000	907.93	.00	908.42	76.00	56.21	3644.18	79.61	76.00	242.00	250.00	310.00	318.00
* 251697.000	906.76	.00	906.80	371.09	15.51	1233.78	1480.71	.00	.00	250.00	310.00	.00
* 251697.000	908.65	.00	908.69	527.82	166.06	1583.27	2030.66	.00	.00	250.00	310.00	.00
* 268.010	907.00	.00	907.10	340.11	14.55	1700.32	1015.13	.00	.00	250.00	319.00	.00
268.010	908.85	.00	908.94	528.01	106.44	2085.19	1588.37	.00	.00	250.00	319.00	.00
* 215.010	907.59	.00	907.84	322.66	13.82	2318.15	398.02	.00	.00	250.00	328.00	.00
* 215.010	909.27	.00	909.49	392.43	82.81	2845.51	851.68	.00	.00	250.00	328.00	.00
257200.000	910.07	.00	910.36	202.75	46.74	2529.55	153.71	.00	.00	250.00	345.00	.00
257200.000	911.24	.00	911.57	228.28	142.18	3338.77	299.05	.00	.00	250.00	345.00	.00
216.010	913.33	.00	913.65	173.08	58.61	2527.52	143.87	.00	.00	250.00	336.00	.00
216.010	914.44	.00	914.84	185.63	139.66	3365.67	274.67	.00	.00	250.00	336.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
263250.000	916.74	.00	917.08	151.35	69.15	2493.95	166.90	.00	.00	250.00	327.00	.00
263250.000	917.93	.00	918.36	163.21	148.16	3331.65	300.19	.00	.00	250.00	327.00	.00

265423.000	918.79	.00	919.03	157.31	84.27	2325.06	320.67	.00	.00	250.00	327.00	.00
265423.000	920.04	.00	920.34	169.83	163.89	3067.04	549.07	.00	.00	250.00	327.00	.00
265633.000	918.97	.00	919.48	51.00	.00	2729.03	.97	51.00	250.00	250.00	300.60	301.00
265633.000	920.25	.00	921.01	51.00	.00	3778.73	1.27	51.00	250.00	250.00	300.60	301.00
265636.000	918.97	.00	919.49	51.00	.00	2730.00	.00	51.00	250.00	250.00	300.60	301.00
* 265636.000	920.25	.00	921.15	51.00	.00	3780.00	.00	51.00	250.00	250.00	300.60	301.00
265664.000	919.01	.00	919.52	51.00	.00	2730.00	.00	51.00	250.00	250.00	300.60	301.00
265664.000	920.35	.00	921.24	51.00	.00	3780.00	.00	51.00	250.00	250.00	300.60	301.00
265667.000	919.01	.00	919.52	51.00	.00	2728.55	1.45	51.00	250.00	250.00	300.60	301.00
* 265667.000	920.63	.00	921.34	51.00	.00	3778.12	1.88	51.00	250.00	250.00	300.60	301.00
* 265797.000	919.77	.00	919.81	314.48	.00	1105.20	1624.80	600.00	.00	285.00	350.00	600.00
* 265797.000	921.68	.00	921.72	455.84	2.56	1409.42	2368.03	600.00	.00	285.00	350.00	600.00
* 266247.000	919.86	.00	919.87	1162.28	.00	643.86	2086.14	.00	.00	285.00	350.00	.00
* 266247.000	921.76	.00	921.77	1237.83	.38	685.25	3094.37	.00	.00	285.00	350.00	.00
* 223.010	920.01	.00	920.03	1213.69	.00	711.94	2018.06	.00	.00	285.00	350.00	.00
223.010	921.84	.00	921.85	1214.52	.00	696.35	3083.65	.00	.00	285.00	350.00	.00
344.010	920.17	.00	920.18	1463.35	.00	634.82	2095.18	.00	.00	285.00	350.00	.00
344.010	921.90	.00	921.91	1464.14	.00	595.70	3184.30	.00	.00	285.00	350.00	.00
271067.000	920.35	.00	920.36	1743.03	.00	591.61	2138.39	.00	.00	285.00	350.00	.00
271067.000	921.97	.00	921.98	1814.83	.00	524.06	3255.94	.00	.00	285.00	350.00	.00
271167.000	920.37	.00	920.38	1740.81	.00	603.37	2126.63	.00	.00	285.00	350.00	.00
271167.000	921.98	.00	921.99	1812.12	.00	530.48	3249.52	.00	.00	285.00	350.00	.00
271267.000	920.39	.00	920.41	1738.83	.00	614.34	2115.66	.00	.00	285.00	350.00	.00
271267.000	921.99	.00	921.99	1809.38	.00	537.18	3242.82	.00	.00	285.00	350.00	.00
271370.000	920.42	.00	920.43	1737.76	.00	620.40	2109.60	2063.25	286.75	285.00	350.00	2350.00
271370.000	922.00	.00	922.00	1807.11	.00	541.82	3238.18	2063.25	286.75	285.00	350.00	2350.00
271380.000	920.42	.00	920.44	1735.68	.00	612.65	2117.35	2060.75	289.25	285.00	350.00	2350.00
271380.000	922.00	.00	922.00	1804.66	.00	530.77	3249.23	2060.75	289.25	285.00	350.00	2350.00
271390.000	920.42	.00	920.44	1732.87	.00	598.81	2131.19	2058.25	291.75	285.00	350.00	2350.00
271390.000	922.00	.00	922.00	1801.76	.00	514.74	3265.26	2058.25	291.75	285.00	350.00	2350.00
271395.000	920.42	.00	920.44	1731.67	.00	589.72	2140.28	2057.00	293.00	285.00	350.00	2350.00
271395.000	922.00	.00	922.00	1800.53	.00	505.59	3274.41	2057.00	293.00	285.00	350.00	2350.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
* 271400.000	920.39	.00	920.48	1740.00	.00	1223.36	1506.64	1740.00	1000.00	1000.00	1052.10	2740.00
* 271400.000	921.99	.00	922.01	1740.00	.00	809.27	2970.73	1740.00	1000.00	1000.00	1052.10	2740.00
* 271434.000	922.45	.00	922.53	2306.52	.00	1369.48	1360.52	52.20	1000.00	1000.00	1052.10	1052.20
271434.000	923.06	.00	923.12	2330.06	.00	1452.87	2327.13	52.20	1000.00	1000.00	1052.10	1052.20
* 271439.000	922.55	.00	922.55	2197.63	.00	247.13	2482.87	2280.00	290.00	285.00	350.00	2570.00
* 271439.000	923.13	.00	923.13	2253.01	.00	316.77	3463.23	2280.00	290.00	285.00	350.00	2570.00
271444.000	922.55	.00	922.55	2201.58	.00	255.93	2474.07	2290.00	280.00	285.00	350.00	2570.00
271444.000	923.13	.00	923.13	2257.23	.00	329.25	3450.75	2290.00	280.00	285.00	350.00	2570.00
271659.000	922.55	.00	922.55	2191.36	.00	259.75	2470.25	.00	.00	285.00	350.00	.00
271659.000	923.13	.00	923.13	2247.11	.00	333.41	3446.59	.00	.00	285.00	350.00	.00
* 274443.000	922.57	.00	922.72	462.96	.00	1429.61	1300.39	.00	.00	885.00	950.00	.00
* 274443.000	923.17	.00	923.35	491.31	.00	1800.44	1979.56	.00	.00	885.00	950.00	.00
* 277640.000	925.06	.00	925.13	1003.84	724.17	1237.76	768.06	.00	.00	350.00	410.00	.00
* 277640.000	925.74	.00	925.81	1113.83	1047.44	1436.41	1296.15	.00	.00	350.00	410.00	.00
280940.000	927.24	.00	927.41	234.30	.00	2368.16	361.84	.00	.00	250.00	364.00	.00
280940.000	928.02	.00	928.25	249.81	.80	3173.76	605.43	.00	.00	250.00	364.00	.00
303.010	928.04	.00	928.16	314.72	2.79	2066.40	660.81	.00	.00	288.00	386.00	.00
303.010	928.96	.00	929.10	347.83	16.60	2702.21	1061.20	.00	.00	288.00	386.00	.00

286.010	928.63	.00	928.71	460.74	32.51	1730.16	967.33	.00	.00	325.00	407.00	.00
286.010	929.62	.00	929.71	510.76	112.53	2182.18	1485.29	.00	.00	325.00	407.00	.00
304.010	929.06	.00	929.11	648.46	206.11	1316.49	1207.40	.00	.00	363.00	429.00	.00
304.010	930.06	.00	930.12	745.78	408.72	1595.91	1775.37	.00	.00	363.00	429.00	.00
285810.000	929.33	.00	929.35	940.49	824.89	770.03	1135.08	.00	.00	400.00	450.00	.00
285810.000	930.33	.00	930.35	1000.00	1215.42	916.67	1647.91	.00	.00	400.00	450.00	.00
* 305.010	929.51	.00	929.58	687.20	757.51	1216.05	756.44	.00	.00	362.00	413.00	.00
* 305.010	930.50	.00	930.56	771.52	1165.36	1399.35	1215.28	.00	.00	362.00	413.00	.00
* 287.010	929.99	.00	930.18	470.88	656.50	1659.13	414.37	.00	.00	325.00	376.00	.00
* 287.010	930.92	.00	931.10	555.92	1086.71	1963.16	730.13	.00	.00	325.00	376.00	.00
354.010	930.93	.00	931.19	293.62	567.83	1868.89	293.28	.00	.00	288.00	339.00	.00
354.010	931.80	.00	932.11	362.71	988.66	2326.09	465.25	.00	.00	288.00	339.00	.00
233.010	932.01	.00	932.30	234.50	495.29	2019.08	215.63	.00	.00	250.00	302.00	.00
233.010	932.94	.00	933.29	258.22	881.26	2565.89	332.85	.00	.00	250.00	302.00	.00
288.010	934.11	.00	934.39	219.18	476.79	2078.11	175.10	.00	.00	250.00	303.00	.00
288.010	935.21	.00	935.53	230.79	866.64	2639.16	274.20	.00	.00	250.00	303.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
293340.000	936.03	.00	936.29	209.98	444.00	2141.22	144.78	.00	.00	250.00	304.00	.00
293340.000	937.22	.00	937.53	219.65	825.18	2721.23	233.59	.00	.00	250.00	304.00	.00
295627.000	938.18	.00	938.44	210.45	452.16	2131.76	146.08	.00	.00	250.00	304.00	.00
295627.000	939.45	.00	939.74	220.69	845.22	2698.04	236.74	.00	.00	250.00	304.00	.00
* 295947.000	938.61	.00	939.18	50.00	.00	2730.00	.00	50.00	252.00	250.00	304.00	302.00
* 295947.000	939.93	.00	940.75	50.00	.00	3780.00	.00	50.00	252.00	250.00	304.00	302.00
* 295967.000	938.68	.00	939.67	40.00	.00	2728.82	1.18	40.00	181.60	178.56	221.28	221.60
* 295967.000	940.00	.00	941.44	40.00	.00	3778.36	1.64	40.00	181.60	178.56	221.28	221.60
295968.000	938.68	.00	939.83	40.00	.00	2730.00	.00	40.00	181.60	178.56	221.28	221.60
295968.000	940.01	.00	941.73	40.00	.00	3780.00	.00	40.00	181.60	178.56	221.28	221.60
296055.000	939.29	.00	940.31	40.00	.00	2730.00	.00	40.00	181.60	178.56	221.28	221.60
296055.000	940.93	.00	942.42	40.00	.00	3780.00	.00	40.00	181.60	178.56	221.28	221.60
296056.000	939.69	.00	940.45	42.00	.00	2720.59	9.41	42.00	180.60	178.56	221.28	222.60
296056.000	941.67	.00	942.66	42.00	.00	3766.83	13.17	42.00	180.60	178.56	221.28	222.60
* 296071.000	940.37	.00	940.69	72.00	74.11	2587.88	68.01	72.00	241.00	250.00	304.00	313.00
* 296071.000	942.58	.00	942.98	72.00	114.11	3562.72	103.16	72.00	241.00	250.00	304.00	313.00
* 296148.000	940.71	.00	940.83	227.20	698.68	1868.85	162.46	.00	.00	250.00	304.00	.00
* 296148.000	943.05	.00	943.16	246.18	1220.41	2296.25	263.34	.00	.00	250.00	304.00	.00
298190.000	941.36	.00	941.40	588.32	1383.51	1294.45	52.03	.00	.00	1236.00	1300.00	.00
* 298190.000	943.52	.00	943.55	779.96	2250.72	1445.79	83.49	.00	.00	1236.00	1300.00	.00
298500.000	941.43	.00	941.48	570.61	1355.23	1323.89	50.88	.00	.00	1236.00	1300.00	.00
298500.000	943.56	.00	943.60	759.78	2221.44	1475.89	82.68	.00	.00	1236.00	1300.00	.00

100-YEAR DISCHARGE

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
.000	.00	.00	.00	669.85	6800.00	685.36	.00	685.95	12.54	7.19	1617.66	1920.35
.000	.00	.00	.00	669.85	9390.00	686.56	.00	687.17	12.58	7.70	2257.86	2647.05
600.000	600.00	.00	.00	670.40	6800.00	686.14	.00	686.67	11.05	6.84	1731.03	2045.45
600.000	600.00	.00	.00	670.40	9390.00	687.35	.00	687.89	11.16	7.34	2396.89	2811.07

3.010	4277.00	.00	.00	678.30	6800.00	690.79	.00	691.39	11.78	6.61	1280.68	1981.61
3.010	4277.00	.00	.00	678.30	9390.00	692.12	.00	692.89	13.20	7.61	1586.27	2584.63
8854.000	3977.00	.00	.00	685.73	6800.00	695.28	.00	695.71	10.21	5.62	1660.30	2127.76
8854.000	3977.00	.00	.00	685.73	9390.00	696.79	.00	697.25	9.51	6.05	2251.78	3044.30
9154.000	300.00	.00	.00	686.30	6800.00	695.62	.00	696.18	12.91	6.20	1316.16	1892.85
9154.000	300.00	.00	.00	686.30	9390.00	697.12	.00	697.79	12.89	6.93	1693.80	2615.79
9354.000	200.00	.00	.00	685.20	6800.00	695.90	.00	696.49	15.30	6.15	1106.21	1738.17
9354.000	200.00	.00	.00	685.20	9390.00	697.41	.00	698.18	15.97	7.06	1330.69	2349.72
9355.000	1.00	701.70	699.10	685.20	6800.00	695.90	.00	696.50	15.18	6.21	1094.16	1745.26
9355.000	1.00	701.70	699.10	685.20	9390.00	697.41	.00	698.20	16.64	7.13	1316.22	2302.10
9400.000	45.00	701.70	699.10	685.20	6800.00	695.99	.00	696.58	14.72	6.15	1105.43	1772.47
9400.000	45.00	701.70	699.10	685.20	9390.00	697.51	.00	698.28	16.10	7.06	1330.96	2340.52
9401.000	1.00	.00	.00	685.20	6800.00	696.02	.00	696.59	14.35	6.05	1127.12	1794.79
9401.000	1.00	.00	.00	685.20	9390.00	697.54	.00	698.29	14.80	6.95	1357.22	2441.09
9576.000	175.00	.00	.00	686.55	6800.00	696.53	.00	696.88	8.10	5.17	2029.53	2389.84
* 9576.000	175.00	.00	.00	686.55	9390.00	698.36	.00	698.67	6.30	5.17	2968.93	3741.65
9.010	4509.00	.00	.00	689.50	6800.00	700.27	.00	700.68	8.84	5.64	1701.94	2287.62
9.010	4509.00	.00	.00	689.50	9390.00	701.59	.00	702.07	9.10	6.24	2216.21	3113.16
18600.000	4515.00	.00	.00	692.40	6800.00	704.22	.00	704.70	8.99	6.09	1777.26	2267.80
18600.000	4515.00	.00	.00	692.40	9390.00	705.72	.00	706.30	9.71	6.89	2307.77	3013.85
10.010	3612.00	.00	.00	695.30	6800.00	707.39	.00	707.94	8.97	6.10	1368.50	2271.07
10.010	3612.00	.00	.00	695.30	9390.00	709.12	.00	709.82	9.76	7.01	1750.21	3005.24
25825.000	3613.00	.00	.00	698.30	6800.00	710.44	.00	710.92	7.63	5.61	1363.18	2461.41
25825.000	3613.00	.00	.00	698.30	9390.00	712.40	.00	713.01	8.07	6.43	1748.46	3305.61
25925.000	100.00	.00	.00	698.40	6800.00	710.78	.00	711.05	4.95	4.15	1639.72	3056.78
25925.000	100.00	.00	.00	698.40	9390.00	712.82	.00	713.16	5.23	4.70	1999.37	4105.41
25926.000	1.00	723.10	722.10	698.40	6800.00	710.77	.00	711.06	7.13	4.34	1567.31	2546.18
25926.000	1.00	723.10	722.10	698.40	9390.00	712.80	.00	713.18	7.93	4.91	1913.22	3334.11

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
25974.000	48.00	723.10	722.10	698.40	6800.00	710.80	.00	711.09	7.09	4.33	1571.03	2554.42
25974.000	48.00	723.10	722.10	698.40	9390.00	712.84	.00	713.22	7.89	4.90	1917.34	3343.75
25975.000	1.00	.00	.00	698.40	6800.00	710.84	.00	711.10	4.86	4.12	1649.94	3085.32
25975.000	1.00	.00	.00	698.40	9390.00	712.89	.00	713.23	5.14	4.67	2011.92	4143.58
26075.000	100.00	.00	.00	698.47	6800.00	710.80	.00	711.26	7.16	5.49	1397.45	2541.68
26075.000	100.00	.00	.00	698.47	9390.00	712.83	.00	713.41	7.42	6.25	1802.63	3448.29
16.010	4582.00	.00	.00	701.50	6800.00	714.28	.00	714.82	8.36	5.97	1240.36	2351.82
16.010	4582.00	.00	.00	701.50	9390.00	716.39	.00	717.07	8.55	6.79	1610.51	3212.24
20.030	1778.00	.00	.00	702.70	6800.00	715.76	.00	716.28	8.15	5.93	1287.18	2382.41
20.030	1778.00	.00	.00	702.70	9390.00	717.92	.00	718.49	7.56	6.43	1862.18	3415.76
20.080	2170.00	.00	.00	704.30	6800.00	717.43	.00	717.72	5.60	4.88	2089.18	2872.30
20.080	2170.00	.00	.00	704.30	9390.00	719.45	.00	719.70	4.37	4.83	3035.44	4491.85
20.070	200.00	.00	.00	704.30	6800.00	717.56	.00	717.94	6.77	5.41	1607.72	2613.31
20.070	200.00	.00	.00	704.30	9390.00	719.56	.00	719.99	6.35	5.85	2084.51	3725.72
35244.000	439.00	.00	.00	704.60	6800.00	717.89	.00	718.46	8.91	6.21	1211.56	2278.40
35244.000	439.00	.00	.00	704.60	9390.00	719.89	.00	720.64	9.52	7.18	1471.12	3042.77
35319.000	75.00	.00	.00	705.00	6800.00	717.99	.00	718.54	8.64	5.95	1143.95	2313.72
35319.000	75.00	.00	.00	705.00	9390.00	719.96	.00	720.72	9.93	7.01	1341.01	2979.72
35320.000	1.00	720.00	718.80	705.00	6800.00	717.99	.00	718.54	6.35	5.95	1143.25	2697.99
* 35320.000	1.00	720.00	718.80	705.00	9390.00	719.96	.00	720.90	23.91	7.77	1209.37	1920.25
35340.000	20.00	720.00	718.80	705.00	6800.00	718.00	.00	718.55	6.33	5.94	1144.74	2703.63

35340.000	20.00	720.00	718.80	705.00	9390.00	720.01	.00	720.95	23.91	7.77	1209.37	1920.25
35341.000	1.00	.00	.00	705.00	6800.00	718.01	.00	718.55	7.62	5.93	1161.10	2463.17
* 35341.000	1.00	.00	.00	705.00	9390.00	720.34	.00	721.06	7.81	6.80	1400.00	3359.05
35466.000	125.00	.00	.00	704.77	6800.00	718.54	.00	718.78	4.50	4.55	2341.08	3204.10
* 35466.000	125.00	.00	.00	704.77	9390.00	721.15	.00	721.37	3.41	4.53	3282.00	5085.53
22.010	3438.00	.00	.00	707.50	6800.00	720.17	.00	720.55	6.15	5.10	1651.27	2742.80
22.010	3438.00	.00	.00	707.50	9390.00	722.41	.00	722.83	5.61	5.52	2425.62	3965.66
22.020	3412.00	.00	.00	710.20	6800.00	722.10	.00	722.38	4.80	4.43	2193.23	3102.68
22.020	3412.00	.00	.00	710.20	9390.00	724.18	.00	724.49	4.39	4.77	3198.38	4481.92
45745.000	3429.00	.00	.00	712.90	6800.00	723.54	.00	723.71	3.57	3.61	3247.36	3600.90
45745.000	3429.00	.00	.00	712.90	9390.00	725.50	.00	725.69	3.31	3.93	4298.54	5158.98
46623.000	878.00	.00	.00	713.29	6800.00	723.86	.00	724.03	3.68	3.65	3208.16	3546.61
46623.000	878.00	.00	.00	713.29	9390.00	725.79	.00	725.98	3.42	3.97	4245.14	5075.38

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
47223.000	600.00	.00	.00	713.53	6800.00	724.10	.00	724.32	4.42	4.00	2424.37	3234.64
47223.000	600.00	.00	.00	713.53	9390.00	726.02	.00	726.28	4.20	4.40	3393.02	4583.77
47423.000	200.00	.00	.00	713.63	6800.00	724.22	.00	724.65	8.32	5.39	1484.79	2357.82
47423.000	200.00	.00	.00	713.63	9390.00	726.14	.00	726.65	8.25	5.98	2270.68	3268.43
47473.000	50.00	.00	.00	713.65	6800.00	724.27	.00	724.83	10.71	6.10	1295.03	2077.81
47473.000	50.00	.00	.00	713.65	9390.00	726.18	.00	726.84	10.55	6.72	2056.67	2890.62
47523.000	50.00	.00	.00	713.67	6800.00	724.33	.00	725.07	15.40	6.95	1114.25	1732.89
47523.000	50.00	.00	.00	713.67	9390.00	726.24	.00	727.07	14.83	7.57	1854.09	2438.66
* 47546.000	23.00	.00	.00	709.00	6800.00	724.38	720.33	725.87	35.16	9.92	846.07	1146.85
* 47546.000	23.00	.00	.00	709.00	9390.00	726.29	.00	727.83	35.20	10.52	1485.87	1582.66
47600.000	54.00	725.50	729.00	709.00	6800.00	724.38	.00	725.87	35.12	9.92	847.05	1147.37
47600.000	54.00	725.50	729.00	709.00	9390.00	726.30	.00	727.83	35.19	10.52	1486.16	1582.89
* 47603.000	3.00	.00	.00	713.71	6590.00	725.85	.00	726.36	12.78	5.84	1455.94	1843.25
* 47603.000	3.00	.00	.00	713.71	9110.00	727.83	.00	728.35	10.93	6.11	2242.81	2755.84
* 47616.000	13.00	.00	.00	713.72	6590.00	726.18	.00	726.48	5.98	4.49	1872.25	2694.49
47616.000	13.00	.00	.00	713.72	9110.00	728.10	.00	728.45	5.88	4.94	2667.44	3757.72
* 47656.000	40.00	.00	.00	713.76	6590.00	726.39	.00	726.56	2.50	3.42	2446.03	4170.92
* 47656.000	40.00	.00	.00	713.76	9110.00	728.31	.00	728.53	2.65	3.89	3318.29	5598.45
47816.000	160.00	.00	.00	713.79	6590.00	726.55	.00	726.63	1.49	2.66	4217.94	5396.14
47816.000	160.00	.00	.00	713.79	9110.00	728.51	.00	728.61	1.57	3.02	5218.63	7273.82
29.010	4343.00	.00	.00	715.40	6590.00	727.34	.00	727.47	2.74	3.36	3454.20	3980.92
29.010	4343.00	.00	.00	715.40	9110.00	729.31	.00	729.46	2.66	3.70	4420.93	5584.22
29.020	4408.00	.00	.00	717.10	6590.00	728.60	.00	728.76	3.90	3.85	3660.90	3337.29
29.020	4408.00	.00	.00	717.10	9110.00	730.46	.00	730.62	3.41	4.03	5119.06	4930.17
29.030	4408.00	.00	.00	718.80	6590.00	730.12	.00	730.25	3.79	3.72	2871.59	3382.94
29.030	4408.00	.00	.00	718.80	9110.00	731.75	.00	731.88	3.29	3.84	3898.40	5024.23
65375.000	4400.00	.00	.00	720.50	6590.00	731.45	.00	731.53	3.30	3.39	3912.08	3627.17
65375.000	4400.00	.00	.00	720.50	9110.00	732.85	.00	732.92	2.63	3.31	5343.92	5612.18
68635.000	3260.00	.00	.00	720.70	6590.00	732.10	.00	732.15	1.73	2.55	4638.94	5009.10
68635.000	3260.00	.00	.00	720.70	9110.00	733.41	.00	733.46	1.72	2.75	5841.26	6954.51
* 48.010	1128.00	.00	.00	721.80	6590.00	732.31	.00	732.42	4.67	3.77	3471.03	3048.45
48.010	1128.00	.00	.00	721.80	9110.00	733.60	.00	733.70	3.47	3.57	5121.84	4890.62
52.010	564.00	.00	.00	722.50	6590.00	732.50	.00	732.74	9.40	5.03	2341.62	2149.38
* 52.010	564.00	.00	.00	722.50	9110.00	733.73	.00	733.94	7.54	4.96	3293.45	3318.10

```
X1   138700      25      350      438      1150      1320      1349
GR    804.0     270     802.0      280     800.0       290     790.0       320     786.0       345
GR    784.5     350     784.2      352     782.8       360     782.3       370     782.5       380
GR    780.8     390     780.2      400     779.7       410     779.7       420     780.3       430
GR    782.4     437     786.0      438     786.0       520     788.0       555     790.0       575
GR    792.0     600     794.0      690     796.0       780     798.0      1090     800.0      1260

ET                        4.1      284       544
X1   179.01      41      350.     438.     970.0     970.0    1100.0
GR    802.0    135.     800.6     162.     799.1      189.     798.5      196.     797.7      212.
GR    796.4    227.     793.1     258.     791.7      269.     791.4      273.     789.1      289.
GR    787.7    304.     786.7     319.     786.2      335.     786.1      337.     785.0      350.
GR    784.7    352.     783.3     360.     782.8      370.     783.0      380.     781.3      390.
GR    780.7    400.     780.2     410.     780.2      420.     780.8      430.     782.9      437.
GR    786.5    438.     786.8     458.     786.3      497.     786.4      499.     787.4      522.
GR    788.4    537.     788.6     539.     789.5      555.     791.2      619.     791.2      621.
GR    791.7    684.     791.6     703.     791.8      785.     792.1      826.     795.1      908.
GR    800.0   1030.

ET                        4.1      240       625
             VALLEY SECTION AP (40)
X1   140900      30      350.     438.     970.0     970.0    1100.0
GR    800.0       0     798.0      100     798.2       125     797.6       150     794.7       200
GR    793.0     225     789.3      250     787.4       275     786.3       300     786.3       325
GR    785.5     350     785.2      352     783.8       360     783.3       370     783.5       380
GR    781.8     390     781.2      400     780.7       410     780.7       420     781.3       430
GR    783.4     437     787.0      438     787.5       450     786.6       475     786.8       500
GR    788.4     550     787.1      600     786.8       650     786.9       675     800.0       800

NC      .07     .07
ET                        4.1      300       695
X1   145.01      48      510.     594.    1025.0    1275.0    1175.0
GR    800.0       0.     795.8     146.     795.1      182.     794.0      219.     790.9      291.
GR    789.2    328.     788.2     343.     787.0      364.     785.9      401.     785.6      419.
GR    785.4    437.     785.6     457.     785.6      474.     785.3      510.     785.0      512.
GR    784.4    516.     783.3     517.     783.0      519.     782.8      521.     782.6      528.
GR    782.6    538.     782.1     543.     781.7      547.     781.2      554.     781.1      556.
GR    780.8    565.     781.0     575.     781.0      575.     781.8      584.     782.1      586.
GR    784.2    593.     786.1     594.     786.3      596.     787.6      604.     789.4      618.
GR    789.4    625.     789.6     646.     789.9      655.     790.8      686.     790.9      689.
GR    790.5    716.     790.1     731.     789.9      747.     790.1      773.     790.1      778.
GR    790.8    794.     795.5     839.     800.0      900.
1
   03JAN94      08:21:33                                                                    PAGE   32


ET                        4.1      300       695
X1   147.01      61      590.     672.     515.0     695.0     590.0
GR    800.0       0.     794.7     169.     793.5      211.     792.1      253.     789.0      337.
GR    787.3    379.     786.5     396.     786.5      397.     785.8      421.     785.2      464.
GR    785.0    484.     785.0     485.     785.0      506.     785.2      528.     785.3      529.
GR    785.3    548.     785.2     590.     784.9      592.     784.4      595.     783.9      596.
GR    783.1    596.     782.8     597.     782.6      599.     782.4      601.     782.3      607.
GR    782.2    617.     781.9     622.     781.6      625.     781.1      632.     781.1      634.
GR    780.8    643.     781.1     652.     781.1      653.     782.1      662.     782.1      662.
GR    782.5    664.     784.6     671.     785.7      672.     785.9      674.     785.9      674.
GR    787.7    681.     790.6     694.     790.7      694.     790.8      700.     791.0      719.
GR    791.2    727.     791.3     728.     792.1      755.     792.1      756.     792.2      758.
GR    792.0    783.     791.9     783.     791.6      796.     791.4      811.     791.7      835.
GR    791.8    839.     791.8     839.     792.8      854.     797.0      894.     797.0      895.
GR    800.0    950.

ET                        4.1      381       755
             VALLEY SECTION AQ (39)
X1   143250      23      670.     750.     515.0     685.0     585.0
GR    800.0       0     784.8      450     784.3       550     784.9       600     785.0       670
GR    784.3     675     782.4      676     782.0       680     781.7       700     781.1       710
GR    780.8     720     781.2      730     782.4       740     785.3       750     785.5       752
GR    792.0     770     792.6      800     793.4       825     793.4       850     792.9       875
GR    793.4     900     798.5      950     799.9      1000

ET                        4.1      277       651
X1   148.01      55      560.     641.     950.0    1050.0    1100.0
GR    797.5       0.     794.0     112.     790.9      224.     787.5      335.     786.4      376.
GR    786.3    376.     786.1     447.     786.1      459.     786.1      460.     786.5      501.
GR    786.5    501.     786.5     503.     786.3      560.     785.5      564.     784.6      564.
GR    784.1    564.     784.0     565.     783.5      568.     783.4      568.     783.0      581.
GR    783.0    585.     782.9     585.     782.5      593.     782.5      593.     782.3      602.
GR    782.4    608.     782.6     614.     782.7      615.     783.1      620.     783.4      626.
```

```
GR    783.6      628.      784.5      632.      785.5      638.      786.9      641.      787.0      642.
GR    790.6      656.      791.6      660.      791.7      661.      792.0      691.      792.0      691.
GR    792.3      704.      792.5      716.      792.5      717.      792.5      742.      792.5      742.
GR    792.4      752.      792.2      767.      792.2      768.      792.6      793.      792.6      793.
GR    793.1      800.      796.4      844.      796.4      844.      796.5      847.      797.4      895.

ET                         4.1       135       688
X1   146.01        40      449.      531.      950.0     1050.0     1100.0
GR    794.9        0.      792.6       90.      790.8      180.      788.6      269.      787.9      302.
GR    787.9      359.      787.9      369.      788.1      402.      788.1      404.      787.6      449.
GR    786.6      453.      785.6      453.      784.9      456.      784.2      466.      784.2      470.
GR    783.9      476.      783.7      483.      783.8      491.      784.1      498.      784.1      499.
GR    784.4      506.      784.6      513.      784.8      515.      785.6      521.      786.3      528.
GR    788.5      531.      788.6      533.      790.8      547.      791.5      551.      791.4      582.
GR    791.5      596.      791.7      608.      791.7      634.      791.6      644.      791.5      660.
GR    791.8      686.      792.1      693.      794.3      738.      794.4      741.      794.9      790.
1
   03JAN94      08:21:33                                                                          PAGE   33


ET                         4.1        50       600
X1   146623        24      300.      383.      975.0     1075.0     1173.0                -2.71
GR    800.0         0      792.0        50      791.7       100      792.2       200      792.7       250
GR    792.6       275      791.6       300      789.1       304      788.1       310      788.0       320
GR    788.0       330      788.3       340      788.4       350      788.4       360      789.2       370
GR    789.1       380      793.0       383      792.7       400      791.7       450      791.7       500
GR    792.0       550      792.2       600      792.0       650      800.0       700

NC                                     .5        1.0
ET                4.1        4.1       167       517
X1   147223                                      600       600       600                 0.68

ET                4.1        4.1       217       467
              VALLEY SECTION AR MOVED DOWNSTREAM (37)
X1   147423        24      300.      383.      200.0     200.0     200.0                -1.62
GR    800.0         0      792.0        50      791.7       100      792.2       200      792.7       250
GR    792.6       275      791.6       300      789.1       304      788.1       310      788.0       320
GR    788.0       330      788.3       340      788.4       350      788.4       360      789.2       370
GR    789.1       380      793.0       383      792.7       400      791.7       450      791.7       500
GR    792.0       550      792.2       600      792.0       650      800.0       700

NC     .035       .05
ET                4.1        4.1        87      301.2
X1   147523        40       100      346.1      100.0     100.0     100.0      0.87
GR    790.8         0      791.0        25      791.3        50      791.2        75      790.2        99
GR    794.7       100      794.7     100.1      790.0       115      785.6       125      786.0       135
GR    786.5       145      786.8       158      786.5     160.9      786.5       161      786.5       162
GR    786.5     162.1      787.7       173      788.0       183      787.7       193      789.0       193
GR    789.0       203      790.0       213      790.1       223      790.1     223.1      790.1       224
GR    790.1     224.1      791.0       250      791.6       275      791.5     285.9      791.5       286
GR    791.2       287      791.2     287.1      792.3       324      798.6       346      798.6     346.1
GR    790.3       347      790.3       375      790.3       400      790.3       425      790.6       450

NC      .03       .03       .03
ET                4.1       4.11        87      301.2
              DOWNSTREAM FACE VANDECAR ROAD (38B)
X1   147524                                        1         1         1
X2                                                                                       0.87
BT      -24         0      899.4                  25     800.5                    50     800.5
BT                 75      800.5                 100     800.8     794.7     100.1     800.8     797.9
BT              160.9      801.3     798.3       161     801.3     786.5       162     801.3     786.5
BT              162.1      801.3     798.3       223     801.8     798.6     223.1     801.8     790.1
BT                224      801.8     790.1     224.1     801.8     798.6     285.9     802.3     799.3
BT                286      802.3     791.5       287     802.3     791.2     287.1     802.3     799.3
BT                346      802.7     799.7     346.1     802.7     798.6       375     802.9
BT                400      803.3                 425     803.6                   450     804.0

ET                4.1       4.11        87      301.2
1
   03JAN94      08:21:33                                                                          PAGE   34


              UPSTREAM FACE VANDECAR ROAD
              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   147556                                       32        32        32
X2                                                                   1

NC      .07       .07      .035
ET                4.1        1.5        86       302
```

```
X1   147557                                  1        1        1
X3                                  86                302

ET                          4.1     110      680
                VALLEY SECTION AR MOVED DOWNSTREAM (37)
X1   147807      24        350     433      250      250      250                -1.03
GR   800.0        0      792.0     100    791.7      150    792.2      250    792.7      300
GR   792.6      325      791.6     350    789.1      354    788.1      360    788.0      370
GR   788.0      380      788.3     390    788.4      400    788.4      410    789.2      420
GR   789.1      430      793.0     433    792.7      450    791.7      500    791.7      550
GR   792.0      600      792.2     650    792.0      700    800.0      800

NC              .06                .1       .3
ET                          4.1     100      690
                VALLEY SECTION AR (37)
X1   148750      24       350.     433.    700.0    750.0    943.0
GR   800.0        0      792.0     100    791.7      150    792.2      250    792.7      300
GR   792.6      325      791.6     350    789.1      354    788.1      360    788.0      370
GR   788.0      380      788.3     390    788.4      400    788.4      410    789.2      420
GR   789.1      430      793.0     433    792.7      450    791.7      500    791.7      550
GR   792.0      600      792.2     650    792.0      700     800.      800

NC    .065     .065                .1       .3
ET                          4.1     252      552
                VALLEY SECTION AS (36)
X1   152800      34       250.     400   3950.0   2450.0   4050.0
GR   819.5        0      807.0      25    807.0       50    806.7       75    805.6      100
GR   803.6      125      801.8     150    801.3      175    802.2      200    802.7      225
GR   800.0      250      792.9     258    792.7      260    791.1      270    789.9      280
GR   789.5      290      789.4     310    791.5      320    792.4      330    792.7      340
GR   792.8      370      793.3     380    793.6      390    795.4      400    795.7      405
GR   795.6      415      797.1     425    797.4      450    796.8      475    798.3      500
GR   798.6      525      798.6     600    797.7      625    800.3      650

ET                          4.1     250      465
X1   181.01      58       250.     374.    599.6    569.4    649.5
GR   820.3       0.      807.8      25.    807.8      50.    807.5      75.    806.4     100.
GR   804.4     125.      802.9     140.    802.4     150.    802.3     155.    802.6     170.
GR   802.6     175.      803.0     185.    802.9     200.    802.6     225.    800.8     250.
GR   794.0     257.      793.6     257.    793.5     258.    793.3     260.    792.0     267.
GR   791.8     268.      790.7     275.    790.7     276.    790.3     284.    790.3     284.
GR   790.2     300.      792.2     308.    792.3     309.    793.2     317.    793.2     317.
GR   793.5     325.      793.5     325.    793.6     350.    793.6     350.    794.1     358.
GR   794.1     358.      794.4     366.    794.4     367.    796.2     374.    796.5     378.
GR   796.5     378.      796.4     386.    796.4     386.    797.8     394.    797.9     395.
GR   798.2     415.      798.2     415.    797.6     434.    797.6     435.    799.0     454.
GR   799.1     455.      799.4     473.    799.4     476.    799.4     536.    799.3     538.
1
   03JAN94      08:21:33                                                                  PAGE   35

GR   798.5     557.      798.5     557.    801.1     577.

NC     .07      .07
ET                          4.1     250      455
                VALLEY SECTION AS MOVED UPSTREAM (36)
                CHANNEL SECTION REDUCED TO REFLECT LOCAL CONDITIONS
X1   154089      34       250     349     589.6    559.4    639.5                 1.54
GR   819.5        0      807.0      25    807.0       50    806.7       75    805.6      100
GR   803.6      125      801.8     140    801.3      155    802.2      170    802.7      185
GR   800.0      250      792.9     256    792.7      258    791.1      265    789.9      271
GR   789.5      278      789.4     291    791.5      297    792.4      304    792.7      310
GR   792.8      330      793.3     336    793.6      343    795.4      349    795.7      352
GR   795.6      358      797.1     364    797.4      380    796.8      395    798.3      410
GR   798.6      425      798.6     475    797.7      490    800.3      505

ET                          4.1     250      450
X1   154439      34       250     340      350      350      350                 1.98
GR   819.5        0      807.0      25    807.0       50    806.7       75    805.6      100
GR   803.6      125      801.8     140    801.3      155    802.2      170    802.7      185
GR   800.0      250      792.9     256    792.7      257    791.1      264    789.9      269
GR   789.5      275      789.4     287    791.5      292    792.4      299    792.7      304
GR   792.8      322      793.3     328    793.6      334    795.4      340    795.7      343
GR   795.6      349      797.1     355    797.4      371    796.8      386    798.3      401
GR   798.6      416      798.6     466    797.7      481    800.3      496

NC                                  .5      1.0
ET              4.1        4.1     250      340
X1   154759                                340      320      320                 0.22
```

```
ET                 4.1       4.1       257       332
X1   154789                                      30        30        30                 0.04

ET                 4.1       4.1       258       331
X1   154793                                       4         4         4                 0.04

ET                 4.1       4.1    258.75    330.25
X1   154796                                       3         3         3                 0.04

ET                 4.1       4.1       250       341
X1   154799         36       250       341         3         3         3
GR    802.6          0     800.9        50     800.9       100     800.6       150     799.1       175
GR    799.7        200     799.4       225     798.0       245     804.3       250     804.3     250.1
GR    801.0      263.4     801.0     263.5     800.6     266.4     800.6     266.5     797.7       277
GR    794.6        287     794.2       297     791.7       307     796.5       317     797.7       322
GR    800.3      325.9     800.3       326     801.6       329     801.6     329.1     808.4     340.9
GR    808.4        341     805.0       366     804.5       391     803.6       416     804.1       441
GR    804.9        466     804.7       491     805.1       516     806.0       541     807.1       566
GR    808.5        591
1
   03JAN94      08:21:33                                                                          PAGE   36


NC      .03        .03       .03
ET                 4.1      4.11    259.39    329.79
                DOWNSTREAM FACE OF COVERED BRIDGE (35B)
                COMBINED SECTIONS 35 & 36
X1   154800                                       1         1         1
X5        1                802.1
BT      -29          0     809.2                 50     808.5                 100     808.1
BT                 150     807.6                175     807.7                 200     808.4
BT                 225     809.7                250     811.0     804.3     250.1     811.0     808.3
BT               263.4     811.0     809.2     263.5     811.0     801.0     266.4     811.0     800.6
BT               266.5     811.0     806.2     325.9     811.1     806.1       326     811.1     800.3
BT                 329     811.1     801.6     329.1     811.1     809.2     340.9     811.1     808.5
BT                 341     811.1     808.4       366     809.1                 391     808.0
BT                 416     806.8                441     805.7                 466     804.9
BT                 491     804.7                516     805.1                 541     806.0
BT                 566     807.1                591     808.5

ET                 4.1      4.11       250       341
                UPSTREAM FACE OF COVERED BRIDGE
X1   154812                                      12        12        12
X2                                                                   1

NC      .07        .07      .035
ET                 4.1       4.1     250.4     334.2
X1   154813                                       1         1         1

ET                 4.1       4.1       252       338
X1   154814         35       250       340         1         1         1                 2.32
GR    819.5          0     807.0        25     807.0        50     806.7        75     805.6       100
GR    803.6        125     801.8       140     801.3       155     802.2       170     802.7       185
GR    800.0        250     792.9       256     792.7       257     791.1       264     789.9       269
GR    789.5        275     789.4       287     791.5       292     792.4       299     792.7       304
GR    792.8        322     793.3       328     793.6       334     795.4       340     795.7       343
GR    795.6        349     797.1       355     797.4       371     796.8       386     798.3       401
GR    798.6        416     798.6       466     797.7       481     800.3       496     810.0      1200

ET                 4.1       4.1       247       343
X1   154819                                       5         5         5                  0.0

ET                 4.1       4.1       243       347
X1   154823                                       4         4         4                  0.0

ET                 4.1       4.1       143       447
X1   154923                                     100       100       100                 0.10

ET                 4.1       6.1        .1       672       220       550
                VALLEY SECTION AS MOVED UPSTREAM (36)
                CHANNEL SECTION REDUCED TO REFLECT LOCAL CONDITIONS
X1   155148         35       250       349       225       225       225                 2.62
GR    819.5          0     807.0        25     807.0        50     806.7        75     805.6       100
GR    803.6        125     801.8       140     801.3       155     802.2       170     802.7       185
GR    800.0        250     792.9       256     792.7       258     791.1       265     789.9       271
GR    789.5        278     789.4       291     791.5       297     792.4       304     792.7       310
1
   03JAN94      08:21:33                                                                          PAGE   37
```

```
GR    792.8       330     793.3       336     793.6       343     795.4       349     795.7       352
GR    795.6       358     797.1       364     797.4       380     796.8       395     798.3       410
GR    798.6       425     798.6       475     797.7       490     800.3       505     810.0      1200

NC                                     .1        .3
ET                          4.1       250       575
X1   136.01        51      250.      369.    2250.0    3250.0    3250.0
GR    819.5        0.     813.3       25.     813.3       50.     812.8       75.     812.0       100.
GR    811.2      125.     810.8      140.     809.9      150.     808.4      175.     807.6       200.
GR    807.7      225.     805.8      250.     801.3      255.     800.1      257.     799.6       257.
GR    799.3      259.     798.8      261.     798.1      268.     797.8      272.     797.5       277.
GR    797.4      283.     797.2      287.     797.0      294.     797.0      305.     798.0       312.
GR    798.5      318.     798.6      324.     798.7      325.     798.9      344.     798.9       345.
GR    799.2      352.     799.4      359.     800.0      363.     800.5      366.     800.6       367.
GR    802.3      369.     802.1      379.     802.5      385.     802.8      390.     803.0       416.
GR    802.9      433.     802.8      442.     803.4      468.     803.5      481.     804.2       494.
GR    806.0      529.     803.9      573.     803.6      577.     803.1      599.     804.3       625.
GR    810.0      640

NC       .1       .09
ET                          4.1      1026      1375
X1   164.01        72     1026.     1127.    1500.0    1100.0    1702.0
GR    819.8        0.     816.5      103.     816.3      205.     815.9      308.     815.4       410.
GR    814.8      513.     814.5      574.     814.0      615.     813.1      718.     812.5       821.
GR    812.4      912.     812.2      923.     811.6      940.     811.8      963.     808.4       997.
GR    808.2     1011.     807.5     1026.     803.7     1030.     802.9     1031.     802.6      1031.
GR    801.8     1033.     801.6     1033.     801.1     1035.     801.1     1035.     800.8      1037.
GR    800.3     1044.     800.3     1045.     800.2     1049.     800.1     1054.     800.1      1055.
GR    799.9     1061.     799.7     1063.     799.7     1065.     799.6     1073.     799.6      1081.
GR    800.1     1086.     800.3     1089.     800.4     1090.     800.5     1094.     800.5      1095.
GR    800.7     1105.     800.8     1109.     800.8     1109.     801.0     1114.     801.1      1119.
GR    801.4     1122.     801.5     1122.     801.9     1125.     801.9     1125.     802.1      1125.
GR    804.4     1127.     804.2     1137.     804.2     1157.     804.4     1167.     804.4      1176.
GR    804.5     1191.     804.5     1197.     806.9     1226.     804.6     1256.     804.6      1271.
GR    804.4     1286.     806.5     1316.     806.5     1323.     806.7     1351.     807.7      1431.
GR    808.0     1471.     808.7     1511.     810.5     1619.     810.6     1754.     810.6      1766.
GR    810.9     1834.     812.2     1914.

ET                          4.1      1800   2180.00
              VALLEY SECTION AT (35)
X1   161800        27     1800.     1883.     700.0    1100.0    1700.0
GR    820.0         0     817.1      1600     815.9      1650     816.6      1690     810.5      1750
GR    810.3      1775     809.1      1800     805.5      1805     804.1      1806     802.9      1810
GR    802.5      1820     802.7      1830     802.2      1840     802.1      1850     802.2      1860
GR    802.6      1870     802.9      1880     803.3      1882     806.4      1883     806.1      1900
GR    806.4      1950     806.1      2000     810.9      2050     806.3      2100     805.9      2150
GR    810.0      2200     820.0      3200

ET                          4.1      1780      2200
X1   162700                                     800       900       900                0.31
1
   03JAN94      08:21:33                                                                          PAGE   38


ET                          4.1      1720      2200
X1   163600                                     800       750       900                0.31

ET                          4.1      1700      2250
              VALLEY SECTION AT MOVED UPSTREAM (35)
X1   165433                                     350      1700      1833                0.63

NC                                     .5       1.0
ET                          4.1       195       777
              DOWNSTREAM FACE WINN ROAD  (34B)
X1   165586        24       500     576.1       153       153       153      0.71
GR    820.0         0     809.1       400     809.2       425     809.8       450     809.5       475
GR    808.2       500     803.5     500.1     801.7       510     802.2       520     799.7       530
GR    799.9       536     799.9     536.1     799.9       539     799.9     539.1     801.5       550
GR    802.8       560     803.2       570     805.7       576     807.2     576.1     808.7       600
GR    810.3       625     811.2       650     812.2       675     816.0      2100

SB              1.963       3.0                  76                423.6
ET                         4.11     157.6     945.6
              UPSTREAM FACE WINN ROAD
              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   165614                                      28        28        28
X2                            1     810.6     812.2                                     0.71
BT      -20         0     820.0                 400     814.3                 425     813.9
```

```
BT                 450     813.7                 475     813.5                 500     813.5     808.2
BT               500.1     813.5     810.6       510     813.5     808.2       520     813.5     810.6
BT                 536     813.5     810.6     536.1     813.5     799.9       539     813.4     799.9
BT               539.1     813.4     810.5       576     813.4     810.5     576.1     813.4     807.2
BT                 600     813.1                 625     813.0                 650     813.D
BT                 675     812.2                2100     816.0

NC      .08        .1      .035
ET                          4.1        15       525
                VALLEY SECTION AU MOVED DOWNSTREAM (33)
X1   166154        33       250       331       540       540       540                -0.65
GR    820.0         0     808.2        30     808.3        80     808.5       105     809.2       130
GR    809.2       180     809.8       205     810.6       223     808.2       236     808.2       250
GR    807.5       251     804.7       252     801.6       260     802.3       270     802.7       280
GR    802.4       290     802.6       300     803.4       310     804.6       320     806.1       330
GR    807.2       331     807.6       333     808.7       355     810.3       380     811.2       405
GR    812.2       430     814.1       455     813.0       480     812.7       505     814.1       530
GR    816.3       555     817.1       580     820.0      2220

NC                                     .1        .3
ET                          4.1        75       450
                VALLEY SECTION AU (33)
X1   167750        33      300.      381.    1596.0    1500.0    1596.0
GR    820.0         0     808.2        80     808.3       130     808.5       155     809.2       180
GR    809.2       230     809.8       255     810.6       273     808.2       286     808.2       300
GR    807.5       301     804.7       302     801.6       310     802.3       320     802.7       330
GR    802.4       340     802.6       350     803.4       360     804.6       370     806.1       380
GR    807.2       381     807.6       383     808.7       405     810.3       430     811.2       455
GR    812.2       480     814.1       505     813.0       530     812.7       555     814.1       580
1
   03JAN94      08:21:33                                                                          PAGE   39

GR    816.3       605     817.1       630     820.0      1000

ET                          4.1        60       400
X1   170.01        42       265       351     787.0     787.0     787.0
GR      817         0     814.9        27     814.6        30     812.6        53       812        60
GR    811.1        71     811.1        80     811.2       115     811.3       137     811.8       203
GR    812.1       225     812.2       233     810.8       248     810.2       254     810.1       265
GR    806.8       268     806.8       268       807       268     806.6       269     806.8       269
GR    805.7       273     804.8       276     803.9       280     804.9       299     804.9       300
GR    804.9       315       805       319     805.6       329     806.5       337     809.6       351
GR    809.8       353     810.4       366     811.8       396     813.8       434     813.6       470
GR    813.9       477     814.5       488     814.7       491       818       564     818.9       636
GR    822.4       736     823.8       779

ET                          4.1       106       426
X1   207.01        75      250.      334.     394.0     394.0     394.0
GR    818.5        0.     816.0       25.     815.7       28.     813.5       50.     813.2       53.
GR    813.0       56.     812.6       67.     812.6       75.     812.6      101.     812.6      108.
GR    812.6      129.     812.7      136.     812.9      176.     812.9      191.     812.9      200.
GR    813.1      212.     813.2      219.     812.6      233.     812.3      239.     812.3      250.
GR    810.6      258.     810.7      258.     810.4      260.     810.5      260.     810.5      261.
GR    809.9      264.     809.1      269.     809.0      271.     808.5      278.     807.9      279.
GR    807.7      279.     806.6      281.     806.1      284.     805.6      287.     805.1      290.
GR    805.7      302.     805.7      302.     805.7      311.     805.8      314.     806.1      320.
GR    806.6      325.     808.2      334.     808.3      335.     808.6      341.     808.7      346.
GR    809.1      356.     809.3      361.     809.6      369.     809.7      371.     809.9      374.
GR    810.5      383.     810.6      384.     811.2      389.     812.0      396.     812.5      398.
GR    812.7      400.     812.9      403.     813.1      426.     813.2      430.     813.2      434.
GR    813.5      439.     813.9      449.     814.1      451.     815.6      485.     817.1      513.
GR    817.7      528.     818.8      573.     818.9      575.     819.6      595.     821.3      628.
GR    821.7      634.     823.4      657.     823.7      661.     823.9      664.     825.7      694.

ET                          1.5
X1   154.01        40       234       316     394.0     394.0     394.0
GR      820         0     814.1        50       814        95       814       128     814.1       165
GR    813.9       188     814.6       234     814.2       252     813.4       257     812.3       265
GR      812       280       811       282     810.9       282     808.6       285     807.8       290
GR    807.1       295     806.3       300     806.8       316       807       322     807.2       334
GR    807.3       338     807.6       345     807.8       349     808.5       356     808.7       357
GR    809.4       361     810.6       367     811.5       368     811.8       370     812.6       391
GR    812.7       394     814.6       439     817.1       474     818.8       512     819.4       528
GR    821.4       555       822       560     824.8       582     825.2       584     827.6       608

NC      .07       .07      .035
ET                          4.1       200       400
X1   154.02        50       240       335    1575.0    1575.0    1575.0
GR      820         0     819.9        24     819.9        27     819.7        48     819.6        55
```

```
GR      779       550       780       600      781.5       650       783       700

NC      .08        .1      .035
ET                          4.1       120       640
                VALLEY SECTION SUPPLIED BY MDNR
X1   131971        19       147       257       600       300       450
GR   793.12         0       793        57    779.49        65   776.49       110    774.79       147
GR    772.9       152     771.7       177     772.8       224     774.9       257    777.93       297
GR   778.43       374    777.53       447    776.43       493    778.73       518       779       700
GR      780       765     780.5       865       782       915       784       940
1
   03JAN94      08:21:33                                                                          PAGE   30


NC      .08       .11      .035
ET                          4.1        62       582
                SECTION SUPPLIED BY MDNR, MANUFACTURED
X1   132371        14       247       357       500       250       400
GR      793         0     780.1        57       778        65       775       247       773       252
GR    771.9       277       773       324     775.1       357     778.1       397     778.6       474
GR    779.1       547     780.1       593     780.6       618       782       700

NC      .05       .05      .035
ET                          4.1        35       315
                VALLEY SECTION SUPPLIED BY MDNR
X1   132771        21       130       205       200       500       400
GR    790.9         0     780.7        17     777.9        31     777.8        49     778.1        67
GR    777.7       130     774.6       150     774.1       157       773       169       772       201
GR    774.5       205     776.5       205       777       212     777.4       259     777.4       289
GR    777.4       312     780.9       324     780.9       449     781.3       459     781.8       619
GR    782.9       649

ET                 4.1       6.1        .1       197        25       195
                VALLEY SECTION SUPPLIED BY MDNR
X1   133591   16.       104.      184.1     800.      750.      820.
X4        1     782.7    363.6
GR   790.4             789.4     14.       780.      30.       777.4     58.       778.4     104.
GR   777.3   107.      775.1     110.      774.      133.      774.3     146.      775.4     159.
GR   776.5   184.      777.9     184.1     782.7     197.      782.7     280.      782.7     362.
GR   794.    380.

ET                 4.1       6.1       225       551       261       470
                VALLEY SECTION SUPPLIED BY MDNR
X1   134611   20.       282.      389.      1100.     1000.     1020.
GR   785.6             785.6     26.       785.6     76.       785.6     127.      785.6     177.
GR   785.6   225.      786.4     246.      783.1     275.      781.8     282.      779.3     286.
GR   776.2   292.      775.      297.      776.2     337.      778.1     361.      779.4     383.
GR   782.    389.      783.4     409.      783.4     449.      784.8     496.      788.6     551.

ET                          4.1       215       475
X1   178.01        39       305.      405.     1172.7    1340.2    1370.0
GR    791.2        90.     790.4       110.     790.2       117.     789.2       144.     789.0       148.
GR    786.8       187.     785.9       224.     785.9       225.     786.3       261.     786.5       277.
GR    784.9       291.     783.8       299.     782.7       305.     782.4       306.     781.1       310.
GR    780.4       313.     780.0       315.     779.2       320.     777.7       325.     777.1       330.
GR    776.6       335.     777.2       360.     777.4       366.     778.8       384.     778.9       385.
GR    780.3       401.     781.2       403.     783.3       405.     784.1       444.     784.6       453.
GR    784.9       460.     785.6       469.     786.3       481.     787.0       523.     787.3       547.
GR    787.8       565.     789.0       658.     790.2       709.     792.4       789.

ET                          4.1       267       467
X1   178.02        39       328.      422.     1172.7    1340.2    1370.0
GR    797.6       181.     796.5       194.     796.1       199.     794.6       218.     794.3       220.
GR    790.8       247.     788.0       273.     788.0       273.     787.1       298.     786.7       309.
GR    785.4       318.     784.4       324.     783.6       328.     783.3       329.     782.0       335.
GR    781.4       340.     781.1       343.     780.8       350.     779.3       358.     778.7       365.
GR    778.1       373.     778.5       390.     778.6       394.     779.6       407.     779.6       408.
1
   03JAN94      08:21:33                                                                          PAGE   31


GR    781.2       419.     781.8       420.     784.7       422.     785.1       482.     785.9       496.
GR    786.5       508.     787.8       523.     789.2       541.     790.5       607.     791.3       646.
GR    791.9       673.     793.2       821.     794.1       901.     796.2      1026.

NC      .07       .07
ET                          4.1       323       570
                MANUFACTURED FROM 2-FOOT TOPO MAP, CHANNEL FROM VALLEY SECTION AP
                INVERT ADJUSTED (APPROXIMATED FROM 2-FOOT TOPO MAP)
```

```
GR     819.5       82     819.3       96     819.2      109     818.7      144     818.9      164
GR     819.2      191     819.3      192     817.1      216     816.3      225     815.8      240
GR     814.4      243     814.2      243     812.9      246     812.6      248       812      255
GR     810.9      271     811.3      280     811.3      281     811.5      289     811.7      298
GR     811.9      302     811.9      307     812.1      313     812.2      316     812.6      323
GR     812.9      325     813.5      328     815.2      334     815.8      335     815.9      337
GR     816.5      357     816.6      360     817.2      380     817.3      386       818      404
1
   03JAN94     08:21:33                                                                      PAGE   40

GR       820      427     821.3      437     823.7      463     824.6      474       826      489
GR     826.8      497     829.8      520     833.6      541     834.1      544     838.2      567

ET                         4.1      225       425
                VALLEY SECTION AV MOVED DOWNSTREAM (32A)
X1    172290       32      250.     351.    1100.0    1390.0    1390.0
GR     825.7        0     825.3       25     825.1       50     825.0       75     824.3      100
GR     823.8      125     823.2      150     823.6      175     823.8      200     820.7      225
GR     819.5      250     817.6      253     816.5      260     816.1      270     815.9      280
GR     815.4      290     815.6      300     815.7      310     816.4      320     816.4      330
GR     816.6      340     817.5      345     819.9      351     820.3      375     820.6      400
GR     821.5      425     825.2      450     828.6      475     832.4      500     836.2      525
GR     842.1      550     848.3      575

NC                                     .5       1.0
ET                 4.1       4.1      259       336
X1    172571                                   281       281       281

ET                 4.1       4.1      265       330
X1    172595                                    24        24        24

ET                 4.1       4.1   268.15    326.85
X1    172608                                    13        13        13

                DOWNSTREAM FACE GILMORE ROAD, BRIDGE REMOVED (32B)
X1    172610       21      250.     301.         2         2         2
GR     834.6        0     831.6       50     829.9      100     827.8      150     827.0      208
GR     825.4      223     827.8      235     826.0      250     816.5      251     816.5      260
GR     815.4      270     815.2      280     815.7      290     815.5      300     821.3      301
GR     829.3      328     830.9      350     833.2      375     836.6      400     840.0      425
GR     858.8      550

                UPSTREAM FACE GILMORE ROAD, BRIDGE REMOVED
X1    172630                                    20        20        20

QT         2     4530      4530
ET                 4.1       4.1     257.5     322.5
X1    172632       32       250       351         2         2         2
GR     825.7        0     825.3       25     825.1       50     825.0       75     824.3      100
GR     823.8      125     823.2      150     823.6      175     823.8      200     820.7      225
GR     819.5      250     817.6      253     816.5      260     816.1      270     815.9      280
GR     815.4      290     815.6      300     815.7      310     816.4      320     816.4      330
GR     816.6      340     817.5      345     819.9      351     820.3      375     820.6      400
GR     821.5      425     825.2      450     828.6      475     832.4      500     836.2      525
GR     842.1      550     848.3      575

ET                 4.1       4.1     255.5     324.5
X1    172634                                     2         2         2
1
   03JAN94     08:21:33                                                                      PAGE   41

ET                 4.1       4.1      220       360
X1    172670                                    36        36        36

ET                 4.1       6.1      210       470       230       440
                VALLEY SECTION AV (32A)
X1    172730       32       300       401        60        60        60
GR     840.0        0     825.7       50     825.1      100     825.0      125     824.3      150
GR     823.8      175     823.2      200     823.6      225     823.8      250     820.7      275
GR     819.5      300     817.6      303     816.5      310     816.1      320     815.9      330
GR     815.4      340     815.6      350     815.7      360     816.4      370     816.4      380
GR     816.6      390     817.5      395     819.9      401     820.3      425     820.6      450
GR     821.5      475     825.2      500     828.6      525     832.4      550     836.2      575
GR     842.1      600     848.3      625

ET                         4.1      260       470
X1    172830       32       300       401       100       100       100
```

```
GR    840.0        0      825.7       50      825.1      100      825.0      125      824.3      150
GR    823.8      175      823.2      200      823.6      225      823.8      250      820.7      275
GR    819.5      300      817.6      303      816.5      310      816.1      320      815.9      330
GR    815.4      340      815.6      350      815.7      360      816.4      370      816.4      380
GR    816.6      390      817.5      395      819.9      401      820.3      425      820.6      450
GR    821.5      475      825.2      500      828.6      525      832.4      550      836.2      575
GR    842.1      600      848.3      625

NC                                  .1        .3
ET                         4.1      275       505
X1   220.01       53      275.     426.     1370.0    1370.0    1370.0
GR    847.0       0.      839.7      46.      839.6      55.      839.2      92.      839.1      110.
GR    839.0     115.      838.7     138.      838.4     160.      838.3     165.      837.9      183.
GR    837.9     206.      837.8     220.      837.6     229.      835.9     248.      835.5      252.
GR    834.6     275.      831.6     281.      826.3     295.      819.8     313.      819.5      314.
GR    818.7     319.      818.6     334.      818.5     340.      818.1     353.      818.1      362.
GR    818.2     365.      818.4     370.      818.3     377.      818.4     379.      818.9      388.
GR    818.9     389.      818.9     401.      819.0     412.      819.1     413.      819.7      418.
GR    820.4     422.      821.5     425.      821.9     426.      822.3     444.      823.2      462.
GR    823.3     463.      823.5     482.      823.9     499.      823.9     500.      824.6      537.
GR    826.6     574.      826.7     575.      828.0     612.      828.0     613.      830.2      650.
GR    832.4     687.      835.7     725.      839.2     763.

ET                         4.1      200       500
              VALLEY SECTION AW (31)
X1   175570       26      250.     450.     1370.0    1370.0    1370.0
GR    854.0        0      853.6       50      853.1      100      852.9      150      851.9      200
GR    850.4      225      849.7      250      823.4      306      821.4      316      821.2      346
GR    820.7      366      820.7      376      821.1      386      820.9      396      821.4      406
GR    821.4      436      822.1      446      823.4      449      823.9      450      824.4      475
GR    826.3      500      826.5      525      827.2      550      828.1      650      827.3      700
GR    830.0      900
1
   03JAN94      08:21:33                                                                          PAGE   42


ET                         4.1      200       500
X1   176575                                   1005      1005      1005                  1.7

ET                         4.1      200       500
X1   177575                                   1000      1000      1000                  1.7

ET                         4.1      200       500
              VALLEY SECTION AW MOVED UPSTREAM (31)
X1   179580                                   2005      2005      2005                  3.4

NC      .04       .04       .03       .1        .3
ET                         4.1      275       650
              VALLEY SECTION AX (30)
X1   180580       38      275      650      1000      1000      1000
GR    858.2        0      832.9      275      831.4      280      828.4      290      827.9      300
GR    827.9      310      826.4      330      825.0      360      822.7      380      821.2      400
GR    819.8      430      817.2      460      816.5      470      814.9      480      813.8      490
GR    813.2      500      813.8      510      813.2      520      811.7      530      812.0      540
GR    811.8      550      811.7      570      812.6      580      823.4      600      823.9      610
GR    824.9      620      824.9      630      829.0      640      831.4      645      833.0      650
GR    835.2      675      835.5      700      835.9      725      837.1      750      839.5      775
GR    843.7      850      844.8      875      844.3      900

ET                         4.1      275       650
              VALLEY SECTION AX MOVED UPSTREAM (30)
X1   181332       38      275      650       752       752       752                  0.44
GR    858.2        0      832.9      275      831.4      280      828.4      290      827.9      300
GR    827.9      310      826.4      330      825.0      360      822.7      380      821.2      400
GR    819.8      430      817.2      460      816.5      470      814.9      480      813.8      490
GR    813.2      500      813.8      510      813.2      520      811.7      530      812.0      540
GR    811.8      550      811.7      570      812.6      580      823.4      600      823.9      610
GR    824.9      620      824.9      630      829.0      640      831.4      645      833.0      650
GR    835.2      675      835.5      700      835.9      725      837.1      750      839.5      775
GR    843.7      850      844.8      875      844.3      900

NC                                  .5        1.0
ET                4.1       4.1      515       575
X1   181960                                    430       628       628                  7.80

ET                4.1       4.1    516.25    573.75
X1   181965                                      5         5         5                  1.25

ET                4.1       4.1     517.5     572.5
```

```
X1   181970                                    5         5         5                1.25

ET                4.1       4.1     518.75    571.25
X1   181975                                    5         5         5                1.25
1
   03JAN94      08:21:33                                                                    PAGE   43


ET                4.1       4.1       520       570
X1   181980                                    5         5         5                1.25

NC      .03       .03                  .5       1.0
ET                4.1       4.1       103       152
X1   181982        18       103       152         2         2         2
GR    835.0         0     834.0        25     833.0        50     832.0        75     831.0       100
GR    833.7       103     828.4       105     826.8       110     825.0       120     825.4       127
GR    825.6       130     826.3       140     830.6       150     832.6       152     833.0       175
GR    834.0       200     835.0       225     836.0       250

ET                4.1      4.11       103       152
              DOWNSTREAM FACE BROOMFIELD ROAD (29B)
X1   181983                                    1         1         1
BT      -16         0     839.6                  25     839.8                  50     840.3
BT                 75     840.5                 103     840.5     833.7       110     840.5     837.6
BT                120     840.6     839.0       127     840.6     839.4       130     840.7     839.3
BT                140     840.8     838.7       150     840.8     836.1       152     840.8     832.6
BT                175     841.1                 200     841.4                 225     841.6
BT                250     841.9

ET                4.1      4.11       103       152
              UPSTREAM FACE BROOMFIELD ROAD
X1   182000                                   17        17        17
X2                                                                1

NC      .04       .04
ET                4.1       4.1       102       153
X1   182001                                    1         1         1

ET                4.1       4.1       523       577
X1   182003        38       275       650         2         2         2                12.80
GR    858.2         0     832.9       275     831.4       280     828.4       290     827.9       300
GR    827.9       310     826.4       330     825.0       360     822.7       380     821.2       400
GR    819.8       430     817.2       460     816.5       470     814.9       480     813.8       490
GR    813.2       500     813.8       510     813.2       520     811.7       530     812.0       540
GR    811.8       550     811.7       570     812.6       580     823.4       600     823.9       610
GR    824.9       620     824.9       630     829.0       640     831.4       645     833.0       650
GR    835.2       675     835.5       700     835.9       725     837.1       750     839.5       775
GR    843.7       850     844.8       875     844.3       900

ET                4.1       4.1       519       581
X1   182007                                    4         4         4                -1.00

ET                4.1       4.1       514       585
X1   182012                                    5         5         5                -1.25

ET                4.1       4.1       425       675
X1   182101                                   89        89        89               -10.25
1
   03JAN94      08:21:33                                                                    PAGE   44


ET                          4.1       275       650
              VALLEY SECTION AX MOVED UPSTREAM (30)
X1   182231        38       275       650       130       130       130                 0.98
GR    858.2         0     832.9       275     831.4       280     828.4       290     827.9       300
GR    827.9       310     826.4       330     825.0       360     822.7       380     821.2       400
GR    819.8       430     817.2       460     816.5       470     814.9       480     813.8       490
GR    813.2       500     813.8       510     813.2       520     811.7       530     812.0       540
GR    811.8       550     811.7       570     812.6       580     823.4       600     823.9       610
GR    824.9       620     824.9       630     829.0       640     831.4       645     833.0       650
GR    835.2       675     835.5       700     835.9       725     837.1       750     839.5       775
GR    843.7       850     844.8       875     844.3       900

NC                                     .1        .3
ET                          4.1       275       650
              VALLEY SECTION AX MOVED UPSTREAM (30)
X1   183400                                  1169      1169      1169                 1.69
```

```
NC      .06       .06      .035        .5        .8
ET                          4.1       125       450
                VALLEY SECTION AY (28)
X1   183600        32       188       300       200       200       200
GR    853.0         0     852.4        28     852.4        33     851.6        58     851.2        83
GR    850.9       108     837.8       125     836.0       150     835.4       175     835.3       188
GR    833.3       190     830.5       200     830.8       220     831.2       230     831.2       240
GR    831.0       250     830.2       270     831.1       280     830.9       290     833.2       300
GR    835.9       318     836.2       325     836.4       350     836.8       375     837.7       400
GR    837.9       425     837.7       450     838.0       475     835.5       500     836.2       525
GR    837.7       550     840.0       560

NC                                       .1        .3
ET                          4.1       125       450
X1   184862                              1262      1262      1262                  0.45

ET                          4.1       125       480
                VALLEY SECTION AY MOVED UPSTREAM (28)
X1   186125                              1263      1263      1263                  0.44

NC      .05       .07      .035
ET                          4.1       155       510
                VALLEY SECTION AZ MOVED DOWNSTREAM (26)
X1   186790        30       360       435       665       665       665                 -1.65
GR    895.7         0     852.6       110     846.1       135     840.2       160     839.6       185
GR    839.6       210     839.3       235     839.0       260     837.9       285     838.2       310
GR    837.2       335     837.5       360     836.0       361     835.0       365     834.1       375
GR    833.1       385     833.0       395     833.4       405     834.3       415     834.7       425
GR    836.3       429     839.5       435     840.0       460     840.8       485     841.2       510
GR    841.5       535     841.2       635     841.4       660     841.2       685     845.0       700
1
   03JAN94     08:21:33                                                                          PAGE   45


NC                                       .5       1.0
ET                4.1       6.1       202       591       232       561
X1   187092                              302       302       302                  0.11

ET                4.1       4.1       278       516
X1   187394                              302       302       302                  0.11

ET                4.1       4.1     303.7     491.3
X1   187494                              100       100       100                   .04

ET                4.1       4.1       100     175.1
X1   187719        22       100       175       225       225       225
GR    838.2         0     837.1        25     837.4        50     836.4        75     833.8       100
GR    833.8     100.1     832.8       105     833.2       115     832.6       125     833.2     135.4
GR    833.2     135.5     833.6       139     833.6     139.1     833.1       145     833.0       155
GR    833.0       165     834.7       175     834.7     175.1     839.2       200     840.0       225
GR    840.4       250     840.7       275

NC      .03       .03       .03
ET                4.1      4.11       100     175.1
                DOWNSTREAM FACE M-20 (27B)
                COMBINED 26 & 27
X1   187720                                1         1         1
BT      -16         0     843.4                  25     843.7                  50     844.0
BT               75     844.4                 100     844.8     833.8     100.1     844.8     841.6
BT            135.4     845.2     842.1     135.5     845.2     833.2       139     845.2     833.6
BT            139.1     845.2     842.1       175     845.7     842.7     175.1     845.7     834.7
BT              200     846.1                 225     846.5                 250     846.8
BT              275     847.1

ET                4.1      4.11       100     175.1
                UPSTREAM FACE M-20
X1   187780                                60        60        60
X2                                                      1

NC      .11       .04      .035
ET                4.1       4.1        99       176
X1   187781                                1         1         1

ET                4.1       4.1       309       486
X1   187831        30       360       435        50        50        50                 -1.26
GR    895.7         0     852.6       110     846.1       135     840.2       160     839.6       185
GR    839.6       210     839.3       235     839.0       260     837.9       285     838.2       310
GR    837.2       335     837.5       360     836.0       361     835.0       365     834.1       375
GR    833.1       385     833.0       395     833.4       405     834.3       415     834.7       425
```

```
GR    836.3       429      839.5       435      840.0       460      840.8       485      841.2       510
GR    841.5       535      841.2       635      841.4       660      841.2       685      850.0      1000
1
   03JAN94      08:21:33                                                                                PAGE   46


ET                4.1        1.4       259       536
X1   187881                                        50        50        50                  0.02

ET                           4.1       150       630
                VALLEY SECTION AZ MOVED DOWNSTREAM (26)
X1   188061                                       180       180       180                  0.05

NC      .08       .08                   .1        .3
ET                           4.1       150       640
                VALLEY SECTION AZ (26)
X1   191400                                      2400      2900      3339                  1.19

ET                           4.1       155       625
X1   192728                                      1380      1210      1328                  1.24

ET                           4.1       155       615
                VALLEY SECTION AZ MOVED UPSTREAM (26)
X1   193956                                      1280      1110      1228                  1.13

NC      .08       .15                   .5       1.0
ET                4.1        4.1       322       474
X1   194826                                       870       870       870                  0.89

ET                4.1        4.1       334       461
X1   194876                                        50        50        50                  0.15

ET                4.1        4.1     357.5     437.5
X1   194972                                        96        96        96                  0.30

ET                4.1        4.1       100     178.1
X1   194976        24        100     178.1         4         4         4
GR    842.9         0      841.7        25     843.0        50     842.4        75     843.6       100
GR    843.6     100.1      841.1       113     838.7       125     838.7     125.1     838.4       126
GR    838.4     126.1      837.1       136     838.2       150     838.2     150.1     839.0       151
GR    839.0     151.1      839.7       161     841.0       163     843.9       178     843.9     178.1
GR    845.7       200      847.1       225     848.5       250     849.7       275

NC      .03       .03        .03
ET                4.1       4.11       100     178.1
                DOWNSTREAM FACE LITTLEFIELD ROAD (25B)
                COMBINED 23 & 25
X1   194977                                         1         1         1
BT      -20         0      848.5                  25     848.4                  50     848.8
BT                 75      849.2                 100     849.3     843.6     100.1     849.3     848.0
BT                125      849.3     848.0     125.1     849.3     838.7       126     849.3     838.4
BT              126.1      849.3     848.0       150     849.4     848.0     150.1     849.4     838.2
BT                151      849.4     839.0     151.1     849.4     847.9       178     849.5     847.9
BT              178.1      849.5     843.9       200     850.0                 225     850.4
BT                250      851.0                 275     851.7
1
   03JAN94      08:21:33                                                                                PAGE   47


ET                4.1       4.11       100     178.1
                UPSTREAM FACE LITTLEFIELD ROAD
X1   195023                                        46        46        46
X2                                                                       1

NC      .06       .07       .035
ET                4.1        4.1        99       179
X1   195024                                         1         1         1

ET                4.1        4.1       220       332
X1   195040        26        236       300        16        16        16                 -2.48
GR    846.3         0      846.5        25     847.3        50     846.7        75     846.7       100
GR    847.4       118      844.9       150     843.9       175     845.2       200     844.4       211
GR    844.6       236      844.4       239     841.3       250     839.9       260     839.3       270
GR    839.7       280      839.9       290     842.9       300     845.5       301     847.4       317
GR    849.3       350      850.7       375     851.9       400     852.4       450     852.8       500
GR    852.7       550

ET                4.1        4.1       170       382
```

```
X1   195090                                    50        50        50                  0.07

ET                        4.1       150       382
                VALLEY SECTION BA MOVED DOWNSTREAM (23)
X1   195170                                    80        80        80                  0.11

NC                                   .1        .3
ET                        4.1       150       382
                VALLEY SECTION BA MOVED DOWNSTREAM (23)
X1   195350       25      236.      300.     165.0     205.0     180.0                 -2.13
GR    846.3        0     846.5        25     847.3        50     846.7        75     846.7       100
GR    847.4      118     844.9       150     843.9       175     845.2       200     844.4       211
GR    844.6      236     844.4       239     841.3       250     839.9       260     839.3       270
GR    839.7      280     839.9       290     842.9       300     845.5       301     847.4       317
GR    849.3      350     850.7       375     851.9       400     852.4       450     852.8       500

NC      .07       .1      .035        .3       0.5
ET                        1.5
X1   195724                                   350       400       374                  0.42

X1   195924       36       247       325     200.0     200.0     200.0
GR    845.7        0     845.8        25     846.1        50     846.1        75     846.3       100
GR    846.7      125     844.9       150     843.9       175     845.2       200     844.5       225
GR    844.4      239     844.5       247     844.5     247.1     842.7       255     840.2       263
GR    839.7    272.5     839.7     272.6     838.9       274     838.9     274.1     838.6       278
GR    839.6      288     840.7       298     840.7     298.1     840.7     299.5     840.7     299.6
GR    841.8      305     842.8       311     843.9       316     849.5       325     849.5     325.1
GR    849.3      350     850.7       375     851.9       400     852.2       425     852.4       450
GR    852.6      475
1
   03JAN94     08:21:33                                                                          PAGE   48


NC      .03      .03       .03
ET                        1.51
                DOWNSTREAM FACE PICKARD ROAD (24)
                COMBINED 23 & 24
X1   195925                                     1         1         1
BT     -28        0     846.5                  25     846.2                  50     846.1
BT                75     846.1                 100     846.3                 125     846.7
BT               150     847.3                 175     848.0                 200     848.8
BT               225     849.5                 247     850.1     844.5     247.1     850.1     849.0
BT             272.5     851.1     849.6     272.6     851.1     839.7       274     851.1     838.9
BT             274.1     851.1     849.6       298     852.1     850.2     298.1     852.1     840.7
BT             299.5     852.1     840.7     299.6     852.1     850.2       325     853.1     850.9
BT             325.1     853.1     849.5       350     854.7                 375     856.6
BT               400     858.5                 425     860.4                 450     862.3
BT               475     864.3

ET                        1.51
                UPSTREAM FACE PICKARD ROAD
X1   195974                                    49        49        49
X2                                                                  1

NC       .1       .1      .035
ET                        4.1         5       325
X1   195975                                     1         1         1

ET                4.1       6.1       403       950       403       750
X1   196015       26       636       700        40        40        40                 -1.22
GR    860.0        0     850.0       150     846.3       400     846.5       425     846.7       500
GR    847.4      518     844.9       550     843.9       575     845.2       600     844.4       611
GR    844.6      636     844.4       639     841.3       650     839.9       660     839.3       670
GR    839.7      680     839.9       690     842.9       700     845.5       701     847.4       717
GR    849.3      750     850.7       775     851.9       800     852.4       850     852.8       900
GR    852.7      950

ET                4.1       6.1       353       950       353       750
X1   196065                                    50        50        50                  0.02

ET                        4.1       305       735
                VALLEY SECTION BA MOVED DOWNSTREAM (23)
X1   196272                                   207       207       207                  0.10

NC                                   .1        .3
ET                        4.1       155       585
                VALLEY SECTION BA (23)
X1   197250       26      486.      550.     578.0     572.0     978.0
GR    850.0        0     846.3       250     846.5       275     846.7       325     846.7       350
```

```
GR    847.4       368      844.9       400      843.9       425      845.2       450      844.4       461
GR    844.6       486      844.4       489      841.3       500      839.9       510      839.3       520
GR    839.7       530      839.9       540      842.9       550      845.5       551      847.4       567
GR    849.3       600      850.7       625      851.9       650      852.4       700      852.8       750
GR    852.7       800
1
   03JAN94      08:21:33                                                                                PAGE   49


NC      .07       .07       .035        .1         .3
ET                           4.1       550        990
X1   178.01        41       843.      920.     2565.0     2465.0     2865.0
GR    860.0        0.      849.9       600      850.0       649.      850.0       651.      849.1       677.
GR    848.7      697.      848.7      703.      848.9       721.      847.9       746.      847.7       754.
GR    847.5      780.      848.3      801.      849.1       806.      850.0       814.      849.9       817.
GR    850.2      843.      849.3      848.      844.7       864.      844.6       865.      843.6       872.
GR    842.7      879.      842.7      880.      842.6       887.      842.2       894.      842.6       903.
GR    842.8      907.      843.7      911.      844.1       913.      846.0       920.      847.3       921.
GR    848.5      937.      849.8      969.      849.8       971.      850.5       993.      851.2      1018.
GR    851.2     1022.      851.2     1067.      851.2      1073.      851.6      1116.      851.6      1124.
GR    853.2     1165.

ET                           1.5
              VALLEY SECTION BB MOVED DOWNSTREAM (22)
X1   202235        20       250.      340.     2020.0     1920.0     2120.0                 -1.09
GR    853.9         0      853.2        50      851.0       100      850.6       150      852.0       207
GR    855.6       220      856.1       250      848.3       279      846.9       289      845.8       299
GR    846.0       309      845.4       319      846.1       329      848.3       334      849.5       340
GR    850.6       390      850.8       440      850.2       490      850.8       540      854.0       580

QT        2      3200      3200
NC                 .04                  .5        1.0
ET                 4.1       4.1       197        393
X1   202936                                      600       740       701                  0.60

ET                 4.1       4.1       227        363
X1   203036                                      100       100       100                  0.08

ET                 4.1       4.1     192.5        258
X1   203176        35       250     335.1      140.0      140.0      140.0      0.77
GR    853.9         0      853.2        50      851.0       100      850.6       150      851.3       175
GR    852.0       200      855.6       225      856.1       240      853.2       250      853.2      250.1
GR    848.9       261      846.8       266      846.8      266.1      846.6       268      846.6      268.1
GR    846.4       274      846.2       279      845.8       284      845.3       289      845.3       294
GR    845.4       299      845.3       304      845.5       309      847.1       316      847.1      316.1
GR    848.0       318      848.0     318.1      848.9       325      853.7       335      853.7      335.1
GR    850.6       385      850.8       440      850.2       490      850.8       540      854.0       585

NC      .03       .03       .03
ET                 4.1      4.11     192.5        258
              DOWNSTREAM STREAM FACE RIVER ROAD (22B)
              COMBINED 22 & 22.1
X1   203181                                        5         5         5
X2                                                                                          0.77
X3                                   192.5                  258
BT      -19         0      865.6                 100      856.6                 175      856.7
BT                 200      856.9                 225      857.0                 250      857.1      853.2
BT               250.1      857.1     855.1       266      857.1      855.1     266.1      857.1      846.8
BT                 268      857.1     846.6      268.1      857.1      854.3       316      857.1      854.3
BT               316.1      857.1     847.1       318      857.1      848.0     318.1      857.1      855.1
BT                 335      857.1     855.4      335.1      857.1      853.7       385      856.7
BT                 585      856.7
1
   03JAN94      08:21:33                                                                                PAGE   50


ET                 4.1      4.11     192.5        258
              UPSTREAM FACE RIVER ROAD
              BRIDGE SKEW DUE TO ABUTMENT AND OR PIER ORIENTATION
X1   203219                                       38        38        38
X2                                                                      1

NC      .06       .04       .035
ET                 4.1       4.1     191.5        259
X1   203224                                        5         5         5

NC                 .06
ET                 4.1       4.1      1959       2130
```

```
X1   203274        21      2000      2090        50        50        50
GR    860.0         0     853.9      1750     853.2      1800     850.6      1900     852.0      1957
GR    855.6      1970     856.1      2000     848.3      2029     846.9      2039     845.8      2049
GR    846.0      2059     845.4      2069     846.1      2079     848.3      2084     849.5      2090
GR    850.6      2140     850.8      2190     850.2      2240     850.8      2290     854.0      2330
GR    860.0      3000

ET                4.1       6.1      1769      2320      1805      2310
              VALLEY SECTION BB (22)
X1   203464        21      2000      2090       230       140       190
GR    860.0         0     853.9      1750     853.2      1800     850.6      1900     852.0      1957
GR    855.6      1970     856.1      2000     848.3      2029     846.9      2039     845.8      2049
GR    846.0      2059     845.4      2069     846.1      2079     848.3      2084     849.5      2090
GR    850.6      2140     850.8      2190     850.2      2240     850.8      2290     854.0      2330
GR    860.0      3000

ET                          4.1       990      1500
X1   277.01        56     1247.     1330.    1637.0    1637.0    1637.0
GR    860.0        0.     857.3      630.     857.1      695.     856.8      758.     856.4      823.
GR    855.1      876.     854.3      924.     853.9      990.     853.9     1000.     854.0     1053.
GR    854.6     1091.     854.8     1118.     854.7     1122.     854.1     1141.     853.9     1174.
GR    853.6     1181.     853.5     1184.     854.4     1220.     856.2     1228.     856.6     1247.
GR    852.6     1262.     850.2     1269.     849.6     1271.     849.5     1272.     848.4     1280.
GR    848.4     1281.     847.6     1288.     847.5     1289.     847.5     1289.     847.5     1297.
GR    847.5     1298.     847.0     1307.     847.4     1314.     847.5     1317.     847.6     1318.
GR    848.5     1321.     849.2     1323.     849.4     1323.     850.3     1328.     851.2     1330.
GR    851.5     1349.     851.8     1367.     851.9     1388.     852.0     1404.     852.0     1407.
GR    851.7     1440.     852.0     1466.     852.0     1477.     852.4     1485.     853.5     1506.
GR    853.6     1544.     853.7     1563.     854.2     1624.     854.4     1639.     855.6     1702.
GR    860.0     1999.

NC      .09       .08                  .1        .3
ET                          4.1       350       820
X1   184.01        40      495.      572.    1633.0    1633.0    1633.0
GR    860.0        0.     858.2       250     858.1      276.     857.8      301.     857.4      327.
GR    855.2      348.     853.7      367.     853.4      393.     853.4      397.     853.8      418.
GR    856.3      444.     855.8      453.     856.7      466.     856.4      469.     857.0      495.
GR    853.8      508.     851.2      514.     850.7      516.     849.9      524.     849.3      530.
GR    849.2      531.     849.1      538.     848.6      546.     849.0      554.     849.0      558.
GR    849.7      562.     850.3      564.     851.5      570.     852.9      572.     852.9      584.
GR    853.1      609.     853.2      621.     853.3      659.     853.2      671.     852.8      709.
1
   03JAN94      08:21:33                                                                          PAGE   51

GR    852.7      721.     853.0      760.     853.1      770.     854.9      810.     860.0      1000

ET                          4.1       138       639
              VALLEY SECTION BC (21)
X1   210350        25      240.      303.    3616.0    3616.0    3616.0
GR    862.6         0     862.7        25     862.5        50     862.8        75     856.5       115
GR    856.2       140     856.4       165     860.8       190     857.2       215     857.9       240
GR    856.1       248     853.2       252     852.7       262     851.8       272     852.1       282
GR    851.8       292     853.8       301     856.3       303     856.1       315     855.8       340
GR    855.8       390     855.2       440     855.3       490     855.8       540     860.0       860

ET                          1.5
X1   185.01        39      245.      312.    3000.0    2475.0    2815.0
GR    862.6        0.     862.7       26.     862.7       49.     862.6       51.     862.7       77.
GR    861.0       98.     859.5      117.     859.3      143.     859.3      147.     859.6      168.
GR    862.0      194.     861.9      196.     860.0      219.     860.2      245.     858.2      253.
GR    856.9      255.     856.3      257.     855.4      266.     855.3      266.     853.8      276.
GR    854.0      285.     854.0      287.     853.9      294.     854.9      299.     856.1      303.
GR    857.6      309.     859.2      312.     859.1      323.     859.1      342.     859.1      348.
GR    859.3      393.     859.3      397.     859.1      443.     859.1      446.     859.5      494.
GR    859.5      496.     859.7      545.     860.0      700     863.0       850

              VALLEY SECTION BD (20A)
X1   215877        19      300.      370.    2600.0    2300.0    2712.0
GR    866.0         0     862.6        50     862.8       100     862.4       200     863.2       250
GR    862.5       300     859.6       310     858.0       320     855.8       330     855.9       340
GR    855.8       350     859.6       360     862.1       370     862.3       400     862.8       450
GR    863.0       500     863.7       550     863.5       560     870.0      1200

NC                                     .5        1.0
              DOWNSTREAM FACE SCHOOL ROAD (20B)
              COMBINED 20 & 20.1
              BRIDGE SKEW DUE TO ROAD ORIENTATION WITH RESPECT TO FLOODPLAIN
X1   216054        26       350     411.1     200.0     150.0     177.0      0.82
GR    866.0         0     863.0        50     862.8       175     862.8       275     863.2       300
```

```
GR    858.5       350      858.5     350.1      858.5       351      856.2       360      856.5       370
GR    855.6       380      855.6       390      856.2       400      858.9       411      858.9     411.1
GR    860.5       415      862.1       420      862.2       436      862.4       461      862.6       486
GR    862.9       511      863.1       561      863.5       586      863.6       636      863.5       661
GR    870.0      1000

SB               1.38        3.0                  50                 335.5
ET                          1.51
              UPSTREAM FACE SCHOOL ROAD
X1   216085                                        31        31         31
X2                             1     863.2      865.1                                      0.82
BT      -17         0      866.3                  50     866.3                  175      865.1
BT                275      865.6                 300     865.6                  350      865.8     858.5
BT              350.1      865.8     863.2       411     865.8     863.1     411.1      865.8     858.9
BT                436      865.8                 461     865.7                  486      865.7
BT                511      865.8                 561     866.1                  586      866.2
BT                636      866.3                 661     866.7
1
   03JAN94      08:21:33                                                                          PAGE   52


NC       .1       .09       .035
ET                4.1        6.1       470      1095       500      1050
              GR DATA SUPPLIED BY MDNR
X1   216135         9        830       885        50        50        50
GR    866.0       450      862.0       525     859.8       830     855.5       832      856.6       854
GR    858.7       882      861.8       885     866.0      1430     870.0      1460

NC                                      .3        .5
ET                          1.5
              GR DATA SUPPLIED BY MDNR
X1   216185        20        700       762         5       150        50
GR    870.0       200      868.0       310     866.0       325     867.0       350      866.0       370
GR    864.0       390      862.0       420     864.0       470     862.0       520      860.0       530
GR    860.0       545      861.5       630     861.4       700     857.3       709      856.4       733
GR    855.9       746      858.4       750     864.5       762     869.0      1220      875.0      1250

NC     .105      .105       .038
              GR DATA SUPPLIED BY MDNR
X1   216277        16        712       765       112       142        92       .95
GR    866.0       350      864.0       395     862.0       430     862.0       550      860.3       660
GR    858.8       663      856.8       674     858.7       686     860.2       688      859.6       712
GR    858.9       714      857.9       725     857.5       744     859.0       756      864.6       765
GR    866.0      1190

NC                                      .1        .3
ET                          4.1       155       725
              GR DATA SUPPLIED BY MDNR
X1   217062        15        678       725       515       565       785
GR    866.5         0      866.0        50     864.0       110     862.0       140      861.8       480
GR    862.0       555      862.1       580     862.0       668     860.0       678      858.5       700
GR    860.0       725      862.0       735     864.0       740     866.0       742      868.0       745

NC                                      .3        .5
ET                          4.1        .1       532
              GR DATA SUPPLIED BY MDNR
X1   217537        14        350       410       525         5       475      0.78
GR    866.0         0      864.0        78     863.0       272     862.6       288      859.5       300
GR    860.9       310      861.8       335     860.0       350     856.3       379      860.0       410
GR    862.0       455      864.0       515     866.0       532     868.0       547

ET                          1.5
              GR DATA SUPPLIED BY MDNR
X1   218237        13         39        88       200       400       700
GR    870.0         0      868.0        10     866.0        30     864.0        35      862.0        39
GR    859.5        62      862.0        88     863.3       130     862.7       590      864.0       680
GR    866.0       825      868.0       838     870.0       855

NC                                      .1        .3
ET                          4.1        40       640
1
   03JAN94      08:21:33                                                                          PAGE   53


              GR DATA SUPPLIED BY MDNR
X1   218792        13        290       344       150       475       555
GR    870.0         0      868.0        10     866.0        19     864.0       160      864.0       285
GR    862.0       290      859.9       318     862.0       344     864.0       348      866.0       388
GR    866.0       702      868.0       743     870.0       765
```

```
NC                                  .1        .3
ET                        4.1       12       612
              GR DATA SUPPLIED BY MDNR
X1   219172        9        12       60       480       300       380
GR    870.0        0     864.0       12     860.5        35     863.0        60     864.0       130
GR    864.3      200     866.0      310     868.0      1008     870.0      1020

NC                                  .3        .5
ET                        4.1       12       412
              GR DATA SUPPLIED BY MDNR
X1   219722       13       332      380       375       325       550
GR    872.0        0     866.0       12     865.0       140     864.0       312     863.0       332
GR    861.0      360     863.0      380     864.0       385     865.0       390     869.0       450
GR    868.0      782     870.0      812     872.0       835

NC                                  .1        .3
ET                        4.1        2       457
              GR DATA SUPPLIED BY MDNR
X1   220247       14        24       82       525       625       525
GR    872.0        0     870.0        2     868.0         5     866.0         9     864.0        17
GR    863.0       24     861.4       50     863.0        82     864.0        89     866.0       170
GR    867.5      470     868.0      595     870.0       618     872.0       646

NC                                  .5       0.8
ET                4.1       6.1      100       720       276       626
              GR DATA SUPPLIED BY MDNR
X1   220447       11       610      705       200       200       200       .87
GR    875.0        0     872.0       45     870.0       100     868.0       210     866.0       530
GR    865.1      600     863.1      610     861.3       667     862.9       705     866.9       710
GR    875.0      720

ET                4.1       4.1      255       633
              GR DATA SUPPLIED BY MDNR
X1   220942       15       405      488       430       390       495       .96
GR    875.0        0     870.0       25     868.0       160     866.2       405     863.5       410
GR    862.8      445     863.7      477     865.0       488     864.3       504     866.3       510
GR    867.0      580     866.0      660     866.0       690     870.0       700     875.0       710

ET                4.1       4.1      300       600
              GR DATA SUPPLIED BY MDNR
X1   221102       14       550      590       160       150       160       .94
GR    875.0        0     870.0       30     868.0       160     866.0       435     863.0       440
GR    862.5      462     865.5      470     866.2       510     865.5       550     862.5       555
GR    862.5      575     866.0      590     868.0       640     875.0       665
1
   03JAN94      08:21:33                                                                    PAGE   54


ET                4.1       4.1      250     300.1
X1   221302       18       250      300     300.0     150.0     200.0
GR    867.0        0     866.9      125     866.9       225     864.0       250     864.0     250.1
GR    862.2      260     860.6      270     860.4       280     861.6       290     861.2       300
GR    861.2    300.1     864.0      310     866.6       325     866.7       350     867.2       400
GR    867.4      450     868.1      500     867.9       550

NC      .03      .03       .03
ET                4.1      4.11      250     300.1
              DOWNSTREAM FACE COLDWATER ROAD (19B)
              COMBINED 20 & 19
X1   221310                                     8         8         8
BT      -10        0     875.1                 125     874.7                 225     874.7
BT                250     874.8     864.0     250.1     874.8     872.4       300     875.3     871.9
BT              300.1     875.3     861.2       325     875.5                 400     877.0
BT                550     881.5

ET                4.1      4.11      250     300.1
              UPSTREAM FACE COLDWATER ROAD
X1   221340                                    30        30        30
X2                                                                  1

NC      .06      .07      .035
ET                4.1       4.1      250     300.1
X1   221348                                     8         8         8

ET                4.1       4.1       30        90
X1   211353        4        30       90         5         5         5
GR    870.2        0     860.2       30     860.3        90     870.2       120
```

```
ET                          1.5
                ESTIMATED VALLEY SECTION DOWNSTREAM OF DAM
X1   221383                                        30         30         30

NC      .04        .04        .03        .1         .3
                ESTIMATED VALLEY SECTION DOWNSTREAM OF DAM
X1   222533          4        30.        90.       1150       1290     1150.0
GR    870.2          0      860.2         30      860.3         90      870.2        120

NC     .035       .055        .03
                VALLEY SECTION BE MOVED DOWNSTREAM
                WATER SURFACE ELEVATION FROM CALCULATIONS OF LAKE STAGE AT DAM
X1   237300         42       250.       869.    14767.0    14767.0    14767.0
X5        2      899.0      899.1
GR    918.7          0      919.1         50      919.7        103      895.9        250      895.7        255
GR    891.8        270      890.7        290      889.8        310      888.7        330      887.5        350
GR    887.1        370      890.7        390      890.8        410      890.6        430      890.6        450
GR    890.2        470      890.2        490      890.2        510      890.0        530      890.0        550
GR    890.3        570      890.2        590      890.5        610      890.5        670      890.4        730
GR    890.5        750      890.6        770      890.6        790      891.0        810      892.4        830
GR    893.5        850      895.6        864      896.0        869      896.8        895      897.3        920
GR    898.0        945      897.6        970      898.2        995      898.6       1020      898.8       1045
GR    898.3       1070      898.5       1095
1
   03JAN94      08:21:33                                                                                  PAGE   55


                VALLEY SECTION BE (16)
X1   241300                                        4000       4000       4000

NC      .06        .06       .035
ET                          4.1        165        435
                VALLEY SECTION BF (15)
X1   244550         26        250        425       3170       3250       3250
GR    905.3          0      902.5        100      897.1        200      896.2        250      895.6        253
GR    892.8        270      891.1        290      890.1        310      889.6        330      889.1        340
GR    889.6        350      890.1        370      891.1        390      892.6        410      893.6        420
GR    895.6        422      897.0        425      900.4        450      905.1        500      904.2        525
GR    905.0        550      907.6        575      906.4        600      909.5        625      910.8        650
GR    913.5        675

ET                          4.1        175        415
X1   267.01         54       251.       398.      742.0      762.0      762.0
GR    904.5         0.      903.7        50.      902.5       100.      902.5       100.      900.3       150.
GR    897.5       200.      897.5       200.      896.8       225.      895.9       251.      895.3       253.
GR    895.3       253.      893.3       264.      892.8       268.      892.8       268.      891.8       280.
GR    891.4       285.      891.4       286.      890.9       298.      890.6       304.      890.5       314.
GR    890.2       321.      890.2       321.      889.8       330.      890.2       338.      890.2       338.
GR    890.6       354.      890.6       354.      891.4       369.      891.5       370.      891.8       375.
GR    892.9       385.      892.9       386.      893.9       393.      895.2       395.      895.5       395.
GR    896.5       398.      897.1       400.      899.6       421.      899.6       422.      903.4       469.
GR    903.4       469.      903.0       493.      903.0       493.      903.5       510.      904.5       517.
GR    908.9       541.      908.9       541.      910.6       565.      910.7       565.      915.5       588.
GR    915.6       589.      919.1       612.      919.1       613.      923.7       637.

NC      .07        .12       .035
ET                          4.1        180        400
X1   256.01         37       251.       370.      742.0      763.0      763.0
GR    903.8         0.      903.5        50.      902.5       100.      902.5       100.      900.7       150.
GR    897.9       200.      897.0       225.      895.5       251.      895.0       253.      893.1       263.
GR    892.8       266.      891.9       277.      891.7       281.      891.3       292.      891.1       297.
GR    891.1       306.      890.8       312.      890.4       320.      890.8       326.      891.1       338.
GR    891.8       349.      892.0       353.      893.2       361.      894.2       367.      895.3       368.
GR    896.1       370.      897.0       372.      898.8       393.      901.8       438.      901.7       461.
GR    902.2       477.      903.9       484.      910.3       507.      914.9       530.      921.5       552.
GR    927.4       575.      933.9       598.

ET                          4.1        180        395
X1   268.01         42       251.       343.      742.0      762.0      762.0
GR    903.0         0.      903.3        50.      902.5       100.      901.1       150.      898.3       200.
GR    897.1       225.      895.2       251.      894.7       253.      893.0       261.      892.9       262.
GR    892.8       264.      892.1       273.      892.1       274.      892.0       277.      891.7       286.
GR    891.7       286.      891.6       290.      891.7       298.      891.4       303.      891.1       310.
GR    891.4       314.      891.6       322.      892.1       329.      892.2       331.      892.3       332.
GR    893.5       337.      894.5       341.      895.1       341.      895.7       343.      896.8       344.
GR    896.9       345.      898.0       364.      900.2       407.      900.5       429.      900.9       444.
GR    901.0       445.      903.3       451.      911.7       473.      919.2       495.      927.5       516.
GR    935.6       538.      944.0       560.
1
```

```
ET                          1.4
                VALLEY SECTION BG (14)
X1   247600        16       251.       315.       742.0       763.0       763.0
GR    902.3         0      903.0         50       902.5         100       901.6         150       897.3         225
GR    894.8       251      892.8        260       892.3         270       892.1         280       892.3         290
GR    891.8       300      892.5        310       895.2         315       896.7         317       899.7         412
GR    954.2       521

X1   301.01        31       251.       313.       600.0       608.0       608.0
GR    903.3        0.      903.2        50.       903.1         50.       902.4        100.       902.3        100.
GR    901.9      150.      901.8       150.       900.1        200.       899.7        225.       899.1        240.
GR    895.6      251.      894.0       253.       893.0        258.       892.3        264.       892.2        266.
GR    892.0      274.      892.0       277.       892.0        282.       891.7        290.       892.2        298.
GR    893.1      305.      893.5       307.       895.5        313.       896.2        316.       895.9        341.
GR    896.2      376.      896.4       411.       896.9        447.       897.2        479.       897.6        482.
GR    929.5      666.

ET                4.1                   .1         550
X1   248716        20       250.       310.       500.0       508.0       508.0                   -2.36
GR    906.6         0      905.5         50       904.4         100       904.3         150       903.8         200
GR    904.6       240      898.6        250       896.1         252       894.4         260       894.0         270
GR    893.8       280      894.5        290       896.1         302       898.1         310       896.8         350
GR    896.8       400      896.5        450       896.9         500       896.8         550       907.0         810

NC      .04                              .5         1.0
ET                4.1                  186         374
                VALLEY SECTION BH MOVED DOWNSTREAM (12A)
X1   249051                                         435         285         335                    0.54

ET                4.1        4.1        245         315
X1   249286                                         235         235         235                    0.37

ET                4.1        4.1      217.5       261.6
                DOWNSTREAM FACE BRINTON ROAD (13B)
                COMBINED 12 & 13
X1   249336        30       240        310        50.0        50.0        50.0        0.87
GR    904.9         0      903.8         50       902.7         100       902.6         125       902.6         150
GR    902.3       175      902.1        200       902.6         225       902.9         240       895.4         250
GR    895.4     250.1      895.5        255       895.6         260       895.0         265       893.2         270
GR    889.8       275      889.2        280       890.3         285       891.8         290       893.2         295
GR    894.8     300.5      894.8      300.6       896.4         310       896.0         325       895.1         350
GR    895.1       400      895.0        425       894.8         450       895.2         500       895.1         550

ET                4.1       6.11        160         480         160         480
SB                1.9        3.0                     44                   331.7
                UPSTREAM FACE BRINTON ROAD
                BRIDGE SKEW DUE TO ROAD ORIENTATION WITH RESPECT TO FLOODPLAIN
X1   249364                                          28          28          28
X2                            1      900.4       903.5                                           0.87
BT      -15         0      905.8                   125       904.8                   175       904.4
BT                200      904.3                   225       904.1                   250       903.8       895.4
BT              250.1      903.8      900.4       300.5       903.7       900.4       300.6       903.7       894.8
BT                325      903.5                   400       903.5                   425       903.7
1
```



```
BT                450      904.0                   500       905.1                   550       906.4

NC      .05       .11       .035
QT        2      2730       2730
ET                4.1        6.1         91         469         235         469
X1   249394        20       250        310          30          30          30                   -1.46
GR    906.6         0      905.5         50       904.4         100       904.3         150       903.8         200
GR    904.6       240      898.6        250       896.1         252       894.4         260       894.0         270
GR    893.8       280      894.5        290       896.1         302       898.1         310       896.8         350
GR    896.8       400      896.5        450       896.9         500       896.8         550       910.0         600

ET                4.1        6.1         41         519         235         519
X1   249444                                          50          50          50                     .11

ET                          4.1        224         541
                VALLEY SECTION BH MOVED DOWNSTREAM (12A)
X1   249617                                         173         173         173                    0.38

NC                                      .1          .3
```

```
ET                          4.1       250       565
                VALLEY SECTION BH (12A)
X1   250140        20       250.      310.      450.0     530.0     523.0
GR    906.6         0      905.5        50      904.4       100     904.3       150     903.8       200
GR    904.6       240      898.6       250      896.1       252     894.4       260     894.0       270
GR    893.8       280      894.5       290      896.1       302     898.1       310     896.8       350
GR    896.8       400      896.5       450      896.9       500     896.8       550     907.0      1000

NC      .08       .06
ET                          4.1       250       540
                VALLEY SECTION BH MOVED UPSTREAM (12A)
X1   250958        20       250.      310.      740.0     860.0     818.0                 1.79
GR    906.6         0      905.5        50      904.4       100     904.3       150     903.8       200
GR    904.6       240      898.6       250      896.1       252     894.4       260     894.0       270
GR    893.8       280      894.5       290      896.1       302     898.1       310     896.8       350
GR    896.8       400      896.5       450      896.9       500     896.8       550     910.0       551

ET                4.1        4.1       201       359
NC                                       .5       1.0
X1   251253                                       225       285       295                 0.57

ET                4.1        4.1       219       341
X1   251328                                        75        75        75                 0.09

ET                4.1        4.1       245       314
X1   251433                                        50       105       105                 0.20

ET                4.1        4.1       250       296
X1   251478        29       250.     295.9      25.0      45.0      45.0
GR    908.7         0      908.1        25      907.6        50     907.1        75     906.5       100
GR    906.4       150      906.1       175      905.9       200     906.4       225     901.6       250
GR    901.6     250.1      900.2       254      899.4       255     899.0       260     897.2       265
GR    895.9       270      896.2       275      896.9       280     897.7       285     898.3       290
GR    899.7     295.8      899.7     295.9      900.2       310     898.8       325     898.9       350
GR    898.9       375      898.9       400      899.0       500     898.9       550
1
   03JAN94      08:21:33                                                                    PAGE   58


NC      .03       .03        .03
ET                4.1       4.11       250       296
                DOWNSTREAM FACE DREW ROAD (12B)
                COMBINED 12 & 12.1
X1   251486                                         8         8         8
BT      -15         0      913.5                   25     913.2                    50     912.9
BT                 75      912.7                  175     912.3                   200     912.4
BT                225      912.7                  250     912.9     901.6     250.1     912.9     910.2
BT              295.8      913.2     910.0      295.9     913.2     899.7       325     914.3
BT                375      916.8                  400     918.4                   550     926.9

ET                4.1       4.11       250       296
                UPSTREAM FACE DREW ROAD
X1   251514                                        28        28        28
X2                                                                   1

NC      .06       .08       .035
ET                4.1        4.1       250       296
X1   251522                                         8         8         8

ET                4.1        4.1       254       306
X1   251525        20       250       310         3         3         3                 2.34
GR    906.6         0      905.5        50      904.4       100     904.3       150     903.8       200
GR    904.6       240      898.6       250      896.1       252     894.4       260     894.0       270
GR    893.8       280      894.5       290      896.1       302     898.1       310     896.8       350
GR    896.8       400      896.5       450      896.9       500     896.8       550     910.0       551

ET                4.1        4.1       242       318
                VALLEY SECTION BH MOVED UPSTREAM (12A)
X1   251537                                        12        12        12

ET                          4.1       250       525
X1   251697        20       250       310       160       160       160                 2.55
GR    906.6         0      905.5        50      904.4       100     904.3       150     903.8       200
GR    904.6       240      898.6       250      896.1       252     894.4       260     894.0       270
GR    893.8       280      894.5       290      896.1       302     898.1       310     896.8       350
GR    896.8       400      896.5       450      896.9       500     896.8       550     910.0       551

NC                                       .1        .3
ET                          4.1       250       525
```

```
X1   268.01      46      250.      319.     1280.0     1210.0     1385.0
GR    910.2       0.     909.9       25.      909.2        50.      908.6        75.      908.2       100.
GR    908.3     125.     908.1      150.      907.8       175.      907.3       200.      907.2       225.
GR    907.3     240.     902.7      250.      900.9       252.      900.7       252.      899.3       260.
GR    899.2     261.     899.1      261.      898.7       267.      898.1       271.      898.0       272.
GR    897.8     274.     897.6      283.      898.4       289.      898.5       294.      898.5       295.
GR    898.6     295.     899.2      302.      899.4       309.      899.5       309.      900.4       316.
GR    900.9     316.     902.3      319.      901.3       358.      901.2       359.      901.2       376.
GR    902.7     401.     902.8      408.      902.8       408.      903.0       427.      902.9       457.
GR    903.1     479.     903.1      504.      903.1       507.      903.2       530.      903.3       557.
GR    910.0     600
1
   03JAN94      08:21:33                                                                                PAGE   59


ET                          4.1       240        515
X1   215.01      39      250.      328.     1300.0     1275.0     1385.0
GR    911.6       0.     911.5       25.      910.6        50.      910.0        75.      909.7       100.
GR    909.9     125.     909.6      150.      909.2       175.      908.4       200.      907.8       225.
GR    907.7     240.     904.5      250.      903.1       252.      901.8       261.      901.6       262.
GR    900.9     268.     899.8      273.      899.3       276.      899.1       285.      900.4       293.
GR    900.3     299.     900.3      300.      900.7       308.      900.5       316.      900.5       316.
GR    901.1     324.     902.0      325.      904.2       328.      903.4       367.      903.3       384.
GR    906.3     409.     906.5      416.      907.1       435.      907.0       465.      907.2       486.
GR    907.1     511.     907.1      514.      907.2       537.      907.4       563.

ET                          4.1       230        370
              VALLEY SECTION BI (11)
X1   257200      29      250.      345.     2560.0     2430.0     2733.0
GR    914.2       0     914.5        25      913.4         50      912.7         75      912.7        100
GR    913.0     125     912.6       150      911.9        175      910.6        200      909.0        225
GR    908.0     250     906.7       262      905.3        270      902.2        280      902.1        290
GR    904.3     300     903.7       310      903.7        320      902.5        330      902.5        340
GR    903.9     342     907.9       345      907.4        400      913.4        425      915.1        450
GR    915.3     500     915.0       525      915.2        550      915.6        575

ET                          4.1       240        390
X1   216.01      38      250.      336.     2725.0     3025.0     3025.0
GR    924.5       0.     923.8       25.      921.5        50.      920.8        75.      919.5       100.
GR    918.8     125.     917.6      150.      916.4       175.      915.4       200.      915.0       208.
GR    912.3     225.     910.7      250.      909.1       254.      908.7       261.      908.6       262.
GR    907.9     268.     906.1      276.      905.8       285.      907.0       294.      906.9       296.
GR    906.6     304.     906.6      307.      906.8       313.      906.6       318.      906.3       322.
GR    906.3     328.     906.5      331.      907.2       333.      907.6       333.      910.8       336.
GR    910.3     362.     912.0      385.      916.6       408.      919.2       430.      922.6       475.
GR    924.1     498.     925.9      520.      927.8       543.

NC      .07       .07
ET                          4.1       240        390
              VALLEY SECTION BJ (10)
X1   263250      21      250.      327.     2725.0     3025.0     3025.0
GR    934.9       0     933.2        25      929.6         50      928.9         75      926.3        100
GR    924.6     125     920.8       175      919.9        208      915.7        225      913.3        250
GR    910.7     253     910.7       260      909.5        280      909.7        290      909.5        300
GR    910.1     310     910.0       320      910.8        324      913.8        327      913.0        350
GR    940.0     510

NC      .07       .04      .035
ET                          4.1       240        390
              VALLEY SECTION BJ MOVED UPSTREAM (10)
X1   265423      21      250.      327.     2000.0     1900.0     2173.0                 1.45
GR    934.9       0     933.2        25      929.6         50      928.9         75      926.3        100
GR    924.6     125     920.8       175      919.9        208      915.7        225      913.3        250
GR    910.7     253     910.7       260      909.5        280      909.7        290      909.5        300
GR    910.1     310     910.0       320      910.8        324      913.8        327      913.0        350
GR    940.0     510
1
   03JAN94      08:21:33                                                                                PAGE   60


NC      .09       .09                  .5         1.0
ET                4.1       4.1       250        301
X1   265633      27       250       300.6      280.0       75.0      210.0
GR    914.3       0     914.3        50      914.3        175      914.3        200      914.3        225
GR    912.1     250     912.1     250.1      912.4        255      912.0        260      910.0        265
GR    909.3     270     907.6       275      906.9        280      907.6        285      908.8        290
GR    909.8     295     910.6     300.5      910.6      300.6      917.0        325      917.5        350
GR    918.0     375     918.5       400      919.0        425      919.5        450      920.0        475
```

```
GR    919.5       525      919.8       550

NC      .03       .03       .03
ET                4.1      4.11       250       301
              DOWNSTREAM FACE WYMAN ROAD (9B)
X1   265636                                       3         3         3
BT      -16         0     921.4                  50     921.3                 175     921.3
BT                200     922.3                 225     922.6                 250     922.9     912.1
BT              250.1     922.9     919.5     300.5     922.8     919.4     300.6     922.8     910.6
BT                325     922.4                 375     921.1                 400     920.7
BT                425     920.4                 450     920.2                 525     919.9
BT                550     919.8

ET                4.1      4.11       250       301
              UPSTREAM FACE WYMAN ROAD
X1   265664                                      28        28        28
X2                                                                   1

NC      .04       .06      .035
ET                4.1       1.4       250       301
X1   265667                                       3         3         3

NC      .06                .040
ET                4.1       6.1        .1       600       285       560
X1   265797        19       285       350       130       130       130                -6.08
GR    928.5         0     927.6       150     927.8       250     927.0       285     920.4       288
GR    918.5       290     916.2       300     916.2       310     916.9       320     916.9       330
GR    916.5       340     918.2       348     920.9       350     920.1       400     919.9       450
GR    919.8       500     919.4       550     919.4       600     926.0      1500

ET                        4.1       285       950
X1   266247                                     450       450       450                 0.32

NC      .06       .06                  .1        .3
ET                        4.1       285       950
X1   223.01        19      285.      350.    1085.0    1385.0    2285.0
GR    924.4         0.    923.5      150.     923.7      250.     922.9      285.     916.3      288.
GR    914.4      290.     912.1      300.     912.1      310.     912.8      320.     912.8      330.
GR    912.4      340.     914.1      348.     916.8      350.     916.0      400.     915.8      450.
GR    915.7      500.     915.3      550.     915.3      600.     920.0      1500
1
   03JAN94      08:21:33                                                                          PAGE   61


ET                        4.1       285      1240
X1   344.01        24      285.      350.     667.5     817.5    1267.5
GR    925.3         0.    924.4      150.     924.6      250.     923.8      285.     917.2      288.
GR    915.3      290.     913.0      300.     913.0      310.     913.7      320.     913.7      330.
GR    913.3      340.     915.0      348.     917.7      350.     917.0      392.     916.8      411.
GR    916.7      435.     916.6      472.     916.6      477.     916.4      520.     916.4      533.
GR    916.3      562.     916.2      593.     916.3      654.     919.8     1750.

ET                        4.1       285      1300
X1   271067        20      285       350     667.5     817.5    1267.5                -2.34
GR    928.5         0     927.6       150     927.8       250     927.0       285     920.4       288
GR    918.5       290     916.2       300     916.2       310     916.9       320     916.9       330
GR    916.5       340     918.2       348     920.9       350     920.1       400     919.9       450
GR    919.8       500     919.4       550     919.4       600     922.0      2000     930.0      2350

ET                        4.1       285      1300
X1   271167                                     100       100       100                 0.07

ET                        4.1       285      1160
              VALLEY SECTION BK MOVED DOWNSTREAM (7)
X1   271267                                     100       100       100                 0.07

ET                4.1       6.1    286.75      2350    286.75      1060
X1   271370                                     103       103       103                 0.05

ET                4.1       6.1    289.25      2350    289.75      1060
X1   271380                                      10        10        10

ET                4.1       6.1    291.75      2350    291.75      1060
X1   271390                                      10        10        10                 0.01

ET                4.1       6.1       293      2350       293      1060
X1   271395                                       5         5         5

NC                                   .3        .5
```

```
ET                 4.1       6.1      1000      2740      1000      1760
                DOWNSTREAM FACE WEST AIRLINE ROAD (8B)
X1   271400        26      1000    1052.1         5         5         5
GR    930.0         0     920.0       750     920.0       850     920.0       950     917.3      1000
GR    917.3    1000.1     916.3      1002     915.4      1005     911.8      1010     911.4      1015
GR    911.4      1020     911.6      1025     911.6    1025.1     911.8      1027     911.8    1027.1
GR    912.7      1033     913.9      1038     916.4      1042     917.2      1047     917.8      1052
GR    917.8    1052.1     918.5      1200     918.5      1250     918.5      1300     920.0      2200
GR    920.0      3250     930.0      3600

NC      .06       .06      .025
SC     2.20       0.5       2.8                8.6     21.75        34       8.3
                UPSTREAM FACE WEST AIRLINE ROAD
1
   03JAN94      08:21:33                                                                          PAGE   62


                SEE SECNO 47603 FOR COMMENT THAT ALSO APPLIES AT THIS BRIDGE.
X1   271434        25      1000    1052.1        34        34        34
X2                           2     922.5     920.2
X3                                  1000                1052.2     921.0
X4        2     921.0      1760     930.0    1760.1
X5        1   922.451
BT      -18         0     930.0                 750     923.0                  850     923.1
BT                950     923.8                1000     923.8               1000.1     923.8
BT               1025     923.8               1025.1     923.8                 1027     923.8
BT             1027.1     923.8                1052     923.8               1052.1     923.8
BT               1200     921.6                1250     921.1                 1300     920.9
BT               1760    922.51               1760.1     930.0                 3600     930.0
GR    930.0         0     920.0       750     920.0       850     920.0       950     917.3      1000
GR    917.3    1000.1     916.3      1002     915.4      1005     911.8      1010     911.4      1015
GR    911.4      1020     911.6      1025     911.6    1025.1     911.8      1027     911.8    1027.1
GR    912.7      1033     913.9      1038     916.4      1042     917.2      1047     917.8      1052
GR    917.8    1052.1     918.5      1200     918.5      1300     930.0      2200     930.0      3600

NC      .04       .06      .040        .3        .5
ET                 4.1       4.1       290      1070
X1   271439        21       285       350         5         5         5                -2.06
X5        1   922.546
GR    928.5         0     927.6       150     927.8       250     927.0       285     920.4       288
GR    918.5       290     916.2       300     916.2       310     916.9       320     916.9       330
GR    916.5       340     918.2       348     920.9       350     920.1       400     919.9       450
GR    919.8       500     919.4       550     919.4       600     920.0      1550     920.0      2050
GR    930.0      3000

ET                 4.1       4.1       280      1080
X1   271444                                       5         5         5
X5        1   922.546

ET                           4.1       288      1640
                VALLEY SECTION BK MOVED DOWNSTREAM (7)
X1   271659                                     300       100       215                 0.11

NC      .07       .07                  .1        .3
ET                           4.1       887      1347
                VALLEY SECTION BK (7)
X1   274443        19      885.      950.    2000.0    2100.0    2784.0
GR    930.0         0     928.5       600     927.8       850     927.0       885     920.4       888
GR    918.5       890     916.2       900     916.2       910     916.9       920     916.9       930
GR    916.5       940     918.2       948     920.9       950     920.1      1000     919.9      1050
GR    919.8      1100     919.4      1150     919.4      1200     930.0      1700

ET                           1.5
                VALLEY SECTION BL (6)
X1   277640        25      350.      410.    2100.0    2500.0    3197.0
GR    930.0         0     922.2       100     922.4       125     922.3       200     922.1       225
GR    922.3       250     922.2       325     923.1       350     920.4       354     919.0       360
GR    918.0       380     916.0       400     919.5       408     923.3       410     923.2       435
GR    923.7       460     922.6       485     922.5       510     922.7       535     924.2       560
GR    922.9       585     923.6       610     922.5       635     922.3       660     930.0      1800
1
   03JAN94      08:21:33                                                                          PAGE   63


ET                           4.1       250       484
                VALLEY SECTION BM (5)
X1   280940        25      250.      364.    3150.0    3050.0    3300.0
GR    951.4         0     948.9        25     945.9        50     943.6        75     941.9       100
GR    939.4       150     930.0       175     933.0       200     930.0       225     927.3       250
```

```
GR    923.2       263     921.2       273     919.4       293     918.8       303     919.3       313
GR    918.3       323     919.6       333     923.1       339     923.6       364     925.1       389
GR    923.5       414     924.4       439     925.6       464     927.6       489     932.6       539

ET                          4.1       275       525
X1   303.01        55      288.      386.     920.0     720.0    1220.0
GR    946.0        0.     943.9       29.     943.8       29.     941.2       58.     939.2        86.
GR    939.2       87.     938.0      108.     937.7      115.     936.8      144.     935.8       173.
GR    928.8      201.     928.8      202.     929.9      216.     931.0      230.     929.4       251.
GR    928.9      259.     928.8      259.     927.0      288.     925.4      290.     922.8       298.
GR    922.7      299.     921.1      307.     921.0      307.     920.9      308.     919.6       324.
GR    919.5      324.     919.3      328.     919.1      332.     919.1      333.     919.3       340.
GR    919.3      341.     918.5      350.     919.6      358.     919.7      359.     922.2       363.
GR    922.5      364.     922.6      368.     924.1      386.     923.4      386.     924.6       410.
GR    925.1      424.     925.1      424.     924.8      434.     923.9      459.     923.8       462.
GR    923.8      463.     924.1      483.     924.5      500.     924.5      501.     924.7       508.
GR    925.7      539.     925.7      539.     927.5      578.     927.6      578.     931.9       655.

ET                          4.1       290       665
X1   286.01        39      325.      407.    1020.0    1215.0    1215.0
GR    940.7        0.     938.8       33.     936.6       65.     934.8       98.     933.7       122.
GR    933.5      130.     932.9      163.     932.2      195.     927.5      228.     928.2       244.
GR    929.0      260.     928.0      284.     927.7      293.     926.8      325.     924.4       327.
GR    922.3      334.     920.9      341.     920.7      342.     919.7      355.     919.5       359.
GR    919.3      362.     919.3      369.     918.6      377.     919.7      384.     921.8       388.
GR    922.0      392.     924.5      407.     923.1      408.     924.7      440.     925.1       459.
GR    925.0      473.     924.2      506.     924.1      511.     924.2      539.     924.6       562.
GR    924.8      572.     925.8      614.     927.5      666.     931.3      770.

ET                          4.1       181       826
X1   304.01        47      363.      429.     870.0    1175.0    1220.0
GR    935.3        0.     933.7       37.     932.0       73.     930.4      109.     929.3       136.
GR    929.3      136.     929.3      145.     929.0      181.     929.0      182.     928.6       218.
GR    926.2      254.     926.5      272.     926.5      272.     927.0      290.     926.6       317.
GR    926.6      317.     926.6      327.     926.5      363.     923.5      364.     923.3       364.
GR    921.9      370.     920.7      375.     920.6      376.     920.5      376.     919.9       386.
GR    919.7      389.     919.7      390.     919.5      392.     919.3      397.     918.8       404.
GR    919.8      409.     921.1      413.     921.4      416.     925.0      429.     923.0       429.
GR    922.8      430.     924.8      470.     925.1      494.     925.2      512.     924.5       553.
GR    924.4      559.     924.4      595.     924.7      624.     924.9      636.     925.9       689.
GR    927.4      754.     930.6      885.

ET                          4.1       137       706
1
   03JAN94      08:21:33                                                                          PAGE   64


              VALLEY SECTION BN (4)
X1   285810        19      400.      450.    1315.0     975.0    1215.0
GR    930.0         0     925.0       150     925.2       200     924.9       300     925.3       350
GR    926.2       400     922.3       401     920.4       410     919.9       420     918.9       430
GR    920.9       440     925.4       450     922.5       451     924.9       500     925.3       550
GR    924.7       600     924.5       650     924.9       700     930.0      1000

ET                          4.1       120       670
X1   305.01        48      362.      413.     640.0     900.0     940.0
GR    932.5        0.     931.5       36.     929.8       72.     927.1      136.     927.1       136.
GR    926.9      145.     926.5      180.     926.5      181.     926.2      217.     926.0       253.
GR    926.0      272.     926.0      272.     926.1      290.     926.3      316.     926.3       317.
GR    926.4      325.     926.9      362.     923.3      363.     921.4      372.     920.8       382.
GR    919.9      392.     921.6      402.     921.7      402.     925.2      412.     926.2       413.
GR    924.1      413.     923.9      414.     923.7      415.     924.9      441.     925.9       455.
GR    925.9      456.     927.1      488.     927.2      498.     927.2      499.     927.1       507.
GR    926.9      538.     926.9      542.     926.9      542.     926.9      585.     926.9       585.
GR    927.1      598.     927.2      601.     927.3      627.     927.3      628.     928.4       693.
GR    928.4      697.     929.9      790.     931.4      886.

ET                          4.1       130       436
X1   287.01        37      325.      376.     730.0     630.0     930.0
GR    935.0        0.     934.2       32.     932.3       65.     929.1      122.     928.8       130.
GR    927.7      162.     927.3      195.     927.1      227.     927.1      244.     927.1       260.
GR    927.3      284.     927.3      292.     927.6      325.     924.3      326.     922.4       335.
GR    921.7      345.     920.9      355.     922.4      365.     925.4      375.     927.0       376.
GR    925.2      377.     924.8      378.     925.7      400.     926.9      412.     928.9       440.
GR    929.0      448.     929.0      456.     929.0      482.     929.0      485.     929.3       521.
GR    929.5      532.     929.6      535.     929.7      557.     930.5      612.     930.5       616.
GR    931.6      694.     932.8      775.

ET                          4.1       144       365
X1   354.01        51      288.      339.     585.0     790.0     940.0
```

```
GR    937.5       0.     937.0       28.     936.9       29.     934.8       58.     931.1      108.
GR    930.6     115.     928.9      143.     928.9      144.     928.5      173.     928.2      201.
GR    928.2     201.     928.2      216.     928.1      230.     928.3      251.     928.3      258.
GR    928.3     259.     928.3      288.     925.3      289.     923.4      298.     922.6      308.
GR    921.9     318.     923.1      328.     923.2      328.     925.6      338.     927.8      339.
GR    926.4     340.     926.0      340.     926.0      341.     926.5      358.     926.6      359.
GR    927.9     368.     930.7      391.     930.7      391.     930.8      397.     930.9      404.
GR    931.0     404.     931.1      425.     931.2      425.     931.2      427.     931.7      457.
GR    931.9     465.     932.0      468.     932.1      468.     932.1      486.     932.6      530.
GR    932.7     531.     932.7      533.     932.7      534.     933.3      597.     933.4      597.
GR    934.2     663.

ET                        4.1      130       320
X1   233.01      29      250.      302.     585.0     790.0     940.0
GR    940.0       0.     939.7       25.     937.3       50.     932.5      100.     930.1      125.
GR    929.6     150.     929.3      175.     929.2      200.     929.2      225.     928.9      250.
GR    926.3     251.     924.3      260.     923.4      270.     922.8      280.     923.8      291.
GR    925.9     301.     928.5      302.     927.1      303.     927.4      317.     932.5      342.
GR    932.9     352.     933.3      368.     934.4      399.     934.5      401.     934.8      449.
GR    934.8     451.     935.1      500.     935.1      500.     935.5      550.
1
   03JAN94      08:21:33                                                                    PAGE   65


X1   288.01      35      250.      303.    1590.0    1285.0    1885.0
GR    947.5       0.     947.0       25.     943.4       50.     936.3      100.     932.7      125.
GR    932.0     150.     931.5      175.     931.1      200.     930.9      225.     930.3      250.
GR    928.4     251.     926.2      260.     925.2      270.     924.8      280.     925.3      292.
GR    926.3     302.     926.4      302.     930.1      303.     929.4      304.     929.6      318.
GR    929.6     318.     936.5      343.     936.6      343.     936.9      353.     937.4      368.
GR    937.4     369.     939.0      399.     939.0      400.     939.1      402.     939.8      449.
GR    939.8     450.     939.8      451.     940.4      500.     940.4      500.     940.8      550.

NC      .07       .07      .040
              VALLEY SECTION BO (3)
X1   293340      21      250.      304.    1600.0    2000.0    1895.0
GR    954.9       0     954.2       25     935.3      125     934.3      150     933.6      175
GR    933.0     200     932.6      225     931.7      250     930.4      251     928.1      260
GR    926.9     270     926.7      280     926.7      303     931.6      304     931.7      319
GR    940.6     344     941.5      369     943.6      400     944.8      450     945.7      500
GR    946.0     550

              VALLEY SECTION BO MOVED UPSTREAM (3)
X1   295627      21      250.      304.    2287.0    1187.0    2287.0                2.10
GR    954.9       0     954.2       25     935.3      125     934.3      150     933.6      175
GR    933.0     200     932.6      225     931.7      250     930.4      251     928.1      260
GR    926.9     270     926.7      280     926.7      303     931.6      304     931.7      319
GR    940.6     344     941.5      369     943.6      400     944.8      450     945.7      500
GR    946.0     550

NC                                  .5       1.0
ET                4.1       4.1      252       302
X1   295947                                  320       320       320                 .21

ET                4.1       4.1    181.6     221.6
X1   295967      34     223.2     276.6      20.0      20.0      20.0       0.8
GR    957.8       0     956.6       25     955.9       50     951.2       75     946.5      100
GR    941.8     125     937.1      150     936.0      175     935.3      200     934.7      220
GR    933.3    223.2     931.0     223.3     930.3      227     930.5      232     929.8      237
GR    930.0     242     929.5     246.5     933.3     246.6     933.3     251.6     929.5     251.7
GR    933.2    253.2     929.5     253.3     928.2      257     928.6      262     929.6      267
GR    930.3     272     930.5     276.5     933.2     276.6     942.3      300     943.2      325
GR    945.3     350     944.6      375     943.5      425     942.4      500

NC      .03       .03       .03
ET                4.1      4.11    181.6     221.6
              DOWNSTREAM FACE VERNON ROAD (2B)
X1   295968                                    1         1         1
X2                                                                                  0.8
BT      -29       0     958.8                 75     956.7                 100     956.3
BT                125     955.3                150     953.9                 175     952.8
BT                200     951.3                220     950.3               223.2     950.2     933.3
BT                227     950.1     940.3      232     949.9    942.55      237     949.7     943.3
BT                242     949.3    942.55     246.6     949.1     940.3     251.6     949.0     933.3
BT               253.2     948.9     933.2     253.3     948.9     940.5      257     948.8    942.75
BT                262     948.6     943.5      267     948.4    942.75      272     948.1     940.5
BT               276.5     948.0     933.2     276.6     948.0     933.2      300     947.1
1
   03JAN94      08:21:33                                                                    PAGE   66
```

```
BT                 325      946.0                  350       945.3                  375       944.6
BT                 425      943.5                  500       942.4

ET                 4.1       4.11      181.6      221.6
                UPSTREAM FACE VERNON ROAD
                BRIDGE SKEW DUE TO ROAD ORIENTATION WITH RESPECT TO FLOODPLAIN
X1   296055                                         87         87         87
X2                                                                        1

ET                 4.1       4.1       180.6      222.6
NC      .07        .08       .040
X1   296056                                          1          1          1

ET                 4.1       4.1        241       313
                VALLEY SECTION BO MOVED UPSTREAM (3)
X1   296071         21       250        304        15         15         15                  2.56
GR    954.9          0     954.2         25     935.3        125      934.3        150      933.6        175
GR    933.0        200     932.6        225     931.7        250      930.4        251      928.1        260
GR    926.9        270     926.7        280     926.7        303      931.6        304      931.7        319
GR    940.6        344     941.5        369     943.6        400      944.8        450      945.7        500
GR    946.0        550

ET                          1.5
X1   296148                                         95         65         77

NC                 .12                   .1        .3
ET                          4.1       1070      1320
                VALLEY SECTION BP (1)
X1   298190         27     1236.      1300.    2150.0     1800.0     2042.0
GR    950.0          0     940.0        860     935.9       1000      936.2       1050      936.3       1105
GR    937.1       1130     938.4       1155     937.4       1180      935.7       1205      935.6       1236
GR    934.8       1240     933.0       1250     931.1       1260      931.1       1270      931.5       1280
GR    932.3       1290     934.8       1299     937.0       1300      936.8       1320      952.5       1360
GR    951.7       1390     947.0       1410     951.4       1435      952.3       1460      953.5       1485
GR    953.5       1510     953.9       1535

ET                          4.1       1070      1320
                VALLEY SECTION BP MOVED UPSTREAM (1)
                UPSTREAM STUDY LIMIT, CORPORATE & COUNTY BOUNDARY
X1   298500                                        310        310        310                  0.27
1
```


THIS RUN EXECUTED 03JAN94 08:22:24

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

 Version   4.6.2;  May 1991
*************************************
```

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

100-YEAR DISCHARGE

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
.000	685.36	.00	685.96	478.37	1785.71	4909.18	105.11	.00	.00	750.00	810.00	.00
.000	685.46	.10	686.08	299.00	1682.80	5006.45	110.76	299.00	525.00	750.00	810.00	824.00
600.000	686.14	.00	686.67	498.17	1922.38	4767.54	110.08	.00	.00	750.00	810.00	.00
600.000	686.24	.10	686.81	299.00	1784.99	4898.53	116.49	299.00	525.00	750.00	810.00	824.00
3.010	690.79	.00	691.39	218.15	753.87	5950.19	95.94	.00	.00	262.00	353.00	.00
3.010	690.90	.11	691.48	214.65	778.36	5924.53	97.10	240.00	125.00	262.00	353.00	365.00
8854.000	695.28	.00	695.71	388.27	666.28	5850.02	283.70	.00	.00	275.00	397.00	.00
8854.000	695.36	.08	695.85	265.00	471.39	6149.31	179.30	265.00	205.00	275.00	397.00	470.00
9154.000	695.62	.00	696.18	250.00	374.75	6283.98	141.27	250.00	215.00	275.00	397.00	465.00
9154.000	695.71	.09	696.25	250.00	383.56	6266.48	149.96	250.00	215.00	275.00	397.00	465.00

9354.000	695.90	.00	696.49	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
9354.000	695.98	.08	696.56	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
9355.000	695.90	.00	696.50	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
9355.000	695.98	.08	696.57	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
9400.000	695.99	.00	696.58	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
9400.000	696.06	.08	696.64	149.20	.00	6800.00	.00	149.20	70.90	70.93	220.10	220.10
9401.000	696.02	.00	696.59	150.80	.55	6798.35	1.10	150.80	70.20	70.93	220.10	221.00
9401.000	696.09	.07	696.65	150.80	.56	6798.29	1.15	150.80	70.20	70.93	220.10	221.00
9576.000	696.53	.00	696.88	500.98	433.80	5663.33	702.87	.00	.00	275.00	397.00	.00
9576.000	696.52	-.01	696.92	374.40	452.52	5924.55	422.93	375.00	165.00	275.00	397.00	540.00
9.010	700.27	.00	700.68	383.13	66.28	5625.76	1107.96	.00	.00	262.00	365.00	.00
9.010	700.40	.13	700.81	327.00	67.80	5631.32	1100.88	327.00	239.00	262.00	365.00	566.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
18600.000	704.22	.00	704.70	349.26	62.63	5617.31	1120.07	.00	.00	250.00	334.00	.00
18600.000	704.29	.07	704.80	230.00	56.77	5755.79	987.44	230.00	240.00	250.00	334.00	470.00
10.010	707.39	.00	707.94	209.24	50.34	6416.43	333.23	.00	.00	250.00	346.00	.00
10.010	707.50	.10	708.04	170.00	49.20	6436.93	313.87	170.00	240.00	250.00	346.00	410.00
25825.000	710.44	.00	710.92	189.13	27.45	6653.43	119.11	.00	.00	250.00	358.00	.00
25825.000	710.49	.05	710.97	182.67	18.52	6659.54	121.95	185.00	245.00	250.00	358.00	430.00
25925.000	710.78	.00	711.05	171.99	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25925.000	710.83	.05	711.09	172.20	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25926.000	710.77	.00	711.06	171.96	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25926.000	710.82	.05	711.11	172.17	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25974.000	710.80	.00	711.09	172.06	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25974.000	710.85	.05	711.14	172.27	.00	6800.00	.00	202.50	70.90	70.93	273.35	273.40
25975.000	710.84	.00	711.10	172.24	.00	6800.00	.00	203.80	70.20	70.93	273.35	274.00
25975.000	710.89	.05	711.15	172.45	.00	6800.00	.00	203.80	70.20	70.93	273.35	274.00
26075.000	710.80	.00	711.26	190.73	32.57	6620.76	146.67	.00	.00	250.00	358.00	.00
26075.000	710.85	.05	711.30	187.00	33.26	6616.87	149.87	187.00	238.00	250.00	358.00	425.00
16.010	714.28	.00	714.82	144.93	77.12	6661.43	61.45	.00	.00	250.00	351.00	.00
16.010	714.29	.01	714.83	143.00	77.43	6659.52	63.05	143.00	225.00	250.00	351.00	368.00
20.030	715.76	.00	716.28	181.84	284.00	6464.90	51.09	.00	.00	250.00	348.00	.00
20.030	715.76	.01	716.28	180.00	284.57	6463.04	52.39	180.00	182.00	250.00	348.00	362.00
20.080	717.43	.00	717.72	443.14	1742.12	5015.74	42.13	.00	.00	400.00	494.00	.00
20.080	717.53	.10	717.85	308.63	1550.82	5249.18	.00	.06	185.37	400.00	494.00	494.00
20.070	717.56	.00	717.94	236.55	1128.96	5622.67	48.36	358.00	271.00	400.00	494.00	629.00
20.070	717.66	.11	718.04	236.73	1154.77	5596.15	49.09	358.00	271.00	400.00	494.00	629.00
35244.000	717.89	.00	718.46	128.27	355.62	6388.00	56.39	138.00	228.00	250.00	343.00	366.00
35244.000	717.99	.10	718.55	128.42	359.10	6383.62	57.28	138.00	228.00	250.00	343.00	366.00
35319.000	717.99	.00	718.54	100.10	.17	6799.83	.00	100.10	99.90	100.00	200.00	200.00
35319.000	718.08	.09	718.62	100.10	.17	6799.83	.00	100.10	99.90	100.00	200.00	200.00
35320.000	717.99	.00	718.54	100.10	.07	6799.93	.00	100.10	99.90	100.00	200.00	200.00
35320.000	718.08	.09	718.62	100.10	.07	6799.93	.00	100.10	99.90	100.00	200.00	200.00
35340.000	718.00	.00	718.55	100.10	.07	6799.93	.00	100.10	99.90	100.00	200.00	200.00
35340.000	718.09	.09	718.63	100.10	.07	6799.93	.00	100.10	99.90	100.00	200.00	200.00
35341.000	718.01	.00	718.55	102.00	6.03	6786.27	7.70	102.00	99.00	100.00	200.00	201.00
35341.000	718.10	.09	718.64	102.00	6.04	6786.27	7.68	102.00	99.00	100.00	200.00	201.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	35466.000	718.54	.00	718.78	357.79	1820.67	4875.80	103.52	.00	.00	255.00	348.00	.00
	35466.000	718.57	.03	718.84	313.00	1575.28	5120.69	104.03	313.00	45.00	255.00	348.00	358.00
	22.010	720.17	.00	720.55	235.12	376.85	6322.78	100.37	.00	.00	243.00	357.00	.00
	22.010	720.29	.12	720.65	231.00	388.83	6309.01	102.16	231.00	145.00	243.00	357.00	376.00
	22.020	722.10	.00	722.38	473.47	225.56	6267.73	306.71	.00	.00	237.00	371.00	.00
	22.020	722.17	.07	722.46	301.63	169.96	6370.81	259.23	.02	195.12	237.00	371.00	496.75
	45745.000	723.54	.00	723.71	524.37	95.50	5469.30	1235.20	.00	.00	230.00	385.00	.00
	45745.000	723.63	.09	723.80	443.99	32.29	5564.07	1203.64	.02	209.54	230.00	385.00	653.53
	46623.000	723.86	.00	724.03	523.42	92.50	5482.34	1225.16	749.90	.10	230.00	385.00	750.00
	46623.000	723.95	.09	724.13	442.01	28.60	5578.41	1193.00	.02	210.97	230.00	385.00	652.98
	47223.000	724.10	.00	724.32	486.55	101.51	6012.48	686.01	345.00	164.00	230.00	385.00	509.00
	47223.000	724.19	.09	724.41	488.01	105.09	6001.77	693.15	345.00	164.00	230.00	385.00	509.00
	47423.000	724.22	.00	724.65	396.74	.00	6567.76	232.24	145.00	264.00	230.00	385.00	409.00
	47423.000	724.30	.09	724.73	397.91	.00	6558.72	241.28	145.00	264.00	230.00	385.00	409.00
	47473.000	724.27	.00	724.83	384.26	.00	6670.99	129.01	120.00	277.00	230.00	385.00	397.00
	47473.000	724.35	.08	724.90	385.41	.00	6660.80	139.20	120.00	277.00	230.00	385.00	397.00
	47523.000	724.33	.00	725.07	373.10	.00	6751.31	48.69	95.00	289.00	230.00	385.00	384.00
	47523.000	724.41	.08	725.14	374.23	.00	6738.60	61.40	95.00	289.00	230.00	385.00	384.00
*	47546.000	724.38	.00	725.87	331.78	.00	6619.06	180.94	83.50	50.00	49.50	123.50	133.50
*	47546.000	724.46	.08	725.92	331.99	.00	6603.98	196.02	83.50	50.00	49.50	123.50	133.50
	47600.000	724.38	.00	725.87	331.79	.00	6618.54	181.45	83.50	50.00	49.50	123.50	133.50
	47600.000	724.46	.08	725.92	332.00	.00	6603.29	196.70	83.50	50.00	49.50	123.50	133.50
*	47603.000	725.85	.00	726.38	337.01	.00	6417.27	172.73	90.00	263.00	230.00	385.00	353.00
*	47603.000	725.86	.01	726.39	337.01	.00	6415.67	174.32	90.00	263.00	230.00	385.00	353.00
*	47616.000	726.18	.00	726.49	350.03	.00	6417.83	172.17	116.00	250.00	230.00	385.00	366.00
*	47616.000	726.20	.02	726.51	350.03	.00	6414.82	175.18	116.00	250.00	230.00	385.00	366.00
*	47656.000	726.39	.00	726.56	390.02	83.10	6251.87	255.02	196.00	210.00	230.00	385.00	406.00
*	47656.000	726.42	.03	726.59	390.02	83.57	6248.83	257.61	196.00	210.00	230.00	385.00	406.00
	47816.000	726.53	.00	726.63	436.95	235.31	5209.02	1145.67	.00	.00	230.00	385.00	.00
	47816.000	726.55	.02	726.66	381.67	199.69	5282.66	1107.66	.02	186.30	230.00	385.00	567.98
	29.010	727.39	.00	727.52	484.96	261.81	4826.79	1501.41	.00	.00	230.00	364.00	.00
	29.010	727.43	.04	727.57	440.26	216.60	4902.56	1470.84	.02	185.28	230.00	364.00	625.54
	29.020	728.63	.00	728.78	732.16	305.40	4431.96	1852.64	.00	.00	229.00	344.00	.00
	29.020	728.69	.07	728.86	528.26	239.98	4512.38	1837.64	.02	184.47	229.00	344.00	712.73

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	29.030	730.13	.00	730.26	568.24	466.23	3451.35	2672.42	.00	.00	229.00	323.00	.00
	29.030	730.20	.07	730.33	490.00	464.65	3440.83	2684.52	490.00	140.00	229.00	323.00	630.00
	65375.000	731.46	.00	731.54	999.61	994.64	2449.59	3145.77	.00	.00	254.00	328.00	.00
	65375.000	731.53	.07	731.62	775.00	914.76	2540.57	3134.67	775.00	95.00	254.00	328.00	870.00
	68635.000	732.11	.00	732.15	892.08	2722.58	2251.40	1616.01	.00	.00	632.00	718.00	.00
*	68635.000	732.20	.10	732.25	761.00	2722.50	2289.80	1577.70	761.00	213.00	632.00	718.00	974.00
*	48.010	732.31	.00	732.43	1091.25	3596.80	2969.80	23.40	.00	.00	1034.00	1124.00	.00
*	48.010	732.40	.09	732.54	845.00	3461.73	3127.14	1.12	845.00	280.00	1034.00	1124.00	1125.00
	52.010	732.51	.00	732.75	752.29	2909.94	3679.25	.81	.00	.00	712.00	804.00	.00
	52.010	732.63	.12	732.85	755.83	2985.28	3603.18	1.54	.00	.00	712.00	804.00	.00
	48.020	732.93	.00	733.27	510.23	2479.41	4110.59	.00	.00	.00	487.00	581.00	.00
	48.020	733.01	.08	733.34	450.00	2496.78	4093.22	.00	450.00	130.00	487.00	581.00	580.00
	71612.000	733.82	.00	734.28	534.92	2068.70	4521.30	.00	.00	.00	440.00	538.00	.00
	71612.000	733.87	.05	734.35	450.00	2001.00	4589.00	.00	450.00	85.00	440.00	538.00	535.00

72012.000	734.47	.00	734.90	336.06	1936.37	4653.63	.00	575.00	200.00	440.00	538.00	775.00
72012.000	734.55	.08	734.97	336.21	1971.17	4618.83	.00	575.00	200.00	440.00	538.00	775.00
72372.000	734.90	.00	735.40	150.37	852.99	5737.01	.00	151.10	99.90	147.00	251.00	251.00
72372.000	734.97	.07	735.46	150.38	857.77	5732.22	.00	151.10	99.90	147.00	251.00	251.00
72373.000	734.92	.00	735.41	150.37	1397.40	5192.59	.00	151.10	99.90	147.00	251.00	251.00
72373.000	734.99	.07	735.47	150.38	1405.48	5184.52	.00	151.10	99.90	147.00	251.00	251.00
72427.000	734.99	.00	735.47	150.38	1405.60	5184.40	.00	151.10	99.90	147.00	251.00	251.00
72427.000	735.05	.07	735.53	150.38	1412.81	5177.19	.00	151.10	99.90	147.00	251.00	251.00
72428.000	734.99	.00	735.52	150.59	637.21	5952.79	.00	153.00	99.00	147.00	251.00	252.00
72428.000	735.05	.07	735.58	150.61	640.68	5949.32	.00	153.00	99.00	147.00	251.00	252.00
72523.000	735.12	.00	735.78	246.45	1061.66	5528.34	.00	485.00	90.00	240.00	338.00	575.00
72523.000	735.19	.07	735.87	227.29	943.97	5646.03	.00	.13	109.26	240.00	338.00	338.00
72600.000	735.57	.00	736.00	324.16	1645.58	4944.42	.00	562.00	613.00	840.00	938.00	1175.00
72600.000	735.66	.10	736.11	307.34	1561.22	5028.78	.00	.13	629.99	840.00	938.00	938.00
72950.000	736.17	.00	736.43	705.76	2311.02	4278.98	.00	.00	.00	840.00	938.00	.00
72950.000	736.26	.10	736.54	461.02	2242.11	4347.89	.00	.03	476.85	840.00	938.00	938.00
73765.000	736.78	.00	737.05	699.03	2279.16	4310.84	.00	.00	.00	840.00	938.00	.00
73765.000	736.88	.10	737.16	455.07	2205.79	4384.21	.00	.03	482.68	840.00	938.00	938.00
74580.000	737.42	.00	737.71	492.51	2223.89	4366.11	.00	730.00	445.00	840.00	938.00	1175.00
74580.000	737.52	.09	737.81	449.68	2180.98	4409.02	.00	450.00	488.00	840.00	938.00	938.00

	SECNO	CWSEL	DIFKWS	EG	TOPWIO	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	75670.000	738.44	.00	738.92	222.28	1115.09	5474.81	.09	333.00	718.00	840.00	938.00	1051.00
	75670.000	738.52	.07	738.99	222.74	1126.61	5463.24	.15	333.00	718.00	840.00	938.00	1051.00
	75870.000	738.67	.00	739.24	173.27	714.15	5875.60	.26	233.00	768.00	840.00	938.00	1001.00
	75870.000	738.74	.07	739.30	173.69	720.94	5868.72	.35	233.00	768.00	840.00	938.00	1001.00
	76070.000	738.90	.00	739.64	124.77	584.94	5990.03	15.02	.00	.00	255.00	325.00	.00
	76070.000	738.96	.06	739.69	125.08	588.89	5985.59	15.52	.00	.00	255.00	325.00	.00
	76120.000	739.31	.00	739.81	176.50	619.03	5968.47	2.51	230.00	170.00	240.00	338.00	400.00
	76120.000	739.36	.06	739.86	176.85	623.05	5964.18	2.77	230.00	170.00	240.00	338.00	400.00
	76180.000	739.50	.00	739.91	235.80	1061.31	5526.81	1.88	465.00	110.00	240.00	338.00	575.00
	76180.000	739.55	.05	739.95	236.14	1067.61	5520.30	2.09	465.00	110.00	240.00	338.00	575.00
*	76432.000	740.04	.00	740.16	575.00	1245.07	3591.04	1753.89	.00	.00	250.00	329.00	.00
	76432.000	739.76	-.28	740.14	226.00	503.40	5232.46	854.14	226.00	182.00	250.00	329.00	408.00
	77032.000	740.25	.00	740.57	275.00	1084.27	4939.85	565.88	275.00	135.00	250.00	329.00	410.00
	77032.000	740.15	-.11	740.59	195.00	585.94	5550.01	454.05	195.00	195.00	250.00	329.00	390.00
	77382.000	740.50	.00	741.17	97.19	.00	6547.44	42.56	139.10	70.90	70.29	173.24	210.00
	77382.000	740.44	-.07	741.11	96.90	.00	6548.20	41.80	139.10	70.90	70.29	173.24	210.00
	77383.000	740.50	.00	741.26	97.19	.00	6419.96	170.04	139.10	70.90	70.29	173.24	210.00
	77383.000	740.44	-.07	741.20	96.90	.00	6423.03	166.97	139.10	70.90	70.29	173.24	210.00
	77418.000	740.58	.00	741.32	97.54	.00	6416.31	173.68	139.10	70.90	70.29	173.24	210.00
	77418.000	740.52	-.06	741.27	97.25	.00	6419.33	170.67	139.10	70.90	70.29	173.24	210.00
*	77419.000	740.78	.00	741.39	99.73	.06	6465.71	124.23	140.80	70.20	70.29	173.24	211.00
*	77419.000	740.72	-.06	741.34	99.46	.06	6467.63	122.30	140.80	70.20	70.29	173.24	211.00
	77484.000	740.82	.00	741.44	98.61	.00	6472.20	117.80	139.10	70.90	70.29	173.24	210.00
	77484.000	740.76	-.06	741.38	98.35	.00	6473.99	116.01	139.10	70.90	70.29	173.24	210.00
*	77485.000	740.83	.00	741.54	98.61	.00	6404.74	185.26	139.10	70.90	70.29	173.24	210.00
*	77485.000	740.77	-.06	741.48	98.35	.00	6407.62	182.38	139.10	70.90	70.29	173.24	210.00
	77520.000	740.90	.00	741.60	98.93	.00	6401.35	188.65	139.10	70.90	70.29	173.24	210.00
	77520.000	740.84	-.06	741.55	98.67	.00	6404.18	185.82	139.10	70.90	70.29	173.24	210.00
	77521.000	741.06	.00	741.65	100.98	.30	6500.36	89.34	140.80	70.20	70.29	173.24	211.00
	77521.000	741.00	-.06	741.60	100.73	.30	6501.58	88.12	140.80	70.20	70.29	173.24	211.00

*	77546.000	741.24	.00	741.72	150.00	2144.30	4087.05	358.65	150.00	215.00	250.00	329.00	365.00
*	77546.000	741.19	-.05	741.67	150.00	2138.49	4093.69	357.82	150.00	215.00	250.00	329.00	365.00
*	77596.000	741.56	.00	741.83	250.00	3381.37	2602.66	605.97	250.00	165.00	250.00	329.00	415.00
*	77596.000	741.51	-.05	741.79	250.00	3374.32	2610.24	605.44	250.00	165.00	250.00	329.00	415.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	77746.000	741.86	.00	741.94	575.00	4573.85	1231.21	784.94	.00	.00	250.00	329.00	.00
*	77746.000	741.70	-.16	741.85	375.00	4068.23	1819.43	702.34	375.00	100.00	250.00	329.00	475.00
	81550.000	741.96	.00	742.00	1276.80	4856.26	923.02	810.72	.00	.00	950.00	1029.00	.00
	81550.000	741.90	-.06	742.08	440.00	3480.00	2060.35	1049.65	440.00	810.00	950.00	1029.00	1250.00
*	82639.000	742.01	.00	742.18	500.00	1133.32	3808.29	1648.39	500.00	740.00	950.00	1029.00	1240.00
*	82639.000	742.06	.05	742.26	435.00	1064.77	4058.61	1466.63	435.00	765.00	950.00	1029.00	1200.00
	83339.000	742.36	.00	742.79	223.00	590.33	5177.45	822.22	223.00	878.00	950.00	1029.00	1101.00
	83339.000	742.43	.07	742.86	223.00	596.67	5165.18	828.15	223.00	878.00	950.00	1029.00	1101.00
	83610.000	742.62	.00	743.27	87.10	.00	6590.00	.00	87.10	76.90	73.15	172.48	164.00
	83610.000	742.69	.07	743.33	87.10	.00	6590.00	.00	87.10	76.90	73.15	172.48	164.00
	83646.000	743.22	.00	743.81	87.10	.00	6590.00	.00	87.10	76.90	73.15	172.48	164.00
	83646.000	743.29	.08	743.88	87.10	.00	6590.00	.00	87.10	76.90	73.15	172.48	164.00
	83677.000	743.42	.00	743.89	148.00	709.00	5553.99	327.01	148.00	216.00	250.00	329.00	364.00
	83677.000	743.49	.07	743.96	148.00	714.10	5546.84	329.06	148.00	216.00	250.00	329.00	364.00
*	83887.000	744.08	.00	744.15	575.00	2562.75	2788.59	1238.67	.00	.00	250.00	329.00	.00
*	83887.000	744.12	.04	744.22	500.00	2339.73	3073.04	1177.23	500.00	40.00	250.00	329.00	540.00
*	85275.000	744.34	.00	744.51	551.47	1757.66	4610.11	222.22	567.00	200.00	600.00	701.00	767.00
*	85275.000	744.43	.09	744.60	520.00	1756.15	4606.65	227.20	520.00	220.00	600.00	701.00	740.00
	85825.000	744.64	.00	744.69	873.72	2564.67	2714.27	1311.06	900.00	300.00	800.00	887.00	1200.00
	85825.000	744.73	.09	744.79	800.00	2703.70	2832.32	1053.98	800.00	300.00	800.00	887.00	1100.00
	87215.000	744.98	.00	745.04	889.98	3537.44	3052.56	.00	924.00	420.00	1200.00	1344.00	1344.00
	87215.000	745.08	.11	745.16	820.28	3402.48	3187.52	.00	854.00	490.00	1200.00	1344.00	1344.00
*	88600.000	745.51	.00	745.71	600.00	1997.41	3978.84	613.75	600.00	50.00	400.00	490.00	650.00
	88600.000	745.64	.13	745.83	600.00	2021.74	3940.82	627.44	600.00	50.00	400.00	490.00	650.00
	89700.000	746.44	.00	746.74	460.00	341.71	4796.97	1451.32	460.00	230.00	295.00	375.00	690.00
	89700.000	746.52	.08	746.82	440.00	293.75	4825.37	1470.87	440.00	240.00	295.00	375.00	680.00
	90800.000	747.55	.00	747.86	663.85	2387.28	4085.26	117.45	724.00	720.00	1350.00	1420.00	1444.00
	90800.000	747.62	.07	747.92	653.00	2418.32	4056.15	115.52	653.00	782.00	1350.00	1420.00	1435.00
*	91350.000	748.17	.00	748.28	544.61	178.79	6009.90	401.30	562.00	600.00	725.00	1013.00	1162.00
*	91350.000	748.22	.05	748.33	509.00	183.75	6032.66	373.59	509.00	600.00	725.00	1013.00	1109.00
	91800.000	748.36	.00	748.53	370.00	145.67	5324.66	1119.67	370.00	590.00	682.00	830.00	960.00
	91800.000	748.41	.05	748.57	370.00	148.85	5319.10	1122.06	370.00	590.00	682.00	830.00	960.00
	92175.000	748.52	.00	748.86	291.36	182.17	5835.43	572.40	315.00	288.00	386.00	506.00	603.00
	92175.000	748.56	.04	748.90	292.04	184.87	5828.68	576.45	315.00	288.00	386.00	506.00	603.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
92550.000	748.74	.00	749.42	135.30	95.34	6400.77	93.88	.00	.00	90.00	182.00	.00
92550.000	748.77	.03	749.46	112.00	75.95	6436.73	77.32	112.00	80.00	90.00	182.00	192.00
92900.000	749.30	.00	749.90	129.35	220.02	6340.80	29.18	140.00	60.00	90.00	182.00	200.00
92900.000	749.34	.04	749.94	129.39	221.36	6339.25	29.39	140.00	60.00	90.00	182.00	200.00
93211.000	749.85	.00	750.39	104.90	.00	6590.00	.00	.00	.00	92.82	209.30	.00
93211.000	749.89	.03	750.42	105.05	.00	6590.00	.00	.00	92.82	92.82	209.30	209.30
93221.000	749.88	.00	750.41	104.97	.00	6590.00	.00	.00	.00	92.82	209.30	.00

	93221.000	749.91	.03	750.44	105.12	.00	6590.00	.00	.00	92.82	92.82	209.30	209.30
	93279.000	749.99	.00	750.52	105.45	.00	6590.00	.00	.00	.00	92.82	209.30	.00
	93279.000	750.03	.03	750.55	105.58	.00	6590.00	.00	.00	92.82	92.82	209.30	209.30
	93289.000	750.02	.00	750.54	105.55	.00	6590.00	.00	.00	.00	92.82	209.30	.00
	93289.000	750.05	.03	750.57	105.69	.00	6590.00	.00	.00	92.82	92.82	209.30	209.30
*	93489.000	750.40	.00	750.78	122.62	23.45	6548.87	17.68	.00	.00	50.00	160.00	.00
*	93489.000	750.43	.03	750.81	119.94	23.57	6554.22	12.21	120.00	43.00	50.00	160.00	163.00
	93650.000	750.47	.00	750.95	148.50	.00	6348.59	241.41	.00	.00	20.00	135.00	.00
	93650.000	750.48	.00	750.99	122.73	.00	6508.15	81.85	124.00	24.00	20.00	135.00	148.00
*	94800.000	751.55	.00	751.64	710.00	189.17	3442.12	2958.70	710.00	90.00	117.00	206.00	800.00
*	94800.000	751.60	.05	751.69	710.00	189.37	3428.85	2971.78	710.00	90.00	117.00	206.00	800.00
*	95200.000	751.73	.00	751.95	476.21	585.04	3806.73	2198.23	.00	.00	100.00	180.00	.00
*	95200.000	751.76	.03	752.03	410.00	615.39	4065.37	1909.24	410.00	10.00	100.00	180.00	420.00
	95550.000	752.04	.00	752.46	265.00	739.59	4871.53	978.89	265.00	13.00	100.00	180.00	278.00
	95550.000	752.13	.09	752.54	265.00	747.21	4855.71	987.08	265.00	13.00	100.00	180.00	278.00
*	95600.000	752.15	.00	753.02	251.89	655.66	4715.40	1218.94	.00	.00	159.00	215.00	.00
*	95600.000	752.23	.09	753.07	251.55	678.04	4675.55	1236.41	275.00	50.00	159.00	215.00	325.00
	95605.000	752.18	.00	753.04	252.32	659.08	4707.97	1222.95	.00	.00	159.00	215.00	.00
	95605.000	752.26	.08	753.09	251.86	681.50	4668.40	1240.10	275.00	50.00	159.00	215.00	325.00
*	95865.000	752.96	.00	753.70	94.00	.00	6590.00	.00	.00	.00	94.00	188.00	.00
	95865.000	753.02	.06	753.75	94.00	.00	6590.00	.00	.00	.00	94.00	188.00	.00
	95905.000	753.04	.00	753.97	79.00	.00	6590.00	.00	79.00	103.50	94.00	188.00	182.50
	95905.000	753.11	.07	754.02	79.00	.00	6590.00	.00	79.00	103.50	94.00	188.00	182.50
*	95909.000	753.06	.00	754.60	74.80	.00	6590.00	.00	.00	.00	101.00	178.00	.00
*	95909.000	753.12	.07	754.64	75.06	.00	6590.00	.00	.00	.00	101.00	178.00	.00
	95910.000	753.06	.00	754.75	74.84	.00	6590.00	.00	.00	.00	101.00	178.00	.00
	95910.000	753.13	.07	754.81	75.10	.00	6590.00	.00	.00	.00	101.00	178.00	.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	95930.000	753.35	.00	755.00	76.02	.00	6590.00	.00	.00	.00	101.00	178.00	.00
	95930.000	753.42	.06	755.06	76.28	.00	6590.00	.00	.00	.00	101.00	178.00	.00
*	95931.000	753.93	.00	755.20	77.00	.00	6590.00	.00	.00	.00	101.00	178.00	.00
*	95931.000	754.02	.09	755.27	77.00	.00	6590.00	.00	.00	.00	101.00	178.00	.00
	96015.000	754.25	.00	755.55	165.50	160.19	4913.87	1515.94	.00	.00	50.00	90.00	.00
	96015.000	754.32	.07	755.62	150.00	150.93	4919.62	1519.45	150.00	35.00	50.00	90.00	185.00
	96122.000	754.90	.00	755.90	186.47	322.34	5344.57	923.09	.00	.00	71.00	120.00	.00
	96122.000	754.98	.08	755.96	187.18	327.05	5328.87	934.08	.00	.00	71.00	120.00	.00
	96230.000	755.42	.00	756.15	216.23	527.30	5529.69	533.01	.00	.00	91.00	149.00	.00
	96230.000	755.48	.06	756.20	216.78	533.95	5516.52	539.54	.00	.00	91.00	149.00	.00
*	96445.000	756.04	.00	756.40	256.30	1094.29	5371.36	124.35	.00	.00	131.00	209.00	.00
*	96445.000	756.08	.04	756.45	220.00	1051.85	5445.71	92.45	220.00	15.00	131.00	209.00	235.00
	96650.000	756.33	.00	756.52	275.17	1578.30	4995.30	16.39	288.00	10.00	170.00	265.00	298.00
	96650.000	756.38	.05	756.57	271.44	1556.11	5016.94	16.95	272.00	14.00	170.00	265.00	286.00
	96850.000	756.43	.00	756.85	178.05	798.77	5522.47	268.75	205.00	35.00	144.00	214.00	240.00
	96850.000	756.48	.05	756.90	178.11	802.69	5517.76	269.56	.00	.00	144.00	214.00	.00
*	97050.000	756.62	.00	757.29	75.00	.00	6590.00	.00	.00	.00	120.00	195.00	.00
*	97050.000	756.67	.05	757.33	75.00	.00	6590.00	.00	.00	.00	120.00	195.00	.00
	97078.000	756.67	.00	757.33	75.00	.00	6590.00	.00	.00	.00	120.00	195.00	.00
	97078.000	756.72	.05	757.38	75.00	.00	6590.00	.00	.00	.00	120.00	195.00	.00
	97122.000	758.84	.00	759.33	81.79	.03	6589.97	.00	.00	.00	120.00	195.00	.00
	97122.000	758.88	.05	759.37	84.11	.07	6589.93	.00	95.00	100.00	120.00	195.00	195.00

97132.000	758.85	.00	759.34	82.35	.04	6589.96	.00	.00	.00	120.00	195.00	.00
97132.000	758.89	.05	759.38	84.67	.09	6589.91	.00	95.00	100.00	120.00	195.00	195.00
97213.000	759.07	.00	759.45	145.00	239.85	5497.30	852.85	145.00	35.00	50.00	109.00	180.00
97213.000	758.95	-.12	759.46	95.00	263.96	6064.79	261.25	95.00	35.00	50.00	109.00	130.00
* 97900.000	759.74	.00	759.78	614.70	.00	2550.11	4039.89	615.00	10.00	10.00	84.00	625.00
* 97900.000	759.84	.10	759.88	612.81	.00	2543.32	4046.68	613.00	10.00	10.00	84.00	623.00
98400.000	759.82	.00	759.88	525.00	2455.10	3121.59	1013.31	.00	.00	308.00	386.00	.00
98400.000	759.92	.10	759.98	495.00	2438.22	3190.14	961.64	495.00	15.00	308.00	386.00	510.00
* 98575.000	759.87	.00	759.90	481.00	1068.77	5468.60	52.64	481.00	100.00	330.00	563.00	581.00
* 98575.000	759.97	.10	760.00	471.00	1054.64	5488.84	46.52	471.00	105.00	330.00	563.00	576.00
* 98961.000	759.85	.00	760.03	581.46	49.47	6481.25	59.28	.00	.00	52.00	522.00	.00
* 98961.000	759.95	.10	760.13	470.00	.00	6590.00	.00	.02	52.00	52.00	522.00	522.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
* 98962.000	759.82	.00	760.05	580.84	70.16	6484.56	35.27	.00	.00	52.00	522.00	.00
* 98962.000	759.92	.10	760.14	470.00	.00	6590.00	.00	.02	52.00	52.00	522.00	522.00
98981.000	759.93	.00	760.18	572.23	86.84	6480.79	22.37	.00	.00	52.00	522.00	.00
98981.000	760.02	.09	760.27	470.00	.00	6590.00	.00	.02	52.00	52.00	522.00	522.00
* 98982.000	760.00	.00	760.19	573.48	61.80	6469.67	58.53	.00	.00	52.00	522.00	.00
* 98982.000	760.08	.09	760.28	470.00	.00	6590.00	.00	.02	52.00	52.00	522.00	522.00
* 99150.000	760.24	.00	760.34	449.90	199.51	3192.18	3198.31	449.90	.10	20.00	100.00	450.00
* 99150.000	760.32	.08	760.44	389.90	218.49	3461.81	2909.69	389.90	.10	20.00	100.00	390.00
99750.000	760.45	.00	760.51	635.00	776.90	3488.03	2325.07	635.00	105.00	206.00	311.00	740.00
99750.000	760.56	.12	760.63	635.00	784.85	3449.87	2355.28	635.00	105.00	206.00	311.00	740.00
100735.000	760.67	.00	760.97	223.00	247.80	5865.44	476.76	223.00	140.00	200.00	303.00	363.00
100735.000	760.78	.10	761.07	223.00	254.20	5853.31	482.49	223.00	140.00	200.00	303.00	363.00
* 100935.000	760.73	.00	761.27	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
* 100935.000	760.83	.10	761.36	121.00	.00	6590.00	.00	.00	102.00	102.00	228.00	228.00
100945.000	760.75	.00	761.29	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
100945.000	760.85	.10	761.38	121.00	.00	6590.00	.00	.00	102.00	102.00	228.00	228.00
101000.000	760.86	.00	761.39	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
101000.000	760.95	.10	761.47	121.00	.00	6590.00	.00	.00	102.00	102.00	228.00	228.00
101010.000	760.88	.00	761.40	121.00	.00	6590.00	.00	.00	.00	102.00	228.00	.00
101010.000	760.97	.10	761.49	121.00	.00	6590.00	.00	.00	102.00	102.00	228.00	228.00
* 101067.000	761.28	.00	761.53	185.53	57.14	6494.82	38.03	.00	.00	95.00	235.00	.00
* 101067.000	761.33	.06	761.61	135.00	.00	6590.00	.00	135.00	95.00	95.00	235.00	230.00
101800.000	761.68	.00	761.79	703.35	1816.62	4771.95	1.44	.00	.00	582.00	728.00	.00
* 101800.000	761.78	.10	761.89	648.00	1764.74	4825.26	.00	648.00	80.00	582.00	728.00	728.00
* 102350.000	761.77	.00	762.03	627.54	756.99	5450.69	382.32	.00	.00	349.00	469.00	.00
* 102350.000	761.86	.10	762.13	571.21	737.97	5497.54	354.49	.01	72.96	349.00	469.00	644.18
102900.000	762.05	.00	762.42	340.00	166.53	5077.26	1346.21	340.00	60.00	116.00	209.00	400.00
102900.000	762.15	.10	762.51	340.00	175.33	5056.81	1357.87	340.00	60.00	116.00	209.00	400.00
104150.000	763.05	.00	763.24	681.41	3114.12	3475.88	.00	.00	.00	610.00	693.00	.00
104150.000	763.12	.07	763.30	659.53	3088.19	3501.81	.00	671.00	22.00	610.00	693.00	693.00
104800.000	763.36	.00	763.48	947.95	3527.74	3031.00	31.26	.00	.00	855.00	925.00	.00
104800.000	763.42	.06	763.56	842.00	3459.16	3111.43	19.41	842.00	93.00	855.00	925.00	935.00
105450.000	763.57	.00	763.66	1000.00	3136.82	2450.47	1002.71	1000.00	250.00	1100.00	1157.00	1250.00
105450.000	763.65	.07	763.73	1000.00	3156.29	2432.38	1001.34	1000.00	250.00	1100.00	1157.00	1250.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR

107.010	764.34	.00	764.47	880.42	2343.22	2734.15	1512.63	.00	.00	683.00	750.00	.00
107.010	764.40	.06	764.54	825.00	2398.31	2806.36	1385.33	825.00	60.00	683.00	750.00	885.00
110575.000	765.63	.00	765.85	684.05	1433.55	3484.51	1671.94	.00	.00	350.00	427.00	.00
110575.000	765.72	.10	765.97	580.00	1232.20	3591.53	1766.27	580.00	145.00	350.00	427.00	725.00
110775.000	765.75	.00	766.08	507.00	1373.02	3925.06	1291.92	507.00	135.00	350.00	427.00	642.00
110775.000	765.87	.12	766.18	507.00	1390.98	3892.49	1306.53	507.00	135.00	350.00	427.00	642.00
111300.000	766.41	.00	767.13	244.00	679.09	5305.10	605.81	244.00	267.00	350.00	427.00	511.00
111300.000	766.49	.08	767.19	244.00	688.88	5286.59	614.53	244.00	267.00	350.00	427.00	511.00
111500.000	766.74	.00	767.73	144.00	300.08	5990.23	299.69	144.00	317.00	350.00	427.00	461.00
111500.000	766.82	.07	767.78	144.00	303.89	5983.03	303.08	144.00	317.00	350.00	427.00	461.00
111521.000	767.44	.00	767.98	134.00	.00	6383.63	206.37	134.00	500.00	499.90	612.00	634.00
111521.000	767.50	.05	768.02	134.00	.00	6382.32	207.67	134.00	500.00	499.90	612.00	634.00
111530.000	767.55	.00	768.02	134.00	.00	6078.65	511.35	134.00	500.00	499.90	612.00	634.00
111530.000	767.60	.05	768.06	134.00	.00	6075.65	514.35	134.00	500.00	499.90	612.00	634.00
111562.000	768.01	.00	768.43	134.00	.00	6052.22	537.78	134.00	500.00	499.90	612.00	634.00
111562.000	768.09	.08	768.51	134.00	.00	6047.76	542.24	134.00	500.00	499.90	612.00	634.00
111571.000	768.01	.00	768.47	134.00	.00	6288.95	301.05	134.00	500.00	499.90	612.00	634.00
111571.000	768.09	.08	768.54	134.00	.00	6286.35	303.65	134.00	500.00	499.90	612.00	634.00
* 111800.000	768.69	.00	768.74	593.00	2288.02	2325.31	1976.68	593.00	92.00	350.00	427.00	685.00
* 111800.000	768.76	.07	768.81	593.00	2294.45	2315.61	1979.94	593.00	92.00	350.00	427.00	685.00
111900.000	768.72	.00	768.76	759.94	2262.67	2202.65	2124.68	.00	.00	350.00	427.00	.00
111900.000	768.78	.07	768.83	666.83	2267.28	2195.93	2126.78	.00	67.81	350.00	427.00	734.64
116500.000	769.40	.00	769.45	1017.40	3103.29	2325.01	1161.70	.00	.00	830.00	919.00	.00
116500.000	769.49	.09	769.57	601.00	3069.79	2538.03	982.18	601.00	426.00	830.00	919.00	1027.00
135.010	769.48	.00	769.56	915.95	3288.71	2414.12	887.17	.00	.00	715.00	802.00	.00
135.010	769.60	.11	769.68	671.00	3324.66	2495.83	769.51	671.00	243.00	715.00	802.00	914.00
144.010	769.54	.00	769.64	864.98	3333.43	2514.79	741.78	.00	.00	658.00	744.00	.00
144.010	769.66	.11	769.76	633.00	3364.13	2599.13	626.74	633.00	218.00	658.00	744.00	851.00
* 135.020	769.57	.00	769.84	811.29	2372.23	3803.27	414.49	.00	.00	600.00	685.00	.00
* 135.020	769.69	.12	769.97	644.00	2524.66	3903.69	161.65	644.00	100.00	600.00	685.00	744.00
120100.000	770.85	.00	771.19	696.76	2462.99	3833.91	293.10	.00	.00	470.00	550.00	.00
120100.000	770.98	.13	771.32	575.00	2494.87	3871.81	223.32	575.00	150.00	470.00	550.00	725.00
115.010	773.74	.00	773.95	377.28	1770.44	3152.20	7.35	.00	.00	362.00	444.00	.00
115.010	773.79	.06	774.00	369.00	1780.47	3142.32	7.20	369.00	90.00	362.00	444.00	459.00

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
115.020	775.77	.00	775.97	537.26	1825.66	3104.03	.31	.00	.00	688.00	773.00	.00
115.020	775.81	.05	776.03	376.00	1748.94	3180.71	.35	376.00	400.00	688.00	773.00	776.00
129470.000	777.70	.00	777.98	670.77	1500.22	3429.78	.00	.00	.00	850.00	937.00	.00
129470.000	777.80	.10	778.09	400.00	1409.72	3520.28	.00	400.00	535.00	850.00	937.00	935.00
129950.000	778.12	.00	778.41	337.22	1353.94	3576.06	.00	339.00	600.00	850.00	937.00	939.00
129950.000	778.24	.11	778.51	338.37	1374.34	3555.66	.00	339.00	600.00	850.00	937.00	939.00
130480.000	778.69	.00	779.37	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130480.000	778.78	.09	779.45	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130488.000	778.70	.00	779.38	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130488.000	778.79	.09	779.46	75.10	.10	4929.90	.00	75 '0	99.90	100.00	175.00	175.00
130513.000	779.84	.00	780.39	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130513.000	779.95	.11	780.48	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130521.000	779.85	.00	780.40	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130521.000	779.95	.11	780.49	75.10	.10	4929.90	.00	75.10	99.90	100.00	175.00	175.00
130571.000	780.18	.00	780.50	170.00	273.52	4213.31	443.17	170.00	170.00	220.00	300.00	340.00

130571.000	780.28	.10	780.60	170.00	279.27	4204.25	446.48	170.00	170.00	220.00	300.00	340.00
131071.000	780.53	.00	780.84	559.81	949.47	3899.81	80.72	.00	.00	462.00	549.00	.00
131071.000	780.61	.09	780.93	319.00	937.77	3910.65	81.58	319.00	240.00	462.00	549.00	559.00
131521.000	780.97	.00	781.14	611.76	952.80	2987.45	989.74	.00	.00	280.00	367.00	.00
131521.000	781.05	.08	781.22	527.98	961.43	2971.90	996.67	.00	76.57	280.00	367.00	604.55
131971.000	781.21	.00	781.37	824.64	386.49	3490.64	1052.87	.00	.00	147.00	257.00	.00
131971.000	781.27	.06	781.46	520.00	194.87	3756.49	978.65	520.00	120.00	147.00	257.00	640.00
132371.000	781.39	.00	781.55	613.67	1034.11	3449.79	446.10	.00	.00	247.00	357.00	.00
132371.000	781.50	.11	781.65	520.00	1039.11	3448.16	442.73	520.00	62.00	247.00	357.00	582.00
* 132771.000	781.57	.00	781.82	527.48	837.93	2871.99	1220.08	.00	.00	130.00	205.00	.00
* 132771.000	781.65	.09	781.93	280.00	780.80	2967.74	1181.46	280.00	35.00	130.00	205.00	315.00
133591.000	782.38	.00	782.95	170.18	1027.99	3845.89	56.11	196.90	.10	104.00	184.10	197.00
133591.000	782.49	.11	783.04	169.23	1042.13	3828.02	59.85	170.00	25.00	104.00	184.10	195.00
134611.000	784.18	.00	784.81	209.81	25.86	4815.96	88.17	326.00	225.00	282.00	389.00	551.00
134611.000	784.21	.03	784.83	204.78	26.60	4810.87	92.54	209.00	261.00	282.00	389.00	470.00
178.010	786.33	.00	786.82	261.14	78.37	4590.37	261.26	.00	.00	305.00	405.00	.00
178.010	786.33	.01	786.83	245.26	78.70	4589.61	261.69	260.00	215.00	305.00	405.00	475.00
178.020	787.98	.00	788.42	251.75	122.46	4315.37	492.17	.00	.00	328.00	422.00	.00
178.020	787.99	.01	788.48	193.66	128.39	4502.55	299.07	200.00	267.00	328.00	422.00	467.00

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
138700.000	789.52	.00	789.99	247.23	82.00	4224.63	623.37	.00	.00	350.00	438.00	.00
138700.000	789.63	.10	790.07	247.00	85.46	4203.24	641.31	247.00	323.00	350.00	438.00	570.00
179.010	790.73	.00	791.06	323.78	361.53	3951.68	616.79	.00	.00	350.00	438.00	.00
179.010	790.79	.05	791.11	260.00	366.42	3964.97	598.62	260.00	284.00	350.00	438.00	544.00
140900.000	791.54	.00	791.69	484.42	600.36	3058.54	1271.10	.00	.00	350.00	438.00	.00
140900.000	791.60	.06	791.78	385.00	655.38	3302.34	972.28	385.00	240.00	350.00	438.00	625.00
145.010	792.01	.00	792.16	540.42	1493.46	3111.31	325.23	.00	.00	510.00	594.00	.00
145.010	792.13	.12	792.28	395.00	1531.86	3166.75	231.39	395.00	300.00	510.00	594.00	695.00
147.010	792.25	.00	792.35	597.61	2062.67	2745.84	121.49	.00	.00	590.00	672.00	.00
147.010	792.37	.12	792.47	395.00	2083.15	2756.55	90.30	395.00	300.00	590.00	672.00	695.00
143250.000	792.42	.00	792.48	566.59	2574.02	2296.03	59.95	.00	.00	670.00	750.00	.00
143250.000	792.53	.11	792.60	374.00	2509.57	2394.83	25.60	374.00	381.00	670.00	750.00	755.00
148.010	792.65	.00	792.76	633.28	2265.80	2588.28	75.92	.00	.00	560.00	641.00	.00
148.010	792.77	.12	792.89	374.00	2229.51	2656.54	43.95	374.00	277.00	560.00	641.00	651.00
146.010	793.07	.00	793.24	641.13	1832.51	2880.67	216.82	.00	.00	449.00	531.00	.00
146.010	793.19	.12	793.35	553.00	1841.94	2860.90	227.16	553.00	135.00	449.00	531.00	688.00
146623.000	793.71	.00	793.80	655.20	1303.74	2200.19	1426.07	.00	.00	300.00	383.00	.00
146623.000	793.81	.11	793.92	550.00	1356.59	2357.86	1215.55	550.00	50.00	300.00	383.00	600.00
* 147223.000	794.09	.00	794.36	350.00	814.65	3179.43	935.92	350.00	167.00	300.00	383.00	517.00
147223.000	794.21	.12	794.47	350.00	828.27	3153.77	947.96	350.00	167.00	300.00	383.00	517.00
147423.000	794.34	.00	794.81	250.00	552.15	3766.98	610.88	250.00	217.00	300.00	383.00	467.00
147423.000	794.44	.10	794.89	250.00	562.51	3746.77	620.72	250.00	217.00	300.00	383.00	467.00
147523.000	794.61	.00	795.01	201.59	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147523.000	794.70	.08	795.08	202.07	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147524.000	794.61	.00	795.02	201.59	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147524.000	794.70	.08	795.09	202.05	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147556.000	794.68	.00	795.08	201.93	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147556.000	794.76	.08	795.14	202.34	.00	4930.00	.00	214.20	87.00	87.00	301.11	301.20
147557.000	794.71	.00	795.09	203.72	1.09	4928.57	.34	216.00	86.00	87.00	301.11	302.00
147557.000	794.79	.08	795.15	203.97	1.12	4928.54	.34	216.00	86.00	87.00	301.11	302.00

*	147807.000	795.33	.00	795.42	709.01	1318.67	2172.55	1438.77	.00	.00	350.00	433.00	.00
*	147807.000	795.38	.05	795.48	570.00	1259.51	2332.07	1338.41	570.00	110.00	350.00	433.00	680.00
	148750.000	795.73	.00	795.85	693.23	1183.63	2231.82	1514.55	.00	.00	350.00	433.00	.00
	148750.000	795.82	.09	795.95	590.00	1167.26	2315.95	1446.79	590.00	100.00	350.00	433.00	690.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
152800.000	798.56	.00	798.91	301.27	.00	4743.90	186.10	.00	.00	250.00	400.00	.00
152800.000	798.66	.10	799.00	300.00	.00	4736.63	193.37	300.00	252.00	250.00	400.00	552.00
181.010	799.30	.00	799.83	240.58	.00	4751.68	178.32	.00	.00	250.00	374.00	.00
181.010	799.36	.06	799.88	213.52	.00	4748.98	181.02	215.00	250.00	250.00	374.00	465.00
154089.000	800.38	.00	801.12	245.59	.00	4724.78	205.22	.00	.00	250.00	349.00	.00
154089.000	800.41	.03	801.15	204.04	.00	4732.79	197.21	205.00	250.00	250.00	349.00	455.00
154439.000	801.15	.00	801.94	238.79	.00	4635.51	294.49	.00	.00	250.00	340.00	.00
154439.000	801.17	.02	801.96	199.31	.00	4658.53	271.47	200.00	250.00	250.00	340.00	450.00
154759.000	801.88	.00	802.70	89.74	.00	4930.00	.00	90.00	250.00	250.00	340.00	340.00
154759.000	801.90	.02	802.71	89.75	.00	4930.00	.00	90.00	250.00	250.00	340.00	340.00
154789.000	801.95	.00	802.97	75.00	.00	4930.00	.00	75.00	257.00	250.00	340.00	332.00
154789.000	801.97	.02	802.98	75.00	.00	4930.00	.00	75.00	257.00	250.00	340.00	332.00
154793.000	801.96	.00	803.03	73.00	.00	4930.00	.00	73.00	258.00	250.00	340.00	331.00
154793.000	801.98	.02	803.04	73.00	.00	4930.00	.00	73.00	258.00	250.00	340.00	331.00
154796.000	801.97	.00	803.08	71.50	.00	4930.00	.00	71.50	258.75	250.00	340.00	330.25
154796.000	801.99	.02	803.09	71.50	.00	4930.00	.00	71.50	258.75	250.00	340.00	330.25
* 154799.000	801.99	.00	804.63	70.32	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
* 154799.000	802.00	.02	804.63	70.41	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
154800.000	802.00	.00	804.72	70.40	.00	4930.00	.00	70.40	259.39	250.00	341.00	329.79
* 154800.000	802.10	.10	804.63	70.40	.00	4930.00	.00	70.40	259.39	250.00	341.00	329.79
* 154812.000	803.98	.00	805.42	81.84	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
* 154812.000	803.85	-.13	805.25	81.08	.00	4930.00	.00	91.00	250.00	250.00	341.00	341.00
154813.000	804.35	.00	805.55	83.46	.00	4930.00	.00	83.80	250.40	250.00	341.00	334.20
154813.000	803.86	-.49	805.25	81.12	.00	4930.00	.00	83.80	250.40	250.00	341.00	334.20
* 154814.000	805.55	.00	805.95	86.00	.00	4930.00	.00	86.00	252.00	250.00	340.00	338.00
* 154814.000	805.33	-.22	805.75	86.00	.00	4930.00	.00	86.00	252.00	250.00	340.00	338.00
154819.000	805.60	.00	805.97	96.00	6.60	4903.61	19.79	96.00	247.00	250.00	340.00	343.00
154819.000	805.38	-.22	805.76	96.00	6.21	4904.01	19.78	96.00	247.00	250.00	340.00	343.00
154823.000	805.62	.00	805.98	104.00	18.67	4837.22	74.11	104.00	243.00	250.00	340.00	347.00
154823.000	805.41	-.22	805.78	104.00	17.38	4839.21	73.41	104.00	243.00	250.00	340.00	347.00
154923.000	805.90	.00	806.10	304.00	127.10	3997.49	805.41	304.00	143.00	250.00	340.00	447.00
154923.000	805.69	-.21	805.90	304.00	109.54	4030.74	789.72	304.00	143.00	250.00	340.00	447.00
155148.000	806.07	.00	806.20	545.74	110.81	3726.71	1092.48	671.90	.10	250.00	349.00	672.00
155148.000	805.85	-.22	806.00	330.00	51.49	3878.02	1000.49	330.00	220.00	250.00	349.00	550.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
136.010	807.15	.00	807.34	400.19	4.33	3943.05	982.62	.00	.00	250.00	369.00	.00
136.010	807.09	-.06	807.31	325.00	.00	4128.16	801.84	325.00	250.00	250.00	369.00	575.00
* 164.010	808.18	.00	808.55	469.61	1.21	4083.63	845.16	.00	.00	1026.00	1127.00	.00
164.010	808.24	.06	808.61	349.00	.00	4089.40	840.60	349.00	1026.00	1026.00	1127.00	1375.00
161800.000	810.19	.00	810.60	426.30	4.66	3583.03	1342.31	.00	.00	1800.00	1883.00	.00
161800.000	810.24	.04	810.63	365.69	.00	3571.80	1358.20	380.00	1800.00	1800.00	1883.00	2180.00
162700.000	811.35	.00	811.62	558.46	23.34	3367.93	1538.73	.00	.00	1800.00	1883.00	.00
162700.000	811.38	.03	811.65	420.00	16.48	3379.87	1533.65	420.00	1780.00	1800.00	1883.00	2200.00

163600.000	812.08	.00	812.30	605.28	37.19	3256.01	1636.80	.00	.00	1800.00	1883.00	.00
163600.000	812.10	.02	812.33	459.66	38.33	3278.23	1613.43	480.00	1720.00	1800.00	1883.00	2200.00
165433.000	813.22	.00	813.39	660.98	54.78	3128.68	1746.54	.00	.00	1800.00	1883.00	.00
165433.000	813.24	.03	813.42	514.68	56.06	3140.00	1733.93	550.00	1700.00	1800.00	1883.00	2250.00
165586.000	813.33	.00	813.86	603.37	540.40	4019.98	369.62	.00	.00	355.00	409.03	.00
165586.000	813.35	.03	813.88	582.00	556.79	3998.36	374.85	582.00	195.00	355.00	409.03	777.00
165614.000	813.95	.00	814.35	788.11	621.54	3788.17	520.29	.00	.00	355.00	409.03	.00
165614.000	814.16	.21	814.52	788.00	648.57	3691.06	590.37	788.00	157.60	355.00	409.03	945.60
* 166154.000	814.60	.00	814.71	530.98	1366.61	3133.14	430.25	.00	.00	250.00	331.00	.00
* 166154.000	814.74	.14	814.84	510.00	1381.05	3110.71	438.24	510.00	15.00	250.00	331.00	525.00
167750.000	814.96	.00	815.08	555.63	1385.49	3144.46	400.04	.00	.00	300.00	381.00	.00
167750.000	815.09	.12	815.21	375.00	1373.09	3258.60	298.31	375.00	75.00	300.00	381.00	450.00
* 170.010	815.15	.00	815.41	477.08	898.39	3745.29	286.32	.00	.00	265.00	351.00	.00
* 170.010	815.28	.13	815.54	340.00	897.76	3820.26	211.98	340.00	60.00	265.00	351.00	400.00
207.010	815.40	.00	815.74	449.38	622.63	3641.80	665.57	.00	.00	250.00	334.00	.00
207.010	815.51	.11	815.89	320.00	473.76	3800.92	655.32	320.00	106.00	250.00	334.00	426.00
* 154.010	815.98	.00	816.38	424.23	523.80	2780.03	1626.16	.00	.00	234.00	316.00	.00
* 154.010	816.11	.13	816.56	311.18	448.47	2922.47	1559.06	.05	88.19	234.00	316.00	399.37
154.020	819.26	.00	819.89	316.63	170.16	4478.16	281.67	.00	.00	240.00	335.00	.00
154.020	819.37	.11	819.98	200.00	167.34	4482.28	280.38	200.00	200.00	240.00	335.00	400.00
172290.000	822.32	.00	823.16	218.58	120.75	4575.90	233.35	.00	.00	250.00	351.00	.00
172290.000	822.33	.01	823.17	200.00	106.37	4590.58	233.05	200.00	225.00	250.00	351.00	425.00
172571.000	823.26	.00	824.47	77.00	.00	4930.00	.00	77.00	259.00	250.00	351.00	336.00
172571.000	823.27	.01	824.47	77.00	.00	4930.00	.00	77.00	259.00	250.00	351.00	336.00
172595.000	823.37	.00	824.97	65.00	.00	4930.00	.00	65.00	265.00	250.00	351.00	330.00
172595.000	823.38	.01	824.97	65.00	.00	4930.00	.00	65.00	265.00	250.00	351.00	330.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
172608.000	823.44	.00	825.35	58.70	.00	4930.00	.00	58.70	268.15	250.00	351.00	326.85
172608.000	823.45	.01	825.35	58.70	.00	4930.00	.00	58.70	268.15	250.00	351.00	326.85
172610.000	823.46	.00	825.97	58.00	.00	4914.93	15.07	.00	.00	250.00	301.00	.00
172610.000	823.46	.01	825.98	58.02	.00	4914.82	15.18	.00	.00	250.00	301.00	.00
172630.000	824.45	.00	826.39	61.47	.00	4895.90	34.10	.00	.00	250.00	301.00	.00
172630.000	824.44	.00	826.39	61.46	.00	4895.96	34.04	.00	.00	250.00	301.00	.00
* 172632.000	826.32	.00	827.02	65.00	.00	4530.00	.00	65.00	257.50	250.00	351.00	322.50
* 172632.000	826.32	.00	827.02	65.00	.00	4530.00	.00	65.00	257.50	250.00	351.00	322.50
172634.000	826.46	.00	827.07	69.00	.00	4530.00	.00	69.00	255.50	250.00	351.00	324.50
172634.000	826.46	.00	827.07	69.00	.00	4530.00	.00	69.00	255.50	250.00	351.00	324.50
* 172670.000	827.07	.00	827.28	140.00	279.50	4186.02	64.49	140.00	220.00	250.00	351.00	360.00
* 172670.000	827.07	.00	827.28	140.00	279.49	4186.02	64.49	140.00	220.00	250.00	351.00	360.00
172730.000	827.21	.00	827.34	260.00	445.35	3553.18	531.48	260.00	210.00	300.00	401.00	470.00
172730.000	827.17	-.04	827.33	210.00	410.88	3792.92	326.20	210.00	230.00	300.00	401.00	440.00
172830.000	827.28	.00	827.38	470.87	679.44	3236.08	614.48	.00	.00	300.00	401.00	.00
172830.000	827.22	-.06	827.37	210.00	302.58	3677.41	550.01	210.00	260.00	300.00	401.00	470.00
* 220.010	827.63	.00	827.80	309.86	.00	3911.36	618.64	.00	.00	275.00	426.00	.00
220.010	827.66	.04	827.86	213.60	.00	4062.42	467.58	230.00	275.00	275.00	426.00	505.00
175570.000	828.36	.00	828.59	482.86	.00	4154.11	375.89	.00	.00	250.00	450.00	.00
175570.000	828.43	.07	828.68	204.71	.00	4280.07	249.93	300.00	200.00	250.00	450.00	500.00
176575.000	829.19	.00	829.52	310.74	.00	4298.29	231.71	.00	.00	250.00	450.00	.00
176575.000	829.28	.09	829.61	202.89	.00	4324.71	205.29	300.00	200.00	250.00	450.00	500.00
177575.000	830.48	.00	830.88	247.47	.00	4341.81	188.19	.00	.00	250.00	450.00	.00

177575.000	830.53	.05	830.92	201.93	.00	4352.12	177.88	300.00	200.00	250.00	450.00	500.00
179580.000	833.69	.00	834.12	240.18	.00	4360.28	169.72	.00	.00	250.00	450.00	.00
179580.000	833.69	.01	834.12	201.43	.00	4367.66	162.34	300.00	200.00	250.00	450.00	500.00
* 180580.000	834.18	.00	834.19	402.32	.77	4528.58	.65	.00	.00	275.00	650.00	.00
* 180580.000	834.19	.01	834.20	375.00	.00	4530.00	.00	375.00	275.00	275.00	650.00	650.00
181332.000	834.19	.00	834.20	392.71	.27	4529.53	.20	.00	.00	275.00	650.00	.00
181332.000	834.20	.01	834.21	375.00	.00	4530.00	.00	375.00	275.00	275.00	650.00	650.00
* 181960.000	834.21	.00	834.67	60.00	.00	4530.00	.00	60.00	515.00	275.00	650.00	575.00
* 181960.000	834.22	.01	834.67	60.00	.00	4530.00	.00	60.00	515.00	275.00	650.00	575.00
181965.000	834.21	.00	834.81	57.50	.00	4530.00	.00	57.50	516.25	275.00	650.00	573.75
181965.000	834.22	.01	834.82	57.50	.00	4530.00	.00	57.50	516.25	275.00	650.00	573.75

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
181970.000	834.22	.00	835.02	55.00	.00	4530.00	.00	55.00	517.50	275.00	650.00	572.50
181970.000	834.23	.01	835.02	55.00	.00	4530.00	.00	55.00	517.50	275.00	650.00	572.50
181975.000	834.23	.00	835.32	52.50	.00	4530.00	.00	52.50	518.75	275.00	650.00	571.25
181975.000	834.23	.01	835.33	52.50	.00	4530.00	.00	52.50	518.75	275.00	650.00	571.25
181980.000	834.24	.00	835.79	50.00	.00	4530.00	.00	50.00	520.00	275.00	650.00	570.00
181980.000	834.25	.01	835.80	50.00	.00	4530.00	.00	50.00	520.00	275.00	650.00	570.00
181982.000	834.25	.00	836.72	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
181982.000	834.25	.01	836.73	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
181983.000	834.25	.00	836.74	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
181983.000	834.55	.30	836.83	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
182000.000	834.85	.00	837.00	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
182000.000	834.95	.10	837.01	49.00	.00	4530.00	.00	49.00	103.00	103.00	152.00	152.00
182001.000	835.13	.00	837.09	51.00	2.68	4522.81	4.51	51.00	102.00	103.00	152.00	153.00
182001.000	835.04	-.09	837.05	51.00	2.57	4523.02	4.40	51.00	102.00	103.00	152.00	153.00
* 182003.000	836.99	.00	837.72	54.00	.00	4530.00	.00	54.00	523.00	275.00	650.00	577.00
* 182003.000	836.96	-.03	837.69	54.00	.00	4530.00	.00	54.00	523.00	275.00	650.00	577.00
182007.000	837.41	.00	837.86	62.00	.00	4530.00	.00	62.00	519.00	275.00	650.00	581.00
182007.000	837.38	-.03	837.83	62.00	.00	4530.00	.00	62.00	519.00	275.00	650.00	581.00
182012.000	837.65	.00	837.94	71.00	.00	4530.00	.00	71.00	514.00	275.00	650.00	585.00
182012.000	837.63	-.03	837.91	71.00	.00	4530.00	.00	71.00	514.00	275.00	650.00	585.00
* 182101.000	838.06	.00	838.08	250.00	.00	4508.53	21.47	250.00	425.00	275.00	650.00	675.00
* 182101.000	838.04	-.02	838.05	250.00	.00	4508.71	21.29	250.00	425.00	275.00	650.00	675.00
182231.000	838.07	.00	838.08	520.69	13.18	4493.81	23.01	.00	.00	275.00	650.00	.00
182231.000	838.05	-.03	838.06	375.00	.00	4530.00	.00	375.00	275.00	275.00	650.00	650.00
183400.000	838.08	.00	838.09	444.80	4.02	4521.99	3.99	.00	.00	275.00	650.00	.00
183400.000	838.05	-.02	838.06	375.00	.00	4530.00	.00	375.00	275.00	275.00	650.00	650.00
* 183600.000	838.01	.00	838.38	426.63	164.89	3993.77	371.33	.00	.00	188.00	300.00	.00
* 183600.000	837.98	-.03	838.39	325.00	166.87	4119.85	243.28	325.00	125.00	188.00	300.00	450.00
184862.000	839.25	.00	839.50	431.09	222.36	3735.37	572.27	.00	.00	188.00	300.00	.00
184862.000	839.31	.06	839.59	325.00	236.15	3909.49	384.36	325.00	125.00	188.00	300.00	450.00
186125.000	840.08	.00	840.28	433.28	246.47	3616.54	666.99	.00	.00	188.00	300.00	.00
186125.000	840.19	.11	840.41	355.00	263.90	3782.03	484.07	355.00	125.00	188.00	300.00	480.00
186790.000	840.50	.00	840.76	536.97	1452.18	2870.84	206.98	.00	.00	360.00	435.00	.00
186790.000	840.63	.13	840.89	355.00	1507.53	2882.48	139.99	355.00	155.00	360.00	435.00	510.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR

187092.000	840.77	.00	841.05	389.00	1372.41	2966.11	191.47	389.00	202.00	360.00	435.00	591.00
187092.000	840.90	.12	841.18	329.00	1286.22	3047.01	196.77	329.00	232.00	360.00	435.00	561.00
187394.000	841.06	.00	841.42	238.00	1032.92	3310.00	187.08	238.00	278.00	360.00	435.00	516.00
187394.000	841.18	.12	841.52	238.00	1043.08	3288.53	198.39	238.00	278.00	360.00	435.00	516.00
187494.000	841.17	.00	841.60	187.60	799.73	3555.20	175.06	187.60	303.70	360.00	435.00	491.30
187494.000	841.28	.11	841.69	187.60	807.35	3539.14	183.51	187.60	303.70	360.00	435.00	491.30
187719.000	841.50	.00	842.32	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
187719.000	841.60	.10	842.39	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
187720.000	841.51	.00	842.40	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
187720.000	841.60	.10	842.48	75.10	.00	4529.68	.32	75.10	100.00	100.00	175.00	175.10
187780.000	841.69	.00	842.54	75.10	.00	4529.87	.13	75.10	100.00	100.00	175.00	175.10
187780.000	841.77	.09	842.62	75.10	.00	4529.65	.34	75.10	100.00	100.00	175.00	175.10
187781.000	841.87	.00	842.61	77.00	3.88	4514.40	11.72	77.00	99.00	100.00	175.00	176.00
187781.000	841.95	.09	842.68	77.00	3.86	4514.44	11.70	77.00	99.00	100.00	175.00	176.00
187831.000	842.50	.00	842.85	177.00	401.02	3666.91	462.07	177.00	309.00	360.00	435.00	486.00
187831.000	842.58	.07	842.92	177.00	402.58	3657.42	469.99	177.00	309.00	360.00	435.00	486.00
187881.000	842.72	.00	842.95	277.00	648.45	3214.59	666.95	277.00	259.00	360.00	435.00	536.00
187881.000	842.76	.04	843.00	271.58	384.95	3286.97	858.07	.23	304.65	360.00	435.00	576.23
188061.000	842.98	.00	843.08	648.08	826.53	2469.61	1233.86	.00	.00	360.00	435.00	.00
188061.000	843.01	.03	843.14	480.00	896.04	2667.86	966.10	480.00	150.00	360.00	435.00	630.00
191400.000	844.00	.00	844.14	641.38	1210.26	2691.79	627.95	.00	.00	360.00	435.00	.00
191400.000	844.13	.13	844.27	490.00	1261.80	2757.80	510.40	490.00	150.00	360.00	435.00	640.00
192728.000	844.58	.00	844.76	614.79	1166.58	2877.41	486.02	.00	.00	360.00	435.00	.00
192728.000	844.71	.13	844.90	470.00	1209.93	2930.70	389.37	470.00	155.00	360.00	435.00	625.00
193956.000	845.32	.00	845.55	599.20	1132.91	2999.36	397.73	.00	.00	360.00	435.00	.00
193956.000	845.44	.12	845.67	460.00	1172.65	3040.77	316.58	460.00	155.00	360.00	435.00	615.00
194826.000	846.14	.00	846.69	152.00	408.01	4038.99	83.00	152.00	322.00	360.00	435.00	474.00
194826.000	846.24	.10	846.78	152.00	411.29	4032.96	85.75	152.00	322.00	360.00	435.00	474.00
194876.000	846.21	.00	846.83	127.00	300.90	4168.19	60.91	127.00	334.00	360.00	435.00	461.00
194876.000	846.30	.10	846.91	127.00	303.67	4163.44	62.90	127.00	334.00	360.00	435.00	461.00
194972.000	846.36	.00	847.17	80.00	14.37	4511.54	4.09	80.00	357.50	360.00	435.00	437.50
194972.000	846.45	.09	847.24	80.00	14.41	4511.42	4.17	80.00	357.50	360.00	435.00	437.50
* 194976.000	846.37	.00	847.67	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
* 194976.000	846.46	.09	847.73	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
194977.000	846.38	.00	847.76	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
194977.000	846.47	.09	847.81	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
195023.000	846.91	.00	848.08	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
195023.000	846.96	.05	848.11	78.10	.00	4530.00	.00	78.10	100.00	100.00	178.10	178.10
195024.000	847.12	.00	848.16	80.00	3.92	4523.53	2.55	80.00	99.00	100.00	178.10	179.00
195024.000	847.16	.04	848.19	80.00	3.94	4523.50	2.56	80.00	99.00	100.00	178.10	179.00
* 195040.000	847.66	.00	848.36	112.00	215.00	4150.39	164.61	112.00	220.00	236.00	300.00	332.00
* 195040.000	847.69	.03	848.38	112.00	215.45	4148.41	166.13	112.00	220.00	236.00	300.00	332.00
195090.000	848.20	.00	848.57	203.54	909.67	3424.44	195.88	212.00	170.00	236.00	300.00	382.00
195090.000	848.23	.03	848.60	204.01	911.15	3421.03	197.82	212.00	170.00	236.00	300.00	382.00
195170.000	848.57	.00	848.72	378.46	1780.78	2585.31	163.91	.00	.00	236.00	300.00	.00
195170.000	848.38	-.19	848.69	224.61	1121.29	3219.89	188.82	232.00	150.00	236.00	300.00	382.00
195350.000	848.64	.00	848.80	376.39	1766.41	2605.06	158.53	.00	.00	236.00	300.00	.00
195350.000	848.50	-.14	848.81	223.91	1118.85	3225.08	186.07	232.00	150.00	236.00	300.00	382.00
195724.000	848.80	.00	849.01	371.61	1581.41	2839.96	108.62	.00	.00	236.00	300.00	.00
195724.000	848.86	.07	849.09	277.46	1630.45	2899.55	.00	.05	22.54	236.00	300.00	300.00

* 195924.000	848.90	.00	849.23	324.03	1439.76	3090.24	.00	.00	.00	247.00	325.00	.00
195924.000	848.99	.09	849.31	322.93	1459.50	3070.50	.00	.00	1.26	247.00	325.00	325.00
195925.000	848.87	.00	849.27	323.98	1473.39	3056.61	.00	.00	.00	247.00	325.00	.00
195925.000	848.94	.08	849.36	306.45	1399.82	3130.18	.00	.05	17.66	247.00	325.00	325.00
195974.000	848.98	.00	849.35	324.17	1534.82	2995.18	.00	.00	.00	247.00	325.00	.00
195974.000	849.09	.10	849.46	311.13	1523.37	3006.63	.00	.04	13.21	247.00	325.00	325.00
195975.000	848.96	.00	849.38	324.14	1127.79	3402.21	.00	.00	.00	247.00	325.00	.00
195975.000	849.07	.11	849.47	319.33	1137.69	3392.31	.00	320.00	5.00	247.00	325.00	325.00
196015.000	849.15	.00	849.45	366.10	1230.72	3184.74	114.54	547.00	403.00	636.00	700.00	950.00
196015.000	849.25	.10	849.54	347.00	1246.28	3169.05	114.67	347.00	403.00	636.00	700.00	750.00
196065.000	849.24	.00	849.50	417.35	1372.91	3044.16	112.92	597.00	353.00	636.00	700.00	950.00
196065.000	849.34	.10	849.59	397.00	1389.96	3027.75	112.29	397.00	353.00	636.00	700.00	750.00
196272.000	849.43	.00	849.65	629.92	1545.44	2873.70	110.86	.00	.00	636.00	700.00	.00
196272.000	849.50	.07	849.73	430.00	1488.75	2943.72	97.53	430.00	305.00	636.00	700.00	735.00
197250.000	849.96	.00	850.25	608.67	1390.57	3049.39	90.04	.00	.00	486.00	550.00	.00
197250.000	850.04	.08	850.33	430.00	1378.85	3066.00	85.14	430.00	155.00	486.00	550.00	585.00
178.010	852.29	.00	852.53	683.31	1234.13	2894.10	401.78	.00	.00	843.00	920.00	.00
178.010	852.36	.07	852.61	440.00	1260.28	2956.28	313.44	440.00	550.00	843.00	920.00	990.00

1

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
202235.000	853.91	.00	854.04	543.72	781.44	2297.17	1451.39	.00	.00	250.00	340.00	.00
202235.000	854.01	.11	854.16	429.25	711.56	2390.31	1428.13	.05	76.43	250.00	340.00	541.18
* 202936.000	854.39	.00	854.62	158.84	41.24	2435.39	723.37	196.00	197.00	250.00	340.00	393.00
* 202936.000	854.49	.11	854.72	159.63	42.87	2426.44	730.69	196.00	197.00	250.00	340.00	393.00
203036.000	854.47	.00	854.81	108.45	.00	2833.71	366.29	136.00	227.00	250.00	340.00	363.00
203036.000	854.58	.10	854.91	108.84	.00	2830.78	369.22	136.00	227.00	250.00	340.00	363.00
* 203176.000	854.67	.00	855.40	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
* 203176.000	854.77	.09	855.48	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
* 203181.000	854.69	.00	855.55	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
203181.000	854.78	.09	855.49	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
203219.000	854.90	.00	855.74	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
203219.000	854.86	-.04	855.55	65.50	.00	3200.00	.00	65.50	192.50	192.50	258.03	258.00
* 203224.000	855.23	.00	855.86	67.50	1.40	3197.00	1.60	67.50	191.50	192.50	258.03	259.00
203224.000	854.87	-.36	855.56	67.50	1.16	3197.62	1.23	67.50	191.50	192.50	258.03	259.00
* 203274.000	855.88	.00	856.11	157.03	15.51	2737.69	446.80	171.00	1959.00	2000.00	2090.00	2130.00
* 203274.000	855.59	-.29	855.84	139.11	12.22	2748.92	438.86	171.00	1959.00	2000.00	2090.00	2130.00
* 203464.000	856.22	.00	856.25	551.00	639.79	1375.52	1184.69	551.00	1769.00	2000.00	2090.00	2320.00
* 203464.000	855.96	-.26	856.00	496.07	574.68	1440.00	1185.31	505.00	1805.00	2000.00	2090.00	2310.00
277.010	856.52	.00	856.57	957.05	576.43	1402.43	1221.13	.00	.00	1247.00	1330.00	.00
* 277.010	856.37	-.15	856.46	498.38	446.37	1717.95	1035.68	510.00	990.00	1247.00	1330.00	1500.00
* 184.010	857.11	.00	857.23	562.54	275.29	1763.70	1161.00	.00	.00	495.00	572.00	.00
184.010	857.18	.07	857.30	470.00	271.57	1777.48	1150.95	470.00	350.00	495.00	572.00	820.00
210350.000	859.54	.00	859.64	713.02	224.37	1467.40	1508.23	.00	.00	240.00	303.00	.00
210350.000	859.62	.09	859.74	486.10	148.77	1535.53	1515.70	501.00	138.00	240.00	303.00	639.00
185.010	861.80	.00	862.02	696.30	208.05	1957.10	1034.85	.00	.00	245.00	312.00	.00
185.010	861.93	.13	862.17	540.79	141.71	2016.33	1041.96	.05	139.96	245.00	312.00	682.84
215877.000	864.77	.00	865.05	668.07	488.82	2308.78	402.40	.00	.00	300.00	370.00	.00
215877.000	864.90	.13	865.20	435.96	452.04	2393.52	354.43	.05	79.60	300.00	370.00	515.56
216054.000	864.95	.00	865.25	589.81	571.08	2214.30	414.62	.00	.00	287.00	337.10	.00
216054.000	865.08	.13	865.41	398.68	537.15	2294.17	368.68	.05	82.48	287.00	337.10	481.17
* 216085.000	866.11	.00	866.25	653.56	735.10	1853.20	611.70	.00	.00	287.00	337.10	.00

216085.000	866.12	.02	866.31	398.68	670.69	2047.02	482.29	.05	82.48	287.00	337.10	481.17
216135.000	866.24	.00	866.30	625.00	1279.84	1438.78	481.37	625.00	470.00	830.00	885.00	1095.00
216135.000	866.32	.08	866.39	550.00	1300.06	1473.97	425.97	550.00	500.00	830.00	885.00	1050.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
216185.000	866.22	.00	866.35	578.06	1250.59	1899.84	49.57	.00	.00	700.00	762.00	.00
216185.000	866.30	.09	866.43	468.10	1259.40	1888.34	52.26	.00	379.76	700.00	762.00	847.86
216277.000	866.31	.00	866.41	798.00	1638.78	1414.75	146.47	.00	.00	693.90	744.25	.00
216277.000	866.40	.08	866.49	681.65	1639.56	1404.01	156.42	.00	365.97	693.90	744.25	1047.62
217062.000	866.67	.00	866.72	743.00	2122.08	1015.95	61.97	.00	.00	678.00	725.00	.00
217062.000	866.77	.10	866.82	570.00	2173.07	1026.93	.00	570.00	155.00	678.00	725.00	725.00
217537.000	866.84	.00	867.03	419.89	912.35	1841.09	446.55	.00	.00	273.00	319.80	.00
217537.000	866.97	.12	867.14	420.45	927.64	1821.93	450.43	531.90	.10	273.00	319.80	532.00
218237.000	867.32	.00	867.37	816.85	20.92	948.47	2230.61	.00	.00	39.00	88.00	.00
218237.000	867.43	.11	867.48	662.19	.00	941.84	2258.16	.05	39.00	39.00	88.00	701.19
* 218792.000	867.54	.00	867.77	721.40	920.72	1808.54	470.74	.00	.00	290.00	344.00	.00
* 218792.000	867.66	.12	867.89	600.00	935.26	1832.40	432.34	600.00	40.00	290.00	344.00	640.00
219172.000	868.11	.00	868.30	1004.88	13.94	1486.48	1699.58	.00	.00	12.00	60.00	.00
219172.000	868.24	.13	868.41	600.00	.00	1449.35	1750.65	600.00	12.00	12.00	60.00	612.00
219722.000	868.72	.00	868.90	686.05	1506.41	1532.81	160.78	.00	.00	332.00	380.00	.00
219722.000	868.81	.09	868.99	400.00	1530.90	1540.59	128.51	400.00	12.00	332.00	380.00	412.00
220247.000	869.30	.00	869.49	606.82	104.77	1873.12	1222.10	.00	.00	24.00	82.00	.00
220247.000	869.37	.08	869.58	454.06	109.54	1939.73	1150.72	455.00	2.00	24.00	82.00	457.00
220447.000	869.48	.00	869.66	508.44	779.12	2402.49	18.39	620.00	100.00	530.70	613.35	720.00
220447.000	869.56	.09	869.76	344.56	710.09	2470.69	19.21	350.00	276.00	530.70	613.35	626.00
220942.000	869.88	.00	870.08	378.00	405.86	2188.53	605.61	378.00	255.00	388.80	468.48	633.00
220942.000	869.97	.10	870.16	378.00	413.14	2173.90	612.97	378.00	255.00	388.80	468.48	633.00
221102.000	870.08	.00	870.34	300.00	1544.49	1478.68	176.83	300.00	300.00	517.00	554.60	600.00
221102.000	870.16	.08	870.41	300.00	1550.45	1469.79	179.75	300.00	300.00	517.00	554.60	600.00
221302.000	870.41	.00	871.21	50.10	.00	3199.87	.13	50.10	250.00	250.00	300.00	300.10
221302.000	870.48	.07	871.26	50.10	.00	3199.87	.13	50.10	250.00	250.00	300.00	300.10
221310.000	870.43	.00	871.22	50.10	.00	3199.86	.14	50.10	250.00	250.00	300.00	300.10
221310.000	870.50	.07	871.28	50.10	.00	3199.65	.35	50.10	250.00	250.00	300.00	300.10
221340.000	870.48	.00	871.27	50.10	.00	3199.86	.14	50.10	250.00	250.00	300.00	300.10
221340.000	870.55	.07	871.32	50.10	.00	3199.65	.35	50.10	250.00	250.00	300.00	300.10
221348.000	870.50	.00	871.28	50.10	.00	3199.82	.17	50.10	250.00	250.00	300.00	300.10
221348.000	870.56	.06	871.33	50.10	.00	3199.83	.17	50.10	250.00	250.00	300.00	300.10
* 211353.000	871.12	.00	871.49	60.00	.00	3200.00	.00	60.00	30.00	30.00	90.00	90.00
* 211353.000	871.17	.05	871.54	60.00	.00	3200.00	.00	60.00	30.00	30.00	90.00	90.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
* 221383.000	871.37	.00	871.59	120.00	276.88	2688.85	234.28	.00	.00	30.00	90.00	.00
* 221383.000	871.42	.05	871.63	117.32	278.65	2685.57	235.78	.00	1.25	30.00	90.00	118.57
222533.000	871.73	.00	871.91	120.00	344.61	2514.95	340.44	.00	.00	30.00	90.00	.00
222533.000	871.78	.05	871.95	118.65	345.55	2513.08	341.37	.00	.67	30.00	90.00	119.32
* 237300.000	899.00	.00	899.01	864.15	4.95	3167.89	27.15	.00	.00	250.00	869.00	.00
* 237300.000	899.10	.10	899.11	619.00	.00	3200.00	.00	.01	250.00	250.00	869.00	869.00
241300.000	899.03	.00	899.04	864.36	5.07	3166.88	28.05	.00	.00	250.00	869.00	.00
241300.000	899.13	.10	899.14	619.00	.00	3200.00	.00	.01	250.00	250.00	869.00	869.00

* 244550.000	899.06	.00	899.14	276.52	86.58	3107.97	5.45	.00	.00	250.00	425.00	.00
* 244550.000	899.16	.10	899.24	270.00	91.94	3101.96	6.11	270.00	165.00	250.00	425.00	435.00
267.010	899.21	.00	899.33	248.33	108.50	3079.78	11.72	.00	.00	251.00	398.00	.00
267.010	899.31	.09	899.42	240.00	114.42	3072.36	13.23	240.00	175.00	251.00	398.00	415.00
256.010	899.44	.00	899.62	230.21	125.10	3060.21	14.69	.00	.00	251.00	370.00	.00
256.010	899.53	.08	899.70	220.00	130.27	3054.02	15.71	220.00	180.00	251.00	370.00	400.00
268.010	899.81	.00	900.07	226.17	185.60	2974.40	40.00	.00	.00	251.00	343.00	.00
268.010	899.87	.07	900.13	215.00	190.78	2966.81	42.41	215.00	180.00	251.00	343.00	395.00
247600.000	900.37	.00	900.79	241.96	289.05	2758.87	152.08	.00	.00	251.00	315.00	.00
247600.000	900.41	.04	900.85	145.74	257.10	2824.13	118.77	.03	213.72	251.00	315.00	359.46
301.010	901.08	.00	901.33	331.04	96.00	2379.81	724.19	.00	.00	251.00	313.00	.00
301.010	901.15	.07	901.40	242.56	62.59	2429.82	707.59	.03	234.54	251.00	313.00	477.10
248716.000	901.48	.00	901.58	314.68	15.70	1782.33	1401.96	549.90	.10	250.00	310.00	550.00
248716.000	901.57	.09	901.67	291.91	.00	1771.56	1428.44	.12	250.00	250.00	310.00	541.91
* 249051.000	901.65	.00	902.02	132.14	36.67	2681.03	482.30	188.00	186.00	250.00	310.00	374.00
* 249051.000	901.76	.11	902.13	121.11	.00	2710.17	489.83	.41	250.00	250.00	310.00	371.11
249286.000	901.91	.00	902.51	70.00	36.75	3140.68	22.57	70.00	245.00	250.00	310.00	315.00
249286.000	902.03	.11	902.61	70.00	37.66	3139.66	22.68	70.00	245.00	250.00	310.00	315.00
* 249336.000	902.00	.00	902.99	44.10	.00	3200.00	.00	44.10	217.50	208.80	269.70	261.60
* 249336.000	902.11	.11	903.08	44.10	.00	3200.00	.00	44.10	217.50	208.80	269.70	261.60
* 249364.000	904.20	.00	904.27	318.50	69.39	1681.44	1449.17	320.00	160.00	208.80	269.70	480.00
* 249364.000	904.26	.05	904.32	318.50	72.07	1679.32	1448.61	320.00	160.00	208.80	269.70	480.00
249394.000	904.22	.00	904.28	378.00	138.66	1616.37	974.97	378.00	91.00	250.00	310.00	469.00
249394.000	904.26	.05	904.33	234.00	38.74	1677.77	1013.49	234.00	235.00	250.00	310.00	469.00
249444.000	904.25	.00	904.29	473.39	121.37	1448.95	1159.68	478.00	41.00	250.00	310.00	519.00
249444.000	904.30	.05	904.35	284.00	33.77	1496.52	1199.71	284.00	235.00	250.00	310.00	519.00

SECNO	CWSEL	DIFKWS	EG	TOPWIO	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
249617.000	904.28	.00	904.32	520.20	78.87	1348.57	1302.56	.00	.00	250.00	310.00	.00
249617.000	904.32	.05	904.37	317.00	32.10	1438.75	1259.15	317.00	224.00	250.00	310.00	541.00
250140.000	904.35	.00	904.38	743.01	20.32	1182.74	1526.94	.00	.00	250.00	310.00	.00
250140.000	904.41	.06	904.46	315.00	.00	1367.20	1362.80	315.00	250.00	250.00	310.00	565.00
250958.000	904.48	.00	904.53	307.26	5.53	1101.25	1623.22	.00	.00	250.00	310.00	.00
250958.000	904.59	.11	904.63	290.00	.00	1098.78	1631.22	290.00	250.00	250.00	310.00	540.00
* 251253.000	904.60	.00	904.93	115.06	8.93	2195.98	525.09	158.00	201.00	250.00	310.00	359.00
* 251253.000	904.71	.11	905.03	115.24	9.39	2191.03	529.58	158.00	201.00	250.00	310.00	359.00
251328.000	904.68	.00	905.11	97.06	9.75	2403.07	317.18	122.00	219.00	250.00	310.00	341.00
251328.000	904.79	.10	905.20	97.23	10.24	2399.53	320.23	122.00	219.00	250.00	310.00	341.00
251433.000	904.83	.00	905.43	69.00	10.76	2692.83	26.41	69.00	245.00	250.00	310.00	314.00
251433.000	904.93	.10	905.51	69.00	11.22	2692.15	26.62	69.00	245.00	250.00	310.00	314.00
* 251478.000	904.94	.00	906.06	46.00	.00	2729.84	.16	46.00	250.00	250.00	295.90	296.00
* 251478.000	905.03	.09	906.13	46.00	.00	2729.84	.16	46.00	250.00	250.00	295.90	296.00
251486.000	904.97	.00	906.09	46.00	.00	2730.00	.00	46.00	250.00	250.00	295.90	296.00
251486.000	905.07	.10	906.16	46.00	.00	2729.87	.13	46.00	250.00	250.00	295.90	296.00
251514.000	905.12	.00	906.20	46.00	.00	2730.00	.00	46.00	250.00	250.00	295.90	296.00
251514.000	905.20	.08	906.25	46.00	.00	2729.87	.13	46.00	250.00	250.00	295.90	296.00
251522.000	905.16	.00	906.22	46.00	.00	2729.88	.12	46.00	250.00	250.00	295.90	296.00
251522.000	905.24	.08	906.28	46.00	.00	2729.88	.12	46.00	250.00	250.00	295.90	296.00
* 251525.000	905.96	.00	906.49	52.00	.00	2730.00	.00	52.00	254.00	250.00	310.00	306.00
* 251525.000	906.01	.05	906.54	52.00	.00	2730.00	.00	52.00	254.00	250.00	310.00	306.00
251537.000	906.21	.00	906.59	76.00	27.98	2647.23	54.80	76.00	242.00	250.00	310.00	318.00
251537.000	906.26	.05	906.63	76.00	28.41	2646.68	54.91	76.00	242.00	250.00	310.00	318.00

* 251697.000	906.76	.00	906.80	371.09	15.51	1233.78	1480.71	.00	.00	250.00	310.00	.00
* 251697.000	906.80	.04	906.84	275.00	.00	1275.40	1454.60	275.00	250.00	250.00	310.00	525.00
* 268.010	907.00	.00	907.10	340.11	14.55	1700.32	1015.13	.00	.00	250.00	319.00	.00
* 268.010	907.09	.08	907.19	275.00	.00	1763.67	966.33	275.00	250.00	250.00	319.00	525.00
* 215.010	907.59	.00	907.84	322.66	13.82	2318.15	398.02	.00	.00	250.00	328.00	.00
215.010	907.72	.13	907.96	275.00	14.90	2305.97	409.13	275.00	240.00	250.00	328.00	515.00
257200.000	910.07	.00	910.36	202.75	46.74	2529.55	153.71	.00	.00	250.00	345.00	.00
257200.000	910.14	.06	910.45	140.00	38.85	2631.84	59.32	140.00	230.00	250.00	345.00	370.00
216.010	913.33	.00	913.65	173.08	58.61	2527.52	143.87	.00	.00	250.00	336.00	.00
216.010	913.43	.10	913.75	150.00	31.17	2547.76	151.07	150.00	240.00	250.00	336.00	390.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
263250.000	916.74	.00	917.08	151.35	69.15	2493.95	166.90	.00	.00	250.00	327.00	.00
263250.000	916.78	.04	917.13	132.37	38.25	2521.11	170.64	150.00	240.00	250.00	327.00	390.00
265423.000	918.79	.00	919.03	157.31	84.27	2325.06	320.67	.00	.00	250.00	327.00	.00
265423.000	918.84	.05	919.09	135.98	40.79	2359.81	329.41	150.00	240.00	250.00	327.00	390.00
265633.000	918.97	.00	919.48	51.00	.00	2729.03	.97	51.00	250.00	250.00	300.60	301.00
265633.000	919.02	.05	919.53	51.00	.00	2729.03	.97	51.00	250.00	250.00	300.60	301.00
265636.000	918.97	.00	919.49	51.00	.00	2730.00	.00	51.00	250.00	250.00	300.60	301.00
265636.000	919.02	.05	919.53	51.00	.00	2729.15	.85	51.00	250.00	250.00	300.60	301.00
265664.000	919.01	.00	919.52	51.00	.00	2730.00	.00	51.00	250.00	250.00	300.60	301.00
265664.000	919.05	.05	919.56	51.00	.00	2729.15	.85	51.00	250.00	250.00	300.60	301.00
265667.000	919.01	.00	919.52	51.00	.00	2728.55	1.45	51.00	250.00	250.00	300.60	301.00
265667.000	919.06	.04	919.56	50.60	.00	2730.00	.00	.61	250.00	250.00	300.60	300.60
* 265797.000	919.77	.00	919.81	314.48	.00	1105.20	1624.80	599.90	.10	285.00	350.00	600.00
* 265797.000	919.80	.03	919.85	274.49	.00	1235.27	1494.73	275.00	285.00	285.00	350.00	560.00
* 266247.000	919.86	.00	919.87	1162.28	.00	643.86	2086.14	.00	.00	285.00	350.00	.00
* 266247.000	919.91	.05	919.92	664.39	.00	673.18	2056.82	665.00	285.00	285.00	350.00	950.00
* 223.010	920.01	.00	920.03	1213.69	.00	711.94	2018.06	.00	.00	285.00	350.00	.00
* 223.010	920.07	.06	920.09	663.71	.00	752.73	1977.27	665.00	285.00	285.00	350.00	950.00
344.010	920.17	.00	920.18	1463.35	.00	634.82	2095.18	.00	.00	285.00	350.00	.00
344.010	920.24	.07	920.25	953.38	.00	650.02	2079.98	955.00	285.00	285.00	350.00	1240.00
271067.000	920.35	.00	920.36	1743.03	.00	591.61	2138.39	.00	.00	285.00	350.00	.00
271067.000	920.43	.09	920.45	1013.08	.00	657.27	2072.73	1015.00	285.00	285.00	350.00	1300.00
271167.000	920.37	.00	920.38	1740.81	.00	603.37	2126.63	.00	.00	285.00	350.00	.00
271167.000	920.46	.09	920.48	1013.06	.00	665.03	2064.97	1015.00	285.00	285.00	350.00	1300.00
271267.000	920.39	.00	920.41	1738.83	.00	614.34	2115.66	.00	.00	285.00	350.00	.00
271267.000	920.48	.09	920.51	873.04	.00	723.56	2006.44	875.00	285.00	285.00	350.00	1160.00
271370.000	920.42	.00	920.43	1737.76	.00	620.40	2109.60	2063.25	286.75	285.00	350.00	2350.00
271370.000	920.52	.10	920.55	773.03	.00	778.42	1951.58	773.25	286.75	285.00	350.00	1060.00
271380.000	920.42	.00	920.44	1735.68	.00	612.65	2117.35	2060.75	289.25	285.00	350.00	2350.00
271380.000	920.52	.10	920.55	770.25	.00	765.55	1964.45	770.25	289.75	285.00	350.00	1060.00
271390.000	920.42	.00	920.44	1732.87	.00	598.81	2131.19	2058.25	291.75	285.00	350.00	2350.00
271390.000	920.53	.10	920.56	768.25	.00	751.77	1978.23	768.25	291.75	285.00	350.00	1060.00
271395.000	920.42	.00	920.44	1731.67	.00	589.72	2140.28	2057.00	293.00	285.00	350.00	2350.00
271395.000	920.53	.10	920.56	767.00	.00	741.14	1988.86	767.00	293.00	285.00	350.00	1060.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
* 271400.000	920.39	.00	920.48	1740.00	.00	1223.36	1506.64	1740.00	1000.00	1000.00	1052.10	2740.00

* 271400.000	920.49	.10	920.60	760.00	.00	1287.96	1442.04	760.00	1000.00	1000.00	1052.10	1760.00
* 271434.000	922.45	.00	922.70	760.02	.00	2074.10	655.90	52.20	1000.00	1000.00	1052.10	1052.20
271434.000	922.19	-.26	922.51	760.01	.00	2200.35	529.65	52.20	1000.00	1000.00	1052.10	1052.20
* 271439.000	922.55	.00	922.55	780.00	.00	529.96	2200.04	780.00	290.00	285.00	350.00	1070.00
* 271439.000	922.59	.05	922.60	780.00	.00	527.41	2202.59	780.00	290.00	285.00	350.00	1070.00
* 271444.000	922.55	.00	922.55	793.91	.00	540.70	2189.30	800.00	280.00	285.00	350.00	1080.00
271444.000	922.59	.05	922.60	793.93	.00	538.17	2191.83	800.00	280.00	285.00	350.00	1080.00
* 271659.000	922.56	.00	922.56	2192.41	.00	259.35	2470.65	.00	.00	285.00	350.00	.00
* 271659.000	922.61	.05	922.61	1352.00	.00	342.56	2387.44	1352.00	288.00	285.00	350.00	1640.00
* 274443.000	922.58	.00	922.73	463.06	.00	1429.10	1300.90	.00	.00	885.00	950.00	.00
* 274443.000	922.72	.14	922.85	460.00	.00	1391.42	1338.58	460.00	887.00	885.00	950.00	1347.00
* 277640.000	925.06	.00	925.13	1004.33	724.38	1236.71	768.91	.00	.00	350.00	410.00	.00
277640.000	925.16	.10	925.24	643.76	669.32	1322.36	738.32	.09	129.76	350.00	410.00	773.52
280940.000	927.24	.00	927.41	234.28	.00	2368.26	361.74	.00	.00	250.00	364.00	.00
280940.000	927.37	.13	927.53	234.00	.00	2354.64	375.36	234.00	250.00	250.00	364.00	484.00
303.010	928.04	.00	928.16	314.70	2.78	2066.48	660.74	.00	.00	288.00	386.00	.00
303.010	928.14	.10	928.26	250.00	3.78	2111.37	614.85	250.00	275.00	288.00	386.00	525.00
286.010	928.63	.00	928.71	460.72	32.50	1730.20	967.29	.00	.00	325.00	407.00	.00
286.010	928.72	.09	928.80	375.00	26.10	1726.03	977.87	375.00	290.00	325.00	407.00	665.00
304.010	929.06	.00	929.11	648.43	206.09	1316.53	1207.38	.00	.00	363.00	429.00	.00
304.010	929.14	.08	929.19	644.24	214.80	1289.41	1225.78	645.00	181.00	363.00	429.00	826.00
285810.000	929.33	.00	929.35	940.48	824.88	770.05	1135.07	.00	.00	400.00	450.00	.00
285810.000	929.42	.09	929.45	569.00	841.42	870.00	1018.57	569.00	137.00	400.00	450.00	706.00
* 305.010	929.51	.00	929.58	687.19	757.50	1216.08	756.42	.00	.00	362.00	413.00	.00
* 305.010	929.63	.13	929.70	550.00	776.93	1195.73	757.34	550.00	120.00	362.00	413.00	670.00
* 287.010	929.99	.00	930.18	470.89	656.51	1659.11	414.38	.00	.00	325.00	376.00	.00
* 287.010	930.10	.11	930.29	306.00	683.87	1681.11	365.02	306.00	130.00	325.00	376.00	436.00
354.010	930.93	.00	931.19	293.62	567.79	1868.93	293.27	.00	.00	288.00	339.00	.00
354.010	931.03	.10	931.31	221.00	570.59	1923.93	235.48	221.00	144.00	288.00	339.00	365.00
233.010	932.01	.00	932.30	234.50	495.29	2019.08	215.63	.00	.00	250.00	302.00	.00
233.010	932.12	.11	932.42	190.00	497.63	2063.80	168.56	190.00	130.00	250.00	302.00	320.00
288.010	934.11	.00	934.39	219.18	476.77	2078.14	175.10	.00	.00	250.00	303.00	.00
288.010	934.20	.08	934.46	220.08	489.55	2063.40	177.06	.00	.00	250.00	303.00	.00

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
293340.000	936.03	.00	936.29	209.98	444.01	2141.21	144.78	.00	.00	250.00	304.00	.00
293340.000	936.05	.02	936.31	210.14	446.84	2137.93	145.23	.00	.00	250.00	304.00	.00
295627.000	938.18	.00	938.44	210.45	452.16	2131.76	146.08	.00	.00	250.00	304.00	.00
295627.000	938.19	.00	938.45	210.48	452.73	2131.09	146.18	.00	.00	250.00	304.00	.00
* 295947.000	938.61	.00	939.18	50.00	.00	2730.00	.00	50.00	252.00	250.00	304.00	302.00
* 295947.000	938.62	.00	939.18	50.00	.00	2730.00	.00	50.00	252.00	250.00	304.00	302.00
* 295967.000	938.68	.00	939.67	40.00	.00	2728.82	1.18	40.00	181.60	178.56	221.28	221.60
* 295967.000	938.68	.00	939.68	40.00	.00	2728.82	1.18	40.00	181.60	178.56	221.28	221.60
295968.000	938.68	.00	939.83	40.00	.00	2730.00	.00	40.00	181.60	178.56	221.28	221.60
295968.000	938.69	.01	939.68	40.00	.00	2727.93	2.07	40.00	181.60	178.56	221.28	221.60
296055.000	939.29	.00	940.31	40.00	.00	2730.00	.00	40.00	181.60	178.56	221.28	221.60
296055.000	939.04	-.25	939.95	40.00	.00	2727.93	2.07	40.00	181.60	178.56	221.28	221.60
296056.000	939.69	.00	940.45	42.00	.00	2720.59	9.41	42.00	180.60	178.56	221.28	222.60
296056.000	939.15	-.55	939.99	42.00	.00	2720.69	9.31	42.00	180.60	178.56	221.28	222.60
* 296071.000	940.37	.00	940.69	72.00	74.11	2587.88	68.01	72.00	241.00	250.00	304.00	313.00
* 296071.000	939.92	-.45	940.27	72.00	71.59	2592.41	66.00	72.00	241.00	250.00	304.00	313.00

* 296148.000	940.71	.00	940.83	227.20	698.70	1868.83	162.47	.00	.00	250.00	304.00	.00
* 296148.000	940.29	-.42	940.42	214.45	655.87	1916.92	157.21	.00	117.52	250.00	304.00	331.97
298190.000	941.36	.00	941.40	588.33	1383.52	1294.45	52.03	.00	.00	1236.00	1300.00	.00
298190.000	941.21	-.15	941.32	250.00	893.02	1785.28	51.70	250.00	1070.00	1236.00	1300.00	1320.00
298500.000	941.43	.00	941.48	570.62	1355.24	1323.88	50.88	.00	.00	1236.00	1300.00	.00
298500.000	941.34	-.08	941.46	250.00	879.47	1799.61	50.92	250.00	1070.00	1236.00	1300.00	1320.00

1

SUMMARY OF ERRORS AND SPECIAL NOTES

```
WARNING SECNO=  47546.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  47546.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=  47603.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO=  47603.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  47603.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=  47616.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO=  47616.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  47616.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=  47656.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO=  47656.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  47656.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  68635.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     48.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     48.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  76432.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77419.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77419.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77485.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77485.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77546.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77546.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77596.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77596.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77746.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77746.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  82639.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  82639.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  83887.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  83887.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  85275.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  85275.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  88600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

1


```
WARNING SECNO=  91350.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  91350.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  93489.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  93489.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  94800.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  94800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=  95200.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  95600.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95865.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95909.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  95909.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95931.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  95931.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  96445.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIOE ACCEPTABLE RANGE
WARNING SECNO=  96445.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  97050.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  97050.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  97900.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  97900.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98575.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  98575.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98961.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  98961.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98962.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  98962.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98982.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  98982.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  99150.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  99150.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 100935.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 100935.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 101067.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   03JAN94      08:21:33                                                                                    PAGE  310

WARNING SECNO= 101067.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 101800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 102350.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 102350.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 111800.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 111800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     135.020  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     135.020  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 132771.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 132771.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 147223.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 147807.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 147807.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 154799.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 154799.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO= 154800.000  PROFILE=  2  WSEL BASED ON X5 CARD

WARNING SECNO= 154812.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 154812.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 154814.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 154814.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     164.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 166154.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO= 166154.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    170.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    170.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    154.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    154.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 172632.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 172632.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 172670.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 172670.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    220.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 180580.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   03JAN94      08:21:33                                                                                    PAGE  311

WARNING SECNO= 180580.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 181960.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 181960.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 182003.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 182003.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 182101.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 182101.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 183600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 183600.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 194976.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 194976.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 195040.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 195040.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 195924.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 202936.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 202936.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203176.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203176.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203181.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203224.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203274.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203274.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203464.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203464.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    277.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    184.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 216085.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 218792.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 218792.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 211353.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 211353.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 221383.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   03JAN94      08:21:33                                                                                    PAGE  312

WARNING SECNO= 221383.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE -  SECNO= 237300.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO= 237300.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
NOTE    SECNO= 237300.000  PROFILE=  2  WSEL BASED ON X5 CARD
WARNING SECNO= 237300.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 244550.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 244550.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 249051.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 249051.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 249336.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 249336.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 249364.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 249364.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251253.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251253.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251478.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251478.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251525.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251525.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251697.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251697.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    268.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    268.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    215.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 265797.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 265797.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 266247.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 266247.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    223.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    223.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 271400.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 271400.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO= 271434.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO= 271434.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO= 271439.000  PROFILE=  1  WSEL BASED ON X5 CARD
1
```



```
WARNING SECNO= 271439.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 271439.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO= 271444.000  PROFILE=  1  WSEL BASED ON X5 CARD

WARNING SECNO= 271659.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 271659.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 274443.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 274443.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 277640.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    305.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    305.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    287.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    287.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 295947.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 295947.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 295967.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 295967.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 296071.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 296071.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

WARNING SECNO= 296148.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 296148.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

1

Floodway width summary: 100-YEAR DISCHARGE
Profile No. 2

Section Number	Elevation Increase	Top Width	Left Encroach Station	Left Sta Distance From Center	Center Station	Right Sta Distance From Center	Right Encroach Station
.000	.10	299.00	525.00	255.00	780.00	44.00	824.00
600.000	.10	299.00	525.00	255.00	780.00	44.00	824.00
3.010	.11	240.00	125.00	182.50	307.50	57.50	365.00
8854.000	.08	265.00	205.00	131.00	336.00	134.00	470.00
9154.000	.09	250.00	215.00	121.00	336.00	129.00	465.00
9354.000	.08	149.20	70.90	74.61	145.51	74.59	220.10
9355.000	.08	149.20	70.90	74.61	145.51	74.59	220.10
9400.000	.08	149.20	70.90	74.61	145.51	74.59	220.10
9401.000	.07	150.80	70.20	75.31	145.51	75.49	221.00
9576.000	-.01	375.00	165.00	171.00	336.00	204.00	540.00
9.010	.13	327.00	239.00	74.50	313.50	252.50	566.00
18600.000	.07	230.00	240.00	52.00	292.00	178.00	470.00
10.010	.10	170.00	240.00	58.00	298.00	112.00	410.00
25825.000	.05	185.00	245.00	59.00	304.00	126.00	430.00
25925.000	.05	202.50	70.90	101.24	172.14	101.26	273.40
25926.000	.05	202.50	70.90	101.24	172.14	101.26	273.40
25974.000	.05	202.50	70.90	101.24	172.14	101.26	273.40
25975.000	.05	203.80	70.20	101.94	172.14	101.86	274.00
26075.000	.05	187.00	238.00	66.00	304.00	121.00	425.00
16.010	.01	143.00	225.00	75.50	300.50	67.50	368.00
20.030	.01	180.00	182.00	117.00	299.00	63.00	362.00
20.080	.10	308.64	185.37	261.63	447.00	47.00	494.00
20.070	.11	358.00	271.00	176.00	447.00	182.00	629.00
35244.000	.10	138.00	228.00	68.50	296.50	69.50	366.00
35319.000	.09	100.10	99.90	50.10	150.00	50.00	200.00
35320.000	.09	100.10	99.90	50.10	150.00	50.00	200.00
35340.000	.09	100.10	99.90	50.10	150.00	50.00	200.00
35341.000	.09	102.00	99.00	51.00	150.00	51.00	201.00
35466.000	.03	313.00	45.00	256.50	301.50	56.50	358.00
22.010	.12	231.00	145.00	155.00	300.00	76.00	376.00
22.020	.07	301.63	195.12	108.88	304.00	192.75	496.75
45745.000	.09	443.99	209.54	97.96	307.50	346.03	653.53
46623.000	.09	442.01	210.97	96.53	307.50	345.48	652.98
47223.000	.09	345.00	164.00	143.50	307.50	201.50	509.00
47423.000	.09	145.00	264.00	43.50	307.50	101.50	409.00
47473.000	.08	120.00	277.00	30.50	307.50	89.50	397.00
47523.000	.08	95.00	289.00	18.50	307.50	76.50	384.00
47546.000	.08	83.50	50.00	36.50	86.50	47.00	133.50
47600.000	.08	83.50	50.00	36.50	86.50	47.00	133.50
47603.000	.01	90.00	263.00	44.50	307.50	45.50	353.00
47616.000	.02	116.00	250.00	57.50	307.50	58.50	366.00
47656.000	.03	196.00	210.00	97.50	307.50	98.50	406.00
47816.000	.02	381.67	186.30	121.20	307.50	260.48	567.98
29.010	.04	440.26	185.28	111.72	297.00	328.54	625.54
29.020	.07	528.26	184.47	102.03	286.50	426.23	712.73
29.030	.07	490.00	140.00	136.00	276.00	354.00	630.00
65375.000	.07	775.00	95.00	196.00	291.00	579.00	870.00

1

68635.000	.10	761.00	213.00	462.00	675.00	299.00	974.00
48.010	.09	845.00	280.00	799.00	1079.00	46.00	1125.00
52.010	*** Encroachments not set ***						
48.020	.08	450.00	130.00	404.00	534.00	46.00	580.00
71612.000	.05	450.00	85.00	404.00	489.00	46.00	535.00
72012.000	.08	575.00	200.00	289.00	489.00	286.00	775.00
72372.000	.07	151.10	99.90	99.10	199.00	52.00	251.00
72373.000	.07	151.10	99.90	99.10	199.00	52.00	251.00
72427.000	.07	151.10	99.90	99.10	199.00	52.00	251.00
72428.000	.07	153.00	99.00	100.00	199.00	53.00	252.00
72523.000	.07	228.74	109.26	179.74	289.00	49.00	338.00
72600.000	.10	308.01	629.99	259.01	889.00	49.00	938.00
72950.000	.10	461.15	476.85	412.15	889.00	49.00	938.00
73765.000	.10	455.32	482.68	406.32	889.00	49.00	938.00

74580.000	.09	450.00	488.00	401.00	889.00	49.00	938.00
75670.000	.07	333.00	718.00	171.00	889.00	162.00	1051.00
75870.000	.07	233.00	768.00	121.00	889.00	112.00	1001.00
76070.000	*** Encroachments not set ***						
76120.000	.06	230.00	170.00	119.00	289.00	111.00	400.00
76180.000	.05	465.00	110.00	179.00	289.00	286.00	575.00
76432.000	-.28	226.00	182.00	107.50	289.50	118.50	408.00
77032.000	-.11	195.00	195.00	94.50	289.50	100.50	390.00
77382.000	-.07	139.10	70.90	50.86	121.76	88.24	210.00
77383.000	-.07	139.10	70.90	50.86	121.76	88.24	210.00
77418.000	-.06	139.10	70.90	50.86	121.76	88.24	210.00
77419.000	-.06	140.80	70.20	51.56	121.76	89.24	211.00
77484.000	-.06	139.10	70.90	50.86	121.76	88.24	210.00
77485.000	-.06	139.10	70.90	50.86	121.76	88.24	210.00
77520.000	-.06	139.10	70.90	50.86	121.76	88.24	210.00
77521.000	-.06	140.80	70.20	51.56	121.76	89.24	211.00
77546.000	-.05	150.00	215.00	74.50	289.50	75.50	365.00
77596.000	-.05	250.00	165.00	124.50	289.50	125.50	415.00
77746.000	-.16	375.00	100.00	189.50	289.50	185.50	475.00
81550.000	-.06	440.00	810.00	179.50	989.50	260.50	1250.00
82639.000	.05	435.00	765.00	224.50	989.50	210.50	1200.00
83339.000	.07	223.00	878.00	111.50	989.50	111.50	1101.00
83610.000	.07	87.10	76.90	45.91	122.82	41.18	164.00
83646.000	.08	87.10	76.90	45.91	122.82	41.18	164.00
83677.000	.07	148.00	216.00	73.50	289.50	74.50	364.00
83887.000	.04	500.00	40.00	249.50	289.50	250.50	540.00
85275.000	.09	520.00	220.00	430.50	650.50	89.50	740.00
85825.000	.09	800.00	300.00	543.50	843.50	256.50	1100.00
87215.000	.11	854.00	490.00	782.00	1272.00	72.00	1344.00
88600.000	.13	600.00	50.00	395.00	445.00	205.00	650.00
89700.000	.08	440.80	240.00	95.00	335.00	345.00	680.00
90800.000	.07	653.00	782.00	603.00	1385.00	50.00	1435.00
91350.000	.05	509.00	600.00	269.00	869.00	240.00	1109.00
91800.000	.05	370.00	590.00	166.00	756.00	204.00	960.00
92175.000	.04	315.00	288.00	158.00	446.00	157.00	603.00
92550.000	.03	112.00	80.00	56.00	136.00	56.00	192.00
92900.000	.04	140.00	60.00	76.00	136.00	64.00	200.00
93211.000	.03	116.48	92.82	58.24	151.06	58.24	209.30
93221.000	.03	116.48	92.82	58.24	151.06	58.24	209.30
93279.000	.03	116.48	92.82	58.24	151.06	58.24	209.30

1

93289.000	.03	116.48	92.82	58.24	151.06	58.24	209.30
93489.000	.03	120.00	43.00	62.00	105.00	58.00	163.00
93650.000	.00	124.00	24.00	53.50	77.50	70.50	148.00
94800.000	.05	710.00	90.00	71.50	161.50	638.50	800.00
95200.000	.03	410.00	10.00	130.00	140.00	280.00	420.00
95550.000	.09	265.00	13.00	127.00	140.00	138.00	278.00
95600.000	.09	275.00	50.00	137.00	187.00	138.00	325.00
95605.000	.08	275.00	50.00	137.00	187.00	138.00	325.00
95865.000	*** Encroachments not set ***						
95905.000	.07	79.00	103.50	37.50	141.00	41.50	182.50
95909.000	*** Encroachments not set ***						
95910.000	*** Encroachments not set ***						
95930.000	*** Encroachments not set ***						
95931.000	*** Encroachments not set ***						
96015.000	.07	150.00	35.00	35.00	70.00	115.00	185.00
96122.000	*** Encroachments not set ***						
96230.000	*** Encroachments not set ***						
96445.000	.04	220.00	15.00	155.00	170.00	65.00	235.00
96650.000	.05	272.00	14.00	203.50	217.50	68.50	286.00
96850.000	*** Encroachments not set ***						
97050.000	*** Encroachments not set ***						
97078.000	*** Encroachments not set ***						
97122.000	.05	95.00	100.00	57.50	157.50	37.50	195.00
97132.000	.05	95.00	100.00	57.50	157.50	37.50	195.00
97213.000	-.12	95.00	35.00	44.50	79.50	50.50	130.00
97900.000	.10	613.00	10.00	37.00	47.00	576.00	623.00
98400.000	.10	495.00	15.00	332.00	347.00	163.00	510.00
98575.000	.10	471.00	105.00	341.50	446.50	129.50	576.00
98961.000	.10	470.00	52.00	235.00	287.00	235.00	522.00
98962.000	.10	470.00	52.00	235.00	287.00	235.00	522.00
98981.000	.09	470.00	52.00	235.00	287.00	235.00	522.00
98982.000	.09	470.00	52.00	235.00	287.00	235.00	522.00
99150.000	.08	389.90	.10	59.90	60.00	330.00	390.00
99750.000	.12	635.00	105.00	153.50	258.50	481.50	740.00
100735.000	.10	223.00	140.00	111.50	251.50	111.50	363.00
100935.000	.10	126.00	102.00	63.00	165.00	63.00	228.00

100945.000	.10	126.00	102.00	63.00	165.00	63.00	228.00
101000.000	.10	126.00	102.00	63.00	165.00	63.00	228.00
101010.000	.10	126.00	102.00	63.00	165.00	63.00	228.00
101067.000	.06	135.00	95.00	70.00	165.00	65.00	230.00
101800.000	.10	648.00	80.00	575.00	655.00	73.00	728.00
102350.000	.10	571.22	72.96	336.04	409.00	235.18	644.18
102900.000	.10	340.00	60.00	102.50	162.50	237.50	400.00
104150.000	.07	671.00	22.00	629.50	651.50	41.50	693.00
104800.000	.06	842.00	93.00	797.00	890.00	45.00	935.00
105450.000	.07	1000.00	250.00	878.50	1128.50	121.50	1250.00
107.010	.06	825.00	60.00	656.50	716.50	168.50	885.00
110575.000	.10	580.00	145.00	243.50	388.50	336.50	725.00
110775.000	.12	507.00	135.00	253.50	388.50	253.50	642.00
111300.000	.08	244.00	267.00	121.50	388.50	122.50	511.00
111500.000	.07	144.00	317.00	71.50	388.50	72.50	461.00
111521.000	.05	134.00	500.00	55.95	555.95	78.05	634.00
111530.000	.05	134.00	500.00	55.95	555.95	78.05	634.00
111562.000	.08	134.00	500.00	55.95	555.95	78.05	634.00

1

111571.000	.08	134.00	500.00	55.95	555.95	78.05	634.00
111800.000	.07	593.00	92.00	296.50	388.50	296.50	685.00
111900.000	.07	666.83	67.81	320.69	388.50	346.14	734.64
116500.000	.09	601.00	426.00	448.50	874.50	152.50	1027.00
135.010	.11	671.00	243.00	515.50	758.50	155.50	914.00
144.010	.11	633.00	218.00	483.00	701.00	150.00	851.00
135.020	.12	644.00	100.00	542.50	642.50	101.50	744.00
120100.000	.13	575.00	150.00	360.00	510.00	215.00	725.00
115.010	.06	369.00	90.00	313.00	403.00	56.00	459.00
115.020	.05	376.00	400.00	330.50	730.50	45.50	776.00
129470.000	.10	400.00	535.00	358.50	893.50	41.50	935.00
129950.000	.11	339.00	600.00	293.50	893.50	45.50	939.00
130480.000	.09	75.10	99.90	37.60	137.50	37.50	175.00
130488.000	.09	75.10	99.90	37.60	137.50	37.50	175.00
130513.000	.11	75.10	99.90	37.60	137.50	37.50	175.00
130521.000	.11	75.10	99.90	37.60	137.50	37.50	175.00
130571.000	.10	170.00	170.00	90.00	260.00	80.00	340.00
131071.000	.09	319.00	240.00	265.50	505.50	53.50	559.00
131521.000	.08	527.98	76.57	246.93	323.50	281.05	604.55
131971.000	.06	520.00	120.00	82.00	202.00	438.00	640.00
132371.000	.11	520.00	62.00	240.00	302.00	280.00	582.00
132771.000	.09	280.00	35.00	132.50	167.50	147.50	315.00
133591.000	.11	170.00	25.00	119.05	144.05	50.95	195.00
134611.000	.03	209.00	261.00	74.50	335.50	134.50	470.00
178.010	.01	260.00	215.00	140.00	355.00	120.00	475.00
178.020	.01	200.00	267.00	108.00	375.00	92.00	467.00
138700.000	.10	247.00	323.00	71.00	394.00	176.00	570.00
179.010	.05	260.00	284.00	110.00	394.00	150.00	544.00
140900.000	.06	385.00	240.00	154.00	394.00	231.00	625.00
145.010	.12	395.00	300.00	252.00	552.00	143.00	695.00
147.010	.12	395.00	300.00	331.00	631.00	64.00	695.00
143250.000	.11	374.00	381.00	329.00	710.00	45.00	755.00
148.010	.12	374.00	277.00	323.50	600.50	50.50	651.00
146.010	.12	553.00	135.00	355.00	490.00	198.00	688.00
146623.000	.11	550.00	50.00	291.50	341.50	258.50	600.00
147223.000	.12	350.00	167.00	174.50	341.50	175.50	517.00
147423.000	.10	250.00	217.00	124.50	341.50	125.50	467.00
147523.000	.08	214.20	87.00	107.05	194.05	107.15	301.20
147524.000	.08	214.20	87.00	107.05	194.05	107.15	301.20
147556.000	.08	214.20	87.00	107.05	194.05	107.15	301.20
147557.000	.08	216.00	86.00	108.05	194.05	107.95	302.00
147807.000	.05	570.00	110.00	281.50	391.50	288.50	680.00
148750.000	.09	590.00	100.00	291.50	391.50	298.50	690.00
152800.000	.10	300.00	252.00	73.00	325.00	227.00	552.00
181.010	.06	215.00	250.00	62.00	312.00	153.00	465.00
154089.000	.03	205.00	250.00	49.50	299.50	155.50	455.00
154439.000	.02	200.00	250.00	45.00	295.00	155.00	450.00
154759.000	.02	90.00	250.00	45.00	295.00	45.00	340.00
154789.000	.02	75.00	257.00	38.00	295.00	37.00	332.00
154793.000	.02	73.00	258.00	37.00	295.00	36.00	331.00
154796.000	.02	71.50	258.75	36.25	295.00	35.25	330.25
154799.000	.02	91.00	250.00	45.50	295.50	45.50	341.00
154800.000	.10	70.40	259.39	36.11	295.50	34.29	329.79
154812.000	-.13	91.00	250.00	45.50	295.50	45.50	341.00

1

154813.000	-.49	83.80	250.40	45.10	295.50	38.70	334.20
154814.000	-.22	86.00	252.00	43.00	295.00	43.00	338.00
154819.000	-.22	96.00	247.00	48.00	295.00	48.00	343.00
154823.000	-.22	104.00	243.00	52.00	295.00	52.00	347.00
154923.000	-.21	304.00	143.00	152.00	295.00	152.00	447.00
155148.000	-.22	330.00	220.00	79.50	299.50	250.50	550.00
136.010	-.06	325.00	250.00	59.50	309.50	265.50	575.00
164.010	.06	349.00	1026.00	50.50	1076.50	298.50	1375.00
161800.000	.04	380.00	1800.00	41.50	1841.50	338.50	2180.00
162700.000	.03	420.00	1780.00	61.50	1841.50	358.50	2200.00
163600.000	.02	480.00	1720.00	121.50	1841.50	358.50	2200.00
165433.000	.03	550.00	1700.00	141.50	1841.50	408.50	2250.00
165586.000	.03	582.00	195.00	187.02	382.02	394.98	777.00
165614.000	.21	788.00	157.60	224.42	382.02	563.58	945.60
166154.000	.14	510.00	15.00	275.50	290.50	234.50	525.00
167750.000	.12	375.00	75.00	265.50	340.50	109.50	450.00
170.010	.13	340.00	60.00	248.00	308.00	92.00	400.00
207.010	.11	320.00	106.00	186.00	292.00	134.00	426.00
154.010	.13	311.18	88.19	186.81	275.00	124.37	399.37
154.020	.11	200.00	200.00	87.50	287.50	112.50	400.00
172290.000	.01	200.00	225.00	75.50	300.50	124.50	425.00
172571.000	.01	77.00	259.00	41.50	300.50	35.50	336.00
172595.000	.01	65.00	265.00	35.50	300.50	29.50	330.00
172608.000	.01	58.70	268.15	32.35	300.50	26.35	326.85
172610.000	*** Encroachments not set ***						
172630.000	*** Encroachments not set ***						
172632.000	.00	65.00	257.50	43.00	300.50	22.00	322.50
172634.000	.00	69.00	255.50	45.00	300.50	24.00	324.50
172670.000	.00	140.00	220.00	80.50	300.50	59.50	360.00
172730.000	-.04	210.00	230.00	120.50	350.50	89.50	440.00
172830.000	-.06	210.00	260.00	90.50	350.50	119.50	470.00
220.010	.04	230.00	275.00	75.50	350.50	154.50	505.00
175570.000	.07	300.00	200.00	150.00	350.00	150.00	500.00
176575.000	.09	300.00	200.00	150.00	350.00	150.00	500.00
177575.000	.05	300.00	200.00	150.00	350.00	150.00	500.00
179580.000	.01	300.00	200.00	150.00	350.00	150.00	500.00
180580.000	.01	375.00	275.00	187.50	462.50	187.50	650.00
181332.000	.01	375.00	275.00	187.50	462.50	187.50	650.00
181960.000	.01	60.00	515.00	-52.50	462.50	112.50	575.00
181965.000	.01	57.50	516.25	-53.75	462.50	111.25	573.75
181970.000	.01	55.00	517.50	-55.00	462.50	110.00	572.50
181975.000	.01	52.50	518.75	-56.25	462.50	108.75	571.25
181980.000	.01	50.00	520.00	-57.50	462.50	107.50	570.00
181982.000	.01	49.00	103.00	24.50	127.50	24.50	152.00
181983.000	.30	49.00	103.00	24.50	127.50	24.50	152.00
182000.000	.10	49.00	103.00	24.50	127.50	24.50	152.00
182001.000	-.09	51.00	102.00	25.50	127.50	25.50	153.00
182003.000	-.03	54.00	523.00	-60.50	462.50	114.50	577.00
182007.000	-.03	62.00	519.00	-56.50	462.50	118.50	581.00
182012.000	-.03	71.00	514.00	-51.50	462.50	122.50	585.00
182101.000	-.02	250.00	425.00	37.50	462.50	212.50	675.00
182231.000	-.03	375.00	275.00	187.50	462.50	187.50	650.00
183400.000	-.02	375.00	275.00	187.50	462.50	187.50	650.00
183600.000	-.03	325.00	125.00	119.00	244.00	206.00	450.00

184862.000	.06	325.00	125.00	119.00	244.00	206.00	450.00
186125.000	.11	355.00	125.00	119.00	244.00	236.00	480.00
186790.000	.13	355.00	155.00	242.50	397.50	112.50	510.00
187092.000	.12	329.00	232.00	165.50	397.50	163.50	561.00
187394.000	.12	238.00	278.00	119.50	397.50	118.50	516.00
187494.000	.11	187.60	303.70	93.80	397.50	93.80	491.30
187719.000	.10	75.10	100.00	37.50	137.50	37.60	175.10
187720.000	.10	75.10	100.00	37.50	137.50	37.60	175.10
187780.000	.09	75.10	100.00	37.50	137.50	37.60	175.10
187781.000	.09	77.00	99.00	38.50	137.50	38.50	176.00
187831.000	.07	177.00	309.00	88.50	397.50	88.50	486.00
187881.000	.04	271.58	304.65	92.85	397.50	178.73	576.23
188061.000	.03	480.00	150.00	247.50	397.50	232.50	630.00
191400.000	.13	490.00	150.00	247.50	397.50	242.50	640.00
192728.000	.13	470.00	155.00	242.50	397.50	227.50	625.00
193956.000	.12	460.00	155.00	242.50	397.50	217.50	615.00
194826.000	.10	152.00	322.00	75.50	397.50	76.50	474.00
194876.000	.10	127.00	334.00	63.50	397.50	63.50	461.00
194972.000	.09	80.00	357.50	40.00	397.50	40.00	437.50
194976.000	.09	78.10	100.00	39.05	139.05	39.05	178.10
194977.000	.09	78.10	100.00	39.05	139.05	39.05	178.10
195023.000	.05	78.10	100.00	39.05	139.05	39.05	178.10

195024.000	.04	80.00	99.00	40.05	139.05	39.95	179.00
195040.000	.03	112.00	220.00	48.00	268.00	64.00	332.00
195090.000	.03	212.00	170.00	98.00	268.00	114.00	382.00
195170.000	-.19	232.00	150.00	118.00	268.00	114.00	382.00
195350.000	-.14	232.00	150.00	118.00	268.00	114.00	382.00
195724.000	.07	277.46	22.54	245.46	268.00	32.00	300.00
195924.000	.09	323.74	1.26	284.74	286.00	39.00	325.00
195925.000	.08	307.35	17.66	268.34	286.00	39.00	325.00
195974.000	.10	311.79	13.21	272.79	286.00	39.00	325.00
195975.000	.11	320.00	5.00	281.00	286.00	39.00	325.00
196015.000	.10	347.00	403.00	265.00	668.00	82.00	750.00
196065.000	.10	397.00	353.00	315.00	668.00	82.00	750.00
196272.000	.07	430.00	305.00	363.00	668.00	67.00	735.00
197250.000	.08	430.00	155.00	363.00	518.00	67.00	585.00
178.010	.07	440.00	550.00	331.50	881.50	108.50	990.00
202235.000	.11	464.75	76.43	218.57	295.00	246.18	541.18
202936.000	.11	196.00	197.00	98.00	295.00	98.00	393.00
203036.000	.10	136.00	227.00	68.00	295.00	68.00	363.00
203176.000	.09	65.50	192.50	32.76	225.26	32.74	258.00
203181.000	.09	65.50	192.50	32.76	225.26	32.74	258.00
203219.000	-.04	65.50	192.50	32.76	225.26	32.74	258.00
203224.000	-.36	67.50	191.50	33.76	225.26	33.74	259.00
203274.000	-.29	171.00	1959.00	86.00	2045.00	85.00	2130.00
203464.000	-.26	505.00	1805.00	240.00	2045.00	265.00	2310.00
277.010	-.15	510.00	990.00	298.50	1288.50	211.50	1500.00
184.010	.07	470.00	350.00	183.50	533.50	286.50	820.00
210350.000	.09	501.00	138.00	133.50	271.50	367.50	639.00
185.010	.13	542.88	139.96	138.54	278.50	404.34	682.84
215877.000	.13	435.97	79.60	255.40	335.00	180.56	515.56
216054.000	.13	398.68	82.48	229.57	312.05	169.12	481.17
216085.000	.02	398.68	82.48	229.57	312.05	169.12	481.17
216135.000	.08	550.00	500.00	357.50	857.50	192.50	1050.00

216185.000	.09	468.10	379.76	351.24	731.00	116.86	847.86
216277.000	.08	681.65	365.97	353.11	719.08	328.55	1047.62
217062.000	.10	570.00	155.00	546.50	701.50	23.50	725.00
217537.000	.12	531.90	.10	296.30	296.40	235.60	532.00
218237.000	.11	662.19	39.00	24.50	63.50	637.69	701.19
218792.000	.12	600.00	40.00	277.00	317.00	323.00	640.00
219172.000	.13	600.00	12.00	24.00	36.00	576.00	612.00
219722.000	.09	400.00	12.00	344.00	356.00	56.00	412.00
220247.000	.08	455.00	2.00	51.00	53.00	404.00	457.00
220447.000	.09	350.00	276.00	296.02	572.03	53.97	626.00
220942.000	.10	378.00	255.00	173.64	428.64	204.36	633.00
221102.000	.08	300.00	300.00	235.80	535.80	64.20	600.00
221302.000	.07	50.10	250.00	25.00	275.00	25.10	300.10
221310.000	.07	50.10	250.00	25.00	275.00	25.10	300.10
221340.000	.07	50.10	250.00	25.00	275.00	25.10	300.10
221348.000	.06	50.10	250.00	25.00	275.00	25.10	300.10
211353.000	.05	60.00	30.00	30.00	60.00	30.00	90.00
221383.000	.05	117.32	1.25	58.75	60.00	58.57	118.57
222533.000	.05	118.65	.67	59.33	60.00	59.32	119.32
237300.000	.10	619.00	250.00	309.50	559.50	309.50	869.00
241300.000	.10	619.00	250.00	309.50	559.50	309.50	869.00
244550.000	.10	270.00	165.00	172.50	337.50	97.50	435.00
267.010	.09	240.00	175.00	149.50	324.50	90.50	415.00
256.010	.08	220.00	180.00	130.50	310.50	89.50	400.00
268.010	.07	215.00	180.00	117.00	297.00	98.00	395.00
247600.000	.04	145.74	213.72	69.28	283.00	76.46	359.46
301.010	.07	242.56	234.54	47.46	282.00	195.10	477.10
248716.000	.09	291.91	250.00	30.00	280.00	261.91	541.91
249051.000	.11	121.11	250.00	30.00	280.00	91.11	371.11
249286.000	.11	70.00	245.00	35.00	280.00	35.00	315.00
249336.000	.11	44.10	217.50	21.75	239.25	22.35	261.60
249364.000	.05	320.00	160.00	79.25	239.25	240.75	480.00
249394.000	.05	234.00	235.00	45.00	280.00	189.00	469.00
249444.000	.05	284.00	235.00	45.00	280.00	239.00	519.00
249617.000	.05	317.00	224.00	56.00	280.00	261.00	541.00
250140.000	.06	315.00	250.00	30.00	280.00	285.00	565.00
250958.000	.11	290.00	250.00	30.00	280.00	260.00	540.00
251253.000	.11	158.00	201.00	79.00	280.00	79.00	359.00
251328.000	.10	122.00	219.00	61.00	280.00	61.00	341.00
251433.000	.10	69.00	245.00	35.00	280.00	34.00	314.00
251478.000	.09	46.00	250.00	22.95	272.95	23.05	296.00
251486.000	.10	46.00	250.00	22.95	272.95	23.05	296.00
251514.000	.08	46.00	250.00	22.95	272.95	23.05	296.00
251522.000	.08	46.00	250.00	22.95	272.95	23.05	296.00

251525.000	.05	52.00	254.00	26.00	280.00	26.00	306.00
251537.000	.05	76.00	242.00	38.00	280.00	38.00	318.00
251697.000	.04	275.00	250.00	30.00	280.00	245.00	525.00
268.010	.08	275.00	250.00	34.50	284.50	240.50	525.00
215.010	.13	275.00	240.00	49.00	289.00	226.00	515.00
257200.000	.06	140.00	230.00	67.50	297.50	72.50	370.00
216.010	.10	150.00	240.00	53.00	293.00	97.00	390.00
263250.000	.04	150.00	240.00	48.50	288.50	101.50	390.00
265423.000	.05	150.00	240.00	48.50	288.50	101.50	390.00
265633.000	.05	51.00	250.00	25.30	275.30	25.70	301.00

1

265636.000	.05	51.00	250.00	25.30	275.30	25.70	301.00
265664.000	.05	51.00	250.00	25.30	275.30	25.70	301.00
265667.000	.04	50.60	250.00	25.30	275.30	25.30	300.60
265797.000	.03	275.00	285.00	32.50	317.50	242.50	560.00
266247.000	.05	665.00	285.00	32.50	317.50	632.50	950.00
223.010	.06	665.00	285.00	32.50	317.50	632.50	950.00
344.010	.07	955.00	285.00	32.50	317.50	922.50	1240.00
271067.000	.09	1015.00	285.00	32.50	317.50	982.50	1300.00
271167.000	.09	1015.00	285.00	32.50	317.50	982.50	1300.00
271267.000	.09	875.00	285.00	32.50	317.50	842.50	1160.00
271370.000	.10	773.25	286.75	30.75	317.50	742.50	1060.00
271380.000	.10	770.25	289.75	27.75	317.50	742.50	1060.00
271390.000	.10	768.25	291.75	25.75	317.50	742.50	1060.00
271395.000	.10	767.00	293.00	24.50	317.50	742.50	1060.00
271400.000	.10	760.00	1000.00	26.05	1026.05	733.95	1760.00
271434.000	-.26	52.20	1000.00	26.05	1026.05	26.15	1052.20
271439.000	.05	780.00	290.00	27.50	317.50	752.50	1070.00
271444.000	.05	800.00	280.00	37.50	317.50	762.50	1080.00
271659.000	.05	1352.00	288.00	29.50	317.50	1322.50	1640.00
274443.000	.14	460.00	887.00	30.50	917.50	429.50	1347.00
277640.000	.10	643.76	129.76	250.24	380.00	393.52	773.52
280940.000	.13	234.00	250.00	57.00	307.00	177.00	484.00
303.010	.10	250.00	275.00	62.00	337.00	188.00	525.00
286.010	.09	375.00	290.00	76.00	366.00	299.00	665.00
304.010	.08	645.00	181.00	215.00	396.00	430.00	826.00
285810.000	.09	569.00	137.00	288.00	425.00	281.00	706.00
305.010	.13	550.00	120.00	267.50	387.50	282.50	670.00
287.010	.11	306.00	130.00	220.50	350.50	85.50	436.00
354.010	.10	221.00	144.00	169.50	313.50	51.50	365.00
233.010	.11	190.00	130.00	146.00	276.00	44.00	320.00
288.010	*** Encroachments not set ***						
293340.000	*** Encroachments not set ***						
295627.000	*** Encroachments not set ***						
295947.000	.00	50.00	252.00	25.00	277.00	25.00	302.00
295967.000	.00	40.00	181.60	18.32	199.92	21.68	221.60
295968.000	.01	40.00	181.60	18.32	199.92	21.68	221.60
296055.000	-.25	40.00	181.60	18.32	199.92	21.68	221.60
296056.000	-.55	42.00	180.60	19.32	199.92	22.68	222.60
296071.000	-.45	72.00	241.00	36.00	277.00	36.00	313.00
296148.000	-.42	214.45	117.52	159.48	277.00	54.97	331.97
298190.000	-.15	250.00	1070.00	198.00	1268.00	52.00	1320.00
298500.000	-.08	250.00	1070.00	198.00	1268.00	52.00	1320.00

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
.000	299.	1460.	4.7	685.5	685.4	.1
600.000	299.	1529.	4.4	686.2	686.1	.1
3.010	215.	1302.	5.2	690.9	690.8	.1
8854.000	265.	1441.	4.7	695.4	695.3	.1
9154.000	250.	1338.	5.1	695.7	695.6	.1
9354.000	149.	1118.	6.1	696.0	695.9	.1
9355.000	149.	1106.	6.1	696.0	695.9	.1
9400.000	149.	1117.	6.1	696.1	696.0	.1
9401.000	151.	1138.	6.0	696.1	696.0	.1
9576.000	374.	1798.	3.8	696.5	696.5	.0

9.010	327.	1683.	4.0	700.4	700.3	.1
18600.000	230.	1604.	4.2	704.3	704.2	.1
10.010	170.	1338.	5.1	707.5	707.4	.1
25825.000	183.	1360.	5.0	710.4	710.4	.0
25925.000	172.	1648.	4.1	710.8	710.8	.0
25926.000	172.	1575.	4.3	710.8	710.8	.0
25974.000	172.	1579.	4.3	710.8	710.8	.0
25975.000	172.	1658.	4.1	710.8	710.8	.0
26075.000	187.	1405.	4.8	710.8	710.8	.0
16.010	143.	1242.	5.5	714.3	714.3	.0
20.030	180.	1288.	5.3	715.8	715.8	.0
20.080	309.	1802.	3.8	717.5	717.4	.1
20.070	237.	1634.	4.2	717.7	717.6	.1
35244.000	128.	1224.	5.6	718.0	717.9	.1
35319.000	100.	1153.	5.9	718.1	718.0	.1
35320.000	100.	1152.	5.9	718.1	718.0	.1
35340.000	100.	1154.	5.9	718.1	718.0	.1
35341.000	102.	1170.	5.8	718.1	718.0	.1
35466.000	313.	2142.	3.2	718.5	718.5	.0
22.010	231.	1678.	4.1	720.3	720.2	.1
22.020	302.	1981.	3.4	722.2	722.1	.1
45745.000	444.	3081.	2.2	723.6	723.5	.1
46623.000	442.	3041.	2.2	724.0	723.9	.1
47223.000	488.	2463.	2.8	724.2	724.1	.1
47423.000	398.	1519.	4.5	724.3	724.2	.1
47473.000	385.	1328.	5.1	724.4	724.3	.1
47523.000	374.	1145.	5.9	724.4	724.3	.1
47546.000	335.	873.	7.8	724.5	724.4	.1
47600.000	335.	874.	7.8	724.5	724.4	.1
47603.000	337.	1363.	4.8	725.9	725.9	.0
47616.000	350.	1764.	3.7	726.2	726.2	.0
47656.000	390.	2370.	2.8	726.4	726.4	.0

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
47816.000	382.	3502.	1.9	726.5	726.5	.0
29.010	440.	3368.	2.0	727.4	727.4	.0
29.020	528.	3365.	2.0	728.7	728.6	.1
29.030	490.	2841.	2.3	730.2	730.1	.1
65375.000	775.	3577.	1.8	731.6	731.5	.1
68635.000	761.	4484.	1.5	732.2	732.1	.1
48.010	845.	3117.	2.1	732.4	732.3	.1
52.010	756.	2434.	2.7	732.6	732.5	.1
48.020	450.	1857.	3.5	733.0	732.9	.1
71612.000	450.	1591.	4.1	733.8	733.8	.0
72012.000	336.	1591.	4.1	734.6	734.5	.1
72372.000	150.	1245.	5.3	735.0	734.9	.1
72373.000	150.	1185.	5.6	735.0	734.9	.1
72427.000	150.	1195.	5.5	735.1	735.0	.1
72428.000	151.	1257.	5.2	735.1	735.0	.1
72523.000	227.	1251.	5.3	735.2	735.1	.1
72600.000	307.	1680.	3.9	735.7	735.6	.1
72950.000	461.	2324.	2.8	736.3	736.2	.1
73765.000	455.	2276.	2.9	736.9	736.8	.1
74580.000	450.	2245.	2.9	737.5	737.4	.1
75670.000	223.	1497.	4.4	738.5	738.4	.1
75870.000	174.	1285.	5.1	738.8	738.7	.1
76070.000	125.	1111.	5.9	739.0	738.9	.1
76120.000	177.	1419.	4.6	739.4	739.3	.1
76180.000	236.	1738.	3.8	739.6	739.5	.1
76432.000	226.	1866.	3.5	739.7	740	-.3
77032.000	195.	1706.	3.9	740.2	740.3	-.1
77382.000	119.	1042.	6.3	740.4	740.5	-.1
77383.000	119.	957.	6.9	740.4	740.5	-.1
77418.000	119.	964.	6.8	740.5	740.6	-.1
77419.000	141.	1077.	6.1	740.7	740.8	-.1
77484.000	119.	1074.	6.1	740.7	740.8	-.1
77485.000	119.	987.	6.7	740.7	740.8	-.1
77520.000	119.	994.	6.6	740.8	740.9	-.1

77521.000	141.	1105.	6.0	741.0	741.1	-.1
77546.000	150.	1597.	4.1	741.1	741.2	-.1
77596.000	250.	2394.	2.8	741.5	741.6	-.1
77746.000	375.	3282.	2.0	741.7	741.9	-.2
81550.000	440.	3265.	2.0	741.9	742.0	-.1
82639.000	435.	2783.	2.4	742.1	742.0	.1
83339.000	223.	1684.	3.9	742.5	742.4	.1
83610.000	87.	1022.	6.4	742.7	742.6	.1

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
83646.000	87.	1075.	6.1	743.3	743.2	.1
83677.000	148.	1399.	4.7	743.5	743.4	.1
83887.000	500.	3669.	1.8	744.1	744.1	.0
85275.000	520.	2876.	2.3	744.4	744.3	.1
85825.000	800.	5486.	1.2	744.7	744.6	.1
87215.000	820.	4858.	1.4	745.1	745.0	.1
88600.000	600.	3197.	2.1	745.6	745.5	.1
89700.000	440.	2232.	3.0	746.5	746.4	.1
90800.000	653.	2762.	2.4	747.7	747.6	.1
91350.000	509.	2900.	2.3	748.2	748.2	.0
91800.000	370.	2591.	2.5	748.4	748.4	.0
92175.000	292.	1803.	3.7	748.5	748.5	.0
92550.000	112.	1056.	6.2	748.7	748.7	.0
92900.000	129.	1187.	5.6	749.3	749.3	.0
93211.000	112.	1124.	5.9	749.9	749.9	.0
93221.000	112.	1126.	5.9	749.9	749.9	.0
93279.000	113.	1138.	5.8	750.0	750.0	.0
93289.000	113.	1141.	5.8	750.0	750.0	.0
93489.000	120.	1366.	4.8	750.4	750.4	.0
93650.000	123.	1197.	5.5	750.5	750.5	.0
94800.000	710.	4528.	1.5	751.6	751.5	.1
95200.000	410.	2470.	2.7	751.7	751.7	.0
95550.000	265.	1824.	3.6	752.1	752.0	.1
95600.000	275.	1176.	5.6	752.2	752.1	.1
95605.000	275.	1181.	5.6	752.3	752.2	.1
95865.000	94.	964.	6.8	753.1	753.0	.1
95905.000	79.	858.	7.7	753.1	753.0	.1
95909.000	75.	667.	9.9	753.2	753.1	.1
95910.000	75.	634.	10.4	753.2	753.1	.1
95930.000	76.	641.	10.3	753.5	753.4	.1
95931.000	77.	736.	9.0	754.0	753.9	.1
96015.000	150.	1077.	6.1	754.3	754.2	.1
96122.000	187.	1227.	5.4	755.0	754.9	.1
96230.000	217.	1415.	4.7	755.5	755.4	.1
96445.000	220.	1886.	3.5	756.0	756.0	.0
96650.000	271.	2632.	2.5	756.3	756.3	.0
96850.000	178.	1741.	3.8	756.4	756.4	.0
97050.000	75.	1008.	6.5	756.6	756.6	.0
97078.000	75.	1011.	6.5	756.7	756.7	.0
97122.000	95.	1175.	5.6	758.8	758.8	.0
97132.000	95.	1176.	5.6	758.8	758.8	.0
97213.000	95.	1401.	4.7	759.0	759.1	-.1

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
97900.000	613.	6366.	1.0	759.8	759.7	.1
98400.000	495.	5392.	1.2	759.9	759.8	.1

98575.000	471.	5900.	1.1	760.0	759.9	.1
98961.000	470.	1928.	3.4	759.9	759.8	.1
98962.000	470.	1738.	3.8	759.9	759.8	.1
98981.000	470.	1643.	4.0	760.0	759.9	.1
98982.000	470.	1848.	3.6	760.1	760.0	.1
99150.000	390.	2720.	2.4	760.3	760.2	.1
99750.000	635.	4015.	1.6	760.5	760.4	.1
100735.000	223.	1876.	3.5	760.8	760.7	.1
100935.000	126.	1124.	5.9	760.8	760.7	.1
100945.000	126.	1126.	5.9	760.8	760.7	.1
101000.000	126.	1138.	5.8	761.0	760.9	.1
101010.000	126.	1141.	5.8	761.0	760.9	.1
101067.000	135.	1559.	4.2	761.4	761.3	.1
101800.000	648.	4352.	1.5	761.8	761.7	.1
102350.000	571.	2781.	2.4	761.9	761.8	.1
102900.000	340.	2111.	3.1	762.2	762.1	.1
104150.000	660.	3866.	1.7	763.2	763.1	.1
104800.000	842.	4798.	1.4	763.5	763.4	.1
105450.000	1000.	5766.	1.1	763.7	763.6	.1
107.010	825.	4119.	1.6	764.4	764.3	.1
110575.000	580.	2866.	2.3	765.7	765.6	.1
110775.000	507.	2506.	2.6	765.9	765.8	.1
111300.000	244.	1412.	4.7	766.5	766.4	.1
111500.000	144.	1026.	6.4	766.8	766.7	.1
111521.000	134.	1202.	5.5	767.5	767.4	.1
111530.000	134.	1214.	5.4	767.6	767.5	.1
111562.000	134.	1280.	5.1	768.1	768.0	.1
111571.000	134.	1281.	5.1	768.1	768.0	.1
111800.000	593.	4520.	1.5	768.8	768.7	.1
111900.000	667.	4907.	1.3	768.8	768.7	.1
116500.000	601.	3347.	2.0	769.5	769.4	.1
135.010	671.	3135.	2.1	769.6	769.5	.1
144.010	633.	2815.	2.3	769.6	769.5	.1
135.020	644.	2530.	2.6	769.7	769.6	.1
120100.000	575.	2197.	3.0	771.0	770.9	.1
115.010	369.	1915.	2.6	773.8	773.7	.1
115.020	376.	1891.	2.6	775.8	775.8	.0
129470.000	400.	1855.	2.7	777.8	777.7	.1
129950.000	338.	1826.	2.7	778.2	778.1	.1
130480.000	75.	750.	6.6	778.8	778.7	.1

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
130488.000	75.	751.	6.6	778.8	778.7	.1
130513.000	75.	838.	5.9	779.9	779.8	.1
130521.000	75.	839.	5.9	779.9	779.8	.1
130571.000	170.	1337.	3.7	780.3	780.2	.1
131071.000	319.	1385.	3.6	780.6	780.5	.1
131521.000	528.	2411.	2.0	781.1	781.0	.1
131971.000	520.	2348.	2.1	781.3	781.2	.1
132371.000	520.	2558.	1.9	781.5	781.4	.1
132771.000	280.	1422.	3.5	781.7	781.6	.1
133591.000	169.	937.	5.3	782.5	782.4	.1
134611.000	205.	843.	5.8	784.2	784.2	.0
178.010	260.	989.	5.0	786.3	786.3	.0
178.020	194.	982.	5.0	788.0	788.0	.0
138700.000	247.	1195.	4.1	789.6	789.5	.1
179.010	260.	1434.	3.4	790.8	790.7	.1
140900.000	385.	2102.	2.3	791.6	791.5	.1
145.010	395.	2242.	2.2	792.1	792.0	.1
147.010	395.	2665.	1.8	792.3	792.2	.1
143250.000	374.	3053.	1.6	792.5	792.4	.1
148.010	374.	2499.	2.0	792.7	792.6	.1
146.010	553.	2321.	2.1	793.2	793.1	.1
146623.000	550.	2733.	1.8	793.8	793.7	.1
147223.000	350.	1713.	2.9	794.2	794.1	.1
147423.000	250.	1240.	4.0	794.4	794.3	.1
147523.000	202.	996.	4.9	794.7	794.6	.1
147524.000	202.	981.	5.0	794.7	794.6	.1

147556.000	202.	993.	5.0	794.8	794.7	.1
147557.000	216.	1018.	4.8	794.8	794.7	.1
147807.000	570.	2753.	1.8	795.3	795.3	.0
148750.000	590.	2493.	2.0	795.8	795.7	.1
152800.000	300.	1166.	4.2	798.7	798.6	.1
181.010	214.	939.	5.2	799.4	799.3	.1
154089.000	204.	802.	6.1	800.4	800.4	.0
154439.000	199.	802.	6.1	801.2	801.2	.0
154759.000	90.	680.	7.2	801.9	801.9	.0
154789.000	75.	612.	8.1	802.0	802.0	.0
154793.000	73.	597.	8.3	802.0	802.0	.0
154796.000	71.	584.	8.4	802.0	802.0	.0
154799.000	70.	379.	13.0	802.0	802.0	.0
154800.000	70.	386.	12.8	802.1	802.0	.1
154812.000	81.	519.	9.5	803.9	804.0	-.1
154813.000	81.	520.	9.5	803.8	804.3	-.5

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
154814.000	86.	954.	5.2	805.4	805.6	-.2
154819.000	96.	1014.	4.9	805.4	805.6	-.2
154823.000	104.	1058.	4.7	805.4	805.6	-.2
154923.000	304.	1785.	2.8	805.7	805.9	-.2
155148.000	330.	2124.	2.3	805.9	806.1	-.2
136.010	325.	1689.	2.9	807.0	807.1	-.1
164.010	349.	1469.	3.4	808.3	808.2	.1
161800.000	380.	1548.	3.2	810.2	810.2	.0
162700.000	420.	1926.	2.6	811.4	811.4	.0
163600.000	460.	2142.	2.3	812.1	812.1	.0
165433.000	515.	2465.	2.0	813.2	813.2	.0
165586.000	582.	1546.	3.2	813.3	813.3	.0
165614.000	788.	2143.	2.3	814.1	813.9	.2
166154.000	510.	3206.	1.5	814.7	814.6	.1
167750.000	375.	2744.	1.8	815.1	815.0	.1
170.010	340.	1842.	2.7	815.3	815.2	.1
207.010	320.	1515.	3.3	815.5	815.4	.1
154.010	311.	1277.	3.9	816.1	816.0	.1
154.020	200.	949.	5.2	819.4	819.3	.1
172290.000	200.	790.	6.2	822.3	822.3	.0
172571.000	77.	561.	8.8	823.3	823.3	.0
172595.000	65.	486.	10.1	823.4	823.4	.0
172608.000	59.	445.	11.1	823.4	823.4	.0
172610.000	58.	394.	12.5	823.5	823.5	.0
172630.000	61.	453.	10.9	824.4	824.4	.0
172632.000	65.	676.	6.7	826.3	826.3	.0
172634.000	69.	725.	6.3	826.5	826.5	.0
172670.000	140.	1349.	3.4	827.1	827.1	.0
172730.000	210.	1732.	2.6	827.2	827.2	.0
172830.000	210.	1822.	2.5	827.2	827.3	-.1
220.010	214.	1454.	3.1	827.6	827.6	.0
175570.000	205.	1234.	3.7	828.5	828.4	.1
176575.000	203.	1060.	4.3	829.3	829.2	.1
177575.000	202.	969.	4.7	830.5	830.5	.0
179580.000	201.	921.	4.9	833.7	833.7	.0
180580.000	375.	5137.	.9	834.2	834.2	.0
181332.000	375.	4975.	.9	834.2	834.2	.0
181960.000	60.	835.	5.4	834.2	834.2	.0
181965.000	57.	730.	6.2	834.2	834.2	.0
181970.000	55.	632.	7.2	834.2	834.2	.0
181975.000	52.	539.	8.4	834.2	834.2	.0
181980.000	50.	453.	10.0	834.2	834.2	.0

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
48.020	564.00	.00	.00	723.00	6590.00	732.93	.00	733.27	12.29	5.67	1872.28	1879.63
48.020	564.00	.00	.00	723.00	9110.00	734.03	.00	734.39	11.66	6.04	2462.70	2667.38
71612.000	721.00	.00	.00	724.07	6590.00	733.82	.00	734.28	16.73	6.44	1675.78	1611.08
71612.000	721.00	.00	.00	724.07	9110.00	734.87	.00	735.33	15.50	6.68	2240.41	2314.13
72012.000	400.00	.00	.00	724.07	6590.00	734.47	.00	734.90	13.62	6.09	1562.50	1785.60
72012.000	400.00	.00	.00	724.07	9110.00	735.49	.00	736.01	15.15	6.87	1905.93	2340.29
72372.000	360.00	.00	.00	720.70	6590.00	734.90	.00	735.40	10.81	5.96	1234.38	2004.72
72372.000	360.00	.00	.00	720.70	9110.00	736.01	.00	736.75	14.04	7.28	1401.22	2431.57
72373.000	1.00	741.20	747.00	720.70	6590.00	734.92	.00	735.41	10.49	5.75	1175.46	2034.68
72373.000	1.00	741.20	747.00	720.70	9110.00	736.04	.00	736.76	13.61	6.92	1339.15	2468.97
72427.000	54.00	741.20	747.00	720.70	6590.00	734.99	.00	735.47	10.23	5.70	1185.59	2060.76
72427.000	54.00	741.20	747.00	720.70	9110.00	736.14	.00	736.84	13.26	6.85	1351.06	2501.58
72428.000	1.00	.00	.00	720.70	6590.00	734.99	.00	735.52	11.30	6.13	1247.45	1960.47
72428.000	1.00	.00	.00	720.70	9110.00	736.14	.00	736.93	14.63	7.48	1420.66	2381.69
72523.000	95.00	.00	.00	724.50	6590.00	735.12	.00	735.78	17.64	7.03	1310.92	1569.22
72523.000	95.00	.00	.00	724.50	9110.00	736.30	.00	737.13	19.92	8.09	1602.70	2041.02
72600.000	77.00	.00	.00	724.55	6590.00	735.57	.00	736.00	12.14	5.99	1722.93	1891.53
72600.000	77.00	.00	.00	724.55	9110.00	736.90	.00	737.42	12.57	6.69	2160.73	2570.00
72950.000	350.00	.00	.00	724.84	6590.00	736.17	.00	736.43	8.15	5.01	2597.45	2308.28
72950.000	350.00	.00	.00	724.84	9110.00	737.62	.00	737.87	7.09	5.16	3730.29	3422.39
73765.000	815.00	.00	.00	725.52	6590.00	736.78	.00	737.05	8.48	5.09	2548.07	2262.75
73765.000	815.00	.00	.00	725.52	9110.00	738.15	.00	738.41	7.68	5.32	3598.05	3288.19
74580.000	815.00	.00	.00	726.20	6590.00	737.42	.00	737.71	8.80	5.17	2305.32	2221.64
74580.000	815.00	.00	.00	726.20	9110.00	738.74	.00	739.06	8.65	5.62	2959.18	3096.62
75670.000	1090.00	.00	.00	726.58	6590.00	738.44	.00	738.92	10.98	6.04	1480.90	1989.10
75670.000	1090.00	.00	.00	726.58	9110.00	739.80	.00	740.44	12.37	7.02	1788.78	2590.62
75870.000	200.00	.00	.00	726.65	6590.00	738.67	.00	739.24	11.94	6.37	1273.87	1906.86
75870.000	200.00	.00	.00	726.65	9110.00	740.07	.00	740.84	13.78	7.50	1520.79	2454.41
76070.000	200.00	.00	.00	724.80	6590.00	738.90	.00	739.64	10.84	7.19	1103.40	2001.20
76070.000	200.00	.00	.00	724.80	9110.00	740.34	.00	741.41	13.71	8.72	1287.11	2460.04
76120.000	50.00	.00	.00	726.45	6590.00	739.31	.00	739.81	9.28	5.94	1408.83	2162.91
76120.000	50.00	.00	.00	726.45	9110.00	741.01	.00	741.67	10.20	6.90	1714.37	2852.47
76180.000	60.00	.00	.00	726.75	6590.00	739.50	.00	739.91	8.26	5.56	1724.64	2293.50
76180.000	60.00	.00	.00	726.75	9110.00	741.29	.00	741.80	8.54	6.31	2153.86	3116.51

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
* 76432.000	252.00	.00	.00	724.47	6590.00	740.04	.00	740.16	2.80	3.73	4021.08	3935.39
* 76432.000	252.00	.00	.00	724.47	9110.00	741.97	.00	742.10	2.70	4.04	5131.21	5539.72
77032.000	600.00	.00	.00	724.69	6590.00	740.25	.00	740.57	5.31	5.13	2222.02	2860.31
* 77032.000	600.00	.00	.00	724.69	9110.00	742.18	.00	742.57	5.60	5.81	2752.75	3849.09
77382.000	350.00	.00	.00	723.40	6590.00	740.50	.00	741.17	9.92	6.57	1047.94	2092.06
* 77382.000	350.00	.00	.00	723.40	9110.00	742.46	.00	743.39	12.08	7.77	1246.86	2621.59
77383.000	1.00	755.70	756.10	723.40	6590.00	740.50	.00	741.26	17.60	7.04	963.14	1570.99
77383.000	1.00	755.70	756.10	723.40	9110.00	742.46	.00	743.48	21.65	8.20	1150.56	1957.90
77418.000	35.00	755.70	756.10	723.40	6590.00	740.58	.00	741.32	17.28	6.99	970.28	1585.44
77418.000	35.00	755.70	756.10	723.40	9110.00	742.57	.00	743.56	21.18	8.13	1160.79	1979.47
* 77419.000	1.00	.00	.00	723.40	6590.00	740.78	.00	741.39	7.19	6.34	1082.74	2458.12
* 77419.000	1.00	.00	.00	723.40	9110.00	742.81	.00	743.65	8.72	7.41	1295.24	3084.19
77484.000	65.00	.00	.00	723.40	6590.00	740.82	.00	741.44	6.60	6.33	1079.49	2565.33
77484.000	65.00	.00	.00	723.40	9110.00	742.87	.00	743.70	7.85	7.40	1290.31	3251.05

*	77485.000	1.00	755.70	756.10	723.40	6590.00	740.83	.00	741.54	16.32	6.84	992.78	1631.13
*	77485.000	1.00	755.70	756.10	723.40	9110.00	742.87	.00	743.82	19.85	7.93	1191.59	2044.65
	77520.000	35.00	755.70	756.10	723.40	6590.00	740.90	.00	741.60	16.06	6.80	999.36	1644.55
	77520.000	35.00	755.70	756.10	723.40	9110.00	742.96	.00	743.89	19.48	7.87	1200.83	2064.31
	77521.000	1.00	.00	.00	723.40	6590.00	741.06	.00	741.65	9.29	6.23	1110.76	2161.93
	77521.000	1.00	.00	.00	723.40	9110.00	743.14	.00	743.95	11.32	7.30	1331.18	2708.19
*	77546.000	25.00	.00	.00	724.55	6590.00	741.24	.00	741.72	2.70	3.88	1604.92	4007.21
*	77546.000	25.00	.00	.00	724.55	9110.00	743.36	.00	744.04	2.84	4.39	1922.63	5404.75
*	77596.000	50.00	.00	.00	724.68	6590.00	741.56	.00	741.83	1.05	2.44	2406.26	6442.24
*	77596.000	50.00	.00	.00	724.68	9110.00	743.84	.00	744.20	.96	2.59	2976.05	9298.38
*	77746.000	150.00	.00	.00	724.94	6590.00	741.86	.00	741.94	.23	1.15	4800.55	13682.27
*	77746.000	150.00	.00	.00	724.94	9110.00	744.25	.00	744.34	.18	1.14	6173.86	21187.89
	81550.000	3804.00	.00	.00	726.20	6590.00	741.96	.00	742.00	.18	.94	6553.78	15727.88
	81550.000	3804.00	.00	.00	726.20	9110.00	744.35	.00	744.39	.10	.79	9858.38	29162.54
*	82639.000	1089.00	.00	.00	727.26	6590.00	742.01	.00	742.18	3.98	4.24	3099.03	3304.72
*	82639.000	1089.00	.00	.00	727.26	9110.00	744.38	.00	744.53	3.09	4.23	4280.82	5185.81
	83339.000	700.00	.00	.00	727.82	6590.00	742.36	.00	742.79	7.81	5.87	1667.94	2358.14
*	83339.000	700.00	.00	.00	727.82	9110.00	744.66	.00	745.14	7.04	6.31	2181.53	3432.56
	83610.000	271.00	.00	.00	729.50	6590.00	742.62	.00	743.27	11.68	6.49	1016.08	1928.65
	83610.000	271.00	.00	.00	729.50	9110.00	744.92	.00	745.79	12.95	7.49	1216.39	2531.44

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	83646.000	36.00	745.90	742.10	729.50	6590.00	743.22	.00	743.81	10.02	6.17	1068.44	2081.63
	83646.000	36.00	745.90	742.10	729.50	9110.00	746.29	.00	747.01	9.78	6.82	1336.29	2913.33
	83677.000	31.00	.00	.00	728.09	6590.00	743.42	.00	743.89	7.16	5.88	1387.94	2463.13
	83677.000	31.00	.00	.00	728.09	9110.00	746.64	.00	747.15	5.67	6.13	1864.88	3826.40
*	83887.000	210.00	.00	.00	728.31	6590.00	744.08	.00	744.15	1.60	2.85	4139.67	5211.49
*	83887.000	210.00	.00	.00	728.31	9110.00	747.35	.00	747.41	.96	2.58	6017.30	9299.45
*	85275.000	1388.00	.00	.00	730.60	6590.00	744.34	.00	744.51	4.39	3.93	2888.87	3144.29
*	85275.000	1388.00	.00	.00	730.60	9110.00	747.50	.00	747.62	2.58	3.53	4656.23	5671.04
	85825.000	550.00	.00	.00	731.70	6590.00	744.64	.00	744.69	2.60	2.68	5809.58	4083.78
	85825.000	550.00	.00	.00	731.70	9110.00	747.69	.00	747.73	1.62	2.47	8487.83	7149.30
	87215.000	1390.00	.00	.00	731.80	6590.00	744.98	.00	745.04	3.75	2.86	5140.12	3405.15
	87215.000	1390.00	.00	.00	731.80	9110.00	747.88	.00	747.93	2.19	2.50	7741.26	6158.84
*	88600.000	1385.00	.00	.00	733.70	6590.00	745.51	.00	745.71	8.14	4.54	3121.42	2309.64
*	88600.000	1385.00	.00	.00	733.70	9110.00	748.17	.00	748.33	5.02	4.19	4719.34	4064.82
	89700.000	1100.00	.00	.00	732.20	6590.00	746.44	.00	746.74	9.85	5.11	2260.47	2100.03
	89700.000	1100.00	.00	.00	732.20	9110.00	748.78	.00	749.03	7.24	4.94	3337.95	3386.74
	90800.000	1100.00	.00	.00	734.20	6590.00	747.55	.00	747.86	13.02	5.57	2724.73	1826.47
	90800.000	1100.00	.00	.00	734.20	9110.00	749.57	.00	749.81	9.24	5.27	4094.50	2996.84
*	91350.000	550.00	.00	.00	736.00	6590.00	748.17	.00	748.28	4.99	2.72	2936.15	2950.93
*	91350.000	550.00	.00	.00	736.00	9110.00	750.01	.00	750.13	4.26	2.90	3954.04	4412.80
	91800.000	450.00	.00	.00	736.50	6590.00	748.36	.00	748.53	5.82	3.64	2574.61	2730.86
	91800.000	450.00	.00	.00	736.50	9110.00	750.16	.00	750.37	5.91	4.10	3241.62	3746.08
	92175.000	375.00	.00	.00	736.60	6590.00	748.52	.00	748.86	10.59	4.92	1790.26	2024.67
	92175.000	375.00	.00	.00	736.60	9110.00	750.31	.00	750.71	10.59	5.50	2334.95	2799.24
	92550.000	375.00	.00	.00	736.70	6590.00	748.74	.00	749.42	14.87	6.75	1088.98	1708.87
	92550.000	375.00	.00	.00	736.70	9110.00	750.42	.00	751.35	16.73	7.92	1345.79	2227.31
	92900.000	350.00	.00	.00	736.70	6590.00	749.30	.00	749.90	12.21	6.34	1181.25	1886.29
	92900.000	350.00	.00	.00	736.70	9110.00	751.07	.00	751.90	13.84	7.47	1411.81	2448.53
	93211.000	311.00	.00	.00	732.90	6590.00	749.85	.00	750.39	18.32	5.88	1120.58	1539.55

	93211.000	311.00	.00	.00	732.90	9110.00	751.74	.00	752.48	22.48	6.88	1324.24	1921.35
	93221.000	10.00	755.60	755.50	732.90	6590.00	749.88	.00	750.41	18.26	5.87	1122.17	1542.34
	93221.000	10.00	755.60	755.50	732.90	9110.00	751.77	.00	752.50	22.39	6.87	1326.21	1925.31
	93279.000	58.00	755.60	755.50	732.90	6590.00	749.99	.00	750.52	17.75	5.81	1134.52	1564.09
	93279.000	58.00	755.60	755.50	732.90	9110.00	751.92	.00	752.63	21.60	6.78	1343.58	1960.27

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	93289.000	10.00	.00	.00	732.90	6590.00	750.02	.00	750.54	17.65	5.80	1137.17	1568.76
	93289.000	10.00	.00	.00	732.90	9110.00	751.94	.00	752.66	21.49	6.77	1345.98	1965.10
*	93489.000	200.00	.00	.00	736.20	6590.00	750.40	.00	750.78	6.69	4.99	1368.12	2548.26
*	93489.000	200.00	.00	.00	736.20	9110.00	752.41	.00	752.95	7.57	5.89	1617.87	3311.96
	93650.000	161.00	.00	.00	737.70	6590.00	750.47	.00	750.95	10.79	5.63	1303.38	2005.77
	93650.000	161.00	.00	.00	737.70	9110.00	752.51	.00	753.12	11.42	6.38	1622.43	2695.60
*	94800.000	1150.00	.00	.00	738.00	6590.00	751.55	.00	751.64	3.76	3.27	4489.74	3397.52
*	94800.000	1150.00	.00	.00	738.00	9110.00	753.69	.00	753.78	3.19	3.36	6009.63	5100.00
*	95200.000	400.00	.00	.00	740.60	6590.00	751.73	.00	751.95	10.81	4.84	2763.37	2004.11
*	95200.000	400.00	.00	.00	740.60	9110.00	753.83	.00	754.04	8.58	4.91	3768.98	3109.29
	95550.000	350.00	.00	.00	740.60	6590.00	752.04	.00	752.46	15.96	6.00	1800.73	1649.51
	95550.000	350.00	.00	.00	740.60	9110.00	754.04	.00	754.51	14.84	6.52	2327.87	2364.61
*	95600.000	50.00	.00	.00	739.50	6590.00	752.15	.00	753.02	33.25	8.63	1155.28	1142.91
	95600.000	50.00	.00	.00	739.50	9110.00	754.13	.00	754.87	25.25	8.39	1702.22	1812.81
	95605.000	5.00	.00	.00	739.50	6590.00	752.18	.00	753.04	32.96	8.60	1159.82	1147.83
	95605.000	5.00	.00	.00	739.50	9110.00	754.15	.00	754.88	25.14	8.38	1705.12	1816.82
*	95865.000	260.00	.00	.00	740.20	6590.00	752.96	.00	753.70	16.74	6.87	959.03	1610.55
	95865.000	260.00	.00	.00	740.20	9110.00	754.71	.00	755.73	19.37	8.12	1122.56	2069.83
	95905.000	40.00	.00	.00	740.20	6590.00	753.04	.00	753.97	23.89	7.72	853.27	1348.39
	95905.000	40.00	.00	.00	740.20	9110.00	754.80	.00	756.12	29.02	9.19	991.35	1691.07
*	95909.000	4.00	.00	.00	736.80	6590.00	753.06	.00	754.60	64.96	9.96	661.67	817.63
*	95909.000	4.00	.00	.00	736.80	9110.00	754.82	.00	756.85	71.10	11.43	796.91	1080.36
	95910.000	1.00	759.00	756.20	736.80	6590.00	753.06	.00	754.75	120.12	10.41	632.79	601.29
*	95910.000	1.00	759.00	756.20	736.80	9110.00	754.83	.00	757.66	196.71	13.50	674.58	649.53
	95930.000	20.00	759.00	756.20	736.80	6590.00	753.35	.00	755.00	117.84	10.31	639.38	607.07
	95930.000	20.00	759.00	756.20	736.80	9110.00	755.38	.00	758.10	186.88	13.24	687.84	666.40
*	95931.000	1.00	.00	.00	736.80	6590.00	753.93	.00	755.20	49.04	9.04	729.02	941.06
*	95931.000	1.00	.00	.00	736.80	9110.00	757.57	.00	758.84	34.44	9.03	1009.36	1552.32
	96015.000	84.00	.00	.00	739.20	6590.00	754.25	.00	755.55	36.26	10.50	1086.04	1094.42
	96015.000	84.00	.00	.00	739.20	9110.00	758.16	.00	759.11	20.12	9.48	1778.53	2030.86
	96122.000	107.00	.00	.00	739.40	6590.00	754.90	.00	755.90	23.22	8.87	1212.83	1367.49
	96122.000	107.00	.00	.00	739.40	9110.00	758.50	.00	759.30	14.72	8.38	1935.22	2374.15
	96230.000	108.00	.00	.00	739.50	6590.00	755.42	.00	756.15	15.26	7.48	1401.55	1686.85
	96230.000	108.00	.00	.00	739.50	9110.00	758.84	.00	759.47	10.51	7.27	2169.87	2810.66

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	96445.000	215.00	.00	.00	739.70	6590.00	756.04	.00	756.40	7.00	5.27	1970.30	2490.43
	96445.000	215.00	.00	.00	739.70	9110.00	759.30	.00	759.65	5.42	5.38	2818.83	3913.89
	96650.000	205.00	.00	.00	740.00	6590.00	756.33	.00	756.52	3.84	3.96	2648.94	3364.44
	96650.000	205.00	.00	.00	740.00	9110.00	759.54	.00	759.74	3.23	4.20	3558.19	5066.01
	96850.000	200.00	.00	.00	741.50	6590.00	756.43	.00	756.85	7.00	5.67	1732.38	2490.82
	96850.000	200.00	.00	.00	741.50	9110.00	759.63	.00	760.10	6.15	6.10	2304.69	3673.97

*	97050.000	200.00	.00	.00	742.70	6590.00	756.62	.00	757.29	14.37	6.56	1004.64	1738.59
*	97050.000	200.00	.00	.00	742.70	9110.00	759.81	.00	760.64	14.49	7.32	1261.36	2393.03
	97078.000	28.00	.00	.00	742.70	6590.00	756.67	.00	757.33	14.25	6.54	1007.43	1745.78
	97078.000	28.00	.00	.00	742.70	9110.00	759.85	.00	760.68	14.39	7.30	1264.88	2401.53
	97122.000	44.00	758.70	756.60	742.70	6590.00	758.84	.00	759.33	9.15	5.63	1171.00	2179.13
	97122.000	44.00	758.70	756.60	742.70	9110.00	762.36	.00	762.97	8.86	6.29	1539.35	3061.17
	97132.000	10.00	.00	.00	742.70	6590.00	758.85	.00	759.34	9.13	5.63	1171.91	2181.43
	97132.000	10.00	.00	.00	742.70	9110.00	762.37	.00	762.98	8.84	6.28	1540.51	3064.10
	97213.000	81.00	.00	.00	738.80	6590.00	759.07	.00	759.45	4.80	5.37	1859.66	3009.47
	97213.000	81.00	.00	.00	738.80	9110.00	762.65	.00	763.10	4.61	5.97	2378.87	4244.49
*	97900.000	687.00	.00	.00	741.00	6590.00	759.74	.00	759.78	1.89	2.31	6321.26	4792.57
*	97900.000	687.00	.00	.00	741.00	9110.00	763.42	.00	763.45	1.47	2.23	8579.83	7518.63
	98400.000	500.00	.00	.00	742.30	6590.00	759.82	.00	759.88	2.02	2.57	5548.42	4638.45
	98400.000	500.00	.00	.00	742.30	9110.00	763.47	.00	763.53	1.58	2.62	7464.65	7249.50
*	98575.000	175.00	.00	.00	738.80	6590.00	759.87	.00	759.90	.74	1.55	5917.63	7640.75
*	98575.000	175.00	.00	.00	738.80	9110.00	763.51	.00	763.54	.65	1.68	7669.54	11264.96
*	98961.000	386.00	.00	.00	743.80	6590.00	759.85	.00	760.03	28.94	3.45	2021.79	1225.04
*	98961.000	386.00	.00	.00	743.80	9110.00	763.53	.00	763.62	5.83	2.39	4181.42	3774.27
*	98962.000	1.00	758.00	758.30	743.80	6590.00	759.82	.00	760.05	62.48	3.83	1791.82	833.72
	98962.000	1.00	758.00	758.30	743.80	9110.00	763.52	.00	763.62	10.59	2.53	3957.38	2799.32
	98981.000	19.00	758.00	758.30	743.80	6590.00	759.93	.00	760.18	72.15	4.05	1696.77	775.83
	98981.000	19.00	758.00	758.30	743.80	9110.00	763.54	.00	763.64	11.33	2.60	3800.46	2706.27
*	98982.000	1.00	.00	.00	743.80	6590.00	760.00	.00	760.19	31.19	3.58	1948.70	1180.00
	98982.000	1.00	.00	.00	743.80	9110.00	763.55	.00	763.64	6.31	2.49	4019.68	3626.56
*	99150.000	168.00	.00	.00	744.50	6590.00	760.24	.00	760.34	3.68	3.11	3006.13	3432.96
*	99150.000	168.00	.00	.00	744.50	9110.00	763.63	.00	763.70	2.01	2.68	4529.68	6422.88
	99750.000	600.00	.00	.00	744.50	6590.00	760.45	.00	760.51	2.91	2.55	3940.82	3859.82
	99750.000	600.00	.00	.00	744.50	9110.00	763.75	.00	763.79	1.61	2.20	6036.43	7172.68

1

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	100735.000	985.00	.00	.00	745.80	6590.00	760.67	.00	760.97	5.49	4.62	1852.98	2813.34
*	100735.000	985.00	.00	.00	745.80	9110.00	763.82	.00	764.13	4.42	4.83	2554.87	4330.94
*	100935.000	200.00	.00	.00	746.80	6590.00	760.73	.00	761.27	17.27	5.93	1111.51	1585.92
*	100935.000	200.00	.00	.00	746.80	9110.00	763.83	.00	764.41	13.94	6.13	1486.72	2440.39
	100945.000	10.00	772.00	767.10	746.80	6590.00	760.75	.00	761.29	17.20	5.92	1112.90	1588.88
	100945.000	10.00	772.00	767.10	746.80	9110.00	763.84	.00	764.42	13.90	6.12	1487.85	2443.09
	101000.000	55.00	772.00	767.10	746.80	6590.00	760.86	.00	761.39	16.60	5.85	1126.12	1617.28
	101000.000	55.00	772.00	767.10	746.80	9110.00	763.93	.00	764.50	13.64	6.08	1497.82	2467.05
	101010.000	10.00	.00	.00	746.80	6590.00	760.88	.00	761.40	16.47	5.84	1129.11	1623.73
	101010.000	10.00	.00	.00	746.80	9110.00	763.94	.00	764.52	13.56	6.07	1500.61	2473.77
*	101067.000	57.00	.00	.00	748.00	6590.00	761.28	.00	761.53	4.96	4.10	1709.49	2958.13
*	101067.000	57.00	.00	.00	748.00	9110.00	764.35	.00	764.64	4.11	4.38	2308.25	4494.30
	101800.000	733.00	.00	.00	749.20	6590.00	761.68	.00	761.79	2.55	3.17	4455.91	4125.93
*	101800.000	733.00	.00	.00	749.20	9110.00	764.74	.00	764.84	1.69	3.06	6646.29	7008.76
*	102350.000	550.00	.00	.00	749.50	6590.00	761.77	.00	762.03	5.43	4.53	2861.66	2828.87
	102350.000	550.00	.00	.00	749.50	9110.00	764.79	.00	764.99	3.22	4.16	4785.20	5077.77
	102900.000	550.00	.00	.00	749.80	6590.00	762.05	.00	762.42	8.16	5.51	2078.10	2306.63
	102900.000	550.00	.00	.00	749.80	9110.00	764.93	.00	765.25	5.48	5.35	3053.75	3892.40
	104150.000	1250.00	.00	.00	748.60	6590.00	763.05	.00	763.24	5.65	4.66	3918.88	2773.59
	104150.000	1250.00	.00	.00	748.60	9110.00	765.67	.00	765.81	3.94	4.33	5707.90	4592.14
	104800.000	650.00	.00	.00	749.60	6590.00	763.36	.00	763.48	4.22	4.10	5040.07	3208.69
	104800.000	650.00	.00	.00	749.60	9110.00	765.87	.00	765.96	2.69	3.77	7471.36	5555.22

105450.000	650.00	.00	.00	750.60	6590.00	763.57	.00	763.66	2.70	3.61	5691.07	4008.87
105450.000	650.00	.00	.00	750.60	9110.00	766.01	.00	766.07	1.88	3.41	8129.00	6649.66
107.010	2663.00	.00	.00	753.30	6590.00	764.34	.00	764.47	5.01	4.22	4225.99	2944.77
107.010	2663.00	.00	.00	753.30	9110.00	766.52	.00	766.62	3.33	3.94	6164.04	4993.62
110575.000	2462.00	.00	.00	755.90	6590.00	765.63	.00	765.85	8.66	5.12	3048.83	2239.99
110575.000	2462.00	.00	.00	755.90	9110.00	767.39	.00	767.59	6.71	5.09	4296.48	3516.27
110775.000	200.00	.00	.00	756.10	6590.00	765.75	.00	766.08	11.25	5.81	2454.69	1965.19
110775.000	200.00	.00	.00	756.10	9110.00	767.46	.00	767.78	9.38	5.97	3317.31	2974.88
111300.000	525.00	.00	.00	756.38	6590.00	766.41	.00	767.13	17.92	7.54	1391.60	1556.81
111300.000	525.00	.00	.00	756.38	9110.00	768.02	.00	768.86	17.72	8.35	1784.11	2164.08
111500.000	200.00	.00	.00	756.49	6590.00	766.74	.00	767.73	21.06	8.31	1016.19	1436.11
111500.000	200.00	.00	.00	756.49	9110.00	768.33	.00	769.61	22.78	9.59	1244.50	1908.80

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
111521.000	21.00	.00	.00	757.20	6590.00	767.44	.00	767.98	11.03	5.96	1194.69	1984.64
111521.000	21.00	.00	.00	757.20	9110.00	769.21	.00	769.92	12.10	6.91	1429.75	2619.09
111530.000	9.00	.00	.00	757.20	6590.00	767.55	.00	768.02	7.12	5.62	1207.21	2470.04
111530.000	9.00	.00	.00	757.20	9110.00	769.36	.00	769.98	7.58	6.44	1450.35	3309.71
111562.000	32.00	768.10	766.50	757.20	6590.00	768.01	.00	768.43	6.07	5.34	1269.27	2675.45
111562.000	32.00	768.10	766.50	757.20	9110.00	769.36	.00	769.98	7.57	6.44	1450.62	3310.70
111571.000	9.00	.00	.00	757.20	6590.00	768.01	.00	768.47	8.90	5.54	1269.89	2208.55
111571.000	9.00	.00	.00	757.20	9110.00	769.36	.00	770.03	11.22	6.72	1451.25	2719.31
* 111800.000	229.00	.00	.00	756.26	6590.00	768.69	.00	768.74	1.58	2.62	4478.26	5240.25
* 111800.000	229.00	.00	.00	756.26	9110.00	770.35	.00	770.41	1.63	2.90	5462.08	7144.31
111900.000	100.00	.00	.00	756.26	6590.00	768.72	.00	768.76	1.41	2.47	5022.20	5553.84
111900.000	100.00	.00	.00	756.26	9110.00	770.38	.00	770.43	1.39	2.68	6326.45	7740.63
116500.000	4600.00	.00	.00	757.00	6590.00	769.40	.00	769.45	1.70	2.56	4076.72	5056.82
116500.000	4600.00	.00	.00	757.00	9110.00	770.97	.00	771.02	1.24	2.41	5778.36	8175.90
135.010	900.00	.00	.00	758.00	6590.00	769.48	.00	769.56	2.64	2.99	3382.93	4053.00
135.010	900.00	.00	.00	758.00	9110.00	771.02	.00	771.09	1.83	2.76	4888.65	6728.10
144.010	450.00	.00	.00	758.50	6590.00	769.54	.00	769.64	3.47	3.31	3047.82	3535.94
144.010	450.00	.00	.00	758.50	9110.00	771.06	.00	771.13	2.35	3.02	4457.75	5943.35
* 135.020	450.00	.00	.00	759.00	6590.00	769.57	.00	769.84	9.42	5.30	2705.09	2147.37
* 135.020	450.00	.00	.00	759.00	9110.00	771.05	.00	771.27	7.14	5.14	4014.85	3409.38
120100.000	1800.00	.00	.00	760.90	6590.00	770.85	.00	771.19	12.54	5.90	2290.08	1861.15
120100.000	1800.00	.00	.00	760.90	9110.00	771.98	.00	772.31	11.87	6.25	3087.59	2644.25
115.010	3280.00	.00	.00	763.00	4930.00	773.74	.00	773.95	6.74	4.50	1898.55	1899.10
115.010	3280.00	.00	.00	763.00	6810.00	774.83	.00	775.10	7.56	5.16	2333.01	2477.41
115.020	3280.00	.00	.00	765.10	4930.00	775.77	.00	775.97	6.95	4.46	2092.52	1869.42
115.020	3280.00	.00	.00	765.10	6810.00	776.97	.00	777.19	6.83	4.84	2790.24	2605.12
129470.000	2810.00	.00	.00	767.20	4930.00	777.70	.00	777.98	9.16	5.01	2131.95	1628.56
129470.000	2810.00	.00	.00	767.20	6810.00	778.84	.00	779.13	9.12	5.42	2969.67	2254.69
129950.000	480.00	.00	.00	767.20	4930.00	778.12	.00	778.41	8.53	4.96	1787.39	1687.78
129950.000	480.00	.00	.00	767.20	6810.00	779.24	.00	779.60	9.71	5.75	2161.76	2185.84
130480.000	530.00	.00	.00	767.10	4930.00	778.69	.00	779.37	13.66	6.64	743.50	1334.10
130480.000	530.00	.00	.00	767.10	6810.00	779.92	.00	780.95	17.96	8.15	836.06	1606.72
130488.000	8.00	.00	.00	767.10	4930.00	778.70	.00	779.38	13.62	6.63	744.17	1336.01
130488.000	8.00	.00	.00	767.10	6810.00	779.94	.00	780.97	17.91	8.15	836.89	1609.26

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
130513.000	25.00	780.30	777.80	767.10	4930.00	779.84	.00	780.39	9.63	5.95	830.16	1588.84
130513.000	25.00	780.30	777.80	767.10	6810.00	781.29	.00	782.11	12.43	7.26	939.68	1931.60
130521.000	8.00	.00	.00	767.10	4930.00	779.85	.00	780.40	9.61	5.94	830.70	1590.47
130521.000	8.00	.00	.00	767.10	6810.00	781.30	.00	782.12	12.41	7.25	940.21	1933.32
130571.000	50.00	.00	.00	769.20	4930.00	780.18	.00	780.50	5.95	4.86	1319.90	2020.60
130571.000	50.00	.00	.00	769.20	6810.00	781.87	.00	782.29	6.57	5.63	1606.84	2656.22
131071.000	500.00	.00	.00	769.40	4930.00	780.53	.00	780.84	7.93	5.02	1451.28	1750.48
131071.000	500.00	.00	.00	769.40	6810.00	782.34	.00	782.62	6.17	5.01	2469.81	2742.05
131521.000	450.00	.00	.00	770.40	4930.00	780.97	.00	781.14	5.76	4.10	2397.42	2054.65
131521.000	450.00	.00	.00	770.40	6810.00	782.70	.00	782.84	4.48	4.10	3533.11	3216.77
131971.000	450.00	.00	.00	771.70	4930.00	781.21	.00	781.37	4.67	3.78	2863.03	2281.14
131971.000	450.00	.00	.00	771.70	6810.00	782.88	.00	783.02	3.66	3.78	4280.48	3558.34
132371.000	400.00	.00	.00	771.90	4930.00	781.39	.00	781.55	4.55	3.73	2579.74	2310.27
132371.000	400.00	.00	.00	771.90	6810.00	783.01	.00	783.17	4.00	3.93	3620.99	3406.39
* 132771.000	400.00	.00	.00	772.00	4930.00	781.57	.00	781.82	9.48	4.97	1559.83	1601.39
132771.000	400.00	.00	.00	772.00	6810.00	783.18	.00	783.37	6.28	4.59	2556.13	2717.07
133591.000	820.00	.00	.00	774.00	4930.00	782.38	.00	782.95	18.27	6.65	918.97	1153.38
* 133591.000	820.00	.00	.00	774.00	6810.00	783.65	.00	784.30	17.49	7.25	1295.53	1628.40
134611.000	1020.00	.00	.00	775.00	4930.00	784.18	.00	784.81	17.65	6.43	837.14	1173.57
134611.000	1020.00	.00	.00	775.00	6810.00	785.40	.00	786.15	17.97	7.22	1119.17	1606.56
178.010	1370.00	.00	.00	776.60	4930.00	786.33	.00	786.82	12.28	5.82	989.97	1406.68
178.010	1370.00	.00	.00	776.60	6810.00	787.61	.00	788.16	12.13	6.39	1419.67	1955.41
178.020	1370.00	.00	.00	778.10	4930.00	787.98	.00	788.42	11.10	5.64	1093.56	1479.72
178.020	1370.00	.00	.00	778.10	6810.00	789.25	.00	789.76	11.32	6.27	1430.74	2023.95
138700.000	1349.00	.00	.00	779.70	4930.00	789.52	.00	789.99	12.18	5.87	1168.78	1412.65
138700.000	1349.00	.00	.00	779.70	6810.00	790.82	.00	791.37	12.66	6.60	1501.91	1913.74
179.010	1100.00	.00	.00	780.20	4930.00	790.73	.00	791.06	8.07	5.05	1469.21	1735.32
179.010	1100.00	.00	.00	780.20	6810.00	792.10	.00	792.47	8.15	5.58	2028.62	2385.78
140900.000	1100.00	.00	.00	780.70	4930.00	791.54	.00	791.69	4.32	3.78	2416.66	2372.85
140900.000	1100.00	.00	.00	780.70	6810.00	792.93	.00	793.09	4.26	4.12	3105.58	3300.49
145.010	1175.00	.00	.00	780.80	4930.00	792.01	.00	792.16	3.87	3.77	2401.26	2507.61
145.010	1175.00	.00	.00	780.80	6810.00	793.40	.00	793.56	3.88	4.12	3183.36	3459.00
147.010	590.00	.00	.00	780.80	4930.00	792.25	.00	792.35	2.83	3.30	2771.50	2929.40
147.010	590.00	.00	.00	780.80	6810.00	793.64	.00	793.76	2.94	3.66	3641.66	3973.85

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
143250.000	585.00	.00	.00	780.80	4930.00	792.42	.00	792.48	1.92	2.76	3476.07	3557.08
143250.000	585.00	.00	.00	780.80	6810.00	793.82	.00	793.90	2.10	3.14	4376.62	4700.83
148.010	1100.00	.00	.00	782.30	4930.00	792.65	.00	792.76	3.49	3.44	2718.04	2637.13
148.010	1100.00	.00	.00	782.30	6810.00	794.06	.00	794.18	3.39	3.73	3664.10	3699.48
146.010	1100.00	.00	.00	783.70	4930.00	793.07	.00	793.24	5.93	4.19	2313.97	2024.33
146.010	1100.00	.00	.00	783.70	6810.00	794.46	.00	794.62	5.15	4.33	3261.21	3002.04
146623.000	1173.00	.00	.00	785.29	4930.00	793.71	.00	793.80	4.33	3.40	3011.52	2370.09
146623.000	1173.00	.00	.00	785.29	6810.00	795.02	.00	795.11	3.95	3.60	3880.59	3425.24
* 147223.000	600.00	.00	.00	785.97	4930.00	794.09	00	794.36	10.29	5.11	1671.86	1537.12
* 147223.000	600.00	.00	.00	785.97	6810.00	795.37	.00	795.69	9.95	5.58	2121.51	2159.04
147423.000	200.00	.00	.00	786.38	4930.00	794.34	.00	794.81	15.52	6.18	1214.64	1251.59
147423.000	200.00	.00	.00	786.38	6810.00	795.62	.00	796.17	15.42	6.86	1534.51	1734.08
147523.000	100.00	.00	.00	785.60	4930.00	794.61	.00	795.01	17.52	5.03	979.20	1177.66
147523.000	100.00	.00	.00	785.60	6810.00	795.90	.00	796.36	15.74	5.49	1240.95	1716.51

147524.000	1.00	800.50	799.70	785.60	4930.00	794.61	.00	795.02	16.14	5.11	965.09	1227.30
147524.000	1.00	800.50	799.70	785.60	6810.00	795.90	.00	796.38	15.04	5.57	1223.21	1755.85
147556.000	32.00	800.50	799.70	785.60	4930.00	794.68	.00	795.08	15.56	5.05	976.82	1249.72
147556.000	32.00	800.50	799.70	785.60	6810.00	795.96	.00	796.43	14.68	5.52	1233.20	1777.43
147557.000	1.00	.00	.00	785.60	4930.00	794.71	.00	795.09	16.51	4.94	1001.89	1213.33
147557.000	1.00	.00	.00	785.60	6810.00	795.99	.00	796.44	14.87	5.40	1265.91	1766.23
* 147807.000	250.00	.00	.00	786.97	4930.00	795.33	.00	795.42	4.32	3.38	3093.97	2371.82
* 147807.000	250.00	.00	.00	786.97	6810.00	796.70	.00	796.79	3.74	3.51	4090.18	3519.05
148750.000	943.00	.00	.00	788.00	4930.00	795.73	.00	795.85	6.05	3.78	2651.54	2003.85
148750.000	943.00	.00	.00	788.00	6810.00	797.04	.00	797.15	4.96	3.83	3578.46	3058.41
152800.000	4050.00	.00	.00	789.40	4930.00	798.56	.00	798.91	10.94	4.87	1151.04	1490.22
* 152800.000	4050.00	.00	.00	789.40	6810.00	799.54	.00	799.99	12.21	5.61	1527.96	1949.29
181.010	649.50	.00	.00	790.20	4930.00	799.30	.00	799.83	16.71	5.95	935.99	1206.00
181.010	649.50	.00	.00	790.20	6810.00	800.34	.00	801.00	18.15	6.79	1256.90	1598.57
154089.000	639.50	.00	.00	790.94	4930.00	800.38	.00	801.12	22.57	7.07	814.75	1037.62
154089.000	639.50	.00	.00	790.94	6810.00	801.48	.00	802.40	24.28	8.03	1088.67	1382.03
154439.000	350.00	.00	.00	791.38	4930.00	801.15	.00	801.94	23.22	7.33	828.65	1023.13
154439.000	350.00	.00	.00	791.38	6810.00	802.31	.00	803.25	24.24	8.22	1111.62	1383.25
154759.000	320.00	.00	.00	791.60	4930.00	801.88	.00	802.70	22.24	7.26	678.89	1045.30
154759.000	320.00	.00	.00	791.60	6810.00	803.12	.00	804.28	26.58	8.63	789.29	1320.94

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
154789.000	30.00	.00	.00	791.64	4930.00	801.95	.00	802.97	27.77	8.07	610.54	935.47
154789.000	30.00	.00	.00	791.64	6810.00	803.21	.00	804.66	34.04	9.66	705.07	1167.22
154793.000	4.00	.00	.00	791.68	4930.00	801.96	.00	803.03	29.38	8.28	595.45	909.53
154793.000	4.00	.00	.00	791.68	6810.00	803.23	.00	804.75	36.04	9.90	687.66	1134.40
154796.000	3.00	.00	.00	791.72	4930.00	801.97	.00	803.08	30.84	8.45	583.14	887.73
154796.000	3.00	.00	.00	791.72	6810.00	803.24	.00	804.83	37.82	10.11	673.63	1107.35
* 154799.000	3.00	.00	.00	791.70	4930.00	801.99	801.89	804.63	107.23	13.04	378.10	476.08
* 154799.000	3.00	.00	.00	791.70	6810.00	803.39	803.39	806.48	105.07	14.11	482.66	664.35
154800.000	1.00	804.70	809.20	791.70	4930.00	802.00	801.81	804.72	80.45	13.24	372.40	549.64
* 154800.000	1.00	804.70	809.20	791.70	6810.00	803.41	803.41	806.68	90.31	14.50	469.51	716.60
* 154812.000	12.00	804.70	809.20	791.70	4930.00	803.98	.00	805.42	38.76	9.64	511.45	791.86
* 154812.000	12.00	804.70	809.20	791.70	6810.00	805.95	.00	807.57	37.36	10.22	666.36	1114.12
154813.000	1.00	.00	.00	791.70	4930.00	804.35	.00	805.55	36.51	8.80	560.24	815.85
154813.000	1.00	.00	.00	791.70	6810.00	806.34	.00	807.70	30.99	9.36	727.81	1223.39
* 154814.000	1.00	.00	.00	791.72	4930.00	805.55	.00	805.95	7.16	5.07	972.69	1841.93
* 154814.000	1.00	.00	.00	791.72	6810.00	807.56	.00	808.11	8.34	5.94	1145.58	2358.51
154819.000	5.00	.00	.00	791.72	4930.00	805.60	.00	805.97	5.70	4.89	1034.83	2065.44
154819.000	5.00	.00	.00	791.72	6810.00	807.63	.00	808.14	6.21	5.71	1230.17	2733.65
154823.000	4.00	.00	.00	791.72	4930.00	805.62	.00	805.98	5.50	4.82	1080.29	2102.02
154823.000	4.00	.00	.00	791.72	6810.00	807.68	.00	808.15	5.94	5.60	1293.52	2793.07
154923.000	100.00	.00	.00	791.82	4930.00	805.90	.00	806.10	3.56	3.92	1849.34	2611.78
154923.000	100.00	.00	.00	791.82	6810.00	808.12	.00	808.33	3.20	4.18	2522.75	3805.16
155148.000	225.00	.00	.00	792.02	4930.00	806.07	.00	806.20	2.53	3.32	2531.25	3099.23
155148.000	225.00	.00	.00	792.02	6810.00	808.32	.00	808.43	1.98	3.31	3787.61	4838.05
136.010	3250.00	.00	.00	797.00	4930.00	807.15	.00	807.34	5.00	3.89	1909.71	2205.50
136.010	3250.00	.00	.00	797.00	6810.00	809.14	.00	809.31	3.85	3.92	2793.79	3470.43
* 164.010	1702.00	.00	.00	799.60	4930.00	808.18	.00	808.55	11.66	5.40	1512.76	1443.53
* 164.010	1702.00	.00	.00	799.60	6810.00	809.89	.00	810.22	8.81	5.39	2434.86	2294.73
161800.000	1700.00	.00	.00	802.10	4930.00	810.19	.00	810.60	14.56	5.90	1567.56	1291.84
161800.000	1700.00	.00	.00	802.10	6810.00	811.46	.00	811.88	13.45	6.31	2238.27	1856.99

162700.000	900.00	.00	.00	802.41	4930.00	811.35	.00	811.62	8.94	4.97	1989.60	1648.75
162700.000	900.00	.00	.00	802.41	6810.00	812.57	.00	812.86	8.83	5.42	2755.48	2291.73
163600.000	900.00	.00	.00	802.72	4930.00	812.08	.00	812.30	7.05	4.57	2237.64	1856.47
163600.000	900.00	.00	.00	802.72	6810.00	813.29	.00	813.53	7.18	5.03	3050.18	2541.39

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
165433.000	1833.00	.00	.00	803.35	4930.00	813.22	.00	813.39	5.38	4.15	2558.69	2125.90
165433.000	1833.00	.00	.00	803.35	6810.00	814.45	.00	814.64	5.56	4.59	3455.01	2887.36
165586.000	153.00	.00	.00	799.70	4930.00	813.33	.00	813.86	10.76	6.48	1538.62	1503.06
165586.000	153.00	.00	.00	799.70	6810.00	814.56	.00	815.13	11.29	7.11	2514.93	2026.80
165614.000	28.00	812.20	810.60	799.70	4930.00	813.95	.00	814.35	7.99	5.79	1978.34	1744.11
165614.000	28.00	812.20	810.60	799.70	6810.00	814.57	.00	815.13	11.23	7.10	2525.51	2032.34
* 166154.000	540.00	.00	.00	800.95	4930.00	814.60	.00	814.71	2.23	3.23	3152.39	3302.41
* 166154.000	540.00	.00	.00	800.95	6810.00	815.47	.00	815.62	3.06	3.96	3619.24	3891.84
167750.000	1596.00	.00	.00	801.60	4930.00	814.96	.00	815.08	2.43	3.32	3097.32	3160.15
167750.000	1596.00	.00	.00	801.60	6810.00	815.96	.00	816.12	3.14	3.98	3661.15	3840.38
* 170.010	787.00	.00	.00	803.90	4930.00	815.15	.00	815.41	6.05	4.59	2007.91	2003.57
* 170.010	787.00	.00	.00	803.90	6810.00	816.20	.00	816.52	7.01	5.30	2531.64	2571.97
207.010	394.00	.00	.00	805.10	4930.00	815.40	.00	815.74	10.52	5.43	1714.29	1519.95
207.010	394.00	.00	.00	805.10	6810.00	816.48	.00	816.89	11.18	6.10	2220.63	2036.45
* 154.010	394.00	.00	.00	806.30	4930.00	815.98	.00	816.38	26.41	6.49	1427.39	959.37
* 154.010	394.00	.00	.00	806.30	6810.00	817.08	.00	817.53	24.03	7.03	1906.18	1389.26
154.020	1575.00	.00	.00	810.90	4930.00	819.26	.00	819.89	18.35	6.65	969.98	1150.96
154.020	1575.00	.00	.00	810.90	6810.00	820.28	.00	821.03	19.65	7.52	1358.04	1536.19
172290.000	1390.00	.00	.00	815.40	4930.00	822.32	.00	823.16	30.27	7.61	801.15	896.04
172290.000	1390.00	.00	.00	815.40	6810.00	823.41	.00	824.41	30.08	8.49	1050.38	1241.76
172571.000	281.00	.00	.00	815.40	4930.00	823.26	.00	824.47	37.68	8.80	560.49	803.11
172571.000	281.00	.00	.00	815.40	6810.00	824.43	.00	826.14	45.27	10.47	650.55	1012.11
172595.000	24.00	.00	.00	815.40	4930.00	823.37	.00	824.97	50.88	10.15	485.49	691.13
172595.000	24.00	.00	.00	815.40	6810.00	824.56	.00	826.83	61.68	12.10	562.93	867.13
172608.000	13.00	.00	.00	815.40	4930.00	823.44	.00	825.35	61.23	11.08	444.89	630.05
172608.000	13.00	.00	.00	815.40	6810.00	824.65	.00	827.36	74.60	13.21	515.63	788.47
172610.000	2.00	.00	.00	815.20	4930.00	823.46	.00	825.97	78.92	12.76	393.11	554.94
172610.000	2.00	.00	.00	815.20	6810.00	824.67	824.18	828.19	93.47	15.12	465.79	704.37
172630.000	20.00	.00	.00	815.20	4930.00	824.45	.00	826.39	52.99	11.23	452.76	677.28
* 172630.000	20.00	.00	.00	815.20	6810.00	826.83	.00	829.00	44.55	11.93	626.75	1020.34
* 172632.000	2.00	.00	.00	815.40	4530.00	826.32	.00	827.02	15.52	6.70	676.36	1149.86
* 172632.000	2.00	.00	.00	815.40	6260.00	828.78	.00	829.65	15.77	7.49	835.94	1576.19
172634.000	2.00	.00	.00	815.40	4530.00	826.46	.00	827.07	13.12	6.25	724.63	1250.69
172634.000	2.00	.00	.00	815.40	6260.00	828.95	.00	829.71	13.26	6.98	896.35	1718.82

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
* 172670.000	36.00	.00	.00	815.40	4530.00	827.07	.00	827.28	3.58	3.87	1349.36	2393.00
* 172670.000	36.00	.00	.00	815.40	6260.00	829.72	.00	829.98	3.20	4.24	1720.66	3501.35
172730.000	60.00	.00	.00	815.40	4530.00	827.21	.00	827.34	2.47	3.24	2006.03	2882.59
172730.000	60.00	.00	.00	815.40	6260.00	829.91	.00	830.05	2.00	3.39	2708.26	4421.21
172830.000	100.00	.00	.00	815.40	4530.00	827.28	.00	827.38	2.00	2.93	2604.20	3199.98
172830.000	100.00	.00	.00	815.40	6260.00	830.01	.00	830.10	1.38	2.83	3928.79	5319.71
* 220.010	1370.00	.00	.00	818.10	4530.00	827.63	.00	827.80	4.53	3.60	1640.97	2127.93

* 220.010	1370.00	.00	.00	818.10	6260.00	830.24	.00	830.39	3.01	3.43	2532.20	3606.82
175570.000	1370.00	.00	.00	820.70	4530.00	828.36	.00	828.59	7.10	4.00	1450.57	1699.90
175570.000	1370.00	.00	.00	820.70	6260.00	830.70	.00	830.85	3.87	3.53	2770.99	3184.10
176575.000	1005.00	.00	.00	822.40	4530.00	829.19	.00	829.52	11.81	4.75	1092.68	1318.25
176575.000	1005.00	.00	.00	822.40	6260.00	831.14	.00	831.41	7.39	4.46	2019.03	2303.36
177575.000	1000.00	.00	.00	824.10	4530.00	830.48	.00	830.88	15.17	5.15	982.05	1162.89
177575.000	1000.00	.00	.00	824.10	6260.00	831.98	.00	832.37	11.93	5.29	1559.46	1812.19
179580.000	2005.00	.00	.00	827.50	4530.00	833.69	.00	834.12	17.15	5.36	935.02	1093.93
179580.000	2005.00	.00	.00	827.50	6260.00	834.74	.00	835.27	17.30	6.01	1257.84	1504.99
* 180580.000	1000.00	.00	.00	811.70	4530.00	834.18	.00	834.19	.10	.88	5150.61	14407.28
* 180580.000	1000.00	.00	.00	811.70	6260.00	835.35	.00	835.37	.14	1.12	5636.36	16535.28
181332.000	752.00	.00	.00	812.14	4530.00	834.19	.00	834.20	.11	.91	4978.71	13653.95
181332.000	752.00	.00	.00	812.14	6260.00	835.36	.00	835.38	.16	1.16	5453.72	15736.36
* 181960.000	628.00	.00	.00	819.94	4530.00	834.21	.00	834.67	5.84	5.43	834.30	1873.80
* 181960.000	628.00	.00	.00	819.94	6260.00	835.39	.00	836.13	8.80	6.91	905.58	2109.68
181965.000	5.00	.00	.00	821.19	4530.00	834.21	.00	834.81	8.45	6.21	730.00	1558.14
181965.000	5.00	.00	.00	821.19	6260.00	835.39	.00	836.35	12.46	7.85	797.91	1773.10
181970.000	5.00	.00	.00	822.44	4530.00	834.22	.00	835.02	12.64	7.17	631.46	1274.18
181970.000	5.00	.00	.00	822.44	6260.00	835.40	.00	836.66	18.12	8.99	696.57	1470.53
181975.000	5.00	.00	.00	823.69	4530.00	834.23	.00	835.32	19.66	8.40	538.98	1021.68
181975.000	5.00	.00	.00	823.69	6260.00	835.41	.00	837.10	27.22	10.41	601.29	1199.79
181980.000	5.00	.00	.00	824.94	4530.00	834.24	.00	835.79	32.08	10.01	452.67	799.77
181980.000	5.00	.00	.00	824.94	6260.00	835.43	.00	837.75	42.51	12.22	512.22	960.14
181982.000	2.00	.00	.00	825.00	4530.00	834.25	.00	836.72	55.96	12.63	358.71	605.56
181982.000	2.00	.00	.00	825.00	6260.00	835.44	.00	838.94	68.22	15.00	417.21	757.93
181983.000	1.00	839.60	839.40	825.00	4530.00	834.25	.00	836.74	57.43	12.65	358.03	597.75
181983.000	1.00	839.60	839.40	825.00	6260.00	835.45	.00	839.02	74.45	15.17	412.61	725.52

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
182000.000	17.00	839.60	839.40	825.00	4530.00	834.85	.00	837.00	46.87	11.75	385.49	661.71
182000.000	17.00	839.60	839.40	825.00	6260.00	836.71	.00	839.52	55.95	13.44	465.80	836.88
182001.000	1.00	.00	.00	825.00	4530.00	835.13	.00	837.09	36.18	11.25	406.51	753.09
* 182001.000	1.00	.00	.00	825.00	6260.00	837.63	.00	839.82	28.44	11.90	533.92	1173.86
* 182003.000	2.00	.00	.00	824.50	4530.00	836.99	.00	837.72	10.80	6.82	664.07	1378.53
* 182003.000	2.00	.00	.00	824.50	6260.00	839.50	.00	840.45	12.08	7.83	799.35	1800.78
182007.000	4.00	.00	.00	823.50	4530.00	837.41	.00	837.86	5.70	5.37	843.08	1896.68
182007.000	4.00	.00	.00	823.50	6260.00	840.03	.00	840.63	6.54	6.23	1005.53	2446.94
182012.000	5.00	.00	.00	822.25	4530.00	837.65	.00	837.94	3.12	4.29	1055.76	2565.10
182012.000	5.00	.00	.00	822.25	6260.00	840.34	.00	840.74	3.68	5.02	1246.89	3265.38
* 182101.000	89.00	.00	.00	812.00	4530.00	838.06	.00	838.08	.08	.98	4669.72	15931.20
* 182101.000	89.00	.00	.00	812.00	6260.00	840.90	.00	840.92	.10	1.19	5379.80	19748.65
182231.000	130.00	.00	.00	812.68	4530.00	838.07	.00	838.08	.05	.72	6494.37	20042.60
182231.000	130.00	.00	.00	812.68	6260.00	840.92	.00	840.93	.06	.83	8062.15	26597.21
183400.000	1169.00	.00	.00	814.37	4530.00	838.08	.00	838.09	.07	.81	5663.89	16653.03
183400.000	1169.00	.00	.00	814.37	6260.00	840.93	.00	840.94	.08	.93	7110.75	22578.70
* 183600.000	200.00	.00	.00	830.20	4530.00	838.01	.00	838.38	11.39	5.16	1195.09	1342.22
* 183600.000	200.00	.00	.00	830.20	6260.00	840.90	.00	841.08	4.35	4.02	2447.08	3001.61
184862.000	1262.00	.00	.00	830.65	4530.00	839.25	.00	839.50	6.95	4.33	1533.88	1718.50
184862.000	1262.00	.00	.00	830.65	6260.00	841.44	.00	841.62	4.17	3.96	2487.26	3066.22
186125.000	1263.00	.00	.00	831.09	4530.00	840.08	.00	840.28	5.53	3.99	1701.49	1926.31
186125.000	1263.00	.00	.00	831.09	6260.00	841.96	.00	842.13	3.99	3.90	2527.79	3132.08

186790.000	665.00	.00	.00	831.35	4530.00	840.50	.00	840.76	8.96	4.91	1556.38	1513.26
186790.000	665.00	.00	.00	831.35	6260.00	842.27	.00	842.45	5.70	4.48	2520.09	2622.78
187092.000	302.00	.00	.00	831.46	4530.00	840.77	.00	841.05	8.92	4.96	1430.99	1517.03
187092.000	302.00	.00	.00	831.46	6260.00	842.45	.00	842.70	6.75	4.90	2085.10	2409.91
187394.000	302.00	.00	.00	831.57	4530.00	841.06	.00	841.42	10.35	5.42	1164.83	1408.15
187394.000	302.00	.00	.00	831.57	6260.00	842.69	.00	843.07	9.15	5.76	1554.50	2069.36
187494.000	100.00	.00	.00	831.61	4530.00	841.17	.00	841.60	11.59	5.77	1029.65	1330.55
187494.000	100.00	.00	.00	831.61	6260.00	842.79	.00	843.28	10.86	6.30	1332.50	1900.00
187719.000	225.00	.00	.00	832.60	4530.00	841.50	.00	842.32	19.67	7.24	626.42	1021.28
187719.000	225.00	.00	.00	832.60	6260.00	843.12	.00	844.21	21.36	8.38	747.84	1354.49
187720.000	1.00	843.40	842.70	832.60	4530.00	841.51	.00	842.40	20.51	7.60	596.75	1000.21
* 187720.000	1.00	843.40	842.70	832.60	6260.00	843.12	.00	844.61	65.43	9.77	641.03	773.91

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
187780.000	60.00	843.40	842.70	832.60	4530.00	841.69	.00	842.54	20.89	7.44	609.31	991.20
187780.000	60.00	843.40	842.70	832.60	6260.00	843.52	.00	845.00	65.43	9.77	641.03	773.91
187781.000	1.00	.00	.00	832.60	4530.00	841.87	.00	842.61	14.89	6.91	668.08	1173.96
* 187781.000	1.00	.00	.00	832.60	6260.00	844.49	.00	845.33	11.82	7.34	870.08	1820.57
187831.000	50.00	.00	.00	831.74	4530.00	842.50	.00	842.85	7.78	5.19	1212.74	1624.12
* 187831.000	50.00	.00	.00	831.74	6260.00	845.29	.00	845.62	5.33	5.10	1705.93	2710.77
187881.000	50.00	.00	.00	831.76	4530.00	842.72	.00	842.95	5.60	4.46	1668.30	1913.65
187881.000	50.00	.00	.00	831.76	6260.00	845.52	.00	845.71	3.46	4.15	2445.55	3366.21
188061.000	180.00	.00	.00	831.81	4530.00	842.98	.00	843.08	3.07	3.35	2800.23	2583.59
* 188061.000	180.00	.00	.00	831.81	6260.00	845.76	.00	845.81	1.39	2.66	4754.62	5315.88
191400.000	3339.00	.00	.00	833.00	4530.00	844.00	.00	844.14	3.87	3.72	2692.25	2303.39
191400.000	3339.00	.00	.00	833.00	6260.00	846.27	.00	846.37	2.50	3.44	4250.39	3958.84
192728.000	1328.00	.00	.00	834.24	4530.00	844.58	.00	844.76	5.60	4.27	2275.20	1913.62
192728.000	1328.00	.00	.00	834.24	6260.00	846.64	.00	846.78	3.68	3.97	3627.38	3263.55
193956.000	1228.00	.00	.00	835.37	4530.00	845.32	.00	845.55	7.06	4.65	2038.80	1705.25
193956.000	1228.00	.00	.00	835.37	6260.00	847.13	.00	847.31	5.00	4.44	3189.67	2800.61
194826.000	870.00	.00	.00	836.26	4530.00	846.14	.00	846.69	13.16	6.31	963.83	1248.71
* 194826.000	870.00	.00	.00	836.26	6260.00	847.80	.00	848.50	13.30	7.14	1216.34	1716.43
194876.000	50.00	.00	.00	836.41	4530.00	846.21	.00	846.83	14.52	6.58	853.42	1188.86
194876.000	50.00	.00	.00	836.41	6260.00	847.87	.00	848.66	14.67	7.46	1065.65	1634.41
194972.000	96.00	.00	.00	836.71	4530.00	846.36	.00	847.17	17.96	7.24	643.79	1068.99
194972.000	96.00	.00	.00	836.71	6260.00	848.03	.00	849.10	18.64	8.33	777.02	1450.01
* 194976.000	4.00	.00	.00	837.10	4530.00	846.37	.00	847.67	44.43	9.16	494.63	679.58
* 194976.000	4.00	.00	.00	837.10	6260.00	848.04	.00	849.59	41.02	10.02	624.70	977.46
194977.000	1.00	848.40	848.00	837.10	4530.00	846.38	.00	847.76	53.52	9.44	479.71	619.24
* 194977.000	1.00	848.40	848.00	837.10	6260.00	848.04	.00	849.73	101.91	10.43	600.26	620.12
195023.000	46.00	848.40	848.00	837.10	4530.00	846.91	.00	848.08	42.19	8.69	521.04	697.40
195023.000	46.00	848.40	848.00	837.10	6260.00	848.51	.00	850.20	101.91	10.43	600.26	620.12
195024.000	1.00	.00	.00	837.10	4530.00	847.12	.00	848.16	27.90	8.17	560.41	857.62
* 195024.000	1.00	.00	.00	837.10	6260.00	849.32	.00	850.47	21.71	8.62	735.75	1343.59
* 195040.000	16.00	.00	.00	836.82	4530.00	847.66	.00	848.36	14.04	6.97	785.37	1208.92
195040.000	16.00	.00	.00	836.82	6260.00	849.88	.00	850.67	12.41	7.55	1033.31	1776.76
195090.000	50.00	.00	.00	836.89	4530.00	848.20	.00	848.57	8.11	5.47	1190.96	1590.42
195090.000	50.00	.00	.00	836.89	6260.00	850.57	.00	850.94	6.34	5.59	1692.10	2486.07

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K

195170.000	80.00	.00	.00	837.00	4530.00	848.57	.00	848.72	4.25	4.03	2000.49	2196.35
* 195170.000	80.00	.00	.00	837.00	6260.00	850.96	.00	851.09	2.89	3.83	3059.14	3680.25
195350.000	180.00	.00	.00	837.17	4530.00	848.64	.00	848.80	4.46	4.10	1963.04	2143.86
195350.000	180.00	.00	.00	837.17	6260.00	851.00	.00	851.14	3.04	3.90	2972.46	3589.11
195724.000	374.00	.00	.00	837.59	4530.00	848.80	.00	849.01	5.79	4.59	1867.02	1882.47
195724.000	374.00	.00	.00	837.59	6260.00	851.11	.00	851.29	4.08	4.44	2818.07	3100.27
* 195924.000	200.00	.00	.00	838.60	4530.00	848.90	.00	849.23	11.89	5.43	1416.68	1313.57
195924.000	200.00	.00	.00	838.60	6260.00	851.18	.00	851.43	7.00	4.95	2233.96	2365.65
195925.000	1.00	846.10	850.90	838.60	4530.00	848.87	.00	849.27	16.88	5.66	954.78	1102.51
195925.000	1.00	846.10	850.90	838.60	6260.00	851.18	.00	851.43	11.43	3.33	1592.45	1851.28
195974.000	49.00	846.10	850.90	838.60	4530.00	848.98	.00	849.35	15.52	5.46	987.41	1150.02
195974.000	49.00	846.10	850.90	838.60	6260.00	851.24	.00	851.49	11.14	3.28	1606.11	1875.64
195975.000	1.00	.00	.00	838.60	4530.00	848.96	.00	849.38	14.04	5.93	1437.37	1209.15
195975.000	1.00	.00	.00	838.60	6260.00	851.20	.00	851.53	9.00	5.61	2240.10	2086.32
196015.000	40.00	.00	.00	838.08	4530.00	849.15	.00	849.45	7.65	5.22	1822.86	1638.25
196015.000	40.00	.00	.00	838.08	6260.00	851.30	.00	851.58	5.91	5.26	2672.69	2575.25
196065.000	50.00	.00	.00	838.10	4530.00	849.24	.00	849.50	6.82	4.96	2039.06	1734.89
196065.000	50.00	.00	.00	838.10	6260.00	851.39	.00	851.62	5.16	4.94	3002.12	2754.73
196272.000	207.00	.00	.00	838.20	4530.00	849.43	.00	849.65	5.89	4.63	2491.62	1866.81
196272.000	207.00	.00	.00	838.20	6260.00	851.58	.00	851.74	3.97	4.35	3949.59	3142.00
197250.000	978.00	.00	.00	839.30	4530.00	849.96	.00	850.25	8.13	5.23	2132.47	1588.74
197250.000	978.00	.00	.00	839.30	6260.00	851.91	.00	852.13	5.67	4.97	3357.80	2628.92
178.010	2865.00	.00	.00	842.20	4530.00	852.29	.00	852.53	8.39	4.80	1939.72	1564.23
178.010	2865.00	.00	.00	842.20	6260.00	853.61	.00	853.81	6.75	4.77	2911.36	2409.15
202235.000	2120.00	.00	.00	844.31	4530.00	853.91	.00	854.04	6.40	3.86	2265.08	1790.86
202235.000	2120.00	.00	.00	844.31	6260.00	855.02	.00	855.16	6.38	4.13	2882.06	2478.73
* 202936.000	701.00	.00	.00	844.91	3200.00	854.39	.00	854.62	7.56	4.16	884.61	1163.45
* 202936.000	701.00	.00	.00	844.91	4430.00	855.52	.00	855.83	8.55	4.75	1074.34	1514.62
203036.000	100.00	.00	.00	844.99	3200.00	854.47	.00	854.81	10.25	4.84	703.22	999.65
203036.000	100.00	.00	.00	844.99	4430.00	855.62	.00	856.09	12.09	5.66	834.16	1273.88
* 203176.000	140.00	.00	.00	845.30	3200.00	854.67	.00	855.40	21.35	6.85	466.98	692.53
* 203176.000	140.00	.00	.00	845.30	4430.00	855.86	.00	856.89	25.59	8.13	544.65	875.70
* 203181.000	5.00	856.60	855.40	845.30	3200.00	854.69	.00	855.55	48.00	7.44	430.06	461.87
* 203181.000	5.00	856.60	855.40	845.30	4430.00	855.88	.00	857.44	106.87	10.01	442.57	428.52

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
203219.000	38.00	856.60	855.40	845.30	3200.00	854.90	.00	855.74	46.39	7.35	435.61	469.81
203219.000	38.00	856.60	855.40	845.30	4430.00	856.29	.00	857.85	106.87	10.01	442.57	428.52
* 203224.000	5.00	.00	.00	845.30	3200.00	855.23	.00	855.86	15.79	6.34	507.32	805.26
* 203224.000	5.00	.00	.00	845.30	4430.00	857.59	.00	858.29	12.44	6.72	665.65	1255.91
* 203274.000	50.00	.00	.00	845.40	3200.00	855.88	.00	856.11	6.36	4.07	932.98	1268.63
* 203274.000	50.00	.00	.00	845.40	4430.00	858.34	.00	858.56	4.48	4.10	1351.42	2092.24
* 203464.000	190.00	.00	.00	845.40	3200.00	856.22	.00	856.25	1.40	1.96	2827.53	2700.36
* 203464.000	190.00	.00	.00	845.40	4430.00	858.66	.00	858.69	.84	1.81	4174.46	4831.94
277.010	1637.00	.00	.00	847.00	3200.00	856.52	.00	856.57	2.58	2.44	2711.42	1993.02
277.010	1637.00	.00	.00	847.00	4430.00	858.82	.00	858.84	.91	1.75	5683.12	4640.23
* 184.010	1633.00	.00	.00	848.60	3200.00	857.11	.00	857.23	6.61	3.65	1842.47	1244.65
* 184.010	1633.00	.00	.00	848.60	4430.00	859.04	.00	859.12	3.66	3.25	3136.60	2315.63
210350.000	3616.00	.00	.00	851.80	3200.00	859.54	.00	859.64	6.71	3.67	2150.27	1235.39
210350.000	3616.00	.00	.00	851.80	4430.00	860.65	.00	860.74	5.61	3.73	2979.81	1870.59
185.010	2815.00	.00	.00	853.80	3200.00	861.80	.00	862.02	11.77	4.78	1619.97	932.73

185.010	2815.00	.00	.00	853.80	4430.00	862.61	.00	862.83	11.09	5.04	2210.33	1330.42
215877.000	2712.00	.00	.00	855.80	3200.00	864.77	.00	865.05	11.36	4.97	1463.76	949.51
215877.000	2712.00	.00	.00	855.80	4430.00	865.52	.00	865.82	11.91	5.46	1990.62	1283.68
216054.000	177.00	.00	.00	855.60	3200.00	864.95	.00	865.25	9.03	5.23	1507.80	1065.06
216054.000	177.00	.00	.00	855.60	4430.00	865.71	.00	866.05	10.15	5.88	1978.46	1390.54
* 216085.000	31.00	865.10	863.20	855.60	3200.00	866.11	.00	866.25	4.12	3.85	2227.21	1575.97
216085.000	31.00	865.10	863.20	855.60	4430.00	866.73	.00	866.91	5.41	4.60	2641.01	1905.22
216135.000	50.00	.00	.00	855.50	3200.00	866.24	.00	866.30	2.67	2.88	3041.91	1957.18
216135.000	50.00	.00	.00	855.50	4430.00	866.89	.00	866.98	3.60	3.50	3450.62	2333.20
216185.000	50.00	.00	.00	855.90	3200.00	866.22	.00	866.35	4.92	3.72	2048.24	1443.12
216185.000	50.00	.00	.00	855.90	4430.00	866.86	.00	867.05	6.54	4.51	2453.61	1732.26
216277.000	92.00	.00	.00	856.80	3200.00	866.31	.00	866.41	6.33	3.70	2352.67	1272.20
216277.000	92.00	.00	.00	856.80	4430.00	867.01	.00	867.14	7.66	4.32	2907.38	1600.72
217062.000	785.00	.00	.00	858.50	3200.00	866.67	.00	866.72	3.85	2.91	3215.12	1631.03
217062.000	785.00	.00	.00	858.50	4430.00	867.44	.00	867.50	4.59	3.40	3795.59	2068.58
217537.000	475.00	.00	.00	856.30	3200.00	866.84	.00	867.03	7.61	4.53	1769.61	1159.65
* 217537.000	475.00	.00	.00	856.30	4430.00	867.64	.00	867.89	9.45	5.35	2107.60	1440.76
218237.000	700.00	.00	.00	859.50	3200.00	867.32	.00	867.37	4.63	2.94	3245.57	1486.41
218237.000	700.00	.00	.00	859.50	4430.00	868.21	.00	868.27	4.86	3.28	3979.04	2009.84

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
* 218792.000	555.00	.00	.00	859.90	3200.00	867.54	.00	867.77	13.75	5.09	1809.24	862.91
* 218792.000	555.00	.00	.00	859.90	4430.00	868.43	.00	868.66	12.69	5.32	2465.49	1243.66
219172.000	380.00	.00	.00	860.50	3200.00	868.11	.00	868.30	15.12	5.06	2010.61	823.02
219172.000	380.00	.00	.00	860.50	4430.00	868.96	.00	869.13	12.91	5.10	2868.67	1232.82
219722.000	550.00	.00	.00	861.00	3200.00	868.72	.00	868.90	11.75	4.76	1807.56	933.65
219722.000	550.00	.00	.00	861.00	4430.00	869.49	.00	869.69	12.68	5.32	2412.56	1243.97
220247.000	525.00	.00	.00	861.40	3200.00	869.30	.00	869.49	9.96	4.55	1850.96	1013.85
220247.000	525.00	.00	.00	861.40	4430.00	870.12	.00	870.34	10.70	5.08	2356.94	1354.41
220447.000	200.00	.00	.00	861.30	3200.00	869.48	.00	869.66	7.27	3.97	1647.80	1186.89
220447.000	200.00	.00	.00	861.30	4430.00	870.31	.00	870.54	8.47	4.61	2047.02	1522.26
220942.000	495.00	.00	.00	862.80	3200.00	869.88	.00	870.08	10.13	4.27	1516.19	1005.52
220942.000	495.00	.00	.00	862.80	4430.00	870.76	.00	871.01	11.30	4.92	1850.21	1317.61
221102.000	160.00	.00	.00	862.50	3200.00	870.08	.00	870.34	18.37	5.84	1333.41	746.59
221102.000	160.00	.00	.00	862.50	4430.00	870.98	.00	871.32	20.59	6.73	1604.77	976.22
221302.000	200.00	.00	.00	860.40	3200.00	870.41	.00	871.21	21.48	7.17	447.39	690.46
221302.000	200.00	.00	.00	860.40	4430.00	871.35	.00	872.60	30.16	8.98	494.37	806.64
221310.000	8.00	874.70	872.40	860.40	3200.00	870.43	.00	871.22	13.34	7.16	447.55	876.20
221310.000	8.00	874.70	872.40	860.40	4430.00	871.37	.00	872.62	18.72	8.97	494.60	1023.91
221340.000	30.00	874.70	872.40	860.40	3200.00	870.48	.00	871.27	13.10	7.12	450.18	884.25
221340.000	30.00	874.70	872.40	860.40	4430.00	871.46	.00	872.69	18.24	8.89	498.71	1037.17
221348.000	8.00	.00	.00	860.40	3200.00	870.50	.00	871.28	17.72	7.10	451.41	760.21
221348.000	8.00	.00	.00	860.40	4430.00	871.49	.00	872.71	24.56	8.86	500.96	893.99
* 221353.000	5.00	.00	.00	860.20	3200.00	871.12	.00	871.49	8.37	4.91	652.27	1105.94
* 221353.000	5.00	.00	.00	860.20	4430.00	872.48	.00	873.04	11.33	6.04	733.57	1316.18
* 221383.000	30.00	.00	.00	860.20	3200.00	871.37	.00	871.59	3.63	4.03	1035.85	1679.58
* 221383.000	30.00	.00	.00	860.20	4430.00	872.89	.00	873.19	4.35	4.81	1218.55	2124.24
222533.000	1150.00	.00	.00	860.20	3200.00	871.73	.00	871.91	2.10	3.65	1079.38	2210.16
222533.000	1150.00	.00	.00	860.20	4430.00	873.34	.00	873.57	2.46	4.32	1271.83	2821.77
* 237300.000	14767.00	.00	.00	887.10	3200.00	899.00	.00	899.01	.09	.61	5506.08	10807.84
* 237300.000	14767.00	.00	.00	887.10	4430.00	900.00	.00	900.01	.11	.74	6373.32	13160.63

241300.000	4000.00	.00	.00	887.10	3200.00	899.03	.00	899.04	.09	.60	5536.25	10886.00
241300.000	4000.00	.00	.00	887.10	4430.00	900.05	.00	900.05	.11	.74	6412.52	13271.99
* 244550.000	3250.00	.00	.00	889.10	3200.00	899.06	.00	899.14	1.92	2.29	1528.79	2308.74
* 244550.000	3250.00	.00	.00	889.10	4430.00	900.07	.00	900.18	2.36	2.75	1822.04	2885.62

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
267.010	762.00	.00	.00	889.80	3200.00	899.21	.00	899.33	2.90	2.77	1287.63	1878.10
267.010	762.00	.00	.00	889.80	4430.00	900.25	.00	900.41	3.45	3.29	1561.57	2383.61
256.010	763.00	.00	.00	890.40	3200.00	899.44	.00	899.62	4.54	3.44	1085.68	1502.01
256.010	763.00	.00	.00	890.40	4430.00	900.52	.00	900.76	5.29	4.06	1352.04	1926.01
268.010	762.00	.00	.00	891.10	3200.00	899.81	.00	900.07	7.09	4.30	942.70	1201.40
268.010	762.00	.00	.00	891.10	4430.00	900.93	.00	901.28	7.92	4.99	1231.61	1573.66
247600.000	763.00	.00	.00	891.80	3200.00	900.37	.00	900.79	11.19	5.53	909.60	956.72
247600.000	763.00	.00	.00	891.80	4430.00	901.55	.00	902.05	11.87	6.26	1208.74	1285.62
301.010	608.00	.00	.00	891.70	3200.00	901.08	.00	901.33	6.79	4.54	1454.52	1227.63
301.010	608.00	.00	.00	891.70	4430.00	902.34	.00	902.62	7.09	5.09	1906.04	1663.41
248716.000	508.00	.00	.00	891.44	3200.00	901.48	.00	901.58	3.55	3.36	2227.29	1697.58
248716.000	508.00	.00	.00	891.44	4430.00	902.77	.00	902.90	4.00	3.90	2769.01	2213.89
* 249051.000	335.00	.00	.00	891.98	3200.00	901.65	.00	902.02	9.23	5.26	930.78	1053.45
* 249051.000	335.00	.00	.00	891.98	4430.00	902.97	.00	903.46	10.47	6.17	1140.60	1368.78
249286.000	235.00	.00	.00	892.35	3200.00	901.91	.00	902.51	13.28	6.26	545.10	878.15
249286.000	235.00	.00	.00	892.35	4430.00	903.26	.00	904.10	15.36	7.43	639.67	1130.47
* 249336.000	50.00	.00	.00	889.20	3200.00	902.00	.00	902.99	28.05	7.96	402.03	604.17
* 249336.000	50.00	.00	.00	889.20	4430.00	903.37	.00	904.80	35.77	9.58	462.43	740.68
* 249364.000	28.00	903.50	900.40	889.20	3200.00	904.20	.00	904.27	2.16	2.74	2584.70	2179.17
* 249364.000	28.00	903.50	900.40	889.20	4430.00	905.29	.00	905.38	2.80	3.35	2929.39	2648.25
249394.000	30.00	.00	.00	892.34	2730.00	904.22	.00	904.28	1.56	2.52	2295.90	2186.78
249394.000	30.00	.00	.00	892.34	3780.00	905.31	.00	905.40	1.93	2.99	2710.77	2723.77
249444.000	50.00	.00	.00	892.45	2730.00	904.25	.00	904.29	1.28	2.28	2727.62	2409.35
249444.000	50.00	.00	.00	892.45	3780.00	905.36	.00	905.42	1.56	2.68	3257.73	3030.64
249617.000	173.00	.00	.00	892.83	2730.00	904.28	.00	904.32	1.25	2.19	2957.92	2445.70
249617.000	173.00	.00	.00	892.83	3780.00	905.39	.00	905.45	1.49	2.57	3568.55	3094.66
250140.000	523.00	.00	.00	893.80	2730.00	904.35	.00	904.38	1.30	2.11	3662.85	2394.75
250140.000	523.00	.00	.00	893.80	3780.00	905.49	.00	905.52	1.47	2.42	4601.14	3119.46
250958.000	818.00	.00	.00	895.59	2730.00	904.48	.00	904.53	2.16	2.38	1874.62	1858.50
250958.000	818.00	.00	.00	895.59	3780.00	905.62	.00	905.69	2.42	2.77	2224.38	2432.33
* 251253.000	295.00	.00	.00	896.16	2730.00	904.60	.00	904.93	10.49	5.05	686.24	842.73
* 251253.000	295.00	.00	.00	896.16	3780.00	905.76	.00	906.21	11.75	5.90	820.65	1102.94
251328.000	75.00	.00	.00	896.25	2730.00	904.68	.00	905.11	12.59	5.53	589.28	769.42
251328.000	75.00	.00	.00	896.25	3780.00	905.85	.00	906.44	14.23	6.50	703.88	1002.21

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
251433.000	105.00	.00	.00	896.45	2730.00	904.83	.00	905.43	16.18	6.24	458.44	678.59
251433.000	105.00	.00	.00	896.45	3780.00	906.02	.00	906.86	18.53	7.40	540.50	878.06
* 251478.000	45.00	.00	.00	895.90	2730.00	904.94	.00	906.06	34.43	8.53	320.70	465.24
* 251478.000	45.00	.00	.00	895.90	3780.00	906.14	.00	907.71	40.05	10.07	376.12	597.28
251486.000	8.00	912.30	910.20	895.90	2730.00	904.97	.00	906.09	28.59	8.50	321.19	510.60
251486.000	8.00	912.30	910.20	895.90	3780.00	906.20	.00	907.75	33.79	10.00	377.84	650.28
251514.000	28.00	912.30	910.20	895.90	2730.00	905.12	.00	906.20	26.70	8.31	328.60	528.33
251514.000	28.00	912.30	910.20	895.90	3780.00	906.40	.00	907.88	31.46	9.77	387.08	673.90

251522.000	8.00	.00	.00	895.90	2730.00	905.16	.00	906.22	31.28	8.27	330.65	488.14
251522.000	8.00	.00	.00	895.90	3780.00	906.46	.00	907.92	35.49	9.68	390.99	634.50
* 251525.000	3.00	.00	.00	896.14	2730.00	905.96	.00	906.49	14.35	5.86	465.48	720.60
* 251525.000	3.00	.00	.00	896.14	3780.00	907.55	.00	908.29	16.99	6.90	548.02	917.12
251537.000	12.00	.00	.00	896.14	2730.00	906.21	.00	906.59	7.73	4.97	603.18	981.68
* 251537.000	12.00	.00	.00	896.14	3780.00	907.93	.00	908.42	8.13	5.73	733.61	1325.43
* 251697.000	160.00	.00	.00	896.35	2730.00	906.76	.00	906.80	1.49	2.23	2355.53	2239.30
* 251697.000	160.00	.00	.00	896.35	3780.00	908.65	.00	908.69	1.31	2.38	3260.54	3296.74
* 268.010	1385.00	.00	.00	897.60	2730.00	907.00	.00	907.10	3.49	3.09	1663.71	1461.23
268.010	1385.00	.00	.00	897.60	3780.00	908.85	.00	908.94	2.62	3.08	2466.75	2335.71
* 215.010	1385.00	.00	.00	899.10	2730.00	907.59	.00	907.84	8.33	4.34	918.80	946.02
* 215.010	1385.00	.00	.00	899.10	3780.00	909.27	.00	909.49	6.04	4.28	1524.93	1538.18
257200.000	2733.00	.00	.00	902.10	2730.00	910.07	.00	910.36	10.39	4.42	767.57	847.02
257200.000	2733.00	.00	.00	902.10	3780.00	911.24	.00	911.57	10.00	4.89	1019.81	1195.53
216.010	3025.00	.00	.00	905.80	2730.00	913.33	.00	913.65	11.38	4.74	708.76	809.26
216.010	3025.00	.00	.00	905.80	3780.00	914.44	.00	914.84	11.65	5.35	908.11	1107.60
263250.000	3025.00	.00	.00	909.50	2730.00	916.74	.00	917.08	11.33	4.92	683.15	811.10
263250.000	3025.00	.00	.00	909.50	3780.00	917.93	.00	918.36	11.62	5.57	870.23	1108.81
265423.000	2173.00	.00	.00	910.95	2730.00	918.79	.00	919.03	7.37	4.20	775.47	1005.73
265423.000	2173.00	.00	.00	910.95	3780.00	920.04	.00	920.34	7.49	4.72	980.80	1380.81
265633.000	210.00	.00	.00	906.90	2730.00	918.97	.00	919.48	11.27	5.75	477.94	813.07
265633.000	210.00	.00	.00	906.90	3780.00	920.25	.00	921.01	14.51	7.00	543.40	992.39
265636.000	3.00	919.80	919.50	906.90	2730.00	918.97	.00	919.49	9.92	5.75	474.41	866.70
* 265636.000	3.00	919.80	919.50	906.90	3780.00	920.25	.00	921.15	34.45	7.58	498.47	644.01
265664.000	28.00	919.80	919.50	906.90	2730.00	919.01	.00	919.52	9.83	5.74	475.92	870.79
265664.000	28.00	919.80	919.50	906.90	3780.00	920.35	.00	921.24	34.45	7.58	498.47	644.01

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
265667.000	3.00	.00	.00	906.90	2730.00	919.01	.00	919.52	11.10	5.72	480.28	819.41
* 265667.000	3.00	.00	.00	906.90	3780.00	920.63	.00	921.34	12.99	6.76	563.11	1048.72
* 265797.000	130.00	.00	.00	910.12	2730.00	919.77	.00	919.81	1.83	1.99	2050.61	2018.03
* 265797.000	130.00	.00	.00	910.12	3780.00	921.68	.00	921.72	1.56	2.07	2673.75	3028.78
* 266247.000	450.00	.00	.00	910.44	2730.00	919.86	.00	919.87	.68	1.19	4613.82	3318.10
* 266247.000	450.00	.00	.00	910.44	3780.00	921.76	.00	921.77	.40	1.03	6922.52	5993.57
* 223.010	2285.00	.00	.00	912.10	2730.00	920.01	.00	920.03	1.54	1.60	3629.35	2197.14
223.010	2285.00	.00	.00	912.10	3780.00	921.84	.00	921.85	.70	1.24	5850.29	4508.38
344.010	1267.50	.00	.00	913.00	2730.00	920.17	.00	920.18	1.76	1.60	3802.76	2058.29
344.010	1267.50	.00	.00	913.00	3780.00	921.90	.00	921.91	.71	1.17	6338.84	4489.18
271067.000	1267.50	.00	.00	913.86	2730.00	920.35	.00	920.36	2.21	1.67	3847.70	1838.21
271067.000	1267.50	.00	.00	913.86	3780.00	921.97	.00	921.98	.76	1.15	6737.15	4321.95
271167.000	100.00	.00	.00	913.93	2730.00	920.37	.00	920.38	2.36	1.72	3760.20	1776.55
271167.000	100.00	.00	.00	913.93	3780.00	921.98	.00	921.99	.81	1.17	6625.92	4211.65
271267.000	100.00	.00	.00	914.00	2730.00	920.39	.00	920.41	2.51	1.77	3682.15	1722.30
271267.000	100.00	.00	.00	914.00	3780.00	921.99	.00	921.99	.85	1.20	6513.85	4101.64
271370.000	103.00	.00	.00	914.05	2730.00	920.42	.00	920.43	2.60	1.79	3640.45	1693.61
271370.000	103.00	.00	.00	914.05	3780.00	922.00	.00	922.00	.88	1.21	6439.12	4029.17
271380.000	10.00	.00	.00	914.05	2730.00	920.42	.00	920.44	2.60	1.79	3641.97	1692.25
271380.000	10.00	.00	.00	914.05	3780.00	922.00	.00	922.00	.89	1.21	6432.71	4017.55
271390.000	10.00	.00	.00	914.06	2730.00	920.42	.00	920.44	2.67	1.81	3619.23	1671.31
271390.000	10.00	.00	.00	914.06	3780.00	922.00	.00	922.00	.90	1.22	6402.12	3980.76
271395.000	5.00	.00	.00	914.06	2730.00	920.42	.00	920.44	2.69	1.81	3615.69	1665.97

271395.000	5.00	.00	.00	914.06	3780.00	922.00	.00	922.00	.91	1.22	6395.27	3970.54
* 271400.000	5.00	.00	.00	911.40	2730.00	920.39	.00	920.48	8.56	3.56	2095.11	933.35
* 271400.000	5.00	.00	.00	911.40	3780.00	921.99	.00	922.01	1.87	1.89	4898.71	2762.13
* 271434.000	34.00	920.90	922.50	911.40	2730.00	922.45	.00	922.53	1.77	3.04	3686.65	2053.34
271434.000	34.00	920.90	922.50	911.40	3780.00	923.06	.00	923.12	1.61	3.01	5089.87	2979.47
* 271439.000	5.00	.00	.00	914.14	2730.00	922.55	.00	922.55	.16	.54	9618.25	6793.53
* 271439.000	5.00	.00	.00	914.14	3780.00	923.13	.00	923.13	.21	.64	10915.63	8241.57
271444.000	5.00	.00	.00	914.14	2730.00	922.55	.00	922.55	.16	.54	9633.52	6818.75
271444.000	5.00	.00	.00	914.14	3780.00	923.13	.00	923.13	.21	.64	10933.28	8272.53
271659.000	215.00	.00	.00	914.25	2730.00	922.55	.00	922.55	.17	.55	9398.25	6565.65
271659.000	215.00	.00	.00	914.25	3780.00	923.13	.00	923.13	.22	.66	10694.38	7998.46

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
* 274443.000	2784.00	.00	.00	916.20	2730.00	922.57	.00	922.72	13.69	4.12	1262.99	737.77
* 274443.000	2784.00	.00	.00	916.20	3780.00	923.17	.00	923.35	15.62	4.68	1546.99	956.43
* 277640.000	3197.00	.00	.00	916.00	2730.00	925.06	.00	925.13	5.89	3.07	2194.61	1124.72
* 277640.000	3197.00	.00	.00	916.00	3780.00	925.74	.00	925.81	5.74	3.23	2918.55	1577.22
280940.000	3300.00	.00	.00	918.30	2730.00	927.24	.00	927.41	8.37	3.49	978.86	943.54
280940.000	3300.00	.00	.00	918.30	3780.00	928.02	.00	928.25	10.01	4.14	1167.18	1194.97
303.010	1220.00	.00	.00	918.50	2730.00	928.04	.00	928.16	5.37	3.07	1283.83	1177.87
303.010	1220.00	.00	.00	918.50	3780.00	928.96	.00	929.10	6.06	3.54	1586.01	1535.57
286.010	1215.00	.00	.00	918.60	2730.00	928.63	.00	928.71	3.92	2.78	1652.29	1379.46
286.010	1215.00	.00	.00	918.60	3780.00	929.62	.00	929.71	4.15	3.11	2135.11	1855.73
304.010	1220.00	.00	.00	918.80	2730.00	929.06	.00	929.11	2.88	2.46	2215.42	1610.02
304.010	1220.00	.00	.00	918.80	3780.00	930.06	.00	930.12	2.87	2.65	2924.69	2232.26
285810.000	1215.00	.00	.00	918.90	2730.00	929.33	.00	929.35	1.55	1.82	3489.85	2194.94
285810.000	1215.00	.00	.00	918.90	3780.00	930.33	.00	930.35	1.51	1.93	4469.74	3074.01
* 305.010	940.00	.00	.00	919.90	2730.00	929.51	.00	929.58	4.91	3.07	1977.86	1231.55
* 305.010	940.00	.00	.00	919.90	3780.00	930.50	.00	930.56	4.36	3.13	2700.38	1809.56
* 287.010	930.00	.00	.00	920.90	2730.00	929.99	.00	930.18	10.70	4.39	1198.21	834.77
* 287.010	930.00	.00	.00	920.90	3780.00	930.92	.00	931.10	10.12	4.61	1673.06	1188.40
354.010	940.00	.00	.00	921.90	2730.00	930.93	.00	931.19	13.03	4.88	955.50	756.26
354.010	940.00	.00	.00	921.90	3780.00	931.80	.00	932.11	13.99	5.44	1245.48	1010.76
233.010	940.00	.00	.00	922.80	2730.00	932.01	.00	932.30	12.62	4.95	880.97	768.39
233.010	940.00	.00	.00	922.80	3780.00	932.94	.00	933.29	14.03	5.63	1107.78	1009.26
288.010	1885.00	.00	.00	924.80	2730.00	934.11	.00	934.39	10.78	4.73	891.34	831.67
288.010	1885.00	.00	.00	924.80	3780.00	935.21	.00	935.53	11.48	5.31	1138.52	1115.84
293340.000	1895.00	.00	.00	926.70	2730.00	936.03	.00	936.29	9.81	4.61	886.14	871.60
293340.000	1895.00	.00	.00	926.70	3780.00	937.22	.00	937.53	10.28	5.14	1142.43	1178.97
295627.000	2287.00	.00	.00	928.80	2730.00	938.18	.00	938.44	9.51	4.56	898.33	885.32
295627.000	2287.00	.00	.00	928.80	3780.00	939.45	.00	939.74	9.67	5.03	1170.82	1215.30
* 295947.000	320.00	.00	.00	929.01	2730.00	938.61	.00	939.18	20.38	6.04	451.84	604.68
* 295947.000	320.00	.00	.00	929.01	3780.00	939.93	.00	940.75	26.20	7.31	517.42	738.49
* 295967.000	20.00	.00	.00	928.20	2730.00	938.68	.00	939.67	51.30	8.02	341.95	381.15
* 295967.000	20.00	.00	.00	928.20	3780.00	940.00	.00	941.44	62.53	9.62	395.05	478.01
295968.000	1.00	942.40	943.50	928.20	2730.00	938.68	.00	939.83	51.51	8.61	317.14	380.40
295968.000	1.00	942.40	943.50	928.20	3780.00	940.01	.00	941.73	71.02	10.52	359.34	448.54

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K

296055.000	87.00	942.40	943.50	928.20	2730.00	939.29	.00	940.31	43.91	8.11	336.78	411.99
296055.000	87.00	942.40	943.50	928.20	3780.00	940.93	.00	942.42	60.33	9.77	386.95	486.64
296056.000	1.00	.00	.00	928.20	2730.00	939.69	.00	940.45	33.53	6.97	398.24	471.47
296056.000	1.00	.00	.00	928.20	3780.00	941.67	.00	942.66	35.82	8.01	481.08	631.59
* 296071.000	15.00	.00	.00	929.26	2730.00	940.37	.00	940.69	7.63	4.61	670.86	988.51
* 296071.000	15.00	.00	.00	929.26	3780.00	942.58	.00	942.98	7.61	5.23	829.67	1369.95
* 296148.000	77.00	.00	.00	929.26	2730.00	940.71	.00	940.83	3.58	3.22	1350.71	1442.58
* 296148.000	77.00	.00	.00	929.26	3780.00	943.05	.00	943.16	2.80	3.25	1905.27	2259.23
298190.000	2042.00	.00	.00	931.10	2730.00	941.36	.00	941.40	2.17	2.29	2373.87	1852.43
* 298190.000	2042.00	.00	.00	931.10	3780.00	943.52	.00	943.55	1.31	2.05	3854.48	3308.11
298500.000	310.00	.00	.00	931.37	2730.00	941.43	.00	941.48	2.45	2.39	2257.97	1743.44
298500.000	310.00	.00	.00	931.37	3780.00	943.56	.00	943.60	1.46	2.14	3679.07	3129.57

100-YEAR DISCHARGE

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
.000	6800.00	685.36	.00	.00	2.36	478.10	.00
.000	9390.00	686.56	1.21	.00	3.56	581.73	.00
600.000	6800.00	686.14	.00	.78	.00	498.03	600.00
600.000	9390.00	687.35	1.21	.78	.00	601.88	600.00
3.010	6800.00	690.79	.00	4.65	.00	218.16	4277.00
3.010	9390.00	692.12	1.33	4.77	.00	241.59	4277.00
8854.000	6800.00	695.28	.00	4.49	.00	388.27	3977.00
8854.000	9390.00	696.79	1.51	4.67	.00	392.26	3977.00
9154.000	6800.00	695.62	.00	.34	.00	250.00	300.00
9154.000	9390.00	697.12	1.50	.33	.00	250.00	300.00
9354.000	6800.00	695.90	.00	.28	.00	149.20	200.00
9354.000	9390.00	697.41	1.50	.29	.00	149.20	200.00
9355.000	6800.00	695.90	.00	.00	.00	149.20	1.00
9355.000	9390.00	697.41	1.50	.00	.00	149.20	1.00
9400.000	6800.00	695.99	.00	.09	.00	149.20	45.00
9400.000	9390.00	697.51	1.52	.10	.00	149.20	45.00
9401.000	6800.00	696.02	.00	.03	.00	150.80	1.00
9401.000	9390.00	697.54	1.53	.04	.00	150.80	1.00
9576.000	6800.00	696.53	.00	.51	.00	500.98	175.00
* 9576.000	9390.00	698.36	1.83	.82	.00	522.34	175.00
9.010	6800.00	700.27	.00	3.73	.00	383.13	4509.00
9.010	9390.00	701.59	1.33	3.23	.00	391.90	4509.00
18600.000	6800.00	704.22	.00	3.95	.00	349.26	4515.00
18600.000	9390.00	705.72	1.50	4.13	.00	358.14	4515.00
10.010	6800.00	707.39	.00	3.18	.00	209.24	3612.00
10.010	9390.00	709.12	1.73	3.40	.00	232.55	3612.00
25825.000	6800.00	710.44	.00	3.05	.00	189.13	3613.00
25825.000	9390.00	712.40	1.96	3.28	.00	206.38	3613.00
25925.000	6800.00	710.78	.00	.34	.00	171.99	100.00
25925.000	9390.00	712.82	2.04	.42	.00	180.86	100.00
25926.000	6800.00	710.77	.00	-.01	.00	171.96	1.00
25926.000	9390.00	712.80	2.04	-.02	.00	180.83	1.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	25974.000	6800.00	710.80	.00	.04	.00	172.06	48.00
	25974.000	9390.00	712.84	2.04	.04	.00	180.93	48.00
	25975.000	6800.00	710.84	.00	.04	.00	172.24	1.00
	25975.000	9390.00	712.89	2.05	.05	.00	181.16	1.00
	26075.000	6800.00	710.80	.00	-.04	.00	190.73	100.00
	26075.000	9390.00	712.83	2.03	-.06	.00	208.69	100.00
	16.010	6800.00	714.28	.00	3.47	.00	144.93	4582.00
	16.010	9390.00	716.39	2.11	3.56	.00	213.61	4582.00
	20.030	6800.00	715.76	.00	1.48	.00	181.84	1778.00
	20.030	9390.00	717.92	2.16	1.53	.00	375.59	1778.00
	20.080	6800.00	717.43	.00	1.67	.00	443.14	2170.00
	20.080	9390.00	719.45	2.02	1.54	.00	496.86	2170.00
	20.070	6800.00	717.56	.00	.12	.00	236.55	200.00
	20.070	9390.00	719.56	2.00	.10	.00	239.91	200.00
	35244.000	6800.00	717.89	.00	.34	.00	128.27	439.00
	35244.000	9390.00	719.89	2.00	.33	.00	131.46	439.00
	35319.000	6800.00	717.99	.00	.10	.00	100.10	75.00
	35319.000	9390.00	719.96	1.98	.07	.00	100.10	75.00
	35320.000	6800.00	717.99	.00	.00	.00	100.10	1.00
*	35320.000	9390.00	719.96	1.98	.00	.00	100.10	1.00
	35340.000	6800.00	718.00	.00	.01	.00	100.10	20.00
	35340.000	9390.00	720.01	2.01	.05	.00	100.10	20.00
	35341.000	6800.00	718.01	.00	.01	.00	102.00	1.00
*	35341.000	9390.00	720.34	2.34	.33	.00	102.00	1.00
	35466.000	6800.00	718.54	.00	.53	.00	357.79	125.00
*	35466.000	9390.00	721.15	2.61	.81	.00	362.70	125.00
	22.010	6800.00	720.17	.00	1.63	.00	235.12	3438.00
	22.010	9390.00	722.41	2.24	1.26	.00	479.14	3438.00
	22.020	6800.00	722.10	.00	1.93	.00	473.47	3412.00
	22.020	9390.00	724.18	2.09	1.77	.00	490.55	3412.00
	45745.000	6800.00	723.54	.00	1.45	.00	524.37	3429.00
	45745.000	9390.00	725.50	1.96	1.32	.00	549.16	3429.00
	46623.000	6800.00	723.86	.00	.32	.00	523.42	878.00
	46623.000	9390.00	725.79	1.94	.29	.00	547.92	878.00

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	47223.000	6800.00	724.10	.00	.24	.00	486.55	600.00
	47223.000	9390.00	726.02	1.92	.23	.00	521.73	600.00
	47423.000	6800.00	724.22	.00	.12	.00	396.74	200.00
	47423.000	9390.00	726.14	1.92	.11	.00	423.02	200.00
	47473.000	6800.00	724.27	.00	.05	.00	384.26	50.00
	47473.000	9390.00	726.18	1.92	.05	.00	410.46	50.00
	47523.000	6800.00	724.33	.00	.06	.00	373.10	50.00
	47523.000	9390.00	726.24	1.92	.06	.00	399.22	50.00
*	47546.000	6800.00	724.38	.00	.05	.00	331.78	23.00
*	47546.000	9390.00	726.29	1.91	.05	.00	336.68	23.00
	47600.000	6800.00	724.38	.00	.00	.00	331.79	54.00
	47600.000	9390.00	726.30	1.91	.00	.00	336.68	54.00
*	47603.000	6590.00	725.85	.00	1.47	.00	396.29	3.00
*	47603.000	9110.00	727.83	1.98	1.54	.00	402.53	3.00

*	47616.000	6590.00	726.18	.00	.32	.00	410.31	13.00
	47616.000	9110.00	728.10	1.92	.27	.00	416.40	13.00
*	47656.000	6590.00	726.39	.00	.21	.00	449.73	40.00
*	47656.000	9110.00	728.31	1.93	.21	.00	456.31	40.00
	47816.000	6590.00	726.55	.00	.16	.00	504.46	160.00
	47816.000	9110.00	728.51	1.96	.20	.00	516.48	160.00
	29.010	6590.00	727.34	.00	.79	.00	484.55	4343.00
	29.010	9110.00	729.31	1.97	.80	.00	500.57	4343.00
	29.020	6590.00	728.60	.00	1.26	.00	730.44	4408.00
	29.020	9110.00	730.46	1.86	1.15	.00	822.30	4408.00
	29.030	6590.00	730.12	.00	1.52	.00	567.71	4408.00
	29.030	9110.00	731.75	1.64	1.30	.00	661.82	4408.00
	65375.000	6590.00	731.45	.00	1.33	.00	999.49	4400.00
	65375.000	9110.00	732.85	1.40	1.10	.00	1040.18	4400.00
	68635.000	6590.00	732.10	.00	.65	.00	891.91	3260.00
	68635.000	9110.00	733.41	1.31	.56	.00	943.02	3260.00
*	48.010	6590.00	732.31	.00	.21	.00	1091.14	1128.00
	48.010	9110.00	733.60	1.30	.19	.00	1343.05	1128.00
	52.010	6590.00	732.50	.00	.20	.00	752.19	564.00
*	52.010	9110.00	733.73	1.23	.12	.00	788.71	564.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
48.020	6590.00	732.93	.00	.43	.00	510.15	564.00
48.020	9110.00	734.03	1.11	.31	.00	559.19	564.00
71612.000	6590.00	733.82	.00	.89	.00	534.91	721.00
71612.000	9110.00	734.87	1.05	.84	.00	536.77	721.00
72012.000	6590.00	734.47	.00	.65	.00	336.06	400.00
72012.000	9110.00	735.49	1.02	.61	.00	337.85	400.00
72372.000	6590.00	734.90	.00	.44	.00	150.37	360.00
72372.000	9110.00	736.01	1.11	.52	.00	150.51	360.00
72373.000	6590.00	734.92	.00	.02	.00	150.37	1.00
72373.000	9110.00	736.04	1.13	.03	.00	150.51	1.00
72427.000	6590.00	734.99	.00	.07	.00	150.38	54.00
72427.000	9110.00	736.14	1.15	.09	.00	150.52	54.00
72428.000	6590.00	734.99	.00	.00	.00	150.59	1.00
72428.000	9110.00	736.14	1.15	.00	.00	150.82	1.00
72523.000	6590.00	735.12	.00	.13	.00	246.45	95.00
72523.000	9110.00	736.30	1.18	.16	.00	249.87	95.00
72600.000	6590.00	735.57	.00	.45	.00	324.16	77.00
72600.000	9110.00	736.90	1.34	.61	.00	330.40	77.00
72950.000	6590.00	736.17	.00	.60	.00	705.74	350.00
72950.000	9110.00	737.62	1.46	.72	.00	850.60	350.00
73765.000	6590.00	736.78	.00	.61	.00	699.02	815.00
73765.000	9110.00	738.15	1.37	.52	.00	834.91	815.00
74580.000	6590.00	737.42	.00	.65	.00	492.51	815.00
74580.000	9110.00	738.74	1.32	.60	.00	499.52	815.00
75670.000	6590.00	738.44	.00	1.02	.00	222.28	1090.00
75670.000	9110.00	739.80	1.36	1.06	.00	230.25	1090.00
75870.000	6590.00	738.67	.00	.23	.00	173.27	200.00
75870.000	9110.00	740.07	1.39	.26	.00	180.63	200.00
76070.000	6590.00	738.90	.00	.23	.00	124.77	200.00

76070.000	9110.00	740.34	1.44	.27	.00	132.08	200.00
76120.000	6590.00	739.31	.00	.41	.00	176.50	50.00
76120.000	9110.00	741.01	1.70	.67	.00	180.93	50.00
76180.000	6590.00	739.50	.00	.19	.00	235.80	60.00
76180.000	9110.00	741.29	1.80	.29	.00	240.89	60.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
* 76432.000	6590.00	740.04	.00	.54	.00	575.00	252.00
* 76432.000	9110.00	741.97	1.93	.67	.00	575.00	252.00
77032.000	6590.00	740.25	.00	.22	.00	275.00	600.00
* 77032.000	9110.00	742.18	1.93	.22	.00	275.00	600.00
77382.000	6590.00	740.50	.00	.25	.00	97.19	350.00
* 77382.000	9110.00	742.46	1.96	.28	.00	105.84	350.00
77383.000	6590.00	740.50	.00	.00	.00	97.19	1.00
77383.000	9110.00	742.46	1.96	.00	.00	105.85	1.00
77418.000	6590.00	740.58	.00	.08	.00	97.54	35.00
77418.000	9110.00	742.57	1.98	.10	.00	106.30	35.00
* 77419.000	6590.00	740.78	.00	.20	.00	99.73	1.00
* 77419.000	9110.00	742.81	2.04	.25	.00	108.82	1.00
77484.000	6590.00	740.82	.00	.05	.00	98.61	65.00
77484.000	9110.00	742.87	2.04	.05	.00	107.64	65.00
* 77485.000	6590.00	740.83	.00	.00	.00	98.61	1.00
* 77485.000	9110.00	742.87	2.04	.00	.00	107.65	1.00
77520.000	6590.00	740.90	.00	.07	.00	98.93	35.00
77520.000	9110.00	742.96	2.06	.09	.00	108.05	35.00
77521.000	6590.00	741.06	.00	.16	.00	100.98	1.00
77521.000	9110.00	743.14	2.09	.18	.00	110.29	1.00
* 77546.000	6590.00	741.24	.00	.19	.00	150.00	25.00
* 77546.000	9110.00	743.36	2.12	.22	.00	150.00	25.00
* 77596.000	6590.00	741.56	.00	.32	.00	250.00	50.00
* 77596.000	9110.00	743.84	2.28	.48	.00	250.00	50.00
* 77746.000	6590.00	741.86	.00	.30	.00	575.00	150.00
* 77746.000	9110.00	744.25	2.39	.41	.00	575.00	150.00
81550.000	6590.00	741.96	.00	.10	.00	1276.79	3804.00
81550.000	9110.00	744.35	2.39	.10	.00	1491.65	3804.00
* 82639.000	6590.00	742.01	.00	.04	.00	500.00	1089.00
* 82639.000	9110.00	744.38	2.37	.02	.00	500.00	1089.00
83339.000	6590.00	742.36	.00	.35	.00	223.00	700.00
* 83339.000	9110.00	744.66	2.30	.29	.00	223.00	700.00
83610.000	6590.00	742.62	.00	.26	.00	87.10	271.00
83610.000	9110.00	744.92	2.30	.25	.00	87.10	271.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
83646.000	6590.00	743.22	.00	.60	.00	87.10	36.00
83646.000	9110.00	746.29	3.07	1.37	.00	87.10	36.00
83677.000	6590.00	743.42	.00	.20	.00	148.00	31.00
83677.000	9110.00	746.64	3.22	.35	.00	148.00	31.00
* 83887.000	6590.00	744.08	.00	.66	.00	575.00	210.00
* 83887.000	9110.00	747.35	3.27	.71	.00	575.00	210.00

*	85275.000	6590.00	744.34	.00	.26	.00	551.47	1388.00
*	85275.000	9110.00	747.50	3.16	.15	.00	567.00	1388.00
	85825.000	6590.00	744.64	.00	.30	.00	873.72	550.00
	85825.000	9110.00	747.69	3.05	.19	.00	884.60	550.00
	87215.000	6590.00	744.98	.00	.33	.00	889.98	1390.00
	87215.000	9110.00	747.88	2.91	.20	.00	898.14	1390.00
*	88600.000	6590.00	745.51	.00	.54	.00	600.00	1385.00
*	88600.000	9110.00	748.17	2.66	.29	.00	600.00	1385.00
	89700.000	6590.00	746.44	.00	.93	.00	460.00	1100.00
	89700.000	9110.00	748.78	2.34	.61	.00	460.00	1100.00
	90800.000	6590.00	747.55	.00	1.11	.00	663.85	1100.00
	90800.000	9110.00	749.57	2.02	.79	.00	694.11	1100.00
*	91350.000	6590.00	748.17	.00	.62	.00	544.61	550.00
*	91350.000	9110.00	750.01	1.84	.44	.00	561.22	550.00
	91800.000	6590.00	748.36	.00	.19	.00	370.00	450.00
	91800.000	9110.00	750.16	1.80	.15	.00	370.00	450.00
	92175.000	6590.00	748.52	.00	.16	.00	291.35	375.00
	92175.000	9110.00	750.31	1.79	.14	.00	315.00	375.00
	92550.000	6590.00	748.74	.00	.21	.00	135.30	375.00
	92550.000	9110.00	750.42	1.68	.11	.00	191.60	375.00
	92900.000	6590.00	749.30	.00	.57	.00	129.35	350.00
	92900.000	9110.00	751.07	1.77	.65	.00	131.78	350.00
	93211.000	6590.00	749.85	.00	.55	.00	104.90	311.00
	93211.000	9110.00	751.74	1.89	.67	.00	109.20	311.00
	93221.000	6590.00	749.88	.00	.02	.00	104.97	10.00
	93221.000	9110.00	751.77	1.89	.03	.00	109.20	10.00
	93279.000	6590.00	749.99	.00	.12	.00	105.45	58.00
	93279.000	9110.00	751.92	1.92	.15	.00	109.20	58.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	93289.000	6590.00	750.02	.00	.02	.00	105.55	10.00
	93289.000	9110.00	751.94	1.93	.02	.00	109.20	10.00
*	93489.000	6590.00	750.40	.00	.38	.00	122.62	200.00
*	93489.000	9110.00	752.41	2.01	.47	.00	125.44	200.00
	93650.000	6590.00	750.47	.00	.07	.00	148.50	161.00
	93650.000	9110.00	752.51	2.04	.10	.00	169.61	161.00
*	94800.000	6590.00	751.55	.00	1.08	.00	710.00	1150.00
*	94800.000	9110.00	753.69	2.14	1.18	.00	710.00	1150.00
*	95200.000	6590.00	751.73	.00	.18	.00	476.21	400.00
*	95200.000	9110.00	753.83	2.10	.14	.00	479.72	400.00
	95550.000	6590.00	752.04	.00	.31	.00	265.00	350.00
	95550.000	9110.00	754.04	2.00	.20	.00	265.00	350.00
*	95600.000	6590.00	752.15	.00	.11	.00	251.89	50.00
	95600.000	9110.00	754.13	1.98	.10	.00	288.17	50.00
	95605.000	6590.00	752.18	.00	.03	.00	252.32	5.00
	95605.000	9110.00	754.15	1.97	.02	.00	288.23	5.00
*	95865.000	6590.00	752.96	.00	.79	.00	94.00	260.00
	95865.000	9110.00	754.71	1.75	.56	.00	94.00	260.00
	95905.000	6590.00	753.04	.00	.08	.00	79.00	40.00
	95905.000	9110.00	754.80	1.76	.09	.00	79.00	40.00
*	95909.000	6590.00	753.06	.00	.01	.00	74.80	4.00
*	95909.000	9110.00	754.82	1.77	.02	.00	77.00	4.00

	95910.000	6590.00	753.06	.00	.01	.00	74.84	1.00
*	95910.000	9110.00	754.83	1.77	.01	.00	77.00	1.00
	95930.000	6590.00	753.35	.00	.29	.00	76.02	20.00
	95930.000	9110.00	755.38	2.02	.55	.00	77.00	20.00
*	95931.000	6590.00	753.93	.00	.58	.00	77.00	1.00
*	95931.000	9110.00	757.57	3.64	2.20	.00	77.00	1.00
	96015.000	6590.00	754.25	.00	.31	.00	165.50	84.00
	96015.000	9110.00	758.16	3.91	.58	.00	188.31	84.00
	96122.000	6590.00	754.90	.00	.66	.00	186.47	107.00
	96122.000	9110.00	758.50	3.60	.35	.00	210.00	107.00
	96230.000	6590.00	755.42	.00	.51	.00	216.23	108.00
	96230.000	9110.00	758.84	3.42	.34	.00	228.00	108.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	96445.000	6590.00	756.04	.00	.63	.00	256.30	215.00
	96445.000	9110.00	759.30	3.26	.46	.00	263.00	215.00
	96650.000	6590.00	756.33	.00	.29	.00	275.17	205.00
	96650.000	9110.00	759.54	3.21	.24	.00	288.00	205.00
	96850.000	6590.00	756.43	.00	.10	.00	178.05	200.00
	96850.000	9110.00	759.63	3.20	.09	.00	180.00	200.00
*	97050.000	6590.00	756.62	.00	.19	.00	75.00	200.00
*	97050.000	9110.00	759.81	3.18	.18	.00	95.00	200.00
	97078.000	6590.00	756.67	.00	.05	.00	75.00	28.00
	97078.000	9110.00	759.85	3.18	.05	.00	95.00	28.00
	97122.000	6590.00	758.84	.00	2.17	.00	81.79	44.00
	97122.000	9110.00	762.36	3.52	2.51	.00	110.00	44.00
	97132.000	6590.00	758.85	.00	.01	.00	82.35	10.00
	97132.000	9110.00	762.37	3.52	.01	.00	110.00	10.00
	97213.000	6590.00	759.07	.00	.22	.00	145.00	81.00
	97213.000	9110.00	762.65	3.58	.28	.00	145.00	81.00
*	97900.000	6590.00	759.74	.00	.68	.00	614.70	687.00
*	97900.000	9110.00	763.42	3.67	.77	.00	615.00	687.00
	98400.000	6590.00	759.82	.00	.08	.00	525.00	500.00
	98400.000	9110.00	763.47	3.65	.06	.00	525.00	500.00
*	98575.000	6590.00	759.87	.00	.04	.00	481.00	175.00
*	98575.000	9110.00	763.51	3.64	.03	.00	481.00	175.00
*	98961.000	6590.00	759.85	.00	-.02	.00	581.46	386.00
*	98961.000	9110.00	763.53	3.68	.02	.00	585.00	386.00
*	98962.000	6590.00	759.82	.00	-.03	.00	580.84	1.00
	98962.000	9110.00	763.52	3.70	-.01	.00	585.00	1.00
	98981.000	6590.00	759.93	.00	.11	.00	572.23	19.00
	98981.000	9110.00	763.54	3.61	.02	.00	585.00	19.00
*	98982.000	6590.00	760.00	.00	.07	.00	573.48	1.00
	98982.000	9110.00	763.55	3.55	.01	.00	585.00	1.00
*	99150.000	6590.00	760.24	.00	.25	.00	450.00	168.00
*	99150.000	9110.00	763.63	3.39	.08	.00	450.00	168.00
	99750.000	6590.00	760.45	.00	.20	.00	635.00	600.00
	99750.000	9110.00	763.75	3.30	.12	.00	635.00	600.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
100735.000	6590.00	760.67	.00	.22	.00	223.00	985.00
* 100735.000	9110.00	763.82	3.15	.07	.00	223.00	985.00
* 100935.000	6590.00	760.73	.00	.06	.00	121.00	200.00
* 100935.000	9110.00	763.83	3.10	.01	.00	121.00	200.00
100945.000	6590.00	760.75	.00	.02	.00	121.00	10.00
100945.000	9110.00	763.84	3.10	.02	.00	121.00	10.00
101000.000	6590.00	760.86	.00	.11	.00	121.00	55.00
101000.000	9110.00	763.93	3.07	.09	.00	121.00	55.00
101010.000	6590.00	760.88	.00	.02	.00	121.00	10.00
101010.000	9110.00	763.94	3.07	.02	.00	121.00	10.00
* 101067.000	6590.00	761.28	.00	.40	.00	185.53	57.00
* 101067.000	9110.00	764.35	3.08	.41	.00	203.68	57.00
101800.000	6590.00	761.68	.00	.40	.00	703.35	733.00
* 101800.000	9110.00	764.74	3.06	.39	.00	723.70	733.00
* 102350.000	6590.00	761.77	.00	.09	.00	627.54	550.00
102350.000	9110.00	764.79	3.03	.05	.00	643.88	550.00
102900.000	6590.00	762.05	.00	.29	.00	340.00	550.00
102900.000	9110.00	764.93	2.88	.14	.00	340.00	550.00
104150.000	6590.00	763.05	.00	1.00	.00	681.41	1250.00
104150.000	9110.00	765.67	2.62	.74	.00	686.42	1250.00
104800.000	6590.00	763.36	.00	.31	.00	947.95	650.00
104800.000	9110.00	765.87	2.51	.21	.00	972.00	650.00
105450.000	6590.00	763.57	.00	.21	.00	1000.00	650.00
105450.000	9110.00	766.01	2.44	.14	.00	1000.00	650.00
107.010	6590.00	764.34	.00	.77	.00	880.42	2663.00
107.010	9110.00	766.52	2.18	.51	.00	897.71	2663.00
110575.000	6590.00	765.63	.00	1.28	.00	684.05	2462.00
110575.000	9110.00	767.39	1.76	.86	.00	732.94	2462.00
110775.000	6590.00	765.75	.00	.13	.00	507.00	200.00
110775.000	9110.00	767.46	1.71	.08	.00	507.00	200.00
111300.000	6590.00	766.41	.00	.66	.00	244.00	525.00
111300.000	9110.00	768.02	1.61	.55	.00	244.00	525.00
111500.000	6590.00	766.74	.00	.34	.00	144.00	200.00
111500.000	9110.00	768.33	1.59	.31	.00	144.00	200.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
111521.000	6590.00	767.44	.00	.70	.00	134.00	21.00
111521.000	9110.00	769.21	1.76	.88	.00	134.00	21.00
111530.000	6590.00	767.55	.00	.10	.00	134.00	9.00
111530.000	9110.00	769.36	1.81	.15	.00	134.00	9.00
111562.000	6590.00	768.01	.00	.46	.00	134.00	32.00
111562.000	9110.00	769.36	1.35	.00	.00	134.00	32.00
111571.000	6590.00	768.01	.00	.00	.00	134.00	9.00
111571.000	9110.00	769.36	1.35	.00	.00	134.00	9.00
* 111800.000	6590.00	768.69	.00	.68	.00	593.00	229.00
* 111800.000	9110.00	770.35	1.66	.99	.00	593.00	229.00
111900.000	6590.00	768.72	.00	.03	.00	759.94	100.00
111900.000	9110.00	770.38	1.67	.04	.00	800.00	100.00
116500.000	6590.00	769.40	.00	.68	.00	1017.40	4600.00
116500.000	9110.00	770.97	1.57	.59	.00	1094.09	4600.00

	135.010	6590.00	769.48	.00	.08	.00	915.95	900.00
	135.010	9110.00	771.02	1.54	.05	.00	1032.57	900.00
	144.010	6590.00	769.54	.00	.06	.00	864.98	450.00
	144.010	9110.00	771.06	1.52	.03	.00	991.30	450.00
*	135.020	6590.00	769.57	.00	.03	.00	811.29	450.00
*	135.020	9110.00	771.05	1.48	.00	.00	933.61	450.00
	120100.000	6590.00	770.85	.00	1.28	.00	696.76	1800.00
	120100.000	9110.00	771.98	1.12	.92	.00	719.76	1800.00
	115.010	4930.00	773.74	.00	2.88	.00	377.28	3280.00
	115.010	6810.00	774.83	1.10	2.86	.00	443.00	3280.00
	115.020	4930.00	775.77	.00	2.03	.00	537.26	3280.00
	115.020	6810.00	776.97	1.20	2.14	.00	621.07	3280.00
	129470.000	4930.00	777.70	.00	1.94	.00	670.77	2810.00
	129470.000	6810.00	778.84	1.13	1.87	.00	809.95	2810.00
	129950.000	4930.00	778.12	.00	.42	.00	337.22	480.00
	129950.000	6810.00	779.24	1.11	.40	.00	339.00	480.00
	130480.000	4930.00	778.69	.00	.56	.00	75.10	530.00
	130480.000	6810.00	779.92	1.23	.68	.00	75.10	530.00
	130488.000	4930.00	778.70	.00	.01	.00	75.10	8.00
	130488.000	6810.00	779.94	1.24	.02	.00	75.10	8.00

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	130513.000	4930.00	779.84	.00	1.14	.00	75.10	25.00
	130513.000	6810.00	781.29	1.46	1.36	.00	75.10	25.00
	130521.000	4930.00	779.85	.00	.01	.00	75.10	8.00
	130521.000	6810.00	781.30	1.46	.01	.00	75.10	8.00
	130571.000	4930.00	780.18	.00	.33	.00	170.00	50.00
	130571.000	6810.00	781.87	1.69	.56	.00	170.00	50.00
	131071.000	4930.00	780.53	.00	.34	.00	559.81	500.00
	131071.000	6810.00	782.34	1.81	.47	.00	561.56	500.00
	131521.000	4930.00	780.97	.00	.45	.00	611.76	450.00
	131521.000	6810.00	782.70	1.72	.36	.00	689.85	450.00
	131971.000	4930.00	781.21	.00	.23	.00	824.64	450.00
	131971.000	6810.00	782.88	1.67	.18	.00	863.01	450.00
	132371.000	4930.00	781.39	.00	.18	.00	613.67	400.00
	132371.000	6810.00	783.01	1.62	.13	.00	655.87	400.00
*	132771.000	4930.00	781.57	.00	.17	.00	527.48	400.00
	132771.000	6810.00	783.18	1.62	.17	.00	636.14	400.00
	133591.000	4930.00	782.38	.00	.81	.00	170.18	820.00
*	133591.000	6810.00	783.65	1.27	.47	.00	339.73	820.00
	134611.000	4930.00	784.18	.00	1.81	.00	209.81	1020.00
	134611.000	6810.00	785.40	1.21	1.74	.00	249.78	1020.00
	178.010	4930.00	786.33	.00	2.14	.00	261.14	1370.00
	178.010	6810.00	787.61	1.28	2.21	.00	385.52	1370.00
	178.020	4930.00	787.98	.00	1.65	.00	251.75	1370.00
	178.020	6810.00	789.25	1.27	1.64	.00	281.94	1370.00
	138700.000	4930.00	789.52	.00	1.54	.00	247.23	1349.00
	138700.000	6810.00	790.82	1.29	1.57	.00	267.63	1349.00
	179.010	4930.00	790.73	.00	1.21	.00	323.78	1100.00
	179.010	6810.00	792.10	1.37	1.28	.00	559.89	1100.00
	140900.000	4930.00	791.54	.00	.81	.00	484.42	1100.00
	140900.000	6810.00	792.93	1.39	.83	.00	507.07	1100.00

145.010	4930.00	792.01	.00	.47	.00	540.42	1175.00
145.010	6810.00	793.40	1.39	.47	.00	585.97	1175.00
147.010	4930.00	792.25	.00	.24	.00	597.61	590.00
147.010	6810.00	793.64	1.39	.24	.00	656.11	590.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
143250.000	4930.00	792.42	.00	.17	.00	566.59	585.00
143250.000	6810.00	793.82	1.40	.18	.00	721.22	585.00
148.010	4930.00	792.65	.00	.23	.00	633.28	1100.00
148.010	6810.00	794.06	1.41	.24	.00	703.28	1100.00
146.010	4930.00	793.07	.00	.42	.00	641.13	1100.00
146.010	6810.00	794.46	1.39	.39	.00	729.10	1100.00
146623.000	4930.00	793.71	.00	.64	.00	655.20	1173.00
146623.000	6810.00	795.02	1.31	.56	.00	671.57	1173.00
* 147223.000	4930.00	794.09	.00	.38	.00	350.00	600.00
* 147223.000	6810.00	795.37	1.28	.36	.00	350.00	600.00
147423.000	4930.00	794.34	.00	.25	.00	250.00	200.00
147423.000	6810.00	795.62	1.28	.24	.00	250.00	200.00
147523.000	4930.00	794.61	.00	.27	.00	201.59	100.00
147523.000	6810.00	795.90	1.28	.28	.00	205.81	100.00
147524.000	4930.00	794.61	.00	.00	.00	201.59	1.00
147524.000	6810.00	795.90	1.28	.00	.00	205.81	1.00
147556.000	4930.00	794.68	.00	.07	.00	201.93	32.00
147556.000	6810.00	795.96	1.28	.06	.00	205.96	32.00
147557.000	4930.00	794.71	.00	.03	.00	203.72	1.00
147557.000	6810.00	795.99	1.28	.03	.00	207.74	1.00
* 147807.000	4930.00	795.33	.00	.62	.00	709.01	250.00
* 147807.000	6810.00	796.70	1.37	.71	.00	743.30	250.00
148750.000	4930.00	795.73	.00	.40	.00	693.23	943.00
148750.000	6810.00	797.04	1.31	.33	.00	725.89	943.00
152800.000	4930.00	798.56	.00	2.83	.00	301.27	4050.00
* 152800.000	6810.00	799.54	.98	2.50	.00	392.13	4050.00
181.010	4930.00	799.30	.00	.74	.00	240.58	649.50
181.010	6810.00	800.34	1.04	.80	.00	320.65	649.50
154089.000	4930.00	800.38	.00	1.08	.00	245.59	639.50
154089.000	6810.00	801.48	1.10	1.14	.00	252.86	639.50
154439.000	4930.00	801.15	.00	.77	.00	238.79	350.00
154439.000	6810.00	802.31	1.16	.84	.00	254.00	350.00
154759.000	4930.00	801.88	.00	.73	.00	89.74	320.00
154759.000	6810.00	803.12	1.25	.81	.00	90.00	320.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
154789.000	4930.00	801.95	.00	.07	.00	75.00	30.00
154789.000	6810.00	803.21	1.26	.09	.00	75.00	30.00
154793.000	4930.00	801.96	.00	.01	.00	73.00	4.00
154793.000	6810.00	803.23	1.26	.01	.00	73.00	4.00
154796.000	4930.00	801.97	.00	.01	.00	71.50	3.00
154796.000	6810.00	803.24	1.27	.01	.00	71.50	3.00
* 154799.000	4930.00	801.99	.00	.02	.00	70.32	3.00

* 154799.000	6810.00	803.39	1.40	.15	.00	78.43	3.00
154800.000	4930.00	802.00	.00	.01	.00	70.40	1.00
* 154800.000	6810.00	803.41	1.42	.03	.00	78.58	1.00
* 154812.000	4930.00	803.98	.00	1.98	.00	81.84	12.00
* 154812.000	6810.00	805.95	1.97	2.53	.00	86.65	12.00
154813.000	4930.00	804.35	.00	.36	.00	83.46	1.00
154813.000	6810.00	806.34	2.00	.40	.00	83.80	1.00
* 154814.000	4930.00	805.55	.00	1.21	.00	86.00	1.00
* 154814.000	6810.00	807.56	2.01	1.22	.00	86.00	1.00
154819.000	4930.00	805.60	.00	.05	.00	96.00	5.00
154819.000	6810.00	807.63	2.03	.07	.00	96.00	5.00
154823.000	4930.00	805.62	.00	.03	.00	104.00	4.00
154823.000	6810.00	807.68	2.05	.04	.00	104.00	4.00
154923.000	4930.00	805.90	.00	.28	.00	304.00	100.00
154923.000	6810.00	808.12	2.21	.44	.00	304.00	100.00
155148.000	4930.00	806.07	.00	.17	.00	545.74	225.00
155148.000	6810.00	808.32	2.25	.20	.00	574.16	225.00
136.010	4930.00	807.15	.00	1.08	.00	400.19	3250.00
136.010	6810.00	809.14	1.99	.82	.00	474.98	3250.00
* 164.010	4930.00	808.18	.00	1.03	.00	469.61	1702.00
* 164.010	6810.00	809.89	1.71	.75	.00	600.01	1702.00
161800.000	4930.00	810.19	.00	2.02	.00	426.30	1700.00
161800.000	6810.00	811.46	1.26	1.57	.00	605.40	1700.00
162700.000	4930.00	811.35	.00	1.16	.00	558.46	900.00
162700.000	6810.00	812.57	1.21	1.11	.00	692.91	900.00
163600.000	4930.00	812.08	.00	.73	.00	605.28	900.00
163600.000	6810.00	813.29	1.21	.72	.00	738.15	900.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
165433.000	4930.00	813.22	.00	1.14	.00	660.98	1833.00
165433.000	6810.00	814.45	1.23	1.16	.00	796.11	1833.00
165586.000	4930.00	813.33	.00	.11	.00	603.37	153.00
165586.000	6810.00	814.56	1.23	.12	.00	966.86	153.00
165614.000	4930.00	813.95	.00	.62	.00	788.11	28.00
165614.000	6810.00	814.57	.62	.00	.00	970.05	28.00
* 166154.000	4930.00	814.60	.00	.65	.00	530.98	540.00
* 166154.000	6810.00	815.47	.87	.90	.00	543.07	540.00
167750.000	4930.00	814.96	.00	.37	.00	555.63	1596.00
167750.000	6810.00	815.96	1.00	.49	.00	573.75	1596.00
* 170.010	4930.00	815.15	.00	.19	.00	477.08	787.00
* 170.010	6810.00	816.20	1.05	.24	.00	514.05	787.00
207.010	4930.00	815.40	.00	.24	.00	449.38	394.00
207.010	6810.00	816.48	1.09	.28	.00	481.36	394.00
* 154.010	4930.00	815.98	.00	.58	.00	424.23	394.00
* 154.010	6810.00	817.08	1.10	.59	.00	448.88	394.00
154.020	4930.00	819.26	.00	3.28	.00	316.63	1575.00
154.020	6810.00	820.28	1.02	3.20	.00	429.12	1575.00
172290.000	4930.00	822.32	.00	3.06	.00	218.58	1390.00
172290.000	6810.00	823.41	1.09	3.13	.00	256.40	1390.00
172571.000	4930.00	823.26	.00	.95	.00	77.00	281.00
172571.000	6810.00	824.43	1.17	1.03	.00	77.00	281.00

172595.000	4930.00	823.37	.00	.10	.00	65.00	24.00
172595.000	6810.00	824.56	1.19	.13	.00	65.00	24.00
172608.000	4930.00	823.44	.00	.07	.00	58.70	13.00
172608.000	6810.00	824.65	1.21	.09	.00	58.70	13.00
172610.000	4930.00	823.46	.00	.01	.00	58.00	2.00
172610.000	6810.00	824.67	1.21	.02	.00	62.21	2.00
172630.000	4930.00	824.45	.00	.99	.00	61.47	20.00
* 172630.000	6810.00	826.83	2.39	2.17	.00	97.24	20.00
* 172632.000	4530.00	826.32	.00	1.88	.00	65.00	2.00
* 172632.000	6260.00	828.78	2.45	1.94	.00	65.00	2.00
172634.000	4530.00	826.46	.00	.14	.00	69.00	2.00
172634.000	6260.00	828.95	2.49	.17	.00	69.00	2.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
* 172670.000	4530.00	827.07	.00	.61	.00	140.00	36.00
* 172670.000	6260.00	829.72	2.65	.77	.00	140.00	36.00
172730.000	4530.00	827.21	.00	.15	.00	260.00	60.00
172730.000	6260.00	829.91	2.70	.19	.00	260.00	60.00
172830.000	4530.00	827.28	.00	.07	.00	470.87	100.00
172830.000	6260.00	830.01	2.73	.10	.00	499.38	100.00
* 220.010	4530.00	827.63	.00	.34	.00	309.86	1370.00
* 220.010	6260.00	830.24	2.61	.22	.00	366.19	1370.00
175570.000	4530.00	828.36	.00	.73	.00	482.86	1370.00
175570.000	6260.00	830.70	2.34	.46	.00	609.54	1370.00
176575.000	4530.00	829.19	.00	.83	.00	310.74	1005.00
176575.000	6260.00	831.14	1.95	.44	.00	565.50	1005.00
177575.000	4530.00	830.48	.00	1.29	.00	247.47	1000.00
177575.000	6260.00	831.98	1.50	.84	.00	499.74	1000.00
179580.000	4530.00	833.69	.00	3.21	.00	240.18	2005.00
179580.000	6260.00	834.74	1.06	2.76	.00	423.18	2005.00
* 180580.000	4530.00	834.18	.00	.49	.00	402.32	1000.00
* 180580.000	6260.00	835.35	1.17	.61	.00	438.93	1000.00
181332.000	4530.00	834.19	.00	.01	.00	392.71	752.00
181332.000	6260.00	835.36	1.17	.01	.00	418.74	752.00
* 181960.000	4530.00	834.21	.00	.02	.00	60.00	628.00
* 181960.000	6260.00	835.39	1.18	.03	.00	60.00	628.00
181965.000	4530.00	834.21	.00	.00	.00	57.50	5.00
181965.000	6260.00	835.39	1.18	.01	.00	57.50	5.00
181970.000	4530.00	834.22	.00	.01	.00	55.00	5.00
181970.000	6260.00	835.40	1.18	.01	.00	55.00	5.00
181975.000	4530.00	834.23	.00	.01	.00	52.50	5.00
181975.000	6260.00	835.41	1.19	.01	.00	52.50	5.00
181980.000	4530.00	834.24	.00	.01	.00	50.00	5.00
181980.000	6260.00	835.43	1.19	.02	.00	50.00	5.00
181982.000	4530.00	834.25	.00	.01	.00	49.00	2.00
181982.000	6260.00	835.44	1.19	.01	.00	49.00	2.00
181983.000	4530.00	834.25	.00	.01	.00	49.00	1.00
181983.000	6260.00	835.45	1.20	.01	.00	49.00	1.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH

182000.000	4530.00	834.85	.00	.60	.00	49.00	17.00
182000.000	6260.00	836.71	1.86	1.26	.00	49.00	17.00
182001.000	4530.00	835.13	.00	.28	.00	51.00	1.00
* 182001.000	6260.00	837.63	2.50	.92	.00	51.00	1.00
* 182003.000	4530.00	836.99	.00	1.86	.00	54.00	2.00
* 182003.000	6260.00	839.50	2.50	1.87	.00	54.00	2.00
182007.000	4530.00	837.41	.00	.41	.00	62.00	4.00
182007.000	6260.00	840.03	2.62	.53	.00	62.00	4.00
182012.000	4530.00	837.65	.00	.25	.00	71.00	5.00
182012.000	6260.00	840.34	2.69	.32	.00	71.00	5.00
* 182101.000	4530.00	838.06	.00	.41	.00	250.00	89.00
* 182101.000	6260.00	840.90	2.84	.56	.00	250.00	89.00
182231.000	4530.00	838.07	.00	.01	.00	520.69	130.00
182231.000	6260.00	840.92	2.85	.02	.00	584.55	130.00
183400.000	4530.00	838.08	.00	.01	.00	444.80	1169.00
183400.000	6260.00	840.93	2.85	.01	.00	545.31	1169.00
* 183600.000	4530.00	838.01	.00	-.07	.00	426.63	200.00
* 183600.000	6260.00	840.90	2.88	-.03	.00	439.02	200.00
184862.000	4530.00	839.25	.00	1.24	.00	431.09	1262.00
184862.000	6260.00	841.44	2.19	.54	.00	439.14	1262.00
186125.000	4530.00	840.08	.00	.83	.00	433.28	1263.00
186125.000	6260.00	841.96	1.88	.52	.00	439.26	1263.00
186790.000	4530.00	840.50	.00	.42	.00	536.97	665.00
186790.000	6260.00	842.27	1.76	.30	.00	551.46	665.00
187092.000	4530.00	840.77	.00	.27	.00	389.00	302.00
187092.000	6260.00	842.45	1.68	.19	.00	389.00	302.00
187394.000	4530.00	841.06	.00	.29	.00	238.00	302.00
187394.000	6260.00	842.69	1.63	.24	.00	238.00	302.00
187494.000	4530.00	841.17	.00	.11	.00	187.60	100.00
187494.000	6260.00	842.79	1.62	.10	.00	187.60	100.00
187719.000	4530.00	841.50	.00	.33	.00	75.10	225.00
187719.000	6260.00	843.12	1.62	.33	.00	75.10	225.00
187720.000	4530.00	841.51	.00	.00	.00	75.10	1.00
* 187720.000	6260.00	843.12	1.62	.00	.00	75.10	1.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
187780.000	4530.00	841.69	.00	.18	.00	75.10	60.00
187780.000	6260.00	843.52	1.83	.39	.00	75.10	60.00
187781.000	4530.00	841.87	.00	.18	.00	77.00	1.00
* 187781.000	6260.00	844.49	2.62	.97	.00	77.00	1.00
187831.000	4530.00	842.50	.00	.64	.00	177.00	50.00
* 187831.000	6260.00	845.29	2.79	.80	.00	177.00	50.00
187881.000	4530.00	842.72	.00	.21	.00	277.00	50.00
187881.000	6260.00	845.52	2.81	.23	.00	277.00	50.00
188061.000	4530.00	842.98	.00	.26	.00	648.08	180.00
* 188061.000	6260.00	845.76	2.78	.23	.00	758.94	180.00
191400.000	4530.00	844.00	.00	1.02	.00	641.38	3339.00
191400.000	6260.00	846.27	2.27	.51	.00	732.13	3339.00
192728.000	4530.00	844.58	.00	.58	.00	614.79	1328.00
192728.000	6260.00	846.64	2.06	.37	.00	697.30	1328.00
193956.000	4530.00	845.32	.00	.74	.00	599.20	1228.00

193956.000	6260.00	847.13	1.81	.49	.00	671.71	1228.00
194826.000	4530.00	846.14	.00	.82	.00	152.00	870.00
* 194826.000	6260.00	847.80	1.66	.67	.00	152.00	870.00
194876.000	4530.00	846.21	.00	.07	.00	127.00	50.00
194876.000	6260.00	847.87	1.66	.07	.00	127.00	50.00
194972.000	4530.00	846.36	.00	.15	.00	80.00	96.00
194972.000	6260.00	848.03	1.67	.16	.00	80.00	96.00
* 194976.000	4530.00	846.37	.00	.01	.00	78.10	4.00
* 194976.000	6260.00	848.04	1.67	.01	.00	78.10	4.00
194977.000	4530.00	846.38	.00	.00	.00	78.10	1.00
* 194977.000	6260.00	848.04	1.67	.01	.00	78.10	1.00
195023.000	4530.00	846.91	.00	.53	.00	78.10	46.00
195023.000	6260.00	848.51	1.60	.47	.00	78.10	46.00
195024.000	4530.00	847.12	.00	.21	.00	80.00	1.00
* 195024.000	6260.00	849.32	2.20	.81	.00	80.00	1.00
* 195040.000	4530.00	847.66	.00	.54	.00	112.00	16.00
195040.000	6260.00	849.88	2.22	.56	.00	112.00	16.00
195090.000	4530.00	848.20	.00	.54	.00	203.54	50.00
195090.000	6260.00	850.57	2.37	.70	.00	212.00	50.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
195170.000	4530.00	848.57	.00	.36	.00	378.46	80.00
* 195170.000	6260.00	850.96	2.39	.38	.00	550.00	80.00
195350.000	4530.00	848.64	.00	.07	.00	376.39	180.00
195350.000	6260.00	851.00	2.37	.05	.00	500.00	180.00
195724.000	4530.00	848.80	.00	.16	.00	371.61	374.00
195724.000	6260.00	851.11	2.31	.10	.00	500.00	374.00
* 195924.000	4530.00	848.90	.00	.11	.00	324.03	200.00
195924.000	6260.00	851.18	2.28	.07	.00	384.98	200.00
195925.000	4530.00	848.87	.00	-.03	.00	323.98	1.00
195925.000	6260.00	851.18	2.31	.00	.00	385.06	1.00
195974.000	4530.00	848.98	.00	.12	.00	324.17	49.00
195974.000	6260.00	851.24	2.26	.06	.00	386.09	49.00
195975.000	4530.00	848.96	.00	-.02	.00	324.14	1.00
195975.000	6260.00	851.20	2.23	-.04	.00	385.32	1.00
196015.000	4530.00	849.15	.00	.19	.00	366.10	40.00
196015.000	6260.00	851.30	2.15	.11	.00	462.26	40.00
196065.000	4530.00	849.24	.00	.09	.00	417.35	50.00
196065.000	6260.00	851.39	2.15	.09	.00	520.66	50.00
196272.000	4530.00	849.43	.00	.19	.00	629.92	207.00
196272.000	6260.00	851.58	2.15	.19	.00	774.64	207.00
197250.000	4530.00	849.96	.00	.53	.00	608.67	978.00
197250.000	6260.00	851.91	1.95	.33	.00	649.99	978.00
178.010	4530.00	852.29	.00	2.33	.00	683.31	2865.00
178.010	6260.00	853.61	1.32	1.70	.00	784.97	2865.00
202235.000	4530.00	853.91	.00	1.62	.00	543.72	2120.00
202235.000	6260.00	855.02	1.11	1.41	.00	580.00	2120.00
* 202936.000	3200.00	854.39	.00	.48	.00	158.84	701.00
* 202936.000	4430.00	855.52	1.13	.50	.00	190.37	701.00
203036.000	3200.00	854.47	.00	.09	.00	108.45	100.00
203036.000	4430.00	855.62	1.15	.10	.00	131.71	100.00

* 203176.000	3200.00	854.67	.00	.20	.00	65.50	140.00
* 203176.000	4430.00	855.86	1.19	.24	.00	65.50	140.00
* 203181.000	3200.00	854.69	.00	.02	.00	65.50	5.00
* 203181.000	4430.00	855.88	1.19	.02	.00	65.50	5.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
203219.000	3200.00	854.90	.00	.21	.00	65.50	38.00
203219.000	4430.00	856.29	1.39	.41	.00	65.50	38.00
* 203224.000	3200.00	855.23	.00	.33	.00	67.50	5.00
* 203224.000	4430.00	857.59	2.35	1.30	.00	67.50	5.00
* 203274.000	3200.00	855.88	.00	.64	.00	157.03	50.00
* 203274.000	4430.00	858.34	2.46	.75	.00	171.00	50.00
* 203464.000	3200.00	856.22	.00	.34	.00	551.00	190.00
* 203464.000	4430.00	858.66	2.44	.33	.00	551.00	190.00
277.010	3200.00	856.52	.00	.30	.00	957.05	1637.00
277.010	4430.00	858.82	2.29	.15	.00	1643.08	1637.00
* 184.010	3200.00	857.11	.00	.59	.00	562.54	1633.00
* 184.010	4430.00	859.04	1.93	.22	.00	830.25	1633.00
210350.000	3200.00	859.54	.00	2.43	.00	713.02	3616.00
210350.000	4430.00	860.65	1.11	1.61	.00	769.28	3616.00
185.010	3200.00	861.80	.00	2.26	.00	696.30	2815.00
185.010	4430.00	862.61	.81	1.96	.00	757.97	2815.00
215877.000	3200.00	864.77	.00	2.97	.00	668.07	2712.00
215877.000	4430.00	865.52	.75	2.91	.00	752.04	2712.00
216054.000	3200.00	864.95	.00	.18	.00	589.81	177.00
216054.000	4430.00	865.71	.76	.19	.00	633.24	177.00
* 216085.000	3200.00	866.11	.00	1.16	.00	653.56	31.00
216085.000	4430.00	866.73	.62	1.01	.00	680.10	31.00
216135.000	3200.00	866.24	.00	.13	.00	625.00	50.00
216135.000	4430.00	866.89	.65	.16	.00	625.00	50.00
216185.000	3200.00	866.22	.00	-.02	.00	578.06	50.00
216185.000	4430.00	866.86	.65	-.03	.00	677.66	50.00
216277.000	3200.00	866.31	.00	.10	.00	798.00	92.00
216277.000	4430.00	867.01	.70	.14	.00	798.00	92.00
217062.000	3200.00	866.67	.00	.36	.00	743.00	785.00
217062.000	4430.00	867.44	.77	.43	.00	744.17	785.00
217537.000	3200.00	866.84	.00	.17	.00	419.89	475.00
* 217537.000	4430.00	867.64	.79	.20	.00	424.58	475.00
218237.000	3200.00	867.32	.00	.48	.00	816.85	700.00
218237.000	4430.00	868.21	.89	.58	.00	830.89	700.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
* 218792.000	3200.00	867.54	.00	.21	.00	721.40	555.00
* 218792.000	4430.00	868.43	.90	.22	.00	739.93	555.00
219172.000	3200.00	868.11	.00	.57	.00	1004.88	380.00
219172.000	4430.00	868.96	.85	.53	.00	1011.69	380.00
219722.000	3200.00	868.72	.00	.61	.00	686.05	550.00
219722.000	4430.00	869.49	.77	.53	.00	799.38	550.00
220247.000	3200.00	869.30	.00	.58	.00	606.82	525.00
220247.000	4430.00	870.12	.82	.63	.00	617.81	525.00

220447.000	3200.00	869.48	.00	.18	.00	480.47	200.00
220447.000	4430.00	870.31	.83	.19	.00	481.36	200.00
220942.000	3200.00	869.88	.00	.40	.00	378.00	495.00
220942.000	4430.00	870.76	.88	.45	.00	378.00	495.00
221102.000	3200.00	870.08	.00	.20	.00	300.00	160.00
221102.000	4430.00	870.98	.90	.22	.00	300.00	160.00
221302.000	3200.00	870.41	.00	.34	.00	50.10	200.00
221302.000	4430.00	871.35	.94	.37	.00	50.10	200.00
221310.000	3200.00	870.43	.00	.02	.00	50.10	8.00
221310.000	4430.00	871.37	.95	.02	.00	50.10	8.00
221340.000	3200.00	870.48	.00	.05	.00	50.10	30.00
221340.000	4430.00	871.46	.98	.09	.00	50.10	30.00
221348.000	3200.00	870.50	.00	.02	.00	50.10	8.00
221348.000	4430.00	871.49	.99	.03	.00	50.10	8.00
* 221353.000	3200.00	871.12	.00	.62	.00	60.00	5.00
* 221353.000	4430.00	872.48	1.36	.99	.00	60.00	5.00
* 221383.000	3200.00	871.37	.00	.25	.00	120.00	30.00
* 221383.000	4430.00	872.89	1.52	.41	.00	120.00	30.00
222533.000	3200.00	871.73	.00	.36	.00	120.00	1150.00
222533.000	4430.00	873.34	1.60	.44	.00	120.00	1150.00
* 237300.000	3200.00	899.00	.00	27.27	.00	864.15	14767.00
* 237300.000	4430.00	900.00	1.00	26.66	.00	870.32	14767.00
241300.000	3200.00	899.03	.00	.03	.00	864.36	4000.00
241300.000	4430.00	900.05	1.01	.05	.00	870.60	4000.00
* 244550.000	3200.00	899.06	.00	.02	.00	276.52	3250.00
* 244550.000	4430.00	900.07	1.01	.02	.00	302.72	3250.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
267.010	3200.00	899.21	.00	.15	.00	248.33	762.00
267.010	4430.00	900.25	1.04	.18	.00	279.22	762.00
256.010	3200.00	899.44	.00	.23	.00	230.21	763.00
256.010	4430.00	900.52	1.07	.27	.00	265.52	763.00
268.010	3200.00	899.81	.00	.36	.00	226.17	762.00
268.010	4430.00	900.93	1.12	.41	.00	291.25	762.00
247600.000	3200.00	900.37	.00	.57	.00	241.96	763.00
247600.000	4430.00	901.55	1.18	.62	.00	264.91	763.00
301.010	3200.00	901.08	.00	.71	.00	331.04	608.00
301.010	4430.00	902.34	1.26	.79	.00	409.34	608.00
248716.000	3200.00	901.48	.00	.40	.00	314.68	508.00
248716.000	4430.00	902.77	1.29	.43	.00	483.18	508.00
* 249051.000	3200.00	901.65	.00	.17	.00	132.14	335.00
* 249051.000	4430.00	902.97	1.31	.20	.00	188.00	335.00
249286.000	3200.00	901.91	.00	.26	.00	70.00	235.00
249286.000	4430.00	903.26	1.35	.30	.00	70.00	235.00
* 249336.000	3200.00	902.00	.00	.09	.00	44.10	50.00
* 249336.000	4430.00	903.37	1.37	.11	.00	44.10	50.00
* 249364.000	3200.00	904.20	.00	2.20	.00	318.50	28.00
* 249364.000	4430.00	905.29	1.08	1.91	.00	318.50	28.00
249394.000	2730.00	904.22	.00	.01	.00	378.00	30.00
249394.000	3780.00	905.31	1.10	.03	.00	378.00	30.00
249444.000	2730.00	904.25	.00	.03	.00	473.39	50.00

249444.000	3780.00	905.36	1.11	.04	.00	478.00	50.00
249617.000	2730.00	904.28	.00	.03	.00	520.20	173.00
249617.000	3780.00	905.39	1.12	.04	.00	575.11	173.00
250140.000	2730.00	904.35	.00	.08	.00	743.01	523.00
250140.000	3780.00	905.49	1.13	.09	.00	881.86	523.00
250958.000	2730.00	904.48	.00	.13	.00	307.26	818.00
250958.000	3780.00	905.62	1.14	.14	.00	312.90	818.00
* 251253.000	2730.00	904.60	.00	.12	.00	115.06	295.00
* 251253.000	3780.00	905.76	1.16	.13	.00	116.99	295.00
251328.000	2730.00	904.68	.00	.09	.00	97.06	75.00
251328.000	3780.00	905.85	1.17	.10	.00	99.01	75.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
251433.000	2730.00	904.83	.00	.15	.00	69.00	105.00
251433.000	3780.00	906.02	1.19	.17	.00	69.00	105.00
* 251478.000	2730.00	904.94	.00	.10	.00	46.00	45.00
* 251478.000	3780.00	906.14	1.20	.12	.00	46.00	45.00
251486.000	2730.00	904.97	.00	.04	.00	46.00	8.00
251486.000	3780.00	906.20	1.23	.06	.00	46.00	8.00
251514.000	2730.00	905.12	.00	.15	.00	46.00	28.00
251514.000	3780.00	906.40	1.28	.20	.00	46.00	28.00
251522.000	2730.00	905.16	.00	.04	.00	46.00	8.00
251522.000	3780.00	906.46	1.30	.06	.00	46.00	8.00
* 251525.000	2730.00	905.96	.00	.80	.00	52.00	3.00
* 251525.000	3780.00	907.55	1.59	1.08	.00	52.00	3.00
251537.000	2730.00	906.21	.00	.26	.00	76.00	12.00
* 251537.000	3780.00	907.93	1.72	.38	.00	76.00	12.00
* 251697.000	2730.00	906.76	.00	.54	.00	371.09	160.00
* 251697.000	3780.00	908.65	1.89	.72	.00	527.82	160.00
* 268.010	2730.00	907.00	.00	.24	.00	340.11	1385.00
268.010	3780.00	908.85	1.85	.20	.00	528.01	1385.00
* 215.010	2730.00	907.59	.00	.59	.00	322.66	1385.00
* 215.010	3780.00	909.27	1.68	.42	.00	392.43	1385.00
257200.000	2730.00	910.07	.00	2.48	.00	202.75	2733.00
257200.000	3780.00	911.24	1.17	1.97	.00	228.28	2733.00
216.010	2730.00	913.33	.00	3.25	.00	173.08	3025.00
216.010	3780.00	914.44	1.12	3.20	.00	185.63	3025.00
263250.000	2730.00	916.74	.00	3.41	.00	151.35	3025.00
263250.000	3780.00	917.93	1.19	3.49	.00	163.21	3025.00
265423.000	2730.00	918.79	.00	2.05	.00	157.31	2173.00
265423.000	3780.00	920.04	1.25	2.11	.00	169.83	2173.00
265633.000	2730.00	918.97	.00	.18	.00	51.00	210.00
265633.000	3780.00	920.25	1.28	.20	.00	51.00	210.00
265636.000	2730.00	918.97	.00	.00	.00	51.00	3.00
* 265636.000	3780.00	920.25	1.28	.01	.00	51.00	3.00
265664.000	2730.00	919.01	.00	.03	.00	51.00	28.00
265664.000	3780.00	920.35	1.34	.10	.00	51.00	28.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH

265667.000	2730.00	919.01	.00	.01	.00	51.00	3.00
* 265667.000	3780.00	920.63	1.62	.28	.00	51.00	3.00
* 265797.000	2730.00	919.77	.00	.76	.00	314.48	130.00
* 265797.000	3780.00	921.68	1.91	1.05	.00	455.84	130.00
* 266247.000	2730.00	919.86	.00	.09	.00	1162.28	450.00
* 266247.000	3780.00	921.76	1.90	.08	.00	1237.83	450.00
* 223.010	2730.00	920.01	.00	.15	.00	1213.69	2285.00
223.010	3780.00	921.84	1.83	.08	.00	1214.52	2285.00
344.010	2730.00	920.17	.00	.15	.00	1463.35	1267.50
344.010	3780.00	921.90	1.74	.06	.00	1464.14	1267.50
271067.000	2730.00	920.35	.00	.18	.00	1743.03	1267.50
271067.000	3780.00	921.97	1.63	.07	.00	1814.83	1267.50
271167.000	2730.00	920.37	.00	.02	.00	1740.81	100.00
271167.000	3780.00	921.98	1.61	.01	.00	1812.12	100.00
271267.000	2730.00	920.39	.00	.02	.00	1738.83	100.00
271267.000	3780.00	921.99	1.60	.01	.00	1809.38	100.00
271370.000	2730.00	920.42	.00	.03	.00	1737.76	103.00
271370.000	3780.00	922.00	1.58	.01	.00	1807.11	103.00
271380.000	2730.00	920.42	.00	.00	.00	1735.68	10.00
271380.000	3780.00	922.00	1.58	.00	.00	1804.66	10.00
271390.000	2730.00	920.42	.00	.00	.00	1732.87	10.00
271390.000	3780.00	922.00	1.57	.00	.00	1801.76	10.00
271395.000	2730.00	920.42	.00	.00	.00	1731.67	5.00
271395.000	3780.00	922.00	1.57	.00	.00	1800.53	5.00
* 271400.000	2730.00	920.39	.00	-.04	.00	1740.00	5.00
* 271400.000	3780.00	921.99	1.61	.00	.00	1740.00	5.00
* 271434.000	2730.00	922.45	.00	2.07	.00	2306.52	34.00
271434.000	3780.00	923.06	.61	1.07	.00	2330.06	34.00
* 271439.000	2730.00	922.55	.00	.09	.00	2197.63	5.00
* 271439.000	3780.00	923.13	.58	.07	.00	2253.01	5.00
271444.000	2730.00	922.55	.00	.00	.00	2201.58	5.00
271444.000	3780.00	923.13	.58	.00	.00	2257.23	5.00
271659.000	2730.00	922.55	.00	.00	.00	2191.36	215.00
271659.000	3780.00	923.13	.58	.00	.00	2247.11	215.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
* 274443.000	2730.00	922.57	.00	.02	.00	462.96	2784.00
* 274443.000	3780.00	923.17	.60	.04	.00	491.31	2784.00
* 277640.000	2730.00	925.06	.00	2.48	.00	1003.84	3197.00
* 277640.000	3780.00	925.74	.68	2.57	.00	1113.83	3197.00
280940.000	2730.00	927.24	.00	2.18	.00	234.30	3300.00
280940.000	3780.00	928.02	.78	2.28	.00	249.81	3300.00
303.010	2730.00	928.04	.00	.80	.00	314.72	1220.00
303.010	3780.00	928.96	.91	.94	.00	347.83	1220.00
286.010	2730.00	928.63	.00	.59	.00	460.74	1215.00
286.010	3780.00	929.62	.98	.66	.00	510.76	1215.00
304.010	2730.00	929.06	.00	.43	.00	648.46	1220.00
304.010	3780.00	930.06	1.00	.45	.00	745.78	1220.00
285810.000	2730.00	929.33	.00	.27	.00	940.49	1215.00
285810.000	3780.00	930.33	1.00	.27	.00	1000.00	1215.00
* 305.010	2730.00	929.51	.00	.18	.00	687.20	940.00
* 305.010	3780.00	930.50	.99	.17	.00	771.52	940.00

*	287.010	2730.00	929.99	.00	.48	.00	470.88	930.00
*	287.010	3780.00	930.92	.93	.42	.00	555.92	930.00
	354.010	2730.00	930.93	.00	.94	.00	293.62	940.00
	354.010	3780.00	931.80	.87	.89	.00	362.71	940.00
	233.010	2730.00	932.01	.00	1.08	.00	234.50	940.00
	233.010	3780.00	932.94	.93	1.14	.00	258.22	940.00
	288.010	2730.00	934.11	.00	2.10	.00	219.18	1885.00
	288.010	3780.00	935.21	1.10	2.27	.00	230.79	1885.00
	293340.000	2730.00	936.03	.00	1.91	.00	209.98	1895.00
	293340.000	3780.00	937.22	1.19	2.01	.00	219.65	1895.00
	295627.000	2730.00	938.18	.00	2.16	.00	210.45	2287.00
	295627.000	3780.00	939.45	1.26	2.23	.00	220.69	2287.00
*	295947.000	2730.00	938.61	.00	.43	.00	50.00	320.00
*	295947.000	3780.00	939.93	1.31	.48	.00	50.00	320.00
*	295967.000	2730.00	938.68	.00	.06	.00	40.00	20.00
*	295967.000	3780.00	940.00	1.33	.08	.00	40.00	20.00
	295968.000	2730.00	938.68	.00	.01	.00	40.00	1.00
	295968.000	3780.00	940.01	1.33	.01	.00	40.00	1.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	296055.000	2730.00	939.29	.00	.61	.00	40.00	87.00
	296055.000	3780.00	940.93	1.64	.92	.00	40.00	87.00
	296056.000	2730.00	939.69	.00	.41	.00	42.00	1.00
	296056.000	3780.00	941.67	1.98	.74	.00	42.00	1.00
*	296071.000	2730.00	940.37	.00	.68	.00	72.00	15.00
*	296071.000	3780.00	942.58	2.20	.91	.00	72.00	15.00
*	296148.000	2730.00	940.71	.00	.34	.00	227.20	77.00
*	296148.000	3780.00	943.05	2.34	.48	.00	246.18	77.00
	298190.000	2730.00	941.36	.00	.65	.00	588.32	2042.00
*	298190.000	3780.00	943.52	2.16	.47	.00	779.96	2042.00
	298500.000	2730.00	941.43	.00	.07	.00	570.61	310.00
	298500.000	3780.00	943.56	2.14	.04	.00	759.78	310.00

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 9576.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35320.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35341.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35466.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 47546.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 47546.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 47603.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 47603.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 47616.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 47656.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 47656.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

```
WARNING SECNO=     48.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     52.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  76432.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  76432.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77032.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77382.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77419.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77419.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77485.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77485.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77546.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77546.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77596.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77596.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  77746.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  77746.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  82639.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  82639.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   29DEC93      14:50:16                                                                                    PAGE  349


WARNING SECNO=  83339.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  83887.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  83887.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  85275.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  85275.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  88600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  88600.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  91350.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  91350.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  93489.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  93489.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  94800.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  94800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  95200.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95865.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95909.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  95909.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95910.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  95931.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  95931.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  96445.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  97050.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  97050.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  97900.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  97900.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98575.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  98575.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98961.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=  98961.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  98962.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   29DEC93      14:50:16                                                                                    PAGE  350


WARNING SECNO=  98982.00D  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  99150.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  99150.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 100735.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 100935.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 100935.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 101067.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 101067.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 101800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 102350.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 111800.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 111800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    135.020  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    135.020  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 132771.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 133591.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 147223.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 147223.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 147807.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 147807.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 152800.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 154799.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO= 154799.0D0  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO= 154799.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 154800.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO= 154800.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO= 154812.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 154812.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 154814.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 154814.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    164.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    164.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   29DEC93      14:50:16                                                                                    PAGE  351


WARNING SECNO= 166154.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 166154.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    170.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    170.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    154.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    154.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 172630.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 172632.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 172632.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 172670.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 172670.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=    220.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    220.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 180580.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 180580.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 181960.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 181960.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 182001.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 182003.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 182003.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 182101.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 182101.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIOE ACCEPTABLE RANGE

WARNING SECNO= 183600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 183600.0D0  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 187720.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 187781.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 187831.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 188061.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 194826.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 194976.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 194976.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 194977.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
```



```
WARNING SECNO= 195024.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 195040.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 195170.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 195924.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 202936.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 202936.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203176.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203176.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203181.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203181.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203224.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203224.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203274.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203274.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 203464.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 203464.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    184.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    184.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 216085.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 217537.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 218792.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 218792.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 221353.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 221353.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 221383.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 221383.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
NOTE    SECNO= 237300.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO= 237300.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
NOTE    SECNO= 237300.000  PROFILE=  2  WSEL BASED ON X5 CARD
WARNING SECNO= 237300.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 244550.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 244550.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 249051.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   29DEC93      14:50:16                                                                                    PAGE  353

WARNING SECNO= 249051.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 249336.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 249336.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 249364.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 249364.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251253.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251253.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251478.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251478.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251525.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251525.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251537.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 251697.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 251697.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    268.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    215.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    215.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 265636.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 265667.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 265797.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 265797.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 266247.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 266247.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    223.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 271400.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 271400.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 271434.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 271439.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 271439.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 274443.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 274443.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 277640.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   29DEC93      14:50:16                                                                                    PAGE  354

WARNING SECNO= 277640.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    305.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    305.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    287.010  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    287.010  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 295947.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 295947.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO= 295967.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 295967.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 296071.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 296071.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 296148.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 296148.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 298190.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
181982.000	49.	359.	12.6	834.2	834.2	.0
181983.000	49.	374.	12.1	834.6	834.3	.3
182000.000	49.	393.	11.5	835.0	834.9	.1
182001.000	51.	402.	11.3	835.0	835.1	-.1
182003.000	54.	662.	6.8	837.0	837.0	.0
182007.000	62.	841.	5.4	837.4	837.4	.0
182012.000	71.	1054.	4.3	837.7	837.7	.0
182101.000	250.	4664.	1.0	838.1	838.1	.0
182231.000	375.	6220.	.7	838.1	838.1	.0
183400.000	375.	5586.	.8	838.1	838.1	.0
183600.000	325.	1068.	4.2	838.0	838.0	.0
184862.000	325.	1354.	3.3	839.4	839.3	.1
186125.000	355.	1542.	2.9	840.2	840.1	.1
186790.000	355.	1460.	3.1	840.6	840.5	.1
187092.000	329.	1360.	3.3	840.9	840.8	.1
187394.000	238.	1193.	3.8	841.2	841.1	.1
187494.000	188.	1051.	4.3	841.3	841.2	.1
187719.000	75.	634.	7.1	841.6	841.5	.1
187720.000	75.	604.	7.5	841.6	841.5	.1
187780.000	75.	616.	7.4	841.8	841.7	.1
187781.000	77.	675.	6.7	842.0	841.9	.1
187831.000	177.	1226.	3.7	842.6	842.5	.1
187881.000	272.	1521.	3.0	842.7	842.7	.0
188061.000	480.	2494.	1.8	843.0	843.0	.0
191400.000	490.	2490.	1.8	844.1	844.0	.1
192728.000	470.	2124.	2.1	844.7	844.6	.1
193956.000	460.	1918.	2.4	845.4	845.3	.1
194826.000	152.	979.	4.6	846.2	846.1	.1
194876.000	127.	866.	5.2	846.3	846.2	.1
194972.000	80.	651.	7.0	846.5	846.4	.1
194976.000	78.	502.	9.0	846.5	846.4	.1
194977.000	78.	487.	9.3	846.5	846.4	.1
195023.000	78.	525.	8.6	846.9	846.9	.0
195024.000	80.	564.	8.0	847.1	847.1	.0
195040.000	112.	789.	5.7	847.7	847.7	.0
195090.000	204.	1196.	3.8	848.2	848.2	.0
195170.000	225.	1327.	3.4	848.4	848.6	-.2
195350.000	224.	1318.	3.4	848.5	848.6	-.1
195724.000	277.	1636.	2.8	848.9	848.8	.1
195924.000	323.	1444.	3.1	849.0	848.9	.1
195925.000	306.	931.	4.9	849.0	848.9	.1
195974.000	311.	981.	4.6	849.1	849.0	.1

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
195975.000	319.	1459.	3.1	849.1	849.0	.1
196015.000	347.	1848.	2.5	849.2	849.1	.1
196065.000	397.	2066.	2.2	849.3	849.2	.1
196272.000	430.	2216.	2.0	849.5	849.4	.1
197250.000	430.	1977.	2.3	850.1	850.0	.1
178.010	440.	1747.	2.6	852.4	852.3	.1
202235.000	465.	2077.	2.2	854.0	853.9	.1
202936.000	196.	902.	3.5	854.5	854.4	.1
203036.000	109.	715.	4.5	854.6	854.5	.1
203176.000	65.	473.	6.8	854.8	854.7	.1
203181.000	65.	474.	6.7	854.8	854.7	.1
203219.000	65.	478.	6.7	854.9	854.9	.0
203224.000	67.	482.	6.6	854.8	855.2	-.4
203274.000	171.	891.	3.6	855.6	855.9	-.3
203464.000	505.	2561.	1.2	855.9	856.2	-.3
277.010	510.	1846.	1.7	856.4	856.5	-.1
184.010	470.	1785.	1.8	857.2	857.1	.1
210350.000	501.	1862.	1.7	859.6	859.5	.1

185.010	543.	1493.	2.1	861.9	861.8	.1
215877.000	436.	1282.	2.5	864.9	864.8	.1
216054.000	399.	1321.	2.4	865.1	865.0	.1
216085.000	399.	1733.	1.8	866.1	866.1	.0
216135.000	550.	2890.	1.1	866.3	866.2	.1
216185.000	468.	2042.	1.6	866.3	866.2	.1
216277.000	682.	2350.	1.4	866.4	866.3	.1
217062.000	570.	2894.	1.1	866.8	866.7	.1
217537.000	420.	1817.	1.8	866.9	866.8	.1
218237.000	662.	3006.	1.1	867.4	867.3	.1
218792.000	600.	1726.	1.9	867.6	867.5	.1
219172.000	600.	1803.	1.8	868.2	868.1	.1
219722.000	400.	1716.	1.9	868.8	868.7	.1
220247.000	454.	1660.	1.9	869.4	869.3	.1
220447.000	345.	1465.	2.2	869.6	869.5	.1
220942.000	378.	1552.	2.1	870.0	869.9	.1
221102.000	300.	1358.	2.4	870.2	870.1	.1
221302.000	50.	451.	7.1	870.5	870.4	.1
221310.000	50.	452.	7.1	870.5	870.4	.1
221340.000	50.	454.	7.0	870.6	870.5	.1
221348.000	50.	455.	7.0	870.6	870.5	.1
211353.000	60.	655.	4.9	871.2	871.1	.1
221383.000	117.	1038.	3.1	871.5	871.4	.1
222533.000	119.	1081.	3.0	871.7	871.7	.0

1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
237300.000	619.	5282.	.6	899.1	899.0	.1
241300.000	619.	5303.	.6	899.1	899.0	.1
244550.000	270.	1554.	2.1	899.2	899.1	.1
267.010	240.	1309.	2.4	899.3	899.2	.1
256.010	220.	1102.	2.9	899.5	899.4	.1
268.010	215.	956.	3.3	899.9	899.8	.1
247600.000	146.	785.	4.1	900.4	900.4	.0
301.010	243.	1359.	2.4	901.2	901.1	.1
248716.000	292.	2175.	1.5	901.6	901.5	.1
249051.000	121.	904.	3.5	901.8	901.7	.1
249286.000	70.	553.	5.8	902.0	901.9	.1
249336.000	44.	407.	7.9	902.1	902.0	.1
249364.000	319.	2602.	1.2	904.3	904.2	.1
249394.000	234.	2095.	1.3	904.2	904.2	.0
249444.000	284.	2519.	1.1	904.3	904.2	.1
249617.000	317.	2615.	1.0	904.3	904.3	.0
250140.000	315.	2484.	1.1	904.5	904.4	.1
250958.000	290.	1831.	1.5	904.6	904.5	.1
251253.000	115.	698.	3.9	904.7	904.6	.1
251328.000	97.	599.	4.6	904.8	904.7	.1
251433.000	69.	465.	5.9	904.9	904.8	.1
251478.000	46.	325.	8.4	905.0	904.9	.1
251486.000	46.	327.	8.4	905.1	905.0	.1
251514.000	46.	333.	8.2	905.2	905.1	.1
251522.000	46.	334.	8.2	905.3	905.2	.1
251525.000	52.	468.	5.8	906.1	906.0	.1
251537.000	76.	607.	4.5	906.2	906.2	.0
251697.000	275.	2142.	1.3	906.8	906.8	.0
268.010	275.	1502.	1.8	907.1	907.0	.1
215.010	275.	937.	2.9	907.7	907.6	.1
257200.000	140.	671.	4.1	910.2	910.1	.1
216.010	150.	698.	3.9	913.4	913.3	.1
263250.000	132.	660.	4.1	916.7	916.7	.0
265423.000	136.	741.	3.7	918.8	918.8	.0
265633.000	51.	480.	5.7	919.0	919.0	.0
265636.000	51.	479.	5.7	919.0	919.0	.0
265664.000	51.	481.	5.7	919.0	919.0	.0
265667.000	51.	479.	5.7	919.0	919.0	.0
265797.000	274.	1801.	1.5	919.8	919.8	.0
266247.000	664.	3738.	.7	920.0	919.9	.1
223.010	664.	2875.	.9	920.1	920.0	.1
344.010	953.	3271.	.8	920.3	920.2	.1

FLOODWAY DATA, 100-YEAR DISCHARGE
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
271067.000	1013.	2991.	.9	920.4	920.3	.1
271167.000	1013.	2942.	.9	920.5	920.4	.1
271267.000	873.	2606.	1.0	920.5	920.4	.1
271370.000	773.	2357.	1.2	920.5	920.4	.1
271380.000	770.	2355.	1.2	920.5	920.4	.1
271390.000	768.	2342.	1.2	920.5	920.4	.1
271395.000	767.	2337.	1.2	920.5	920.4	.1
271400.000	760.	1633.	1.7	920.5	920.4	.1
271434.000	760.	1286.	2.1	922.2	922.5	-.3
271439.000	780.	4059.	.7	922.5	922.5	.0
271444.000	794.	4124.	.7	922.5	922.5	.0
271659.000	1352.	6666.	.4	922.6	922.6	.0
274443.000	460.	1327.	2.1	922.7	922.6	.1
277640.000	644.	1839.	1.5	925.2	925.1	.1
280940.000	234.	1008.	2.7	927.3	927.2	.1
303.010	250.	1214.	2.2	928.1	928.0	.1
286.010	375.	1640.	1.7	928.7	928.6	.1
304.010	644.	2266.	1.2	929.2	929.1	.1
285810.000	569.	2763.	1.0	929.4	929.3	.1
305.010	550.	1930.	1.4	929.6	929.5	.1
287.010	306.	1117.	2.4	930.1	930.0	.1
354.010	221.	892.	3.1	931.0	930.9	.1
233.010	190.	834.	3.3	932.1	932.0	.1
288.010	220.	910.	3.0	934.2	934.1	.1
293340.000	210.	890.	3.1	936.0	936.0	.0
295627.000	210.	899.	3.0	938.2	938.2	.0
295947.000	50.	452.	6.0	938.6	938.6	.0
295967.000	40.	342.	8.0	938.7	938.7	.0
295968.000	40.	343.	8.0	938.7	938.7	.0
296055.000	40.	356.	7.7	939.0	939.3	-.3
296056.000	42.	375.	7.3	939.2	939.7	-.5
296071.000	72.	639.	4.3	940.0	940.4	-.4
296148.000	214.	1250.	2.2	940.3	940.7	-.4
298190.000	250.	1385.	2.0	941.2	941.4	-.2
298500.000	250.	1352.	2.0	941.3	941.4	-.1

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100-yr run

00BREAK00

THIS RUN EXECUTED 08/24/89 13:57:49

```
*****************************************
 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
*****************************************
```

```
C
T1      DEERFIELD TWP FLOODPLAIN INFORMATION
T2      INFO FROM FILE NO. 89-8-46   STARTING WSEL FROM UNION FPI
T3      CHIPPEWA RIVER          NATURAL PROFILE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0.       2.       0.       0.  .000000      .00       .0    5020.  777.590     .000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

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


NC      .040     .060     .045     .300     .500     .000     .000     .000     .000     .000
ET      .000    5.100     .000     .000     .000  260.000     .000     .000     .000     .000
X1  22880.000   10.000   90.000  170.000     .000     .000     .000     .000     .000     .000
GR   786.500     .000  773.800   60.000  773.000   90.000  769.000   92.000  768.200  130.000
GR   769.000  168.000  773.800  170.000  778.300  260.000  777.200  310.000  779.800  390.000

NC      .040     .060     .040     .300     .500     .000     .000     .000     .000     .000
                DS FACE OF MERIDIAN ROAD
X1      .000   13.000  222.000  295.000  100.000  100.000  100.000     .000     .000     .000
X3    10.000     .000     .000     .000     .000     .000     .000  780.700  780.700     .000
GR   786.100     .000  782.900  100.000  781.000  200.000  773.000  213.000  769.200  222.000
GR   769.300  247.000  770.000  270.000  771.000  295.000  774.000  304.000  780.400  325.000
GR   780.700  425.000  780.900  525.000  781.200  625.000     .000     .000     .000     .000

SB     1.250    1.560    2.500     .000   73.000    4.000  730.000     .000  769.300  769.300
                US FACE OF MERIDIAN ROAD
X1      .250     .000     .000     .000   25.000   25.000   25.000     .000     .000     .000
X2      .000     .000    1.000  778.900  780.700     .000     .000     .000     .000     .000
X3    10.000     .000     .000     .000     .000     .000     .000  780.700  780.700     .000
BT    -6.000  200.000  781.000     .000  222.000  780.700     .000  395.000  780.700     .000
BT      .000  425.000  780.700     .000  525.000  780.900     .000  625.000  781.200     .000

NC      .070     .070     .035     .000     .000     .000     .000     .000     .000     .000
ET      .000     .000     .000    1.400     .000     .000     .000     .000     .000     .000
                XSEC CC    50 FT US OF MERIDIAN RD
X1      .750   10.000  220.000  300.000   50.000   50.000   50.000     .000     .000     .000
X3      .000     .000     .000  170.000     .000  340.000     .000     .000     .000     .000
GR   779.800     .000  779.000  175.000  774.600  205.000  773.800  220.000  769.300  222.000
GR   769.200  260.000  769.300  298.000  773.000  300.000  773.800  330.000  786.500  390.000
```



```
NC      .070     .070     .035     .100     .300     .000     .000     .000     .000     .000
```

```
                XSEC 6
X1      5.750    13.000   462.000   549.000   500.000   500.000   500.000      .000      .000      .000
GR    780.200      .000   780.000   380.000   774.900   390.000   774.100   462.000   773.600   488.000
GR    773.400   498.000   770.800   500.000   769.600   512.000   769.400   535.000   771.600   548.000
GR    774.000   549.000   774.500   554.000   791.100   570.000      .000      .000      .000      .000

NC       .070      .090      .035      .000      .000      .000      .000      .000      .000      .000
                MANUFACTURED XSEC
X1     10.250    19.000   280.000   367.000   300.000   450.000   450.000      .000      .000      .000
GR    781.200      .000   780.000   110.000   775.900   208.000   775.100   280.000   774.600   306.000
GR    774.400   316.000   771.800   318.000   770.600   330.000   770.400   353.000   772.600   366.000
GR    775.000   367.000   775.500   372.000   775.900   393.000   776.000   500.000   778.000   530.000
GR    779.000   550.000   780.000   600.000   781.500   650.000   783.000   700.000      .000      .000

NC       .080      .100      .035      .000      .000      .000      .000      .000      .000      .000
                XSEC DD
X1     14.750    19.000   147.000   257.000   600.000   300.000   450.000      .000      .000      .000
GR    793.120      .000   793.000    57.000   779.490    65.000   776.490   110.000   774.790   147.000
GR    772.900   152.000   771.700   177.000   772.800   224.000   774.900   257.000   777.930   297.000
GR    778.430   374.000   777.530   447.000   776.430   493.000   778.730   518.000   779.000   700.000
GR    780.000   765.000   780.500   865.000   782.000   915.000   784.000   940.000      .000      .000

NC       .080      .110      .035      .000      .000      .000      .000      .000      .000      .000
X1     18.750    14.000   247.000   357.000   500.000   250.000   400.000      .000      .000      .000
GR    793.000      .000   780.100    57.000   778.000    65.000   775.000   247.000   773.000   252.000
GR    771.900   277.000   773.000   324.000   775.100   357.000   778.100   397.000   778.600   474.000
GR    779.100   547.000   780.100   593.000   780.600   618.000   782.000   700.000      .000      .000

NC       .050      .050      .035      .000      .000      .000      .000      .000      .000      .000
                XSEC 5
X1     22.750    21.000   130.000   205.000   200.000   500.000   400.000      .000      .000      .000
GR    790.900      .000   780.700    17.000   777.900    31.000   777.800    49.000   778.100    67.000
GR    777.700   130.000   774.600   150.000   774.100   157.000   773.000   169.000   772.000   201.000
GR    774.500   205.000   776.500   205.000   777.000   212.000   777.400   259.000   777.400   289.000
GR    777.400   312.000   780.900   324.000   780.900   449.000   781.300   459.000   781.800   619.000
GR    782.900   649.000      .000      .000      .000      .000      .000      .000      .000      .000

                XSEC 3 FROM FILE NO. 160 32D.1
X1     30.950    16.000   104.000   184.100   800.000   750.000   820.000      .000      .000      .000
X3       .000      .000      .000      .000      .000   197.000   782.700      .000      .000      .000
GR    790.400      .000   789.400    14.000   780.000    30.000   777.400    58.000   778.400   104.000
GR    777.300   107.000   775.100   110.000   774.000   133.000   774.300   146.000   775.400   159.000
GR    776.500   184.000   777.900   184.100   782.700   197.000   781.900   280.000   781.600   362.000
GR    794.000   380.000      .000      .000      .000      .000      .000      .000      .000      .000

                XSEC 1 FROM FILE NO. 160 32D.1
X1     41.150    20.000   282.000   389.000  1100.000  1000.000  1020.000      .000      .000      .000
X3       .000      .000      .000   225.000   785.600      .000      .000      .000      .000      .000
GR    784.700      .000   784.300    26.000   783.700    76.000   782.900   127.000   783.900   177.000
GR    785.600   225.000   786.400   246.000   783.100   275.000   781.800   282.000   779.300   286.000
GR    776.200   292.000   775.000   297.000   776.200   337.000   778.100   361.000   779.400   383.000
GR    782.000   389.000   783.400   409.000   783.400   449.000   784.800   496.000   788.600   551.000
1
 08/24/89    13:57:49                                                                          PAGE    3


                XSEC 41.15 REPEATED INVERT ADJ
X1     47.150      .000      .000      .000   600.000   600.000   600.000      .000      .600      .000
X3       .000      .000      .000   225.000   786.000      .000      .000      .000      .000      .000

NC       .080      .080      .040      .000      .000      .000      .000      .000      .000      .000
                CHANNEL XSEC FROM 41.15 W INVERT ADJ  OB FROM QUAD
X1     61.150     8.000   100.000   197.000  1100.000  1300.000  1400.000      .000      .000      .000
GR    790.000      .000   781.300   100.000   778.200   106.000   777.000   111.000   778.200   151.000
GR    780.100   175.000   781.400   197.000   790.000   282.000      .000      .000      .000      .000
```

```
X1     71.150      8.000    100.000    197.000   1000.000    900.000   1000.000       .000       .000       .000
GR    790.000       .000    782.300    100.000    779.200    106.000    778.000    111.000    779.200    151.000
GR    781.100    175.000    782.400    197.000    790.000    557.000       .000       .000       .000       .000

X1     91.150      8.000    100.000    197.000   1850.000   1600.000   2000.000       .000       .000       .000
GR    790.000     50.000    784.900    100.000    781.800    106.000    780.600    111.000    781.800    151.000
GR    783.700    175.000    785.000    197.000    790.000    497.000       .000       .000       .000       .000

X1    107.150      9.000    420.000    517.000   1200.000   1500.000   1600.000       .000       .000       .000
GR    800.000       .000    790.000    280.000    786.900    420.000    783.800    426.000    782.600    431.000
GR    783.800    471.000    785.700    495.000    787.000    517.000    790.000    600.000    800.000   1090.000

X1    119.150     10.000    395.000    494.000    980.000   1200.000   1200.000       .000       .000       .000
GR    800.000       .000    790.000    200.000    787.100    395.000    785.300    401.000    784.100    406.000
GR    785.300    446.000    787.200    472.000    788.500    494.000    790.000    590.000    800.000   1390.000

X1    136.150      9.000    400.000    520.000   1600.000   1100.000   1700.000       .000       .000       .000
GR    800.000       .000    790.000    350.000    790.000    400.000    787.500    406.000    786.300    411.000
GR    787.500    451.000    789.400    477.000    790.000    520.000    800.000    600.000       .000       .000

X1    154.150      9.000    370.000    447.000   1600.000   1700.000   1800.000       .000       .000       .000
GR    800.000       .000    790.000    350.000    790.000    370.000    788.100    376.000    786.900    381.000
GR    788.100    421.000    790.000    447.000    790.000    490.000    800.000    600.000       .000       .000
EJ       .000       .000       .000       .000       .000       .000       .000       .000       .000       .000
1
 08/24/89    13:57:49                                                                                    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    CGRAR    TOPWID     ENDST


*PROF 1

CCHV=    .300 CEHV=    .500
*SECND 22880.000
 22880.00     9.39   777.59      .00      .00   778.14      .55      .00      .00   773.00
    5020.     642.    4378.       0.     160.     709.       0.       0.       0.   773.80
      .00     4.02     6.18     2.94     .040     .045     .060     .000   768.20    42.09
  .002091       0.       0.       0.        0        0        0      .00   127.91   170.00
0
CCHV=    .300 CEHV=    .500
*SECND  .000

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=     780.70 ELREA=     780.70

                DS FACE OF MERIDIAN ROAD
      .00     8.32   777.52      .00      .00   778.76     1.23      .27      .34   769.20
    5020.       0.    5020.       0.       0.     564.       0.       2.       0.   771.00
      .00      .00     8.91      .00     .040     .040     .060     .000   769.20   222.00
  .003770     100.     100.     100.        2        0        0      .00    73.00   295.00
0

SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.56      2.50       .00    73.00      4.00    730.00       .00    769.30    769.30

*SECND  .250
CLASS 6 LOW FLOW
```

3420 BRIDGE W.S.= 777.33 BRIDGE VELOCITY=, 9.06 CALCULATED CHANNEL AREA=, 554.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD
778.67	779.01	.36	0.	5020.	730.	662.	778.90	780.70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA= 780.70 ELREA= 780.70

US FACE OF MERIDIAN ROAD

1

08/24/89 13:57:49 PAGE 5

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
.25	8.69	777.89	.00	.00	779.01	1.12	.26	.00	769.20
5020.	0.	5020.	0.	0.	590.	0.	2.	0.	771.00
.00	.00	8.51	.00	.000	.040	.000	.000	769.20	222.00
.003235	25.	25.	25.	0	0	0	.00	73.00	295.00

0

*SECNO .750

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 170.0 340.0 TYPE= 1 TARGET= 170.000

XSEC CC 50 FT US OF MERIDIAN RD

.75	9.62	778.82	.00	.00	779.29	.47	.08	.20	773.80
5020.	198.	4425.	397.	130.	757.	202.	3.	0.	773.00
.01	1.52	5.85	1.97	.070	.035	.070	.000	769.20	176.26
.001029	50.	50.	50.	3	0	0	.00	163.74	340.00

0

CCHV= .100 CEHV= .300

*SECNO 5.750

XSEC 6

5.75	10.00	779.40	.00	.00	779.89	.48	.59	.00	774.10
5020.	829.	4117.	74.	373.	679.	37.	15.	2.	774.00
.03	2.22	6.07	1.97	.070	.035	.070	.000	769.40	381.17
.001384	500.	500.	500.	2	0	0	.00	177.55	558.73

0

*SECNO 10.250

MANUFACTURED XSEC

10.25	9.74	780.14	.00	.00	780.40	.26	.49	.02	775.10
5020.	855.	3260.	905.	549.	655.	725.	29.	5.	775.00
.06	1.56	4.97	1.25	.070	.035	.090	.000	770.40	97.37
.000974	300.	450.	450.	2	0	0	.00	507.22	604.59

0

*SECNO 14.750

XSEC DD

14.75	8.83	780.53	.00	.00	780.77	.24	.37	.00	774.79
5020.	369.	3795.	856.	296.	849.	1169.	50.	11.	774.90
.10	1.25	4.47	.73	.080	.035	.100	.000	771.70	64.38
.000730	600.	450.	300.	2	0	0	.00	801.72	866.10

0

1

08/24/89 13:57:49 PAGE 6

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


 *SECNO 18.750
     18.75     8.94   780.84      .00      .00   781.04      .21      .27      .00   775.00
     5020.     998.    3647.     375.     805.     862.     577.      69.      16.   775.10
       .13     1.24     4.23      .65     .080     .035     .110     .000   771.90    53.74
   .000642     500.     400.     250.        2        0        0      .00   578.13   631.87
0
 *SECNO 22.750
                XSEC 5
     22.75     9.08   781.08      .00      .00   781.43      .35      .34      .04   777.70
     5020.     788.    3091.    1141.     341.     543.     456.      84.      21.   776.50
       .15     2.31     5.70     2.50     .050     .035     .050     .000   772.00    16.35
   .001356     200.     400.     500.        0        0        0      .00   437.35   453.71
0
 *SECNO 30.950

 3470 ENCROACHMENT STATIONS=        .0     197.0  TYPE=     1  TARGET=     196.999
                XSEC 3 FROM FILE NO. 160 32D.1
     30.95     8.22   782.22      .00      .00   782.85      .63     1.34      .09   778.40
     5020.    1025.    3941.      54.     302.     566.      25.     104.      26.   777.90
       .19     3.40     6.97     2.16     .050     .035     .050     .000   774.00    26.22
   .002064     800.     820.     750.        2        0        0      .00   169.49   195.71
0
 *SECNO 41.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    785.60  ELENCR= 100000.00
                XSEC 1 FROM FILE NO. 160 32D.1
     41.15     9.20   784.20      .00      .00   784.84      .65     1.99      .01   781.80
     5020.      27.    4902.      91.      18.     750.      72.     125.      31.   782.00
       .24     1.52     6.54     1.26     .050     .035     .050     .000   775.00   265.37
   .001817    1100.    1020.    1000.        2        0        0      .00   210.35   475.72
0
 *SECNO 47.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    786.00  ELENCR= 100000.00
              XSEC 41.15 REPEATED INVERT ADJ
     47.15     9.67   785.27      .00      .00   785.81      .54      .96      .01   782.40
     5020.      40.    4822.     158.      26.     801.     117.     137.      34.   782.60
       .26     1.50     6.02     1.35     .050     .035     .050     .000   775.60   261.19
   .001413     600.     600.     600.        2        0        0      .00   230.48   491.67
0
1
  08/24/89    13:57:49                                                                PAGE    7


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 61.150
              CHANNEL XSEC FROM 41.15 W INVERT ADJ  OB FROM QUAD
     61.15    10.27   787.27      .00      .00   787.69      .42     1.86      .01   781.30
     5020.     282.    4480.     259.     205.     819.     190.     171.      41.   781.40
       .34     1.37     5.47     1.36     .080     .040     .080     .000   777.00    31.37
   .001280    1100.    1400.    1300.        2        0        0      .00   230.48   261.85
0
 *SECNO 71.150
     71.15    10.48   788.48      .00      .00   788.71      .24     1.01      .02   783.30
```

```
     5020.     281.    3757.     982.     248.     839.     874.     206.      48.    782.40
       .42     1.13     4.48     1.12     .080     .040     .080     .000   778.00     19.80
   .000831    1000.    1000.     900.        2        0        0      .00   465.00    484.79
0
 *SECNO 91.150
 3280 CROSS SECTION     91.15 EXTENDED       .30 FEET

     91.15     9.70   790.30      .00      .00   790.59      .29     1.86      .02    784.90
     5020.     179.    3788.    1053.     142.     763.     840.     282.      66.    785.00
       .55     1.26     4.96     1.25     .080     .040     .080     .000   780.60     50.00
   .001157    1850.    2000.    1600.        2        0        0      .00   447.00    497.00
0
 *SECNO 107.150
 3280 CROSS SECTION    107.15 EXTENDED      2.12 FEET

    107.15     9.53   792.13      .00      .00   792.42      .30     1.83      .00    786.90
     5020.     834.    3735.     451.     577.     746.     301.     340.      80.    787.00
       .65     1.44     5.01     1.50     .080     .040     .080     .000   782.60    220.55
   .001212    1200.    1600.    1500.        2        0        0      .00   379.45    600.00
0
 *SECNO 119.150
    119.15     9.26   793.36      .00      .00   793.49      .13     1.05      .02    787.10
     5020.    1407.    2793.     820.    1051.     739.     846.     394.      94.    788.50
       .77     1.34     3.78      .97     .080     .040     .080     .000   784.10    132.81
   .000716     980.    1200.    1200.        2        0        0      .00   725.93    858.74
0
 *SECNO 136.150
    136.15     8.55   794.85      .00      .00   795.15      .30     1.61      .05    790.00
     5020.    1025.    3875.     120.     654.     782.      94.     467.     112.    790.00
       .88     1.57     4.95     1.28     .080     .040     .080     .000   786.30    180.23
   .001472    1600.    1700.    1100.        2        0        0      .00   378.58    558.80
0
1
  08/24/89    13:57:49                                                                  PAGE    8


    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


 *SECNO 154.150
    154.15     9.92   796.82      .00      .00   797.01      .19     1.84      .01    790.00
     5020.    1223.    2942.     855.     950.     668.     549.     539.     128.    790.00
      1.03     1.29     4.40     1.56     .080     .040     .080     .000   786.90    111.32
   .000795    1600.    1800.    1700.        2        0        0      .00   453.70    565.01
0
1
  08/24/89    13:57:49                                                                  PAGE    9



                                                                  THIS RUN EXECUTED 08/24/89   13:58:06
 ************************************************
   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
 ************************************************


 T1       FLOODWAY DETERMINATION
 T2       METHOD 4 ENCROACHMENT   .1 FOOT RISE, ENCR. AT MERIDIAN RD. BRIDGE
 T3       METHOD 4   .1 TARGET
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	4.	0.	0.	.000000	.00	.0	5020.	777.690	.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	.000	.000	.000	.000	.000	.000	.000	.000	.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=    .300 CEHV=    .500
#SECNO 22880.000

3265 DIVIDED FLOW

 22880.00     9.49   777.69      .00   777.69   778.15      .46      .00      .00   773.00
    5020.     623.    4145.     252.     164.     717.     160.       0.       0.   773.80
      .00     3.79     5.78     1.57     .040     .045     .060     .000   768.20    41.62
  .001806       0.       0.       0.        0        0        0      .00   243.53   325.08
0
 CCHV=    .300 CEHV=    .500
 #SECNO  .000

 3301 HV CHANGED MORE THAN HVINS


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=     780.70 ELREA=     780.70

                DS FACE OF MERIDIAN ROAD
      .00     8.36   777.56      .00      .00   778.78     1.22      .25      .38   769.20
    5020.       0.    5020.       0.       0.     566.       0.       2.       0.   771.00
      .00      .00     8.87      .00     .040     .040     .060     .000   769.20   222.00
  .003710     100.     100.     100.        2        0        0      .00    73.00   295.00
0

 SPECIAL BRIDGE

 SB  XK       XKOR     COFQ     RDLEN    BWC      BWP      BAREA    SS       ELCHU    ELCHD
     1.25     1.56     2.50       .00   73.00     4.00   730.00      .00   769.30   769.30

 #SECNO  .250
 CLASS A LOW FLOW

 3420 BRIDGE W.S.=    777.37 BRIDGE VELOCITY=,     9.02     CALCULATED CHANNEL AREA=,     557.

  EGPRS     EGLWC     H3      QWEIR     QLOW     BAREA   TRAPEZOID     ELLC     ELTRD
                                                          AREA
    778.71   779.03     .36       0.    5020.     730.     662.     778.90   780.70
```


SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS BANK ELEV

```
   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=     780.70 ELREA=     780.70

                US FACE OF MERIDIAN ROAD
      .25     8.72   777.92      .00      .00   779.03     1.12      .25      .00   769.20
    5020.       0.    5020.       0.       0.     592.       0.       2.       0.   771.00
      .00      .00     8.48      .00     .000     .040     .000     .000   769.20   222.00
  .003196      25.      25.      25.        0        0        0      .00    73.00   295.00
0
 #SECNO  .750

3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     170.0     340.0  TYPE=     1  TARGET=     170.000
                XSEC CC    50 FT US OF MERIDIAN RD
      .75     9.64   778.84      .00   778.82   779.31      .47      .08      .19   773.80
    5020.     199.    4422.     398.     131.     759.     203.       3.       1.   773.00
      .01     1.52     5.83     1.96     .070     .035     .070     .000   769.20   176.11
  .001020      50.      50.      50.        3        0        0      .00   163.89   340.00
0
 CCHV=    .100 CEHV=    .300
 #SECNO 5.750
  2800 NAT Q1=   1349.34  WSEL=    779.40  ENC Q1=   1349.34  WSEL=    779.50  RATIO=   .0000
  NAT Q1=   1382.  RATIOS LOB,CH,ROB=   .1670   .8181   .0148  WSEL=    779.50

3470 ENCROACHMENT STATIONS=     390.0     551.5  TYPE=     4  TARGET=        .024
                XSEC 6
      5.75    10.01   779.41      .00   779.40   779.92      .51      .60      .01   774.10
    5020.     792.    4213.      16.     354.     680.      13.      15.       2.   774.00
      .03     2.24     6.20     1.17     .070     .035     .070     .000   769.40   390.03
  .001441     500.     500.     500.        1        0        0      .00   161.51   551.54
0
 #SECNO 10.250
  2800 NAT Q1=   1608.58  WSEL=    780.14  ENC Q1=   1608.58  WSEL=    780.24  RATIO=   .0000
  NAT Q1=   1658.  RATIOS LOB,CH,ROB=   .1731   .6440   .1829  WSEL=    780.24

3470 ENCROACHMENT STATIONS=     174.4     518.8  TYPE=     4  TARGET=        .030
                MANUFACTURED XSEC
     10.25     9.78   780.18      .00   780.14   780.46      .28      .51      .02   775.10
    5020.     813.    3343.     864.     457.     659.     638.      28.       5.   775.00
      .06     1.78     5.07     1.36     .070     .035     .090     .000   770.40   174.44
  .001006     300.     450.     450.        2        0        0      .00   344.36   518.80
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 14.750
  2800 NAT Q1=   1857.43  WSEL=    780.53  ENC Q1=   1857.43  WSEL=    780.63  RATIO=   .0000
  NAT Q1=   1916.  RATIOS LOB,CH,ROB=   .0743   .7486   .1771  WSEL=    780.63

3470 ENCROACHMENT STATIONS=     101.9     659.2  TYPE=     4  TARGET=        .031
                XSEC DD
     14.75     8.89   780.59      .00   780.53   780.84      .25      .38      .00   774.79
```

```
    5020.     300.    3894.     826.     214.     855.    1031.      47.       9.    774.90
      .09     1.40     4.55     .80     .080     .035     .100     .000   771.70    101.94
  .000751     600.     450.     300.        2        0        0      .00   557.27    659.22
0
 *SECNO 18.750
  2800 NAT Q1=   1981.74  WSEL=    780.84  ENC Q1=   1981.74  WSEL=    780.94  RATIO=   .0000
  NAT Q1=   2038.  RATIOS LOB,CH,ROB=   .2009   .7216   .0776  WSEL=    780.94

 3470 ENCROACHMENT STATIONS=      82.3     508.9  TYPE=     4  TARGET=        .028
    18.75     9.00   780.90      .00   780.84   781.12      .22      .28      .00   775.00
    5020.     963.    3731.     326.     749.     869.     445.      64.      12.    775.10
      .13     1.29     4.29     .73     .080     .035     .110     .000   771.90    82.27
  .000653     500.     400.     250.        2        0        0      .00   426.66   508.94
0
 *SECNO 22.750
  2800 NAT Q1=   1363.01  WSEL=    781.08  ENC Q1=   1363.01  WSEL=    781.18  RATIO=   .0000
  NAT Q1=   1408.  RATIOS LOB,CH,ROB=   .1599   .6091   .2310  WSEL=    781.18

 3470 ENCROACHMENT STATIONS=      33.8     311.9  TYPE=     4  TARGET=        .032
                XSEC 5
    22.75     9.15   781.15      .00   781.08   781.51      .37      .35      .04   777.70
    5020.     743.    3166.    1111.     312.     547.     415.      78.      15.    776.50
      .15     2.38     5.79    2.68     .050     .035     .050     .000   772.00    33.78
  .001385     200.     400.     500.        2        0        0      .00   278.11   311.89
0
 *SECNO 30.950

 3470 ENCROACHMENT STATIONS=        .0     197.0  TYPE=     1  TARGET=     196.999
                XSEC 3 FROM FILE NO. 160 32D.1
    30.95     8.30   782.30      .00   782.22   782.91      .61     1.33      .07   778.40
    5020.    1036.    3928.      56.     308.     572.      26.      98.      19.    777.90
      .19     3.37     6.86    2.14     .050     .035     .050     .000   774.00    26.08
  .001973     800.     820.     750.        2        0        0      .00   169.85   195.93
0
1
 08/24/89    13:57:49                                                                    PAGE   13


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 41.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    785.60  ELENCR= 100000.00
                XSEC 1 FROM FILE NO. 160 32D.1
    41.15     9.21   784.21      .00   784.20   784.86      .64     1.94      .01   781.80
    5020.      27.    4899.      94.      18.     752.      74.     119.      24.    782.00
      .23     1.52     6.51    1.27     .050     .035     .050     .000   775.00   265.20
  .001799    1100.    1020.    1000.        2        0        0      .00   211.15   476.35
0
 *SECNO 47.150

 3470 ENCROACHMENT STATIONS=     225.0     551.0  TYPE=     1  TARGET=    -225.000
  ELENCL=    786.00  ELENCR= 100000.00
               XSEC 41.15 REPEATED INVERT ADJ
    47.15     9.68   785.28      .00   785.27   785.82      .54      .95      .01   782.40
    5020.      40.    4821.     159.      27.     802.     118.     131.      27.    782.60
      .26     1.50     6.01    1.35     .050     .035     .050     .000   775.60   261.12
  .001407     600.     600.     600.        2        0        0      .00   230.85   491.97
0
 *SECNO 61.150
  2800 NAT Q1=   1403.05  WSEL=    787.37  ENC Q1=   1403.05  WSEL=    787.37  RATIO=   .0000
```

```
 NAT Q1=   1435.  RATIOS LOB,CH,ROB=   .0573   .8899   .0527  WSEL=    787.37

3470 ENCROACHMENT STATIONS=      72.4     222.4  TYPE=     4  TARGET=        .022
                 CHANNEL XSEC FROM 41.15 W INVERT ADJ  OB FROM QUAD
    61.15    10.28   787.28      .00   787.27   787.73      .45     1.90      .01   781.30
    5020.     234.    4577.     210.     132.     820.     120.     163.      33.   781.40
      .33     1.77     5.58     1.74     .080     .040     .080     .000   777.00    72.35
  .001330    1100.    1400.    1300.        2        0        0      .00   150.05   222.41
0
 #SECNO 71.150
 2800 NAT Q1=   1741.00  WSEL=    788.48  ENC Q1=   1741.00  WSEL=    788.58  RATIO=   .0000
 NAT Q1=   1786.  RATIOS LOB,CH,ROB=   .0569   .7439   .1992  WSEL=    788.58

3470 ENCROACHMENT STATIONS=      69.6     334.4  TYPE=     4  TARGET=        .025
    71.15    10.53   788.53      .00   788.48   788.78      .25     1.04      .02   782.30
    5020.     226.    3836.     959.     154.     844.     643.     193.      37.   782.40
      .40     1.47     4.55     1.49     .080     .040     .080     .000   778.00    69.60
  .000848    1000.    1000.     900.        2        0        0      .00   264.83   334.43
0
1
 08/24/89    13:57:49                                                                          PAGE   14


   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


 #SECNO 91.150
 2800 NAT Q1=   1475.98  WSEL=    790.30  ENC Q1=   1475.98  WSEL=    790.40  RATIO=   .0000
 NAT Q1=   1521.  RATIOS LOB,CH,ROB=   .0367   .7477   .2156  WSEL=    790.40
3280 CROSS SECTION     91.15 EXTENDED       .38 FEET


3470 ENCROACHMENT STATIONS=      85.0     357.4  TYPE=     4  TARGET=        .030
    91.15     9.78   790.38      .00   790.30   790.70      .31     1.89      .02   784.90
    5020.     108.    3877.    1035.      71.     772.     649.     259.      48.   785.00
      .53     1.52     5.02     1.59     .080     .040     .080     .000   780.60    85.00
  .001168    1850.    2000.    1600.        2        0        0      .00   272.41   357.41
0
 #SECNO 107.150
 2800 NAT Q1=   1441.83  WSEL=    792.13  ENC Q1=   1441.83  WSEL=    792.23  RATIO=   .0000
 NAT Q1=   1484.  RATIOS LOB,CH,ROB=   .1697   .7389   .0913  WSEL=    792.23
3280 CROSS SECTION    107.15 EXTENDED      2.23 FEET


3470 ENCROACHMENT STATIONS=     287.5     577.0  TYPE=     4  TARGET=        .028
   107.15     9.63   792.23      .00   792.13   792.54      .31     1.84      .00   786.90
    5020.     804.    3816.     401.     512.     756.     249.     310.      58.   787.00
      .63     1.57     5.05     1.61     .080     .040     .080     .000   782.60   287.50
  .001210    1200.    1600.    1500.        2        0        0      .00   289.51   577.01
0
 #SECNO 119.150
 2800 NAT Q1=   1876.50  WSEL=    793.36  ENC Q1=   1876.50  WSEL=    793.46  RATIO=   .0000
 NAT Q1=   1937.  RATIOS LOB,CH,ROB=   .2817   .5511   .1672  WSEL=    793.46

3470 ENCROACHMENT STATIONS=     198.7     683.7  TYPE=     4  TARGET=        .031
   119.15     9.37   793.47      .00   793.36   793.61      .14     1.05      .02   787.10
    5020.    1376.    2854.     790.     963.     749.     675.     360.      68.   788.50
      .75     1.43     3.81     1.17     .080     .040     .080     .000   784.10   198.66
  .000712     980.    1200.    1200.        2        0        0      .00   485.01   683.67
0
 #SECNO 136.150
 2800 NAT Q1=   1308.61  WSEL=    794.85  ENC Q1=   1308.61  WSEL=    794.95  RATIO=   .0000
 NAT Q1=   1348.  RATIOS LOB,CH,ROB=   .2071   .7683   .0246  WSEL=    794.95
```

```
3470 ENCROACHMENT STATIONS=     278.5     526.7  TYPE=     4  TARGET=        .030
   136.15     8.65   794.95      .00   794.85   795.27      .32     1.61      .05   790.00
    5020.     999.    3978.      43.     529.     795.      30.     427.      80.    790.00
      .85     1.89     5.01     1.41     .080     .040     .080     .000   786.30   278.46
  .001473    1600.    1700.    1100.        2        0        0      .00   248.23   526.69
0
1
 08/24/89    13:57:49                                                                          PAGE   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


#SECNO 154.150
 2800 NAT Q1=   1779.86  WSEL=    796.82  ENC Q1=   1779.86  WSEL=    796.92  RATIO=   .0000
 NAT Q1=   1825.  RATIOS LOB,CH,ROB=   .2462   .5826   .1711  WSEL=    796.92

3470 ENCROACHMENT STATIONS=     235.3     519.8  TYPE=     4  TARGET=        .025
   154.15    10.03   796.93      .00   796.82   797.13      .20     1.84      .01   790.00
    5020.    1206.    2998.     815.     745.     676.     464.     490.      90.    790.00
     1.00     1.62     4.43     1.76     .080     .040     .080     .000   786.90   235.31
  .000793    1600.    1800.    1700.        2        0        0      .00   284.44   519.75
0
1
PROFILE FOR STREAM   METHOD 4  .1 TARGET



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   765.     770.     775.     780.     785.     790.     795.     800.     805.     810.
    SECNO   CUMDIS

 22880.00     0.  C    I  .    L R .   WE  M        .        .        .        .        .        .        .
      .00   100.  C      I , R      .   W  E . M      .        .        .        .        .        .        .
      .25   200.  C      I . R      .    W E . M      .        .        .        .        .        .        .
      .75   300.  C      I .    R L .      WE.        . M      .        .        .        .        .        .
            400.  C      I .    R L .      WE.        M        .        .        .        .        .        .
            500.  C       I.     RL .      WE.      M .        .        .        .        .        .        .
            600.  C       I.     RL .      WE.   M    .        .        .        .        .        .        .
     5.75   700.  C       I.      L .       WE        .        .        .        .        .        .        .
            800.  C       I.      RL.       WEM       .        .        .        .        .        .        .
            900.  C        I       L.        EM       .        .        .        .        .        .        .
           1000.  C        I       RL        WEM      .        .        .        .        .        .        .
           1100.  C        .I       L        WEM      .        .        .        .        .        .        .
    10.25  1200.  C        .I       L        WEM      .        .        .        .        .        .        .
           1300.  C        .I       L        .E  M    .        .        .        .        .        .        .
           1400.  C        . I      L        .E   M   .        .        .        .        .        .        .
           1500.  C        . I      L        .E   M   .        .        .        .        .        .        .
    14.75  1600.  C        . I      L        .WE    M .        .        .        .        .        .        .
           1700.  C        .  I     L        .WE   M  .        .        .        .        .        .        .
           1800.  C        .  I     L        .WE   M  .        .        .        .        .        .        .
           1900.  C        .  I     L        . E  M   .        .        .        .        .        .        .
    18.75  2000.  C        .  I     L        . E M    .        .        .        .        .        .        .
           2100.  C        .  I     .L       . E M    .        .        .        .        .        .        .
           2200.  C        .  I     . RL     . WE M   .        .        .        .        .        .        .
           2300.  C        .  I     . R L    . WE M   .        .        .        .        .        .        .
    22.75  2400.  C        .  I     .  R L   . WE  M  .        .        .        .        .        .        .
           2500.  C        .  I     .  R  L  .  E    M.        .        .        .        .        .        .
           2600.  C        .   I    .   R L  .  WE    .M       .        .        .        .        .        .
           2700.  C                 I        R L      WE        M
```

```
        2800. C        .    I   .  R L   .  WE    .      M .        .        .        .        .        .
        2900. C        .    I   .   RL   .  WE    .       M.        .        .        .        .        .
        3000. C        .     I  .   RL   .  WE    .        . M      .        .        .        .        .
        3100. C        .     I  .   R L  .  WE    .        .   M    .        .        .        .        .
30.95   3200. C        .      I .    RL  .   WE   .        .      M .        .        .        .        .
        3300. C        .      I .     L  .   WE   .        .     M  .        .        .        .        .
        3400. C        .      I .     RL .   W E  .        .    M   .        .        .        .        .
        3500. C        .       I.      RL.    WE  .        .   M    .        .        .        .        .
        3600. C        .       I.       L.    WE  .        .  M     .        .        .        .        .
        3700. C        .       I.        L    W E .        . M      .        .        .        .        .
        3800. C        .       I.        .L    WE .        . M      .        .        .        .        .
        3900. C        .       I.        .L    WE .        .M       .        .        .        .        .
        4000. C        .        I        . L    WE.        M        .        .        .        .        .
        4100. C        .        I        .  L   WE.      M .        .        .        .        .        .
        4200. C        .        I        .  LR  W E     M  .        .        .        .        .        .
41.15   4300. C        .        I        .   L  W E     M  .        .        .        .        .        .
        4400. C        .        I        .   L   WE     M  .        .        .        .        .        .
        4500. C        .        I        .   L   WE      M .        .        .        .        .        .
        4600. C        .        .I       .   LR  W.E     M .        .        .        .        .        .
        4700. C        .        .I       .   LR   WE     M .        .        .        .        .        .
        4800. C        .        .I       .    L   WE     M .        .        .        .        .        .
47.15   4900. C        .        .I       .    L   .WE    M .        .        .        .        .        .
        5000. C        .        .I       .    L   .WE     M.        .        .        .        .        .
        5100. C        .        . I      .   LR   .WE     M.        .        .        .        .        .
        5200. C        .        . I      .   LR   .WE     M.        .        .        .        .        .
        5300. C        .        . I      .   LR   . WE    M.        .        .        .        .        .
        5400. C        .        . I      .    L   . WE    M.        .        .        .        .        .
        5500. C        .        . I      .    L   . WE    M.        .        .        .        .        .
        5600. C        .        .  I     .    L   .  WE   M.        .        .        .        .        .
        5700. C        .        .  I     .    L   .  WE   M.        .        .        .        .        .
        5800. C        .        .  I     .   LR   .  WE   M.        .        .        .        .        .
        5900. C        .        .  I     .    L   .  WE    M        .        .        .        .        .
        6000. C        .        .  I     .    L   .   WE   M        .        .        .        .        .
        6100. C        .        .   I    .    L   .   WE   M        .        .        .        .        .
        6200. C        .        .   I    .    L   .   WE   M        .        .        .        .        .
61.15   6300. C        .        .   I    .    L   .    E   M        .        .        .        .        .
        6400. C        .        .   I    .    L   .   WE   M        .        .        .        .        .
        6500. C        .        .   I    .    L   .   WE   M        .        .        .        .        .
        6600. C        .        .    I   .    L   .   WE   M        .        .        .        .        .
        6700. C        .        .    I   .   LR   .    E   M        .        .        .        .        .
        6800. C        .        .    I   .    L   .    WE  M        .        .        .        .        .
        6900. C        .        .    I   .    L   .    WE  M        .        .        .        .        .
        7000. C        .        .    I   .    L   .    WE  M        .        .        .        .        .
        7100. C        .        .     I  .    L   .     E  M        .        .        .        .        .
        7200. C        .        .     I  .   LR   .     E  M        .        .        .        .        .
71.15   7300. C        .        .     I  .    L   .     WE M        .        .        .        .        .
        7400. C        .        .     I  .    L   .     WE M        .        .        .        .        .
        7500. C        .        .      I .    L   .     WE M        .        .        .        .        .
        7600. C        .        .      I .    LR  .      E M        .        .        .        .        .
        7700. C        .        .      I .     L  .      E M        .        .        .        .        .
        7800. C        .        .      I .     L  .      WEM        .        .        .        .        .
        7900. C        .        .       I .    L  .      WEM        .        .        .        .        .
        8000. C        .        .       I .    LR .      WEM        .        .        .        .        .
        8100. C        .        .       I .     L .       EM        .        .        .        .        .
        8200. C        .        .       I .     L .       EM        .        .        .        .        .
        8300. C        .        .        I.     L .       EM        .        .        .        .        .
        8400. C        .        .        I.     LR .      WE        .        .        .        .        .
        8500. C        .        .        I.      L .      WE        .        .        .        .        .
        8600. C        .        .        I.      L .      WE        .        .        .        .        .
        8700. C        .        .         I      L .       E        .        .        .        .        .
        8800. C        .        .         I       L.       E        .        .        .        .        .
        8900. C        .        .         I       L.       WE       .        .        .        .        .
        9000. C        .        .         I       L.       WE       .        .        .        .        .
        9100. C        .        .         .I      L.       WE       .        .        .        .        .
        9200. C        .        .         .I       L       ME       .        .        .        .        .
81.15   9300. C        .        .         .I       L       ME
```

```
        9400.  C        .        .        .I       L        MWE      .        .        .        .        .
        9500.  C        .        .        . I      LR       MWE      .        .        .        .        .
        9600.  C        .        .        . I      .L       MWE      .        .        .        .        .
        9700.  C        .        .        . I      .L       M E      .        .        .        .        .
        9800.  C        .        .        . I      .L       M WE     .        .        .        .        .
        9900.  C        .        .        .  I     .LR      M WE     .        .        .        .        .
       10000.  C        .        .        .  I     . L      M WE     .        .        .        .        .
       10100.  C        .        .        .  I     . L      M  E     .        .        .        .        .
       10200.  C        .        .        .  I     . L      M  E     .        .        .        .        .
       10300.  C        .        .        .   I    . LR     M  WE    .        .        .        .        .
       10400.  C        .        .        .   I    .  L     M  WE    .        .        .        .        .
       10500.  C        .        .        .   I    .  L     M   E    .        .        .        .        .
       10600.  C        .        .        .   I    .  L     M   E    .        .        .        .        .
       10700.  C        .        .        .    I   .  LR    M   WE   .        .        .        .        .
       10800.  C        .        .        .    I   .   L    M   WE   .        .        .        .        .
107.15 10900.  C        .        .        .    I   .   L    M   WE   .        .        .        .        .
       11000.  C        .        .        .    I   .   L    . M  E   .        .        .        .        .
       11100.  C        .        .        .     I  .   LR   .  M E   .        .        .        .        .
       11200.  C        .        .        .     I  .   LR   .    WE  .        .        .        .        .
       11300.  C        .        .        .     I  .   LR   .    WEM .        .        .        .        .
       11400.  C        .        .        .     I  .   LR   .    WE M .        .        .        .        .
       11500.  C        .        .        .      I .   L R  .     E  M        .        .        .        .
       11600.  C        .        .        .      I .   L R  .     E  . M      .        .        .        .
       11700.  C        .        .        .      I .   L R  .     WE . M      .        .        .        .
       11800.  C        .        .        .      I .   L R  .     WE .   M    .        .        .        .
       11900.  C        .        .        .       I .   L  R .     E .     M  .        .        .        .
       12000.  C        .        .        .       I .   L  R .     E .      M .        .        .        .
119.15 12100.  C        .        .        .       I .   L  R .     E .        M        .        .        .
       12200.  C        .        .        .       I .    L R .     E .        M        .        .        .
       12300.  C        .        .        .        I.    L R .     WE .        M        .        .        .
       12400.  C        .        .        .        I.    L  R .    WE .        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      LR .     WE.        M        .        .        .
       12900.  C        .        .        .         I      LR .     WE.        M        .        .        .
       13000.  C        .        .        .         .I     L R.      E.        M        .        .        .
       13100.  C        .        .        .         .I      LR.      E.        M        .        .        .
       13200.  C        .        .        .         .I      LR.      E.        M        .        .        .
       13300.  C        .        .        .         .I      LR.      WE        M        .        .        .
       13400.  C        .        .        .         . I      L.      WE        M        .        .        .
       13500.  C        .        .        .         . I      L.      WE        M        .        .        .
       13600.  C        .        .        .         . I      LR       E        M        .        .        .
       13700.  C        .        .        .         . I       L       E        M        .        .        .
136.15 13800.  C        .        .        .         .  I      L       WE       M        .        .        .
       13900.  C        .        .        .         .  I      L       WE       M        .        .        .
       14000.  C        .        .        .         .  I      L       WE       M        .        .        .
       14100.  C        .        .        .         .  I      L       .E       M        .        .        .
       14200.  C        .        .        .         .  I      L       .E       M        .        .        .
       14300.  C        .        .        .         .  I      L       .WE      M        .        .        .
       14400.  C        .        .        .         .  I      L       .WE      M        .        .        .
       14500.  C        .        .        .         .  I      L       .WE      M        .        .        .
       14600.  C        .        .        .         .  I      L       . E      M        .        .        .
       14700.  C        .        .        .         .  I      L       . E      M        .        .        .
       14800.  C        .        .        .         .  I      L       . WE     M        .        .        .
       14900.  C        .        .        .         .  I      L       . WE     M        .        .        .
       15000.  C        .        .        .         .  I      L       .  E     M        .        .        .
       15100.  C        .        .        .         .  I      L       .  E     M        .        .        .
       15200.  C        .        .        .         .   I     L       .  E     M        .        .        .
       15300.  C        .        .        .         .   I     L       .  WE    M        .        .        .
       15400.  C        .        .        .         .   I     L       .  WE    M        .        .        .
       15500.  C        .        .        .         .   I     L       .   E    M        .        .        .
154.15 15600.  C        .        .        .         .   I     L       .   E    M        .        .        .
```

1

THIS RUN EXECUTED 08/24/89 13:58:23

```
*********************************************
 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
*********************************************
```

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

CHIPPEWA RIVER

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
22880.000	.00	.00	.00	768.20	5020.00	777.59	.00	778.14	20.91	6.18	868.44	1097.78
22880.000	.00	.00	.00	768.20	5020.00	777.69	.00	778.15	18.06	5.78	1041.72	1181.31
.000	100.00	.00	.00	769.20	5020.00	777.52	.00	778.76	37.70	8.91	563.56	817.62
.000	100.00	.00	.00	769.20	5020.00	777.56	.00	778.78	37.10	8.87	566.24	824.12
.250	25.00	780.70	778.90	769.20	5020.00	777.89	.00	779.01	32.35	8.51	590.02	882.59
.250	25.00	780.70	778.90	769.20	5020.00	777.92	.00	779.03	31.96	8.48	592.18	887.99
.750	50.00	.00	.00	769.20	5020.00	778.82	.00	779.29	10.29	5.85	1088.72	1564.74
.750	50.00	.00	.00	769.20	5020.00	778.84	.00	779.31	10.20	5.83	1092.29	1571.52
5.750	500.00	.00	.00	769.40	5020.00	779.40	.00	779.89	13.84	6.07	1088.72	1349.34
5.750	500.00	.00	.00	769.40	5020.00	779.41	.00	779.92	14.41	6.20	1046.99	1322.56
10.250	450.00	.00	.00	770.40	5020.00	780.14	.00	780.40	9.74	4.97	1929.48	1608.58
10.250	450.00	.00	.00	770.40	5020.00	780.18	.00	780.46	10.06	5.07	1753.26	1582.42
14.750	450.00	.00	.00	771.70	5020.00	780.53	.00	780.77	7.30	4.47	2313.54	1857.43
14.750	450.00	.00	.00	771.70	5020.00	780.59	.00	780.84	7.51	4.55	2099.65	1831.41
18.750	400.00	.00	.00	771.90	5020.00	780.84	.00	781.04	6.42	4.23	2243.49	1981.74
18.750	400.00	.00	.00	771.90	5020.00	780.90	.00	781.12	6.53	4.29	2062.42	1963.81
22.750	400.00	.00	.00	772.00	5020.00	781.08	.00	781.43	13.56	5.70	1339.22	1363.01
22.750	400.00	.00	.00	772.00	5020.00	781.15	.00	781.51	13.85	5.79	1274.11	1348.94
30.950	820.00	.00	.00	774.00	5020.00	782.22	.00	782.85	20.64	6.97	892.33	1104.91
30.950	820.00	.00	.00	774.00	5020.00	782.30	.00	782.91	19.73	6.86	906.22	1130.08
41.150	1020.00	.00	.00	775.00	5020.00	784.20	.00	784.84	18.17	6.54	839.86	1177.66
41.150	1020.00	.00	.00	775.00	5020.00	784.21	.00	784.86	17.99	6.51	843.81	1183.61

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
47.150	600.00	.00	.00	775.60	5020.00	785.27	.00	785.81	14.13	6.02	944.57	1335.36
47.150	600.00	.00	.00	775.60	5020.00	785.28	.00	785.82	14.07	6.01	946.60	1338.41
61.150	1400.00	.00	.00	777.00	5020.00	787.27	.00	787.69	12.80	5.47	1213.95	1403.05
61.150	1400.00	.00	.00	777.00	5020.00	787.28	.00	787.73	13.36	5.59	1173.05	1376.32

71.150	1000.00	.00	.00	778.00	5020.00	788.48	.00	788.71	8.31	4.48	1960.45	1741.00
71.150	1000.00	.00	.00	778.00	5020.00	788.53	.00	788.78	8.48	4.55	1640.88	1723.61
91.150	2000.00	.00	.00	780.60	5020.00	790.30	.00	790.59	11.57	4.96	1745.14	1475.98
91.150	2000.00	.00	.00	780.60	5020.00	790.38	.00	790.70	11.68	5.02	1491.66	1468.69
107.150	1600.00	.00	.00	782.60	5020.00	792.13	.00	792.42	12.12	5.01	1624.29	1441.83
107.150	1600.00	.00	.00	782.60	5020.00	792.23	.00	792.54	12.10	5.05	1516.42	1443.26
119.150	1200.00	.00	.00	784.10	5020.00	793.36	.00	793.49	7.16	3.78	2635.19	1876.50
119.150	1200.00	.00	.00	784.10	5020.00	793.47	.00	793.61	7.12	3.81	2387.05	1880.88
136.150	1700.00	.00	.00	786.30	5020.00	794.85	.00	795.15	14.72	4.95	1530.66	1308.61
136.150	1700.00	.00	.00	786.30	5020.00	794.95	.00	795.27	14.73	5.01	1353.76	1308.20
154.150	1800.00	.00	.00	786.90	5020.00	796.82	.00	797.01	7.95	4.40	2167.27	1779.86
154.150	1800.00	.00	.00	786.90	5020.00	796.93	.00	797.13	7.93	4.43	1885.40	1783.10

CHIPPEWA RIVER

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
22880.000	5020.00	777.59	.00	.00	.00	127.91	.00
22880.000	5020.00	777.69	.10	.00	.00	243.53	.00
.000	5020.00	777.52	.00	-.07	.00	73.00	100.00
.000	5020.00	777.56	.04	-.13	.00	73.00	100.00
.250	5020.00	777.89	.00	.36	.00	73.00	25.00
.250	5020.00	777.92	.03	.36	.00	73.00	25.00
.750	5020.00	778.82	.00	.93	.00	163.74	50.00
.750	5020.00	778.84	.02	.92	.02	163.89	50.00
5.750	5020.00	779.40	.00	.59	.00	177.55	500.00
5.750	5020.00	779.41	.01	.57	.01	161.51	500.00
10.250	5020.00	780.14	.00	.73	.00	507.22	450.00
10.250	5020.00	780.18	.04	.77	.04	344.36	450.00
14.750	5020.00	780.53	.00	.40	.00	801.72	450.00
14.750	5020.00	780.59	.05	.41	.05	557.27	450.00
18.750	5020.00	780.84	.00	.30	.00	578.13	400.00
18.750	5020.00	780.90	.06	.32	.06	426.66	400.00
22.750	5020.00	781.08	.00	.25	.00	437.35	400.00
22.750	5020.00	781.15	.07	.25	.07	278.11	400.00
30.950	5020.00	782.22	.00	1.14	.00	169.49	820.00
30.950	5020.00	782.30	.08	1.16	.08	169.85	820.00
41.150	5020.00	784.20	.00	1.98	.00	210.35	1020.00
41.150	5020.00	784.21	.02	1.91	.02	211.15	1020.00
47.150	5020.00	785.27	.00	1.07	.00	230.48	600.00
47.150	5020.00	785.28	.01	1.06	.01	230.85	600.00

61.150	5020.00	787.27	.00	2.00	.00	230.48	1400.00
61.150	5020.00	787.28	.01	2.00	.01	150.05	1400.00
71.150	5020.00	788.48	.00	1.20	.00	465.00	1000.00
71.150	5020.00	788.53	.06	1.25	.06	264.83	1000.00
91.150	5020.00	790.30	.00	1.82	.00	447.00	2000.00
91.150	5020.00	790.38	.09	1.85	.09	272.41	2000.00
107.150	5020.00	792.13	.00	1.83	.00	379.45	1600.00
107.150	5020.00	792.23	.10	1.84	.10	289.51	1600.00

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
119.150	5020.00	793.36	.00	1.23	.00	725.93	1200.00
119.150	5020.00	793.47	.11	1.24	.11	485.01	1200.00
136.150	5020.00	794.85	.00	1.49	.00	378.58	1700.00
136.150	5020.00	794.95	.10	1.49	.10	248.23	1700.00
154.150	5020.00	796.82	.00	1.97	.00	453.70	1800.00
154.150	5020.00	796.93	.11	1.98	.11	284.44	1800.00

SUMMARY OF ERRORS AND SPECIAL NOTES

THIS RUN EXECUTED 08/24/89 13:58:25

```
*****************************************
 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
*****************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Multi-Profile Run

00BREAK00

Diskette is available.

Paper copy - double sided
also available

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp. ~~Chippewa~~

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Notes

00BREAK00

Chippewa @ M-20
At ~ Low Steel, over M-20
u/s of bridge
Buckley's Canoe Rental ~ Low Steel
1½ feet into house

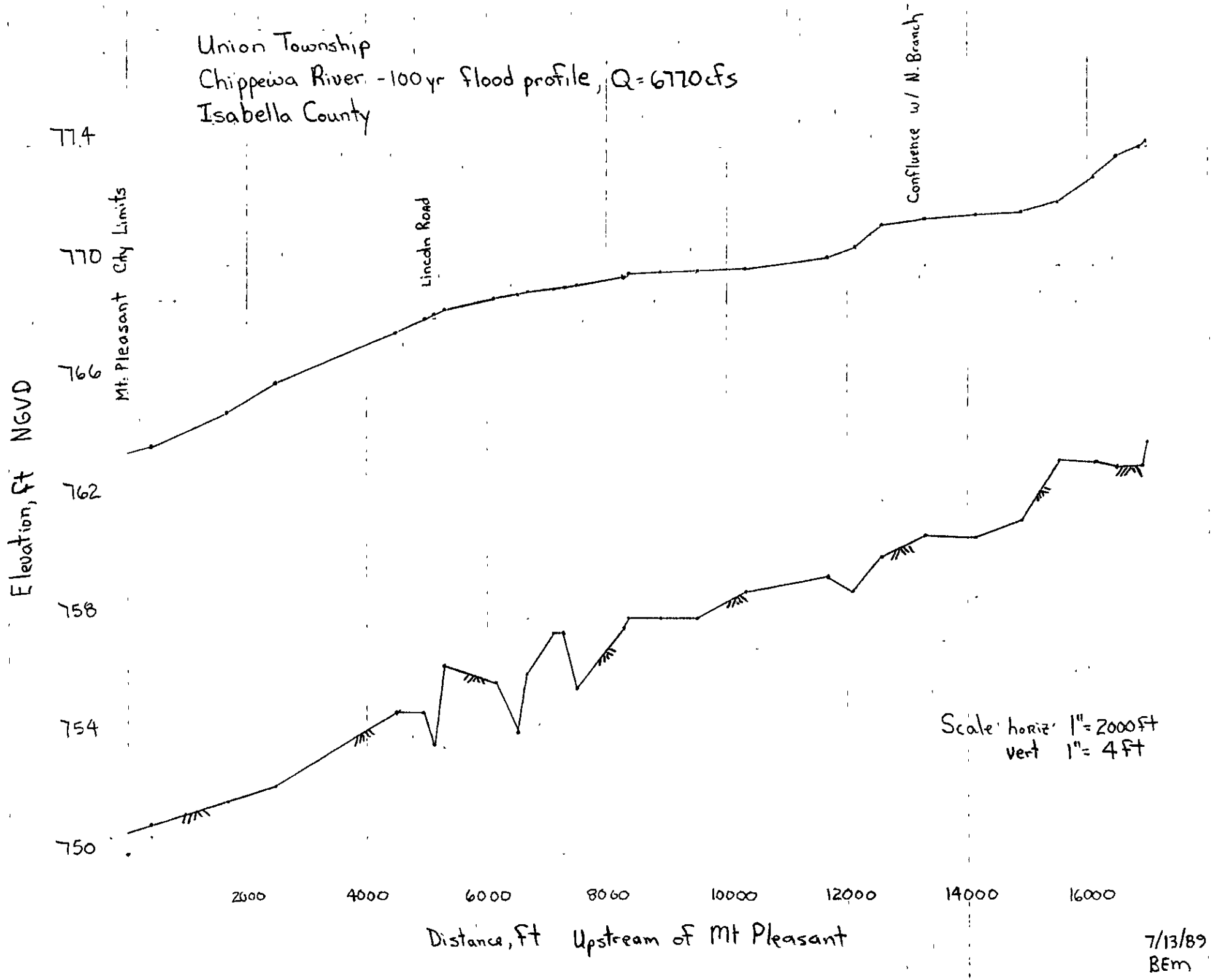
Little Field
W.S. to ELLC - 7 ft

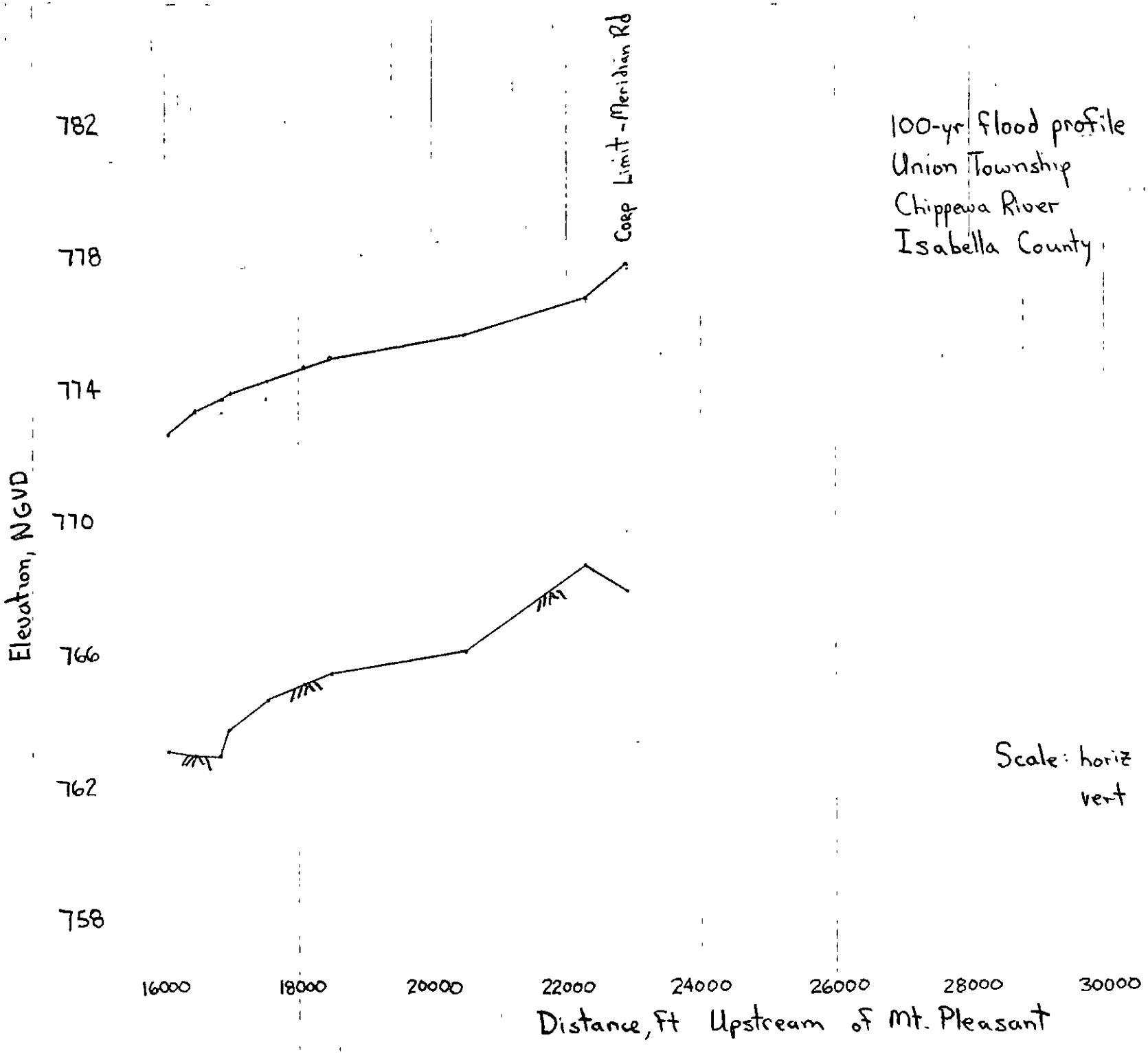
- Pickard
W.S. to ELLC - 7'

- River's Road W.S. to ELLC 7½'

- School Road
ELLC 2.8' Above W.S. 8/25/89 14:15pm

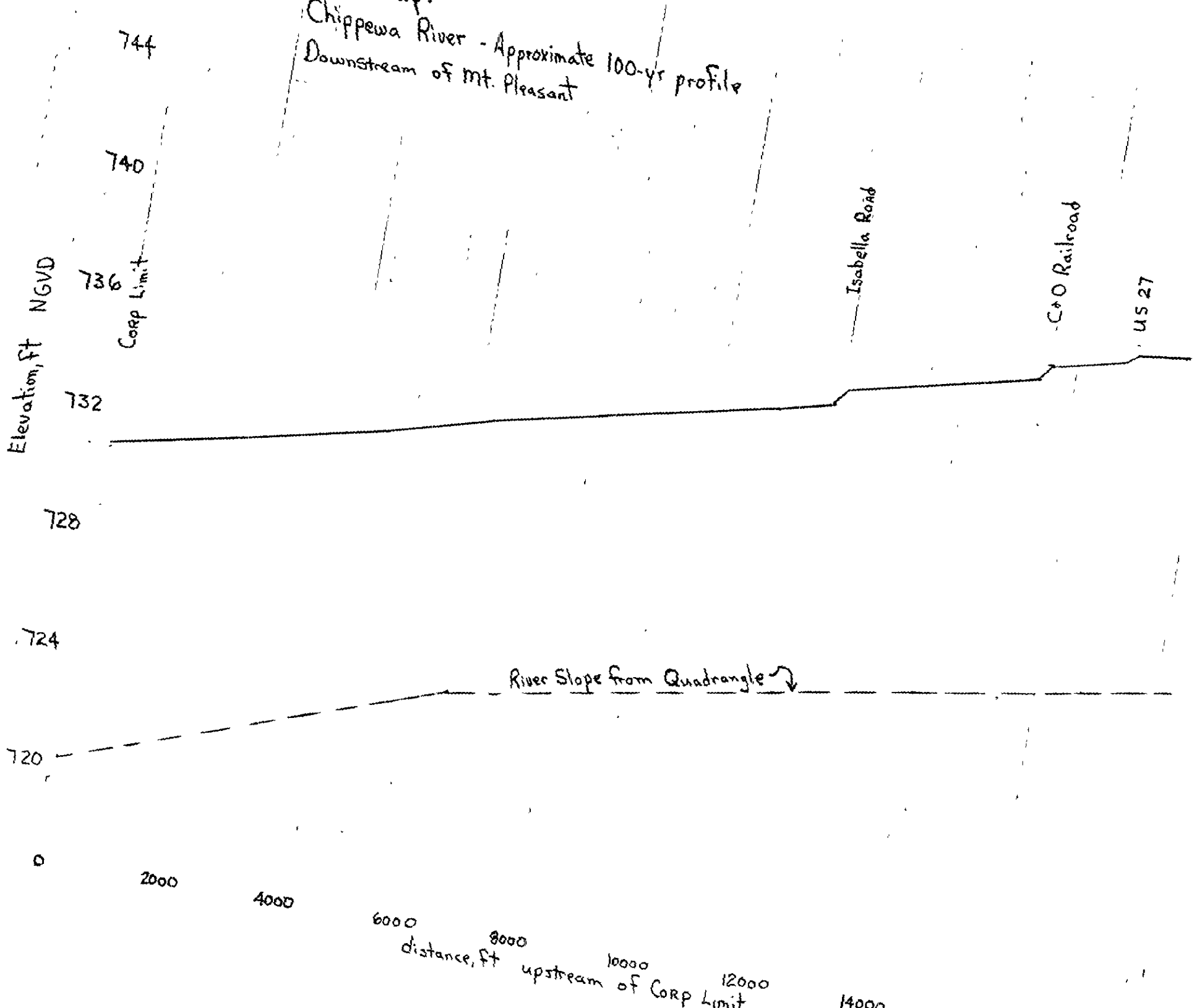
This data was used to develop 1989 Estimate for the Chippewa River. Updated by FIS

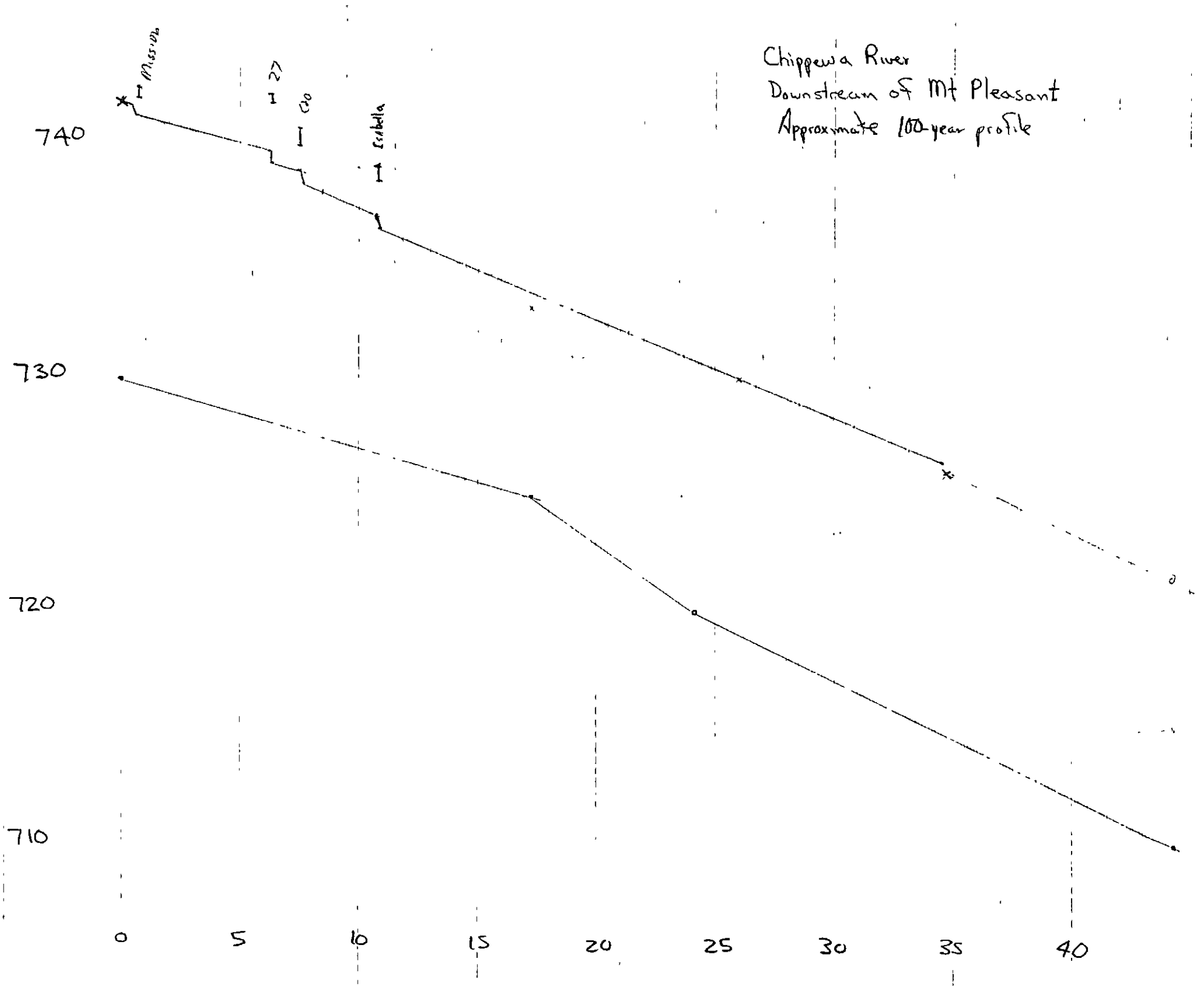

Union Township
Chippewa River -100yr flood profile, Q=6770cfs
Isabella County
Mt. Pleasant City Limits
Lincoln Road
Confluence w/ N. Branch
Elevation, ft NGVD
774
770
766
762
758
754
750
2000
4000
6000
8000
10000
12000
14000
16000
Distance, ft Upstream of Mt Pleasant
Scale: horiz 1"=2000ft
vert 1"= 4ft
7/13/89
BEM



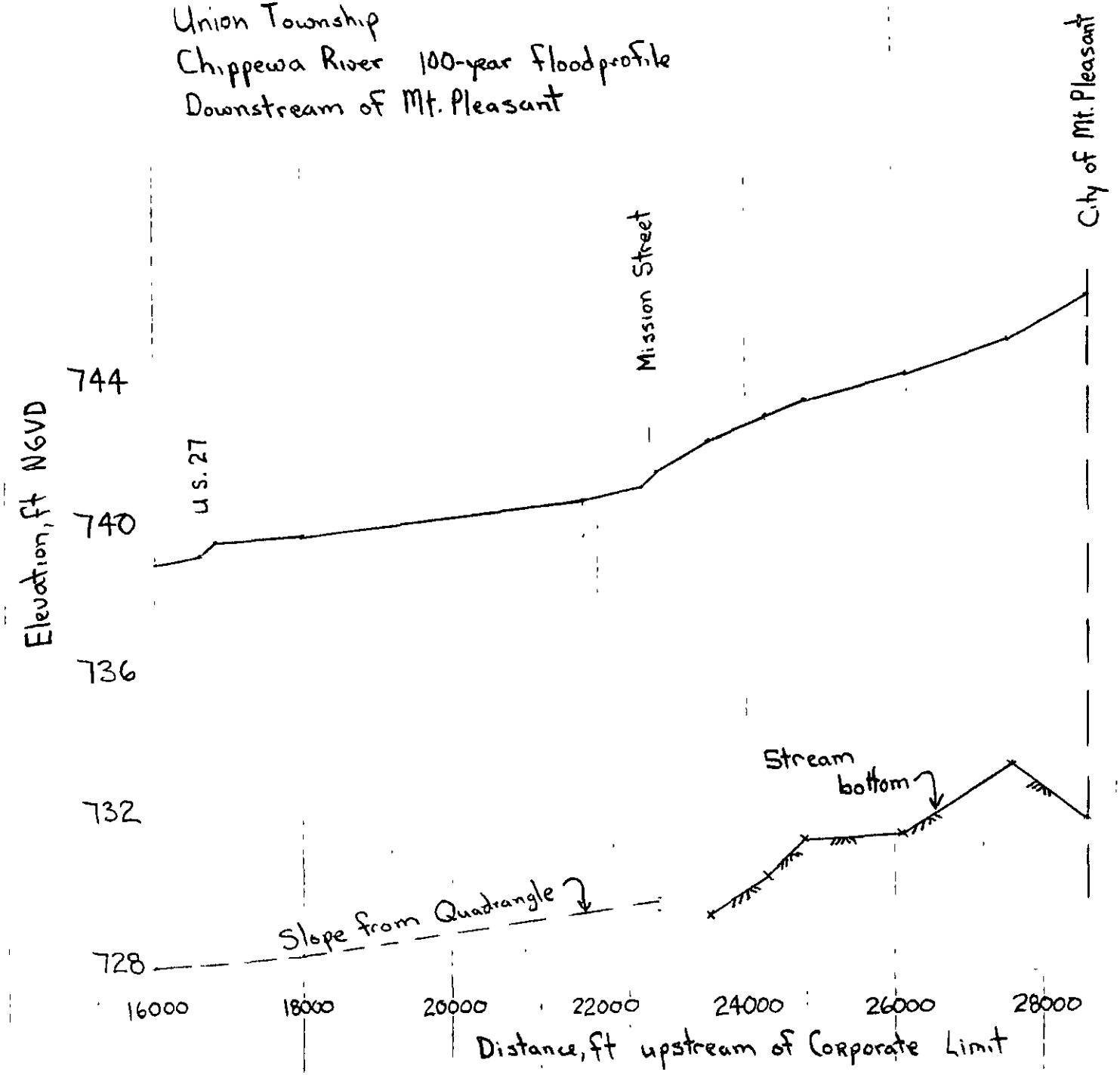
100-yr flood profile
Union Township
Chippewa River
Isabella County

Scale: horiz 1" = 2000 ft
vert 1" = 4 ft


Chippewa River - Approximate 100-yr profile
Downstream of Mt. Pleasant
Elevation, ft NGVD
744
740
736
732
728
724
720
Corp Limit
Isabella Road
C+O Railroad
US 27
River Slope from Quadrangle
0
2000
4000
6000
8000
10000
12000
14000
distance, ft upstream of Corp Limit


Chippewa River
Downstream of Mt Pleasant
Approximate 100-year profile
740
730
720
710
0
5
10
15
20
25
30
35
40

Union Township
Chippewa River 100-year floodprofile
Downstream of Mt. Pleasant



1 7

112 12

4.3

~~108.9~~ 100

107.7 7.8

HI

100

112 107.7

113.4 4.3 ~~108.9~~ [illegible]

5.7 ~~4.7~~ [illegible] 109.3 [illegible]

Van de car HW. ~10' above current WSEL

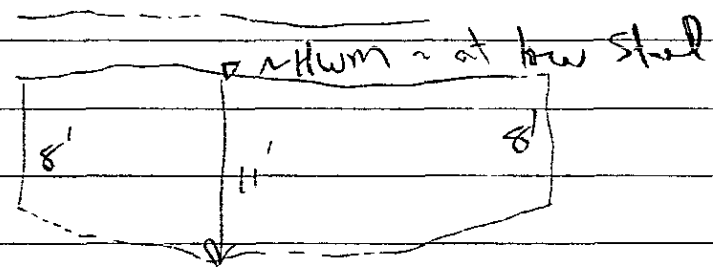
WSEL [illegible] below bridge seat

LOR u/s

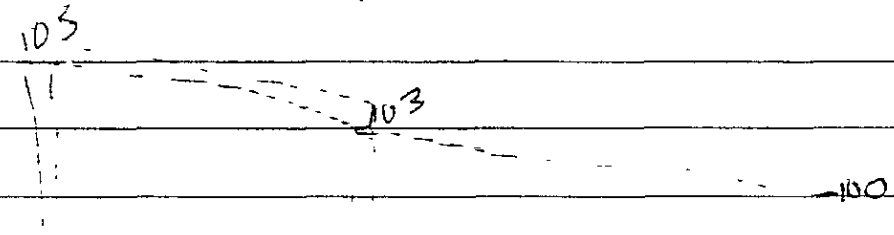
North Branch @ N-20

~6"-8" overroad due to drain overflow

Littlefield Rd over road
in basement d/s of road, ROB



Pizzard



Winn Road
No info
~Hwm ~ 15' above current WSEL, on
shed in ROB u/s of bridge

Van Becar Rd
over in LOB

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

TO: Hydrologic Studies Unit

SUBJECT: Request for 100-Year Flood Discharges Current and Urbanized Conditions

FROM: Flood Plain Management Section / BEM

DATE: 8/28/89

FILE NO:

#320, 37

H-89170

WATERCOURSE: Chippewa River

SECTION: 17/20 T14N, R5W

TOWNSHIP: Deerfield

COUNTY: Isabella

LOCATION: @ M-20

REMARKS: ~~Please provide~~ Q_{100}

P-23SW

~~DA = 304 sq miles~~

DA = 269 sq miles

cDA = 262 sq miles

Q_5 = 2020 cfs

Q_{10} = 2580

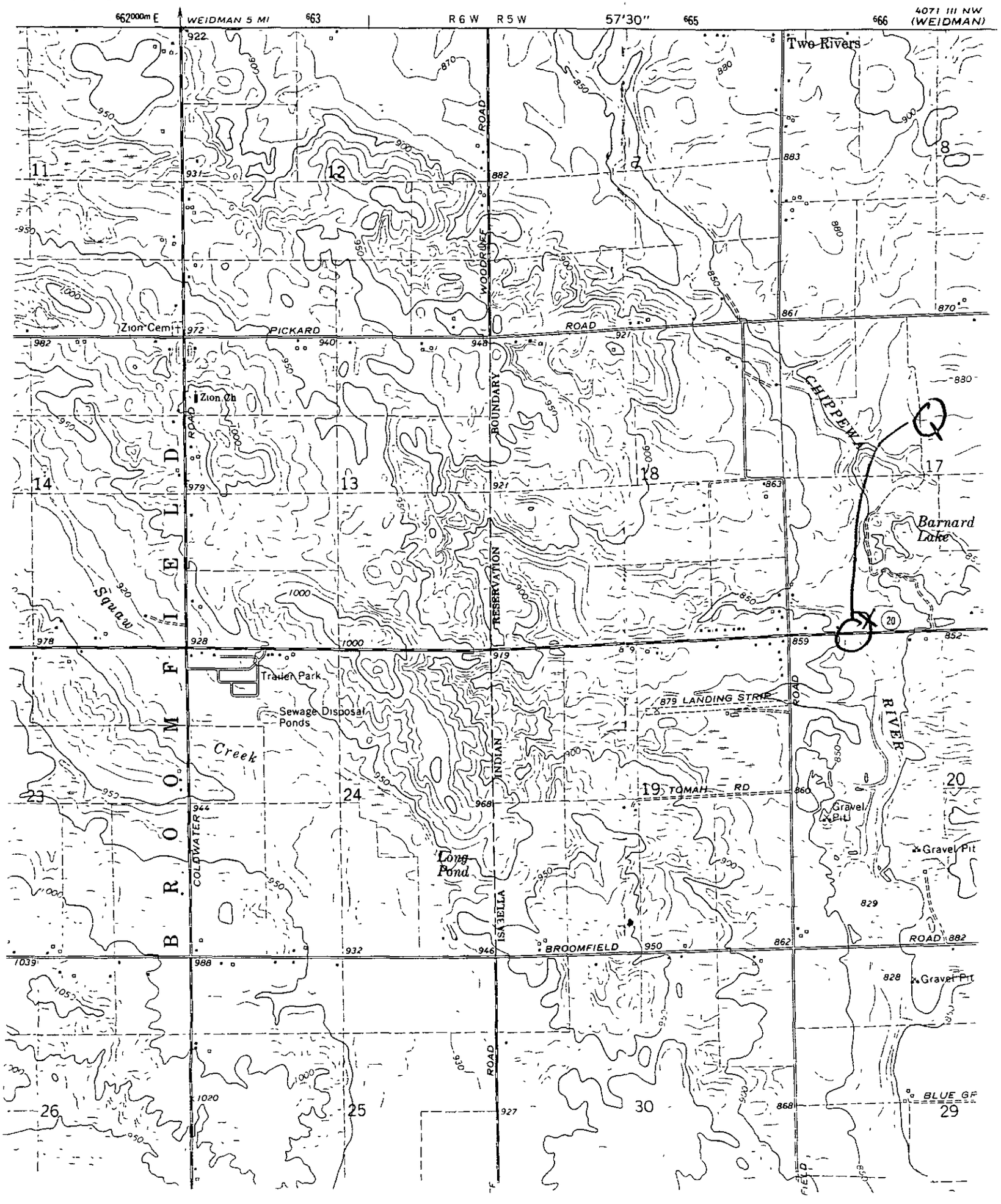
Q_{25} = 3370

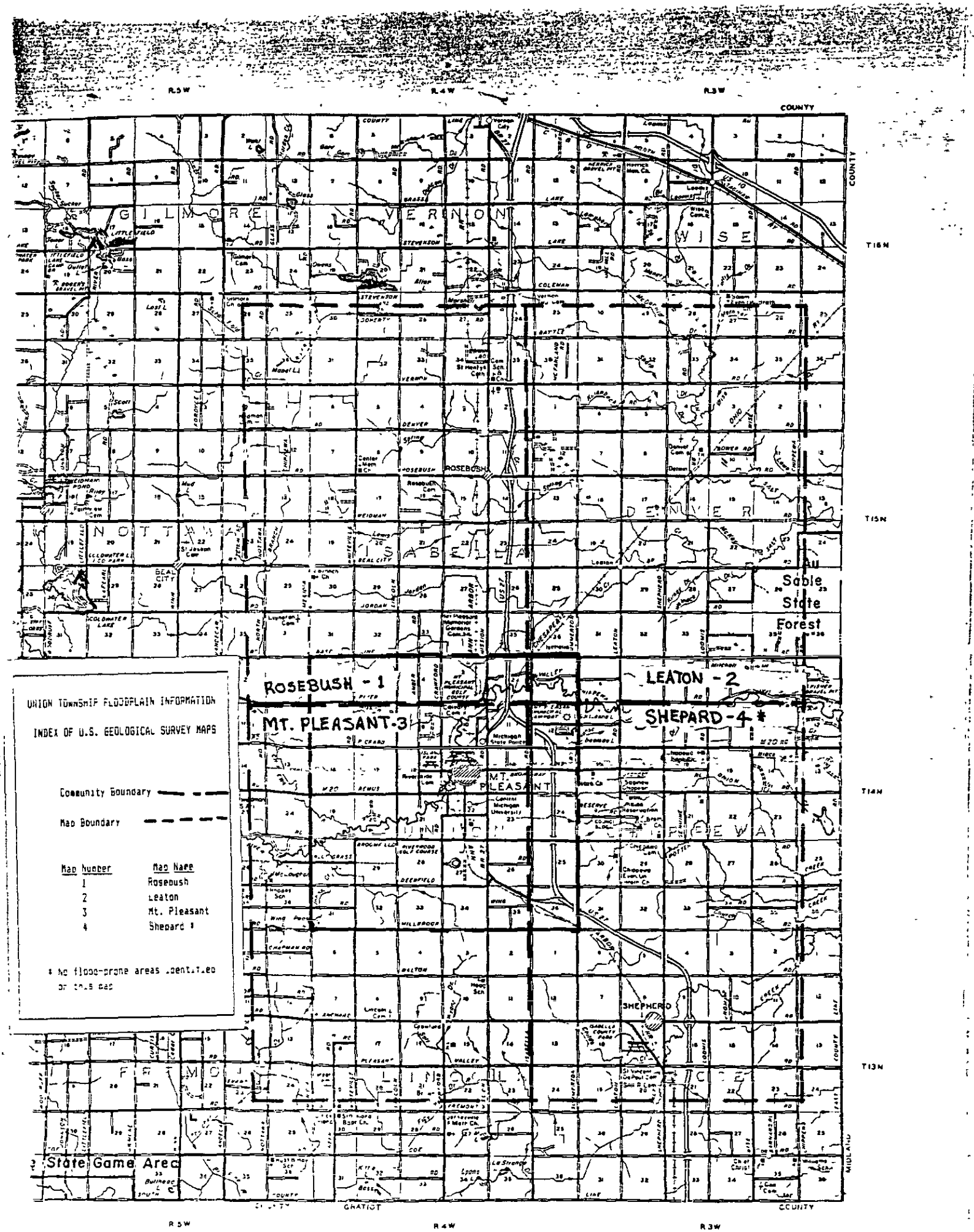
Q_{50} = 4020

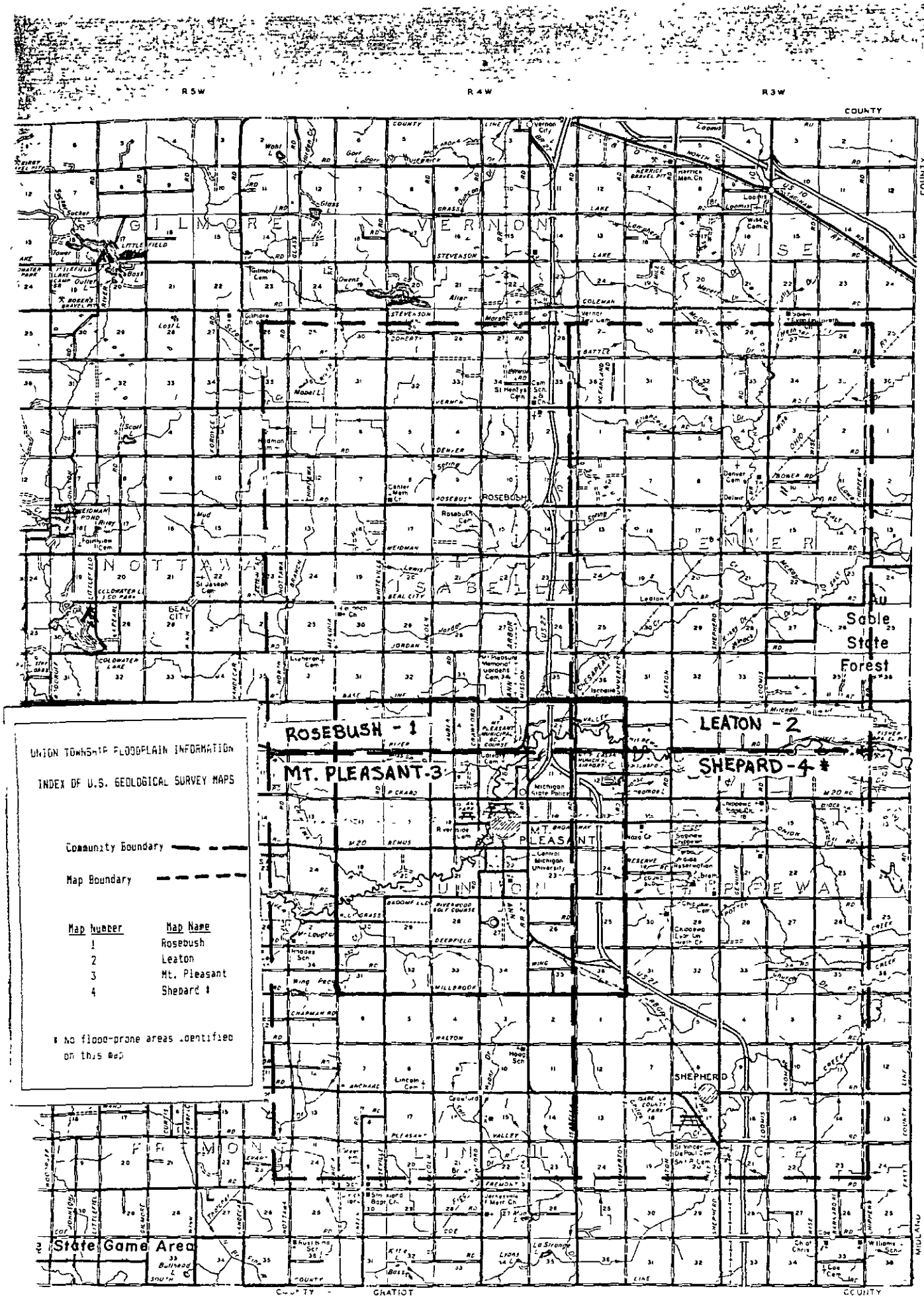
Q_{100} = 4730 cfs

Leap Sept 12, 1989

UNITED STATES
PARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY




R.5W
R.4W
R.3W
COUNTY
T16N
T15N
T14N
T13N
GILMORE
VERNON
WISE
NOTTAWA
ISABELLA
DENVER
ROSEBUSH
BEAL CITY
Au Sable State Forest
ROSEBUSH - 1
LEATON - 2
MT. PLEASANT-3
SHEPARD-4 *
MT. PLEASANT
SHEPHERD
State Game Area
GRATIOT
MIDLAND
UNION TOWNSHIP FLOODPLAIN INFORMATION
INDEX OF U.S. GEOLOGICAL SURVEY MAPS
Community Boundary
Map Boundary
Map Number
Map Name
1 Rosebush
2 Leaton
3 Mt. Pleasant
4 Shepard *
* No flood-prone areas identified on this map


R5W
R4W
R3W
COUNTY
T16N
T15N
T14N
T13N
GILMORE
VERNON
WISE
NOTTAWA
ISABELLA
DENVER
UNION
CHIPPEWA
FREMONT
LINCOLN
COE
ROSEBUSH
BEAL CITY
MT. PLEASANT
SHEPHERD
Au Sable State Forest
State Game Area
ROSEBUSH - 1
LEATON - 2
MT. PLEASANT-3
SHEPARD-4 *
UNION TOWNSHIP FLOODPLAIN INFORMATION
INDEX OF U.S. GEOLOGICAL SURVEY MAPS
Community Boundary
Map Boundary
Map Number
Map Name
1 Rosebush
2 Leaton
3 Mt. Pleasant
4 Shepard *
* No flood-prone areas identified on this map
GRATIOT
MIDLAND

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Report

00BREAK00

HYDRAULIC REPORT ON
CHIPPEWA RIVER IN SECTION 25,
T14N-R5W,
DEERFIELD TOWNSHIP
ISABELLA COUNTY
MICHIGAN

Prepared by:
Ruddell Engineering, Inc.
35 West Remus Road
Mt. Pleasant, Michigan

HYDRAULIC REPORT ON CHIPPEWA RIVER IN SECTION 25, T14N-R5W, DEERFIELD TOWNSHIP, ISABELLA COUNTY, MICHIGAN

Introduction

Mr. Lee Jones, owner of Lots 11, 12, 21, 22, 24, 25, 34, 41 and Outlot A of the recorded plat of Hiawatha Hills, located in the E 1/2, NE 1/4 of Section 25, T14N-R5W, requested of the Michigan Department of Natural Resources that a flood hazard determination be made for the lots. Mr. Ted Collins of the Flood Plain Management Section of DNR replied that the 100 year flood plain must be established before the flood hazard could be determined. It is Mr. Jones' desire to provide for filling of certain areas of the flood plain to allow construction of single family residences. A filling permit is not being requested at this time, but Mr. Jones desires that permission to fill will be granted upon submittal of a proper application.

The investigation of the flood plain included downstream from Meridian Road (East line of Section 25) for plus or minus one-half mile and upstream plus or minus one-quarter mile. The bridge carrying Meridian Road across the Chippewa River was also investigated. Existing plotted river cross sections were utilized as much as possible with additional cross sections being completed where necessary.

The 100 year flood discharge of 4400 cfs at Meridian Road was provided by Mr. Collins of DNR.

Method of Analysis

The Army Corps of Engineers Manual "Backwater Curves in River Channels" (EM-1110-2-1409 7 Dec 59) Method No. 1 was used as the basis of analysis of the 100 year flood. This procedure utilizes the Bernoulli's Theorem and Manning's Formula for the determination of the water surface and energy gradient. The Meridian Road bridge was analyzed by two methods. First, that the bridge opening would function under open channel flow conditions. Second, that the opening would function as an orfice.

A vigorous bridge analysis was not done in that all the losses caused by the piers and opening of the bridge were not considered. The velocity through the bridge opening is relatively small and from the analysis of the bridge it appears that the bridge is not a controlling structure.

It was determined that an error of plus or minus 1.0 ft. in the flood plain elevation would be of sufficient accuracy. The method of analysis used will give required accuracy under the stated conditions.

Variables and Coefficients

The utilization of Manning's Formula in determining flows requires the assigning of roughness coefficients (n) to the wetted perimeters of the channel. Roughness coefficients were assigned utilizing observation of the existing channel and flood plain areas of the section of river under analysis. The values of the roughness coefficients were determined using Table 5 - 6 from "Open Channel Hydraulics" by Ven Te Chow published by McGraw Hill Book Company. A copy of the table is included in the appendix. The coefficients were verified by comparison to the table in the Corps Manual.

Normal Channel

Roughness Coefficient - 0.045
The normal channel is a reasonable regular channel having a gravel bottom with little brush on the banks.

Flood Plains

Roughness Coefficient - 0.035
This "n" was assigned to the flood plain which is open land utilized as pasture having an intermediate height of grass and was only utilized for a small cross section area which carries plus or minus six percent (6%) of the channel flow at the section.

Roughness Coefficient - 0.05
This "n" was assigned to the flood plain which is open with high grass and very light brush. It was also utilized in areas adjacent to where residential construction is anticipated and would be used as lawn areas.

Roughness Coefficient - 0.06
This "n" was assigned to the flood plain similar to that assigned "n" = 0.05 with the difference being more brush in existence.

Roughness Coefficient - 0.100
This "n" was assigned to flood plain areas having a moderate to heavy stand of timber with little underbrush. The flood waters would reach portions of the branches.

Roughness Coefficient - 0.110
Same as above except heavier stand of timber.

Roughness Coefficient - 0.025
This "n" was assigned to the bridge which has a gravel bottom with sides of formed concrete. This is the maximum value indicated in the above referred to Table 5 - 6 and should compensate for the pier and expansion and contraction losses which were not considered in the bridge analysis.

Starting Elevation

The starting point for determination of the flood plain is at the point where the Chippewa River crosses the N & S 1/4 line of Section 19, T14N-R4W, (Section D). This section was surveyed for the plat of Meadowbrook and the 50 year flood plain elevation was established. The 100 year flood plain elevation was assumed to be 1.1 ft. above the established 50 year flood plain. The next cross section (Section D) is also part of the determination of the 50 year flood plain and therefore offered an immediate check on the validity of the assumed elevation.

As the computation proceed upstream, any error in the assumed elevation tends to diminish. A further verification of the starting elevation is the flood plain elevation at the bridge which indicates that the bridge is functioning at its full capacity. As a further verification on the starting elevation, a backwater profile was computed using 776.0 as the starting elevation. Running an approximate profile at the bridge is 778.3 which is within 0.6 ft. of the profile using a starting elevation of 775.0'From a difference of 1.0ft. the difference decreased by plus or minus one-half ft. which indicates that the starting elevation of 775.0 ft. is valid.

Discussion

The standard step method of flood plain analysis which was used in the computations is a widely utilized method of flood plain analysis. The analysis indicates that for the 100 year flood that the Meridian Road bridge is not a controlling structure but is functioning very close to capacity. The flood plain is wide in relation to the flow which means that the water depth is shallow during flood conditions. Shallow flow creates a greater resistance to flow in that the irregulatities of the bottom surface have a more pronounced effect on the flow.

The normal channel of the river is generally a clean gravel bottom with banks which have little vegetation on them. The flood plain areas vary from open pasture land to heavy timbered areas with little underbursh. As the section under consideration is in platted subdivisions, it can be assumed that as the lots are occupied the flood plain areas will be converted into lawn areas with no short brush.

One item which should be noted is that the flood plain computations were terminated in the recorded plat of Rivercrest No. 3 which does indicate a "50" year flood plain elevation. At Section 5, our computed 100 year flood plain elevation is 3.0 ft. below the recorded 50 year flood elevation and at Section 4 the 100 year flood elevation is 1.9 ft. below the recorded 50 year flood elevation. Discussion with DNR personnel indicates that they do not have much confidence in the Rivercrest flood plain determination. It was one of the first flood plains computed by the State for plats, the computation method may not have been refined. There also is a question if the discharge was the same as computed now.

APPENDIX A - CORESPONDENCE

Lee Jones Builder
40 Cedar Drive, Hiawatha Hills
Mt Pleasant, Michigan
Phone-773-7311

Fine Quality Custom Built Homes

September 24, 1976

Michigan Department of Natural Resources
Lansing, Michigan

Dear Mr. Collins:

As a follow-up of our conversation on September 9, 1976 concerning the sale of lots in Hiawatha Hills Subdivision recorded in Isabella County, Michigan on May 5, 1964, we would like to have your department make a flood hazard determination of the following lots: 11, 12, 21, 22, 24, 25, 34, 41, and Outlot A.

We are requesting this determination prior to the sale of the above lots for residential use.

May we hear from you soon as to your decision.

Sincerely yours,

Lee Jones

Jones & Cernek Development Co.

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n
(Boldface figures are values generally recommended in design)

Type of channel and description	Minimum	Normal	Maximum
A. CLOSED CONDUITS FLOWING PARTLY FULL			
A-1. Metal			
a. Brass, smooth	0 009	**0.010**	0 013
b. Steel			
1 Lockbar and welded	0 010	0 012	0 014
2. Riveted and spiral	0 013	0 016	0 017
c. Cast iron			
1. Coated	0 010	0 013	0.014
2. Uncoated	0 011	0.014	0.016
d. Wrought iron			
1. Black	0 012	0 014	0.015
2. Galvanized	0 013	0.016	0.017
e. Corrugated metal			
1. Subdrain	0 017	0 019	0.021
2. Storm drain	0 021	**0.024**	0 030
A-2 Nonmetal			
a. Lucite	0 008	0 009	0.010
b. Glass	0 009	**0.010**	0 013
c. Cement			
1. Neat, surface	0 010	0 011	0 013
2. Mortar	0 011	0 013	0 015
d. Concrete			
1. Culvert, straight and free of debris	0 010	0 011	0.013
2. Culvert with bends, connections, and some debris	0 011	**0.013**	0 014
3. Finished	0 011	0 012	0 014
4. Sewer with manholes, inlet, etc., straight	0 013	0 015	0 017
5. Unfinished, steel form	0 012	0 013	0 014
6. Unfinished, smooth wood form	0 012	**0.014**	0.016
7. Unfinished, rough wood form	0 015	0 017	0 020
e. Wood			
1. Stave	0 010	0 012	0 014
2. Laminated, treated	0 015	0.017	0.020
f. Clay			
1. Common drainage tile	0 011	**0.013**	0.017
2. Vitrified sewer	0 011	0.014	0 017
3. Vitrified sewer with manholes, inlet, etc.	0.013	0 015	0.017
4. Vitrified subdrain with open joint	0.014	**0.016**	0.018
g. Brickwork			
1. Glazed	0 011	0.013	0.015
2. Lined with cement mortar	0 012	0.015	0.017
h. Sanitary sewers coated with sewage slimes, with bends and connections	0.012	0.013	0.016
i. Paved invert, sewer, smooth bottom	0 016	0 019	0.020
j. Rubble masonry, cemented	0 018	0 025	0.030

TABLE 5-6 VALUES OF THE ROUGHNESS COEFFICIENT n (*continued*)

Type of channel and description	Minimum	Normal	Maximum
LINED OR BUILT-UP CHANNELS			
B-1 Metal			
a Smooth steel surface			
1 Unpainted	0 011	**0.012**	0 014
2 Painted	0 012	0 013	0.017
b. Corrugated	0 021	0 025	0.030
B-2 Nonmetal			
a. Cement			
1. Neat, surface	0 010	0.011	0.013
2. Mortar	0 011	0 013	**0.015**
b. Wood			
1 Planed, untreated	0 010	0.012	0 014
2 Planed, creosoted	0 011	0 012	0 015
3. Unplaned	0 011	0 013	0 015
4 Plank with battens	0 012	0 015	0 018
5 Lined with roofing paper	0 010	0.014	0 017
c. Concrete			
1 Trowel finish	0 011	**0.013**	0 015
2 Float finish	0 013	0 015	0 016
3. Finished, with gravel on bottom	0 015	0.017	0 020
4. Unfinished	0 014	0 017	0 020
5 Gunite, good section	0 016	0 019	0.023
6 Gunite, wavy section	0 018	0 022	0.025
7 On good excavated rock	0 017	0 020	
8 On irregular excavated rock	0 022	0 027	
d Concrete bottom float finished with sides of			
1. Dressed stone in mortar	0 015	0 017	0 020
2. Random stone in mortar	0 017	0 020	0 024
3. Cement rubble masonry, plastered	0 016	0 020	0 024
4 Cement rubble masonry	0 020	0 025	0.030
5. Dry rubble or riprap	0 020	0.030	0 035
e. Gravel bottom with sides of			
1. Formed concrete	0 017	0.020	0.025
2. Random stone in mortar	0.020	0 023	0.026
3. Dry rubble or riprap	0.023	0.033	0.036
f. Brick			
1. Glazed	0 011	**0.013**	0.015
2. In cement mortar	0 012	**0.015**	0.018
g. Masonry			
1. Cemented rubble	0 017	0.025	0.030
2. Dry rubble	0 023	0 032	0.035
h. Dressed ashlar	0 013	0.015	0.017
i. Asphalt			
1. Smooth	0 013	0 013	
2. Rough	0 016	0 016	
j. Vegetal lining	0 030	[illegible]	0 500

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n (*continued*)

Type of channel and description	Minimum	Normal	Maximum
C. EXCAVATED OR DREDGED			
a. Earth, straight and uniform			
1. Clean, recently completed	0 016	0 018	0.020
2. Clean, after weathering	0 018	0.022	0.025
3. Gravel, uniform section, clean	0 022	0 025	0 030
4. With short grass, few weeds	0 022	0 027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0 023	0 025	0.030
2. Grass, some weeds	0 025	0 030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0 035	0.040
4. Earth bottom and rubble sides	0 028	0 030	0 035
5. Stony bottom and weedy banks	0 025	0 035	0 040
6. Cobble bottom and clean sides	0 030	0 040	0 050
c. Dragline-excavated or dredged			
1. No vegetation	0 025	0 028	0 033
2. Light brush on banks	0 035	0 050	0 060
d. Rock cuts			
1. Smooth and uniform	0 025	0 035	0 040
2. Jagged and irregular	0 035	0 040	0 050
e. Channels not maintained, weeds and brush uncut			
1. Dense weeds, high as flow depth	0 050	0 080	0 120
2. Clean bottom, brush on sides	0 040	0 050	0 080
3. Same, highest stage of flow	0 045	0 070	0 110
4. Dense brush, high stage	0 080	0 100	0 140
D. NATURAL STREAMS			
D-1. Minor streams (top width at flood stage <100 ft)			
a. Streams on plain			
1. Clean, straight, full stage, no rifts or deep pools	0 025	0.030	0 033
2. Same as above, but more stones and weeds	0 030	0 035	0 040
3. Clean, winding, some pools and shoals	0 033	0 040	0.045
4. Same as above, but some weeds and stones	0 035	0 045	0 050
5 Same as above, lower stages, more ineffective slopes and sections	0 040	0.048	0.055
6. Same as 4, but more stones	0 045	0 050	0.060
7 Sluggish reaches, weedy, deep pools	0 050	0 070	0 080
8. Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0 075	0.100	0.150

TABLE 5-6 VALUES OF THE ROUGHNESS COEFFICIENT n (*continued*)

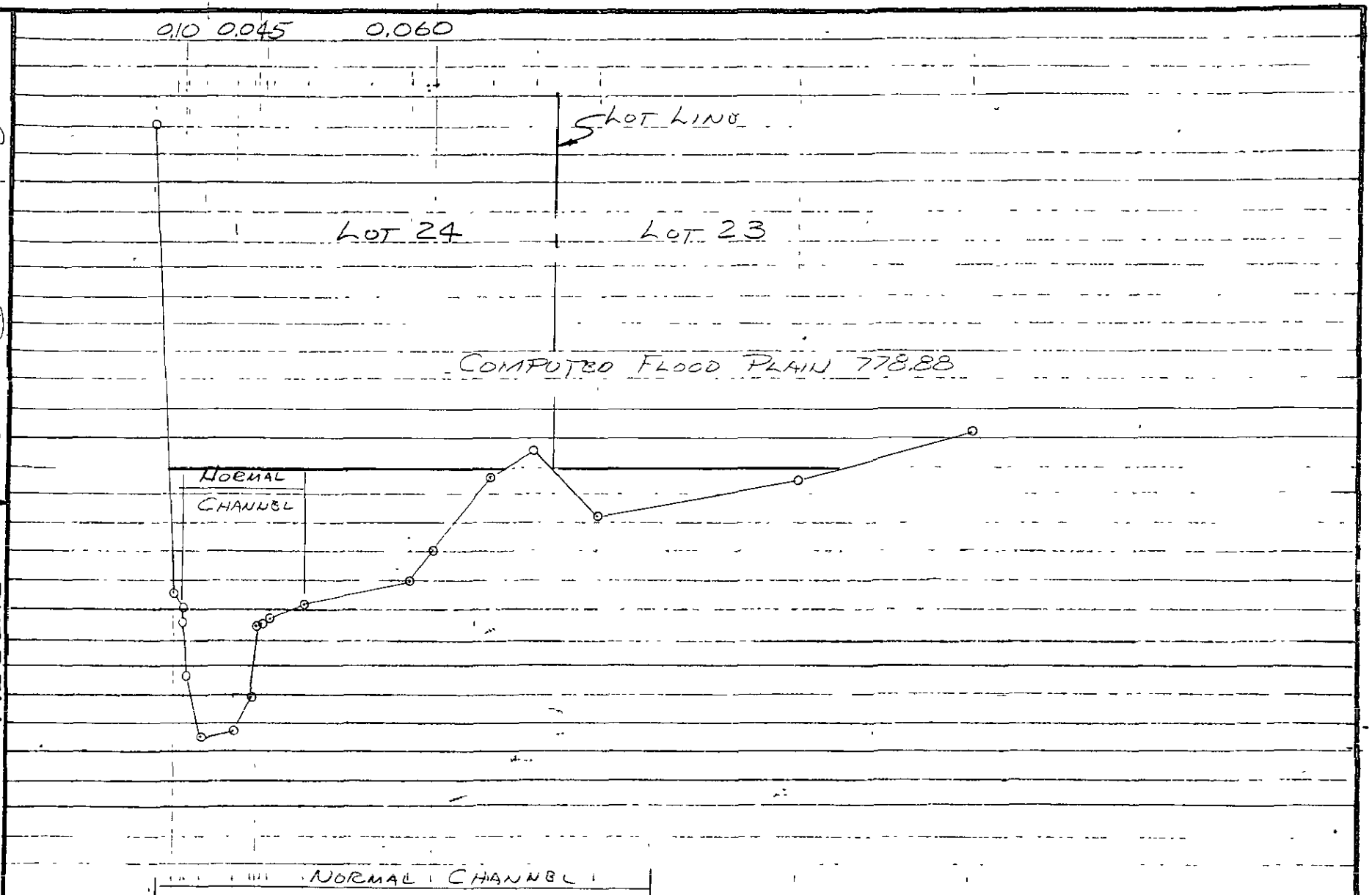
Type of channel and description	Minimum	Normal	Maximum
b. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stages			
1. Bottom gravels, cobbles, and few boulders	0 030	0 040	0 050
2. Bottom: cobbles with large boulders	0 040	0 050	0 070
D-2 Flood plains			
a. Pasture, no brush			
1. Short grass	0 025	0 030	0 035
2. High grass	0 030	0 035	0 050
b Cultivated areas			
1 No crop	0 020	0 030	0 040
2 Mature row crops	0 025	0.035	0 045
3 Mature field crops	0 030	0 040	0 050
c Brush			
1 Scattered brush, heavy weeds	0 035	0 050	0 070
2 Light brush and trees, in winter	0 035	0 050	0.060
3 Light brush and trees, in summer	0 040	0 060	0 080
4 Medium to dense brush, in winter	0 045	0 070	0 110
5. Medium to dense brush, in summer	0 070	0 100	0 160
d Trees			
1 Dense willows, summer, straight	0 110	0 150	0 200
2 Cleared land with tree stumps, no sprouts	0 030	0 040	0 050
3 Same as above, but with heavy growth of sprouts	0 050	0 060	0 080
4 Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0 080	0 100	0 120
5. Same as above, but with flood stage reaching branches	0 100	0 120	0 160
D-3 Major streams (top width at flood stage >100 ft). The n value is less than that for minor streams of similar description, because banks offer less effective resistance			
a Regular section with no boulders or brush	0 025		0 060
b Irregular and rough section	0.035		0 100

ROUGHNESS COEF

CHIPPEWA RIVER

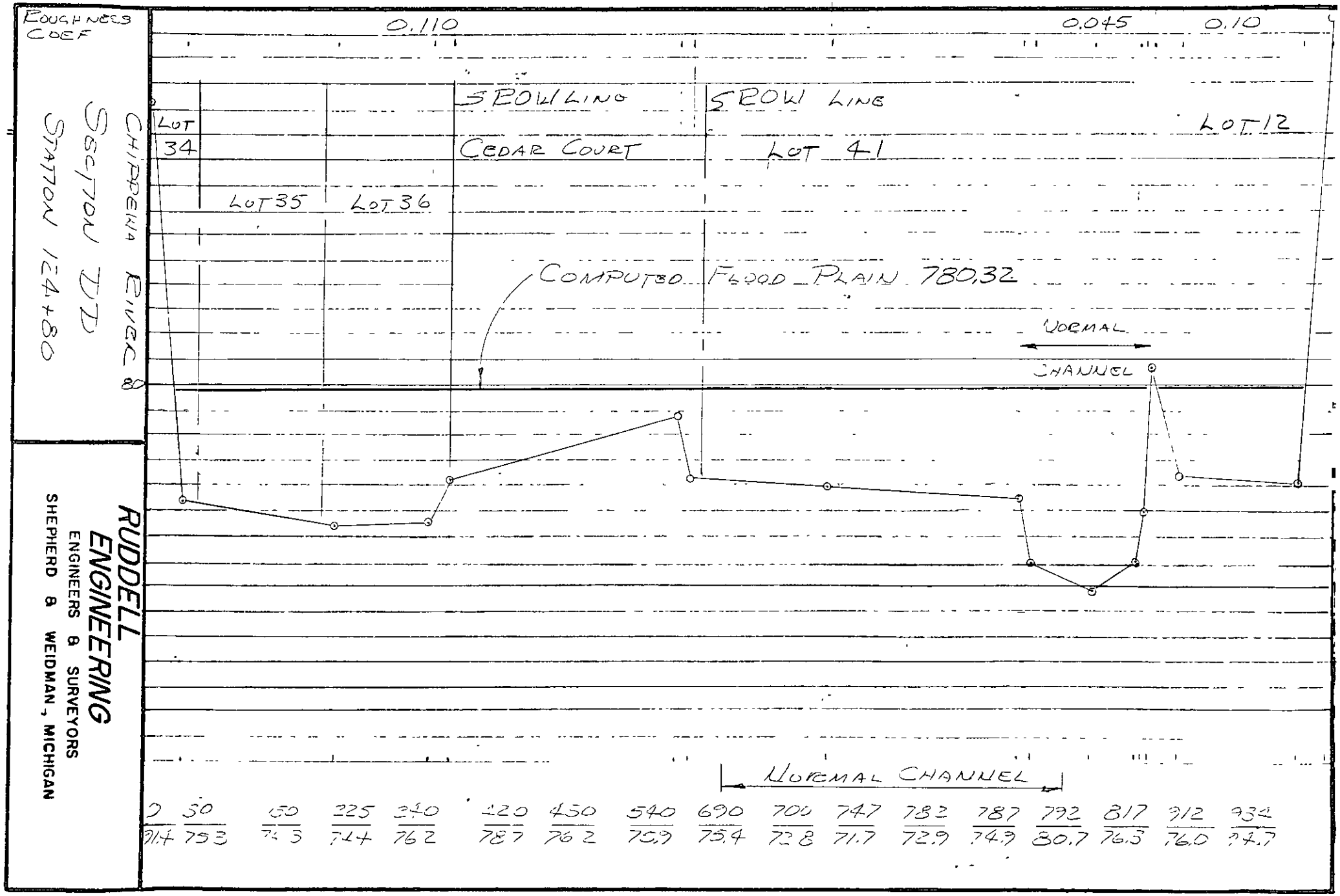
SECTION 6

STATION 115+30



0	16	21	21	22	35	58	70	72	77	82	108	180	195	235	265	310	450	570
91.1	74.5	74.0	73.5	71.6	69.4	67.6	70.3	73.5	73.4	75.6	77.1	74.9	76.0	78.6	79.5	77.2	78.5	80.2

RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

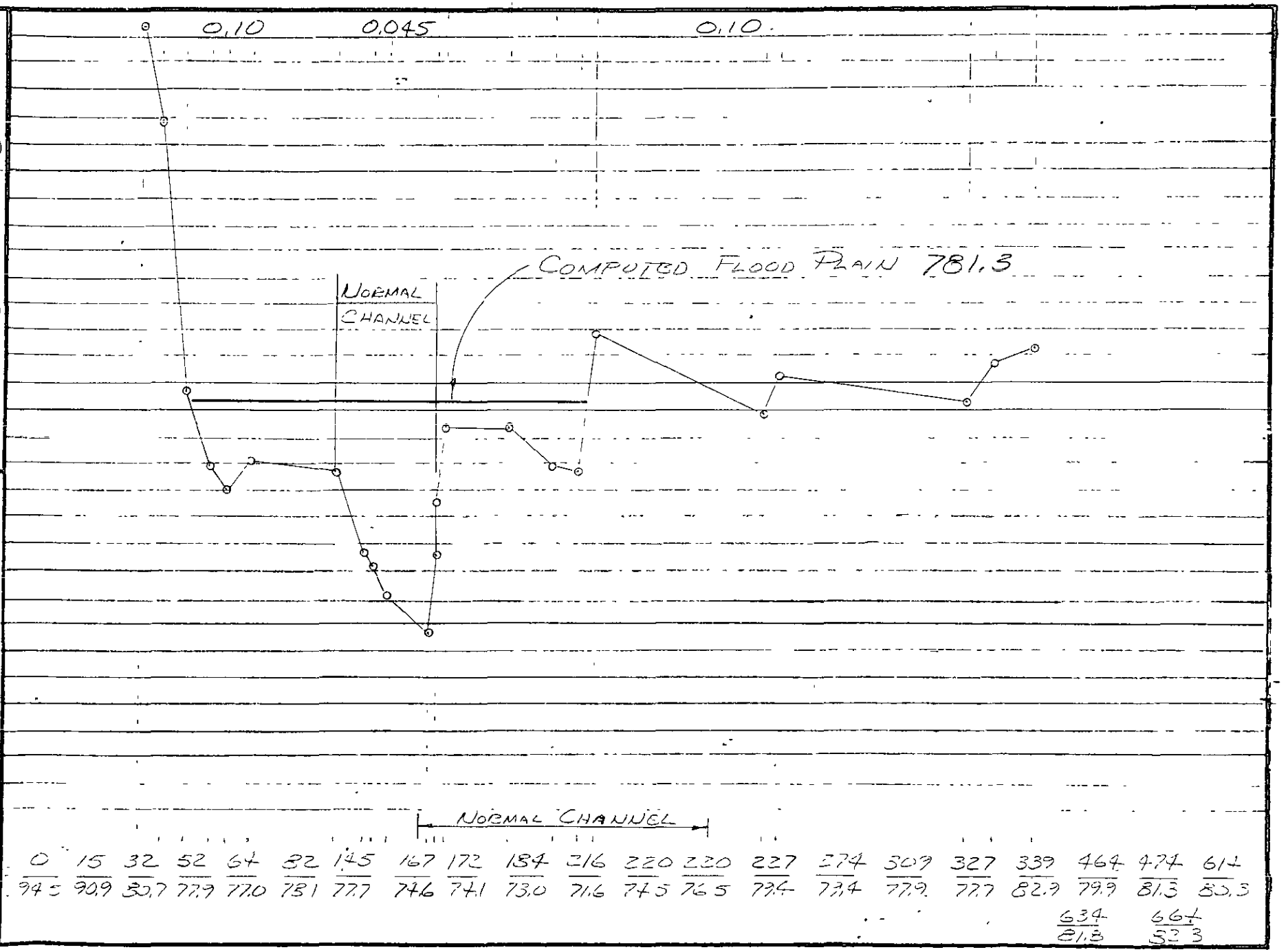

ROUGHNESS COEF
CHIPPEWA RIVER
SECTION DD
STATION 124+80
RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN
0.110
0.045
0.10
SROW LINE
SROW LINE
LOT 34
CEDAR COURT
LOT 41
LOT 12
LOT 35
LOT 36
COMPUTED FLOOD PLAIN 780.32
NORMAL CHANNEL
80
NORMAL CHANNEL
0 50 150 225 240 420 450 540 690 700 747 782 787 792 817 912 934
91.4 75.3 74.3 74.4 76.2 78.7 76.2 75.9 75.4 72.8 71.7 72.9 74.9 80.7 76.3 76.0 94.7

ROUGHNESS COEF

CHIPPEWA RIVER

SECTION 5

STATION 132+80



RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

Sec No. Assume Ele	Reach Length	Area	P	n	Corr n	$S_1 = 0.001$, $S_2 = 0.0316$: $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W. S. Ele.	
D		65	17	0.10		1.15	74.6				0.86	559	41.5						
775.0		692	68	0.045		4.90	3391.0				3.67	2539.0	3419.5						
		2056	521	0.100		1.17	2410.9				0.88	1305.1	1377.9						
							5876.5	0.000559				4400	35656.7	8.10	0.13		775.13	775.0	I
	1090								0.000353	0.36						0.11	0.47	775.47	A
																		-.03	
A		177	35	0.060		2.31	408.1				0.76	134.7	77.8						
775.5		1808	205	0.045		4.45	8053.6				1.47	2658.6	5745.0						
		2476	622	0.060		1.97	4867.2				0.65	1606.7	678.8						
							13328.9	0.000108				4400	6501.6	1.48	0.02		775.52		
	4400								0.000387	1.70						-0.10	1.60	777.07	A
																		-.45	
A A	(2500)	117	55	0.035	0.026	2.99	349.5				2.44	285.3	1698.6						
777.5	-	781	105	0.045	0.045	3.97	3105.4				3.22	2535.4	26288.0						
	(2700)	851	248	0.060	0.047	2.27	1934.3				1.85	1579.3	5405.2						
							5389.2	0.000666				4400.0	333918	7.59	0.12		777.62		
	650								0.001075	0.64									
50' DS of Bridge (Use CC)		190	56	0.100		1.06	2015				1.29	245.7	408.7			0.27	0.37	777.44	
		758	90	0.045		4.31	3274.3				5.25	3991.6	110018.5					-.76	
		232	171	0.100		0.58	133.5				0.71	162.7	82.0						
778.2							5609.3	0.001484				4400	110509.4	25.12	0.39				
50 DS of Bridge (Use CC)	600								0.001200	0.72						-0.05	0.67	777.74	50 D
		170	56	0.10		0.98	167.4				1.29	220.5	366.9					-.00	Bei
		726	90	0.045		4.20	3047.1				5.53	4014.1	122754.8			+0.32	0.40	777.47	
		176	94	0.100		0.71	125.5				0.94	165.4	146.1					-.33	
777.8							3340	0.001733				4400	123267.8	28.02	0.44		778.24		
									0.001366	0.07						-0.10	-0.03	777.71	
	50																		
Bridge 778.3		748	135	0.025		5.88	4399.3	0.001000			5.88	4400	152127.3	34.57	0.54				

Sec No Assume Ele	Reach Lenth	Area	P	n	Corr n	$S_1 = 0.001$, $S_2 = 0.0316$: $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.	
	50								0.001438	0.07						-0.15	-0.08	777.66	Bri
Bridge 777.75		712	132	0.025		5.78	4113.2	0.001143			6.18	4400		38.19	0.59		778.34		
	80								0.001318	0.11						0.22	0.33	777.99 -.01	C
CC 778.0		180	55	0.10		1.04	186.3				1.27	227.9	367.6						
		742	90	0.045		4.26	3159.9				5.21	3865.0	104911.9						
		176	94	0.05		1.43	251.1				1.75	307.1	940.5						
							3597.3	0.001494				4400	106220	24.14	0.37		778.37		
	500								0.001717	0.86						0.03	0.89	778.88 -.12	G
6 779.0		33	14	0.10		0.83	27.4				1.16	38.2	51.4						
		645	96	0.045		3.72	2396.5				5.18	3340.1	89622.9						
		449	149	0.06		1.63	733.1				2.27	1021.7	5264.7						
							3157.0	0.001940				4400.0	94939.0	21.58	0.34		779.34		
	950								0.001206	1.15						0.29	1.44	780.32 +.12	DD
DD 780.2		2846	683	0.11		1.11	3146.0				0.76	2160.7	1248.0						
		758	114	0.045		3.69	2796.9				2.53	1921.0	12296.1						
		444	134	0.10		1.04	463.4				0.71	318.3	160.5						
							6406.3	0.000471				4400.0	13704.6	3.11	0.05		780.25		
	800								0.001441	1.15						-0.38	0.77	781.09	
5 ~~781.7~~		534	142	0.10		1.14	606.4				1.77	942.2	2951.8						
		470	61	0.045		4.07	1913.2				6.32	2972.8	118740.8						
		334	119	0.10		0.93	312.1				1.45	485.0	1019.7						
							2831.7	0.002411				4400	122712.3	27.89	0.43				

Bridge loss from dnstr wtr surf to upstream EGL 1.09'
~~Using min K of 1.7 H=0.8~~
~~or a min EGL of~~ 778.6

Should be ≈ 778.6

Sec No. Assume Ele	Reach Length	Area	P	n	Corr n	$S_1 = 0.001$, $S_2 = 0.0316$: $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.	
	800								0.001847	1.48						-0.51	0.97	781.29 +.03	5
5		466	142	0.10		1.04	483.2				1.87	868.1	3035.7						
781.2		444	61	0.045		3.92	1740.1				7.04	3126.4	154,949.4						
		275	119	0.10		0.82	225.7				1.47	405.5	876.2				781.76		
							2449.0	0.003223				4400	158,861.3	36.10	0.56				
	480								0.002199	1.06						0.32	1.38	782.67 -.03	4
4		1033	236	0.10		1.26	1298.0				1.37	1408.5	2643.6						
782.7		625	73	0.045		4.37	2729.5				4.74	2961.8	66,544.5						
		32	13	0.10		0.86	27.4				0.93	29.7	25.7						
							4054.9	0.001176				4400	69213.8	15.73	0.24		782.94		

Sec No Assume Ele	Reach Length	Area	P	n	Corr n	$S_1 = 0.001$, $S_2 = 0.0316$ $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_2} - h_{v_1}$	Total H	W.S. Ele.

ASSUME BRIDGE ACTS AS ORIFICE

$Q = CA\sqrt{2gH}$

H = DISTANCE FROM CENTER OPENING TO TOP WATER

$4400 = 0.7(752)\sqrt{64.4H}$

$1.08 = H$

WS ELE = 74.28

WHICH IS BELOW MINIMUM ELEVATION FOR ORIFICE.

CHECK ON STARTING ELEVATION

Sec. No. Assume Ele	Reach Lenth	Area	P	n	Corr. n	$S_1 = 0.001$, $S_2 = 0.0316$ $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.
D																		
776.0		82	17	0.10		1.34	109.9											
		760	68	0.045		5.21	3964.4											776.0 D
		2577	521	0.10		1.36	3512.9											
							7587.2	0.000336										
	1090								0.000206	0.22								776.2 A
A		202	35	0.06		2.52	508.7											
776.2		1951	205	0.045		4.68	9142.9											
		2911	622	0.06		2.19	6374.3											
							16025.9	0.000075										
	4400								0.000371	1.63								777.8 A
A	2500	117	55															
777.5	2700							0.000666										
	650								0.00083	0.54								778.3 Bo
Bridge																		
778.3		748	135	0.025		5.88	4399.3	0.001000										

APPENDIX C - FLOOD PLAIN COMPUTATIONS
PROPOSED CONDITIONS

PROPOSED FILL SECTION

Sec No Assume Ele	Reach Lenth	Area	P	n	Corr n	$S_1 = 0.001$, $S_2 = 0.0316$: $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.
Bridge 772.75		712	132	0.025		5.78	4113.2	0.001143			6.18	4400		38.19	0.59	-		777.66
	80								0.001112	0.09						0.28	0.37	778.03
CC 779.0		233	60	0.10		1.16	270.3				1.21	281.3	411.9					
		816	90	0.045		4.54	3702.4				4.73	3853.3	86209.5					
		138	50	0.05		1.85	255.0				1.93	265.4	988.6					
							4227.7	0.001082				4400	87609.9	19.9	0.31			
	80								0.001230	0.10						0.23	0.33	777.99
CC 778.5		205	58	0.10		1.09	223.4				1.25	256.6	400.9					
		776	90	0.045		4.39	3404.9				5.04	3911.5	99358.4					
		117	47	0.05		1.72	201.8				1.98	231.9	909.1					
							3830.1	0.001318				4400	100668.4	22.88	0.36			
CC 778.1	80								0.0013476	0.11						0.19	0.30	777.96 CC
		185	56	0.10		1.04	192.7				1.30	240.3						
		744	90	0.045		4.27	3174.1				5.32	3957.4						
		100	44	0.050		1.62	162.3				2.02	202.3						
							3529.1	0.001552				4400	113235.5	25.74	0.40			
6 778.6	500								0.001869	0.93						0.05	0.98	778.94 6
		30	14	0.10		0.78	23.4				1.15	34.6	45.8					
		610	96	0.045		3.58	2183.7				5.30	3230.5	90744.7					
		394	132	0.050		1.95	767.1				2.88	1134.9	9413.3					
							2974.2	0.002185				4400	100203.8	22.77	0.35			

PROPOSED FILL SECTION

Sec. Nº Assume Ele	Reach Lenth	Area	P	n	Corr. n	$S_1 = 0.001$, $S_2 = 0.0316$: $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.
	500								0.001748	0.87						-0.05	0.82	778.78 (6)
6		33	14	0.1		0.83	27.4				1.16	38.2	51.4					
779.0		645	96	0.045		3.72	2396.5				5.19	3343.9	90071.6					
		361	87	0.06		2.02	729.5				2.82	1017.9	8094.7					
							3153.4	0.001944				4400	98217.7	22.32	0.35			
	950								0.001666	1.58						0.07	1.65	780.43 (DD)
DD		533	132	0.10		1.19	634.7				1.40	747.9	1465.5					
780.5		781	107	0.045		3.93	3066.6				4.63	3613.9	77470.8					
		52	34	0.10		0.62	32.4				0.73	38.2	20.4					
							3733.7	0.001387				4400	78956.7	17.94	0.28			
	800								0.002305	1.84						-0.28	1.56	781.79
5		466	142	0.10		1.04	483.2				1.87	868.1	3035.7					
781.2		444	61	0.045		3.92	1740.1				7.04	3126.4	154,949.4					
		275	119	0.10		0.82	225.7				1.47	405.5	876.2					
							2449.0	0.003223				4400	158,861.3	36.10	0.56			
	800								0.001899	1.52						-0.15	1.37	781.80 (5)
5		534	142	0.10		1.14	606.4				1.77	942.2	2951.8					
781.7		470	61	0.045		4.07	1913.2				6.32	2972.8	118740.8					
		334	119	0.10		0.93	312.1				1.45	485.0	1019.7					
							2831.7	0.002411				4400	122712.3	27.89	0.43			
	480								0.001794	0.86						0.19	1.05	782.95 (4)
4																		
782.7								0.001176							0.24			

APPENDIX D - PROFILES AND MAPS

HYDRAULIC REPORT ON
CHIPPEWA RIVER IN SECTION 25,
T14N-R5W,
DEERFIELD TOWNSHIP
ISABELLA COUNTY
MICHIGAN

(ADDITION TO PREVIOUS REPORT - MICH. DEPT. OF NATURAL RESOURCES SERVICE No. 7705-54)

Prepared by:
Ruddell Engineering, Inc.
35 West Remus Road
Mt. Pleasant, Michigan
December 29, 1978

TABLE OF CONTENTS

	Page
Introduction	1
Method of Analysis	1
Variables	1
Discussion	2
Proposed Flood Plain Alterations	3
Conclusions	3

Appendix A

Computations:

Existing Conditions
Proposed fill Lot 25 only
Proposed fill Hiawatha Hills & Lot 25
River Bottom & Flood Plain Profiles

Appendix B

Previous Report
DNR Service No. 7705-54

Appendix C

Permit Application

Act 346, PA 1972
Act 245, PA 1929

Approval from Deerfield Township

Plot Plan
Crossection 3 and 4

HYDRAULIC REPORT ON CHIPPEWA RIVER IN SECTION 25, T14N-R5W,
DEERFIELD TOWNSHIP, ISABELLA COUNTY, MICHIGAN
(ADDITION TO PREVIOUS REPORT - DNR SERVICE No. 7705-54)

Introduction

Mr. Harold Himes, owner of Lot 25, of the recorded plat of Rivercrest, requested that permission be obtained from the Michigan Department of Natural Resources under Act 245, P.A. 1929 as amended, The Flood Plain Control Act, for placing fill upon the lot and construction of a single family dwelling.

This report is an addition to the report previously submitted by Ruddell Engineering, Inc. Lot 25 is bisected by River crossection 4 which was the furthest upstream crossection utilized in the previous report. We, therefor, had information to begin from and only needed to extend the computations upstream one crossection (Section 3).

Method of Analysis

The Army Corps of Engineers Manual "Backwater Curves in River Channels" (EM-1110-2-1409 7 Dec 59) Method No. 1 was used as the basis of analysis of the 100 year flood. This procedure utilizes the Bernoulli's Theorem and Manning's Formula for the determination of the water surface and energy gradient. It was determined that an error of plus or minus 0.5 ft. in the flood plain elevation would be of sufficient accuracy. The method of analysis used will give required accuracy under the stated conditions.

Variables and Coefficients

The utilization of Manning's Formula in determining flows requires the assigning of roughness coefficients (n) to the wetted perimeters of the channel. Roughness coefficients were assigned utilizing observation of the existing channel and flood plain areas of the section of river under analysis. The values of the roughness coefficients were determined using Table 5 - 6 from "Open Channel Hydraulics" by Ven Te Chow published by McGraw Hill Book Company. A copy of the table is included in the appendix of the previous report. The coefficients were verified by comparison to the table in the Corps Manual.

Normal Channel

Roughness Coefficient - 0.045
The normal channel is a reasonable regular channel having a gravel bottom with little brush on the banks.

Flood Plains

Rougness Coefficient - 0.035
This "n" was assigned to the flood plain which is open land utilized as pasture having an intermediate height of grass and was only utilized for a small cross section area which carries plus or minus six percent (6%) of the channel flow at the section.

Starting Elevation

The starting elevation used was taken from the previous report.

Discussion

The standard step method of flood plain analysis which was used in the computations widely utilized. The flood plain is wide in relation to the flow, i.e. having shallow depths on the overbank areas. In this type of situation, generally, filling of a portion of overbank areas causes little rise in the flood plain elevation.

The normal channel of the river is generally a clean gravel bottom with banks with little vegetation. The overbank areas in the section under consideration consist of moderate to heavy stands of timber with light amounts of underbrush. This condition is reflected in the "n" used of 0.100. This section consists of existing platted lots, so a valid assumption is that the overbank areas will be cleaned up in a given time period, thereby, creating a less restrictive flow condition. We made no allowance for this future condition in our computations, thereby, remaining on the conservative side of the flood plain contour.

Two different proposed flood plain alternations were considered. First, that the downstream conditions remain as now existing and that the flood plain alteration be to Lot 25 only. A flood plain elevation of 782.6 was computed for Lot 25.

Second, that the proposed alterations as indicated in the previous report were fulfilled along with the alteration to Lot 25. A flood plain elevation of 782.71 was obtained for Lot 25. This is the elevation used in placing the dwelling upon the lot.

At the upstream crossection the maximum change in the flood plain is a rise of 0.64 ft. which is 1.1 ft. below the flood plain indicated on the recorded plat of Rivercrest #3.

The flood plain as recorded on the plat of Rivercrest No. 3 does not have the confidence of the DNR staff. It was one of the first flood plains computed for plats under the Subdivision Control Act and it is their feeling that to conservative an approach was made and that the flood plain is too high. This is proven by our computations.

Proposed Flood Plain Alterations

It is proposed to construct a single family dwelling with attached garage on Lot 25. The building is a split level having the lower floor level below the flood plain with all openings above the flood plain elevation. Approximately 2000 cubic yards of clean sand fill will be placed within the flood plain area. The proposed occupation of the flood plain is as shown on the attached drawings.

The upstream side of the fill will be sodded and landscaped using stone and timber rip-rap to provide a minimum restriction to the splitting of the flood waters. The proposal to have no openings in the dwelling below an elevation of 783.3 which is 0.6 ft. above the computed flood plain.

Conclusions

The proposed alteration of the flood plain on Lot 25 does not materially change the flood plain elevation and direction of flow. The adverse effects are mininual. The raising of the upstream existing general river basin configuration.

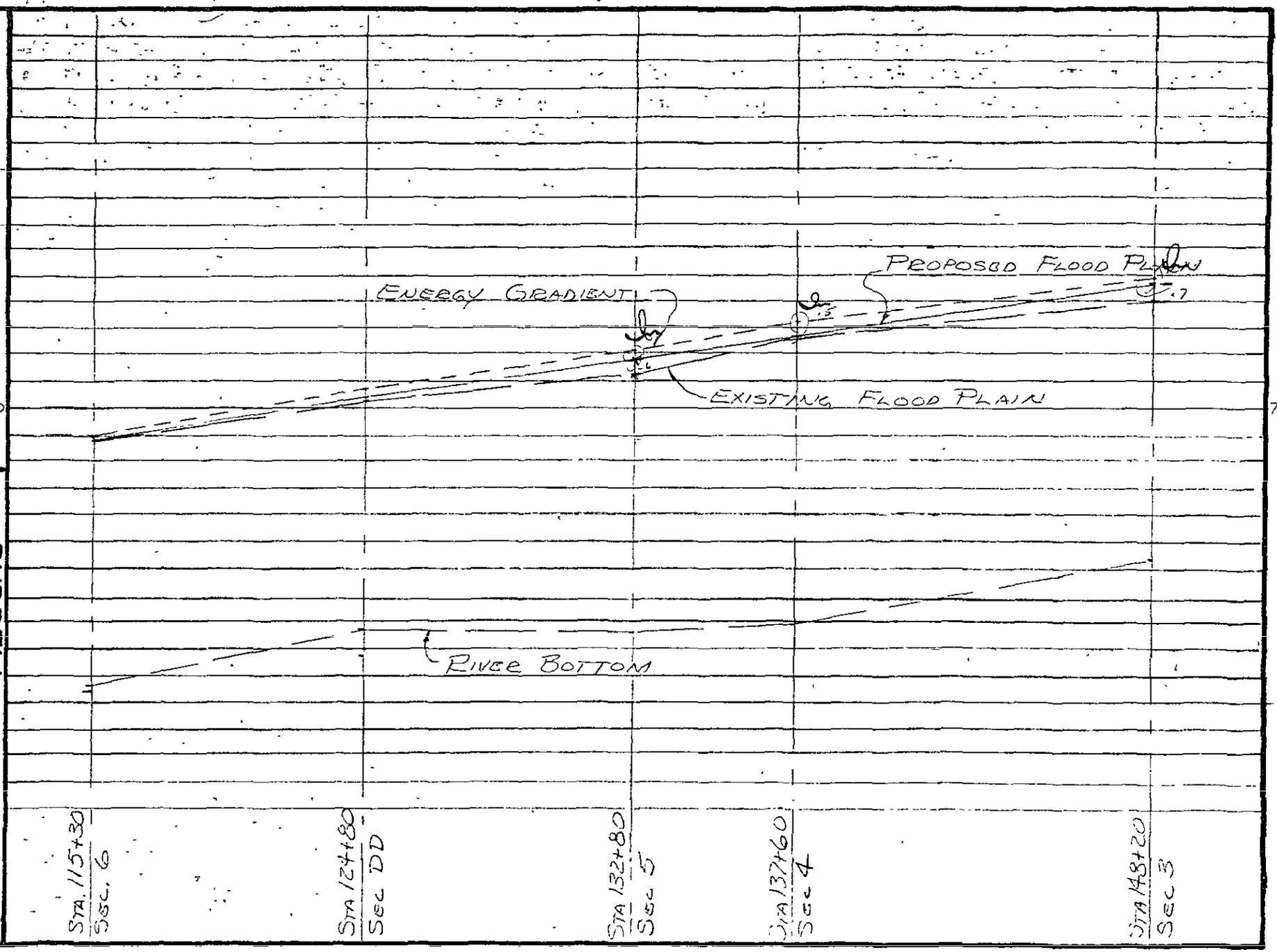
William B. Ruddell

William B. Ruddell
PE & RLS 14769

vss

Appendix A - Computations

CHIPPEWA RIVER
PROFILES



RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

HYDRAULIC REPORT ON
CHIPPEWA RIVER IN SECTION 25,
T14N-R5W,
DEERFIELD TOWNSHIP
ISABELLA COUNTY
MICHIGAN

Prepared by:
Ruddell Engineering, Inc.
35 West Remus Road
Mt. Pleasant, Michigan

HYDRAULIC REPORT ON CHIPPEWA RIVER IN SECTION 25, T14N-R5W, DEERFIELD TOWNSHIP, ISABELLA COUNTY, MICHIGAN

Introduction

Mr. Lee Jones, owner of Lots 11, 12, 21, 22, 24, 25, 34, 41 and Outlot A of the recorded plat of Hiawatha Hills, located in the E 1/2, NE 1/4 of Section 25, T14N-R5W, requested of the Michigan Department of Natural Resources that a flood hazard determination be made for the lots. Mr. Ted Collins of the Flood Plain Management Section of DNR replied that the 100 year flood plain must be established before the flood hazard could be determined. It is Mr. Jones' desire to provide for filling of certain areas of the flood plain to allow construction of single family residences. A filling permit is not being requested at this time, but Mr. Jones desires that permission to fill will be granted upon submittal of a proper application.

The investigation of the flood plain included downstream from Meridian Road (East line of Section 25) for plus or minus one-half mile and upstream plus or minus one-quarter mile. The bridge carrying Meridian Road across the Chippewa River was also investigated. Existing plotted river cross sections were utilized as much as possible with additional cross sections being completed where necessary.

The 100 year flood discharge of 4400 cfs at Meridian Road was provided by Mr. Collins of DNR.

Method of Analysis

The Army Corps of Engineers Manual "Backwater Curves in River Channels" (EM-1110-2-1409 7 Dec 59) Method No. 1 was used as the basis of analysis of the 100 year flood. This procedure utilizes the Bernoulli's Theorem and Manning's Formula for the determination of the water surface and energy gradient. The Meridian Road bridge was analyzed by two methods. First, that the bridge opening would function under open channel flow conditions. Second, that the opening would function as an orfice.

A vigorous bridge analysis was not done in that all the losses caused by the piers and opening of the bridge were not considered. The velocity through the bridge opening is relatively small and from the analysis of the bridge it appears that the bridge is not a controlling structure.

It was determined that an error of plus or minus 1.0 ft. in the flood plain elevation would be of sufficient accuracy. The method of analysis used will give required accuracy under the stated conditions.

Variables and Coefficients

The utilization of Manning's Formula in determining flows requires the assigning of roughness coefficients (n) to the wetted perimeters of the channel. Roughness coefficients were assigned utilizing observation of the existing channel and flood plain areas of the section of river under analysis. The values of the roughness coefficients were determined using Table 5 - 6 from "Open Channel Hydraulics" by Ven Te Chow published by McGraw Hill Book Company. A copy of the table is included in the appendix. The coefficients were verified by comparison to the table in the Corps Manual.

Normal Channel

Roughness Coefficient - 0.045
The normal channel is a reasonable regular channel having a gravel bottom with little brush on the banks.

Flood Plains

Roughness Coefficient - 0.035
This "n" was assigned to the flood plain which is open land utilized as pasture having an intermediate height of grass and was only utilized for a small cross section area which carries plus or minus six percent (6%) of the channel flow at the section.

Roughness Coefficient - 0.05
This "n" was assigned to the flood plain which is open with high grass and very light brush. It was also utilized in areas adjacent to where residential construction is anticipated and would be used as lawn areas.

Roughness Coefficient - 0.06
This "n" was assigned to the flood plain similar to that assigned "n" = 0.05 with the difference being more brush in existence.

Roughness Coefficient - 0.100
This "n" was assigned to flood plain areas having a moderate to heavy stand of timber with little underbrush. The flood waters would reach portions of the branches.

Roughness Coefficient - 0.110
Same as above except heavier stand of timber.

Roughness Coefficient - 0.025
This "n" was assigned to the bridge which has a gravel bottom with sides of formed concrete. This is the maximum value indicated in the above referred to Table 5 - 6 and should compensate for the pier and expansion and contraction losses which were not considered in the bridge analysis.

Starting Elevation

The starting point for determination of the flood plain is at the point where the Chippewa River crosses the N & S 1/4 line of Section 19, T14N-R4W, (Section D). This section was surveyed for the plat of Meadowbrook and the 50 year flood plain elevation was established. The 100 year flood plain elevation was assumed to be 1.1 ft. above the established 50 year flood plain. The next cross section (Section D) is also part of the determination of the 50 year flood plain and therefore offered an immediate check on the validity of the assumed elevation.

As the computation proceed upstream, any error in the assumed elevation tends to diminish. A further verification of the starting elevation is the flood plain elevation at the bridge which indicates that the bridge is functioning at its full capacity. As a further verification on the starting elevation, a backwater profile was computed using 776.0 as the starting elevation. Running an approximate profile at the bridge is 778.3 which is within 0.6 ft. of the profile using a starting elevation of 775.0'From a difference of 1.0ft. the difference decreased by plus or minus one-half ft. which indicates that the starting elevation of 775.0 ft. is valid.

Discussion

The standard step method of flood plain analysis which was used in the computations is a widely utilized method of flood plain analysis. The analysis indicates that for the 100 year flood that the Meridian Road bridge is not a controlling structure but is functioning very close to capacity. The flood plain is wide in relation to the flow which means that the water depth is shallow during flood conditions. Shallow flow creates a greater resistance to flow in that the irregulatities of the bottom surface have a more pronounced effect on the flow.

The normal channel of the river is generally a clean gravel bottom with banks which have little vegetation on them. The flood plain areas vary from open pasture land to heavy timbered areas with little underbursh. As the section under consideration is in platted subdivisions, it can be assumed that as the lots are occupied the flood plain areas will be converted into lawn areas with no short brush.

One item which should be noted is that the flood plain computations were terminated in the recorded plat of Rivercrest No. 3 which does indicate a "50" year flood plain elevation. At Section 5, our computed 100 year flood plain elevation is 3.0 ft. below the recorded 50 year flood elevation and at Section 4 the 100 year flood elevation is 1.9 ft. below the recorded 50 year flood elevation. Discussion with DNR personnel indicates that they do not have much confidence in the Rivercrest flood plain determination. It was one of the first flood plains computed by the State for plats, the computation method may not have been refined. There also is a question if the discharge was the same as computed now.

Proposed Alterations of Flood Plain

It is proposed to fill the areas shown on the attached drawing. Upstream from the bridge the toe of the fill slope will be placed at an angle of 12.5° to a line normal to the bridge. This would approximate the most hydraulicly efficient transition to the bridge.

On Lot 24 it is proposed to place a residence which would have the living quarters above the flood plain elevation and a garage below the living quarters and therefore below the flood plain elevation (sketch attached).

In computing the flood plain after filling had taken place it was assumed that the area of Cedar Court would be blocked so that no flood waters could flow through this area. This does change the direction of flow but only raises the flood plain elevation plus or minus 0.5 ft. As there has previously been constructed two residences which are in the flood plain, this assumption is reasonable. It also would allow for future residence construction on Cedar Court, with approved filling.

Conclusions

The proposed alterations to the flood plain do not materially change the flood plain elevation, raising it plus or minus 0.5 ft. at the maximum. The change of direction of the flood waters is major in certain areas but because of the width of the flood plain in these areas the impact of the direction change should be minimal. No problems are created upstream. The fact that the flood plain as recorded in Rivercrest No. 3 is higher than the computed flood plain indicates that the water surface can raise to plus or minus 2.0 ft. above the recorded flood plain and not cause any problems upstream.

It is our conclusion that the proposed alterations to the flood plain can be allowed with no detrimental effects on the ability of the river to handle the flood discharge.

As stated before, our client, Mr. Jones, is not requesting permission to alter the flood plain at this time, but he does wish agreement by DNR that the proposed flood plain alterations will be acceptable when applications for permission to alter the flood plain is made. We assume that the applications will be made on a lot by lot basis and that greater detail of the proposed alteration will be shown at that time.

William B. Ruddell

William B. Ruddell
PE & RLS 14769

APPENDIX A - CORESPONDENCE

NATURAL RESOURCES COMMISSION
ARL T JOHNSON
M LAITALA
DEAN PRIDGEON
HILARY F. SNELL
HARRY H WHITELEY
JOAN L. WOLFE
CHARLES G. YOUNGLOVE

STATE OF MICHIGAN

WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T MASON BUILDING, BOX 30028, LANSING, MICHIGAN 48909
HOWARD A TANNER, Director

July 7, 1977

William B. Ruddell, P.E.
Ruddell Engineering
35 West Remus Rd.
Mt. Pleasant, MI 48858

Re: Service No: 7705 54
Flood Hazard Determination
Chippewa River
Lee Jones
Lots 20-25, Hiawatha Hills Subdivision
Section 25, T14N, R5W
Deerfield Township
Isabella County

Dear Mr. Ruddell:

This is in response to our telephone conversation of June 2, 1977 regarding the calculations that your office will perform to determine the 100-year flood elevation for lots 20-25, Hiawatha Hills Subdivision.

Our Hydrologic Studies Unit have determined the 100-year peak flood discharge for the Chippewa River at Meridian Road to be 4,400 c.f.s.

After the 100-year flood elevation has been determined, we will be in a better position to comment further on the suitability for development of these lots.

Should you have any questions, please feel free to contact me.

Very truly yours,

BUREAU OF LAND AND WATER MANAGEMENT
Water Management Division

Ted L. Collins

Ted L. Collins

TLC:mks
Enclosure: Guidelines - Hydrologic Report
cc: Lee Jones
Lynn Fauver
File 770553

MICHIGAN
THE GREAT LAKES STATE

R1026 10/76

RESOURCES COMMISSION
JOHNSON
E M LAITALA
DEAN PRIDGEON
HILARY F SNELL
HARRY H WHITELEY
JOAN L WOLFE
CHARLES G YOUNGLOVE

STATE OF MICHIGAN

WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T MASON BUILDING, LANSING, MICHIGAN 48926
HOWARD A TANNER, Director

November 4, 1977

William B. Ruddell
Ruddell Engineering
35 West Remus Road
Mount Pleasant, Michigan 48858

Re: Service No. 7705 54
Chippewa River
Section 25, T14N, R5W
Deerfield Township
Isabella County

Dear Mr. Ruddell:

This is in regard to the request of Mr. Lee Jones, concerning development of Lots 11, 12, 21, 22, 24, 25, 34 and 41 of Hiawatha Hills Subdivision.

Based upon information taken from the Hydraulic Report that you prepared, development of the Lots without measurably effecting flood flows could take place as follows:

Lots 23 and 24 could be filled within the area along their adjoining property line as outlined on the enclosed drawing. Building grades should be not less than 779.5, USGS datum.

Lots 22 and 25 could be filled within their northern portions as outlined on the enclosed drawing. Building grades should be not less than 779.5, USGS datum.

Lot 34 could be filled within the southwesterly portion, only if necessary to provide sufficient building area at an elevation of not less than 779.5, USGS datum.

Lot 41 could be filled to provide a minimum building area in line with the existing building on Lot 42, according to the direction of flood flows. The building grade should be not less than 780.5, USGS datum.

Lots 11 and 12 could be filled within their northern portions only if necessary to provide sufficient building area at an elevation of not less than 780.5, USGS datum.

MICHIGAN
THE GREAT LAKES STATE
R1026 1/75

Proposed filling and development plans for each individual lot will require approval under the Flood Plain Control Act (Act 245, P.A. 1929, as amended by Act 167, P.A. 1968). Copies of the Act, Rules and Permit Application forms are enclosed.

Should you have any questions, please contact us (telephone 517/373-3930).

Sincerely,

BUREAU OF LAND & WATER MANAGEMENT
Water Management Division

Wallace A. Wilson, P.E., Chief
Flood Plain Management Unit

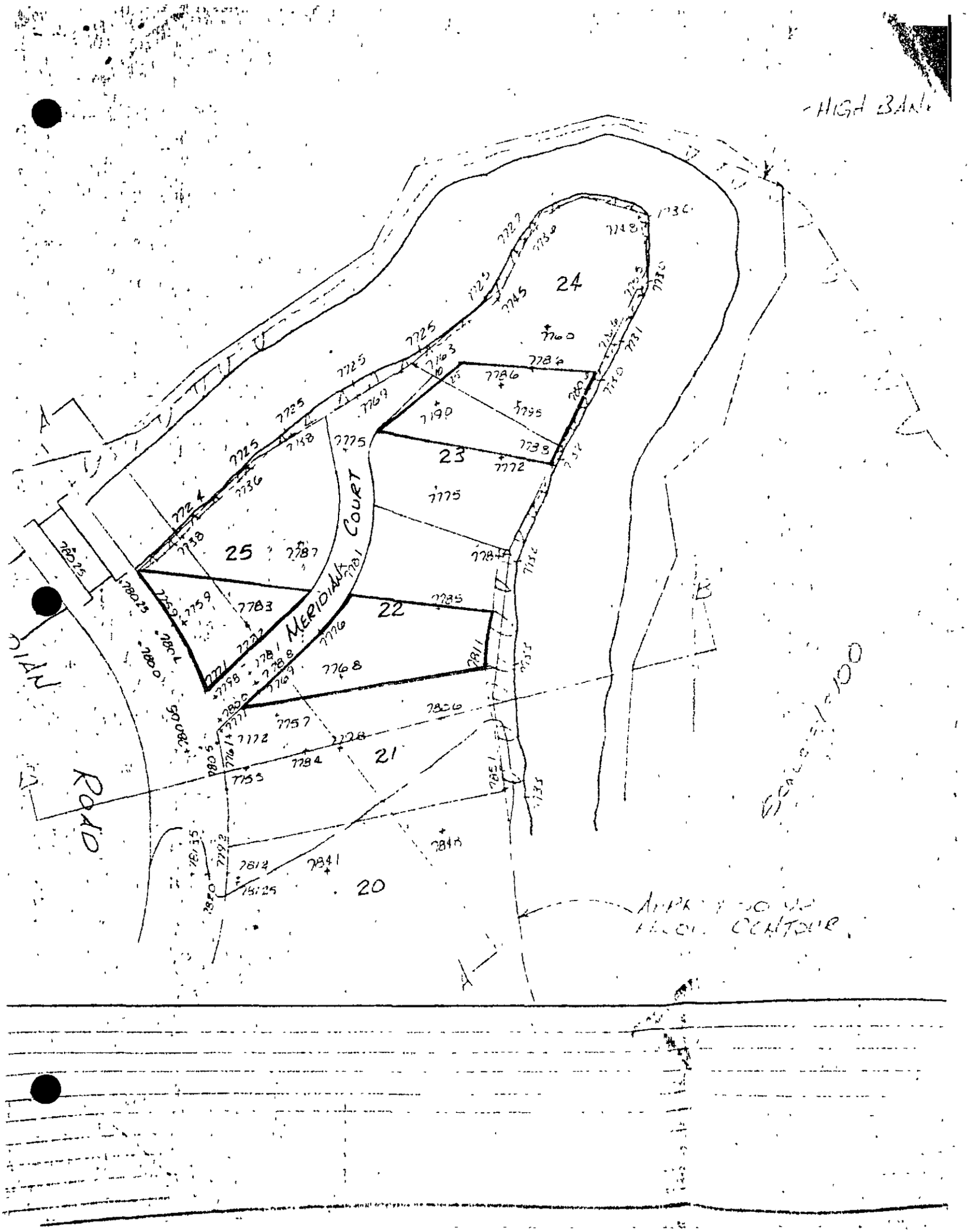
Gary L. Bondeson

by: Gary L. Bondeson

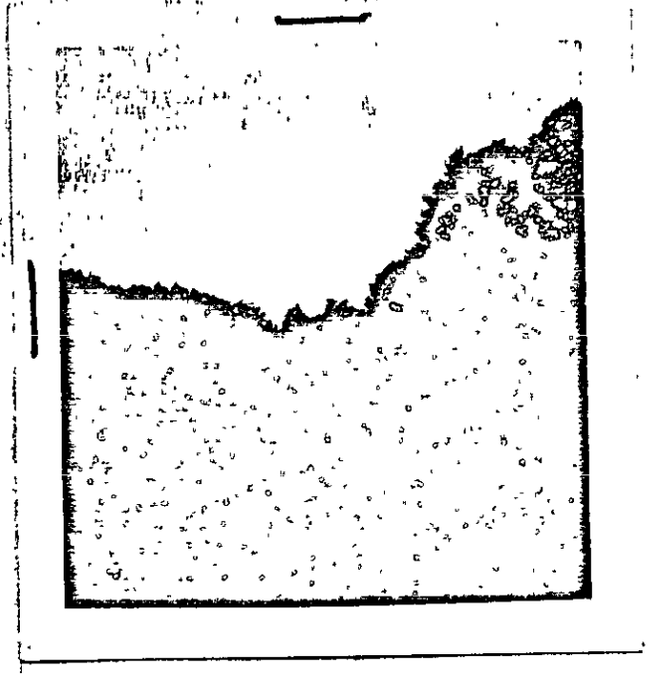
WAW/GLB: mjb

Enclosure Water-Surface Profile Calculations

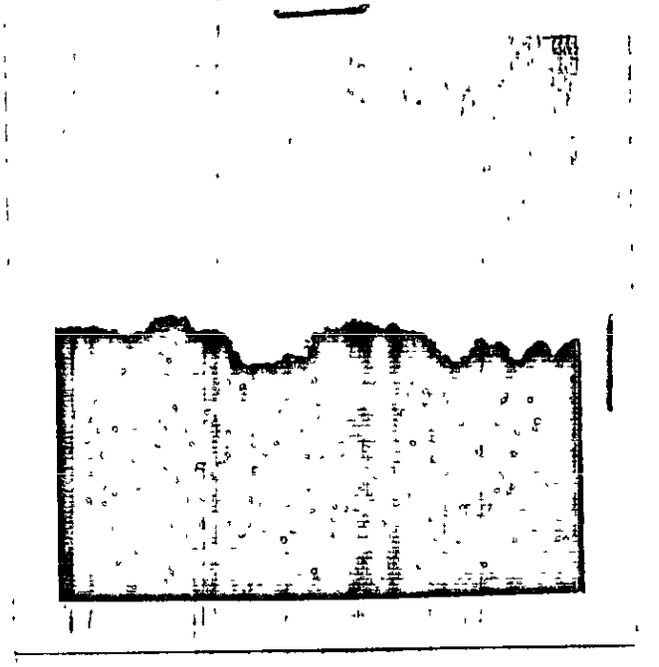
cc Lee Jones
Robert Cernek


HIGH BANK
24
23
22
21
20
25
MERIDIAN COURT
ROAD
CONTOUR

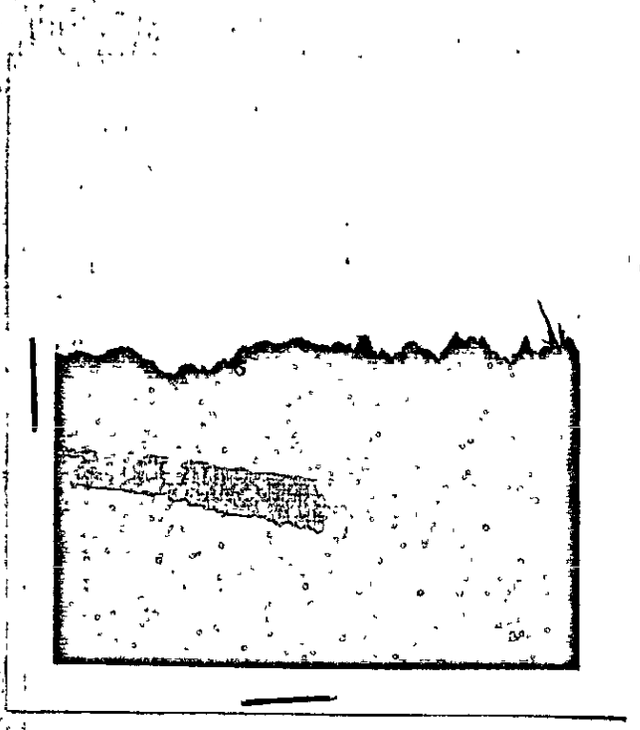
APPENDIX B - FLOOD PLAIN COMPUTATIONS
EXISTING CONDITIONS



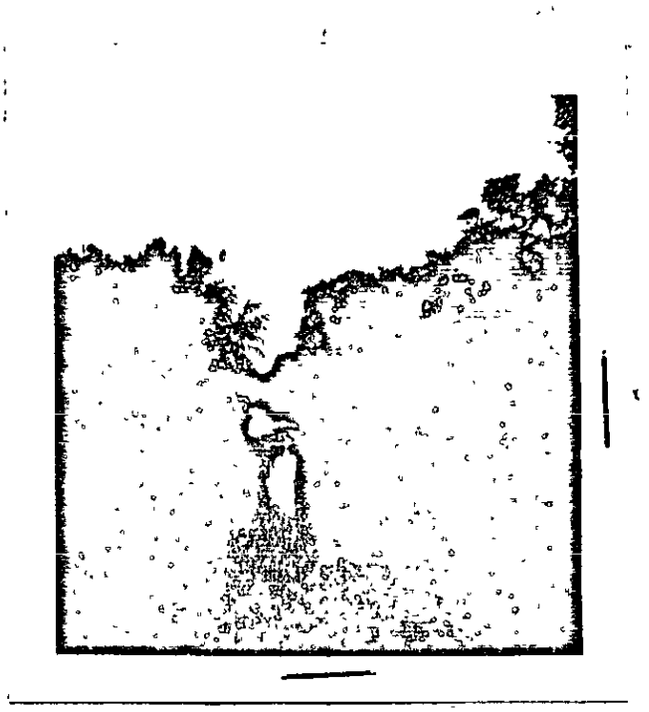
SECTION D



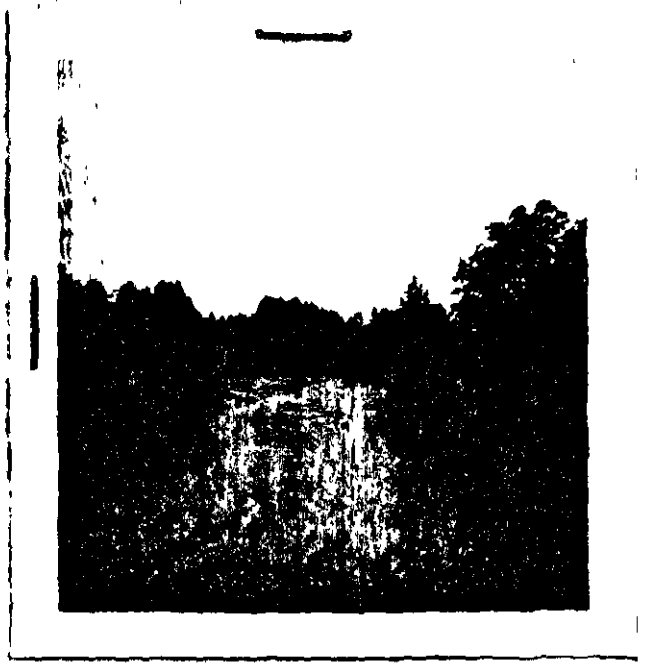
SECTION A



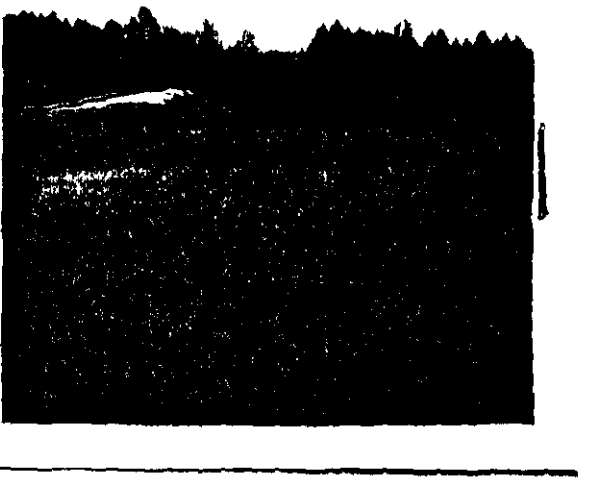
SECTION AA



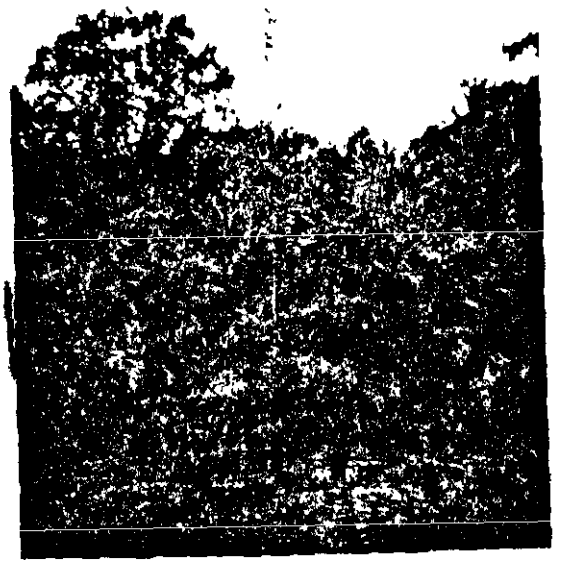
DOWNSTREAM FROM MERIDIAN RD. BRIDGE



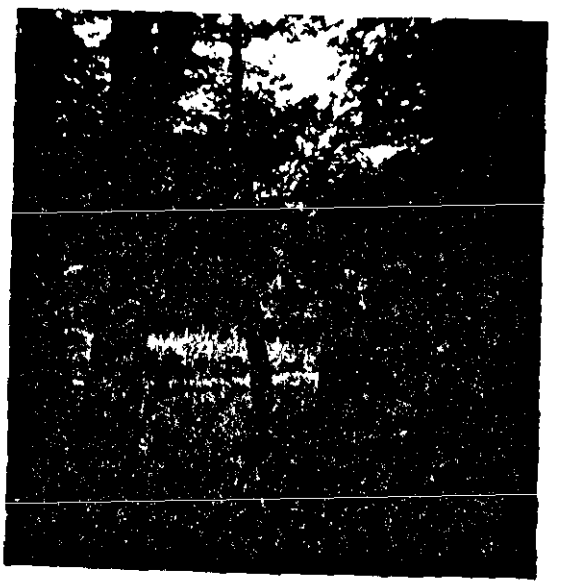
UPSTREAM FROM
MERIDIAN RD. BRIDGE



SECTION CC



SECTION DD



SECTION 5

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n (Boldface figures are values generally recommended in design)

Type of channel and description	Minimum	Normal	Maximum
A. CLOSED CONDUITS FLOWING PARTLY FULL			
A-1. Metal			
a. Brass, smooth	0.009	0.010	0.013
b. Steel			
1. Lockbar and welded	0.010	0.012	0.014
2. Riveted and spiral	0.013	0.016	0.017
c. Cast iron			
1. Coated	0.010	0.013	0.014
2. Uncoated	0.011	0.014	0.016
d. Wrought iron			
1. Black	0.012	0.014	0.015
2. Galvanized	0.013	0.016	0.017
e. Corrugated metal			
1. Subdrain	0.017	0.019	0.021
2. Storm drain	0.021	0.024	0.030
A-2. Nonmetal			
a. Lucite	0.008	0.009	0.010
b. Glass	0.009	0.010	0.013
c. Cement			
1. Neat, surface	0.010	0.011	0.013
2. Mortar	0.011	0.013	0.015
d. Concrete			
1. Culvert, straight and free of debris	0.010	0.011	0.013
2. Culvert with bends, connections, and some debris	0.011	0.013	0.014
3. Finished	0.011	0.012	0.014
4. Sewer with manholes, inlet, etc., straight	0.013	0.015	0.017
5. Unfinished, steel form	0.012	0.013	0.014
6. Unfinished, smooth wood form	0.012	0.014	0.016
7. Unfinished, rough wood form	0.015	0.017	0.020
e. Wood			
1. Stave	0.010	0.012	0.014
2. Laminated, treated	0.015	0.017	0.020
f. Clay			
1. Common drainage tile	0.011	0.013	0.017
2. Vitrified sewer	0.011	0.014	0.017
3. Vitrified sewer with manholes, inlet, etc.	0.013	0.015	0.017
4. Vitrified subdrain with open joint	0.014	0.016	0.018
g. Brickwork			
1. Glazed	0.011	0.013	0.015
2. Lined with cement mortar	0.012	0.015	0.017
h. Sanitary sewers coated with sewage slimes, with bends and connections	0.012	0.013	0.016
i. Paved invert, sewer, smooth bottom	0.016	0.019	0.020
j. Rubble masonry, cemented	0.018	0.025	0.030

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n (continued)

Type of channel and description	Minimum	Normal	Maximum
LINED OR BUILT-UP CHANNELS			
B-1. Metal			
a. Smooth steel surface			
1. Unpainted	0.011	0.012	0.014
2. Painted	0.012	0.013	0.017
b. Corrugated	0.021	0.025	0.030
B-2. Nonmetal			
a. Cement			
1. Neat, surface	0.010	0.011	0.013
2. Mortar	0.011	0.013	0.015
b. Wood			
1. Planed, untreated	0.010	0.012	0.014
2. Planed, creosoted	0.011	0.012	0.015
3. Unplaned	0.011	0.013	0.015
4. Plank with battens	0.012	0.015	0.018
5. Lined with roofing paper	0.010	0.014	0.017
c. Concrete			
1. Trowel finish	0.011	0.013	0.015
2. Float finish	0.013	0.015	0.016
3. Finished, with gravel on bottom	0.015	0.017	0.020
4. Unfinished	0.014	0.017	0.020
5. Gunite, good section	0.016	0.019	0.023
6. Gunite, wavy section	0.018	0.022	0.025
7. On good excavated rock	0.017	0.020	
8. On irregular excavated rock	0.022	0.027	
d. Concrete bottom float finished with sides of			
1. Dressed stone in mortar	0.015	0.017	0.020
2. Random stone in mortar	0.017	0.020	0.024
3. Cement rubble masonry, plastered	0.016	0.020	0.024
4. Cement rubble masonry	0.020	0.025	0.030
5. Dry rubble or riprap	0.020	0.030	0.035
e. Gravel bottom with sides of			
1. Formed concrete	0.017	0.020	0.025
2. Random stone in mortar	0.020	0.023	0.026
3. Dry rubble or riprap	0.023	0.033	0.036
f. Brick			
1. Glazed	0.011	0.013	0.015
2. In cement mortar	0.012	0.015	0.018
g. Masonry			
1. Cemented rubble	0.017	0.025	0.030
2. Dry rubble	0.023	0.032	0.035
h. Dressed ashlar	0.013	0.015	0.017
i. Asphalt			
1. Smooth	0.013	0.013	
2. Rough	0.016	0.016	
j. Vegetal lining	0.030	.....	0.500

TABLE 5-6. VALUES OF THE ROUGHNESS COEFFICIENT n (*continued*)

Type of channel and description	Minimum	Normal	Maximum
C. EXCAVATED OR DREDGED			
a. Earth, straight and uniform			
1. Clean, recently completed	0.016	0.018	0.020
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.030
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth, winding and sluggish			
1. No vegetation	0.023	0.025	0.030
2. Grass, some weeds	0.025	0.030	0.033
3. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. Earth bottom and rubble sides	0.028	0.030	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.040
6. Cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. Smooth and uniform	0.025	0.035	0.040
2. Jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush uncut			
1. Dense weeds, high as flow depth	0.050	0.080	0.120
2. Clean bottom, brush on sides	0.040	0.050	0.080
3. Same, highest stage of flow	0.045	0.070	0.110
4. Dense brush, high stage	0.080	0.100	0.140
D. NATURAL STREAMS			
D-1. Minor streams (top width at flood stage <100 ft)			
a. Streams on plain			
1. Clean, straight, full stage, no rifts or deep pools	0.025	0.030	0.033
2. Same as above, but more stones and weeds	0.030	0.035	0.040
3. Clean, winding, some pools and shoals	0.033	0.040	0.045
4. Same as above, but some weeds and stones	0.035	0.045	0.050
5. Same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
6. Same as 4, but more stones	0.045	0.050	0.060
7. Sluggish reaches, weedy, deep pools	0.050	0.070	0.080
8. Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.100	0.150

TABLE 5-6 VALUES OF THE ROUGHNESS COEFFICIENT n (*continued*)

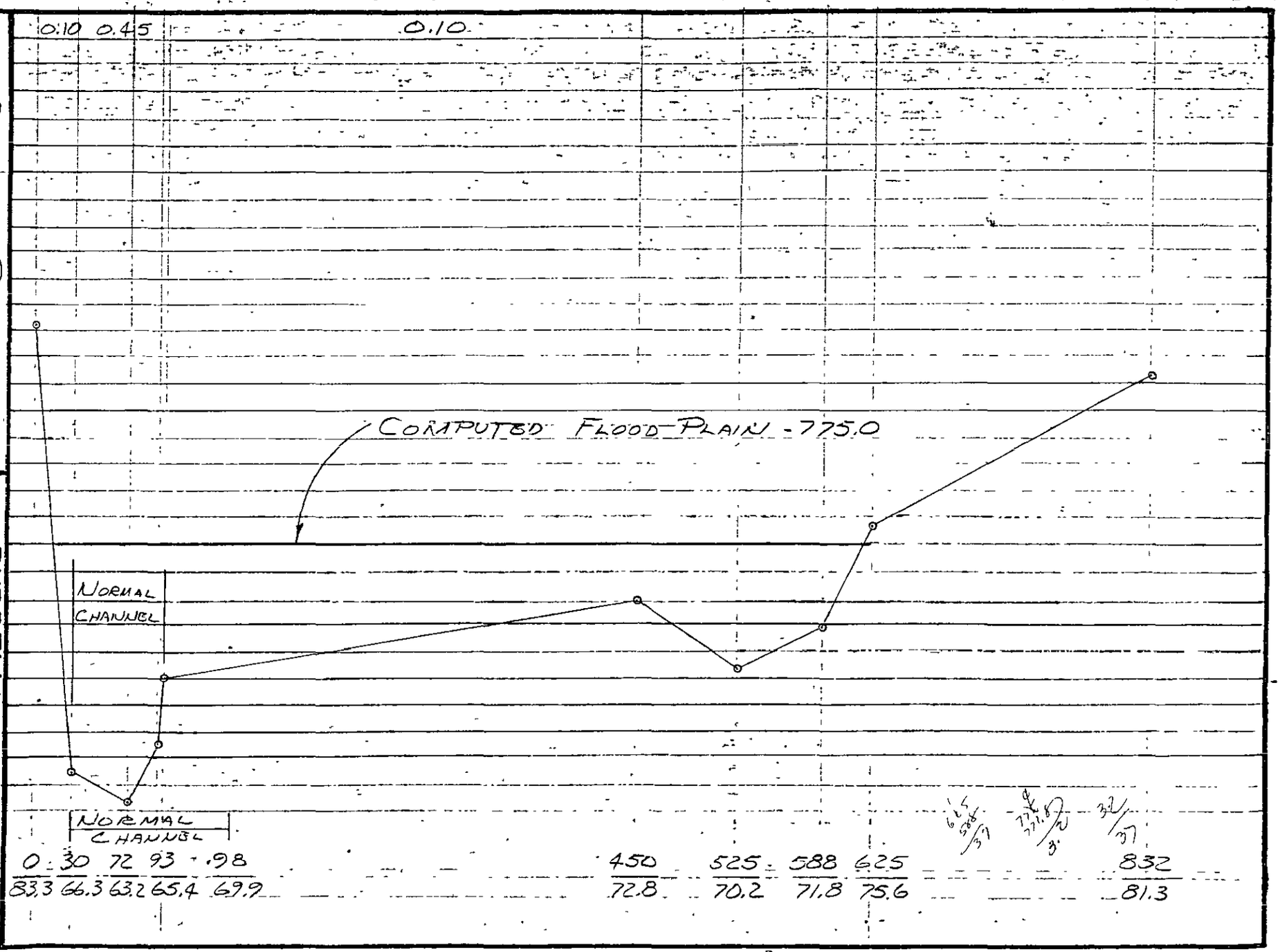
Type of channel and description	Minimum	Normal	Maximum
b. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stages			
1. Bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
2. Bottom: cobbles with large boulders	0.040	0.050	0.070
D-2. Flood plains			
a. Pasture, no brush			
1. Short grass	0.025	0.030	0.035
2. High grass	0.030	0.035	0.050
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. Scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Dense willows, summer, straight	0.110	0.150	0.200
2. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. Same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. Heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120
5. Same as above, but with flood stage reaching branches	0.100	0.120	0.160
D-3. Major streams (top width at flood stage >100 ft). The n value is less than that for minor streams of similar description, because banks offer less effective resistance.			
a. Regular section with no boulders or brush	0.025		0.060
b. Irregular and rough section	0.035		0.100

ROUGH COEF.

CHIPPEWA RIVER

SECTION D

STA 48+10



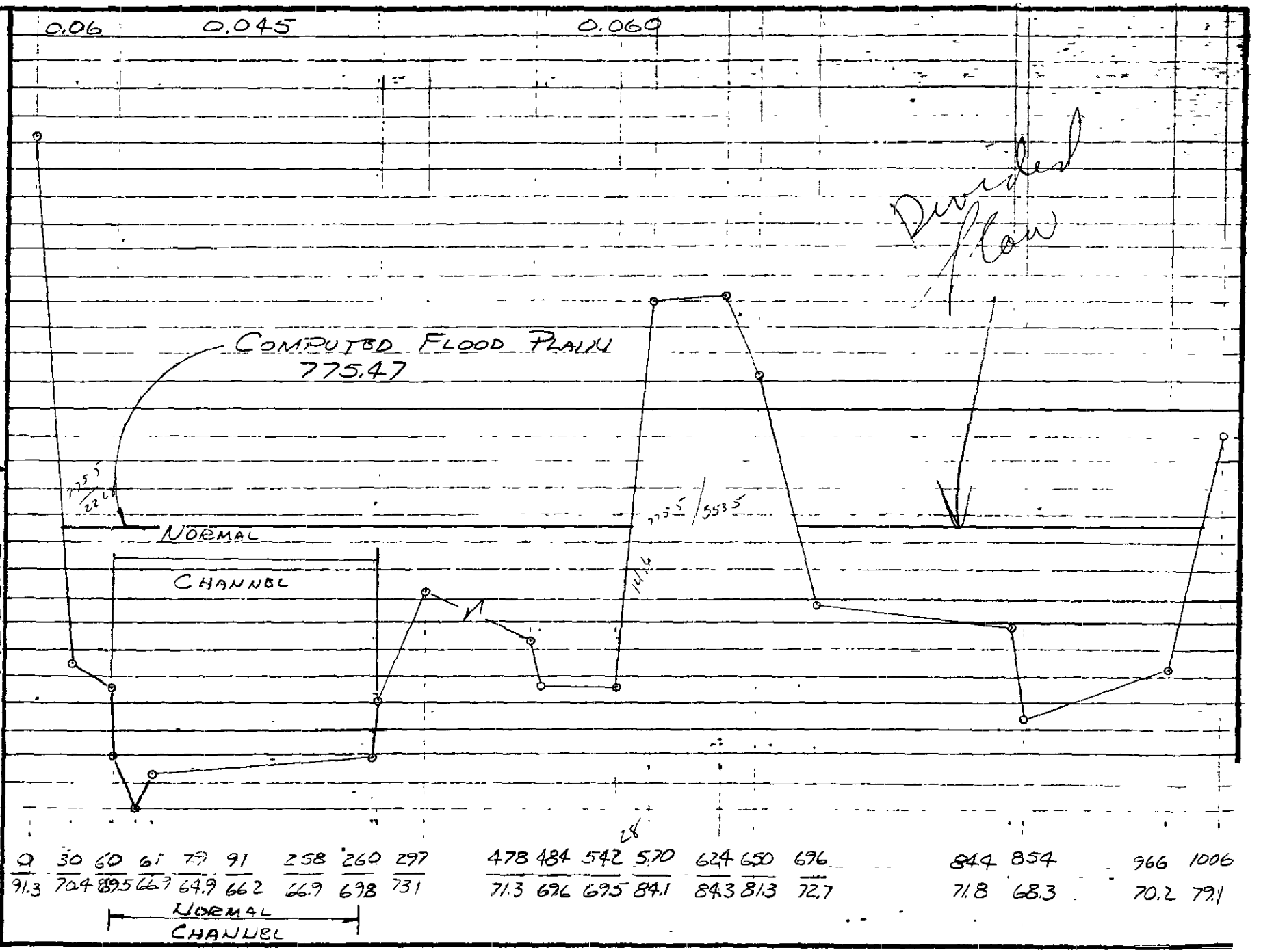
RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

ROUGHNESS COEF.

CHIPPEWA RIVER

SECTION A

STA 39+0.



RUDDELL ENGINEERING

ENGINEERS & SURVEYORS

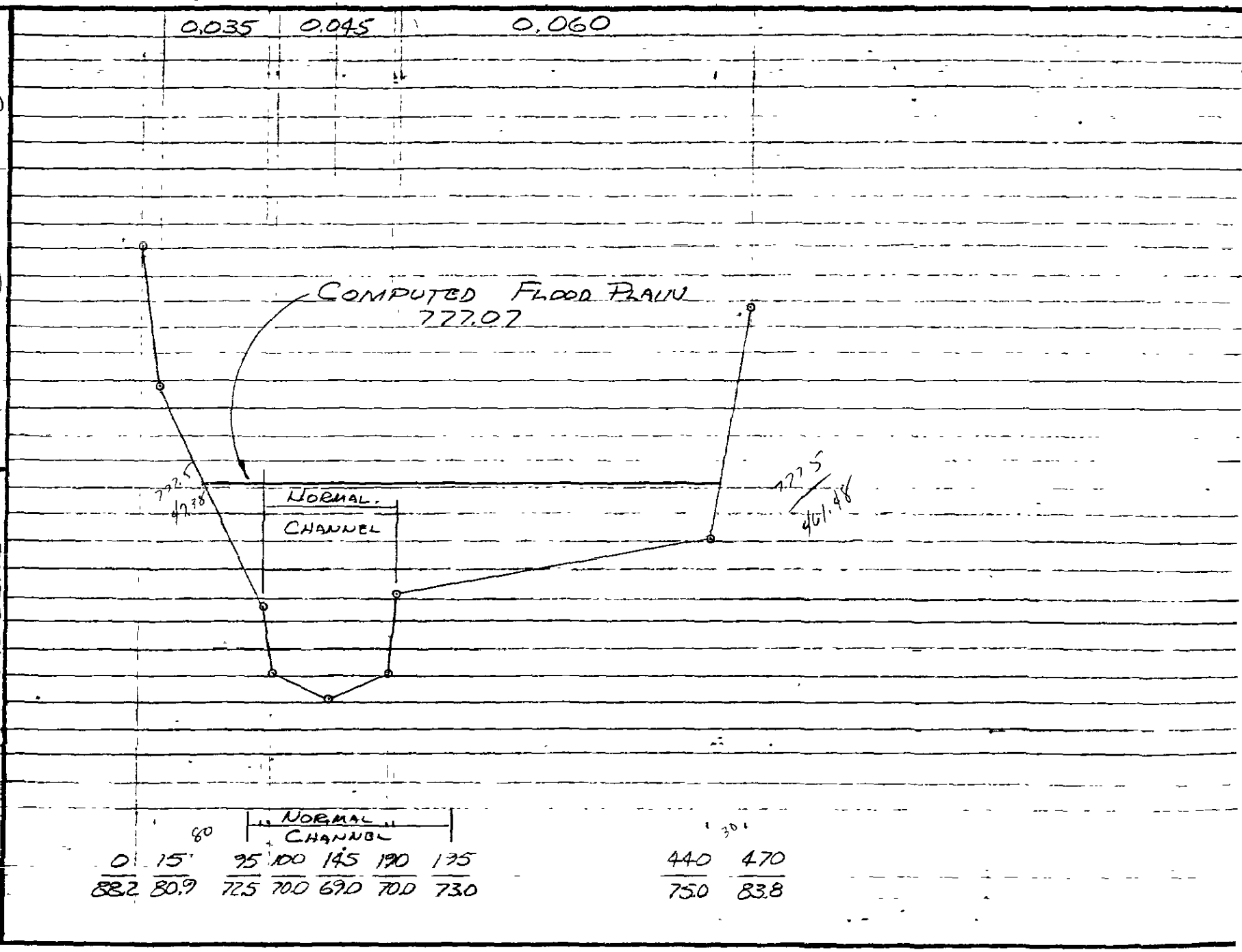
SHEPHERD & WEIDMAN, MICHIGAN

ROUGHNESS COEF

CHIPPEWA RIVER

SECTION AA

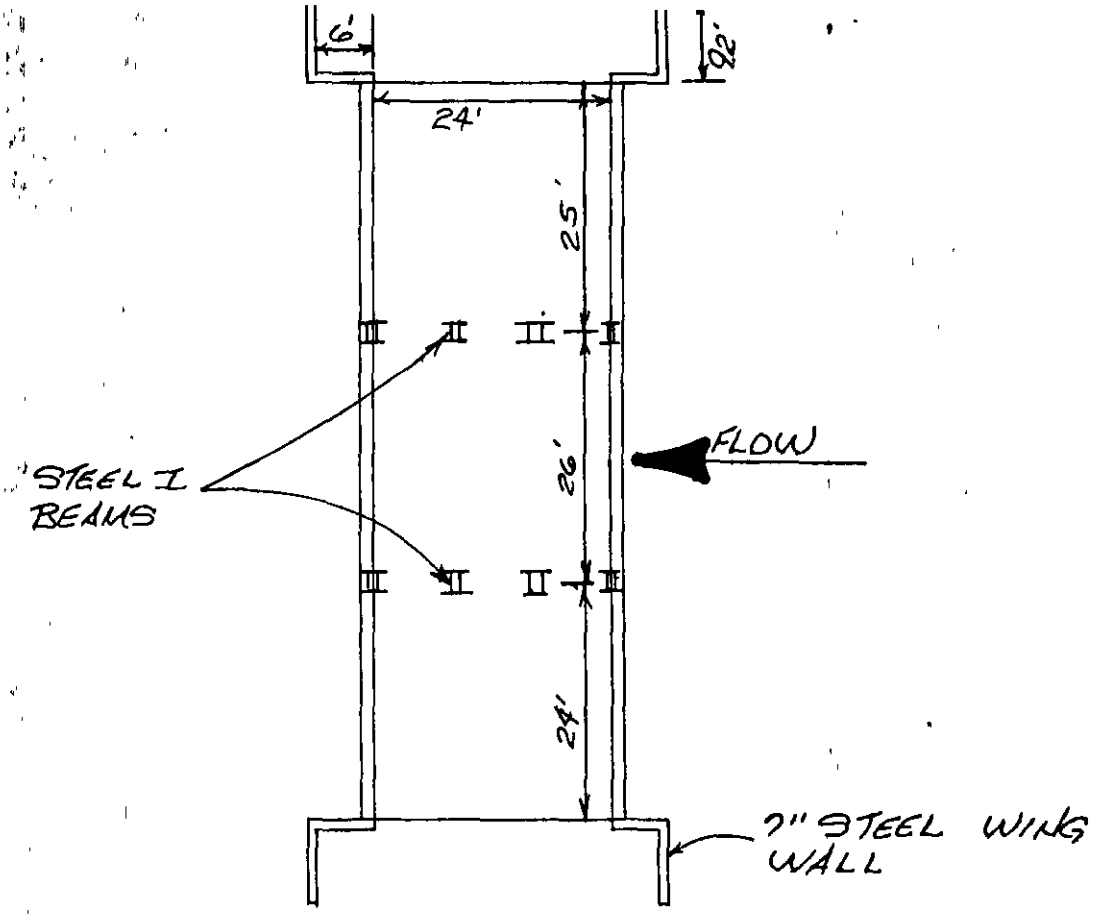
STA 10310



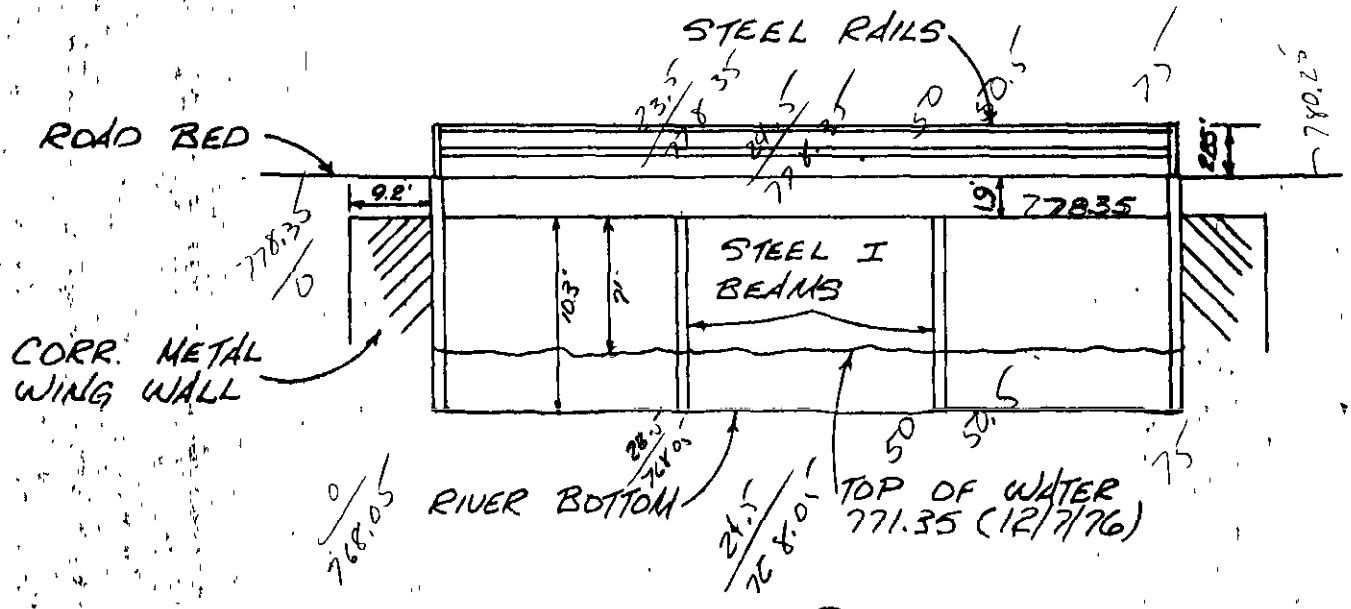
RUDDELL ENGINEERING

ENGINEERS & SURVEYORS

SHEPHERD & WEIDMAN, MICHIGAN



PLAN VIEW
MERIDIAN ROAD BRIDGE
SCALE: 1"=20' HORIZ. & VERT.

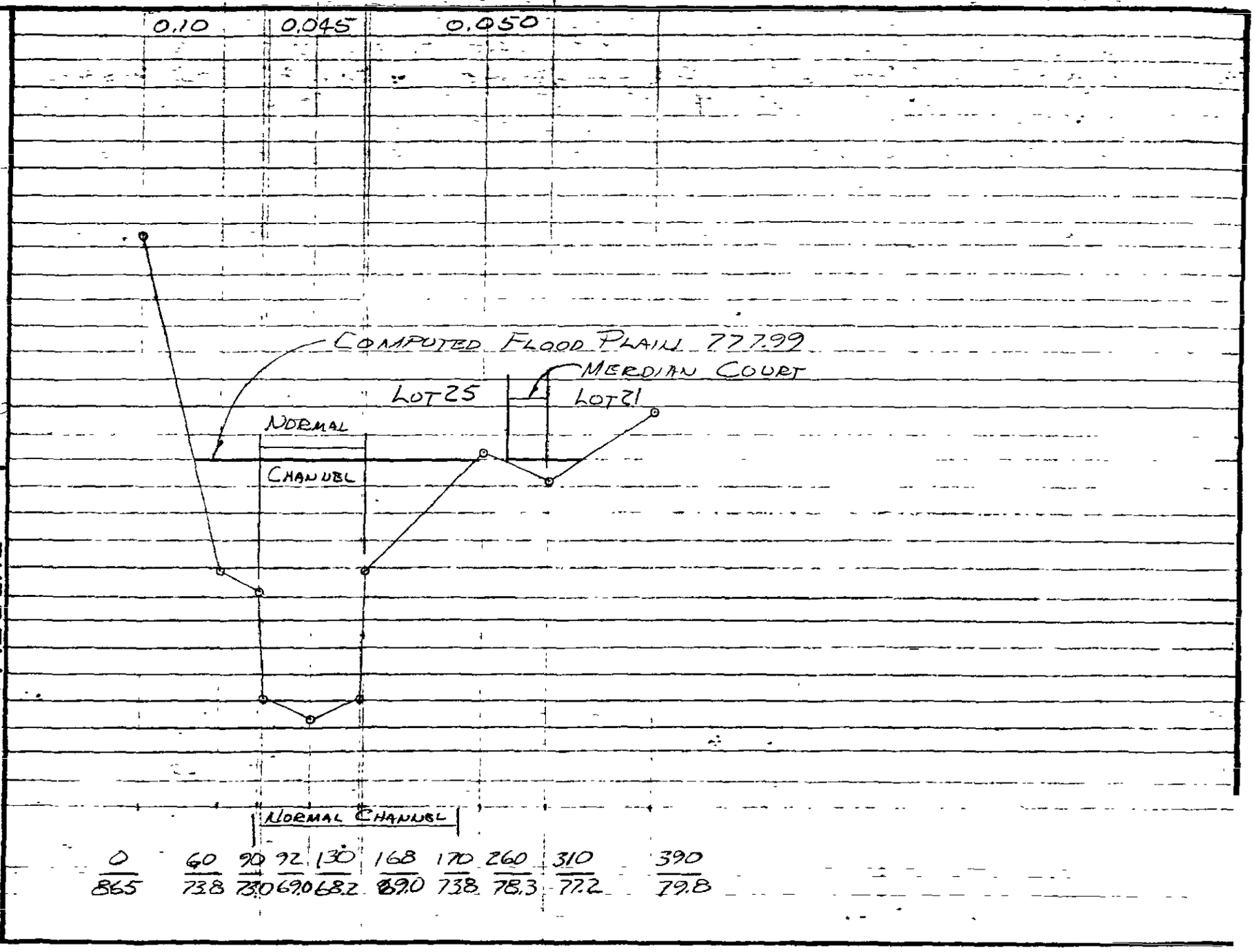


WEST PROFILE
MERIDIAN ROAD BRIDGE

SCALE: 1"=20' HORIZONTAL
1"=10' VERTICAL

ROUGHNESS COEF

CHIPPEWA RIVER
SECTION CC
STATION 110+30



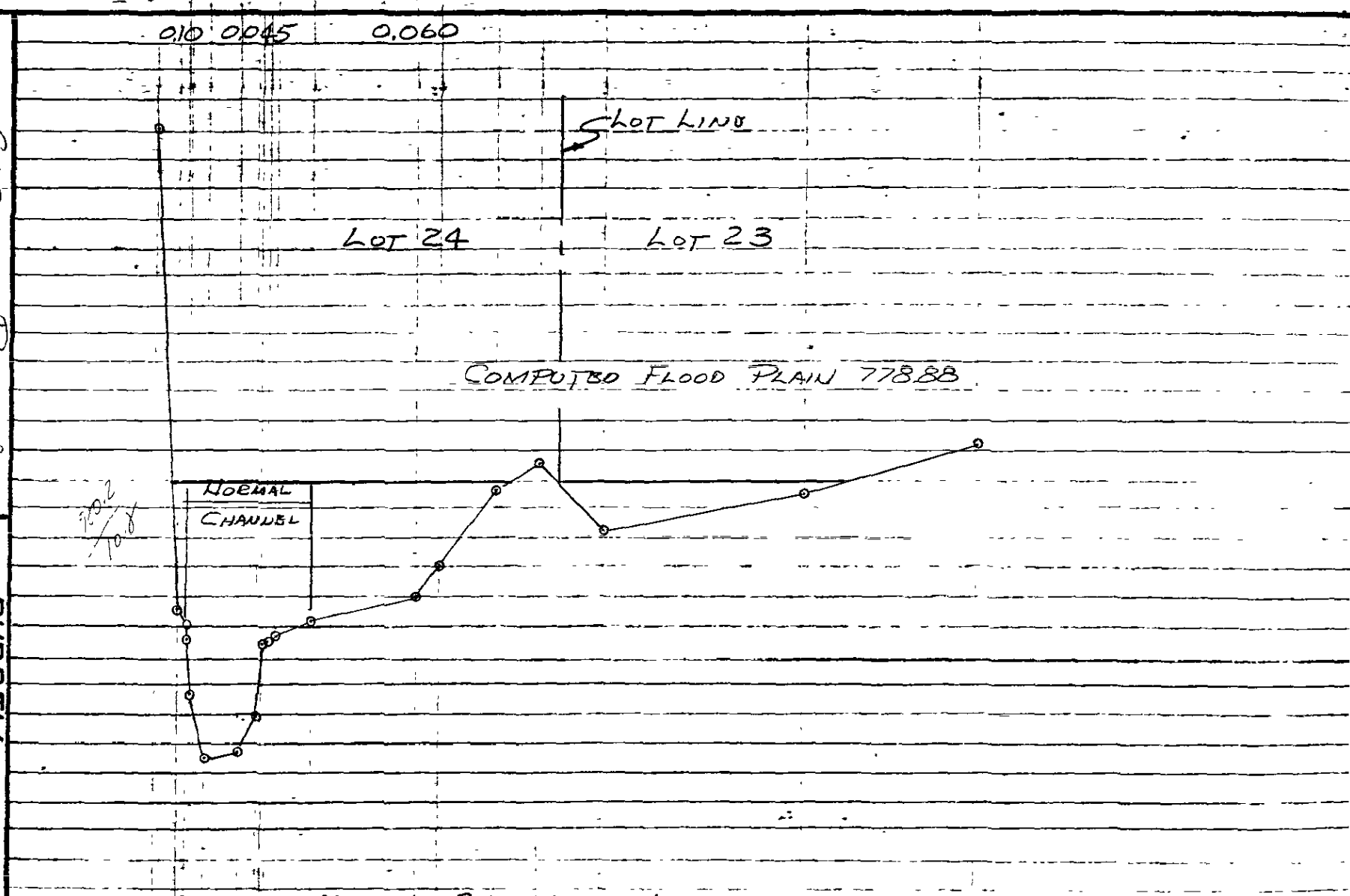
RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

ROUGHNESS COEF.

CHIPPEWA RIVER

SECTION 6

STATION 115+30

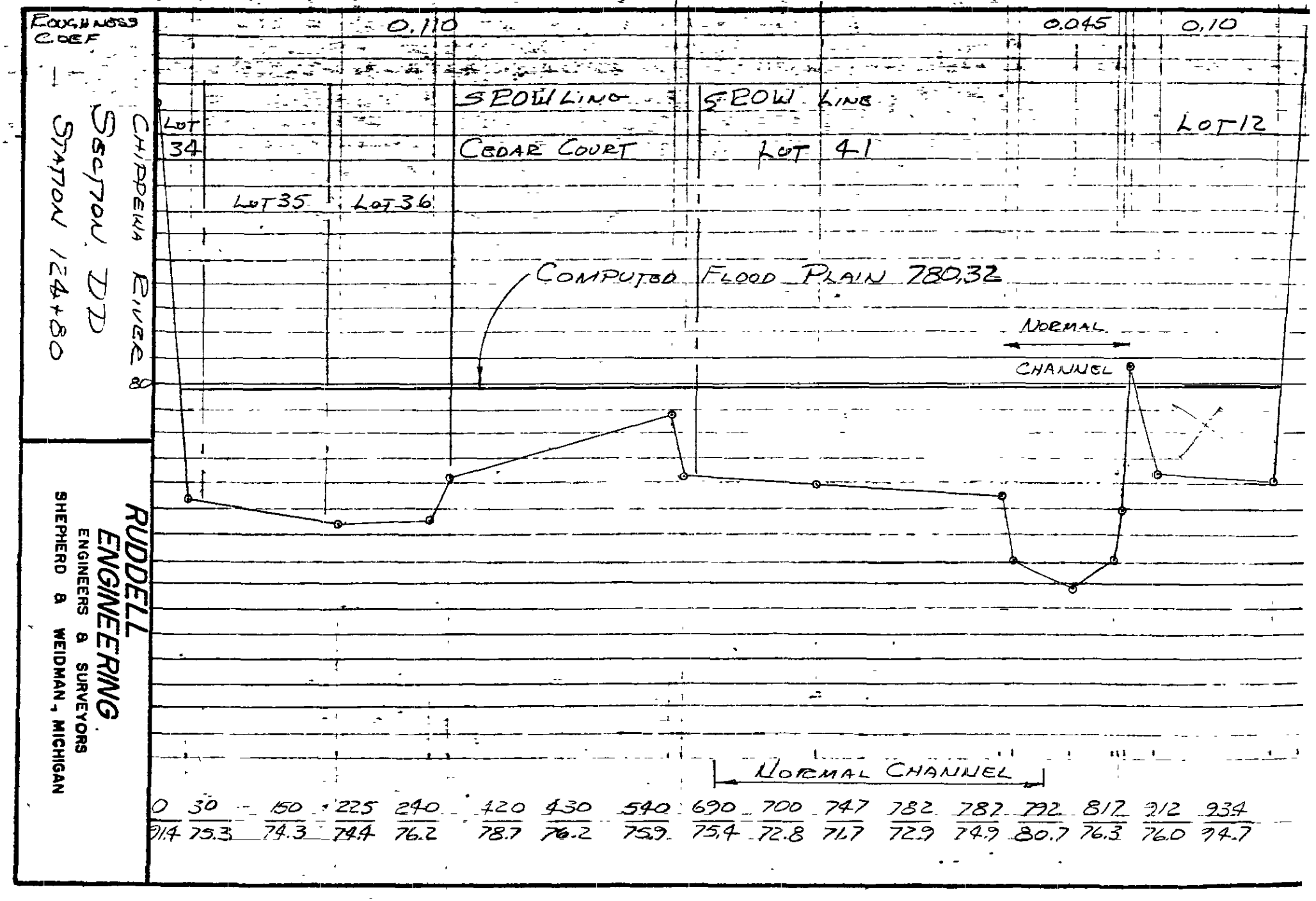


0	16	21	21	22	35	58	70	72	77	82	108	180	195	235	265	310	450	570
91.1	74.5	74.0	73.5	71.6	69.4	69.6	70.8	73.3	73.4	73.6	74.1	74.9	76.0	78.6	79.5	77.2	78.5	80.2

RUDDELL ENGINEERING

ENGINEERS & SURVEYORS

SHEPHERD & WEIDMAN, MICHIGAN



SECTION DD
STATION 124+80

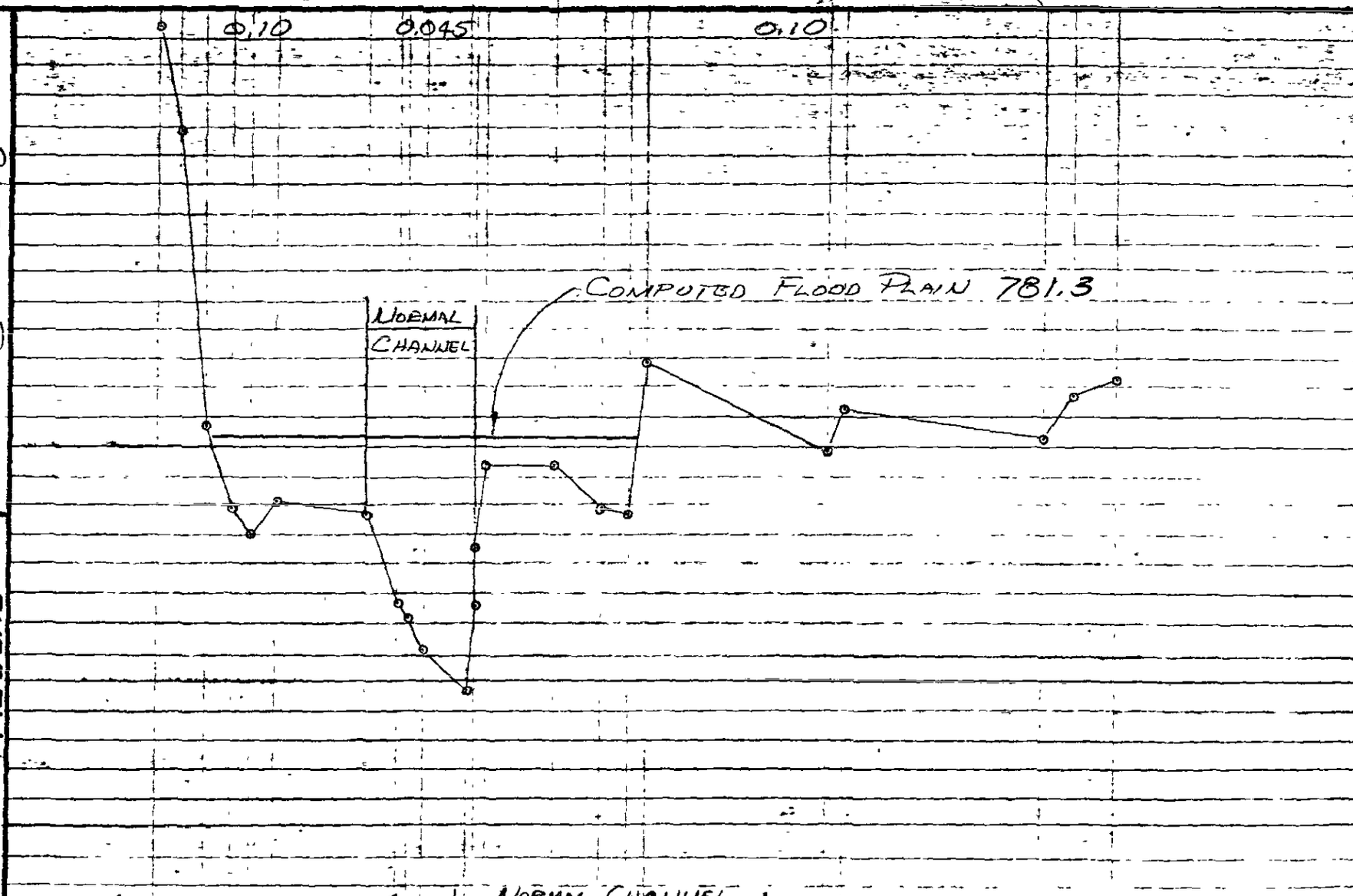
RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

ROUGHNESS COEF

CHIPPEWA RIVER

SECTION 5

STATION 132+80



700	685	668	648	636	618	555	533	528	516	484	480	480	473	453	391	373	361	236	226	180
0	15	32	52	64	82	145	167	172	184	216	220	220	227	274	309	327	339	464	474	614
94.5	90.9	80.7	77.9	77.0	78.1	77.7	74.6	74.1	73.0	71.6	74.5	76.5	79.4	79.4	77.9	77.7	82.9	79.9	81.3	80.3

634 66 / 81.8 664 36 / 82.3

RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

APPENDIX C - FLOOD PLAIN COMPUTATIONS
PROPOSED CONDITIONS

Sec. No Assume Ele	Reach Lenth	Area	P	n	Corr. n	Sh 0.0316 $V_{0.001}$	Sh 0.0316 $Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1}-h_{v_2}$	Total H	W.S. E.S.
D																		
776.0		82	17	0.10		1.34	109.9											
		760	68	0.045		5.21	3964.4											776.0
		2577	521	0.10		1.36	3512.9											
							7587.2	0.000336										
	1090								0.000206	0.22								776.2
A		202	35	0.06		2.52	508.7											
776.2		1951	205	0.045		4.68	9142.9											
		2911	622	0.06		2.19	6374.3											
							16025.9	0.000075										
	4400								0.000371	1.63								777.8
AA	2500	117	55															
777.5	2700							0.000666										
	650								0.00083	0.54								778.3
Bridge																		
778.3		748	135	0.025		5.88	4399.3	0.001000										

Sec. No. Assume Ele	Reach Length	Area	P	n	Corr. n	$S_1 = 0.001$ $S_2 = 0.0316$ $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.	
D		65	17	0.10		1.15	74.6				0.86	55.9	41.3						
775.0		692	68	0.045		4.90	3391.0				3.67	2539.0	34197.5						
		2056	521	0.100		1.17	2410.9				0.88	1805.1	1397.9						
							5876.5	0.000559				4400	35636.7	8.10	0.13			775.0	I
	1090								0.000333	0.36						0.11	0.47	775.47	1
A		177	35	0.060		2.31	408.1				0.76	134.7	77.8						
775.5		1808	205	0.045		4.45	8053.6				1.47	2658.6	5745.0						
1.6		2476	622	0.060		1.97	4867.2				0.65	1606.7	678.8						
777.07							13328.9	0.000108				4400	65016	1.48	0.02	0.11			
	4400															0.09			
									0.000387	1.70						-0.10	1.60	777.07	A
AA	(2500)	117	55	0.035	0.026	2.99	349.5				2.44	285.3	1698.6						
777.5	-	781	105	0.045	0.045	3.97	3105.4				3.22	2535.4	26288.0						
777.07	(2700)	851	248	0.060	0.047	2.27	1934.3				1.85	1579.3	5405.2						
							5389.2	0.000666				4400.0	33391.8	7.59	0.12				
	600								0.001075	0.64									
50' DS of Bridge (Use CC) 778.2		190	56	0.100		1.06	201.5				1.29	245.7	408.9			-0.27	0.37	777.44	
		758	90	0.045		4.31	3274.3				5.25	3991.6	110018.5						
		232	171	0.100		0.58	133.5				0.71	162.7	82.0						
							3609.3	0.001484				4400	110509.4	25.12	0.39				
50 DS of Bridge (Use CC) 777.8	600	6							0.001200	0.72						-0.05	0.67	777.74	5 D B
		170	56	0.10		0.98	167.4				1.29	220.5	366.9						
		726	90	0.045		4.20	3047.1				5.53	4014.1	122754.8						
		176	94	0.100		0.71	125.5				0.94	165.4	146.1						
							3340	0.001733				4400	123267.8	28.02	0.44				
	50								0.001366	0.07						-0.10	-0.03	777.71	
Bridge 778.3		748	135	0.025		5.88	4399.3	0.001000			5.88	4400	152127.3	34.57	0.54				

Sec. No. Assume Ele	Reach Length	Area	P	n	Corr n	$S_1 = 0.001$, $S_2 = 0.0316$ $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele	
	50								0.001438	0.07						-0.15	-0.08	777.66	B
Bridge 777.75		712	132	0.025		5.78	4113.2	0.001143			6.18	4400		38.19	0.59				
	80								0.001318	0.11						0.22	0.33	777.99	C
CC 778.0		180	55	0.10		1.04	186.3				1.27	227.9	367.6						
		742	90	0.045		4.26	3159.9				5.21	3865.0	104911.9						
		176	94	0.05		1.43	251.1				1.75	307.1	940.5						
							3597.3	0.001494				4400	106220	24.14	0.37				
	500								0.001717	0.86						0.03	0.89	778.88	
6 779.0		33	14	0.10		0.83	27.4				1.16	38.2	51.4						
		645	96	0.045		3.72	2396.5				5.18	3340.1	89622.9						
		449	149	0.06		1.63	733.1				2.27	1021.7	5264.7						
							3157.0	0.001940				4400.0	94939.0	21.58	0.34				
	950								0.001206	1.15						0.29	1.44	780.32	
DD 780.2		2846	683	0.11		1.11	3146.0				0.76	2160.7	1248.0						
		758	114	0.045		3.69	2796.9				2.53	1921.0	12296.1						
		444	134	0.10		1.04	463.4				0.71	318.3	160.5						
							6406.3	0.000471				4400.0	13704.6	3.11	0.05				
	800								0.001441	1.15						-0.38	0.77	781.09	
5 781.7		534	142	0.10		1.14	606.4				1.77	942.2	2951.8						
		470	61	0.045		4.07	1913.2				6.32	2972.8	118740.8						
		334	119	0.10		0.93	312.1				1.45	485.0	1019.7						
							2)1.7	0.002411				440)	122712.3						

Sec. No. Assume Ele	Reach Length	Area	P	n	Corr. n	$S_1=0.001$ $S_2=0.0316$ $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1}-h_{v_2}$	Total H	W.S. Ele.
	800								0.001847	1.48						-0.51	0.97	781.29
5		466	142	0.10		1.04	483.2				1.87	868.1	3035.7					
781.2		444	61	0.045		3.92	1740.1				7.04	3126.4	154,949.4					
		275	119	0.10		0.82	225.7				1.47	405.5	876.2					
							2449.0	0.003223				4400	158,861.3	36.10	0.56			
	480								0.002199	1.06						0.32	1.38	782.67
4		1033	236	0.10		1.26	1298.0				1.37	1408.5	2643.6					
782.7		625	73	0.045		4.37	2729.5				4.74	2961.8	66,544.5					
		32	13	0.10		0.86	27.4				0.93	29.7	25.7					
							4054.9	0.001176				4400	69213.8	15.73	0.24			

Sec No. Assume Ele	Reach Length	Area	P	n	Corr n	$S_1 = 0.001$ $S_2 = 0.0316$ $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_2} - h_{v_1}$	Total H	W.S. Ele.

ASSUME BRIDGE ACTS AS ORIFICE

$Q = CA\sqrt{2gH}$

H = DISTANCE FROM CENTER OPENING TO TOP WATER

$4400 = 0.7(752)\sqrt{64.4H}$

$1.08 = H$

WS ELE = 74.28

WHICH IS BELOW MINIMUM ELEVATION FOR ORIFICE.

					CORR. n	S = 0.001 Sec 0.0316 (.001	Q 0.001	SLOPE	MEAN SLOPE	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_2}-h_{v_2}$	TOTAL H	W.S. ELE.
[illegible] 777.75		712	132	0.025		5.78	4113.2	0.001143			6.18	4400		38.19	0.59	-		777.66
	80								0.001112	0.09						0.28	0.37	778.03
CC 779.0		233	60	0.10		1.16	270.3				1.21	281.3	411.9					
		816	90	0.045		4.54	3702.4				4.73	3853.3	86209.5					
		138	50	0.05		1.85	255.0				1.93	265.4	988.6					
							4227.7	0.001082				4400	87609.9	19.9	0.31			
	80								0.001230	0.10						0.23	0.33	777.99
CC 778.5		205	58	0.10		1.09	223.4				1.25	256.6	400.9					
		776	90	0.045		4.39	3404.9				5.04	3911.5	99358.4					
		117	47	0.05		1.72	201.8				1.98	231.9	909.1					
							3830.1	0.001318				4400	100668.4	22.88	0.36			
	80								0.0013476	0.11						0.19	0.30	777.96
CC 778.1		185	56	0.10		1.04	192.7				1.30	240.3						
		744	90	0.045		4.27	3174.1				5.32	3957.4						
		100	44	0.050		1.62	162.3				2.02	202.3						
							3529.1	0.001552				4400	113235.5	25.74	0.40			
	500								0.001869	0.93						0.05	0.98	
6 778.6		30	14	0.10		0.78	23.4				1.15	34.6	45.8					778.94
		610	96	0.045		3.58	2183.7				5.30	3230.5	90744.7					
		394	132	0.050		1.95	767.1				2.88	1134.9	9413.3					
							2974.2	0.002185				4400	100203.8	22.77	0.35			

					CORR. n	$S_1 = 0.001$ $S_2 = 0.0316$	$Q_{0.001}$	SLOPE	MEAN SLOPE	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	TOTAL H	W.S. ELE.
									0.001748	0.87						-0.05	0.82	778.[illegible]
6		33	14	0.1		0.83	27.4				1.16	38.2	51.4					
779.0		645	96	0.045		3.72	2396.5				5.19	3343.9	90071.6					
		361	87	0.06		2.02	729.5				2.82	1017.9	8094.7					
							3153.4	0.001944				4400	98217.7	22.32	0.35			
	950								0.001666	1.58						0.07	1.65	780.43
DD		533	132	0.10		1.19	634.7				1.40	747.9	1465.5					
780.5		781	107	0.045		3.93	3066.6				4.63	3613.9	77470.8					
		52	34	0.10		0.62	32.4				0.73	38.2	20.4					
							3733.7	0.001387				4400	78956.7	17.94	0.28			
	800								0.002305	1.84						-0.28	1.56	781.99
5		466	142	0.10		1.04	483.2				1.87	868.1	3035.7					
781.2		444	61	0.045		3.92	1740.1				7.04	3126.4	154,949.4					
		275	119	0.10		0.82	225.7				1.47	405.5	876.2					
							2449.0	0.003223				4400	158,861.3	36.10	0.56			
	800								0.001899	1.52						-0.15	1.37	781.80
5		534	142	0.10		1.14	606.4				1.77	942.2	2951.8					
781.7		470	61	0.045		4.07	1913.2				6.32	2972.8	118740.8					
		334	119	0.10		0.93	312.1				1.45	485.0	1019.7					
							2831.7	0.002411				4400	122712.3	27.89	0.43			
	480								0.001794	0.86						0.19	1.05	782.95
4																		
782.7								0.001176							0.24			

EXISTING CONDITIONS

Sec No. Assume Ele	Reach Lenth	Area	P	n	Corr. n	S = 0.001 S½ = 0.0316 $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1}-h_{v_2}$	Total H	W.S. Ele.
	800								0.001847	1.48						0.05-0.56		
5		466	142	0.10		1.04	483.2				1.87	868.1	3035.7					
781.2		444	61	0.045		3.92	1740.1				7.04	3126.4	154,949.4			-0.51		
		275	119	0.10		0.82	225.7				1.47	405.5	876.2					
							2449.0	0.003223				4400	158,861.3	36.10	0.56		0.97	781.29
	480								0.002199	1.06								
4		1033	236	0.10		1.26	1298.0				1.37	1408.5	2643.6			0.56-0.24		
782.7		625	73	0.045		4.37	2729.5				4.74	2961.8	66,544.5			0.32		
		32	13	0.10		0.86	27.4				0.93	29.7	25.7					
							4054.9	0.001176				4400	69,213.8	15.73	0.24		1.38	782.67
	1060								0.001341	1.42								
3		433	88	0.1		1.36	588.2				1.67	722.2	2014.1			0.24-0.31		
784.05		617	76	0.045		4.22	2600.7				5.18	3193.2	85681.2			-0.07		
		478	205	0.1		0.83	394.7				1.02	484.6	504.2					
							3583.6	0.001505				4400	88199.5	20.05	0.31		1.35	784.02

Sec No. Assume Ele	Reach Length	Area	P	n	Corr. n	$S_k = 0.001$ $V_{0.001}$	$S_k = 0.0316$ $Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.
	800								0.001845	1.48						0.28-0.42		
5		538	142	0.1		1.14	614.0				1.52	932.4	2,154.2					
781.8		476	61	0.045		4.11	1954.1				6.24	2967.4	115,543.4			-0.14		
		345	119	0.1		0.95	329.4				1.44	500.2	1,037.2					781.77
							2897.5	0.002303				4400	118,734.8	26.99	0.42		1.34	~~781.7~~
	480								0.002177	1.04								
4		459	176	0.1		0.89	408.4				1.28	585.4	959.1			0.42-0.52		
782.8		609	72	0.045		4.33	2638.2				6.21	3781.4	145,826.3					
		33	18	0.1		0.70	23.2				1.00	33.2	33.2			-0.10		
							3069.8	0.002051			1	44.00	146,818.6	33.37	0.52		0.94	782.71
	1060								0.001563	1.66								
3		488	88	0.1		1.47	717.9				1.53	744.9	1,743.7			0.52-0.23		
784.7		663	76	0.045		4.42	2931.8				4.59	3041.9	64,087.1					
		609	205	0.1		0.97	591.0				1.01	613.2	625.5			0.29		
							4240.7	0.001075				4400	66,456.3	15.1	0.23		1.95	784.6

PROPOSED FILL LOT 25, RIVERCREST ONLY

Sec. No. Assume Ele	Reach Length	Area	P	n	Corr. n	$S_1 = 0.001$, $S^{1/2} = 0.0316$: $V_{0.001}$	$Q_{0.001}$	Slope	Mean Slope	h_f	V	Q	V^2Q	V^2	h_v	$h_{v_1} - h_{v_2}$	Total H	W.S. Ele.
	800								0.001847	1.48						0.05-0.56		
5		466	142	0.1		1.04	483.2				1.87	868.1	3035.7					
781.8		444	61	0.045		3.92	1740.1				7.04	3126.4	154,949.4			-0.51		
		275	119	0.10		0.82	225.7				1.47	405.5	876.2					
							2449.0	0.003223				4400	158,861.2	36.10	0.56		0.97	781.2
	480								0.002740	1.32								
4		426	176	0.1		0.85	360.6				1.28	542.2	888.3			0.56-0.56		
782.6		596	72	0.045		4.27	2545.0				6.42	3826.4	157,710.4			0		
		31	18	0.1		0.67	20.9				1.01	31.4	32.0					
							2926.5	0.002257				4400	158,630.7	36.05	0.56		1.32	782.4
	1060								0.001726	1.83								
3		470	88	0.1		1.43	674.3				1.56	737.6	1,795.0			0.56-0.26		
784.5		648	76	0.045		4.36	2822.1				4.77	3086.9	70,235.9			0.30		
		568	205	0.1		0.93	526.2				1.02	575.5	588					
							4022.6	0.001195				4400	72,629.7	16.51	0.26		2.13	784.74

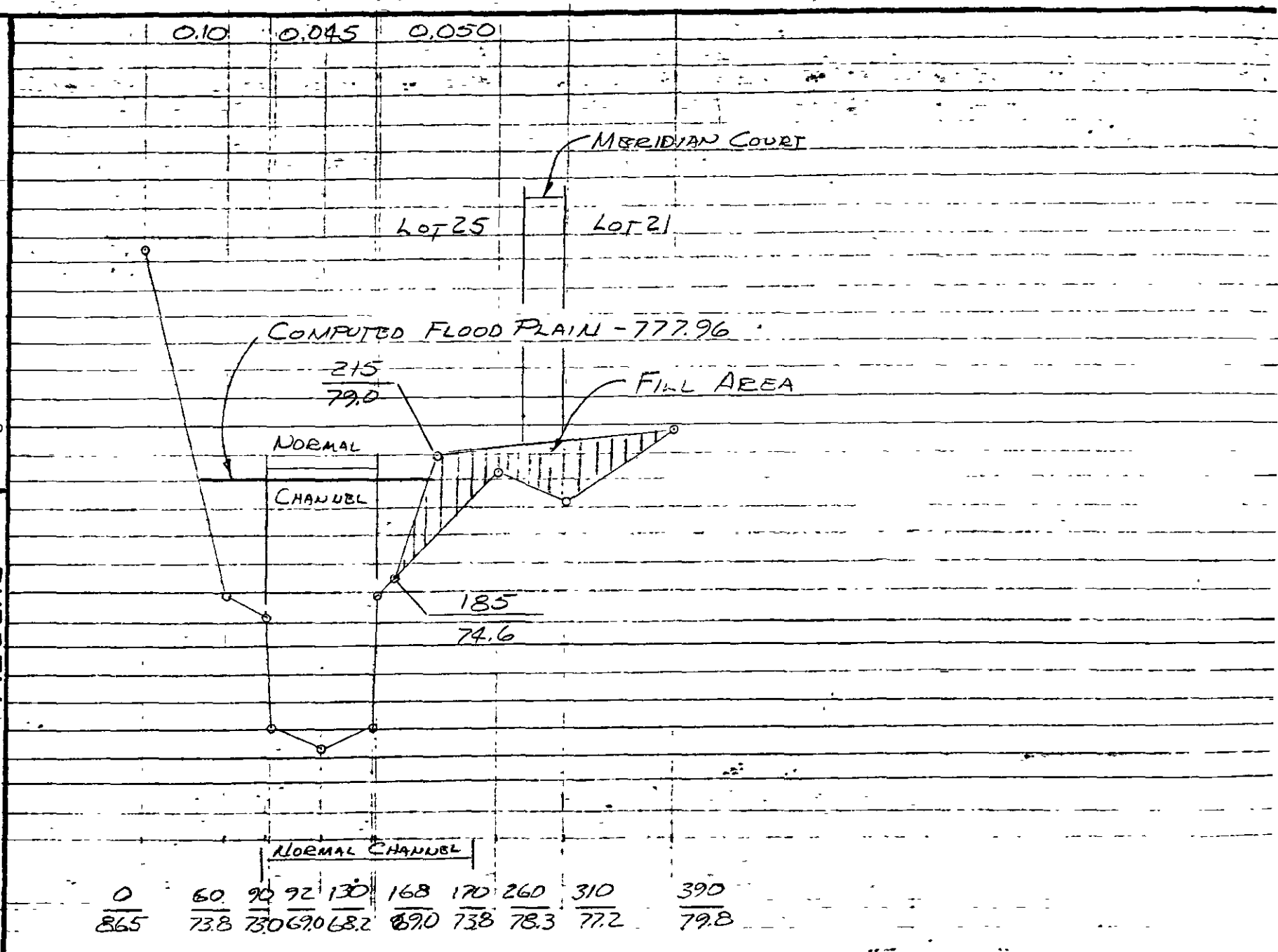
ROUGHNESS COEF

CHIPPEWA RIVER

SECTION CC

STATION 110+30

(FILL SECTION)



RUDDELL ENGINEERING

ENGINEERS & SURVEYORS

SHEPHERD & WEIDMAN, MICHIGAN

ROUGHNESS COEF

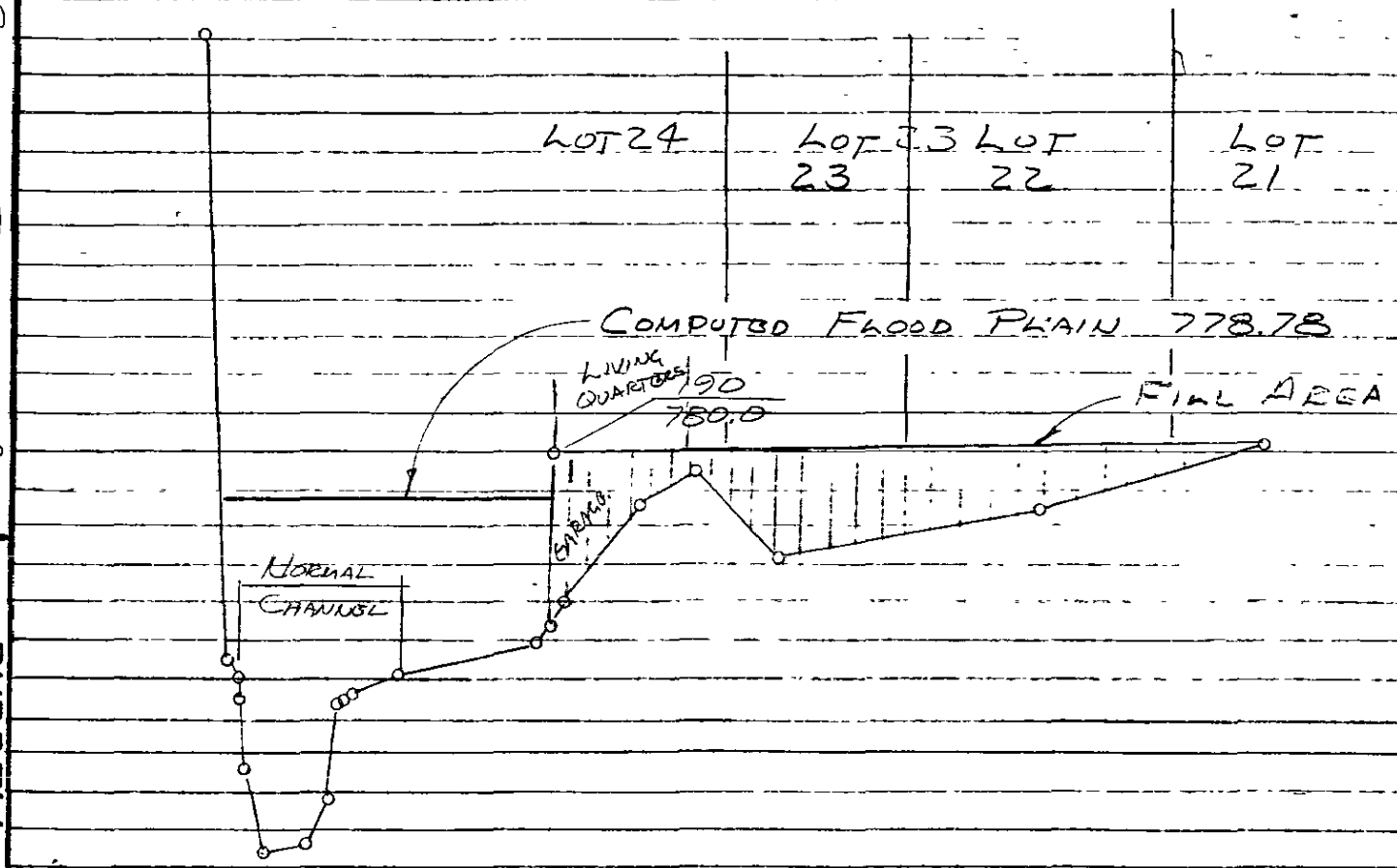
0.10 0.045 0.060

CHIPPEWA RIVER

SECTION 6

STATION 1/5730

(FILL SECTION)



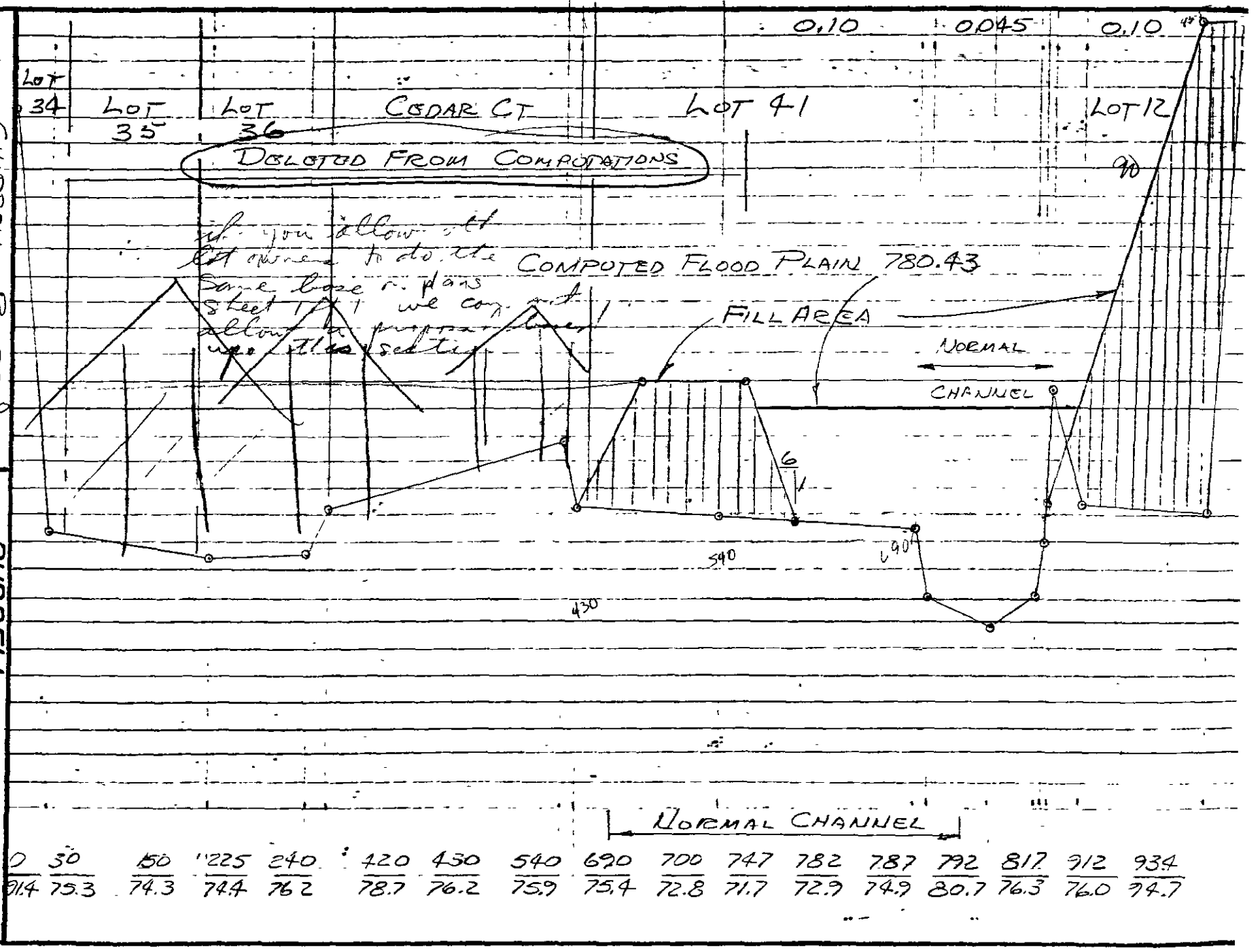
NORMAL CHANNEL

0	16	21	31	22	35	58	70	72	82	108	180	195	235	265	310	450	570
91.1	74.5	74.0	73.5	71.6	69.4	69.6	70.8	73.4	73.6	74.1	74.9	76.0	78.6	79.5	77.2	78.5	80.2

RUDDELL ENGINEERING

ENGINEERS & SURVEYORS

SHEPHERD & WEIDMAN, MICHIGAN



RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

Appendix C - Permit Application

OVER →

ROUGHNESS COEF

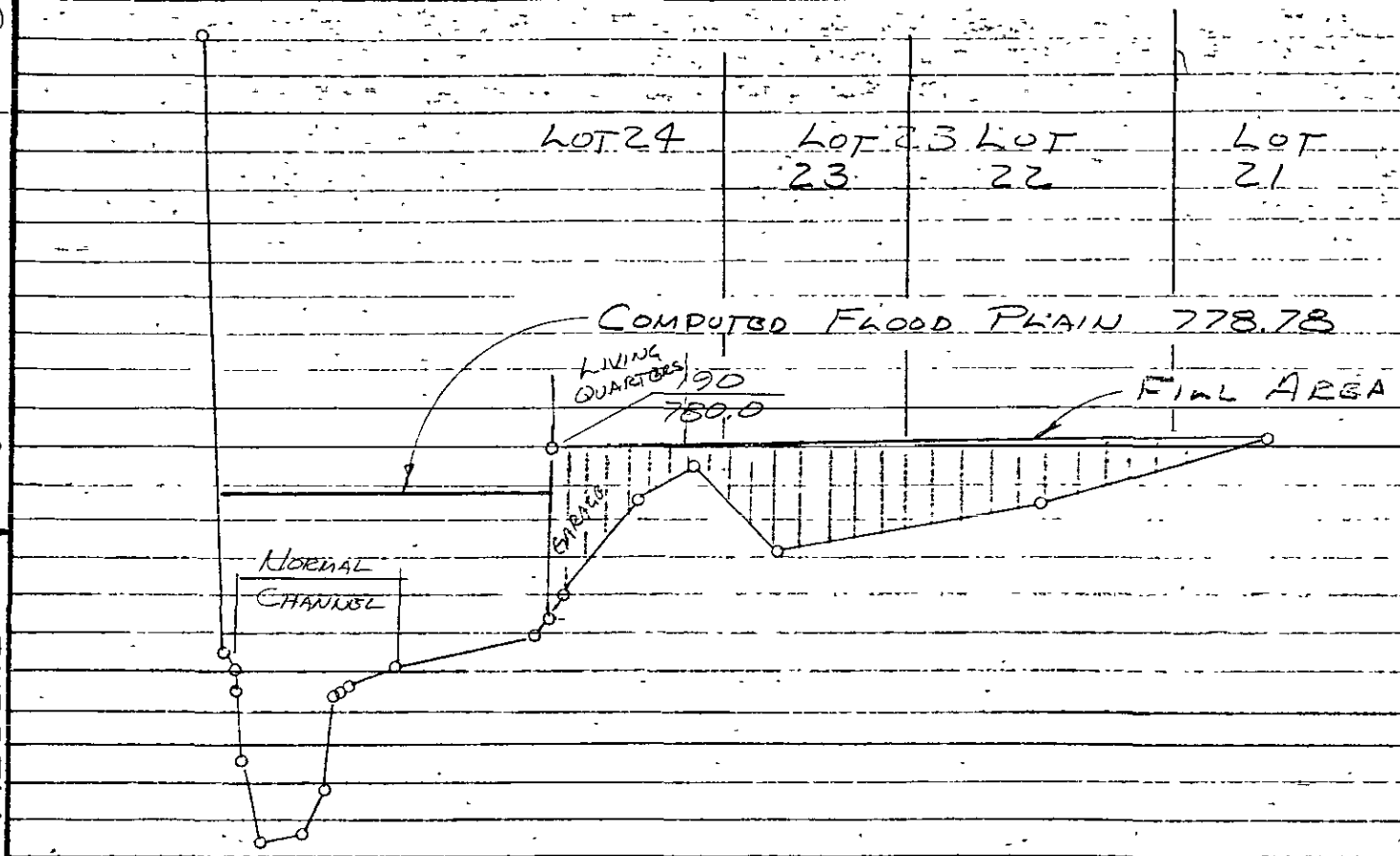
0.10 0.045 0.060

CHIPPEWA RIVER

SECTION 6

STATION 115730

(FILL SECTION)



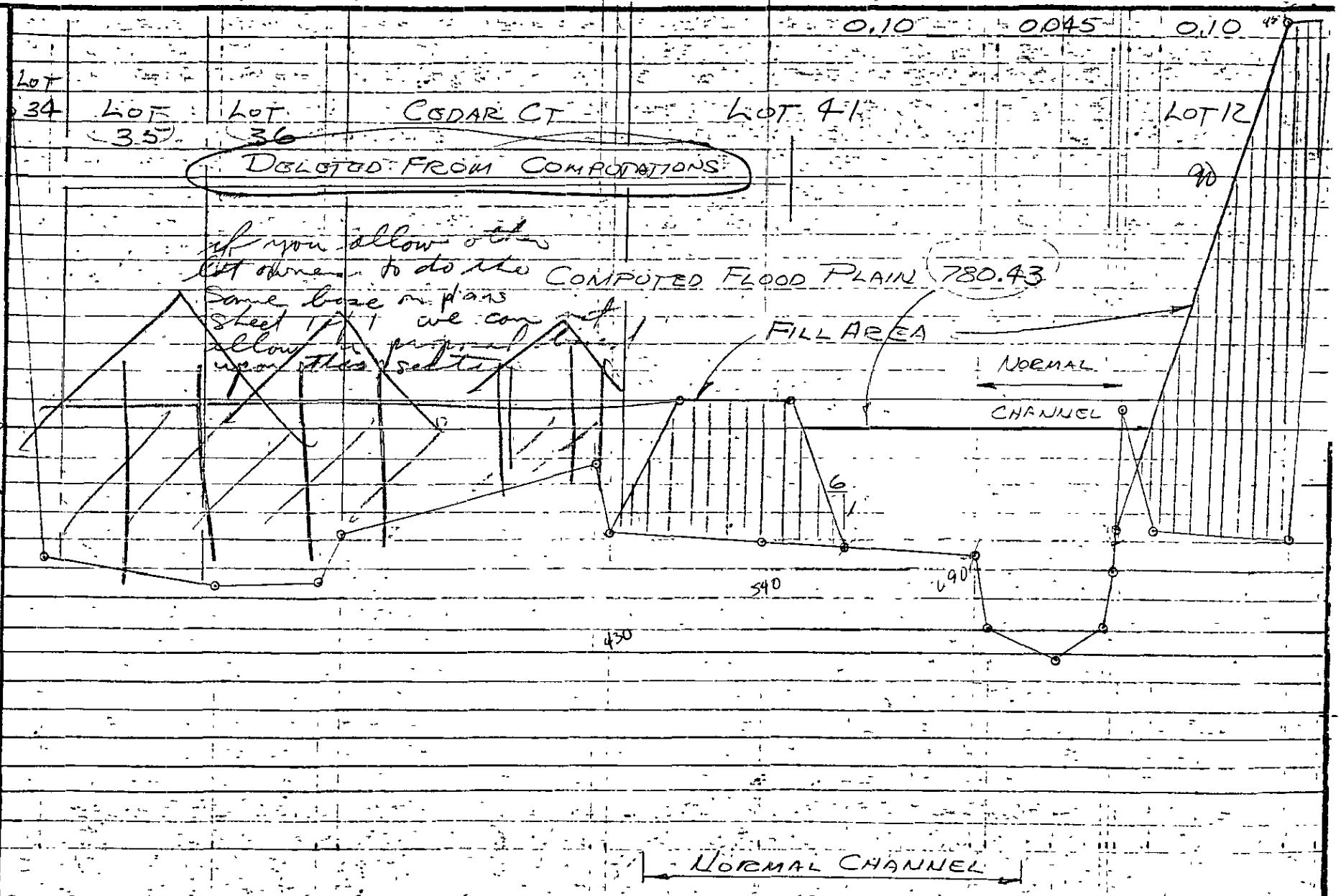
NORMAL CHANNEL

0	16	21	21	22	35	58	70	72	82	108	180	195	235	265	310	450	570
91.1	74.5	74.0	73.5	71.6	69.4	69.6	70.8	73.4	73.6	74.1	74.9	76.0	78.6	79.5	77.2	78.5	80.2

RUDDELL ENGINEERING

ENGINEERS & SURVEYORS

SHEPHERD & WEIDMAN, MICHIGAN



CHIPPEWA RIVER
SECTION DD
STATION 124+80
(FILL SECTION)

If you allow other lot owners to do the same based on plans sheet 1 of 1 we can not allow the proposed fill upon this section

RUDDELL ENGINEERING
ENGINEERS & SURVEYORS
SHEPHERD & WEIDMAN, MICHIGAN

Appendix C - Permit Application

APPLICATION FOR PERMIT TO OCCUPY OR ALTER THE FLOOD PLAIN OR CHANNEL OF A WATERCOURSE. Act 245, Public Acts of 1929, as amended by ACT 167, PUBLIC ACTS OF 1968 (FLOOD PLAIN CONTROL ACT)

1. PURPOSE OF PROJECT (include name and type of development)

Fill and occupy the existing flood plain with a single family residence

2. LOCATION County Isabella Town 14N Range R5W Section 25

Township/City Deerfield Watercourse Chippewa

3. SCOPE OF PROJECT (describe proposed occupation or alteration including quantities of cut and fill, nature of fill material, dimensions of culverts, etc.)

Place approximately 2000 cubic yards of clean fill material

4. OWNERSHIP Is the applicant the owner of all properties involved or affected? yes. If not, provide a description of the properties, their relationship to the project and written authorization from the respective owners.

5. PLANS This application is to be accompanied by a plan or drawing showing the watercourse and the proposed land alterations. If the alterations could affect the stage or discharge characteristics of the watercourse, an engineering study will be requested to provide an analysis and evaluation of the effects.

6. APPLICANT

Howard R. Kinney
individual or corporate name

1006 S. KINNEY
address

MT. PLEASANT MI 48858
city state zip

Howard R. Kinney 1-5-79
signature date

telephone 517-772-0484

7. AGENT

Rudell Engineering, Inc.
firm name

35 W. Broadway Rd
address

Mt Pleasant MI 48858
city state zip

William B. Rudell 1/5/78
signature date

telephone 517-772-2135

8. RETURN completed application and accompanying material to:

WATER MANAGEMENT DIVISION
BUREAU OF LAND & WATER MANAGEMENT
DEPARTMENT OF NATURAL RESOURCES
BOX 30028
LANSING, MICHIGAN 48909

OVER →

Statutory Application Fee of $25 00 required with all Non-Governmental applications, to be credited to the General Fund of the State of Michigan

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES

APPLICATION FOR PERMIT

(Act 346, P A 1972)

DNR USE ONLY

FILE NO
PERMIT NO

In accordance with Act 346, P A 1972, the undersigned herewith makes application for a permit to

Fill and occupy the existing flood plain
(Indicate type of project proposed)

1 Project located in Isabella County Deerfield Township

Section 25 T 14N R 5W, on Chippewa River
(name of lake or stream)

2 Legal description of upland property at project site

Name of Plat Rivercrest Lot Number(s) 25

Is the applicant the owner of the above described property? [X] Yes [ ] No If not attached the name and address of record owner and authorization for project

3 State reason for this proposed project (be specific)
To construct and occupy a single family residence

4 Attach a drawing of existing and proposed site (please refer to instructions on reverse side in preparing drawing)

Approval requested from Deerfield Township. See attached

5 Attach a letter showing approval or disapproval of local unit of government (township, village, city) in which the proposed project is located

6 Return completed application and accompanying material to DEPARTMENT OF NATURAL RESOURCES, HYDROLOGICAL SURVEY DIVISION, STEVENS T MASON BUILDING, LANSING, MICHIGAN 48926

Applicant's Signature Howard P Himes

Typed or printed name HOWARD P. HIMES

Address 1006 S. KINNEY

City, State, Zip Code MT PLEASANT, MI 48858

Phone Number 517-772-0484

APPLICATIONS NOT FULLY COMPLETED WILL BE RETURNED

(See instructions on reverse side)

FOR CASHIER'S USE ONLY—DO NOT WRITE IN THIS SPACE

R 4506 Rev 7/74

APPLICATION FOR PERMIT

State of Michgian
Department of Natural Resources

Name of Remittor
Address
Purpose

RUDDELL ENGINEERING, INC.

Professional Engineers - Land Surveyors

35 West Remus Road
Mt Pleasant, Michigan 48858
517-772-2138

Shepherd Office
200 Michael Avenue
Shepherd, Michigan 48883
517-828-5103

January 3, 1979

Mr. Edwin Courser
Deerfield Township Supervisor
1757 S. Littlefield Road
Mt. Pleasant, Michigan 48858

SUBJECT: Fill on Lot 25 Rivercrest Subdivision

Dear Mr. Courser:

Enclosed is a plot plan showing the proposed fill within the flood plain for Lot 25, Rivercrest Subdivision. We are requesting approval from the township board in accordance with the requirements of Act 346, P.A. 1972.

We are enclosing a suggested form for the approval. Upon action by the township board would you please forward a copy of the action to Mr. Dale Granger and to us.

If any question arise please contact us.

Very truly yours,

William B. Ruddell

William B. Ruddell
PE & RLS 14769

vss

Enclosures

January , 1979

Mr. Dale W. Granger
Hydrological Survey Division
Department of Natural Resources
Stevens T. Mason Building
Lansing, Michigan 48926

Dear Mr. Granger:

At a meeting held 1979, the Deerfield Township Board took action stating that they had no objection to the proposed filling on Lot 25, Rivercrest Subdivision as proposed by the drawings of Ruddell Engineering, Inc. dated December 6, 1978.

Very truly yours,

Peter Gruss
Township Clerk

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Report- Floodway data

ORIGINAL FLOODWAY DATA TABLE AS SUBMITTED WITH INCREASE IN 100-YEAR WATER SURFACE FROM THIS TABLE TO UPDATED TABLE (SHOWN NEXT TO REGULATORY COLUMN)

TABLE 2

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
CHIPPEWA RIVER								
A	600	299.0	1529.0	4.4	686.1	686.1	686.2	0.1
B	9,154	250.0	1338.0	5.1	695.6	695.6	695.7	0.1
C	18,600	230.0	1604.0	4.2	704.2	704.2	704.3	0.1
D	25,825	183.0	1360.0	5.0	710.4	710.4	710.4	0.0
E	35,244	128.0	1224.0	5.6	717.9	717.9	718.0	0.1
F	45,745	444.0	3081.0	2.2	723.5	723.5	723.6	0.1
G	65,375	775.0	3577.0	1.8	731.5	731.5	731.6	0.1
H	68,635	761.0	4484.0	1.5	732.1	732.1	732.2	0.1
I	74,580	450.0	2245.0	2.9	737.4	737.4	737.5	0.1
J	81,550	440.0	3265.0	2.0	742.0 +0.4	742.0	741.9	-0.1
K	85,825	800.0	5486.0	1.2	744.6 +0.4	744.6	744.7	0.1
L	87,215	820.0	4858.0	1.4	745.0 +0.3	745.0	745.1	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
M	88,600	600.0	3197.0	2.1	745.5 +0.3	745.5	745.6	0.1
N	89,700	440.0	2232.0	3.0	746.4 +0.2	746.4	746.5	0.1
O	90,800	653.0	2762.0	2.4	747.6	747.6	747.7	0.1
P	91,350	509.0	2900.0	2.3	748.2	748.2	748.2	0.0
Q	91,800	370.0	2591.0	2.5	748.4	748.4	748.4	0.0
R	92,550	112.0	1056.0	6.2	748.7 +0.1	748.7	748.7	0.0
S	92,900	129.0	1187.0	5.6	749.3	749.3	749.3	0.0
T	93,650	123.0	1197.0	5.5	750.5	750.5	750.5	0.0
U	94,800	710.0	4528.0	1.5	751.6	751.5	751.6	0.1
V	95,200	410.0	2470.0	2.7	751.7	751.7	751.7	0.0
W	95,865	94.0	964.0	6.8	753.0	753.0	753.1	0.1
X	96,015	150.0	1077.0	6.1	754.2 +0.1	754.2	754.3	0.1
Y	96,650	271.0	2632.0	2.5	756.3	756.3	756.3	0.0

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
Z	97,050	75.0	1008.0	6.5	756.6	756.6	756.6	0.0
AA	97,213	95.0	1401.0	4.7	759.1 +0.7	759.1	759.0	-0.1
AB	97,900	613.0	6366.0	1.0	759.7 +0.5	759.7	759.8	0.1
AC	98,400	495.0	5392.0	1.2	759.8 +0.5	759.8	759.9	0.1
AD	99,150	390.0	2720.0	2.4	760.2 +0.3	760.2	760.3	0.1
AE	99,750	635.0	4015.0	1.6	760.5 +0.4	760.4	760.5	0.1
AF	100,735	223.0	1876.0	3.5	760.7 +0.3	760.7	760.8	0.1
AG	101,067	135.0	1559.0	4.2	761.3 +0.2	761.3	761.4	0.1
AH	101,800	648.0	4352.0	1.5	761.7 +0.2	761.7	761.8	0.1
AI	102,900	340.0	2111.0	3.1	762.1 +0.2	762.1	762.2	0.1
AJ	104,150	660.0	3866.0	1.7	763.1 +0.2	763.1	763.2	0.1
AK	105,450	1000.0	5766.0	1.1	763.6 +0.1	763.6	763.7	0.1
AL	110,775	507.0	2506.0	2.6	765.8 +0.1	765.8	765.9	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
AM	116,500	601.0	3347.0	2.0	769.4	769.4	769.5	0.1
AN	120,100	575.0	2197.0	3.0	770.9	770.9	771.0	0.1
AO	129,950	338.0	1826.0	2.7	778.1	778.1	778.2	0.1
AP	140,900	385.0	2102.0	2.3	791.5	791.5	791.6	0.1
AQ	143,250	374.0	3053.0	1.6	792.4	792.4	792.5	0.1
AR	148,750	590.0	2493.0	2.0	795.7	795.7	795.8	0.1
AS	152,800	300.0	1166.0	4.2	798.6	798.6	798.7	0.1
AT	161,800	380.0	1548.0	3.2	810.2	810.2	810.2	0.0
AU	167,750	375.0	2744.0	1.8	815.0	815.0	815.1	0.1
AV	172,730	210.0	1732.0	2.6	827.2	827.2	827.2	0.0
AW	175,570	205.0	1234.0	3.7	828.4	828.4	828.5	0.1
AX	180,580	375.0	5137.0	0.9	834.2	834.2	834.2	0.0
AY	183,600	325.0	1068.0	4.2	838.0	838.0	838.0	0.0

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
AZ	191,400	490.0	2490.0	1.8	844.0	844.0	844.1	0.1
BA	197,250	430.0	1977.0	2.3	850.0	850.0	850.1	0.1
BB	203,464	505.0	2561.0	1.2	856.2 +0.1	856.2	855.9	-0.3
BC	210,350	501.0	1862.0	1.7	859.5	859.5	859.6	0.1
BD	215,877	436.0	1282.0	2.5	864.8	864.8	864.9	0.1
BE	241,300	619.0	5303.0	0.6	899.0	899.0	899.1	0.1
BF	244,550	270.0	1554.0	2.1	899.1	899.1	899.2	0.1
BG	247,600	146.0	785.0	4.1	900.4	900.4	900.4	0.0
BH	250,140	315.0	2484.0	1.1	904.4	904.4	904.5	0.1
BI	257,200	140.0	671.0	4.1	910.1	910.1	910.2	0.1
BJ	263,250	132.0	660.0	4.1	916.7	916.7	916.7	0.0
BK	274,443	460.0	1327.0	2.1	922.6	922.6	922.7	0.1
BL	277,640	644.0	1839.0	1.5	925.1	925.1	925.2	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
BM	280,940	234.0	1008.0	2.7	927.2	927.2	927.3	0.1
BN	285,810	569.0	2763.0	1.0	929.3	929.3	929.4	0.1
BO	293,340	210.0	890.0	3.1	936.0	936.0	936.0	0.0
BP	298,190	250.0	1385.0	2.0	941.4 +0.2	941.4	941.2	-0.2

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASI (ft)
CHIPPEWA RIVER								
A	600	299.0	1529.0	4.4	686.1	686.1	686.2	0.1
B	9,154	250.0	1338.0	5.1	695.6	695.6	695.7	0.1
C	18,600	230.0	1604.0	4.2	704.2	704.2	704.3	0.1
D	25,825	183.0	1360.0	5.0	710.4	710.4	710.4	0.0
E	35,244	128.0	1224.0	5.6	717.9	717.9	718.0	0.1
F	45,745	444.0	3081.0	2.2	723.5	723.5	723.6	0.1
G	65,375	775.0	3577.0	1.8	731.5	731.5	731.6	0.1
H	68,635	761.0	4484.0	1.5	732.1	732.1	732.2	0.1
I	74,580	450.0	2245.0	2.9	737.4	737.4	737.5	0.1
J	81,550	590.0	4495.0	1.5	742.4	742.4	742.5	0.1
K	85,825	800.0	5796.0	1.1	745.0	745.0	745.1	0.1
L	87,215	821.0	5132.0	1.3	745.3	745.3	745.4	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
M	88,600	600.0	3350.0	2.0	745.8	745.8	745.9	0.1
N	89,700	440.0	2305.0	2.9	746.6	746.6	746.7	0.1
O	90,800	653.0	2822.0	2.3	747.6	747.6	747.7	0.1
P	91,350	509.0	2932.0	2.2	748.2	748.2	748.3	0.1
Q	91,800	370.0	2612.0	2.5	748.4	748.4	748.5	0.1
R	92,550	112.0	1061.0	6.2	748.8	748.8	748.8	0.0
S	92,900	129.0	1191.0	5.5	749.3	749.3	749.3	0.0
T	93,650	123.0	1200.0	5.5	750.5	750.5	750.5	0.0
U	94,800	710.0	4542.0	1.5	751.6	751.6	751.7	0.1
V	95,200	410.0	2477.0	2.7	751.7	751.7	751.7	0.0
W	95,865	94.0	965.0	6.8	753.0	753.0	753.1	0.1
X	96,015	150.0	1077.0	6.1	754.3	754.3	754.4	0.1
Y	96,650	271.0	2633.0	2.5	756.3	756.3	756.4	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
Z	97,050	75.0	1008.0	6.5	756.6	756.6	756.6	0.0
AA	97,213	105.0	1429.0	4.6	758.4	758.4	758.3	-0.1
AB	97,900	612.0	6031.0	1.1	759.2	759.2	759.3	0.1
AC	98,400	495.0	5129.0	1.3	759.3	759.3	759.4	0.1
AD	99,150	390.0	2577.0	2.6	759.9	759.9	760.0	0.1
AE	99,750	635.0	3808.0	1.7	760.1	760.1	760.2	0.1
AF	100,735	223.0	1812.0	3.6	760.4	760.4	760.5	0.1
AG	101,067	135.0	1527.0	4.3	761.1	761.1	761.1	0.0
AH	101,800	648.0	4216.0	1.6	761.5	761.5	761.6	0.1
AI	102,900	340.0	2052.0	3.2	761.9	761.9	762.0	0.1
AJ	104,150	659.0	3793.0	1.7	762.9	762.9	763.0	0.1
AK	105,450	1000.0	5681.0	1.2	763.5	763.5	763.6	0.1
AL	110,775	507.0	2496.0	2.6	765.7	765.7	765.8	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
AM	116,500	601.0	3344.0	2.0	769.4	769.4	769.5	0.1
AN	120,100	575.0	2197.0	3.0	770.9	770.9	771.0	0.1
AO	129,950	338.0	1826.0	2.7	778.1	778.1	778.2	0.1
AP	140,900	385.0	2102.0	2.3	791.5	791.5	791.6	0.1
AQ	143,250	374.0	3053.0	1.6	792.4	792.4	792.5	0.1
AR	148,750	650.0	2666.0	1.8	795.7	795.7	795.8	0.1
AS	152,800	268.0	1135.0	4.3	798.6	798.6	798.6	0.0
AT	161,800	380.0	1548.0	3.2	810.2	810.2	810.2	0.0
AU	167,750	375.0	2744.0	1.8	815.0	815.0	815.1	0.1
AV	172,730	210.0	1732.0	2.6	827.2	827.2	827.2	0.0
AW	175,570	205.0	1234.0	3.7	828.4	828.4	828.5	0.1
AX	180,580	375.0	5137.0	0.9	834.2	834.2	834.2	0.0
AY	183,600	325.0	1068.0	4.2	838.0	838.0	838.0	0.0

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
AZ	191,400	490.0	2490.0	1.8	844.0	844.0	844.1	0.1
BA	197,250	430.0	1982.0	2.3	850.0	850.0	850.1	0.1
BB	203,464	505.0	2629.0	1.2	856.1	856.1	856.1	0.0
BC	210,350	501.0	1855.0	1.7	859.5	859.5	859.6	0.1
BD	215,877	436.0	1282.0	2.5	864.8	864.8	864.9	0.1
BE	241,300	619.0	5303.0	0.6	899.0	899.0	899.1	0.1
BF	244,550	270.0	1554.0	2.1	899.1	899.1	899.2	0.1
BG	247,600	146.0	785.0	4.1	900.4	900.4	900.4	0.0
BH	250,140	315.0	2484.0	1.1	904.4	904.4	904.5	0.1
BI	257,200	140.0	671.0	4.1	910.1	910.1	910.2	0.1
BJ	263,250	132.0	660.0	4.1	916.7	916.7	916.7	0.0
BK	274,443	460.0	1327.0	2.1	922.6	922.6	922.7	0.1
BL	277,640	644.0	1839.0	1.5	925.1	925.1	925.2	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
BM	280,940	234.0	1008.0	2.7	927.2	927.2	927.3	0.1
BN	285,810	569.0	2763.0	1.0	929.3	929.3	929.4	0.1
BO	293,340	210.0	886.0	3.1	936.0	936.0	936.0	0.0
BP	298,190	290.0	1612.0	1.7	941.2	941.2	941.3	0.1

[1]FEET ABOVE CORPORATE LIMIT

Vandecar Rd.

B. St	H I	F S	Elev	Comment	
2.90	102.90		100.00	N. E. Cor of Dr. Abut Wall	
		4.04	95.96	H. W. House Dr.	799
		3.77	96.23	Service Door	799.29
		2.47	97.53	3rd Home Sub Rd & Dr.	
		2.19	97.81	2nd Home Sub Rd & Dr.	
		2.83	97.17	2nd Home S.E Cor. of Gar.	799.23
7.05	107.05 ~~92.95~~		100.00	N. E. Cor Br Abut. Wall	798.06
		5.51	101.54 ~~87.44~~	BM. Corp #38	799.6
		4.30	102.75	℄ Sub. Rd. Br Corner	
		3.85	103.20	BM #4	

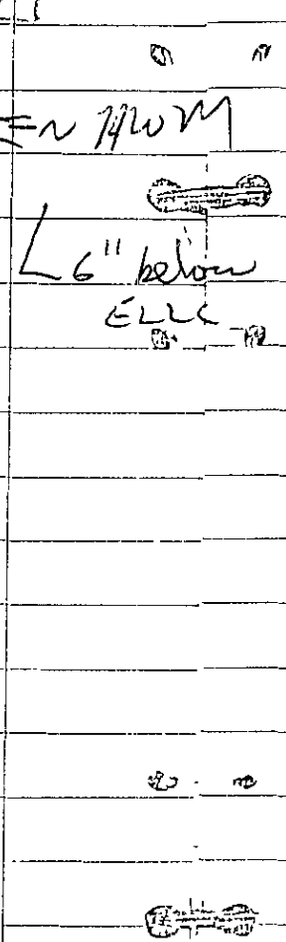
Al Haynes 773-2128

10 Dec. 92

Pg - 43SL SPUR LINES BOOK 2 Pg - 7B

[RR SPIKE N.W. U/S SIDE WOOD BEAM AIRLINE Rd & Chippewa

	+	HI	-	ELEV.		
TBM 1-D				922.1 ✓		
	6.61	928.7				Road Section
	Dist	Rod	ELEV.			Desc.
	0'	4.~~81~~ 9	923.8			Top ℄ Rd @ FACE LT. WOOD HEAD WALL
	50' LT	4.91	923.8			℄ R AIRLINE Rd
	100' LT	5.~~26~~ 3	923.4			
	150' LT	5.60	923.1			
	200' LT	5.~~76~~ 8	922.9			
	250' LT	5.~~69~~ 7	923.0			
						Rd CONT. FLAT.
	52' RT	4.98	923.8			Top ℄ Rd @ FACE RT WOOD HEADWALL
	100' RT	5.61	923.1			℄ Rd
	150' RT	6.41	922.3			
	200' RT	7.14	921.6			
	250' RT	7.68	921.1			
	300' RT	7.88	920.9			
						Road CONT. FLAT



= N HWM

6" below ELLC

	+	H		ELEV						Pa-8B
		928.7								
	DIST	Rod	ELEV				Desc			
1	0'	5.2	923.5			TOP LT WOOD	Headwall @ FACE			
2	0'	11.4	917.3		GE	BTM	"	"	"	
3	2' RT	12.4	916.3			W/S	S/L			
4	5' RT	0.9	915.4		SND6				Rock	
5	10' RT	4.5	911.8		"				"	
6	15' RT	4.9	911.4		"				"	
7	20 RT	4.9	911.4		"				"	
8	25' RT	4.7	911.6		"	BTM	Pier	LT	"	
9	27' RT	4.5	911.8		"	BTM	Pier	RT	"	
10	33' RT	3.6	912.7		"				"	
11	38' RT	2.4	913.9		SND6				Rock	
12	42' RT	12.3	916.4			W/S	S/L			
13	47' RT	11.5	917.2			GE				
14	52' RT	10.8	917.9		GE	BTM	RT WOOD	Headwall @ FACE		
15	52' RT	9.9	923.8			TOP	"	"	"	
16	52' RT	6.2	922.5			L/S				
17	0	6.2	922.5			L/S				
TBM 1-D	CT	5.61	922.1							

TABLE 2

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
CHIPPEWA RIVER								
A	600	299.0	1529.0	4.4	686.1	686.1	686.2	0.1
B	9,154	250.0	1338.0	5.1	695.6	695.6	695.7	0.1
C	18,600	230.0	1604.0	4.2	704.2	704.2	704.3	0.1
D	25,825	183.0	1360.0	5.0	710.4	710.4	710.4	0.0
E	35,244	128.0	1224.0	5.6	717.9	717.9	718.0	0.1
F	45,745	444.0	3081.0	2.2	723.5	723.5	723.6	0.1
G	65,375	775.0	3577.0	1.8	731.5	731.5	731.6	0.1
H	68,635	761.0	4484.0	1.5	732.1	732.1	732.2	0.1
I	74,580	450.0	2245.0	2.9	737.4	737.4	737.5	0.1
J	81,550	440.0	3288.0	2.0	742.0	742.0	742.0	0.0
K	85,825	800.0	5508.0	1.2	744.6	744.6	744.7	0.1
L	87,215	820.0	4877.0	1.4	745.0	745.0	745.1	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
M	88,600	600.0	3207.0	2.1	745.5	745.5	745.6	0.1
N	89,700	440.0	2237.0	2.9	746.4	746.4	746.5	0.1
O	90,800	653.0	2765.0	2.4	747.6	747.6	747.7	0.1
P	91,350	509.0	2902.0	2.3	748.2	748.2	748.3	0.1
Q	91,800	370.0	2593.0	2.5	748.4	748.4	748.4	0.0
R	92,550	112.0	1057.0	6.2	748.7	748.7	748.7	0.0
S	92,900	129.0	1187.0	5.6	749.3	749.3	749.3	0.0
T	93,650	123.0	1197.0	5.5	750.5	750.5	750.5	0.0
U	94,800	710.0	4529.0	1.5	751.5	751.5	751.6	0.1
V	95,200	410.0	2470.0	2.7	751.7	751.7	751.7	0.0
W	95,865	94.0	964.0	6.8	753.0	753.0	753.1	0.1
X	96,015	150.0	1077.0	6.1	754.2	754.2	754.3	0.1
Y	96,650	271.0	2632.0	2.5	756.3	756.3	756.4	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
Z	97,050	75.0	1008.0	6.5	756.6	756.6	756.6	0.0
AA	97,213	105.0	1429.0	4.6	758.4	758.4	758.3	-0.1
AB	97,900	612.0	6030.0	1.1	759.2	759.2	759.3	0.1
AC	98,400	495.0	5128.0	1.3	759.3	759.3	759.4	0.1
AD	99,150	390.0	2577.0	2.6	759.9	759.9	760.0	0.1
AE	99,750	635.0	3807.0	1.7	760.1	760.1	760.2	0.1
AF	100,735	223.0	1812.0	3.6	760.4	760.4	760.5	0.1
AG	101,067	135.0	1527.0	4.3	761.1	761.1	761.1	0.0
AH	101,800	648.0	4216.0	1.6	761.5	761.5	761.6	0.1
AI	102,900	340.0	2052.0	3.2	761.9	761.9	762.0	0.1
AJ	104,150	659.0	3793.0	1.7	762.9	762.9	763.0	0.1
AK	105,450	1000.0	5681.0	1.2	763.5	763.5	763.6	0.1
AL	110,775	507.0	2496.0	2.6	765.7	765.7	765.8	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
AM	116,500	601.0	3344.0	2.0	769.4	769.4	769.5	0.1
AN	120,100	575.0	2197.0	3.0	770.9	770.9	771.0	0.1
AO	129,950	338.0	1826.0	2.7	778.1	778.1	778.2	0.1
AP	140,900	385.0	2102.0	2.3	791.5	791.5	791.6	0.1
AQ	143,250	374.0	3053.0	1.6	792.4	792.4	792.5	0.1
AR	148,750	650.0	2666.0	1.8	795.7	795.7	795.8	0.1
AS	152,800	268.0	1135.0	4.3	798.6	798.6	798.6	0.0
AT	161,800	380.0	1548.0	3.2	810.2	810.2	810.2	0.0
AU	167,750	375.0	2744.0	1.8	815.0	815.0	815.1	0.1
AV	172,730	210.0	1732.0	2.6	827.2	827.2	827.2	0.0
AW	175,570	205.0	1234.0	3.7	828.4	828.4	828.5	0.1
AX	180,580	375.0	5137.0	0.9	834.2	834.2	834.2	0.0
AY	183,600	325.0	1068.0	4.2	838.0	838.0	838.0	0.0

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
AZ	191,400	490.0	2490.0	1.8	844.0	844.0	844.1	0.1
BA	197,250	430.0	1982.0	2.3	850.0	850.0	850.1	0.1
BB	203,464	505.0	2629.0	1.2	856.1	856.1	856.1	0.0
BC	210,350	501.0	1855.0	1.7	859.5	859.5	859.6	0.1
BD	215,877	436.0	1282.0	2.5	864.8	864.8	864.9	0.1
BE	241,300	619.0	5303.0	0.6	899.0	899.0	899.1	0.1
BF	244,550	270.0	1554.0	2.1	899.1	899.1	899.2	0.1
BG	247,600	146.0	785.0	4.1	900.4	900.4	900.4	0.0
BH	250,140	315.0	2484.0	1.1	904.4	904.4	904.5	0.1
BI	257,200	140.0	671.0	4.1	910.1	910.1	910.2	0.1
BJ	263,250	132.0	660.0	4.1	916.7	916.7	916.7	0.0
BK	274,443	460.0	1327.0	2.1	922.6	922.6	922.7	0.1
BL	277,640	644.0	1839.0	1.5	925.1	925.1	925.2	0.1

[1]FEET ABOVE CORPORATE LIMIT

TABLE 2
(cont'd)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATIONS			
CROSS SECTION	DISTANCE[1]	WIDTH (ft)	SECTION AREA (sq ft)	MEAN VELOCITY (ft/sec)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (ft)
BM	280,940	234.0	1008.0	2.7	927.2	927.2	927.3	0.1
BN	285,810	569.0	2763.0	1.0	929.3	929.3	929.4	0.1
BO	293,340	210.0	886.0	3.1	936.0	936.0	936.0	0.0
BP	298,190	290.0	1612.0	1.7	941.2	941.2	941.3	0.1

[1]FEET ABOVE CORPORATE LIMIT

County of Isabella, Michigan FIS
Flood Insurance Restudy
Hydraulic Computation Background Information

This study covers the Chippewa River from the downstream corporate limit at the Isabella-Midland county line to the upstream corporate limit at the Isabella-Mecosta County line. The 100- and 500-year floods are being modeled with discharges as previously approved by the Michigan Department of Natural Resources (MDNR). It should be noted that the time and cost estimate for the study specifies that only a 100-year flood plain and floodway will be determined for Chippewa and Broomfield Townships. The 500-year profile has been determined in these townships but will not be published.

Bridge and valley sections were field surveyed for this study, except in three locations as follows. HEC-2 input data was supplied by the MDNR from SECNO 85275 to SECNO 105450, which is the data used in the City of Mt. Pleasant FIS; upstream of Meridian Road, from Secno 130571 to Secno 134611; for the entire reach between School and Coldwater Roads, being SECNO 216135 through SECNO 221102. A field trip was also made to collect Manning's "N" values, supplemental bridge data and to become familiar with the area.

The starting water surface elevation was estimated using the slope area method. The data used to determine the slope was the measured water surface elevation for cross sections A and B, Secnos 600 and 9154, respectively, and the measured distance between these two sections.

The natural profile at Leaton and West Airline Roads included encroachment elevations to better model the flow distribution. When the encroached run was made, difficulties were encountered in recreating the natural profile. As a result, the encroached model was modified for purposes of establishing encroachments, but does not directly give the natural profile water surface elevations. Instead, X5 cards are used for the natural profile portion of the run to input the water surface elevation in the areas with encroachment elevations. Because of the rapid changes in geometry, even with inputing the water surface elevation to the thousands of a foot, the encroached model gives a natural water surface of up to 0.05 foot higher upstream of Leaton Road and 0.01 foot higher upstream of West Airline Road. Also, an X5 card was used at the downstream face of the covered bridge at SECNO 154800. Because of the rapid changes in geometry at this location, even with a surcharge of less than 0.10 foot, a water surface increase in excess of 1.00 foot resulted just upstream. As discussed with your office, the X5 card was used to input a 0.10 foot rise at this location. Finally, as discussed previously, even though the modeling at Leaton Road does not explicitly indicate where the weir flow occurs, the weir flow will be shown to occur starting 200 feet south of the bridge and over about 260 feet of the road.

County of Isabella FIS
Chippewa River
Responses to MDNR Review Comments dated 22 November 1993

1. The starting slope was obtained by using the measured water surface at cross sections A and B, which were obtained during the survey for this study. These cross sections are closer to the downstream corporate limit than Loomis and Chippewa Roads and are felt to give a better approximation. It is also felt that they are a better approximation than information obtained from the U.S.G.S. quadrangle as it is more accurately measured.

2. The skew used at Leaton Road for the bridge opening in our model is with respect to the road embankment. Since we believe that the U.S.G.S. measured the flow direction with respect to the road embankment, we did not change the skew value. For the measurements taken during the survey for this study, the depth of water upstream of the bridge, as indicated by our model, is about 16 feet. The bridge modelling has been modified to the special culvert routine to enable the indicated weir flow to be accounted for. A constant elevation weir length of 260 feet is being used, as we have no mapping to give us more detailed information. Also, encroachment elevations have been specified on the right side to model the flow at the weir for sections both upstream and downstream of the bridge.

3. The Isabella County Road Commission was contacted about weir flow over Lincoln Road during the 1986 flood. They were not aware of any water overtopping the road. As a result, the model was modified to increase the bridge opening to about 930 feet as requested. Also, the encroachments both upstream and downstream were modified to reflect this change. Since the model still indicated weir flow to be occurring, the Manning's "N" values for the downstream channel were reduced to 0.035 whenever they exceeded that value, the expansion coefficient was reduced to 0.8 and the XKOR value was reduced to assume a more efficient entrance. There is still a minor amount of weir flow indicated. Based on phone discussions between your office and our office, no further changes were made to the model.

4. The Meridian Road bridge modelling was examined and the bridge length in the direction of flow during which pressure flow could occur was determined to be 25 feet, down from 41 feet that originally was being used when the model was set up for the normal bridge routine. This resulted in the XKOR value being reduced from 2.11 to 1.87. The remaining 16 feet was coded in as valley sections, with the distance split between the upstream and downstream sides of the bridge.

5. The HEC-2 input data which you supplied for the reach upstream of Meridian Road has been used through your section 41.15, which is section 134611 in our model. Upstream of this point 2-foot mapping is available. A new section was added based on the 2-foot mapping for the overbanks and the channel was based on the valley section

upstream of the location. Additionally, an interpolated section was added. Our cross section data which was based on sections taken at other locations and on interpolation, which in part used the relocated sections, were removed.

6. The bridge at Vandecar Road was replaced in 1992 with a bridge that has an opening about twice as wide as the previous bridge. Also, as indicated by your office during our phone conversation, based on the benchmark established by our office for the survey of the bridge, the high water mark elevation appears to be lower than indicated in the review comments and agrees well with our model. As a result no changes were made at this location.

7. Based on the measured water surface elevations taken during the study survey at valley sections AY and AZ, it appears an error was made in the interpolation. Secno 186790 was raised 1.02 foot. As a result it was also necessary to adjust the elevations of secnos 187092, 187394 and 187494. The energy grade line at the bridge is now at 842.59 feet. This matches closely with the low chord of the bridge. It is felt that the observed high water mark was for an area that reflected stagnation in the flow and that the energy grade line may be a more accurate indication of the observed high water mark than the water surface elevation. Therefore, no more changes were made to the model.

8. The requested changes at Pickard Road have been made. This also required the adjustment of encroachments upstream of the bridge and the removal of encroachments downstream of the bridge.

9. The error with the encroachment had been caught before receiving your review letter and the problem has been corrected.

10. The requested changes in elevations for the weir flow calculations at the dam forming Lake Isabella are within the accuracy of the computation methodology and have been made.

11. The encroachment at the upstream face of the Briton Road bridge has been opened up to the length of the weir flow. Encroachments upstream of this location have been adjusted accordingly.

12. The modelling at West Airline Road has been modified to the special culvert routine and now includes about 1/2 of the flow going over the road. Encroachments upstream and downstream of the bridge have been adjusted accordingly.

13. The HEC-2 input data which you supplied for the reach between School and Coldwater Roads has been used and the sections in our model which had been obtained by moving valley section data from other locations, has been eliminated. Slight adjustments to your HEC-2 reach lengths had to be made to match the base map being used in our study. Also, several encroachments were added and as a result, the expansion and contraction coefficients were modified at several locations. There was a problem with the NH values in the model not being properly adjusted for the skew values being used at

the valley sections. As a result, inappropriate Manning's "N" values were being applied. It also appeared, based on the 2 foot mapping provided, that the bank stations were limiting the channel to the open area of the stream. Based on our field visit and the location of the bank stations, it appeared that the "N" values were large. As a result of these problems, the NH cards were removed and the NC cards were added. An average of the "N" values provided and those estimated by our office were applied.

14. The floodway run is being provided in this submittal. We are also providing floppy disks with 2 foot mapping in Microstation DOS format, for all areas that were provided to our office by the local community.

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Report - Survey data

00BREAK00

	+	HI	-	ELEV.
TBM 0-7				731.57
	5.97	737.54		
	Dist	Rod	ELEV.	
	0	5.79	731.75	
	25 LT	5.23	732.31	
	50 LT	4.68	732.86	
	75 LT	4.05	733.49	
	100 LT	3.70	733.84	
	146 RT	7.97	729.57	
	171 RT	8.35	729.19	
	196 RT	8.65	728.89	
	221 RT	9.06	728.48	
	246 RT	9.42	728.12	
	346		727.2	
	446		726.63	
	546		726.67	
	646		727.5	
	746		728.5	

23 FEB, 93

Pg-131B 151B

CHISELED □ S.W. CORNER LEATON-Rd3 BRIDGE (Pg-11 Levels Book 2)

Desc

Top ℄ Rd @ FACE LT ABUT

℄ Rd

Rd CONT. Slight [illegible]

Top ℄ Rd @ FACE RT ABUT

Rd CONT. FLAT

	+	HI	-	ELEV
		737.54		
	DIST	ROD	ELEV.	
1	0	7.83	729.71	
2	1' RT	9.1	728.4	
3	31' RT	21.0	716.54	
4	37' RT	22.8	714.7	
5	46' RT	1 0	713.7	
6	49' RT	3 7	711.0	
7	59' RT	4 0	710.7	
8	69' RT	4.0	710.7	
9	79' RT	3.5	711.2	
10	89' RT	5.2	709.5	
11	96' RT	5.2	709.5	
12	99' LT	5.6	709.1	
13	110' RT	5.7	709.0	
14	117 RT	1.0	713.7	
15	117' RT	22.9	714.6	
16	117' RT	21 6	715.9	
17	145' RT	10.8	726.7	
18	146' RT	9 81	727.73	
TBM 0.7	CK	5.97	731.57	

DESC

L/S TOP LT ABUT @ FACE

BTM

C.F BTM OF BANK

W/S S/C

SNDG - BTM OF PIER # 1 LT

" " " 1 RT

SNDG

"

BTM OF PIER # 2 LT

" " " # 2 RT

SNDG

SNDG BTM OF BANK

W/S S/C

TOP OF BANK @ FACE

BTM OF ABUT

L/S TOP OF RT ABUT. @ FACE

ROCK

ISABELLA COUNTY
CHIPPEWA RIVER
F.I.S
BRIDGE ⊗ SECTIONS
1992 - 1993
BOOK NO 3
AUTO LEVEL : ZEISS N. 2

TOTAL STATION : GEODIMETER 440

T. ROZNOWSKI
K. DRAKE

TBM DESCRIPTION

ISABELLA COUNTY
CHIPPEWA RIV
F.S.

JULY 6 - JULY 10 1993

T. ROZNOWSKI
K. DRAKE

AUTO LEVEL = Zeiss N. 2

TOTAL STATION = Geodimeter 440

DIETZGEN NO. 384-S

BRIDGE SECTION
NO. 35A
Covered BRIDGE

AUTO LEVEL

	+	HI	-	ELEV.
TBM Pump				810.32
	3.06	813.39		

DIST	Rod	ELEV.
0'	2.39	811.00
25' LT	3.7	809.7
50' LT	5.0	808.4
75' LT	5.7	807.7
100' LT	5.8	807.6
150' LT	5.3	808.1
200' LT	4.9	808.5
250' LT	4.2	809.2
91' RT	2.3	811.1
116' RT	4.3	809.1
141' RT	5.4	808.0
166' RT	6.6	806.8
191' RT	7.7	805.7
216' RT	8.5	804.9
241' RT	8.7	804.7

T. ROZNOWSKI Sunny 85°
K. DRAKE JUL 10, 93 Pg-14

Pg-15L Levels

ROAD SECTION

DESC

TOP ℄ Rd @ FACE LT ABUT
GE ℄ Dirt Rd

Rd CONT FLAT

TOP ℄ Rd @ FACE RT ABUT
GE ℄ Dirt Rd

	+	HI	—	ELEV.	
		813.39			
	DIST	Rod	ELEV		
	266' RT	8.3	805.1		
	291' RT	7.4	806.0		
	316' RT	6.3	807.1		
	341' RT	4.9	808.5		
TBM Ramp	CK	3.06	810.33		
TBM Ramp		HI		810.33	
	+0.57	810.87			
	DIST	Rod	ELEV		
1	0'	0.54	810.33		
2	0'	6.6	804.3		
3	13.5' RT	9.9	801.0		
4	16.5' RT	10.3	800.6		
5	27' RT	13.2	797.7	WS S/L	
6	37' RT	3.1	794.6		
7	47' RT	35	794.2		
8	57 RT	6.0	791.7		

Desc

℄ Dirt Rd

LAND CONT. TO Rise 10' ±

Next 150' ±

Desc

TOP LT ABUT @ FACE

BTM LT ABUT @ FACE ON Rubble

GE BTM pier 1 ON Rubble

" " " " "

W/S S/L

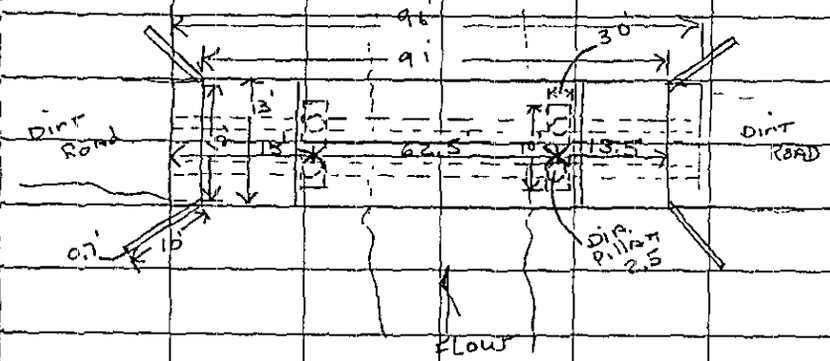
ENDS SAND

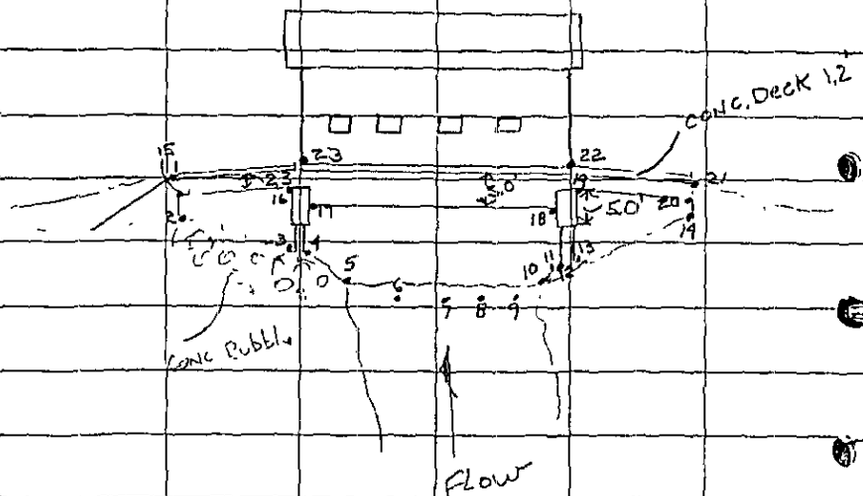
	+	HI	—	ELEV	Desc
		797.7	WS		
	DIST	Rod	ELEV		
9	67' RT	1.2	796.5	SHDC	SNDC SAND
HI 810.87 10	72' RT	13.2	797.7	WS	U/S S/L
11	73' RT	11.4	799.5		TOP RT BNK ON CONC. & Toe of SLOPE
12	76' RT	10.6	800.3		BTM Pier 2 ON CONC
13	79' RT	9.3	801.6		BTM Pier 2 GE
14	91' RT	2.5	808.4		BTM RT ABUT GE @ FACE
					~~TOP RT ABUT @ FACE~~
15	0'	2.6	808.3		L/S
16	13.5' RT	1.7	809.2		L/S
17	16.5' RT	4.7	806.2		L/S
18	76' RT	4.8	806.1		L/S
19	79' RT	1.7	809.2		L/S
20	91' RT	2.4	808.5		L/S
Tem Ramp	CL	0.59	810.33		

	+	HI	−	ELEV.
TBM Ramp	4.30	814.63		810.33

	DIST	Rod	ELEV.	Desc
21	91' RT	4.72	809.91	Top RT ADUT @ FACE
22	15' RT	2.54	812.09	Top CONC. Ramp @ ENT.
23	76' RT	2.49	812.14	" " " "
TBM Ramp	ck	4.30	810.33	

COVERED BRIDGE
SKetch





TOTAL = 90'

Lenght Bridge = 91'

- Dia Pillar = 2.5'
- Width Pier = 3'
- Lenght pier = 10'
- Height of pier = 5'
- Width Rd = 12'
- Width Bridge = 13'

- Steel center Beam = 5.0
- End Beam = 2.3'
- Conc Deck = 1.2'

- Wingwall Lenght = 10'
- " Width = 0.7'

Top pier to Bot Deck = 2.0

BRIDGE SECTION
NO. 48C
R.R. BRIDGE

AUTO LEVEL

	+	HI	−	ELEV
TBM Hub 1				758.1
	5.1	763.2		
	DIST	Rod	ELEV	
	0	4.2	759.0	
	50' RT	4.3	758.9	
	100' RT	4.3	758.9	
	150' RT	4.4	758.8	
	200' RT	4.5	758.7	
	250' RT	4.6	758.6	
	75' LT	3.8	759.4	
	100' LT	4.0	759.2	
	150' LT	3.6	759.6	
	200' LT	3.4	759.8	
	250' LT	3.4	759.8	
	300' LT	3.4	759.8	
	325' LT	3.4	759.8	

✓ IK

Hub set @ RR Tracks
(pg 18 LEVELS)

Desc

Top & RR Ties @ Face Rt Conc ABUT

Top & R.R. Ties

TRACKS CONT FLAT

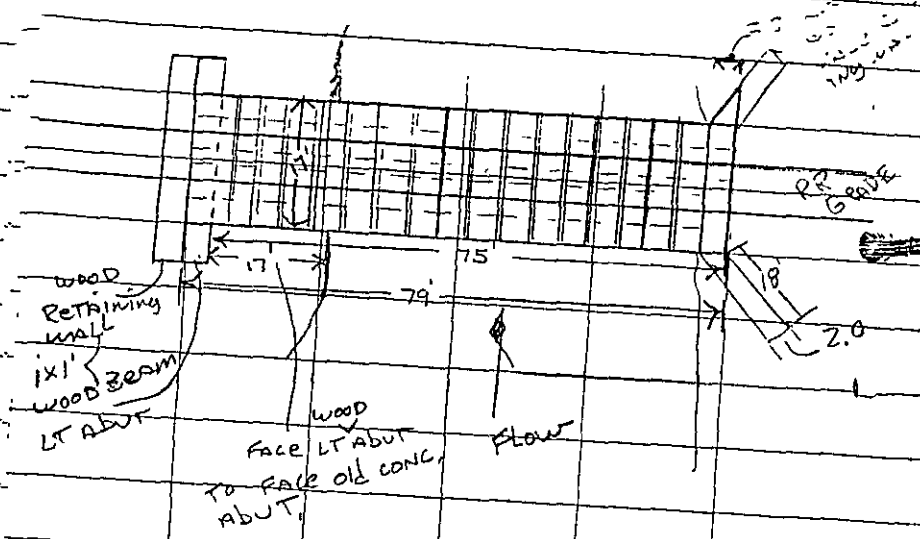
Top & R.R. Ties @ Face wood ABUT

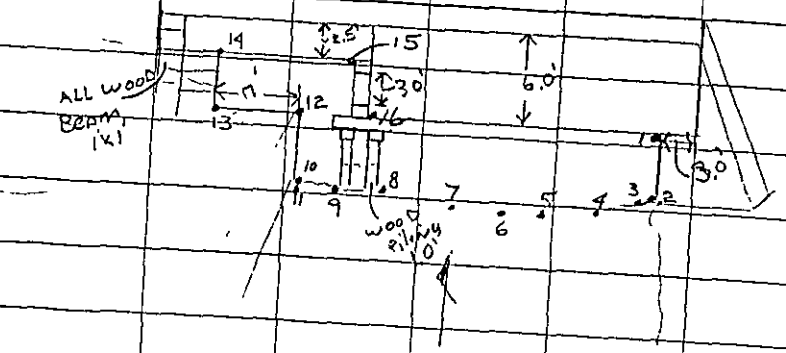
Top & Ties

CONT FLAT

	+	HI	−	ELEV			Desc
		763.2					
	DIST	Rod	ELEV				
1	0'	11.2	748.6			L/S	Top RT Abut @ Face
2	0'	18.4	744.8			GE	Bot RT Abut @ Face
3	1' LT	18.7	744.5	WS			W/S S/L
4	10' LT	4.4	740.1	SNDG		SNDG	SAND
5	20' LT	6.9	737.6				
6	30' LT	7.1	737.4				
7	40' LT	4.8	739.7				
8	49' LT	2.1	742.4				Rt Edge wood Pier
9	53' LT	0.9	743.6	SNDG		SNDG	LT Edge wood Pier
10	58' LT	18.7	744.5	WS			W/S S/L
11	58' LT	19.0	744.2				Bottom LT Abut (old conc Abut)
12	58' LT	12.2	751.0				Top LT "old conc Abut"
13	75' LT	8.8	754.4			LT	Bot wood Abut
14	75' LT	6.9	756.3			LT	Top wood Abut & L/S
15	53' LT	6.9	756.3				L/S
16	49' LT	10.9	752.3				L/S
TBM Hub	ck	5.1	758.1				

R.R. BRIDGE
SKETCH.
150 U/S OF ISLAND
PARK.





LT STEEL BEAM = 2.5' (4)

RT STEEL " = 6.0' (2)
8.7'

WOOD PILES 1.0'

WOOD TIES 1'x.1'

4 CROSS TIES

Upright WOOD BEAMS 3' LONG (5)

WIDTH OF BRIDGE = 17'

T. ABUT TO FACE OF RET WALL = 3'

W/W = 2' W & 18' LONG

TOTAL LENGHT = 79'

LENGHT = 75'

WIDTH 7'

ISABELLA COUNTY
CHIPPEWA RIVER
F.I.S
BRIDGE ⊗ SECTIONS
1992 - 1993
BOOK NO. 3
AUTO LEVEL = ZEISS N. 2

TOTAL STATION = GEODIMETER 440

T. ROZNOWSKI
K. DRAKE

BRIDGE SECTION INDEX

WATER SURFACE ELEV.
pg - 1w - pg 2w

INDEX

⊗ 2B VERNON Rd
Pg-1B - Pg-6B

⊗ 8B AIRLINE Rd
Pg-6BA - Pg-10B

⊗ 9B WYMAN Rd
Pg-11B - Pg-16B

⊗ 12B DREW Rd
Pg-17B - Pg 22B

⊗ 13B ROLAND Rd
Pg-23B - Pg-28B

⊗ 19B COLDWATER RD
Pg-29B - Pg-34B

⊗ 20B SCHOOL RD
Pg-35B - Pg 40B

⊗ 22B RIVER RD
Pg-42B - Pg 47B

⊗ 24B PICKARD RD
Pg-48B - Pg-53B

⊗ 25B LITTLEfield RD
Pg-54B - Pg-58B

⊗ 27B HIGHWAY 20
Pg 59B - Pg-63B

⊗ 29B BROOMfield RD
Pg 64B - Pg-68B

⊗ 34 B	WINN RD	pg 69 B - pg 73 B
⊗ 38 B	VANDECAR RD	pg - 74 B - pg 79 B
⊗ 41 B	MERIDIAN RD	pg 80 B - pg - 84 B
⊗ 44 B	LINCOLN RD	pg - 85 B - pg 90 B
⊗ 46 B	HIGH ST	pg - 91 B - pg - 96 B
⊗ 48 B	BROADWAY ST.	pg - 97 B - pg 101 B
⊗ 49 B	ISLAND PARK ~~LINCOLN ST~~	pg - 102 B - pg - 107 B
⊗ 50 B	PICKARD RD	pg - 108 B - pg 112 B
⊗ 52 B	MISSION RD	pg 113 B - pg 118 B
⊗ 54 B	US - 27	pg - 119 B - pg - 124 B
⊗ 56 B	ISABELLA RD	pg - 125 B - pg 129 B
⊗ 59 B	LEATON RD	pg - 130 B - pg - 134 B

⊗ 60 B Shepherd Rd

Pg - 135 B - Pg 139 B

⊗ 61 B Loomis Rd

Pg 140 B - Pg - 145 B

⊗ 62 B CHIPPEWA Rd

Pg - 146 B - Pg 151 B

WATER SURFACE
ELEVATIONS

WATER SURFACE ELEV.

	⊗ SECTION	DATE	W/S ELEV.
	⊗ 1	April 13, 93	935.6
	⊗ 2 B	16 DEC. 92	932.6
	⊗ 3	April 13, 93	931.4
	⊗ 4	April 13, 93	925.9
	⊗ 5	April 13, 93	923.2
	⊗ 6	April 13, 93	922.0
	⊗ 7	April 13, 93	920.5
	⊗ 8 B	10 DEC. 92	916.3
	⊗ 9 B	10 DEC. 92	913.6
	⊗ 10	14 April 93	912.7
	⊗ 11	14 April 93	906.7
	⊗ 12 B	16 DEC. 92	900.2
10 Dec. 92	⊗ 13 B	10 DEC. 92	895.8
April 14, 93	⊗ 14	14 April 93	896.3
April 14, 93	⊗ 15	14 April 93	895.6
	⊗ 16	14 April 93	895.7
	⊗ 17	(NOT DONE,	
April 13 93	⊗ 18	Top U/S SPILLWAY @ LAKE	896.2
	⊗ 18	BTM U/S SPILLWAY @ RIVER	867.1

⊗ SECTION		W/S ELEV.
⊗ 19 B	16 DEC. 92	865.6
⊗ 20 B	10 Dec. 92	860.3
⊗ 21	April 27, 93	856.1
⊗ 22 B	10 Dec. 92	848.9
⊗ 23	April 23, 93	844.3
⊗ 24 B	Dec. 16, 92	842.8
⊗ 25 B	Feb. 18, 93	841.1
⊗ 26	April 27, 93	837.3
⊗ 27 B	Feb. 18, 93	835.8
⊗ 28	April 27, 93	833.2
⊗ 29 B	Feb. 18, 93	831.3
⊗ 30	April 26, 93	831.4
⊗ 31	April 26, 93	823.4
⊗ 32	April 26, 93	818.5
⊗ 33	April 28, 93	807.6
⊗ 34 B	Feb. 18, 93	805.7
⊗ 35	April 28, 93	805.5
⊗ 36	April 28, 93	795.5

⊗ SECTION		W/S ELEV.
⊗ 37	April 28, 93	791.4
⊗ 38 B	Feb 18, 93	790.0
⊗ 39	April 28, 93	784.4
⊗ 40	April 28, 93	785.2
⊗ 41 B	Feb 18, 93	771.5
⊗ 42	April 28, 93	765.1
⊗ 43	April 30, 93	763.2
⊗ 44 B	Feb. 27, 93	760.0
⊗ 45	April 28, 93	760.0
⊗ 46 B	April 30, 93	753.0
⊗ 47	April 12, 93	751.8
⊗ 48 B	Feb. 22, 93	745.4
⊗ 49 B	Feb. 22, 93	742.5
⊗ 50 B	Feb. 27, 93	740.7
⊗ 51	April 29, 93	738.8
⊗ 52 B	Feb. 23, 93	733.4
⊗ 53	April 29, 93	734.1
⊗ 54 B	Feb 27, 93	730.4

April 12, 93 DAM

⊗ SECTION		W/S ELEV.
⊗ 55	April 29, 93	731.7
⊗ 56 B	Feb 23, 93	727.8
⊗ 57	April 30, 93	726.7
⊗ 58	April 30, 93	726.4
⊗ 59 B	Feb 23, 93	714.7
⊗ 60 B	Feb 23, 93	708.4
⊗ 61 B	Feb. 23, 93	702.1
⊗ 62 B	Feb. 22, 93	690.8

16 DEC 92

⊗ 2B BRIDGE & ROAD

VERNON ROAD

TEM 12B

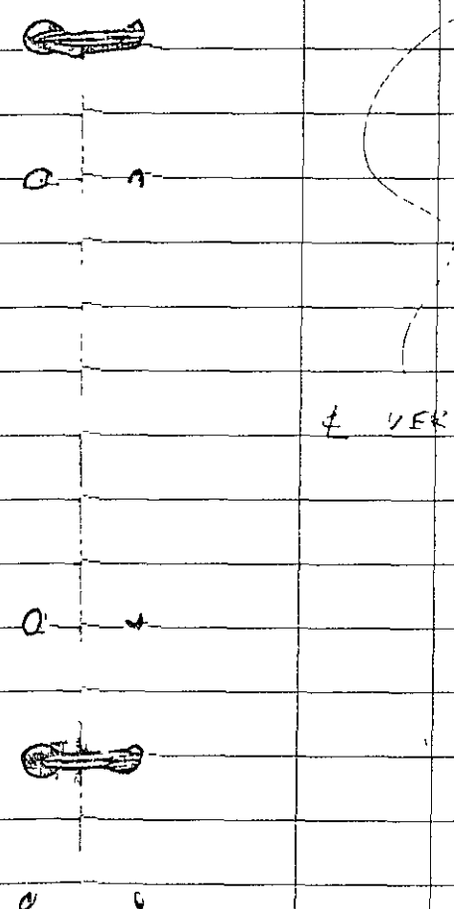
2 24" CMP'S

16 Dec. 92

Pg. 1B

	+	HI	-	ELEV.	
TBM 12B				943 324	Chiseled + S. End of W. Cmp Vernon Co. Chippewa Riv (Refer to Pg-31 Levels Book 1)
	10 42	953 74			
	Dist	Rod	ELEV.		Description
	0'	5.7	948 0		℄ Rd Top ℄ RT Cmp
	25 RT	6 6	947 1		℄ Rd
	50' RT	7 7	946 0		
	75' RT	8.4	945 5		
	100' RT	9.1	944 6		
	125 RT	9.7	944 0		
	150' RT	10.2	943 5		
	175' RT	10.6	943.1		
	200' RT	11.0	942 7		
	225' RT	11.3	942 4		
	250' RT	11.5	942.2		
					Road cont [illegible]
	28' LT	4.6	949.1		℄ Rd Top ℄ LT Cmp
	50' LT	3.5	950 2		℄ Rd
	75' LT	2.4	951 3		"

	+	HI	–	ELEV.
		953.74		
	[illegible]	Rod	ELEV.	
	100' LT	0.9	952.8	TP 1
	"	HI 9.4	962.2 ~~944.3~~	
	125' LT	8.3	953.9 ~~945.4~~	
	150' LT	6.9	955.3 ~~946.8~~	
	175' LT	5.9	956.3 ~~947.8~~	
	200' LT	5.5	956.7 ~~948.2~~	
	225 LT	4.9	957.3 ~~948.8~~	
	250' LT	4.1	958.1 ~~949.6~~	
	275 LT	[illegible].4	958.8 ~~950.3~~	
CK	100' LT ℄			
	TP-1	9.4	952.8	



	+	HI	-	ELEV.		
TBM 12-B				943 328		(Pg-31 Levels)
	8.70	952 02				BRIDGE SECTION
	Dist	Rod	ELEV.			Description
1	0'	18.79	93323			TOP LT FACE RT CONC SLAB
2	0'	19.4	9326			W/L W/L
3	0'	2.1	930 5		SNDG	BTM RT " " " (SAND)
4	5' LT	2 5	930.1		"	SAND
5	10' LT	3.3	929 3		"	"
6	15' LT	4.4	928 2		"	CONC.
7	20 LT	4.4	928 2		"	"
8	23.4 LT	3.1	929 5		SNDG	BTM RT FACE CENTER CONC SLAB (CONC)
9	23 4 LT	18.74	933 28			TOP " " " "
10	28.4 LT	18.72	933 30			TOP LT FACE CENTER CONC SLAB
11	28.4 LT	3.1	930.2		SNDG	BTM " " " " "
12	33 LT	2.6	930.7		"	CONC
13	38' LT	2 8	930.5		"	"
14	43' LT	2.1	931.2		"	"
15	48' LT	2.3	931.0		"	"
16	51.8' LT	1 6	931.7		SNDG	BTM LT CONC SLAB @ RT FACE

	+	HI	−	ELEV.						
		952 02								
	DIST	Rod	ELEV				DESC.			
17	51.8' LT	19.4	932 62				W/S	S/L		
18	51.8' LT	18.71	933 31				TOP	RT FACE	LT CONC SLAB	
19	117' LT	8.5	943.5				L/S	℄	TOP LT	CMP
20		8.7	943.3				L/S	℄	TOP RT	CMP
TBM 12B	CK	8.70	943.32							

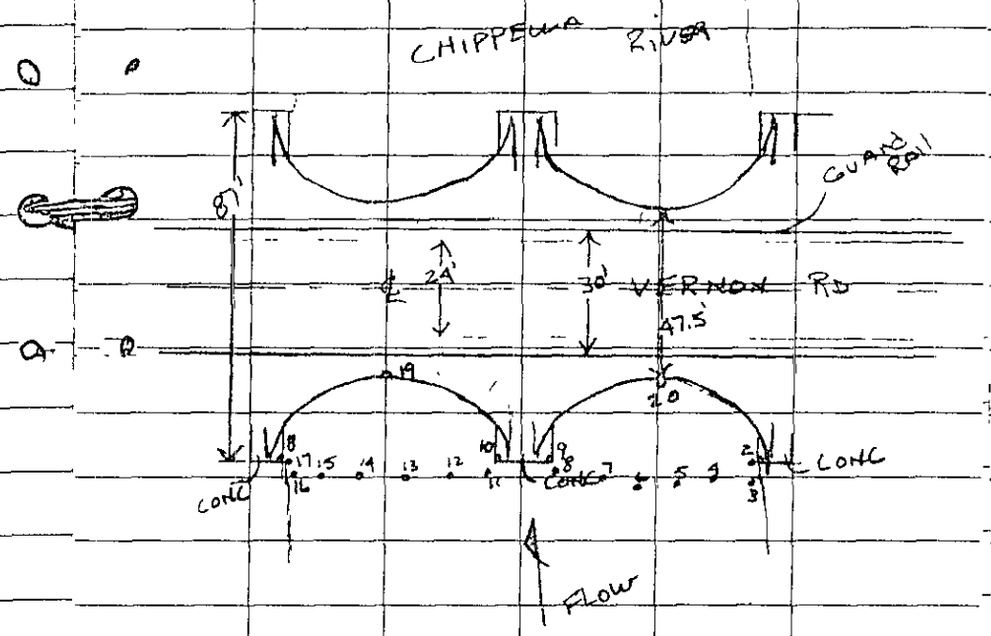
BRIDGE DRAWING

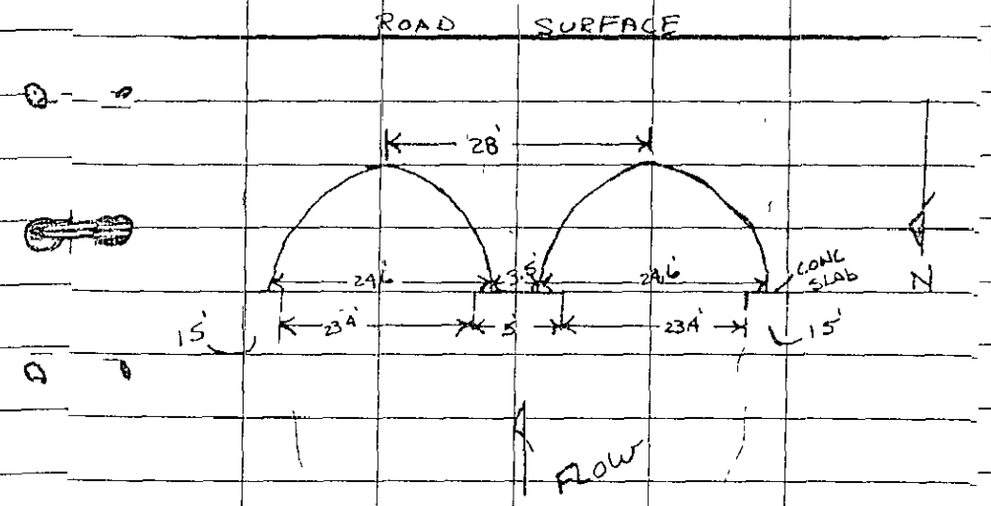
CMP'S

VERNON ROAD

⊗ 2B

NO SKEW


CHIPPEWA RIVER
GUARD RAIL
80'
24'
30'
VERNON RD
47.5'
19
20
CONC
CONC
CONC
FLOW


ROAD SURFACE
28'
24'
3.5'
24.6'
CONC SLAB
N
15'
23.4'
5
23.4'
15'
FLOW

10 Dec. 92

⊗ 8 B

AIRLINE Rd & CHIPPEWA Riv

TBM 1D

WOOD CONSTRUCTION

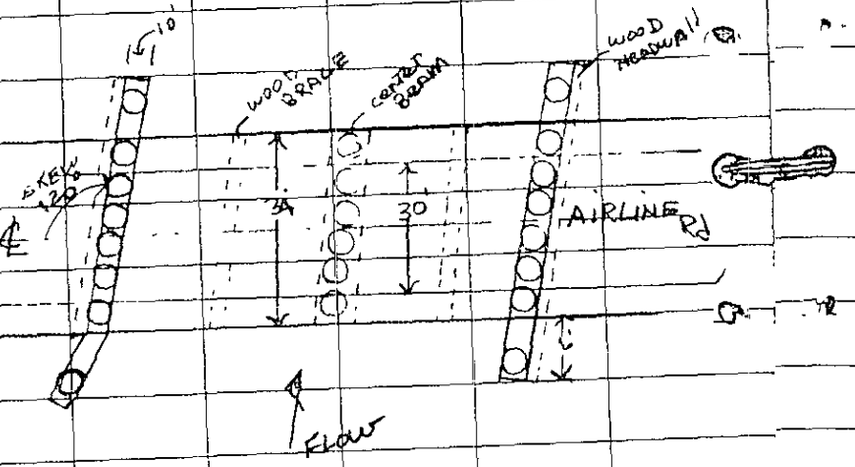
DRAWING

⊗ SECTION E.B

AIRLINE Rd & CHIPPEWA RIV

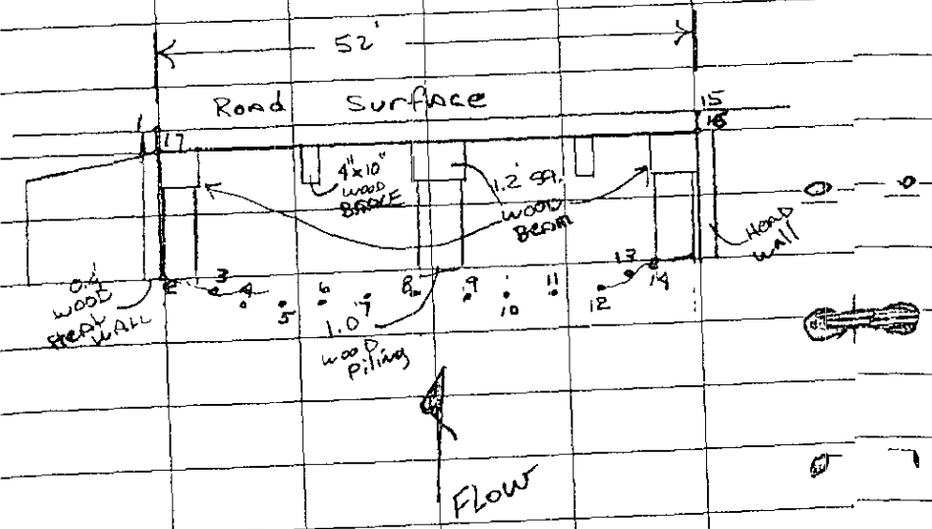
TBM 1D

ALL WOOD BRIDGE



TOTAL Lenght = 52'

SKEW = 120°



Lenght of Bridge was meas. from the Face of Headwalls.

10 Dec. 92

Pg - 43SL SPUR LINES BOOK 2 Pg-7B

RR SPIKE N.W. U/S SIDE WOOD BEAM AIRLINE Rd & CHIPPEWA

	+	HI	-	ELEV.
TBM 1-D				922.1 ✓
	6.61	928.7 ✓		
	Dist	Rod	ELEV.	
	0'	4.~~81~~ 9	923.8	
	50' LT	4.91	923.8	
	100' LT	5.~~26~~ 3	923.4	
	150' LT	5.60	923.1	
	200' LT	5.~~76~~ 8	922.9	
	250' LT	5.~~69~~ 7	923.0	
	52' RT	4.93	923.8	
	100' RT	5.61	923.1	
	150' RT	6.41	922.3	
	200' RT	7.14	921.6	
	250' RT	7.63	921.1	
	300' RT	7.83	920.9	

Road Section

Desc

Top ℄ Rd @ FACE LT. WOOD HEAD WALL

℄ R AIRLINE Rd

Rd CONT. FLAT.

Top ℄ Rd @ FACE RT WOOD HEADWALL

℄ Rd

Road CONT. FLAT

	+	HI	−	ELEV							Pg-8B
		928.7 ✓									
	Dist	Rod	ELEV.					Desc.			
1	0'	5.~~16~~ 2	923.5				TOP	LT	WOOD	Headwall @	FACE
2	0'	11.4	917.3			GE	BTM	"	"	"	
3	2' RT	12.4	916.3				W/S	S/L			
4	5' RT	0.9	915.4			SND6				Rock	
5	10' RT	4.5	911.8			"				"	
6	15' RT	4.9	911.4			"				"	
7	20' RT	4.9	911.4			"				"	
8	25' RT	4.7	911.6			"	BTM	Pier	LT	"	
9	27' RT	4.5	911.8			"	BTM	pier	RT	"	
10	33' RT	3.6	912.7			"				"	
11	38' RT	2.4	913.9			SND6				ROCK	
12	42' RT	12.3	916.4				W/S	S/L			
13	47' RT	11.5	917.2				GE				
14	52' RT	10.8	917.9			GE	BTM	RT	WOOD	Headwall @	FACE
15	52' RT	9.~~88~~ 9	923.8				TOP	"	"	"	
16	52' RT	6.2	922.5				L/S				
17	0	6.2	922.5				L/S				
TBM 1-D	CK	6.61	922.1								

Pg 11 B

10 Dec. 92

ROAD SECTION

@ 9B

WYMAN Rd & CHIPUEWA Riv

CONC. & STEEL CONSTRUCTION

10 Dec. 92

Pg- 22 Levels BOOK 1 Pg-12B

CHISELED □ NW CORNER OF BRIDGE ON WYMAN Rd. & CHIPPEWA RIV.

ROAD SECTION

	+	HI	−	ELEV
TBM 3.B				921.51
	6.32	927.83		
	DIST	Rod	ELEV	
	0	4.98	922.85	
	25' LT	5.23	922.60	
	50' LT	5.55	922.28	
	75' LT	5.81	922.02	
	100' LT	6.02	921.81	
	125' LT	6.25	921.58	
	150' LT	6.47	921.36	
	175' LT	6.58	921.25	
	200' LT	6.60	921.23	
	225' LT	6.48	921.35	
	250' LT	6.39	921.44	
	50.6' RT	5.01	922.82	
	75' RT	5.44	922.39	
	100 RT	6.05	921.78	
	125 RT	6.69	921.14	

DESC

℄ Rd @ FACE LT ABUT

℄ Rd

Rd CONT FLAT

℄ Rd @ FACE RT ABUT

℄ Rd

+	HI	−	ELEV.		
	927.83				
DIST	Rod	ELEV.			Desc
150' RT	7.15	920 68			℄ Rd
175' RT	7.45	920 38			℄ WYMAN & ℄ WEIDMAN Rd
200' RT	7.68	920 15			℄ R
225' RT	7.73	920.10			
250' RT	7.80	920 03			
275' RT	7.89	919 94			
300' RT	8.06	919 77			Rd CONT FLAT

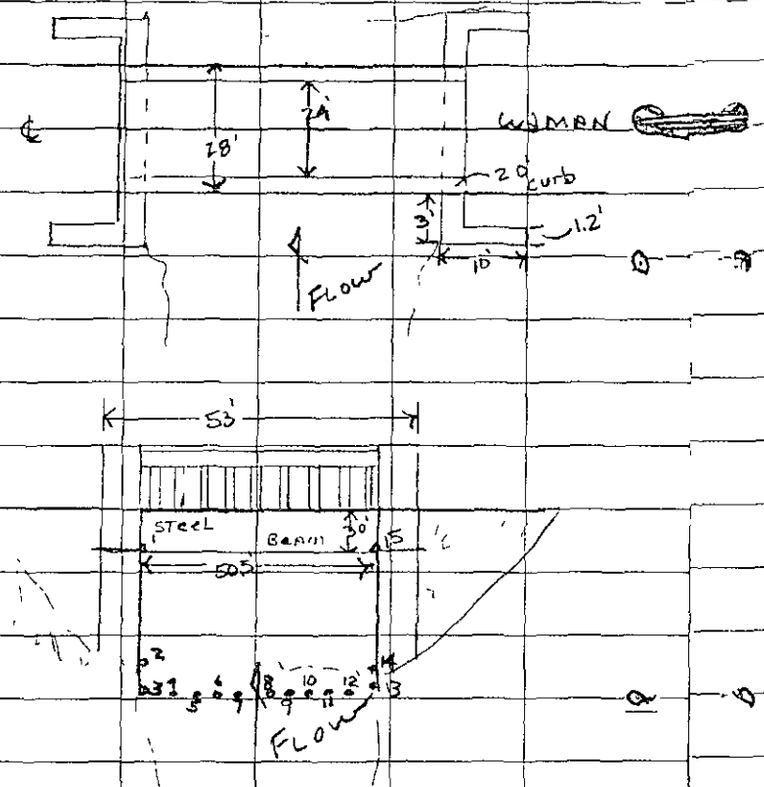
	+	HI	-	ELEV		DESC.
		927 83				
	DIST	ROD	ELEV.			
1	0	8.20	919 54			TOP LT ABUT @ FACE
2	0'	14 2	913 6			W/S S/L
3	0'	1.5	912 1		SNDG	BTM LT ABUT @ FACE (SAND)
4	5' RT	1.2	912 4		"	"
5	10' RT	1.6	912 0		"	"
6	15' RT	2.7	910 9		"	"
7	20' RT	4.3	909 3		"	ROCK
8	25' RT	6.0	907 6		"	"
9	30' RT	6 7	906 9		"	"
10	35RT	6 0	907 6		"	"
11	40'RT	4 5	908.8		"	"
12	45 LT	2 8	909 8		"	"
13	50'SRT	3.0	910.6		SNDG	BTM RT ABUT @ FACE (ROCK)
14	50.5' RT	14.2	913 6			W/S S/L
15	50.5 RT	8.44	919.39			TOP RT ABUT @ FACE
16	50.5' RT	8.45	919.38			L/S
17	0'	8.30	919 53			45
TBM 3B	LK	[illegible]	921 51	[illegible]		

⊗ 9B Wolman Rd.

BRIDGE DRAWING

CONC. & STEEL CONST.

NO SKEW



16 DEC. 92

ROAD SECTION

⊗ 12 B

DREW ROAD

CONC. & STEEL CONSTRUCTION

	+	HI	−	ELEV.
TBM 2-A1				910.2 ✓
	10 ~~01~~ 1	920.3 ✓		
	List	Rod	ELEV.	
	0	7.41	912.9 ✓	
	25' LT	7.68	912.7 ✓	
	50' LT	7.91	912.4 ✓	
	75' LT	~~7.96~~ 8.0	912.3 ✓	
	100' LT	7.98	912.4 ✓	
	125 LT	7.80	912.5 ✓	
	150 LT	7.72	912.6 ✓	
	175 LT	7 ~~59~~ 6	912.7 ✓	
	200' LT	7 ~~38~~ 4	912.9 ✓	
	225' LT	7.12	913.2 ✓	
	250' LT	6.00	913.5 ✓	
	45.8' LT	~~29~~ 1	913.2 ✓	
	75' LT	6.02	914.3 ✓	
	100' LT	4.84	915.5 ✓	
	125' LT	3.[illegible]	916.8 ✓	

✓ [illegible]

16 Dec 92

~~Pg-2D Book 1 For Desc.~~ Pg-18B

Pg-38 SL Spur Lines Book 2

Road Section

Description

Top ℄ Rd @ Face LT Abut

℄ Rd

Rd cont to Rise

Top ℄ Rd @ [illegible] LT, Abut.

℄ Rd

+	HI	-	ELEV	Desc
	920.3			
DIST	ROD	ELEV.		
150' RT	1.92	918.4		℄ Rd
175' RT	0.58	919.8	TP-1	
	HI 12.42	932.2		
200' RT	11.00	921.2		
225' RT	1.56	922.7		
250' RT	8.09	924.1		
275' RT	6.64	925.6		
300' RT	5.39	916.9 ~~915.0~~		
175 ℄ TP-1	CK	12.4	919.8	Rd. CONT. upgrade
	0.86	920.7		
TBM 2.A1		10.39	910.3	

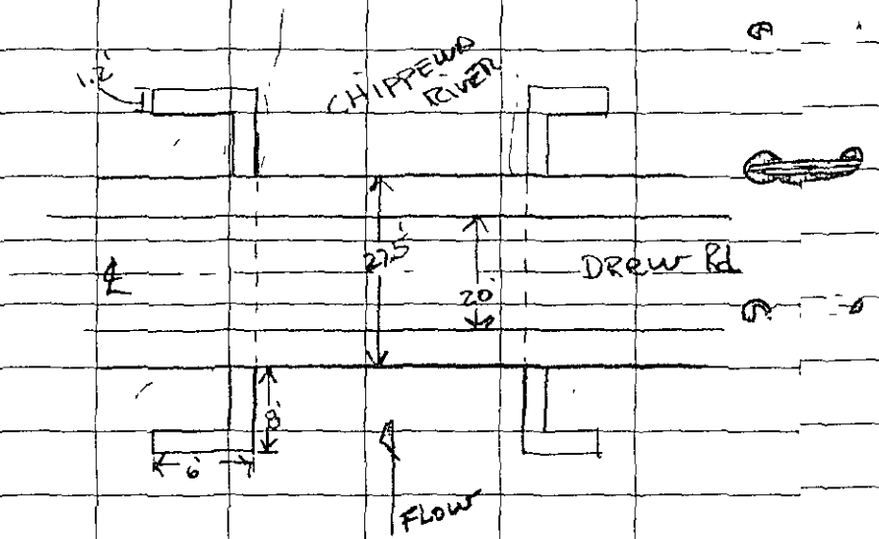
	+	HI	−	ELEV				
TBM 2-A1				910.2			Pg-18B	(pg 35 P.B #2)
	10.~~39~~ 4	920.6						
	DIST	Rod	ELEV.				DESC	
1	0	10.42	910.2				TOP	LT ABUT @ FACE & L/S
2	0	19.0	901.6			GE	BTM	" " "
3	4' RT	20.4	900.2				W/S	S/L
4	5' RT	0.8	899.4	SNDG		SNDG		Rock
5	10' RT	1.2	899.0					"
6	15' RT	3.0	897.2					"
7	20' RT	4.3	895.9					"
8	25' RT	4.0	896.2					"
9	30' RT	3.3	896.9			"		"
10	35' RT	2.5	897.7			"		"
11	40' RT	1.9	898.3			"		"
12	45.8' RT	0.5	899.7	SNDG		SNDG	BTM	RT ABUT @ FACE
13	45.8' RT	20.4	900.2				W/S	S/L
14	45.8' RT	10.~~58~~ 6	910.0				TOP	RT ABUT @ FACE & L/S
TBM 2-A1	CK	10.~~38~~ 4	~~920.6~~ 910.2					

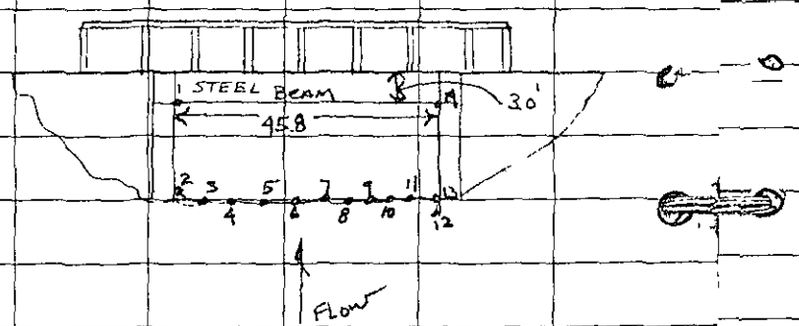
BRIDGE DRAWING

@ 12 B

DREW ROAD

NO SKEW


1.2'
CHIPPEWA RIVER
27.5'
20'
DREW Rd
8'
6'
FLOW


STEEL BEAM
30'
45.8
2
3
4
5
6
8
10
11
12
FLOW

10 Dec 92

⊗ 13 B

Roland Rd

CHIPPEWA RIVER

WOOD CONSTRUCTION

10 Dec. 92

(Pg - 11 Level Book 1) Pg - 24B

CHISELED □ N.W. WINGWALL ON ROLAND Rd. BRIDGE.

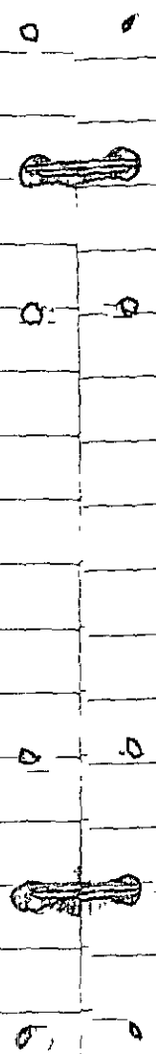
	+	HI	−	ELEV.
TBM BA				903.69
	5.26	90895		

Road section

DIST	Rod	ELEV.	DESCRIPTIONS
0'	5.16	90379	℄ Rd TOP LT ABUT @ FACE
25' LT	4.84	904.11	℄ Roland Rd.
50' LT	4.62	904.33	
75' LT	4.53	904.42	
100' LT	4.36	904.59	
125' LT	4.20	904.75	
150' LT	4.02	904.93	
175' LT	3.82	905.13	
200' LT	3.62	905.33	
225' LT	3.38	905.57	
250' LT	3.11	905.84	
			Rd. CONT. TO INCLINE
50.5 RT	5.25	903.70	℄ Rd TOP RT ABUT @ FACE
75' RT	5.49	903.46	℄ Rd
100' RT	5.49	903.46	
125' RT	5.51	903.44	

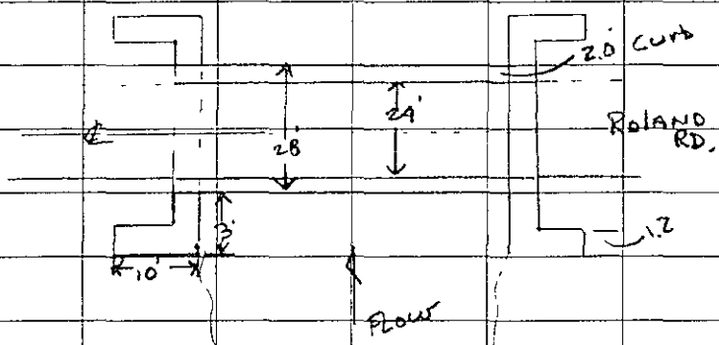
+	HI	-	ELEV.		Desc
	908.95'				
DIST	Rod	ELEV.			
150' RT	5.43	903.52			℄ Rd
175' RT	5.28	903.67			
200' RT	4.96	903.99			
225' RT	4.47	904.48			
250' RT	3.83	905.12			
275' RT	3.08	905.87			
300' RT	2.52	906.43			
					Rd cont. to Rise

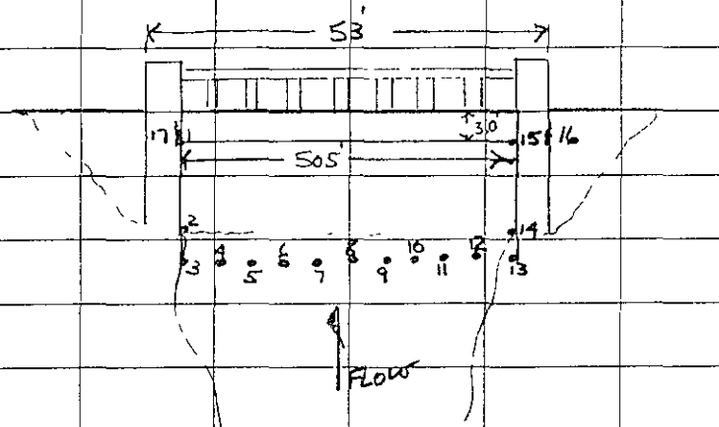
	+	HI	−	ELEV.	Desc
		90895			
	DIST	Rod	ELEV		
1	0'	8.55	90040		TOP LT ABUT @ FACE
2	0'	13.2	8958		W/S S/L " "
3	0'	0.4	8954	4	INDG BTM LT ABUT @ FACE = SAND
4	5' RT	0.3	8955	5	" "
5	10 RT	0.2	8956	6	" "
6	15' RT	0.8	8950	0	" "
7	20' RT	2.6	8932	2	" ROCK
8	25' RT	6.0	8898	8	" "
9	30' RT	6.6	8892	2	" "
10	35' RT	5.5	8903	3	" "
11	40 RT	7.0	8918	8	" "
12	45' RT	2.6	8932	2	" "
13	50.5' RT	1.0	8948	8	INDG BTM RT ABUT @ FACE "
14	50.5' RT	13.2	8158	8	W/S S/L
15	50.5' RT	8.56	90039		TOP RT ABUT @ FACE
16	50.5' RT	8.57	90038		L/S
17	0	8.56	90039		L/S
TBM 3,A	CK	5.[illegible]	[illegible]		



DRAWING
⊗ 13 B
ROLAND Rd

NO SKEW


2.0' Curb
24'
28
Roland Rd.
3'
1.2
10'
Flow


53'
17
1
3.0'
15
16
50.5'
2
3
4
5
6
7
8
9
10
11
12
13
14
Flow

16 DEC. 92

@ 19 B

COLDWATER ROAD

BM 45 FDR 1962

CONC. CONSTRUCTION

	+	HI	−	ELEV.
BM 45 FDR				875.49
	8.44	883.93		
	DIST	Rod	ELEV.	
	0	8.64	875.29	
	25' RT	8.46	875.47	
	50' RT	7.97	875.96	
	75' RT	7.39	876.54	
	100' RT	6.89	877.04	
	125' RT	6.15	877.78	
	150' RT	5.42	878.51	
	175' RT	4.67	879.24	
	200' RT	3.92	880.01	
	225' RT	3.13	880.80	
	250' RT	2.43	881.50	
	CK	8.44	875.49	
BM 45 FDR				875.49
	4.48	879.97		
	50' LT	5.20	0477	

16 Dec. 92 Pg. 30B

USGS BM REMUS NW LINE 7 PG12 Pg 1D Desc Book 1

DESCRIPTION

℄ Rd @ FACE RT ABUT

℄ Rd

Rd CONT TO [illegible]

Pg-1 Desc Book 1

℄ [illegible] FACE RT ABUT

Pg-31B

+	HI	−	ELEV.
	87997.		

DIST	Rod	ELEV
75' LT	5.30	874.67
100' LT	5.28	874.69
125' LT	5.32	874.65
150' LT	5.20	874.77
175' LT	5.10	874.87
200' LT	5.12	874.85
225' LT	4.99	874.98
250' LT	4.87	875.10
275' LT	4.60	875.37
300' LT	4.22	875.75

Desc

℄ Rd

	+	HI	T	ELEV.		
		87997				
	DIST	Rod	ELEV.			DESC
1	0'	7.53	872 44		L/S	TOP LT ABUT @ FACE
2	0'	14.4	865 6			W/S
3	0'	1.6	864 0			SNDG BTM LT ABUT @ FACE (SAND)
4	10' RT	3.4	862.2		"	SAND
5	20' RT	5.0	860 6		"	"
6	30' RT	5.2	860 4		"	"
7	40' RT	4.0	861 6		"	ROCK
8	50' RT	4.4	861 2			BTM RT ABUT @ FACE (SAND.
9	50' RT	14.4	865 6			W/S SIL
10	50' RT	8.07	871 9		L/S	TOP RT ABUT @ FACE
BM 45 FDR	CK	4.47	87[illegible]50			

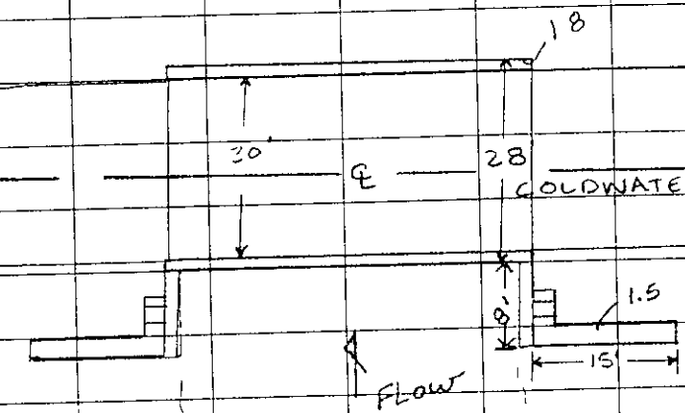
DRAWING

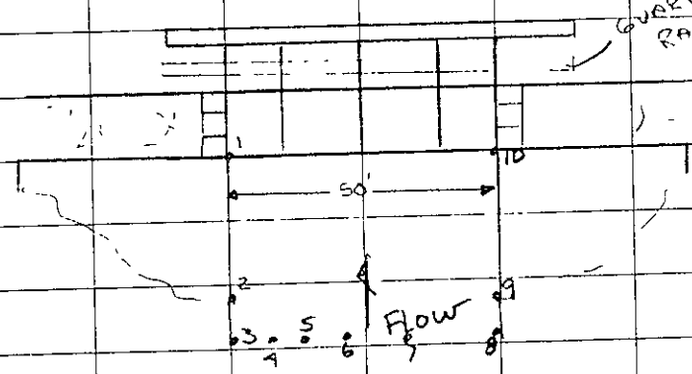
⊗ 19 B

COLD WATER Rd

Pg-34B

NO SKEW





10 Dec. 92

BRIDGE SECTION

⊗ # 20 B

SCHOOL Rd & CHIPPEWA RIVER

CONC. CONSTRUCTION

	+	H.I.	-	ELEV.
TBM 1E				865.62
	5.41	871.03		

Dist	Rod	ELEV.
0'	5.21	865.82
25' LT	5.31	865.72
50' LT	5.41	865.62
75' LT	5.43	865.60
100' LT	5.54	865.49
125' LT	5.60	865.43
150' LT	5.80	865.23
175' LT	5.93	865.10
200' LT	5.89	865.14
225' LT	5.79	865.24
250' LT	5.60	865.43
61.5' RT	5.23	865.80
86 RT	5.21	865.82
111' RT	5.38	865.65
136' RT	5.37	865.66

10 Dec. 92 pg. 36B

CHISELED □ N.E. CORNER BRIDGE ON school Rd. (pg. 35 Levels Book 1)

ROAD SECTION.

DESCRIPTIONS

TOP ℄ School Rd @ FACE LT ABUT ℄ Rd

ROAD CONT. FLAT

℄ RD @ FACE RT ABUT ℄ RD.

"

"

+	HI	-	ELEV.
	871.03	-	

DIST	Rod	ELEV.	Desc
161' RT	5.27	865.76	℄ R
186' RT	5.07	865.96	
211' RT	4.94	866.09	
236' RT	4.87	866.16	
261' RT	4.83	866.20	
286' RT	4.77	866.26	
311' RT	4.56	866.47	

Road CONT. FLAT NEXT 200'
THEN RISES.

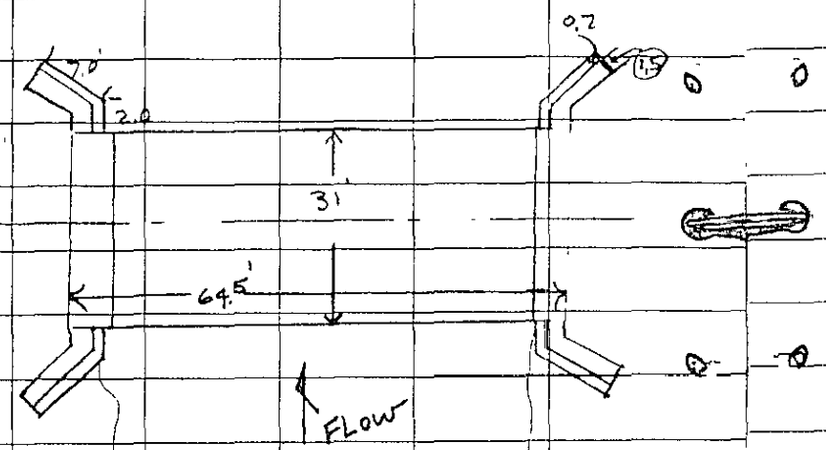
	+	HI	−	ELEV.	Desc
		871.03			
	Dist	Rod	ELEV.		
1	0'	7.86	863.17		L/S Top LT Abut @ FACE
2	1' RT	10.7	8603		W/S S/L
3	1' RT	1.8	858.5		SNDG BTM LT ABUT Rock
4	10' RT	4.1	856.2		" SAND
5	20' RT	3.8	856.5		" "
6	30' RT	4.7	855.6		" "
7	40' RT	4.7	855.6		" "
8	50' RT	4.1	856.2		" "
9	60.5' RT	1.4	858.9		SNDG BTM RT ABUT Rock
10	60.5' RT	10.7	860.3		W/S S/L
11	61.5' RT	7.89	863.1		L/S Top RT abut @ FACE
TBM 1-E		CK 5.40	865.63		

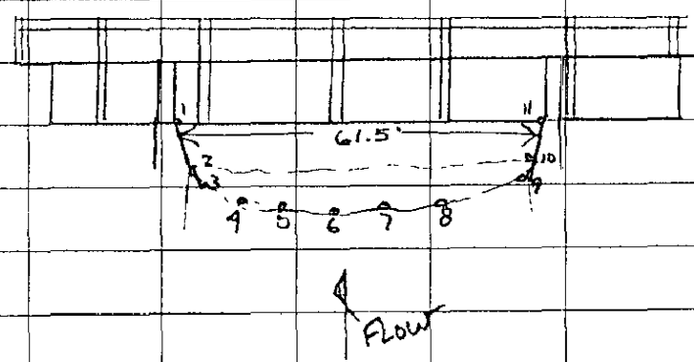
BRIDGE DRAWING

@ 20 B

School Rd

CONC CONSTRUCTION





TOTAL 64.5'

NO SKEW

BLANK

35° SNOW

10 Dec. 92

ROAD SECTION

⊗ # 22 B

RIVER ROAD

CONC. CONSTRUCTION

	+	HI	-	ELEV
TBM 3-E				856.87
	4.76	861.63		

DIST	Rod	ELEV
0	4.49	857.14
25' LT	4.61	857.02
50' LT	4.77	856.86
75' LT	4.93	856.70
100' LT	4.96	856.67
150' LT	5.03	856.60
200' LT	5.01	856.62
250' LT	4.98	856.65
85' RT	4.49	857.14
135 RT	4.94	856.69
185 RT	4.99	856.64
235 RT	5.02	856.61
285 RT	4.97	856.64
335 RT	4.93	856.70

T. ROZNOWSKI 35° SNOW
K. DEAKE 10. DEC. 92 Pg. 43B
CHISELED □ NE U/S CORNER, BRIDGE ON RIVER Rd (pg-43 Levels Book 1)

ROAD SECTION

DESCRIPTIONS

TOP LT FACE ABOUT ℄ Rd.
℄ RIVER R ⅓ ℄ JOHNSON Rd
℄ RIVER Rd
"
"

RT OUT FLAT
℄ RIVER Rd @ FACE RT ABOUT
℄ Rd

Rd CONT

+ HI − ELEV

861.63

	DIST	Rod	ELEV
1	0'	6.53	855.10
2	0'	8.4	853.2
3	11' RT	12.7	848.9
4	16' RT	2.1	846.8
5	19' RT	2.3	846.6
6	24' RT	2.5	846.4
7	29' RT	2.7	846.2
8	34' RT	3.1	845.8
9	39' RT	3.6	845.3
10	44' RT	3.6	845.3
11	49' RT	3.5	845.4
12	54' RT	3.6	845.3
13	59' RT	3.4	845.5
14	64' RT	2.6	846.3
15	66' RT	1.8	847.1
16	69' RT	0.9	848.0

BRIDGE Section

Desc

Top LT ABUT @ FACE

BTM LT " " "

BTM BNK @ WS/SL

SNDG BTM Pier El Rock

" " " " "

" "

" "

" "

" "

" "

" "

" "

" "

" "

" "

" "

" BTM Pier 2 "

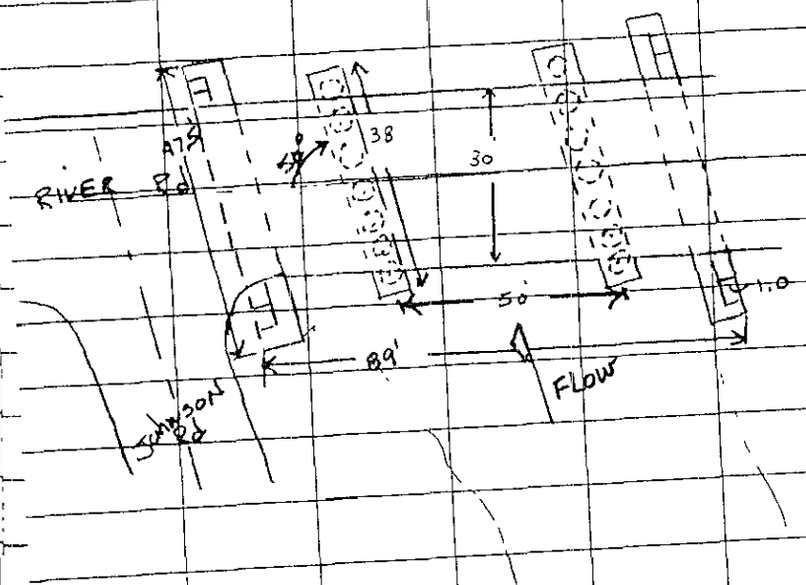
SNDG " " " Rock

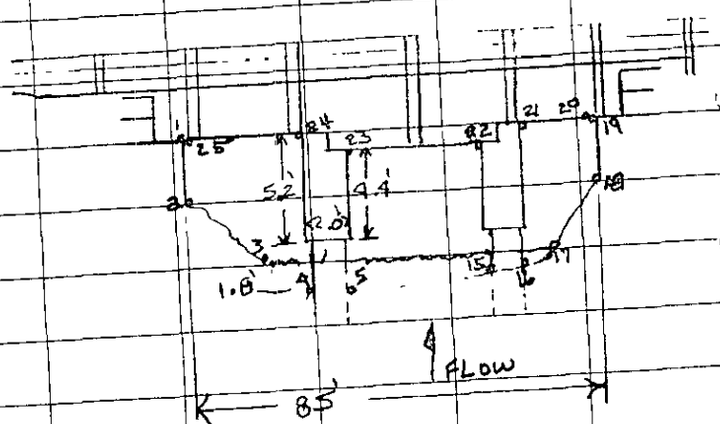
	+	Hi	-	ELEV	Desc
		861.63			
	DIST	Rod	ELEV		
17	75' RT	12.7	848.9		BTM RT BNK & W/S/S/L
18	85' RT	7.9	853.7		BTM RT ABUT @ FACE
19	85' RT	6.22	855.4		TOP RT ABUT " "
20	85' RT	6.2	855.4		L/S
21	69' RT	6.5	855.1		
22	66' RT	7.3	854.3		
23	19' RT	7.3	854.3		
24	16' RT	6.5	855.1		
25	0'	6.5	855.1		
TBM 3E		CK 4.76	856.87		Pg 43 B

BRIDGE DRAWING

@ 22 B

RIVER ROAD





TOTAL 89

SKEW 50°

L ABUT 47.5'

16 Dec. 92

ROAD SECTION

@ 24 B

PICKARD Rd

WOOD BRIDGE

16 DEC, 92

Pg. 49B

RR. SPIKE NE CORNER WOOD BRIDGE
ABUT. PICKARD Rd. (Pg 54 Levels Book 1)

	+	HI	−	ELEV
TBM F-1				848.545
	15.95	864.50		
	DIST	Rod	ELEV.	
	0'	11.4	853.1	
	25' RT	9.8	854.7	
	50' RT	7.9	856.6	
	75' RT	6.0	858.5	
	100' RT	4.1	860.4	
	125' RT	2.2	862.3	
	150' RT	0.2	864.3	
TBM F-1	CR	15.95	848.55	
TBM F-1		HI		848.545
	5.88	854.43		
	78' LT	4.3	850.1	
	100' LT	4.9	849.5	
	125' LT	5.6	848.8	
	150' LT	6.4	848.0	
	175' LT	7.1	847.3	

DESCRIPTION

℄ Rd @ FACE RT WOOD HEADWALL

℄ Rd

Rd CONT TO RISE sharply TO [illegible] 0.5=930

Pg 54 Levels

above

℄ Rd @ FACE LT WOOD HEAD WALL

℄ "

+	HI	—	ELEV.
	854.43		

DIST	Rod	ELEV.
200' LT	7.7	846.7
225' LT	8.1	846.3
250' LT	8.3	846.1
275' LT	8.3	846.1
300' LT	8.2	846.2
325' LT	7.9	846.5

Desc
℄ Rd

Rd CONT FLAT

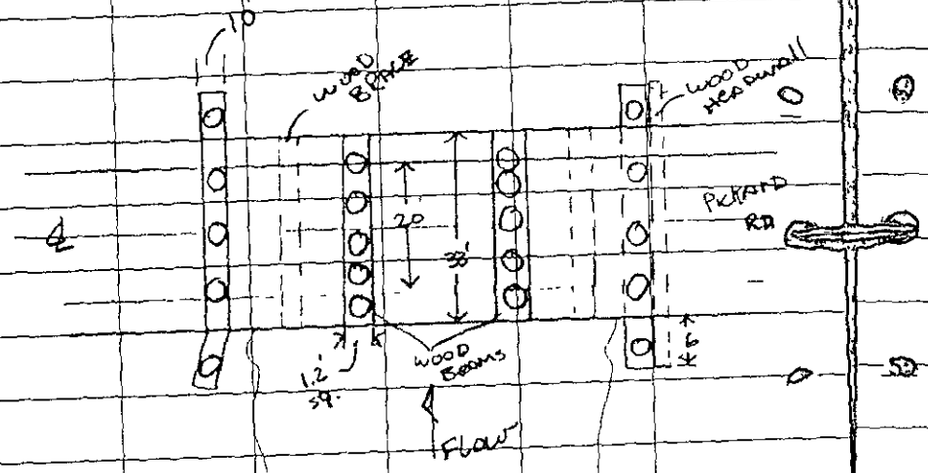
H1

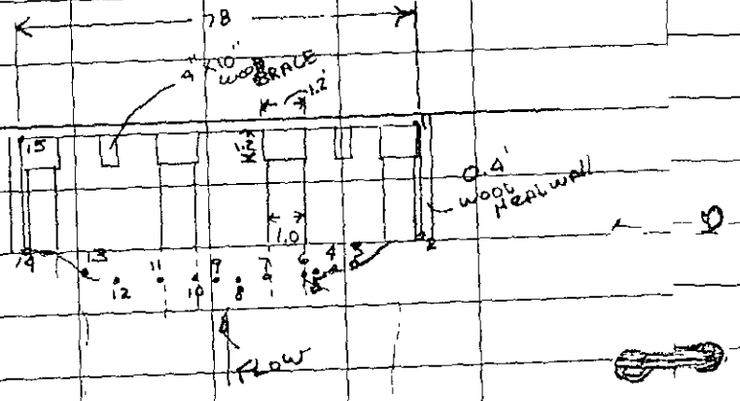
854.43

	Dist	Rod	Elev
1	0'	3.55	850.88
2	0'	4.9	849.5
3	9' LT	10.5	843.9
4	14' LT	11.6	842.8
5	20' LT	1.0	841.8
6	25.5' LT	2.1	840.7
7	27' LT	2.1	840.7
8	37' LT	3.2	839.6
9	47' LT	4.2	838.6
10	51' LT	3.9	838.9
11	52.5' LT	3.1	839.7
12	62' LT	2.6	840.2
13	70' LT	11.7	842.7
14	78' LT	9.9	844.5
15	78' LT	5.46	848.17
TBM E-1	CK	5.88	848.55

	Desc
45	TOP RT wood abut & face
GE	BTM " " " & TOP BNK
GE	BTM RT BNK
	w/s s/L
SNDG	Gravel
"	RT BTM Pier #1
"	LT BTM Pier #1
"	"
"	RT BTM Pier #2
"	LT " " " "
SNDG	"
	w/s s/L
GE	BTM LT wood abut & face
45	TOP " " "

DRAWING
@ 248
BRIDGE DRAWING
WOOD BRIDGE
PICKARD Rd





5 pilings = 1.0 Dia.

width of Bridge = 33

" " Road = 20'

Lenght = 78'

NO SKEW

ROAD SECTION

@ 25 B

LITTLE Field Rd

18 FEB 93

T. ROZNOWSKI
K. DRAKE

Sunny 3° Wind chill -20°

Feb. 18, 93

55 B

RR SPIKE N.E. CORNER BRIDGE IN WOOD ABUT LITTLE Field Rd (pg-55 Levels Book 1)

	+	H.	-	ELEV.
TBM F-2				847.45 ✓
	6.90	854.35		

Dist	Rod	ELEV.
0	5.1	849.3 ✓
25' LT	5.2	849.2 ✓
50' LT	5.6	848.8 ✓
75' LT	6.0	848.4 ✓
100' LT	5.9	848.5 ✓
75' RT	4.9	849.5 ✓
100' RT	4.4	850.0 ✓
125' RT	4.0	850.4 ✓
150' RT	3.4	851.0 ✓
175' RT	2.7	851.7 ✓

DESCRIPTION

TOP ℄ Rd @ FACE LT WOOD RETAINING WALL

℄ R GRAVEL

Rd CONT. TO RISE

TOP ℄ RD @ FACE RT RETAINING WALL

℄ R GRAVEL

Rd CONT FLAT.

	+	HI	−	ELEV
		854.4		
	DIST	Rod	ELEV	
1	0	6.4	848.0 ✓	
2	0	10.8	843.6 ✓	
3	13' RT	13.3	841.1 ✓	
4	25 RT	2.4	838.7 ✓	
5	26' RT	2.7	838.4 ✓	
6	36' RT	4.0	837.1 ✓	
7	460 RT	2.9	838.2 ✓	
8	51' RT	2.1	839.0 ✓	
9	61' RT	1.4	839.7 ✓	
10	63' RT	13.4	841.0 ✓	
11	78' RT	10.5	843.9 ✓	
12	78' RT	6.5	847.9 ✓	
TBM F-2	CK	6.90	847.45 ✓	

56 B

ALL WOOD CONT

Desc

U/S TOP LT RETAINING WALL @ FACE

BTM LT " " "

W/S S/L

SND6 = BTM RT SIDE LT Pier

" LT " "

"

" BTM LT SIDE RT Pier

" " RT " " "

"

SND6 W/S S/L

BTM RT RETAINING WALL @ FACE

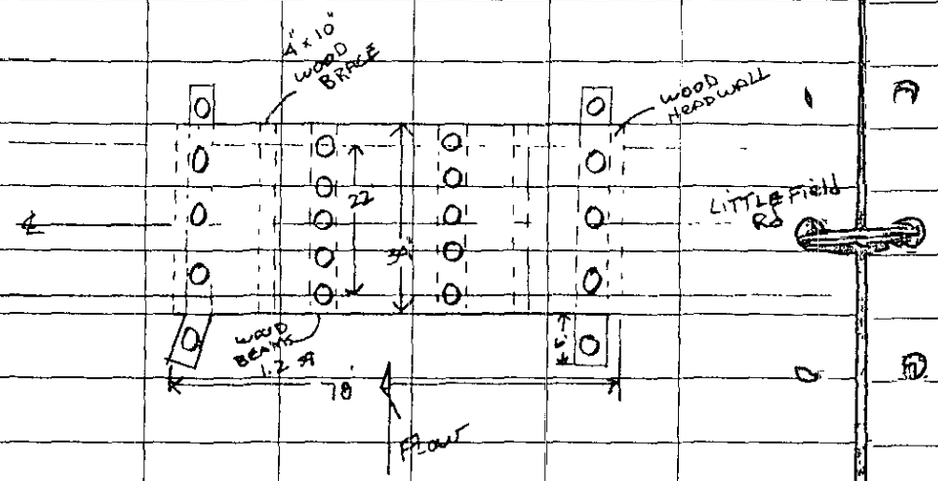
U/S TOP " " " "

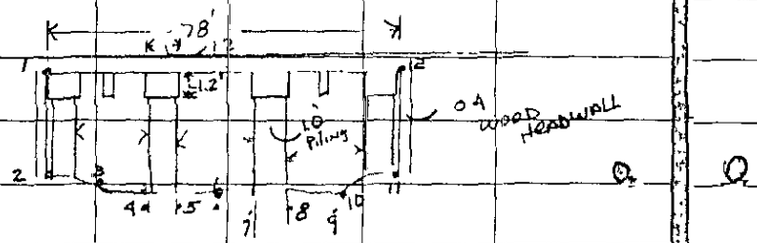
57 B

DRAWING

⊗ 25 B

LITTLE Field Rd





110 [illegible]

Rd [illegible]

Bridge 34

piers [illegible]

pg-59 B

18 FEB 93

ROAD SECTION

⊗ 27 B

HWY 20

CONC. CONSTRUCTION

18 FEB. 93

Pg. 60B

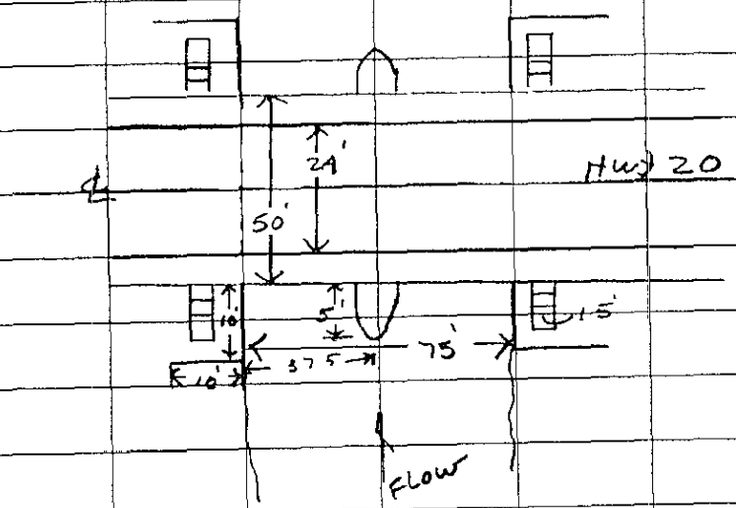
	+	HI	−	ELEV.	
TBM 27-B				845.5 ✓	CHISELED □ TOP N.W CORNER NW HEADWALL OF BRIDGE ON HW/20 over Chippewa RIV. (Pg- 59 SL Spur Lines Book 2)
	5.0 ~~4.99~~	850.5 ✓			
	DIST	Rod	ELEV.		Desc
	0	4.~~79~~ 8	845.7 ✓		TOP ℄ Rd @ FACE RT ABUT
	25' RT	4.4~~3~~	846.1 ✓		℄ Rd
	50' RT	4.0~~1~~	846.5 ✓		
	75' RT	3.~~67~~ 7	846.8 ✓		
	100' RT	3.~~36~~ 4	847.1 ✓		
					Rd CONT. FLAT
	75' LT	5.7~~3~~	844.8 ✓		
	100' LT	6.1~~2~~	844.4 ✓		
	125' LT	6.~~46~~ 5	844.0		
	150' LT	6.~~76~~ 8	843.7 ✓		
	175' LT	7.~~06~~ 1	843.4 ✓		
				✓, V	Rd CONT FLAT

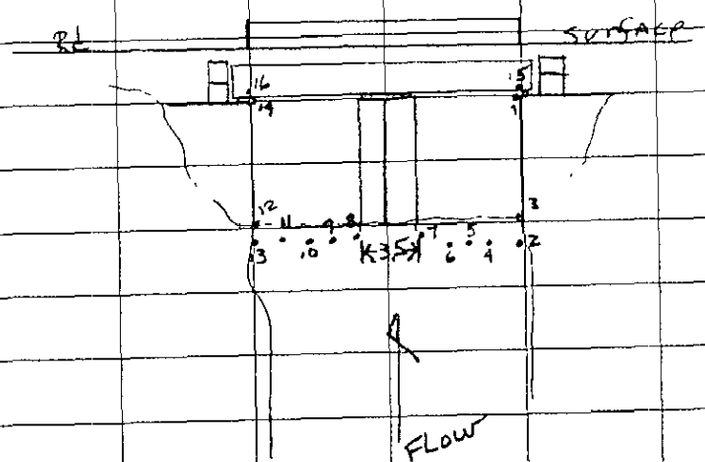
	+	HI	-	ELEV.			
		850.5					
	Dist	Rod	ELEV.				Desc
1	0	~~7.98~~ 8.0	842.5 ✓				Top RT Abut @ Face
2	0	15.8	834.7 ✓				BTM
3	0	14.7	835.8 ✓				w/s ✓
4	10' LT	2.8	833.0 ✓		SNDG	SNDG	
5	20' LT	2.8	833.0 ✓				
6	30' LT	2.7	833.1 ✓				
7	36' LT	2.2	833.6 ✓				BTM pier RT
8	39.5 LT	2.6	833.2 ✓				BTM pier LT
9	50' LT	3.2	832.6 ✓				
10	60' LT	2.6	833.2 ✓				
11	70' LT	3.0	832.~~5~~ 8		SNDG	SNDG	
12	75' LT	14.7	835.8 ✓				w/s S/L
13	75' LT	16.7	833.8 ✓				BTM LT Abut
4	75 LT	9.1	841.4 ✓				Top LT Abut
15	0'	7.8	842.7 ✓				L/S RT
16	75' LT	8.9	841.6 ✓				L/S LT

DRAWING

@ 27B

HWY 20





NO SKEW

Rd = 24'

BRIDGE = 50'

64B

18 FEB 93

ROAD SECTION

@ 29 B

BROOMFIELD Rd

	+	HI	−	ELEV.
TBM F-10				840.91 ✓
	5.86	846.77		

DIST	Rod	ELEV.
0	6.0	840.8 ✓
25' RT	5.7	841.1 ✓
50' RT	5.4	841.4 ✓
75' RT	5.2	841.6 ✓
100' RT	4.9	841.9 ✓
45' LT	6.3	840.5 ✓
75' LT	6.3	840.5 ✓
100' LT	6.5	840.3 ✓
125' LT	7.0	839.8 ✓
150' LT	7.2	839.6 ✓

18 FEB 93

65B

TOP BOLT HEAD SW. CORNER BRIDGE BROOMFIELD Rd.
(Pg- 70 Levels Book 1)

Desc

TOP ℄ Rd @ FACE RT ABUT ℄ Rd

GRAVEL

Rd CONT FLAT

TOP ℄ Rd @ FACE LT ABUT ℄ Rd

GRAVEL

NEXT 100' LT Rd IS FLAT THEN RISES sharply 40' NEXT 300' ±

	+	HI	-	ELEV.
		846.77		
	DIST	ROD	ELEV	
1	2' RT	14.20	832.57 ✓	
2	0'	14.33	832.44	
3	0'	16.2	830.6 ✓	
4	0'	15.5	831.3 ✓	
5	10' LT	5.0	826.3 ✓	
6	20' LT	5.7	825.6 ✓	
7	30' LT	6.3	825.0 ✓	
8	40' LT	4.5	826.8 ✓	
9	45' LT	15.6	831.2 ✓	
10	45' LT	18.4	828.4 ✓	
11	45' LT	13.06	833.71 ✓	
12	47' LT	13.09	833.23 ✓	
13	23' LT	7.4	839.4 ✓	
TBM F-10	ok	5.86	840.91 ✓	

66 B

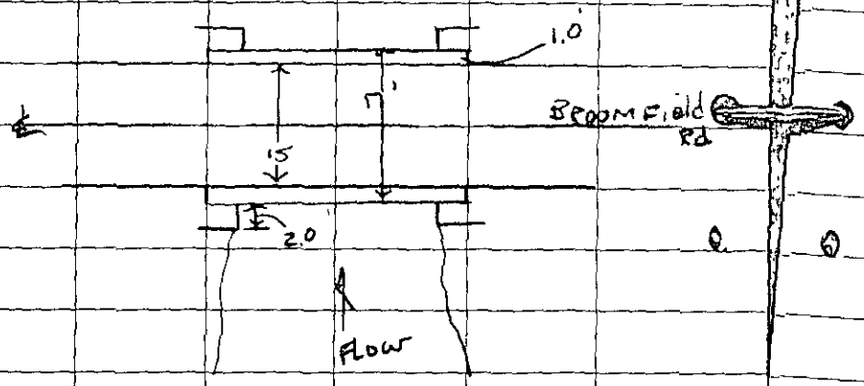
		Desc
6	D	Top RT Abut @ BTM ARCH
		Top RT Abut @ FACE
		BTM RT Abut
2	D	W/S S/L
		SNDG
		"
		"
		SNDG
		W/S S/L
		BTM LT Abut @ FACE
1	D	Top LT Abut @ FACE
		Top LT Abut @ BTM ARCH
		W/S Top of Arch

Pg - 07 B

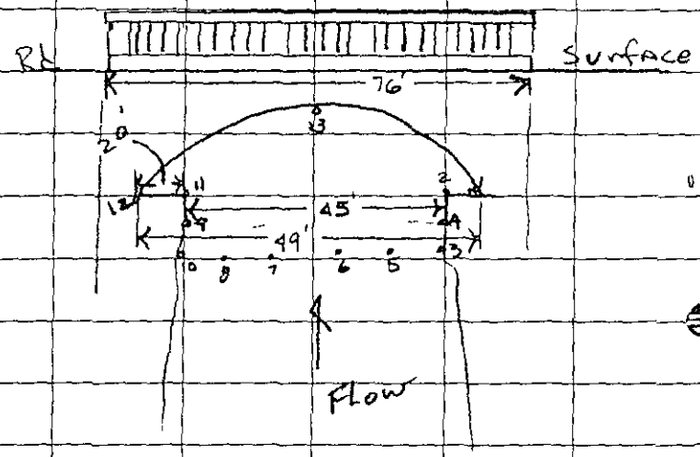
DRAWING

@ 29 B

BROOMFIELD Rd



CONC. CONSTRUCTION
NO SKEW
Rd = 15'
Bridge = 17'



18 FEB 93

ROAD SECTION
⊗ 34 B
AREA =
WINN Rd

STEEL & CONC. CONSTRUCTION

	+	Hi	−	ELEV.
TBM F12				811.86
	6.32	818.18		

DIST	Rod	ELEV.
0	4.73	813.45 ✓
25' LT	4.64	813.54 ✓
50' LT	4.50	813.68 ✓
75' LT	4.30	813.88 ✓
100' LT	3.91	814.27 ~~809.97~~
76' RT	4.80	813.38 ✓
100' RT	5.12	813.06 ✓
125' RT	5.18	813.01 ✓
150' RT	5.21	812.97 ✓
175' RT	5.34	812.84 ✓

18 FEB. 93

70 B

CHISELED □ S.W. CORNER OF BRIDGE ON WINN Rd.
(Pg-77 Levels Book 1)

151 B

DESC

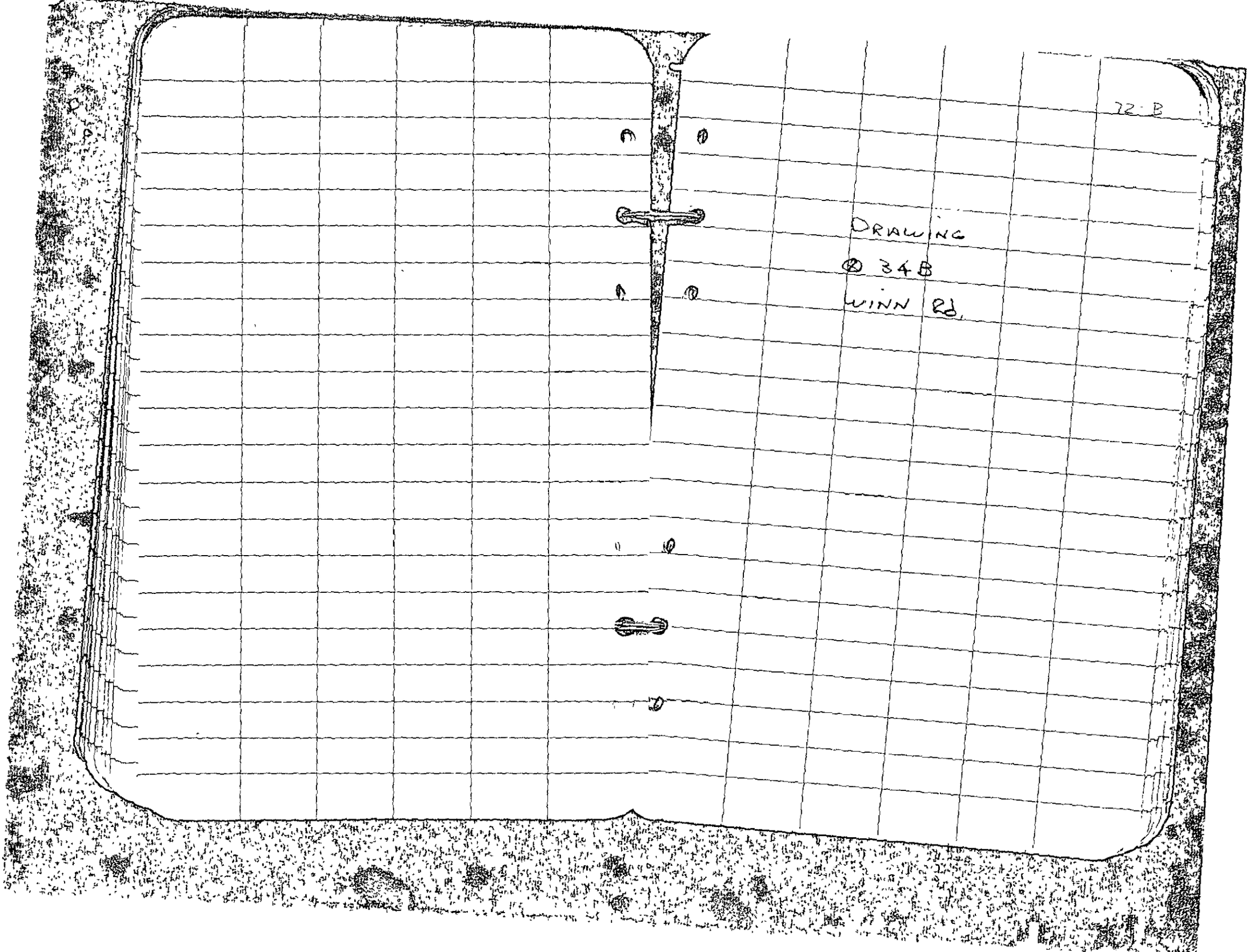
Top ℄ Rd @ FACE LT ABUT ℄ Rd

Rd CONT. FLAT

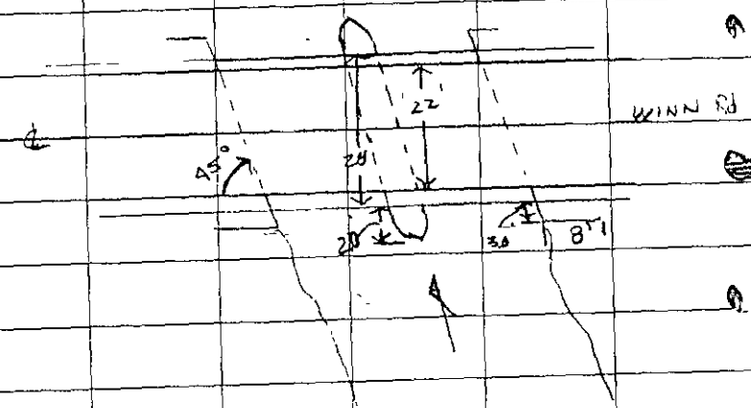
Top ℄ Rd @ FACE RT ABUT ℄ Rd

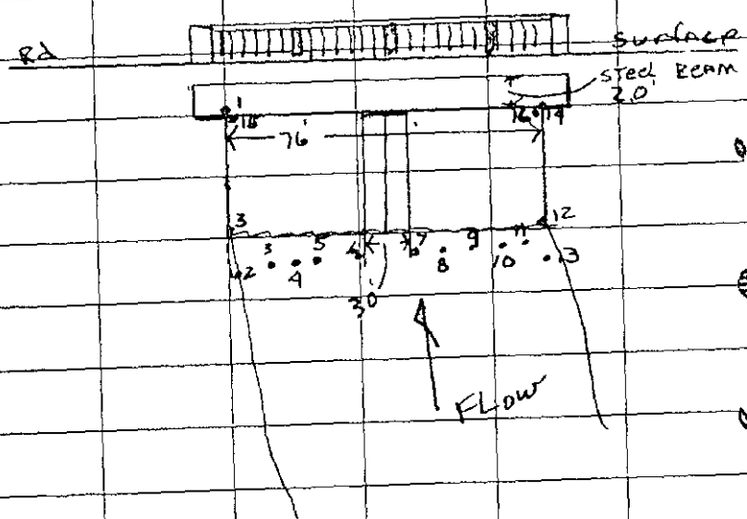
Rd CONT. FLAT

	+	HI	−	ELEV.			
		818.18					
	Dist	Rod	ELEV				Desc
1	0	7.8	810.4				Top LT Abut @ Face
2	0	14.7	803.5				Btm LT Abut @ Face
3	0	12.5	805.7				u/s S/L
4	10' RT	4.0	801.7	SNDG			SNDG
5	20' RT	3.5	802.2				
6	30' RT	6.0	799.7				
7	36' RT	5.8	799.9				Btm Pier LT
8	39 RT	5.8	799.9				Btm Pier RT
9	50 RT	4.2	801.5				
10	60 RT	2.9	802.8				
11	70' RT	2.5	803.2	SNDG			SNDG
12	76' RT	12.5	805.7				W/S S/L
13	76' RT	15.6	802.6				Btm RT Abut @ Face
14	76' RT	7.9	810.3				Top RT Abut @ Face
15	0'	7.6	810.6				4S
16	76' RT	7.7	810.5				4S
TBM F.12	CK	6.32	811.86				


72-B
DRAWING
@ 34B
WINN Rd.

73 B





SKEW = 45°

Rd = = 22

BRIDGE = 28

W W L

W

18 FEB 93

ROAD SECTION
@ 38 B
AREA V
VANDECAR Rd

NEW BRIDGE "1992"
CONC. CONSTRUCTION

18 Feb 93

Pg-75B

	+	HI	−	ELEV.
TBM 038				799.6 ✓
	6.13	805.7 ✓		

R.R. SPIKE E Face of P.P. W. SIDE OF VANDECAR Rd 40' W. of ℄ Rd & 30' N of Top of RIVER BANK
(Pg-32 SL SPUR LINES Book 2)

Dist	Rod	ELEV.	Desc
0	4.90	800.8 ✓	Top ℄ Rd @ Face LT About ℄ Rd
25' LT	5.18 (2)	800.5 ✓	
50' LT	5.19 (2)	800.5 ✓	
75' LT	5.25	800.5 ✓	
100' LT	5.27 (3)	800.4 ✓	Rd CONT FLAT
247 RT	~~2.96~~ 3.0	802.7 ✓	Top ℄ Rd @ FACE RT About ℄ R
275' RT	2.85	802.9 ✓	
300' RT	2.45	803.3 ✓	
325' RT	2.06	803.6 ✓	
350' RT	1.72	804.0 ✓	Rd CONT. FLAT

✓K.V

+	HI	−	ELEV						76 B
	805.7								
DIST	Rod	ELEV				Desc			
0	7~~77~~ 8	797.9 ✓			4S	TOP LT ABUT @ FACE			
2' RT	11.0	794.7 ✓				BTM LT ABUT @ FACE (ROCK)			
15' RT	15.7	790.0 ✓				W/S S/L			
25' RT	4.4	785.6 ✓				SND6		ROCK	
35' RT	4.0	786.0						ROCK	
45' RT	3.5	786.5 ✓						SAND	
58' RT	3.2	786.8 ✓					BTM LT	Pier 1	SAND
62' RT	3.5	786.~~0~~ 5 ✓					BTM RT	Pier 1	"
73' RT	2.3	78~~6~~7.7 ✓							"
83' RT	2.0	788.0 ✓							"
93' RT	2.3	78~~6~~7.7 ✓							"
103' RT	1.0	789.0 ✓				SND6			"
113' RT	15.7	790.0 ✓				W/S S/L			
121' RT	15.6	790.1 ✓			GE	BTM LT	Pier 2		
125 RT	15.6	790.1 ✓			GE	BTM RT	Pier 2		
150' RT	14.7	791.0 ✓				GE			
175' RT	14.1	791.6 ✓				GE			

+	HI	−	ELEV.
	805.7		

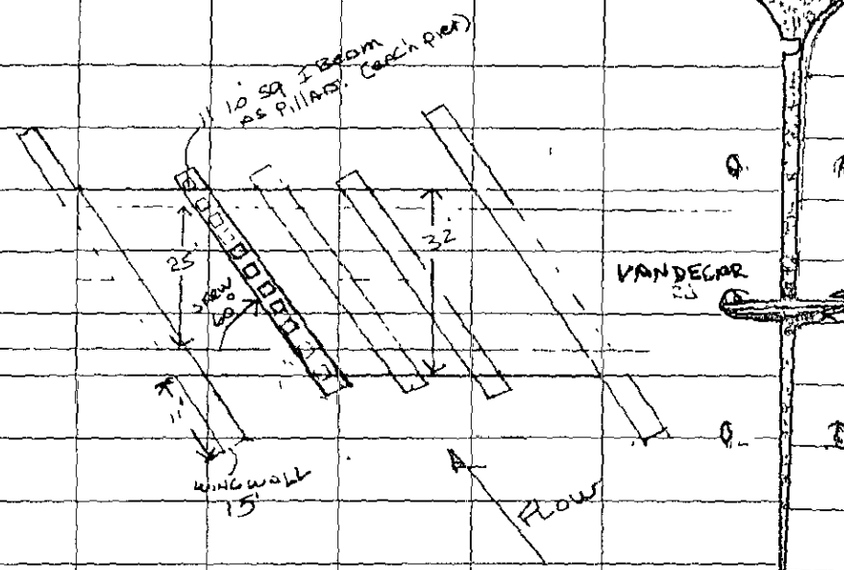
DIST	Rod	ELEV.		Desc
184' RT	14.2	791.5 ✓		6E BTM LT Pier 3
188 RT	14.5	791.2 ✓		6E BTM RT Pier 3
224 RT	13.4	792.3 ✓		Toe of Slope
246 RT	7.1	798.6 ✓		Top Slope & Bottom RT Abut (Rock)
246 RT	6.0~~5~~	799.7 ✓	4S	Top RT Abut
60' RT	7.4~~0~~	798.3 ✓	4S	Top ℄ Pier 1
123' RT	7.~~07~~	798.6 ✓	4S	" " 2
186' RT	6.4~~4~~	799.3 ✓	4S	" " 3
TBM ⊗ 38 CK	6.1~~8~~	799.6 ✓		Pg - 75B

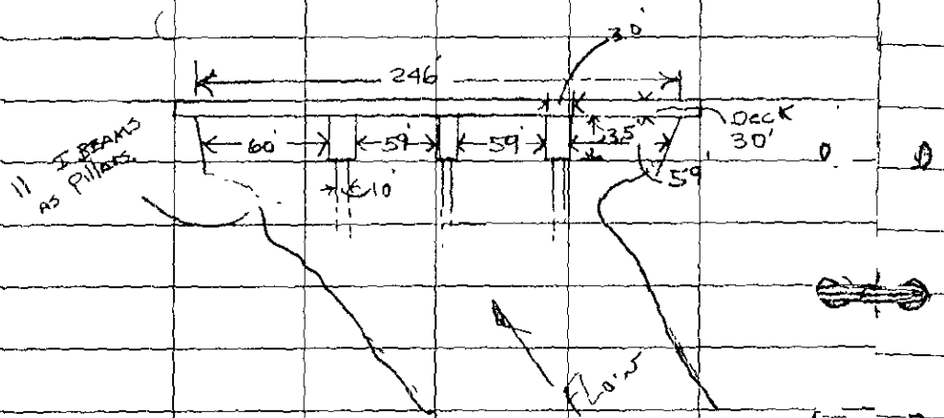
PU-78 B

DRAWING

@ 38 B

VANDECAR RD





SKEW 60°

Rd = 25'

BRIDGE - 32'

W W =

W = 1.5'

Piers W = 3.0

No. of up rights = 11

SIZE = 1' I BEAMS

TOTAL L BRIDGE 300'

18 FEB. 93

ROAD SECTION

⊗ 41 B

AREA U

MERIDIAN Rd

STEEL CONSTRUCTION

	+	HI	−	ELEV.
TBM U-4	4.82	785.26		780.44

	DIST	Rod	ELEV.	Desc
1	0	7.46	777.80 ✓	L/S TOP RT RETAINING WALL @ FACE
2	0	14.6	770.7 ✓	BTM " " " ROCK
3	0	13.8	771.5 ✓	W/S S/L
4	10' LT	1.7	769.8 ✓	SND6 ROCK
5	20' LT	1.8	769.7 ✓	
6	24' LT	2.5	769.0 ✓	BTM RT Pier 1
7	25' LT	2.4	769.1 ✓	BTM LT Pier 1
8	35' LT	2.4	769.1 ✓	
9	45' LT	3.5	768.0 ✓	
10	50' LT	3.1	768.4 ✓	BTM RT Pier 2
11	51' LT	3.1	768.4 ✓	BTM LT Pier 2
12	61' LT	4.4	767.1 ✓	
13	71' LT	3.5	768.0 ✓	SND6 ROCK
14	75' LT	13.9	771.4 ✓	W/S S/L
15	75' LT	16.6	768.7	BTM LT RETAINING WALL (ROCK
16	15' LT	6.80	778.46	L/S TOP LT RETAINING WALL @ FACE
TBM U 4	CK	4.82	780.44	

DRAWING
⊗ 41 B
MERIDIAN Rd

18 FEB 93

B1 B

	+	HI	−	ELEV		
TBM U-4				780.44 ✓		CHISELED □ S.W CORNER N.W. WINGWALL BRIDGE ON MERIDIAN Rd (Pg-24 Levels Book 2)
	13.43	793.87 ✓				
	Dist	Rod	ELEV.			Desc
	0	13.43	780.44 ✓			Top ℄ Rd @ Face Steel Retaining Wall
	25' LT	13.25	780.62 ✓			℄ Rd
	50' LT	13.45	780.42 ✓			
	75' LT	13.60	780.27 ✓			
	100' LT	13.56	780.31 ✓			
						Rd cont. FLAT
	75' RT	13.31	780.56 ✓			Top ℄ Rd @ Face Steel Retaining Wall
	100 RT	12.38	781.49			℄ Rd
	125' RT	11.06	782.81 ✓			
	150' RT	9.75	784.12 ✓			
	175' RT	8.28	785.59 ✓			
						Rd cont. STEADY INCLINE
	CK	13.43	780.44 ✓			

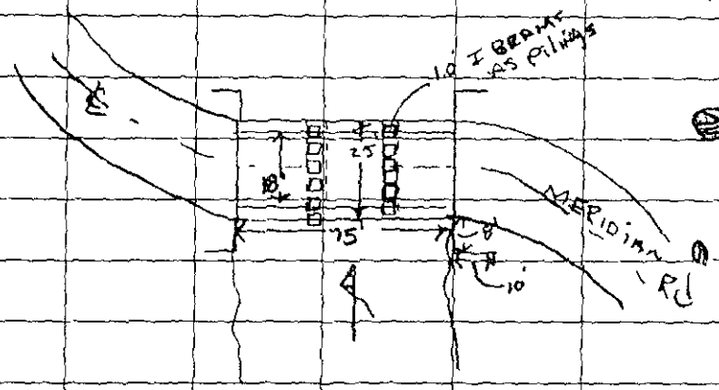
84-B

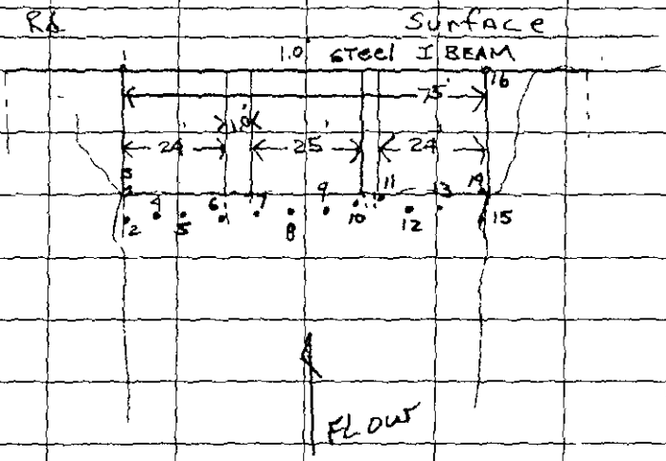
NO SKEW

Pl 18

BRIDGE 25

6 STEEL I J-BEAM AT EACH Pier





27 FEB 93 Pg. 85B

ROAD SECTION
@ 44 B
LINCOLN Rd

	+	HI	−	ELEV.
TBM S-1				768.10
	5.13	773.23		

Dist	Rod	ELEV
0	4.96	768.27
25 LT	4.85	768.38
50' LT	4.87	768.36
75' LT	5.05	768.18
100' LT	5.12	768.11
134 RT	4.99	768.24
160 RT	5.11	768.12
185 RT	5.16	768.07
210' RT	5.15	768.08
235 RT	5.15	768.08

27. FEB. 93

Pg. 86B

CHISELED □ N.W. CORNER
LINCOLN Rd BRIDGE
(Pg- 17 Levels Book 2)

Desc

Top ℄ Rd ; FACE LT ABUT
℄ Rd

Rd CONT FLAT

TOP ℄ Rd @ FACE RT ABUT
TOP ℄ Rd

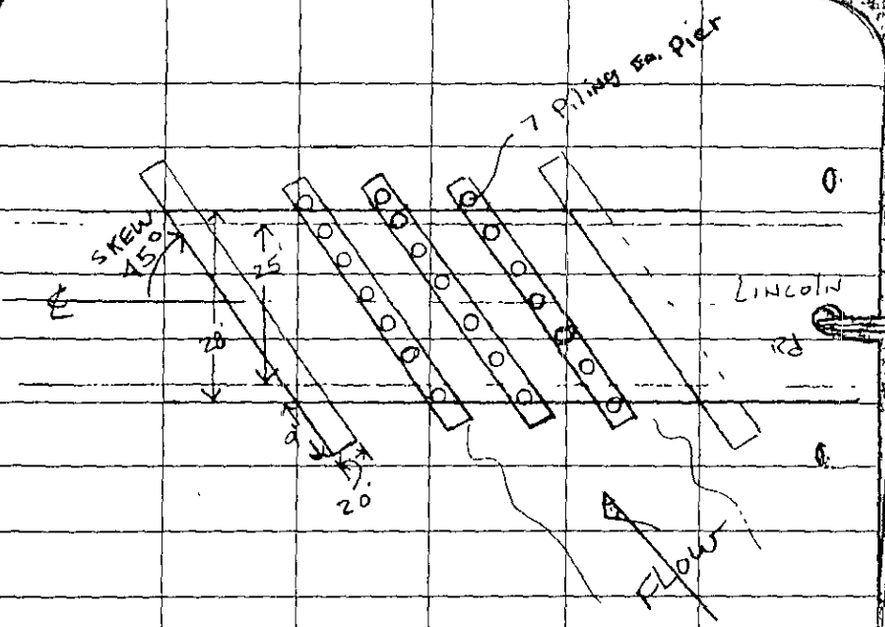
Rd CONT. FLAT

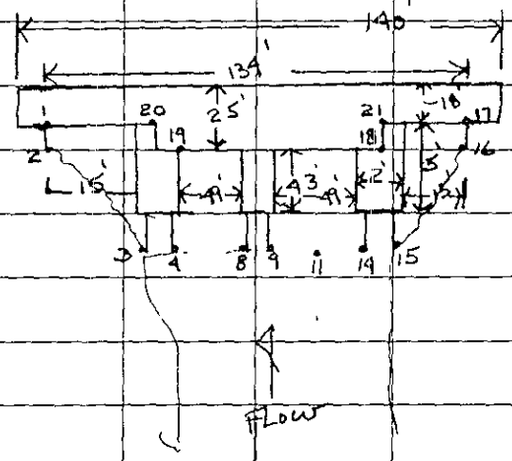
	+	HI	−	ELEV
		773.23		
	DIST	ROD	ELEV	
1	0	6.80	766.43	
2	0	9.7	763.5	
3	15' RT	13.2	760.0	
4	18' RT	1.2	758.8	759.4
5	30' RT	–	UNSafe Ice	
6	40' RT	–	" "	
7	50' RT	–	" "	
8	66' RT	2.3	757.7	
9	69' RT	2.4	757.6	
10	80' RT		UNSafe Ice	
11	90' RT	6.4	75[illegible] 1 ~~766.3~~	
12	100 RT		UNSafe Ice	
13	110' RT		" "	
14	118' RT	1.4	758.6	
15	121 RT	13.2	760.0	759.3
16	134 RT	8.1	765.1	
17	134 RT	6.75	766.48	

ID	Desc
4.5	TOP LT ABUT @ FACE
	BTM LT ABUT @ FACE
	W/S S/L LT Edge Pier 1
D	SNDG RT Edge pier 1
	LT Edge pier 2
	RT Edge pier 2
D	
	SNDG LT Edge pier 3
	W/S S/L RT Edge pier 3
	BTM RT ABUT
4.5	TOP RT ABUT

	+	HI	—	ELEV.				
		773.23						
	Dist	Rod	ELEV.					
18	118' RT	7.6	765.6 ✓			4/5		Pier 3
19	18' RT	7.6	765.6 ✓			4/5		Pier 1
20	15' RT	6.8	766.4 ✓			4/5		Pier 1
21	121' RT	6.8	766.4 ✓			4/5		Pier 3
	CK	5.13	768.10 ✓					

Drawing
@ 44 B
Lincoln Rd





Pg-90B

SKEW : 45°

BRIDGE : 28

RD : 25'

W.W. = L 9'

W 2'

Pier

Piles 7

TOTAL 140'

27 FEB 93 pg-91B

ROAD SECTION

@ 4b B

HIGH ST (US 20)

T. ROZNOWSKI, SUNNY 5°
K. DRAKE Feb. 27, 93 Pg-92B
CHISELED □ S.E. CORNER SW WINGWALL
BRIDGE ON High ST CHIPPEWA RIV.
(Pg- DIA Desc Book2)

	+	HI	-	ELEV
Rm # 3				772.01 ✓
	4.66	776.67 ✓		

DIST	Rod	ELEV.	DESC
0	5.49	771.23 ✓	Top ℄ Rd @ RT Abut
25' LT	5.47	771.20 ✓	℄ Rd
50' LT	5.56	771.11 ✓	
75' LT	5.53	771.14 ✓	
100 LT	5.45	771.22 ✓	
			Rd. CONT FLAT
125' RT	5.39	771.28 ✓	
150 RT	5.50	771.17 ✓	Top ℄ Rd @ LT Abut
175 RT	5.56	771.11 ✓	℄ Rd
200 RT	5.72	770.95 ✓	
225' RT	5.70	770.97 ✓	
			Rd CONT. FLAT

	+	HI	−	ELEV.			
		776.67					
	Dist	Rod	ELEV.				Desc
1	0	9.55	767.12 ✓				TOP LT ABUT @ FACE
2	0	18.7	758.0 ✓				BTM LT ABUT @ FACE
3	16' RT	23.0	753.7 ✓				Top sec. BNK & BTM Prim.
4	50' RT	23.7	753.0 ✓				TOP SSP LT
5	64' RT	23.8	752.9 ✓				TOP SSP RT
6	100' RT	23.4	753.3 ✓				TOP RT BNK & TOE of Prim.
7	125 RT	17.8	758.9 ✓				BTM RT ABUT @ FACE
8	125' RT	9.50	767.17 ✓				TOP RT ABUT @ FACE
9	0	9.2	767.5 ✓				L/S @ FACE LT ABUT
10	125' RT	9.2	767.5 ✓				L/S @ FACE RT ABUT
	CK	4.67	772.0 ✓	V.L.P			

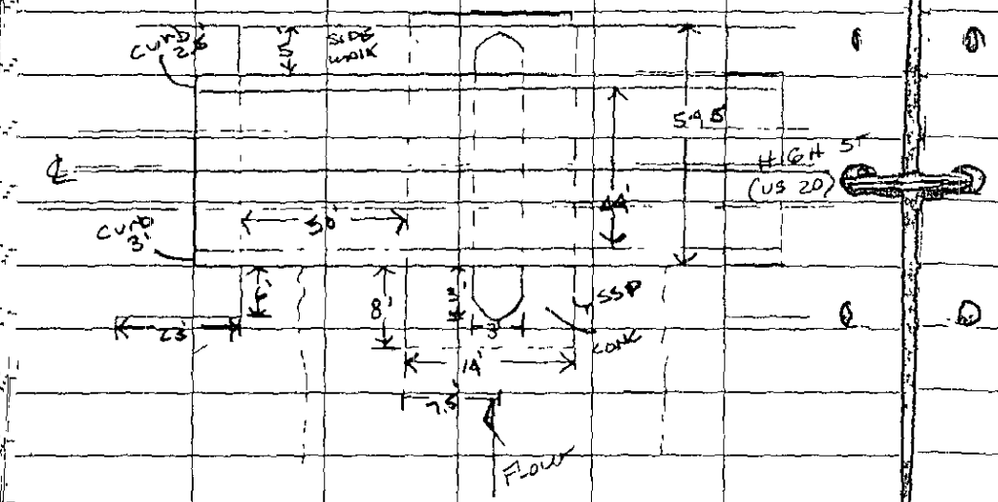
SND6 DONE = April 30,93 Pg. 94B

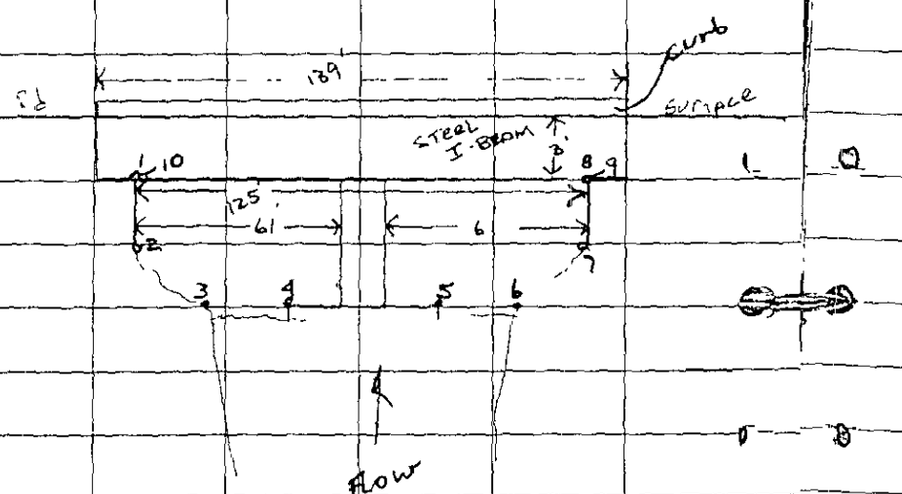
	+	HI	−	ELEV.		
RM #3	4.6	776.7		772.01		SND6
	Dist	Rod	ELEV.			Desc
	16' RT	23.7	753.0		W/S	W/S S/L
	16' RT	1.2	751.8		SND6	SND6 - Toe LT BNK SAND
	26'	3.8	749.2			
	36'	5.5	747.5			
	46'	5.5	747.5			
	50' RT	6.0	747.0			@ Face SSP LT
	64' RT	5.5	747.5			@ Face SSP RT
	74	5.6	747.4			
	84	5.0	748.0			
	94	2.9	750.1			
	100' RT	1.2	751.8		SND6	SND6 - Toe RT BNK
	100' RT	23.7	753.0		W/S	W/S S/L
	CK	4.6	772.0			

DRAWING

⊗ 46 B

HIGH ST (HWY 20)





NO SKEW

ROAD = 44

BRIDGE = 125'

" TOTAL = 139'

CURB = D/S = 2.5'

" U/S = 3.0

SIDEWALK = 5'

Fig-97B

22 FEB 43

ROAD SECTION

@ 48 B

BROADWAY ST

BM # 27	+	HI	−	ELEV.
				756.07 ✓
	9.30	765.37 ✓		

DIST	Rod	ELEV.
0	5.93	759.44 ✓
25' LT	6.62	758.75 ✓
50' LT	7.23	758.14 ✓
75 LT	7.77	757.60 ✓
100 LT	8.09	757.28 ✓
78' RT	5.55	759.82 ✓
100 RT	5.37	760.00 ✓
125 RT	5.17	760.20 ✓
150 RT	6.30	759.07 ✓
175 RT	7.28	758.09 ✓
40' RT	5.50	759.87 ✓

✓ + V

Feb 22, 93 Pg-98B

PG D-1A USC & GS & FEMA BM
Broadway & Harris Milling Co.

Desc

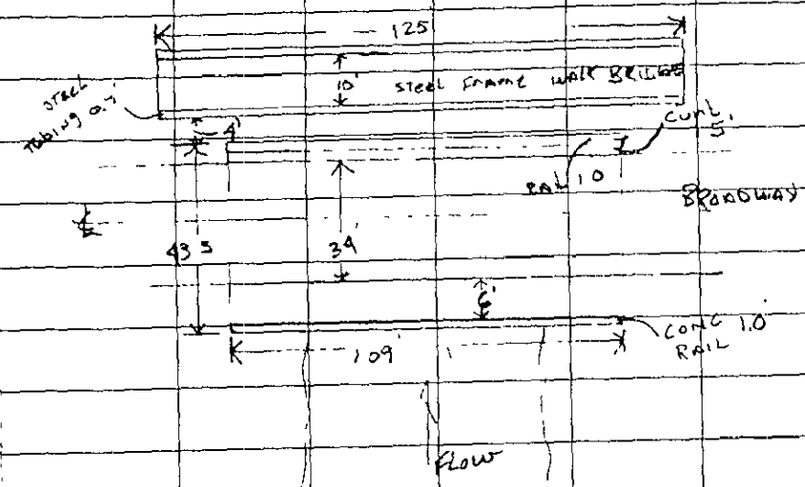
Top ℄ Rd @ BTM Arch
℄ Rd

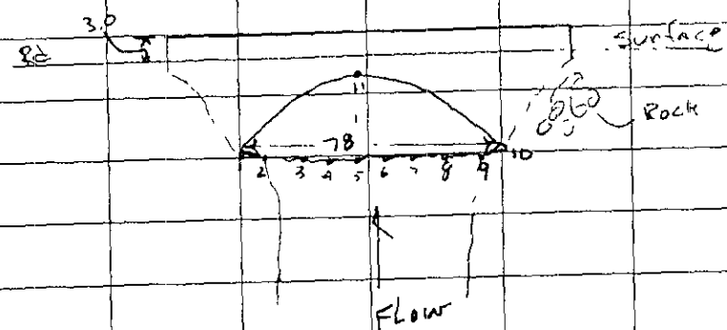
Rd declines 2' Next 200
Top ℄ Rd @ BTM Arch
℄ Rd

℄ Rd & ℄ BRIDGE

	+	HI	—	ELEV		Desc
		765.37				
	Dist	Rod	ELEV.			
1	0	19.2	746.2 ✓			GE @ BTM Arch
2	4' RT	20.0	745.4 ✓			W/S S/L
3	14' RT	2.8	742.6 ✓		SNDG	SNDG Rock
4	24 RT	2.7	742.7 ✓			
5	34 RT	2.8	742.6 ✓			
6	44 RT	2.6	742.8 ✓			
7	54 RT	3.0	742.4 ✓			
8	64 RT	2.2	743.2 ✓		SNDG	SNDG
9	74 RT	20.0	745.4 ✓			W/S S/L
10	18 RT	19.3	746.1 ✓			GE BTM Arch
11	39' RT	8.7	756.7 ✓			L/S TOP of ARCH.
	CK	9.30	756.07 ✓			
BM # 27						

Drawing
@ 48 B
Broadway ST





No Skew

TOTAL = 109'

Rd = 34'

curb 2.5

22 FEB 93

ROAD SECTION

@ 495

LINCOLN ST

22 FEB 93

Pg - 103B

CHISELED □ N.E. CORNER HEADWALL
BRIDGE @ LINCOLN ST (PARK ENTRANCE)
(Pg - 16 SL SPUR LINES Book 2)

	+	HI	-	ELEV	Desc
TBM O-1				761.31 ✓	
	1401	775.32			
	Dist	Rod	ELEV		
	0'	16.04	759.28		Top ℄ Rd @ BTM Arch
	25' RT	14.36	760.96 ✓		℄ Rd
	50 RT	12.42	762.90 ✓		
	75 RT	11.20	764.12 ✓		
	100 RT	8.84	766.48		
	125 RT	6.84	768.48 ✓		
	150 RT	4.91	770.41 ✓		
	175 RT	3.34	771.98 ✓		
	200 RT	2.52	772.80 ✓		
	CK	1401	761.31 ✓		Rd CONT FLAT
TBM O-1				761.31	
	0.74	762.05 ✓			
	Dist	Rod	ELEV		
	0' LT	7.76	754.29		Top ℄ Rd @ BTM Arch
	25 LT	9.64	752.41 ✓		℄ Rd

+	Hi	−	ELEV.
	762.05		
Dist	Rod	ELEV.	
50' LT	11.14	750.91	
75' LT	11.93	750.12	
100' LT	12.43	749.62	

Desc

℄ Rd

"

Rd CONT FLAT

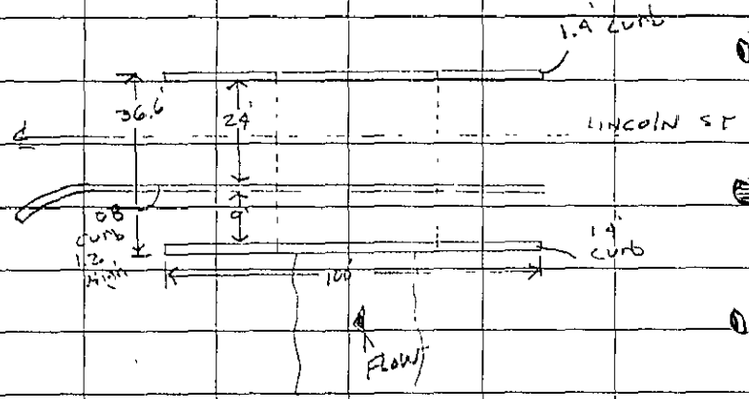
	+	HI	-	ELEV		Pg-105B
		762.05				
	Dist	Rod	ELEV.			Desc
1	0	17.4	744.6 ✓			GE @ BTM ARCH
2	12' RT	[illegible]	742.5 ✓			W/S S/L
3	20' RT	1.7	740.8 ✓			SNDG [illegible]
4	[illegible] RT	1.7	740.8 ✓			
5	40' RT	1.4	741.1 ✓			
6	50' RT	0.8	741.7 ✓			
7	60' RT	19.5	742.5 ✓			W/S S/L
8	70' RT	18.6	743.4 ✓			GE - Top PT [illegible] & BTM ARCH
9	35' RT	7.4	754.6 ✓			L/S Top of ARCH
TBM Q-1	CK	0.74	761.31 ✓			Pg-103 B

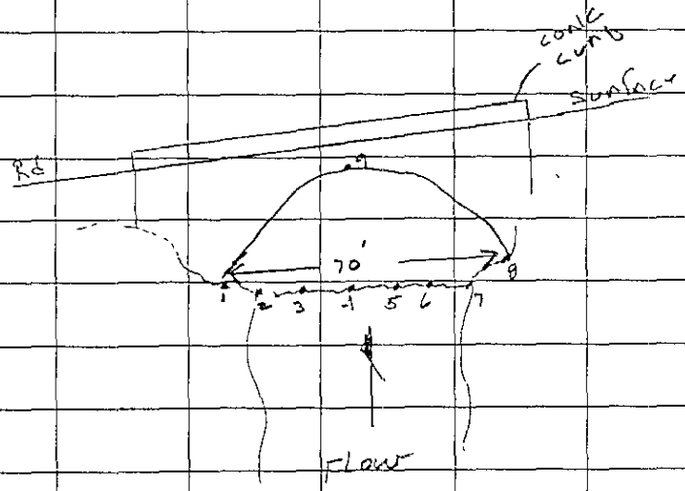
DRAWING

3 4 3

LINCOLN ST

PARK ENTRANCE





NO SKEW

curb 1.4

SW = 9'

wall = 0.8 , 1.2

Rd 24'

TOTAL = 100'

27 FEB 93 Pg-108B 51B

ROAD SECTION

@ 50 B

PICKARD Rd

27 FEB 93

Pg - 109B

	+	HI	−	ELEV.	
TBM P-1				759.85	CHISELED □ S.W. CORNER BRIDGE Pickard Rd. (Pg 14 SL spur Line = Book 2)
	4.22	764.07			
	DIST	Rod	ELEV.		DESC.
	0	7.29	756.78		Top ℄ Rd @ FACE LT ABUT
	25' LT	7.57	756.50		℄ Rd
	50' LT	7.80	756.27		
	75' LT	7.95	756.12		
	100' LT	8.20	755.87		
					Rd CONT FLAT
	130' RT	5.71	758.36		Top ℄ Rd @ FACE RT ABUT
	155 RT	5.17	758.90		℄ Rd
	180' RT	4.69	759.38		
	205 RT	4.20	759.87		
	230 RT	3.58	760.49		
TBM P-1	CK	4.22	759.85		Rd CONT. FLAT

	+	HI	−	ELEV.
TBM R1	3.04	762.89		759.85

PG 14SL Book #2

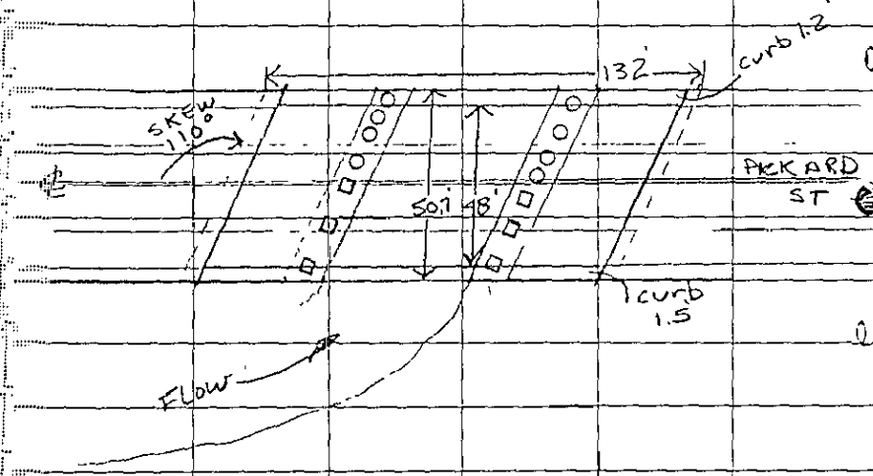
	Dist	Rod	ELEV.		Desc
1	0	8.2	754.7	4/S	Top LT Abut @ Face
2	0	11.4	751.5		RT [illegible] abut @ Face
3	31 RT	19.0	743.9		GE LT [illegible] Pier 1
4	35 RT	21.4	741.5		GE [illegible]
5	38 RT	22.2	740.7		[illegible]
6	48 RT	7.3	733.4		SNDG Rock
7	58 RT	6.3	734.4		
8	68 RT	5.0	735.7		
9	79 RT	3.6	737.1		
10	89 RT	2.5	738.2		
11	93 RT	0.7	740.0		SNDG-BTM LT Edge Pier 2
12	93 RT	22.2	740.7		WS/SL
13	97 RT	21.6	741.3		BTM RT Edge Pier 2
14	130 RT	9.6	753.3		BTM RT Abut
15	130 RT	6.4	756.5	4/S	Top RT Abut
TBM R1	CK	3.04	759.85		
16	33 RT	8.9	754.0		L/S
17	95 RT	7.1	755.8		4/S

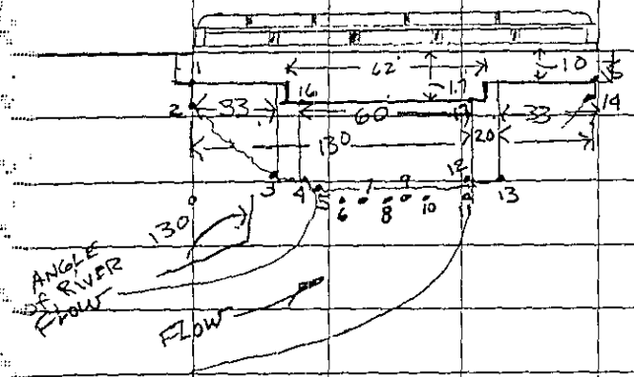
Pg-111B

DRAWING

PICKARD Rd

@ 50 R



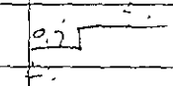


SKEW = 110°

BRIDGE =

ROAD = 48'

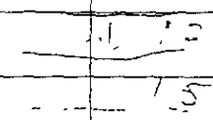
curb = 2' D/S



pier 2'

TOTAL 132

piling 1 = 10



SIDEWALK - 6

RAIL = 10

23 FEB 93 Pg-113B

ROAD SECTION

@ 52B

MISSION Rd.

	+	Hi	−	ELEV.
BM # 39				746.69 ✓
	5.10	751.79		
	Dist	Rod	ELEV.	
	0	5.13	746.66 ✓	
	25 LT	5.19	746.60 ✓	
	50' LT	5.39	746.40	
	75' LT	5.75	746.04	
	100' LT	5.8[illegible]	745.93 ✓	
	113' RT	5.22	746.57 ✓	
	138' RT	5.32	746.47 ✓	
	163' RT	5.55	746.24	
	188' RT	5.57	746.22	
	213' RT	5.54	746.25	

23 FEB. 93 Pg-114B

CITY BM (Pg- D-1 Desc Book 2)

Desc

Top ℄ Rd & @ Face LT Abut.

℄ Rd

Rd cont. Flat

Top ℄ Rd @ Face RT Abut.

℄ Rd

Rd CONT. FLAT

	+	HI		ELEV							
		751.79									
	Dist	Rod	ELEV.					Desc			
1	0'	10.4	741.4	✓				Top LT abut @ Face			
2	0'	18.4	733.4	✓				w/s S/L			
3	0'	0.7	732.7	✓				SNDG BTM LT abut			
4	10'							SNDG unsafe ice			
5	20'	2.0	731.4	✓							Rock
6	30'	3.5	729.9	✓							"
7	40'	3.5	729.9	✓							"
8	54'	3.9	729.5	✓				BTM of PIER LT			SAND
9	59'	3.6	729.8	✓				" " " RT			
10	69'	2.2	731.2								
11	79'	2.2	731.2	✓							
12	89'	2.1	731.3	✓							
13	99'	2.5	730.9	✓							
14	113 RT	0.8	732.6	✓				BTM RT abut @ Face			
15	113' RT	18.4	733.4	✓				w/s S/L			
16	113' RT	10.6	741.2	✓				TOP RT abut @ Face			

	+	HI	−	[illegible]							
		751.79									
	DIST	Rod	ELEV.				Desc				
17	113' RT	9.7	742.1 ✓				4S	RT			
18	0	9.8	742.0 ✓				4S	LT			
BM # 39	CK	5.10	746.69 ✓								

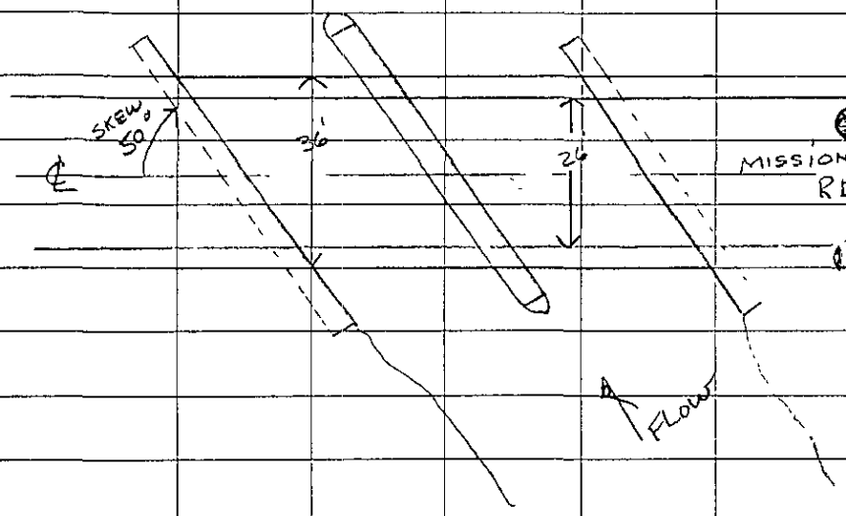
DRAWING

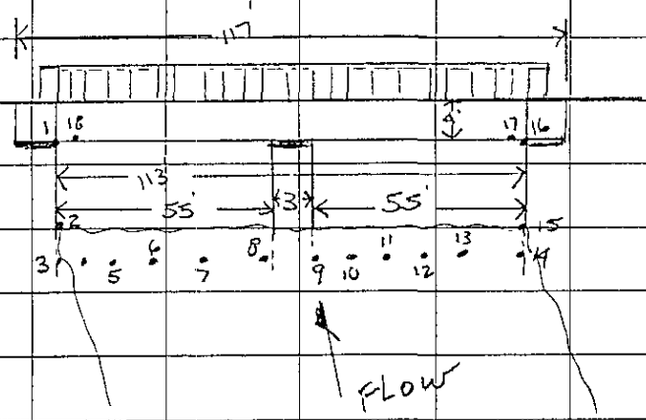
@ 52 B

MISSION Rd

CONC. CONSTRUCTION

Pg - 118B





Skew = 50°

RJ = 26

B = 26

27 FEB. 93 Pg. 119 B 51B

ROAD SECTION

@ 54B

US 27

S. Bound U/S side

	+	HI	−	ELEV.
TBM 54B				75692 ✓
	4.19	761.11		
	DIST	Rod	ELEV.	
	0	4.96	756.15 ✓	
	25' RT	4.93	756.18 ✓	
	50' RT	4.85	756.26 ✓	
	75' RT	4.69	756.51	
	100' RT	4.52	756.59 ✓	
	195' LT	5.15	755.96 ✓	
	220' LT	5.24	755.87 ✓	
	245' LT	5.37	755.74 ✓	
	270' LT	5.30	755.81 ✓	
	295' LT	5.17	755.94 ✓	

27 FEB. 93

Pg- 120B B

CHISELED SQ. SW END SW WINGWALL US-27 BRIDGE (Pg-8 SL Spur Lines Book 2)

Desc

TOP U/S Edge @ Face RT Abut.

U/S Edge

Rd CONT. FLAT

TOP U/S Edge @ Face LT Abut.

U/S Edge Rd

Rd CONT FLAT

	+	HI	−	ELEV.
		Pg. 11 ~~753.94~~		
	Dist	Rod	ELEV.	
1	0'	8.90	752.21 ✓	
2	0'	11.1	750.0 ✓	
3	0'	8.4	752.7 ✓	
4	195' LT	9.04	752.07 ✓	
5	195' LT	11.2	749.9 ✓	
6	195' LT	8.5	752.6 ✓	
TBM E+B	CK	4.18	756.93 ✓	
TBM Log				740.5 ✓
	1.6	742.1		
	Dist	Rod	ELEV.	
7	51' LT	8.4	733.7 ✓	
8	56' LT	11.7	730.4 ✓	
9	62' LT	3.1	727.3 ✓	
10	66' LT	3.8	726.6 ✓	
11	76' LT	3.9	726.5	
12	86' LT	4.9	725.5	

-151B

Pg-121B

Desc

Top RT Abut @ Face

Btm RT Abut @ Face & Top BNK

L/S RT

Top LT Abut @ Face

Btm LT Abut @ Face

L/S LT

Spur Lines (Pg-69 SL Book 2) Dot on Log 19.0' below Bridge Rail

Desc

Top LT BNK & Top of Slope

W/S S/L

SND6 = RT Edge pier 1 SAND

" LT Edge pier 1 "

SND6

"

		730.4	W/S
	DIST	Rod	ELEV
13	92' LT	2.6'	727.8 ✓
14	100' LT	3.4	727.0 ✓
15	110' LT	5.8'	724.6 ✓
16	120' LT	7.0'	723.4 ✓
17	129' LT	6.5	723.9 ✓
18	133' LT	6.5	723.9 ✓
		LH 742.1	
19	144 LT	11.7	730.4 ✓
20	147 LT	8.0	734.1 ✓
TBM Log	CK	1.6	740.5

P2-122B

Desc

SNDG SAND

RT Edge Pier 2

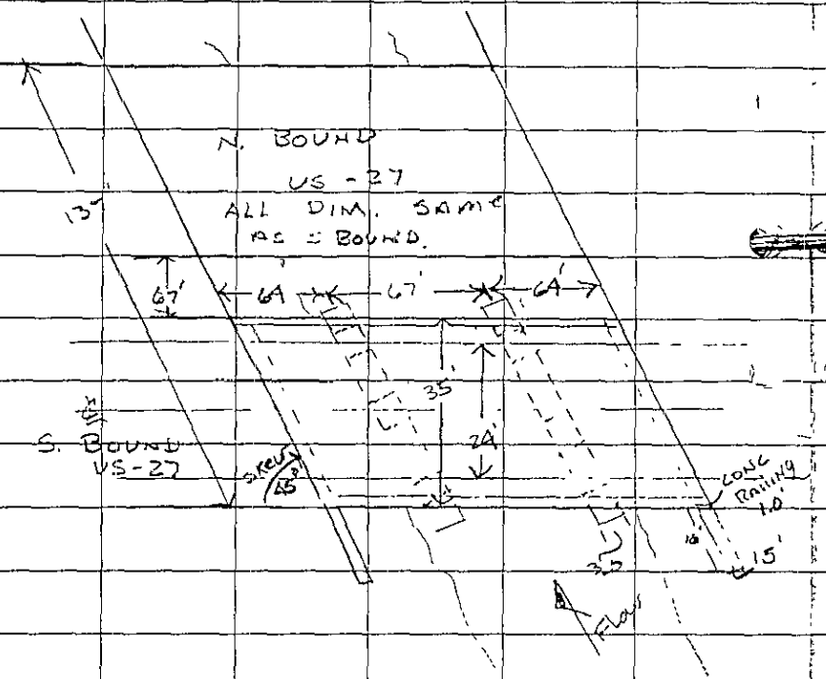
SNDG = LT Edge Pier 2

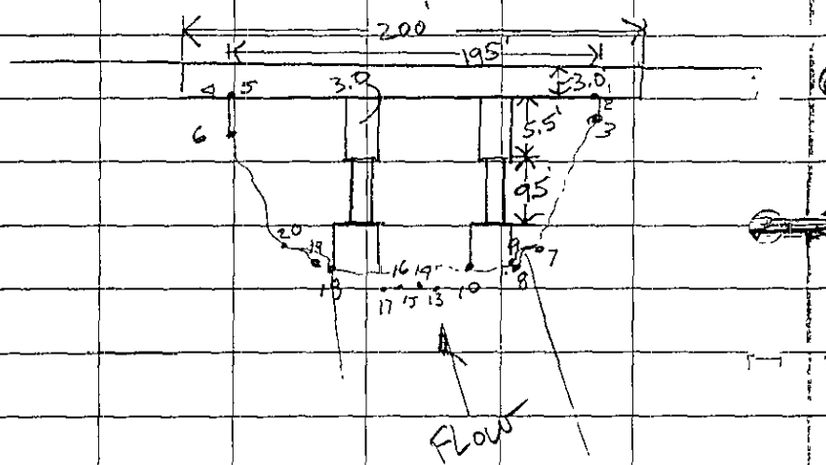
W/S S/L

Top LT BNK & Toe of Slope

Pg-123B

DRAWING
⊗ 54B
US-27



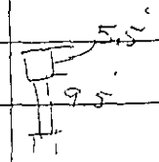


SKEW 45°

BRIDGE - 35'

ROAD = 24'

CONC. GUARD RAIL = 1.0



3 pillars each pier.

WINGWALL - " "

" "

TOTAL L - 200'

DIST BETWEEN BRIDGES = 67'

23 FEB 93 P. 125B

ROAD SECTION

@ 56 B

ISABELLA RD

CONC. CONST.

	+	HI	-	ELEV.
TBM 0-12				751.12 ✓
	7.06	758.18 ✓		
	Dist	Rod	ELEV.	
	0	6.94	751.24 ✓	
	25' LT	5.44	752.74 ✓	
	50' LT	4.06	754.12 ✓	
	75' LT	2.47	755.71 ✓	
	100' LT	1.43	756.75 ✓	
	150' RT	13.07	745.11 ✓	
	175 RT	14.22	743.96 ✓	
	200' RT	15.18	743.00	
	225' RT	16.10	742.08	
	250' RT	16.99	741.19	
	CK	7.06	751.12 ✓	

23 FEB. 93

Pg-126B

Pg-1

CHISELED □ S.W CORNER N.W. WINGWALL
Bridge Isabella Rd
(Pg-37 Levels Book 2)

DESC

Top ℄ Rd @ Face LT Abut

℄ Rd

Rd Rises 5' ± Next 200' ±
Then Flattens.

Top ℄ Rd @ Face RT Abut.

Rd cont Flat

	+	HI	—	ELEV.
TBM 0-12	1.15	752.27		751.12
	DIST	Rod	ELEV.	
1	0'	3.32	748.95	
2	1' RT	2.8	749.5	
3	35 RT	24.5	727.8	
4	47 RT	2.0	725.8	
5	50' RT	5.6	722.2	
6	60 RT	6.6	721.2	
7	70 RT	7.1	720.7	
8	80' RT	7.1	720.7	
9	90 RT	—		
10	100 RT	2.3	725.5	
11	103' RT	2.4	725.4	
12	110' RT	24.6	727.7	
13	124 RT	22.6	729.7	
14	150 RT	12.7	739.6	
15	151 RT	9.49	742.78	
TBM 0-12	CK	1.15	751.12	

Pg - 126E

Desc

L/S TOP LT ABUT @ FACE

BTM LT ABUT @ FACE

W/S S/C

SNDG BTM PIER 1 LT

BTM PIER 1 RT

UNSAFE ICE

BTM PIER 2 LT

SNDG BTM PIER 2 RT

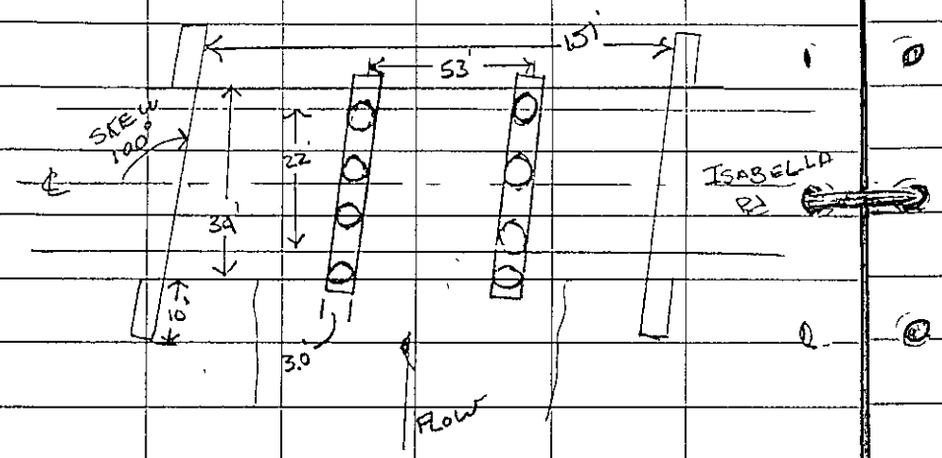
W/S S/C

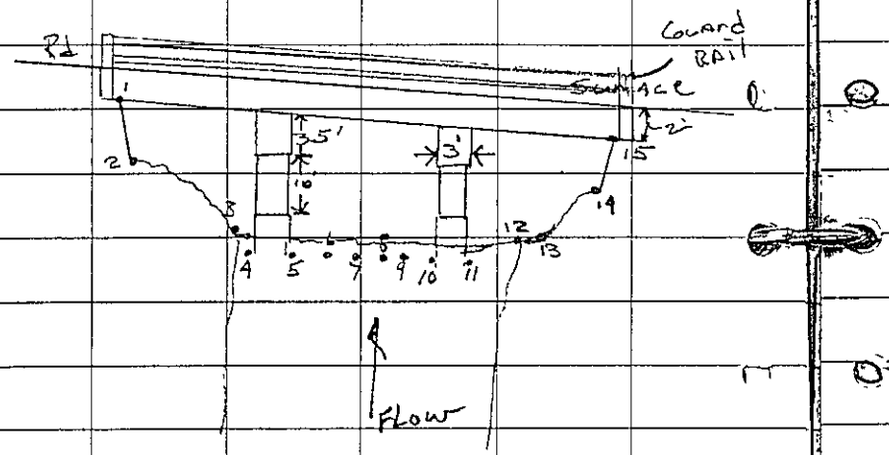
BTM RT PNS

TOP RT PNS & BTM RT ABUT

45 TOP RT ABUT

DRAWING
@ 56B
ISABELLA Rd.





Skew = 100°

Rd = 22

Bridge = 34

Deck = 2'

Colum = 10'

wing wall = 10'

23 FEB. 93

Pg-130B

-151B

ROAD SECTION

@ 59 B

LEATON RD

23 FEB, 93

Pg-131B 151B

	+	HI	-	ELEV.
TBM 0-7				731.57
	5.97	737.54		

CHISELED □ S.W. CORNER LEATON Rd BRIDGE (Pg-11 Levels Book 2)

Dist	Rod	ELEV.	Desc
0	5.79	731.75	Top of Rd @ FACE LT ABUT
25 LT	5.23	732.31	℄ Rd
50 LT	4.60	732.86	
75 LT	4.05	733.49	
100 LT	3.70	733.84	
			Rd CONT. slight incline
146 RT	7.97	729.57	Top of Rd @ FACE RT ABUT
171 RT	8.35	729.19	
196 RT	8.65	728.89	
221 RT	9.06	728.48	
246 RT	9.42	728.12	
			Rd CONT. FLAT

	+	HI	-	ELEV
		737.54		
	DIST	Rod	ELEV.	
1	0	7.83	729.71	
2	1' RT	9.1	728.4	
3	31' RT	21.0	716.5	
4	37' RT	22.8	714.7	
5	46' RT	1 0	713.7	
6	49' RT	3 7	711.0	
7	59' RT	4 0	710.7	
8	69' RT	4.0	710.7	
9	79' RT	3 5	711.2	
10	89' RT	5.2	709.5	
11	96' RT	5.2	709.5	
12	99' LT	5.6	709.1	
13	110' RT	5.7	709 0	
14	117 RT	1.0	713.7	
15	117' RT	22.9	714.6	
16	117' RT	21.6	715.9	
17	145' RT	10.8	726.7	
18	146' RT	9 81	727.73	
TBM 0.7	CK	5.97	731.57	

Pg-132B 51B

Desc

L/S Top LT Abut @ Face

BTM

CF BTM OF BANK

W/S S/C

SNDG - BTM OF PIER # 1 LT

" " # 1 LT

SNDG

"

Rock

BTM OF PIER # 2 LT

" " " # 2 LT

SNDG

SNDG BTM OF BANK

W/S S/C

Top of Bank [illegible]

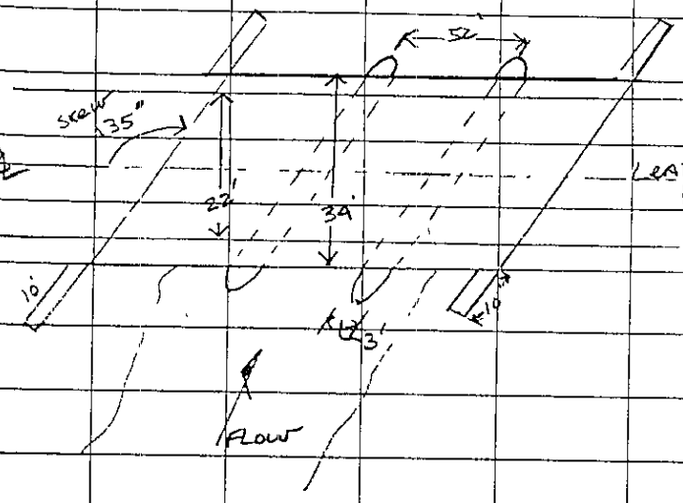
@ Face

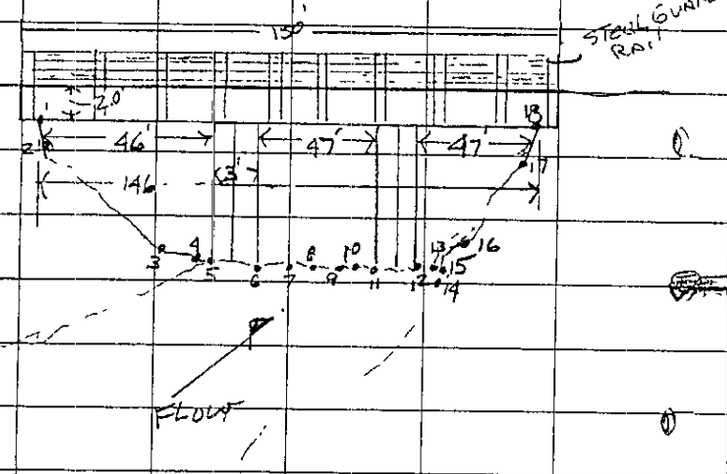
BTM OF Abut [illegible]

L/S Top of RT Abut. @ Face

Pg-133B

DRAWING
@ 59 B
LEATON Rd.





Skew = 135°

Pd = 22'

Brix = 34'

pier = 3'

wing wall 10

Deck = 2'

23. FEB. 93 Pg 135B

Road Section
@ 60 B
SHEPHERD Rd

Steel CONST.

23 FEB 93

Pg-136B

	+	HI	−	ELEV
TBM 0-5 A				719.48 ✓
	6.24	725.72 ✓		
	Dist	Rod	ELEV	
	0	4.91	720.81	
	25 LT	4.99	720.73	
	50 "	5.74	719.98	
	75 LT	5.73	719.99	
	100 LT	5.29	720.43	
	100 RT	4.69	721.03	
	125 RT	4.14	721.58	
	150 RT	3.69	722.03	
	175 RT	3.24	722.48	
	200 RT	2.67	723.05	

CHISELED □ N.E. END WINGWALL
steel BRIDGE, Shepherd Rd
(Pg- 3SL SPUR LINES BOOK 2)

DESC.

TOP & Rd @ FACE LT CONK. RETAINING WALL
℄ Rd

Rd CONT. FLAT

TOP & Rd @ FACE RT CONC. RETAINING WALL
℄ R

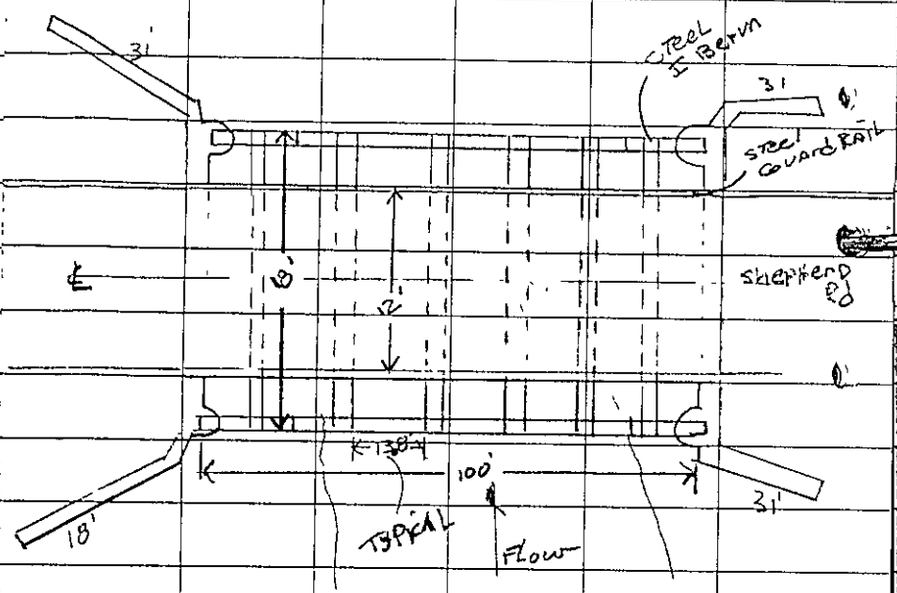
Rd RISES 3' NEXT 150'
THEN FLAT.

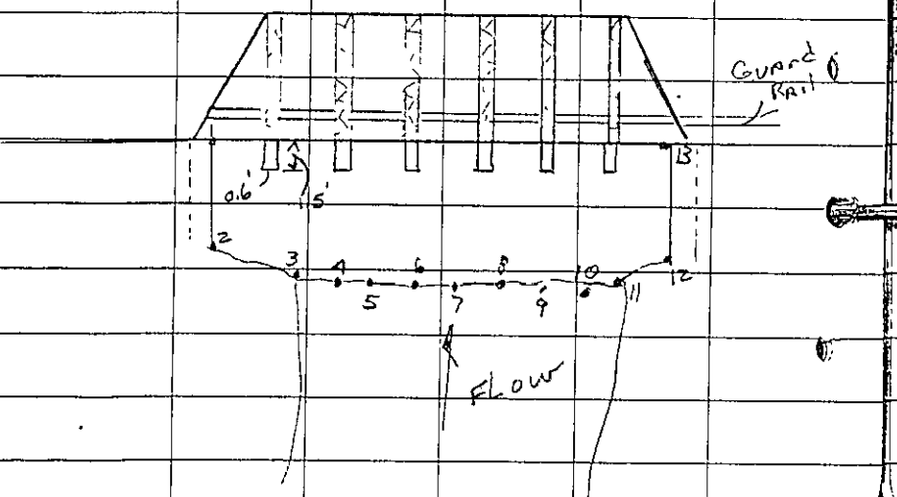
	+	HI	−	ELEV		DESC
		725.72				
	DIST	Rod	ELEV			
1	0	7.26	718.46			L/S TOP RETAINING WALL @ FACE
2	0	15.8	709.9			GE BTM " " "
3	11' RT	17.3	708.4			W/S S/L
4	21 RT	1.4	707.0			SNDG
5	26 RT	1.0	707.4			SNDG
6	36' RT	2.6	705.8			
7	46' RT	3.3	705.1			
8	56' RT	3.3	705.1			
9	66' RT	3.4	705.0			
10	76' LT	3.3	705.1			SNDG UNSAFE ICE
11	9 86' RT	17.3	708.4			W/S S/L
12	100' RT	6.95	708.77	718.77		L/S Top Retaining wall [illegible]
13	100' RT	15.5	710.2			BTM " "
TBM 0.5A	CK	6.24	719.48			

DRAWING

@ 60 B

SHEPHERD Rd





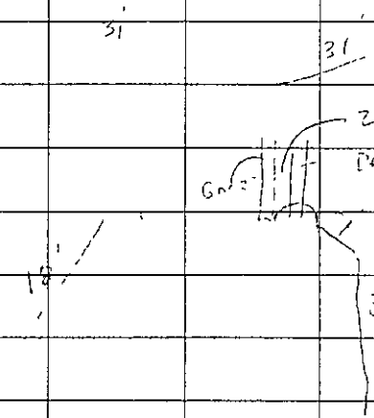
NO STRUT

BRIDGE 12

R1 12 TOTAL 18"

[illegible] 1.0

I BEAMS = 1.5 × 0.6



Pj -140B

23 FEB 93

ROAD SECTION

@ 618

[illegible] Pa

	+	HI	−	ELEV.
TBM 0-3				722.74
	7.49	730.23		

DIST	Rod	ELEV.
0'	5.35	724.88
25' RT	5.07	725.16
50' RT	4.59	725.64
75' RT	4.16	726.07
100' RT	3.78	726.45
285' LT	7.14	723.09
310' LT	7.14	723.09
335' LT	6.80	723.43
360' LT	6.25	723.98
385' LT	5.67	724.56

23 FEB. 93

Pg-14LB

CHISELED □ NW CORNER BRIDGE
LOOMIS Rd.
(Pg-15P SPUR LINES Book 2)

DESC

TOP ℄ Rd @ FACE RT ABUT
℄ Rd

Rd CONT. FLAT

TOP ℄ Rd @ FACE LT ABUT
℄ Rd

Rd CONT slight INCLINE

	+	HI	−	ELEV
		730.23		
	Dist	Rod	ELEV	
1	0	8.09	722.14	
2	1' LT	10.46	719.77	
3	5' LT	12.94	717.29	TBM 0-3 CK 7.49 722.74
TBM Hub	0.70	709.1 (HI)		708.4
4	53 LT	7.0	702.1	
5	57' LT	1.7	700.4	
6	67'	1.6	700.5	
7	77'	1.6	700.5	
8	87	1.7	700.4	
9	97	2.4	699.7	
10	111' LT	3.5	698.6	
11	115' LT	3.7	698.4	
12	125	1.5	700.6	
13	135	2.4	699.7	
14	145	2.6	699.5	
15	155	2.7	699.4	
16	169	3.1	699.0	
17	173	2.9	699.2	

Pg-142B

Desc

TOP RT ABUT @ FACE

BTM RT ABUT @ FACE

TOP LT BNK ON CONC

(Pg-28 SL SPUR LINES BOOK 2)

GE BTM Pier #1 RT & W/E S/L

SND6 & BTM Pier #1 LT

SND6

BTM Pier #2 RT

BTM Pier #2 LT

BTM pier #3 RT

SND6 BTM Pier #3 LT

	+	HI	−	ELEV	
		702.1 W/S			
	DIST	Rod	ELEV.		
18	183' LT	2.6	699.5 ✓		
19	193	2.2	699.9		
20	203	2.3	699.8 ✓		
21	213	2.8	699.3 ✓		
22	223	3.0	699.1 ✓		
23	228' LT	3.0	699.1 ✓		
24	232' LT	2.0	700.1 ✓		
		HI 709.1			
25	231' LT	7.0	702.1	CK TBM HUB 0.70	ELEV 708.4
TBM-03	7.22	729.96		722.74	
26	283 LT	13.4	716.6		
27	285' LT	9.66	720.30		
TBM 0-3	CK	7.22	722.74		

Pg. 143B

Desc

SNDG

BTM pier #4 RT

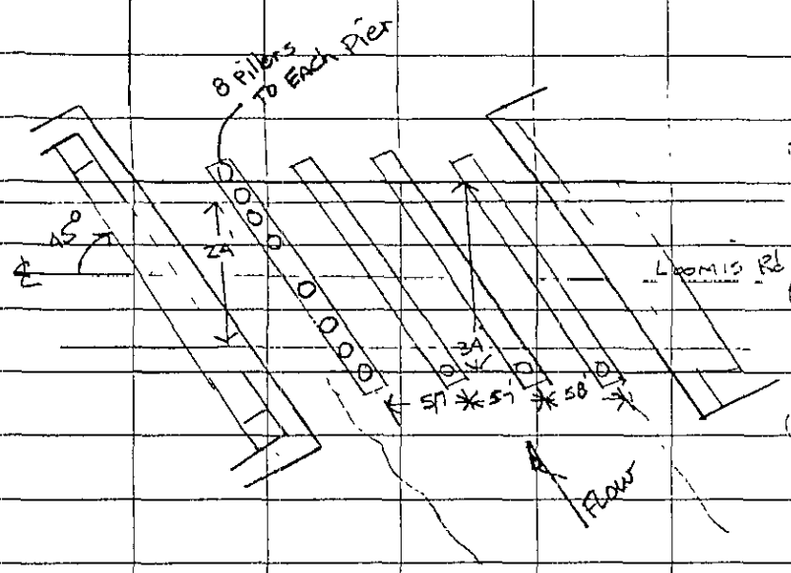
SNDG BTM pier #4 LT

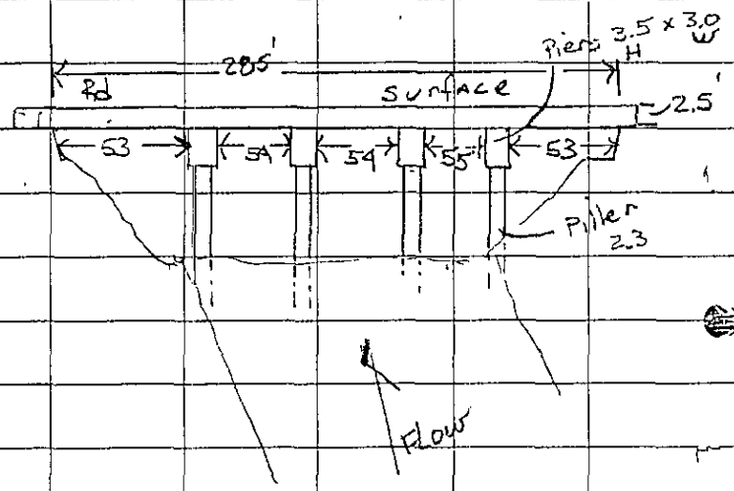
W/S [illegible]

GE BTM LT ABUT

TOP LT ABUT & [illegible]

DRAWING
@ 61B
Loomis Rd





Skew = 45°

Rd = 24

Bridge = 34

Deck = 2.5

8 pillers = 2.2'

8 pillers each pier

22 Feb. 93

Road Section

@ 62B

CHIPPEWA Rd

	+	HI	−	ELEV
TBM N-3				701.84
	5.57	707.41		

DIST	Rod	ELEV
0	5.32	702.09
25' LT	5.30	702.11
50' LT	5.45	701.96
75' LT	5.56	701.85
100' LT	5.68	701.73
210' RT	4.26	703.15
225 RT	4.01	703.4
250' RT	3.85	703.56
275 RT	3.62	703.79
300' RT	3.15	704.26
325 RT	2.49	704.92

22 FEB 93

Pg - 147B

CHISELED □ ON N.E. WINGWALL ON BRIDGE @ CHIPPEWA Rd.
(Pg - 44 Levels Book 2)

Desc

Top ℄ Rd @ FACE LT Abut
℄ Rd

Rd CONT. FLAT

Rd CONT FLAT

+	Hi	−	ELEV.
	707.41		
DIST	Rod	ELEV.	
0'	9.49	697.92	
2' RT	13.2	694.2	
23' RT	16.6	690.8	✓
33' RT	0.6	690.2	✓
43' RT	1.5	689.3	
53' RT	1.6	689.2	✓
62' RT	2.1	688.7	✓
65' RT	3.0	687.8	✓
75	2.9	687.9	✓
85	3.2	687.6	✓
95	3.5	687.3	✓
105	3.8	687.0	✓
115	3.8	687.0	✓
125	3.6	687.2	✓
135	3.6	687.2	
144	4.0	686.8	✓
147	5.6	685.2	

	DESC.	
	TOP LT ABUT	
	BTM LT - ABUT	ROCK
	W/S S/L	
	SNDG	ROCK
	BTM LT Pier 1	
	BTM RT Pier 1	
	BTM LT Pier 2	
	BT RT Pier 2	

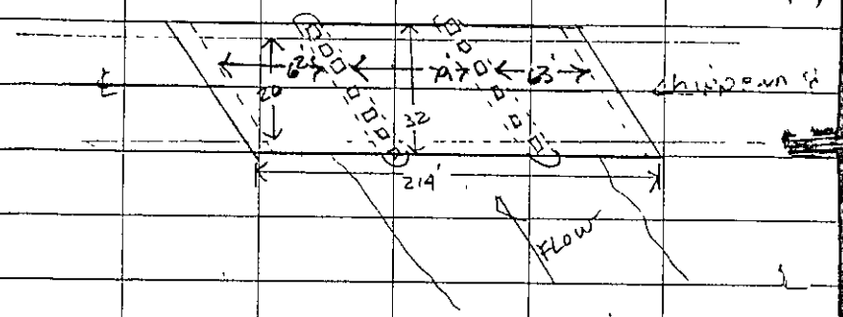
+	HI	-	ELEV						
	690.8	W/S							
Dist	Rod	ELEV			Desc				
157' RT	5.6	685.2	✓		SNDG				
167' RT	4.8	686.0	✓						
177' RT	4.8	686.0	✓						
187' RT	4.6	686.2	✓		SNDG				
192' RT	16.6	690.8	✓		W/S	S/L			
208' RT	12.8	694.6	✓		BTM	RT	Abut @	FACE	
210' RT	8.47	698.94	✓		TOP	RT	Abut @	FACE	
209' RT	8.3	699.1	✓		L/S				
0'	9.1	698.3	✓		L/S				
63' RT	10.5	696.9	✓		Top ℄	Pier 1			
146' RT	10.1	697.3	✓		TOP ℄	Pier 2			
TBM N-3 CK	5.57	701.84	✓						

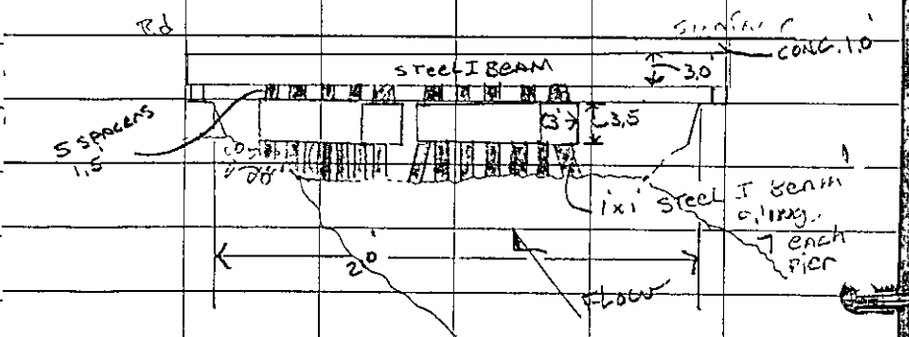
22 FEB 93

DRAWING

@ 62 B

Chippewa Rd





SKEW = 45°

Piers = 2' W H 3.5

5 spacers - 1.5

7 up right - 1' I Beam

I Beam 3'

BRIDGE 3.2'

Rd = 26'

CONC. Deck 1'

VALLEY SECTIONS

Paul Barkey

Map Location

Cross Sections

CHIPPEWA RIV
F.I.S.
ISABELLA CO.

VALLEY SECTIONS

PARTY CHIEF: T. ROZNOWSKI
INSTRUMENT: M. CLINCY
RODMAN: K. DRAKE
13 APRIL 1993

CROSS SECTION

INDEX

	+	HI	−	ELEV.
TBM S-1				768.10
	5.13	773.23		

Dist	Rod	ELEV
0	4.96	768.27
25 LT	4.85	768.38
50' LT	4.87	768.36
75' LT	5.05	768.18
100' LT	5.12	768.11
139 RT	4.99	768.24
162 RT	5.11	768.12
185 RT	5.16	768.07
210' RT	5.15	768.08
235 RT	5.15	768.08

27. FEB. 93

Pg. 86B

CHISELED □ N.W. CORNER LINCOLN RD BRIDGE
(Pg- 17 Levels Book 2)

Desc
TOP ℄ Rd ; FACE LT ABUT
℄ Rd
Rd CONT. FLAT
TOP ℄ Rd @ FACE RT ABUT
TOP ℄ Rd
Rd CONT. FLAT

	+	HI	−	ELEV
		773.23		
	DIST	ROD	ELEV	
1	0	6.80	766.43	
2	0	4.7	763.5	
3	15' RT	13.2	760.0	
4	18' RT	1.2	758.8	
5	30' RT	--	UNSAFE ICE	
6	40' RT		"	"
7	50' RT	—	"	"
8	66' RT	2.3	757.7	
9	69' RT	2.4	757.6	
10	80' RT		UNSAFE ICE	
11	90' RT	6.4	755.1 ~~766.3~~	
12	100 RT		UNSAFE ICE	
13	110' RT		"	"
14	118' RT	1.4	758.6	
15	121 RT	13.2	760.0	
16	134 RT	8.1	765.1	
17	134 RT	6.75	766.48	

	Desc
4.5	TOP LT ABUT @ FACE
	BTM LT ABUT @ FACE
	W/S S/L 1 LT Edge Pier 1
	SNDG RT Edge pier 1
	LT Edge Pier 2
	RT Edge pier 2
	SNDG LT Edge pier 3
	W/S S/L RT Edge pier 3
	BTM RT ABUT
4	TOP RT ABUT

Leaton Rd 12-13-93

	B. S	HI	FS	Elev	Com.
BM @ S.E Abut Wingwall Upper Hoa.	3.17	732.72		729.55	
			2.97	729.75	@ S. Abut on rd E
			4.39	728.33 ~~725.76~~	100' S
			5.52	727.20	200' S.
			6.09	726.63	300' S.
			6.05	726.67 ~~59~~	400' S.
			5.20	727.52	500' S.
			4.25	728.47	600' S.
Chisel X on N.W Abut	2.10	733.67		731.57	
			4.12	729.55	Upper Main S.E Abut,

Discharge measurements.-- Stages up to about 4.8 ft can be waded 100-200 ft downstream at good section. In summer wading measurements can be made under the bridge where there is usually least aquatic growth. Higher stages are measured from downstream side of bridge. I. P. is face of right abutment. When complete ice cover is present at gage it may be possible, at relatively constant stages, to make open water measurements at next bridge upstream (about 2½ mi) or at U.S. 27 bridge in Mt. Pleasant.

Floods.-- Maximum discharge, 4,960 cfs Mar. 8, 1946 (gage height, 12.78 ft).

Point of zero flow.--

Winter flow.-- Complete ice cover every winter. Often some slush ice from open water upstream under ice cover at and near gage.

Regulation and diversion.-- Diurnal fluctuation below about 750 cfs from powerplant at Mt. Pleasant.

Accuracy.-- Generally good except for low-flow records in aquatic growth season and record for periods of ice effect.

Cooperation.-- State of Michigan, through Water Resources Commission, cooperates in station operation.

Sketch.-- Attached.

Photographs.-- In district office files.

Reference marks.-- R.M. 1 is top of vertical I-beam reinforcing in upstream end of right upstream wingwall. Elevation 12.21 ft gage datum.

R.M. 3 is bronze tablet set in concrete post about on line with landward wall of gage house and 23' downstream from upstream side. Elevation 8.08 ft gage datum.

R.M. 4 is chiseled cross in second rivet from bottom in downstream row of rivets in right downstream truss member. Elevation 17.50 ft gage datum.

B.M. - T. 14 N., R. 3 W., about 550 ft N. of S.W. cor. sec. 5, on E. side of road, at SW corner of yard of Milloy School, 1 ft N. of fence corner, in concrete post; standard tablet stamped "5 A 1929 Mich." Elevation 740.259 ft above m.s.l., datum of 1929.

	+	HI	−	ELEV.
YBM 038				799.6 ✓
	618	805.7 ✓		

Dist	Rod	ELEV.
0	4.90	800.8 ✓
25' LT	5.~~18~~ 2	800.5 ✓
50' LT	5.~~19~~ 2	800.5 ✓
75' LT	5.2~~5~~	800.5 ✓
100' LT	5.~~27~~ 3	800.4 ✓
247 RT	~~2.96~~ 3.0	802.7 ✓
275' RT	2.8~~5~~	802.9 ✓
300' RT	2.4~~8~~	803.3 ✓
325' RT	2.~~06~~ 1	803.6 ✓
350' RT	1.72	804.0 ✓

✓✓✓

18 Feb 93

Pg-768

R.R. SPIKO E Face of P.P. W. side of VANDECAR Rd 40' W. of ℄ Rd & 30' N of Top of Mun BANK
(Pg-32 SL Spur Lines Book 2)

Desc

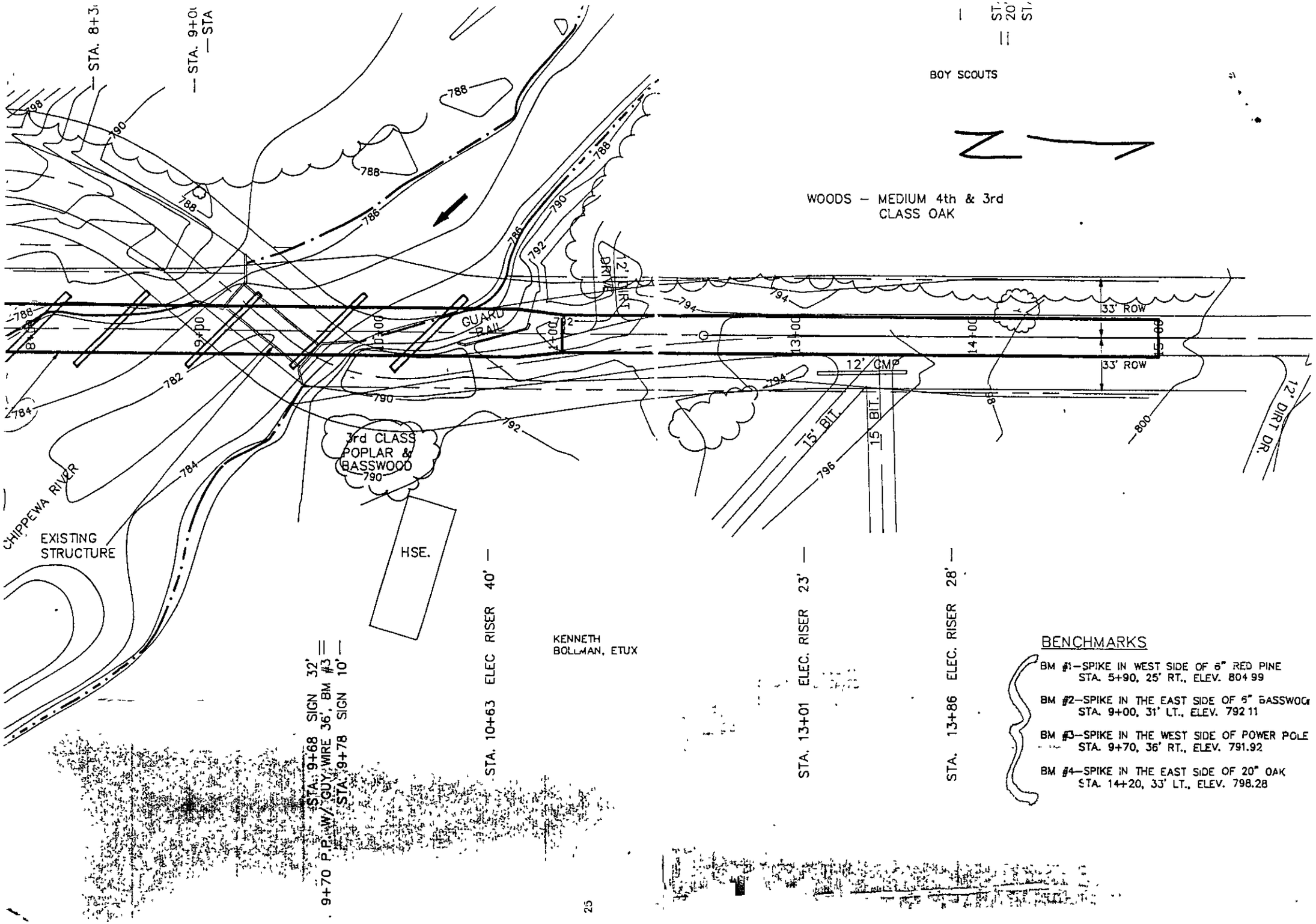
Top ℄ Rd @ Face LT Abut ℄ Rd

Rd CONT FLAT

Top ℄ Rd @ Face RT Abut ℄ R

Rd CONT. FLAT

+	HI	−	ELEV						76 B.
	805.7								
DIST	Rod	ELEV			Desc				
0	7~~77~~ 8	797.9 ✓			U/S	Top LT Abut @ FACE			
2' RT	11 0	794.7 ✓				BTM LT Abut @ Face (Rock)			
15' RT	15 7	790 0 ✓				W/S S/L			
25' RT	4.4	785.6 ✓				SNDG		Rock	
35' RT	4.0	786.0						Rock	
45' RT	3.5	786.5 ✓						SAND	
58' RT	3.2	786 8 ✓					BTM LT	Pier 1	SAND
62' RT	3 5	786.~~0~~ 5 ✓					BTM RT	Pier 1	"
73' RT	2.3	78~~6~~7.7 ✓							"
83' RT	2.0	788.0 ✓							"
93' RT	2.3	78~~6~~7.7 ✓							"
103' RT	1.0	789.0 ✓				SNDG			"
113' RT	15.7	790.0 ✓				W/S S/L			
121' RT	15.6	790.1 ✓			GE	BTM LT	Pier 2		
125 RT	15.6	790.1 ✓			GE	BTM RT	Pier 2		
150' RT	14.7	791.0 ✓				GE			
175' RT	14.1	791.6 ✓				GE			


STA. 8+3
STA. 9+0
STA
BOY SCOUTS
WOODS – MEDIUM 4th & 3rd
CLASS OAK
12' DIRT DRIVE
GUARD RAIL
33' ROW
33' ROW
12' CMP
15' BIT.
15' BIT.
12' DIRT DR.
3rd CLASS
POPLAR &
BASSWOOD
HSE.
CHIPPEWA RIVER
EXISTING
STRUCTURE
KENNETH
BOLLMAN, ETUX
STA. 9+68 SIGN 32'
9+70 P.P. W/ GUY WIRE 36', BM #3
STA. 9+78 SIGN 10'
STA. 10+63 ELEC RISER 40'
STA. 13+01 ELEC. RISER 23'
STA. 13+86 ELEC. RISER 28'
BENCHMARKS
BM #1–SPIKE IN WEST SIDE OF 6" RED PINE
STA. 5+90, 25' RT., ELEV. 804.99
BM #2–SPIKE IN THE EAST SIDE OF 6" BASSWOO
STA. 9+00, 31' LT., ELEV. 792.11
BM #3–SPIKE IN THE WEST SIDE OF POWER POLE
STA. 9+70, 36' RT., ELEV. 791.92
BM #4–SPIKE IN THE EAST SIDE OF 20" OAK
STA. 14+20, 33' LT., ELEV. 798.28

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Run - upstream of M-20

00BREAK00

THIS RUN EXECUTED 08/29/89 14:29:29

```
*********************************************
 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
*********************************************
```

```
C
T1      DEERFIELD TWP  US OF M-20
T2
T3      CHIPPEWA RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        0.        0.        0.   .000000      .00       .0     5020.   842.000     .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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

NC      .125      .120      .045      .300      .500      .000      .000      .000      .000      .000
            XSEC FROM M-20 BRIDGE PLANS
X1      .000    21.000   320.000   385.000      .000      .000      .000      .000      .000      .000
GR   843.600      .000   842.600    20.000   841.600    33.000   840.600    59.000   839.600   130.000
GR   839.600   230.000   838.600   288.000   837.600   309.000   833.600   320.000   832.600   343.000
GR   831.600   346.000   831.600   352.000   832.600   371.000   833.600   385.000   836.600   407.000
GR   837.600   460.000   838.600   465.000   839.600   510.000   840.600   530.000   841.600   554.000
GR   842.600   576.000      .000      .000      .000      .000      .000      .000      .000      .000

X1    24.000      .000      .000      .000  1400.000  2400.000  2400.000      .000     2.400      .000

X1    42.000      .000      .000      .000  1800.000  1800.000  1800.000      .000     1.800      .000
X3      .000      .000      .000   270.000      .000      .000      .000      .000      .000      .000

X1    54.000      .000      .000      .000  1200.000  1200.000  1200.000      .000     1.200      .000
X3      .000      .000      .000   220.000      .000      .000      .000      .000      .000      .000

X1    68.000      .000      .000      .000  1400.000  1400.000  1400.000      .000     1.400      .000

NC      .080      .080      .040      .100      .300      .000      .000      .000      .000      .000
X1    70.000     6.000   450.000   550.000   200.000   200.000   200.000      .000      .000      .000
GR   850.000    30.000   841.000   450.000   836.000   500.000   836.000   545.000   841.000   550.000
GR   850.000   620.000      .000      .000      .000      .000      .000      .000      .000      .000

X1    79.000      .000      .000      .000   900.000   900.000   900.000      .000     1.500      .000

NC      .000      .000      .000      .300      .500      .000      .000      .000      .000      .000
X1    80.000      .000      .000      .000   100.000   100.000   100.000      .000      .000      .000
```

```
X3      .000      .000      .000    450.000      .000    550.000      .000      .000      .000      .000
```



```
NC      .050      .050      .040      .300      .500      .000      .000      .000      .000      .000
X1    80.200     8.000    90.000   150.000    20.000    20.000    20.000      .000      .000      .000
GR   850.000    86.000   843.800    88.010   841.800    90.000   838.500   100.000   838.500   148.000
GR   841.800   150.000   843.000   161.000   850.000   161.100      .000      .000      .000      .000

            PICKARD ROAD   INFO FROM FILE NO. 7905 702
X1    80.600      .000      .000      .000    40.000    40.000    40.000      .000      .000      .000

NC      .080      .080      .040      .000      .000      .000      .000      .000      .000      .000
            XSEC B FROM FILE NO. 7905 702
X1    51.100    11.000   575.000   635.000    50.000    50.000    50.000      .000      .000      .000
X3      .000      .000      .000   550.000      .000   650.000      .000      .000      .000      .000
GR   855.000    15.000   849.500   100.000   847.500   250.000   847.000   300.000   846.000   550.000
GR   844.300   575.000   837.500   590.000   837.500   630.000   844.300   635.000   850.000   730.000
GR   855.000   785.000      .000      .000      .000      .000      .000      .000      .000      .000

X1    82.100      .000      .000      .000   100.000   100.000   100.000      .000      .000      .000

NC      .000      .000      .000      .100      .300      .000      .000      .000      .000      .000
X1   102.100      .000      .000      .000  2000.000  2000.000  2000.000      .000      .000      .000

            XSEC A FROM FILE NO. 7905 702
X1   113.100     8.000   180.000   270.000  1100.000  1100.000  1100.000      .000      .000      .000
GR   855.000    45.000   844.500   175.000   844.000   180.000   838.000   195.000   838.000   255.000
GR   844.000   270.000   844.500   280.000   855.000   570.000      .000      .000      .000      .000

X1   122.100      .000      .000      .000  2000.000  2000.000  2000.000      .000     2.400      .000

X1   142.100      .000      .000      .000  2000.000  2000.000  2000.000      .000     2.400      .000
EJ      .000      .000      .000      .000      .000      .000      .000      .000      .000      .000
```

```
  SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
  Q        OLOB     OCH      OROB     ALOB     ACH      AROB     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=    .300 CEHV=    .500
#SECNO  .000
             XSEC FROM M-20 BRIDGE PLANS
      .00    10.40   842.00      .00   842.00   842.36      .36      .00      .00   833.60
    5020.     669.    3496.     855.     720.     610.     643.       0.       0.   833.60
      .00      .93     5.74     1.33     .125     .045     .120     .000   831.60    27.80
  .001533       0.       0.       0.        0        0        0      .00   535.00   562.80


#SECNO 24.000
3280 CROSS SECTION     24.00 EXTENDED       .03 FEET

    24.00    11.03   845.03      .00      .00   845.30      .27     2.91      .03   836.00
    5020.     803.    3306.     911.     907.     651.     759.      99.      23.   836.00
      .17      .89     5.08     1.20     .125     .045     .120     .000   834.00    19.38
  .001104    1400.    2400.    2400.        2        0        0      .00   556.62   576.00


#SECNO 42.000
3280 CROSS SECTION     42.00 EXTENDED       .29 FEET


3470 ENCROACHMENT STATIONS=     270.0     576.0  TYPE=     1  TARGET=    -270.000
    42.00    11.29   847.09      .00      .00   847.44      .35     2.10      .04   837.80
    5020.     311.    3655.    1054.     235.     668.     810.     183.      41.   837.80
      .28     1.22     5.47     1.30     .125     .045     .120     .000   835.80   270.00
  .001237    1800.    1800.    1800.        2        0        0      .00   306.00   576.00


#SECNO 54.000
3280 CROSS SECTION     54.00 EXTENDED       .53 FEET


3470 ENCROACHMENT STATIONS=     220.0     576.0  TYPE=     1  TARGET=    -220.000
    54.00    11.53   848.53      .00      .00   848.82      .29     1.36      .02   839.00
    5020.     489.    3485.    1046.     458.     683.     855.     234.      50.   839.00
      .37     1.07     5.10     1.22     .125     .045     .120     .000   837.00   220.00
  .001042    1200.    1200.    1200.        2        0        0      .00   356.00   576.00
```

```
   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 68.000
3280 CROSS SECTION     68.00 EXTENDED       .54 FEET

    68.00    11.54   849.94      .00      .00   850.16      .22     1.32      .02   840.40
    5020.     902.    3166.     952.    1064.     684.     857.     308.     65.    840.40
      .49      .85     4.63     1.11     .125     .045     .120     .000   838.40     9.12
  .000857    1400.    1400.    1400.        2        0        0      .00   566.88   576.00


CCHV=    .100 CEHV=    .300
*SECNO 70.000
3280 CROSS SECTION     70.00 EXTENDED       .16 FEET

    70.00    14.16   850.16      .00      .00   850.24      .08      .07      .01   841.00
    5020.    1362.    3433.     225.    1956.    1279.     326.     323.     68.    841.00
      .52      .70     2.68      .69     .080     .040     .080     .000   836.00    30.00
  .000180     200.     200.     200.        2        0        0      .00   590.00   620.00


*SECNO 79.000
    79.00    12.84   850.34      .00      .00   850.46      .12      .21      .01   842.50
    5020.    1144.    3686.     190.    1424.    1146.     239.     389.     79.    842.50
      .61      .80     3.22      .79     .080     .040     .080     .000   837.50    84.19
  .000299     900.     900.     900.        2        0        0      .00   526.78   610.97


CCHV=    .300 CEHV=    .500
*SECNO 80.000

3470 ENCROACHMENT STATIONS=     450.0     550.0  TYPE=     1  TARGET=     100.000
    80.00    12.79   850.29      .00      .00   850.59      .30      .04      .09   842.50
    5020.       0.    5020.       0.       0.    1142.       0.     393.     80. 100000.00
      .62      .00     4.40      .00     .080     .040     .080     .000   837.50   450.00
  .000679     100.     100.     100.        2        0        0      .00   100.00   550.00


CCHV=    .300 CEHV=    .500
*SECNO 80.200
3280 CROSS SECTION     80.20 EXTENDED       .10 FEET

    80.20    11.60   850.10      .00      .00   850.82      .72      .02      .21   841.80
    5020.      23.    4726.     271.      15.     676.      85.     394.     80.    841.80
      .62     1.57     6.99     3.19     .050     .040     .050     .000   838.50    88.00
  .001476      20.      20.      20.        2        0        0      .00    73.10   161.10
```

```
  SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
  Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 80.600
3280 CROSS SECTION     80.60 EXTENDED       .17 FEET

             PICKARD ROAD   INFO FROM FILE NO. 7905 702
    80.60    11.67   850.17      .00      .00   850.88      .71      .06      .00   841.80
    5020.      23.    4725.     272.      15.     680.      86.     394.      80.    841.80
      .62     1.56     6.94     3.17     .050     .040     .050     .000   838.50    88.00
  .001444      40.      40.      40.        2        0        0      .00    73.10   161.10


*SECNO 81.100

3470 ENCROACHMENT STATIONS=     550.0     650.0  TYPE=     1  TARGET=     100.000
            XSEC B FROM FILE NO. 7905 702
    81.10    12.85   850.35      .00      .00   850.98      .63      .07      .03   844.30
    5020.     236.    4638.     146.     130.     703.      84.     395.      80.    844.30
      .62     1.81     6.60     1.74     .080     .040     .080     .000   837.50   550.00
  .001316      50.      50.      50.        2        0        0      .00   100.00   650.00


*SECNO 82.100
    82.10    13.56   851.06      .00      .00   851.19      .14      .07      .15   844.30
    5020.    1814.    2857.     348.    1883.     746.     378.     400.      81.    844.30
      .63      .96     3.83      .92     .080     .040     .080     .000   837.50    75.84
  .000410     100.     100.     100.        2        0        0      .00   665.86   741.70


CCHV=    .100 CEHV=    .300
*SECNO 102.100
   102.10    14.28   851.78      .00      .00   851.88      .10      .68      .00   844.30
    5020.    1999.    2631.     390.    2244.     769.     457.     549.     112.    844.30
      .89      .89     3.34      .85     .080     .040     .080     .000   837.50    64.77
  .000289    2000.    2000.    2000.        2        0        0      .00   684.80   749.57


*SECNO 113.100
            XSEC A FROM FILE NO. 7905 702
   113.10    14.06   852.06      .00      .00   852.21      .15      .31      .01   844.00
    5020.     316.    4009.     695.     393.    1176.     868.     624.     126.    844.00
     1.00      .80     3.41      .80     .080     .040     .080     .000   838.00    81.36
  .000283    1100.    1100.    1100.        2        0        0      .00   407.54   488.89
```

```
  SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       GLOSS   BANK ELEV
  Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 122.100
   122.10   12.35   852.75     .00      .00   852.99     .24      .75      .03   846.40
    5020.    226.    4298.    496.     242.   1021.    534.     721.     143.   846.40
     1.14     .93     4.21     .93     .080    .040    .080     .000   840.40   102.57
  .000520   2000.   2000.   2000.        2       0       0      .00   338.99   441.56

*SECNO 142.100
   142.10   11.17   853.97     .00      .00   854.31     .34     1.29      .03   848.80
    5020.    164.    4498.    358.     160.    915.    350.     795.     157.   848.80
     1.27     1.03     4.91    1.02     .080    .040    .080     .000   842.80   117.18
  .000821   2000.   2000.   2000.        2       0       0      .00   291.79   408.98
```

THIS RUN EXECUTED 08/29/89 14:32:55

```
##############################################
  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
##############################################
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Run - upstream of M-20

00BREAK00

THIS RUN EXECUTED 08/29/89 14:29:29

```
**********************************************
 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
**********************************************
```

```
C
T1      DEERFIELD TWP  US OF M-20
T2
T3      CHIPPEWA RIVER

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0.       0.       0.       0.  .000000      .00       .0    5020.  842.000     .000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLOC    IBW      CHNIM    ITRACE

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


NC      .125     .120     .045     .300     .500     .000     .000     .000     .000     .000
              XSEC FROM M-20 BRIDGE PLANS
X1      .000   21.000  320.000  385.000     .000     .000     .000     .000     .000     .000
GR   843.600     .000  842.600   20.000  841.600   33.000  840.600   59.000  839.600  130.000
GR   839.600  230.000  838.600  288.000  837.600  309.000  833.600  320.000  832.600  343.000
GR   831.600  346.000  831.600  352.000  832.600  371.000  833.600  385.000  836.600  407.000
GR   837.600  460.000  838.600  465.000  839.600  510.000  840.600  530.000  841.600  554.000
GR   842.600  576.000     .000     .000     .000     .000     .000     .000     .000     .000

X1    24.000     .000     .000     .000 1400.000 2400.000 2400.000     .000    2.400     .000

X1    42.000     .000     .000     .000 1800.000 1800.000 1800.000     .000    1.800     .000
X3      .000     .000     .000  270.000     .000     .000     .000     .000     .000     .000

X1    54.000     .000     .000     .000 1200.000 1200.000 1200.000     .000    1.200     .000
X3      .000     .000     .000  220.000     .000     .000     .000     .000     .000     .000

X1    68.000     .000     .000     .000 1400.000 1400.000 1400.000     .000    1.400     .000

NC      .080     .080     .040     .100     .300     .000     .000     .000     .000     .000
X1    70.000    6.000  450.000  550.000  200.000  200.000  200.000     .000     .000     .000
GR   850.000   30.000  841.000  450.000  836.000  500.000  836.000  545.000  841.000  550.000
GR   850.000  620.000     .000     .000     .000     .000     .000     .000     .000     .000

X1    79.000     .000     .000     .000  900.000  900.000  900.000     .000    1.500     .000

NC      .000     .000     .000     .300     .500     .000     .000     .000     .000     .000
X1    80.000     .000     .000     .000  100.000  100.000  100.000     .000     .000     .000
```

```
X3      .000      .000      .000    450.000      .000    550.000      .000      .000      .000      .000
```



```
NC      .050      .050      .040      .300      .500      .000      .000      .000      .000      .000
X1    80.200      8.000    90.000   150.000    20.000    20.000    20.000      .000      .000      .000
GR   850.000     88.000   843.800     88.010   841.800    90.000   838.500   100.000   838.500   148.000
GR   841.800    150.000   843.000   161.000   850.000   161.100      .000      .000      .000      .000

            PICKARD ROAD   INFO FROM FILE NO. 7905 702
X1    80.600      .000      .000      .000    40.000    40.000    40.000      .000      .000      .000

NC      .080      .080      .040      .000      .000      .000      .000      .000      .000      .000
            XSEC B FROM FILE NO. 7905 702
X1    81.100     11.000   575.000   635.000    50.000    50.000    50.000      .000      .000      .000
X3      .000      .000      .000   550.000      .000   650.000      .000      .000      .000      .000
GR   855.000     15.000   849.500   100.000   847.500   250.000   847.000   300.000   846.000   550.000
GR   844.300    575.000   837.500   590.000   837.500   630.000   844.300   635.000   850.000   730.000
GR   855.000    785.000      .000      .000      .000      .000      .000      .000      .000      .000

X1    82.100      .000      .000      .000   100.000   100.000   100.000      .000      .000      .000

NC      .000      .000      .000      .100      .300      .000      .000      .000      .000      .000
X1   102.100      .000      .000      .000  2000.000  2000.000  2000.000      .000      .000      .000

            XSEC A FROM FILE NO. 7905 702
X1   113.100      8.000   180.000   270.000  1100.000  1100.000  1100.000      .000      .000      .000
GR   855.000     45.000   844.500   175.000   844.000   180.000   838.000   195.000   838.000   255.000
GR   844.000    270.000   844.500   280.000   855.000   570.000      .000      .000      .000      .000

X1   122.100      .000      .000      .000  2000.000  2000.000  2000.000      .000     2.400      .000

X1   142.100      .000      .000      .000  2000.000  2000.000  2000.000      .000     2.400      .000
EJ      .000      .000      .000      .000      .000      .000      .000      .000      .000      .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 1

CCHV=    .300 CEHV=    .500
*SECNO  .000
             XSEC FROM M-20 BRIDGE PLANS
      .00    10.40   842.00      .00   842.00   842.36      .36      .00      .00   833.60
    5020.     669.    3496.     855.     720.     610.     643.       0.       0.   833.60
      .00      .93     5.74     1.33     .125     .045     .120     .000   831.60    27.80
  .001533       0.       0.       0.        0        0        0      .00   535.00   562.80


*SECNO 24.000
3280 CROSS SECTION     24.00 EXTENDED       .03 FEET

    24.00    11.03   845.03      .00      .00   845.30      .27     2.91      .03   836.00
    5020.     803.    3306.     911.     907.     651.     759.      99.      23.   836.00
      .17      .89     5.08     1.20     .125     .045     .120     .000   834.00    19.38
  .001104    1400.    2400.    2400.        2        0        0      .00   556.62   576.00


*SECNO 42.000
3280 CROSS SECTION     42.00 EXTENDED       .29 FEET


3470 ENCROACHMENT STATIONS=     270.0     576.0  TYPE=     1  TARGET=    -270.000
    42.00    11.29   847.09      .00      .00   847.44      .35     2.10      .04   837.80
    5020.     311.    3655.    1054.     255.     668.     810.     183.      41.   837.80
      .28     1.22     5.47     1.30     .125     .045     .120     .000   835.80   270.00
  .001237    1800.    1800.    1800.        2        0        0      .00   306.00   576.00


*SECNO 54.000
3280 CROSS SECTION     54.00 EXTENDED       .53 FEET


3470 ENCROACHMENT STATIONS=     220.0     576.0  TYPE=     1  TARGET=    -220.000
    54.00    11.53   848.53      .00      .00   848.82      .29     1.36      .02   839.00
    5020.     489.    3485.    1046.     458.     683.     855.     234.      50.   839.00
      .37     1.07     5.10     1.22     .125     .045     .120     .000   837.00   220.00
  .001042    1200.    1200.    1200.        2        0        0      .00   356.00   576.00
```

```
   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 68.000
3280 CROSS SECTION     68.00 EXTENDED       .54 FEET

    68.00    11.54   849.94      .00      .00   850.16      .22     1.32      .02   840.40
    5020.     902.    3166.     952.    1064.     684.     857.     308.      65.   840.40
      .49      .85     4.63     1.11     .125     .045     .120     .000   838.40     9.12
  .000857    1400.    1400.    1400.        2        0        0      .00   566.88   576.00


CCHV=    .100 CEHV=    .300
*SECNO 70.000
3280 CROSS SECTION     70.00 EXTENDED       .16 FEET

    70.00    14.16   850.16      .00      .00   850.24      .08      .07      .01   841.00
    5020.    1362.    3433.     225.    1956.    1279.     326.     323.      68.   841.00
      .52      .70     2.68      .69     .080     .040     .080     .000   836.00    30.00
  .000180     200.     200.     200.        2        0        0      .00   590.00   620.00


*SECNO 79.000
    79.00    12.84   850.34      .00      .00   850.46      .12      .21      .01   842.50
    5020.    1144.    3686.     190.    1434.    1146.     239.     389.      79.   842.50
      .61      .80     3.22      .79     .080     .040     .080     .000   837.50    84.19
  .000299     900.     900.     900.        2        0        0      .00   526.78   610.97


CCHV=    .300 CEHV=    .500
*SECNO 80.000

3470 ENCROACHMENT STATIONS=     450.0     550.0  TYPE=     1  TARGET=     100.000
    80.00    12.79   850.29      .00      .00   850.59      .30      .04      .09   842.50
    5020.       0.    5020.       0.       0.    1142.       0.     393.      80. 100000.00
      .62      .00     4.40      .00     .080     .040     .080     .000   837.50   450.00
  .000679     100.     100.     100.        2        0        0      .00   100.00   550.00


CCHV=    .300 CEHV=    .500
*SECNO 80.200
3280 CROSS SECTION     80.20 EXTENDED       .10 FEET

    80.20    11.60   850.10      .00      .00   850.82      .72      .02      .21   841.80
    5020.      23.    4726.     271.      15.     676.      85.     394.      80.   841.80
      .62     1.57     6.99     3.19     .050     .040     .050     .000   839.50    88.00
  .001476      20.      20.      20.        2        0        0      .00    73.10   161.10
```

```
  SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
  Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 80.600
3280 CROSS SECTION     80.60 EXTENDED       .17 FEET

             PICKARD ROAD   INFO FROM FILE NO. 7905 702
    80.60    11.67   850.17      .00      .00   850.88      .71      .06      .00   841.80
    5020.      23.    4725.     272.      15.     680.      86.     394.      80.   841.80
      .62     1.56     6.94     3.17     .050     .040     .050     .000   838.50    88.00
  .001444      40.      40.      40.        2        0        0      .00    73.10   161.10


$SECNO 81.100

3470 ENCROACHMENT STATIONS=     550.0     650.0  TYPE=     1  TARGET=     100.000
             XSEC B FROM FILE NO. 7905 702
    81.10    12.85   850.35      .00      .00   850.98      .63      .07      .03   844.30
    5020.     236.    4638.     146.     130.     703.      84.     395.      80.   844.30
      .62     1.81     6.60     1.74     .080     .040     .080     .000   837.50   550.00
  .001316      50.      50.      50.        2        0        0      .00   100.00   650.00


$SECNO 82.100
    82.10    13.56   851.06      .00      .00   851.19      .14      .07      .15   844.30
    5020.    1814.    2857.     348.    1883.     746.     378.     400.      81.   844.30
      .63      .96     3.83      .92     .080     .040     .080     .000   837.50    75.84
  .000410     100.     100.     100.        2        0        0      .00   665.86   741.70


CCHV=    .100 CEHV=    .300
$SECNO 102.100
   102.10    14.28   851.78      .00      .00   851.88      .10      .68      .00   844.30
    5020.    1999.    2631.     390.    2244.     789.     457.     549.     112.   844.30
      .89      .89     3.34      .85     .080     .040     .080     .000   837.30    64.77
  .000289    2000.    2000.    2000.        2        0        0      .00   684.80   749.57


$SECNO 113.100
             XSEC A FROM FILE NO. 7905 702
   113.10    14.06   852.06      .00      .00   852.21      .15      .31      .01   844.00
    5020.     316.    4009.     695.     393.    1176.     868.     624.     126.   844.00
     1.00      .80     3.41      .80     .080     .040     .080     .000   838.00    81.36
  .000283    1100.    1100.    1100.        2        0        0      .00   407.54   488.89
```

```
   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


%SECNO 122.100
   122.10   12.35   852.75     .00      .00   852.99     .24      .75      .03   846.40
    5020.    226.    4298.    496.     242.    1021.    534.     721.     143.    846.40
     1.14     .93     4.21     .93     .080     .040    .080     .000   840.40   102.57
  .000520   2000.   2000.   2000.        2        0       0      .00   338.99   441.56


%SECNO 142.100
   142.10   11.17   853.97     .00      .00   854.31     .34     1.29      .03   848.80
    5020.    164.    4498.    358.     160.     915.    350.     795.     157.    848.80
     1.27    1.03     4.91    1.02     .080     .040    .080     .000   842.80   117.18
  .000821   2000.   2000.   2000.        2        0       0      .00   291.79   408.98
```

THIS RUN EXECUTED 08/29/89 14:32:55

```
*********************************************
  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
*********************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp

3) WATERCOURSE: N. Br. Chippewa River

4) DOCUMENT TYPE: 100 yr run

00BREAK00

THIS RUN EXECUTED 10/31/89 16:56:05

```
**********************************************
 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
**********************************************


C
T1      FLOODPLAIN INFORMATION
T2
T3      NORTH BR CHIPPEWA RIVER          XSEC INFROMATION FROM FILE B52.32D

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        0.        0.        0.   .000000      .00       .0     2600.   770.000      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC      .160      .160      .060      .300      .500      .000      .000      .000      .000      .000
X1      .000     7.000   495.000   548.000      .000      .000      .000      .000      .000      .000
GR   778.100      .000   765.500   204.000   764.500   495.000   764.000   497.000   761.300   520.000
GR   764.100   548.000   765.000   700.000      .000      .000      .000      .000      .000      .000

X1     4.000    10.000   208.000   250.000   200.000   350.000   400.000      .000      .000      .000
GR   776.900      .000   771.900    51.000   770.200   119.000   768.200   208.000   764.100   210.000
GR   763.400   230.000   764.100   249.000   766.900   250.000   765.700   730.000   782.300   800.000

X1    16.000     9.000   708.000   750.000  1000.000  1050.000  1200.000      .000      .000      .000
GR   780.000      .000   770.000   500.000   770.000   619.000   768.200   708.000   767.400   710.000
GR   766.700   730.000   767.400   749.000   768.200   750.000   780.000   850.000      .000      .000

X1    35.500      .000      .000      .000  1450.000  1200.000  1950.000      .000     4.400      .000

X1    59.500      .000      .000      .000  1800.000  2000.000  2400.000      .000     5.500      .000

NC      .000      .000      .000      .300      .500      .000      .000      .000      .000      .000
X1    74.500    12.000    45.000    79.000  1500.000  1500.000  1500.000      .000     -.100      .000
X3      .000      .000      .000      .000      .000    93.000   781.500      .000      .000      .000
GR   792.500      .000   782.100    16.000   779.800    45.000   775.100    47.000   773.500    62.000
GR   774.900    76.000   779.300    79.000   781.500    93.000   779.600   120.000   781.000   149.000
GR   780.800   200.000   790.000   900.000      .000      .000      .000      .000      .000      .000

NC      .000      .000      .000      .300      .500      .000      .000      .000      .000      .000
                DS OF MERIDIAN ROAD   HWM APPROX 788
X1    75.500      .000      .000      .000   100.000   100.000   100.000      .000      .100      .000
X3      .000      .000      .000    35.000      .000    98.000      .000      .000      .000      .000
```



```
X1    76.500    11.000   109.000   140.000   100.000   100.000   100.000      .000      .000      .000
GR   790.400      .000   781.300    35.000   778.800   109.000   775.300   117.000   773.400   124.000
```

GR	779.400	140.000	782.000	180.000	783.200	235.000	783.200	355.000	783.200	930.000
GR	789.300	945.000	.000	.000	.000	.000	.000	.000	.000	.000
X1	87.500	10.000	223.000	255.000	1100.000	1100.000	1100.000	.000	.000	.000
GR	797.000	33.000	787.000	78.000	785.700	215.000	776.600	223.000	775.900	235.000
GR	777.200	249.000	783.900	255.000	785.000	480.000	789.000	658.000	791.000	770.000
X1	93.250	9.000	450.000	472.000	575.000	575.000	575.000	.000	.000	.000
GR	796.300	145.000	784.600	170.000	784.800	430.000	778.700	450.000	778.500	461.000
GR	778.900	472.000	784.600	482.000	784.600	765.000	791.900	800.000	.000	.000
X1	96.750	10.000	50.000	100.000	550.000	550.000	550.000	.000	-.500	.000
GR	796.500	.000	794.500	20.000	793.500	38.000	791.500	50.000	779.500	55.000
GR	779.500	59.000	783.500	75.000	787.500	100.000	792.500	160.000	795.500	185.000
X1	102.250	.000	.000	.000	550.000	550.000	550.000	.000	.500	.000
X1	110.250	12.000	400.000	472.000	460.000	460.000	460.000	.000	.000	.000
X3	.000	.000	.000	400.000	.000	470.000	.000	.000	.000	.000
GR	805.500	.000	804.500	100.000	801.500	200.000	794.500	300.000	793.500	347.000
GR	791.500	400.000	781.500	444.000	789.100	472.000	786.700	700.000	786.700	750.000
GR	788.500	800.000	798.700	900.000	.000	.000	.000	.000	.000	.000
		DS M20								
X1	110.750	.000	.000	.000	50.000	50.000	50.000	.000	.000	.000
X3	.000	.000	.000	410.000	.000	460.000	.000	.000	.000	.000
NC	.000	.000	.040	.000	.000	.000	.000	.000	.000	.000
X1	111.200	.000	.000	.000	45.000	45.000	45.000	.000	.000	.000
X3	.000	.000	.000	410.000	.000	460.000	.000	.000	.000	.000
NC	.000	.000	.060	.000	.000	.000	.000	.000	.000	.000
X1	111.400	14.000	400.000	475.000	20.000	20.000	20.000	.000	.000	.000
X3	.000	.000	.000	400.000	.000	475.000	.000	.000	.000	.000
GR	802.500	150.000	794.100	230.000	790.500	300.000	791.500	350.000	791.000	400.000
GR	783.500	420.000	782.500	434.000	781.500	445.000	789.500	475.000	789.500	475.000
GR	787.500	600.000	790.500	800.000	794.700	900.000	798.500	950.000	.000	.000
X1	112.400	.000	.000	.000	100.000	100.000	100.000	.000	.000	.000
X3	.000	.000	.000	300.000	.000	575.000	.000	.000	.000	.000
X1	114.250	14.000	55.000	97.000	185.000	185.000	185.000	.000	.000	.000
GR	801.500	.000	792.500	18.000	787.500	55.000	783.500	61.000	782.500	71.000
GR	782.000	76.000	782.500	81.000	783.500	90.000	787.500	97.000	787.500	263.000
GR	788.500	290.000	790.500	305.000	791.500	355.000	797.500	380.000	.000	.000

1

X1	124.250	.000	.000	.000	1000.000	1000.000	1000.000	.000	1.300	.000
X1	134.250	.000	.000	.000	1000.000	1000.000	1000.000	.000	1.300	.000
X1	144.250	.000	.000	.000	1000.000	1000.000	1000.000	.000	1.300	.000
X3	.000	.000	.000	.000	.000	250.000	.000	.000	.000	.000
X1	154.250	.000	.000	.000	1000.000	1000.000	1000.000	.000	1.300	.000
X3	.000	.000	.000	20.000	.000	170.000	.000	.000	.000	.000
X1	164.250	.000	.000	.000	1000.000	1000.000	1000.000	.000	1.300	.000
X3	.000	.000	.000	30.000	.000	140.000	.000	.000	.000	.000
X1	174.250	.000	.000	.000	1000.000	1000.000	1000.000	.000	1.300	.000
X3	.000	.000	.000	30.000	.000	140.000	.000	.000	.000	.000

```
                DS OF PICKARD
X1    184.250      .000      .000      .000   1000.000   1000.000   1000.000      .000     1.300      .000
X3       .000      .000      .000    40.000      .000    100.000       .000      .000      .000      .000

X1    185.000      .000      .000      .000     75.000     75.000     75.000      .000      .200      .000
X3       .000      .000      .000    40.000      .000    100.000       .000      .000      .000      .000

X1    195.000      .000      .000      .000   1000.000   1000.000   1000.000      .000     1.300      .000
X3       .000      .000      .000    20.000      .000    170.000       .000      .000      .000      .000

                DS OF NOTTAWA RD
X1    205.000      .000      .000      .000   1000.000   1000.000   1000.000      .000     1.300      .000
X3       .000      .000      .000    20.000      .000    170.000       .000      .000      .000      .000
EJ       .000      .000      .000      .000      .000       .000       .000      .000      .000      .000
1
 10/31/89    16:56:05                                                                          PAGE    4


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        OLOB     OCH      OROB     ALOB     ACH      AROB     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=    .300 CEHV=    .500
*SECNO  .000
3280 CROSS SECTION       .00 EXTENDED      5.00 FEET

      .00     8.70   770.00      .00   770.00   770.04      .04      .00      .00   764.50
    2600.    1084.    916.     600.    1619.     385.     828.       0.       0.   764.10
      .00      .67     2.38     .72     .160     .060     .160     .000   761.30   131.14
  .000662       0.       0.       0.       0        0        0      .00   568.86   700.00
0
*SECNO 4.000
     4.00     6.91   770.31      .00      .00   770.36      .05      .32      .01   768.20
    2600.      37.     817.    1745.      99.     269.    1968.      18.       4.   766.90
      .06      .38     3.04     .89     .160     .060     .160     .000   763.40   114.73
  .001454     200.     400.     350.        2        0        0      .00   634.70   749.43
0
*SECNO 16.000
    16.00     6.18   772.88      .00      .00   773.14      .26     2.68      .10   768.20
    2600.    1153.    1341.    106.     888.     243.      93.      61.      17.   768.20
      .15     1.30     5.52     1.14     .160     .060     .160     .000   766.70   355.75
  .004865    1000.    1200.    1050.        2        0        0      .00   433.95   789.70
0
*SECNO 35.500
    35.50     7.22   778.32      .00      .00   778.45      .13     5.28      .04   772.60
    2600.    1296.    1184.    121.    1278.     286.     138.     112.      33.   772.60
      .34     1.01     4.14     .87     .160     .060     .160     .000   771.10   304.16
  .002191    1450.    1950.    1200.        3        0        0      .00   494.28   798.45
0
*SECNO 59.500
    59.50     6.87   783.47      .00      .00   783.63      .16     5.16      .02   778.10
    2600.    1254.    1230.    116.    1143.     272.     122.     184.      53.   778.10
      .55     1.10     4.53     .95     .160     .060     .160     .000   776.60   321.28
  .002811    1800.    2400.    2000.        3        0        0      .00   474.27   795.55
0
CCHV=    .300 CEHV=    .500
*SECNO 74.500
1
 10/31/89    16:56:05                                                                          PAGE    5


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
```

```
   Q        QLOB     QCH     QROB     ALOB     ACH      AROB     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      93.0  TYPE=     1  TARGET=      92.999
    74.50    12.63   786.03     .00      .00   786.16     .13     2.52     .01   779.70
    2600.     144.    1473.    982.     163.     389.   1456.     245.     71.   779.20
      .72      .89     3.79     .67     .160     .060    .160     .000  773.40    9.81
  .001113    1500.    1500.   1500.       3        0       0      .00  571.15  580.95
0
 CCHV=    .300 CEHV=    .500
 *SECNO 75.500

 3470 ENCROACHMENT STATIONS=      35.0      98.0  TYPE=     1  TARGET=      63.000
                DS OF MERIDIAN ROAD   HWM APPROX 788
    75.50    12.49   785.99     .00      .00   786.54     .55     .17     .21   779.80
    2600.      72.    2382.    146.      58.     384.    102.     248.     72.   779.30
      .73     1.24     6.20    1.44     .160     .060    .160     .000  773.50   35.00
  .003030     100.     100.    100.       2        0       0      .00   63.00   98.00
0
 *SECNO 76.500

 3301 HV CHANGED MORE THAN HVINS

    76.50    13.35   786.75     .00      .00   786.79     .03     .09     .16   778.80
    2600.     365.     838.    1397.     553.     344.   2956.     253.     73.   779.40
      .75      .66     2.44     .47     .160     .060    .160     .000  773.40   14.02
  .000441     100.     100.    100.       2        0       0      .00  924.71  938.74
0
 *SECNO 87.500
    87.50    11.65   787.55     .00      .00   787.84     .28     .93     .13   776.60
    2600.     141.    1731.    728.     218.     332.    846.     319.     91.   783.90
      .83      .65     5.21     .86     .160     .060    .160     .000  775.90   75.47
  .002214    1100.    1100.   1100.       2        0       0      .00  518.54  594.01
0
 *SECNO 93.250
    93.25    10.15   788.65     .00      .00   788.71     .07     .81     .07   778.70
    2600.     889.     787.    924.    1181.     220.   1253.     346.     99.   778.90
      .93      .75     3.58     .74     .160     .060    .160     .000  778.50  161.36
  .000971     575.     575.    575.       2        0       0      .00  623.03  784.39
0
1
 10/31/89    16:56:05                                                          PAGE    6


   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


 *SECNO 96.750

 3301 HV CHANGED MORE THAN HVINS

    96.75    10.44   789.44     .00      .00   790.48    1.04    1.28     .49   791.00
    2600.       0.    2559.     41.       0.     311.     36.     365.    103.   787.00
      .95      .00     8.24    1.14     .160     .060    .160     .000  779.00   50.65
  .011560     550.     550.    550.       2        0       0      .00   78.68  129.33
0
 *SECNO 102.250

 3301 HV CHANGED MORE THAN HVINS
```

```
   102.25    13.54   793.04      .00      .00   793.43      .39     2.75      .19   791.50
    2600.       3.    2410.     187.       7.     465.     184.     371.     105.   787.50
      .98      .41     5.18     1.02     .160     .060     .160     .000   779.50    40.76
  .002779     550.     550.     550.        2        0        0      .00   123.75   164.51
0
 $SECNO 110.250

 3470 ENCROACHMENT STATIONS=     400.0     470.0  TYPE=     1  TARGET=      70.000
   110.25    12.81   794.31      .00      .00   794.61      .31     1.16      .02   791.50
    2600.       0.    2600.       0.       0.     585.       0.     378.     106. 100000.00
     1.01      .00     4.45      .00     .160     .060     .160     .000   781.50   400.00
  .002297     460.     460.     460.        3        0        0      .00    70.00   470.00
0
 $SECNO 110.750

 3470 ENCROACHMENT STATIONS=     410.0     460.0  TYPE=     1  TARGET=      50.000
                DS M20
   110.75    12.87   794.37      .00      .00   794.83      .46      .14      .08100000.00
    2600.       0.    2600.       0.       0.     477.       0.     378.     106. 100000.00
     1.02      .00     5.45      .00     .160     .060     .160     .000   781.50   410.00
  .003399      50.      50.      50.        2        0        0      .00    50.00   460.00
0
 $SECNO 111.200

 3470 ENCROACHMENT STATIONS=     410.0     460.0  TYPE=     1  TARGET=      50.000
   111.20    12.98   794.48      .00      .00   794.93      .45      .10      .00100000.00
    2600.       0.    2600.       0.       0.     483.       0.     379.     106. 100000.00
     1.02      .00     5.38      .00     .160     .040     .160     .000   781.50   410.00
  .001456      45.      45.      45.        1        0        0      .00    50.00   460.00
0
1
 10/31/89    16:56:05                                                                    PAGE    7


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       DLOSS   BANK ELEV
   B        QLOB     QCH      QROB     ALOB     ACH      AROB     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 111.400

 3470 ENCROACHMENT STATIONS=     400.0     475.0  TYPE=     1  TARGET=      75.000
   111.40    13.34   794.84      .00      .00   795.03      .19      .03      .08   791.00
    2600.       0.    2600.       0.       0.     739.       0.     379.     106. 100000.00
     1.02      .00     3.52      .00     .160     .060     .160     .000   781.50   400.00
  .001159      20.      20.      20.        2        0        0      .00    75.00   475.00
0
 $SECNO 112.400

 3470 ENCROACHMENT STATIONS=     300.0     575.0  TYPE=     1  TARGET=     275.000
   112.40    13.56   795.06      .00      .00   795.14      .08      .07      .03   791.00
    2600.     202.    1955.     443.     393.     755.     636.     382.     106.   789.50
     1.03      .51     2.59      .70     .160     .060     .160     .000   781.50   300.00
  .000524     100.     100.     100.        2        0        0      .00   275.00   575.00
0
 $SECNO 114.250
   114.25    13.18   795.18      .00      .00   795.23      .05      .09      .01   787.50
    2600.     111.    1231.    1258.     199.     487.    1792.     391.     108.   787.50
     1.07      .56     2.53      .70     .160     .060     .160     .000   782.00    12.63
  .000428     185.     185.     185.        2        0        0      .00   357.72   370.35
0
 $SECNO 124.250
   124.25    12.38   795.68      .00      .00   795.75      .07      .50      .01   788.80
    2600.      98.    1291.    1211.     165.     453.    1571.     445.     116.   788.80
     1.22      .60     2.85      .77     .160     .060     .160     .000   783.30    14.26
```

```
  .000600    1000.    1000.    1000.       1        0        0      .00   352.70   366.96
0
 *SECNO 134.250
   134.25    11.76   796.36      .00      .00   796.44      .08      .69      .01   790.10
    2600.      87.    1344.    1169.     141.     427.    1406.     492.     124.    790.10
     1.36      .62     3.15      .83     .160     .060     .160     .000   784.60    15.49
  .000791    1000.    1000.    1000.       2        0        0      .00   348.91   364.40
0
 *SECNO 144.250

 3470 ENCROACHMENT STATIONS=        .0     250.0  TYPE=     1  TARGET=     249.999
   144.25    11.40   797.30      .00      .00   797.44      .14      .97      .03   791.40
    2600.      92.    1574.     934.     127.     412.     903.     532.     130.    791.40
     1.46      .73     3.82     1.03     .160     .060     .160     .000   785.90    16.20
  .001224    1000.    1000.    1000.       2        0        0      .00   233.80   250.00
0
1
 10/31/89    16:56:05                                                                    PAGE    8


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 154.250

 3470 ENCROACHMENT STATIONS=      20.0     170.0  TYPE=     1  TARGET=     150.000
   154.25    11.51   798.71      .00      .00   798.97      .26     1.47      .06   792.70
    2600.     115.    1943.     542.     128.     416.     439.     559.     135.    792.70
     1.53      .90     4.67     1.23     .160     .060     .160     .000   787.20    20.00
  .001796    1000.    1000.    1000.       2        0        0      .00   150.00   170.00
0
 *SECNO 164.250

 3470 ENCROACHMENT STATIONS=      30.0     140.0  TYPE=     1  TARGET=     110.000
   164.25    12.00   800.50      .00      .00   800.80      .30     1.81      .02   794.00
    2600.     125.    2123.     352.     120.     437.     279.     580.     138.    794.00
     1.60     1.04     4.86     1.26     .160     .060     .160     .000   788.50    30.00
  .001827    1000.    1000.    1000.       2        0        0      .00   110.00   140.00
0
 *SECNO 174.250

 3470 ENCROACHMENT STATIONS=      30.0     140.0  TYPE=     1  TARGET=     110.000
   174.25    12.43   802.23      .00      .00   802.50      .27     1.69      .01   795.30
    2600.     132.    2107.     361.     131.     455.     298.     600.     140.    795.30
     1.67     1.01     4.63     1.21     .160     .060     .160     .000   789.80    30.00
  .001571    1000.    1000.    1000.       2        0        0      .00   110.00   140.00
0
 *SECNO 184.250

 3470 ENCROACHMENT STATIONS=      40.0     100.0  TYPE=     1  TARGET=      60.000
                DS OF PICKARD
   184.25    12.80   803.90      .00      .00   804.31      .41     1.74      .07   796.60
    2600.     107.    2478.      15.      94.     471.      22.     617.     142.    796.60
     1.72     1.14     5.26      .68     .160     .060     .160     .000   791.10    40.00
  .001942    1000.    1000.    1000.       2        0        0      .00    60.00   100.00
0
 *SECNO 185.000

 3470 ENCROACHMENT STATIONS=      40.0     100.0  TYPE=     1  TARGET=      60.000
   185.00    12.75   804.05      .00      .00   804.46      .42      .15      .00   796.80
    2600.     107.    2479.      15.      93.     468.      22.     618.     142.    796.80
     1.73     1.14     5.29      .68     .160     .060     .160     .000   791.30    40.00
  .001979      75       75       75        1        0        0       [illegible]
```

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


 *SECNO 195.000

 3470 ENCROACHMENT STATIONS=      20.0     170.0  TYPE=     1  TARGET=     150.000
    195.00    13.13   805.73      .00      .00   805.90      .17     1.36      .07   798.10
     2600.     154.    1856.     590.     184.     484.     557.     639.     145.   798.10
      1.82      .83     3.83     1.06     .160     .060     .160     .000   792.60    20.00
   .000990    1000.    1000.    1000.        2        0        0      .00   150.00   170.00
0
 *SECNO 205.000

 3470 ENCROACHMENT STATIONS=      20.0     170.0  TYPE=     1  TARGET=     150.000
                 DS OF NOTTAWA RD
    205.00    12.86   806.76      .00      .00   806.94      .18     1.04      .01   799.40
     2600.     148.    1869.     583.     175.     473.     537.     666.     148.   799.40
      1.91      .85     3.95     1.09     .160     .060     .160     .000   793.90    20.00
   .001087    1000.    1000.    1000.        2        0        0      .00   150.00   170.00
0
1
```


THIS RUN EXECUTED 10/31/89 16:56:22

```
**************************************************
  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
**************************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Deerfield Twp.

3) WATERCOURSE: N. Br. Chippewa River

4) DOCUMENT TYPE: Notes

00BREAK00

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

TO: Hydrologic Studies Unit

SUBJECT: Request for 100-Year Flood Discharges Current and Urbanized Conditions

FROM: Flood Plain Management Section / BEM

DATE: 8/28/89

FILE NO:

320
37

WATERCOURSE: N. Branch Chippewa

SECTION: 13/24, T14N, R5W

TOWNSHIP: Deerfield

COUNTY: Isabella

H-89171

LOCATION: @ M-20

REMARKS:

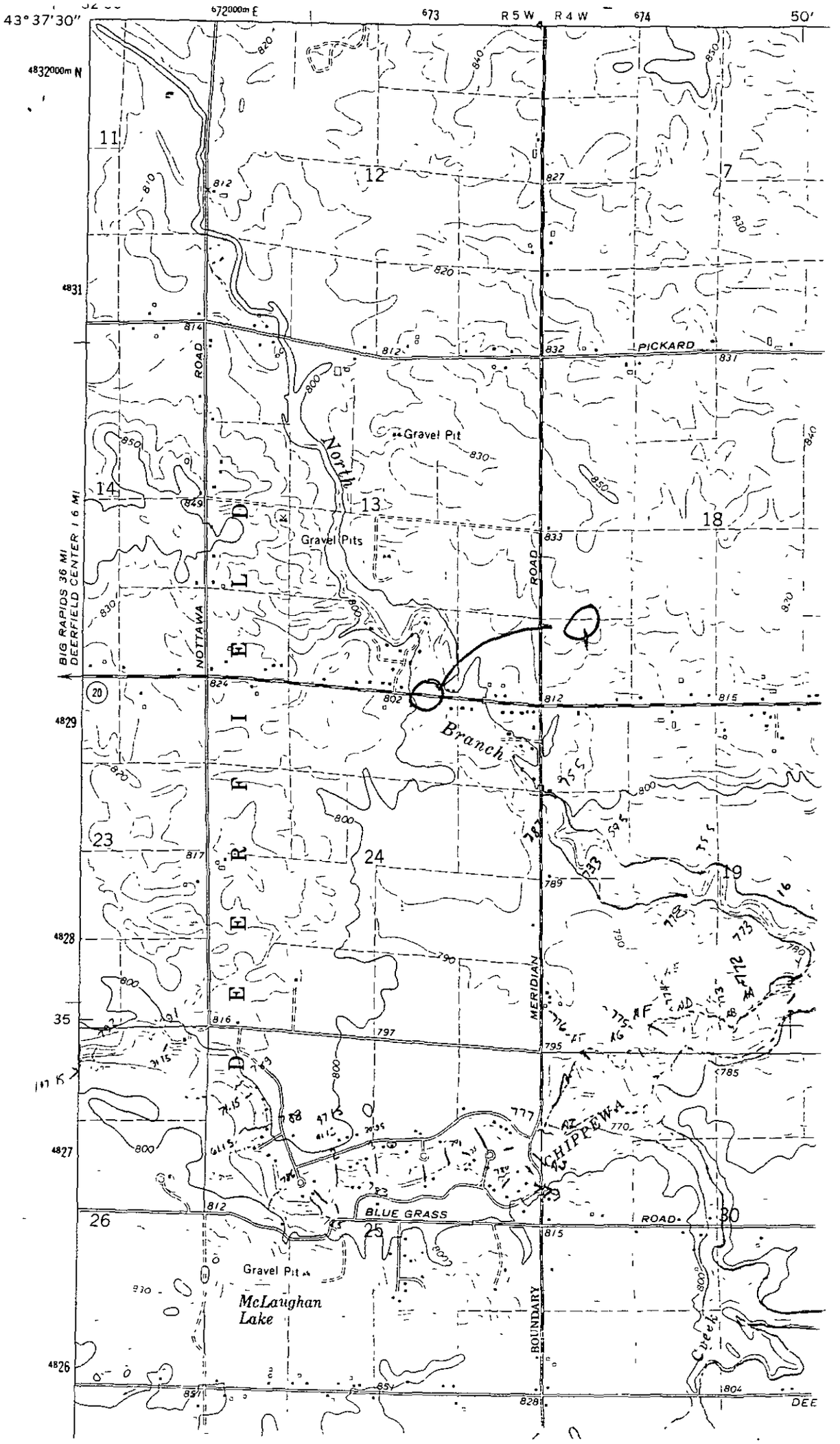
Please provide Q_{100}

P235E

Bruce The soils in the lower 30 to 50 sq miles are very heavy & high intensity Ag with a long history of flooding & drainage problems. may produce Q_{100} as high as 2600 cfs

The North Branch of the Chippewa river appears to be capable of producing very high flows off the Medtill areas. Suggest you work with the 1986 flood hydraulics to get an estimate that we could try to evaluate in conjunction with the down stream gage.

Leng 9/13/89


43°37'30"
672000m E
673
R 5 W
R 4 W
674
50'
4832000m N
4831
4829
4828
4827
4826
11
12
7
14
13
18
23
24
19
35
26
25
30
PICKARD
ROAD
NOTTAWA
North
Gravel Pit
Gravel Pits
BIG RAPIDS 36 MI
DEERFIELD CENTER 1.6 MI
20
DEERFIELD
Branch
MERIDIAN
CHIPPEWA
BLUE GRASS
ROAD
Gravel Pit
McLaughan
Lake
BOUNDARY
Creek
DEE

Deerfield

N. Br. Chippewa

Nottawa - over the road
Did not get to house east side of
Road, in yard

9½' to low steel
~4
13½' ~~depth~~ above WSEL during '86

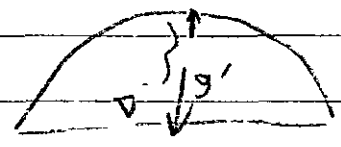
~14' depth

Meridian
1986 ~ ELLC in ROTS
↳ From file ELLC ~ 787.6

WT 0 5.3 T.P.
5.9
11.2
-1.7
9.5 ~ Basement Floor
9½ above WSEL. Robert Cook 7/24 Bldg. Bermit

High bank f.w/f.p. ~ 100' from edge

Broomfield Rd



Deerfield Township

North Branch Chippewa River

Nottawa Road - according to resident d/s of Nottawa Road, ROB, the road was topped during 1986. Water did not reach the house.

Meridian Road - HWM (debris indicates water ~ equal the low steel. File No. 83-8-122 show low steel at 787.6.

Littlefield Road - (Chippewa River)

Resident in ROB, u/s of bridge indicated that water was not over the road, about at low steel. She did not experience problems, however d/s homeowners had over a foot of water in their walkout.

M-20

Resident d/s of M-20 in LOB experienced flooding problems but mostly from overflow from the drain adjacent to M-20. The water was about 8" in his shed behind the house, and about 1 foot below the top of his well.

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Mount Pleasant, City of

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100 yr encroached

00BREAK00

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
*****************************************************

T1
T2
T3
```

Sweet ft. lows

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	7.	0.	0.	0.0	0.0	0.0	0.	740.100	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

3.8 miles north east of Mt. Pl.
South Leaton Rd.
Gage "0" datum of 710.38
12.78
723.06
713

.0011

MOORE BUSINESS FORMS INC 27

```
*PROF 2

CCHV     0.100 CEHV     0.300
*SECNO 204095.000
   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       430.0      767.0  TYPE       1  TARGET      -430.000

        A                                                  may be as high as 742 to 743

204095.00      9.50    740.10      0.0    740.00    740.83      0.73      0.0       0.0    739.50
    5850.      407.     5336.      108.      253.      745.       70.       0.        0.    735.70
      0.0      1.61      7.16      1.55     0.070     0.040     0.100      0.0    730.60    449.50
 0.002673        0.        0.        0.         0         0         0     -0.02    279.72    729.22

*SECNO 204595.000

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS       540.0     1110.0  TYPE       1  TARGET       570.000

        B

204595.00      9.92    741.62      0.0    741.59    741.94      0.32      1.07      0.04    739.50
    5850.     1016.     4024.      811.      781.      750.      663.       19.        5.    737.20
      0.04      1.30      5.36      1.22     0.100     0.045     0.100     0.046    731.70    540.00
 0.001557      400.      550.      550.         2         0         0     -0.03    561.65   1110.00

CCHV     0.200 CEHV     0.400
*SECNO 205985.000

3470 ENCROACHMENT STATIONS       420.0     1344.0  TYPE       1  TARGET      -420.000

        C

205985.00     11.35    743.15      0.0    743.14    743.28      0.13      1.31      0.04    737.30
    5850.     2556.     3294.        0.     2650.      869.        0.       86.       20.  100000.00
      0.17      0.96      3.79      0.0     0.100     0.045     0.060     0.050    731.80    420.00
 0.000804      850.     1390.     1050.         3         0         0     -0.10    884.85   1304.85

CCHV     0.100 CEHV     0.300
*SECNO 207370.000

3470 ENCROACHMENT STATIONS        70.0      620.0  TYPE       1  TARGET       550.000

        D

207370.00     10.56    744.26      0.0    744.25    744.56      0.30      1.23      0.05    739.90
    5850.     1471.     3983.      396.     1180.      763.      359.      159.       37.    739.30
      0.25      1.25      5.22      1.10     0.100     0.042     0.100     0.049    733.70     70.00
 0.001288     1000.     1385.      600.         2         0         0     -0.02    550.00    620.00

*SECNO 208600.000
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
```

MOORE BUSINESS FORMS INC 27

```
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

3470 ENCROACHMENT STATIONS       230.0      670.0  TYPE       1  TARGET       440.000

        E

208600.00    13.35    745.55      0.0    745.53    745.91      0.36      1.33      0.02    742.70
    5850.      245.     4641.      964.      191.      869.      760.      210.       50.    740.70
     0.32      1.28      5.34      1.27     0.080     0.045     0.080     0.048    732.20    230.00
 0.001198     1000.     1060.     1230.         2         0         0     -0.04    440.00    670.00

*SECNO 209590.000

3470 ENCROACHMENT STATIONS       720.0     1444.0  TYPE       1  TARGET      -720.000

        F

209590.00    12.61    746.81      0.0    746.81    747.18      0.36      1.27      0.00    742.10
    5850.     1778.     3972.      100.     1492.      682.       65.      249.       59.    741.30
     0.38      1.19      5.82      1.53     0.100     0.045     0.100     0.048    734.20    784.00
 0.001569      700.     1000.      800.         2         0         0     -0.02    652.80   1436.80

*SECNO 210140.000

3470 ENCROACHMENT STATIONS       630.0     1162.0  TYPE       1  TARGET      -630.000

        G   CORPORATE LIMIT

210140.00    11.56    747.56      0.0    747.55    747.66      0.10      0.46      0.03    740.70
    5850.       95.     5438.      316.      127.     2032.      404.      277.       66.    742.10
     0.44      0.75      2.68      0.78     0.080     0.047     0.100     0.048    736.00    630.00
 0.000540      450.      550.      500.         2         0         0     -0.03    509.05   1139.05

*SECNO 210660.000

3470 ENCROACHMENT STATIONS       590.0      960.0  TYPE       1  TARGET       370.000

        H

210660.00    11.29    747.79      0.0    747.79    747.95      0.16      0.27      0.02    744.60
    5850.       94.     4791.      965.      170.     1380.      815.      304.       71.    739.50
     0.48      0.55      3.47      1.18     0.100     0.045     0.100     0.048    736.50    590.00
 0.000574      580.      500.      400.         2         0         0     -0.01    370.00    960.00

*SECNO 211360.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS        90.0      185.0  TYPE       1  TARGET        95.000

        I   MANUFACTURED

211360.00    11.37    748.07      0.0    748.06    748.74      0.67      0.63      0.15    741.40
    5850.        0.     5832.       18.        0.      886.       18.      329.       74.    741.40
     0.51       0.0      6.58      1.00     0.100     0.040     0.100     0.047    736.70     90.00
 0.001695      820.      700.      550.         2         0         0     -0.00     95.00    185.00
```

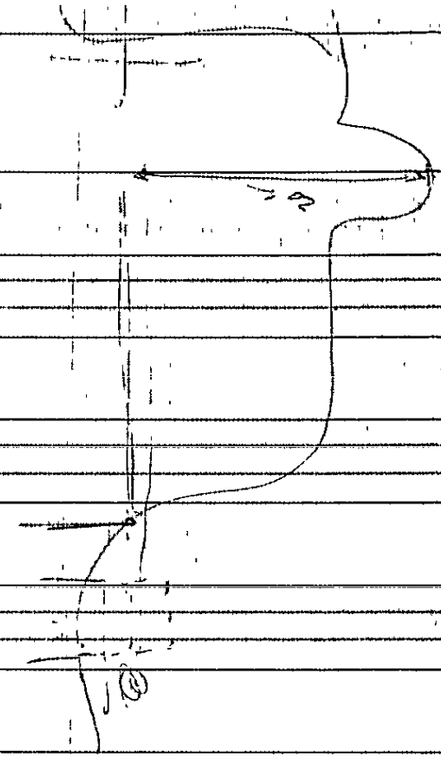
MOORE BUSINESS FORMS, INC 27

```
*SECNO 211800.000
   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        60.0      200.0  TYPE       1  TARGET       -60.000

        J   MANUFACTURED

211800.00    12.07   748.77     0.0    748.69   749.30     0.53     0.55     0.01   741.40
    5850.     179.    5647.      23.     136.     951.      25.     339.      76.   741.40
     0.53     1.31     5.94     0.93    0.100    0.040    0.100    0.047   736.70    60.00
 0.001144     400.     400.     480.        2        0        0    -0.00   128.86   188.86

CCHV    0.300 CEHV    0.500
*SECNO 212000.000

3265 DIVIDED FLOW

        K   PICKARD AVE BRIDGE, MAX LC 755.5, MIN TR 758.7, WIDTH 58, LENGTH 132

212000.00    16.77   749.67     0.0    749.61   750.11     0.44     0.78     0.03   757.20
    5850.       0.    5850.       0.       0.    1102.       0.     354.      77.   758.70
     0.56      0.0     5.31     0.0    0.100    0.040    0.100    0.046   732.90    95.94
 0.001508     550.     600.     700.        2        0        0    -0.01   104.16   207.38

*SECNO 212001.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD    6 MIN ELTRD    755.60 MAX ELLC    760.80

212001.00    16.79   749.69     0.0    749.63   750.13     0.44     0.02     0.00   757.20
    5850.       0.    5850.       0.       0.    1103.       0.     354.      77.   758.70
     0.56      0.0     5.30     0.0    0.100    0.040    0.100    0.046   732.90    95.91
 0.001503      10.      10.      10.        0        0        0    -0.00   104.22   207.41

*SECNO 212002.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD    6 MIN ELTRD    755.60 MAX ELLC    760.80

212002.00    16.89   749.79     0.0    749.73   750.22     0.43     0.09     0.00   757.20
    5850.       0.    5850.       0.       0.    1113.       0.     355.      77.   758.70
     0.57      0.0     5.26     0.0    0.100    0.040    0.100    0.046   732.90    95.72
 0.001471      58.      58.      58.        0        0        0    -0.01   104.59   207.59

*SECNO 212003.000

3265 DIVIDED FLOW

212003.00    16.90   749.80     0.0    749.74   750.23     0.43     0.01     0.00   757.20
    5850.       0.    5850.       0.       0.    1115.       0.     356.      77.   758.70
     0.57      0.0     5.25     0.0    0.100    0.040    0.100    0.046   732.90    95.68
```

MOORE BUSINESS FORMS, INC 27

```
*SECNO 212130.000
   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

3470 ENCROACHMENT STATIONS        50.0      160.0  TYPE       1  TARGET       110.000

        L   MANUFACTURED

212130.00    13.93   750.13      0.0    750.06   750.46      0.32      0.20      0.03   741.40
    5850.       0.    5850.       0.        0.    1282.        0.      361.       78. 100000.00
     0.58      0.0     4.56      0.0     0.100    0.040     0.100     0.046    736.20    50.00
 0.000699     125.     200.     250.         2        0         0     -0.01    110.00   160.00

CCHV    0.100 CEHV    0.300
*SECNO 212340.000

3470 ENCROACHMENT STATIONS        20.0      150.0  TYPE       1  TARGET       130.000

        M

212340.00    12.52   750.22      0.0    750.15   750.64      0.42      0.15      0.03   753.30
    5850.       0.    5766.       84.        0.    1101.       75.      367.       78.   745.40
     0.59      0.0     5.24      1.11     0.100    0.040     0.100     0.046    737.70    25.74
 0.000960     190.     190.     210.         2        0         0     -0.01    124.26   150.00

CCHV    0.200 CEHV    0.400
*SECNO 213420.000
3280 CROSS SECTION 213420.00 EXTENDED       1.15 FEET

3470 ENCROACHMENT STATIONS         0.0      810.0  TYPE       1  TARGET       809.999

        N

213420.00    13.15   751.15      0.0    751.05   751.23      0.08      0.52      0.07   743.10
    5850.     170.    3123.     2557.      184.    1018.     3063.      418.       86.   743.70
     0.72      0.92     3.07      0.83     0.100    0.045     0.100     0.046    738.00    84.59
 0.000348    1150.    1050.     650.         2        0         0     -0.02    725.41   810.00

*SECNO 213880.000
3280 CROSS SECTION 213880.00 EXTENDED       4.49 FEET

3470 ENCROACHMENT STATIONS        40.0      410.0  TYPE       1  TARGET       370.000

        O

213880.00    10.69   751.29      0.0    751.21   751.57      0.28      0.26      0.08   746.70
    5850.     368.    3865.     1616.      265.     752.     1086.      452.       92.   746.00
     0.75      1.39     5.14      1.49     0.100    0.045     0.100     0.046    740.60    40.00
 0.001296     400.     400.     500.         2        0         0     -0.04    370.00   410.00

CCHV    0.100 CEHV    0.300
```

```
3265 DIVIDED FLOW

3280 CROSS SECTION 214200.00 EXTENDED       4.43 FEET


3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS          0.0      300.0  TYPE       1  TARGET       299.999

        P   FOOT BRIDGE ON WEST SIDE ISLAND PARK, TRUSS, LC 752.9, AS REGULAR

214200.00    11.93   751.43     0.0    751.31   752.57     1.15     0.74     0.26   752.90
    5850.     491.    4772.     587.     183.     507.     189.     463.      94.   752.80
     0.76     2.69     9.41     3.11    0.060    0.040    0.060    0.046   739.50    52.28
 0.004254     350.     350.     320.        2        0        0    -0.01   209.90   300.00


*SECNO 214201.000

3265 DIVIDED FLOW

3280 CROSS SECTION 214201.00 EXTENDED       4.83 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

214201.00    12.33   751.83     0.0    751.75   752.62     0.79     0.02     0.04   752.90
    5850.     528.    4307.    1015.     219.     530.     330.     464.      94.   752.80
     0.76     2.42     8.13     3.08    0.060    0.040    0.060    0.046   739.50    49.95
 0.003041       5.       5.       5.        3        0        0    -0.02   244.49   325.00


*SECNO 214400.000
3280 CROSS SECTION 214400.00 EXTENDED       7.43 FEET


        Q

214400.00    12.23   752.43     0.0    752.38   753.07     0.64     0.43     0.01   750.00
    5850.       0.    5850.       0.       0.     908.       0.     468.      95.   745.00
     0.77     0.0     6.44     0.0     0.060    0.040    0.060    0.046   740.20    94.00
 0.001571     150.     200.     270.        2        0        0    -0.01    94.00   188.00


*SECNO 214450.000

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS


        R   ANN ARBOR R. R. BRIDGE, LC 752.5, TR 759.5, WIDTH 18, LENGTH 82

214450.00    15.09   751.89     0.0    751.84   753.47     1.58     0.12     0.28   759.70
    5850.       0.    5850.       0.       0.     580.       0.     469.      95.   759.50
     0.77     0.0    10.08     0.0     0.060    0.040    0.060    0.046   736.80   107.83
```



```
*SECNO 214451.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD    7 MIN ELTRD    759.00 MAX ELLC    759.80

214451.00    15.10   751.90     0.0    751.85   753.47     1.58     0.01     0.00   759.70
    5850.       0.    5850.      0.        0.     580.       0.     469.      95.    759.50
     0.77      0.0    10.08     0.0     0.060    0.040    0.060    0.046   736.80   107.83
 0.006868       1.       1.      1.         0        0        0    -0.00    66.17   178.00

*SECNO 214452.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD    7 MIN ELTRD    759.00 MAX ELLC    759.80

214452.00    15.31   752.11     0.0    752.07   753.61     1.50     0.13     0.01   759.70
    5850.       0.    5850.      0.        0.     595.       0.     469.      95.    759.50
     0.77      0.0     9.83     0.0     0.060    0.040    0.060    0.046   736.80   106.94
 0.006452      20.      20.     20.         2        0        0    -0.00    67.06   178.00

*SECNO 214453.000

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    IDC       ICONT     CORAR     TOPWID      ENDST

214453.00    15.32   752.12     0.0    752.08   753.62     1.50     0.01     0.00   759.70
    5850.       0.    5850.      0.        0.     595.       0.     469.      95.    759.50
     0.77      0.0     9.82     0.0     0.060    0.040    0.060    0.046   736.80   106.92
 0.006442       1.       1.      1.         0        0        0    -0.00    67.08   178.00

CCHV     0.200 CEHV     0.400
*SECNO 214550.000

3470 ENCROACHMENT STATIONS        45.0      180.0  TYPE       1  TARGET       135.000

        S

214550.00    13.28   752.48     0.0    752.49   754.37     1.89     0.59     0.16   748.00
    5850.      39.    4808.    1003.       19.     397.     354.     471.      95.    748.70
     0.78      2.00    12.10     2.83    0.100    0.040    0.100    0.045   739.20    45.00
 0.005993     100.     100.     50.         2        0        0    -0.01   135.00   180.00

*SECNO 215180.000

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS        10.0      298.0  TYPE       1  TARGET       -10.000

        T
```

```
215180.00    15.20   755.20     0.0   755.11   755.39     0.19     0.68     0.34   747.00
    5850.    1312.    4532.      7.    1168.    1154.      18.     493.      98.   752.60
     0.83     1.12     3.93    0.36    0.100    0.040    0.100    0.045   740.00    10.00
 0.000425     650.     650.    500.        2        0        0    -0.01   269.02   279.02

*SECNO 215380.000

3470 ENCROACHMENT STATIONS        35.0      240.0  TYPE      1  TARGET      -35.000

        U   MANUFACTURED

215380.00    13.67   755.17     0.0   755.08   755.60     0.43     0.11     0.10   744.20
    5850.     614.    5016.     220.     477.     885.     146.     502.      99.   744.20
     0.84     1.29     5.67    1.51    0.100    0.040    0.100    0.045   741.50    60.00
 0.000794     200.     200.    200.        2        0        0    -0.01   176.46   236.46

CCHV    0.300 CEHV    0.500
*SECNO 215600.000

        V   BROADWAY ST. BRIDGE, LC 756.7, TR 760.6, WIDTH 44, LENGTH 110

215600.00    12.57   755.27     0.0   755.19   755.92     0.65     0.22     0.11   759.10
    5850.       0.    5850.      D.       0.     904.       0.     508.      99.   760.00
     0.85      0.0     6.47     0.0    0.100    0.040    0.100    0.045   742.70   120.00
 0.001552     200.     200.    200.        1        0        0    -0.00    75.00   195.00

*SECNO 215601.000
   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

3370 NORMAL BRIDGE,NRD  13 MIN ELTRD    758.70 MAX ELLC    760.00

215601.00    12.37   755.07     0.0   754.99   756.18     1.11     0.03     0.23   759.10
    5850.       0.    5850.      0.       0.     691.       0.     508.     100.   760.00
     0.85      0.0     8.46     0.0    0.100    0.040    0.100    0.045   742.70   120.00
 0.005423      10.      10.     10.        2        0        0  -196.77    75.00   195.00

*SECNO 215602.000
                                                                                D/S SIDE OF BRIDGE
3370 NORMAL BRIDGE,NRD  13 MIN ELTRD    758.70 MAX ELLC    760.00

215602.00    12.64   755.34     0.0   755.26   756.43     1.09     0.24     0.01   759.10
    5850.       0.    5850.      0.       0.     699.       0.     508.     100.   760.00
     0.85      0.0     8.37     0.0    0.100    0.040    0.100    0.045   742.70   120.00
 0.005368      44.      44.     44.        2        0        0  -209.51    75.00   195.00

*SECNO 215603.000

3301 HV CHANGED MORE THAN HVINS

215603.00    13.33   756.03     0.0   755.95   756.60     0.58     0.02     0.15   759.10
    5850.       0.    5850.      0.       0.     960.       0.     509.     100.   760.00
     0.85      0.0     6.09     0.0    0.100    0.040    0.100    0.045   742.70   120.00
 0.001296      10.      10.     10.        2        0        0    -0.00    75.00   195.00
```

MOORE BUSINESS FORMS, INC 27

```
3280 CROSS SECTION 215700.00 EXTENDED      5.92 FEET


3470 ENCROACHMENT STATIONS        0.0      130.0  TYPE      1  TARGET      129.999

        W

215700.00     17.32    756.12      0.0    756.05    756.72      0.60      0.11      0.01    744.20
    5850.       217.     5443.     190.     136.      849.      146.      511.      100.    744.20
     0.86      1.59      6.41      1.30    0.100     0.040     0.100     0.045    738.80     35.00
 0.000875      100.      100.      100.        2         0         0     -0.00     95.00    130.00


*SECNO 216500.000
3280 CROSS SECTION 216500.00 EXTENDED      3.13 FEET


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS        0.0      625.0  TYPE      1  TARGET      624.999

        X

216500.00     16.13    757.13      0.0    757.07    757.20      0.06      0.32      0.16    760.00
    5850.        0.     2599.    3251.        0.      915.     3805.      544.      104.    747.70
     0.95       0.0      2.84      0.85    0.120     0.050     0.120     0.046    741.00     13.37
 0.000343      720.      700.      400.        2         0         0     -0.04    611.63    625.00


CCHV     0.100 CEHV     0.300
*SECNO 217050.000
3280 CROSS SECTION 217050.00 EXTENDED      1.29 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       10.0      505.0  TYPE      1  TARGET      495.000

        Y

217050.00     14.99    757.29      0.0    757.23    757.37      0.08      0.17      0.01    749.00
    5850.      1998.     3114.     738.     2216.     1015.      855.      591.      109.    749.40
     1.02      0.90      3.07      0.86    0.120     0.050     0.120     0.046    742.30     10.00
 0.000363      500.      550.      400.        2         0         0     -0.02    495.00    505.00


*SECNO 217150.000

3470 ENCROACHMENT STATIONS       100.0      581.0  TYPE      1  TARGET     -100.000

        Z

217150.00     18.58    757.38      0.0    757.32    757.42      0.04      0.04      0.00    744.90
    5850.       830.     4981.      40.     1674.     2909.      103.      611.      111.    745.10
     1.06      0.50      1.71      0.39    0.120     0.050     0.120     0.046    738.80    100.00
 0.000117      190.      200.      210.        1         0         0     -0.03    479.73    579.73
```

MOORE BUSINESS FORMS INC 27

```
*SECNO 217650.000

3265 DIVIDED FLOW

        AE   DAM AA  UNDER A FOOT BRIDGE,LC 757.3,TR 758.6, WIDTH 16, LENGTH 40

             TOP OF DAM  749.1

             NOTE  BETWEEN DAM AA AND DAM AE, AN EARTH DIKE ABOUT 300 FT LONG

               AND 20 FT WIDE IN THE WATER WAY FORMED A NARROW ISLAND.

               IT WAS HANDLED BY A CROSS SECTION THROUGH THE DYKE

             DAM AE UNDER A FOOT BRIDGE,LC 757.1,TR 758.0,WIDTH 19.5, LENGTH 97

             TOP OF DAM 750.6

 217650.00    13.36   757.16     0.0    757.09   757.63     0.47     0.09     0.13   758.40
      5850.       0.    5850.      0.        0.   1059.       0.     630.     114.   758.60
      1.07      0.0     5.53     0.0     0.120    0.050    0.120    0.046   743.80    52.00
  0.005240     500.     225.     45.         2        0        0    -0.01   136.50   522.00

*SECNO 217651.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD  13 MIN ELTRD   758.00 MAX ELLC   760.60

 217651.00    13.35   757.15     0.0    757.09   757.65     0.50     0.01     0.01   758.40
      5850.       0.    5850.      0.        0.   1033.       0.     631.     114.   758.60
      1.07      0.0     5.66     0.0     0.120    0.050    0.120    0.046   743.80    52.00
  0.007010       1.       1.      1.         1        0        0   -24.72   136.50   522.00

*SECNO 217652.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD  13 MIN ELTRD   758.00 MAX ELLC   760.60

 217652.00    13.39   757.19     0.0    757.12   757.86     0.67     0.16     0.05   758.40
      5850.       0.    5850.      0.        0.    891.       0.     631.     114.   758.60
      1.07      0.0     6.57     0.0     0.120    0.050    0.120    0.046   743.80    52.00
  0.010277      20.      20.     20.         2        0        0   -28.24   136.50   522.00

*SECNO 217653.000

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    IDC       ICONT     CORAR     TOPWID      ENDST
```

AE

```
217653.00    13.46   757.26     0.0   757.17   757.88    0.62    0.01    0.01   758.40
    5850.       0.    5850.      0.       0.     928.      0.    631.    114.   758.60
     1.07      0.0     6.30     0.0    0.120    0.050   0.120   0.046  743.80    52.00
 0.007128       1.       1.      1.        2        0       0   -0.01  136.50   522.00

*SECNO 217850.000
3280 CROSS SECTION 217850.00 EXTENDED      3.07 FEET

3470 ENCROACHMENT STATIONS        0.0     290.0  TYPE      1  TARGET      289.999

        AF   MANUFACTURED

217850.00    13.87   758.37     0.0   758.32   758.65    0.28    0.74    0.03   750.40
    5850.      193.    4216.  1441.      81.     878.    652.    642.    116.   750.40
     1.09      2.37     4.80    2.21    0.050    0.050   0.050   0.046  744.50     0.00
 0.001086       50.      300.   580.        3        0       0   -0.02  290.00   290.00

CCHV     0.200 CEHV     0.400
*SECNO 218400.000
3280 CROSS SECTION 218400.00 EXTENDED      3.31 FEET

3470 ENCROACHMENT STATIONS      105.0     740.0  TYPE      1  TARGET      635.000

        AG

218400.00    14.42   758.92     0.0   758.87   759.02    0.11    0.34    0.03   750.40
    5850.      535.    3780.  1535.     373.    1209.  1384.    667.    121.   750.40
     1.15      1.44     3.13    1.11    0.050    0.050   0.065   0.046  744.50   105.00
 0.000430      650.      550.   400.        2        0       0   -0.05  635.00   740.00

CCHV     0.200 CEHV     0.400
*SECNO 219350.000
3280 CROSS SECTION 219350.00 EXTENDED      3.03 FEET

3470 ENCROACHMENT STATIONS      105.0     395.0  TYPE      1  TARGET      290.000

        AH   MANUFACTURED

219350.00    13.43   759.23     0.0   759.19   759.54    0.31    0.44    0.08   750.80
    5850.      143.    5293.   415.     172.    1121.   340.    711.    129.   750.80
     1.20      0.83     4.72    1.22    0.080    0.040   0.080   0.046  745.80   113.55
 0.000677      850.      820.   800.        2        0       0   -0.01  281.45   395.00

CCHV     0.300 CEHV     0.500
*SECNO 219600.000

3265 DIVIDED FLOW

        AI   M-20 BRIDGE, LC 767.1, TR 772, WIDTH 55, LENGTH 130

219600.00    12.51   759.31     0.0   759.28   759.91    0.60    0.23    0.14   772.00
    5850.       0.    5850.      0.       0.     940.      0.    716.    130.   772.00
     1.21      0.0     6.22     0.0    0.100    0.040   0.080   0.046  746.80   102.00
```

AF

AG

200' DNSTR M-20

@ DNSTR FACE OF M-20

```
*SECNO 219601.000

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    IDC       ICONT     CORAR     TOPWID      ENDST

3370 NORMAL BRIDGE,NRD    0 MIN ELTRD    772.00 MAX ELLC    767.10

 219601.00     12.53    759.33      0.0    759.30    759.93      0.60      0.02      0.00    772.00
      5850.        0.     5850.       0.        0.     942.        0.      717.      130.    772.00
      1.21       0.0      6.21      0.0     0.100     0.040     0.080     0.046    746.80    102.00
  0.002237       10.       10.      10.         1         0         0     -0.01    120.74    227.74

*SECNO 219602.000

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD    0 MIN ELTRD    772.00 MAX ELLC    767.10

 219602.00     12.68    759.48      0.0    759.45    760.06      0.58      0.12      0.01    772.00
      5850.        0.     5850.       0.        0.     961.        0.      718.      130.    772.00
      1.21       0.0      6.09      0.0     0.100     0.040     0.080     0.046    746.80    102.00
  0.D02110       55.       55.      55.         2         0         0     -0.01    121.00    228.00

*SECNO 219603.000

3265 DIVIDED FLOW

 219603.00     12.71    759.51      0.0    759.48    760.08      0.57      0.02      0.00    772.00
      5850.        0.     5850.       0.        0.     964.        0.      718.      130.    772.00
      1.21       0.0      6.07      0.0     0.100     0.040     0.080     0.046    746.80    102.00
  0.002093       10.       10.      10.         0         0         0     -0.01    121.00    228.00

*SECNO 219700.000

3470 ENCROACHMENT STATIONS        100.0      235.0  TYPE        1  TARGET        135.000

         AJ

 219700.00     12.00    760.00      0.0    759.98    760.28      0.28      0.11      0.09    750.80
      5850.        0.     5850.       0.        0.    1373.        0.      721.      131. 100000.00
      1.22       0.0      4.26      0.0     0.100     0.040     0.080     0.046    748.00    100.00
  0.000686      100.      100.     100.         2         0         0     -0.01    135.00    235.00

CCHV     0.100 CEHV     0.300
*SECNO 220400.000

3470 ENCROACHMENT STATIONS         80.0      728.0  TYPE        1  TARGET        648.000

         AK

 220400.00     11.27    760.47      0.0    760.42    760.61      0.14      0.31      0.01    757.60
      5850.     1327.     4523.       0.     2173.     1330.        0.      755.      136. 100000.00
      1.29      0.61      3.40      0.0     0.120     0.035     0.100     0.045    749.20     80.00
```

MOORE BUSINESS FORMS INC 27

```
 0.000347     510.     680.     700.        2        0        0    -0.05   647.71   727.71

*SECNO 221650.000
3280 CROSS SECTION 221650.00 EXTENDED       4.50 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

3470 ENCROACHMENT STATIONS        0.0      400.0  TYPE       1  TARGET       399.999

        AL

221650.00    11.20   761.00      0.0    760.94   761.41      0.41      0.72      0.08   759.80
    5850.      70.    4687.    1093.      61.     823.     835.      823.      149.    755.00
     1.36     1.14     5.70     1.31    0.050    0.040    0.110     0.045    749.80     60.00
 0.001323    1080.    1200.    1200.        2        0        0     -0.04    340.00    400.00

*SECNO 222720.000

3470 ENCROACHMENT STATIONS       20.0      693.0  TYPE       1  TARGET       673.000

        AM

222720.00    13.71   762.31      0.0    762.27   762.48      0.17      1.05      0.02   753.00
    5850.    2766.    3084.       0.     2648.     693.       0.      878.      159. 100000.00
     1.45     1.04     4.45     0.0     0.120    0.045    0.045     0.045    748.60     20.00
 0.000911    1000.    1000.     610.        2        0        0     -0.04    659.98    679.98

*SECNO 223990.000
3280 CROSS SECTION 223990.00 EXTENDED       2.95 FEET

3470 ENCROACHMENT STATIONS      250.0     1250.0  TYPE       1  TARGET      -250.000

        AN

223990.00    12.35   762.95      0.0    762.91   763.02      0.07      0.53      0.01   753.50
    5850.    2739.    2077.    1034.     3815.     642.     609.      953.      173.    753.80
     1.60     0.72     3.23     1.70    0.110    0.045    0.060     0.046    750.60    250.00
 0.000384     650.    1180.    1250.        2        0        0     -0.02   1000.00   1250.00
```

MOORE BUSINESS FORMS INC. 27

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
**************************************************
```

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

CHIPPEWA RIVER AT MT. PL

SUMMARY PRINTOUT TABLE 110

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	204095.000	740.00	0.0	740.76	278.69	380.18	5365.21	104.61	-430.00	430.00	600.00	701.00	767.00
	204095.000	740.10	0.10	740.83	279.72	406.91	5335.58	107.50	-430.00	430.00	600.00	701.00	767.00
	204595.000	741.59	0.0	741.91	560.96	1009.40	4036.55	804.05	570.00	540.00	800.00	887.00	1110.00
	204595.000	741.62	0.03	741.94	561.65	1015.58	4023.88	810.53	570.00	540.00	800.00	887.00	1110.00
	205985.000	743.14	0.0	743.27	884.82	2552.10	3297.90	0.0	-420.00	420.00	1200.00	1344.00	1344.00
	205985.000	743.15	0.01	743.28	884.85	2556.45	3293.55	0.0	-420.00	420.00	1200.00	1344.00	1344.00
	207370.000	744.25	0.0	744.54	604.62	1502.72	3943.03	404.25	0.0	0.0	400.00	490.00	0.0
	207370.000	744.26	0.01	744.56	550.00	1470.73	3983.13	396.15	550.00	70.00	400.00	490.00	620.00
	208600.000	745.53	0.0	745.89	440.00	243.32	4650.06	956.62	440.00	230.00	295.00	375.00	670.00
	208600.000	745.55	0.02	745.91	440.00	244.98	4640.78	964.23	440.00	230.00	295.00	375.00	670.00
	209590.000	746.81	0.0	747.17	652.65	1773.42	3976.68	99.90	-720.00	720.00	1350.00	1420.00	1444.00
	209590.000	746.81	0.01	747.18	652.80	1778.41	3971.63	99.97	-720.00	720.00	1350.00	1420.00	1444.00
	210140.000	747.55	0.0	747.66	509.00	95.14	5439.15	315.71	-630.00	630.00	725.00	1013.00	1162.00
	210140.000	747.56	0.01	747.66	509.05	95.41	5438.48	316.11	-630.00	630.00	725.00	1013.00	1162.00
H	210660.000	747.79	0.0	747.95	370.00	93.59	4791.78	964.63	370.00	590.00	682.00	830.00	960.00
	210660.000	747.79	0.00	747.95	370.00	93.88	4791.23	964.89	370.00	590.00	682.00	830.00	960.00
I	211360.000	748.06	0.0	748.69	130.10	71.36	5706.22	72.42	0.0	0.0	90.00	182.00	0.0
	211360.000	748.07	0.01	748.74	95.00	0.0	5831.67	18.33	95.00	90.00	90.00	182.00	185.00
J	211800.000	748.69	0.0	749.23	128.78	176.35	5650.57	23.08	-60.00	60.00	90.00	182.00	200.00
	211800.000	748.77	0.09	749.30	128.86	179.14	5647.38	23.47	-60.00	60.00	90.00	182.00	200.00
K	212000.000	749.61	0.0	750.06	103.90	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
	212000.000	749.67	0.06	750.11	104.16	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
	212001.000	749.63	0.0	750.07	103.96	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
	212001.000	749.69	0.06	750.13	104.22	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
	212002.000	749.73	0.0	750.16	104.34	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
	212002.000	749.79	0.06	750.22	104.59	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0

MOORE BUSINESS FORMS INC 27

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
212003.000	749.74	0.0	750.18	104.44	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
212003.000	749.80	0.06	750.23	104.68	0.0	5850.00	0.0	0.0	0.0	92.82	209.30	0.0
212130.000	750.06	0.0	750.38	122.15	19.74	5815.38	14.88	0.0	0.0	50.00	160.00	0.0
212130.000	750.13	0.07	750.46	110.00	0.0	5850.00	0.0	110.00	50.00	50.00	160.00	160.00
212340.000	750.15	0.0	750.55	147.12	0.0	5648.03	201.97	0.0	0.0	20.00	135.00	0.0
212340.000	750.22	0.08	750.64	124.26	0.0	5766.45	83.55	130.00	20.00	20.00	135.00	150.00
213420.000	751.05	0.0	751.14	725.25	169.39	3146.01	2534.61	810.00	0.00	117.00	206.00	810.00
213420.000	751.15	0.09	751.23	725.41	169.98	3122.94	2557.07	810.00	0.00	117.00	206.00	810.00
213880.000	751.21	0.0	751.48	398.03	409.41	3806.85	1633.74	0.0	0.0	100.00	180.00	0.0
213880.000	751.29	0.08	751.57	370.00	368.46	3865.35	1616.19	370.00	40.00	100.00	180.00	410.00
214200.000	751.31	0.0	752.52	207.28	470.83	4814.25	564.92	300.00	0.00	159.00	215.00	300.00
214200.000	751.43	0.11	752.57	209.90	491.25	4771.95	586.79	300.00	0.00	159.00	215.00	300.00
214201.000	751.75	0.0	752.57	242.60	514.56	4337.78	997.65	0.0	0.0	159.00	215.00	0.0
214201.000	751.83	0.08	752.62	244.49	528.04	4306.83	1015.13	0.0	0.0	159.00	215.00	0.0
214400.000	752.38	0.0	753.04	94.00	0.0	5850.00	0.0	0.0	0.0	94.00	188.00	0.0
214400.000	752.43	0.04	753.07	94.00	0.0	5850.00	0.0	0.0	0.0	94.00	188.00	0.0
214450.000	751.84	0.0	753.44	65.99	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214450.000	751.89	0.05	753.47	66.17	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214451.000	751.85	0.0	753.44	65.98	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214451.000	751.90	0.05	753.47	66.17	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214452.000	752.07	0.0	753.58	66.87	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214452.000	752.11	0.05	753.61	67.06	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214453.000	752.08	0.0	753.59	66.90	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214453.000	752.12	0.05	753.62	67.08	0.0	5850.00	0.0	0.0	0.0	101.00	178.00	0.0
214550.000	752.49	0.0	754.30	154.92	86.11	4739.91	1023.98	0.0	0.0	50.00	90.00	0.0
214550.000	752.48	-0.01	754.37	135.00	38.66	4808.08	1003.26	135.00	45.00	50.00	90.00	180.00
215180.000	755.11	0.0	755.31	268.56	1304.22	4539.71	6.07	-10.00	10.00	170.00	265.00	298.00
215180.000	755.20	0.08	755.39	269.02	1311.77	4531.68	6.55	-10.00	10.00	170.00	265.00	298.00
215380.000	755.08	0.0	755.52	176.36	607.02	5024.40	218.58	-35.00	35.00	144.00	214.00	240.00
215380.000	755.17	0.08	755.60	176.46	614.01	5016.08	219.91	-35.00	35.00	144.00	214.00	240.00
215600.000	755.19	0.0	755.85	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215600.000	755.27	0.08	755.92	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215601.000	754.99	0.0	756.11	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215601.000	755.07	0.08	756.18	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215602.000	755.26	0.0	756.36	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215602.000	755.34	0.08	756.43	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215603.000	755.95	0.0	756.53	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0
215603.000	756.03	0.08	756.60	75.00	0.0	5850.00	0.0	0.0	0.0	120.00	195.00	0.0

MOORE BUSINESS FORMS INC 27

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
215700.000	756.05	0.0	756.65	95.00	216.22	5445.37	188.41	130.00	0.00	50.00	109.00	130.00
215700.000	756.12	0.08	756.72	95.00	216.83	5443.37	189.80	130.00	0.00	50.00	109.00	130.00
216500.000	757.07	0.0	757.14	611.55	0.0	2609.65	3240.35	625.00	0.00	10.00	84.00	625.00
216500.000	757.13	0.06	757.20	611.63	0.0	2599.39	3250.61	625.00	0.00	10.00	84.00	625.00
217050.000	757.23	0.0	757.31	525.00	1983.30	3071.05	795.64	0.0	0.0	308.00	386.00	0.0
217050.000	757.29	0.06	757.37	495.00	1997.93	3113.78	738.29	495.00	10.00	308.00	386.00	505.00
217150.000	757.32	0.0	757.36	479.65	825.71	4984.54	39.76	-100.00	100.00	330.00	563.00	581.00
217150.000	757.38	0.06	757.42	479.73	829.52	4980.55	39.92	-100.00	100.00	330.00	563.00	581.00
217650.000	757.09	0.0	757.58	133.27	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217650.000	757.16	0.06	757.63	136.50	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217651.000	757.09	0.0	757.59	133.35	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217651.000	757.15	0.06	757.65	136.50	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217652.000	757.12	0.0	757.79	136.50	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217652.000	757.19	0.08	757.86	136.50	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217653.000	757.17	0.0	757.80	136.50	0.0	5850.00	0.0	0.0	0.0	52.00	522.00	0.0
217653.000	757.26	0.09	757.88	136.50	0.0	5849.99	0.0	0.0	0.0	52.00	522.00	0.0
217850.000	758.32	0.0	758.60	290.00	191.50	4236.50	1422.00	290.00	0.00	20.00	100.00	290.00
217850.000	758.37	0.06	758.65	290.00	192.99	4216.00	1441.00	290.00	0.00	20.00	100.00	290.00
218400.000	758.87	0.0	758.98	635.00	531.04	3798.61	1520.35	635.00	105.00	206.00	311.00	740.00
218400.000	758.92	0.04	759.02	635.00	535.24	3780.21	1534.54	635.00	105.00	206.00	311.00	740.00
219350.000	759.19	0.0	759.51	280.85	140.05	5298.59	411.36	290.00	105.00	200.00	303.00	395.00
219350.000	759.23	0.03	759.54	281.45	142.62	5292.81	414.57	290.00	105.00	200.00	303.00	395.00
219600.000	759.28	0.0	759.88	120.55	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219600.000	759.31	0.03	759.91	120.67	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219601.000	759.30	0.0	759.91	120.62	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219601.000	759.33	0.03	759.93	120.74	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219602.000	759.45	0.0	760.03	121.00	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219602.000	759.48	0.03	760.06	121.00	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219603.000	759.48	0.0	760.06	121.00	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219603.000	759.51	0.03	760.08	121.00	0.0	5850.00	0.0	0.0	0.0	102.00	228.00	0.0
219700.000	759.98	0.0	760.25	177.75	60.03	5772.10	17.86	0.0	0.0	100.00	235.00	0.0
219700.000	760.00	0.02	760.28	135.00	0.0	5850.00	0.0	135.00	100.00	100.00	235.00	235.00
220400.000	760.42	0.0	760.55	679.70	1373.23	4476.77	0.0	0.0	0.0	582.00	728.00	0.0
220400.000	760.47	0.05	760.61	647.71	1327.21	4522.78	0.0	648.00	80.00	582.00	728.00	728.00
221650.000	760.94	0.0	761.36	340.00	65.95	4697.34	1086.70	400.00	0.00	116.00	209.00	400.00
221650.000	761.00	0.05	761.41	340.00	69.76	4687.08	1093.16	400.00	0.00	116.00	209.00	400.00
222720.000	762.27	0.0	762.44	679.92	2787.74	3062.26	0.0	0.0	0.0	610.00	693.00	0.0
222720.000	762.31	0.03	762.48	659.98	2765.52	3084.48	0.0	673.00	20.00	610.00	693.00	693.00

MOORE BUSINESS FORMS INC 27

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
223990.000	762.91	0.0	762.98	1000.00	2729.42	2085.51	1035.07	-250.00	250.00	1100.00	1157.00	1250.00
223990.000	762.95	0.03	763.02	1000.00	2738.98	2076.86	1034.16	-250.00	250.00	1100.00	1157.00	1250.00

MOORE BUSINESS FORMS INC 27

CHIPPEWA RIVER AT MT. PL

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
204095.000	0.0	0.0	0.0	730.60	5850.00	740.00	0.0	740.76	28.28	7.30	1039.37	1100.02
204095.000	0.0	0.0	0.0	730.60	5850.00	740.10	0.0	740.83	26.73	7.16	1067.32	1131.60
204595.000	550.00	0.0	0.0	731.70	5850.00	741.59	0.0	741.91	15.86	5.40	2176.45	1468.94
204595.000	550.00	0.0	0.0	731.70	5850.00	741.62	0.0	741.94	15.57	5.36	2194.05	1482.54
205985.000	1390.00	0.0	0.0	731.80	5850.00	743.14	0.0	743.27	8.09	3.80	3510.46	2056.58
205985.000	1390.00	0.0	0.0	731.80	5850.00	743.15	0.0	743.28	8.04	3.79	3519.39	2063.09
207370.000	1385.00	0.0	0.0	733.70	5850.00	744.25	0.0	744.54	12.67	5.17	2371.60	1643.19
207370.000	1385.00	0.0	0.0	733.70	5850.00	744.26	0.0	744.56	12.88	5.22	2301.78	1629.88
208600.000	1060.00	0.0	0.0	732.20	5850.00	745.53	0.0	745.89	12.10	5.36	1810.45	1681.45
208600.000	1060.00	0.0	0.0	732.20	5850.00	745.55	0.0	745.91	11.98	5.34	1820.04	1690.47
209590.000	1000.00	0.0	0.0	734.20	5850.00	746.81	0.0	747.17	15.78	5.83	2233.10	1472.63
209590.000	1000.00	0.0	0.0	734.20	5850.00	746.81	0.0	747.18	15.69	5.82	2239.49	1476.97
210140.000	550.00	0.0	0.0	736.00	5850.00	747.55	0.0	747.66	5.41	2.68	2559.78	2514.37
210140.000	550.00	0.0	0.0	736.00	5850.00	747.56	0.0	747.66	5.40	2.68	2562.55	2517.92
210660.000	500.00	0.0	0.0	736.50	5850.00	747.79	0.0	747.95	5.75	3.47	2362.74	2438.90
210660.000	500.00	0.0	0.0	736.50	5850.00	747.79	0.0	747.95	5.74	3.47	2364.46	2441.21
211360.000	700.00	0.0	0.0	736.70	5850.00	748.06	0.0	748.69	14.82	6.44	999.23	1519.51
211360.000	700.00	0.0	0.0	736.70	5850.00	748.07	0.0	748.74	16.95	6.58	904.43	1421.06
211800.000	400.00	0.0	0.0	736.70	5850.00	748.69	0.0	749.23	11.78	5.99	1101.60	1704.59
211800.000	400.00	0.0	0.0	736.70	5850.00	748.77	0.0	749.30	11.44	5.94	1112.79	1729.69
212000.000	600.00	0.0	0.0	732.90	5850.00	749.61	0.0	750.06	15.31	5.34	1095.23	1495.15
212000.000	600.00	0.0	0.0	732.90	5850.00	749.67	0.0	750.11	15.08	5.31	1101.78	1506.60
212001.000	10.00	755.60	760.80	732.90	5850.00	749.63	0.0	750.07	15.26	5.33	1096.65	1497.63
212001.000	10.00	755.60	760.80	732.90	5850.00	749.69	0.0	750.13	15.03	5.30	1103.13	1508.95
212002.000	58.00	755.60	760.80	732.90	5850.00	749.73	0.0	750.16	14.92	5.29	1106.23	1514.39
212002.000	58.00	755.60	760.80	732.90	5850.00	749.79	0.0	750.22	14.71	5.26	1112.53	1525.43
212003.000	10.00	0.0	0.0	732.90	5850.00	749.74	0.0	750.18	14.84	5.28	1108.68	1518.67
212003.000	10.00	0.0	0.0	732.90	5850.00	749.80	0.0	750.23	14.63	5.25	1114.96	1529.68
212130.000	200.00	0.0	0.0	736.20	5850.00	750.06	0.0	750.38	5.80	4.56	1327.19	2429.43
212130.000	200.00	0.0	0.0	736.20	5850.00	750.13	0.0	750.46	6.99	4.56	1282.40	2212.72
212340.000	190.00	0.0	0.0	737.70	5850.00	750.15	0.0	750.55	9.43	5.17	1255.36	1905.06
212340.000	190.00	0.0	0.0	737.70	5850.00	750.22	0.0	750.64	9.60	5.24	1176.26	1887.68
213420.000	1050.00	0.0	0.0	738.00	5850.00	751.05	0.0	751.14	3.62	3.12	4196.71	3072.87
213420.000	1050.00	0.0	0.0	738.00	5850.00	751.15	0.0	751.23	3.48	3.07	4264.45	3138.17
213880.000	400.00	0.0	0.0	740.60	5850.00	751.21	0.0	751.48	12.94	5.11	2158.21	1626.42
213880.000	400.00	0.0	0.0	740.60	5850.00	751.29	0.0	751.57	12.96	5.14	2102.99	1624.74

MOORE BUSINESS FORMS INC 27

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
214200.000	350.00	0.0	0.0	739.50	5850.00	751.31	0.0	752.52	44.92	9.62	854.71	872.86
214200.000	350.00	0.0	0.0	739.50	5850.00	751.43	0.0	752.57	42.54	9.41	877.98	896.96
214201.000	4.50	0.0	0.0	739.50	5850.00	751.75	0.0	752.57	31.64	8.26	1058.39	1040.05
214201.000	4.50	0.0	0.0	739.50	5850.00	751.83	0.0	752.62	30.41	8.13	1077.96	1060.83
214400.000	200.00	0.0	0.0	740.20	5850.00	752.38	0.0	753.04	15.94	6.47	904.01	1465.25
214400.000	200.00	0.0	0.0	740.20	5850.00	752.43	0.0	753.07	15.71	6.44	908.08	1475.81
214450.000	40.00	0.0	0.0	736.80	5850.00	751.84	0.0	753.44	69.58	10.13	577.27	701.34
214450.000	40.00	0.0	0.0	736.80	5850.00	751.89	0.0	753.47	68.67	10.08	580.32	705.94
214451.000	1.00	759.00	759.80	736.80	5850.00	751.85	0.0	753.44	69.64	10.14	577.06	701.02
214451.000	1.00	759.00	759.80	736.80	5850.00	751.90	0.0	753.47	68.68	10.08	580.30	705.91
214452.000	20.00	759.00	759.80	736.80	5850.00	752.07	0.0	753.58	65.38	9.88	591.90	723.48
214452.000	20.00	759.00	759.80	736.80	5850.00	752.11	0.0	753.61	64.52	9.83	595.07	728.30
214453.000	1.00	0.0	0.0	736.80	5850.00	752.08	0.0	753.59	65.26	9.88	592.34	724.15
214453.000	1.00	0.0	0.0	736.80	5850.00	752.12	0.0	753.62	64.42	9.82	595.45	728.88
214550.000	100.00	0.0	0.0	739.20	5850.00	752.49	0.0	754.30	58.14	11.93	803.71	767.21
214550.000	100.00	0.0	0.0	739.20	5850.00	752.48	0.0	754.37	59.93	12.10	770.79	755.70
215180.000	650.00	0.0	0.0	740.00	5850.00	755.11	0.0	755.31	4.37	3.96	2316.75	2798.08
215180.000	650.00	0.0	0.0	740.00	5850.00	755.20	0.0	755.39	4.25	3.93	2339.80	2836.33
215380.000	200.00	0.0	0.0	741.50	5850.00	755.08	0.0	755.52	8.15	5.71	1492.79	2049.54
215380.000	200.00	0.0	0.0	741.50	5850.00	755.17	0.0	755.60	7.94	5.67	1507.70	2076.01
215600.000	200.00	0.0	0.0	742.70	5850.00	755.19	0.0	755.85	15.84	6.51	897.96	1469.94
215600.000	200.00	0.0	0.0	742.70	5850.00	755.27	0.0	755.92	15.52	6.47	903.97	1484.75
215601.000	10.00	758.70	760.00	742.70	5850.00	754.99	0.0	756.11	54.43	8.49	689.04	792.97
215601.000	10.00	758.70	760.00	742.70	5850.00	755.07	0.0	756.18	54.23	8.46	691.29	794.38
215602.000	44.00	758.70	760.00	742.70	5850.00	755.26	0.0	756.36	53.82	8.40	696.57	797.42
215602.000	44.00	758.70	760.00	742.70	5850.00	755.34	0.0	756.43	53.68	8.37	698.59	798.48
215603.000	10.00	0.0	0.0	742.70	5850.00	755.95	0.0	756.53	13.20	6.13	954.27	1610.20
215603.000	10.00	0.0	0.0	742.70	5850.00	756.03	0.0	756.60	12.96	6.09	960.03	1624.75
215700.000	100.00	0.0	0.0	738.80	5850.00	756.05	0.0	756.65	8.91	6.45	1123.88	1959.88
215700.000	100.00	0.0	0.0	738.80	5850.00	756.12	0.0	756.72	8.75	6.41	1131.05	1977.87
216500.000	700.00	0.0	0.0	741.00	5850.00	757.07	0.0	757.14	3.50	2.86	4682.97	3124.99
216500.000	700.00	0.0	0.0	741.00	5850.00	757.13	0.0	757.20	3.43	2.84	4720.40	3159.60
217050.000	550.00	0.0	0.0	742.30	5850.00	757.23	0.0	757.31	3.59	3.04	4189.23	3089.43
217050.000	550.00	0.0	0.0	742.30	5850.00	757.29	0.0	757.37	3.63	3.07	4086.38	3069.66
217150.000	200.00	0.0	0.0	738.80	5850.00	757.32	0.0	757.36	1.19	1.72	4657.03	5359.82
217150.000	200.00	0.0	0.0	738.80	5850.00	757.38	0.0	757.42	1.17	1.71	4685.44	5406.77
217650.000	225.00	0.0	0.0	743.80	5850.00	757.09	0.0	757.58	52.88	5.57	1049.94	804.44
217650.000	225.00	0.0	0.0	743.80	5850.00	757.16	0.0	757.63	52.40	5.53	1058.62	808.13

MOORE BUSINESS FORMS INC 27

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
217651.000	1.00	758.00	760.60	743.80	5850.00	757.09	0.0	757.59	59.88	5.67	1030.91	755.97
217651.000	1.00	758.00	760.60	743.80	5850.00	757.15	0.0	757.65	70.10	5.66	1033.33	698.69
217652.000	19.50	758.00	760.60	743.80	5850.00	757.12	0.0	757.79	103.86	6.59	887.63	574.02
217652.000	19.50	758.00	760.60	743.80	5850.00	757.19	0.0	757.86	102.77	6.57	890.66	577.07
217653.000	1.00	0.0	0.0	743.80	5850.00	757.17	0.0	757.80	74.29	6.39	916.00	678.70
217653.000	1.00	0.0	0.0	743.80	5850.00	757.26	0.0	757.88	71.28	6.30	928.02	692.91
217850.000	300.00	0.0	0.0	744.50	5850.00	758.32	0.0	758.60	11.15	4.85	1595.75	1751.89
217850.000	300.00	0.0	0.0	744.50	5850.00	758.37	0.0	758.65	10.86	4.80	1611.72	1775.23
218400.000	550.00	0.0	0.0	744.50	5850.00	758.87	0.0	758.98	4.39	3.15	2938.40	2791.59
218400.000	550.00	0.0	0.0	744.50	5850.00	758.92	0.0	759.02	4.30	3.13	2965.54	2822.62
219350.000	820.00	0.0	0.0	745.80	5850.00	759.19	0.0	759.51	6.86	4.74	1623.68	2234.03
219350.000	820.00	0.0	0.0	745.80	5850.00	759.23	0.0	759.54	6.77	4.72	1633.37	2248.32
219600.000	200.00	0.0	0.0	746.80	5850.00	759.28	0.0	759.88	22.81	6.25	935.94	1225.01
219600.000	200.00	0.0	0.0	746.80	5850.00	759.31	0.0	759.91	22.53	6.22	939.95	1232.47
219601.000	10.00	772.00	767.10	746.80	5850.00	759.30	0.0	759.91	22.64	6.23	938.36	1229.51
219601.000	10.00	772.00	767.10	746.80	5850.00	759.33	0.0	759.93	22.37	6.21	942.33	1236.90
219602.000	55.00	772.00	767.10	746.80	5850.00	759.45	0.0	760.03	21.35	6.11	957.52	1266.17
219602.000	55.00	772.00	767.10	746.80	5850.00	759.48	0.0	760.06	21.10	6.09	961.13	1273.42
219603.000	10.00	0.0	0.0	746.80	5850.00	759.48	0.0	760.06	21.17	6.09	960.17	1271.49
219603.000	10.00	0.0	0.0	746.80	5850.00	759.51	0.0	760.08	20.93	6.07	963.78	1278.74
219700.000	100.00	0.0	0.0	748.00	5850.00	759.98	0.0	760.25	5.95	4.21	1473.36	2398.82
219700.000	100.00	0.0	0.0	748.00	5850.00	760.00	0.0	760.28	6.86	4.26	1373.14	2233.41
220400.000	680.00	0.0	0.0	749.20	5850.00	760.42	0.0	760.55	3.45	3.38	3585.31	3148.40
220400.000	680.00	0.0	0.0	749.20	5850.00	760.47	0.0	760.61	3.47	3.40	3503.13	3142.25
221650.000	1200.00	0.0	0.0	749.80	5850.00	760.94	0.0	761.36	13.51	5.74	1704.54	1591.79
221650.000	1200.00	0.0	0.0	749.80	5850.00	761.00	0.0	761.41	13.23	5.70	1719.23	1608.34
222720.000	1000.00	0.0	0.0	748.60	5850.00	762.27	0.0	762.44	9.07	4.43	3388.90	1942.07
222720.000	1000.00	0.0	0.0	748.60	5850.00	762.31	0.0	762.48	9.11	4.45	3340.65	1938.02
223990.000	1180.00	0.0	0.0	750.60	5850.00	762.91	0.0	762.98	3.91	3.26	5032.07	2957.53
223990.000	1180.00	0.0	0.0	750.60	5850.00	762.95	0.0	763.02	3.84	3.23	5066.39	2984.97

MOORE BUSINESS FORMS INC 27

CHIPPEWA RIVER AT MT. PL

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
204095.000	5850.00	740.00	0.0	0.0	0.0	278.69	0.0
204095.000	5850.00	740.10	0.10	0.0	0.10	279.72	0.0
204595.000	5850.00	741.59	0.0	1.59	0.0	560.96	550.00
204595.000	5850.00	741.62	0.03	1.52	0.03	561.65	550.00
205985.000	5850.00	743.14	0.0	1.55	0.0	884.82	1390.00
205985.000	5850.00	743.15	0.01	1.53	0.01	884.85	1390.00
207370.000	5850.00	744.25	0.0	1.12	0.0	604.62	1385.00
207370.000	5850.00	744.26	0.01	1.12	0.01	550.00	1385.00
208600.000	5850.00	745.53	0.0	1.27	0.0	440.00	1060.00
208600.000	5850.00	745.55	0.02	1.29	0.02	440.00	1060.00
209590.000	5850.00	746.81	0.0	1.28	0.0	652.65	1000.00
209590.000	5850.00	746.81	0.01	1.26	0.01	652.80	1000.00
210140.000	5850.00	747.55	0.0	0.75	0.0	509.00	550.00
210140.000	5850.00	747.56	0.01	0.74	0.01	509.05	550.00
210660.000	5850.00	747.79	0.0	0.24	0.0	370.00	500.00
210660.000	5850.00	747.79	0.00	0.24	0.00	370.00	500.00
211360.000	5850.00	748.06	0.0	0.27	0.0	130.10	700.00
211360.000	5850.00	748.07	0.01	0.27	0.01	95.00	700.00
211800.000	5850.00	748.69	0.0	0.63	0.0	128.78	400.00
211800.000	5850.00	748.77	0.09	0.71	0.09	128.86	400.00
212000.000	5850.00	749.61	0.0	0.93	0.0	103.90	600.00
212000.000	5850.00	749.67	0.06	0.90	0.06	104.16	600.00
212001.000	5850.00	749.63	0.0	0.02	0.0	103.96	10.00
212001.000	5850.00	749.69	0.06	0.02	0.06	104.22	10.00
212002.000	5850.00	749.73	0.0	0.10	0.0	104.34	58.00
212002.000	5850.00	749.79	0.06	0.10	0.06	104.59	58.00
212003.000	5850.00	749.74	0.0	0.02	0.0	104.44	10.00
212003.000	5850.00	749.80	0.06	0.02	0.06	104.68	10.00
212130.000	5850.00	750.06	0.0	0.32	0.0	122.15	200.00
212130.000	5850.00	750.13	0.07	0.33	0.07	110.00	200.00
212340.000	5850.00	750.15	0.0	0.08	0.0	147.12	190.00
212340.000	5850.00	750.22	0.08	0.09	0.08	124.26	190.00
213420.000	5850.00	751.05	0.0	0.91	0.0	725.25	1050.00
213420.000	5850.00	751.15	0.09	0.93	0.09	725.41	1050.00
213880.000	5850.00	751.21	0.0	0.16	0.0	398.03	400.00
213880.000	5850.00	751.29	0.08	0.14	0.08	370.00	400.00

MOORE BUSINESS FORMS, INC 27

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
214200.000	5850.00	751.31	0.0	0.10	0.0	207.28	350.00
214200.000	5850.00	751.43	0.11	0.14	0.11	209.90	350.00
214201.000	5850.00	751.75	0.0	0.44	0.0	242.60	4.50
214201.000	5850.00	751.83	0.08	0.41	0.08	244.49	4.50
214400.000	5850.00	752.38	0.0	0.63	0.0	94.00	200.00
214400.000	5850.00	752.43	0.04	0.59	0.04	94.00	200.00
214450.000	5850.00	751.84	0.0	-0.54	0.0	65.99	40.00
214450.000	5850.00	751.89	0.05	-0.54	0.05	66.17	40.00
214451.000	5850.00	751.85	0.0	0.01	0.0	65.98	1.00
214451.000	5850.00	751.90	0.05	0.01	0.05	66.17	1.00
214452.000	5850.00	752.07	0.0	0.22	0.0	66.87	20.00
214452.000	5850.00	752.11	0.05	0.22	0.05	67.06	20.00
214453.000	5850.00	752.08	0.0	0.01	0.0	66.90	1.00
214453.000	5850.00	752.12	0.05	0.01	0.05	67.08	1.00
214550.000	5850.00	752.49	0.0	0.41	0.0	154.92	100.00
214550.000	5850.00	752.48	-0.01	0.36	-0.01	135.00	100.00
215180.000	5850.00	755.11	0.0	2.63	0.0	268.56	650.00
215180.000	5850.00	755.20	0.08	2.72	0.08	269.02	650.00
215380.000	5850.00	755.08	0.0	-0.03	0.0	176.36	200.00
215380.000	5850.00	755.17	0.08	-0.03	0.08	176.46	200.00
215600.000	5850.00	755.19	0.0	0.11	0.0	75.00	200.00
215600.000	5850.00	755.27	0.08	0.11	0.08	75.00	200.00
215601.000	5850.00	754.99	0.0	-0.20	0.0	75.00	10.00
215601.000	5850.00	755.07	0.08	-0.20	0.08	75.00	10.00
215602.000	5850.00	755.26	0.0	0.27	0.0	75.00	44.00
215602.000	5850.00	755.34	0.08	0.27	0.08	75.00	44.00
215603.000	5850.00	755.95	0.0	0.69	0.0	75.00	10.00
215603.000	5850.00	756.03	0.08	0.69	0.08	75.00	10.00
215700.000	5850.00	756.05	0.0	0.10	0.0	95.00	100.00
215700.000	5850.00	756.12	0.08	0.10	0.08	95.00	100.00
216500.000	5850.00	757.07	0.0	1.03	0.0	611.55	700.00
216500.000	5850.00	757.13	0.06	1.01	0.06	611.63	700.00
217050.000	5850.00	757.23	0.0	0.16	0.0	525.00	550.00
217050.000	5850.00	757.29	0.06	0.16	0.06	495.00	550.00
217150.000	5850.00	757.32	0.0	0.08	0.0	479.65	200.00
217150.000	5850.00	757.38	0.06	0.09	0.06	479.73	200.00
217650.000	5850.00	757.09	0.0	-0.22	0.0	133.27	225.00
217650.000	5850.00	757.16	0.06	-0.22	0.06	136.50	225.00

MOORE BUSINESS FORMS INC 27

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
217651.000	5850.00	757.09	0.0	-0.01	0.0	133.35	1.00
217651.000	5850.00	757.15	0.06	-0.01	0.06	136.50	1.00
217652.000	5850.00	757.12	0.0	0.03	0.0	136.50	19.50
217652.000	5850.00	757.19	0.08	0.04	0.08	136.50	19.50
217653.000	5850.00	757.17	0.0	0.05	0.0	136.50	1.00
217653.000	5850.00	757.26	0.09	0.07	0.09	136.50	1.00
217850.000	5850.00	758.32	0.0	1.15	0.0	290.00	300.00
217850.000	5850.00	758.37	0.06	1.11	0.06	290.00	300.00
218400.000	5850.00	758.87	0.0	0.56	0.0	635.00	550.00
218400.000	5850.00	758.92	0.04	0.54	0.04	635.00	550.00
219350.000	5850.00	759.19	0.0	0.32	0.0	280.85	820.00
219350.000	5850.00	759.23	0.03	0.31	0.03	281.45	820.00
219600.000	5850.00	759.28	0.0	0.08	0.0	120.55	200.00
219600.000	5850.00	759.31	0.03	0.08	0.03	120.67	200.00
219601.000	5850.00	759.30	0.0	0.03	0.0	120.62	10.00
219601.000	5850.00	759.33	0.03	0.03	0.03	120.74	10.00
219602.000	5850.00	759.45	0.0	0.15	0.0	121.00	55.00
219602.000	5850.00	759.48	0.03	0.15	0.03	121.00	55.00
219603.000	5850.00	759.48	0.0	0.03	0.0	121.00	10.00
219603.000	5850.00	759.51	0.03	0.02	0.03	121.00	10.00
219700.000	5850.00	759.98	0.0	0.50	0.0	177.75	100.00
219700.000	5850.00	760.00	0.02	0.49	0.02	135.00	100.00
220400.000	5850.00	760.42	0.0	0.44	0.0	679.70	680.00
220400.000	5850.00	760.47	0.05	0.47	0.05	647.71	680.00
221650.000	5850.00	760.94	0.0	0.53	0.0	340.00	1200.00
221650.000	5850.00	761.00	0.05	0.53	0.05	340.00	1200.00
222720.000	5850.00	762.27	0.0	1.33	0.0	679.92	1000.00
222720.000	5850.00	762.31	0.03	1.31	0.03	659.98	1000.00
223990.000	5850.00	762.91	0.0	0.64	0.0	1000.00	1180.00
223990.000	5850.00	762.95	0.03	0.64	0.03	1000.00	1180.00

SUMMARY OF ERRORS

MOORE BUSINESS FORMS INC 27

FLOODWAY DATA, CHIPPEWA RIVER AT MT. PL
PROFILE NO. 2

STATION	FLOODWAY WIDTH FT	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
204095.000	280.	1067.	5.5	740.1	740.0	0.1
204595.000	570.	2194.	2.7	741.6	741.6	0.0
205985.000	885.	3519.	1.7	743.1	743.1	0.0
207370.000	550.	2302.	2.5	744.3	744.3	0.0
208600.000	440.	1820.	3.2	745.5	745.5	0.0
209590.000	653.	2239.	2.6	746.8	746.8	0.0
210140.000	509.	2563.	2.3	747.6	747.6	0.0
210660.000	370.	2364.	2.5	747.8	747.8	0.0
211360.000	95.	904.	6.5	748.1	748.1	0.0
211800.000	129.	1113.	5.3	748.8	748.7	0.1
212000.000	111.	1102.	5.3	749.7	749.6	0.1
212001.000	111.	1103.	5.3	749.7	749.6	0.1
212002.000	112.	1113.	5.3	749.8	749.7	0.1
212003.000	112.	1115.	5.2	749.8	749.7	0.1
212130.000	110.	1282.	4.6	750.2	750.1	0.1
212340.000	124.	1176.	5.0	750.2	750.1	0.1
213420.000	725.	4264.	1.4	751.2	751.1	0.1
213880.000	370.	2103.	2.8	751.3	751.2	0.1
214200.000	248.	878.	6.7	751.4	751.3	0.1
214201.000	275.	1078.	5.4	751.9	751.8	0.1
214400.000	94.	908.	6.4	752.4	752.4	0.0
214450.000	70.	580.	10.1	751.8	751.8	0.0
214451.000	70.	580.	10.1	751.9	751.8	0.1
214452.000	71.	595.	9.8	752.1	752.1	0.0
214453.000	71.	595.	9.8	752.1	752.1	0.0
214550.000	135.	771.	7.6	752.5	752.5	0.0
215180.000	269.	2340.	2.5	755.2	755.1	0.1
215380.000	176.	1508.	3.9	755.2	755.1	0.1
215600.000	75.	904.	6.5	755.3	755.2	0.1
215601.000	75.	691.	8.5	755.1	755.0	0.1
215602.000	75.	699.	8.4	755.4	755.3	0.1
215603.000	75.	960.	6.1	756.0	755.9	0.1
215700.000	95.	1131.	5.2	756.1	756.0	0.1
216500.000	612.	4720.	1.2	757.2	757.1	0.1
217050.000	495.	4086.	1.4	757.3	757.2	0.1
217150.000	480.	4685.	1.2	757.4	757.3	0.1
217650.000	470.	1059.	5.5	757.2	757.1	0.1
217651.000	470.	1033.	5.7	757.2	757.1	0.1
217652.000	470.	891.	6.6	757.2	757.1	0.1
217653.000	470.	928.	6.3	757.3	757.2	0.1
217850.000	290.	1612.	3.6	758.4	758.3	0.1
218400.000	635.	2966.	2.0	758.9	758.9	0.0
219350.000	281.	1633.	3.6	759.2	759.2	0.0
219600.000	126.	940.	6.2	759.3	759.3	0.0
219601.000	126.	942.	6.2	759.3	759.3	0.0
219602.000	126.	961.	6.1	759.5	759.5	0.0
219603.000	126.	964.	6.1	759.5	759.5	0.0
219700.000	135.	1373.	4.3	760.0	760.0	0.0
220400.000	648.	3503.	1.7	760.4	760.4	0.0
221650.000	340.	1719.	3.4	761.0	760.9	0.1

MOORE BUSINESS FORMS, INC 27

FLOODWAY DATA, CHIPPEWA RIVER AT MT. PL
PROFILE NO. 2

STATION	FLOODWAY WIDTH FT	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
222720.000	660.	3341.	1.8	762.3	762.3	0.0
223990.000	1000.	5066.	1.2	762.9	762.9	0.0

MOORE BUSINESS FORMS INC 27

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Mount Pleasant, City of

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100 yr natural

00BREAK00

GOVEA	JGOVEDSS	2434	GO.FT06F001	9.19.11	20 OCT 80	MOUNT PLEASANT	ASANT
GOVEA	JGOVEDSS	2434	GO.FT06F001	9.19.11	20 OCT 80	MOUNT PLEASANT	ASANT
GOVEA	JGOVEDSS	2434	GO.FT06F001	9.19.11	20 OCT 80	MOUNT PLEASANT	ASANT

Rec'd
10/31/8

MOORE BUSINESS FORMS, INC 27

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
*****************************************************

C
T1      CHIPPEWA RIVER AT MOUNT PLEASANT, PROJECT NO. 8545,MOUNT
T2      CHIPPEWA RIVER AT MT. PLEASANT,
T3      CHIPPEWA RIVER AT MT. PLEASANT

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

     -10.       4.        0.        0.  0.0          0.0       0.0       0.   740.000     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

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    150.000   110.000   200.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0

*PROF 1

CCHV    0.100 CEHV    0.300
*SECNO 204095.000
   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      430.0     767.0  TYPE      1  TARGET     -430.000

        A

204095.00     9.40   740.00     0.0    740.00   740.76     0.76     0.0      0.0    739.50
    5850.     380.    5365.     105.     237.     735.      67.      0.       0.    735.70
     0.0      1.60     7.30     1.57    0.070    0.040    0.100     0.0    730.60    450.00
 0.002828      0.       0.       0.        0        0        0    -0.02    278.69    728.69


FLOW DISTRIBUTION FOR SECNO  204095.00          CWSEL     740.00

STA      450.     460.     540.     570.     590.     600.     701.     714.     729.
  PER Q      0.2      4.9      0.7      0.5      0.3     91.7      1.4      0.3
   AREA     10.0    160.0     33.0     22.0     12.5    735.1     46.2     20.6
    VEL      1.1      1.8      1.2      1.2      1.3      7.3      1.8      1.0

*SECNO 204595.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS      540.0    1110.0  TYPE      1  TARGET      570.000

        B

204595.00     9.89   741.59     0.0      0.0    741.91     0.32     1.10     0.04    739.50
```

```
     0.04     1.31     5.40     1.23    0.100    0.045    0.100    0.046   731.70   540.00
 0.001586     400.     550.     550.        2        0        0    -0.03   560.96  1110.00


FLOW DISTRIBUTION FOR SECNO  204595.00          CWSEL     741.59

STA       540.     550.     730.     766.     800.     887.     950.    1050.    1110.
  PER Q     0.7     15.3      1.0      0.3     69.0      5.7      5.1      2.9
   AREA    36.2    646.1     64.4     26.2    747.5    235.6    263.9    156.6
    VEL     1.1      1.4      0.9      0.6      5.4      1.4      1.1      1.1

CCHV    0.200 CEHV    0.400
*SECNO 205985.000

3470 ENCROACHMENT STATIONS       420.0     1344.0  TYPE       1  TARGET      -420.000

         C

205985.00    11.34   743.14      0.0      0.0   743.27     0.13     1.32     0.04   737.30
    5850.     2552.    3298.       0.    2642.     868.       0.      86.      20. 100000.00
     0.17     0.97     3.80      0.0    0.100    0.045    0.060    0.050   731.80   420.00
 0.000809     850.    1390.    1050.        3        0        0    -0.10   884.82  1304.82


FLOW DISTRIBUTION FOR SECNO  205985.00          CWSEL     743.14

STA       420.     470.     490.     510.    1000.    1200.    1344.
  PER Q     2.4      1.6      1.7     22.0     16.0     56.4
   AREA   158.2     84.8     86.8   1464.5    847.8    868.4
    VEL     0.9      1.1      1.1      0.9      1.1      3.8

CCHV    0.100 CEHV    0.300
*SECNO 207370.000

         O

207370.00    10.55   744.25      0.0      0.0   744.54     0.29     1.22     0.05   739.90
    5850.     1503.    3943.     404.    1227.     763.     382.     159.      38.   739.30
     0.25     1.22     5.17     1.06    0.100    0.042    0.100    0.049   733.70    43.30
 0.001267     1000.    1385.     600.        2        0        0    -0.02   604.62   647.92


FLOW DISTRIBUTION FOR SECNO  207370.00          CWSEL     744.25

STA        43.      60.     230.     240.     250.     300.     400.     490.     550.     630.     648.
  PER Q     0.3     11.0      1.2      1.2      3.7      8.4     67.4      4.8      2.0      0.1
   AREA    23.0    553.3     47.5     47.5    175.2    380.5    762.6    222.3    148.4     11.2
    VEL     0.6      1.2      1.5      1.5      1.2      1.3      5.2      1.3      0.8      0.4

*SECNO 208600.000
   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       230.0      670.0  TYPE       1  TARGET       440.000

         E

208600.00    13.33   745.53      0.0      0.0   745.89     0.36     1.33     0.02   742.70
    5850.      243.    4650.     957.     190.     867.     754.     211.      51.   740.70
     0.32     1.28     5.36     1.27    0.080    0.045    0.080    0.048   732.20   230.00
 0.001210     1000.    1060.    1230.        2        0        0    -0.04   440.00   670.00
```

```
FLOW DISTRIBUTION FOR SECNO  208600.00          CWSEL      745.53

STA        230.      295.      375.      500.      670.
  PER Q      4.2      79.5      11.0       5.3
   AREA    189.9     866.9     435.0     318.7
    VEL      1.3       5.4       1.5       1.0

*SECNO 209590.000

3470 ENCROACHMENT STATIONS      720.0     1444.0  TYPE      L  TARGET      -720.000

        F

209590.00    12.61    746.81      0.0       0.0    747.17      0.37      1.28      0.00    742.10
     5850.    1773.    3977.     100.     1486.     682.       65.      249.       61.    741.30
      0.38     1.19     5.83     1.53     0.100    0.045     0.100     0.048    734.20    784.13
  0.001578     700.    1000.     800.         2        0         0     -0.02    652.65   1436.78

FLOW DISTRIBUTION FOR SECNO  209590.00          CWSEL      746.81

STA        784.      795.      825.      870.      923.     1070.     1100.     1225.     1350.     1420.     1430.     1437.
  PER Q      0.0       0.8       3.1       3.6       8.3       0.7       2.6      11.2      68.0       1.5       0.2
   AREA      4.4      54.2     142.0     167.2     412.4      48.2     194.4     463.2     681.8      50.1      15.3
    VEL      0.3       0.9       1.3       1.3       1.2       0.8       0.8       1.4       5.8       1.7       0.9

*SECNO 210140.000

3470 ENCROACHMENT STATIONS      630.0     1162.0  TYPE      1  TARGET      -630.000

        G   CORPORATE LIMIT

210140.00    11.55    747.55      0.0       0.0    747.66      0.10      0.46      0.03    740.70
     5850.      95.    5439.     316.      127.    2030.     403.      278.       67.    742.10
      0.44     0.75     2.68     0.78     0.080    0.047     0.100     0.048    736.00    630.00
  0.000541     450.     550.     500.         2        0         0     -0.03    509.00   1139.00

FLOW DISTRIBUTION FOR SECNO  210140.00          CWSEL      747.55

STA        630.      700.      725.     1013.     1125.     1139.
  PER Q      0.2       1.4      93.0       5.3       0.1
   AREA     40.4      86.3    2030.1     392.2      10.9
    VEL      0.3       1.0       2.7       0.8       0.3

*SECNO 210660.000

3470 ENCROACHMENT STATIONS      590.0      960.0  TYPE      L  TARGET       370.000

        H

210660.00    11.29    747.79      0.0       0.0    747.95      0.16      0.27      0.02    744.60
     5850.      94.    4792.     965.      170.    1379.     814.      305.       72.    739.50
      0.48     0.55     3.47     1.19     0.100    0.045     0.100     0.048    736.50    590.00
  0.000575     580.     500.     400.         2        0         0     -0.01    370.00    960.00

FLOW DISTRIBUTION FOR SECNO  210660.00          CWSEL      747.79

STA        590.      600.      682.      830.      960.
  PER Q      0.0       1.6      81.9      16.5
   AREA      6.6     163.0    1379.1     814.0
    VEL      0.3       0.6       3.5       1.2
```

```
        I   MANUFACTURED

211360.00    11.36   748.06     0.0      0.0    748.69     0.63     0.60     0.14   741.40
    5850.      71.    5706.      72.      54.     886.      59.     331.      76.    741.40
     0.51     1.31     6.44     1.22    0.100    0.040    0.100    0.047   736.70    69.70
 0.001482     820.     700.     550.        2        0        0    -0.01   130.10   199.81

FLOW DISTRIBUTION FOR SECNO  211360.00          CWSEL      748.06

STA        70.       80.       86.       90.      182.      200.
  PER Q      0.1       0.4       0.7      97.5       1.2
   AREA     10.6      20.8      23.0     885.5      59.3
    VEL      0.6       1.2       1.7       6.4       1.2

*SECNO 211800.000
   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        60.0      200.0  TYPE      1  TARGET      -60.000

        J   MANUFACTURED

211800.00    11.99   748.69     0.0      0.0    749.23     0.54     0.53     0.01   741.40
    5850.     176.    5651.      23.     134.     943.      25.     340.      77.    741.40
     0.53     1.32     5.99     0.93    0.100    0.040    0.100    0.047   736.70    60.00
 0.001178     400.     400.     480.        2        0        0    -0.00   128.78   188.78

FLOW DISTRIBUTION FOR SECNO  211800.00          CWSEL      748.69

STA        60.       90.      182.      189.
  PER Q      3.0      96.6       0.4
   AREA    133.7     943.2      24.7
    VEL      1.3       6.0       0.9

CCHV    0.300 CEHV    0.500
*SECNO 212000.000

3265 DIVIDED FLOW

        K   PICKARD AVE BRIDGE, MAX LC 755.5, MIN TR 758.7, WIDTH 58, LENGTH 132

212000.00    16.71   749.61     0.0      0.0    750.06     0.44     0.80     0.03   757.20
    5850.       0.    5850.       0.       0.     1095.       0.     355.      79.    758.70
     0.56      0.0     5.34      0.0    0.100    0.040    0.100    0.046   732.90    96.06
 0.001531     550.     600.     700.        2        0        0    -0.01   103.90   207.25

FLOW DISTRIBUTION FOR SECNO  212000.00          CWSEL      749.61

STA        96.      209.
  PER Q    100.0
   AREA   1095.2
    VEL      5.3

*SECNO 212001.000

3265 DIVIDED FLOW
```

MOORE BUSINESS FORMS, INC. 27

```
3370 NORMAL BRIDGE,NRD    6 MIN ELTRD:   755.60 MAX ELLC    760.80

212001.00     16.73    749.63      0.0       0.0    750.07      0.44      0.02      0.00    757.20
    5850.        0.     5850.       0.        0.     1097.        0.      356.       79.    758.70
     0.56       0.0      5.33      0.0     0.100     0.040     0.100     0.046    732.90     96.04
 0.001526       10.       10.      10.         0         0         0     -0.01    103.96    207.28


FLOW DISTRIBUTION FOR SECNO  212001.00          CWSEL      749.63

STA        96.      209.
  PER Q     100.0
   AREA    1096.6
    VEL       5.3

*SECNO 212002.000

3265 DIVIDED FLOW


3370 NORMAL BRIDGE,NRD    6 MIN ELTRD    755.60 MAX ELLC    760.80

212002.00     16.83    749.73      0.0       0.0    750.16      0.43      0.09      0.00    757.20
    5850.        0.     5850.       0.        0.     1106.        0.      357.       79.    758.70
     0.57       0.0      5.29      0.0     0.100     0.040     0.100     0.046    732.90     95.85
 0.001492       58.       58.      58.         0         0         0     -0.00    104.34    207.47


FLOW DISTRIBUTION FOR SECNO  212002.00          CWSEL      749.73

STA        96.      209.
  PER Q     100.0
   AREA    1106.2
    VEL       5.3

*SECNO 212003.000

3265 DIVIDED FLOW

212003.00     16.84    749.74      0.0       0.0    750.18      0.43      0.01      0.00    757.20
    5850.        0.     5850.       0.        0.     1109.        0.      357.       79.    758.70
     0.57       0.0      5.28      0.0     0.100     0.040     0.100     0.046    732.90     95.80
 0.001484       10.       10.      10.         0         0         0     -0.00    104.44    207.52


FLOW DISTRIBUTION FOR SECNO  212003.00          CWSEL      749.74

STA        96.      209.
  PER Q     100.0
   AREA    1108.7
    VEL       5.3

*SECNO 212130.000
    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


         L   MANUFACTURED

212130.00     13.86    750.06      0.0       0.0    750.38      0.32      0.18      0.03    741.40
    5850.       20.     5815.       15.       29.     1275.       24.      363.       79.    741.40
```

```
 0.000580    125.    200.    250.      2       0       0    -0.01   122.15   165.48

FLOW DISTRIBUTION FOR SECNO  212130.00          CWSEL      750.06

STA        43.      50.     160.     165.
  PER Q       0.3     99.4      0.3
   AREA      28.9   1274.6     23.8
    VEL       0.7      4.6      0.6

CCHV    0.100 CEHV    0.300
*SECNO 212340.000

        M

212340.00    12.45   750.15     0.0      0.0    750.55     0.40     0.14     0.02   753.30
    5850.       0.    5648.     202.       0.    1093.     163.     369.      80.   745.40
     0.59      0.0     5.17     1.24    0.100    0.040    0.100    0.046   737.70    25.88
 0.000943     190.     190.     210.        2        0        0    -0.01   147.12   173.01

FLOW DISTRIBUTION FOR SECNO  212340.00          CWSEL      750.15

STA        26.     135.     160.     173.
  PER Q      96.5      2.9      0.5
   AREA    1092.6    127.4     35.4
    VEL       5.2      1.4      0.8

CCHV    0.200 CEHV    0.400
*SECNO 213420.000
3280 CROSS SECTION 213420.00 EXTENDED      1.05 FEET


3470 ENCROACHMENT STATIONS        0.0     810.0  TYPE      1  TARGET      809.999

        N

213420.00    13.05   751.05     0.0      0.0    751.14     0.09     0.53     0.06   743.10
    5850.     169.    3146.    2535.     181.    1010.    3006.     420.      88.   743.70
     0.72     0.94     3.12     0.84    0.100    0.045    0.100    0.046   738.00    84.75
 0.000362    1150.    1050.     650.        2        0        0    -0.02   725.25   810.00

FLOW DISTRIBUTION FOR SECNO  213420.00          CWSEL      751.05

STA        85.      94.     117.     206.     226.     230.     310.     600.     675.     750.     810.
  PER Q       0.2      2.7     53.8      2.4      0.5     11.2     17.9      3.2      4.0      4.1
   AREA      25.7    155.3   1009.6    138.1     32.8    604.2   1334.9    277.7    315.2    303.2
    VEL       0.5      1.0      3.1      1.0      1.0      1.1      0.8      0.7      0.7      0.8

*SECNO 213880.000
3280 CROSS SECTION 213880.00 EXTENDED      4.41 FEET


        O

213880.00    10.61   751.21     0.0      0.0    751.48     0.27     0.27     0.08   746.70
    5850.     409.    3807.    1634.     301.     745.    1112.     454.      94.   746.00
     0.75     1.36     5.11     1.47    0.100    0.045    0.100    0.046   740.60    21.97
 0.001294     400.     400.     500.        2        0        0    -0.04   398.03   420.00

FLOW DISTRIBUTION FOR SECNO  213880.00          CWSEL      751.21
```

MOORE BUSINESS FORMS INC 27

```
STA        22.      25.      35.      95.     100.     180.     250.     360.     420.
  PER Q     0.0      0.3      6.0      0.6     65.1      8.8     12.6      6.6
   AREA     1.8     22.1    252.6     24.3    745.4    336.7    501.6    273.6
    VEL     0.4      0.9      1.4      1.5      5.1      1.5      1.5      1.4

CCHV    0.100 CEHV    0.300
*SECNO 214200.000

3265 DIVIDED FLOW

3280 CROSS SECTION 214200.00 EXTENDED       4.31 FEET


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS        0.0      300.0  TYPE      1  TARGET      299.999

        P   FOOT BRIDGE ON WEST SIDE ISLAND PARK, TRUSS, LC 752.9, AS REGULAR

214200.00    11.81   751.31      0.0      0.0   752.52     1.21     0.75     0.28   752.90
    5850.     471.    4814.     565.     173.     501.     181.     465.      96.   752.80
     0.76     2.72     9.62     3.12    0.060    0.040    0.060    0.046   739.50    52.91
 0.004492     350.     350.     320.        2        0        0    -0.01   207.28   300.00


FLOW DISTRIBUTION FOR SECNO  214200.00          CWSEL      751.31

STA        53.      77.     135.     215.     239.     300.
  PER Q     2.3      5.7     82.3      0.2      9.4
   AREA    50.8    122.5    500.6      8.1    172.7
    VEL     2.7      2.7      9.6      1.6      3.2

*SECNO 214201.000

3265 DIVIDED FLOW

3280 CROSS SECTION 214201.00 EXTENDED       4.75 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


214201.00    12.25   751.75      0.0      0.0   752.57     0.82     0.02     0.04   752.90
    5850.     515.    4338.     998.     211.     525.     322.     466.      96.   752.80
     0.76     2.44     8.26     3.10    0.060    0.040    0.060    0.046   739.50    50.41
 0.003164       5.       5.       5.        3        0        0    -0.02   242.60   325.00


FLOW DISTRIBUTION FOR SECNO  214201.00          CWSEL      751.75

STA        50.      77.     141.     215.     239.     325.
  PER Q     2.6      6.2     74.2      0.3     16.7
   AREA    61.9    149.4    525.2     12.0    309.9
    VEL     2.4      2.4      8.3      1.6      3.2

*SECNO 214400.000
3280 CROSS SECTION 214400.00 EXTENDED       7.39 FEET
```

```
214400.00     12.18    752.38      0.0       0.0    753.04      0.65      0.44      0.02    750.00
    5850.        0.     5850.       0.        0.     904.        0.      470.       97.    745.00
     0.77       0.0      6.47      0.0     0.060     0.040     0.060     0.046    740.20     94.00
 0.001594      150.      200.      270.         2         0         0     -0.01     94.00    188.00

 FLOW DISTRIBUTION FOR SECNO  214400.00          CWSEL     752.38

 STA        94.      188.
   PER Q     100.0
    AREA     904.0
     VEL       6.5

 *SECNO 214450.000

 3265 DIVIDED FLOW

 3301 HV CHANGED MORE THAN HVINS

        R   ANN ARBOR R. R. BRIDGE, LC 752.5, TR 759.5, WIDTH 18, LENGTH 82

 214450.00     15.04    751.84      0.0       0.0    753.44      1.59      0.12      0.28    759.70
    5850.        0.     5850.       0.        0.     577.        0.      471.       97.    759.50
     0.77       0.0     10.13      0.0     0.060     0.040     0.060     0.046    736.80    108.01
 0.006958       40.       40.       40.         2         0         0     -0.00     65.99    178.00

 FLOW DISTRIBUTION FOR SECNO  214450.00          CWSEL     751.84

 STA       108.      178.
   PER Q     100.0
    AREA     577.3
     VEL      10.1

 *SECNO 214451.000

 3265 DIVIDED FLOW

 3370 NORMAL BRIDGE,NRD   7 MIN ELTRD   759.00 MAX ELLC   759.80

 214451.00     15.05    751.85      0.0       0.0    753.44      1.60      0.01      0.00    759.70
    5850.        0.     5850.       0.        0.     577.        0.      471.       97.    759.50
     0.77       0.0     10.14      0.0     0.060     0.040     0.060     0.046    736.80    108.02
 0.006964        1.        1.       1.         0         0         0     -0.00     65.98    178.00

 FLOW DISTRIBUTION FOR SECNO  214451.00          CWSEL     751.85

 STA       108.      178.
   PER Q     100.0
    AREA     577.1
     VEL      10.1

 *SECNO 214452.000

 3265 DIVIDED FLOW

 3370 NORMAL BRIDGE,NRD   7 MIN ELTRD   759.00 MAX ELLC   759.80

 214452.00     15.27    752.07      0.0       0.0    753.58      1.52      0.13      0.01    759.70
```

```
      0.77      0.0      9.88      0.0     0.060     0.040     0.060     0.046    736.80    107.13
  0.006538      20.      20.       20.       2         0         0      -0.00     66.87    178.00

 FLOW DISTRIBUTION FOR SECNO  214452.00          CWSEL      752.07

 STA       107.      178.
   PER Q      100.0
    AREA      591.9
     VEL        9.9

 *SECNO 214453.000

 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    IDC       ICONT     CORAR     TOPWID     ENDST

 214453.00     15.28    752.08      0.0       0.0     753.59     1.51      0.01      0.00     759.70
     5850.        0.    5850.        0.        0.      592.       0.      471.       97.     759.50
      0.77       0.0      9.88      0.0     0.060     0.040     0.060     0.046    736.80    107.10
  0.006526        1.       1.        1.        0         0         0      -0.00     66.90    178.00

 FLOW DISTRIBUTION FOR SECNO  214453.00          CWSEL      752.08

 STA       107.      178.
   PER Q      100.0
    AREA      592.3
     VEL        9.9

 CCHV     0.200 CEHV     0.400
 *SECNO 214550.000

         S

 214550.00     13.29    752.49      0.0       0.0     754.30     1.81      0.59      0.12     748.00
     5850.       86.     4740.     1024.      40.      397.      367.      473.       97.     748.70
      0.77      2.18     11.93      2.79     0.100     0.040     0.100     0.045    739.20     32.67
  0.005814      100.      100.       50.       2         0         0      -0.01    154.92    187.60

 FLOW DISTRIBUTION FOR SECNO  214550.00          CWSEL      752.49

 STA        33.       42.       50.       90.      150.      182.      188.
   PER Q      0.3       1.2      81.0      12.4       5.0       0.1
    AREA     11.6      27.9     397.4     248.3     111.6       7.0
     VEL      1.3       2.6      11.9       2.9       2.6       1.2

 *SECNO 215180.000

 3301 HV CHANGED MORE THAN HVINS

 3470 ENCROACHMENT STATIONS        10.0      298.0  TYPE      1  TARGET      -10.000

         T

 215180.00     15.11    755.11      0.0       0.0     755.31     0.19      0.69      0.32     747.00
     5850.     1304.     4540.       6.     1154.     1146.      17.      495.      100.     752.60
      0.83      1.13      3.96     0.36     0.100     0.040     0.100     0.045    740.00     10.00
  0.000437      650.      650.     500.       2         0         0      -0.01    268.56    278.56
```

```
FLOW DISTRIBUTION FOR SECNO  215180.00          CWSEL      755.11

STA        10.      170.      265.      279.
  PER Q      22.3      77.6       0.1
   AREA    1154.0    1145.8      17.0
    VEL       1.1       4.0       0.4

*SECNO 215380.000

3470 ENCROACHMENT STATIONS        35.0      240.0  TYPE      1  TARGET      -35.000

        U   MANUFACTURED

215380.00     13.58    755.08       0.0       0.0    755.52      0.44      0.12      0.10    744.20
    5850.       607.     5024.      219.      470.     879.      144.      504.      101.    744.20
     0.84      1.29      5.71      1.52     0.100    0.040     0.100     0.045    741.50     60.00
 0.000815      200.      200.      200.         2        0         0     -0.01    176.36    236.36


FLOW DISTRIBUTION FOR SECNO  215380.00          CWSEL      755.08

STA        60.       95.      142.      144.      214.      230.      236.
  PER Q      3.1       6.9       0.3      85.9       3.6       0.2
   AREA    165.7     286.0      18.0     879.2     127.8      16.2
    VEL       1.1       1.4       1.1       5.7       1.6       0.7

CCHV    0.300 CEHV    0.500
*SECNO 215600.000

        V   BROADWAY ST. BRIDGE, LC 756.7, TR 760.6, WIDTH 44, LENGTH 110

215600.00     12.49    755.19       0.0       0.0    755.85      0.66      0.22      0.11    759.10
    5850.        0.     5850.        0.        0.     898.        0.      509.      102.    760.00
     0.85       0.0      6.51       0.0     0.100    0.040     0.100     0.045    742.70    120.00
 0.001584      200.      200.      200.         1        0         0     -0.00     75.00    195.00


FLOW DISTRIBUTION FOR SECNO  215600.00          CWSEL      755.19

STA       120.      195.
  PER Q     100.0
   AREA    898.0
    VEL       6.5

*SECNO 215601.000
   SECND     DEPTH     CWSEL     CRIWS     WSELK        EG        HV        HL     OLOSS   BANK ELEV
   Q         QLOB      QCH       QROB      ALOB       ACH      AROB       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  13 MIN ELTRD   758.70 MAX ELLC    760.00

215601.00     12.29    754.99       0.0       0.0    756.11      1.12      0.03      0.23    759.10
    5850.        0.     5850.        0.        0.     689.        0.      510.      102.    760.00
     0.85       0.0      8.49       0.0     0.100    0.040     0.100     0.045    742.70    120.00
 0.005443       10.       10.       10.         2        0         0   -193.16     75.00    195.00


FLOW DISTRIBUTION FOR SECNO  215601.00          CWSEL      754.99

STA       120.      195.
  PER Q     100.0
```

```
VEL        8.5

*SECNO 215602.000

3370 NORMAL BRIDGE,NRD  13 MIN ELTRD   758.70 MAX ELLC   760.00

215602.00    12.56   755.26     0.0     0.0   756.36     1.10     0.24     0.01   759.10
    5850.       0.    5850.      0.      0.     697.       0.     510.     102.   760.00
     0.85      0.0     8.40     0.0   0.100   0.040    0.100    0.045   742.70   120.00
 0.005382      44.      44.     44.       2       0        0  -205.81    75.00   195.00


FLOW DISTRIBUTION FOR SECNO  215602.00          CWSEL     755.26

STA        120.      195.
  PER Q    100.0
   AREA    696.6
    VEL      8.4

*SECNO 215603.000

3301 HV CHANGED MORE THAN HVINS

215603.00    13.25   755.95     0.0     0.0   756.53     0.58     0.02     0.15   759.10
    5850.       0.    5850.      0.      0.     954.       0.     511.     102.   760.00
     0.85      0.0     6.13     0.0   0.100   0.040    0.100    0.045   742.70   120.00
 0.001320      10.      10.     10.       2       0        0    -0.00    75.00   195.00


FLOW DISTRIBUTION FOR SECNO  215603.00          CWSEL     755.95

STA        120.      195.
  PER Q    100.0
   AREA    954.3
    VEL      6.1

*SECNO 215700.000
3280 CROSS SECTION 215700.00 EXTENDED      5.84 FEET


3470 ENCROACHMENT STATIONS        0.0     130.0  TYPE      1  TARGET      129.999

       W

215700.00    17.25   756.05     0.0     0.0   756.65     0.60     0.11     0.01   744.20
    5850.     216.    5445.    188.     135.     845.     144.     513.     102.   744.20
     0.85     1.60     6.45    1.31   0.100   0.040    0.100    0.045   738.80    35.00
 0.000891     100.     100.    100.       2       0        0    -0.00    95.00   130.00


FLOW DISTRIBUTION FOR SECNO  215700.00          CWSEL     756.05

STA        35.       45.       50.      109.      115.      130.
  PER Q     1.7       2.0      93.1       1.4       1.8
   AREA    80.4      54.7     844.6      53.7      90.4
    VEL     1.3       2.1       6.4       1.5       1.2

*SECNO 216500.000
3280 CROSS SECTION 216500.00 EXTENDED      3.07 FEET


3301 HV CHANGED MORE THAN HVINS
```

```
3470 ENCROACHMENT STATIONS        0.0      625.0  TYPE      1  TARGET      624.999

        X

216500.00    16.07   757.07     0.0      0.0    757.14     0.06     0.32     0.16   760.00
    5850.       0.    2610.    3240.       0.     911.    3772.     546.     106.   747.70
     0.95      0.0     2.85     0.86    0.120    0.050    0.120    0.046   741.00    13.44
 0.000350     720.     700.     400.        2        0        0    -0.04   611.55   625.00

FLOW DISTRIBUTION FOR SECNO  216500.00          CWSEL      757.07

STA        13.      84.     146.     175.     230.     290.     370.     460.     550.     625.
  PER Q      44.6     10.8      4.1      4.7      5.1      9.0     10.1      7.3      4.4
   AREA     911.1    599.7    247.1    347.7    379.3    593.8    668.0    551.0    385.3
    VEL       2.9      1.1      1.0      0.8      0.8      0.9      0.9      0.8      0.7

CCHV    0.100 CEHV    0.300
*SECNO 217050.000
3280 CROSS SECTION 217050.00 EXTENDED      3.23 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

        Y

217050.00    14.93   757.23     0.0      0.0    757.31     0.08     0.17     0.01   749.00
    5850.    1983.    3071.     796.    2239.    1011.     939.     593.     112.   749.40
     1.02     0.89     3.04     0.85    0.120    0.050    0.120    0.046   742.30      0.0
 0.000359     500.     550.     400.        2        0        0    -0.02   525.00   525.00

FLOW DISTRIBUTION FOR SECNO  217050.00          CWSEL      757.23

STA         0.      50.     135.     200.     290.     308.     386.     500.     525.
  PER Q       4.2     11.7      6.6      9.2      2.2     52.5     12.1      1.5
   AREA     309.7    707.9    453.9    628.5    139.2   1010.7    813.5    125.8
    VEL       0.8      1.0      0.9      0.9      0.9      3.0      0.9      0.7

*SECNO 217150.000

3470 ENCROACHMENT STATIONS        100.0      581.0  TYPE      1  TARGET     -100.000

        Z

217150.00    18.52   757.32     0.0      0.0    757.36     0.04     0.04     0.00   744.90
    5850.     826.    4985.      40.    1660.    2895.     102.     613.     114.   745.10
     1.05     0.50     1.72     0.39    0.120    0.050    0.120    0.046   738.80   100.00
 0.000119     190.     200.     210.        1        0        0    -0.03   479.65   579.65

FLOW DISTRIBUTION FOR SECNO  217150.00          CWSEL      757.32

STA       100.     200.     250.     311.     325.     330.     563.     580.
  PER Q       6.1      2.7      3.3      1.3      0.7     85.2      0.7
   AREA     731.0    333.0    406.3    130.3     59.3   2895.5    101.6
    VEL       0.5      0.5      0.5      0.6      0.7      1.7      0.4

*SECNO 217650.000
```

```
AE   DAM AA  UNDER A FOOT BRIDGE,LC 757.3,TR 758.6, WIDTH 16, LENGTH 40

          TOP OF DAM  749.1

           NOTE  BETWEEN DAM AA AND DAM AE, AN EARTH DIKE ABOUT 300 FT LONG

             AND 20 FT WIDE IN THE WATER WAY FORMED A NARROW ISLAND.

             IT WAS HANDLED BY A CROSS SECTION THROUGH THE DYKE

          DAM AE UNDER A FOOT BRIDGE,LC 757.1,TR 758.0,WIDTH 19.5, LENGTH 97

          TOP OF DAM 750.6

 217650.00    13.29   757.09     0.0      0.0    757.58     0.48     0.09     0.13   758.40
     5850.       0.    5850.      0.       0.    1050.       0.      632.     116.   758.60
      1.07      0.0     5.57     0.0    0.120    0.050    0.120    0.046   743.80    52.00
  0.005288     500.     225.     45.        2        0        0    -0.01   133.27   522.00

 FLOW DISTRIBUTION FOR SECNO  217650.00          CWSEL      757.09

 STA        52.      522.
   PER Q     100.0
    AREA    1049.9
     VEL       5.6

 *SECNO 217651.000

 3265 DIVIDED FLOW

 3370 NORMAL BRIDGE,NRD  13 MIN ELTRD   758.00 MAX ELLC    760.60

 217651.00    13.29   757.09     0.0      0.0    757.59     0.50     0.01     0.01   758.40
     5850.       0.    5850.      0.       0.    1031.       0.      632.     116.   758.60
      1.07      0.0     5.67     0.0    0.120    0.050    0.120    0.046   743.80    52.00
  0.005988       1.       1.      1.        0        0        0   -19.24   133.35   522.00

 FLOW DISTRIBUTION FOR SECNO  217651.00          CWSEL      757.09

 STA        52.      522.
   PER Q     100.0
    AREA    1030.9
     VEL       5.7

 *SECNO 217652.000

 3265 DIVIDED FLOW

 3370 NORMAL BRIDGE,NRD  13 MIN ELTRD   758.00 MAX ELLC    760.60

 217652.00    13.32   757.12     0.0      0.0    757.79     0.67     0.15     0.05   758.40
     5850.       0.    5850.      0.       0.     888.       0.      633.     116.   758.60
      1.07      0.0     6.59     0.0    0.120    0.050    0.120    0.046   743.80    52.00
```

```
FLOW DISTRIBUTION FOR SECNO  217652.00          CWSEL    757.12

STA        52.      522.
  PER Q      100.0
   AREA      887.6
    VEL        6.6

*SECNO 217653.000

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    IDC       ICONT     CORAR     TOPWID      ENDST

217653.00    13.37    757.17      0.0       0.0     757.80      0.63      0.01      0.00    758.40
    5850.       0.     5850.       0.        0.      916.        0.      633.      116.     758.60
     1.07      0.0      6.39      0.0     0.120     0.050     0.120     0.046    743.80     52.00
 0.007429       1.        1.       1.         2         0         0     -0.01    136.50    522.00

FLOW DISTRIBUTION FOR SECNO  217653.00          CWSEL    757.17

STA        52.      522.
  PER Q      100.0
   AREA      916.0
    VEL        6.4

*SECNO 217850.000
3280 CROSS SECTION 217850.00 EXTENDED       3.02 FEET

3470 ENCROACHMENT STATIONS        0.0      290.0  TYPE      1  TARGET      289.999

        AF   MANUFACTURED

217850.00    13.82    758.32      0.0       0.0     758.60      0.29      0.76      0.03    750.40
    5850.      191.     4237.     1422.       80.      874.      642.      643.      118.     750.40
     1.09      2.38      4.85      2.22     0.050     0.050     0.050     0.046    744.50      0.00
 0.001115       50.      300.      580.         3         0         0     -0.02    290.00    290.00

FLOW DISTRIBUTION FOR SECNO  217850.00          CWSEL    758.32

STA         0.       20.      100.      110.      250.      290.
  PER Q       3.3      72.4       2.7      16.6       5.0
   AREA      80.3     873.7      54.7     450.3     136.7
    VEL       2.4       4.8       2.9       2.2       2.1

CCHV    0.200 CEHV    0.400
*SECNO 218400.000
3280 CROSS SECTION 218400.00 EXTENDED       3.27 FEET

3470 ENCROACHMENT STATIONS      105.0      740.0  TYPE      1  TARGET      635.000

        AG

218400.00    14.37    758.87      0.0       0.0     758.98      0.11      0.34      0.04    750.40
```

```
      1.15      1.44      3.15      1.11     0.050     0.050     0.065     0.046    744.50    105.00
  0.000439      650.      550.      400.         2         0         0     -0.05    635.00    740.00


FLOW DISTRIBUTION FOR SECNO  218400.00          CWSEL      758.87

STA       105.      200.      206.      311.      400.      500.      600.      700.      740.
  PER Q     7.9       1.1      64.9      12.5       4.3       4.5       3.4       1.2
   AREA   331.4      37.0    1204.4     491.1     271.8     276.8     236.8      89.1
    VEL     1.4       1.8       3.2       1.5       0.9       0.9       0.9       0.8

CCHV    0.200 CEHV    0.400
*SECNO 219350.000
3280 CROSS SECTION 219350.00 EXTENDED      2.99 FEET


3470 ENCROACHMENT STATIONS       105.0      395.0  TYPE       1  TARGET       290.000

         AH   MANUFACTURED

219350.00     13.39    759.19       0.0       0.0    759.51      0.32      0.44      0.08    750.80
    5850.      140.      5299.      411.      169.     1118.      337.      712.      132.    750.80
     1.20      0.83      4.74      1.22     0.080     0.040     0.080     0.046    745.80    114.15
  0.000686      850.      820.      800.         2         0         0     -0.01    280.85    395.00


FLOW DISTRIBUTION FOR SECNO  219350.00          CWSEL      759.19

STA       114.      135.      196.      200.      303.      330.      395.
  PER Q     0.1       1.9       0.4      90.6       4.1       2.9
   AREA    12.4     133.7      23.2    1117.8     156.4     180.3
    VEL     0.3       0.8       1.1       4.7       1.5       0.9

CCHV    0.300 CEHV    0.500
*SECNO 219600.000

3265 DIVIDED FLOW


         AI   M-20 BRIDGE, LC 767.1, TR 772, WIDTH 55, LENGTH 130

219600.00     12.48    759.28       0.0       0.0    759.88      0.61      0.23      0.14    772.00
    5850.        0.     5850.        0.        0.      936.        0.      718.      133.    772.00
     1.21       0.0      6.25       0.0     0.100     0.040     0.080     0.046    746.80    102.00
  0.002281      200.      200.      200.         2         0         0     -0.01    120.55    227.55


FLOW DISTRIBUTION FOR SECNO  219600.00          CWSEL      759.28

STA       102.      228.
  PER Q   100.0
   AREA   935.9
    VEL     6.3

*SECNO 219601.000

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     IDC      ICONT     CORAR     TOPWID      ENDST
```

```
3370 NORMAL BRIDGE,NRD    0 MIN ELTRD   772.00 MAX ELLC   767.10

219601.00     12.50    759.30      0.0       0.0    759.91      0.60      0.02      0.00    772.00
    5850.        0.     5850.       0.        0.      938.        0.      718.      133.    772.00
     1.21       0.0      6.23      0.0     0.100     0.040     0.080     0.046    746.80    102.00
 0.002264       10.       10.       10.         1         0         0     -0.01    120.62    227.62


FLOW DISTRIBUTION FOR SECNO  219601.00          CWSEL     759.30

STA       102.      228.
  PER Q     100.0
   AREA     938.4
    VEL       6.2

*SECNO 219602.000

3265 DIVIDED FLOW


3370 NORMAL BRIDGE,NRD    0 MIN ELTRD   772.00 MAX ELLC   767.10

219602.00     12.65    759.45      0.0       0.0    760.03      0.58      0.12      0.01    772.00
    5850.        0.     5850.       0.        0.      958.        0.      719.      133.    772.00
     1.21       0.0      6.11      0.0     0.100     0.040     0.080     0.046    746.80    102.00
 0.002135       55.       55.       55.         2         0         0     -0.01    121.00    228.00


FLOW DISTRIBUTION FOR SECNO  219602.00          CWSEL     759.45

STA       102.      228.
  PER Q     100.0
   AREA     957.5
    VEL       6.1

*SECNO 219603.000

3265 DIVIDED FLOW

219603.00     12.68    759.48      0.0       0.0    760.06      0.58      0.02      0.00    772.00
    5850.        0.     5850.       0.        0.      960.        0.      719.      133.    772.00
     1.21       0.0      6.09      0.0     0.100     0.040     0.080     0.046    746.80    102.00
 0.002117       10.       10.       10.         0         0         0     -0.01    121.00    228.00


FLOW DISTRIBUTION FOR SECNO  219603.00          CWSEL     759.48

STA       102.      228.
  PER Q     100.0
   AREA     960.2
    VEL       6.1

*SECNO 219700.000

        AJ

219700.00     11.98    759.98      0.0       0.0    760.25      0.27      0.10      0.09    750.80
    5850.       60.     5772.      18.        77.     1370.       26.      722.      133.    756.00
     1.22      0.78      4.21     0.70     0.100     0.040     0.080     0.046    748.00     70.17
 0.000595      100.      100.      100.         2         0         0     -0.01    177.75    247.92


FLOW DISTRIBUTION FOR SECNO  219700.00          CWSEL     759.98

STA        70.       85.       95.      100.      235.      248.
```

```
    AREA      14.7      29.8      32.9    1370.4      25.7
     VEL       0.4       0.7       1.0       4.2       0.7

CCHV    0.100 CEHV    0.300
*SECNO 220400.000

        AK

220400.00    11.22    760.42       0.0       0.0    760.55      0.14      0.29      0.01    757.60
    5850.     1373.     4477.        0.     2262.     1323.        0.      757.      139.    760.60
     1.29      0.61      3.38       0.0     0.120     0.035     0.100     0.045    749.20     47.91
 0.000345      510.      680.      700.         2         0         0     -0.06    679.70    727.60


FLOW DISTRIBUTION FOR SECNO  220400.00          CWSEL     760.42

STA        48.       60.      200.      350.      400.      500.      582.      728.
  PER Q     0.2       6.8       6.0       2.0       5.4       3.1      76.5
   AREA    24.6     632.5     602.7     203.4     481.8     317.2    1323.0
    VEL     0.4       0.6       0.6       0.6       0.7       0.6       3.4

*SECNO 221650.000
3280 CROSS SECTION 221650.00 EXTENDED       4.45 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          0.0      400.0  TYPE       1  TARGET       399.999

        AL

221650.00    11.14    760.94       0.0       0.0    761.36      0.42      0.72      0.08    759.80
    5850.       66.     4697.     1087.       59.      819.      827.      827.      152.    755.00
     1.35      1.12      5.74      1.31     0.050     0.040     0.110     0.045    749.80     60.00
 0.001351     1080.     1200.     1200.         1         0         0     -0.04    340.00    400.00


FLOW DISTRIBUTION FOR SECNO  221650.00          CWSEL     760.94

STA        60.      116.      209.      300.      400.
  PER Q     1.1      80.3      10.7       7.8
   AREA    59.0     818.6     441.7     385.3
    VEL     1.1       5.7       1.4       1.2

*SECNO 222720.000
3280 CROSS SECTION 222720.00 EXTENDED       3.47 FEET


        AM

222720.00    13.67    762.27       0.0       0.0    762.44      0.17      1.06      0.02    753.00
    5850.     2788.     3062.        0.     2698.      690.        0.      881.      163.    769.10
     1.45      1.03      4.43       0.0     0.120     0.045     0.045     0.045    748.60      0.0
 0.000907     1000.     1000.      610.         2         0         0     -0.04    679.92    679.92


FLOW DISTRIBUTION FOR SECNO  222720.00          CWSEL     762.27

STA         0.      100.      200.      300.      400.      500.      570.      582.      610.      693.
```

AREA	387.3	412.3	417.3	427.3	427.3	288.6	78.9	259.6	690.5
VEL	0.9	1.0	1.0	1.0	1.0	1.0	1.2	1.6	4.4

*SECNO 223990.000
3280 CROSS SECTION 223990.00 EXTENDED 2.91 FEET

3470 ENCROACHMENT STATIONS 250.0 1250.0 TYPE 1 TARGET -250.000

AN

223990.00	12.31	762.91	0.0	0.0	762.98	0.07	0.53	0.01	753.50
5850.	2729.	2086.	1035.	3786.	641.	606.	957.	177.	753.80
1.59	0.72	3.26	1.71	0.110	0.045	0.060	0.046	750.60	250.00
0.000391	650.	1180.	1250.	2	0	0	-0.02	1000.00	1250.00

FLOW DISTRIBUTION FOR SECNO 223990.00 CWSEL 762.91

STA	250.	600.	700.	800.	900.	1000.	1096.	1100.	1157.	1175.	1250.
PER Q	21.0	5.8	5.6	5.1	4.5	4.3	0.3	35.6	5.9	11.8	
AREA	1649.1	461.2	451.2	426.2	396.2	375.5	26.6	640.5	162.2	443.4	
VEL	0.7	0.7	0.7	0.7	0.7	0.7	0.7	3.3	2.1	1.6	

MOORE BUSINESS FORMS, INC 27

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Mount Pleasant, City of

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Input Data

00BREAK00

Chippewa River – Mt. pleasant 102080

(i) The two dams and dike between Sections AA & AE regarded as one unit.

(ii) X2 Card of Section 215602 been installed.

revised
RECEIVED
OCT 31 1980
WATER MANAGEMENT

MOORE BUSINESS FORMS INC 27

```
*****************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53
*****************************************************

C
T1      CHIPPEWA RIVER AT MOUNT PLEASANT, PROJECT NO. 8545,MOUNT
T2      CHIPPEWA RIVER AT MT. PLEASANT,
T3      CHIPPEWA RIVER AT MT. PLEASANT

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        4.        0.        0.  0.002828      0.0       0.0       0.   740.000     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       0.0

J5  LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS********

    -10.000     0.0  217150.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0
NC      0.070     0.100     0.040     0.100     0.300     0.0       0.0       0.0       0.0       0.0
QT      7.000  3520.000  5130.000  5850.000  7590.000  2170.000  5850.000  3450.000     0.0       0.0
ET      0.0       0.0       0.0       0.0       0.0       0.0       9.100     0.0     450.000   710.000

        A

X1 204095.000    21.000   600.000   701.000     0.0       0.0       0.0       0.0       0.0       0.0
X3      0.0       0.0       0.0     430.000     0.0       0.0       0.0       0.0       0.0       0.0
GR    749.500     0.0     748.000    70.000   744.000   100.000   741.900   200.000   742.100   350.000
GR    742.000   440.000   738.000   460.000   738.000   540.000   739.800   570.000   738.000   590.000
GR    739.500   600.000   737.300   607.000   734.000   610.000   732.200   630.000   731.800   645.000
GR    730.600   665.000   731.700   680.000   734.000   698.000   735.700   701.000   737.200   714.000
GR    747.300   767.000     0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
NC      0.100     0.100     0.045     0.0       0.0       0.0       0.0       0.0       0.0       0.0
ET      0.0       0.0       0.0       0.0       0.0       0.0       9.100     0.0     550.000  1100.000

        B

X1 204595.000    22.000   800.000   887.000   400.000   550.000   550.000     0.0       0.0       0.0
X3      0.0       0.0       0.0     540.000     0.0    1110.000     0.0       0.0       0.0       0.0
GR    752.500     0.0     750.000   100.000   738.000   130.000   739.400   170.000   737.500   230.000
GR    739.800   320.000   738.000   370.000   737.500   470.000   738.000   550.000   738.000   730.000
GR    742.000   770.000   739.500   800.000   734.500   808.000   731.900   828.000   731.700   848.000
GR    731.900   868.000   734.500   884.000   737.200   887.000   738.500   950.000   739.400  1050.000
GR    738.000  1150.000   752.000  1200.000     0.0       0.0       0.0       0.0       0.0       0.0
NC      0.100     0.060     0.045     0.200     0.400     0.0       0.0       0.0       0.0       0.0
ET      0.0       0.0       0.0       0.0       0.0       0.0       9.100     0.0     430.000  1344.000

        C

X1 205985.000    17.000  1200.000  1344.000   850.000  1050.000  1390.000     0.0       0.0       0.0
X3      0.0       0.0       0.0     420.000     0.0       0.0       0.0       0.0       0.0       0.0
GR    739.000     0.0     740.800    50.000   741.600   140.000   740.000   230.000   739.800   270.000
GR    740.000   470.000   737.800   490.000   739.800   510.000   740.500  1000.000   737.300  1200.000
GR    735.400  1209.000   733.400  1230.000   732.800  1245.000   731.800  1265.000   735.400  1283.000
GR    737.500  1289.000   757.100  1344.000     0.0       0.0       0.0       0.0       0.0       0.0
```

ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	70.000	620.000
D										
X1	207370.000	20.000	400.000	490.000	1000.000	600.000	1385.000	0.0	0.0	0.0
GR	744.800	40.000	741.500	60.000	740.500	230.000	738.500	240.000	740.500	250.000
GR	741.000	300.000	739.900	400.000	737.500	407.000	736.800	425.000	736.200	427.000
GR	733.700	440.000	734.500	450.000	734.400	460.000	735.000	465.000	734.200	475.000
GR	736.200	482.000	739.300	490.000	741.800	550.000	743.000	630.000	750.000	730.000
NC	0.080	0.080	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	240.000	630.000
E										
X1	208600.000	16.000	295.000	375.000	1000.000	1230.000	1060.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	230.000	0.0	670.000	0.0	0.0	0.0	0.0
GR	747.200	0.0	745.700	8.000	740.400	19.000	742.400	45.000	742.400	132.000
GR	742.500	224.000	742.700	295.000	736.700	298.000	734.900	299.000	732.200	320.000
GR	733.600	345.000	736.700	364.000	740.700	375.000	743.400	500.000	744.000	700.000
GR	749.900	775.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.100	0.100	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	830.000	1425.000
F										
X1	209590.000	27.000	1350.000	1420.000	700.000	800.000	1000.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	720.000	0.0	0.0	0.0	0.0	0.0	0.0
GR	750.000	210.000	748.000	211.000	746.000	264.000	744.000	265.000	743.100	270.000
GR	743.100	355.000	744.000	360.000	746.000	365.000	746.000	400.000	744.800	500.000
GR	746.000	608.000	752.300	710.000	746.000	795.000	744.000	825.000	743.300	870.000
GR	744.000	923.000	744.000	1070.000	746.400	1100.000	744.100	1225.000	742.100	1350.000
GR	738.600	1360.000	736.400	1380.000	734.200	1400.000	738.600	1418.000	741.300	1420.000
GR	742.300	1430.000	751.600	1444.000	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.080	0.100	0.047	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	710.000	1120.000
G CORPORATE LIMIT										
X1	210140.000	29.000	725.000	1013.000	450.000	500.000	550.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	630.000	0.0	0.0	0.0	0.0	0.0	0.0
GR	750.000	88.000	748.000	94.000	746.000	135.000	744.000	140.000	743.600	150.000
GR	743.600	230.000	750.200	250.000	750.000	278.000	748.000	279.000	747.200	400.000
GR	746.000	600.000	747.500	700.000	740.700	725.000	737.500	732.000	736.600	743.000
GR	736.100	754.000	737.500	766.000	738.200	770.000	738.400	778.000	743.100	790.000
GR	742.300	890.000	743.300	944.000	737.500	958.000	736.500	975.000	736.000	990.000
GR	737.500	1003.000	742.100	1013.000	746.000	1125.000	750.100	1162.000	0.0	0.0
NC	0.100	0.100	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	650.000	950.000
H										
X1	210660.000	16.000	682.000	830.000	580.000	400.000	500.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	590.000	0.0	960.000	0.0	0.0	0.0	0.0
GR	750.000	490.000	748.000	560.000	747.000	600.000	744.600	682.000	738.200	698.000
GR	736.500	710.000	737.000	725.000	738.900	735.000	740.300	743.000	738.200	752.000
GR	738.200	826.000	739.500	830.000	744.800	1000.000	746.500	1200.000	748.200	1280.000
GR	750.800	1306.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.100	0.100	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	90.000	185.000

MOORE BUSINESS FORMS INC 27

I MANUFACTURED

X1	211360.000	12.000	90.000	182.000	820.000	550.000	700.000	0.0	0.0	0.0
GR	752.600	50.000	750.000	60.000	746.000	80.000	743.200	86.000	741.400	90.000
GR	738.600	110.000	736.900	125.000	736.700	145.000	738.000	160.000	741.400	182.000
GR	750.000	205.000	750.000	250.000	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	70.000	182.000

J MANUFACTURED

X1	211800.000	11.000	90.000	182.000	400.000	480.000	400.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	60.000	0.0	0.0	0.0	0.0	0.0	0.0
GR	750.000	20.000	750.000	40.000	748.000	55.000	741.400	90.000	738.600	110.000
GR	736.900	125.000	736.700	145.000	738.000	160.000	741.400	182.000	750.000	190.000
GR	756.000	200.000	0.0	0.0	0.0	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

K PICKARD AVE BRIDGE, MAX LC=755.5, MIN TR=758.7, WIDTH=58, LENGTH=132

X1	212000.000	18.000	102.000	230.000	550.000	700.000	600.000	0.910	0.0	0.0
GR	755.600	0.0	757.200	102.000	751.200	102.000	741.400	124.000	738.200	134.000
GR	754.400	134.000	754.400	138.000	738.400	138.000	732.900	160.000	733.100	180.000
GR	738.400	197.000	755.100	197.000	755.100	201.000	738.400	201.000	741.400	209.000
GR	750.600	230.000	758.700	230.000	760.800	332.000	0.0	0.0	0.0	0.0
X1	212001.000	0.0	0.0	0.0	10.000	10.000	10.000	0.0	0.0	0.0
X2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.910	0.0
BT	6.000	0.0	755.600	755.600	102.000	757.200	754.000	138.000	757.600	754.400
BT	197.000	758.300	755.100	230.000	758.700	755.500	332.000	760.800	760.800	0.0
X1	212002.000	0.0	0.0	0.0	58.000	58.000	58.000	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
X1	212003.000	0.0	0.0	0.0	10.000	10.000	10.000	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	50.000	160.000

L MANUFACTURED

X1	212130.000	10.000	50.000	160.000	125.000	250.000	200.000	0.0	0.0	0.0
GR	756.800	0.0	754.400	40.000	741.400	50.000	738.200	73.000	736.200	93.000
GR	736.400	113.000	738.900	126.000	740.000	147.000	741.400	160.000	757.200	170.000
NC	0.100	0.100	0.040	0.100	0.300	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	20.000	150.000

M

X1	212340.000	11.000	20.000	135.000	190.000	210.000	190.000	0.0	0.0	0.0
GR	755.100	0.0	753.300	20.000	739.900	45.000	737.700	65.000	738.300	85.000
GR	738.700	105.000	739.900	125.000	745.400	135.000	744.700	160.000	751.400	176.000
GR	754.500	218.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.100	0.100	0.045	0.200	0.400	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	100.000	790.000

N

X1	213420.000	18.000	117.000	206.000	1150.000	650.000	1050.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	0.0	0.0	810.000	0.0	0.0	0.0	0.0

MOORE BUSINESS FORMS INC 27

```
GR      738.000     140.000     739.600     160.000     739.900     180.000     740.600     202.000     743.700     206.000
GR      744.600     226.000     741.100     230.000     745.900     310.000     747.000     600.000     747.700     675.000
GR      746.000     750.000     746.000     850.000     750.000     880.000       0.0         0.0         0.0         0.0
ET        0.0         0.0         0.0         0.0         0.0         0.0       9.100       0.0        40.000     410.000

        O

X1  213880.000      15.000     100.000     180.000     400.000     500.000     400.000       0.0         0.0         0.0
GR      754.000       0.0       752.000      20.000     750.000      25.000     748.000      35.000     746.000      95.000
GR      746.700     100.000     741.600     111.000     740.900     115.000     740.600     123.500     741.600     135.500
GR      741.800     177.500     746.000     180.000     746.800     250.000     746.500     360.000     746.800     420.000
NC        0.060       0.060       0.040       0.100       0.300       0.0         0.0         0.0         0.0         0.0

        P   FOOT BRIDGE ON WEST SIDE ISLAND PARK, TRUSS, LC=752.9, AS REGULAR

X1  214200.000      16.000     159.000     215.000     350.000     320.000     350.000       0.0         0.0         0.0
X3        0.0         0.0         0.0         0.0         0.0       300.000       0.0         0.0         0.0         0.0
GR      759.300       0.0       759.000      9.000     747.100      77.000     752.900     157.000     752.900     159.000
GR      747.200     159.000     741.800     167.000     740.400     177.000     739.500     187.000     740.000     195.000
GR      741.800     200.000     749.400     215.000     752.800     215.000     752.800     225.000     749.300     239.000
GR      747.000     325.000       0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0

X1  214201.000       0.0         0.0         0.0         4.500       4.500       4.500       0.0         0.0         0.0

        Q

X1  214400.000       7.000      94.000     188.000     150.000     270.000     200.000       0.0         0.0         0.0
GR      750.000      94.000     744.200     100.000     743.000     120.000     740.200     140.000     741.800     160.000
GR      744.200     182.000     745.000     188.000       0.0         0.0         0.0         0.0         0.0         0.0

        R   ANN ARBOR R. R. BRIDGE, LC=752.5, TR=759.5, WIDTH=18, LENGTH=82

X1  214450.000      16.000     101.000     178.000      40.000      40.000      40.000       0.0         0.0         0.0
GR      759.800       0.0       759.700     101.000     753.600     101.000     748.600     121.000     744.200     121.000
GR      743.700     125.000     752.500     125.000     752.500     129.000     743.200     129.000     740.700     140.000
GR      736.800     150.000     741.800     160.000     744.200     178.000     759.500     178.000     759.400     182.000
GR      759.000     300.000       0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0

X1  214451.000       0.0         0.0         0.0         1.000       1.000       1.000       0.0         0.0         0.0
BT        7.000       0.0       759.800     759.800     101.000     759.700     756.200     125.000     759.500     756.200
BT      125.000     759.500     752.500     178.000     759.500     752.500     182.000     759.400     759.400     300.000
BT      759.000     759.000       0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0

X1  214452.000       0.0         0.0         0.0        20.000      20.000      20.000       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

X1  214453.000       0.0         0.0         0.0         1.000       1.000       1.000       0.0         0.0         0.0
NC        0.100       0.100       0.040       0.200       0.400       0.0         0.0         0.0         0.0         0.0
ET        0.0         0.0         0.0         0.0         0.0         0.0       9.100       0.0        45.000     180.000

        S

X1  214550.000      13.000      50.000      90.000     100.000      50.000     100.000       0.0         0.0         0.0
GR      760.000       8.000     758.000      12.000     750.000      42.000     748.000      50.000     744.200      54.000
GR      742.000      62.000     739.200      70.000     742.000      78.000     744.100      88.000     748.700      90.000
GR      748.000     150.000     750.000     182.000     758.000     200.000       0.0         0.0         0.0         0.0
                                                                                 9.100       0.0        10.000     265.000
```

MOORE BUSINESS FORMS INC 27

```
        T

X1 215180.000     9.000   170.000   265.000   650.000   500.000   650.000     0.0       0.0       0.0
X3       0.0       0.0       0.0    10.000       0.0       0.0       0.0       0.0       0.0       0.0
GR     748.900       0.0   747.000   170.000   743.800   173.000   741.000   190.000   742.600   210.000
GR     740.000   225.000   743.800   249.000   752.600   265.000   758.700   298.000       0.0       0.0
ET       0.0       0.0       0.0       0.0       0.0       0.0     9.100       0.0    70.000   230.000


        U   MANUFACTURED

X1 215380.000    10.000   144.000   214.000   200.000   200.000   200.000     0.0       0.0       0.0
X3       0.0       0.0       0.0    35.000       0.0       0.0       0.0       0.0       0.0       0.0
GR     750.700    60.000   750.000    95.000   748.000   142.000   744.200   144.000   742.800   160.000
GR     741.500   180.000   741.800   198.000   744.200   214.000   750.000   230.000   758.000   240.000
NC       0.100     0.100     0.040     0.300     0.500       0.0       0.0       0.0       0.0       0.0


        V   BROADWAY ST. BRIDGE, LC=756.7, TR=760.6, WIDTH=44, LENGTH=110

X1 215600.000    15.000   120.000   195.000   200.000   200.000   200.000     0.0       0.0       0.0
GR     758.700   100.000   759.100   120.000   744.200   120.000   744.000   126.000   743.500   134.000
GR     743.100   140.000   743.000   146.000   742.700   158.000   742.700   168.000   742.800   175.000
GR     743.200   182.000   743.800   190.000   744.200   195.000   760.000   195.000   760.000   210.000


X1 215601.000       0.0       0.0       0.0    10.000    10.000    10.000       0.0       0.0       0.0
BT      13.000   100.000   758.700   758.700   120.000   759.100   744.200   126.000   759.300   748.400
BT     134.000   759.500   752.100   140.000   759.600   754.100   146.000   759.800   755.600   158.000
BT     760.000   756.600   168.000   760.000   756.000   175.000   760.000   754.500   182.000   760.000
BT     752.500   190.000   760.000   748.500   195.000   760.000   744.200   210.000   760.000   760.000


X1 215602.000       0.0       0.0       0.0    44.000    44.000    44.000       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


X1 215603.000       0.0       0.0       0.0    10.000    10.000    10.000       0.0       0.0       0.0
ET       0.0       0.0       0.0       0.0       0.0       0.0     9.100       0.0    40.000   125.000


        W

X1 215700.000     9.000    50.000   109.000   100.000   100.000   100.000     0.0       0.0       0.0
X3       0.0       0.0       0.0       0.0       0.0   130.000       0.0       0.0       0.0       0.0
GR     750.000    35.000   746.000    45.000   744.200    50.000   742.700    63.000   741.200    80.000
GR     738.800    93.000   744.200   109.000   750.000   115.000   750.200   200.000       0.0       0.0
NC       0.120     0.120     0.050       0.0       0.0       0.0       0.0       0.0       0.0       0.0
ET       0.0       0.0       0.0       0.0       0.0       0.0     9.100       0.0    10.000   610.000


        X

X1 216500.000    16.000    10.000    84.000   720.000   400.000   700.000     0.0       0.0       0.0
X3       0.0       0.0       0.0       0.0       0.0   625.000       0.0       0.0       0.0       0.0
GR     760.000    10.000   744.700    28.000   741.000    42.000   741.500    55.000   742.200    70.000
GR     744.700    83.000   747.700    84.000   747.100   146.000   750.000   175.000   751.500   230.000
GR     750.000   290.000   749.300   370.000   750.000   460.000   751.900   550.000   752.000   660.000
GR     754.000   665.000       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
NC       0.0       0.0       0.0     0.100     0.300       0.0       0.0       0.0       0.0       0.0
ET       0.0       0.0       0.0       0.0       0.0       0.0     9.100       0.0    10.000   505.000
```

```
X1 217050.000     20.000    308.000   386.000   500.000   400.000   550.000     0.0       0.0       0.0
GR     754.000      0.0    752.000    13.000   750.000    38.000   748.000    50.000   748.000    58.000
GR     750.000   135.000   750.500   200.000   750.000   290.000   749.000   308.000   744.900   316.000
GR     743.400   330.000   742.300   345.000   743.100   358.000   744.900   371.000   745.600   381.000
GR     749.400   386.000   750.300   406.000   750.000   500.000   752.000   515.000   756.000   525.000
ET       0.0       0.0       0.0       0.0       0.0       0.0     9.100       0.0     110.000   563.000


        Z

X1 217150.000     19.000   330.000   563.000   190.000   210.000   200.000     0.0       0.0       0.0
X3       0.0       0.0       0.0     100.000     0.0       0.0       0.0       0.0       0.0       0.0
GR     750.000    30.000   750.000   200.000   751.300   250.000   750.000   311.000   746.000   325.000
GR     744.900   330.000   743.400   343.000   742.300   357.000   743.100   369.000   744.900   381.000
GR     749.800   385.000   750.800   410.000   745.100   475.000   742.700   495.000   741.000   511.000
GR     738.800   530.000   742.000   550.000   745.100   563.000   758.300   581.000     0.0       0.0


        AE    DAM(AA) UNDER A FOOT BRIDGE,LC=757.3,TR=758.6, WIDTH=16, LENGTH=40

              TOP OF DAM =749.1

              NOTE: BETWEEN DAM AA AND DAM AE, AN EARTH DIKE ABOUT 300 FT LONG

                AND 20 FT WIDE IN THE WATER WAY FORMED A NARROW ISLAND.

                IT WAS HANDLED BY A CROSS SECTION THROUGH THE DYKE

              DAM AE UNDER A FOOT BRIDGE,LC=757.1,TR=758.0,WIDTH=19.5, LENGTH=97

              TOP OF DAM=750.6

X1 217650.000     34.000    52.000   522.000   500.000    45.000   225.000     0.0       0.0       0.0
GR     758.800      0.0    758.400    52.000   748.200    52.000   748.200    62.000   757.100    62.000
GR     757.100    63.500   748.200    63.500   748.200    76.500   757.100    76.500   757.100    78.000
GR     748.200    78.000   748.200    90.000   757.100    90.000   756.700   110.000   748.200   110.000
GR     748.200   122.000   756.700   122.000   756.700   123.500   748.200   123.500   748.500   137.000
GR     756.700   137.000   756.700   138.500   748.500   138.500   748.800   148.500   758.300   148.500
GR     758.300   180.000   758.700   482.000   749.100   482.000   746.000   493.000   743.800   505.000
GR     747.500   515.000   750.000   522.000   758.600   522.000   760.600   585.000     0.0       0.0


X1 217651.000      0.0       0.0       0.0       1.000     1.000     1.000     0.0       0.0       0.0
BT      13.000      0.0    758.800   758.800    52.000   758.400   757.100    62.000   758.300   757.100
BT      78.000   758.200   757.100    90.000   758.100   757.100   110.000   758.000   756.700   122.000
BT     758.100   756.700   137.000   758.200   756.700   148.500   758.300   756.700   180.000   758.300
BT     758.300   482.000   758.700   757.300   522.000   758.600   757.300   585.000   760.600   760.600


X1 217652.000     34.000    52.000   522.000    19.500    19.500    19.500     0.0       0.0       0.0
BT      13.000      0.0    758.800   758.800    52.000   758.400   757.100    62.000   758.300   757.100
BT      78.000   758.200   757.100    90.000   758.100   757.100   110.000   758.000   756.700   122.000
BT     758.100   756.700   137.000   758.200   756.700   148.500   758.300   756.700   180.000   758.300
BT     758.300   482.000   758.700   757.300   522.000   758.600   757.300   585.000   760.600   760.600
GR     758.800      0.0    758.400    52.000   750.600    52.000   750.600    62.000   757.100    62.000
GR     757.100    63.500   750.600    63.500   750.600    76.500   757.100    76.500   757.100    78.000
GR     750.600    78.000   750.300    90.000   757.100    90.000   756.700   110.000   750.200   110.000
GR     750.000   122.000   756.700   122.000   756.700   123.500   750.000   123.500   750.200   137.000
GR     756.700   137.000   756.700   138.500   750.200   138.500   750.200   148.500   758.300   148.500
GR     758.300   180.000   758.700   482.000   749.100   482.000   746.000   493.000   743.800   505.000
GR     747.500   515.000   750.000   522.000   758.600   522.000   760.600   585.000     0.0       0.0


X1 217653.000      0.0       0.0       0.0       1.000     1.000     1.000     0.0       0.0       0.0
```

MOORE BUSINESS FORMS INC 27

ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	10.000	290.000

AF MANUFACTURED

X1	217850.000	10.000	20.000	100.000	50.000	580.000	300.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	0.0	0.0	290.000	0.0	0.0	0.0	0.0
GR	758.200	0.0	750.400	20.000	747.000	38.000	744.500	61.000	748.000	80.000
GR	750.400	100.000	755.300	110.000	754.900	250.000	754.900	400.000	755.300	600.000
NC	0.050	0.065	0.050	0.200	0.400	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	120.000	740.000

AG

X1	218400.000	15.000	206.000	311.000	650.000	400.000	550.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	105.000	0.0	740.000	0.0	0.0	0.0	0.0
GR	755.600	0.0	755.800	100.000	755.000	200.000	750.400	206.000	747.000	230.000
GR	744.500	260.000	748.000	285.000	750.400	311.000	756.300	400.000	756.000	500.000
GR	756.200	600.000	756.800	700.000	756.000	800.000	756.100	900.000	755.600	1100.000
NC	0.080	0.080	0.040	0.200	0.400	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	195.000	395.000

AH MANUFACTURED

X1	219350.000	12.000	200.000	303.000	850.000	800.000	820.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	105.000	0.0	395.000	0.0	0.0	0.0	0.0
GR	760.000	100.000	758.000	135.000	756.000	196.000	750.800	200.000	745.800	223.000
GR	748.700	243.000	748.300	263.000	748.100	283.000	750.800	303.000	756.000	330.000
GR	756.900	400.000	756.200	500.000	0.0	0.0	0.0	0.0	0.0	0.0
NC	0.100	0.080	0.040	0.300	0.500	0.0	0.0	0.0	0.0	0.0

AI M-20 BRIDGE, LC=767.1, TR=772, WIDTH=55, LENGTH=130

X1	219600.000	18.000	102.000	228.000	200.000	200.000	200.000	0.0	0.0	0.0
GR	772.000	102.000	758.200	102.000	750.800	118.000	746.800	130.000	748.100	145.000
GR	750.800	156.000	752.700	157.000	752.700	163.000	767.100	163.000	767.100	168.000
GR	752.700	168.000	752.700	171.000	750.800	172.000	748.100	180.000	749.800	190.000
GR	750.800	197.000	759.400	228.000	772.000	228.000	0.0	0.0	0.0	0.0
X1	219601.000	0.0	0.0	0.0	10.000	10.000	10.000	0.0	0.0	0.0
X2	0.0	0.0	0.0	767.100	772.000	0.0	0.0	0.0	0.0	0.0
X1	219602.000	0.0	0.0	0.0	55.000	55.000	55.000	0.0	0.0	0.0
X2	0.0	0.0	0.0	767.100	772.000	0.0	0.0	0.0	0.0	0.0
X1	219603.000	0.0	0.0	0.0	10.000	10.000	10.000	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	100.000	235.000

AJ

X1	219700.000	13.000	100.000	235.000	100.000	100.000	100.000	0.0	0.0	0.0
GR	770.000	25.000	760.000	70.000	758.000	85.000	756.000	95.000	750.800	100.000
GR	748.900	124.000	748.000	149.000	749.900	174.000	750.300	199.000	750.800	227.000
GR	756.000	235.000	760.000	248.000	770.000	262.000	0.0	0.0	0.0	0.0
NC	0.120	0.100	0.035	0.100	0.300	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	80.000	728.000

MOORE BUSINESS FORMS INC. 27

X1	220400.000	15.000	582.000	728.000	510.000	700.000	680.000	0.0	0.0	0.0
GR	770.000	0.0	760.000	50.000	756.000	60.000	755.800	200.000	757.000	350.000
GR	755.700	400.000	755.500	500.000	757.600	582.000	751.400	597.000	749.900	625.000
GR	749.900	650.000	749.200	680.000	751.400	708.000	760.600	728.000	762.000	750.000
NC	0.050	0.110	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	116.000	390.000

AL

X1	221650.000	13.000	116.000	209.000	1080.000	1200.000	1200.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	0.0	0.0	400.000	0.0	0.0	0.0	0.0
GR	760.000	60.000	759.800	116.000	753.500	131.000	751.800	142.000	750.000	160.000
GR	749.800	180.000	751.800	196.000	755.000	209.000	757.200	300.000	757.000	400.000
GR	756.800	500.000	757.100	550.000	756.500	600.000	0.0	0.0	0.0	0.0
NC	0.120	0.045	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	20.000	693.000

AM

X1	222720.000	15.000	610.000	693.000	1000.000	610.000	1000.000	0.0	0.0	0.0
GR	758.800	0.0	758.000	100.000	758.300	200.000	757.900	300.000	758.100	400.000
GR	757.900	500.000	758.400	570.000	753.000	582.000	753.000	610.000	752.400	611.000
GR	751.400	625.000	749.800	635.000	748.600	650.000	752.400	661.000	769.100	693.000
NC	0.110	0.060	0.045	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ET	0.0	0.0	0.0	0.0	0.0	0.0	9.100	0.0	265.000	1230.000

AN

X1	223990.000	17.000	1100.000	1157.000	650.000	1250.000	1180.000	0.0	0.0	0.0
X3	0.0	0.0	0.0	250.000	0.0	0.0	0.0	0.0	0.0	0.0
GR	770.000	0.0	760.000	60.000	758.200	200.000	758.200	600.000	758.400	700.000
GR	758.400	800.000	758.900	900.000	759.000	1000.000	759.000	1096.000	753.500	1100.000
GR	750.900	1115.000	751.300	1130.000	750.600	1140.000	753.500	1156.000	753.800	1157.000
GR	754.000	1175.000	760.000	1250.000	0.0	0.0	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

MOORE BUSINESS FORMS, INC 27

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Mount Pleasant, City of

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Summary

00BREAK00

```
*****************************************
HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
ERROR CORR -  01,02,03
MODIFICATION -  50,51,52,53
*****************************************
```

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

CHIPPEWA RIVER AT MT. PL

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
204095.000	0.0	0.0	0.0	730.60	3520.00	738.22	0.0	738.82	28.28	6.25	602.26	661.91
204095.000	0.0	0.0	0.0	730.60	5130.00	738.22	0.0	739.49	60.07	9.10	602.26	661.91
204095.000	0.0	0.0	0.0	730.60	5850.00	740.00	0.0	740.76	28.28	7.30	1039.37	1100.02
204095.000	0.0	0.0	0.0	730.60	7590.00	740.96	0.0	741.82	28.37	7.94	1311.62	1425.05
204595.000	550.00	0.0	0.0	731.70	3520.00	739.76	0.0	740.11	19.44	5.10	1187.61	798.44
204595.000	550.00	0.0	0.0	731.70	5130.00	740.89	0.0	741.25	18.82	5.56	1788.10	1182.51
204595.000	550.00	0.0	0.0	731.70	5850.00	741.59	0.0	741.91	15.86	5.40	2176.45	1468.94
204595.000	550.00	0.0	0.0	731.70	7590.00	742.61	0.0	742.94	15.16	5.69	2756.93	1949.27
205985.000	1390.00	0.0	0.0	731.80	3520.00	741.60	0.0	741.74	8.69	3.54	2153.61	1194.15
205985.000	1390.00	0.0	0.0	731.80	5130.00	742.65	0.0	742.79	8.54	3.78	3079.63	1755.00
205985.000	1390.00	0.0	0.0	731.80	5850.00	743.14	0.0	743.27	8.09	3.80	3510.46	2056.58
205985.000	1390.00	0.0	0.0	731.80	7590.00	744.09	0.0	744.22	7.82	3.95	4352.40	2713.93
207370.000	1385.00	0.0	0.0	733.70	3520.00	742.82	0.0	743.06	11.70	4.39	1525.36	1029.22
207370.000	1385.00	0.0	0.0	733.70	5130.00	743.83	0.0	744.11	12.62	4.99	2116.29	1443.85
207370.000	1385.00	0.0	0.0	733.70	5850.00	744.25	0.0	744.54	12.67	5.17	2371.60	1643.19
207370.000	1385.00	0.0	0.0	733.70	7590.00	745.15	0.0	745.46	12.96	5.59	2920.82	2108.52
208600.000	1060.00	0.0	0.0	732.20	3520.00	743.94	0.0	744.21	9.96	4.38	1109.56	1115.22
208600.000	1060.00	0.0	0.0	732.20	5130.00	745.08	0.0	745.42	11.65	5.12	1612.94	1502.90
208600.000	1060.00	0.0	0.0	732.20	5850.00	745.53	0.0	745.89	12.10	5.36	1810.45	1681.45
208600.000	1060.00	0.0	0.0	732.20	7590.00	746.48	0.0	746.89	13.02	5.88	2229.85	2103.67
209590.000	1000.00	0.0	0.0	734.20	3520.00	745.11	0.0	745.48	16.92	5.32	1202.16	855.66
209590.000	1000.00	0.0	0.0	734.20	5130.00	746.34	0.0	746.71	16.16	5.71	1931.45	1276.26
209590.000	1000.00	0.0	0.0	734.20	5850.00	746.81	0.0	747.17	15.78	5.83	2233.10	1472.63
209590.000	1000.00	0.0	0.0	734.20	7590.00	747.81	0.0	748.17	15.03	6.08	2894.54	1957.48
210140.000	550.00	0.0	0.0	736.00	3520.00	745.90	0.0	745.97	5.08	2.17	1811.06	1561.95
210140.000	550.00	0.0	0.0	736.00	5130.00	747.10	0.0	747.20	5.28	2.53	2337.77	2233.33
210140.000	550.00	0.0	0.0	736.00	5850.00	747.55	0.0	747.66	5.41	2.68	2559.78	2514.37
210140.000	550.00	0.0	0.0	736.00	7590.00	748.52	0.0	748.65	5.69	2.99	3054.24	3180.52
210660.000	500.00	0.0	0.0	736.50	3520.00	746.11	0.0	746.21	4.38	2.66	1766.75	1682.28
210660.000	500.00	0.0	0.0	736.50	5130.00	747.33	0.0	747.47	5.35	3.24	2194.16	2217.88
210660.000	500.00	0.0	0.0	736.50	5850.00	747.79	0.0	747.95	5.75	3.47	2362.74	2438.90
210660.000	500.00	0.0	0.0	736.50	7590.00	748.77	0.0	748.97	6.63	3.99	2725.54	2948.07

MOORE BUSINESS FORMS INC 27

SECNO	XLCH	ELTRO	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
211360.000	700.00	0.0	0.0	736.70	3520.00	746.38	0.0	746.73	10.35	4.74	791.83	1094.00
211360.000	700.00	0.0	0.0	736.70	5130.00	747.61	0.0	748.14	13.45	5.95	941.15	1398.56
211360.000	700.00	0.0	0.0	736.70	5850.00	748.06	0.0	748.69	14.82	6.44	999.23	1519.51
211360.000	700.00	0.0	0.0	736.70	7590.00	749.01	0.0	749.88	17.98	7.56	1127.06	1790.01
211800.000	400.00	0.0	0.0	736.70	3520.00	746.80	0.0	747.11	8.62	4.48	860.93	1199.06
211800.000	400.00	0.0	0.0	736.70	5130.00	748.17	0.0	748.63	10.84	5.55	1035.22	1558.40
211800.000	400.00	0.0	0.0	736.70	5850.00	748.69	0.0	749.23	11.78	5.99	1101.60	1704.59
211800.000	400.00	0.0	0.0	736.70	7590.00	749.80	0.0	750.52	13.89	6.97	1245.11	2036.77
212000.000	600.00	0.0	0.0	732.90	3520.00	747.42	0.0	747.67	9.77	4.01	877.73	1126.41
212000.000	600.00	0.0	0.0	732.90	5130.00	749.00	0.0	749.39	13.68	4.97	1032.68	1386.82
212000.000	600.00	0.0	0.0	732.90	5850.00	749.61	0.0	750.06	15.31	5.34	1095.23	1495.15
212000.000	600.00	0.0	0.0	732.90	7590.00	750.94	0.0	751.53	18.82	6.14	1236.73	1749.58
212001.000	10.00	755.60	760.80	732.90	3520.00	747.43	0.0	747.68	9.74	4.01	878.54	1127.74
212001.000	10.00	755.60	760.80	732.90	5130.00	749.02	0.0	749.40	13.64	4.96	1033.86	1388.86
212001.000	10.00	755.60	760.80	732.90	5850.00	749.63	0.0	750.07	15.26	5.33	1096.65	1497.63
212001.000	10.00	755.60	760.80	732.90	7590.00	750.96	0.0	751.54	18.75	6.13	1238.49	1752.89
212002.000	58.00	755.60	760.80	732.90	3520.00	747.49	0.0	747.74	9.59	3.98	884.01	1136.74
212002.000	58.00	755.60	760.80	732.90	5130.00	749.10	0.0	749.48	13.37	4.92	1042.17	1403.15
212002.000	58.00	755.60	760.80	732.90	5850.00	749.73	0.0	750.16	14.92	5.29	1106.23	1514.39
212002.000	58.00	755.60	760.80	732.90	7590.00	751.08	0.0	751.66	18.23	6.06	1251.56	1777.63
212003.000	10.00	0.0	0.0	732.90	3520.00	747.50	0.0	747.75	9.55	3.98	885.24	1138.77
212003.000	10.00	0.0	0.0	732.90	5130.00	749.12	0.0	749.49	13.30	4.91	1044.24	1406.70
212003.000	10.00	0.0	0.0	732.90	5850.00	749.74	0.0	750.18	14.84	5.28	1108.68	1518.67
212003.000	10.00	0.0	0.0	732.90	7590.00	751.11	0.0	751.67	18.12	6.05	1254.35	1782.92
212130.000	200.00	0.0	0.0	736.20	3520.00	747.71	0.0	747.89	4.50	3.45	1043.56	1660.26
212130.000	200.00	0.0	0.0	736.20	5130.00	749.41	0.0	749.68	5.43	4.24	1247.09	2202.39
212130.000	200.00	0.0	0.0	736.20	5850.00	750.06	0.0	750.38	5.80	4.56	1327.19	2429.43
212130.000	200.00	0.0	0.0	736.20	7590.00	751.49	0.0	751.92	6.60	5.26	1503.51	2954.25
212340.000	190.00	0.0	0.0	737.70	3520.00	747.77	0.0	748.03	8.04	4.12	917.73	1241.44
212340.000	190.00	0.0	0.0	737.70	5130.00	749.48	0.0	749.84	9.04	4.88	1158.29	1705.98
212340.000	190.00	0.0	0.0	737.70	5850.00	750.15	0.0	750.55	9.43	5.17	1255.36	1905.06
212340.000	190.00	0.0	0.0	737.70	7590.00	751.60	0.0	752.10	10.22	5.79	1473.76	2374.06
213420.000	1050.00	0.0	0.0	738.00	3520.00	748.57	0.0	748.67	4.89	3.07	2399.58	1591.13
213420.000	1050.00	0.0	0.0	738.00	5130.00	750.35	0.0	750.44	3.88	3.09	3687.70	2603.11
213420.000	1050.00	0.0	0.0	738.00	5850.00	751.05	0.0	751.14	3.62	3.12	4196.71	3072.87
213420.000	1050.00	0.0	0.0	738.00	7590.00	752.60	0.0	752.68	3.21	3.20	5317.86	4233.05
213880.000	400.00	0.0	0.0	740.60	3520.00	748.80	0.0	749.13	19.15	5.09	1207.97	804.38
213880.000	400.00	0.0	0.0	740.60	5130.00	750.52	0.0	750.81	14.14	5.07	1886.04	1364.10
213880.000	400.00	0.0	0.0	740.60	5850.00	751.21	0.0	751.48	12.94	5.11	2158.21	1626.42
213880.000	400.00	0.0	0.0	740.60	7590.00	752.72	0.0	752.99	11.08	5.23	2765.72	2279.71
214200.000	350.00	0.0	0.0	739.50	3520.00	749.22	0.0	750.38	49.16	8.81	471.56	502.05
214200.000	350.00	0.0	0.0	739.50	5130.00	750.67	0.0	751.91	47.72	9.56	726.38	742.59
214200.000	350.00	0.0	0.0	739.50	5850.00	751.31	0.0	752.52	44.92	9.62	854.71	872.86
214200.000	350.00	0.0	0.0	739.50	7590.00	752.80	0.0	753.88	38.05	9.52	1188.30	1230.48

MOORE BUSINESS FORMS INC 27

SECND	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
214201.000	4.50	0.0	0.0	739.50	3520.00	749.52	0.0	750.43	38.92	8.00	574.86	564.24
214201.000	4.50	0.0	0.0	739.50	5130.00	751.12	0.0	751.97	33.62	8.23	908.90	884.74
214201.000	4.50	0.0	0.0	739.50	5850.00	751.75	0.0	752.57	31.64	8.26	1058.39	1040.05
214201.000	4.50	0.0	0.0	739.50	7590.00	753.19	0.0	753.93	26.88	8.20	1436.08	1464.05
214400.000	200.00	0.0	0.0	740.20	3520.00	750.51	0.0	750.87	11.59	4.84	727.79	1033.92
214400.000	200.00	0.0	0.0	740.20	5130.00	751.87	0.0	752.43	14.61	5.99	855.79	1341.92
214400.000	200.00	0.0	0.0	740.20	5850.00	752.38	0.0	753.04	15.94	6.47	904.01	1465.25
214400.000	200.00	0.0	0.0	740.20	7590.00	753.55	0.0	754.42	18.63	7.49	1013.36	1758.67
214450.000	40.00	0.0	0.0	736.80	3520.00	750.25	0.0	751.10	40.31	7.38	477.14	554.44
214450.000	40.00	0.0	0.0	736.80	5130.00	751.42	0.0	752.77	60.35	9.33	549.89	660.34
214450.000	40.00	0.0	0.0	736.80	5850.00	751.84	0.0	753.44	69.58	10.13	577.27	701.34
214450.000	40.00	0.0	0.0	736.80	7590.00	752.78	0.0	754.95	93.85	11.83	641.67	783.47
214451.000	1.00	759.00	759.80	736.80	3520.00	750.26	0.0	751.10	40.30	7.38	477.18	554.49
214451.000	1.00	759.00	759.80	736.80	5130.00	751.43	0.0	752.78	60.38	9.33	549.77	660.17
214451.000	1.00	759.00	759.80	736.80	5850.00	751.85	0.0	753.44	69.64	10.14	577.06	701.02
214451.000	1.00	759.00	759.80	736.80	7590.00	752.71	0.0	755.00	162.65	12.14	625.40	595.14
214452.000	20.00	759.00	759.80	736.80	3520.00	750.36	0.0	751.18	39.04	7.28	483.42	563.40
214452.000	20.00	759.00	759.80	736.80	5130.00	751.61	0.0	752.90	57.33	9.14	561.41	677.52
214452.000	20.00	759.00	759.80	736.80	5850.00	752.07	0.0	753.58	65.38	9.88	591.90	723.48
214452.000	20.00	759.00	759.80	736.80	7590.00	753.10	0.0	755.33	158.97	11.98	633.59	601.98
214453.000	1.00	0.0	0.0	736.80	3520.00	750.36	0.0	751.19	38.99	7.28	483.66	563.74
214453.000	1.00	0.0	0.0	736.80	5130.00	751.61	0.0	752.91	57.23	9.13	561.82	678.13
214453.000	1.00	0.0	0.0	736.80	5850.00	752.08	0.0	753.59	65.26	9.88	592.34	724.15
214453.000	1.00	0.0	0.0	736.80	7590.00	753.56	0.0	755.38	73.48	10.83	700.73	885.43
214550.000	100.00	0.0	0.0	739.20	3520.00	750.44	0.0	751.90	57.46	10.17	498.96	464.37
214550.000	100.00	0.0	0.0	739.20	5130.00	751.92	0.0	753.63	57.86	11.44	716.41	674.39
214550.000	100.00	0.0	0.0	739.20	5850.00	752.49	0.0	754.30	58.14	11.93	803.71	767.21
214550.000	100.00	0.0	0.0	739.20	7590.00	754.19	0.0	755.95	49.07	12.18	1077.09	1083.49
215180.000	650.00	0.0	0.0	740.00	3520.00	752.66	0.0	752.79	3.82	3.18	1674.23	1801.51
215180.000	650.00	0.0	0.0	740.00	5130.00	754.43	0.0	754.60	4.21	3.74	2134.20	2500.89
215180.000	650.00	0.0	0.0	740.00	5850.00	755.11	0.0	755.31	4.37	3.96	2316.75	2798.08
215180.000	650.00	0.0	0.0	740.00	7590.00	756.70	0.0	756.94	4.59	4.41	2750.46	3543.63
215380.000	200.00	0.0	0.0	741.50	3520.00	752.66	0.0	752.95	6.72	4.50	1069.89	1358.26
215380.000	200.00	0.0	0.0	741.50	5130.00	754.41	0.0	754.80	7.74	5.37	1374.19	1843.82
215380.000	200.00	0.0	0.0	741.50	5850.00	755.08	0.0	755.52	8.15	5.71	1492.79	2049.54
215380.000	200.00	0.0	0.0	741.50	7590.00	756.64	0.0	757.18	8.78	6.41	1769.06	2551.25
215600.000	200.00	0.0	0.0	742.70	3520.00	752.79	0.0	753.17	11.33	4.91	717.27	1045.71
215600.000	200.00	0.0	0.0	742.70	5130.00	754.53	0.0	755.10	14.50	6.05	847.49	1347.33
215600.000	200.00	0.0	0.0	742.70	5850.00	755.19	0.0	755.85	15.84	6.51	897.96	1469.94
215600.000	200.00	0.0	0.0	742.70	7590.00	756.72	0.0	757.60	18.65	7.50	1011.95	1757.43
215601.000	10.00	758.70	760.00	742.70	3520.00	752.73	0.0	753.26	25.30	5.83	603.85	699.79
215601.000	10.00	758.70	760.00	742.70	5130.00	754.38	0.0	755.29	43.48	7.66	669.61	777.96
215601.000	10.00	758.70	760.00	742.70	5850.00	754.99	0.0	756.11	54.43	8.49	689.04	792.97
215601.000	10.00	758.70	760.00	742.70	7590.00	756.33	0.0	758.06	98.78	10.58	717.49	763.67

MOORE BUSINESS FORMS, INC 27

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
215602.000	44.00	758.70	760.00	742.70	3520.00	752.85	0.0	753.37	24.80	5.78	609.32	706.83
215602.000	44.00	758.70	760.00	742.70	5130.00	754.59	0.0	755.49	42.78	7.58	676.81	784.30
215602.000	44.00	758.70	760.00	742.70	5850.00	755.26	0.0	756.36	53.82	8.40	696.57	797.42
215602.000	44.00	758.70	760.00	742.70	7590.00	756.78	0.0	758.51	105.27	10.56	718.55	739.75
215603.000	10.00	0.0	0.0	742.70	3520.00	753.09	0.0	753.44	10.33	4.76	739.27	1095.07
215603.000	10.00	0.0	0.0	742.70	5130.00	755.11	0.0	755.62	12.47	5.76	890.94	1452.72
215603.000	10.00	0.0	0.0	742.70	5850.00	755.95	0.0	756.53	13.20	6.13	954.27	1610.20
215603.000	10.00	0.0	0.0	742.70	7590.00	758.13	0.0	758.85	13.89	6.79	1117.76	2036.18
215700.000	100.00	0.0	0.0	738.80	3520.00	753.17	0.0	753.53	7.07	4.94	850.38	1324.07
215700.000	100.00	0.0	0.0	738.80	5130.00	755.20	0.0	755.73	8.47	6.03	1043.61	1763.07
215700.000	100.00	0.0	0.0	738.80	5850.00	756.05	0.0	756.65	8.91	6.45	1123.88	1959.88
215700.000	100.00	0.0	0.0	738.80	7590.00	758.23	0.0	758.97	9.17	7.19	1331.42	2505.80
216500.000	700.00	0.0	0.0	741.00	3520.00	753.90	0.0	753.98	4.95	2.96	2748.38	1581.90
216500.000	700.00	0.0	0.0	741.00	5130.00	756.14	0.0	756.21	3.83	2.89	4113.72	2619.71
216500.000	700.00	0.0	0.0	741.00	5850.00	757.07	0.0	757.14	3.50	2.86	4682.97	3124.99
216500.000	700.00	0.0	0.0	741.00	7590.00	759.40	0.0	759.46	2.77	2.76	6112.50	4563.35
217050.000	550.00	0.0	0.0	742.30	3520.00	754.14	0.0	754.23	4.76	2.92	2569.96	1612.84
217050.000	550.00	0.0	0.0	742.30	5130.00	756.32	0.0	756.40	3.87	3.01	3709.36	2607.98
217050.000	550.00	0.0	0.0	742.30	5850.00	757.23	0.0	757.31	3.59	3.04	4189.23	3089.43
217050.000	550.00	0.0	0.0	742.30	7590.00	759.53	0.0	759.60	2.91	3.05	5392.68	4447.65
217150.000	200.00	0.0	0.0	738.80	3520.00	754.25	0.0	754.28	1.23	1.45	3189.98	3169.56
217150.000	200.00	0.0	0.0	738.80	5130.00	756.41	0.0	756.45	1.21	1.65	4222.45	4662.24
217150.000	200.00	0.0	0.0	738.80	5850.00	757.32	0.0	757.36	1.19	1.72	4657.03	5359.82
217150.000	200.00	0.0	0.0	738.80	7590.00	759.59	0.0	759.64	1.08	1.84	5752.47	7288.52
217650.000	225.00	0.0	0.0	743.80	3520.00	754.09	0.0	754.47	47.62	4.94	712.82	510.09
217650.000	225.00	0.0	0.0	743.80	5130.00	756.20	0.0	756.66	47.68	5.42	946.23	742.94
217650.000	225.00	0.0	0.0	743.80	5850.00	757.09	0.0	757.58	52.88	5.57	1049.94	804.44
217650.000	225.00	0.0	0.0	743.80	7590.00	759.50	0.0	759.80	53.25	4.39	1777.21	1040.12
217651.000	1.00	758.00	760.60	743.80	3520.00	754.10	0.0	754.47	47.58	4.94	713.03	510.28
217651.000	1.00	758.00	760.60	743.80	5130.00	756.21	0.0	756.66	47.65	5.42	946.44	743.15
217651.000	1.00	758.00	760.60	743.80	5850.00	757.09	0.0	757.59	59.88	5.67	1030.91	755.97
217651.000	1.00	758.00	760.60	743.80	7590.00	759.45	0.0	759.83	120.72	4.96	1573.81	690.81
217652.000	19.50	758.00	760.60	743.80	3520.00	754.06	0.0	754.66	85.53	6.23	565.42	380.61
217652.000	19.50	758.00	760.60	743.80	5130.00	756.19	0.0	756.83	70.94	6.40	801.00	609.08
217652.000	19.50	758.00	760.60	743.80	5850.00	757.12	0.0	757.79	103.86	6.59	887.63	574.02
217652.000	19.50	758.00	760.60	743.80	7590.00	759.68	0.0	760.07	124.39	5.06	1556.65	680.54
217653.000	1.00	0.0	0.0	743.80	3520.00	754.07	0.0	754.67	85.27	6.22	566.07	381.20
217653.000	1.00	0.0	0.0	743.80	5130.00	756.20	0.0	756.84	70.79	6.40	801.63	609.72
217653.000	1.00	0.0	0.0	743.80	5850.00	757.17	0.0	757.80	74.29	6.39	916.00	678.70
217653.000	1.00	0.0	0.0	743.80	7590.00	759.79	0.0	760.09	50.59	4.39	1795.73	1067.12
217850.000	300.00	0.0	0.0	744.50	3520.00	755.37	0.0	755.78	20.02	5.26	748.89	786.66
217850.000	300.00	0.0	0.0	744.50	5130.00	757.39	0.0	757.72	13.69	5.06	1327.04	1386.50
217850.000	300.00	0.0	0.0	744.50	5850.00	758.32	0.0	758.60	11.15	4.85	1595.75	1751.89
217850.000	300.00	0.0	0.0	744.50	7590.00	760.41	0.0	760.64	7.64	4.51	2201.37	2745.79

MOORE BUSINESS FORMS INC 27

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
218400.000	550.00	0.0	0.0	744.50	3520.00	756.28	0.0	756.43	6.87	3.33	1329.75	1342.83
218400.000	550.00	0.0	0.0	744.50	5130.00	758.05	0.0	758.18	5.26	3.29	2417.32	2236.01
218400.000	550.00	0.0	0.0	744.50	5850.00	758.87	0.0	758.98	4.39	3.15	2938.40	2791.59
218400.000	550.00	0.0	0.0	744.50	7590.00	760.81	0.0	760.90	2.98	2.89	4173.98	4395.37
219350.000	820.00	0.0	0.0	745.80	3520.00	756.78	0.0	757.01	6.55	3.92	1006.63	1375.46
219350.000	820.00	0.0	0.0	745.80	5130.00	758.44	0.0	758.75	7.01	4.57	1418.44	1937.23
219350.000	820.00	0.0	0.0	745.80	5850.00	759.19	0.0	759.51	6.86	4.74	1623.68	2234.03
219350.000	820.00	0.0	0.0	745.80	7590.00	761.00	0.0	761.34	6.16	4.98	2146.60	3058.70
219600.000	200.00	0.0	0.0	746.80	3520.00	756.89	0.0	757.33	21.90	5.32	661.94	752.13
219600.000	200.00	0.0	0.0	746.80	5130.00	758.54	0.0	759.11	23.18	6.04	848.70	1065.58
219600.000	200.00	0.0	0.0	746.80	5850.00	759.28	0.0	759.88	22.81	6.25	935.94	1225.01
219600.000	200.00	0.0	0.0	746.80	7590.00	761.04	0.0	761.71	20.73	6.61	1149.04	1666.84
219601.000	10.00	772.00	767.10	746.80	3520.00	756.92	0.0	757.35	21.86	5.31	662.40	752.87
219601.000	10.00	772.00	767.10	746.80	5130.00	758.57	0.0	759.14	22.99	6.03	851.11	1069.91
219601.000	10.00	772.00	767.10	746.80	5850.00	759.30	0.0	759.91	22.64	6.23	938.36	1229.51
219601.000	10.00	772.00	767.10	746.80	7590.00	761.06	0.0	761.74	20.65	6.60	1150.65	1670.33
219602.000	55.00	772.00	767.10	746.80	3520.00	757.06	0.0	757.48	20.39	5.18	679.01	779.44
219602.000	55.00	772.00	767.10	746.80	5130.00	758.72	0.0	759.26	21.58	5.90	870.14	1104.23
219602.000	55.00	772.00	767.10	746.80	5850.00	759.45	0.0	760.03	21.35	6.11	957.52	1266.17
219602.000	55.00	772.00	767.10	746.80	7590.00	761.20	0.0	761.85	19.72	6.50	1168.44	1709.09
219603.000	10.00	0.0	0.0	746.80	3520.00	757.08	0.0	757.50	20.20	5.17	681.37	783.22
219603.000	10.00	0.0	0.0	746.80	5130.00	758.75	0.0	759.29	21.40	5.88	872.76	1108.99
219603.000	10.00	0.0	0.0	746.80	5850.00	759.48	0.0	760.06	21.17	6.09	960.17	1271.49
219603.000	10.00	0.0	0.0	746.80	7590.00	761.22	0.0	761.87	19.60	6.48	1170.89	1714.45
219700.000	100.00	0.0	0.0	748.00	3520.00	757.49	0.0	757.66	5.59	3.39	1063.89	1488.23
219700.000	100.00	0.0	0.0	748.00	5130.00	759.23	0.0	759.48	5.94	4.00	1343.66	2105.31
219700.000	100.00	0.0	0.0	748.00	5850.00	759.98	0.0	760.25	5.95	4.21	1473.36	2398.82
219700.000	100.00	0.0	0.0	748.00	7590.00	761.75	0.0	762.07	5.74	4.61	1797.41	3167.98
220400.000	680.00	0.0	0.0	749.20	3520.00	757.86	0.0	758.01	4.77	3.30	1865.80	1611.96
220400.000	680.00	0.0	0.0	749.20	5130.00	759.65	0.0	759.80	3.79	3.37	3068.20	2633.51
220400.000	680.00	0.0	0.0	749.20	5850.00	760.42	0.0	760.55	3.45	3.38	3585.31	3148.40
220400.000	680.00	0.0	0.0	749.20	7590.00	762.21	0.0	762.34	2.75	3.40	4831.46	4576.04
221650.000	1200.00	0.0	0.0	749.80	3520.00	758.65	0.0	759.04	16.08	5.23	993.83	877.77
221650.000	1200.00	0.0	0.0	749.80	5130.00	760.25	0.0	760.67	14.70	5.67	1466.64	1337.87
221650.000	1200.00	0.0	0.0	749.80	5850.00	760.94	0.0	761.36	13.51	5.74	1704.54	1591.79
221650.000	1200.00	0.0	0.0	749.80	7590.00	762.60	0.0	763.00	11.02	5.81	2263.76	2286.26
222720.000	1000.00	0.0	0.0	748.60	3520.00	760.15	0.0	760.36	11.13	4.39	1950.00	1055.05
222720.000	1000.00	0.0	0.0	748.60	5130.00	761.66	0.0	761.83	9.62	4.43	2969.89	1653.70
222720.000	1000.00	0.0	0.0	748.60	5850.00	762.27	0.0	762.44	9.07	4.43	3388.90	1942.07
222720.000	1000.00	0.0	0.0	748.60	7590.00	763.75	0.0	763.90	7.75	4.38	4396.34	2726.62
223990.000	1180.00	0.0	0.0	750.60	3520.00	760.99	0.0	761.07	4.77	3.17	3105.68	1611.92
223990.000	1180.00	0.0	0.0	750.60	5130.00	762.35	0.0	762.42	4.14	3.24	4464.08	2520.39
223990.000	1180.00	0.0	0.0	750.60	5850.00	762.91	0.0	762.98	3.91	3.26	5032.07	2957.53
223990.000	1180.00	0.0	0.0	750.60	7590.00	764.29	0.0	764.35	3.36	3.26	6405.58	4142.47

MOORE BUSINESS FORMS, INC 27

CHIPPEWA RIVER AT MT. PL

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
204095.000	3520.00	738.22	0.0	0.0	0.0	203.96	0.0
204095.000	5130.00	738.22	0.0	0.0	0.0	203.96	0.0
204095.000	5850.00	740.00	1.78	0.0	0.0	278.69	0.0
204095.000	7590.00	740.96	0.96	0.0	0.0	288.53	0.0
204595.000	3520.00	739.76	0.0	1.54	0.0	520.74	550.00
204595.000	5130.00	740.89	1.13	2.67	0.0	545.52	550.00
204595.000	5850.00	741.59	0.70	1.59	0.0	560.96	550.00
204595.000	7590.00	742.61	1.02	1.65	0.0	570.00	550.00
205985.000	3520.00	741.60	0.0	1.84	0.0	880.51	1390.00
205985.000	5130.00	742.65	1.05	1.76	0.0	883.46	1390.00
205985.000	5850.00	743.14	0.49	1.55	0.0	884.82	1390.00
205985.000	7590.00	744.09	0.95	1.48	0.0	887.49	1390.00
207370.000	3520.00	742.82	0.0	1.22	0.0	565.93	1385.00
207370.000	5130.00	743.83	1.01	1.18	0.0	595.97	1385.00
207370.000	5850.00	744.25	0.43	1.12	0.0	604.62	1385.00
207370.000	7590.00	745.15	0.90	1.06	0.0	620.72	1385.00
208600.000	3520.00	743.94	0.0	1.12	0.0	440.00	1060.00
208600.000	5130.00	745.08	1.14	1.25	0.0	440.00	1060.00
208600.000	5850.00	745.53	0.45	1.27	0.0	440.00	1060.00
208600.000	7590.00	746.48	0.95	1.33	0.0	440.00	1060.00
209590.000	3520.00	745.11	0.0	1.17	0.0	539.32	1000.00
209590.000	5130.00	746.34	1.23	1.26	0.0	641.72	1000.00
209590.000	5850.00	746.81	0.47	1.28	0.0	652.65	1000.00
209590.000	7590.00	747.81	1.00	1.32	0.0	667.68	1000.00
210140.000	3520.00	745.90	0.0	0.79	0.0	416.22	550.00
210140.000	5130.00	747.10	1.20	0.76	0.0	477.01	550.00
210140.000	5850.00	747.55	0.45	0.75	0.0	509.00	550.00
210140.000	7590.00	748.52	0.97	0.71	0.0	517.69	550.00
210660.000	3520.00	746.11	0.0	0.21	0.0	329.72	500.00
210660.000	5130.00	747.33	1.22	0.23	0.0	370.00	500.00
210660.000	5850.00	747.79	0.46	0.24	0.0	370.00	500.00
210660.000	7590.00	748.77	0.98	0.25	0.0	370.00	500.00
211360.000	3520.00	746.38	0.0	0.27	0.0	117.23	700.00
211360.000	5130.00	747.61	1.22	0.27	0.0	126.63	700.00
211360.000	5850.00	748.06	0.45	0.27	0.0	130.10	700.00
211360.000	7590.00	749.01	0.96	0.25	0.0	137.44	700.00
211800.000	3520.00	746.80	0.0	0.42	0.0	125.68	400.00
211800.000	5130.00	748.17	1.37	0.56	0.0	128.30	400.00
211800.000	5850.00	748.69	0.52	0.63	0.0	128.78	400.00
211800.000	7590.00	749.80	1.11	0.78	0.0	129.81	400.00
212000.000	3520.00	747.42	0.0	0.62	0.0	94.89	600.00
212000.000	5130.00	749.00	1.58	0.83	0.0	101.39	600.00
212000.000	5850.00	749.61	0.61	0.93	0.0	103.90	600.00
212000.000	7590.00	750.94	1.33	1.14	0.0	108.67	600.00

MOORE BUSINESS FORMS INC 27

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
212001.000	3520.00	747.43	0.0	0.01	0.0	94.92	10.00
212001.000	5130.00	749.02	1.58	0.01	0.0	101.44	10.00
212001.000	5850.00	749.63	0.61	0.02	0.0	103.96	10.00
212001.000	7590.00	750.96	1.33	0.02	0.0	108.70	10.00
212002.000	3520.00	747.49	0.0	0.06	0.0	95.16	58.00
212002.000	5130.00	749.10	1.61	0.09	0.0	101.78	58.00
212002.000	5850.00	749.73	0.62	0.10	0.0	104.34	58.00
212002.000	7590.00	751.08	1.36	0.12	0.0	108.95	58.00
212003.000	3520.00	747.50	0.0	0.01	0.0	95.21	10.00
212003.000	5130.00	749.12	1.61	0.02	0.0	101.86	10.00
212003.000	5850.00	749.74	0.63	0.02	0.0	104.44	10.00
212003.000	7590.00	751.11	1.36	0.02	0.0	109.00	10.00
212130.000	3520.00	747.71	0.0	0.21	0.0	118.85	200.00
212130.000	5130.00	749.41	1.70	0.29	0.0	121.22	200.00
212130.000	5850.00	750.06	0.66	0.32	0.0	122.15	200.00
212130.000	7590.00	751.49	1.43	0.39	0.0	124.15	200.00
212340.000	3520.00	747.77	0.0	0.06	0.0	137.01	190.00
212340.000	5130.00	749.48	1.71	0.07	0.0	144.29	190.00
212340.000	5850.00	750.15	0.67	0.08	0.0	147.12	190.00
212340.000	7590.00	751.60	1.45	0.10	0.0	155.51	190.00
213420.000	3520.00	748.57	0.0	0.80	0.0	721.11	1050.00
213420.000	5130.00	750.35	1.78	0.87	0.0	724.08	1050.00
213420.000	5850.00	751.05	0.70	0.91	0.0	725.25	1050.00
213420.000	7590.00	752.60	1.54	1.00	0.0	727.83	1050.00
213880.000	3520.00	748.80	0.0	0.23	0.0	389.00	400.00
213880.000	5130.00	750.52	1.72	0.17	0.0	396.31	400.00
213880.000	5850.00	751.21	0.69	0.16	0.0	398.03	400.00
213880.000	7590.00	752.72	1.51	0.13	0.0	407.24	400.00
214200.000	3520.00	749.22	0.0	0.42	0.0	154.77	350.00
214200.000	5130.00	750.67	1.45	0.15	0.0	192.18	350.00
214200.000	5850.00	751.31	0.64	0.10	0.0	207.28	350.00
214200.000	7590.00	752.80	1.49	0.07	0.0	242.18	350.00
214201.000	3520.00	749.52	0.0	0.30	0.0	190.05	4.50
214201.000	5130.00	751.12	1.60	0.45	0.0	227.65	4.50
214201.000	5850.00	751.75	0.64	0.44	0.0	242.60	4.50
214201.000	7590.00	753.19	1.43	0.39	0.0	282.83	4.50
214400.000	3520.00	750.51	0.0	0.99	0.0	94.00	200.00
214400.000	5130.00	751.87	1.36	0.75	0.0	94.00	200.00
214400.000	5850.00	752.38	0.51	0.63	0.0	94.00	200.00
214400.000	7590.00	753.55	1.16	0.36	0.0	94.00	200.00
214450.000	3520.00	750.25	0.0	-0.26	0.0	59.61	40.00
214450.000	5130.00	751.42	1.17	-0.45	0.0	64.31	40.00
214450.000	5850.00	751.84	0.42	-0.54	0.0	65.99	40.00
214450.000	7590.00	752.78	0.94	-0.77	0.0	73.72	40.00

MOORE BUSINESS FORMS INC 27

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
214451.000	3520.00	750.26	0.0	0.00	0.0	59.62	1.00
214451.000	5130.00	751.43	1.17	0.01	0.0	64.30	1.00
214451.000	5850.00	751.85	0.42	0.01	0.0	65.98	1.00
214451.000	7590.00	752.71	0.87	-0.07	0.0	73.45	1.00
214452.000	3520.00	750.36	0.0	0.10	0.0	60.03	20.00
214452.000	5130.00	751.61	1.25	0.18	0.0	65.02	20.00
214452.000	5850.00	752.07	0.46	0.22	0.0	66.87	20.00
214452.000	7590.00	753.10	1.03	0.39	0.0	74.99	20.00
214453.000	3520.00	750.36	0.0	0.00	0.0	60.05	1.00
214453.000	5130.00	751.61	1.25	0.01	0.0	65.05	1.00
214453.000	5850.00	752.08	0.46	0.01	0.0	66.90	1.00
214453.000	7590.00	753.56	1.48	0.46	0.0	76.86	1.00
214550.000	3520.00	750.44	0.0	0.07	0.0	142.63	100.00
214550.000	5130.00	751.92	1.48	0.30	0.0	151.51	100.00
214550.000	5850.00	752.49	0.57	0.41	0.0	154.92	100.00
214550.000	7590.00	754.19	1.70	0.63	0.0	165.17	100.00
215180.000	3520.00	752.66	0.0	2.22	0.0	255.29	650.00
215180.000	5130.00	754.43	1.77	2.51	0.0	264.86	650.00
215180.000	5850.00	755.11	0.69	2.63	0.0	268.56	650.00
215180.000	7590.00	756.70	1.59	2.51	0.0	277.16	650.00
215380.000	3520.00	752.66	0.0	0.01	0.0	173.33	200.00
215380.000	5130.00	754.41	1.74	-0.02	0.0	175.51	200.00
215380.000	5850.00	755.08	0.67	-0.03	0.0	176.36	200.00
215380.000	7590.00	756.64	1.56	-0.06	0.0	178.30	200.00
215600.000	3520.00	752.79	0.0	0.13	0.0	75.00	200.00
215600.000	5130.00	754.53	1.74	0.12	0.0	75.00	200.00
215600.000	5850.00	755.19	0.67	0.11	0.0	75.00	200.00
215600.000	7590.00	756.72	1.53	0.08	0.0	75.00	200.00
215601.000	3520.00	752.73	0.0	-0.06	0.0	75.00	10.00
215601.000	5130.00	754.38	1.65	-0.15	0.0	75.00	10.00
215601.000	5850.00	754.99	0.61	-0.20	0.0	75.00	10.00
215601.000	7590.00	756.33	1.33	-0.40	0.0	75.00	10.00
215602.000	3520.00	752.85	0.0	0.12	0.0	75.00	44.00
215602.000	5130.00	754.59	1.74	0.21	0.0	75.00	44.00
215602.000	5850.00	755.26	0.67	0.27	0.0	75.00	44.00
215602.000	7590.00	756.78	1.52	0.46	0.0	75.00	44.00
215603.000	3520.00	753.09	0.0	0.23	0.0	75.00	10.00
215603.000	5130.00	755.11	2.02	0.51	0.0	75.00	10.00
215603.000	5850.00	755.95	0.84	0.69	0.0	75.00	10.00
215603.000	7590.00	758.13	2.18	1.35	0.0	75.00	10.00
215700.000	3520.00	753.17	0.0	0.08	0.0	95.00	100.00
215700.000	5130.00	755.20	2.03	0.09	0.0	95.00	100.00
215700.000	5850.00	756.05	0.85	0.10	0.0	95.00	100.00
215700.000	7590.00	758.23	2.18	0.10	0.0	95.00	100.00

MOORE BUSINESS FORMS INC 27

SECND	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
216500.000	3520.00	753.90	0.0	0.73	0.0	607.82	700.00
216500.000	5130.00	756.14	2.24	0.94	0.0	610.46	700.00
216500.000	5850.00	757.07	0.93	1.03	0.0	611.55	700.00
216500.000	7590.00	759.40	2.33	1.17	0.0	614.30	700.00
217050.000	3520.00	754.14	0.0	0.24	0.0	520.35	550.00
217050.000	5130.00	756.32	2.18	0.18	0.0	525.00	550.00
217050.000	5850.00	757.23	0.91	0.16	0.0	525.00	550.00
217050.000	7590.00	759.53	2.29	0.12	0.0	525.00	550.00
217150.000	3520.00	754.25	0.0	0.11	0.0	475.46	200.00
217150.000	5130.00	756.41	2.16	0.09	0.0	478.41	200.00
217150.000	5850.00	757.32	0.91	0.08	0.0	479.65	200.00
217150.000	7590.00	759.59	2.28	0.07	0.0	481.00	200.00
217650.000	3520.00	754.09	0.0	-0.16	0.0	110.50	225.00
217650.000	5130.00	756.20	2.11	-0.21	0.0	110.50	225.00
217650.000	5850.00	757.09	0.89	-0.22	0.0	133.27	225.00
217650.000	7590.00	759.50	2.40	-0.10	0.0	550.33	225.00
217651.000	3520.00	754.10	0.0	0.00	0.0	110.50	1.00
217651.000	5130.00	756.21	2.11	0.00	0.0	110.50	1.00
217651.000	5850.00	757.09	0.88	-0.01	0.0	133.35	1.00
217651.000	7590.00	759.45	2.36	-0.05	0.0	548.78	1.00
217652.000	3520.00	754.06	0.0	-0.03	0.0	110.50	19.50
217652.000	5130.00	756.19	2.13	-0.01	0.0	110.50	19.50
217652.000	5850.00	757.12	0.92	0.03	0.0	136.50	19.50
217652.000	7590.00	759.68	2.56	0.23	0.0	556.02	19.50
217653.000	3520.00	754.07	0.0	0.01	0.0	110.50	1.00
217653.000	5130.00	756.20	2.13	0.01	0.0	110.50	1.00
217653.000	5850.00	757.17	0.97	0.05	0.0	136.50	1.00
217653.000	7590.00	759.79	2.62	0.11	0.0	559.56	1.00
217850.000	3520.00	755.37	0.0	1.30	0.0	282.72	300.00
217850.000	5130.00	757.39	2.02	1.19	0.0	287.91	300.00
217850.000	5850.00	758.32	0.93	1.15	0.0	290.00	300.00
217850.000	7590.00	760.41	2.09	0.61	0.0	290.00	300.00
218400.000	3520.00	756.28	0.0	0.90	0.0	499.02	550.00
218400.000	5130.00	758.05	1.78	0.66	0.0	635.00	550.00
218400.000	5850.00	758.87	0.82	0.56	0.0	635.00	550.00
218400.000	7590.00	760.81	1.94	0.41	0.0	635.00	550.00
219350.000	3520.00	756.78	0.0	0.50	0.0	218.21	820.00
219350.000	5130.00	758.44	1.66	0.39	0.0	267.75	820.00
219350.000	5850.00	759.19	0.75	0.32	0.0	280.85	820.00
219350.000	7590.00	761.00	1.81	0.19	0.0	290.00	820.00
219600.000	3520.00	756.89	0.0	0.11	0.0	109.20	200.00
219600.000	5130.00	758.54	1.65	0.10	0.0	117.91	200.00
219600.000	5850.00	759.28	0.73	0.08	0.0	120.55	200.00
219600.000	7590.00	761.04	1.76	0.03	0.0	121.00	200.00

MOORE BUSINESS FORMS INC 27

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
219601.000	3520.00	756.92	0.0	0.02	0.0	109.22	10.00
219601.000	5130.00	758.57	1.65	0.03	0.0	117.99	10.00
219601.000	5850.00	759.30	0.73	0.03	0.0	120.62	10.00
219601.000	7590.00	761.06	1.76	0.02	0.0	121.00	10.00
219602.000	3520.00	757.06	0.0	0.14	0.0	110.09	55.00
219602.000	5130.00	758.72	1.67	0.15	0.0	118.57	55.00
219602.000	5850.00	759.45	0.73	0.15	0.0	121.00	55.00
219602.000	7590.00	761.20	1.74	0.14	0.0	121.00	55.00
219603.000	3520.00	757.08	0.0	0.02	0.0	110.22	10.00
219603.000	5130.00	758.75	1.67	0.03	0.0	118.65	10.00
219603.000	5850.00	759.48	0.73	0.03	0.0	121.00	10.00
219603.000	7590.00	761.22	1.74	0.02	0.0	121.00	10.00
219700.000	3520.00	757.49	0.0	0.40	0.0	152.27	100.00
219700.000	5130.00	759.23	1.74	0.48	0.0	169.72	100.00
219700.000	5850.00	759.98	0.75	0.50	0.0	177.75	100.00
219700.000	7590.00	761.75	1.77	0.53	0.0	188.31	100.00
220400.000	3520.00	757.86	0.0	0.37	0.0	666.70	680.00
220400.000	5130.00	759.65	1.79	0.42	0.0	675.08	680.00
220400.000	5850.00	760.42	0.76	0.44	0.0	679.70	680.00
220400.000	7590.00	762.21	1.79	0.46	0.0	711.05	680.00
221650.000	3520.00	758.65	0.0	0.79	0.0	281.27	1200.00
221650.000	5130.00	760.25	1.60	0.60	0.0	340.00	1200.00
221650.000	5850.00	760.94	0.69	0.53	0.0	340.00	1200.00
221650.000	7590.00	762.60	1.65	0.39	0.0	340.00	1200.00
222720.000	3520.00	760.15	0.0	1.50	0.0	675.85	1000.00
222720.000	5130.00	761.66	1.51	1.40	0.0	678.74	1000.00
222720.000	5850.00	762.27	0.62	1.33	0.0	679.92	1000.00
222720.000	7590.00	763.75	1.48	1.15	0.0	682.75	1000.00
223990.000	3520.00	760.99	0.0	0.84	0.0	1000.00	1180.00
223990.000	5130.00	762.35	1.36	0.69	0.0	1000.00	1180.00
223990.000	5850.00	762.91	0.57	0.64	0.0	1000.00	1180.00
223990.000	7590.00	764.29	1.37	0.53	0.0	1000.00	1180.00

SUMMARY OF ERRORS

MOORE BUSINESS FORMS INC 27

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Nottawa Twp

3) WATERCOURSE: Coldwater River

4) DOCUMENT TYPE: Run 1 - downstream of Coldwater Lake

00BREAK00

THIS RUN EXECUTED 03/07/90 16:07:29

```
**************************************************
  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
**************************************************


C
T1      NOTTAWA TWP  ISABELLA CO
T2
T3      COLDWATER RIVER  DS OF COLDWATER LAKE

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        0.        0.        0.   .000800       .00        .0     1740.   865.000      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC       .075      .075      .035      .100      .300      .000      .000      .000      .000      .000
                XSEC 8 FROM FILE F88-32D.5  MOVED DS 1000FT INVERT ADJ
X1       .000    11.000   148.000   201.000      .000      .000      .000      .000     -.800      .000
GR    865.500      .000   865.400    25.000   862.500    60.000   862.500   135.000   861.600   148.000
GR    861.100   150.000   860.300   175.000   860.200   198.000   862.200   201.000   863.400   225.000
GR    866.000   350.000      .000      .000      .000      .000      .000      .000      .000      .000

                DUP OF XSEC 0.00
X1     10.000      .000      .000      .000   900.000   900.000  1000.000      .000      .000      .000

                XSEC 3 FROM FILE F88-32D.5
X1     16.000    11.000   110.000   160.000   600.000   500.000   600.000      .000      .000      .000
GR    870.000    50.000   863.900    73.000   863.600   100.000   861.800   110.000   860.800   135.000
GR    862.400   160.000   862.400   160.000   862.600   205.000   862.800   293.000   864.900   340.000
GR    864.900   500.000      .000      .000      .000      .000      .000      .000      .000      .000

                XSEC 7 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
X1     18.800    13.000   447.000   500.000   200.000   300.000   280.000      .000      .000      .000
GR    870.500    25.000   867.000    80.000   866.000   250.000   862.500   400.000   861.900   447.000
GR    861.300   449.000   858.800   450.000   857.600   460.000   857.700   498.000   862.200   500.000
GR    863.100   556.000   864.500   650.000   867.800   750.000      .000      .000      .000      .000

                XSEC 2 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
X1     22.600    13.000   102.000   141.000   380.000   380.000   380.000      .000      .000      .000
GR    870.000      .000   867.000    25.000   866.000    52.000   863.100   100.000   862.300   102.000
GR    861.600   110.000   861.400   130.000   862.000   140.000   862.700   141.000   865.700   175.000
GR    866.700   200.000   867.600   238.000   868.400   420.000      .000      .000      .000      .000
```



```
                XSEC 6 FROM FILE F88-32D.5
X1     28.000    12.000    57.000   100.000   440.000   590.000   540.000      .000      .000      .000
X3       [illegible]      .000      [illegible]    40.000   869.600   115.000   869.600      .000      .000      .000
```

```
GR    871.000     15.000    865.200     52.000    861.900     57.000    859.900     68.000    860.500     79.000
GR    862.300     81.000    862.700    100.000    863.000    200.000    863.500    250.000    865.000    300.000
GR    866.000    350.000    867.000    400.000       .000       .000       .000       .000       .000       .000

                JORDAN ROAD   50FT SPAN BRIDGE  ELLC 865.1  ROAD AT 869.6
X1     28.500       .000       .000       .000     50.000     50.000     50.000       .000       .000       .000
X3       .000       .000       .000     52.000    869.600    102.000    869.600       .000       .000       .000

SB       .000      1.600      2.900    200.000     50.000       .000    241.000       .000    860.100    860.100
                US OF JORDAN ROAD
X1     28.800       .000       .000       .000     30.000     30.000     30.000       .000       .000       .000
X2       .000       .000      1.000    865.100    869.600       .000       .000       .000       .000       .000
X3       .000       .000       .000     52.000    869.600    102.000    869.600       .000       .000       .000

                500FT US OF JORDAN ROAD  XSEC 4 FROM FILE F88-32D.5
X1     33.800     12.000    200.000    250.000    500.000    500.000    500.000       .000       .000       .000
GR    869.500      5.000    865.500     15.000    865.000    100.000    863.100    200.000    862.800    206.000
GR    862.400    210.000    862.100    240.000    862.400    246.000    862.700    248.000    863.500    250.000
GR    865.800    325.000    867.500    350.000       .000       .000       .000       .000       .000       .000

                DUP OF XSEC 34.6 MOVED US 1000FT   INVERT ADJ
X1     43.800       .000       .000       .000   1000.000   1000.000   1000.000       .000       .800       .000

X1     53.800       .000       .000       .000   1000.000   1000.000   1000.000       .000       .800       .000
EJ       .000       .000       .000       .000       .000       .000       .000       .000       .000       .000
1
 03/07/90    16:07:29                                                                                          PAGE    3


   SECNO    DEPTH    CWSEL    CRIWS    WSELV    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
 *SECNO  .000
 3280 CROSS SECTION       .00 EXTENDED       .49 FEET

                XSEC 8 FROM FILE F88-32D.5  MOVED DS 1000FT INVERT ADJ
      .00     5.79   865.19      .00   865.00   865.32      .14      .00      .00   860.80
    1740.     478.    1061.     200.     397.     288.     237.       0.       0.   861.40
      .00     1.20     3.69      .84     .075     .035     .075     .000   859.40      .00
  .000805       0.       0.       0.        0        0        4      .00   349.28   349.28
0
 *SECNO 10.000
 3280 CROSS SECTION     10.00 EXTENDED      1.12 FEET

                DUP OF XSEC 0.00
    10.00     6.42   865.82      .00      .00   865.91      .09      .58      .00   860.80
    1740.     504.     980.     256.     491.     321.     332.      22.       7.   861.40
      .13     1.03     3.05      .77     .075     .035     .075     .000   859.40      .00
  .000474     900.    1000.     900.        2        0        0      .00   350.00   350.00
0
 *SECNO 16.000
 3280 CROSS SECTION     16.00 EXTENDED      1.26 FEET

                XSEC 3 FROM FILE F88-32D.5
    16.00     5.36   866.16      .00      .00   866.25      .09      .34      .00   861.80
    1740.     114.     786.     839.     109.     236.     780.      36.      12.   862.40
      .20     1.04     3.34     1.08     .075     .035     .075     .000   860.80    64.47
  .000784     600.     600.     500.        2        0        0      .00   435.53   500.00
0
 *STP    18
```

```
                XSEC 7 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
    18.80     8.70   866.30      .00      .00   866.36      .07      .11      .00   861.90
    1740.     309.    1131.     300.     507.     438.     487.      44.      15.   862.20
      .24      .61     2.58      .62     .075     .035     .075     .000   857.60   199.83
  .000249     200.     280.     300.        2        0        0      .00   504.57   704.40
0
 #SECNO 22.600
1
 03/07/90    16:07:29                                                                          PAGE    4


   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



 3301 HV CHANGED MORE THAN HVINS

                XSEC 2 FROM FILE F88-32D.5, PERMITTED FILLING ADDED TO XSEC
    22.60     4.48   865.88      .00      .00   866.92     1.05      .26      .29   862.30
    1740.     148.    1463.     129.      70.     164.      58.      52.      18.   862.70
      .25     2.11     8.90     2.24     .075     .035     .075     .000   861.40    53.98
  .006512     380.     380.     380.        3        0        0      .00   125.53   179.51
0
 #SECNO 28.000
 3280 CROSS SECTION     28.00 EXTENDED       .97 FEET


 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=      40.0     115.0  TYPE=     1  TARGET=      75.000
  ELENCL=    869.60  ELENCR=    869.60
                XSEC 6 FROM FILE F88-32D.5
    28.00     8.08   867.98      .00      .00   868.39      .41     1.41      .06   861.90
    1740.      62.    1533.     144.      44.     280.      79.      56.      19.   862.70
      .28     1.41     5.47     1.83     .075     .035     .075     .000   859.90    40.00
  .001399     440.     540.     590.        2        0        0      .00    75.00   115.00
0
 #SECNO 28.500
 3280 CROSS SECTION     28.50 EXTENDED       .95 FEET


 3470 ENCROACHMENT STATIONS=      52.0     102.0  TYPE=     1  TARGET=      50.000
  ELENCL=    869.60  ELENCR=    869.60
                JORDAN ROAD   50FT SPAN BRIDGE  ELLC 865.1  ROAD AT 869.6
    28.50     8.05   867.95      .00      .00   868.51      .56      .08      .04   861.90
    1740.      34.    1695.      11.      22.     280.      10.      57.      19.   862.70
      .29     1.52     6.06     1.05     .075     .035     .075     .000   859.90    52.00
  .001727      50.      50.      50.        2        0        0      .00    50.00   102.00
0
1
 03/07/90    16:07:29                                                                          PAGE    5


   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



 SPECIAL BRIDGE
```

```
SB  XK        XYOR      COFG      RDLEN     BWC       BWF       BAREA     SS        ELCHU     ELCHD
     .00      1.60      2.90    200.00     50.00       .00    241.00       .00    860.10    860.10

*SECNO 28.800
3280 CROSS SECTION     28.80 EXTENDED      1.82 FEET

PRESSURE FLOW


 EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC     ELTRD
                                                                 AREA
   869.25    868.68       .00        0.     1740.      241.      250.      865.10    869.60


3470 ENCROACHMENT STATIONS=      52.0     102.0  TYPE=     1  TARGET=      50.000
 ELENCL=    869.60  ELENCR=    869.60
                US OF JORDAN ROAD
    28.80     8.91   868.81      .00      .00   869.25      .43      .74      .00   861.90
    1740.      34.    1695.      11.      26.     317.      12.      57.      19.    862.70
      .29     1.31     5.35      .88     .075     .035     .075     .000   859.90    52.00
  .001139      30.      30.      30.        2        0        0      .00    50.00   102.00
0
*SECNO 33.800
3280 CROSS SECTION     33.80 EXTENDED      1.94 FEET

                500FT US OF JORDAN ROAD  XSEC 4 FROM FILE F88-32D.5
    33.80     7.34   869.44      .00      .00   869.47      .03      .19      .04   863.10
    1740.     697.     736.     307.     915.     352.     429.      69.      21.    863.50
      .39      .76     2.09      .72     .075     .035     .075     .000   862.10     5.15
  .000181     500.     500.     500.        2        0        0      .00   344.85   350.00
0
*SECNO 43.800
3280 CROSS SECTION     43.80 EXTENDED      1.35 FEET

                DUP OF XSEC 34.6 MOVED US 1000FT   INVERT ADJ
    43.80     6.75   869.65      .00      .00   869.69      .05      .22      .00   863.90
    1740.     678.     769.     293.     800.     322.     370.     105.      29.    864.30
      .58      .85     2.39      .79     .075     .035     .075     .000   862.90     6.63
  .000265    1000.    1000.    1000.        2        0        0      .00   343.37   350.00
0
1
 03/07/90    16:07:29                                                                    PAGE    6


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 53.800
3280 CROSS SECTION     53.80 EXTENDED       .85 FEET

    53.80     6.25   869.95      .00      .00   870.01      .06      .31      .00   864.70
    1740.     659.     802.     279.     704.     297.     320.     137.      37.    865.10
      .74      .94     2.70      .87     .075     .035     .075     .000   863.70     7.87
  .000377    1000.    1000.    1000.        2        0        0      .00   342.13   350.00
0
1
 03/07/90    16:07:29                                                                    PAGE    7
```

THIS RUN EXECUTED 03/07/90 11:07:30

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Nottawa Twp.

3) WATERCOURSE: Coldwater River

4) DOCUMENT TYPE: Run 2 - downstream of Coldwater Lake

00BREAK00

THIS RUN EXECUTED 03/07/90 16:33:25

```
*********************************************
 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
*********************************************
```

```
C
T1      NOTTAWA TWP  ISABELLA CO
T2
T3      COLDWATER RIVER  DS OF COLDWATER LAKE

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        0.        0.        0.   .000800      .00       .0     1200.   865.000      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC      .075      .075      .035      .100      .300      .000      .000      .000      .000      .000
                XSEC 8 FROM FILE F88-32D.5  MOVED DS 1000FT INVERT ADJ
X1      .000    11.000   148.000   201.000      .000      .000      .000      .000     -.800      .000
GR   865.500      .000   865.400    25.000   862.500    60.000   862.500   135.000   861.600   148.000
GR   861.100   150.000   860.300   175.000   860.200   198.000   862.200   201.000   863.400   225.000
GR   866.000   350.000      .000      .000      .000      .000      .000      .000      .000      .000

865.3           DUP OF XSEC 0.00                                                          +-8
X1    10.000      .000      .000      .000   900.000   900.000  1000.000      .000      .000      .000

865.6           XSEC 3 FROM FILE F88-32D.5
X1    16.000    11.000   110.000   160.000   600.000   500.000   600.000      .000      .000      .000
GR   870.000    50.000   863.900    73.000   863.600   100.000   861.800   110.000   860.800   135.000
GR   862.400   160.000   862.400   160.000   862.600   205.000   862.800   293.000   864.900   340.000
GR   864.900   500.000      .000      .000      .000      .000      .000      .000      .000      .000

                XSEC 7 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
X1    18.800    13.000   447.000   500.000   200.000   300.000   280.000      .000      .000      .000
GR   870.500    25.000   867.000    80.000   866.000   250.000   862.500   400.000   861.900   447.000
GR   861.300   449.000   858.800   450.000   857.600   460.000   857.700   498.000   862.200   500.000
GR   863.100   556.000   864.500   650.000   867.800   750.000      .000      .000      .000      .000

                XSEC 2 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
X1    22.600    13.000   102.000   141.000   380.000   380.000   380.000      .000      .000      .000
GR   870.000      .000   867.000    25.000   866.000    52.000   863.100   100.000   862.300   102.000
GR   861.600   110.000   861.400   130.000   862.000   140.000   862.700   141.000   865.700   175.000
GR   866.700   200.000   867.600   238.000   868.400   420.000      .000      .000      .000      .000
```

```
                XSEC 6 FROM FILE F88-32D.5
X1     28.000    12.000    57.000   100.000   440.000   590.000   540.000      .000      .000      .000
X3       .000      .000      .000    40.000   869.600   115.000   869.600      .000      .000      .000
GR    871.000    15.000   865.200    52.000   861.900    57.000   859.900    68.000   860.500    79.000
GR    862.300    81.000   862.700   100.000   863.000   200.000   863.500   250.000   865.000   300.000
GR    866.000   350.000   867.000   400.000      .000      .000      .000      .000      .000      .000

                JORDAN ROAD   50FT SPAN BRIDGE  ELLC 865.1  ROAD AT 869.6
X1     28.500      .000      .000      .000    50.000    50.000    50.000      .000      .000      .000
X3       .000      .000      .000    52.000   869.600   102.000   869.600      .000      .000      .000

SB       .000     1.600     2.900   200.000    50.000      .000   241.000      .000   860.100   860.100
                US OF JORDAN ROAD
X1     28.800      .000      .000      .000    30.000    30.000    30.000      .000      .000      .000
X2       .000      .000     1.000   865.100   869.600      .000      .000      .000      .000      .000
X3       .000      .000      .000    52.000   869.600   102.000   869.600      .000      .000      .000

                500FT US OF JORDAN ROAD  XSEC 4 FROM FILE F88-32D.5
X1     33.800    12.000   200.000   250.000   500.000   500.000   500.000      .000      .000      .000
GR    869.500     5.000   865.500    15.000   865.000   100.000   863.100   200.000   862.800   206.000
GR    862.400   210.000   862.100   240.000   862.400   246.000   862.700   248.000   863.500   250.000
GR    865.800   325.000   867.500   350.000      .000      .000      .000      .000      .000      .000

                DUP OF XSEC 34.6 MOVED US 1000FT   INVERT ADJ
X1     43.800      .000      .000      .000  1000.000  1000.000  1000.000      .000      .800      .000

X1     53.800      .000      .000      .000  1000.000  1000.000  1000.000      .000      .800      .000
EJ       .000      .000      .000      .000      .000      .000      .000      .000      .000      .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 1

CCHV=    .100 CEHV=    .300
#SECNO  .000
                XSEC B FROM FILE F88-32D.5  MOVED DS 1000FT INVERT ADJ
     .00     4.98   864.38      .00   865.00   864.50      .12      .00      .00   860.80
    1200.     295.     809.      96.     285.     245.     133.       0.       0.   861.40
     .00     1.04     3.30      .72     .075     .035     .075     .000   859.40    27.70
  .000801       0.       0.       0.        0        0        5      .00   282.72   310.42


#SECNO 10.000
3280 CROSS SECTION     10.00 EXTENDED       .29 FEET

                DUP OF XSEC 0.00
    10.00     5.59   864.99      .00      .00   865.07      .07      .57      .00   860.80
    1200.     322.     749.     128.     369.     278.     210.      16.       7.   861.40
      .13      .87     2.70      .61     .075     .035     .075     .000   859.40      .00
  .000452     900.    1000.     900.        2        0        0      .00   340.11   340.11


#SECNO 16.000
3280 CROSS SECTION     16.00 EXTENDED       .45 FEET

                XSEC 3 FROM FILE F88-32D.5
    16.00     4.54   865.34      .00      .00   865.43      .09      .36      .00   861.80
    1200.      68.     625.     507.      74.     195.     504.      27.      11.   862.40
      .21      .92     3.21     1.01     .075     .035     .075     .000   860.80    67.53
  .000931     600.     600.     500.        0        0        0      .00   432.47   500.00


#SECNO 18.800
                XSEC 7 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
    18.80     7.89   865.49      .00      .00   865.54      .06      .11      .00   861.90
    1200.     169.     873.     158.     346.     395.     332.      32.      14.   862.20
      .25      .49     2.21      .48     .075     .035     .075     .000   857.60   271.94
  .000209     200.     280.     300.        2        0        0      .00   408.01   679.94


#SECNO 22.600

3301 HV CHANGED MORE THAN HVINS
```

```
              XSEC 2 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
   22.60     3.76   865.16      .00      .00   866.01      .85      .23      .24   862.30
   1200.      71.    1067.      63.      40.     136.      34.      38.      16.   862.70
     .27     1.76     7.82     1.82     .075     .035     .075     .000   861.40    65.84
 .006442     380.     380.     380.        3        0        0      .00   103.08   168.92


*SECNO 28.000
3280 CROSS SECTION     28.00 EXTENDED       .02 FEET


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=      40.0     115.0  TYPE=     1  TARGET=      75.000
 ELENCL=    869.60  ELENCR=    869.60
              XSEC 6 FROM FILE F88-32D.5
   28.00     7.12   867.02      .00      .00   867.30      .28     1.23      .06   861.90
   1200.      30.    1072.      97.      28.     239.      64.      41.      17.   862.70
     .30     1.09     4.48     1.51     .075     .035     .075     .000   859.90    40.41
 .001160     440.     540.     590.        2        0        0      .00    74.59   115.00


*SECNO 28.500
3280 CROSS SECTION     28.50 EXTENDED       .03 FEET


3470 ENCROACHMENT STATIONS=      52.0     102.0  TYPE=     1  TARGET=      50.000
 ELENCL=    869.60  ELENCR=    869.60
              JORDAN ROAD   50FT SPAN BRIDGE  ELLC 865.1  ROAD AT 869.6
   28.50     7.13   867.03      .00      .00   867.39      .36      .06      .02   861.90
   1200.      22.    1170.       8.      17.     240.       9.      42.      17.   862.70
     .31     1.25     4.88      .91     .075     .035     .075     .000   859.90    52.00
 .001375      50.      50.      50.        2        0        0      .00    50.00   102.00



SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     .00      1.60      2.90    200.00     50.00       .00    241.00       .00    860.10    860.10

*SECNO 28.800
3280 CROSS SECTION     28.80 EXTENDED       .32 FEET

PRESSURE 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


 EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC     ELTRD
                                                                 AREA
   867.64    867.56       .00        0.     1200.      241.      250.      865.10    869.60


3470 ENCROACHMENT STATIONS=      52.0     102.0  TYPE=     1  TARGET=      50.000
 ELENCL=    869.60  ELENCR=    869.60
              US OF JORDAN ROAD
   28.80     7.41   867.31      .00      .00   867.64      .33      .25      .00   861.90
   1200.      22.    1170.       8.      19.     252.       9.      42.      17.   862.70
     .31     1.18     4.64      .84     .075     .035     .075     .000   859.90    52.00
 .001160      30.      30.      30.        2        0        0      .00    50.00   102.00


*SECNO 33.800
3280 CROSS SECTION     33.80 EXTENDED       .37 FEET

              500FT US OF JORDAN ROAD  XSEC 4 FROM FILE F88-32D.5
   33.80     5.77   867.87      .00      .00   867.91      .04      .24      .03   863.10
   1200.     438.     581.     180.     612.     273.     272.      50.      20.   863.50
     .41      .72     2.13      .66     .075     .035     .075     .000   862.10     9.07
 .000262     500.     500.     500.        2        0        0      .00   340.93   350.00


*SECNO 43.800
              DUP OF XSEC 34.6 MOVED US 1000FT   INVERT ADJ
   43.80     5.28   868.18      .00      .00   868.24      .05      .32      .00   863.90
   1200.     417.     617.     166.     519.     249.     223.      75.      27.   864.30
     .58      .80     2.48      .74     .075     .035     .075     .000   862.90    10.29
 .000404    1000.    1000.    1000.        2        0        0      .00   337.98   348.27


*SECNO 53.800
   53.80     4.95   868.64      .00      .00   868.72      .07      .47      .00   864.70
   1200.     399.     646.     155.     455.     232.     191.      96.      35.   865.10
     .72      .88     2.79      .81     .075     .035     .075     .000   863.70    11.14
 .000561    1000.    1000.    1000.        2        0        0      .00   332.17   343.31
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Nottawa Twp

3) WATERCOURSE: Coldwater River

4) DOCUMENT TYPE: Run - Coldwater River and Lake

00BREAK00

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

 Version   4.6.2;  May 1991
************************************


T1      FPI XSEC BASED ON FILE F88-32D.5
T2
T3      COLDWATER RIVER & LAKE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

                                        .00078                     1200     865

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

                       -1


NC      .06       .06      .045       .1        .3
X1                 11       185      261
GR      865                865       75     862.5      110     862.5      185     861.6      200
GR    860.3       203     860.2      248     862.2      261     862.5      350     863.5      385
GR      866       400

X1      5.8        10       100      160       580      580       580
GR      867        60     863.9       73     863.6      100     861.8      110     860.8      135
GR    860.6       160     862.4      160     862.8      293     862.8      400       863      600

X1     13.2        10       100      141       840      840       840
GR      870                866       25     863.5       65     863.5       82     863.1      100
GR    862.5       102     861.4      130       862      140     862.7      141     865.7      175

X1     18.3        10        33       83       510      510       510
GR      870        20       865       33     861.9       57     861.1       60     859.9       68
GR    860.5        79     862.3       83     862.7      100       865      300       867      400

             JORDAN ROAD
X1     18.8         7         0       50        50       50        50
GR    868.7                860.8               859.3       20     860.1       30     860.4       40
GR    860.8        50     868.8       50

SB                1.6       2.8                  50                 279               859.3     859.3
X1     19.5         9       350      400        70       70        70
X2                            1    865.7     868.7
BT        7         0     870.5                 100     869.6                 200     869.1
BT      250       869                350     868.7     865.7      400     868.8     865.7      600
BT    870.4
GR    870.5                869.6      100     869.1      200       869      250     868.7      350
GR    860.5       350     860.5      400     868.8      400     870.4      600
1
   05DEC95      08:58:44                                                                    PAGE    2


             "MANUFACTURED" XSEC CHANNEL SHAPE BASED ON DS XSEC OB FLAT
X1       20         9       300      357        50       50        50
GR      866                865      300       862      325      860.      326     860.5      337
GR    862.3       342       863      357       865      600       865      700
```

```
X1      25                                  500       500       500                  .4

X1      35                                 1000      1000      1000                  .8

X1      40                                  500       500       500                  .4

X1    41.9                                  190       190       190

            QUAD SHOWS LAKE AT 865, DAM FILES INDICATE AT DAM EXISTED ABOUT
            1890'S   XSEC ASSUMED TO GET A "NORMAL" LAKE LEVEL OF 865
X1      42        6      410      460        10        10        10
GR     866                865      400     864.6       410     864.6       460       865       470
GR     866      600
```

1


```
   SECNO    DEPTH    CWSEL    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      WTN      ELMIN    SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*PROF 1

CCHV=    .100 CEHV=    .300
*SECNO  .000
     .000     4.48   864.68      .00   865.00   864.74      .05      .00      .00   862.50
   1200.0    215.4    671.8    312.8    197.3    295.6    271.0       .0       .0   862.20
      .00     1.09     2.27     1.15     .060     .045     .060     .000   860.20    79.41
  .000780       0.       0.       0.        0        0        5      .00   312.70   392.11


*SECNO 5.800
3280 CROSS SECTION     5.80 EXTENDED     2.03 FEET


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

    5.800     4.43   865.03      .00      .00   865.05      .02      .31      .00   863.60
   1200.0     21.0    347.4    831.7     37.4    225.1    989.7     13.4      5.6   862.40
      .16      .56     1.54      .84     .060     .045     .060     .000   860.60    68.24
  .000391     580.     580.     580.        2        0        0      .00   531.76   600.00


*SECNO 13.200

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .29

   13.200     4.21   865.61      .00      .00   865.94      .33      .79      .09   863.10
   1200.0    286.9    808.5    104.6    113.0    150.4     47.9     28.5     12.1   862.70
      .21     2.54     5.38     2.18     .060     .045     .060     .000   861.40    31.26
  .004737     840.     840.     840.        2        0        0      .00   142.70   173.96


*SECNO 18.300
```

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.97

18.300	6.65	866.55	.00	.00	866.58	.04	.61	.03	865.00
1200.0	1.4	474.0	724.6	3.1	227.8	665.3	35.6	15.0	862.30
.30	.46	2.08	1.09	.060	.045	.060	.000	859.90	29.00
.000537	510.	510.	510.	2	0	0	.00	347.89	376.89

1

SECNO	DEPTH	CWSEL	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	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18.800

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .60

JORDAN ROAD

18.800	7.16	866.46	.00	.00	866.68	.22	.04	.06	868.70
1200.0	.0	1200.0	.0	.0	316.4	.0	36.3	15.2	868.80
.31	.00	3.79	.00	.000	.045	.000	.000	859.30	.00
.001483	50.	50.	50.	2	0	0	.00	50.00	50.00

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.00	1.60	2.80	.00	50.00	.00	279.00	.00	859.30	859.30

*SECNO 19.500
PRESSURE FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
866.92	866.71	.00	0.	1200.	279.	320.	865.70	868.70	0.

19.500	6.18	866.68	.00	.00	866.92	.23	.24	.00	868.70
1200.0	.0	1200.0	.0	.0	309.2	.0	36.8	15.3	868.80
.31	.00	3.88	.00	.000	.045	.000	.000	860.50	350.00
.001634	70.	70.	70.	2	0	0	.00	50.00	400.00

*SECNO 20.000
3280 CROSS SECTION 20.00 EXTENDED 1.95 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.72

"MANUFACTURED" XSEC CHANNEL SHAPE BASED ON DS XSEC OB FLAT

20.000	6.95	866.95	.00	.00	866.96	.01	.02	.02	865.00
1200.0	205.1	340.5	654.5	435.1	258.2	911.9	37.9	15.7	863.00

```
     .33      .47     1.32      .72     .060     .045     .060     .000   860.00      .00
  .000222      50.      50.      50.        2        0        0      .00   700.00   700.00


1
  05DEC95     08:58:44                                                                    PAGE    5


   SECNO    DEPTH    CWSEL    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      WTN      ELMIN    SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID   ENDST


*SECNO 25.000
3280 CROSS SECTION     25.00 EXTENDED      1.68 FEET

   25.000     6.68   867.08      .00      .00   867.10      .02      .13      .00   865.40
   1200.0    173.9    368.0    658.1    353.3    242.6    818.4     55.2     23.8   863.40
      .47      .49     1.52      .80     .060     .045     .060     .000   860.40      .00
  .000318     500.     500.     500.        2        0        0      .00   700.00   700.00


*SECNO 35.000
3280 CROSS SECTION     35.00 EXTENDED      1.29 FEET

   35.000     6.29   867.49      .00      .00   867.52      .03      .42      .00   866.20
   1200.0    119.3    419.9    660.8    236.4    220.4    684.8     84.5     39.8   864.20
      .69      .50     1.90      .96     .060     .045     .060     .000   861.20      .00
  .000571    1000.    1000.    1000.        2        0        0      .00   700.00   700.00


*SECNO 40.000
3280 CROSS SECTION     40.00 EXTENDED      1.19 FEET

   40.000     6.19   867.79      .00      .00   867.83      .03      .31      .00   866.60
   1200.0    104.2    435.3    660.5    208.0    215.0    652.3     97.3     47.9   864.60
      .80      .50     2.02     1.01     .060     .045     .060     .000   861.60      .00
  .000666     500.     500.     500.        2        0        0      .00   700.00   700.00


*SECNO 41.900
3280 CROSS SECTION     41.90 EXTENDED      1.31 FEET

   41.900     6.31   867.91      .00      .00   867.94      .03      .11      .00   866.60
   1200.0    122.9    416.3    660.8    243.3    221.7    692.7    102.1     50.9   864.60
      .84      .50     1.88      .95     .060     .045     .060     .000   861.60      .00
  .000550     190.     190.     190.        0        0        0      .00   700.00   700.00


*SECNO 42.000
3280 CROSS SECTION     42.00 EXTENDED      1.93 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

            QUAD SHOWS LAKE AT 865, DAM FILES INDICATE AT DAM EXISTED ABOUT
1
  05DEC95     08:58:44                                                                    PAGE    6
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Nottawa Twp.

3) WATERCOURSE: Coldwater River

4) DOCUMENT TYPE: Run 2 - downstream of Coldwater Lake

00BREAK00

THIS RUN EXECUTED 03/07/90 16:33:25

```
*********************************************
 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
*********************************************
```

```
C
T1      NOTTAWA TWP  ISABELLA CO
T2
T3      COLDWATER RIVER  DS OF COLDWATER LAKE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       0.       0.       0.   .000800      .00       .0    1200.   865.000     .000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN      ALLDC    IBW      CHNIM    ITRACE

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

NC      .075      .075      .035      .100      .300      .000      .000      .000      .000      .000
                XSEC 8 FROM FILE F88-32D.5  MOVED DS 1000FT INVERT ADJ
X1      .000    11.000   148.000   201.000      .000      .000      .000      .000     -.800      .000
GR   865.500      .000   865.400    25.000   862.500    60.000   862.500   135.000   861.600   148.000
GR   861.100   150.000   860.300   175.000   860.200   198.000   862.200   201.000   863.400   225.000
GR   866.000   350.000      .000      .000      .000      .000      .000      .000      .000      .000

865.3           DUP OF XSEC 0.00                                                          +-8
X1    10.000      .000      .000      .000   900.000   900.000  1000.000      .000      .000      .000

865.6           XSEC 3 FROM FILE F88-32D.5
X1    16.000    11.000   110.000   160.000   600.000   500.000   600.000      .000      .000      .000
GR   870.000    50.000   863.900    73.000   863.600   100.000   861.800   110.000   860.800   135.000
GR   862.400   160.000   862.400   160.000   862.600   205.000   862.800   293.000   864.900   340.000
GR   864.900   500.000      .000      .000      .000      .000      .000      .000      .000      .000

                XSEC 7 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
X1    18.800    13.000   447.000   500.000   200.000   300.000   280.000      .000      .000      .000
GR   870.500    25.000   867.000    80.000   866.000   250.000   862.500   400.000   861.900   447.000
GR   861.300   449.000   858.800   450.000   857.600   460.000   857.700   498.000   862.200   500.000
GR   863.100   556.000   864.500   650.000   867.800   750.000      .000      .000      .000      .000

                XSEC 2 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
X1    22.600    13.000   102.000   141.000   380.000   380.000   380.000      .000      .000      .000
GR   870.000      .000   867.000    25.000   866.000    52.000   863.100   100.000   862.300   102.000
GR   861.600   110.000   861.400   130.000   862.000   140.000   862.700   141.000   865.700   175.000
GR   866.700   200.000   867.600   238.000   868.400   420.000      .000      .000      .000      .000
```

```
                XSEC 6 FROM FILE FBB-32D.5
X1     28.000    12.000    57.000   100.000   440.000   590.000   540.000      .000      .000      .000
X3      .000      .000      .000    40.000   869.600   115.000   869.600      .000      .000      .000
GR    871.000    15.000   865.200    52.000   861.900    57.000   859.900    68.000   860.500    79.000
GR    862.300    81.000   862.700   100.000   863.000   200.000   863.500   250.000   865.000   300.000
GR    866.000   350.000   867.000   400.000      .000      .000      .000      .000      .000      .000

                JORDAN ROAD   50FT SPAN BRIDGE  ELLC 865.1  ROAD AT 869.6
X1     28.500      .000      .000      .000    50.000    50.000    50.000      .000      .000      .000
X3      .000      .000      .000    52.000   869.600   102.000   869.600      .000      .000      .000

SB      .000     1.600     2.900   200.000    50.000      .000   241.000      .000   860.100   860.100
                US OF JORDAN ROAD
X1     28.800      .000      .000      .000    30.000    30.000    30.000      .000      .000      .000
X2      .000      .000     1.000   865.100   869.600      .000      .000      .000      .000      .000
X3      .000      .000      .000    52.000   869.600   102.000   869.600      .000      .000      .000

                500FT US OF JORDAN ROAD  XSEC 4 FROM FILE FBB-32D.5
X1     33.800    12.000   200.000   250.000   500.000   500.000   500.000      .000      .000      .000
GR    869.500     5.000   865.500    15.000   865.000   100.000   863.100   200.000   862.800   206.000
GR    862.400   210.000   862.100   240.000   862.400   246.000   862.700   248.000   863.500   250.000
GR    865.800   325.000   867.500   350.000      .000      .000      .000      .000      .000      .000

                DUP OF XSEC 34.6 MOVED US 1000FT   INVERT ADJ
X1     43.800      .000      .000      .000  1000.000  1000.000  1000.000      .000      .800      .000

X1     53.800      .000      .000      .000  1000.000  1000.000  1000.000      .000      .800      .000
EJ      .000      .000      .000      .000      .000      .000      .000      .000      .000      .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 1

CCHV=    .100 CEHV=    .300
*SECNO  .000
                XSEC 8 FROM FILE F88-32D.5  MOVED DS 1000FT INVERT ADJ
     .00     4.98   864.38      .00   865.00   864.50      .12      .00      .00   860.80
   1200.     295.     809.      96.     285.     245.     133.       0.       0.   861.40
     .00     1.04     3.30      .72     .075     .035     .075     .000   859.40    27.70
 .000801       0.       0.       0.        0        0        5      .00   282.72   310.42


*SECNO 10.000
3280 CROSS SECTION     10.00 EXTENDED       .29 FEET

                DUP OF XSEC 0.00
   10.00     5.59   864.99      .00      .00   865.07      .07      .57      .00   860.80
   1200.     322.     749.     128.     369.     278.     210.      16.       7.   861.40
     .13      .87     2.70      .61     .075     .035     .075     .000   859.40      .00
 .000452     900.    1000.     900.        2        0        0      .00   340.11   340.11


*SECNO 16.000
3280 CROSS SECTION     16.00 EXTENDED       .45 FEET

                XSEC 3 FROM FILE F88-32D.5
   16.00     4.54   865.34      .00      .00   865.43      .09      .36      .00   861.80
   1200.      68.     625.     507.      74.     195.     504.      27.      11.   862.40
     .21      .92     3.21     1.01     .075     .035     .075     .000   860.80    67.53
 .000931     600.     600.     500.        0        0        0      .00   432.47   500.00


*SECNO 18.800
                XSEC 7 FROM FILE F88-32D.5  PERMITTED FILLING ADDED TO XSEC
   18.80     7.89   865.49      .00      .00   865.54      .06      .11      .00   861.90
   1200.     169.     873.     158.     346.     395.     332.      32.      14.   862.20
     .25      .49     2.21      .48     .075     .035     .075     .000   857.60   271.94
 .000209     200.     280.     300.        2        0        0      .00   408.01   679.94


*SECNO 22.600

3301 HV CHANGED MORE THAN HVINS
```

```
              XSEC 2 FROM FILE FBB-32D.5  PERMITTED FILLING ADDED TO XSEC
   22.60     3.76   865.16      .00      .00   866.01      .85      .23      .24   862.30
   1200.      71.    1067.      63.      40.     136.      34.      38.      16.   862.70
     .27     1.76     7.82     1.82     .075     .035     .075     .000   861.40    65.84
 .006442     380.     380.     380.        3        0        0      .00   103.08   168.92


#SECND 28.000
3280 CROSS SECTION     28.00 EXTENDED       .02 FEET


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=      40.0     115.0  TYPE=     1  TARGET=      75.000
 ELENCL=    869.60  ELENCR=    869.60
              XSEC 6 FROM FILE FBB-32D.5
   28.00     7.12   867.02      .00      .00   867.30      .28     1.23      .06   861.90
   1200.      30.    1072.      97.      28.     239.      64.      41.      17.   862.70
     .30     1.09     4.48     1.51     .075     .035     .075     .000   859.90    40.41
 .001160     440.     540.     590.        2        0        0      .00    74.59   115.00


#SECND 28.500
3280 CROSS SECTION     28.50 EXTENDED       .03 FEET


3470 ENCROACHMENT STATIONS=      52.0     102.0  TYPE=     1  TARGET=      50.000
 ELENCL=    869.60  ELENCR=    869.60
              JORDAN ROAD   50FT SPAN BRIDGE  ELLC 865.1  ROAD AT 869.6
   28.50     7.13   867.03      .00      .00   867.39      .36      .06      .02   861.90
   1200.      22.    1170.       8.      17.     240.       9.      42.      17.   862.70
     .31     1.25     4.88      .91     .075     .035     .075     .000   859.90    52.00
 .001375      50.      50.      50.        2        0        0      .00    50.00   102.00


SPECIAL BRIDGE

SB  XK        XKOR      CDFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     .00      1.60      2.90    200.00    50.00       .00    241.00      .00    860.10    860.10

#SECND 28.800
3280 CROSS SECTION     28.80 EXTENDED       .32 FEET

PRESSURE 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

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD
867.64	867.56	.00	0.	1200.	241.	250.	865.10	869.60

3470 ENCROACHMENT STATIONS= 52.0 102.0 TYPE= 1 TARGET= 50.000
ELENCL= 869.60 ELENCR= 869.60
US OF JORDAN ROAD

28.80	7.41	867.31	.00	.00	867.64	.33	.25	.00	861.90
1200.	22.	1170.	8.	19.	252.	9.	42.	17.	862.70
.31	1.18	4.64	.84	.075	.035	.075	.000	859.90	52.00
.001160	30.	30.	30.	2	0	0	.00	50.00	102.00

#SECNO 33.800
3280 CROSS SECTION 33.80 EXTENDED .37 FEET

500FT US OF JORDAN ROAD XSEC 4 FROM FILE F88-32D.5

33.80	5.77	867.87	.00	.00	867.91	.04	.24	.03	863.10
1200.	438.	581.	180.	612.	273.	272.	50.	20.	863.50
.41	.72	2.13	.66	.075	.035	.075	.000	862.10	9.07
.000262	500.	500.	500.	2	0	0	.00	340.93	350.00

#SECNO 43.800
DUP OF XSEC 34.6 MOVED US 1000FT INVERT ADJ

43.80	5.28	868.18	.00	.00	868.24	.05	.32	.00	863.90
1200.	417.	617.	166.	519.	249.	223.	75.	27.	864.30
.58	.80	2.48	.74	.075	.035	.075	.000	862.90	10.29
.000404	1000.	1000.	1000.	2	0	0	.00	337.98	348.27

#SECNO 53.800

53.80	4.95	868.64	.00	.00	868.72	.07	.47	.00	864.70
1200.	399.	646.	155.	455.	232.	191.	96.	35.	865.10
.72	.88	2.79	.81	.075	.035	.075	.000	863.70	11.14
.000561	1000.	1000.	1000.	2	0	0	.00	332.17	343.31

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Union Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100-yr run

00BREAK00

THIS RUN EXECUTED 06/29/89 07:41:43

```
**************************************************
 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
**************************************************


C
T1      UNION TWP FLOODPLAIN INFO                    UNION1.FPI
T2      DATA BASED ON MT PLEASANT FIS, FILES 2942-32.4, 852-32D
T3      CHIPPEWA RIVER   Q BASED ON DAR TO GAGE AT MT PLEAS INCLUDES 1986 Q

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       2.       0.       0.   .000000      .00       .0    6650.   763.500     .000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

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


NC      .060     .060     .045     .100     .300     .000     .000     .000     .000     .000
                FIS XSEC AN    START WSEL BASED ON FIS
X1 223990.000   18.000  1100.000  1157.000     .000     .000     .000     .000     .000     .000
X3      .000     .000     .000   250.000     .000     .000     .000     .000     .000     .000
GR   770.000     .000   760.000    60.000   758.200   200.000   758.200   600.000   758.400   700.000
GR   758.400   800.000   758.900   900.000   759.000  1000.000   759.000  1096.000   753.500  1100.000
GR   750.900  1115.000   751.300  1130.000   750.600  1140.000   753.500  1156.000   753.800  1157.000
GR   754.000  1175.000   760.000  1250.000   764.000  1260.000     .000     .000     .000     .000

NC      .150     .150     .045     .100     .300     .000     .000     .000     .000     .000
ET      .000     .000    1.400     .000     .000     .000     .000     .000     .000     .000
         A   XSEC OB FROM 2FT TOPO  CH FROM DS FIS XSEC  400FT US TWP LINE
X1   400.000   15.000   200.000   280.000   500.000   500.000   690.000     .000     .000     .000
GR   768.000     .000   762.000    35.000   760.000   200.000   754.000   205.000   751.300   220.000
GR   751.700   235.000   751.000   245.000   753.900   261.000   754.200   262.000   754.400   280.000
GR   760.000   326.000   760.400   700.000   762.000   930.000   766.000   940.000   770.000   950.000

ET      .000     .000    5.100     .000   160.000   895.000     .000     .000     .000     .000
         B    XSEC OB CUT FROM 2FT TOPO   CHANNEL FROM DS FIS XSEC
X1  1680.000   13.000   820.000   885.000   750.000   750.000  1280.000     .000     .000     .000
GR   770.000     .000   764.000   150.000   760.000   160.000   760.000   790.000   754.800   820.000
GR   752.100   825.000   752.500   840.000   751.800   850.000   754.700   866.000   755.000   867.000
GR   755.200   885.000   760.000   892.000   770.000   910.000     .000     .000     .000     .000

ET      .000    5.100    1.400     .000     .000  1034.000     .000     .000     .000     .000
X1  2470.000   16.000   652.000   754.000   700.000   800.000   790.000     .000     .000     .000
GR   770.000     .000   768.000    80.000   766.000   435.000   764.000   490.000   762.000   570.000
GR   760.900   652.000   755.700   682.000   752.600   687.000   753.000   702.000   752.300   712.000
GR   755.200   728.000   755.500   729.000   755.700   747.000   760.500   754.000   761.700   804.000
GR   770.000  1154.000     .000     .000     .000     .000     .000     .000     .000     .000
```

```
ET      .000      .000     7.100      .000      .000      .000    520.000   1250.000      .000      .000
          D  XSEC 1 FROM FILE 2942-32.4  85 FT DS OF LINCOLN RD
               OB EXTENDED TO 770 FROM QUAD
X1   4470.000    13.000   698.000   802.000  1200.000  1300.000  2000.000      .000      .000      .000
GR    770.000      .000   770.000   498.000   760.800   520.000   762.300   698.000   757.300   705.000
GR    755.900   720.000   755.300   735.000   754.800   750.000   754.800   765.000   756.000   780.000
GR    756.600   798.000   762.100   802.000   770.000  1940.000      .000      .000      .000      .000

NC      .000      .000      .000      .300      .500      .000      .000      .000      .000      .000
ET      .000     5.100     7.100      .000   698.000   828.000   698.000   818.000      .000      .000
          E  CHANNEL FROM XSEC D  OB EXTENDED TO 770 BASED ON QUAD
X1   4970.000    15.000   698.000   802.000   500.000   500.000   500.000      .000      .000      .000
GR    763.700      .000   762.400   250.000   760.800   520.000   762.300   698.000   757.300   705.000
GR    755.900   720.000   755.300   735.000   754.800   750.000   754.800   765.000   756.000   780.000
GR    756.600   798.000   762.100   802.000   761.700  1050.000   762.000  1405.000   765.200  1415.000

NC      .090      .090      .035      .300      .500      .000      .000      .000      .000      .000
ET      .000     5.100     5.100      .000   844.000   970.000      .000      .000      .000      .000
          F    XSEC 2    DS OF LINCOLN RD
X1   5030.000    14.000   848.000   952.000   100.000   100.000    60.000      .000      .000      .000
GR    774.300      .000   766.600   115.000   762.400   400.000   760.700   670.000   762.300   848.000
GR    756.900   852.000   754.200   880.000   755.300   900.000   755.400   920.000   756.700   945.000
GR    762.400   952.000   761.500  1200.000   760.500  1530.000   767.600  1540.000      .000      .000

NC      .100      .150      .035      .000      .000      .000      .000      .000      .000      .000
ET      .000     5.100     1.400      .000   824.000   981.000      .000      .000      .000      .000
          G    XSEC 4   US OF LINCOLN RD  MINIMAL LOSS AT BRIDGE
X1   5110.000    19.000   840.000   965.000    80.000    80.000    80.000      .000      .000      .000
GR    771.900      .000   771.200   100.000   768.100   455.000   759.900   480.000   760.300   650.000
GR    760.000   700.000   760.700   840.000   759.700   848.000   758.000   858.000   756.500   879.000
GR    753.700   900.000   754.200   920.000   756.200   940.000   761.700   965.000   760.600  1200.000
GR    763.300  1220.000   763.700  1500.000   763.800  1700.000   773.600  1720.000      .000      .000

ET      .000     5.100     7.100      .000   550.000  1035.000   550.000  1035.000      .000      .000
          H    XSEC 6   DS LIMITS OF MCGUIRK ESTATES SUB
X1   5290.000    18.000   736.000   855.000   180.000   200.000   180.000      .000      .000      .000
GR    771.200      .000   768.500   315.000   767.100   340.000   766.300   510.000   760.600   560.000
GR    761.100   736.000   759.700   748.000   757.900   760.000   757.400   780.000   756.700   800.000
GR    756.400   820.000   756.700   840.000   761.400   855.000   763.300  1090.000   760.800  1100.000
GR    763.100  1400.000   762.900  1520.000   772.900  1550.000      .000      .000      .000      .000

NC      .000      .000      .000      .100      .300      .000      .000      .000      .000      .000
ET      .000      .000     1.400      .000      .000      .000      .000      .000      .000      .000
          I
X1   6190.000    14.000    95.000   167.000   780.000  1000.000   900.000      .000      .000      .000
GR    774.000      .000   769.100    15.000   768.700    80.000   769.100    95.000   758.100   110.000
GR    756.500   120.000   755.800   135.000   755.900   150.000   762.800   167.000   761.000   395.000
GR    763.450   435.000   763.800   610.000   763.800   810.000   771.300   840.000      .000      .000
1
 06/29/89    07:41:43                                                                          PAGE    3


ET      .000     5.100     5.100      .000     3.000   857.000      .000      .000      .000      .000
X1   6520.000     9.000    19.000    86.000   360.000    70.000   330.000      .000      .000      .000
GR    770.000      .000   759.510    19.000   754.600    35.000   754.100    50.000   754.700    65.000
GR    758.800    81.000   762.400    86.000   762.200  1250.000   773.200  1375.000      .000      .000

ET      .000     5.100     1.400      .000   400.000  1000.000      .000      .000      .000      .000
X1   6680.000    12.000   530.000   630.000   160.000   160.000   160.000      .000      .000      .000
GR    776.700      .000   764.200    40.000   762.300   530.000   758.300   540.000   757.300   570.000
GR    756.110   580.000   757.400   600.000   757.800   615.000   763.500   630.000   763.200  1080.000
GR    762.100  1240.000   773.100  1265.000      .000      .000      .000      .000      .000      .000

ET      .000     5.100     1.400      .000   400.000  1000.000      .000      .000      .000      .000
X1   7190.000      .000      .000      .000    10.000    10.000    10.000      .000      .000      .000
```

```
ET      .000     5.100     1.400      .000    580.000      .000      .000      .000      .000      .000
         L
X1   7090.000    19.000   980.000   1260.000    150.000    300.000    400.000      .000      .000      .000
GR    770.000      .000   765.000     60.000    766.800    630.000    761.800    650.000   763.000    980.000
GR    758.500   990.000   758.600   1010.000    757.500   1030.000    758.000   1050.000   759.100   1070.000
GR    762.600  1080.000   761.800   1230.000    770.300   1260.000    769.660   1320.000   768.500   1360.000
GR    768.500  1745.000   769.500   1820.000    770.000   1880.000    771.500   1915.000      .000      .000

NC      .180      .080      .000      .300      .500      .000      .000      .000      .000      .000
ET      .000     5.100     1.400      .000    530.000   1700.000      .000      .000      .000      .000
X1   7240.000    17.000  1030.000   1160.000    150.000    150.000    150.000      .000      .000      .000
GR    770.000      .000   765.000     60.000    764.400   1030.000    758.600   1040.000   758.200   1055.000
GR    757.700  1070.000   757.700   1085.000    758.400   1100.000    764.400   1108.000   765.400   1145.000
GR    773.400  1160.000   773.200   1310.000    765.200   1370.000    764.100   1460.000   763.000   1510.000
GR    763.300  1840.000   775.300   1865.000       .000      .000      .000      .000      .000      .000

NC      .180      .080      .030      .000      .000      .000      .000      .000      .000      .000
ET      .000     5.100     5.100      .000    230.000   1300.000      .000      .000      .000      .000
         N     WTP IN OVERBANK   XSEC 7590 MOVED DS 100FT
X1   7490.000    17.000   530.000    800.000    200.000    200.000    250.000      .000      .000      .000
GR    782.400      .000   772.400     20.000    772.400    160.000    765.600    180.000   763.800    530.000
GR    758.700   552.300   755.600    568.200    759.300    584.100    763.800    606.400   763.800    700.000
GR    773.000   800.000   773.000    960.000    764.000   1135.000    756.100   1175.000   762.400   1200.000
GR    761.300  1480.000   774.300   1510.000       .000      .000      .000      .000      .000      .000

ET      .000     5.100     5.100      .000    330.000   1300.000      .000      .000      .000      .000
         O     WTP IN OVERBANK                XSEC 12
X1   7590.000      .000      .000      .000    100.000    100.000    100.000      .000      .000      .000

ET      .000     5.100     7.100      .000    200.000   1235.000    480.000   1180.000      .000      .000
         P     US OF INTAKE CANAL             XSEC 13
X1   8290.000    15.000  1035.000   1155.000    600.000    300.000    700.000      .000      .000      .000
GR    782.400      .000   772.400     20.000    772.400    145.000    765.600    165.000   765.600    695.000
GR    762.300   785.000   763.800   1035.000    760.300   1045.000    758.000   1070.000   757.700   1095.000
GR    758.100  1120.000   758.500   1145.000    764.800   1155.000    770.200   1205.000   773.000   1235.000
1
 06/29/89    07:41:43                                                                          PAGE    4


NC      .045      .075      .030      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000    150.000    760.000      .000      .000      .000      .000
         Q     XSEC 1 GREEN ACRES SUB         XSEC 14.1
X1   8390.000    20.000   385.000    540.000    100.000    100.000    100.000      .000      .000      .000
GR    770.200    23.000   769.200    102.000    766.300    185.000    764.000    212.000   763.800    245.000
GR    766.000   308.000   763.000    325.000    762.900    385.000    759.500    391.000   758.000    400.000
GR    759.500   420.000   758.500    440.000    759.700    455.000    760.600    500.000   763.000    540.000
GR    763.000   728.000   764.500    742.000    768.500    770.000    772.300    780.000   774.500    900.000

NC      .080      .040      .035      .100      .300      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000    650.000   1510.000      .000      .000      .000      .000
         R  OB EXTENDED TO 770 BASED ON QUAD
X1   8890.000    17.000   900.000   1055.000    500.000    500.000    500.000      .000      .000      .000
GR    770.000      .000   769.200    520.000    766.300    700.000    764.000    733.000   763.800    760.000
GR    766.000   823.000   763.000    840.000    762.400    900.000    759.500    906.000   758.000    915.000
GR    759.500   935.000   758.500    955.000    759.700    970.000    760.600   1021.000   763.000   1055.000
GR    763.000  1243.000   770.000   1780.000       .000      .000      .000      .000      .000      .000

ET      .000      .000     5.100      .000    600.000   1630.000      .000      .000      .000      .000
         S  BASED ON XSEC R  OB EXTENDED TO 770 BASED ON QUAD
X1   9590.000    17.000   900.000   1055.000    700.000    700.000    700.000      .000      .000      .000
GR    770.000   600.000   769.200    620.000    766.300    700.000    764.000    733.000   763.800    760.000
GR    766.000   823.000   763.000    840.000    762.400    900.000    759.500    906.000   758.000    915.000
GR    759.500   935.000   758.500    955.000    759.700    970.000    760.600   1021.000   763.000   1055.000
GR    763.000  1243.000   770.000   1655.000       .000      .000      .000      .000      .000      .000
```

```
NC      .040      .040      .035      .100      .300      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000    490.000   1500.000      .000      .000      .000      .000
         T   CHANNEL FROM XSEC U  OB EXT TO 770 BASED ON QUAD
X1  10340.000    12.000  1430.000  1495.000   450.000    750.000    750.000      .000      .000      .000
GR    770.000    33.000   764.100   910.000   765.700   1132.000   766.700   1233.000   767.200   1333.000
GR    767.200  1390.000   763.900  1430.000   762.200   1433.000   758.900   1462.000   762.200   1493.000
GR    764.700  1495.000   772.000  1505.000      .000      .000      .000      .000      .000      .000

NC      .060      .000      .000      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     1.400      .000      .000      .000      .000      .000      .000      .000
         U     XSEC 1 FROM FILE NO. 852-32D  GR'S REVERSED TO LOOK DS
X1  11640.000    15.000   533.000   593.000   900.000   1300.000  1300.000      .000      .000      .000
GR    773.000      .000   764.600    10.000   766.200    232.000   767.200    333.000   767.700    433.000
GR    767.700   490.000   764.400   530.000   762.700    533.000   759.400    562.000   762.700    593.000
GR    765.200   595.000   773.200   605.000   773.100    755.000   772.600    795.000   783.100    855.000

NC      .080      .060      .035      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000    38.000    788.000      .000      .000      .000      .000
                V      XSEC G (2.0) FROM FILES
X1  12140.000    11.000   525.000   594.000   500.000    500.000   500.000      .000      .000      .000
GR    776.300      .000   763.700    61.000   767.100    355.000   764.900    523.000   762.900    525.000
GR    758.900   578.000   762.900   594.000   765.500    595.000   767.800    654.000   771.900    897.000
GR    784.300  1098.000      .000      .000      .000      .000      .000      .000      .000      .000
1
 06/29/89    07:41:43                                                                                PAGE    5


ET      .000      .000     5.100      .000    82.000    665.000      .000      .000      .000      .000
         W    XSEC F (3.0) FROM FILES   GR SWITCHED TO GET XSEC LOOKING DS
X1  12590.000     8.000    89.000   149.000   400.000    400.000   450.000      .000      .000      .000
GR    774.200      .000   765.900    87.000   763.300     89.000   760.100    114.000   763.300    149.000
GR    767.400   150.000   769.800   620.000   786.100    705.000      .000      .000      .000      .000

GT     2.000  5020.000  5020.000      .000      .000      .000      .000      .000      .000      .000
NH     5.000      .080   497.000      .035    692.000      .080   994.000      .035  1069.000      .080
NH  1120.000      .000      .000      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000   170.000   1080.000      .000      .000      .000      .000
         X     US OF NORTH BRANCH    XSEC O (4.0) FROM FILES  GR SWITCHED
X1  13260.000    12.000   994.000  1069.000   200.000    500.000   670.000      .000      .000      .000
GR    778.100      .000   765.500   204.000   764.500    495.000   764.000    497.000   761.300    520.000
GR    764.100   692.000   765.600   990.000   763.800    994.000   760.800   1012.000   763.800   1069.000
GR    767.200  1070.000   786.200  1120.000      .000      .000      .000      .000      .000      .000

NC      .070      .080      .035      .000      .000      .000      .000      .000      .000      .000
QT     2.000  5020.000  5020.000      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     1.400      .000      .000      .000      .000      .000      .000      .000
         Y
X1  14140.000     9.000    43.000   152.000   400.000    700.000   880.000      .000      .000      .000
GR    780.400      .000   770.600    40.000   764.200     43.000   760.700     95.000   764.200    152.000
GR    766.000   155.000   767.800   565.000   769.800    675.000   786.200    763.000      .000      .000

NC      .070      .070      .035      .000      .000      .000      .000      .000      .000      .000
ET      .000     5.100     5.100      .000   140.000    640.000      .000      .000      .000      .000
         Z
X1  14880.000    11.000   391.000   495.000   450.000    450.000   740.000      .000      .000      .000
GR    780.900      .000   764.500    41.000   766.200    261.000   769.200    289.000   765.000    391.000
GR    761.300   429.000   765.000   495.000   766.500    499.000   766.100    568.000   767.400    651.000
GR    783.100   683.000      .000      .000      .000      .000      .000      .000      .000      .000

NH     4.000      .080    88.000      .035   148.000      .070   360.000      .080   710.000      .000
ET      .000     5.100     5.100      .000    54.000    620.000      .000      .000      .000      .000
         AA
X1  15530.000    12.000    88.000   148.000   540.000    740.000   650.000      .000      .000      .000
GR    778.500      .000   769.900    30.000   765.600     88.000   763.400    120.000   765.600    149.000
```

```
GR    768.300    150.000    768.200    190.000    766.100    310.000    768.100    360.000    769.100    504.000
GR    768.200    655.000    788.300    710.000       .000       .000       .000       .000       .000       .000

ET       .000       .000      5.100      7.100     27.000    395.000     27.000    395.000       .000       .000
NC       .090       .060       .035       .000       .000       .000       .000       .000       .000       .000
         AB
X1  16065.000      9.000     41.000    119.000    750.000    400.000    535.000       .000       .000       .000
GR    784.600       .000    765.800     41.000    763.300     75.000    765.800    119.000    770.300    123.000
GR    772.900    528.000    784.000    577.000    788.400    582.000    789.800    597.000       .000       .000

NC       .090       .060       .035       .000       .000       .000       .000       .000       .000       .000
ET       .000       .000      1.400       .000       .000       .000       .000       .000       .000       .000
1
 05/29/89    07:41:43                                                                                    PAGE    6


         AC
X1  16440.000     11.000     39.000    107.000    375.000    350.000    375.000       .000       .000       .000
GR    783.300       .000    766.300     39.000    763.200     86.000    765.400    102.000    769.900    107.000
GR    772.800    455.000    770.200    525.000    771.600    588.000    775.600    625.000    781.300    832.000
GR    793.100    948.000       .000       .000       .000       .000       .000       .000       .000       .000

NC       .080       .080       .035       .000       .000       .000       .000       .000       .000       .000
ET       .090      5.100      5.100       .000     94.000    650.000       .000       .000       .000       .000
         AD
X1  16840.000     13.000    394.000    460.000    350.000    350.000    400.000       .000       .000       .000
GR    784.500       .000    768.600     32.000    768.800    391.000    765.400    394.000    763.200    431.000
GR    765.700    460.000    770.200    465.000    773.200    965.000    771.400   1265.000    770.600   1315.000
GR    771.500   1365.000    794.000   1458.000    797.600   1476.000       .000       .000       .000       .000

ET       .000      5.100      7.100       .000    150.000    610.000    150.000    553.000       .000       .000
         AE
X1  16990.000     16.000    345.000    410.000    225.000    125.000    150.000       .000       .000       .000
GR    785.200       .000    770.800     44.000    769.800    343.000    766.500    345.000    764.000    377.000
GR    764.700    408.000    769.000    410.000    770.400    533.000    779.190    584.000    784.000    665.000
GR    785.100    765.000    775.700    855.000    772.300   1255.000    770.300   1275.000    773.600   1380.000
GR    790.800   1405.000       .000       .000       .000       .000       .000       .000       .000       .000

ET       .000      7.100      7.100       .000       .000       .000     25.000    542.000       .000       .000
         AF    STA SWITCHED AS XSEC WAS TAKED LOOKING UPSTREAM
X1  17530.000     21.000     62.000     91.000     10.000    650.000    540.000       .000       .000       .000
GR    791.300       .000    770.400     31.000    769.500     61.000    766.900     62.000    764.900     80.000
GR    766.200     91.000    766.900    258.000    769.800    260.000    773.100    297.000    771.300    478.000
GR    769.600    484.000    769.500    542.000    784.100    570.000    784.300    644.000    781.300    650.000
GR    772.700    696.000    771.800    844.000    768.300    854.000    770.200    966.000    779.100   1006.000
GR    787.500   1201.000       .000       .000       .000       .000       .000       .000       .000       .000

ET       .000      5.100      7.100       .000     57.000    614.000     56.000    612.000       .000       .000
X1  18080.000      8.000    195.000    245.000    450.000    350.000    550.000       .000       .000       .000
GR    780.000       .000    770.000    110.000    767.400    195.000    765.400    213.000    766.000    230.000
GR    767.000    245.000    770.000    345.000    780.000    910.000       .000       .000       .000       .000

ET       .000      5.100      1.400       .000       .000    501.000       .000       .000       .000       .000
         AG
X1  18530.000     21.000     62.000     91.000    450.000    250.000    450.000       .000       .800       .000
GR    791.300       .000    770.400     31.000    769.500     61.000    766.900     62.000    764.900     80.000
GR    766.200     91.000    766.900    258.000    769.800    260.000    773.100    297.000    771.300    478.000
GR    769.600    484.000    769.500    542.000    784.100    570.000    784.300    644.000    781.300    650.000
GR    772.700    696.000    771.800    844.000    768.300    854.000    770.200    966.000    779.100   1006.000
GR    787.500   1201.000       .000       .000       .000       .000       .000       .000       .000       .000

ET       .000      5.100      7.100       .000       .000   1390.000     60.000    955.000       .000       .000
         AH    XSEC BASED ON XSEC AK AND QUAD
X1  20530.000     20.000     62.000     91.000   2000.000   1000.000   2000.000       .000       .000       .000
GR    791.300       .000    771.900     31.000    771.000     61.000    768.400     62.000    766.400     80.000
GR    767.700     91.000    768.400    258.000    771.700    260.000    774.400    297.000    772.800    478.000
```

```
GR    771.100    484.000    771.000     542.000     771.000     570.000     771.100     644.000     771.000     650.000
GR    774.200    696.000    773.300     844.000     769.800     854.000     771.700     966.000     780.000    1590.000
1
 06/29/89    07:41:43                                                                                    PAGE    7


ET       .000       .000      5.100        .000      70.000     430.000        .000        .000        .000        .000
          AI
X1  22280.000      9.000     95.000     195.000    1400.000    1200.000    1750.000        .000        .000        .000
GR    788.200       .000    780.900      15.000     772.500      95.000     770.000     100.000     769.000     145.000
GR    770.000    190.000    773.000     195.000     775.000     440.000     783.800     470.000        .000        .000

NC       .040       .060       .045        .000        .000        .000        .000        .000        .000        .000
ET       .000      5.100      1.400        .000        .000     260.000        .000        .000        .000        .000
          AJ    DS OF MERIDIAN ROAD  US TWP LIMITS
X1  22880.000     10.000     90.000     170.000     600.000     600.000     600.000        .000        .000        .000
GR    786.500       .000    773.800      60.000     773.000      90.000     769.000      92.000     768.200     130.000
GR    769.000    168.000    773.800     170.000     778.300     260.000     777.200     310.000     779.800     390.000
EJ       .000       .000       .000        .000        .000        .000        .000        .000        .000        .000
1
 06/29/89    07:41:43                                                                                    PAGE    8


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
$SECNO 223990.000

3470 ENCROACHMENT STATIONS=     250.0    1260.0  TYPE=     1  TARGET=    -250.000
                FIS XSEC AN     START WSEL BASED ON FIS
223990.00    12.90   763.50      .00   763.50   763.53      .03      .00      .00   753.50
    6650.    4240.    1566.     844.    4286.     674.     676.       0.       0.   753.80
      .00      .99     2.32     1.25     .060     .045     .060     .000   750.60   250.00
  .000186       0.       0.       0.        0        0        0      .00  1008.75  1258.75
0
CCHV=    .100 CEHV=    .300
$SECNO 400.000
          A   XSEC GB FROM 2FT TOPO  CH FROM DS FIS XSEC  400FT US TWP LINE
   400.00    12.51   763.51      .00      .00   763.86      .34      .23      .09   760.00
    6650.     274.    4719.    1657.     421.     850.    2064.      55.      11.   754.40
      .04      .65     5.55      .80     .150     .045     .150     .000   751.00    26.17
  .001281     500.     690.     500.        2        0        0      .00   907.61   933.78
0
$SECNO 1680.000
          B     XSEC OB CUT FROM 2FT TOPO   CHANNEL FROM DS FIS XSEC
  1680.00    13.01   764.81      .00      .00   765.04      .22     1.17      .01   754.80
    6650.    2868.    3722.      60.    3291.     741.      71.     129.      27.   755.20
      .13      .87     5.02      .84     .150     .045     .150     .000   751.80   129.67
  .000921     750.    1280.     750.        2        0        0      .00   770.99   900.66
0
$SECNO 2470.000
  2470.00    13.23   765.53      .00      .00   766.00      .47      .89      .07   760.90
    6650.     481.    5951.     218.     569.    1023.     221.     178.      36.   760.50
      .17      .85     5.82      .98     .150     .045     .150     .000   752.30   447.95
  .001495     700.     790.     800.        2        0        0      .00   356.07   804.01
0
$SECNO 4470.000
          D  XSEC 1 FROM FILE 2942-32.4  85 FT DS OF LINCOLN RD
              OB EXTEND TO 770 FROM LOAD
```

```
  4470.00    12.72   767.52      .00      .00   767.70      .18     1.67      .03   762.30
    6650.     879.    4770.    1001.    1117.    1191.    2117.     287.      59.   762.10
      .34      .79     4.00      .47     .150     .045     .150     .000   754.80   502.93
  .000603    1200.    2000.    1300.        2        0        0      .00  1079.05  1582.98
0
1
 06/29/89    07:41:43                                                                    PAGE    9


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 4970.000
 3280 CROSS SECTION   4970.00 EXTENDED      2.59 FEET


 3470 ENCROACHMENT STATIONS=     698.0     828.0  TYPE=     1  TARGET=     130.000
          E  CHANNEL FROM XSEC D  OB EXTENDED TO 770 BASED ON QUAD
  4970.00    12.99   767.79      .00      .00   768.23      .43      .40      .13   762.30
    6650.       0.    6513.     137.       0.    1220.     149.     320.      65.   762.10
      .37      .00     5.34      .92     .150     .045     .150     .000   754.80   698.00
  .001110     500.     500.     500.        2        0        0      .00   130.00   828.00
0
 CCHV=    .300 CEHV=    .500
 *SECNO 5030.000
 3280 CROSS SECTION   5030.00 EXTENDED       .27 FEET


 3470 ENCROACHMENT STATIONS=     844.0     970.0  TYPE=     1  TARGET=     126.000
          F    XSEC 2    DS OF LINCOLN RD
  5030.00    13.66   767.86      .00      .00   768.28      .42      .05      .00   762.30
    6650.      16.    6530.     104.      22.    1244.      99.     322.      66.   762.40
      .37      .71     5.25     1.05     .090     .035     .090     .000   754.20   844.00
  .000594     100.      60.     100.        0        0        0      .00   126.00   970.00
0
 *SECNO 5110.000

 3470 ENCROACHMENT STATIONS=     824.0     981.0  TYPE=     1  TARGET=     157.000
          G    XSEC 4   US OF LINCOLN RD  MINIMAL LOSS AT BRIDGE
  5110.00    14.34   768.04      .00      .00   768.35      .32      .04      .02   760.70
    6650.     111.    6480.      59.     118.    1419.     102.     325.      66.   761.70
      .38      .94     4.57      .58     .100     .035     .150     .000   753.70   824.00
  .000459      80.      80.      80.        2        0        0      .00   157.00   981.00
0
 *SECNO 5290.000

 3470 ENCROACHMENT STATIONS=     550.0    1035.0  TYPE=     1  TARGET=     485.000
          H    XSEC 6   DS LIMITS OF MCGUIRK ESTATES SUB
  5290.00    11.93   768.33      .00      .00   768.47      .15      .07      .05   761.10
    6650.    1393.    4600.     657.    1387.    1259.    1116.     337.      67.   761.40
      .40     1.00     3.65      .59     .100     .035     .150     .000   756.40   550.00
  .000322     180.     180.     200.        2        0        0      .00   485.00  1035.00
0
1
 06/29/89    07:41:43                                                                    PAGE   10


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
*SECNO 6190.000
          I
  6190.00    12.89   768.69      .00      .00   768.90      .21      .41      .02   769.10
    6650.       0.    3597.    3053.       0.     729.    3715.     425.      81.   762.80
      .43      .00     4.93      .82     .100     .035     .150     .000   755.80    95.57
  .000666     780.     900.    1000.        1        0        0      .00   733.97   829.54
0
*SECNO 6520.000

3470 ENCROACHMENT STATIONS=      3.0     857.0  TYPE=     1  TARGET=     854.000
  6520.00    14.77   768.87      .00      .00   769.00      .14      .09      .01   759.51
    6650.      55.    3494.    3101.      79.     859.    5032.     438.      82.   762.40
      .50      .69     4.07      .62     .100     .035     .150     .000   754.10     3.00
  .000321     360.     330.      70.        2        0        0      .00   854.00   857.00
0
*SECNO 6680.000

3470 ENCROACHMENT STATIONS=    400.0    1000.0  TYPE=     1  TARGET=     600.000
  6680.00    12.78   768.89      .00      .00   769.08      .19      .06      .02   762.30
    6650.     837.    4527.    1285.     824.    1076.    2039.     457.      85.   763.50
      .52     1.02     4.21      .63     .100     .035     .150     .000   756.11   400.00
  .000424     160.     160.     160.        2        0        0      .00   600.00  1000.00
0
*SECNO 6690.000

3470 ENCROACHMENT STATIONS=    400.0    1000.0  TYPE=     1  TARGET=     600.000
  6690.00    12.78   768.89      .00      .00   769.08      .19      .00      .00   762.30
    6650.     838.    4527.    1286.     824.    1076.    2040.     458.      85.   763.50
      .52     1.02     4.21      .63     .100     .035     .150     .000   756.11   400.00
  .000424      10.      10.      10.        0        0        0      .00   600.00  1000.00
0
*SECNO 7090.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=    580.0    1915.0  TYPE=     1  TARGET=    -580.000
          L
1
 06/29/89    07:41:43                                                                    PAGE   11


   SECNO     DEPTH     CWSEL     CRIWS     WSELF     EG        HV        HL        DLOSS    BANK ELEV
   Q         DLOB      DCH       DROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


  7090.00    11.63   769.13      .00      .00   769.19      .06      .09      .01   763.00
    6650.    1694.    4931.     25.    2436.    2172.     262.     486.      91.   770.30
      .57      .70     2.27      .10     .100     .035     .150     .000   757.50   580.00
  .000185     150.     400.     300.        2        0        0      .00  1129.38  1791.94
0
CCHV=    .300 CEHV=    .500
*SECNO 7240.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=    530.0    1700.0  TYPE=     1  TARGET=    1170.000
  7240.00    11.45   769.15      .00      .00   769.25      .10      .04      .02   764.40
    6650.    1075.    3340.    2235.    2296.     976.    1895.     503.      94.   773.40
      .59      .47     3.42     1.18     .180     .035     .080     .000   757.70   530.00
  [illegible]     150.     150.     150.        2        0        0      .00   981.63  1700.00
```

```
0
 *SECNO 7490.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     230.0    1300.0  TYPE=     1  TARGET=    1070.000
          N     WTP IN OVERBANK   XSEC 7590 MOVED DS 100FT
   7490.00    13.64   769.24      .00      .00   769.33      .09      .08      .00   763.80
     6650.     578.    4159.    1913.    1401.    1400.    1588.     527.      99.    773.00
       .62      .41     2.97     1.20     .180     .030     .080     .000   755.60   230.00
   .000326     200.     250.     200.        2        0        0      .00   796.04  1700.00
0
 *SECNO 7590.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     330.0    1300.0  TYPE=     1  TARGET=     970.000
          Q     WTP IN OVERBANK                XSEC 12
   7590.00    13.67   769.27      .00      .00   769.37      .10      .03      .00   763.80
     6650.     431.    4261.    1958.     993.    1408.    1598.     536.     100.    773.00
       .63      .43     3.03     1.23     .180     .030     .080     .000   755.60   330.00
   .000336     100.     100.     100.        0        0        0      .00   697.16  1300.00
0
1
  06/29/89    07:41:43                                                                          PAGE   12


     SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
     Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 8290.000

 3470 ENCROACHMENT STATIONS=     200.0    1235.0  TYPE=     1  TARGET=    1035.000
          P     US OF INTAKE CANAL             XSEC 13
   8290.00    11.72   769.42      .00      .00   769.60      .18      .19      .04   763.80
     6650.    1610.    4986.     54.    3977.    1264.     99.     598.     111.    764.80
       .69      .40     3.95     .54     .180     .030     .080     .000   757.70   200.00
   .000283     600.     700.     300.        2        0        0      .00   997.79  1197.79
0
 *SECNO 8390.000
          Q     XSEC 1 GREEN ACRES SUB         XSEC 14.1
   8390.00    11.58   769.58      .00      .00   769.66      .08      .02      .03   762.90
     6650.    1479.    4000.    1171.    1243.    1469.    1406.     609.     113.    763.00
       .70     1.19     2.72     .83     .045     .030     .075     .000   758.00    72.06
   .000152     100.     100.     100.        2        0        0      .00   700.78   772.84
0
 CCHV=    .100 CEHV=    .300
 *SECNO 8890.000
          R  OB EXTENDED TO 770 BASED ON QUAD
   8890.00    11.69   769.69      .00      .00   769.72      .03      .06      .00   762.40
     6650.     760.    2839.    3051.    1541.    1497.    2973.     667.     126.    763.00
       .80      .49     1.90     1.03     .080     .035     .040     .000   758.00   202.97
   .000098     500.     500.     500.        0        0        0      .00  1553.08  1756.05
0
 *SECNO 9590.000
          S  BASED ON XSEC R  OB EXTENDED TO 770 BASED ON QUAD
   9590.00    11.76   769.76      .00      .00   769.79      .04      .07      .00   762.40
     6650.     748.    2998.    2903.    1296.    1509.    2619.     759.     147.    763.00
       .94      .58     1.99     1.11     .080     .035     .040     .000   758.00   605.86
   .000106     700.     700.     700.        1        0        0      .00  1035.36  1641.21
0
```

```
CCHV=    .100 CEHV=    .300
*SECNO 10340.000
          T   CHANNEL FROM XSEC U  OB EXT TO 770 BASED ON QUAD
 10340.00    10.94   769.84      .00      .00   769.88      .04      .08      .00   763.90
    6650.    5186.    1450.      15.    4513.     590.      18.     829.     163.   764.70
     1.06     1.15     2.46      .82     .040     .035     .040     .000   758.90    58.03
  .000184     450.     750.     750.        1        0        0      .00  1444.00  1502.03
0
1
 06/29/89    07:41:43                                                                    PAGE   13


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 11640.000
          U     XSEC 1 FROM FILE NO. 852-32D  GR'S REVERSED TO LOOK DS
 11640.00    10.66   770.06      .00      .00   770.30      .24      .36      .06   762.70
    6650.    3623.    2969.      58.    1968.     541.      27.     914.     184.   762.70
     1.14     1.84     5.49     2.17     .060     .035     .040     .000   759.40     3.50
  .000899     900.    1300.    1300.        2        0        0      .00   597.58   601.08
0
*SECNO 12140.000
                V      XSEC Q (2.0) FROM FILES
 12140.00    11.60   770.50      .00      .00   770.67      .17      .36      .01   762.90
    6650.    3072.    3076.     502.    2380.     662.     449.     948.     192.   762.90
     1.19     1.29     4.64     1.12     .080     .035     .060     .000   758.90    28.08
  .000594     500.     500.     500.        2        0        0      .00   785.91   813.99
0
*SECNO 12590.000

3301 HV CHANGED MORE THAN HVINS

          W    XSEC P (3.0) FROM FILES   GR SWITCHED TO GET XSEC LOOKING DS
 12590.00    10.30   770.40      .00      .00   771.38      .98      .47      .24   763.30
    6650.     201.    4833.    1616.     118.     522.     853.     972.     199.   763.30
     1.21     1.70     9.26     1.89     .080     .035     .060     .000   760.10    39.80
  .002676     400.     450.     400.        3        0        0      .00   583.34   623.14
0
1490 NH CARD USED
*SECNO 13260.000

3301 HV CHANGED MORE THAN HVINS

          X     US OF NORTH BRANCH    XSEC O (4.0) FROM FILES  GR SWITCHED
 13260.00    10.75   771.55      .00      .00   771.56      .01      .08      .10   763.80
    5020.    4117.     897.       6.    6062.     694.      31.    1001.     205.   763.80
     1.36      .68     1.29      .20     .056     .035     .080     .000   760.80   105.99
  .000048     200.     670.     500.        2        0        0      .00   975.47  1081.46
0
*SECNO 14140.000
          Y
 14140.00    10.85   771.55      .00      .00   771.65      .10      .06      .03   764.20
    5020.       7.    3121.    1892.      14.     993.    2240.    1064.     215.   764.20
     1.44      .49     3.14      .84     .070     .035     .080     .000   760.70    36.09
  .000289     400.     880.     700.        2        0        0      .00   648.33   684.43
0
1
 06/29/89    07:41:43                                                                    PAGE   14


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
```

```
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN     SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOFWID    ENDST


#SECNO 14880.000

3470 ENCROACHMENT STATIONS=     140.0     640.0  TYPE=     1  TARGET=     500.000
          Z
 14880.00    10.45   771.75      .00      .00   771.84      .09      .18      .00   765.00
    5020.    1440.    2745.     835.    1315.     894.     766.    1102.     222.    765.00
     1.52     1.09     3.07     1.09     .070     .035     .070     .000   761.30   140.00
  .000298     450.     740.     450.        2        0        0      .00   500.00   640.00
0
 1490 NH CARD USED
 #SECNO 15530.000

 3470 ENCROACHMENT STATIONS=      54.0     620.0  TYPE=     1  TARGET=     566.000
          AA
 15530.00     8.61   772.01      .00      .00   772.16      .16      .31      .02   765.60
    5020.     256.    2081.    2683.     175.     450.    1856.    1144.     230.    765.60
     1.59     1.46     4.62     1.45     .080     .035     .074     .000   763.40    54.00
  .000808     540.     650.     740.        2        0        0      .00   566.00   620.00
0
 #SECNO 16065.000

 3301 HV CHANGED MORE THAN HVINS

          AB
 16065.00     8.84   772.14      .00      .00   773.01      .87      .64      .21   765.80
    5020.      70.    4617.     333.      44.     592.     281.    1162.     235.    765.80
     1.61     1.59     7.80     1.19     .090     .035     .060     .000   763.30    27.17
  .002264     750.     535.     400.        2        0        0      .00   383.01   410.18
0
 #SECNO 16440.000
          AC
 16440.00    10.03   773.23      .00      .00   773.70      .47      .65      .04   766.30
    5020.      73.    3639.    1308.      55.     569.     926.    1172.     238.    769.90
     1.63     1.33     6.39     1.41     .090     .035     .060     .000   763.20    23.10
  .001385     375.     375.     350.        3        0        0      .00   578.82   601.92
0
 #SECNO 16840.000

 3470 ENCROACHMENT STATIONS=      94.0     650.0  TYPE=     1  TARGET=     556.000
1
  06/29/89    07:41:43                                                                    PAGE   15


          AD
 16840.00    10.67   773.87      .00      .00   774.02      .15      .29      .03   765.40
    5020.    1866.    2623.     530.    1551.     627.     606.    1190.     243.    765.70
     1.67     1.20     4.18      .87     .080     .035     .080     .000   763.20    94.00
  .000483     350.     400.     350.        2        0        0      .00   556.00   650.00
0
 #SECNO 16990.000

 3470 ENCROACHMENT STATIONS=     150.0     610.0  TYPE=     1  TARGET=     460.000
          AE
 16990.00     9.87   773.87      .00      .00   774.18      .31      .11      .05   766.50
    5020.    1003.    3226.     791.     734.     585.     548.    1200.     245.    769.00
     1.68     1.37     5.52     1.44     .080     .035     .080     .000   764.00   150.00
  .000955     225.     150.     125.        2        0        0      .00   403.12   553.12
0
 #SECNO 17530.000

 3470 ENCROACHMENT STATIONS=      23.0     542.0  TYPE=     1  TARGET=     517.000
          F    STA SWITCHED AS XSEC HAS TAKEN LOOKING UPSTREAM
```

```
 17530.00     9.62   774.52      .00      .00   774.64      .12      .43      .02   766.90
    5020.     203.    1228.    3588.     156.     254.    2188.    1226.     250.    766.20
     1.74     1.30     4.84     1.64     .080     .035     .080     .000   764.90    25.00
  .000727      10.     540.     650.        2        0        0      .00   517.00   542.00
0
 *SECNO 18080.000

 3470 ENCROACHMENT STATIONS=      57.0     614.0  TYPE=     1  TARGET=     557.000
 18080.00     9.40   774.80      .00      .00   774.99      .20      .33      .02   767.40
    5020.    1045.    2203.    1773.     645.     430.    1280.    1248.     255.    767.00
     1.78     1.62     5.12     1.39     .080     .035     .080     .000   765.40    57.24
  .000828     450.     550.     350.        2        0        0      .00   556.76   614.00
0
 *SECNO 18530.000
          AG
 18530.00     9.44   775.14      .00      .00   775.30      .16      .31      .00   767.70
    5020.     217.    1354.    3449.     149.     249.    1830.    1265.     258.    767.00
     1.81     1.45     5.45     1.88     .080     .035     .080     .000   765.70    25.16
  .000946     450.     450.     250.        2        0        0      .00   458.85   484.00
0
 *SECNO 20530.000
          AH    XSEC BASED ON XSEC AK AND QUAD
 20530.00     9.57   775.97      .00      .00   776.01      .05      .70      .01   768.40
    5020.     141.     859.    4020.     155.     252.    3802.    1348.     276.    767.70
     2.05      .91     3.41     1.06     .080     .035     .080     .000   766.40    24.51
  .000364    2000.    2000.    1000.        2        0        0      .00   941.51   966.03
0
1
 06/29/89    07:41:43                                                                PAGE   16


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 22280.000
          AI
 22280.00     7.65   776.65      .00      .00   777.08      .43      .95      .12   772.50
    5020.      94.    4049.     878.      82.     696.     653.    1432.     295.    773.00
     2.13     1.14     5.82     1.34     .080     .035     .080     .000   769.00    55.50
  .001440    1400.    1750.    1200.        2        0        0      .00   390.12   445.62
0
 *SECNO 22880.000
          AJ    DS OF MERIDIAN ROAD  US TWP LIMITS
 22880.00     9.39   777.59      .00      .00   778.14      .55     1.03      .04   773.00
    5020.     643.    4377.       0.     160.     709.       0.    1448.     299.    773.80
     2.16     4.02     6.17     2.94     .040     .045     .060     .000   768.20    42.07
  .002087     600.     600.     600.        2        0        0      .00   127.93   170.00
0
1
 06/29/89    07:41:43                                                                PAGE   17


                                                                  THIS RUN EXECUTED 06/29/89   07:42:23
 ************************************************
  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
 ************************************************
```

```
T1
T2
T3

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       3.       0.       0.   .000000      .00       .0    6650.   763.600     .000

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

    15.000     .000   -1.000     .000     .000     .000     .000     .000     .000     .000

1
 06/29/89    07:41:43                                                                    PAGE   18


   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


*PROF 2

CCHV=    .100 CEHV=    .300
*SECNO 223990.000

3470 ENCROACHMENT STATIONS=     250.0    1260.0  TYPE=     1  TARGET=    -250.000
                FIS XSEC AN     START WSEL BASED ON FIS
223990.00    13.00   763.60      .00   763.60   763.63      .03      .00      .00   753.50
    6650.    4264.    1546.     840.    4371.     680.     686.       0.       0.    753.80
      .00      .98     2.27     1.23     .060     .045     .060     .000   750.60   250.00
  .000176       0.       0.       0.        0        0        0      .00  1009.00  1259.00
0
CCHV=    .100 CEHV=    .300
*SECNO 400.000
 2800 NAT Q1=   1858.31  WSEL=    763.51  ENC Q1=   1858.31  WSEL=    763.61  RATIO=   .0000
 NAT Q1=   1907.  RATIOS LOB,CH.ROB=   .0428   .7023   .2549  WSEL=    763.61

3470 ENCROACHMENT STATIONS=     109.1     844.3  TYPE=     4  TARGET=       .026
          A   XSEC OB FROM 2FT TOPO  CH FROM DS FIS XSEC  400FT US TWP LINE
   400.00    12.60   763.60      .00   763.51   763.95      .36      .22      .10   760.00
    6650.     203.    4800.    1646.     277.     856.    1954.      54.      10.    754.40
      .04      .73     5.61      .84     .150     .045     .150     .000   751.00   109.06
  .001290     500.     690.     500.        2        0        0      .00   735.20   844.26
0
*SECNO 1680.000

3470 ENCROACHMENT STATIONS=     160.0     895.0  TYPE=     1  TARGET=     735.000
          B     XSEC OB CUT FROM 2FT TOPO   CHANNEL FROM DS FIS XSEC
  1680.00    13.10   764.90      .00   764.81   765.12      .22     1.16      .01   754.80
    6650.    2879.    3715.      56.    3313.     747.      63.     126.      24.    755.20
      .13      .87     4.98      .88     .150     .045     .150     .000   751.80   160.00
  .000894     750.    1280.     750.        2        0        0      .00   735.00   895.00
0
*SECNO 2470.000
 2800 NAT Q1=   1720.12  WSEL=    765.53  ENC Q1=   1720.12  WSEL=    765.63  RATIO=   .0000
 NAT Q1=   1808.  RATIOS LOB,CH.ROB=   .0724   .8656   .0619  WSEL=    765.63

3470 ENCROACHMENT STATIONS=     568.3     811.9  TYPE=     4  TARGET=       .049
  2470.00    13.29   765.59      .00   765.53   766.08      .49      .88      .08   760.90
    6650.     340.    6052.     258.     346.    1029.     255.     174.      32.    760.50
      .17      .98     5.88     1.01     .150     .045     .150     .000   752.30   568.33
  .001513     700.     790.     800.        2        0        0      .00   243.57   811.90
0
```

```
   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 4470.000

 3470 ENCROACHMENT STATIONS=     520.0    1250.0  TYPE=     1  TARGET=     730.000
          D  XSEC 1 FROM FILE 2942-32.4  85 FT DS OF LINCOLN RD
               OB EXTENDED TO 770 FROM QUAD
  4470.00    12.80   767.60      .00   767.52   767.77      .18     1.66      .03   762.30
    6650.     837.    4759.    1054.    1076.    1199.    1766.     275.      48.   762.10
      .34      .78     3.97      .60     .150     .045     .150     .000   754.80   520.00
  .000588    1200.    2000.    1300.        2        0        0      .00   730.00  1250.00
0
 CCHV=    .300 CEHV=    .500
 $SECNO 4970.000
 3280 CROSS SECTION   4970.00 EXTENDED      2.66 FEET


 3470 ENCROACHMENT STATIONS=     698.0     818.0  TYPE=     1  TARGET=     120.000
          E  CHANNEL FROM XSEC D  OB EXTENDED TO 770 BASED ON QUAD
  4970.00    13.06   767.86      .00   767.79   768.30      .44      .39      .13   762.30
    6650.       0.    6570.      80.       0.    1226.      92.     306.      53.   762.10
      .37      .00     5.36      .86     .150     .045     .150     .000   754.80   695.00
  .001110     500.     500.     500.        2        0        0      .00   120.00   818.00
0
 CCHV=    .300 CEHV=    .500
 $SECNO 5030.000
 3280 CROSS SECTION   5030.00 EXTENDED       .33 FEET


 3470 ENCROACHMENT STATIONS=     844.0     970.0  TYPE=     1  TARGET=     126.000
          F    XSEC 2    DS OF LINCOLN RD
  5030.00    13.74   767.94      .00   767.86   768.35      .42      .05      .01   762.30
    6650.      16.    6529.     105.      23.    1251.     100.     308.      53.   762.40
      .37      .70     5.22     1.05     .090     .035     .090     .000   754.20   844.00
  .000583     100.      60.     100.        0        0        0      .00   126.00   970.00
0
 $SECNO 5110.000
  2800 NAT Q1=   3102.51  WSEL=    768.04  ENC Q1=   3102.51  WSEL=    768.14  RATIO=   .0000
  NAT Q1=   6024.  RATIOS LOB,CH,ROB=   .2867   .5092   .2041  WSEL=    768.14

 3470 ENCROACHMENT STATIONS=     830.9     965.0  TYPE=     4  TARGET=       .485
          G    XSEC 4   US OF LINCOLN RD  MINIMAL LOSS AT BRIDGE
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


  5110.00    14.39   768.09      .00   768.04   768.42      .33      .04      .03   760.70
    6650.      57.    6593.       0.      68.    1426.       0.     310.      53.   761.70
      .38      .85     4.62      .00     .100     .035     .150     .000   753.70   830.90
  .000500      80.      80.      80.        2        0        0      .00   134.10   965.00
0
 $SECNO 5290.000
```

```
3470 ENCROACHMENT STATIONS=     550.0    1035.0  TYPE=     1  TARGET=     485.000
          H    XSEC 6   DS LIMITS OF MCGUIRK ESTATES SUB
  5290.00    12.01   768.41      .00   768.33   768.55      .14      .07      .06   761.10
    6650.    1398.    4591.     661.    1402.    1268.    1130.     322.      54.   761.40
      .40     1.00     3.62      .58     .100     .035     .150     .000   756.40   550.00
  .000313     180.     180.     200.        2        0        0      .00   485.00  1035.00
0
 CCHV=    .100 CEHV=    .300
 *SECNO 6190.000
  2800 NAT Q1=   2577.70  WSEL=    768.69  ENC Q1=   2577.70  WSEL=    768.79  RATIO=   .0000
  NAT Q1=   2638.  RATIOS LOB,CH,ROB=   .0000   .5371   .4629  WSEL=    768.79

 3470 ENCROACHMENT STATIONS=      95.0     778.1  TYPE=     4  TARGET=        .023
          I
  6190.00    12.96   768.76      .00   768.69   768.98      .22      .41      .02   769.10
    6650.       0.    3662.    2988.       0.     735.    3558.     409.      67.   762.80
      .48      .00     4.98      .84     .100     .035     .150     .000   755.80    95.46
  .000675     780.     900.    1000.        2        0        0      .00   682.66   778.13
0
 *SECNO 6520.000

 3470 ENCROACHMENT STATIONS=       3.0     857.0  TYPE=     1  TARGET=     854.000
  6520.00    14.84   768.94      .00   768.87   769.08      .13      .09      .01   759.51
    6650.      55.    3478.    3117.      80.     864.    5093.     422.      69.   762.40
      .50      .69     4.02      .61     .100     .035     .150     .000   754.10     3.00
  .000312     360.     330.      70.        2        0        0      .00   854.00   857.00
0
 *SECNO 6680.000
  2800 NAT Q1=   3228.32  WSEL=    768.89  ENC Q1=   3228.32  WSEL=    768.99  RATIO=   .0000
  NAT Q1=   4732.  RATIOS LOB,CH,ROB=   .2850   .4717   .2434  WSEL=    768.99

 3470 ENCROACHMENT STATIONS=     340.8     864.6  TYPE=     4  TARGET=        .318
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


  6680.00    12.85   768.96      .00   768.89   769.16      .20      .06      .02   762.30
    6650.    1224.    4605.     821.    1190.    1083.    1299.     440.      71.   763.50
      .52     1.03     4.25      .63     .100     .035     .150     .000   756.11   340.82
  .000430     160.     160.     160.        2        0        0      .00   523.79   864.61
0
 *SECNO 6690.000
  2800 NAT Q1=   3230.64  WSEL=    768.89  ENC Q1=   3230.64  WSEL=    768.99  RATIO=   .0000
  NAT Q1=   4737.  RATIOS LOB,CH,ROB=   .2851   .4715   .2434  WSEL=    768.99

 3470 ENCROACHMENT STATIONS=     340.9     864.4  TYPE=     4  TARGET=        .318
  6690.00    12.85   768.96      .00   768.89   769.16      .20      .00      .00   762.30
    6650.    1224.    4605.     821.    1190.    1083.    1299.     441.      72.   763.50
      .52     1.03     4.25      .63     .100     .035     .150     .000   756.11   340.88
  .000429      10.      10.      10.        0        0        0      .00   523.56   864.44
0
 *SECNO 7090.000
  2800 NAT Q1=   4892.29  WSEL=    769.13  ENC Q1=   4892.29  WSEL=    769.23  RATIO=   .0000
  NAT Q1=   5625.  RATIOS LOB,CH,ROB=   .3378   .6580   .0042  WSEL=    769.23

 3470 ENCROACHMENT STATIONS=     649.0    1260.0  TYPE=     4  TARGET=        .130
          L
  7090.00    11.70   769.20      .00   769.13   769.27      .06      .09      .01   763.00
    6650.    1633.    5017.       0.    2252.    2193.       0.     466.      75.   770.30
      .57      .72     2.29       [illegible]     .100     .035     .150     .000   757.50   648.97
```

```
  .000188     150.     400.     300.       2       0       0     .00   607.15  1256.13
0
 CCHV=    .300 CEHV=    .500
 *SECNO 7240.000
  2800 NAT Q1=   3220.74  WSEL=    769.15  ENC Q1=   3220.74  WSEL=    769.25  RATIO=   .0000
  NAT Q1=   4324.  RATIOS LOB,CH,ROB=   .2346   .3815   .3839  WSEL=    769.25

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     604.7    1698.5  TYPE=     4  TARGET=        .255
   7240.00    11.52   769.22      .00   769.15   769.33      .10      .04      .02   764.40
     6650.     953.    3409.    2288.    1998.     986.    1915.     482.      78.   773.40
       .58      .48     3.46     1.20     .180     .035     .080     .000   757.70   604.66
  .000430     150.     150.     150.       1       0       0      .00   906.22  1698.49
0
1
  06/29/89    07:41:43                                                                          PAGE   22


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 7490.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     230.0    1300.0  TYPE=     1  TARGET=    1070.000
          N     WTP IN OVERBANK   XSEC 7590 MOVED DS 100FT
   7490.00    13.72   769.32      .00   769.24   769.41      .09      .08      .00   763.80
     6650.     583.    4157.    1910.    1426.    1419.    1610.     505.      82.   773.00
       .61      .41     2.93     1.19     .180     .030     .080     .000   755.60   230.00
  .000313     200.     250.     200.       2       0       0      .00   798.55  1300.00
0
 *SECNO 7590.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     330.0    1300.0  TYPE=     1  TARGET=     970.000
          Q     WTP IN OVERBANK                XSEC 12
   7590.00    13.75   769.35      .00   769.27   769.45      .10      .03      .00   763.80
     6650.     434.    4260.    1956.    1009.    1427.    1620.     515.      83.   773.00
       .63      .43     2.98     1.21     .180     .030     .080     .000   755.60   330.00
  .000323     100.     100.     100.       0       0       0      .00   699.68  1300.00
0
 *SECNO 8290.000

 3470 ENCROACHMENT STATIONS=     480.0    1180.0  TYPE=     1  TARGET=     700.000
          P     US OF INTAKE CANAL             XSEC 13
   8290.00    11.79   769.49      .00   769.42   769.70      .21      .20      .08   763.80
     6650.    1330.    5262.      58.    2946.    1272.      84.     569.      92.   764.80
       .69      .45     4.14      .69     .180     .030     .080     .000   757.70   480.00
  .000308     600.     700.     300.       2       0       0      .00   700.00  1180.00
0
 *SECNO 8390.000

 3470 ENCROACHMENT STATIONS=     150.0     760.0  TYPE=     1  TARGET=     610.000
          G     XSEC 1 GREEN ACRES SUB         XSEC 14.1
   8350.00    11.69   769.69      .00   769.58   769.76      .07      .02      .04   762.90
     6650.    1478.    3998.    1174.    1205.    1486.    1411.     579.      94.   763.00
       .69     1.23     2.49      .83     .045     .030     .075     .000   759.00   150.00
```

```
   .000146     100.     100.     100.        2        0        0      .00   610.00   760.00
0
1
 06/29/89    07:41:43                                                                          PAGE   23


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        OLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
 *SECNO 8890.000

 3470 ENCROACHMENT STATIONS=     650.0    1510.0  TYPE=     1  TARGET=     860.000
          R  OB EXTENDED TO 770 BASED ON QUAD
   8890.00    11.79   769.79      .00   769.69   769.83      .03      .06      .00   762.40
     6650.     722.    2844.    3083.    1292.    1514.    2629.     634.     102.    763.00
       .79      .56     1.88     1.17     .080     .035     .040     .000   758.00   650.00
   .000095     500.     500.     500.        1        0        0      .00   860.00  1510.00
0
 *SECNO 9590.000

 3470 ENCROACHMENT STATIONS=     600.0    1630.0  TYPE=     1  TARGET=    1030.000
          S  BASED ON XSEC R  OB EXTENDED TO 770 BASED ON QUAD
   9590.00    11.86   769.86      .00   769.76   769.90      .03      .07      .00   762.40
     6650.     750.    2961.    2939.    1326.    1525.    2677.     722.     118.    763.00
       .93      .57     1.94     1.10     .080     .035     .040     .000   758.00   603.28
   .000100     700.     700.     700.        1        0        0      .00  1026.72  1630.00
0
 CCHV=    .100 CEHV=    .300
 *SECNO 10340.000

 3470 ENCROACHMENT STATIONS=     490.0    1500.0  TYPE=     1  TARGET=    1010.000
          T   CHANNEL FROM XSEC U  OB EXT TO 770 BASED ON QUAD
  10340.00    11.04   769.94      .00   769.84   769.98      .04      .08      .00   763.90
     6650.    5194.    1442.      14.    3978.     596.      17.     791.     131.    764.70
      1.04     1.31     2.42      .83     .040     .035     .040     .000   758.90   490.00
   .000176     450.     750.     750.        1        0        0      .00  1010.00  1500.00
0
 *SECNO 11640.000
  2800 NAT Q1=   2217.60  WSEL=    770.06  ENC Q1=   2217.60  WSEL=    770.16  RATIO=   .0000
  NAT Q1=   2289.  RATIOS LOB,CH,ROB=   .5506   .4406   .0089  WSEL=    770.16

 3470 ENCROACHMENT STATIONS=      17.5     593.0  TYPE=     4  TARGET=       .031
          U     XSEC 1 FROM FILE NO. 852-32D  GR'S REVERSED TO LOOK DS
  11640.00    10.77   770.17      .00   770.06   770.39      .22      .36      .05   762.70
     6650.    3756.    2894.       0.    1964.     547.       0.     869.     148.    762.70
      1.12     1.91     5.29      .00     .060     .035     .040     .000   759.40    17.47
   .000960     900.    1300.    1300.        2        0        0      .00   575.53   593.00
0
1
 06/29/89    07:41:43                                                                          PAGE   24


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        OLOB     QCH      QROB     ALOB     ACH      AROB     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 12140.000

 3470 ENCROACHMENT STATIONS=      38.0     788.0  TYPE=     1  TARGET=     750.000
          U     XSEC 0 (2 0) FROM FILES
```

```
 12140.00    11.69   770.59      .00   770.50   770.75      .16      .36      .01   762.90
    6650.    3083.    3037.     530.    2416.     669.     462.     904.     155.   762.90
     1.17     1.28     4.54     1.15     .080     .035     .060     .000   758.90    38.00
  .000560     500.     500.     500.        2        0        0      .00   750.00   788.00
0
 #SECNO 12590.000

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=      82.0     665.0  TYPE=     1  TARGET=     583.000
          W    XSEC P (3.0) FROM FILES   GR SWITCHED TO GET XSEC LOOKING DS
 12590.00    10.36   770.46      .00   770.40   771.46     1.00      .45      .25   763.30
    6650.      63.    4886.    1701.      33.     526.     880.     928.     161.   763.30
     1.19     1.90     9.30     1.93     .080     .035     .060     .000   760.10    82.00
  .002675     400.     450.     400.        3        0        0      .00   541.44   623.44
0
 1490 NH CARD USED
 #SECNO 13260.000

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=     170.0    1080.0  TYPE=     1  TARGET=     910.000
          X     US OF NORTH BRANCH    XSEC O (4.0) FROM FILES  GR SWITCHED
 13260.00    10.83   771.63      .00   771.55   771.64      .01      .08      .10   763.80
    5020.    4115.     899.       7.    5998.     700.      31.     956.     167.   763.80
     1.35      .69     1.28      .21     .056     .035     .080     .000   760.80   170.00
  .000047     200.     670.     500.        2        0        0      .00   910.00  1080.00
0
 #SECNO 14140.000
  2800 NAT Q1=   2952.10  WSEL=    771.55  ENC Q1=   2952.10  WSEL=    771.65  RATIO=   .0000
  NAT Q1=   3027.  RATIOS LOB,CH,ROB=   .0014   .6172   .3813  WSEL=    771.65

 3470 ENCROACHMENT STATIONS=      43.0     597.9  TYPE=     4  TARGET=       .025
          Y
1
  06/29/89    07:41:43                                                                    PAGE   25


    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


  14140.00    10.93   771.63      .00   771.55   771.73      .10      .06      .03   764.20
    5020.       0.    3131.    1889.       0.    1001.    2076.    1018.     176.   764.20
     1.43      .00     3.13      .91     .070     .035     .080     .000   760.70    43.00
  .000309     400.     880.     700.        2        0        0      .00   554.90   597.90
0
 #SECNO 14880.000

 3470 ENCROACHMENT STATIONS=     140.0     640.0  TYPE=     1  TARGET=     500.000
          Z
 14880.00    10.53   771.83      .00   771.75   771.92      .09      .18      .00   765.00
    5020.    1448.    2733.     839.    1336.     903.     778.    1056.     183.   765.00
     1.51     1.08     3.03     1.08     .070     .035     .070     .000   761.30   140.00
  .000286     450.     740.     450.        2        0        0      .00   500.00   640.00
0
 1490 NH CARD USED
 #SECNO 15530.000

 3470 ENCROACHMENT STATIONS=      54.0     620.0  TYPE=     1  TARGET=     566.000
          AA
 15530.00     8.68   772.08      .00   772.01   772.23       15      .29      .02   765.40
```

```
    5020.     256.    2066.    2699.     177.     455.    1890.    1098.     191.    765.60
     1.57     1.44     4.54     1.43     .080     .035     .074     .000   763.40    54.00
  .000772     540.     650.     740.        2        0        0      .00   566.00   620.00
0
 *SECNO 16065.000

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=      27.0     395.0  TYPE=     1  TARGET=     368.000
          AB
  16065.00     8.90   772.20      .00   772.14   773.04      .84      .61      .21   765.80
    5020.      70.    4581.     369.     45.     597.     298.    1116.     196.    765.80
     1.59     1.57     7.67     1.24     .090     .035     .060     .000   763.30    27.03
  .002170     750.     535.     400.        2        0        0      .00   367.97   395.00
0
 *SECNO 16440.000
  2800 NAT Q1=   1348.89  WSEL=    773.23  ENC Q1=   1348.89  WSEL=    773.33  RATIO=   .0000
  NAT Q1=   1401.  RATIOS LOB,CH,ROB=   .0146   .7120   .2734  WSEL=    773.33
1
  06/29/89    07:41:43                                                                          PAGE   26


    SECND    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=      39.0     551.4  TYPE=     4  TARGET=        .037
          AC
  16440.00    10.08   773.28      .00   773.23   773.76      .48      .68      .04   766.30
    5020.       0.    3686.    1334.      0.     572.     867.    1126.     199.    769.90
     1.61      .00     6.44     1.54     .090     .035     .060     .000   763.20    39.00
  .001584     375.     375.     350.        3        0        0      .00   512.38   551.38
0
 *SECND 16840.000

 3470 ENCROACHMENT STATIONS=      94.0     650.0  TYPE=     1  TARGET=     556.000
          AD
  16840.00    10.74   773.94      .00   773.87   774.09      .15      .30      .03   765.40
    5020.    1874.    2606.     540.    1573.     632.     620.    1144.     203.    765.70
     1.65     1.19     4.12      .87     .080     .035     .080     .000   763.20    94.00
  .000465     350.     400.     350.        2        0        0      .00   556.00   650.00
0
 *SECNO 16990.000

 3470 ENCROACHMENT STATIONS=     150.0     553.0  TYPE=     1  TARGET=     403.000
          AE
  16990.00     9.94   773.94      .00   773.87   774.25      .30      .11      .05   766.50
    5020.    1015.    3206.     799.     749.     590.     558.    1154.     205.    769.00
     1.67     1.36     5.44     1.43     .080     .035     .080     .000   764.00   150.00
  .000917     225.     150.     125.        2        0        0      .00   403.00   553.00
0
 *SECNO 17530.000

 3470 ENCROACHMENT STATIONS=      25.0     542.0  TYPE=     1  TARGET=     517.000
          AF    STA SWITCHED AS XSEC WAS TAKED LOOKING UPSTREAM
  17530.00     9.67   774.57      .00   774.52   774.68      .12      .42      .02   766.90
    5020.     204.    1224.    3592.     158.     255.    2211.    1180.     210.    766.20
     1.73     1.30     4.80     1.62     .080     .035     .080     .000   764.90    25.00
  .000708      10.     540.     650.        2        0        0      .00   517.00   542.00
0
 *SECNO 18080.000
```

```
3470 ENCROACHMENT STATIONS=      56.0     612.0  TYPE=     1  TARGET=     556.000
 18030.00     9.44   774.84      .00   774.80   775.03      .19      .32      .02   767.40
    5020.    1045.    2192.    1783.     651.     432.    1295.    1202.     215.    767.00
     1.77     1.61     5.07     1.38     .080     .035     .080     .000   765.40    56.77
  .000807     450.     550.     350.        2        0        0      .00   555.23   612.00
0
1
 06/29/89    07:41:43                                                                    PAGE   27


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 18530.000
  2800 NAT Q1=   1632.15  WSEL=    775.14  ENC Q1=   1632.15  WSEL=    775.24  RATIO=   .0000
  NAT Q1=   2298.  RATIOS LOB,CH,ROB=   .0319   .1953   .7729  WSEL=    775.24

 3470 ENCROACHMENT STATIONS=      62.0     495.4  TYPE=     4  TARGET=        .290
          AG
 18530.00     9.51   775.21      .00   775.14   775.35      .14      .31      .01   767.70
    5020.       0.    1238.    3782.       0.     251.    1913.    1219.     219.    767.00
     1.80      .00     4.94     1.98     .080     .035     .080     .000   765.70    62.00
  .001045     450.     450.     250.        2        0        0      .00   433.45   495.45
0
 *SECNO 20530.000

 3470 ENCROACHMENT STATIONS=      60.0     955.0  TYPE=     1  TARGET=     895.000
          AH    XSEC BASED ON XSEC AK AND QUAD
 20530.00     9.62   776.02      .00   775.97   776.07      .05      .71      .01   768.40
    5020.       6.     886.    4129.      11.     254.    3802.    1296.     234.    767.70
     2.02      .49     3.49     1.09     .080     .035     .080     .000   766.40    60.00
  .000378    2000.    2000.    1000.        2        0        0      .00   895.00   955.00
0
 *SECNO 22280.000

 3470 ENCROACHMENT STATIONS=      70.0     430.0  TYPE=     1  TARGET=     360.000
          AI
 22280.00     7.72   776.72      .00   776.65   777.14      .42      .96      .11   772.50
    5020.      98.    4042.     880.      73.     704.     650.    1378.     253.    773.00
     2.11     1.35     5.74     1.35     .080     .035     .080     .000   769.00    70.00
  .001382    1400.    1750.    1200.        2        0        0      .00   360.00   430.00
0
 *SECNO 22880.000
  2800 NAT Q1=   1098.93  WSEL=    777.59  ENC Q1=   1098.93  WSEL=    777.69  RATIO=   .0000
  NAT Q1=   1183.  RATIOS LOB,CH,ROB=   .1242   .8255   .0503  WSEL=    777.69

 3470 ENCROACHMENT STATIONS=      62.9     179.0  TYPE=     4  TARGET=        .071
          AJ    DS OF MERIDIAN ROAD  US TWP LIMITS
 22880.00     9.44   777.64      .00   777.59   778.21      .57     1.02      .05   773.00
    5020.     480.    4469.      71.     116.     713.      33.    1394.     256.    773.80
     2.14     4.14     6.27     2.18     .040     .045     .060     .000   768.20    62.90
  .002140     600.     600.     600.        2        0        0      .00   116.13   179.03
0
1
 06/29/89    07:41:43                                                                    PAGE   28



                                                                  THIS RUN EXECUTED 06/29/89   07:42:47
 ************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01 02 03.04.05.06
```

MODIFICATION - 50,51,52,53.54.55,56
IBM-PC-XT VERSION 1.1
****

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

CHIPPEWA RIVER Q BASED

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
223990.000	.00	.00	.00	750.60	6650.00	763.50	.00	763.53	1.86	2.32	5635.65	4873.85
223990.000	.00	.00	.00	750.60	6650.00	763.60	.00	763.63	1.76	2.27	5736.51	5007.55
400.000	690.00	.00	.00	751.00	6650.00	763.51	.00	763.86	12.81	5.55	3335.43	1858.31
400.000	690.00	.00	.00	751.00	6650.00	763.60	.00	763.95	12.90	5.61	3087.20	1851.25
1680.000	1280.00	.00	.00	751.80	6650.00	764.81	.00	765.04	9.21	5.02	4103.39	2191.55
1680.000	1280.00	.00	.00	751.80	6650.00	764.90	.00	765.12	8.94	4.98	4123.48	2224.24
2470.000	790.00	.00	.00	752.30	6650.00	765.53	.00	766.00	14.95	5.82	1813.36	1720.12
2470.000	790.00	.00	.00	752.30	6650.00	765.59	.00	766.08	15.13	5.88	1629.88	1709.53
4470.000	2000.00	.00	.00	754.80	6650.00	767.52	.00	767.70	6.03	4.00	4425.11	2708.15
4470.000	2000.00	.00	.00	754.80	6650.00	767.60	.00	767.77	5.88	3.97	4040.68	2743.55
4970.000	500.00	.00	.00	754.80	6650.00	767.79	.00	768.23	11.10	5.34	1368.11	1996.03
4970.000	500.00	.00	.00	754.80	6650.00	767.86	.00	768.30	11.10	5.36	1318.52	1995.89
5030.000	60.00	.00	.00	754.20	6650.00	767.86	.00	768.28	5.94	5.25	1365.85	2729.30
5030.000	60.00	.00	.00	754.20	6650.00	767.94	.00	768.35	5.83	5.22	1373.83	2753.83
5110.000	80.00	.00	.00	753.70	6650.00	768.04	.00	768.35	4.59	4.57	1638.58	3102.51
5110.000	80.00	.00	.00	753.70	6650.00	768.09	.00	768.42	5.00	4.62	1493.09	2975.03
5290.000	180.00	.00	.00	756.40	6650.00	768.33	.00	768.47	3.22	3.65	3762.00	3703.12
5290.000	180.00	.00	.00	756.40	6650.00	768.41	.00	768.55	3.13	3.62	3800.19	3756.25
6190.000	900.00	.00	.00	755.80	6650.00	768.69	.00	768.90	6.66	4.93	4444.96	2577.70
6190.000	900.00	.00	.00	755.80	6650.00	768.76	.00	768.98	6.75	4.98	4292.79	2560.20
6520.000	330.00	.00	.00	754.10	6650.00	768.87	.00	769.00	3.21	4.07	5970.13	3712.52
6520.000	330.00	.00	.00	754.10	6650.00	768.94	.00	769.08	3.12	4.02	6036.96	3767.75

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
6680.000	160.00	.00	.00	756.11	6650.00	768.89	.00	769.08	4.24	4.21	3938.61	3228.32
6680.000	160.00	.00	.00	756.11	6650.00	768.96	.00	769.16	4.30	4.25	3571.65	3208.40
6690.000	10.00	.00	.00	756.11	6650.00	768.89	.00	769.08	4.24	4.21	3940.81	3230.64
6690.000	10.00	.00	.00	756.11	6650.00	768.96	.00	769.16	4.29	4.25	3572.03	3209.89
7090.000	400.00	.00	.00	757.50	6650.00	769.13	.00	769.19	1.85	2.27	4870.93	4892.29
7090.000	400.00	.00	.00	757.50	6650.00	769.20	.00	769.27	1.86	2.29	4445.45	4882.32
7240.000	150.00	.00	.00	757.70	6650.00	769.15	.00	769.25	4.26	3.42	5166.97	3220.74
7240.000	150.00	.00	.00	757.70	6650.00	769.22	.00	769.33	4.30	3.46	4898.45	3206.22

7490.000	250.00	.00	.00	755.60	6650.00	769.24	.00	769.33	3.26	2.97	4388.41	3682.49
7490.000	250.00	.00	.00	755.60	6650.00	769.32	.00	769.41	3.13	2.93	4454.55	3758.52
7590.000	100.00	.00	.00	755.60	6650.00	769.27	.00	769.37	3.36	3.03	3999.11	3627.31
7590.000	100.00	.00	.00	755.60	6650.00	769.35	.00	769.45	3.23	2.98	4056.70	3700.24
8290.000	700.00	.00	.00	757.70	6650.00	769.42	.00	769.60	2.83	3.95	5338.95	3955.14
8290.000	700.00	.00	.00	757.70	6650.00	769.49	.00	769.70	3.08	4.14	4301.79	3789.90
8390.000	100.00	.00	.00	758.00	6650.00	769.58	.00	769.66	1.52	2.72	4118.06	5386.82
8390.000	100.00	.00	.00	758.00	6650.00	769.69	.00	769.76	1.46	2.69	4102.21	5494.85
8890.000	500.00	.00	.00	758.00	6650.00	769.69	.00	769.72	.98	1.90	6010.86	6721.19
8890.000	500.00	.00	.00	758.00	6650.00	769.79	.00	769.83	.95	1.88	5434.43	6837.27
9590.000	700.00	.00	.00	758.00	6650.00	769.76	.00	769.79	1.06	1.99	5423.91	6451.83
9590.000	700.00	.00	.00	758.00	6650.00	769.86	.00	769.90	1.00	1.94	5528.49	6647.80
10340.000	750.00	.00	.00	758.90	6650.00	769.84	.00	769.88	1.84	2.46	5120.66	4899.92
10340.000	750.00	.00	.00	758.90	6650.00	769.94	.00	769.98	1.76	2.42	4590.98	5015.70
11640.000	1300.00	.00	.00	759.40	6650.00	770.06	.00	770.30	8.99	5.49	2535.16	2217.60
11640.000	1300.00	.00	.00	759.40	6650.00	770.17	.00	770.39	9.60	5.29	2510.98	2146.50
12140.000	500.00	.00	.00	758.90	6650.00	770.50	.00	770.67	5.94	4.64	3492.03	2729.56
12140.000	500.00	.00	.00	758.90	6650.00	770.59	.00	770.75	5.60	4.54	3546.66	2809.72
12590.000	450.00	.00	.00	760.10	6650.00	770.40	.00	771.38	26.76	9.26	1493.37	1285.62
12590.000	450.00	.00	.00	760.10	6650.00	770.46	.00	771.46	26.75	9.30	1439.05	1285.67
13260.000	670.00	.00	.00	760.80	5020.00	771.55	.00	771.56	.48	1.29	6786.54	7246.94
13260.000	670.00	.00	.00	760.80	5020.00	771.63	.00	771.64	.47	1.28	6729.04	7333.86
14140.000	880.00	.00	.00	760.70	5020.00	771.55	.00	771.65	2.89	3.14	3247.22	2952.10
14140.000	880.00	.00	.00	760.70	5020.00	771.63	.00	771.73	3.09	3.13	3076.30	2854.63
14880.000	740.00	.00	.00	761.30	5020.00	771.75	.00	771.84	2.98	3.07	2975.70	2909.39
14880.000	740.00	.00	.00	761.30	5020.00	771.83	.00	771.92	2.86	3.03	3016.72	2968.59

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10V**2	VCH	AREA	.01K
15530.000	650.00	.00	.00	763.40	5020.00	772.01	.00	772.16	8.08	4.62	2481.72	1765.57
15530.000	650.00	.00	.00	763.40	5020.00	772.08	.00	772.23	7.72	4.54	2522.21	1806.98
16065.000	535.00	.00	.00	763.30	5020.00	772.14	.00	773.01	22.64	7.80	917.28	1054.93
16065.000	535.00	.00	.00	763.30	5020.00	772.20	.00	773.04	21.70	7.67	939.42	1077.75
16440.000	375.00	.00	.00	763.20	5020.00	773.23	.00	773.70	13.83	6.39	1550.20	1348.89
16440.000	375.00	.00	.00	763.20	5020.00	773.28	.00	773.76	15.84	6.44	1439.28	1261.40
16840.000	400.00	.00	.00	763.20	5020.00	773.87	.00	774.02	4.83	4.18	2784.46	2283.16
16840.000	400.00	.00	.00	763.20	5020.00	773.94	.00	774.09	4.65	4.12	2825.42	2327.96
16990.000	150.00	.00	.00	764.00	5020.00	773.87	.00	774.18	9.35	5.52	1866.66	1624.56
16990.000	150.00	.00	.00	764.00	5020.00	773.94	.00	774.25	9.17	5.44	1896.47	1657.32
17530.000	540.00	.00	.00	764.90	5020.00	774.52	.00	774.64	7.27	4.84	2597.72	1861.47
17530.000	540.00	.00	.00	764.90	5020.00	774.57	.00	774.68	7.08	4.80	2623.59	1886.46
18080.000	550.00	.00	.00	765.40	5020.00	774.80	.00	774.99	8.28	5.12	2354.51	1744.66
18080.000	550.00	.00	.00	765.40	5020.00	774.84	.00	775.03	8.07	5.07	2377.98	1767.57

18530.000	450.00	.00	.00	765.70	5020.00	775.14	.00	775.30	9.46	5.45	2228.36	1632.15
18530.000	450.00	.00	.00	765.70	5020.00	775.21	.00	775.35	10.45	4.94	2163.13	1553.27
20530.000	2000.00	.00	.00	766.40	5020.00	775.97	.00	776.01	3.64	3.41	4208.92	2632.68
20530.000	2000.00	.00	.00	766.40	5020.00	776.02	.00	776.07	3.78	3.49	4066.62	2580.44
22280.000	1750.00	.00	.00	769.00	5020.00	776.65	.00	777.08	14.40	5.82	1431.21	1323.04
22280.000	1750.00	.00	.00	769.00	5020.00	776.72	.00	777.14	13.82	5.74	1426.78	1350.25
22880.000	600.00	.00	.00	768.20	5020.00	777.59	.00	778.14	20.87	6.17	869.05	1098.93
22880.000	600.00	.00	.00	768.20	5020.00	777.64	.00	778.21	21.40	6.27	861.13	1085.06

1

CHIPPEWA RIVER Q BASED

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
223990.000	6650.00	763.50	.00	.00	.00	1008.75	.00
223990.000	6650.00	763.60	.10	.00	.00	1009.00	.00
400.000	6650.00	763.51	.00	.01	.00	907.61	690.00
400.000	6650.00	763.60	.08	.00	.08	735.20	690.00
1680.000	6650.00	764.81	.00	1.30	.00	770.99	1280.00
1680.000	6650.00	764.90	.09	1.31	.09	735.00	1280.00
2470.000	6650.00	765.53	.00	.71	.00	356.07	790.00
2470.000	6650.00	765.59	.06	.69	.06	243.57	790.00
4470.000	6650.00	767.52	.00	1.99	.00	1079.05	2000.00
4470.000	6650.00	767.60	.07	2.00	.07	730.00	2000.00
4970.000	6650.00	767.79	.00	.27	.00	130.00	500.00
4970.000	6650.00	767.86	.06	.26	.06	120.00	500.00
5030.000	6650.00	767.86	.00	.07	.00	126.00	60.00
5030.000	6650.00	767.94	.08	.08	.08	126.00	60.00
5110.000	6650.00	768.04	.00	.18	.00	157.00	80.00
5110.000	6650.00	768.09	.06	.16	.06	134.10	80.00
5290.000	6650.00	768.33	.00	.29	.00	485.00	180.00
5290.000	6650.00	768.41	.08	.31	.08	485.00	180.00
6190.000	6650.00	768.69	.00	.37	.00	733.97	900.00
6190.000	6650.00	768.76	.07	.35	.07	682.66	900.00
6520.000	6650.00	768.87	.00	.17	.00	854.00	330.00
6520.000	6650.00	768.94	.08	.18	.08	854.00	330.00
6680.000	6650.00	768.89	.00	.02	.00	600.00	160.00
6680.000	6650.00	768.96	.07	.01	.07	523.79	160.00
6690.000	6650.00	768.89	.00	.00	.00	600.00	10.00
6690.000	6650.00	768.96	.07	.00	.07	523.56	10.00
7090.000	6650.00	769.13	.00	.23	.00	1129.38	400.00
7090.000	6650.00	769.20	.08	.24	.08	607.15	400.00
7240.[illegible]	[illegible]	769.15	[illegible]	.02	.00	981.[illegible]	150.00

7240.000	6650.00	769.22	.08	.02	.08	906.22	150.00
7490.000	6650.00	769.24	.00	.09	.00	796.04	250.00
7490.000	6650.00	769.32	.08	.10	.08	798.55	250.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
7590.000	6650.00	769.27	.00	.03	.00	697.18	100.00
7590.000	6650.00	769.35	.08	.03	.08	699.68	100.00
8290.000	6650.00	769.42	.00	.15	.00	997.79	700.00
8290.000	6650.00	769.49	.07	.14	.07	700.00	700.00
8390.000	6650.00	769.58	.00	.16	.00	700.78	100.00
8390.000	6650.00	769.69	.11	.20	.11	610.00	100.00
8890.000	6650.00	769.69	.00	.11	.00	1553.08	500.00
8890.000	6650.00	769.79	.10	.10	.10	860.00	500.00
9590.000	6650.00	769.76	.00	.07	.00	1035.36	700.00
9590.000	6650.00	769.86	.10	.07	.10	1026.72	700.00
10340.000	6650.00	769.84	.00	.08	.00	1444.00	750.00
10340.000	6650.00	769.94	.10	.08	.10	1010.00	750.00
11640.000	6650.00	770.06	.00	.22	.00	597.58	1300.00
11640.000	6650.00	770.17	.10	.23	.10	575.53	1300.00
12140.000	6650.00	770.50	.00	.44	.00	785.91	500.00
12140.000	6650.00	770.59	.09	.43	.09	750.00	500.00
12590.000	6650.00	770.40	.00	-.10	.00	583.34	450.00
12590.000	6650.00	770.46	.06	-.14	.06	541.44	450.00
13260.000	5020.00	771.55	.00	1.15	.00	975.47	670.00
13260.000	5020.00	771.63	.08	1.17	.08	910.00	670.00
14140.000	5020.00	771.55	.00	.00	.00	648.33	880.00
14140.000	5020.00	771.63	.08	.00	.08	554.90	880.00
14880.000	5020.00	771.75	.00	.19	.00	500.00	740.00
14880.000	5020.00	771.83	.08	.20	.08	500.00	740.00
15530.000	5020.00	772.01	.00	.26	.00	566.00	650.00
15530.000	5020.00	772.08	.07	.25	.07	566.00	650.00
16065.000	5020.00	772.14	.00	.14	.00	383.01	535.00
16065.000	5020.00	772.20	.06	.13	.06	367.97	535.00
16440.000	5020.00	773.23	.00	1.09	.00	578.82	375.00
16440.000	5020.00	773.28	.05	1.07	.05	512.38	375.00
16840.000	5020.00	773.87	.00	.64	.00	556.00	400.00
16840.000	5020.00	773.94	.07	.67	.07	556.00	400.00
16990.000	5020.00	773.87	.00	.00	.00	403.12	150.00
16990.000	5020.00	773.94	.07	.00	.07	403.00	150.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
17530.000	5020.00	774.52	.00	.65	.00	517.00	540.00
17530.000	5020.00	774.57	.05	.63	.05	517.00	540.00
18080.000	5020.00	774.80	.00	.28	.00	556.76	550.00
18080.000	5020.00	774.84	.04	.27	.04	555.23	550.00
18530.000	5020.00	775.14	.00	.34	.00	458.85	450.00
18530.000	5020.00	775.21	.07	.37	.07	433.45	450.00
20530.000	5020.00	775.97	.00	.83	.00	941.51	2000.00
20530.000	5020.00	776.02	.06	.81	.06	895.00	2000.00
22280.000	5020.00	776.65	.00	.68	.00	390.12	1750.00
22280.000	5020.00	776.72	.08	.70	.08	360.00	1750.00
22880.000	5020.00	777.59	.00	.95	.00	127.93	600.00
22880.000	5020.00	777.64	.04	.91	.04	116.13	600.00

SUMMARY OF ERRORS AND SPECIAL NOTES

THIS RUN EXECUTED 06/29/89 07:42:52

```
**************************************************
  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
**************************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Union Twp.

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: 100-yr run

00BREAK00

THIS RUN EXECUTED 06/29/89 07:41:43

```
**********************************************
 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
**********************************************


C
T1      UNION TWP FLOODPLAIN INFO                    UNION1.FPI
T2      DATA BASED ON MT PLEASANT FIS, FILES 2942-32.4, 852-32D
T3      CHIPPEWA RIVER   Q BASED ON DAR TO GAGE AT MT PLEAS INCLUDES 1986 Q

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0.       2.       0.       0.  .000000      .00       .0    6650.   763.500     .000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN      ALLDC    IBW      CHNIM    ITRACE

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


NC      .060     .060     .045     .100     .300     .000     .000     .000     .000     .000
              FIS XSEC AN -   START WSEL BASED ON FIS
X1 223990.000   18.000 1100.000 1157.000     .000     .000     .000     .000     .000     .000
X3      .000     .000     .000  250.000     .000     .000     .000     .000     .000     .000
GR   770.000     .000  760.000   60.000  758.200  200.000  758.200  600.000  758.400  700.000
GR   758.400  800.000  758.900  900.000  759.000 1000.000  759.000 1096.000  753.500 1100.000
GR   750.900 1115.000  751.300 1130.000  750.600 1140.000  753.500 1156.000  753.800 1157.000
GR   754.000 1175.000  760.000 1250.000  764.000 1260.000     .000     .000     .000     .000

NC      .150     .150     .045     .100     .300     .000     .000     .000     .000     .000
ET      .000     .000    1.400     .000     .000     .000     .000     .000     .000     .000
         A   XSEC OB FROM 2FT TOPO  CH FROM DS FIS XSEC  400FT US TWP LINE
X1   400.000   15.000  200.000  280.000  500.000  500.000  690.000     .000     .000     .000
GR   768.000     .000  762.000   35.000  760.000  200.000  754.000  205.000  751.300  220.000
GR   751.700  235.000  751.000  245.000  753.900  261.000  754.200  262.000  754.400  280.000
GR   760.000  326.000  760.400  700.000  762.000  930.000  766.000  940.000  770.000  950.000

ET      .000     .000    5.100     .000  160.000  895.000     .000     .000     .000     .000
         B     XSEC OB CUT FROM 2FT TOPO   CHANNEL FROM DS FIS XSEC
X1  1680.000   13.000  820.000  885.000  750.000  750.000 1280.000     .000     .000     .000
GR   770.000     .000  764.000  150.000  760.000  160.000  760.000  790.000  754.800  820.000
GR   752.100  825.000  752.500  840.000  751.800  850.000  754.700  866.000  755.000  867.000
GR   755.200  885.000  760.000  892.000  770.000  910.000     .000     .000     .000     .000

ET      .000    5.100    1.400     .000     .000 1034.000     .000     .000     .000     .000
X1  2470.000   16.000  652.000  754.000  700.000  800.000  790.000     .000     .000     .000
GR   770.000     .000  768.000   80.000  766.000  435.000  764.000  490.000  762.000  570.000
GR   760.900  652.000  755.700  682.000  752.600  687.000  753.000  702.000  752.300  712.000
GR   755.200  728.000  755.500  729.000  755.700  747.000  760.500  754.000  761.700  804.000
GR   770.000 1154.000     .000     .000     .000     .000     .000     .000     .000     .000
```

```
ET      .000      .000     7.100      .000      .000      .000   520.000  1250.000      .000      .000
          D  XSEC 1 FROM FILE 2942-32.4  85 FT DS OF LINCOLN RD
               OB EXTENDED TO 770 FROM QUAD
X1   4470.000    13.000   698.000   802.000  1200.000  1300.000  2000.000      .000      .000      .000
GR    770.000      .000   770.000   498.000   760.800   520.000   762.300   698.000   757.300   705.000
GR    755.900   720.000   755.300   735.000   754.800   750.000   754.800   765.000   756.000   780.000
GR    756.600   798.000   762.100   802.000   770.000  1940.000      .000      .000      .000      .000

NC      .000      .000      .000      .300      .500      .000      .000      .000      .000      .000
ET      .000     5.100     7.100      .000   698.000   828.000   698.000   818.000      .000      .000
          E  CHANNEL FROM XSEC D  OB EXTENDED TO 770 BASED ON QUAD
X1   4970.000    15.000   698.000   802.000   500.000   500.000   500.000      .000      .000      .000
GR    763.700      .000   762.400   250.000   760.800   520.000   762.300   698.000   757.300   705.000
GR    755.900   720.000   755.300   735.000   754.800   750.000   754.800   765.000   756.000   780.000
GR    756.600   798.000   762.100   802.000   761.700  1050.000   762.000  1405.000   765.200  1415.000

NC      .090      .090      .035      .300      .500      .000      .000      .000      .000      .000
ET      .000     5.100     5.100      .000   844.000   970.000      .000      .000      .000      .000
          F    XSEC 2    DS OF LINCOLN RD
X1   5030.000    14.000   848.000   952.000   100.000   100.000    60.000      .000      .000      .000
GR    774.300      .000   766.600   115.000   762.400   400.000   760.700   670.000   762.300   848.000
GR    756.900   852.000   754.200   880.000   755.300   900.000   755.400   920.000   756.700   945.000
GR    762.400   952.000   761.500  1200.000   760.500  1530.000   767.600  1540.000      .000      .000

NC      .100      .150      .035      .000      .000      .000      .000      .000      .000      .000
ET      .000     5.100     1.400      .000   824.000   981.000      .000      .000      .000      .000
          G    XSEC 4   US OF LINCOLN RD  MINIMAL LOSS AT BRIDGE
X1   5110.000    19.000   840.000   965.000    80.000    80.000    80.000      .000      .000      .000
GR    771.900      .000   771.200   100.000   768.100   455.000   759.900   480.000   760.300   650.000
GR    760.000   700.000   760.700   840.000   759.700   848.000   758.000   858.000   756.500   879.000
GR    753.700   900.000   754.200   920.000   756.200   940.000   761.700   965.000   760.600  1200.000
GR    763.300  1220.000   763.700  1500.000   763.800  1700.000   773.600  1720.000      .000      .000

ET      .000     5.100     7.100      .000   550.000  1035.000   550.000  1035.000      .000      .000
          H    XSEC 6   DS LIMITS OF MCGUIRK ESTATES SUB
X1   5290.000    18.000   736.000   855.000   180.000   200.000   180.000      .000      .000      .000
GR    771.200      .000   768.500   315.000   767.100   340.000   766.300   510.000   760.600   560.000
GR    761.100   736.000   759.700   748.000   757.900   760.000   757.400   780.000   756.700   800.000
GR    756.400   820.000   756.700   840.000   761.400   855.000   763.300  1090.000   760.800  1100.000
GR    763.100  1400.000   762.900  1520.000   772.900  1550.000      .000      .000      .000      .000

NC      .000      .000      .000      .100      .300      .000      .000      .000      .000      .000
ET      .000      .000     1.400      .000      .000      .000      .000      .000      .000      .000
          I
X1   6190.000    14.000    95.000   167.000   780.000  1000.000   900.000      .000      .000      .000
GR    774.000      .000   769.100    15.000   768.700    80.000   769.100    95.000   758.100   110.000
GR    756.500   120.000   755.800   135.000   755.900   150.000   762.800   167.000   761.000   395.000
GR    763.450   435.000   763.800   610.000   763.800   810.000   771.300   840.000      .000      .000
1
 06/29/89    07:41:43                                                                          PAGE    3


ET      .000     5.100     5.100      .000     3.000   857.000      .000      .000      .000      .000
X1   6520.000     9.000    19.000    86.000   360.000    70.000   330.000      .000      .000      .000
GR    770.000      .000   759.510    19.000   754.600    35.000   754.100    50.000   754.700    65.000
GR    758.800    81.000   762.400    86.000   762.200  1350.000   773.200  1375.000      .000      .000

ET      .000     5.100     1.400      .000   400.000  1000.000      .000      .000      .000      .000
X1   6680.000    12.000   530.000   630.000   160.000   160.000   160.000      .000      .000      .000
GR    776.700      .000   764.200    40.000   762.300   530.000   758.300   540.000   757.300   570.000
GR    756.110   580.000   757.400   600.000   757.800   615.000   763.500   630.000   763.200  1080.000
GR    762.100  1240.000   773.100  1265.000      .000      .000      .000      .000      .000      .000

ET      .000     5.100     1.400      .000   400.000  1000.000      .000      .000      .000      .000
X1   6690.000      .000      .000      .000    10.000    10.000    10.000      .000      .000      .000
```

```
ET      .000      5.100      1.400       .000     580.000       .000       .000       .000       .000       .000
          L
X1   7090.000     19.000    980.000   1260.000     150.000     300.000     400.000       .000       .000       .000
GR    770.000       .000    765.000     60.000     766.800     630.000     761.800    650.000    763.000    980.000
GR    758.500    990.000    758.600   1010.000     757.500    1030.000     758.000   1050.000    759.100   1070.000
GR    762.600   1080.000    761.800   1230.000     770.300    1260.000     769.660   1320.000    768.500   1360.000
GR    768.500   1745.000    769.500   1820.000     770.000    1880.000     771.500   1915.000       .000       .000

NC      .180       .080       .000       .300       .500       .000       .000       .000       .000       .000
ET      .000      5.100      1.400       .000     530.000    1700.000       .000       .000       .000       .000
X1   7240.000     17.000   1030.000   1160.000     150.000     150.000     150.000       .000       .000       .000
GR    770.000       .000    765.000     60.000     764.400    1030.000     758.600   1040.000    758.200   1055.000
GR    757.700   1070.000    757.700   1085.000     758.400    1100.000     764.400   1108.000    765.400   1145.000
GR    773.400   1160.000    773.200   1310.000     765.200    1370.000     764.100   1460.000    763.000   1510.000
GR    763.300   1840.000    775.300   1865.000        .000       .000       .000       .000       .000       .000

NC      .180       .080       .030       .000       .000       .000       .000       .000       .000       .000
ET      .000      5.100      5.100       .000     230.000    1300.000       .000       .000       .000       .000
          N     WTP IN OVERBANK   XSEC 7590 MOVED DS 100FT
X1   7490.000     17.000    530.000    800.000     200.000     200.000     250.000       .000       .000       .000
GR    782.400       .000    772.400     20.000     772.400     160.000     765.600    180.000    763.800    530.000
GR    758.700    552.300    755.600    568.200     759.300     584.100     763.800    606.400    763.800    700.000
GR    773.000    800.000    773.000    960.000     764.000    1135.000     756.100   1175.000    762.400   1200.000
GR    761.300   1480.000    774.300   1510.000        .000       .000       .000       .000       .000       .000

ET      .000      5.100      5.100       .000     330.000    1300.000       .000       .000       .000       .000
          O     WTP IN OVERBANK                XSEC 12
X1   7590.000       .000       .000       .000     100.000     100.000     100.000       .000       .000       .000

ET      .000      5.100      7.100       .000     200.000    1235.000     480.000   1180.000       .000       .000
          P     US OF INTAKE CANAL             XSEC 13
X1   8290.000     15.000   1035.000   1155.000     600.000     300.000     700.000       .000       .000       .000
GR    782.400       .000    772.400     20.000     772.400     145.000     765.600    165.000    765.600    695.000
GR    762.300    785.000    763.800   1035.000     760.300    1045.000     758.000   1070.000    757.700   1095.000
GR    758.100   1120.000    758.500   1145.000     764.800    1155.000     770.200   1205.000    773.000   1235.000
1
 06/29/89    07:41:43                                                                                    PAGE    4


NC      .045       .075       .030       .000       .000       .000       .000       .000       .000       .000
ET      .000       .000      5.100       .000     150.000     760.000       .000       .000       .000       .000
          Q     XSEC 1 GREEN ACRES SUB         XSEC 14.1
X1   8390.000     20.000    385.000    540.000     100.000     100.000     100.000       .000       .000       .000
GR    770.200     23.000    769.200    102.000     766.300     185.000     764.000    212.000    763.800    245.000
GR    766.000    308.000    763.000    325.000     762.900     385.000     759.500    391.000    758.000    400.000
GR    759.500    420.000    758.500    440.000     759.700     455.000     760.600    500.000    763.000    540.000
GR    763.000    728.000    764.500    742.000     768.500     770.000     772.300    780.000    774.500    900.000

NC      .080       .040       .035       .100       .300       .000       .000       .000       .000       .000
ET      .000       .000      5.100       .000     650.000    1510.000       .000       .000       .000       .000
          R  OB EXTENDED TO 770 BASED ON QUAD
X1   8890.000     17.000    900.000   1055.000     500.000     500.000     500.000       .000       .000       .000
GR    770.000       .000    769.200    520.000     766.300     700.000     764.000    733.000    763.800    760.000
GR    766.000    823.000    763.000    840.000     762.400     900.000     759.500    906.000    758.000    915.000
GR    759.500    935.000    758.500    955.000     759.700     970.000     760.600   1021.000    763.000   1055.000
GR    763.000   1243.000    770.000   1780.000        .000       .000       .000       .000       .000       .000

ET      .000       .000      5.100       .000     600.000    1630.000       .000       .000       .000       .000
          S  BASED ON XSEC R  OB EXTENDED TO 770 BASED ON QUAD
X1   9590.000     17.000    900.000   1055.000     700.000     700.000     700.000       .000       .000       .000
GR    770.000    600.000    769.200    620.000     766.300     700.000     764.000    733.000    763.800    760.000
GR    766.000    823.000    763.000    840.000     762.400     900.000     759.500    906.000    758.000    915.000
GR    759.500    935.000    758.500    955.000     759.700     970.000     760.600   1021.000    763.000   1055.000
GR    763.000   1243.000    770.000   1655.000        .000       .000       .000       .000       .000       .000
```

```
NC      .040      .040      .035      .100      .300      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000   490.000  1500.000      .000      .000      .000      .000
         T   CHANNEL FROM XSEC U  OB EXT TO 770 BASED ON QUAD
X1  10340.000    12.000  1430.000  1495.000   450.000   750.000   750.000      .000      .000      .000
GR    770.000    33.000   764.100   910.000   765.700  1132.000   766.700  1233.000   767.200  1333.000
GR    767.200  1390.000   763.900  1430.000   762.200  1433.000   758.900  1462.000   762.200  1493.000
GR    764.700  1495.000   772.000  1505.000      .000      .000      .000      .000      .000      .000

NC      .060      .000      .000      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     1.400      .000      .000      .000      .000      .000      .000      .000
         U     XSEC 1 FROM FILE NO. 852-32D  GR'S REVERSED TO LOOK DS
X1  11640.000    15.000   533.000   593.000   900.000  1300.000  1300.000      .000      .000      .000
GR    773.000      .000   764.600    10.000   766.200   232.000   767.200   333.000   767.700   433.000
GR    767.700   490.000   764.400   530.000   762.700   533.000   759.400   562.000   762.700   593.000
GR    765.200   595.000   773.200   605.000   773.100   755.000   772.600   795.000   783.100   855.000

NC      .080      .060      .035      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000    38.000   788.000      .000      .000      .000      .000
                V      XSEC Q (2.0) FROM FILES
X1  12140.000    11.000   525.000   594.000   500.000   500.000   500.000      .000      .000      .000
GR    776.300      .000   763.700    61.000   767.100   355.000   764.900   523.000   762.900   525.000
GR    758.900   578.000   762.900   594.000   765.500   595.000   767.800   654.000   771.900   897.000
GR    784.300  1098.000      .000      .000      .000      .000      .000      .000      .000      .000
1
 06/29/89    07:41:43                                                                          PAGE    5


ET      .000      .000     5.100      .000    82.000   665.000      .000      .000      .000      .000
         W    XSEC P (3.0) FROM FILES   GR SWITCHED TO GET XSEC LOOKING DS
X1  12590.000     8.000    89.000   149.000   400.000   400.000   450.000      .000      .000      .000
GR    774.200      .000   765.900    87.000   763.300    89.000   760.100   114.000   763.300   149.000
GR    767.400   150.000   769.800   620.000   786.100   705.000      .000      .000      .000      .000

QT      2.000  5020.000  5020.000      .000      .000      .000      .000      .000      .000      .000
NH      5.000      .080   497.000      .035   692.000      .080   994.000      .035  1069.000      .080
NH   1120.000      .000      .000      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     5.100      .000   170.000  1080.000      .000      .000      .000      .000
         X    US OF NORTH BRANCH    XSEC O (4.0) FROM FILES  GR SWITCHED
X1  13260.000    12.000   994.000  1069.000   200.000   500.000   670.000      .000      .000      .000
GR    778.100      .000   765.500   204.000   764.500   495.000   764.000   497.000   761.300   520.000
GR    764.100   692.000   765.000   990.000   763.800   994.000   760.800  1012.000   763.800  1069.000
GR    767.200  1070.000   786.200  1120.000      .000      .000      .000      .000      .000      .000

NC      .070      .080      .035      .000      .000      .000      .000      .000      .000      .000
QT      2.000  5020.000  5020.000      .000      .000      .000      .000      .000      .000      .000
ET      .000      .000     1.400      .000      .000      .000      .000      .000      .000      .000
         Y
X1  14140.000     9.000    43.000   152.000   400.000   700.000   880.000      .000      .000      .000
GR    780.400      .000   770.600    40.000   764.200    43.000   760.700    95.000   764.200   152.000
GR    766.000   155.000   767.800   565.000   769.800   675.000   786.200   763.000      .000      .000

NC      .070      .070      .035      .000      .000      .000      .000      .000      .000      .000
ET      .000     5.100     5.100      .000   140.000   640.000      .000      .000      .000      .000
         Z
X1  14880.000    11.000   391.000   495.000   450.000   450.000   740.000      .000      .000      .000
GR    780.900      .000   764.500    41.000   766.200   261.000   769.200   289.000   765.000   391.000
GR    761.300   429.000   765.000   495.000   766.500   499.000   766.100   568.000   767.400   651.000
GR    783.100   683.000      .000      .000      .000      .000      .000      .000      .000      .000

NH      4.000      .080    88.000      .035   148.000      .070   360.000      .080   710.000      .000
ET      .000     5.100     5.100      .000    54.000   620.000      .000      .000      .000      .000
         AA
X1  15530.000    12.000    88.000   148.000   540.000   740.000   650.000      .000      .000      .000
GR    778.500      .000   769.900    30.000   765.600    88.000   763.400   120.000   765.600   148.000
```

```
GR    768.300    150.000    768.200    190.000    766.100    310.000    768.100    360.000    769.100    504.000
GR    768.200    655.000    788.300    710.000       .000       .000       .000       .000       .000       .000

ET       .000       .000      5.100      7.100     27.000    395.000     27.000    395.000       .000       .000
NC       .090       .060       .035       .000       .000       .000       .000       .000       .000       .000
         AB
X1  16065.000      9.000     41.000    119.000    750.000    400.000    535.000       .000       .000       .000
GR    784.600       .000    765.800     41.000    763.300     75.000    765.800    119.000    770.300    123.000
GR    772.900    528.000    784.000    577.000    788.400    582.000    789.800    597.000       .000       .000

NC       .090       .060       .035       .000       .000       .000       .000       .000       .000       .000
ET       .000       .000      1.400       .000       .000       .000       .000       .000       .000       .000
1
 06/29/89    07:41:43                                                                                    PAGE    6


         AC
X1  16440.000     11.000     39.000    107.000    375.000    350.000    375.000       .000       .000       .000
GR    783.300       .000    766.300     39.000    763.200     86.000    765.400    102.000    769.900    107.000
GR    772.800    455.000    770.200    525.000    771.800    588.000    775.600    625.000    781.300    832.000
GR    793.100    948.000       .000       .000       .000       .000       .000       .000       .000       .000

NC       .080       .080       .035       .000       .000       .000       .000       .000       .000       .000
ET       .000      5.100      5.100       .000     94.000    650.000       .000       .000       .000       .000
         AD
X1  16840.000     13.000    394.000    460.000    350.000    350.000    400.000       .000       .000       .000
GR    784.500       .000    768.600     32.000    768.800    391.000    765.400    394.000    763.200    431.000
GR    765.700    460.000    770.200    465.000    773.200    965.000    771.400   1265.000    770.600   1315.000
GR    771.500   1365.000    794.000   1458.000    797.600   1476.000       .000       .000       .000       .000

ET       .000      5.100      7.100       .000    150.000    610.000    150.000    553.000       .000       .000
         AE
X1  16990.000     16.000    345.000    410.000    225.000    125.000    150.000       .000       .000       .000
GR    785.200       .000    770.800     44.000    769.800    343.000    766.500    345.000    764.000    377.000
GR    764.700    408.000    769.000    410.000    770.400    533.000    779.190    584.000    784.000    665.000
GR    785.100    765.000    775.700    855.000    772.300   1255.000    770.300   1275.000    773.600   1380.000
GR    790.800   1405.000       .000       .000       .000       .000       .000       .000       .000       .000

ET       .000      7.100      7.100       .000       .000       .000     25.000    542.000       .000       .000
         AF    STA SWITCHED AS XSEC WAS TAKED LOOKING UPSTREAM
X1  17530.000     21.000     62.000     91.000     10.000    650.000    540.000       .000       .000       .000
GR    791.300       .000    770.400     31.000    769.500     61.000    766.900     62.000    764.900     80.000
GR    766.200     91.000    766.900    258.000    769.800    260.000    773.100    297.000    771.300    478.000
GR    769.600    484.000    769.500    542.000    784.100    570.000    784.300    644.000    781.300    650.000
GR    772.700    696.000    771.800    844.000    768.300    854.000    770.200    966.000    779.100   1006.000
GR    787.500   1201.000       .000       .000       .000       .000       .000       .000       .000       .000

ET       .000      5.100      7.100       .000     57.000    614.000     56.000    612.000       .000       .000
X1  18080.000      8.000    195.000    245.000    450.000    350.000    550.000       .000       .000       .000
GR    780.000       .000    770.000    110.000    767.400    195.000    765.400    213.000    766.000    230.000
GR    767.000    245.000    770.000    345.000    780.000    910.000       .000       .000       .000       .000

ET       .000      5.100      1.400       .000       .000    501.000       .000       .000       .000       .000
         AG
X1  18530.000     21.000     62.000     91.000    450.000    250.000    450.000       .000       .800       .000
GR    791.300       .000    770.400     31.000    769.500     61.000    766.900     62.000    764.900     80.000
GR    766.200     91.000    766.900    258.000    769.800    260.000    773.100    297.000    771.300    478.000
GR    769.600    484.000    769.500    542.000    784.100    570.000    784.300    644.000    781.300    650.000
GR    772.700    696.000    771.800    844.000    768.300    854.000    770.200    966.000    779.100   1006.000
GR    787.500   1201.000       .000       .000       .000       .000       .000       .000       .000       .000

ET       .000      5.100      7.100       .000       .000   1390.000     60.000    955.000       .000       .000
         AH    XSEC BASED ON XSEC AK AND QUAD
X1  20530.000     20.000     62.000     91.000   2000.000   1000.000   2000.000       .000       .000       .000
GR    791.300       .000    771.900     31.000    771.000     61.000    768.400     62.000    766.400     80.000
GR    767.700     91.000    768.400    258.000    771.300    260.000    774.600    297.000    772.800    478.000
```

```
GR    771.100    484.000    771.000    542.000    771.000    570.000    771.100    644.000    771.000    650.000
GR    774.200    696.000    773.300    844.000    769.800    854.000    771.700    966.000    780.000   1590.000
1
 06/29/89    07:41:43                                                                                    PAGE    7


ET       .000       .000      5.100       .000     70.000    430.000       .000       .000       .000       .000
          AI
X1  22280.000      9.000     95.000    195.000   1400.000   1200.000   1750.000       .000       .000       .000
GR    788.200       .000    780.900     15.000    772.500     95.000    770.000    100.000    769.000    145.000
GR    770.000    190.000    773.000    195.000    775.000    440.000    783.800    470.000       .000       .000

NC       .040       .060       .045       .000       .000       .000       .000       .000       .000       .000
ET       .000      5.100      1.400       .000       .000    260.000       .000       .000       .000       .000
          AJ    DS OF MERIDIAN ROAD  US TWP LIMITS
X1  22880.000     10.000     90.000    170.000    600.000    600.000    600.000       .000       .000       .000
GR    786.500       .000    773.800     60.000    773.000     90.000    769.000     92.000    768.200    130.000
GR    769.000    168.000    773.800    170.000    778.300    260.000    777.200    310.000    779.800    390.000
EJ       .000       .000       .000       .000       .000       .000       .000       .000       .000       .000
1
 06/29/89    07:41:43                                                                                    PAGE    8


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
$SECNO 223990.000

3470 ENCROACHMENT STATIONS=     250.0    1260.0  TYPE=     1  TARGET=    -250.000
                FIS XSEC AN     START WSEL BASED ON FIS
223990.00    12.90   763.50      .00   763.50   763.53      .03      .00      .00   753.50
    6650.    4240.    1566.     844.    4286.     674.     676.       0.       0.   753.80
      .00      .99     2.32     1.25     .060     .045     .060     .000   750.60   250.00
  .000186       0.       0.       0.        0        0        0      .00  1008.75  1258.75
0
CCHV=    .100 CEHV=    .300
$SECNO 400.000
          A   XSEC OB FROM 2FT TOPO  CH FROM DS FIS XSEC  400FT US TWP LINE
   400.00    12.51   763.51      .00      .00   763.86      .34      .23      .09   760.00
    6650.     274.    4719.    1657.     421.     850.    2064.      55.      11.   754.40
      .04      .65     5.55      .80     .150     .045     .150     .000   751.00    26.17
  .001281     500.     690.     500.        2        0        0      .00   907.61   933.78
0
$SECNO 1680.000
          B     XSEC OB CUT FROM 2FT TOPO   CHANNEL FROM DS FIS XSEC
  1680.00    13.01   764.81      .00      .00   765.04      .22     1.17      .01   754.80
    6650.    2868.    3722.      60.    3291.     741.      71.     129.      27.   755.20
      .13      .87     5.02      .84     .150     .045     .150     .000   751.80   129.67
  .000921     750.    1280.     750.        2        0        0      .00   770.99   900.66
0
$SECNO 2470.000
  2470.00    13.23   765.53      .00      .00   766.00      .47      .89      .07   760.90
    6650.     481.    5951.     218.     569.    1023.     221.     178.      36.   760.50
      .17      .85     5.82      .98     .150     .045     .150     .000   752.30   447.95
  .001495     700.     790.     800.        2        0        0      .00   356.07   804.01
0
$SECNO 4470.000
          D  XSEC 1 FROM FILE 2942-32.4  85 FT DS OF LINCOLN RD
               OB EXTENDED TO 770 FROM QUAD
```

```
  4470.00    12.72   767.52      .00      .00   767.70      .18     1.67      .03   762.30
    6650.     879.    4770.    1001.    1117.    1191.    2117.     287.      59.   762.10
      .34      .79     4.00      .47     .150     .045     .150     .000   754.80   503.93
  .000603    1200.    2000.    1300.        2        0        0      .00  1079.05  1582.98
0
1
 06/29/89    07:41:43                                                                          PAGE    9


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 4970.000
 3280 CROSS SECTION   4970.00 EXTENDED      2.59 FEET


 3470 ENCROACHMENT STATIONS=     698.0     828.0  TYPE=     1  TARGET=     130.000
          E  CHANNEL FROM XSEC D  OB EXTENDED TO 770 BASED ON QUAD
  4970.00    12.99   767.79      .00      .00   768.23      .43      .40      .13   762.30
    6650.       0.    6513.     137.       0.    1220.     149.     320.      65.   762.10
      .37      .00     5.34      .92     .150     .045     .150     .000   754.80   698.00
  .001110     500.     500.     500.        2        0        0      .00   130.00   828.00
0
 CCHV=    .300 CEHV=    .500
 $SECNO 5030.000
 3280 CROSS SECTION   5030.00 EXTENDED       .27 FEET


 3470 ENCROACHMENT STATIONS=     844.0     970.0  TYPE=     1  TARGET=     126.000
          F    XSEC 2    DS OF LINCOLN RD
  5030.00    13.66   767.86      .00      .00   768.28      .42      .05      .00   762.30
    6650.      16.    6530.     104.      22.    1244.      99.     322.      66.   762.40
      .37      .71     5.25     1.05     .090     .035     .090     .000   754.20   844.00
  .000594     100.      60.     100.        0        0        0      .00   126.00   970.00
0
 $SECNO 5110.000

 3470 ENCROACHMENT STATIONS=     824.0     981.0  TYPE=     1  TARGET=     157.000
          G    XSEC 4   US OF LINCOLN RD  MINIMAL LOSS AT BRIDGE
  5110.00    14.34   768.04      .00      .00   768.35      .32      .04      .03   760.70
    6650.     111.    6480.      59.     118.    1419.     102.     325.      66.   761.70
      .38      .94     4.57      .58     .100     .035     .150     .000   753.70   824.00
  .000459      80.      80.      80.        2        0        0      .00   157.00   981.00
0
 $SECNO 5290.000

 3470 ENCROACHMENT STATIONS=     550.0    1035.0  TYPE=     1  TARGET=     485.000
          H    XSEC 6   DS LIMITS OF MCGUIRK ESTATES SUB
  5290.00    11.93   768.33      .00      .00   768.47      .15      .07      .05   761.10
    6650.    1393.    4600.     657.    1387.    1259.    1116.     337.      67.   761.40
      .40     1.00     3.65      .59     .100     .035     .150     .000   756.40   550.00
  .000322     180.     180.     200.        2        0        0      .00   485.00  1035.00
0
1
 06/29/89    07:41:43                                                                          PAGE   10


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
*SECNO 6190.000
          I
  6190.00    12.89   768.69      .00      .00   768.90      .21      .41      .02   769.10
    6650.       0.    3597.    3053.       0.     729.    3715.     425.      81.   762.80
      .48      .00     4.93      .82     .100     .035     .150     .000   755.80    95.57
  .000666     780.     900.    1000.        1        0        0      .00   733.97   829.54
0
*SECNO 6520.000

3470 ENCROACHMENT STATIONS=       3.0     857.0  TYPE=     1  TARGET=     854.000
  6520.00    14.77   768.87      .00      .00   769.00      .14      .09      .01   759.51
    6650.      55.    3494.    3101.      79.     859.    5032.     438.      82.   762.40
      .50      .69     4.07      .62     .100     .035     .150     .000   754.10     3.00
  .000321     360.     330.      70.        2        0        0      .00   854.00   857.00
0
*SECNO 6680.000

3470 ENCROACHMENT STATIONS=     400.0    1000.0  TYPE=     1  TARGET=     600.000
  6680.00    12.78   768.89      .00      .00   769.08      .19      .06      .02   762.30
    6650.     837.    4527.    1285.     824.    1076.    2039.     457.      85.   763.50
      .52     1.02     4.21      .63     .100     .035     .150     .000   756.11   400.00
  .000424     160.     160.     160.        2        0        0      .00   600.00  1000.00
0
*SECNO 6690.000

3470 ENCROACHMENT STATIONS=     400.0    1000.0  TYPE=     1  TARGET=     600.000
  6690.00    12.78   768.89      .00      .00   769.08      .19      .00      .00   762.30
    6650.     838.    4527.    1286.     824.    1076.    2040.     458.      85.   763.50
      .52     1.02     4.21      .63     .100     .035     .150     .000   756.11   400.00
  .000424      10.      10.      10.        0        0        0      .00   600.00  1000.00
0
*SECNO 7090.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     580.0    1915.0  TYPE=     1  TARGET=    -580.000
          L
1
 06/29/89    07:41:43                                                                    PAGE   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


  7090.00    11.63   769.13      .00      .00   769.19      .06      .09      .01   763.00
    6650.    1694.    4931.      25.    2436.    2172.     262.     486.      91.   770.30
      .57      .70     2.27      .10     .100     .035     .150     .000   757.50   580.00
  .000185     150.     400.     300.        2        0        0      .00  1129.38  1791.94
0
CCHV=    .300 CEHV=    .500
*SECNO 7240.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     530.0    1700.0  TYPE=     1  TARGET=    1170.000
  7240.00    11.45   769.15      .00      .00   769.25      .10      .04      .02   764.40
    6650.    1075.    3340.    2235.    2296.     976.    1895.     503.      94.   773.40
      .59      .47     3.42     1.18     .180     .035     .080     .000   757.70   530.00
  .000426     150.     150.     150.        2        0        0      .00   981.63  1700.00
```

```
0
 *SECNO 7490.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     230.0    1300.0  TYPE=     1  TARGET=    1070.000
          N     WTP IN OVERBANK   XSEC 7590 MOVED DS 100FT
   7490.00    13.64   769.24      .00      .00   769.33      .09      .08      .00   763.80
     6650.     578.    4159.    1913.    1401.    1400.    1588.     527.      99.    773.00
       .62      .41     2.97     1.20     .180     .030     .080     .000   755.60   230.00
   .000326     200.     250.     200.        2        0        0      .00   796.04  1300.00
0
 *SECNO 7590.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     330.0    1300.0  TYPE=     1  TARGET=     970.000
          O     WTP IN OVERBANK                 XSEC 12
   7590.00    13.67   769.27      .00      .00   769.37      .10      .03      .00   763.80
     6650.     431.    4261.    1958.     993.    1408.    1598.     536.     100.    773.00
       .63      .43     3.03     1.23     .180     .030     .080     .000   755.60   330.00
   .000336     100.     100.     100.        0        0        0      .00   697.18  1300.00
0
1
  06/29/89    07:41:43                                                                          PAGE   12


    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


 *SECNO 8290.000

 3470 ENCROACHMENT STATIONS=     200.0    1235.0  TYPE=     1  TARGET=    1035.000
          P     US OF INTAKE CANAL              XSEC 13
   8290.00    11.72   769.42      .00      .00   769.60      .18      .19      .04   763.80
     6650.    1610.    4986.      54.    3977.    1264.      99.     598.     111.    764.80
       .69      .40     3.95      .54     .180     .030     .080     .000   757.70   200.00
   .000283     600.     700.     300.        2        0        0      .00   997.79  1197.79
0
 *SECNO 8390.000
          Q     XSEC 1 GREEN ACRES SUB          XSEC 14.1
   8390.00    11.58   769.58      .00      .00   769.66      .08      .02      .03   762.90
     6650.    1479.    4000.    1171.    1243.    1469.    1406.     609.     113.    763.00
       .70     1.19     2.72      .83     .045     .030     .075     .000   758.00    72.06
   .000152     100.     100.     100.        2        0        0      .00   700.78   772.84
0
 CCHV=    .100 CEHV=    .300
 *SECNO 8890.000
          R  OB EXTENDED TO 770 BASED ON QUAD
   8890.00    11.69   769.69      .00      .00   769.72      .03      .06      .00   762.40
     6650.     760.    2839.    3051.    1541.    1497.    2973.     667.     126.    763.00
       .80      .49     1.90     1.03     .080     .035     .040     .000   758.00   202.97
   .000098     500.     500.     500.        0        0        0      .00  1553.08  1756.05
0
 *SECNO 9590.000
          S  BASED ON XSEC R  OB EXTENDED TO 770 BASED ON QUAD
   9590.00    11.76   769.76      .00      .00   769.79      .04      .07      .00   762.40
     6650.     748.    2998.    2903.    1296.    1509.    2619.     759.     147.    763.00
       .94      .58     1.99     1.11     .080     .035     .040     .000   758.00   605.86
   .000106     700.     700.     700.        1        0        0      .00  1035.36  1641.21
0
```

```
CCHV=    .100 CEHV=    .300
*SECNO 10340.000
          T   CHANNEL FROM XSEC U  OB EXT TO 770 BASED ON QUAD
 10340.00    10.94   769.84      .00      .00   769.88      .04      .08      .00   763.90
    6650.    5186.    1450.      15.    4513.     590.      18.     829.     163.   764.70
     1.06     1.15     2.46      .82     .040     .035     .040     .000   758.90    58.03
  .000184     450.     750.     750.        1        0        0      .00  1444.00  1502.03
0
1
 06/29/89    07:41:43                                                                          PAGE   13


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    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   IDC      ICONT    CORAR    TOPWID     ENDST


*SECNO 11640.000
          U     XSEC 1 FROM FILE NO. 852-32D  GR'S REVERSED TO LOOK DS
 11640.00    10.66   770.06      .00      .00   770.30      .24      .36      .06   762.70
    6650.    3623.    2969.      58.    1968.     541.      27.     914.     184.   762.70
     1.14     1.84     5.49     2.17     .060     .035     .040     .000   759.40     3.50
  .000899     900.    1300.    1300.        2        0        0      .00   597.55   601.08
0
*SECNO 12140.000
                V     XSEC Q (2.0) FROM FILES
 12140.00    11.60   770.50      .00      .00   770.67      .17      .36      .01   762.90
    6650.    3072.    3076.     502.    2380.     662.     449.     948.     192.   762.90
     1.19     1.29     4.64     1.12     .080     .035     .060     .000   758.90    28.08
  .000594     500.     500.     500.        2        0        0      .00   785.91   813.99
0
*SECNO 12590.000

3301 HV CHANGED MORE THAN HVINS

          W    XSEC P (3.0) FROM FILES   GR SWITCHED TO GET XSEC LOOKING DS
 12590.00    10.30   770.40      .00      .00   771.38      .98      .47      .24   763.30
    6650.     201.    4833.    1616.     118.     522.     853.     972.     199.   763.30
     1.21     1.70     9.26     1.89     .080     .035     .060     .000   760.10    39.80
  .002676     400.     450.     400.        3        0        0      .00   583.34   623.14
0
1490 NH CARD USED
*SECNO 13260.000

3301 HV CHANGED MORE THAN HVINS

          X     US OF NORTH BRANCH    XSEC O (4.0) FROM FILES  GR SWITCHED
 13260.00    10.75   771.55      .00      .00   771.56      .01      .08      .10   763.80
    5020.    4117.     897.       6.    6062.     694.      31.    1001.     205.   763.80
     1.36      .68     1.29      .20     .056     .035     .080     .000   760.80   105.99
  .000048     200.     670.     500.        2        0        0      .00   975.47  1081.46
0
*SECNO 14140.000
          Y
 14140.00    10.85   771.55      .00      .00   771.65      .10      .06      .03   764.20
    5020.       7.    3121.    1892.      14.     993.    2240.    1064.     215.   764.20
     1.44      .49     3.14      .84     .070     .035     .080     .000   760.70    36.09
  .000289     400.     880.     700.        2        0        0      .00   648.33   684.43
0
1
 06/29/89    07:41:43                                                                          PAGE   14


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
```

```
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN    SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOFWID   ENDST


 #SECND 14880.000

 3470 ENCROACHMENT STATIONS=     140.0     640.0  TYPE=     1  TARGET=     500.000
          Z
  14880.00    10.45   771.75      .00      .00   771.84      .09      .18      .00   765.00
     5020.    1440.    2745.     835.    1315.     894.     766.    1102.     222.    765.00
      1.52     1.09     3.07     1.09     .070     .035     .070     .000   761.30   140.00
   .000298     450.     740.     450.        2        0        0      .00   500.00   640.00
0
 1490 NH CARD USED
 #SECND 15530.000

 3470 ENCROACHMENT STATIONS=      54.0     620.0  TYPE=     1  TARGET=     566.000
          AA
  15530.00     8.61   772.01      .00      .00   772.16      .16      .31      .02   765.60
     5020.     256.    2081.    2683.     175.     450.    1856.    1144.     230.    765.60
      1.59     1.46     4.62     1.45     .080     .035     .074     .000   763.40    54.00
   .000808     540.     650.     740.        2        0        0      .00   566.00   620.00
0
 #SECND 16065.000

 3301 HV CHANGED MORE THAN HVINS

          AB
  16065.00     8.84   772.14      .00      .00   773.01      .87      .64      .21   765.80
     5020.      70.    4617.     333.     44.     592.     281.    1162.     235.    765.80
      1.61     1.59     7.80     1.19     .090     .035     .060     .000   763.30    27.17
   .002264     750.     535.     400.        2        0        0      .00   383.01   410.18
0
 #SECND 16440.000
          AC
  16440.00    10.03   773.23      .00      .00   773.70      .47      .65      .04   766.30
     5020.      73.    3639.    1308.     55.     569.     926.    1172.     238.    769.90
      1.63     1.33     6.39     1.41     .090     .035     .060     .000   763.20    23.10
   .001385     375.     375.     350.        3        0        0      .00   578.82   601.92
0
 #SECND 16840.000

 3470 ENCROACHMENT STATIONS=      94.0     650.0  TYPE=     1  TARGET=     556.000
1
  06/29/89    07:41:43                                                                    PAGE   15


          AD
  16840.00    10.67   773.87      .00      .00   774.02      .15      .29      .03   765.40
     5020.    1866.    2623.     530.    1551.     627.     606.    1190.     243.    765.70
      1.67     1.20     4.18     .87     .080     .035     .080     .000   763.20    94.00
   .000483     350.     400.     350.        2        0        0      .00   556.00   650.00
0
 #SECND 16990.000

 3470 ENCROACHMENT STATIONS=     150.0     610.0  TYPE=     1  TARGET=     460.000
          AE
  16990.00     9.87   773.87      .00      .00   774.18      .31      .11      .05   766.50
     5020.    1003.    3226.     791.     734.     585.     548.    1200.     245.    769.00
      1.68     1.37     5.52     1.44     .080     .035     .080     .000   764.00   150.00
   .000955     225.     150.     125.        2        0        0      .00   403.12   553.12
0
 #SECND 17530.000

 3470 ENCROACHMENT STATIONS=      25.0     542.0  TYPE=     1  TARGET=     517.000
          AF    STA SWITCHED AS XSEC HAS TAKEN LOOKING UPSTREAM
```

```
 17530.00     9.62   774.52      .00      .00   774.64      .12      .43      .02   766.90
    5020.     203.    1228.    3588.     156.     254.    2188.    1226.     250.   766.20
     1.74     1.30     4.84     1.64     .080     .035     .080     .000   764.90    25.00
  .000727      10.     540.     650.        2        0        0      .00   517.00   542.00
0
 *SECNO 18080.000

 3470 ENCROACHMENT STATIONS=      57.0     614.0  TYPE=     1  TARGET=     557.000
 18080.00     9.40   774.80      .00      .00   774.99      .20      .33      .02   767.40
    5020.    1045.    2203.    1773.     645.     430.    1280.    1248.     255.   767.00
     1.78     1.62     5.12     1.39     .080     .035     .080     .000   765.40    57.24
  .000828     450.     550.     350.        2        0        0      .00   556.76   614.00
0
 *SECNO 18530.000
          AG
 18530.00     9.44   775.14      .00      .00   775.30      .16      .31      .00   767.70
    5020.     217.    1354.    3449.     149.     249.    1830.    1265.     258.   767.00
     1.81     1.45     5.45     1.88     .080     .035     .080     .000   765.70    25.16
  .000946     450.     450.     250.        2        0        0      .00   458.85   484.00
0
 *SECNO 20530.000
          AH    XSEC BASED ON XSEC AK AND QUAD
 20530.00     9.57   775.97      .00      .00   776.01      .05      .70      .01   768.40
    5020.     141.     859.    4020.     155.     252.    3802.    1348.     276.   767.70
     2.05      .91     3.41     1.06     .080     .035     .080     .000   766.40    24.51
  .000364    2000.    2000.    1000.        2        0        0      .00   941.51   966.03
0
1
 06/29/89    07:41:43                                                                  PAGE   16


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 22280.000
          AI
 22280.00     7.65   776.65      .00      .00   777.08      .43      .95      .12   772.50
    5020.      94.    4049.     878.      82.     696.     653.    1432.     295.   773.00
     2.13     1.14     5.82     1.34     .080     .035     .080     .000   769.00    55.50
  .001440    1400.    1750.    1200.        2        0        0      .00   390.12   445.62
0
 *SECNO 22880.000
          AJ    DS OF MERIDIAN ROAD  US TWP LIMITS
 22880.00     9.39   777.59      .00      .00   778.14      .55     1.03      .04   773.00
    5020.     643.    4377.       0.     160.     709.       0.    1448.     299.   773.80
     2.16     4.02     6.17     2.94     .040     .045     .060     .000   768.20    42.07
  .002087     600.     600.     600.        2        0        0      .00   127.93   170.00
0
1
 06/29/89    07:41:43                                                                  PAGE   17



                                                                  THIS RUN EXECUTED 06/29/89   07:42:23
 ************************************************
  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
 ************************************************
```

```
T1
T2
T3

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0.       3.       0.       0.   .000000     .00       .0    6650.   763.600    .000

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

    15.000     .000   -1.000     .000     .000     .000     .000     .000     .000     .000

1
 06/29/89   07:41:43                                                                          PAGE   18

   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


 *PROF 2

 CCHV=    .100 CEHV=    .300
 *SECNO 223990.000

 3470 ENCROACHMENT STATIONS=     250.0    1260.0  TYPE=     1  TARGET=    -250.000
                FIS XSEC AN     START WSEL BASED ON FIS
 223990.00    13.00   763.60      .00   763.60   763.63      .03      .00      .00   753.50
    6650.     4264.    1546.     840.    4371.     680.     686.       0.       0.   753.80
      .00       .98     2.27     1.23     .060     .045     .060     .000   750.60   250.00
  .000176        0.       0.       0.        0        0        0      .00  1009.00  1259.00
0
 CCHV=    .100 CEHV=    .300
 *SECNO 400.000
  2800 NAT Q1=   1858.31  WSEL=    763.51  ENC Q1=   1858.31  WSEL=    763.61  RATIO=   .0000
  NAT Q1=   1907.  RATIOS LOB,CH,ROB=   .0428   .7023   .2549  WSEL=    763.61

 3470 ENCROACHMENT STATIONS=     109.1     844.3  TYPE=     4  TARGET=       .026
          A   XSEC OB FROM 2FT TOPO  CH FROM DS FIS XSEC  400FT US TWP LINE
   400.00    12.60   763.60      .00   763.51   763.95      .36      .22      .10   760.00
    6650.     203.    4800.    1646.     277.     856.    1954.      54.      10.   754.40
      .04       .73     5.61      .84     .150     .045     .150     .000   751.00   109.06
  .001290     500.     690.     500.        2        0        0      .00   735.20   844.26
0
 *SECNO 1680.000

 3470 ENCROACHMENT STATIONS=     160.0     895.0  TYPE=     1  TARGET=     735.000
          B     XSEC OB CUT FROM 2FT TOPO   CHANNEL FROM DS FIS XSEC
  1680.00    13.10   764.90      .00   764.81   765.12      .22     1.16      .01   754.80
    6650.    2879.    3715.      56.    3313.     747.      63.     126.      24.   755.20
      .13       .87     4.98      .88     .150     .045     .150     .000   751.80   160.00
  .000894     750.    1280.     750.        2        0        0      .00   735.00   895.00
0
 *SECNO 2470.000
  2800 NAT Q1=   1720.12  WSEL=    765.53  ENC Q1=   1720.12  WSEL=    765.63  RATIO=   .0000
  NAT Q1=   1808.  RATIOS LOB,CH,ROB=   .0724   .8656   .0619  WSEL=    765.63

 3470 ENCROACHMENT STATIONS=     568.3     811.9  TYPE=     4  TARGET=       .049
  2470.00    13.29   765.59      .00   765.53   766.08      .49      .88      .08   760.90
    6650.     340.    6052.     258.     346.    1029.     255.     174.      32.   760.50
      .17       .98     5.88     1.01     .150     .045     .150     .000   752.30   568.33
  .001513     700.     790.     800.        2        0        0      .00   243.57   811.90
0
```

```
  SECND    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


#SECND 4470.000

3470 ENCROACHMENT STATIONS=     520.0    1250.0  TYPE=     1  TARGET=     730.000
         D  XSEC 1 FROM FILE 2942-32.4  85 FT DS OF LINCOLN RD
              OB EXTENDED TO 770 FROM QUAD
  4470.00    12.80   767.60      .00   767.52   767.77      .18     1.66      .03   762.30
    6650.     837.    4759.    1054.    1076.    1199.    1766.     275.      48.   762.10
      .34      .78     3.97      .60     .150     .045     .150     .000   754.80   520.00
  .000588    1200.    2000.    1300.        2        0        0      .00   730.00  1250.00
0
 CCHV=    .300 CEHV=    .500
 #SECND 4970.000
 3280 CROSS SECTION   4970.00 EXTENDED      2.66 FEET


 3470 ENCROACHMENT STATIONS=     698.0     818.0  TYPE=     1  TARGET=     120.000
         E  CHANNEL FROM XSEC D  OB EXTENDED TO 770 BASED ON QUAD
  4970.00    13.06   767.86      .00   767.79   768.30      .44      .39      .13   762.30
    6650.       0.    6570.      80.       0.    1226.      92.     306.      53.   762.10
      .37      .00     5.36      .86     .150     .045     .150     .000   754.80   698.00
  .001110     500.     500.     500.        2        0        0      .00   120.00   818.00
0
 CCHV=    .300 CEHV=    .500
 #SECND 5030.000
 3280 CROSS SECTION   5030.00 EXTENDED       .33 FEET


 3470 ENCROACHMENT STATIONS=     844.0     970.0  TYPE=     1  TARGET=     126.000
         F    XSEC 2    DS OF LINCOLN RD
  5030.00    13.74   767.94      .00   767.86   768.35      .42      .05      .01   762.30
    6650.      16.    6529.     105.      23.    1251.     100.     308.      53.   762.40
      .37      .70     5.22     1.05     .090     .035     .090     .000   754.20   844.00
  .000583     100.      60.     100.        0        0        0      .00   126.00   970.00
0
 #SECND 5110.000
  2800 NAT Q1=   3102.51  WSEL=    768.04  ENC Q1=   3102.51  WSEL=    768.14  RATIO=   .0000
  NAT Q1=   6024.  RATIOS LOB,CH,ROB=   .2867   .5092   .2041  WSEL=    768.14

 3470 ENCROACHMENT STATIONS=     830.9     965.0  TYPE=     4  TARGET=       .485
         G    XSEC 4   US OF LINCOLN RD  MINIMAL LOSS AT BRIDGE
1
```



```
  SECND    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


  5110.00    14.39   768.09      .00   768.04   768.42      .33      .04      .03   760.70
    6650.      57.    6593.       0.      68.    1426.       0.     310.      53.   761.70
      .38      .85     4.62      .00     .100     .035     .150     .000   753.70   830.90
  .000500      80.      80.      80.        2        0        0      .00   134.10   965.00
0
 #SECND 5290.000
```

```
3470 ENCROACHMENT STATIONS=     550.0    1035.0  TYPE=     1  TARGET=     485.000
          H    XSEC 6   DS LIMITS OF MCGUIRK ESTATES SUB
  5290.00    12.01   768.41      .00   768.33   768.55      .14      .07      .06   761.10
    6650.    1398.    4591.     661.    1402.    1268.    1130.     322.      54.   761.40
      .40     1.00     3.62      .58     .100     .035     .150     .000   756.40   550.00
  .000313     180.     180.     200.        2        0        0      .00   485.00  1035.00
0
 CCHV=    .100 CEHV=    .300
 $SECNO 6190.000
  2800 NAT Q1=   2577.70  WSEL=    768.69  ENC Q1=   2577.70  WSEL=    768.79  RATIO=   .0000
  NAT Q1=   2638.  RATIOS LOB,CH,ROB=   .0000   .5371   .4629  WSEL=    768.79

 3470 ENCROACHMENT STATIONS=      95.0     778.1  TYPE=     4  TARGET=       .023
          I
  6190.00    12.96   768.76      .00   768.69   768.98      .22      .41      .02   769.10
    6650.       0.    3662.    2988.       0.     735.    3558.     409.      67.   762.80
      .48      .00     4.98      .84     .100     .035     .150     .000   755.80    95.46
  .000675     780.     900.    1000.        2        0        0      .00   682.66   778.13
0
 $SECNO 6520.000

 3470 ENCROACHMENT STATIONS=       3.0     857.0  TYPE=     1  TARGET=     854.000
  6520.00    14.84   768.94      .00   768.87   769.08      .13      .09      .01   759.51
    6650.      55.    3478.    3117.      80.     864.    5093.     422.      69.   762.40
      .50      .69     4.02      .61     .100     .035     .150     .000   754.10     3.00
  .000312     360.     330.      70.        2        0        0      .00   854.00   857.00
0
 $SECNO 6680.000
  2800 NAT Q1=   3228.32  WSEL=    768.89  ENC Q1=   3228.32  WSEL=    768.99  RATIO=   .0000
  NAT Q1=   4732.  RATIOS LOB,CH,ROB=   .2850   .4717   .2434  WSEL=    768.99

 3470 ENCROACHMENT STATIONS=     340.8     864.6  TYPE=     4  TARGET=       .318
1
  06/29/89    07:41:43                                                                    PAGE   21


    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


  6680.00    12.85   768.96      .00   768.89   769.16      .20      .06      .02   762.30
    6650.    1224.    4605.     821.    1190.    1083.    1299.     440.      71.   763.50
      .52     1.03     4.25      .63     .100     .035     .150     .000   756.11   340.82
  .000430     160.     160.     160.        2        0        0      .00   523.79   864.61
0
 $SECNO 6690.000
  2800 NAT Q1=   3230.64  WSEL=    768.89  ENC Q1=   3230.64  WSEL=    768.99  RATIO=   .0000
  NAT Q1=   4737.  RATIOS LOB,CH,ROB=   .2851   .4715   .2434  WSEL=    768.99

 3470 ENCROACHMENT STATIONS=     340.9     864.4  TYPE=     4  TARGET=       .318
  6690.00    12.85   768.96      .00   768.89   769.16      .20      .00      .00   762.30
    6650.    1224.    4605.     821.    1190.    1083.    1299.     441.      72.   763.50
      .52     1.03     4.25      .63     .100     .035     .150     .000   756.11   340.88
  .000429      10.      10.      10.        0        0        0      .00   523.56   864.44
0
 $SECNO 7090.000
  2800 NAT Q1=   4892.29  WSEL=    769.13  ENC Q1=   4892.29  WSEL=    769.23  RATIO=   .0000
  NAT Q1=   5625.  RATIOS LOB,CH,ROB=   .3378   .6580   .0042  WSEL=    769.23

 3470 ENCROACHMENT STATIONS=     649.0    1260.0  TYPE=     4  TARGET=       .130
          L
  7090.00    11.70   769.20      .00   769.13   769.27      .06      .09      .01   763.00
    6650.    1633.    5017.       0.    2252.    2193.       0.     466.      75.   770.30
      .57      .72     2.29      .00     .100     .035     .150     .000   757.50   648.97
```

```
  .000186     150.     400.     300.       2       0       0     .00   607.15  1256.13
0
 CCHV=   .300 CEHV=   .500
 *SECNO 7240.000
  2800 NAT Q1=   3220.74  WSEL=   769.15  ENC Q1=   3220.74  WSEL=   769.25  RATIO=   .0000
  NAT Q1=   4324.  RATIOS LOB,CH,ROB=   .2346   .3815   .3839  WSEL=   769.25

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=    604.7   1698.5  TYPE=    4  TARGET=       .255
   7240.00    11.52   769.22     .00   769.15   769.33     .10     .04     .02   764.40
     6650.     953.    3409.    2288.    1998.     986.    1915.    482.     78.   773.40
       .58      .48     3.46     1.20     .180     .035    .080    .000   757.70   604.66
  .000430     150.     150.     150.       1       0       0     .00   906.22  1698.49
0
1
  06/29/89    07:41:43                                                                          PAGE   22


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 7490.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=    230.0   1300.0  TYPE=    1  TARGET=   1070.000
          N     WTP IN OVERBANK   XSEC 7590 MOVED DS 100FT
   7490.00    13.72   769.32     .00   769.24   769.41     .09     .08     .00   763.80
     6650.     583.    4157.    1910.    1426.    1419.    1610.    505.     82.   773.00
       .61      .41     2.93     1.19     .180     .030    .080    .000   755.60   230.00
  .000313     200.     250.     200.       2       0       0     .00   798.55  1300.00
0
 *SECNO 7590.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=    330.0   1300.0  TYPE=    1  TARGET=    970.000
          O     WTP IN OVERBANK                XSEC 12
   7590.00    13.75   769.35     .00   769.27   769.45     .10     .03     .00   763.80
     6650.     434.    4260.    1956.    1009.    1427.    1620.    515.     83.   773.00
       .63      .43     2.98     1.21     .180     .030    .080    .000   755.60   330.00
  .000323     100.     100.     100.       0       0       0     .00   699.68  1300.00
0
 *SECNO 8290.000

 3470 ENCROACHMENT STATIONS=    480.0   1180.0  TYPE=    1  TARGET=    700.000
          P     US OF INTAKE CANAL             XSEC 13
   8290.00    11.79   769.49     .00   769.42   769.70     .21     .20     .06   763.80
     6650.    1330.    5262.      58.    2946.    1272.      84.    569.     92.   764.80
       .68      .45     4.14     .69     .180     .030    .080    .000   757.70   480.00
  .000308     600.     700.     300.       2       0       0     .00   700.00  1180.00
0
 *SECNO 8390.000

 3470 ENCROACHMENT STATIONS=    150.0    760.0  TYPE=    1  TARGET=    610.000
          Q     XSEC 1 GREEN ACRES SUB         XSEC 14.1
   8390.00    11.69   769.69     .00   769.58   769.76     .07     .02     .04   762.90
     6650.    1478.    3998.    1174.    1205.    1486.    1411.    579.     94.   763.00
       .69     1.23     2.65     .83     .045     .030    .075    .000   758.00   150.00
```

```
  .000146     100.     100.     100.        2        0        0      .00   610.00   760.00
0
1
 06/29/89    07:41:43                                                                          PAGE   23


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        OLOB     QCH      QROB     ALOB     ACH      AROB     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=    .100 CEHV=    .300
 *SECNO 8890.000

 3470 ENCROACHMENT STATIONS=     650.0    1510.0  TYPE=     1  TARGET=     860.000
          R  OB EXTENDED TO 770 BASED ON QUAD
  8890.00    11.79   769.79      .00   769.69   769.83      .03      .06      .00   762.40
    6650.     722.    2844.    3083.    1292.    1514.    2629.     634.     102.   763.00
      .79      .56     1.88     1.17     .080     .035     .040     .000   758.00   650.00
  .000095     500.     500.     500.        1        0        0      .00   860.00  1510.00
0
 *SECNO 9590.000

 3470 ENCROACHMENT STATIONS=     600.0    1630.0  TYPE=     1  TARGET=    1030.000
          S  BASED ON XSEC R  OB EXTENDED TO 770 BASED ON QUAD
  9590.00    11.86   769.86      .00   769.76   769.90      .03      .07      .00   762.40
    6650.     750.    2961.    2939.    1326.    1525.    2677.     722.     118.   763.00
      .93      .57     1.94     1.10     .080     .035     .040     .000   758.00   603.28
  .000100     700.     700.     700.        1        0        0      .00  1026.72  1630.00
0
 CCHV=    .100 CEHV=    .300
 *SECNO 10340.000

 3470 ENCROACHMENT STATIONS=     490.0    1500.0  TYPE=     1  TARGET=    1010.000
          T   CHANNEL FROM XSEC U  OB EXT TO 770 BASED ON QUAD
 10340.00    11.04   769.94      .00   769.84   769.98      .04      .08      .00   763.90
    6650.    5194.    1442.      14.    3978.     596.      17.     791.     131.   764.70
     1.04     1.31     2.42      .83     .040     .035     .040     .000   758.90   490.00
  .000176     450.     750.     750.        1        0        0      .00  1010.00  1500.00
0
 *SECNO 11640.000
  2800 NAT Q1=   2217.60  WSEL=    770.06  ENC Q1=   2217.60  WSEL=    770.16  RATIO=   .0000
  NAT Q1=   2289.  RATIOS LOB,CH,ROB=   .5506   .4406   .0089  WSEL=    770.16

 3470 ENCROACHMENT STATIONS=      17.5     593.0  TYPE=     4  TARGET=       .031
          U     XSEC 1 FROM FILE NO. 852-32D  GR'S REVERSED TO LOOK DS
 11640.00    10.77   770.17      .00   770.06   770.39      .22      .36      .05   762.70
    6650.    3756.    2894.       0.    1964.     547.       0.     869.     148.   762.70
     1.12     1.91     5.29      .00     .060     .035     .040     .000   759.40    17.47
  .000960     900.    1300.    1300.        2        0        0      .00   575.53   593.00
0
1
 06/29/89    07:41:43                                                                          PAGE   24


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        OLOB     QCH      QROB     ALOB     ACH      AROB     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 12140.000

 3470 ENCROACHMENT STATIONS=      38.0     788.0  TYPE=     1  TARGET=     750.000
          V     XSEC 0 (2.0) FROM FILES
```

```
 12140.00    11.69   770.59      .00   770.50   770.75      .16      .36      .01   762.90
    6650.    3083.    3037.     530.    2416.     669.     462.     904.     155.   762.90
     1.17     1.28     4.54     1.15     .080     .035     .060     .000   758.90    38.00
  .000560     500.     500.     500.        2        0        0      .00   750.00   788.00
0
 #SECNO 12590.000

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=      82.0     665.0  TYPE=     1  TARGET=     583.000
          W    XSEC P (3.0) FROM FILES   GR SWITCHED TO GET XSEC LOOKING DS
 12590.00    10.36   770.46      .00   770.40   771.46     1.00      .45      .25   763.30
    6650.      63.    4886.    1701.      33.     526.     880.     928.     161.   763.30
     1.19     1.90     9.30     1.93     .080     .035     .060     .000   760.10    82.00
  .002675     400.     450.     400.        3        0        0      .00   541.44   623.44
0
 1490 NH CARD USED
 #SECNO 13260.000

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=     170.0    1080.0  TYPE=     1  TARGET=     910.000
          X     US OF NORTH BRANCH    XSEC O (4.0) FROM FILES  GR SWITCHED
 13260.00    10.83   771.63      .00   771.55   771.64      .01      .08      .10   763.80
    5020.    4115.     899.       7.    5998.     700.      31.     956.     167.   763.80
     1.35      .69     1.28      .21     .056     .035     .080     .000   760.80   170.00
  .000047     200.     670.     500.        2        0        0      .00   910.00  1080.00
0
 #SECNO 14140.000
  2800 NAT Q1=   2952.10  WSEL=    771.55  ENC Q1=   2952.10  WSEL=    771.65  RATIO=   .0000
  NAT Q1=   3027.  RATIOS LOB,CH,ROB=   .0014   .6172   .3813  WSEL=    771.65

 3470 ENCROACHMENT STATIONS=      43.0     597.9  TYPE=     4  TARGET=       .025
          Y
1
  06/29/89    07:41:43                                                                    PAGE   25


    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   IBC      ICONT    CORAR    TOPWID     ENDST


  14140.00    10.93   771.63      .00   771.55   771.73      .10      .06      .03   764.20
    5020.       0.    3131.    1889.       0.    1001.    2076.    1018.     176.   764.20
     1.43      .00     3.13      .91     .070     .035     .080     .000   760.70    43.00
  .000309     400.     880.     700.        2        0        0      .00   554.90   597.90
0
 #SECNO 14880.000

 3470 ENCROACHMENT STATIONS=     140.0     640.0  TYPE=     1  TARGET=     500.000
          Z
 14880.00    10.53   771.83      .00   771.75   771.92      .09      .18      .00   765.00
    5020.    1448.    2733.     839.    1336.     903.     778.    1056.     183.   765.00
     1.51     1.08     3.03     1.08     .070     .035     .070     .000   761.30   140.00
  .000286     450.     740.     450.        2        0        0      .00   500.00   640.00
0
 1490 NH CARD USED
 #SECNO 15530.000

 3470 ENCROACHMENT STATIONS=      54.0     620.0  TYPE=     1  TARGET=     566.000
          AA
 15530.00     8.68   772.08      .00   772.01   772.23      .15      .29      .02   765.60
```

```
    5020.     256.    2066.    2699.     177.     455.    1890.    1098.     191.    765.60
     1.57     1.44     4.54     1.43     .080     .035     .074     .000   763.40    54.00
  .000772     540.     650.     740.        2        0        0      .00   566.00   620.00
0
 #SECNO 16065.000

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=      27.0     395.0  TYPE=     1  TARGET=     368.000
          AB
  16065.00     8.90   772.20      .00   772.14   773.04      .84      .61      .21   765.80
    5020.       70.    4581.     369.      45.     597.     298.    1116.     196.    765.80
     1.59     1.57     7.67     1.24     .090     .035     .060     .000   763.30    27.03
  .002170     750.     535.     400.        2        0        0      .00   367.97   395.00
0
 #SECNO 16440.000
  2800 NAT Q1=   1348.89  WSEL=    773.23  ENC Q1=   1348.89  WSEL=    773.33  RATIO=   .0000
  NAT Q1=   1401.  RATIOS LOB,CH,ROB=   .0146   .7120   .2734  WSEL=    773.33
1
  06/29/89    07:41:43                                                                          PAGE   26


    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     XWL      XNCH     XNR      WTN      ELMIN      SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 3470 ENCROACHMENT STATIONS=      39.0     551.4  TYPE=     4  TARGET=        .037
          AC
  16440.00    10.08   773.28      .00   773.23   773.76      .48      .68      .04   766.30
    5020.        0.    3686.    1334.       0.     572.     867.    1126.     199.    769.90
     1.61      .00     6.44     1.54     .090     .035     .060     .000   763.20    39.00
  .001584     375.     375.     350.        3        0        0      .00   512.38   551.38
0
 #SECNO 16840.000

 3470 ENCROACHMENT STATIONS=      94.0     650.0  TYPE=     1  TARGET=     556.000
          AD
  16840.00    10.74   773.94      .00   773.87   774.09      .15      .30      .03   765.40
    5020.     1874.    2606.     540.     1573.     632.     620.    1144.     203.    765.70
     1.65     1.19     4.12      .87     .080     .035     .080     .000   763.20    94.00
  .000465     350.     400.     350.        2        0        0      .00   556.00   650.00
0
 #SECNO 16990.000

 3470 ENCROACHMENT STATIONS=     150.0     553.0  TYPE=     1  TARGET=     403.000
          AE
  16990.00     9.94   773.94      .00   773.87   774.25      .30      .11      .05   766.50
    5020.     1015.    3206.     799.     749.     590.     558.    1154.     205.    769.00
     1.67     1.36     5.44     1.43     .080     .035     .080     .000   764.00   150.00
  .000917     225.     150.     125.        2        0        0      .00   403.00   553.00
0
 #SECNO 17530.000

 3470 ENCROACHMENT STATIONS=      25.0     542.0  TYPE=     1  TARGET=     517.000
          AF    STA SWITCHED AS XSEC WAS TAKED LOOKING UPSTREAM
  17530.00     9.67   774.57      .00   774.52   774.68      .12      .42      .02   766.90
    5020.      204.    1224.    3592.     158.     255.    2211.    1180.     210.    766.20
     1.73     1.30     4.80     1.62     .080     .035     .080     .000   764.90    25.00
  .000708      10.     540.     650.        2        0        0      .00   517.00   542.00
0
 #SECNO 18080.000
```

```
 3470 ENCROACHMENT STATIONS=      56.0     612.0  TYPE=     1  TARGET=     556.000
  18080.00     9.44   774.84      .00   774.80   775.03      .19      .32      .02   767.40
     5020.    1045.    2192.    1783.     651.     432.    1295.    1202.     215.    767.00
      1.77     1.61     5.07     1.38     .080     .035     .080     .000   765.40    56.77
   .000807     450.     550.     350.        2        0        0      .00   555.23   612.00
0
1
  06/29/89    07:41:43                                                                    PAGE   27


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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 18530.000
  2800 NAT Q1=   1632.15  WSEL=    775.14  ENC Q1=   1632.15  WSEL=    775.24  RATIO=   .0000
  NAT Q1=   2298.  RATIOS LOB,CH,ROB=   .0319   .1953   .7729  WSEL=    775.24

 3470 ENCROACHMENT STATIONS=      62.0     495.4  TYPE=     4  TARGET=        .290
          AG
  18530.00     9.51   775.21      .00   775.14   775.35      .14      .31      .01   767.70
     5020.       0.    1238.    3782.       0.     251.    1913.    1219.     219.    767.00
      1.80      .00     4.94     1.98     .080     .035     .080     .000   765.70    62.00
   .001045     450.     450.     250.        2        0        0      .00   433.45   495.45
0
 *SECNO 20530.000

 3470 ENCROACHMENT STATIONS=      60.0     955.0  TYPE=     1  TARGET=     895.000
          AH    XSEC BASED ON XSEC AK AND QUAD
  20530.00     9.62   776.02      .00   775.97   776.07      .05      .71      .01   768.40
     5020.       6.     886.    4129.      11.     254.    3802.    1296.     234.    767.70
      2.02      .49     3.49     1.09     .080     .035     .080     .000   766.40    60.00
   .000378    2000.    2000.    1000.        2        0        0      .00   895.00   955.00
0
 *SECNO 22280.000

 3470 ENCROACHMENT STATIONS=      70.0     430.0  TYPE=     1  TARGET=     360.000
          AI
  22280.00     7.72   776.72      .00   776.65   777.14      .42      .96      .11   772.50
     5020.      98.    4042.     880.      73.     704.     650.    1378.     253.    773.00
      2.11     1.35     5.74     1.35     .080     .035     .080     .000   769.00    70.00
   .001382    1400.    1750.    1200.        2        0        0      .00   360.00   430.00
0
 *SECNO 22880.000
  2800 NAT Q1=   1098.93  WSEL=    777.59  ENC Q1=   1098.93  WSEL=    777.69  RATIO=   .0000
  NAT Q1=   1183.  RATIOS LOB,CH,ROB=   .1242   .8255   .0503  WSEL=    777.69

 3470 ENCROACHMENT STATIONS=      62.9     179.0  TYPE=     4  TARGET=        .071
          AJ    DS OF MERIDIAN ROAD  US TWP LIMITS
  22880.00     9.44   777.64      .00   777.59   778.21      .57     1.02      .05   773.00
     5020.     480.    4469.      71.     116.     713.      33.    1394.     256.    773.80
      2.14     4.14     6.27     2.18     .040     .045     .060     .000   768.20    62.90
   .002140     600.     600.     600.        2        0        0      .00   116.13   179.03
0
1
  06/29/89    07:41:43                                                                    PAGE   28


                                                                  THIS RUN EXECUTED 06/29/89   07:42:47
 ************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01.02.03.04.05.06
```

MODIFICATION - 50,51,52,53,54,55,56
IBM-PC-XT VERSION 1.1
****

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

CHIPPEWA RIVER Q BASED

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
223990.000	.00	.00	.00	750.60	6650.00	763.50	.00	763.53	1.86	2.32	5635.65	4873.85
223990.000	.00	.00	.00	750.60	6650.00	763.60	.00	763.63	1.76	2.27	5736.51	5007.55
400.000	690.00	.00	.00	751.00	6650.00	763.51	.00	763.86	12.81	5.55	3335.43	1858.31
400.000	690.00	.00	.00	751.00	6650.00	763.60	.00	763.95	12.90	5.61	3087.20	1851.25
1680.000	1280.00	.00	.00	751.80	6650.00	764.81	.00	765.04	9.21	5.02	4103.39	2191.55
1680.000	1280.00	.00	.00	751.80	6650.00	764.90	.00	765.12	8.94	4.98	4123.48	2224.24
2470.000	790.00	.00	.00	752.30	6650.00	765.53	.00	766.00	14.95	5.82	1813.36	1720.12
2470.000	790.00	.00	.00	752.30	6650.00	765.59	.00	766.08	15.13	5.88	1629.88	1709.53
4470.000	2000.00	.00	.00	754.80	6650.00	767.52	.00	767.70	6.03	4.00	4425.11	2708.15
4470.000	2000.00	.00	.00	754.80	6650.00	767.60	.00	767.77	5.88	3.97	4040.68	2743.55
4970.000	500.00	.00	.00	754.80	6650.00	767.79	.00	768.23	11.10	5.34	1368.11	1996.03
4970.000	500.00	.00	.00	754.80	6650.00	767.86	.00	768.30	11.10	5.36	1318.52	1995.89
5030.000	60.00	.00	.00	754.20	6650.00	767.86	.00	768.28	5.94	5.25	1365.85	2729.30
5030.000	60.00	.00	.00	754.20	6650.00	767.94	.00	768.35	5.83	5.22	1373.83	2753.83
5110.000	80.00	.00	.00	753.70	6650.00	768.04	.00	768.35	4.59	4.57	1638.58	3102.51
5110.000	80.00	.00	.00	753.70	6650.00	768.09	.00	768.42	5.00	4.62	1493.09	2975.03
5290.000	180.00	.00	.00	756.40	6650.00	768.33	.00	768.47	3.22	3.65	3762.00	3703.12
5290.000	180.00	.00	.00	756.40	6650.00	768.41	.00	768.55	3.13	3.62	3800.19	3756.25
6190.000	900.00	.00	.00	755.80	6650.00	768.69	.00	768.90	6.66	4.93	4444.96	2577.70
6190.000	900.00	.00	.00	755.80	6650.00	768.76	.00	768.98	6.75	4.98	4292.79	2560.20
6520.000	330.00	.00	.00	754.10	6650.00	768.87	.00	769.00	3.21	4.07	5970.13	3712.52
6520.000	330.00	.00	.00	754.10	6650.00	768.94	.00	769.08	3.12	4.02	6036.96	3767.75

1

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
6680.000	160.00	.00	.00	756.11	6650.00	768.89	.00	769.08	4.24	4.21	3938.61	3228.32
6680.000	160.00	.00	.00	756.11	6650.00	768.96	.00	769.16	4.30	4.25	3571.65	3208.40
6690.000	10.00	.00	.00	756.11	6650.00	768.89	.00	769.08	4.24	4.21	3940.81	3230.64
6690.000	10.00	.00	.00	756.11	6650.00	768.96	.00	769.16	4.29	4.25	3572.03	3209.89
7090.000	400.00	.00	.00	757.50	6650.00	769.13	.00	769.19	1.85	2.27	4870.93	4892.29
7090.000	400.00	.00	.00	757.50	6650.00	769.20	.00	769.27	1.86	2.29	4445.45	4882.32
7240.000	150.00	.00	.00	757.70	6650.00	769.15	.00	769.25	4.26	3.42	5166.97	3220.74
7240.000	150.00	.00	.00	757.70	6650.00	769.22	.00	769.33	4.30	3.46	4898.45	3206.22

7490.000	250.00	.00	.00	755.60	6650.00	769.24	.00	769.33	3.26	2.97	4388.41	3682.49
7490.000	250.00	.00	.00	755.60	6650.00	769.32	.00	769.41	3.13	2.93	4454.55	3758.52
7590.000	100.00	.00	.00	755.60	6650.00	769.27	.00	769.37	3.36	3.03	3999.11	3627.31
7590.000	100.00	.00	.00	755.60	6650.00	769.35	.00	769.45	3.23	2.98	4056.70	3700.24
8290.000	700.00	.00	.00	757.70	6650.00	769.42	.00	769.60	2.83	3.95	5338.95	3955.14
8290.000	700.00	.00	.00	757.70	6650.00	769.49	.00	769.70	3.08	4.14	4301.79	3789.90
8390.000	100.00	.00	.00	758.00	6650.00	769.58	.00	769.66	1.52	2.72	4118.06	5386.82
8390.000	100.00	.00	.00	758.00	6650.00	769.69	.00	769.76	1.46	2.69	4102.21	5494.85
8890.000	500.00	.00	.00	758.00	6650.00	769.69	.00	769.72	.98	1.90	6010.86	6721.19
8890.000	500.00	.00	.00	758.00	6650.00	769.79	.00	769.83	.95	1.88	5434.43	6837.27
9590.000	700.00	.00	.00	758.00	6650.00	769.76	.00	769.79	1.06	1.99	5423.91	6451.83
9590.000	700.00	.00	.00	758.00	6650.00	769.86	.00	769.90	1.00	1.94	5528.49	6647.80
10340.000	750.00	.00	.00	758.90	6650.00	769.84	.00	769.88	1.84	2.46	5120.66	4899.92
10340.000	750.00	.00	.00	758.90	6650.00	769.94	.00	769.98	1.76	2.42	4590.98	5015.70
11640.000	1300.00	.00	.00	759.40	6650.00	770.06	.00	770.30	8.99	5.49	2535.16	2217.60
11640.000	1300.00	.00	.00	759.40	6650.00	770.17	.00	770.39	9.60	5.29	2510.98	2146.50
12140.000	500.00	.00	.00	758.90	6650.00	770.50	.00	770.67	5.94	4.64	3492.03	2729.56
12140.000	500.00	.00	.00	758.90	6650.00	770.59	.00	770.75	5.60	4.54	3546.66	2809.72
12590.000	450.00	.00	.00	760.10	6650.00	770.40	.00	771.38	26.76	9.26	1493.37	1285.62
12590.000	450.00	.00	.00	760.10	6650.00	770.46	.00	771.46	26.75	9.30	1439.05	1285.67
13260.000	670.00	.00	.00	760.80	5020.00	771.55	.00	771.56	.48	1.29	6786.54	7246.94
13260.000	670.00	.00	.00	760.80	5020.00	771.63	.00	771.64	.47	1.28	6729.04	7333.86
14140.000	880.00	.00	.00	760.70	5020.00	771.55	.00	771.65	2.89	3.14	3247.22	2952.10
14140.000	880.00	.00	.00	760.70	5020.00	771.63	.00	771.73	3.09	3.13	3076.30	2854.63
14880.000	740.00	.00	.00	761.30	5020.00	771.75	.00	771.84	2.98	3.07	2975.70	2909.39
14880.000	740.00	.00	.00	761.30	5020.00	771.83	.00	771.92	2.86	3.03	3016.72	2968.59

SECND	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K#S	VCH	AREA	.01K
15530.000	650.00	.00	.00	763.40	5020.00	772.01	.00	772.16	8.08	4.62	2481.72	1765.57
15530.000	650.00	.00	.00	763.40	5020.00	772.08	.00	772.23	7.72	4.54	2522.21	1806.98
16065.000	535.00	.00	.00	763.30	5020.00	772.14	.00	773.01	22.64	7.80	917.28	1054.93
16065.000	535.00	.00	.00	763.30	5020.00	772.20	.00	773.04	21.70	7.67	939.42	1077.75
16440.000	375.00	.00	.00	763.20	5020.00	773.23	.00	773.70	13.85	6.39	1550.20	1348.89
16440.000	375.00	.00	.00	763.20	5020.00	773.28	.00	773.76	15.84	6.44	1439.28	1261.40
16840.000	400.00	.00	.00	763.20	5020.00	773.87	.00	774.02	4.83	4.18	2784.46	2283.16
16840.000	400.00	.00	.00	763.20	5020.00	773.94	.00	774.09	4.65	4.12	2825.42	2327.96
16990.000	150.00	.00	.00	764.00	5020.00	773.87	.00	774.18	9.55	5.52	1866.86	1624.56
16990.000	150.00	.00	.00	764.00	5020.00	773.94	.00	774.25	9.17	5.44	1896.47	1657.32
17530.000	540.00	.00	.00	764.90	5020.00	774.52	.00	774.64	7.27	4.84	2597.72	1861.47
17530.000	540.00	.00	.00	764.90	5020.00	774.57	.00	774.68	7.08	4.80	2623.59	1886.46
18080.000	550.00	.00	.00	765.40	5020.00	774.80	.00	774.99	8.28	5.12	2354.51	1744.66
18080.000	550.00	.00	.00	765.40	5020.00	774.84	.00	775.03	8.07	5.07	2377.98	1767.57

18530.000	450.00	.00	.00	765.70	5020.00	775.14	.00	775.30	9.46	5.45	2228.36	1632.15
18530.000	450.00	.00	.00	765.70	5020.00	775.21	.00	775.35	10.45	4.94	2163.13	1553.27
20530.000	2000.00	.00	.00	766.40	5020.00	775.97	.00	776.01	3.64	3.41	4208.92	2632.68
20530.000	2000.00	.00	.00	766.40	5020.00	776.02	.00	776.07	3.78	3.49	4066.62	2580.44
22280.000	1750.00	.00	.00	769.00	5020.00	776.65	.00	777.08	14.40	5.82	1431.21	1323.04
22280.000	1750.00	.00	.00	769.00	5020.00	776.72	.00	777.14	13.82	5.74	1426.78	1350.25
22880.000	600.00	.00	.00	768.20	5020.00	777.59	.00	778.14	20.87	6.17	869.05	1098.93
22880.000	600.00	.00	.00	768.20	5020.00	777.64	.00	778.21	21.40	6.27	861.13	1085.06

CHIPPEWA RIVER Q BASED

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
223990.000	6650.00	763.50	.00	.00	.00	1008.75	.00
223990.000	6650.00	763.60	.10	.00	.00	1009.00	.00
400.000	6650.00	763.51	.00	.01	.00	907.61	690.00
400.000	6650.00	763.60	.08	.00	.08	735.20	690.00
1680.000	6650.00	764.81	.00	1.30	.00	770.99	1280.00
1680.000	6650.00	764.90	.09	1.31	.09	735.00	1280.00
2470.000	6650.00	765.53	.00	.71	.00	356.07	790.00
2470.000	6650.00	765.59	.06	.69	.06	243.57	790.00
4470.000	6650.00	767.52	.00	1.99	.00	1079.05	2000.00
4470.000	6650.00	767.60	.07	2.00	.07	730.00	2000.00
4970.000	6650.00	767.79	.00	.27	.00	130.00	500.00
4970.000	6650.00	767.86	.06	.26	.06	120.00	500.00
5030.000	6650.00	767.86	.00	.07	.00	126.00	60.00
5030.000	6650.00	767.94	.08	.08	.08	126.00	60.00
5110.000	6650.00	768.04	.00	.18	.00	157.00	80.00
5110.000	6650.00	768.09	.06	.16	.06	134.10	80.00
5290.000	6650.00	768.33	.00	.29	.00	485.00	180.00
5290.000	6650.00	768.41	.08	.31	.08	485.00	180.00
6190.000	6650.00	768.69	.00	.37	.00	733.97	900.00
6190.000	6650.00	768.76	.07	.35	.07	682.66	900.00
6520.000	6650.00	768.87	.00	.17	.00	854.00	330.00
6520.000	6650.00	768.94	.08	.18	.08	854.00	330.00
6680.000	6650.00	768.89	.00	.02	.00	600.00	160.00
6680.000	6650.00	768.96	.07	.01	.07	523.79	160.00
6690.000	6650.00	768.89	.00	.00	.00	600.00	10.00
6690.000	6650.00	768.96	.07	.00	.07	523.56	10.00
7090.000	6650.00	769.13	.00	.23	.00	1129.38	400.00
7090.000	6650.00	769.20	.08	.24	.08	607.15	400.00
7240.000	6650.00	769.15	.00	.02	.00	981.63	150.00

7240.000	6650.00	769.22	.08	.02	.08	906.22	150.00
7490.000	6650.00	769.24	.00	.09	.00	796.04	250.00
7490.000	6650.00	769.32	.08	.10	.08	798.55	250.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
7590.000	6650.00	769.27	.00	.03	.00	697.18	100.00
7590.000	6650.00	769.35	.08	.03	.08	699.68	100.00
8290.000	6650.00	769.42	.00	.15	.00	997.79	700.00
8290.000	6650.00	769.49	.07	.14	.07	700.00	700.00
8390.000	6650.00	769.58	.00	.16	.00	700.78	100.00
8390.000	6650.00	769.69	.11	.20	.11	610.00	100.00
8890.000	6650.00	769.69	.00	.11	.00	1553.08	500.00
8890.000	6650.00	769.79	.10	.10	.10	860.00	500.00
9590.000	6650.00	769.76	.00	.07	.00	1035.36	700.00
9590.000	6650.00	769.86	.10	.07	.10	1026.72	700.00
10340.000	6650.00	769.84	.00	.08	.00	1444.00	750.00
10340.000	6650.00	769.94	.10	.08	.10	1010.00	750.00
11640.000	6650.00	770.06	.00	.22	.00	597.58	1300.00
11640.000	6650.00	770.17	.10	.23	.10	575.53	1300.00
12140.000	6650.00	770.50	.09	.44	.00	785.91	500.00
12140.000	6650.00	770.59	.09	.43	.09	750.00	500.00
12590.000	6650.00	770.40	.00	-.10	.00	583.34	450.00
12590.000	6650.00	770.46	.06	-.14	.06	541.44	450.00
13260.000	5020.00	771.55	.00	1.15	.00	975.47	670.00
13260.000	5020.00	771.63	.08	1.17	.08	910.00	670.00
14140.000	5020.00	771.55	.00	.00	.00	648.33	880.00
14140.000	5020.00	771.63	.08	.00	.08	554.90	880.00
14880.000	5020.00	771.75	.00	.19	.00	500.00	740.00
14880.000	5020.00	771.83	.08	.20	.08	500.00	740.00
15530.000	5020.00	772.01	.00	.26	.00	566.00	650.00
15530.000	5020.00	772.08	.07	.25	.07	566.00	650.00
16065.000	5020.00	772.14	.00	.14	.00	383.01	535.00
16065.000	5020.00	772.20	.06	.13	.06	367.97	535.00
16440.000	5020.00	773.23	.00	1.09	.00	578.82	375.00
16440.000	5020.00	773.28	.05	1.07	.05	512.38	375.00
16840.000	5020.00	773.87	.00	.64	.00	556.00	400.00
16840.000	5020.00	773.94	.07	.67	.07	556.00	400.00
16990.000	5020.00	773.87	.00	.00	.00	403.12	150.00
16990.000	5020.00	773.94	.07	.00	.07	403.00	150.00

1

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
17530.000	5020.00	774.52	.00	.65	.00	517.00	540.00
17530.000	5020.00	774.57	.05	.63	.05	517.00	540.00
18080.000	5020.00	774.80	.00	.28	.00	556.76	550.00
18080.000	5020.00	774.84	.04	.27	.04	555.23	550.00
18530.000	5020.00	775.14	.00	.34	.00	458.85	450.00
18530.000	5020.00	775.21	.07	.37	.07	433.45	450.00
20530.000	5020.00	775.97	.00	.83	.00	941.51	2000.00
20530.000	5020.00	776.02	.06	.81	.06	895.00	2000.00
22280.000	5020.00	776.65	.00	.68	.00	390.12	1750.00
22280.000	5020.00	776.72	.08	.70	.08	360.00	1750.00
22880.000	5020.00	777.59	.00	.95	.00	127.93	600.00
22880.000	5020.00	777.64	.04	.91	.04	116.13	600.00

SUMMARY OF ERRORS AND SPECIAL NOTES

THIS RUN EXECUTED 06/29/89 07:42:52

```
*********************************************
 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
*********************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Union Twp

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Run - downstream of Mt. Pleasant and upstream of Mission Street

00BREAK00

THIS RUN EXECUTED 07/21/89 10:01:49

```
*****************************************
 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
*****************************************


C
T1      UNION TWP FLOODPLAIN INFORMATION   SECTIONS 10 & 15
T2      DS OF MT. PLEASANT  US OF MISSION STREET       SLOPE-AREA START
T3      CHIPPEWA RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        0.        0.        0.   .001500       .00        .0     6770.   739.000      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC       .070      .100      .040      .100      .300      .000      .000      .000      .000      .000
                200FT US OF MISSION STREET   XSEC FROM 2FT TOPO
X1 202745.000    15.000   372.000   470.000      .000      .000      .000      .000      .000      .000
X3       .000      .000      .000   230.000      .000   540.000      .000      .000      .000      .000
GR    740.000      .000   738.700    12.000   738.700   360.000   738.800   372.000   735.300   379.000
GR    732.000   382.000   730.200   402.000   728.600   432.000   729.700   437.000   732.000   447.000
GR    729.700   452.000   738.700   470.000   738.700   570.000   740.000   660.000   742.000   696.000

                800FT US OF MISSION ST  XSEC FROM 2FT TOPO
X1 203345.000    13.000   720.000   810.000   590.000   600.000   600.000      .000      .000      .000
X3       .000      .000      .000   370.000      .000      .000      .000      .000      .000      .000
GR    740.000      .000   738.700    20.000   738.700   630.000   739.000   720.000   736.300   727.000
GR    733.000   730.000   731.200   750.000   730.800   765.000   729.600   785.000   730.700   790.000
GR    733.000   805.000   740.000   810.000   750.000   822.000      .000      .000      .000      .000

                XSEC A IN CITY OF MT. PLEASANT FIS SUPPORT DATA
X1 204095.000    21.000   600.000   701.000   750.000   750.000   750.000      .000      .000      .000
X3       .000      .000      .000   430.000      .000      .000      .000      .000      .000      .000
GR    749.500      .000   748.000    70.000   744.000   100.000   741.900   200.000   742.100   350.000
GR    742.000   440.000   738.000   460.000   738.000   540.000   739.800   570.000   738.000   590.000
GR    739.500   600.000   737.300   607.000   734.000   610.000   732.200   630.000   731.800   645.000
GR    730.600   665.000   731.700   680.000   734.000   698.000   735.700   701.000   737.200   714.000
GR    747.300   767.000      .000      .000      .000      .000      .000      .000      .000      .000

NC       .100      .100      .045      .000      .000      .000      .000      .000      .000      .000
                XSEC B IN FIS SUPPORT DATA
X1 204595.000    22.000   800.000   887.000   400.000   550.000   550.000      .000      .000      .000
X3       .000      .000      .000   540.000      .000  1110.000      .000      .000      .000      .000
GR    752.500      .000   750.000   100.000   738.000   130.000   739.400   170.000   737.500   230.000
GR    739.800   320.000   736.000   370.000   737.500   470.000   738.000   550.000   738.000   730.000
GR    742.000   770.000   739.500   800.000   734.500   808.000   731.900   828.000   731.700   848.000
GR    731.900   868.000   734.500   884.000   737.200   887.000   738.500   950.000   739.400  1050.000
```

```
GR    738.000   1150.000    752.000   1200.000       .000       .000       .000       .000       .000       .000

NC       .100       .060       .045       .200       .400       .000       .000       .000       .000       .000
                XSEC C IN FIS SUPPORT DATA
X1 205985.000     17.000   1200.000   1344.000    850.000   1050.000   1390.000       .000       .000       .000
X3       .000       .000       .000    420.000       .000       .000       .000       .000       .000       .000
GR    739.000       .000    740.800     50.000    741.600    140.000    740.000    230.000    739.800    270.000
GR    740.000    470.000    737.800    490.000    739.800    510.000    740.500   1000.000    737.300   1200.000
GR    735.400   1209.000    733.400   1230.000    732.800   1245.000    731.800   1265.000    735.400   1283.000
GR    737.500   1289.000    757.100   1344.000       .000       .000       .000       .000       .000       .000

NC       .100       .100       .042       .100       .300       .000       .000       .000       .000       .000
                XSEC D IN FIS SUPPORT DATA
X1 207370.000     20.000    400.000    490.000   1000.000    600.000   1385.000       .000       .000       .000
GR    744.800     40.000    741.500     60.000    740.500    230.000    738.500    240.000    740.500    250.000
GR    741.000    300.000    739.900    400.000    737.500    407.000    736.800    425.000    736.200    427.000
GR    733.700    440.000    734.500    450.000    734.400    460.000    735.000    465.000    734.200    475.000
GR    736.200    482.000    739.300    490.000    741.800    550.000    743.000    630.000    750.000    730.000

NC       .080       .080       .045       .000       .000       .000       .000       .000       .000       .000
X1 208600.000     16.000    295.000    375.000   1000.000   1230.000   1060.000       .000       .000       .000
X3       .000       .000       .000    230.000       .000    670.000       .000       .000       .000       .000
GR    747.200       .000    745.700      8.000    740.400     19.000    742.400     45.000    742.400    132.000
GR    742.500    224.000    742.700    295.000    736.700    298.000    734.900    299.000    732.200    320.000
GR    733.200    345.000    736.700    364.000    740.700    375.000    743.400    500.000    744.000    700.000
GR    749.900    775.000       .000       .000       .000       .000       .000       .000       .000       .000
EJ       .000       .000       .000       .000       .000       .000       .000       .000       .000       .000
```

```
SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
Q         OLOB      OCH       OROB      ALOB      ACH       AROB      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=    .100 CEHV=    .300
*SECNO 202745.000

3470 ENCROACHMENT STATIONS=     230.0     540.0  TYPE=     1  TARGET=     310.000
                200FT US OF MISSION STREET   XSEC FROM 2FT TOPO
202745.00    12.65   741.25      .00   739.00   741.80      .56      .00      .00   738.80
    6770.     547.    6037.     187.     361.     954.     178.       0.       0.   738.70
      .00     1.51     6.33     1.05     .070     .040     .100     .000   726.60   230.00
  .001501       0.       0.       0.        0        0        4      .00   310.00   540.00


*SECNO 203345.000

3470 ENCROACHMENT STATIONS=     370.0     822.0  TYPE=     1  TARGET=    -370.000
                800FT US OF MISSION ST  XSEC FROM 2FT TOPO
203345.00    12.63   742.23      .00      .00   742.56      .33      .74      .02   739.00
    6770.    1904.    4865.       1.    1224.     912.       3.      25.       5.   740.00
      .04     1.56     5.34      .43     .070     .040     .100     .000   729.60   370.00
  .001026     590.     600.     600.        2        0        0      .00   442.68   812.68


*SECNO 204095.000

3470 ENCROACHMENT STATIONS=     430.0     767.0  TYPE=     1  TARGET=    -430.000
                XSEC A IN CITY OF MT. PLEASANT FIS SUPPORT DATA
204095.00    12.35   742.95      .00      .00   743.29      .34      .72      .00   739.50
    6770.    1212.    5349.     208.     708.    1033.     171.      60.      12.   735.70
      .09     1.71     5.18     1.22     .070     .040     .100     .000   730.60   430.00
  .000905     750.     750.     750.        2        0        0      .00   314.15   744.15
1559


*SECNO 204595.000

3470 ENCROACHMENT STATIONS=     540.0    1110.0  TYPE=     1  TARGET=     570.000
                XSEC B IN FIS SUPPORT DATA
204595.00    11.86   743.56      .00      .00   743.73      .18      .43      .02   739.50
    6770.    1543.    3940.    1287.    1283.     919.    1095.      89.      16.   737.20
      .13     1.20     4.29     1.18     .100     .045     .100     .000   731.70   540.00
  .000759     400.     550.     550.        2        0        0      .00   570.00  1110.00
2182
```

```
   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=    .200 CEHV=    .400
$SECNO 205985.000

3470 ENCROACHMENT STATIONS=     420.0    1344.0  TYPE=     1  TARGET=    -420.000
                  XSEC C IN FIS SUPPORT DATA
205985.00    12.59   744.39      .00      .00   744.48      .09      .73      .02   737.30
    6770.    3460.    3310.       0.    3618.    1002.       0.     181.      32. 100000.00
      .29      .96     3.30      .00     .100     .045     .060     .000   731.80   420.00
3490 .000530    850.    1390.    1050.        2        0        0      .00   886.33  1308.33


CCHV=    .100 CEHV=    .300
$SECNO 207370.000
3280 CROSS SECTION 207370.00 EXTENDED       .34 FEET

                  XSEC D IN FIS SUPPORT DATA
207370.00    11.44   745.14      .00      .00   745.39      .25      .86      .05   739.90
    6770.    1977.    4208.     585.    1545.     842.     527.     273.      50.   739.30
      .38     1.28     5.00     1.11     .100     .042     .100     .000   733.70    40.00
  .001036    1000.    1385.     600.        2        0        0      .00   620.58   660.58


$SECNO 208600.000

3470 ENCROACHMENT STATIONS=     230.0     670.0  TYPE=     1  TARGET=     440.000
208600.00    14.04   746.24      .00      .00   746.60      .35     1.17      .03   742.70
    6770.     340.    5052.    1379.     236.     924.     964.     336.      63.   740.70
      .45     1.44     5.47     1.43     .080     .045     .080     .000   732.20   230.00
  .001155    1000.    1060.    1230.        2        0        0      .00   440.00   670.00
```

THIS RUN EXECUTED 07/21/89 10:03:31

```
*****************************************
 HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
 ERROR CORR -  01,02,03,04,05,06
 MODIFICATION -  50,51,52,53,54,55,56
 IBM-PC-XT VERSION 1.1
*****************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Union Twp

3) WATERCOURSE: Chippewa River

4) DOCUMENT TYPE: Run - downstream of Mt. Pleasant and upstream of Mission Street

00BREAK00

THIS RUN EXECUTED 07/21/89 10:01:49

```
*************************************************
  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
*************************************************
```

```
C
T1      UNION TWP FLOODPLAIN INFORMATION   SECTIONS 10 & 15
T2      DS OF MT. PLEASANT  US OF MISSION STREET       SLOPE-AREA START
T3      CHIPPEWA RIVER

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        0.        0.        0.   .001500       .00        .0    6770.   739.000      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC       .070      .100      .040      .100      .300      .000      .000      .000      .000      .000
                 200FT US OF MISSION STREET   XSEC FROM 2FT TOPO
X1 202745.000    15.000   372.000   470.000      .000      .000      .000      .000      .000      .000
X3       .000      .000      .000   230.000      .000   540.000      .000      .000      .000      .000
GR   740.000      .000   738.700    12.000   738.700   360.000   738.800   372.000   735.300   379.000
GR   732.000   382.000   730.200   402.000   728.600   432.000   729.700   437.000   732.000   447.000
GR   729.700   452.000   738.700   470.000   738.700   570.000   740.000   660.000   742.000   696.000

                800FT US OF MISSION ST  XSEC FROM 2FT TOPO
X1 203345.000    13.000   720.000   810.000   590.000   600.000   600.000      .000      .000      .000
X3       .000      .000      .000   370.000      .000      .000      .000      .000      .000      .000
GR   740.000      .000   738.700    20.000   738.700   630.000   739.000   720.000   736.300   727.000
GR   733.000   730.000   731.200   750.000   730.800   765.000   729.600   785.000   730.700   790.000
GR   733.000   805.000   740.000   810.000   750.000   822.000      .000      .000      .000      .000

                XSEC A IN CITY OF MT. PLEASANT FIS SUPPORT DATA
X1 204095.000    21.000   600.000   701.000   750.000   750.000   750.000      .000      .000      .000
X3       .000      .000      .000   430.000      .000      .000      .000      .000      .000      .000
GR   749.500      .000   748.000    70.000   744.000   100.000   741.900   200.000   742.100   350.000
GR   742.000   440.000   738.000   460.000   738.000   540.000   739.800   570.000   738.000   590.000
GR   739.500   600.000   737.300   607.000   734.000   610.000   732.200   630.000   731.800   645.000
GR   730.600   665.000   731.700   680.000   734.000   698.000   735.700   701.000   737.200   714.000
GR   747.300   767.000      .000      .000      .000      .000      .000      .000      .000      .000

NC       .100      .100      .045      .000      .000      .000      .000      .000      .000      .000
                XSEC B IN FIS SUPPORT DATA
X1 204595.000    22.000   800.000   887.000   400.000   550.000   550.000      .000      .000      .000
X3       .000      .000      .000   540.000      .000  1110.000      .000      .000      .000      .000
GR   752.500      .000   750.000   100.000   738.000   130.000   739.400   170.000   737.500   230.000
GR   739.800   320.000   738.000   370.000   737.500   470.000   738.000   550.000   738.000   730.000
GR   742.000   770.000   739.500   800.000   734.500   808.000   731.900   828.000   731.700   848.000
GR   731.900   868.000   734.500   884.000   737.200   887.000   738.500   950.000   739.400  1050.000
```

```
GR    738.000   1150.000    752.000   1200.000       .000       .000       .000       .000       .000       .000

NC       .100       .060       .045       .200       .400       .000       .000       .000       .000       .000
                XSEC C IN FIS SUPPORT DATA
X1 205985.000     17.000   1200.000   1344.000    850.000   1050.000   1390.000       .000       .000       .000
X3       .000       .000       .000    420.000       .000       .000       .000       .000       .000       .000
GR    739.000       .000    740.800     50.000    741.600    140.000    740.000    230.000    739.800    270.000
GR    740.000    470.000    737.800    490.000    739.800    510.000    740.500   1000.000    737.300   1200.000
GR    735.400   1209.000    733.400   1230.000    732.800   1245.000    731.800   1265.000    735.400   1283.000
GR    737.500   1289.000    757.100   1344.000       .000       .000       .000       .000       .000       .000

NC       .100       .100       .042       .100       .300       .000       .000       .000       .000       .000
                XSEC D IN FIS SUPPORT DATA
X1 207370.000     20.000    400.000    490.000   1000.000    600.000   1385.000       .000       .000       .000
GR    744.800     40.000    741.500     60.000    740.500    230.000    738.500    240.000    740.500    250.000
GR    741.000    300.000    739.900    400.000    737.500    407.000    736.800    425.000    736.200    427.000
GR    733.700    440.000    734.500    450.000    734.400    460.000    735.000    465.000    734.200    475.000
GR    736.200    482.000    739.300    490.000    741.800    550.000    743.000    630.000    750.000    730.000

NC       .080       .080       .045       .000       .000       .000       .000       .000       .000       .000
X1 208600.000     16.000    295.000    375.000   1000.000   1230.000   1060.000       .000       .000       .000
X3       .000       .000       .000    230.000       .000    670.000       .000       .000       .000       .000
GR    747.200       .000    745.700      8.000    740.400     19.000    742.400     45.000    742.400    132.000
GR    742.500    224.000    742.700    295.000    736.700    298.000    734.900    299.000    732.200    320.000
GR    733.600    345.000    736.700    364.000    740.700    375.000    743.400    500.000    744.000    700.000
GR    749.900    775.000       .000       .000       .000       .000       .000       .000       .000       .000
EJ       .000       .000       .000       .000       .000       .000       .000       .000       .000       .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 1

CCHV=    .100 CEHV=    .300
*SECNO 202745.000

3470 ENCROACHMENT STATIONS=     230.0     540.0  TYPE=     1  TARGET=     310.000
              200FT US OF MISSION STREET   XSEC FROM 2FT TOPO
202745.00    12.65   741.25      .00   739.00   741.80      .56      .00      .00   738.80
    6770.     547.    6037.     187.     361.     954.     178.       0.       0.   738.70
      .00     1.51     6.33     1.05     .070     .040     .100     .000   728.60   230.00
  .001501       0.       0.       0.        0        0        4      .00   310.00   540.00


*SECNO 203345.000

3470 ENCROACHMENT STATIONS=     370.0     822.0  TYPE=     1  TARGET=    -370.000
              800FT US OF MISSION ST  XSEC FROM 2FT TOPO
203345.00    12.63   742.23      .00      .00   742.56      .33      .74      .02   739.00
    6770.    1904.    4865.       1.    1224.     912.       3.      25.       5.   740.00
      .04     1.56     5.34      .43     .070     .040     .100     .000   729.60   370.00
  .001026     590.     600.     600.        2        0        0      .00   442.68   812.68


*SECNO 204095.000

3470 ENCROACHMENT STATIONS=     430.0     767.0  TYPE=     1  TARGET=    -430.000
              XSEC A IN CITY OF MT. PLEASANT FIS SUPPORT DATA
204095.00    12.35   742.95      .00      .00   743.29      .34      .72      .00   739.50
    6770.    1212.    5349.     208.     708.    1033.     171.      60.      12.   735.70
      .09     1.71     5.18     1.22     .070     .040     .100     .000   730.60   430.00
   .000905     750.     750.     750.        2        0        0      .00   314.15   744.15
1550


*SECNO 204595.000

3470 ENCROACHMENT STATIONS=     540.0    1110.0  TYPE=     1  TARGET=     570.000
              XSEC B IN FIS SUPPORT DATA
204595.00    11.86   743.56      .00      .00   743.73      .18      .43      .02   739.50
    6770.    1543.    3940.    1287.    1283.     919.    1095.      89.      16.   737.20
      .13     1.20     4.29     1.18     .100     .045     .100     .000   731.70   540.00
   .000759     400.     550.     550.        2        0        0      .00   570.00  1110.00
2150
```

```
  SECND    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
  Q        QLOB     QCH      QROB     ALOB     ACH      AROB     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=    .200 CEHV=    .400
*SECNO 205985.000

3470 ENCROACHMENT STATIONS=     420.0    1344.0  TYPE=     1  TARGET=    -420.000
                XSEC C IN FIS SUPPORT DATA
205985.00    12.59   744.39      .00      .00   744.48      .09      .73      .02   737.30
    6770.    3460.    3310.       0.    3618.    1002.       0.     181.      32. 100000.00
      .29      .96     3.30      .00     .100     .045     .060     .000   731.80   420.00
 3490 .000530    850.    1390.    1050.        2        0        0      .00   888.33  1308.33


CCHV=    .100 CEHV=    .300
*SECNO 207370.000
3280 CROSS SECTION 207370.00 EXTENDED       .34 FEET

                XSEC D IN FIS SUPPORT DATA
207370.00    11.44   745.14      .00      .00   745.39      .25      .86      .05   739.90
    6770.    1977.    4208.     585.    1545.     842.     527.     273.      50.   739.30
      .38     1.28     5.00     1.11     .100     .042     .100     .000   733.70    40.00
  .001036    1000.    1385.     600.        2        0        0      .00   620.58   660.58


*SECNO 208600.000

3470 ENCROACHMENT STATIONS=     230.0     670.0  TYPE=     1  TARGET=     440.000
208600.00    14.04   746.24      .00      .00   746.60      .35     1.17      .03   742.70
    6770.     340.    5052.    1379.     236.     924.     964.     336.      63.   740.70
      .45     1.44     5.47     1.43     .080     .045     .080     .000   732.20   230.00
  .001155    1000.    1060.    1230.        2        0        0      .00   440.00   670.00
```

THIS RUN EXECUTED 07/21/89 10:03:31

```
**********************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
  IBM-PC-XT VERSION 1.1
**********************************************
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Union Twp

3) WATERCOURSE: Mission Creek

4) DOCUMENT TYPE: 100 yr run ~~Mission Creek~~

00BREAK00

THIS RUN EXECUTED 07/17/89 09:50:14

```
*********************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MAY  1984
  ERROR CORR -  01,02,03,04,05,06
  MODIFICATION -  50,51,52,53,54,55,56
  IBM-PC-XT VERSION 1.1
*********************************************


T1      UNION TWP FLOODPLAIN INFO
T2      XSEC INFO FROM FILE NO. 8103 512  AND TOPO FROM FIS
T3      MISSION CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0.        0.        0.        0.   .000000       .00        .0      400.   745.000      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC      .070      .070      .045      .100      .300      .000      .000      .000      .000      .000
X1      .000     6.000   200.000   215.000      .000      .000      .000      .000      .000      .000
GR   742.000      .000   742.000   200.000   739.000   205.000   739.000   210.000   742.000   215.000
GR   742.000   415.000      .000      .000      .000      .000      .000      .000      .000      .000

X1     6.000      .000      .000      .000   600.000   600.000   600.000      .000      .900      .000

X1     8.000      .000      .000      .000   200.000   200.000   200.000      .000     1.100      .000
X3      .000      .000      .000   120.000      .000   295.000      .000      .000      .000      .000

X1    10.300     8.000   203.000   219.000   230.000   230.000   230.000      .000      .000      .000
GR   746.300   150.000   746.000   198.000   745.000   203.000   742.000   205.000   742.000   217.000
GR   745.000   219.000   746.000   222.000   746.800   320.000      .000      .000      .000      .000

X1    13.000     7.000   203.000   225.000   270.000   270.000   270.000      .000      .000      .000
GR   754.000    25.000   752.000    50.000   750.000    80.000   748.000   203.000   743.000   205.000
GR   743.000   217.000   760.000   225.000      .000      .000      .000      .000      .000      .000

X1    19.600     7.000   203.000   219.000   660.000   660.000   660.000      .000      .000      .000
GR   760.000    80.000   754.000   170.000   750.000   203.000   747.000   205.000   747.000   217.000
GR   750.000   219.000   760.000   250.000      .000      .000      .000      .000      .000      .000

X1    21.600      .000      .000      .000   200.000   200.000   200.000      .000     1.500      .000
EJ      .000      .000      .000      .000      .000      .000      .000      .000      .000      .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 1

CCHV=    .100 CEHV=    .300
$SECNO  .000
3280 CROSS SECTION       .00 EXTENDED      3.00 FEET

      .00     6.00   745.00      .00   745.00   745.00      .00      .00      .00   742.00
     400.     177.     46.     177.     600.      75.     600.       0.       0.   742.00
      .00      .30      .61      .30     .070     .045     .070     .000   739.00      .00
  .000046       0.       0.       0.        0        0        0      .00   415.00   415.00


$SECNO 6.000
3280 CROSS SECTION      6.00 EXTENDED      2.13 FEET

     6.00     5.14   745.04      .00      .00   745.05      .00      .04      .00   742.90
     400.     172.     57.     172.     427.      62.     427.      15.       6.   742.90
      .35      .40      .91      .40     .070     .045     .070     .000   739.90      .00
  .000132     600.     600.     600.        1        0        0      .00   415.00   415.00


$SECNO 8.000
3280 CROSS SECTION      8.00 EXTENDED      1.03 FEET


3470 ENCROACHMENT STATIONS=     120.0     295.0  TYPE=     1  TARGET=     175.000
     8.00     4.03   745.03      .00      .00   745.16      .13      .08      .04   744.00
     400.     109.    181.     109.      83.      45.      83.      16.       7.   744.00
      .37     1.33     3.98     1.33     .070     .045     .070     .000   741.00   120.00
  .003810     200.     200.     200.        2        0        0      .00   175.00   295.00


$SECNO 10.300

3301 HV CHANGED MORE THAN HVINS

    10.30     3.96   745.96      .00      .00   746.68      .73     1.34      .18   745.00
     400.       3.     395.       2.       2.      57.       1.      18.       8.   745.00
      .38     1.29     6.88     1.27     .070     .045     .070     .000   742.00   198.18
  .010088     230.     230.     230.        2        0        0      .00    23.71   221.89
```

```
  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


$SECNO 13.000
   13.00     5.23   748.23      .00      .00   748.68      .44     1.96      .03   748.00
    400.       1.     399.       0.       2.     75.       0.      19.       8.   760.00
     .40      .38     5.34      .00     .070    .045     .070     .000   743.00   188.60
  .005497    270.     270.     270.        2       0        0      .00    30.87   219.46


$SECNO 19.600
   19.60     4.69   751.69      .00      .00   752.13      .44     3.46      .00   750.00
    400.      16.     378.       6.      12.     69.       4.      20.       8.   750.00
     .43     1.34     5.48     1.30     .070    .045     .070     .000   747.00   189.04
  .004999    660.     660.     660.        3       0        0      .00    35.20   224.24


$SECNO 21.600
   21.60     4.29   752.79      .00      .00   753.37      .58     1.19      .04   751.50
    400.       9.     387.       3.       7.     63.       3.      20.       8.   751.50
     .44     1.34     6.18     1.31     .070    .045     .070     .000   748.50   192.35
  .007245    200.     200.     200.        2       0        0      .00    30.66   223.00
```

00BREAK00

1) COUNTY: Isabella

2) STUDY NAME: Union Twp.

3) WATERCOURSE: Mission Creek

4) DOCUMENT TYPE: Notes

00BREAK00

C4

WL of pool 3' below emergency spillway [illegible] [illegible]

Upstream culvert could not be seen - covered over

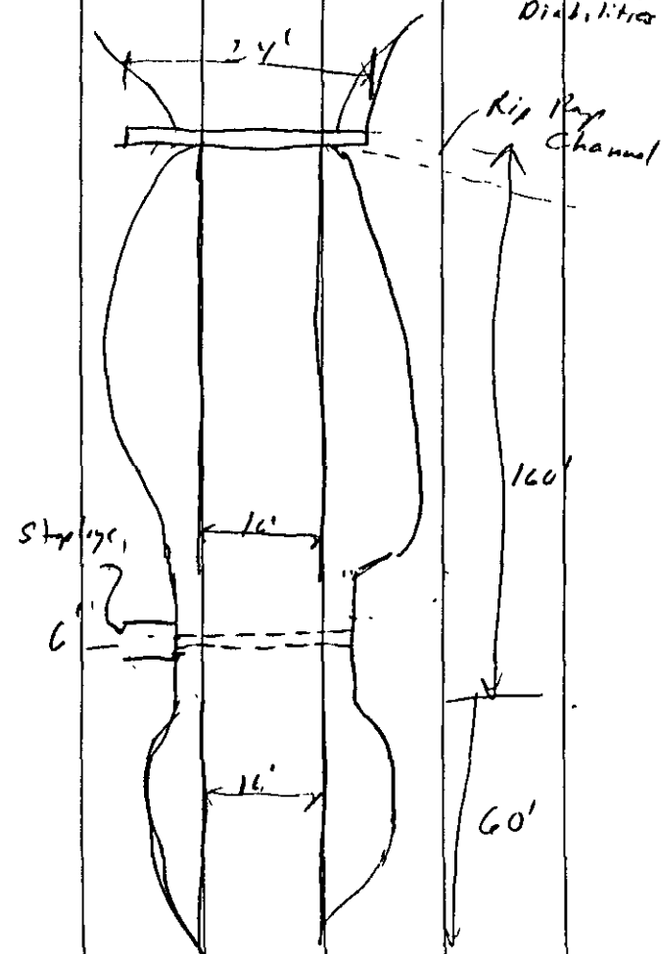
Downstream only top exposed rest filled w ice

Ht = Sin 27.5 (38') = 17.5'

A = 400' x 1800' x 10'/43560 = 165

Misson Creek Dam 66

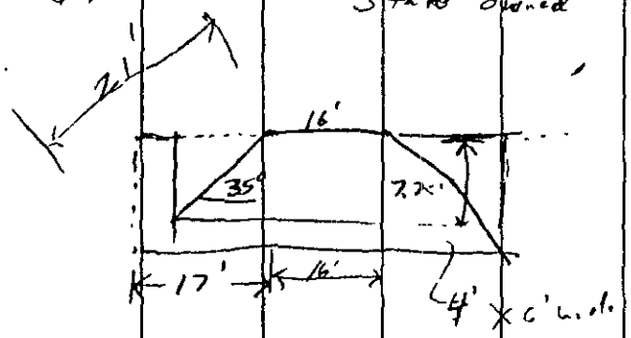
On: Mt. Pleasant Regional Center For Developmental Diabilities



Emptied 8 or 9 yrs ago - for safety reasons

67

State owned



No stop logs in now - no pool

3.75

2nd spillway 3'-9" wide
3'-6" high

Area 300 x 1400 x 10'/43560 = 96

Vol. = 33' x 12' x 210/27 = 3080

2nd Spillway $\sqrt{\frac{32(24' \times 3.5)^3}{3.75'}}$ = 2256 ft³/sec

Box 4x6 H/D = 10/4 = 2.5 Q = 55/ft x 6 = 330 cfs

68

Dams in Sec. 34, 16N, 6W
Too Small 27 A-ft + 36 A-ft

Misson Creek Dam
1-10-80

JJB YE

Sewage Lagoons

1) COUNTY: Isabella

2) STUDY NAME: Union Twp

3) WATERCOURSE: Mission Creek

4) DOCUMENT TYPE: ~~Run [illegible]~~ 100 yr run upstream of Lincoln Road

THIS RUN EXECUTED 07/17/89 11:47:59

```
*********************************************
  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
*********************************************


T1      UNION TWP FLOODPLAIN INFO   US OF LINCOLN ROAD
T2      XSEC FROM FILE NO. 8712 711
T3      MISSION CREEK

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0.        0.        0.        0.   .000000       .00        .0      400.   781.700      .000

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

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


NC      .070      .070      .045      .100      .300      .000      .000      .000      .000      .000
X1      .000     9.000   209.000   218.000      .000      .000      .000      .000      .000      .000
X3      .000      .000      .000   209.000      .000   218.000      .000      .000      .000      .000
GR   782.000      .000   781.900   200.000   776.700   209.000   775.500   210.000   774.900   214.000
GR   775.700   218.000   776.300   218.100   781.200   226.000   782.000   400.000      .000      .000

X1      .500      .000      .000      .000    50.000    50.000    50.000      .000      .000      .000
X3      .000      .000      .000   159.000      .000   268.000      .000      .000      .000      .000

X1     5.000    10.000   107.000   113.000   450.000   450.000   450.000      .000      .000      .000
GR   782.000      .000   778.000    10.000   778.000    70.000   777.500   107.000   776.300   108.000
GR   776.000   110.000   776.300   112.000   777.500   113.000   777.500   126.000   783.500   149.000

X1    17.000      .000      .000      .000  1200.000  1200.000  1200.000      .000     3.000      .000
EJ      .000      .000      .000      .000      .000      .000      .000      .000      .000      .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 1

CCHV=    .100 CEHV=    .300
*SECNO  .000

3470 ENCROACHMENT STATIONS=     209.0     218.0  TYPE=     1  TARGET=       9.000
      .00     6.80   781.70      .00   781.70   782.46      .76      .00      .00   776.70
     400.       0.     400.       0.       0.      57.       0.       0.       0. 100000.00
      .00      .00     6.99      .00     .070     .045     .070     .000   774.90   209.00
  .011557       0.       0.       0.        0        0        0      .00     9.00   218.00
```

```
*SECNO  .500
3280 CROSS SECTION       .50 EXTENDED       .49 FEET


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     159.0     268.0  TYPE=     1  TARGET=     109.000
      .50     7.59   782.49      .00      .00   782.66      .17      .14      .06   776.70
     400.      53.     259.      88.      52.      64.      80.       0.       0.    775.70
      .00     1.02     4.03     1.09     .070     .045     .070     .000   774.90   159.00
  .001192      50.      50.      50.        2        0        0      .00   109.00   268.00
0
*SECNO 5.000
3280 CROSS SECTION      5.00 EXTENDED       .77 FEET

     5.00     6.77   782.77      .00      .00   782.78      .01      .11      .02   777.50
     400.     297.      38.      65.     500.      38.     122.       5.       1.    777.50
      .21      .59     1.00      .53     .070     .045     .070     .000   776.00      .00
  .000099     450.     450.     450.        3        0        0      .00   146.21   146.21
0
*SECNO 17.000
    17.00     4.05   783.05      .00      .00   783.09      .04      .30      .01   780.50
     400.     282.      57.      61.     213.      22.      46.      18.       5.    780.50
      .43     1.32     2.62     1.34     .070     .045     .070     .000   779.00     4.88
  .001426    1200.    1200.    1200.        2        0        0      .00   130.89   135.77
0
1
 07/17/89    11:47:59                                                                    PAGE    3


                                                                  THIS RUN EXECUTED 07/17/89   11:48:03
*************************************************
  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
*************************************************
```