63174-052

CS: 63174

ID: 052

ROUTE	STATE PROJECT	FEDERAL NO.	SHEET NO	TOTAL SHEETS
I 75	63174A,C52	I 75-2 (84) 60	1	72

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT 1963 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS

DESIGN SPEED: 60 M.P.H. FREEWAY
35 M.P.H. SERVICE ROADS

MICHIGAN
STATE HIGHWAY DEPARTMENT

—*—

PLANS OF PROPOSED

MICH. PROJECT I 75-2 (84) 60
STATE PROJECT I 63174A,C52
DETROIT - BAY CITY ROAD

OAKLAND COUNTY

CITY OF HAZEL PARK

BORROW REQUIREMENTS

WHERE REQUIRED STA. TO STA.	AMT REQUIRED CYDS.	AMT AVAILABLE CYDS.	SOILS SERIES	BORROW AREA LOCATION
REGULAR BORROW				

CONTRACTOR FURNISHED

ROAD PLANS	SHEET NO'S.
TITLE	1
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TRUNK SEWER PLAN & PROFILE	13 - 17
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N.B. SERV. RD. PLAN & PROFILE	26 - 33
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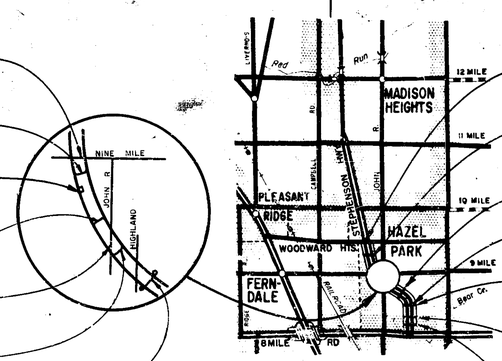
LEGEND

GRAV. B. ON GRAV. BT. RELOC. IMPED.

PROPOSED PROJECT
T.L. OR F.A. PAVED
T.L. OR F.A. BITUMINOUS
T.L. OR F.A. GRAVEL
T.L. OR F.A. UNIMPROVED
NON T.L. OR F.A. PAVED
NON T.L. OR F.A. BITUMINOUS
NON T.L. OR F.A. GRAVEL
NON T.L. OR F.A. UNIMPROVED
COUNTY LINE
CITY OR VILLAGE LIMITS
TOWNSHIP LINE
SECTION LINE
RAILROADS



Part 9
S-27 of 63174 A
Sta. 761 + 20.13

Part 8
S-26 of 63174 A
Sta. 757 + 23.00

Part 3
D-03 of 63174 A
Sta. 752 + 80.00

Part 5
S-23 of 63174 A
Sta. 748 + 25.00

Part 6
S-24 of 63174 A
Sta. 750 + 67.89

Part 7
S-25 of 63174 A
Sta. 754 + 37.00

Part 12
P-04 of 63174 A
Sta. 740 + 12

Point of Ending
Michigan Project I 75-2 (84) 60
State Project I 63174A, C52, Part 1
Sta. 785 + 41

Part 13
P-06 of 63174 A
Sta. 775 + 43.96

Part 11
P-03 of 63174 A
Sta. 726 + 53

Part 4 (Meyers)
S-22 of 63174 A
Sta. 722 + 06.66

Part 2
D-02 of 63174 A
Sta. 721 + 72.00

Part 10
P-02 of 63174 A
Sta. 708 + 65

Point of Beginning
Michigan Project I 75-2 (84) 60
State Project I 63174A, C52, Part 1
Sta. 707 + 30

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

ITEM: 709

CONTRACT FOR G.B.D.S. & SURF FOR SERV. RDS; STRUCTURES; UTILITY ALT.

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 12-28-64
RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE 12-24-64
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE & ROAD DESIGN — DATE 12-30-64

OFFICES OF DESIGN & CONSTRUCTION

APPROVED — ROAD CONSTRUCTION ENGINEER — DATE 1-4-65
APPROVED — CHIEF OF DESIGN — DATE 1-5-65

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED BY — STATE HIGHWAY COMMISSION
DIRECTOR OF ENGINEERING - CHIEF ENGINEER — DATE 1/5/65

PLANS PREPARED BY
MICHIGAN STATE HIGHWAY DEPARTMENT
REIGHARD SQUAD

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED [redacted]
DIVISION ENGINEER — DATE

63174A, C52

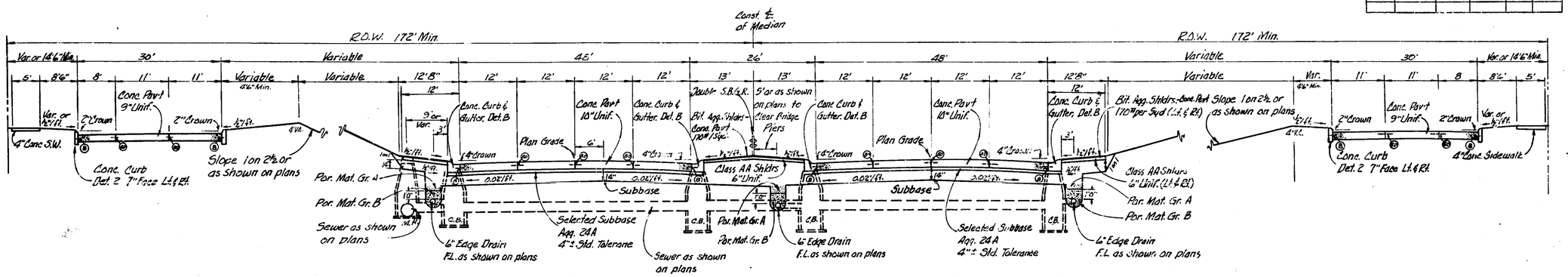
STATE PROJECT	FEDERAL PROJECT	SHEET NO
63174A,C52	I 75-2 (84) 60	1

63174A, C 52

STATE PROJECT

TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)-60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	2	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



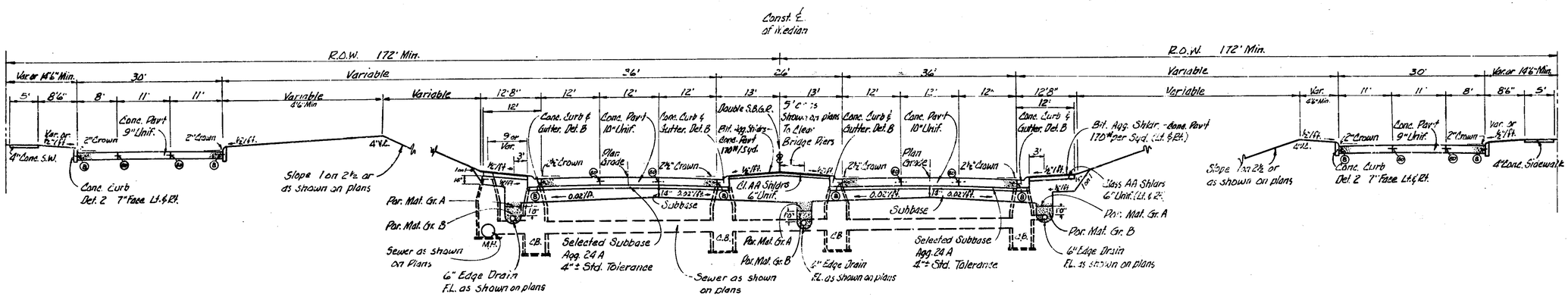
NORMAL FINISHED SECTION

To Apply: 743+54.23 to 747+08.00
762+07.64 to 769+26.08
777+93.64 to 786+54.46
(Not Part of this Contract) For Information only

SUPPLIMENTAL GRADING INSTRUCTIONS
Sta. 755+00 to 757+00 - Extend Shldr Slope 5' Rt. for Horizontal Stopping Sight Distance.
Service Rd. Contract includes Freeway Excavation above a rough grade line at the following locations:

Sta. 708+40	to	708+90
Sta. 720+75	to	723+50
Sta. 726+10	to	726+95
Sta. 739+72	to	740+53
Sta. 747+00	to	763+00
Sta. 774+92	to	776+08

Longitudinal Grading Limits as shown on E'way Plans.



NORMAL FINISHED SECTION

To Apply: P.O.B. to 716+67.50 (Not Part of This Contract) For Information only

Note: All crowns are modified parabolic.

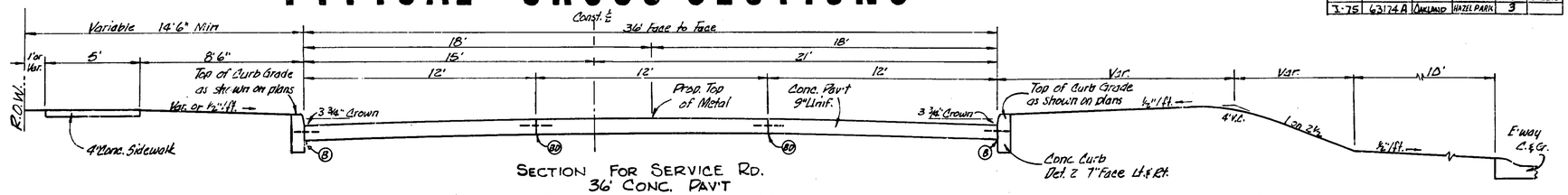
SCALE: 1" = 10' (Horiz.)
1" = 5 (Vert.)

Plotted: RJM
Ckd:

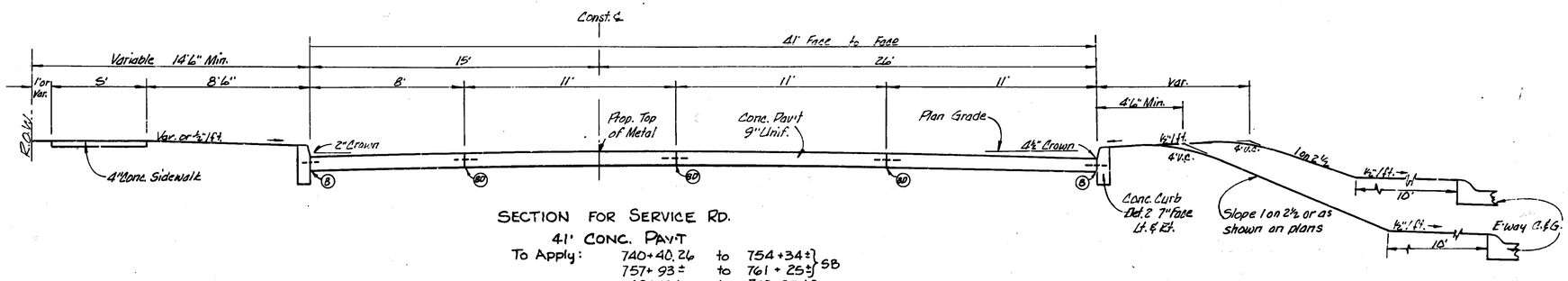
FILE NO. USE NO. 380 STENCIL	63174A,C-52	STATE PROJECT 63174A	FISCAL PROJECT I75-2(84)60	SHEET NO. 2

B.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	3	

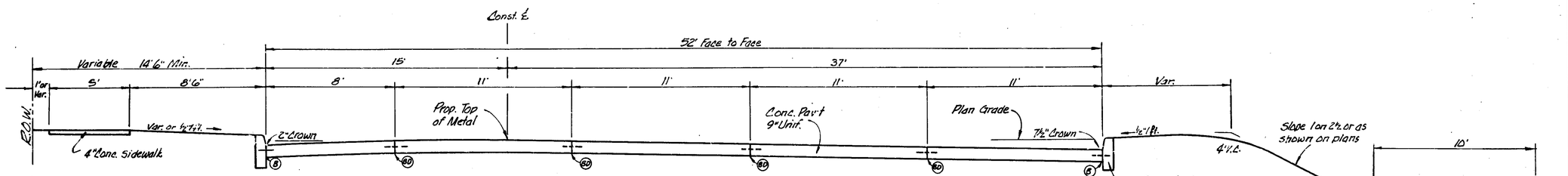
TYPICAL CROSS-SECTIONS



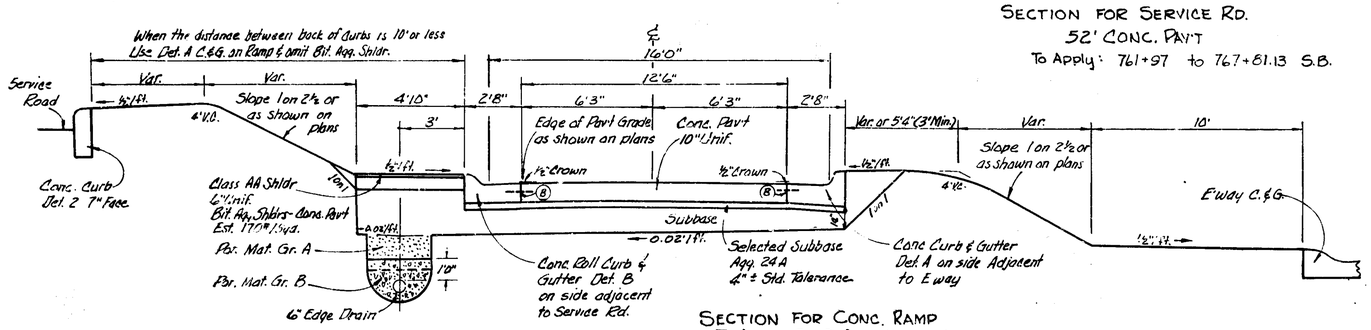
SECTION FOR SERVICE RD.
36' CONC. PAV'T
To Apply: P.O.B. to 710+39.40 SB
P.O.B. to 713+07.44 NB



SECTION FOR SERVICE RD.
41' CONC. PAV'T
To Apply: 740+40.26 to 754+34± } SB
757+93± to 761+25± } SB
748+12± to 753+55± } NB
757+32± to 760+52± } NB



SECTION FOR SERVICE RD.
52' CONC. PAV'T
To Apply: 761+97 to 767+81.13 S.B.



SECTION FOR CONC. RAMP
To Apply: For Information only

Note: All crowns are modified parabolic.

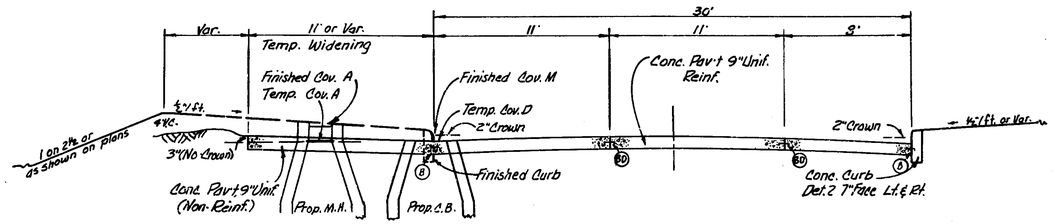
Plotted: R.J.M.
Ckd:

SCALE 1" = 3'0"

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	63174A	I 75-2(84)60	3

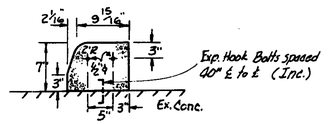
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(86)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-A	OAKLAND	HAZEL PARK	4	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



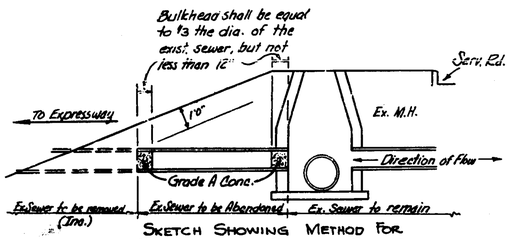
SECTION SHOWING NORMAL SERVICE ROAD WITH TEMPORARY WIDENING

To Apply: Where shown on plans



SKETCH SHOWING CONCRETE CURB SPECIAL

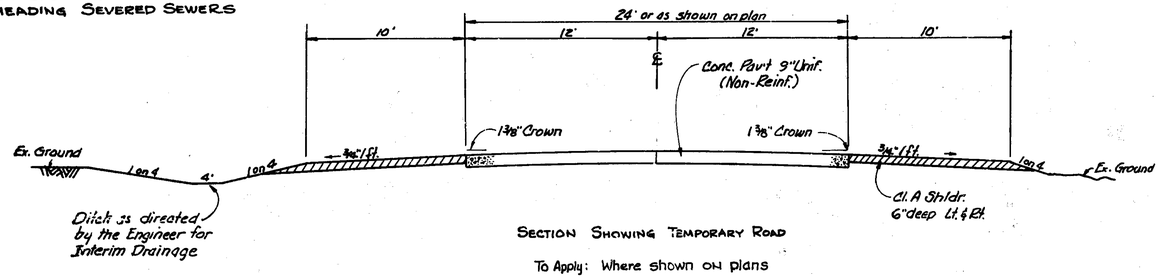
To Apply: Where called for on plans



SKETCH SHOWING METHOD FOR BULKHEADING SEVERED SEWERS

SKETCH SHOWING 3" ENCASED CONDUIT

For details, see Signal & Lighting Plans SHEET #45



SECTION SHOWING TEMPORARY ROAD

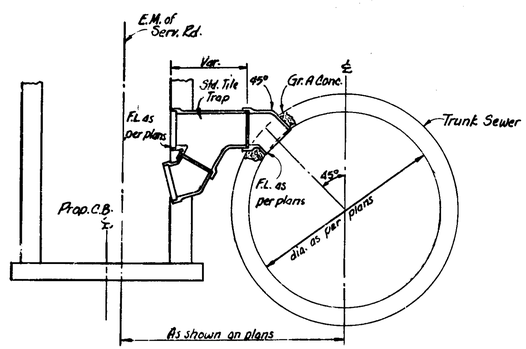
To Apply: Where shown on plans

Notes:

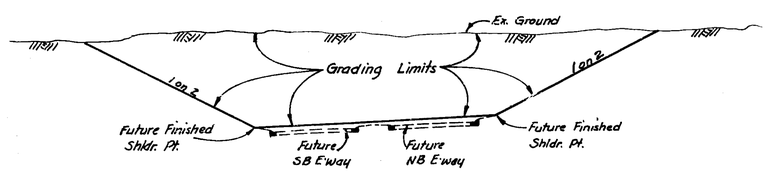
Stockpiling topsoil shall not be required on this Contract. Outside of the proposed Service Road Curbs, Topsoil shall be restored and the lawn - extensions finished according to Specifications for Class A Slopes and Class A Seeding and mulched at the rate of 2½ Tons per Acre.

The Area between the Service Road Curbs adjacent to the freeway shall be graded in accordance with specifications for Class B Slopes.—Applies to Rough Grading Section.

All crowns are modified parabolic.



SKETCH SHOWING SEWER TAP INTO TRUNK SEWER FROM S.B. SERVICE RD.



SKETCH SHOWING ROUGH GRADING SECTION

To Apply: Where called for on plans

JOINT LEGEND

D - Longitudinal Lane Tie Joint with Tie Bars according to Standard Plan E-4-A-33G Det. #1

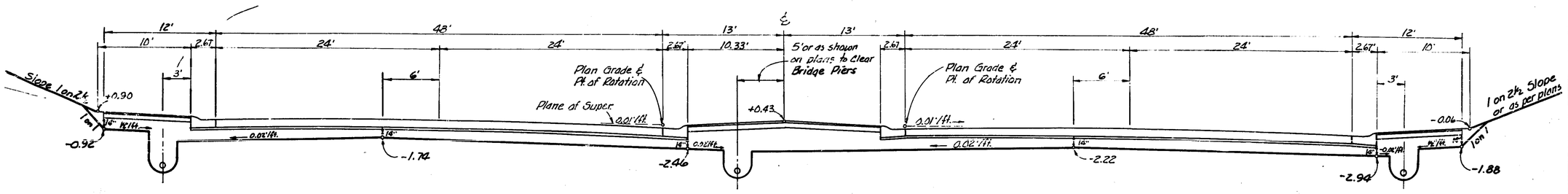
B - Longitudinal Bulkhead Construction Joint according to Standard Plan E-4-A-33G, Det. #2

BD - Optional B or D.

FILE NO. USE NO. 300 STENCIL	63174A,C-52	63174-A	I75-2(86)60	SHEET NO. 4

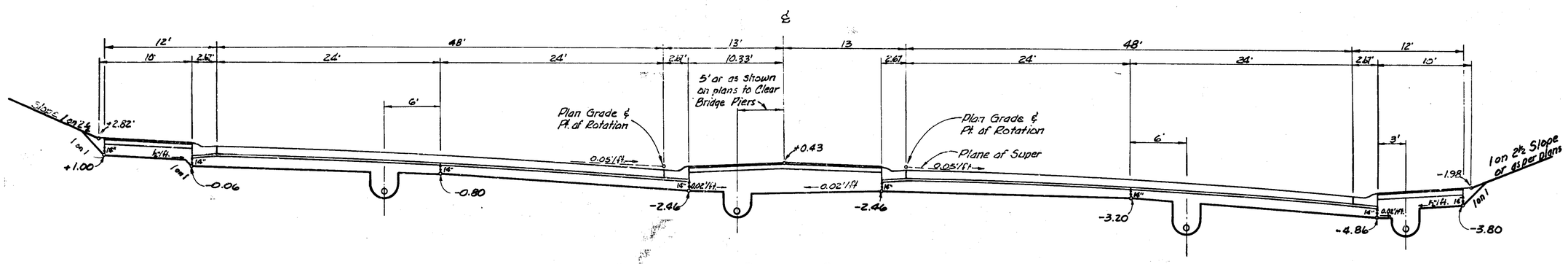
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	5	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



SUPERELEVATED GRADING SECTION
DUAL 48' CONC. PAV'T
(0.01'/ft. S.E.)

To Apply: 769 + 26.08 to 777 + 93.64
786 + 54.46 to WOODWARD HTS.



SUPERELEVATED GRADING SECTION
DUAL 48' CONC. PAV'T
(0.05'/ft. S.E.)

To Apply: 716 + 67.50 to 743 + 54.23
747 + 08.00 to 762 + 07.64

Not Part of This Contract For Information only

SCALE 1" = 5'0"

Plotted: 2-M
Ckd:

FILE NO. USE NO. 350 STENCIL	63174A,C-52	FISCAL PROJECT	FEDERAL PROJECT	SHEET NO.
		63174 A	I-75-2(84)60	5

I 63174 A, C52

SPECIAL PROVISIONS

GRADES FOR INTERSECTIONS

All intersections are to be considered as complete units and their grades determined before construction is started.

TRANSVERSE JOINTS IN CONCRETE PAVEMENT

Transverse joints in concrete pavement shall be placed according to details on Standard Plan E-4-A-133B and E-4-A-127B.

TRANSVERSE PLANE OF WEAKNESS JOINTS IN CONCRETE BASE COURSE

Transverse plane of weakness joints shall be placed as directed by the Engineer.

HAND FINISHING

Hand finishing, according to 4.14.03-q-1 of the Standard Specifications, will be permitted on intersections outside of the normal traffic lanes.

RESISTIVITY INVESTIGATION

A resistivity survey will generally be made in all cut sections in excess of 12 feet in depth and in larger borrow pits. A minimum number of borings will be made to satisfactorily establish a correlation with the resistivity factors. *See below

POSTS IN VICINITY OF LIGHT STANDARDS

Fence posts and guard rail posts shall not be located within 2 feet of street lighting standards, to avoid the possibility of damaging the underground lighting cable. The exact location of all cables shall be determined before posts are located.

MANHOLES, CATCH BASINS, & INLETS WITHIN LIMITS OF THE ROADBED

The maximum pay limits for backfilling with porous material shall be the space for a distance of 18 inches from the outside surface of the structure at its maximum diameter and from the bottom of the footings to the elevation of the earth grade. The volume of the structure to be deducted.

*These surveys are available for review by the contractor in the District Office of the district in which the project occurs, in the Office of the Engineer of Soils in Lansing, and in the Office of Testing and Research in Lansing.

I 63174 A, C52

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS.

FINE GRADING AND CLEANUP
STA. 707 + 30 TO STA. 785 + 41 NBD
STA. 707 + 30 TO STA. 788 + 75 SBD — 159 STAS.

TOPSOIL SURFACE	882 CU. YDS.
ELM TREE SPRAY - APPLIED	267 GALS.
BARRICADES	51 EACH
MULCHING (SLOPES, AS DIRECTED BY THE ENGINEER)	8 TONS
CLASS A SEEDING	3.3 ACRES

THE FOLLOWING ITEMS ARE ESTIMATED FOR THE ENTIRE PROJECT TO BE USED WHERE DESIGNATED BY THE ENGINEER.

SUBGRADE UNDERCUTTING	2,500 CU. YDS.
POROUS MATERIAL - GRADE A (COMPACTED IN PLACE)	2,500 CU. YDS.
TEMP. STEEL BEAM GUARD RAIL	2,575 LIN. FT.

I 63174 A, C52

GENERAL PLAN NOTES

PROPERTY OWNERS

Property owners' names, where shown, are for information only and their accuracy is not guaranteed.

POLES

No poles will be permitted within the Limited Access right of way. On the balance of the project, the exact location of poles will be determined by the Engineer.

I 63174 A, C52

PUBLIC UTILITIES

The existing utilities listed below and shown on these plans represent the best information available as obtained on our surveys dated September, 1961. This information does not relieve the contractor of the responsibility to satisfy himself as to its accuracy or of his responsibility in case utilities have been constructed or removed since the above survey date.

NAME AND ADDRESS OF OWNER	KIND OF UTILITY	SIZE OR CAPACITY	LOCATION STA. TO STA.
City of Hazel Park	Water	12"	P.O.B. to Madge
		6"	Bernhard
		6"	Elza
		6"	Maxlow
		6"	Evelyn
		6"	Madge
		6"	Meyers
		6"	Madge to 734+60
		4"	Granet
		4"	Harry
		4"	Vassar
		6"	Jarvis
		6"	Caledonia
		4"	734+60 to Highland
		16"	Highland
		6"	Robert
		6"	Burns
		6"	Rhodes
		8"	John R.
		8"	John R. to POE
		6"	Woodruff
		8"	Nine Mile
		6"	Yuma
		6"	Shasta
		6"	Cherry
		6"	Lander
		6"	Orchard
		6"	Sonoma
		6"	Manatee
		8"	Chestnut
		6"	Hamata
		8"	Woodward Heights
Consumers Power Co.	Gas	2"	Bernhard
		2"	Elza
		2"	Maxlow
		2"	Evelyn
		4"	Madge
		2"	Meyers
		2"	Granet
		2"	Harry
		2"	Jarvis
		2"	Pearl
		2"	Robert
		2"	Highland
		2"	Burns
		2"	Otis
Consumers Power Co.	Gas	Unknown	749+30 Rt. (Alley)
		6"	John R
		2"	Goulson
		2"	Woodruff
		6"	Nine Mile
		2"	Yuma
		2"	Shasta
		2"	Cherry
		2"	Lander
		2"	Orchard
		2"	Sonoma
		2"	Manatee
		2"	Chestnut
		2"	Hamata
		8"	Woodward Hgts. (2 Lines N.Side)
Detroit Edison Co.	Electricity	Unknown	POB to POE (Outside both rdways)
			709+50 East Side
			712+30 " "
(Unless otherwise indicated lines are service connections)			715+05 " "
			717+85 " "
		3 Wire Trans	720+40
		3 Wire Trans	730+00 To 730+50 W. Sd.
		3 Wire Trans	727+00 W. Side
		3 " "	Jarvis St.
		5 " "	Caledonia
		3 " "	735+50 (W. Side)
		5 " "	Highland
		3 " "	Otis
		3 " "	749 N. Side
			753 N. Side
		3 " "	Goulson
			756+50 N. Side
		5 " "	Woodruff
		Lighting Circuits	Nine Mi.Rd N&S Side
		8 Wire	762+80
			767+85 E. Side
			770+60 E. Side
			773+50 E. Side
			776+40 E. Side
			779+15 E. Side
			781+90 E. Side
			784+70 E. Side
			Hamata
			787+40 E. Side
Mich.Bell Telephone Co.	Telephone	Cable	712+50 E. Side
		"	715+05 E. "
		"	717+85 E. "
		"	Madge
		4 Wire	727+00 W. "
		4 "	730+50 W. "
		2 "	732+50 W. "
		3 Cable	Highland
		1 "	Otis
		1 Cable	749 N. Side
		1 "	753 N. "
		2 "	Nine Mi.S. "
		1 "	Nine Mi.N. "
		[redacted]rried 4½'	
		1 Cable	762+80 E. Side
		1 "	767+85 E. "
		1 "	770+60 E. "
		1 "	773+50 E. "
		2 Wire	776+40 E. "
		3 "	779+15 E. "
		1 Cable	781+90 E. "
		1 "	784+70 E. "
		1 "	Woodward Hgts
		(Burried S.Side)	
Mich.State Hwy Dept.	Sewers	12"	POB to Maxlow W. Side
		15"	Maxlow to Nine Mi.W.Side
		12"	Highland toGoulson E. Side
		12"	Shasta to 779+20 E. Side
		15"	779+20 to 784+70 E. Side
		15"	784+70 to Hamata E. Side
		24"	Hamata to P.O.E. E. Side
Oakland Co.Drain Comm.	Sewers	48" Steel Cyl.	Otis St.
City of Hazel Park	Sewers	12"	Bernhard
		12"	Elza
		12"	Maxlow
		12"	Evelyn
		27"	Madge
		12"	721+60
		16"	Meyers
		15"	Harry
		24"	736+00
		54"	Pearl
		48"	Highland
		10"	Burns
		12"	748+85
		12"	Goulson (From West)
		8"	Goulson (From East)
		8"	756+70
		12"	758+00
		8"	759+75
		33"	Nine Mile
		12"	767+90
		12"	770+65
		10"	773+50
		10"	776+40
		10"	779+20
		10"	748+70
		20"	Hamata

The owners of existing poles and other service structures that are within the limited access right of way will move them to locations designated by the engineer on free access right of way, or will remove them entirely from the highway right of way.

Owners of public utilities will not be required by the Department to move additional poles and structures that are not within grading or structure limits in order to facilitate the operation of construction equipment, unless it is determined by the engineer that such pole line or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

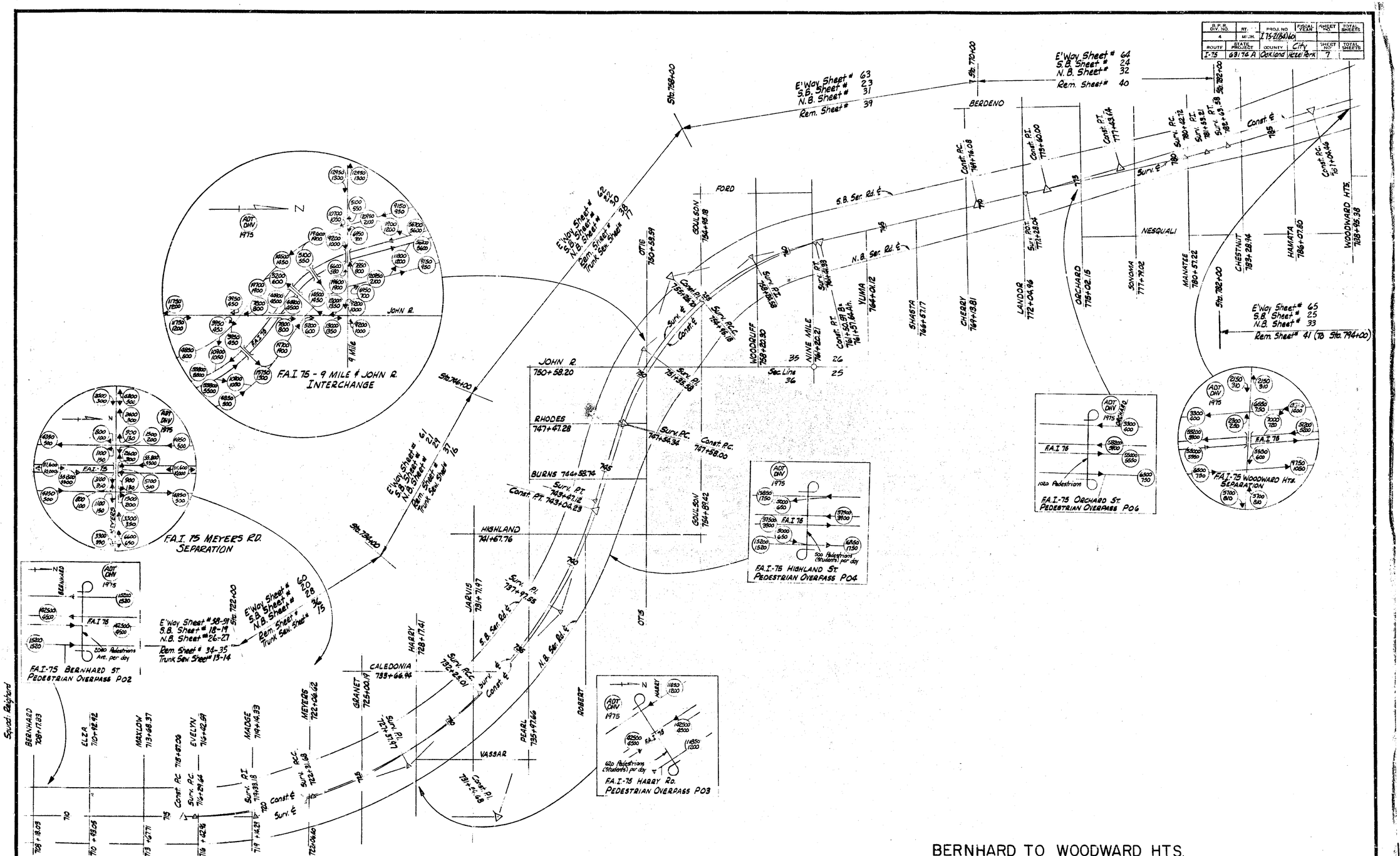
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	FRS-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	6	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the Standard Plan given below opposite each item unless otherwise indicated.

Pavement Reinforcement	E-4-A-21F
Grading Cross Sections	E-4-A-26D
Manholes, Catch Basins & Inlets	E-4-A-27R-4
Cover A	E-4-A-27A-3
Cover M	E-4-A-27M
Cover D	E-4-A-27D-4
Monument Box (Monument Boxes furnished by the State)	E-4-A-27F-3
Cover G	E-4-A-27G-4
Concrete Curb, Roll Curb and Curb and Gutter	E-4-A-29F
Curb and Gutter Endings	E-4-A-29F, Detail 14
Driveway Returns and Driveway Openings	E-4-A-29F
Pavement Joints	E-4-A-33H
Superelevation of Curves	E-4-A-49B-7- (Except that rate of superelevation is to be as called for on plans).
Pavement Crowns	E-4-A-49B-7
4" Concrete Sidewalk	E-4-A-110B, Detail 2
Concrete Pavement 7" Uniform	E-4-A-110B, Detail 4
Concrete Curve Header	E-4-A-125
Typical Joint Layout	E-4-A-127B-(Except that the joint spacing shall be as called for in the Supplemental Specifications).
Tile Trap	E-4-A-129
Dowel Bar Installation for Load Transfer at Transverse Contruction and Expansion Joints	E-4-A-130E
Base Plates for Transverse Pavement Joints	E-4-A-138-(Except that spot welds may be substituted for rivets to attach the 1" angle).
Concrete Steps	E-4-A-132A
Location of Transverse Expansion & Contraction Joints in Concrete Pavement	E-4-A-135B-(Except that the joint spacing shall be as called for in the Supplemental Specification).
Corrugated Concrete Divider	According to Special Details
Concrete Nose	E-4-A-145
Manholes for 48" to 120" Sewers	E-4-A-147
Barricade	E-6-A-55E
Steel Beam Guard Rail	E-4-A-137E

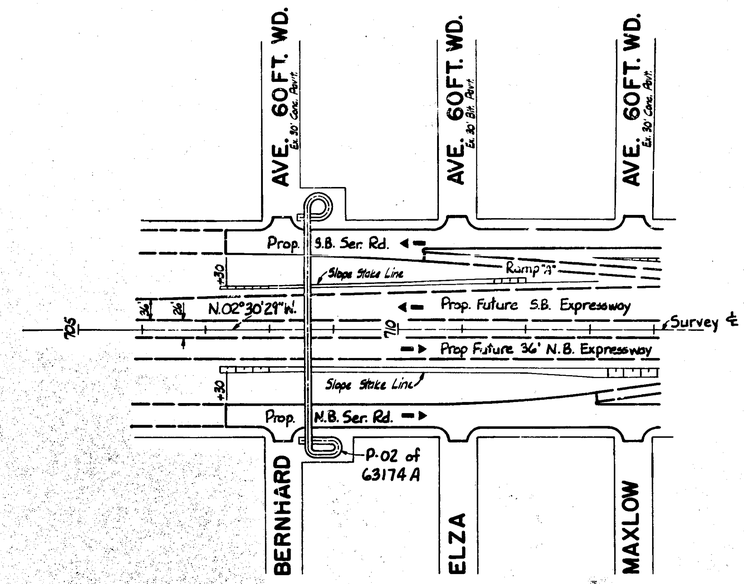


B.P.R. DIV. NO.	ST.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	7	

BERNHARD TO WOODWARD HTS.

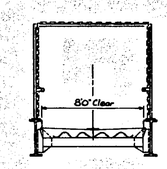
LOCATION & INDEX

FILE NO. USE NO. 350 STENCIL 63174A,C-52 | STATE PROJECT 63174A | FEDERAL PROJECT I75-2(84)60 | SHEET NO. 7



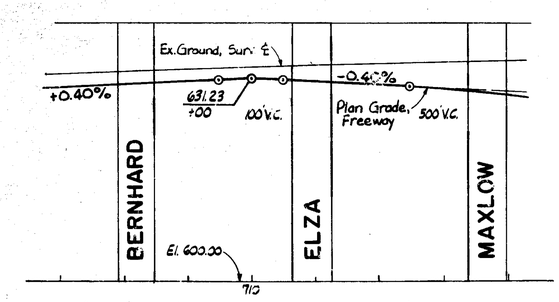
PLAN

SCALE: 1"=100'



Typical All Pedestrian Bridges
Scale: 1"=5'

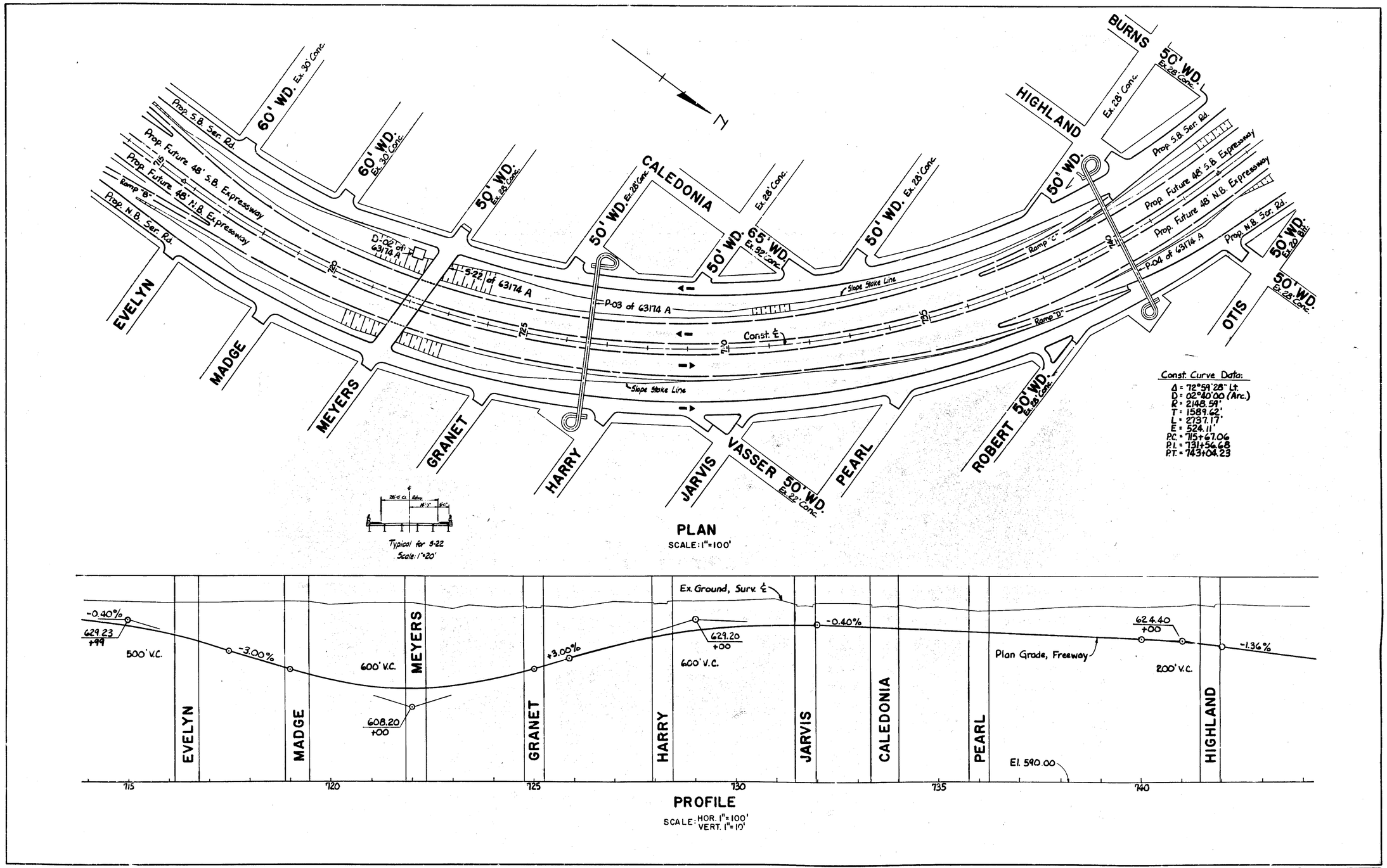
N



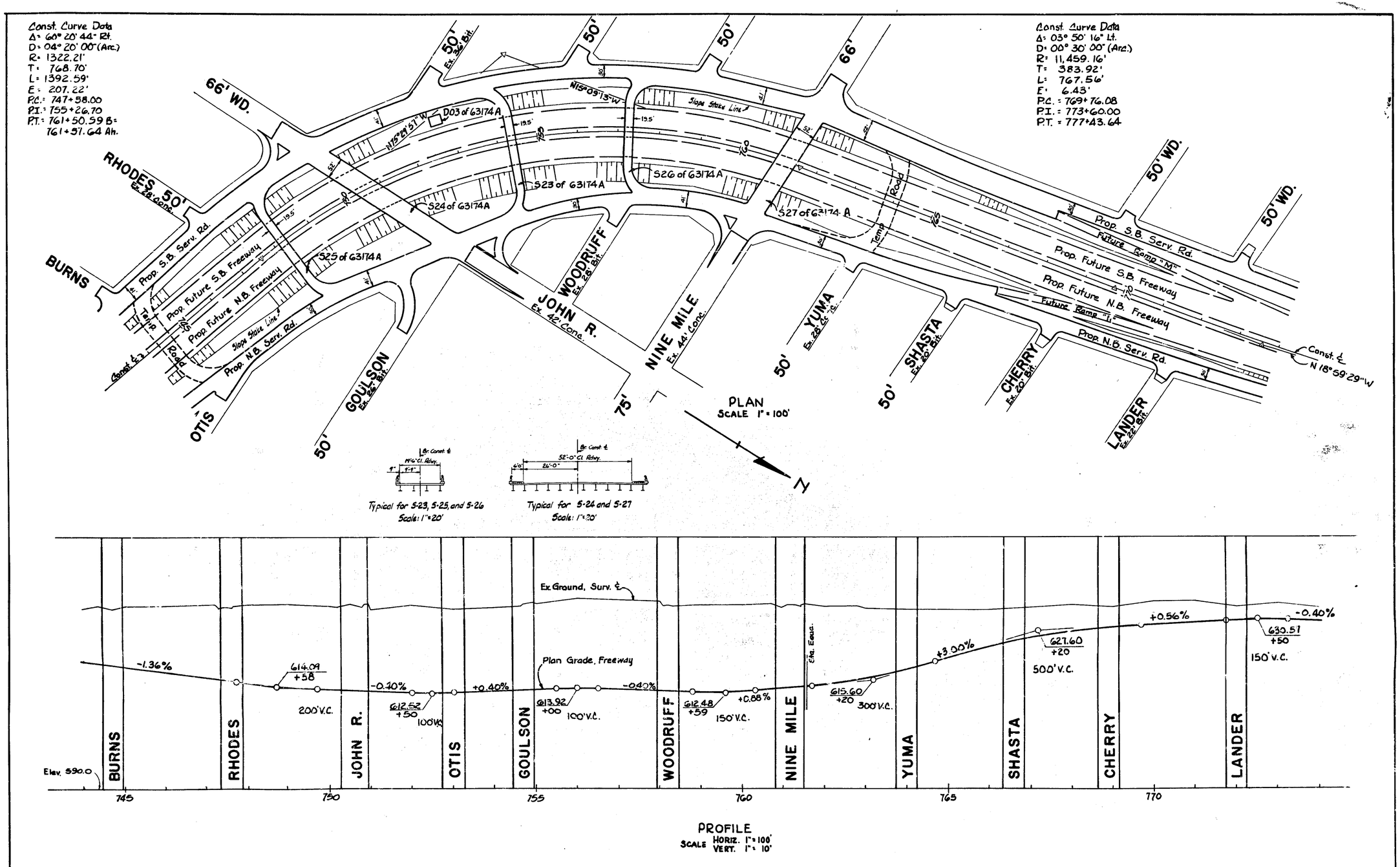
PROFILE

SCALE: HOR. 1"=100'
VERT. 1"=10'

	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C-52	63174 A	I75-2(84)60	8

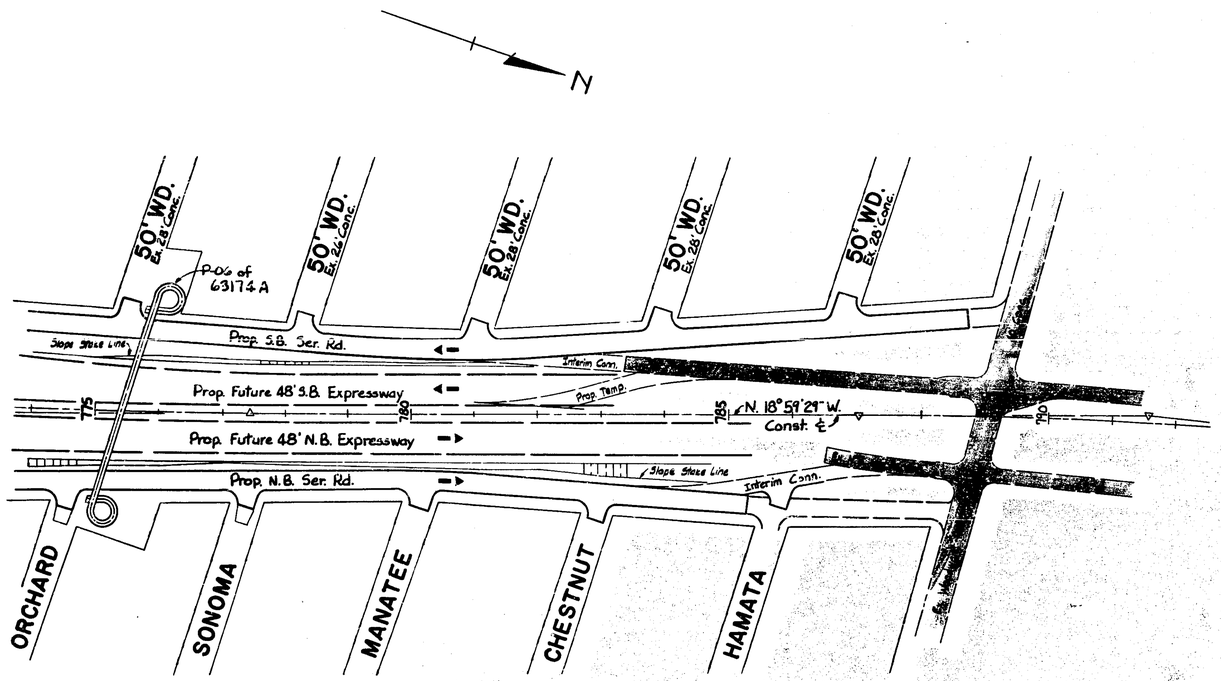


	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A, C-52	63174A	I75-2(84)60	9



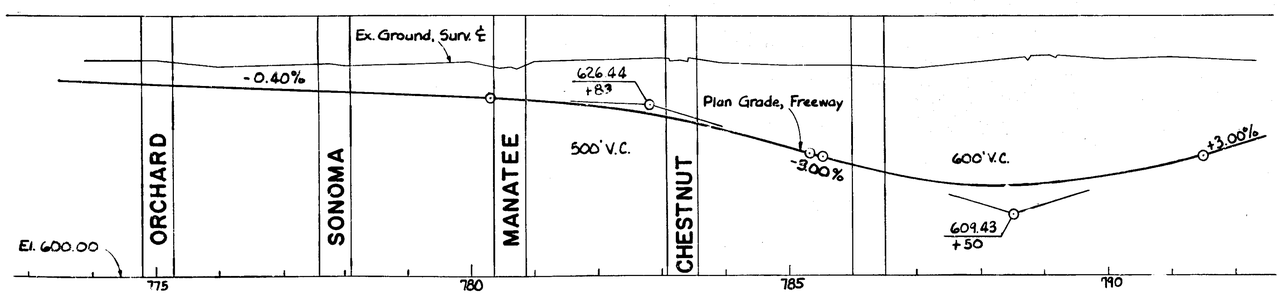
R.H. Reighard Squad
R.J. Miller 8-64

63174A,C-52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	63174A	175-2(84)60	10



PLAN
SCALE: 1" = 100'

Const. Curve Data:
Δ = 06°00'38" Rt.
D = 00°40'00" (Arc.)
R = 8594.37'
T = 451.21'
L = 901.58'
E = 11.84'
P.C. = 787+04.46
P.I. = 791+55.67
P.T. = 796+06.04



PROFILE
SCALE: HOR. 1" = 100'
VERT. 1" = 10'

	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C-52	63174A	I 75-2(84)(6)	11

WITNESSES TO TRANSIT POINTS — COORDINATES

Sta. 693+99.36;H.C.P. #1 — N 5,000.00 E 20,000.00
Sec. Line (8 Mi. Rd.)
N 56° W 37.74' N&C Light Pole
N 09° E 90.37' N&C Light Pole
N 62° E 71.64' S.W. Cor. Bldg. #941

Sta. 698+00;H.C.P. #2 — N 5,400.26 E 19,982.47
Rt. Edge N.B. Stephenson St.
S 68° W 62.1' Tree
S 30° W 65.0' End Guard Post
S 25° E 48.2' Light Pole

Sta. 702+00;H.C.P. #3 — N 5,799.87 E 19,964.96
Rt. Edge 22' Pav't. N.B. Stephenson St.
N 75° W 163.6' Light Pole
N 19° W 93.9' End Guard Post
N 11° E 109.4' Light Pole

Sta. 706+00;H.C.P. #4 — N 6,1[illegible].49 E 19,947.46
Rt. Edge N.B. Stephenson
S 61° W 182.8' Light Pole
N 32° W 94.2' Power Pole
S 40° E 30.6' Light Pole

Sta. 710+00;H.C.P. #5 — N 6,599.11 E 19,929.96
N 69° W 170.5' Light Pole
N 09° E 129.3' Light Pole
S 63° E 98.22' Power Pole

Sta. 714.00;H.C.P. #6 — N 6,998.72 E 19,912.45
S 78° W 32.9' End Guard Post
S 30° W 64.9' End Guard Post
S 46° E 90.5' Intersect. Sidewalks

P.C. Sta. 716+29.64;H.C.P. #7 — N 7,228.14 E 19,902.40
Rt. Edge Stephenson
S 81° W 161.4' Light Pole
N 23° E 51.7' Light Pole
S 71° E 66.6' Intersect. Sidewalks

P.I. Sta. 719+33.18;H.C.P. #8 — N 7,531.39 E 19,889.12
P. K. - Rt. Edge Stephenson
N 49° E 26.56' N&C Light Pole
S 88° E 36.33' N&C T.P.
S 11° E 82.65' N&C 12" Elm

P.C.C. Sta. 722+31.68;H.C.P. #9 — N 7,815.56 E 19,782.41
N 37° W 110.6' P. Pole
N 80° E 85.6' Light Pole
S 51° W 86.7' Light Pole

Sta. 725+00; H.C.P. #10 (on Tang.) — N 8,066.75 E 19,688.07
N 18° W 95.4' P. Pole
N 74° E 110.0' Light Pole
S 57° E 36.4' Light Pole

P.I. Sta. 727+37.97; H.C.P. #11 — N 8,289.53 E 19,604.41
P.K. Nail
N 69° W 77.63' N&C 8" Elm
N 85° W 63.06' N&C 12" Ash
S 25° W 19.20' N&C Light Pole

P.C.C. Sta. 732+25.01; H.C.P. #12 — N 8,628.96 E 19,228.76
S 11° E 55.0' P. Pole
N 22° W 35.3' P. Pole
S 60° E 112.2' Light Pole

Sta. 735+63.50;H.C.P. #13 (on Tan.) — N 8,855.89 E 18,977.61
S 27° W 60.9' P. Pole
N 20° W 98.2' P. Pole
N 70° E 105.5' Light Pole

P.I. Sta. 737+97.55; H.C.P. #14 — N 9,012.81 E 18,803.95
Boat Spike
N 33° W 41.74' N.W. Cor. House #604
N 19° E 63.09' N.E. Cor. Church
S 63° E 21.76' N.W. Cor. Church

H.C.P. #15 — N 9,108.85 E 18,420.08
(P.I. + 395.70on Foreward Tan.)
S 60° W 43.0' Light Pole
S 52° E 27.6' P. Pole
N 06° E 137.7' P. Pole

P.T. Sta. 743+47.12; H.C.P. #16 — N 9,151.78 E 18,248.53
N 85° W 150.0' Light Pole
S 19° W 30.7' Light Pole
S 62° E 151.7' Light Pole

P.C. Sta. 747+54.34; H.C.P. #17 — N 9,250.62 E 17,853.49
S 74° W 50.7' Light Pole
S 59° E 123.4' Light Pole
N 10° W 102.2 P. Pole

P.I. 751+35.58; H.C.P. #18 — N 9,343.16 E 17,483.65
P.K. Nail
N 35° W 80.69' N&C P. Pole
N 56° E 75.43' N&C G. Pole
N 82° E 37.23' N&C Light Pole

WITNESSES TO TRANSIT POINTS — COORDINATES

P.C.C. 754+95.18; H.C.P #19 — N 9,623.72 E 17,225.53
N 51° W 111.2' Light Pole
N 69° E 37.5' Light Pole
S 13° E 50.7' Light Pole

P.I. Sta. 758+24.58; H.C.P. #20 — N 9,866.13 E 17,002.50
P.K. Nail
N 07° E 35.91' N&C P. Pole
S 78° E 41.91' N.W. Cor. Bldg. #22846
S 60° E 58.58' S.W. Cor. Bldg. #22846

P.T. Sta. 761+41.33; H.C.P. #21 — N 10,184.08 E 16,916.39
N 53° W 62.5' Light Pole
S 09° E 50.7' P. Pole
S 71° E 126.0' Light Pole

Sta. 764+00; H.C.P. #22 — N 10,433.75 E 16,848.78
S 12° W 89.0' G. Pole
S 62° W 166.3' Light Pole
N 47° W 54.1' Light Pole

Sta. 768+00; H.C.P. #23 — N 10,819.85 E 16,744.21
N 24° W 163.9' Light Pole
N 67° W 199.8' Light Pole
S 03° W 106.8' Light Pole

P.O.T. Sta. 772+28.04; H.C.P. #24 — N 11,233.00 E 16,632.32
Drill hole in chis. square
N 09° E 26.81' Cor. Bldg. #160
N 44° E 36.18' Cor. Bldg. #160
S 68° E 12.94' N&C 12" B.E.

Sta. 776+00; H.C.P. #25 — N 11,592.03 E 16,535.09
S 18° W 58.9' Light Post
S 02° E 71.5' Intersect. Sidewalks
S 48° E 108.6' Intersect. Drive & Walk

P.C. Sta. 780+42.72; H.C.P. #26 — N 12,019.35 E 16,419.36
N 44° W 64.4' Light Pole
S 81° W 161.6' Light Pole
N 56° E 53.4' Intersect. Drive & Walk

P.I. Sta. 781+53.21; H.C.P. #27 — N 12,126.00 E 16,390.47
Boat spike
N 24° W 48.98' N&C 12" Elm
N 49° E 52.77' N&C P. Pole
S 17° W 61.99 N&C Light Pole

P.T. Sta. 782+63.58; H.C.P. #28 — N 12,230.11 E 16,353.46
N 66° W 174.8' Light Pole
N 15° W 110.9' Light Pole

Sta. 786+00; H.C.P. #29 — N 12,547.09 E 16,240.77
N 05° E 139.9' P. Pole
N 24° E 66.9' Light Pole
S 72° E 36.8' P. Pole

Sta. 790+00; H.C.P. #30 — N 12,923.99 E 16,106.78
S 11° E 66.6' P. Pole
N 40° W 63.8' G. Pole
S 54° E 113.5' Light Pole

P.C. Sta. 793+26.15; H.C.P. #31 — N 13,231.29 E 15,997.53
N 67° E 34.4' - 2.5' x 4' Conc.
S 48° E 185.4' Light Pole
S 15° W 160.2' Light Pole

P.I. Sta. 795+12.06; H.C.P. #32 — N 13,406.46 E 15,935.26
Boat Spike
N 76° W 55.25' Cor. Bldg. 24207
S 53° W 56.58' N&C Light Pole
S 18° W 113.25' N&C Twin 12" Elm

Sta. 796+97.46; H.C.P. #33 — N 13,588.21 E 15,896.14
N 61° W 70.5' Light Pole
N 70° E 127.7' Light Pole
N 87° E 80.2' Cor. Sidewalk

Sta. 801+00; H.C.P. #34 — N 13,981.74 E 15,811.46
N 30° W 195.3' Light Pole
N 22° E 216.4' Light Pole
S 27° W 109.5' Light Pole

Sta. 805+00; H.C.P. # 35 — N 14,372.79 E 15,727.30
N 51° W 117.9' Light Pole
N 71° E 106.2' Light Pole
N 06° E 93.3' - 2.5' x 4' Conc.

Sta. 809+00; H.C.P. #36 — N 14,763.84 E 15,643.15
S 57° W 93.3' Light Pole
S 04° W 52.9' P. Pole
S 63° E 120.8' Light Pole

Sta. 813+00; H.C.P. #37 — N 15,154.89 E 15,559.00
N 38° E 113.1' Light Pole
S 19° W 189.3' Light Pole
S 15° E 106.8' - 2.5' x 4' Conc.

WITNESSES TO TRANSIT POINTS — COORDINATES

P.O.T. Sta. 816+41.50 — N 15,488.74 E 15,487.15
P.K. Nail
N 02° W 62.08' N&C G Pole
N 54° E 87.57' N&C G. Pole
S 63° E 89.22' N&C G. Pole

Sta. 817+00; H.C.P. #38 — N 15,545.93 E 15,474.85
S 43° W 121.3' G. Pole
N 86° E 73.6' G. Pole
S 49° E 128.6' G. Pole

Sta. 821+00; H.C.P. #39 — N 15,936.98 E 15,390.69
N 27° E 95.5' L. Pole
S 33° E 161.4' P. Pole
S 02° W 134.1 P. Pole

Sta. 825+00; H.C.P. #40 — N 16,328.03 E 15,306.54
S 84° W 145.6' L. Pole
N 52° E 56.5' Intersect. Walks.
S 78° E 55.2' Intersect. Walks.

P.I. Sta. 828+48.07; H.C.P. #41 — N 16,668.31 E 15,233.31
P.K. Nail
N 55° E 74.78' N.W. Cor. Bldg. #1409
N 77° E 63.10' S.W. Cor. Bldg. #1409
S 60° E 85.04' S.W. Cor. Bldg. #1415

Sta. 832+00; H.C.P. #42 — N 17,009.08 E 15,145.38
N 15° E 72.3' L[illegible] Pole
S 77° E 42.4' Intersect. Walks.
S 25° E 170.5' Intersect. Walks.

Sta. 836+00; H.C.P. #43 — N 17,396.39 E 15,045.44
S 84° W 156.6' Light Pole
N 14° E 89.7' Intersect. Walks.
S 17° E 39.5' Intersect. Walks.

Sta. 840+00; H.C.P. #44 — N 17,783.71 E 14,945.50
N 27° W 145.4' P. Pole
N 09° E 123.7' P. Pole
S 57° E 52.8' Intersect. Walks.

P.I. Sta. 843+89.33(No Curve); H.C.P. #45 — N 18,160.69 E 18,848.23
℄ Lincoln St. P.K. Nail
N 35° 37' 21" E 43.09' N&C P. Pole
S 54° 52' 39" E 71.85' N.W. Cor. Bldg.
S 33° 37' 21" W 44.00' N&C T. Pole

Sta. 848+00; H.C.P. #46 — N 18,558.50 E 14,746.26
N 62° W 59.2' - 2.5 x 4' Conc.
N 41° E 50.3' Intersect. Walks.
S 37° E 93.8' Intersect. Walks.

Sta. 852+00; H.C.P. #47 — N 18,945.97 E 14,646.93
N 37° W 109.0' P. Pole
N 11° E 87.5' Light Pole
S 80° E 35.7' G. Pole

Sta. 856+00; H.C.P. #48 — N 19,333.44 E 14,547.61
N 32° W 142.4' - 2.5' x 4' Conc.
N 03° E 132.8' P. Pole
S 33° E 93.0' P. Pole

Sta. 860+00; H.C.P. #49 — N 19,720.91 E 14,448.29
S 59° W 43.1' Light Pole
N 09° E 93.7' Light Pole
S 33° E 92.8' P. Pole

P.O.T. Sta. 862+00 — N 19,914.65 E 14,398.62
P.K. Nail
N 16° E 71.59' N&C P. Pole
N 34° E 78.93' N.W. Cor. Brick Box.
S 70° E 77.85' S.W. Cor. Church

Sta. 864+00; H.C.P. #50 — N 20,108.38 E 14,348.96
N 83° W 172.0' Light Pole
N 22° E 57.4' P. Pole
S 26° E 140.4' P. Pole

Sta. 868+00; H.C.P. #51 — N 20,495.86 E 14,249.64
N 33° W 169.4' P. Pole
N 02° E 138.3' Light Pole
S 48° E 55.7' P. Pole

Sta. 871+00; H.C.P. #52 — N 20,786.46 E 14,175.14
S 77° W 63.1' Light Pole
S 75° W 106.2' G. Pole
S 11° W 154.1' P. Pole

P.C.T. Sta. 871+27.50 — N 20,813.10 E 14,168.31
P.K. Nail & Cap.
S 30° E 70.99 Drill hole in curb
S 56° W 67.81 Light Pole
N 23° E 56.80 Power Pole

P.I. Sta. 879+83.76 — N 21,642.54 E 13,955.70
Boat Spike
N 41° W 58.17' N&C G. Pole
N 47° E 78.56' N&C Fence Post
S 58° E 104.84' S.W. Cor. House #318

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	*I75-2(84)60*			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	*63174A*	*Oakland*	*Hazel Park*	*12*	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

BENCH MARKS

As Const.

ELEVATIONS SHOWN ARE TO TOP OF ARROW ON FIRE HYDRANT, UNLESS OTHERWISE NOTED.

92 Elev. 635.36
191' Lt. Sta. 702 + 46
S. W. Cor. Hayes & Stephenson

91 Elev. 636.88
172' Lt. Sta. 713 + 48
S. W. Cor. Maxlow & Stephenson

90 Elev. 635.84
47' Lt. Sta. 725 + 46
N. W. Cor. Granet & Stephenson

89 Elev. 634.87
123' Rt. Sta. 734 + 65
N. E. Cor. Stephenson & Pearl

89A El. 634.04
60' Rt. Sta. 735.25 N.B. Serv. Rd - R.R. Spike in P. Pole

88 ~~Elev. 635.94~~
~~[illegible] Rt. Sta. 750 + 13~~
~~S. E. Cor. Otis & John R.~~
Deleted On Const.

87 ~~Elev. 636.66~~
~~6' Rt. Sta. 761 + 48~~
~~9 Mile & Stephenson, N.E. Cor.~~
Deleted On Const.

86 Elev. ~~636.11~~ *634.91*
1' Rt. Sta. 777 + 95
Sonoma & Stephenson, N.E. Cor.

85 Elev. ~~637.15~~ *636.17*
137' Rt. Sta. 793 + 92
Morehouse & Stephenson, S.E. Cor.

84 Elev. 636.93
118' Rt. Sta. 807 + 80
Coy & Stephenson, S. E. Cor.

83 Elev. 636.80
86' Rt. Sta. 819 + 09
S. E. Cor. Stephenson & Kenneth

82 Elev. 636.64
52' Rt. Sta. 838 + 09
Kalama and Stephenson, S. E. Cor.

81 Elev. 638.12
177' Lt. Sta. 852 + 81
S. W. Cor. Sixth & Stephenson

80 Elev. 637.94
153' Lt. Sta. 864 + 94
N. W. Cor. Middlesex & Stephenson

79 Elev. 638.54
165' Lt. Sta. 872 + 24
Chisled Square on Concrete Sign Base
N. W. Cor. 11 Mile & Stephenson (Shell Service Station)

78 Elev. 635.52
202' Rt. Sta. 880+28
M.S.H.D. Tag.;
S.W. Root 23" Box Elder

77 Elev. 636.96
143' Lt. Sta. 885+57
R.R. Spikein
Street Light Pole

83A Elev. 638.10
N. E. Cor. Kenneth & Helene

BENCH MARKS & WITNESSES

FILE NO. USE NO. 380 STENCIL	63174 A,C-52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	*I75-2(84)60*	*12*

AUTH.	DATE	REVISION
		FINAL R.O.W.

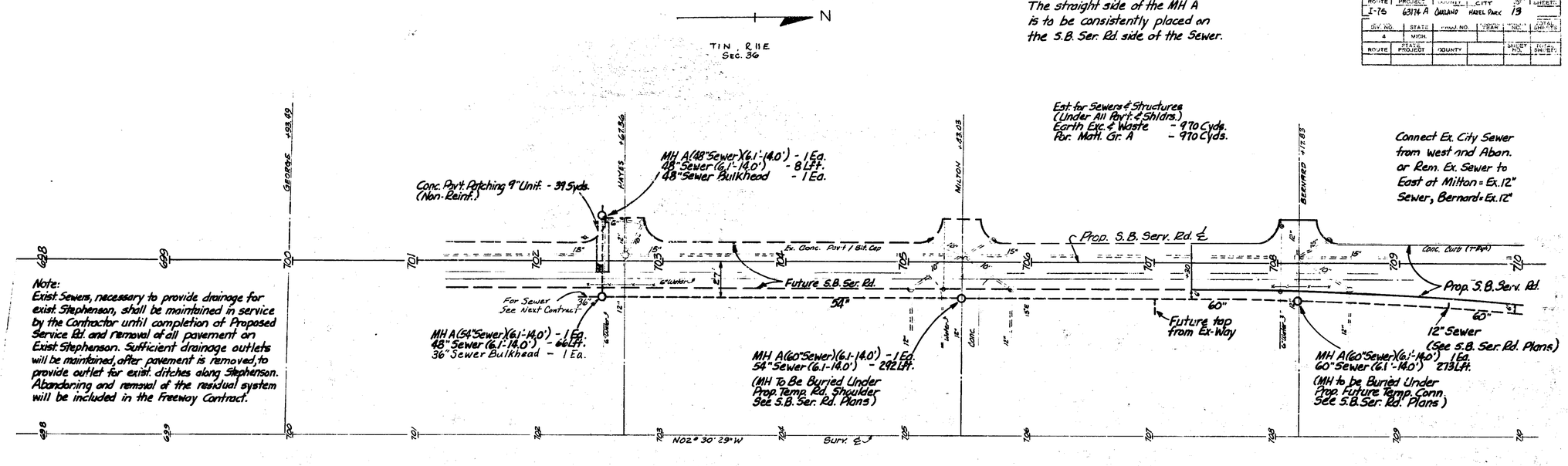
OPERATION	BY	DATE
PRELIMINARY R.O.W. ORIGINATED		
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN SHEET PREPARED		
TRACED		
FINAL R.O.W. CHECKED		
QUANTITIES		
QUANTITIES CHECKED		
SEALED		

R.H. Rzewnicki 1-84

OPERATION	BY	DATE
SURVEYED		
PLOTTED	Trovo	
PLAN SHEET	Bjustrom	2-84
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE		
FINAL GRADE		
FEDERAL APPROVAL		

B.P.R. D.V. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 152(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHT. NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	19	

DIV. NO.	STATE	PROJ. NO.	YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



TRUNK SEWER

63174A, C-52

63174A I 75-2(84)60 19

B.P.R. DIV. NO.	STATE	FEDERAL AID PROJ. NO.	AL. PLAN	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(34)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHT.	TOTAL SHEETS
I-75	63174-A	OAKLAND	HAZEL PARK	14	

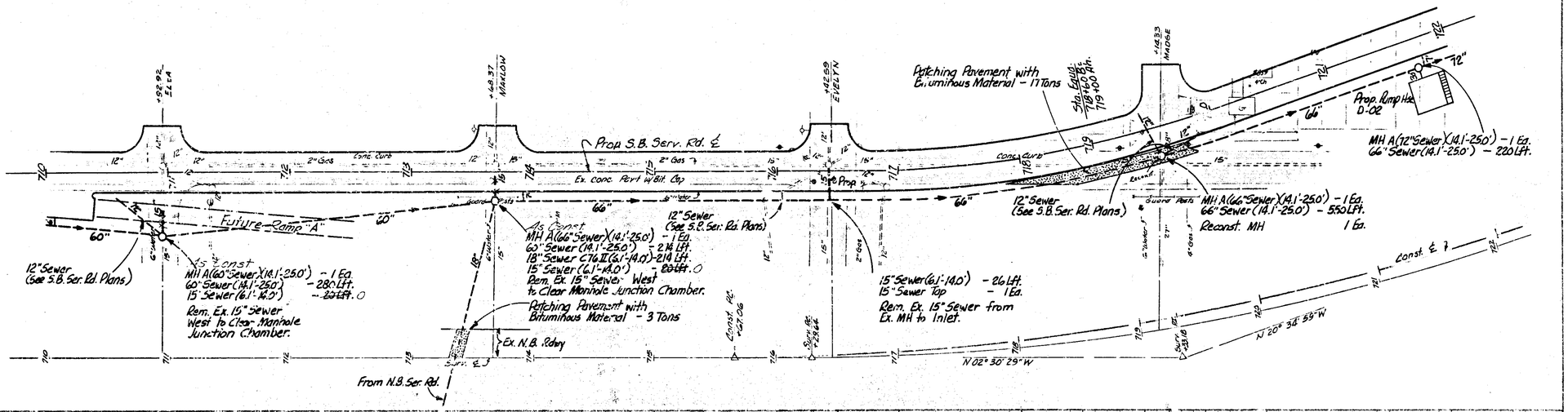
B.P.R. DIV. NO.	STATE	FEDERAL AID PROJ. NO.	AL. PLAN	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

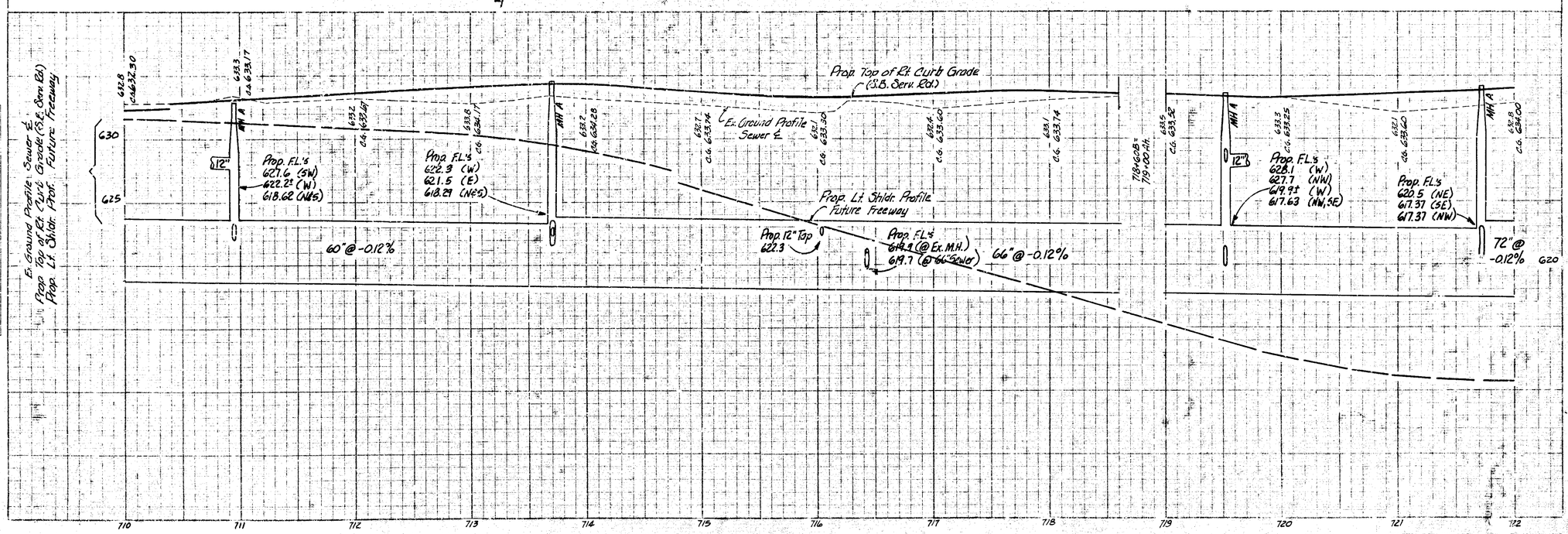
AUTH.	DATE	REVISION
		FINAL R. C. W.

Sec. 36
T1N, R11E
N

Connect Ex. City Sewer From West
And Aban. or Rem. Ex. Sewer to East
At Elza : Prop. 15" Sewer
Maxlow : Prop. 15" Sewer
Evelyn : Prop. 15" Sewer
Madge : Ex. 18" Sewer

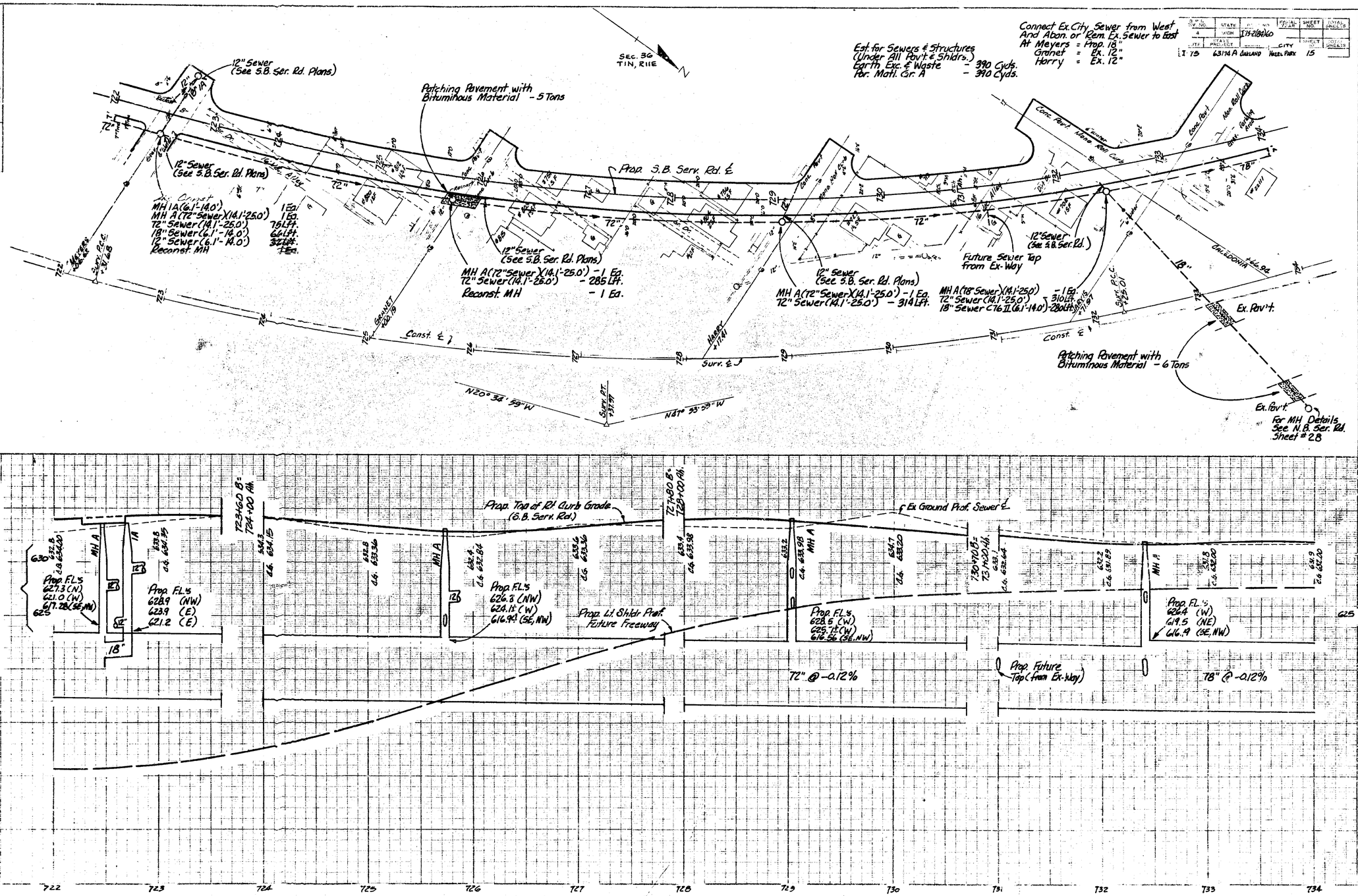
Est. for Sewers & Structures
(Under All Pavt. & Shldrs.)
Earth Exc. & Waste - 693 Cyds.
Por. Matl. Gr. A - 693 Cyds.





TRUNK SEWER

63174A, C-52 63174A SHEET NO. 14



TRUNK SEWER

63174A, C-52

63174A I75-2(84)60 15

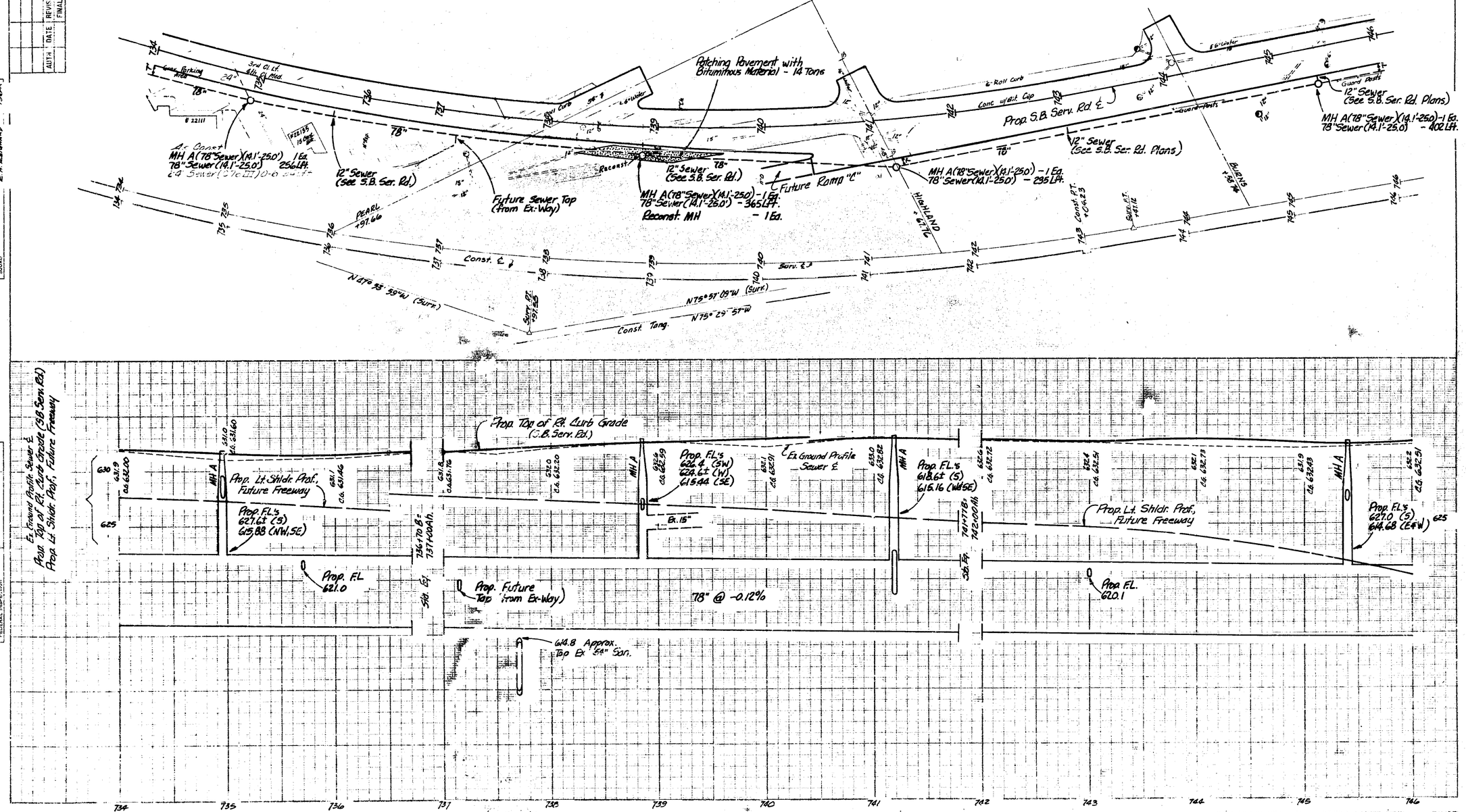
FAP NO.	STATE	FUNDING YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1752(8)(6)		
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO. / TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	16
FAP NO.	STATE	PROJ. NO.	YEAR	NO. / TOTAL SHEETS
4	MICH.			
ROUTE	STATE PROJECT	COUNTY		SHEET NO. / TOTAL SHEETS

Est. for Sewers & Structures
(Under All Pavt. & Shldrs.)
Earth Exc. & Waste - 1154 Cyds.
Por. Matl. Gr. A - 1154 Cyds.

TIN, R11E
SEC. 36

Connect Ex. City Sewer from South And Aban. or Rem. Ex. Sewer to North At Alley Sta. 734+95 = Ex. 24"
At Highland = Ex. 48"

Connect Ex. City Sewer from West And Aban. or Rem. Ex. Sewer to East at Ex. S.B. Stephenson = Ex. 15"



TRUNK SEWER

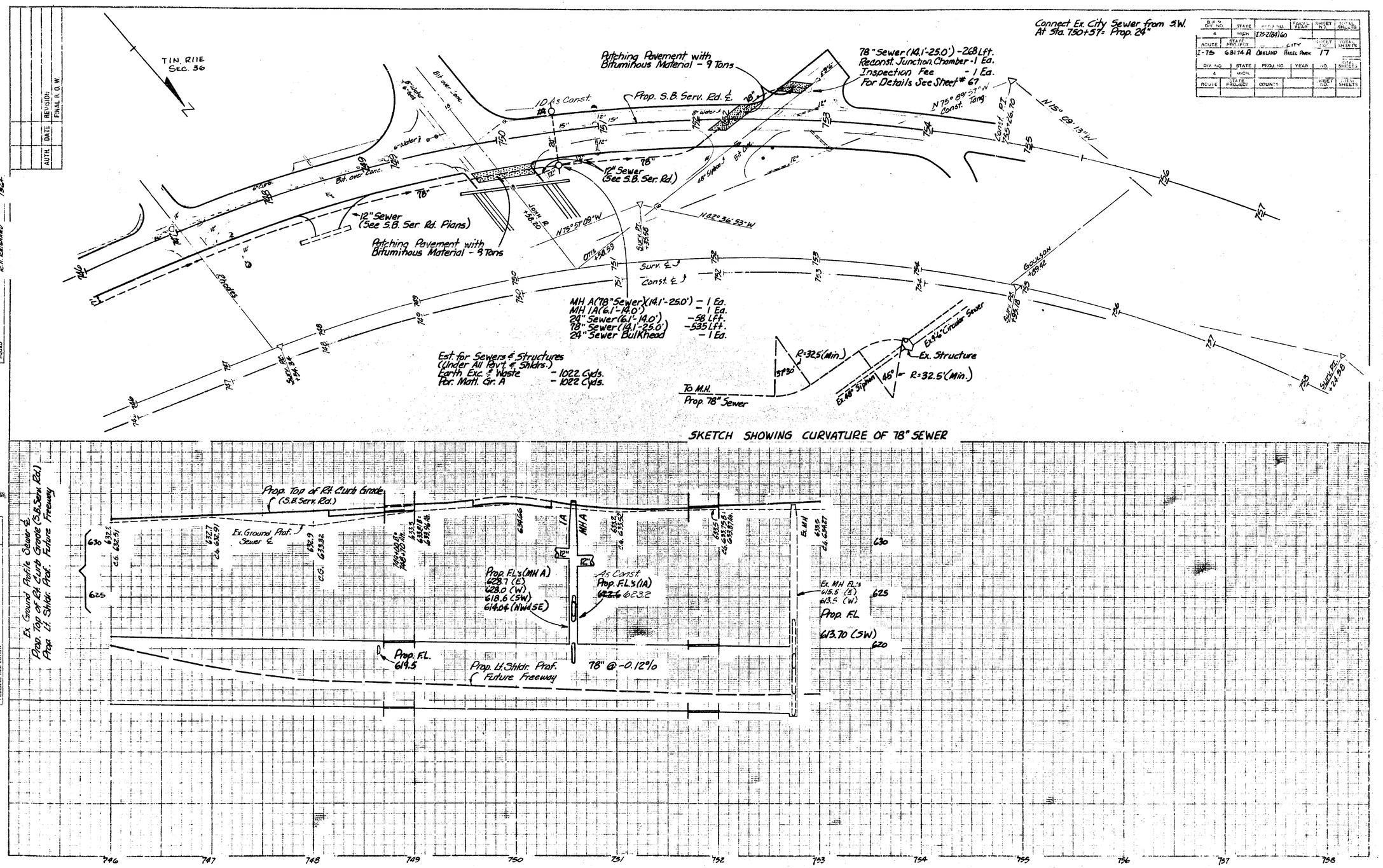
63174A, C-52 63174A(T15-21(8)(6) 16

B.P.W. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)60			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND HAZEL PARK		17	

DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION:
		FINAL R.O.W.

OPERATION	BY	DATE
PRE. CONTRACT R.O.W. UNDERTED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
FINAL R.O.W.		
FINAL R.O.W. CHECK		
EQUANTities		
EQUANTities CHECKED		
PROJECT	R.H. BLANCHARD	7-9-62



TRUNK SEWER

63174A, C-52 63174A I-75-2(84)60 17

AUTH.	DATE	REVISION
		FINAL R O W

S.P.R. NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH	IM-2(16)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	18	
S.P.R. DIV. NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

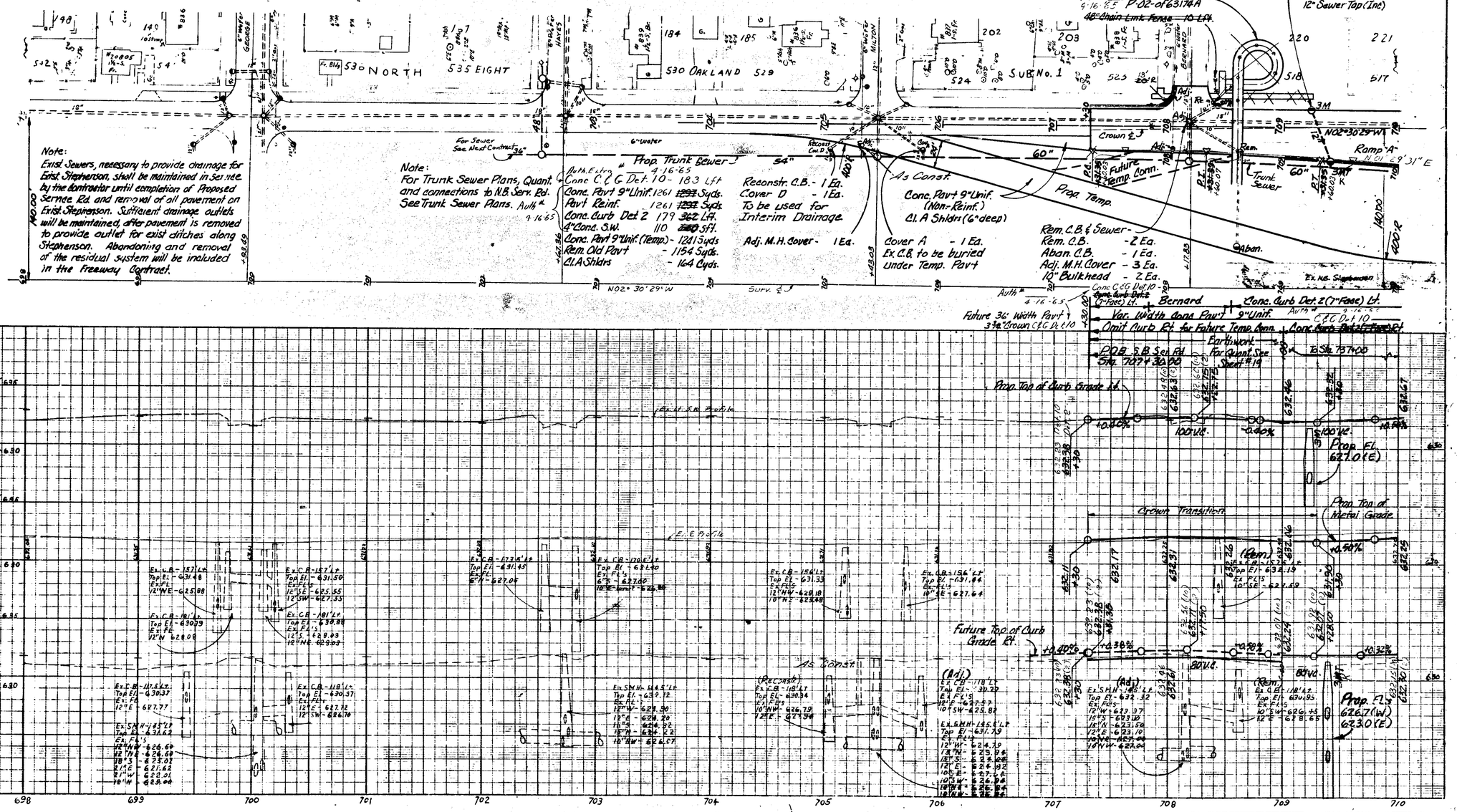
Note: At locations where the new pavt coincides with the exist. pavt; estimated material to replace any earth removed incidentally, while removing old pavt, to bring ground up to earth grade.
Por. Mat. Gr. A - 1000 Cyds.

Edge of Pavt
P.C. = 707 + 60.03 } 21' Rt of ℄
P.I. = 708 + 60.03
P.T. = 709 + 60.03
Omit Auth # ___ 4-16-65
Rough Grading in Freeway from Sta. 708+40 to 708+90 for Quant. See Sheet # 26

Ramp "A" Curve Data (Pavt Edge)
Δ = 04°00'00" Rt.
D = 02°00'00" (Arc.)
R = 2864.79'
T = 100.04'
L = 200.00' Auth # ___
E = 1.75' 4-16-65
~~P.C. = 707 + 31.35 (21' Rt of ℄)~~
~~P.I. = 708 + 31.35 (21' Rt of ℄)~~
~~P.T. = 709 + 31.35~~

Auth. Entry # ___ 4-16-65 CB3K(6.1-14) - 1 Ea.
Auth # ___ 4-16-65 CB3M(6.1-14) - 1 2 Ea.
12" Sew CMP II (0-6.0) - 46 Lft.
12" Tile Trap - 1 Ea.
12" Sewer Tap (Inc.)

Auth # 4-16-65 Prop. Ped. Bridge P-02-of 63174A
~~48" Chain Link Fence - 10 Lft.~~



Note:
Exist. Sewers, necessary to provide drainage for Exist. Stephenson, shall be maintained in service by the contractor until completion of Proposed Service Rd. and removal of all pavement on Exist. Stephenson. Sufficient drainage outlets will be maintained, after pavement is removed to provide outlet for exist. ditches along Stephenson. Abandoning and removal of the residual system will be included in the Freeway Contract.

Note:
For Trunk Sewer Plans, Quant. and connections to N.B. Serv. Rd. See Trunk Sewer Plans. Auth # 4-16-65

For Sewer See Next Contract

Auth. Entry # 4-16-65
Conc. C&G Det. 10 - 183 Lft
Conc. Pavt 9" Unif. 1261 ~~1293~~ Syds.
Pavt Reinf. - 1261 ~~1293~~ Syds.
Conc. Curb Det. 2 179 ~~362~~ Lft.
4" Conc. S.W. 110 ~~220~~ Sft.
Conc. Pavt 9" Unif. (Temp.) - 1241 Syds
Rem. Old Pavt - 1154 Syds.
Cl. A Shldrs - 164 Cyds.

Reconstr. C.B. - 1 Ea.
Cover D - 1 Ea.
To be used for Interim Drainage.

Adj. M.H. Cover - 1 Ea.

As Const.
Conc. Pavt 9" Unif. (Non-Reinf.)
Cl. A Shldrs (6" deep)

Cover A - 1 Ea.
Ex. C.B. to be buried under Temp. Pavt

Rem. C.B. & Sewer - 2 Ea.
Rem. C.B. - 1 Ea.
Aban. C.B. - 1 Ea.
Adj. M.H. Cover - 3 Ea.
10" Bulkhead - 2 Ea.

Auth # 4-16-65
Future 36' Width Pavt + 3 3/4" Crown C&G Det. 10

Auth # 4-16-65 C&G D-10

DOB S.B. Serv. Rd. Sta. 707+30.00

Sta. 737+00

Ex. CB - 157' Lt.
Top El. - 631.48
Ex. Fl.
12" NE - 625.88

Ex. CB - 181' Lt.
Top El. - 630.79
Ex. Fl.
12" N 628.08

Ex. CB - 157' Lt.
Top El. - 631.50
Ex. Fl's
12" SE - 625.55
12" SW - 627.35

Ex. CB - 181' Lt.
Top El. - 630.88
Ex. Fl's
12" S 628.03
12" NE 629.93

Ex. CB - 177.8' Lt.
Top El. - 631.45
Ex. Fl.
6" N - 627.04

Ex. CB - 170.6' Lt.
Top El. - 632.40
Ex. Fl's
6" N - 627.80
18" E and W - 626.88

Ex. CB - 156' Lt.
Top El. - 631.35
Ex. Fl's
12" NW - 626.18
10" N - 625.48

Ex. CB - 156' Lt.
Top El. - 631.84
Ex. Fl.
18" E - 627.64

Ex. CB - 157' Lt.
Top El. - 632.19
Ex. Fl's
10" SE - 627.59

Ex. CB - 118' Lt.
Top El. - 630.37
Ex. Fl.
12" E - 627.77

Ex. CB - 118' Lt.
Top El. - 630.37
Ex. Fl.
12" E - 627.72
12" SW - 626.70

Ex. S.M.H. - 185' Lt.
Top El. - 631.62
Ex. Fl's
12" NW - 626.60
12" N - 626.60
18" S - 625.02
21" E - 621.62
21" W - 622.01
18" N - 623.04

Ex. S.M.H. - 164.5' Lt.
Top El. - 631.12
Ex. Fl.
12" W - 628.90
12" E - 628.20
18" S - 624.22
15" N - 624.22
18" NW - 626.07

(Proposed)
Ex. CB - 118' Lt.
Top El. - 630.94
Ex. Fl's
10" NW - 626.79
12" E - 627.94

(Adj.)
Ex. CB - 118' Lt.
Top El. - 631.29
Ex. Fl's
12" E - 627.57
10" SW - 625.83

Ex. S.M.H. - 145.5' Lt.
Top El. - 631.79
Ex. Fl.
12" W - 624.79
18" N - 625.94
15" S - 625.04
12" E - 624.82
10" E - 627.26
10" S W - 626.94
18" N - 626.94
18" N W - 626.94

(Adj.)
Ex. S.M.H. - 145' Lt.
Top El. - 632.32
Ex. Fl's
12" W - 623.97
15" S - 623.20
18" N - 623.50
12" E - 623.10
10" NW - 623.40
18" W - 623.04

(Rem.)
Ex. CB - 118' Lt.
Top El. - 630.95
Ex. Fl's
10" SW - 626.45
12" E - 628.65

(Rem.)
Ex. CB - 157' Lt.
Top El. - 632.19
Ex. Fl's
10" SE - 627.59

Prop. Fl. 626.7 (W)
627.0 (E)

DATE	BY	OPERATION
		PRELIMINARY R.O.W. CHECKED
		FINAL DESIGN
		FINAL DESIGN CHECKED
		PROJECT PLOTTED
		FINAL R.O.W. DRGS.
		FINAL R.O.W. CHECKED
		QUANTITIES CHECKED
		SQUAD
		R. H. Stevenson 1962

DATE	BY	OPERATION
		SURVEYED
5-63	D.T. Hill	PLAN PLOTTED
8-63	D.T. Hill	PROFILE PLOTTED
8-63	D.N. Hill	PROJECT CHECKED
8-63	E.B. Barrett	PRELIMINARY GRADE
8-63		GRADE INSP. & CHECKED
		FEDERAL INSPECTION

S.B. SERVICE RD.

FILE NO. 63174 A, C-52 | STATE PROJECT 63174A | FEDERAL PROJECT IM-2(16)60 | SHEET 18

AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
QUANTITY CHECK		
QUANTITY CHECKED		
QUANTITIES CHECKED		
ISSUED		

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED	E.P. Dabney	9-64
PLAN REVIEWED	D.L. Mill	9-64
PROFILE PLOTTED	E.P. Dabney	9-64
PROFILE REVIEWED	D.L. Mill	9-64
PRELIMINARY GRADE	E.P. Dabney	9-64
GRADE INSPECTION		
FINAL GRADE INSPECTION		

REVISED 1966

Est. for Sewers & Structures Sta. 709+00 to 722+00
(Under All Pav't & Shldrs.)
Earth Exc. & Waste - 76 Cyds.
Por. Mat. Gr. A - 76 Cyds.

Note: For Trunk Sewer Plans, Quant. and Connections to NB Serv. Rd. Sewer. See Trunk Sewer Plans

SEC 36 T1N, R11E N

SB Serv. Rd. & Curve Data
Δ = 18°25'35" Lt.
D = 06°00'00" (Arc.)
R = 956.93'
T = 154.89'
L = 307.11'
E = 12.48'
P.C. = 716+59.11
P.I. = 718+14.00 (190' Lt. of 718+14.00 Surv. Tang.)
P.T. = 720+06.22
SUB * Note Sta Equa.

SB Serv. Rd. Sta. Equa.
Sta. 718+60 Back = Sta 719+00 Ahead
Line Shortens 40'

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-2(184)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND/HIRZEL TAP		19	

Drive Opening - 30 Lft.
Conc. Pav't 7" Unif. - 23 Syd.

Drive Opening - 30 Lft.
Conc. Pav't 7" Unif. - 20 Syds.

HERMAN W. MEINKE

NORTH EIGHT OAKLAND

Ramp "A"

Prop. Jump Use D02 of 63174A

Steel Beam G.R.
Auth. 4-16-65

Conc. Pav't 9" Unif. 4343 ~~4352~~ Syds.
Pav't Reinf. 4343 ~~4352~~ Syds.
Conc. Curb Det. 2 2233 ~~2292~~ Lft.
4" Conc. S.W. - 2505 Sft.
Conc. Curb & Gutter Det. 10 39 Lft.
Auth. Extra # ____
4-16-65

Leave C.B. To be used for Interim Drainage

LB 3M (6.1-14') - 1 Ea.
12" Sew. C76 II (0-6.0') - 56 Lft.
Adj. M.H. Cov. - 4 Ea.
Reconst. C.B. - 1 Ea.
Aban. M.H. - 1 Ea.
12" Tile Trap - 1 Ea.

Adj. M.H. Cov. - 2 Ea.
Aban. M.H. - 1 Ea.

CB 3M (6.1-14') - 1 Ea.
12" Sewer (6.1-14') - 6 Lft.
12" Tile Trap - 1 Ea.
12" Sew. Tap. (Inc.)

Adj. M.H. Cov. - 3 Ea.
Adj. C.B. Cov. - 2 Ea.
Rem. M.H. - 1 Ea.
Aban M.H. - 1 Ea.
Aban. C.B. - 2 Ea.
12" Sew Bulkhead - 2 Ea.

CB 6M (6.1-14') - 1 Ea.
CB 3M (6.1-14') - 2 Ea.
12" Sew. C76 II (0-6.0') - 78 Lft.
12" Sew. (0-6.0') - 38 Lft.
Aban. M.H. - 1 Ea.
Adj. M.H. Cover - 1 Ea.
12" Tile Trap - 2 Ea.
15" Sew. Bulkhead - 1 Ea.

Steel Beam G.R. Sta. 717+48.12 to Sta. 722+18± (Meyers Rd. Bridge) 432.0 Lft.

Trunk Sewer

Sta. Equa. 718+60 B. = 720+00 Ah.

N 02° 30' 29" W

N 20° 56' 09" W

N 20° 34' 25" W

Conc. Curb Det. 2 | Elva | Conc. Curb Det. 2 (7" Face) Lt. | Maxlow | Conc. Curb Det. 2 (7" Face) Lt. | Evelyn | Conc. Curb Det. 2 (7" Face) Lt. | Madge | Conc. Curb Det. 2 (7" Face) Lt.

Auth. # 4-16-65 Var. Width Conc. Curb Det. 10 (Lt. Side)

30' Conc. Pav't 9" Unif. (Reinf.)

Conc. Curb Det. 2 (7" Face) Rt

Earth Exc. 3048 Cyds.
Emb. + Str. = 2325 Cyds.
Waste = 723 Cyds.

From Sta. 707+30

To Sta. 737+00

Prop. Top of Curb Profile Lt.

Prop. Top of Metal Grade

Prop. Top of Curb Profile Rt.

Prop. Top of Metal Grade

Prop. Top of Curb Profile Rt.

Prop. Top of Metal Grade

Ex. Sewer Profile Lt.

Ex. Sewer Profile Rt.

Ex. Ground Profile Lt.

Ex. Ground Profile Rt.

Ex. Sewer Profile Lt.

Ex. Sewer Profile Rt.

Ex. Ground Profile Lt.

Ex. Ground Profile Rt.

Prop. Fl. 628.8 As Const.

Prop. Fl. 628.3 (E)

Prop. Fl. 628.2 (E)

Prop. Fl. 628.0 (W) 622.4 (S.F.)

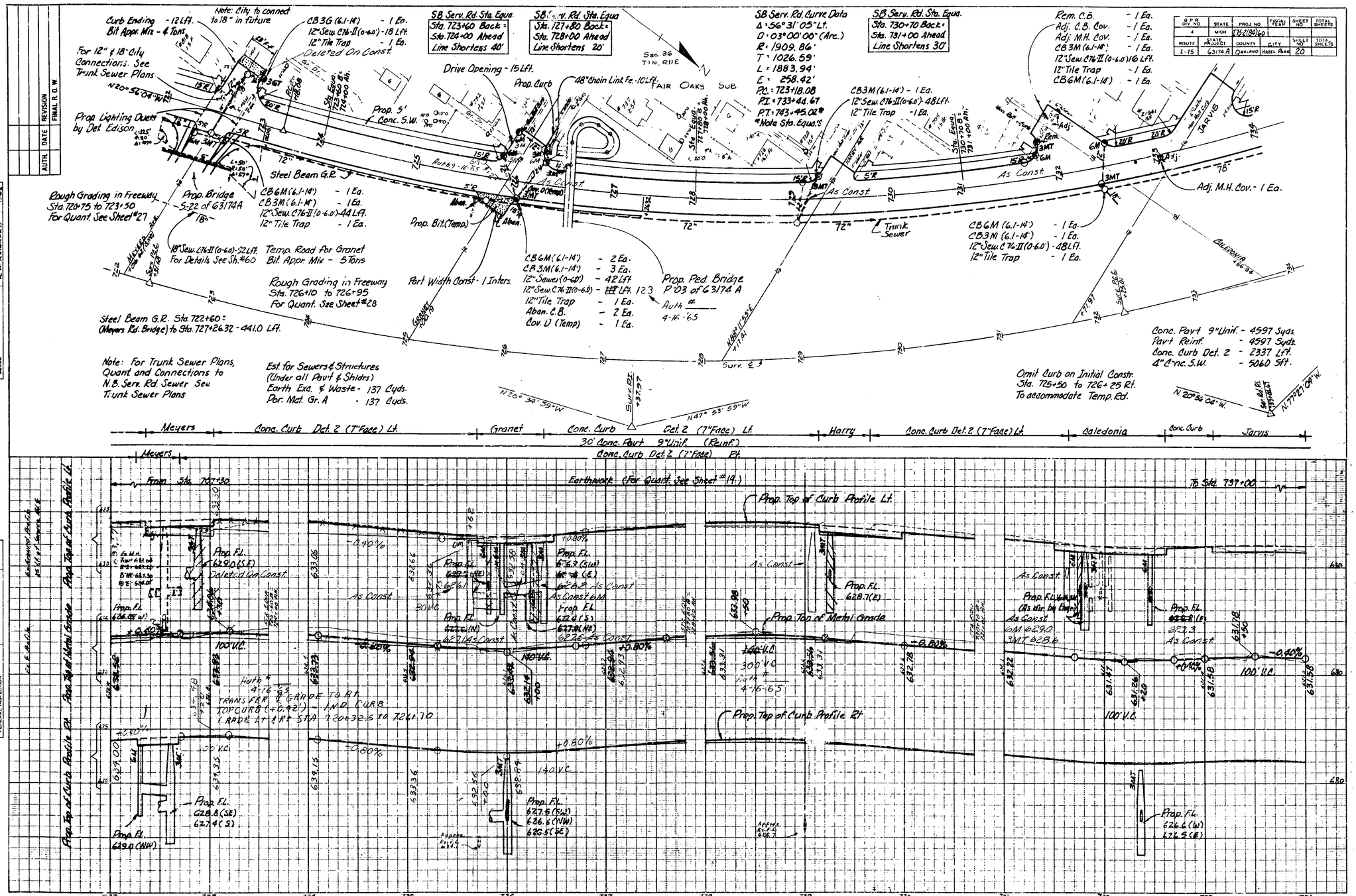
Auth. 4-16-65 Transfer Grade to Rt. Top Curb (D042) Ind. Curb Grades Lt. & Rt. Sta. 720+32.5 - 726+70

710 711 712 713 714 715 716 717 718 719 720 721 722

S.B. SERVICE RD.

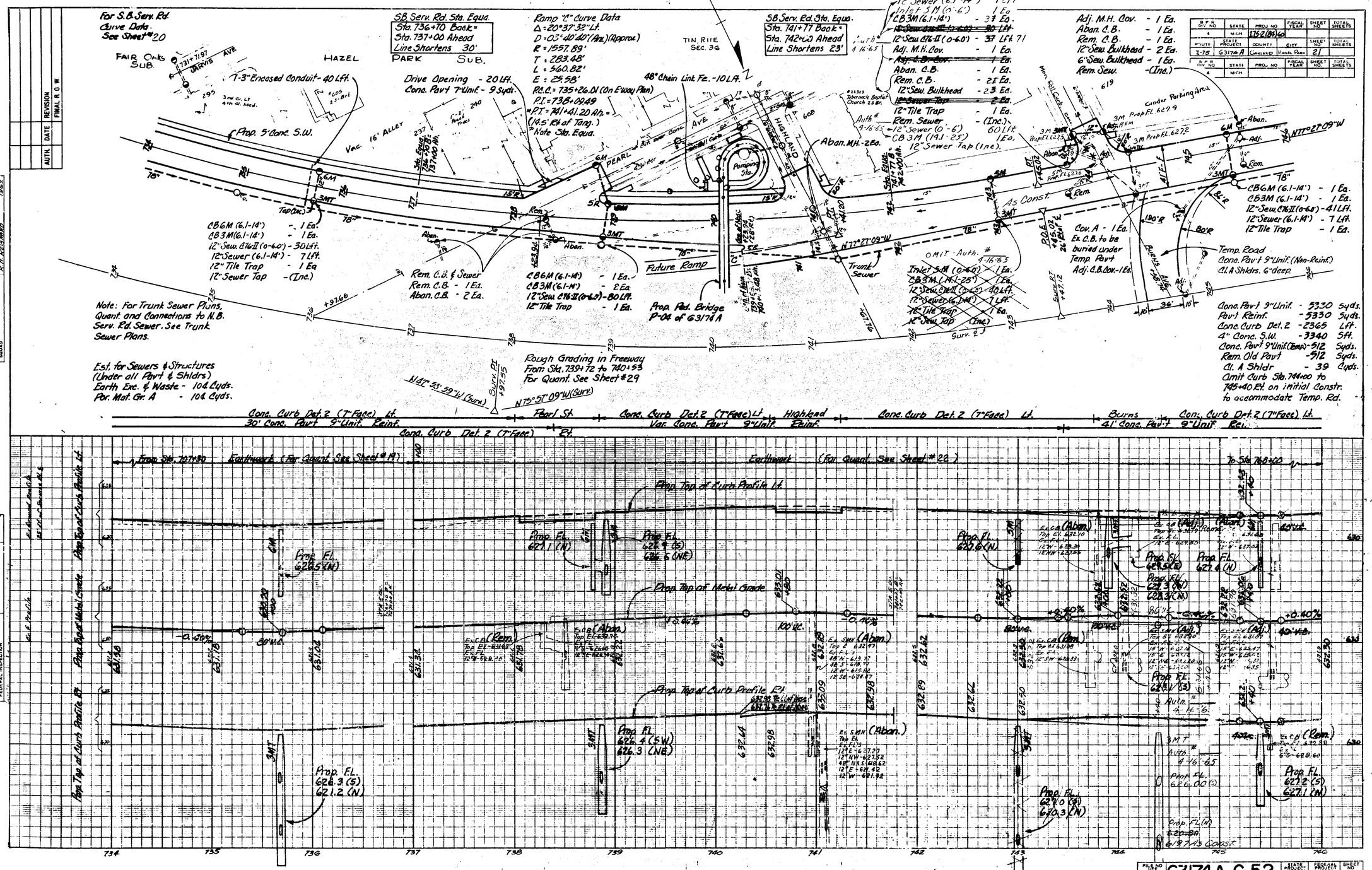
FED. NO.	PROJECT	SHEET NO.
63174A	C-52	19

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(184)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	20	



S.B. SERVICE RD.

FILE NO.	SHEET NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52		63174-A	I-75-2(184)60	20



S.B. SERVICE RD.

FILE NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
63174A, C-52					

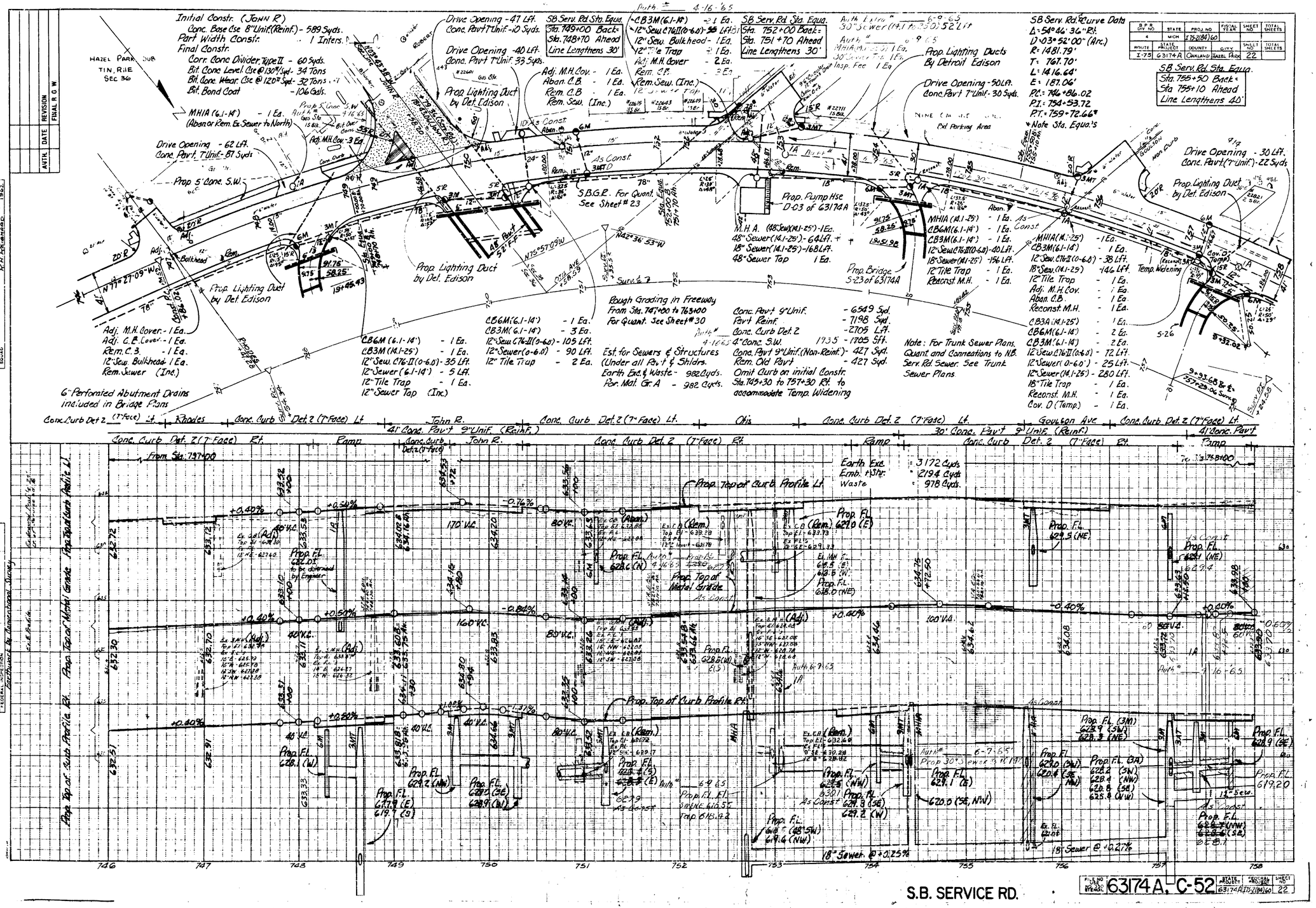
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	21	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD	R.H. REGIMBO	1962

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED	Traced R.J. Miller	2-30-62
PLAN CHECKED	E.O. ABBEY	9-62
PROFILE PLOTTED	E.O. ABBEY	9-62
PROFILE CHECKED	D.J. Hill	
PRELIMINARY GRADE		
GRADE INSPECTION		
FEDERAL INSPECTION		

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84) 60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-A	OAKLAND	HAZEL PARK	22	



S.B. SERVICE RD.

FILE NO.	STATE PROJECT	COUNTY PROJECT	SHEET NO.
63174A-C-52	63174A	I 75-2(84)60	22

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
PLAN & PROFILE CHECKED		
PROVED		
FINAL R.O.W. CHECK		
QUANTITIES CHECKED		
SIGNED		5-68

OPERATION	BY	DATE
SURVEYED		5-65
PLAN PLOTTED	R.P. Lanney	
PLAN REVIEWED	J.A. Jenkins	
PROFILE PLOTTED	C.D. Mayer	6-66
PROFILE CHECKED	D.L. Hill	
HYDRAULICS		
GRADE INSPECTION		
FEDERAL INSPECTION		

A.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(84)60			
RO. SITE	STATE PROJECT	COUNTY	CITY	SHEET I/O	TOTAL SHEETS
I-76	63174 A	OAKLAND	HAZEL PARK	23	

SB Serv. Rd. Sta. Equa.
Sta. 759+80 Back =
Sta. 759+50 Ahead
Line Lengthens 30'

6-9-65
Auth Extra #
30" Sewer (I.E. 25.0) 910 L.ft
Auth # 6-9-65

Rough Grading in Freeway
From Sta. 747+00 to 763+00
For Quant. See Sheet #30

M.H. I A (14.1 to 25.0) 2 Ea
- Earth Exc. & Waste 2100 C.y.s.
- Por. Mat. Gr. A 2100 S.y.d.
* Inclusive 30' run

Steel Beam Guard Rail
Sta. 746+84.99 to 764+77.22 - 1712.0 L.ft.
Note: In locations where temp. widened Pav't is used & Permanent G.R. cannot be placed, Temp. G.R. shall be used during constr.

SB Serv. Rd. Sta. Equa.
P.T. Sta. 762+04.30 Back =
Sta. 761+86.85 Ahead
Δ = 10° 29' 00" - (158.57' Lt.
Surv. Sta. 761+87.22)
Line Lengthens 17.45'

N
T1N, R11E

SB Serv. Rd. Curve Data.
Δ = 02° 57' 40" Lt.
D = 01° 30' 00" (Arc.)
R = 3,819.72'
T = 98.73'
L = 197.41'
E = 1.28'
P.C. = 764+28.32
P.I. = 765+27.05 (141' Lt. R.S. = 27.0 Surv.)
P.T. = 766+25.73

Ramp "M" Curve Data.
Serv. Rd. Sta. Face of Curb
Δ = 03° 21' 44" Rt.
D = 05° 20' 00" (Arc.)
R = 1074.30'
T = 31.53'
L = 63.04'
E = 0.46'
P.C. = 767+74.11 (37' Rt. of ℄)
P.I. = 768+10.67 (37' Rt. of ℄ Sta 768+05.64)
P.T. = 768+42.18

Rezonst. M.H. - 1 Ea.
Adj. M.H. Cov. - 1 Ea.
Adj. C.B. Cov. - 1 Ea.
Aban. M.H. - 1 Ea.
Rem. C.B. - 3 Ea.
Rem. Sewer - (Inc.)

As Const.

Est for Sewers & Structures
(Under all Pav't & Shldrs.)
Earth Exc. & Waste - 202 Cyds.
Por. Mat. Gr. A - 202 Cyds.

Deleted On Const.
M H I A (6.1-14') - 2 Ea
C B 6 M (6.1-14') - 2 Ea
C B 3 M (6.1-14') - 2 Ea.
12" Sew. C76-II (0-6.0') - 95 L.ft.
12" Sewer (0-6.0) - 165 L.ft.

Nine Mile Inters
Part Width Const. - 1 Inters.
Adj. M.H. Cov. - 3 Ea.
Aban. M.H. - 1 Ea.
12" Sew. Bulkhead - 1 Ea.
Rem. C.B. - 2 Ea.
Rem. Sewer (Inc.)

For 6" Abutment Drain
See Bridge Plans

Drives (This Sheet)

Sta.	Dr. Open. L.ft.	Pav't (Unif.) Syd.
758+30	24	20
760+50	50	40
762+60	50	66
763+00	30	36
764+40	26	32
765+80	24	24
767+60	24	19

Rem. M.H. 1 Ea.
Rem. C.B. 1 Ea.
Aban. C.B. 3 Ea.
Rem. Sewer (Inc.)

Temp Road
Conc. Pav't 9" Unif. (Non-Reinf.)
Cl. A Shldrs. 6" deep

Rem. C.B. - 2 Ea.
Rem. Sew. - (Inc.)

M H I A (6.1-14') - 1 Ea
C B 6 M (6.1-14') - 2 Ea.
C B 3 M (6.1-14') - 2 Ea.
12" Sew. C76-II (0-6.0') - 104 L.ft.
12" Sew. (0-6.0') - 163 L.ft.

Rem. M.H. - 1 Ea.
Rem. C.B. - 1 Ea.
Rem. Sew. (Inc.)

M H I A (6.1-14') - 1 Ea.
C B 3 M (6.1-14') - 1 Ea.
12" Sew. C76-II (0-6') - 30 L.ft.
12" Sew. (6.1-14') - 168 L.ft.

Conc. Pav't 9" Unif. - 6964 Syds.
Pav't Reinf. - 6964 Syds.
Conc. Curb Det. Z - 2512 L.ft.
4" Conc. S.W. 2630 - 1800.00 L.ft. Auth # 4-16-65
Conc. Pav't 9" Unif. (Temp) - 581 Syds.
Rem. Old Pav't - 581 Syds.
Cl. A Shldr. - 54 Cyds.
(Omit Curb on initial Constr. Sta. 762+50 to 764+10 to accommodate Temp. Rd.)

For Quant.
See Sheet #24

Prop. Lighting Duct by Det. Edison

Adj. M.H. Cov. - 1 Ea.

Ex 30" Sewer Flows East ~~To be intercepted by City~~

Prop. S' Conc. S.W.

Auth # 1-16-65

Ramp "M"

Conc. Curb | Det. Z (7" Face) Lt. | Woodruff | Conc. Curb Det. Z (7" Face) Lt. | Nine Mile | Conc. Curb Det. Z (7" Face) Lt. | Cherry | Conc. Curb Det. Z (7") Lt.
4' Conc. Pav't 9" Unif. Reinf. | 52' Conc. Pav't 9" Unif. Reinf. | 30' Conc. Pav't 9" Unif. Reinf.
Conc. Curb Det. Z (7" Face) Rt. | Nine Mile | Conc. Curb Det. Z (7" Face) Rt.

Earthwork (For Quant. See Sheet #22) | Earthwork (For Quant. See Sheet #24)

From Sta. 757+00 | To Sta. 788+75

Prop. Top of Lt. Curb Profile
Prop. Top of Metal Grade
Prop. Top of Rt. Curb Profile
Prop. Top of Curb Profile Lt.
Prop. Top of Curb Profile Rt.
Ex. Sidewalk Prof.

Prop. F.L. 628.6 (NE)
Prop. F.L. 628.0 / 628.8
Prop. F.L. 627.4 (E) / 627.8
Prop. F.L. 628.8 (NE)
Prop. F.L. (3M) 628.3 (SW) 628.2 (NE)
Prop. F.L. (1A) 628.1 (S-W) 627.3 (NW SE)
Prop. F.L. 628.3 (N) 628.2 (S)
Prop. F.L. 628.5 (S)
Prop. F.L. 621.5 (E) 626.5 (N)
Prop. F.L. (3M) 627.0 (W) 626.9 (E)
Prop. F.L. (1A) 626.8 (W) 626.0 (N,S)
Prop. F.L. 621.9 (W) 625.4 (N,S)
Prop. F.L. 628.1 (E)
Prop. F.L. 628.4 (S-W) 628.8 (N,S)
Future Top from Ex. Ins. 628.8

Prop. F.L. to intercept Ex. Sew. as Directed by Engineer

Auth # 6-9-65
Ex. F.L. 30" W.
℄ Prop. F.L. E.L.S.E. 627.80

12" Sewer @ +0.54%
12" Sewer @ -0.30%
15" Sewer @ -0.25%

758 759 760 761 762 763 764 765 766 767 768 769 770

S.B. SERVICE RD.

FILE NO.	STATE PROJECT	PROJECT NO.	SHEET NO.
63174 A, C-52	63174 A	175-2(84)60	23

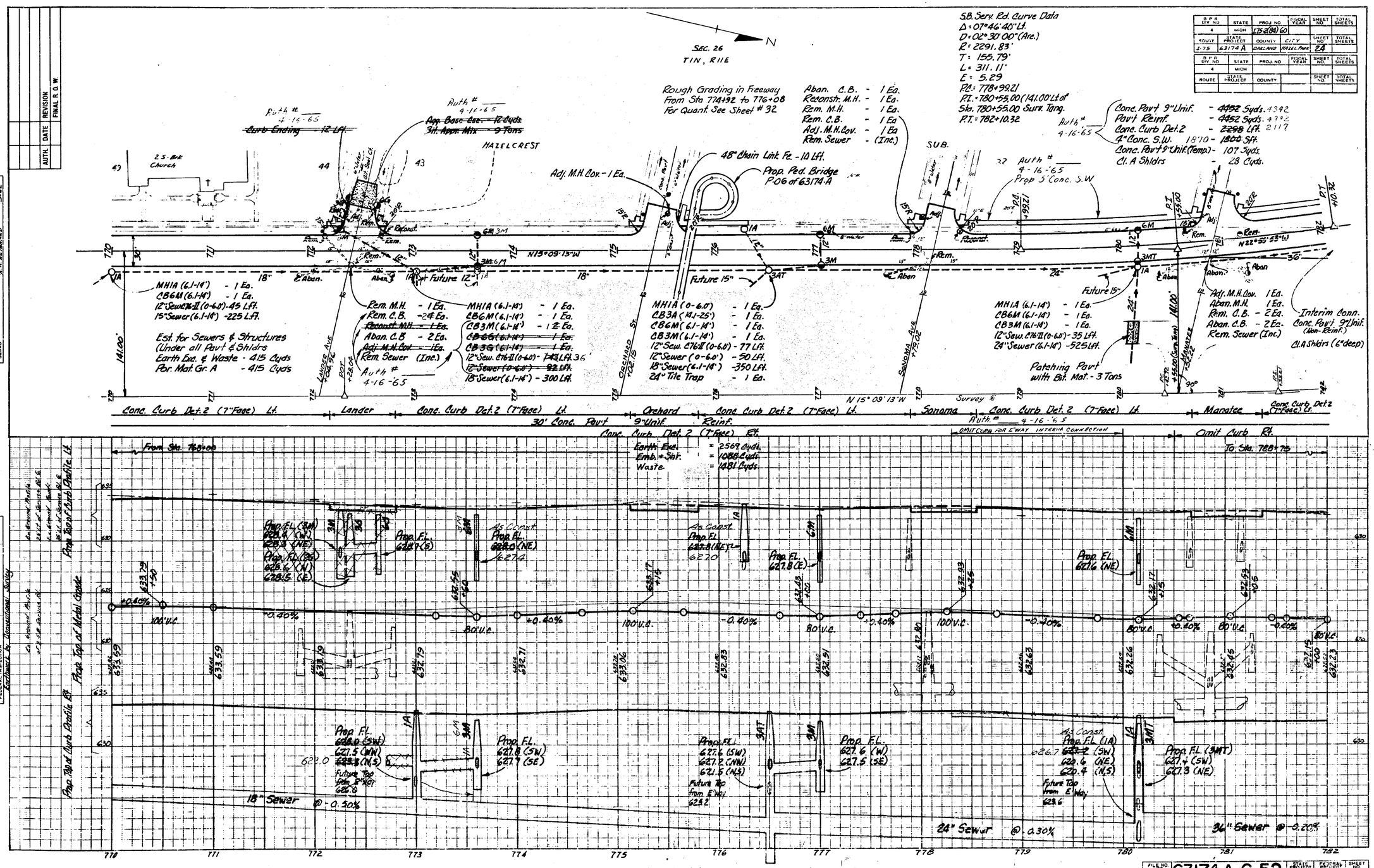
AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL T.O.W. CHECK		
PROPERTY		
QUANTITIES CHECKED		
SIGNED	R.H. RICHARDS	5-62

OPERATION	BY	DATE
SURVEYED		2-62
PLAN PLOTTED	R.D. RAMEY	2-62
PROFILE PLOTTED	R.D. RAMEY	2-62
PROP. PLOTTED	R.D. RAMEY	6-62
PROFILE CHECKED	D.J. HILL	6-62
PROPERTY CHECKED		
GRADE INSPECTION		
FEDERAL INSPECTION		
ESTIMATE BY CONDITIONAL SURVEY		

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	(75-2(88)) 60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	24	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



S.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A, C-52	63174 A	(75-2(88)) 60	24

AUTH.	DATE	REVISION
		FINAL R. O. W.

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I152(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	WEST PARK	25	

Conc. Pavt 9" Unif. -2531 Syds.
Pavt Reinf. -2531 Syds.
Conc. Curb Det. 2 -1248 Lft.
4" Conc. S.W. -3200 Sft.
Conc. Pavt 9" Unif. (Temp.) -873 Syds.
Rem. Old Pavt -553 Syds.
Cl. A Shldr -114 Cyds.

Est. for Sewers & Structures
(Under all Pavt. & Shldrs.
Earth Ext. & Waste - 576 Cyds
Per. Mat. Gr. A - 576 Cyds

As Const.
Drive Opening - 30 Lft.
Conc. Pavt 7" Unif. - 27 Syds

Drive Opening - 30 Lft.
Conc. Pavt 7" Unif. - 27 Syds.

Drive Opening 24 Lft.
Conc. Pavt 7" Unif. 22 Syds.
Locate Drive as directed by Engineer.

Prop. 30" Sewer by City to M.H.

Drive Opening - 15 Lft.
Cl. A Appr. - 2 Cyds.

Sec. 26
T1N, R11E

30" Sewer Tap. - 1 Ea.
Rem. or Aban. Ex. Sewer to East

54" Sewer (14.1-25') - 47 Lft.
54" Sewer Tap - 1 Ea
Rem. Ex. Sewer East to Prop. M.H.A - (Inc.)
Inspection Fee - 1 Ea.

Bit. Parking Area
16' Alley
HAZELCREST
SUB.
N22°55'53"W
As Const.
Interim Connection
Future 15" Sewer from Fwy
Ex. S.B. Stephenson
Adj. M.H. - 1 Ea.
Conc. Pavt 9" Unif. (Non-Reinf.)
Cl. A Shldrs (6" decp.) Lt. & Rt.
Prop. Temp.
Ex. N.B. Stephenson
M.H.A (14.1-25') 54" Sew - 1 Ea.
42" Sewer (14.1-25') - 265 Lft.
Bit. over Conc.
Leave
TEN OAKLAND
SUB.
Conc. Pavt
Max. Curb
Bit.
Boulevard Heights Blvd.
Ansonville Blvd.
N19°34'15"W

MHIA (6.1-14') - 1 Ea.
CBGM (6.1-14') - 1 Ea.
CB3D (6.1-14') - 1 Ea.
12" Sew. C76-II (0-6.0') - 50 Lft.
36" Sewer (6.1-14') - 207 Lft.
12" Tile Trap 1 Ea.

MHIA (6.1-14') - 1 Ea.
CBGM (6.1-14') - 1 Ea.
CB3M (6.1-14) - 2 Ea.
12" Sew. C76-II (0-6.0') - 90 Lft.
12" Sewer (0-6.0') - 55 Lft.
30" Sewer (6.1-14') - 77 Lft.
36" Sewer (6.1-14') - 428 Lft.
12" Tile Trap - - 2 Ea.

P.M.E.S.B. Serv. Rd.
Sta. 788+75
Surv. 67

Conc. Curb Det. 2 (7" Face) Lt. | Chestnut | Conc. Curb Det. 2 (7" Face) Lt. | Hamata | Conc. Curb Det. 2 (7" Face) Lt.
30' Conc. Pavt 9" Unif. (Reinf.)
Conc. Curb Det. 2 (7" Face) Rt.

Drain Curb Rt.
From Sta. 78+00
Earthwork (For Quant. See Sheet #24)
Prop. Top of Curb Profile Lt.
Future Top of Curb Profile Lt.
Prop. Top of Metal Grade
Future Top of Metal Grade
Prop. Top of Curb Profile Rt.
Future Top of Curb Profile Rt.
Prop. Top of Curb Profile Rt.

As Const.
Prop. FL. 627.8 (E)
627.79

Prop. FL. 627.4 (NE)
Prop. FL. 629.02 (E)
As Const.
Prop. FL. 627.6 (SE)
627.71

Ex. M.H.
Ex. 6" W = 616.94
Ex. 30" E = 617.76
Prop. FL. 615.94 (E)

80' V.C. | +0.40% | 100' V.C. | -0.20% | 80' V.C. | +0.40% | 100' V.C. | -0.60% | 120' V.C. | +0.71% | 100' V.C.

Prop. FL's. 627.3 (W)
627.2 (W)
Prop. FL's. 627.0 (S)
620.0 (N.S)
Future Top from E. Way 620.3

Prop. FL. 627.2 (SW)
627.1 (W)
As Const.
Prop. FL.
627.4 (NW)
626.3 (S)
619.5 (W)
~~619.1~~ (N.S)
618.6

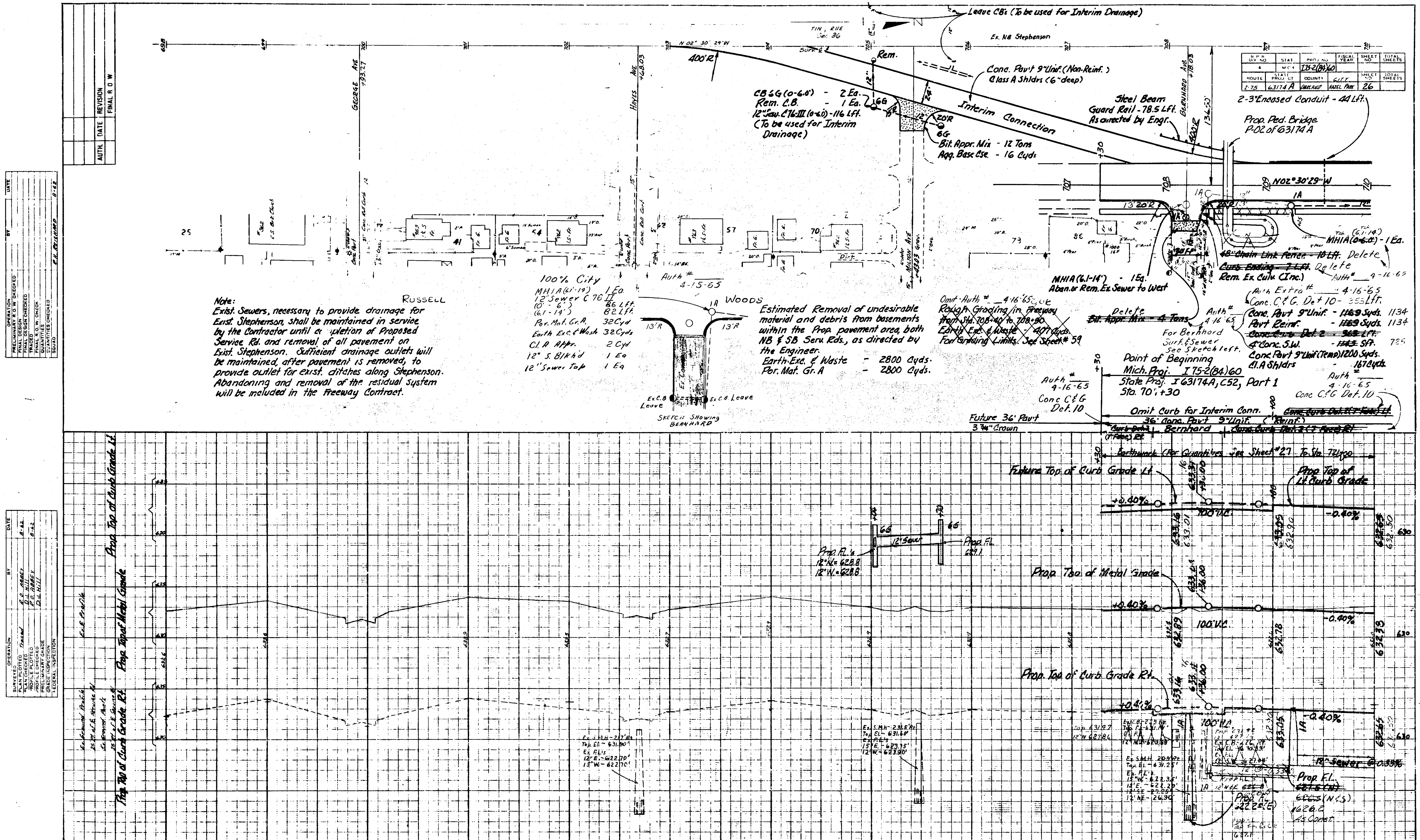
Prop. FL. 617.83 (E)
616.03 (W)
618.5 (S)

36" Sewer @ - 0.22%
42" Sewer @ - 0.22%

782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794

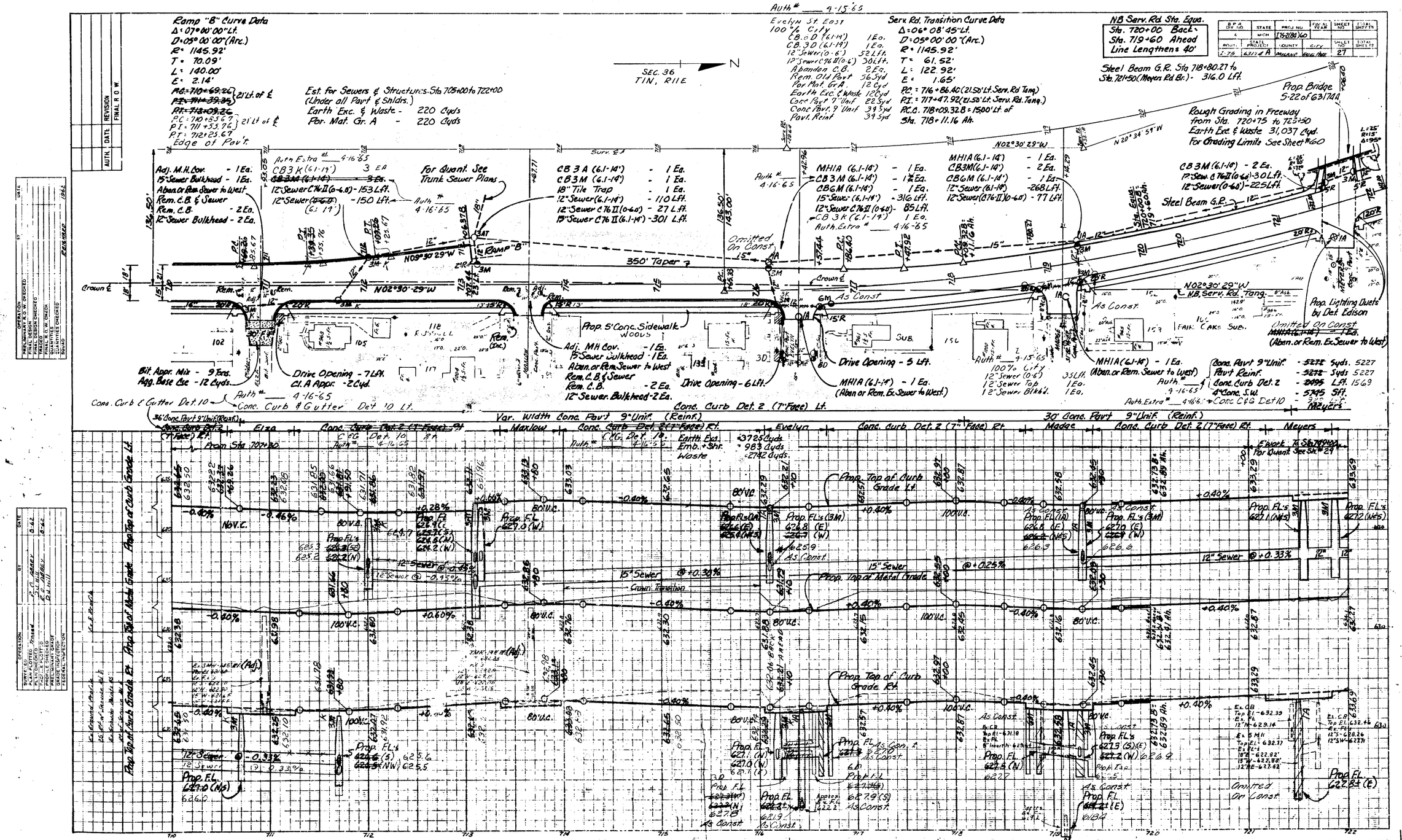
S.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A, C-52	63174A	I152(84)60	25



N.B. SERVICE RD.

FILE NO. USE NO. 380 STENCIL | 63174A, C-52 | STATE PROJECT 63174A | FEDERAL PROJECT I 75-2(84)60 | SHEET NO. 26


Ramp "B" Curve Data
Δ = 07°00'00" Lt.
D = 05°00'00" (Arc.)
R = 1145.92'
T = 70.09'
L = 140.00'
E = 2.14'
PC = 710+55.67
PI = 711+53.76
PT = 712+25.67
Edge of Pavt.
Est. for Sewers & Structures. Sta 705+00 to 722+00
(Under all Pavt & Shlders.)
Earth Exc. & Waste - 220 Cyds
Por. Mat. Gr. A - 220 Cyds
Evelyn St East
100% City
Serv. Rd. Transition Curve Data
Δ = 06° 08' 45" Lt.
D = 05° 00' 00" (Arc.)
R = 1145.92'
T = 61.52'
L = 122.92'
E = 1.65'
P.C. = 716+86.40 (21.50' Lt. Serv. Rd Tang.)
P.I. = 717+47.92 (21.50' Lt. Serv. Rd. Tang.)
P.C.C. 718+09.32 B = 1580' Lt. of Sta. 718+11.16 Ah.
N.B. Serv. Rd. Sta. Equa.
Sta. 720+00 Back
Sta. 719+60 Ahead
Line Lengthens 40'
Steel Beam G.R. Sta 718+80.27 to Sta. 721+50 (Meyers Rd Br.) - 316.0 Lf.
Prop. Bridge S-22 of 63174A
Rough Grading in Freeway from Sta. 720+75 to 723+50
Earth Exc. & Waste 31,037 Cyd.
For Grading Limits See Sheet #60
Steel Beam G.R.
Prop. Lighting Outlets by Det. Edison
Omitted On Const (Aban. or Rem. Ex. Sewer to West)
Prop. 5' Conc. Sidewalk
Drive Opening - 7 Lf.
Cl. A Appr. - 2 Cyd.
Bit. Aggr. Mix - 9 Tons.
Agg. Base Cse - 12 Cyds.
Drive Opening - 6 Lf.
Drive Opening - 5 Lf.
Conc. Curb & Gutter Det. 10
Conc. Curb Det. 2 (7" Face) Lt.
Var. Width Conc. Pavt 9" Unif. (Reinf.)
30' Conc. Pavt 9" Unif. (Reinf.)
Elza
Maxlow
Evelyn
Madge
Meyers
Prop. Top of Curb Grade Lt.
Prop. Top of Curb Grade Rt.
Prop. Top of Metal Grade
Crown Transition
N.B. SERVICE RD.
63174 A, C-52

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN CHECKED		
FINAL DESIGN CHECKED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
TOTAL	P.A. Kirkwood	1962

B.F.P. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-2(30)60		28	
ROUTE	STATE PROJECT	COUNTY	CITY		
I-75	G3174-A	Oakland	Hazel Park		

Temp. Road for Granet
Bit. Appr. Mix - 25 Tons
Agg. Base Cse. - 45 Cyds
Cl. A Shldrs. - 28 Cyds

Temp. Road for Ex. N.B. Stephenson
From Pt. of Sta. 724+80± to Pt. of Sta 733+80± Surv. ℄.
Conc. Pavt 9" Unif. (Temp.) - 2085 Syds.
Cl. "A" Shldrs. - 277 Cyds.
Rem. Old Pavt - 2085 Syds.
For Location of Temp. Road
See Removal Sheet # 36 & 37

NB Serv. Rd. Sta. Equa.
Sta. 726+00 Back =
Sta. 725+50 Ahead
Line Lengthens 50'

Rough Grading in Freeway
from Sta. 726+10 to 726+95
Earth Exc. & Waste - 4754 Cyds.
For Grading Limits See Sheet # 60

T1N, R11E
SEC. 36

NB Serv. Rd. Curve Data
Δ = 100°09'38" Lt.
D = 02°30'00" (Int.)
R = 2291.83'
T = 1609.55'
L = 2806.42'
E = 508.73'
P.C. = 715+65.33 (143.00' Rt. of Sta. 715+65.33 Surv. ℄)
PI = 731+74.88
PT = 741+84.75 *
* Note: Sta. Equa's

NB Surv. Rd. Sta. Equa.
Sta. 732+00 Back =
Sta. 731+60 Ahead
Line Lengthens 40'

Steel Beam G.R. Sta. 72.+36± (Meyers Rd) to Sta 724+78.52 - 291.0 Lft.

Auth # 4-16-65
~~CB6M(6.1-14') - 1 Ea.~~
CB3M(6.1-14') - 2 Ea.
12" Sew. C76II (0-6.0') - 36 Lft.

Prop. Temp. Bit.

Ex. S.B. Stephenson

Aban. C.B. - 2 Ea. (After Temp. is Removed)

Prop. 5' Conc. Sidewalk

Auth. # 4-15-65
Granet Ave.
100% City
CB3M (0-6') 1 Ea.
CB6M (0-6') 1 Ea.
12" Sewer (0-6') 129 Lft.
12" Sewer C76III (0-6') 28 Lft.
Abandon. C.B. 2 Ea.
Rem. Old Pavt 39 Syd.
Por. Mat. Gr. A. 5 Cyd.
Earth Ex. & Waste 5 Cyd.
Rem. S.W. 18 Syd.
4" Conc. Sidewalk 165 Sft.
Conc. Pavt 7" Unif. 7 Syd.
Conc. Pavt 9" Unif. 32 Syd.
Pavt Reinf. 32 Syd.
Class A Appr. 2 Cyd.

MHIA (6.1-14') - 1 Ea.
CB6M (6.1-14') - 1 Ea.
CB3M (6.1-14') - 3 Ea.
12" Sewer (0-6.0') - 156 Lft.
12" Sewer C76II (0-6.0') - 70 Lft.

Prop. Ped. Bridge
P.03 of G3174 A

Drive Opening - 150 Lft.
Conc. Pavt. 7" Unif. - 53 Syds.
(to be located on const. by Engr.)

MHIA (6.1-14) - 1 Ea.
(Aban. or Rem. Ex. Sewer to West)

Part Width Const 1 Inters.
(For Granet Ave.)

Est. for Sewers & Structures
(Under all Pavt & Shldrs)
Earth Exc. & Waste - 256 Cyds.
Por. Mat. Gr. A - 256 Cyds.

48" Chain Link Fe - 10 Lft.

MHIA (6.1-14') - 1 Ea.
(Aban. or Rem. Ex. Sewer to West)

Rem. C.B. & Sewer
Rem. C.B. - 1 Ea.

Drive Opening - 50 Lft.
Conc. Pavt 7" Unif. 61 Syds.

MHIA (6.1-14') - 1 Ea.
CB6M (6.1-14') - 2 Ea.
CB3M (6.1-14') - 2 Ea.
12" Sewer (0-6.0') - 92 Lft.
12" Sewer (6.1-14') - 320 Lft.
12" Sewer C76II (0-6.0') - 88 Lft.

Rem. C.B. & Sewer
Rem. C.B. - 2 Ea.
Aban. C.B. - 2 Ea.

Leave CB for Temp. Ext. Drainage
Aban.

Conc. Curb Spec. - 80 Lft.
(See Spec. Det. Sheet # 4)

Omit Curb on initial Constr.
Sta. 724+25 to 725+00 Lt. to accommodate Temp. Road.

Rem. C.B. & Sewers
Rem. C.B. - 3 Ea.

CB3A (6.1-14') - 1 Ea.
CB6M (6.1-14') - 2 Ea.
CB3M (6.1-14') - 2 Ea.
12" Sewer (0-6.0') - 20 Lft.
12" Sewer C76II (0-6.0') - 83 Lft.
15" Sewer (6.1-14') - 372 Lft.
18" Tile Trap - 1 Ea.

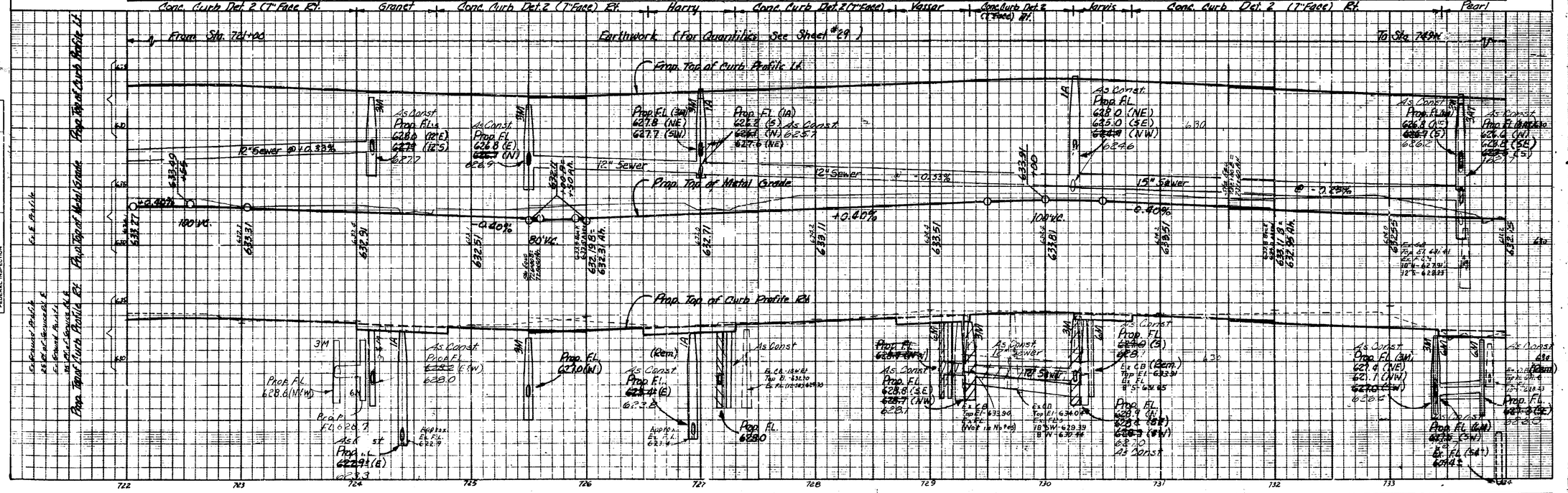
Drive Opening - 24 Lft.
Conc. Pavt 7" Unif. - 10 Syds.

Conc. Pavt 9" Unif. - 4972 Syds.
Pavt Reinf. - 4972 Syds.
Conc. Curb Det. 2 - 2743 Lft.
4" Conc. S.W. - 5856 Sft.

Conc. Curb Det. 2 (7" Face) Rt. — Granet — Conc. Curb Det. 2 (7" Face) Rt. — Harry — Conc. Curb Det. 2 (7" Face) — Vassar — Conc. Curb Det. 2 (7" Face) Rt. — Jarvis — Conc. Curb Det. 2 (7" Face) Rt. — Pearl

30' Conc. Pavt 9" Unif. (Reinf.)

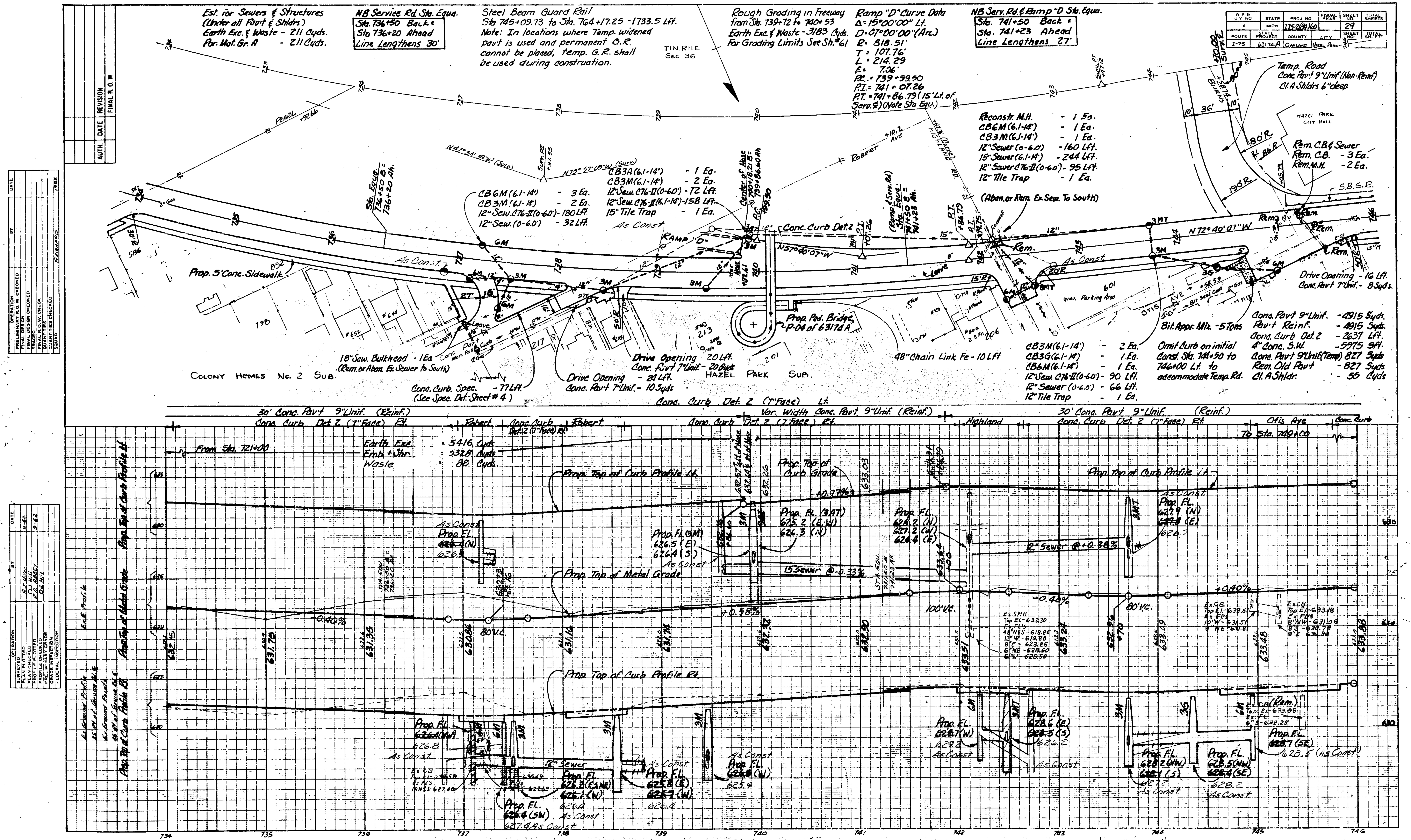
Conc. Curb Det. 2 (7" Face) Lt.



SURVEYED	R.J. Miller (Crews)	8-65
PLAN PLOTTED	E.E. Abney	8-65
PLAN CHECKED	E.E. Abney	8-65
PROFILE PLOTTED	D.L. Miller	9-65
PROFILE CHECKED	D.L. Miller	9-65
PRELIMINARY GRADE		
FINAL GRADE		
FEDERAL INSPECTION		

N.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	G3174-A	I75-2(30)60	28



N.B. SERVICE RD.

FILE NO. USE NO. 380 STENCIL 63174A C-52 | STATE PROJECT 63174A | FEDERAL PROJECT I-75-2(84)60 | SHEET NO. 29

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	HIGH	115-2(86)60		30	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	SHELBY	WALL PARK		

NB Serv. Rd. Curve Data
Δ = 15°02'22" Rt.
D = 07°00'00" (Arc.)
R = 818.51'
T = 108.05'
L = 214.85'
E = 7.10'
P.C. = 746+79.76
P.I. = 747+87.81 (184' Rt. of 747+88 on Surv. Tang.)
P.T. = 748+94.61

Rough Grading in Freeway
Sta. 747+00 to 763+00
Earth Exc. & Waste - 215,817 Cyds.
For Grading Limits See Sheets # 62 & 63

NB Serv. Rd. Sta. Equa.
Sta. 754+40 Back =
Sta. 755+80 Ahead
Line Shortens 140'

NB Serv. Rd. Curve Data.
Δ = 40°38'34" Rt.
D = 06°30'00" (Arc.)
R = 838.47'
T = 310.52'
L = 594.77'
E = 55.65'
P.C. = 753+00.08
P.I. = 756+10.60 - 131.27' Rt. of Sta. 757+20.58 Surv. Tang.
P.T. = 760+81.85*
* Note Sta. Equa.'s

NB Serv. Rd. Sta. Equa.
Sta. 757+50 Back =
Sta. 757+80 Ahead
Line Shortens 30'

Est. for Sewers & Structures (Under all Pav't & Shldrs.)
Earth Exc. & Waste - 1112 Cyds.
Por. Mat. Gr. A - 1112 Cyds.

Adj. M.H. Cov. - 1 Ea.
24" Sewer (14.1-25') - 15 L.Ft.
24" Sewer Tap - 1 Ea.
Inspection Fee - 1 Ea.
MHIA (14.1-25') - 1 Ea.
Reconstr. M.H. - 1 Ea.
24" Sewer (14.1-25') - 121 Lft.

Temp. Widening
Conc. Pav't, 9" Unif. (Non-Reinf.)

Entire Proj. Est. for Temp. S.W. as directed by the Engineer
Bit. Appr. Mix. - 12 Tons

Prop. 5' Conc. Sidewalk

6" Bridge Abut. Drains Incl. in Bridge Plans

MHIA (14.1-25') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
CB6M (6.1-14') - 2 Ea.
12" Sewer (Tile II (0-6.0') - 93 Lft.
24" Sewer (14.1-25') - 152 Lft.
12" Tile Trap - 1 Ea.
Cover D (Temp.) - 1 Ea.
Reconstr. M.H. - 1 Ea.

18" Sewer (6.1-14') = 72 Lft.
For Details See Sheet # 62

Adj. M.H. Cover - 2 Ea.
24" Sewer (14.1-25') - 132 Lft.
24" Sewer Tap - 2 Ea.
12" Sewer Bulkhead - 1 Ea.

Steel Beam G.R.
For Quant. See Sheet #29

24" Sew. (6.1-14') 132 Lft.
For Details See Sh. # 62

MHIA (14.1-25') - 1 Ea.
CB3M (6.1-14') - 4 Ea.
12" Sewer (Tile II (0-6.0') - 240 Lft.
24" Sewer (14.1-25') - 210 Lft.
12" Tile Trap - 3 Ea.

MHIA (14.1-25') - 1 Ea.
CB3M (6.1-14') - 2 Ea.
CB6M (6.1-14') - 1 Ea.
12" Sewer (Tile II (0-6.0') - 123 Lft.
18" Sewer (6.1-14') - 116 Lft.
12" Tile Trap - 1 Ea.
Cover D (Temp.) - 1 Ea.

WGMH's @ John R. Inters.
Adj. M.H. Cov. - 1 Ea.
Rem. M.H. - 1 Ea.
Aban. M.H. - 1 Ea.

Prop. Lighting Duct by Det. Edison

36" Sew. (6.1-14') - 72 Lft.
For Details See Sh. # 62

MHIA (6.1-14') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
CB6M (6.1-14') - 1 Ea.
12" Sewer (Tile II (0-6.0') - 38 Lft.
15" Sewer (6.1-14') - 232 Lft.
12" Tile Trap - 1 Ea.
Cover D (Temp.) - 1 Ea.
Adj. M.H. Cover - 1 Ea.
Reconst. M.H. - 1 Ea.

36" Sew. (6.1-14') - 72 Lft.
For Details See Sh. # 63

Temp. Widening
Conc. Pav't 9" Unif. (Non-Reinf.)

MHIA (6.1-14') - 1 Ea.
CB3M (6.1-14') - 2 Ea.
CB6M (6.1-14') - 1 Ea.
12" Sew. (Tile II (0-6.0') - 82 Lft.
12" Sewer (0-6.0') - 20 Lft.
15" Sewer (6.1-14') - 115 Lft.
12" Tile Trap - 1 Ea.

Conc. Pav't 9" Unif. - 5661 Syds
Pav't Reinf. - 6304 Syds.
Conc. Curb Det. 2 - 2767 Lft.
4" Conc. Sidewalk - 6370 Sft.
Appr. Pav't 9" Unif. (Temp.) - 585 Syds
Rem. Old Pav't - 585 Syds
Omit Curb on initial Constr.
Sta. 746+00 to 748+80 &
Sta. 753+40 to 757+40 Lt. to accommodate Temp. Widening

Prop. Lighting Duct by Det. Ed.
Rem. C.B. & Sewer
Rem. C.B. - 3 Ea.
Aban. C.B. - 3 Ea.
MHIA (0-6.0') - 1 Ea.
(Aban. or Rem. Ex. Sew. to South)

Drive Opening - 29 Lft.
Bit. Appr. Mix - 7 Tons.
Cl. A Appr. - 6 Cyds.

Initial Constr.
Conc. Base (Use 8" Unif. (Reinf.) - 510 Syds.
Part Width Constr. - 1 Inters.

Final Constr.
Corr. Conc. Divider Type II - 133 Syds.
Bit. Conc. Lev. Cse. @ 130#/Syd. - 25 Tons
Bit. Conc. Wear. Cse. @ 120#/Syd. - 23 Tons
Bit. Bond Coat - 75 Gal.

Drive Opening - 24 Lft.
Conc. Pav't 7" Unif. - 10 Syds.

Prop. Lighting Duct by Det. Edison
As Const. 12" Sewer

Prop. Lighting Duct by Det. Edison

Conc. Curb Det. 2 (7" Face) Lt. | Bridge Var. Width | Conc. Curb Det. 2 (7" Face) Lt. | John R. | Conc. Curb Det. 2 (7" Face) Lt. | Bridge Var. Width | Conc. Curb Det. 2 (7" Face) Lt. | Conc. Curb Det. 2 (7" Face) Lt. | Bridge Var. Width | Conc. Curb Det. 2 (7" Face) Lt.
30' Conc. Pav't 9" Unif. (Reinf.) | 41' Conc. Pavt 9" Unif. (Reinf.) | Goudson | Conc. Curb | John R. | 30' Conc. Pav't 9" Unif. (Temp.) | Woodruff | Conc. Curb Det. 2 (7" Face) Rt.
Conc. Curb Det. 2 (7" Face) Rt.

From Sta. 72+00 Earthwork (For Quant. See Sheet #2) | Earthwork (For Quant. See Sheet #2) To Sta. 785+61

746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758

N.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C-52	63174A	I-75-2(86)60	30

S.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO	TOTAL SHEETS
I-75	63174 A	OAKLAND	WALL PART	31	

NB Serv. Rd. Sta. Equa.
Sta. 759+90 Back =
Sta. 759+67 Ahead
Line Shortens 17'

Rough Grading in Freeway from Sta. 747+00 to 763+00 For Quant. See Sheet #30

Ramp "N" Curve Data
Δ = 06° 20' 00" Lt.
D = 02° 30' 00" (Arc.)
R = 2291.83'
T = 126.80'
L = 253.33'
E = 3.50'
P.S. = 763+91.09
P.I. = 765+17.88
P.T. = 766+44.42

Est. for Sewers & Structures (Unde. all Pavt & Shldrs.)
Earth Exc. & Waste - 294 Cuds
For. Mat. Gr. A - 294 Cuds.

CB3A(14.1-25') - 1 Ea.
CB6M(6.1-14') - 1 Ea.
CB3M(6.1-14') - 3 Ea.
12" Sew. CT6-II (0-6.0') - 178 Lft.
12" Sewer (0-6.0') - 220 Lft.
12" Sewer (6.1-14') - 23 Lft.
15" Tile Trap 1 Ea.

18" Sewer (6.1-14') - 120 Lft.
For Details See Sh. #63

MH1A (6.1-14') - 1 Ea.
15" Sewer (6.1-14') - 108 Lft.

CB6M (6.1-14') - 2 Ea.
CB3M (6.1-14') - 1 Ea.
12" Sew. CT6-II (0-6.0') - 90 Lft.
Cover D. (Temp.) - 1 Ea.

Temp. Road
Conc. Pavt 9" Unif. (Non-Reinf.)
Cl. A Shldrs. 6" deep

Steel Beam G.R.
For Quant. See Sh. #29

CB6M (6.1-14') - 3 Ea.
CB3M (6.1-14') - 1 Ea.
CB6G (6.1-14') - 1 Ea.
CB3G (6.1-14') - 1 Ea.
12" Sew. CT6-II (0-6.0') - 222 Lft.
12" Sewer (0-6.0') - 22 Lft.

MH1A (6.1-14') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
CB6G (6.1-14') - 1 Ea.
CB3G (6.1-14') - 1 Ea.
12" Sew. CT6-II (0-6.0') - 70 Lft.
12" Sewer (0-6.0') - 30 Lft.
12" Sewer (6.1-14') - 174 Lft.

Rem. Future RAMP "N"

For Quantities See Sheet #30

Initial Constr. (Nine Mile)
Conc. Base Cse. 8" Unif. (Reinf.) - 527 Syds.
Part Width Constr. - 1 Inters.

Final Constr.
Corr. Conc. Divider Type II - 57 Syds.
Bit. Conc. Level Cse. @ 130#/Syd. - 31 Tons.
Bit. Conc. Wear Cse. @ 120#/Syd. - 28 Tons.
Bit. Bond Coat - 94 Gals.

MH1A (6.1-14') - 1 Ea.
(Aban. or Rem. Ex. Sew. to West)

Prop. Light Duct by Def. Edison

Prop. S.W.

Temp. Widening

Prop. Lighting Ducts by Def. Edison

Prop. 5' Conc. Sidewalk

MH1A (6.1-14') - 1 Ea.
(Aban. or Rem. Ex. Sewer to West

Drive Opening - 30 Lft.
Conc. Pavt 9" Unif. - 28 Syds.

MH1A (6.1-14') - 1 Ea.
(Aban. or Rem. Ex. Sewer to West.)

Drive Opening - 12 Lft.
Cl. A Appr. - 2 Cyd.
Bit. Appr. Mix. - 3 Tons.

MH1A (6.1-14') - 1 Ea.
(Aban. or Rem. Ex. Sew. to West.)
Rem. M.H. - 1 Ea.

Curb Ending - 12 Lft.

Agg. Base Cse. - 12 Cuds.
Bit. Appr. Mix - 9 Tons

Conc. Pavt 9" Unif. - 4930 Syds.
Pavt Reinf. - 5514 Syds.
Conc. Curb Det. 2 - 2509 Lft.
4" Conc. S.W. - 4660 Sft.
Conc. Pavt 9" Unif. (Temp.) - 898 Syds.
Rem. Old Pavt - 898 Syds.
Cl. A Shldrs - 45 Cuds
Omit curb on initial constr. Sta. 761+10 to 763+10 Rt. & 761+60 to 764+00 Lt. to accommodate Temp. Road.

Nine Mile Road — Conc. Curb Det. 2 (T-Face) Lt. — 41' Conc. Pavt 9" Unif. (Reinf.) — Conc. Curb Det. 2 (T-Face) Rt.
Yuma — Conc. Curb Det. 2 (T-Face) Lt. — 30' Conc. Pavt 9" Unif. (Reinf.) — Conc. Curb Det. 2 (T-Face) Rt.
Shasta — Var. Width Conc. Pavt 9" Unif. (Reinf.) — Conc. Curb Det. 2 (T-Face) Rt.
Cherry — Conc. Curb Det. 2 (T-Face) Lt. — 30' Conc. Pavt 9" Unif. (Reinf.) — Conc. Curb Det. 2 (T-Face) Rt.
Temp. Road

Earthwork (For Quant. See Sheet #32)

From Sta. 749+00 — To Sta. 785+41

Prop. Top of Curb Profile Lt.
Prop. Top of Curb Profile Rt.
Prop. Top of Metal Grade

Prop. F.L. 628.7 (SE) 621.8 (S) 621.6 (NW, SE)
Prop. F.L. 622.1 (NW, SE)
Prop. F.L. 628.6 (NW) 626.7 (S)
Prop. F.L. 628.6 (NE) 627.6 (NW, S)
Prop. F.L. 626.6 (NW) 629.0 (E) 623.7 (W) 622.5 (SE) 622.4
Prop. F.L. 621.8 (W, NE) 621.7 (S)
Prop. F.L. 627.7 (NE)
Prop. F.L. 627.7 (E) 627.5 (SW) 627.2 (SE, NW)
Prop. F.L. 627.8 (NE) 626.6 (SE, NW)
Prop. F.L. 628.8 (W)
Prop. F.L. 628.0 (W)
Prop. F.L. 628.1 (SW)
Prop. F.L. 628.0 (NE)
Prop. F.L. 627.8 (SW, N) 627.7 (NW)
Prop. F.L. 627.9 (E)
Prop. F.L. 628.0 (S)
Prop. F.L. 628.5 (N)
Prop. F.L. (3M) 628.1 (E) 628.0 (SW) 628
Prop. F.L. (3G) 628.4 (S) 628.3 (W)

As Const. El. 628.91
As Const. El. 631.0

Prop. F.L. To intercept Ex. Sew. as Directed by Engineer

12" Sewer @ +0.33%
12" Sewer @ -0.33%
12" Sewer @ +0.50%
12" Sewer @ +0.40%
15" Sewer

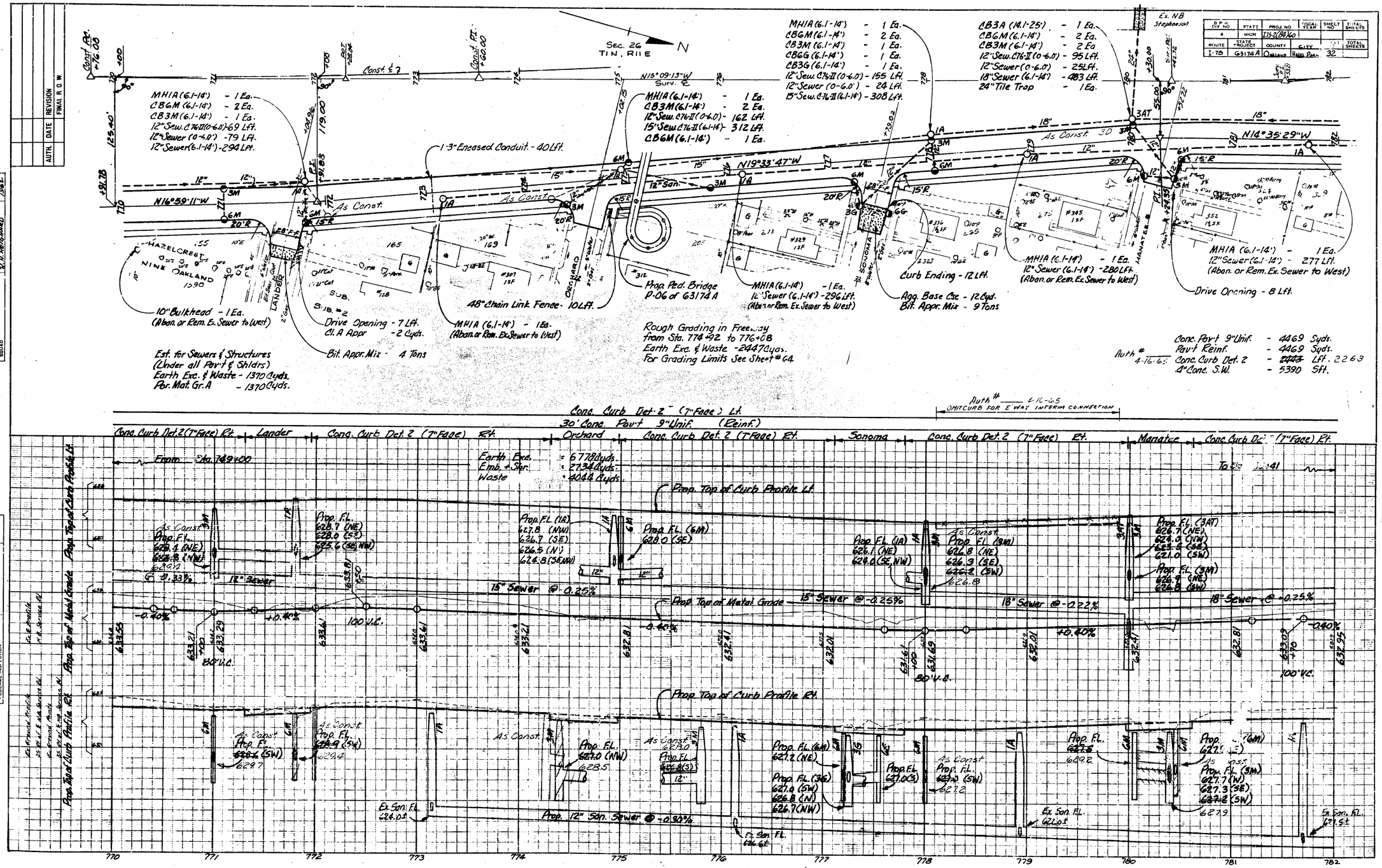
N.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHT. NO.
63174 A.C-52	63174 A	I75-2(84)60	31

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY		TOTAL SHEETS
I-75	G3174A	OAKLAND	HAZEL PARK	32	

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED		
FINAL DESIGN CHECKED		
TRACED C.O.W. SHEET		
QUANTITIES		
QUANTITIES CHECKED		
SOUND	R.H. FERGUSON	1965



OPERATION	BY	DATE
SURVEY PLOTTED	R.T. Miller	6-63
PLAN CHECKED	R.O. Abbey	7-63
PROFILE PLOTTED	F.X. Kelly	2-64
PROFILE CHECKED	D.L. Miller	5-64
PRELIMINARY GRADE		
FINAL GRADE CHECKED		
FEDERAL INSPECTION		

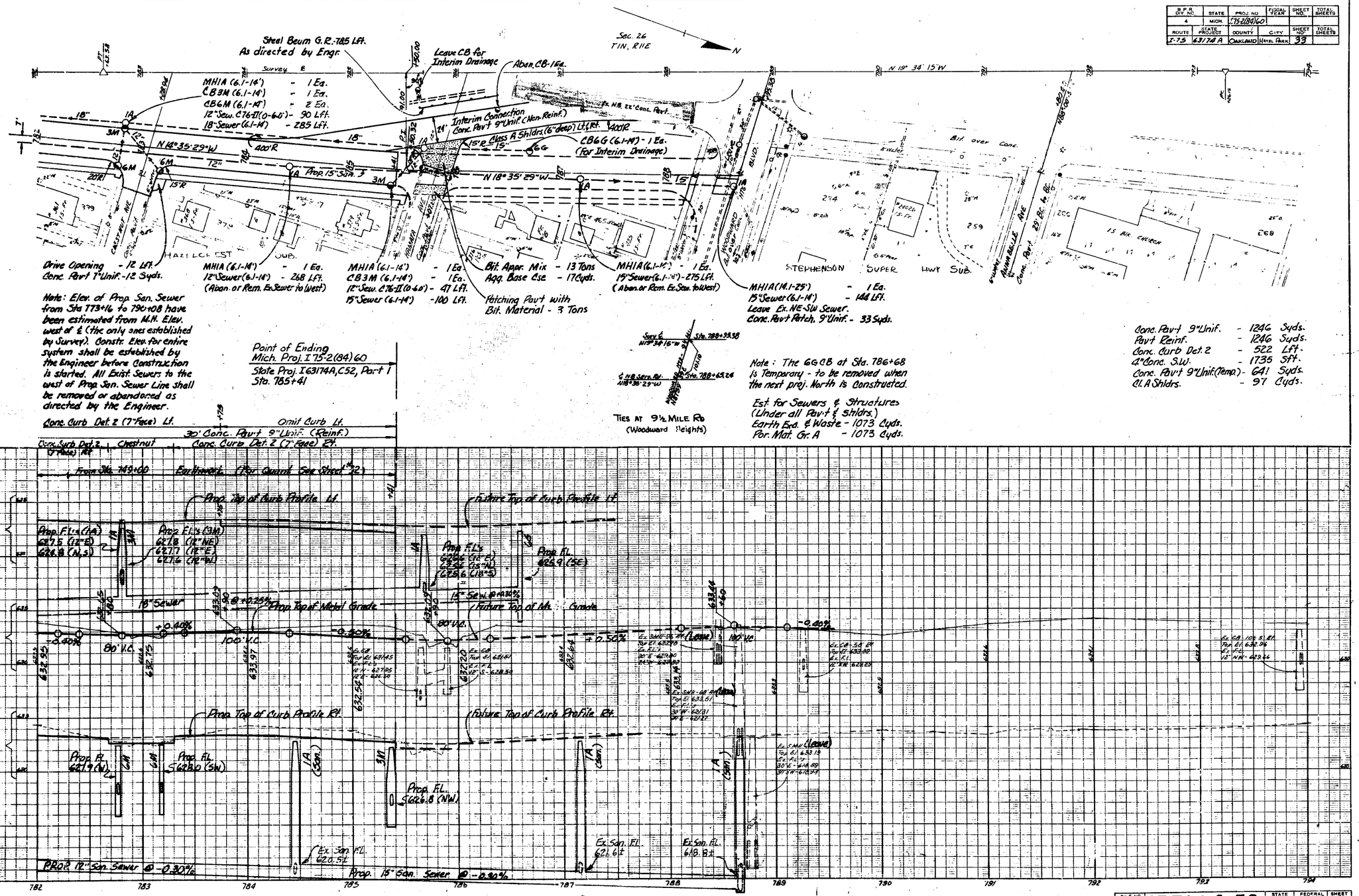
N.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET
63174 A.C-52	63174 A	I75-2(84)60	32

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	ROYAL OAK	33	

AUTH.	DATE	REVISION
		FINAL R. O. W.

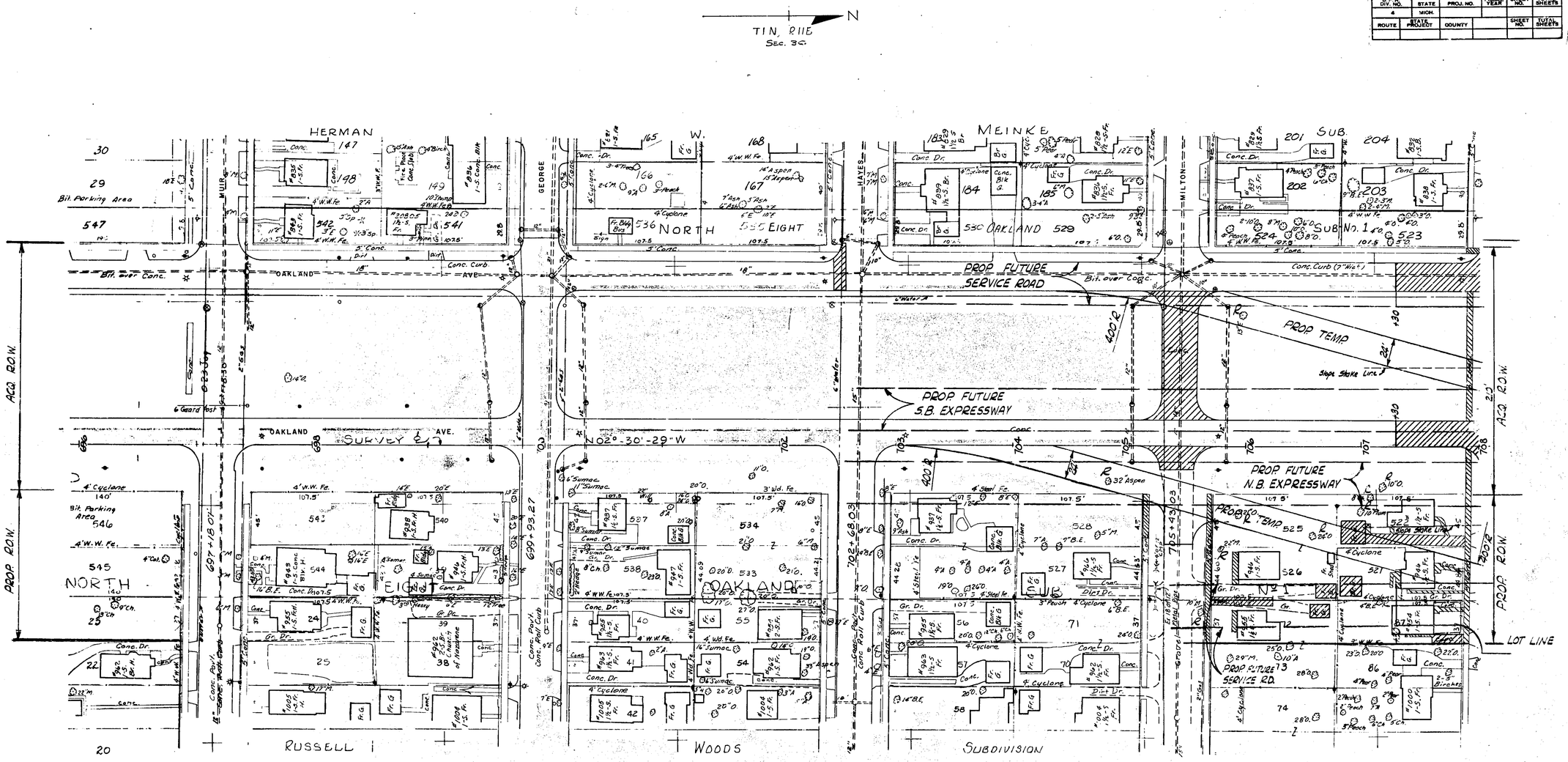
OPERATION	BY	DATE
PRELIMINARY PLAN CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
FINAL R.O.W.		
FINAL R.O.W. CHECK		
PROJECT ESTIMATE		
QUANT. EST. CHECKED		
SQUAD	Z. H. KRIZMAN	6-62



OPERATION	BY	DATE
SURVEYED 7-1-62		
PLAN PLOTTED	E. O. GRAVEY	6-62
PLAN CHECKED	R. J. ADAMS	6-62
PROFILE PLOTTED	E. O. GRAVEY	7-62
PROFILE CHECKED	R. J. HILL	7-62
CROSS SECTIONS CHECKED		
PRELIMINARY ROUTE		
FEDERAL INSPECTION		

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	63174A	I75-2(84)60	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	34	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Removals (This Sheet)

Trees	8-12" Dia.	4 Ea.
	13-24" Dia.	4 Ea.
	25-36" Dia.	1 Ea.
Old Pav't. Shown		1171 Syds.
Masonry & Conc.		33 Cyds.
Sidewalks Shown		337 Syds

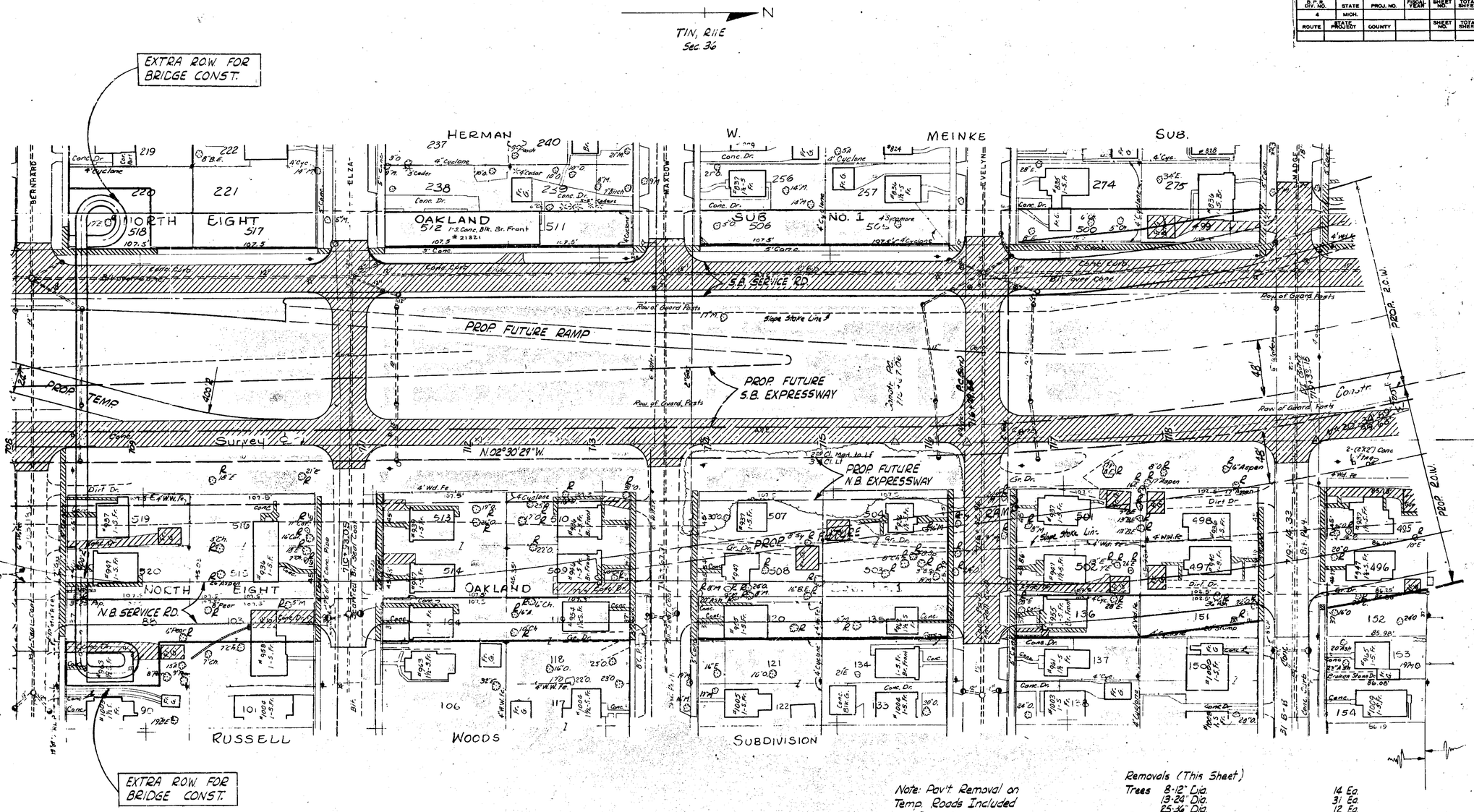
Note: Pav't. Removal on Temp. Roads Included on Plan Sheets.

REMOVAL

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	63174A	I75-2(84)60	34

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	Huntington Park	35	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Prelim. ROW - E.H.R. 1-11-62

Note: Pav't Removal on Temp. Roads Included on Plan Sheets.

Removals (This Sheet)

Trees	8-12" Dia.	14 Ea.
	13-24" Dia.	31 Ea.
	25-36" Dia.	12 Ea.
Stumps	13-24" Dia.	1 Ea.
Old Pav't Shown		9552 Syds.
Masonry & Conc.		113 Cy.yd.
Sidewalks Shown		1301 Syds.

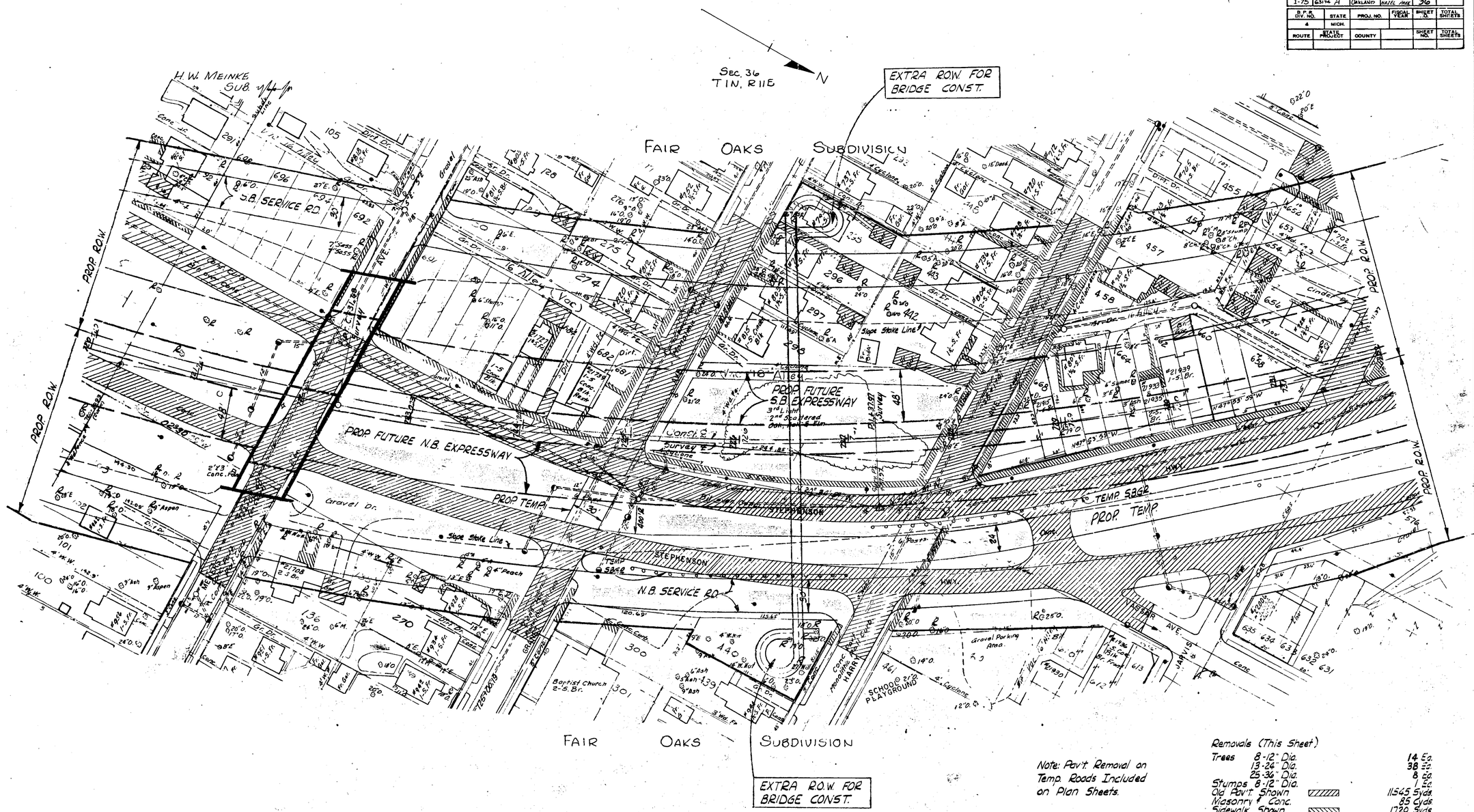
Clearing & Grubbing
Sta 713+85 Rt. - 716+30 Rt.

Clearing	0.3 Ac.
Grubbing	54 Sq. Rds.

REMOVAL

FILE NO.	FEDERAL PROJECT	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52		63174 A	175-2(84)60	35

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	36	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Note: Pav't. Removal on Temp. Roads Included on Plan Sheets.

Removals (This Sheet)

Trees	8-12" Dia.	14 Ea.
	13-24" Dia.	38 Ea.
	25-36" Dia.	8 Ea.
Stumps	8-12" Dia.	1 Ea.
Old Pav't. Shown		11545 Syds.
Masonry & Conc.		85 Cyds.
Sidewalk Shown		1720 Syds.
Curb		20 Lin. Ft.

Clearing & Grubbing
Sta. 725+80 - 727+70

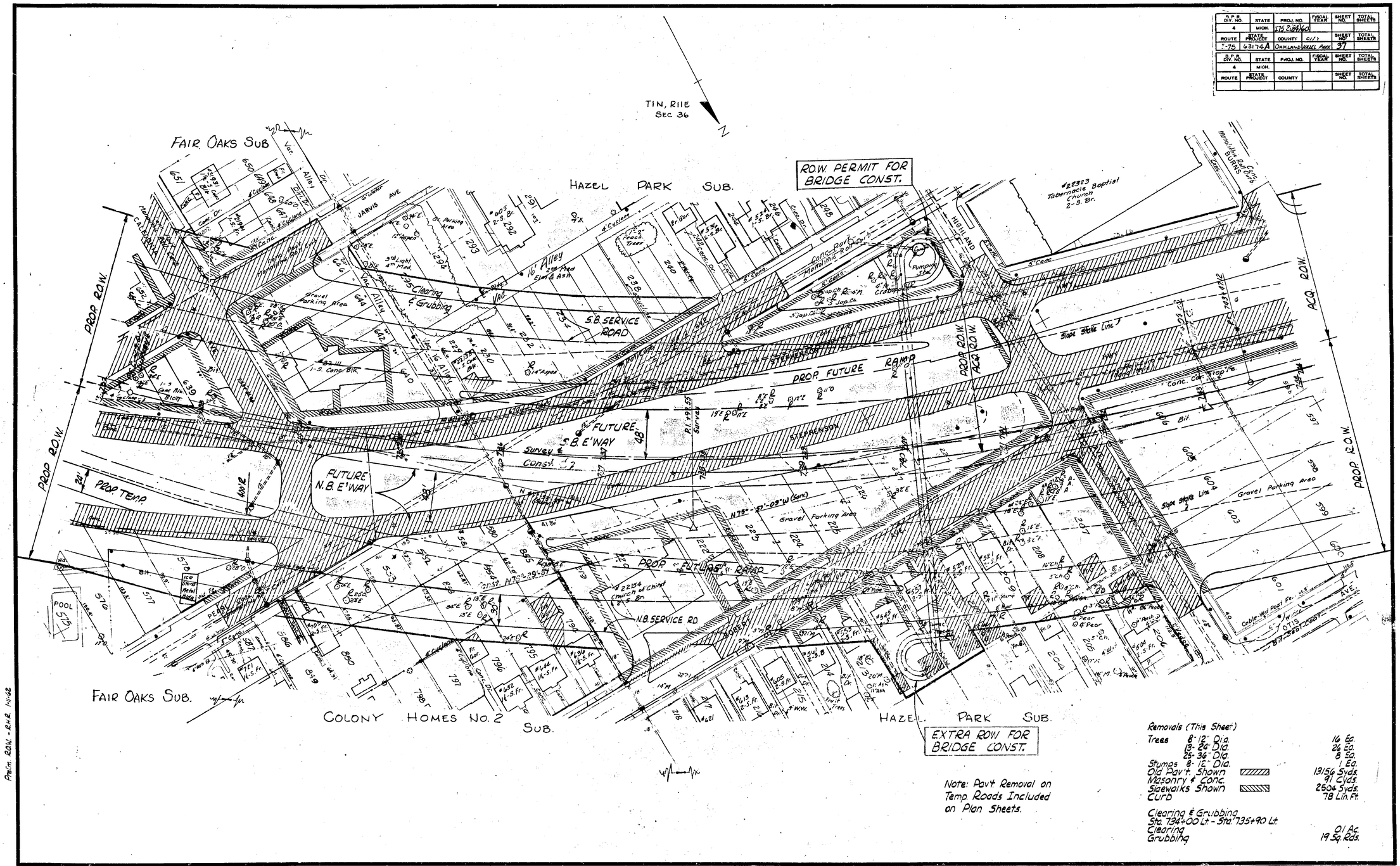
Clearing	0.3 Ac.
Grubbing	44 Sq. Rds.

Prelim. R.O.W. 1-11-62 R.H.S.

REMOVAL

FILE NO.	SHEET NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	36	63174A	I75-2(84)60	36

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	37	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Note: Pav't Removal on Temp. Roads Included on Plan Sheets.

Removals (This Sheet)

Trees	8-12" Dia.	16 Ea.
	13-24" Dia.	26 Ea.
	25-36" Dia.	8 Ea.
Stumps	8-12" Dia.	1 Ea.
Old Pav't. Shown		13156 Syds.
Masonry & Conc.		91 Cyds.
Sidewalks Shown		2504 Syds.
Curb		78 Lin. Ft.

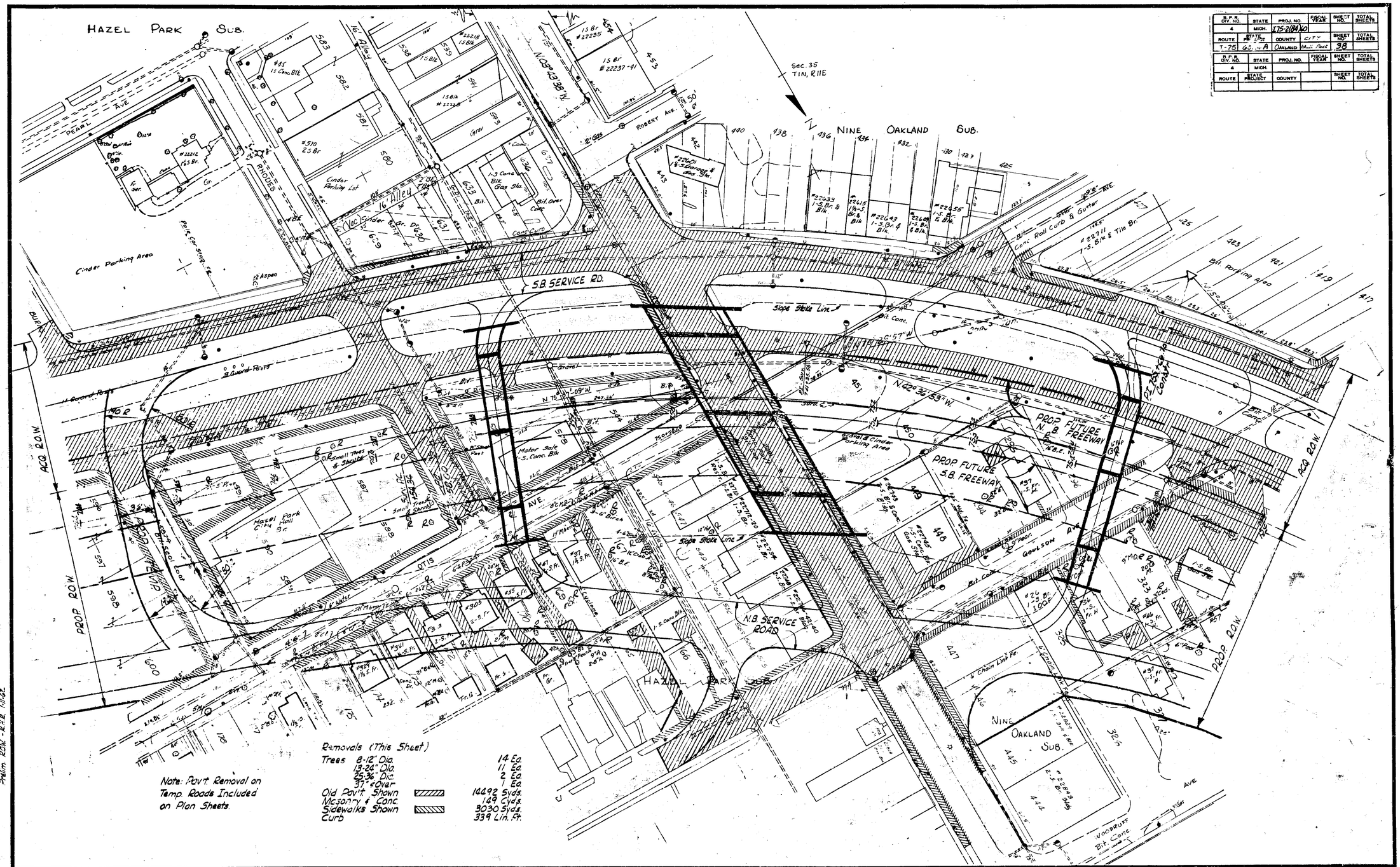
Clearing & Grubbing
Sta. 734+00 Lt. - Sta. 735+90 Lt.

Clearing	0.1 Ac.
Grubbing	19 Sq. Rds.

Prelim. R.O.W. - R.H.R. 1-11-62

REMOVAL

FILE NO. USE NO. 330 STENCIL	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	63174A	I75-2(84)60	37



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)40			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	Hazel Park	38	

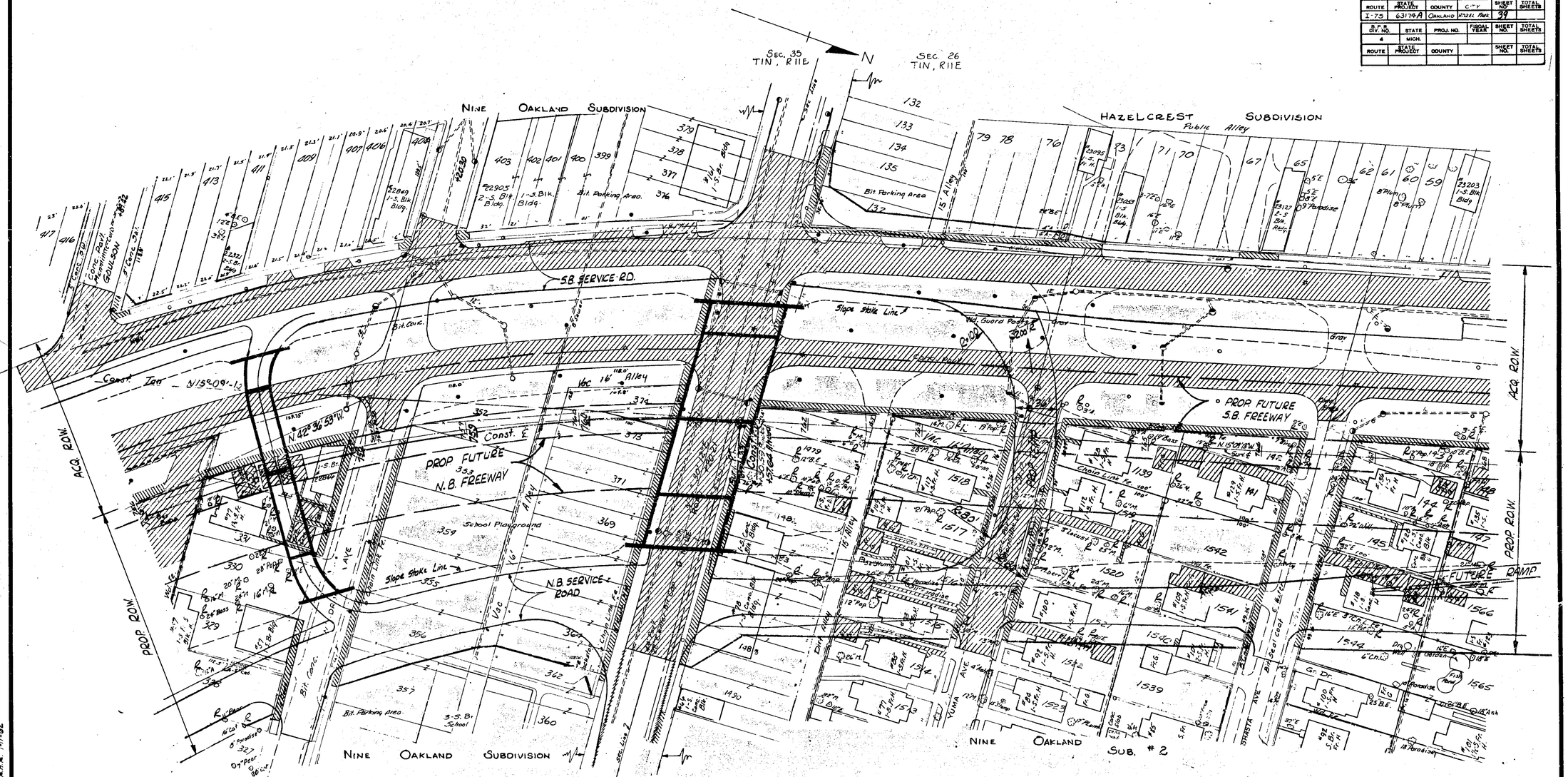
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

Prelim. ROW - R.H.R. 1-11-62

REMOVAL

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	63174 A	I75-2(84)40	38

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	39	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Prelim. R.O.W. - R.H.R. 1-11-62

Note: Pav't Removal on Temp. Roads Included on Plan Sheets.

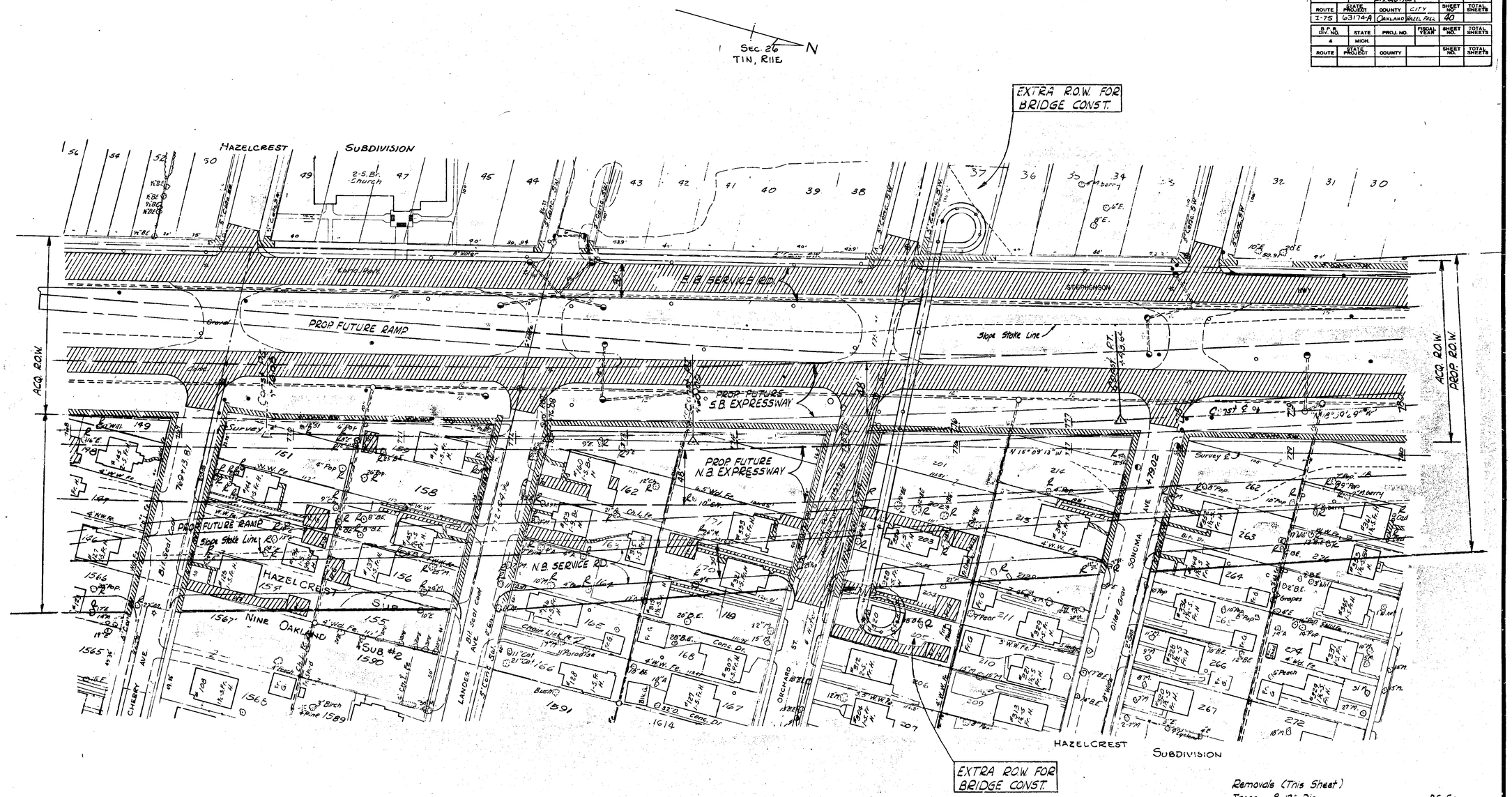
Removals (This Sheet)

Trees	8-12" Dia.	28 Ea.
	13-24" Dia.	35 Ea.
	25-36" Dia.	10 Ea.
Stumps	8-12" Dia.	1 Ea.
Old Pav't Shown		12041 Syds.
Masonry & Conc.		88 Cyds.
Sidewalk Shown		2000 Syds.
Curb		183 Lin. Ft.

REMOVAL

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A,C-52	63174A	I75-2(84)60	39

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-A	OAKLAND	HAZEL PKR.	40	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Removals (This Sheet)

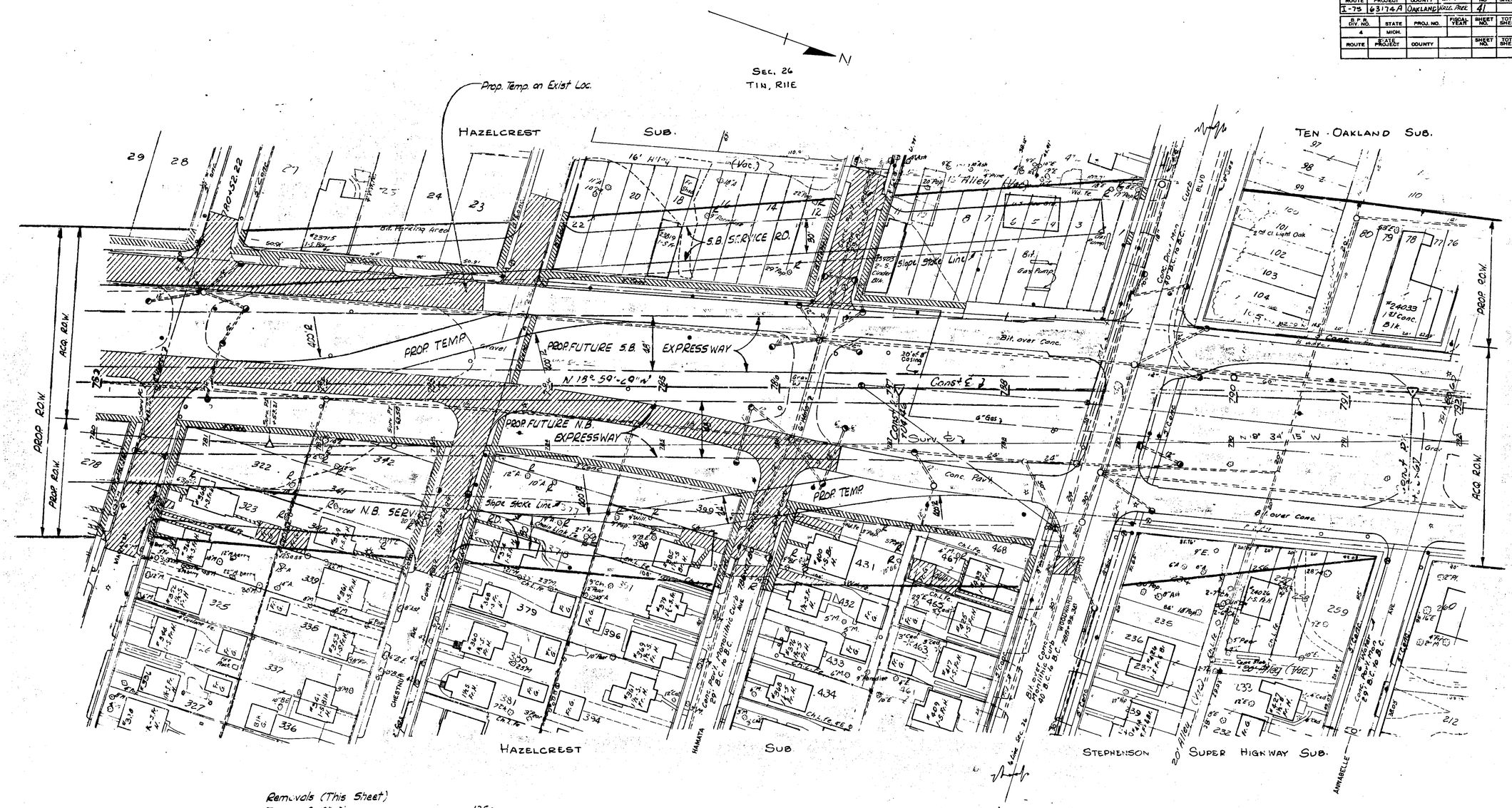
Trees	8-12" Dia.	25 Ea.
	13-24" Dia.	15 Ea.
	25-36" Dia.	5 Ea.
Stumps	8-12" Dia.	3 Ea.
Old Pav't Shown		849.8 Syds.
Masonry & Conc.		138 Cyds.
Sidewalk Shown		1655 Syds.

Prelim. R.O.W. - R.H.R. 1-11-62

REMOVAL

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A,C-52	63174A	I75-2(84)60	40

H.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-1(88)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-A	OAKLAND	WALL TREE	41	
H.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Removals (This Sheet)

Trees 8-12" Dia.		12 Ea.
13-24" Dia.		8 Ea.
25-36" Dia.		1 Ea.
Old Pavt. Shown		5108 Syds.
Masonry & Conc.		93 Cyds.
Sidewalk Shown		1529 Syds.

Note: Pavt. Removal on Temp. Roads Included on Plan Sheets.

P.O.E. Removal Items
Sta. 789+20

Prelim. R.O.W. - R.H.E. 1-12-62

REMOVAL

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C-52	63174-A	I75-1(88)60	41

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84)C			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	42	

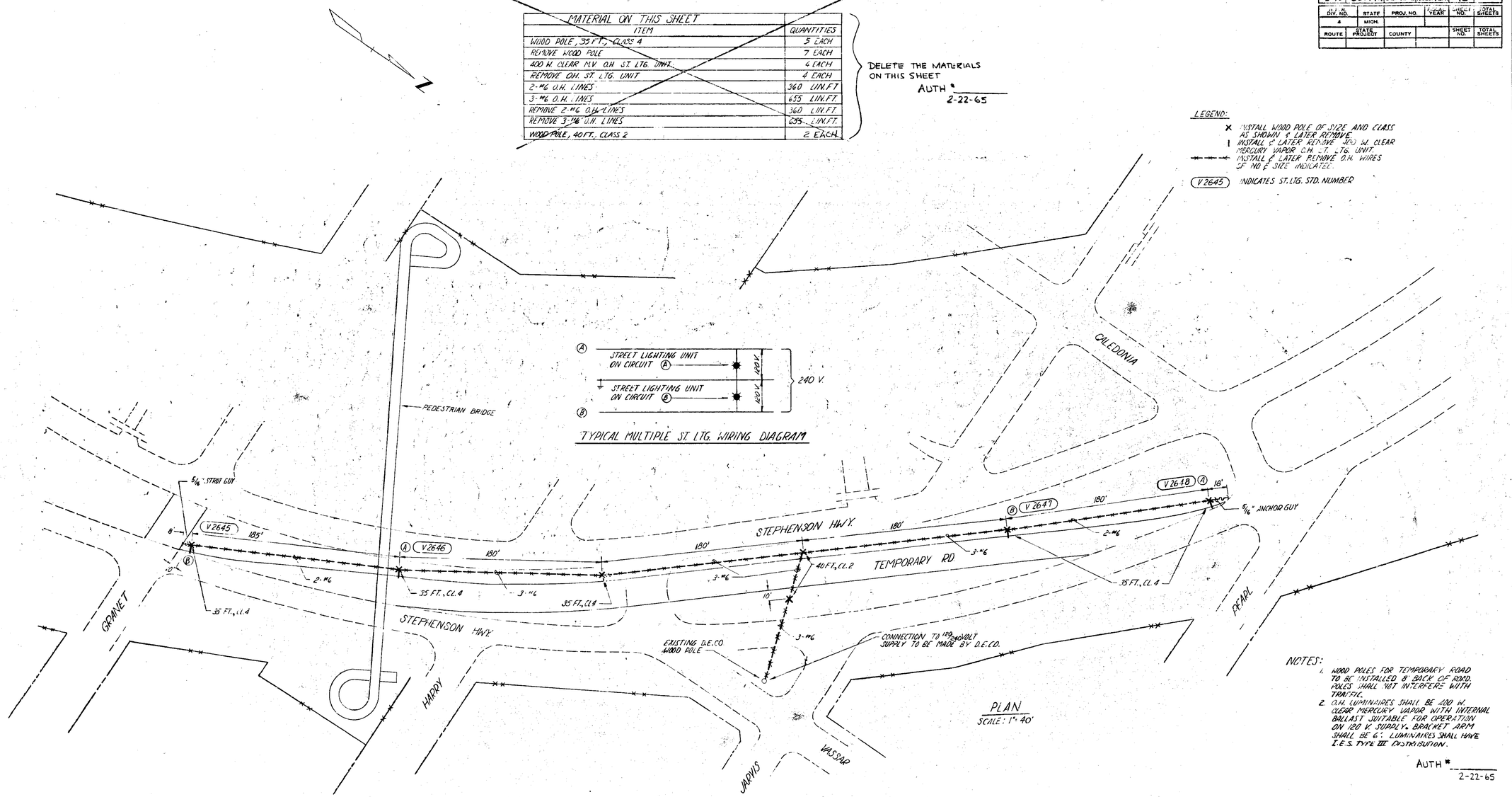
DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

MATERIAL ON THIS SHEET	
ITEM	QUANTITIES
WOOD POLE, 35 FT., CLASS 4	5 EACH
REMOVE WOOD POLE	7 EACH
400 W. CLEAR M.V. O.H. ST. LTG. UNIT	4 EACH
REMOVE O.H. ST. LTG. UNIT	4 EACH
2-#6 O.H. LINES	360 LIN.FT.
3-#6 O.H. LINES	655 LIN.FT.
REMOVE 2-#6 O.H. LINES	360 LIN.FT.
REMOVE 3-#6 O.H. LINES	655 LIN.FT.
WOOD POLE, 40 FT., CLASS 2	2 EACH

DELETE THE MATERIALS ON THIS SHEET
AUTH * _____
2-22-65

LEGEND:

- X INSTALL WOOD POLE OF SIZE AND CLASS AS SHOWN & LATER REMOVE.
- I INSTALL & LATER REMOVE 400 W. CLEAR MERCURY VAPOR O.H. ST. LTG. UNIT.
- INSTALL & LATER REMOVE O.H. WIRES OF NO & SIZE INDICATED.
- (V2645) INDICATES ST. LTG. STD. NUMBER



PLAN
SCALE: 1" = 40'

TYPICAL MULTIPLE ST. LTG. WIRING DIAGRAM

NOTES:

1. WOOD POLES FOR TEMPORARY ROAD TO BE INSTALLED 8' BACK OF ROAD. POLES SHALL NOT INTERFERE WITH TRAFFIC.
2. O.H. LUMINAIRES SHALL BE 400 W. CLEAR MERCURY VAPOR WITH INTERNAL BALLAST SUITABLE FOR OPERATION ON 120 V. SUPPLY. BRACKET ARM SHALL BE 6'. LUMINAIRES SHALL HAVE I.E.S. TYPE III DISTRIBUTION.

AUTH * _____
2-22-65

I-75 FREEWAY

TEMPORARY ROAD LIGHTING GRANET TO PEARL

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE
DRAWN BY B.M.
CHECKED BY
APPROVED BY

FILE NO.	DRWG. NO.	DATE
CEA C TR	1 OF 1	10-23-64

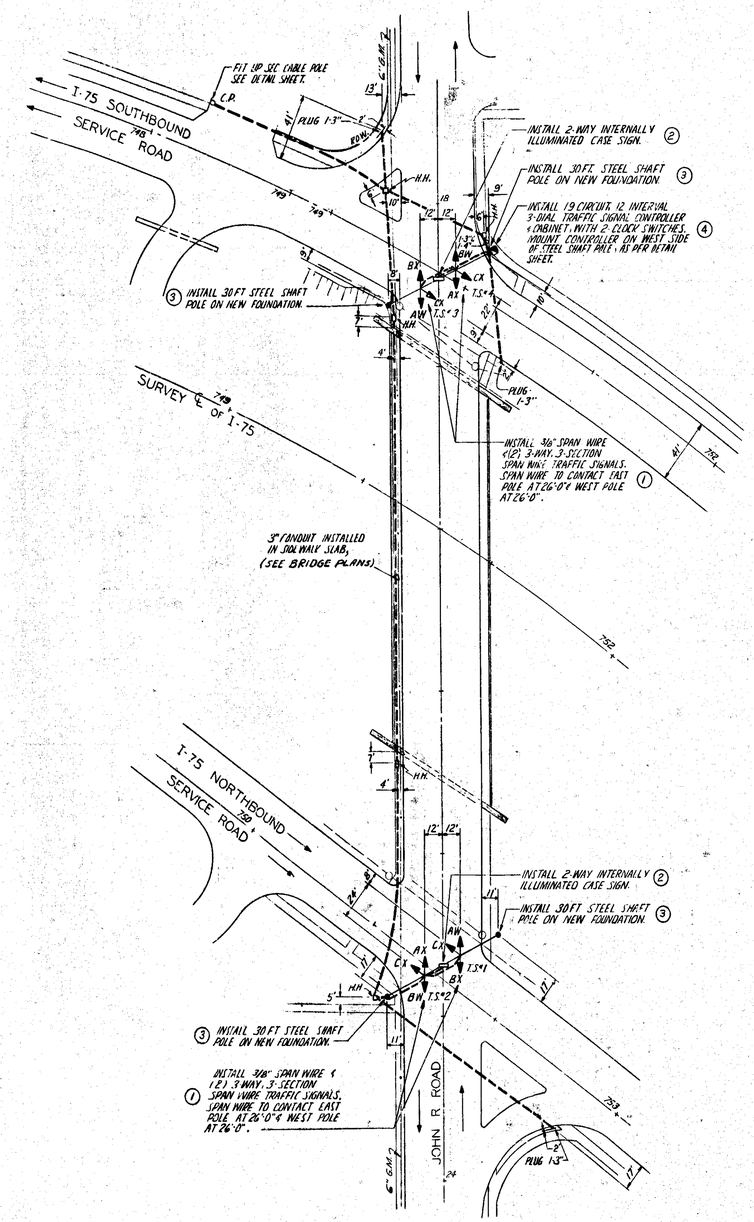
FILE NO. USE BLANK NO. 3-82

LIGHTING (TEMPORARY ROAD) 63174 A, C-52

DIST.	FEDERAL PROJECT	SHEET NO.
	63174A I 75-2(84)C	42

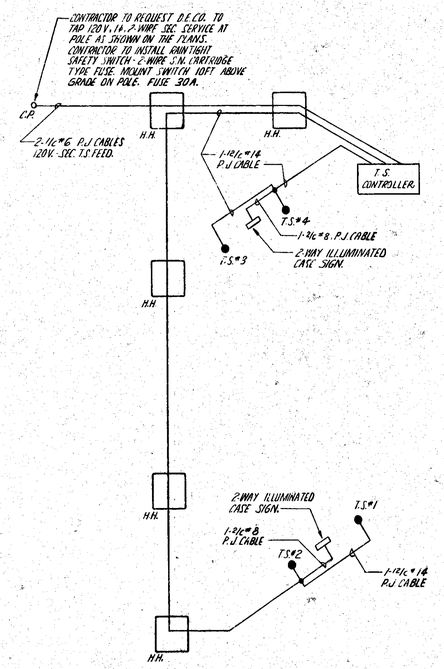
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(184)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	43	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FINAL SIGNALS

SCALE 1" = 40'-0"



WIRING DIAGRAM

FINAL SIGNALS

LEGEND

- INSTALL TRAFFIC SIGNAL
- INSTALL ILLUMINATED CASE SIGN
- INSTALL 30 FT. STEEL SHAFT POLE
- INSTALL TRAFFIC SIGNAL CONTROLLER
- BUILD TRAFFIC SIGNAL HANDHOLE
- EXISTING WOOD POLE (D.E.CO. SHOWN)
- BUILD 1-3" ENCASED CONDUIT
- BUILD MULTIPLE DUCT RUN (NO & SIZE AS INDICATED)
- 1-3" ENCASED CONDUIT (SEE BRIDGE PLANS)

MATERIAL ON THIS SHEET		
NO	ITEM	QUANTITIES
①	TWO 3-WAY TRAFFIC SIGNALS ON NEW SPAN WIRE - FURNISH & INSTALL	2 EACH
②	2-WAY INTERNALLY ILLUMINATED CASE SIGN ON SPAN WIRE - FURNISH & INSTALL	2 "
③	STEEL SHAFT POLE - FURNISH & INSTALL ON NEW FOUNDATION	4 "
④	TRAFFIC SIGNAL CONTROLLER & CABINET - FURNISH & INSTALL ON STEEL SHAFT POLE	1 "
	BUILD TRAFFIC SIGNAL HANDHOLE	5 "
	FIT-UP WOOD POLE AS A SEC CABLE POLE	1 "
	1-3" ENCASED CONDUIT	668 LIN. FT
	1-3" AND 1-4" ENCASED CONDUIT	12 "
	600 V. - TWO 5/c #6 PLASTIC JACKETED SEC. POWER CABLES - F. & I.	207 "

SAG SCHEDULE				
PLAN FINAL SIGNALS T.S SPANS	EAST POLE Y1	WEST POLE Y2	SAG BELOW LOWER SUPPORT WITHOUT LOAD	SAG BELOW LOWER SUPPORT WITH LOAD
I-75 SOUTHBOUND SERVICE RD & JOHN R. RD.	6'-0"	6'-0"	—	6'-0"
I-75 NORTHBOUND SERVICE RD & JOHN R. RD.	6'-0"	6'-0"	—	16'-0"

SOUTHBOUND SERVICE RD. & JOHN R.

FACING SOUTH — FACING NORTH

NORTHBOUND SERVICE RD. & JOHN RD.

FACING NORTH — FACING SOUTH

2-WAY INTERNALLY ILLUMINATED CASE SIGN

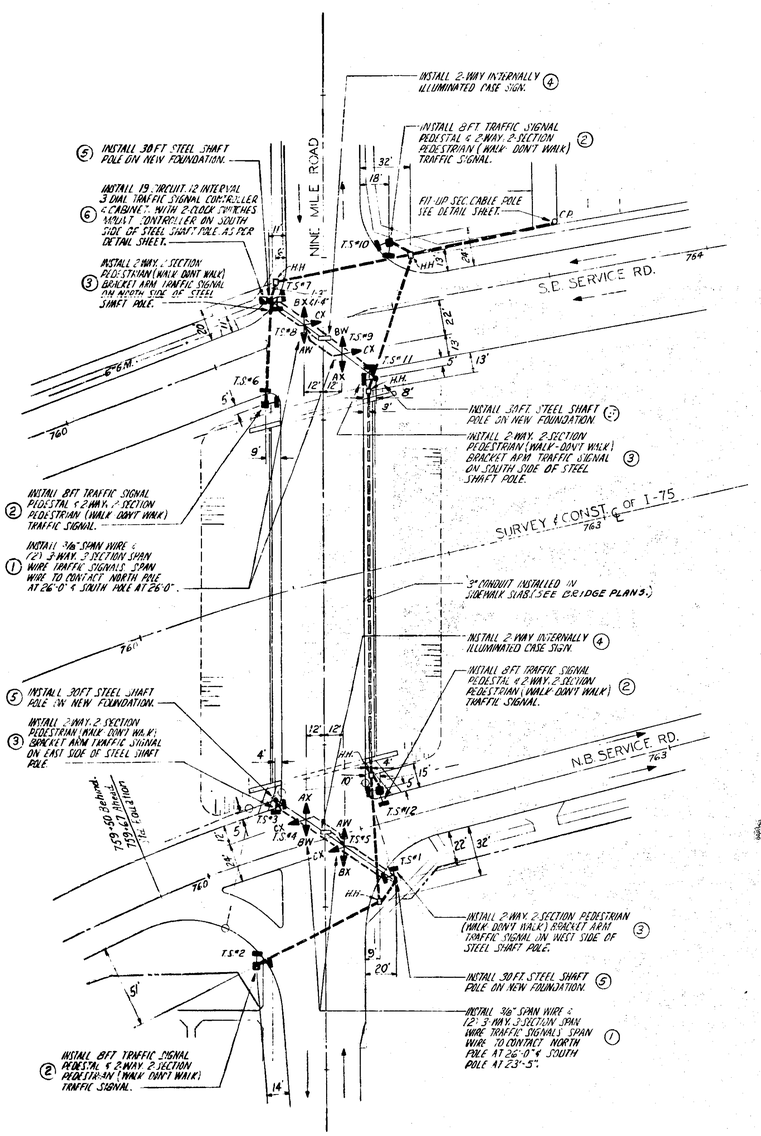
NO SCALE

CONSULTING ENGINEERING ASSOCIATES INC.	DATE 6-17-64	I-75 TRAFFIC SIGNALS JOHN R. RD.
	DRAWN J.J.S.	
	CHECKED	
	APPROVED	
16580 WYOMING DETROIT, MICH. 48221	FILE NO. CEA 64 TS-200	DRWG. NO. 1 OF 6

SIGNAL & LIGHTING

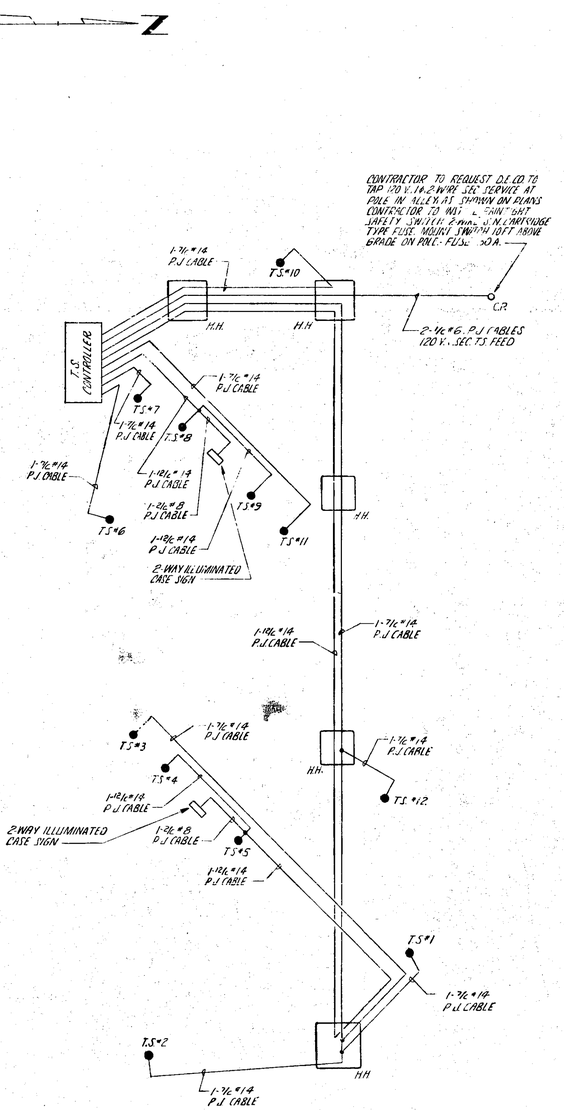
FILE & NO. LTG. NO. SIGNAL	63174A,C-52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	I-75-2(184)60	43

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	44	
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FINAL SIGNALS

SCALE 1" = 40'-0"



WIRING DIAGRAM

FINAL SIGNALS

LEGEND

- INSTALL TRAFFIC SIGNAL
- INSTALL PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL
- INSTALL ILLUMINATED CASE SIGN
- INSTALL 30 FT STEEL SHAFT POLE
- INSTALL TRAFFIC SIGNAL CONTROLLER
- INSTALL TRAFFIC SIGNAL PEDESTAL & FOUNDATION
- BUILD TRAFFIC SIGNAL HANDHOLE
- EXISTING WOOD POLE (D.E.CO. SHOWN)
- BUILD 1-3" ENCASED CONDUIT
- BUILD MULTIPLE DUCT RUN (NO. & SIZE AS INDICATED)
- 1-3" ENCASED CONDUIT (SEE BRIDGE PLANS)

MATERIAL ON THIS SHEET		
NO.	ITEM	QUANTITIES
(1)	TWO 3-WAY TRAFFIC SIGNALS ON NEW SPAN WIRE - FURNISH & INSTALL	2-EACH
(2)	2-WAY (WALK-DON'T WALK) TRAFFIC SIGNAL AND 8 FT. PEDESTAL FURNISH AND INSTALL ON NEW FOUNDATION.	4 "
(3)	2-WAY (WALK-DON'T WALK) BRACKET ARM TRAFFIC SIGNAL-FURNISH & INSTALL	4 "
(4)	2-WAY INTERNALLY ILLUMINATED CASE SIGN ON SPAN WIRE-FURNISH & INSTALL	2 "
(5)	STEEL SHAFT POLE-FURNISH & INSTALL ON NEW FOUNDATION.	4 "
(6)	TRAFFIC SIGNAL CONTROLLER & CABINET-FURNISH & INSTALL ON STEEL SHAFT POLE	1 "
	BUILD TRAFFIC SIGNAL HANDHOLE	5 "
	FIT-UP WOOD POLE AS A SEC CABLE POLE	1 "
	1-3" ENCASED CONDUIT	553 LIN FT.
	1-3" & 1-4" ENCASED CONDUIT	12 "
	600V. TWO 4/C #6 PLASTIC JACKETED SEC POWER CABLES-FURNISH & INSTALL	195 "

SAG SCHEDULE				
PLAN FINAL SIGNALS T.S SPANS	NORTH POLE Y1	SOUTH POLE Y2	TAG BELOW LOWER SUPPORT WITHOUT LOAD	TAG BELOW LOWER SUPPORT WITH LOAD
I-75 SOUTHBOUND SERVICE RD & NINE MILE RD.	6'-0"	6'-0"	—	4'-0"
I-75 NORTHBOUND SERVICE RD & NINE MILE RD.	3'-5"	6'-0"	—	3'-5"

SOUTHBOUND SERVICE RD. & NINE MILE RD.

ONE WAY — FACING WEST

NO TURNS — FACING EAST

NORTHBOUND SERVICE RD. & NINE MILE RD.

ONE WAY — FACING EAST

NO TURNS — FACING WEST

2 WAY INTERNALLY ILLUMINATED CASE SIGN

CONSULTING ENGINEERING ASSOCIATES INC.	DATE 6-17-64	I-75 TRAFFIC SIGNALS 9-MILE RD.	
	DRAWN J.S.S.		
	CHECKED		
	APPROVED		
16580 WYOMING DETROIT, MICH. 48221	FILE NO. CEA 64 TS-200	DRWG. NO. 2 OF 6	

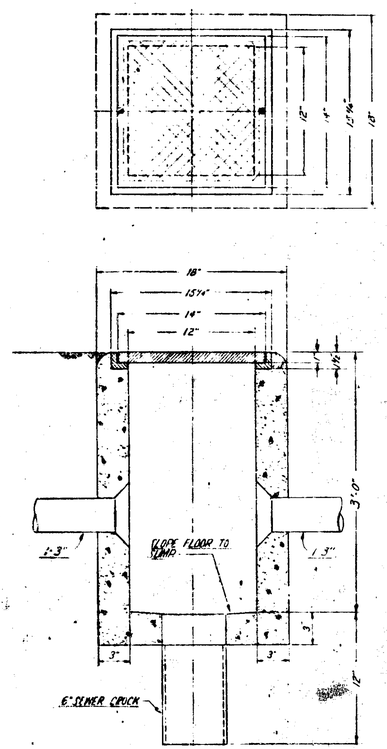
SIGNAL & LIGHTING

FILE NO. USE NO. SPR STENCIL 63174A, C-52

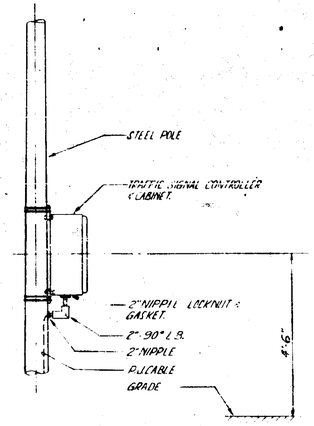
DATE 11-30-67 | FR. 5-26-67 | SHEET NO.

63174A I-75-2(84)60 No 44

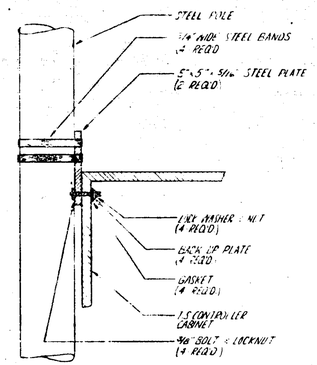
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	45	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



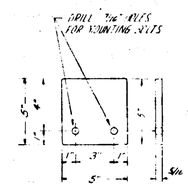
TRAFFIC SIGNAL HANDHOLE
SCALE 2"=1'-0"
MATERIAL:
CAST IRON FRAME & COVER
PRE-CAST CONCRETE HANDHOLE



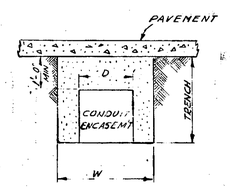
TYPICAL INSTALLATION OF TRAFFIC SIGNAL CONTROLLER MOUNTED ON METAL POLE
NO SCALE



DETAIL
MOUNTING OF T.S. CONTROLLER ON STEEL POLE
NO SCALE

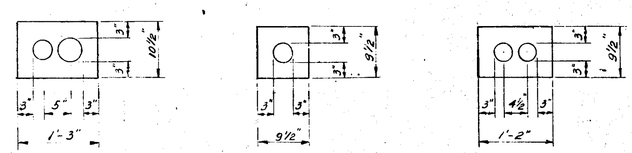


DETAIL
MOUNTING PLATE
NO SCALE



TYPICAL SECTION OF TRENCH.

NOTE: PREFERRED TRENCH WIDTH "W" NOT WIDER THAN CONDUIT ENCASEMENT WIDTH "D".



1-3" & 1-4" CONDUITS
1-3" CONDUIT
2-3" CONDUITS

TYPICAL CONDUIT SECTIONS

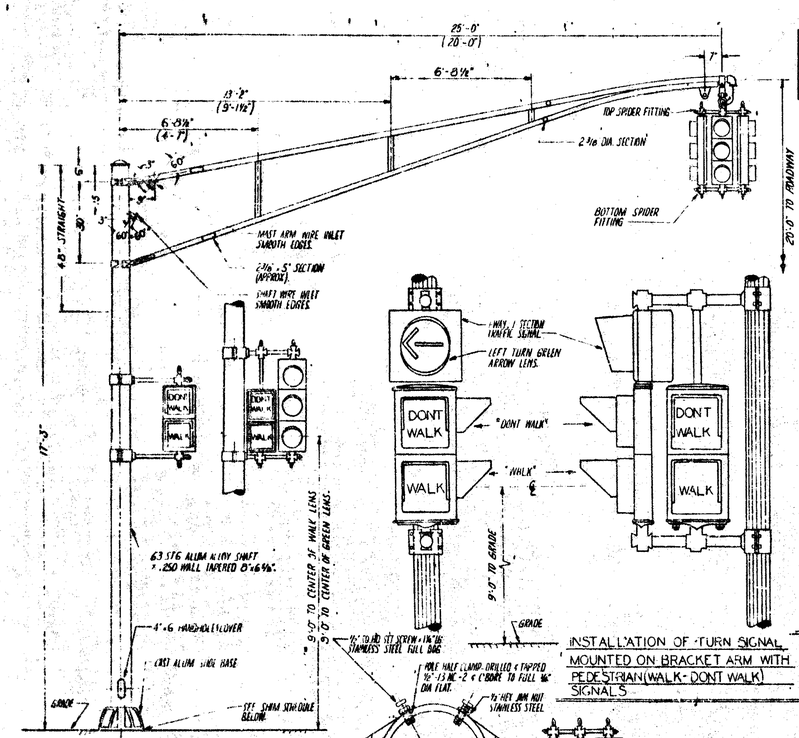
CONSULTING ENGINEERING ASSOCIATES INC.	DATE 6-17-64	TRAFFIC SIGNAL DETAILS
	DRAWN JSS	
	CHECKED	
	APPROVED	
16580 WYOMING DETROIT, MICH 48221	FILE NO. CEA 64 TS-200	DWG. NO. 3 6

SIGNAL & LIGHTING

FILE NO.	STATE PROJECT	FISCAL YEAR	SHEET NO.
63174A,C-52	63174A	I75-2(84)60	45

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2184160			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	46	

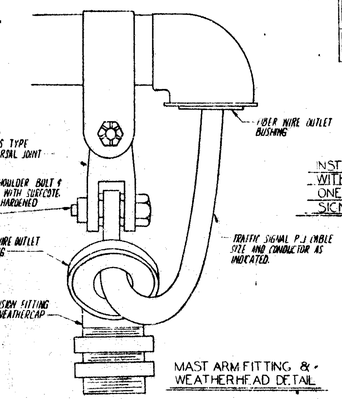
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



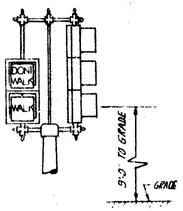
ALUMINUM MAST ARM STANDARD & MAST ARM WITH BRACKET ARM SIGNAL ADDED

INSTALLATION OF TURN SIGNAL MOUNTED ON BRACKET ARM WITH PEDESTRIAN (WALK-DON'T WALK) SIGNALS

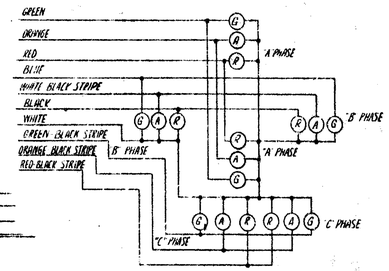
INSTALLATION OF 3-SECTION TRAFFIC SIGNAL & (2) WALK-DON'T WALK PEDESTRAIN SIGNALS ON A TRAFFIC SIGNAL PEDESTAL



MAST ARM FITTING & WEATHERHEAD DETAIL



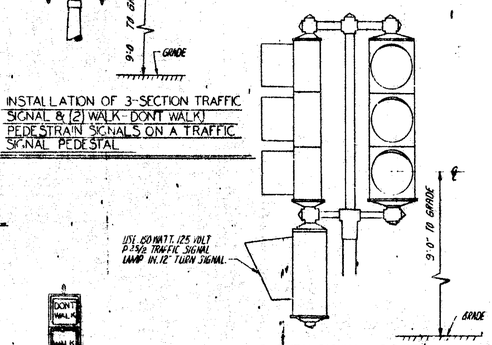
INSTALLATION OF A 2 WAY T.S. WITH ONE 3-SECTION HEAD & ONE WALK-DON'T WALK PED. SIGNAL ON T.S. PEDESTAL



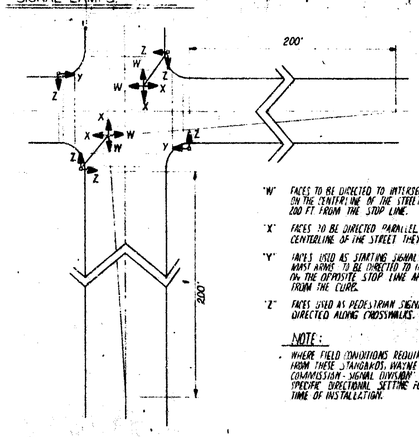
COLOR CODE FOR WIRING, CONNECTING SIGNAL LAMPS

MAIN STREET	GREEN	WALK
	RED	DON'T WALK
WHITE (COMMON)		
CROSS STREET	ORANGE	WALK
	BLACK	DON'T WALK

COLOR CODE FOR WIRING AND CONNECTING 5/C CABLE TO (WALK-DON'T WALK) SIGNAL LAMPS



12" TURN SIGNAL MOUNTED WITH VEHICLE SIGNALS



"W" FACES TO BE DIRECTED TO INTERSECT A POINT ON THE CENTERLINE OF THE STREET THEY CONTROL, 200 FT. FROM THE STOP LINE.

"X" FACES TO BE DIRECTED PARALLEL TO THE CENTERLINE OF THE STREET THEY CONTROL.

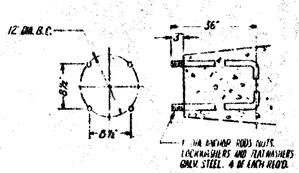
"Y" FACES USED AS STARTING SIGNALS WITH NEAR SIDE MAST ARMS TO BE DIRECTED TO INTERSECT A POINT ON THE OPPOSITE STOP LINE APPROXIMATELY 4 FT. FROM THE CURB.

"Z" FACES USED AS PEDESTRIAN SIGNALS TO BE DIRECTED ALONG CROSSWALKS.

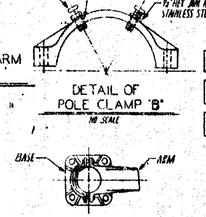
NOTE:

WHERE FIELD CONDITIONS REQUIRE DEVIATION FROM THESE STANDARDS, WAYNE COUNTY ROAD COMMISSION SIGNAL DIVISION WILL FURNISH SPECIFIC DIRECTIONAL SETTING FOR SIGNALS AT TIME OF INSTALLATION.

STANDARD FOR DIRECTIONAL SETTINGS OF TRAFFIC SIGNALS



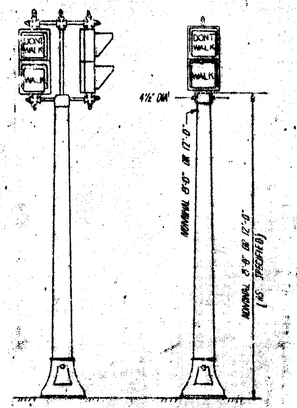
BOLT LAYOUT FOR MAST ARM STANDARD FOUNDATION



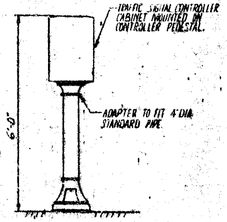
DETAIL OF POLE CLAMP "B"

NO SCALE

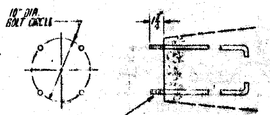
RELATION OF ARM TO BASE



BASE PEDESTAL



CABINET CONTROLLER



BOLT LAYOUT FOR BASE PEDESTAL FOUNDATION

CONSULTING ENGINEERING ASSOCIATES INC.
16580 WYOMING DETROIT, MICH 48221

DATE 6-17-64
DRAWN J.S.S.
CHECKED
APPROVED

TRAFFIC SIGNAL DETAILS

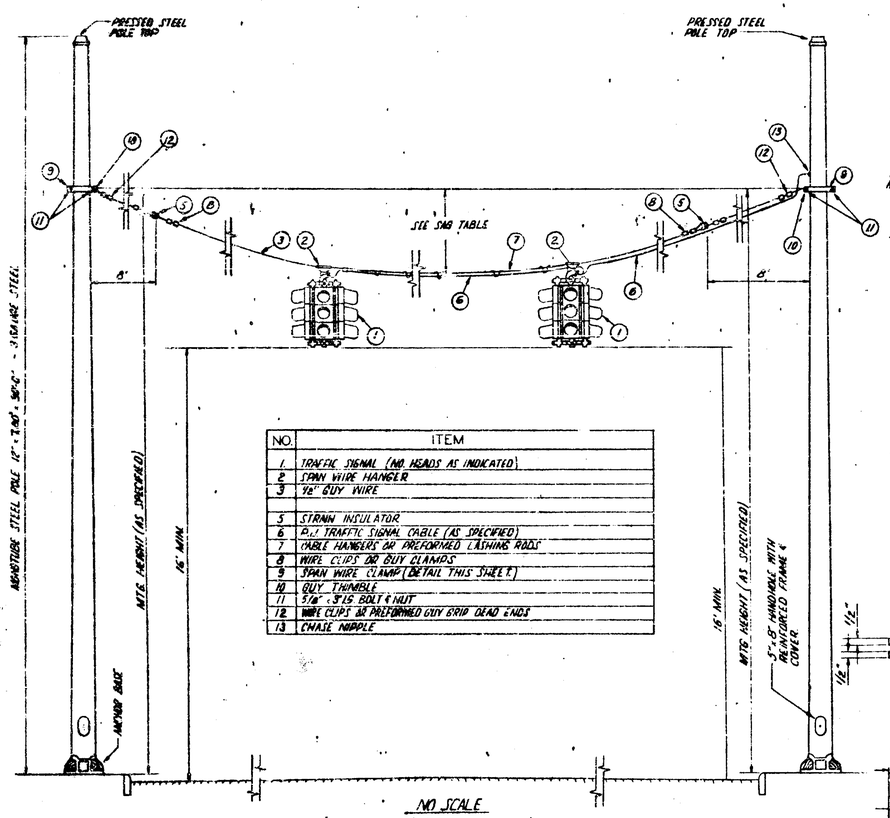
FILE NO. CEA.64 T.S.-200
DRWG. NO. 4 OF 6

SIGNAL & LIGHTING

NO. 63174A.C-52

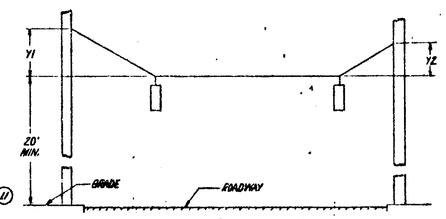
63174A 175-2184160 46

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	4	
R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

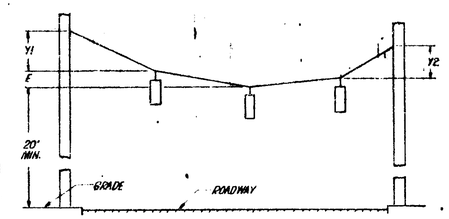


NO.	ITEM
1.	TRAFFIC SIGNAL (NO HEADS AS INDICATED)
2	SPAN WIRE HANGER
3	1/2" GUY WIRE
5	STRAIN INSULATOR
6	P.J. TRAFFIC SIGNAL CABLE (AS SPECIFIED)
7	CABLE HANGERS OR PREFORMED LASHING RODS
8	WIRE CLIPS OR GUY CLAMPS
9	SPAN WIRE CLAMP (DETAIL THIS SHEET)
10	GUY THIMBLE
11	5/8" x 3" LG. BOLT & NUT
12	WIRE CLIPS OR PREFORMED GUY GRIP DEAD ENDS
13	CHASE NIPPLE

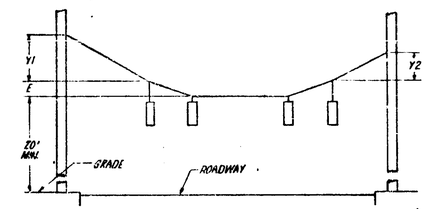
NO SCALE



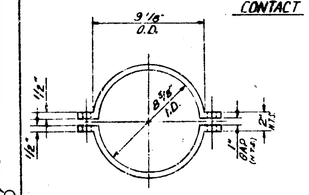
SAG SCHEDULE FOR 2 POLE-2 HEAD CONTACT

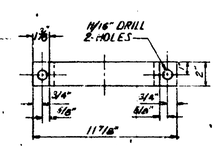


SAG SCHEDULE FOR 2 POLE-3 HEAD CONTACT

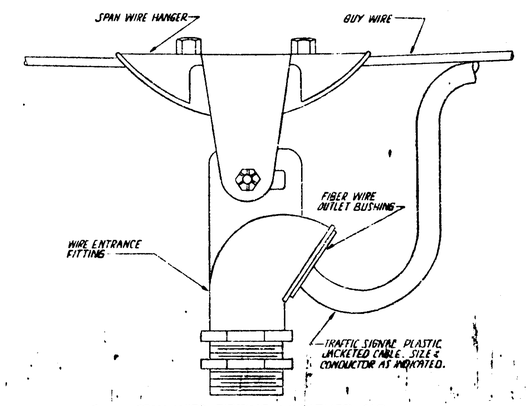


SAG SCHEDULE FOR 2 POLE-4 HEAD CONTACT

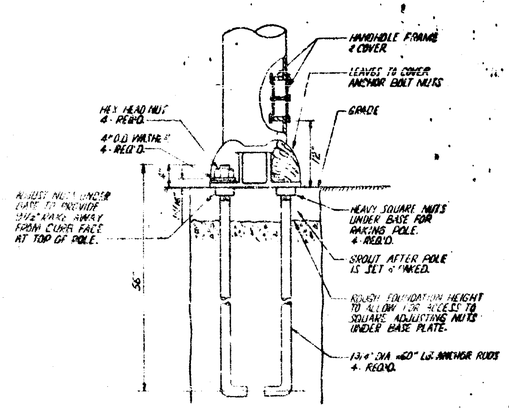


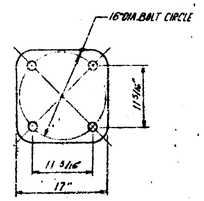


SPAN WIRE CLAMP
SCALE 3/16"=1"
MATERIAL:
1/2" x 2" GALVANIZED STEEL



SPAN WIRE FITTING & WEATHER CAP
NO SCALE





ANCHOR BOLT PLAN
SCALE 1/12" = 1'.

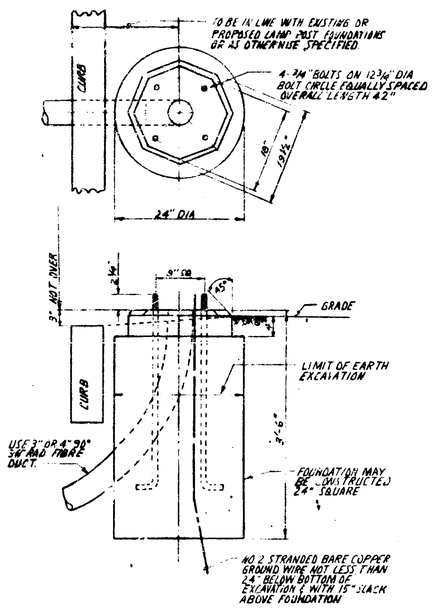
CONSULTING ENGINEERING ASSOCIATES INC.	DATE 6-17-64	TRAFFIC SIGNAL DETAILS
	DRAWN J.S.S.	
	CHECKED	
	APPROVED	
16580 WYOMING DETROIT, MICH 48221	FILE NO. CEA 64 TS-200	DRWG. NO. 5 OF 6

SIGNAL & LIGHTING

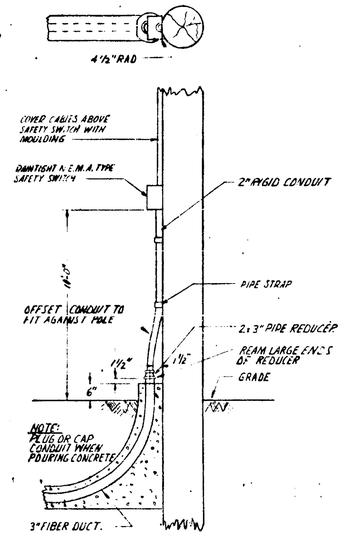
FILE NO. 63174A,C-52

S.P.R. DIV. NO.	STATE	PROJ. NO.	FEDERAL PROJ.	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	48	

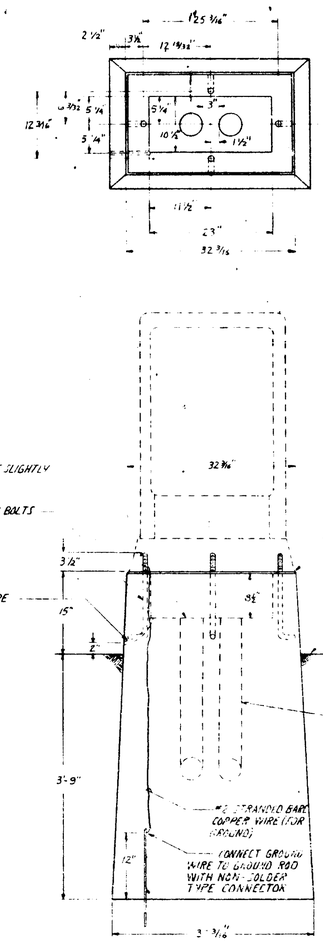
S.P.R. DIV. NO.	STATE	PROJ. NO.	FEDERAL PROJ.	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



OCTAGON BASE TRAFFIC SIGNAL CONTROLLER PEDESTAL FOUNDATION
SCALE 1"=1'-0"

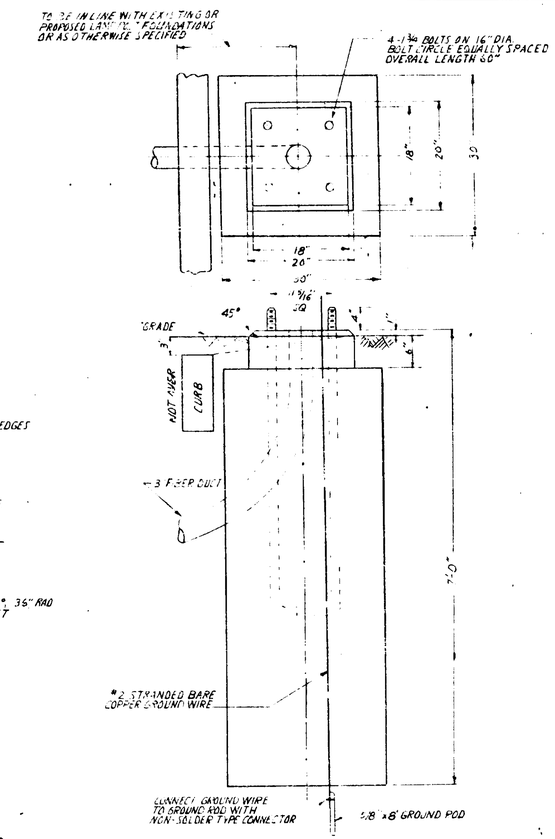


3" STANDARD CONDUIT TO CABLE POLE CONN.
SCALE 1"=1'-0"



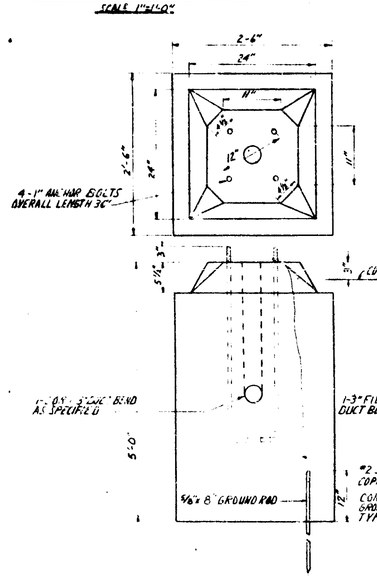
ELEVATION
SCALE: 1"=1'-0"

BALMUND TRAFFIC SIGNAL CONTROLLER FOUNDATION WITH 2-4" ENTRANCE DUCTS

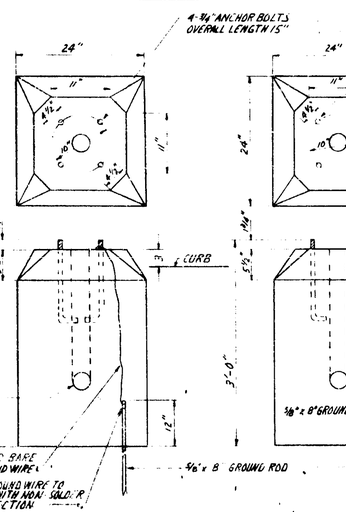


ELEVATION
SCALE 1"=1'-0"

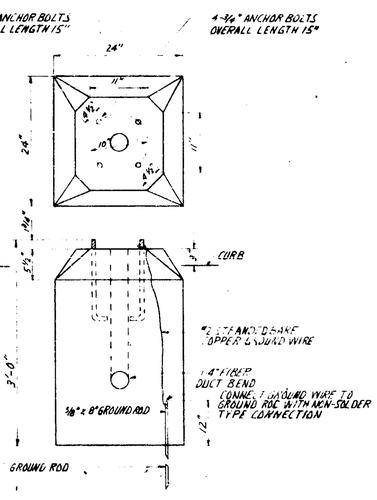
SPAN WIRE STEEL POLE FOUNDATION



ALUMINUM TRAFFIC SIGNAL MAST ARM STANDARD FOUNDATION
N.T.S.
(8)



ALUMINUM TRAFFIC SIGNAL PEDESTAL FOUNDATION
N.T.S.
(8)



ALUMINUM TRAFFIC SIGNAL CONTROLLER PEDESTAL FOUNDATION
N.T.S.
(8)

CONSULTING ENGINEERING ASSOCIATES INC.	DATE 6-17-64	TRAFFIC SIGNAL DETAILS
	DRAWN L.S.S.	
	CHECKED	
	APPROVED	
16580 WYOMING DETROIT, MICH. 48221	FILE NO. CEA 64 T.S.-200	DRWG. NO. 6 OF 6

SIGNAL & LIGHTING

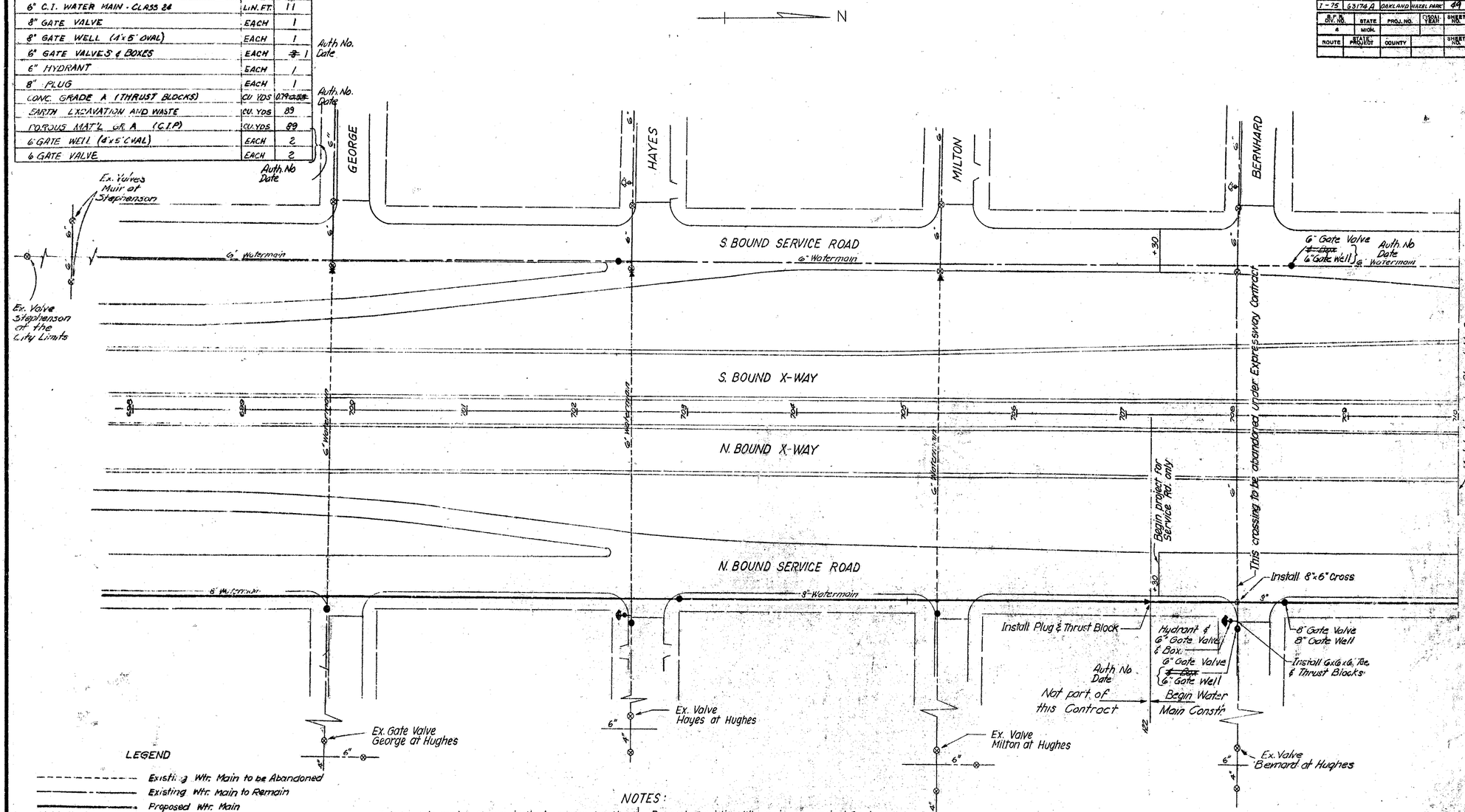
FILE NO.	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.
63174A,C-52	63174A	I75-2(84)60	48

B.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-284(60)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	49	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES

ITEM	UNIT	AMOUNT
8" C.I. WATER MAIN - CLASS 25	LIN. FT.	278
6" C.I. WATER MAIN - CLASS 24	LIN. FT.	11
8" GATE VALVE	EACH	1
8" GATE WELL (4'x5' OVAL)	EACH	1
6" GATE VALVES & BOXES	EACH	~~3~~ 1
6" HYDRANT	EACH	1
8" PLUG	EACH	1
CONC. GRADE A (THRUST BLOCKS)	CU. YDS	0.79 ~~0.55~~
EARTH EXCAVATION AND WASTE	CU. YDS	89
POROUS MAT'L GR. A (C.I.P.)	CU. YDS	89
6" GATE WELL (4'x5' OVAL)	EACH	2
6 GATE VALVE	EACH	2

Auth. No. Date



LEGEND

- Existing Wtr. Main to be Abandoned
- Existing Wtr. Main to Remain
- Proposed Wtr. Main
- Existing Valve
- Proposed Valve
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Plug & Thrust Block

Auth. No. Date:

NOTES:

Existing Wtr. mains shown indicate approx. location only and no guarantee is made either as to completeness or accuracy.
All Wtr. mains will be installed with minimum 5' cover, except this may vary to meet existing conditions where connecting to existing mains.
Location of Fire Hyd. are approx. only. Exact location subject to approval by city. Fire Hyd. Valves ~~6" or less~~ will be installed with valve boxes ~~unless otherwise indicated;~~ all other valves will be in std. gate wells.

Removal of existing Wtr. main as required for clearance to construct new main is incidental to pipe laying.
Proposed Wtr. mains shall be Cast Iron Pipe Class 250, A.S.A. Thickness Class No ~~22~~ 24 for 6" watermains. A.S.A. Thickness Class No 25 for 8" watermains. City forces to make normal maintenance repairs prior to relocation of hydrants.

Auth. No. Date

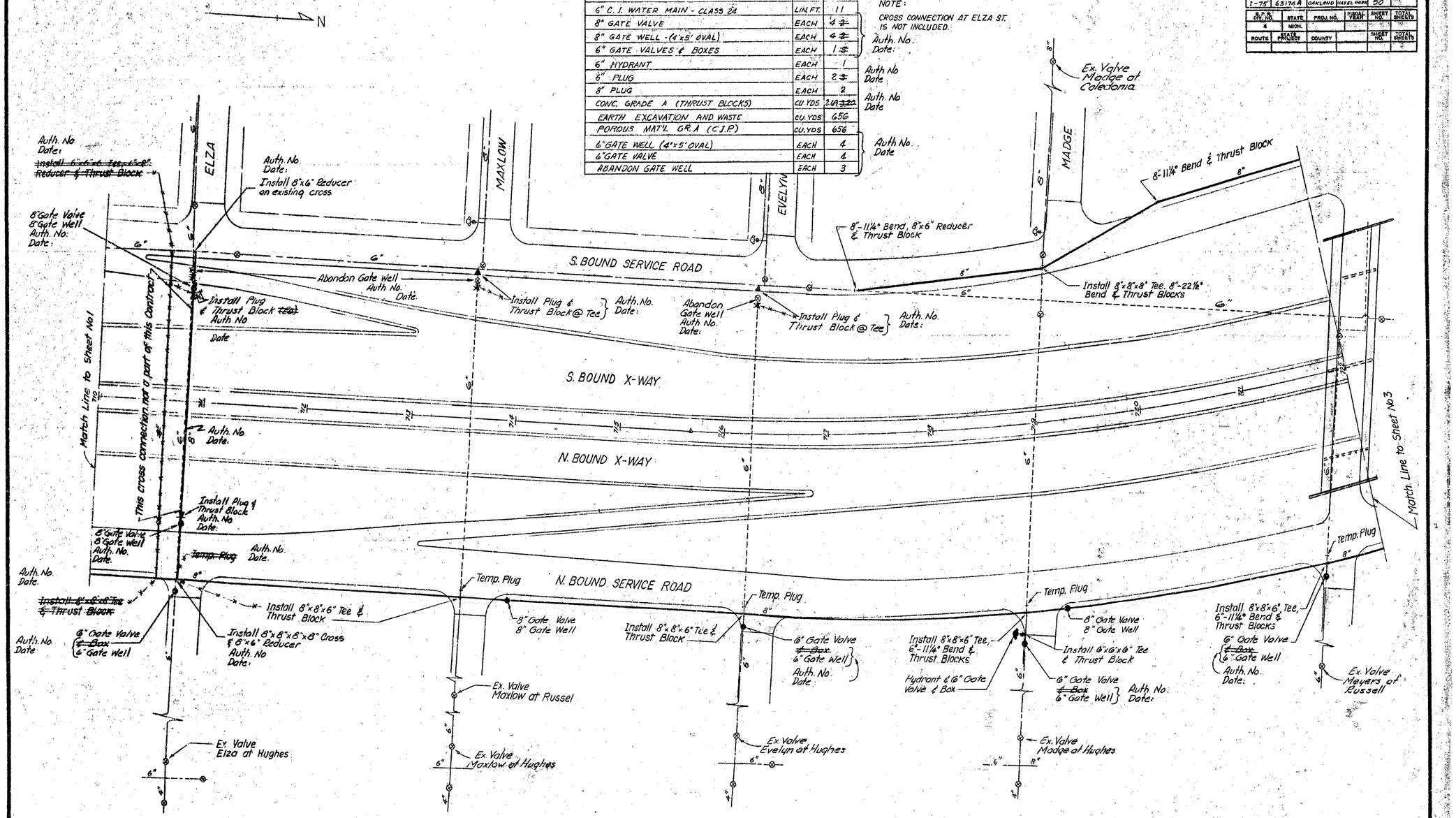
WATER MAINS

FILE NO. USE NO. 350 STENCIL	63174A,C52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	I75-284(60)	49

S.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	50	
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES

ITEM	UNIT	AMOUNT	
8" C.I. WATER MAIN - CLASS 25	LIN. FT.	~~1721~~ 1736	Auth. No Date
6" C.I. WATER MAIN - CLASS 24	LIN. FT.	11	NOTE:
8" GATE VALVE	EACH	4 ~~2~~	CROSS CONNECTION AT ELZA ST. IS NOT INCLUDED.
8" GATE WELL - (4'x5' OVAL)	EACH	4 ~~2~~	Auth. No. Date:
6" GATE VALVES & BOXES	EACH	1 ~~5~~	
6" HYDRANT	EACH	1	Auth. No Date
6" PLUG	EACH	2 ~~3~~	
8" PLUG	EACH	2	Auth. No Date
CONC. GRADE A (THRUST BLOCKS)	CU. YDS.	2.6A ~~3.20~~	
EARTH EXCAVATION AND WASTE	CU. YDS.	656	
POROUS MAT'L GR. A (C.I.P.)	CU. YDS.	656	
6" GATE WELL (4'x5' OVAL)	EACH	4	Auth. No Date
6" GATE VALVE	EACH	4	
ABANDON GATE WELL	EACH	3	



WATER MAINS

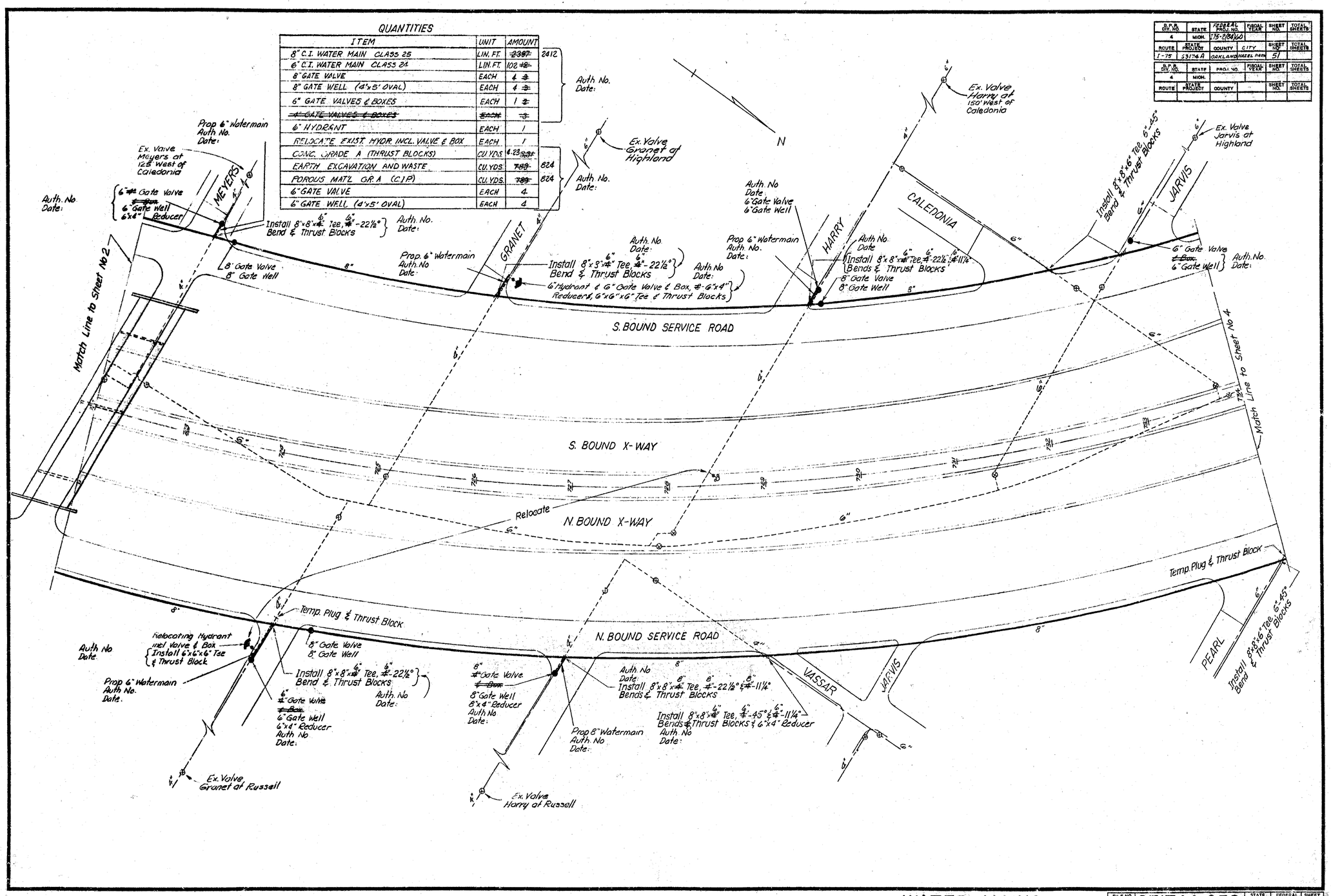
FILE NO. USE NO. OR SYMBOL	63174A, C52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	I 75-2(84)60	50

S.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	WHEEL PARK	51	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES

ITEM	UNIT	AMOUNT	
8" C.I. WATER MAIN CLASS 25	LIN. FT.	~~2387~~ 2412	Auth. No. Date:
6" C.I. WATER MAIN CLASS 24	LIN. FT.	102 ~~112~~	
8" GATE VALVE	EACH	4 ~~3~~	
8" GATE WELL (4'x5' OVAL)	EACH	4 ~~3~~	
6" GATE VALVES & BOXES	EACH	1 ~~2~~	
~~4" GATE VALVES & BOXES~~	~~EACH~~	~~3~~	
6" HYDRANT	EACH	1	
RELOCATE EXIST. HYDR. INCL. VALVE & BOX	EACH	1	
CONC. GRADE A (THRUST BLOCKS)	CU. YDS.	4.23 ~~5.37~~	Auth. No. Date:
EARTH EXCAVATION AND WASTE	CU. YDS.	~~750~~ 824	
POROUS MATL. GR. A (C.I.P.)	CU. YDS.	~~750~~ 824	
6" GATE VALVE	EACH	4	
6" GATE WELL (4'x5' OVAL)	EACH	4	



WATER MAINS

FILE & NO. INS. DWG.	63174A.C52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	I-75-2(84)60	51

QUANTITIES

ITEM	UNIT	AMOUNT
8" C.I. WATER MAIN CLASS 25	LIN. FT.	214.5
6" C.I. WATER MAIN CLASS 24	LIN. FT.	9
8" GATE VALVE	EACH	3
8" GATE WELL (4'x5' OVAL)	EACH	5
6" GATE VALVES & BOXES	EACH	1
6" HYDRANT	EACH	1
6" PLUG	EACH	1
RELOCATE EXIST. HYDR. INCL. VALVE & BOX	EACH	1
CONC. GRADE A (THRUST BLOCKS)	CU. YDS	4.66
EARTH EXCAVATION AND WASTE	CU. YDS	677
POROUS MAT'L GR. A (C.I.P.)	CU. YDS	677
8" TAPPING VALVE	EACH	2
6" GATE VALVE	EACH	2
6" GATE WELL (4'x5' OVAL)	EACH	2
16" GATE VALVE	EACH	2
16" GATE WELL (5'-6"x6'-0" OVAL)	EACH	2

NOTE:

CROSS CONNECTION AT HIGHLAND AVE IS NOT INCLUDED.

Auth. No.
Date:

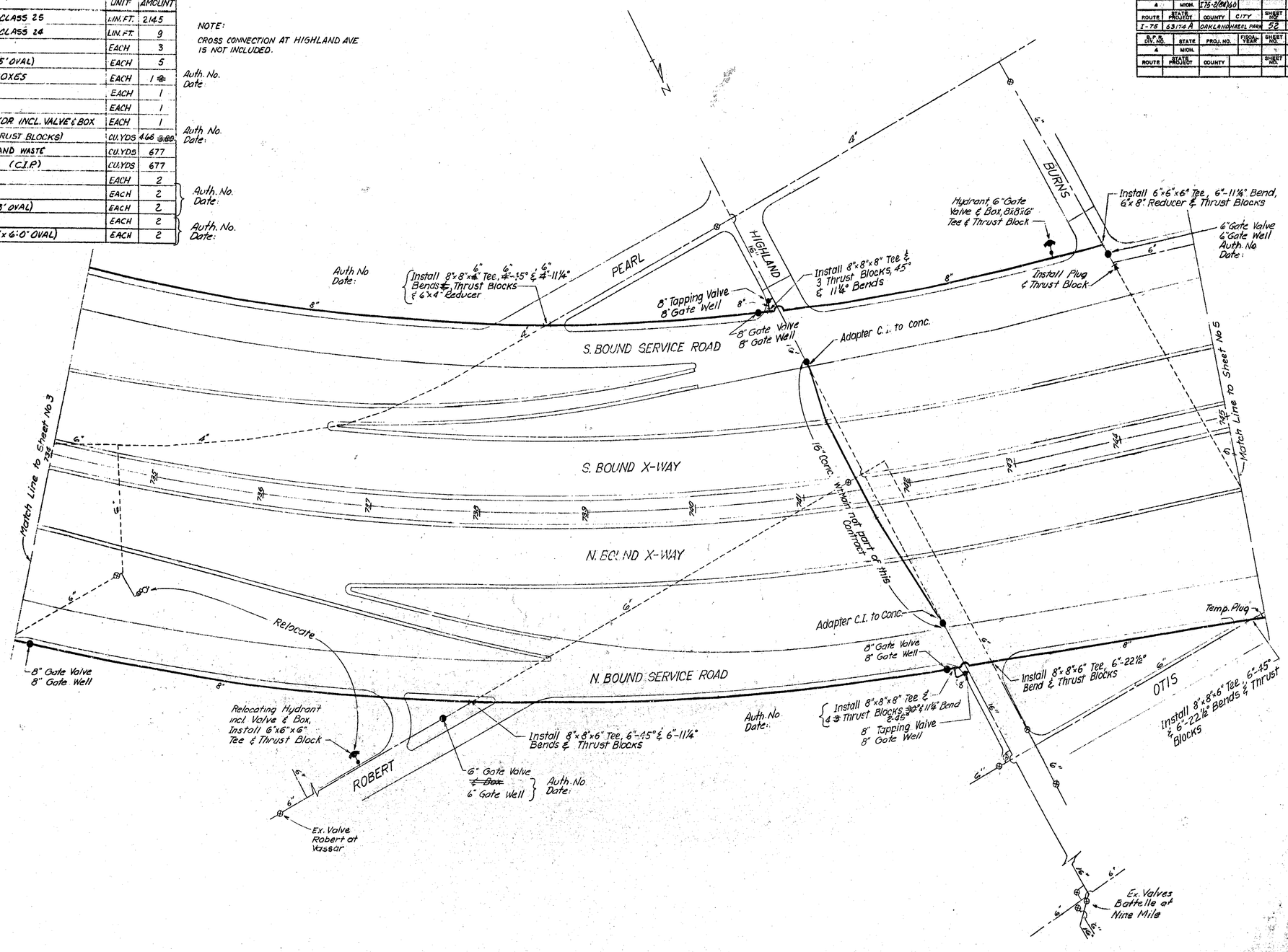
Auth. No.
Date:

Auth. No.
Date:

Auth. No.
Date:

S.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)160			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	52	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



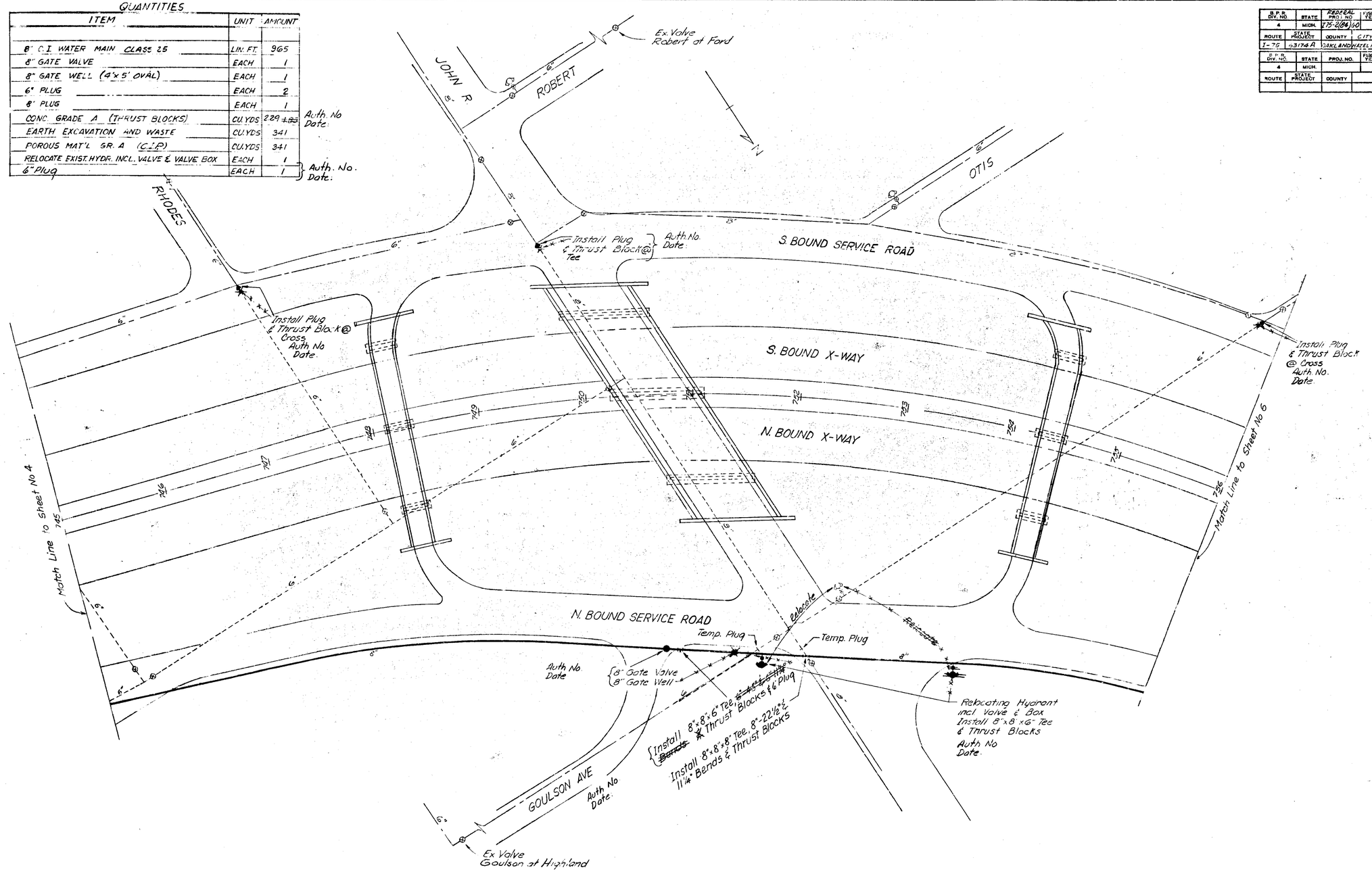
WATER MAINS

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C52	63174-A	I-75-2(84)160	52

B.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	53	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES

ITEM	UNIT	AMOUNT	
8" C.I. WATER MAIN CLASS 25	LIN. FT.	965	
8" GATE VALVE	EACH	1	
8" GATE WELL (4'x5' OVAL)	EACH	1	
6" PLUG	EACH	2	
8" PLUG	EACH	1	
CONC. GRADE A (THRUST BLOCKS)	CU.YDS	229 ~~185~~	Auth. No Date.
EARTH EXCAVATION AND WASTE	CU.YDS	341	
POROUS MAT'L GR. A (C.I.P.)	CU.YDS	341	
RELOCATE EXIST. HYDR. INCL. VALVE & VALVE BOX	EACH	1	Auth. No. Date.
6" Plug	EACH	1	



WATER MAINS

FILE NO. USE NO. 350 STENCIL	63174A,C52	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	I75-2(84)60	53

B.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(184)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	52	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

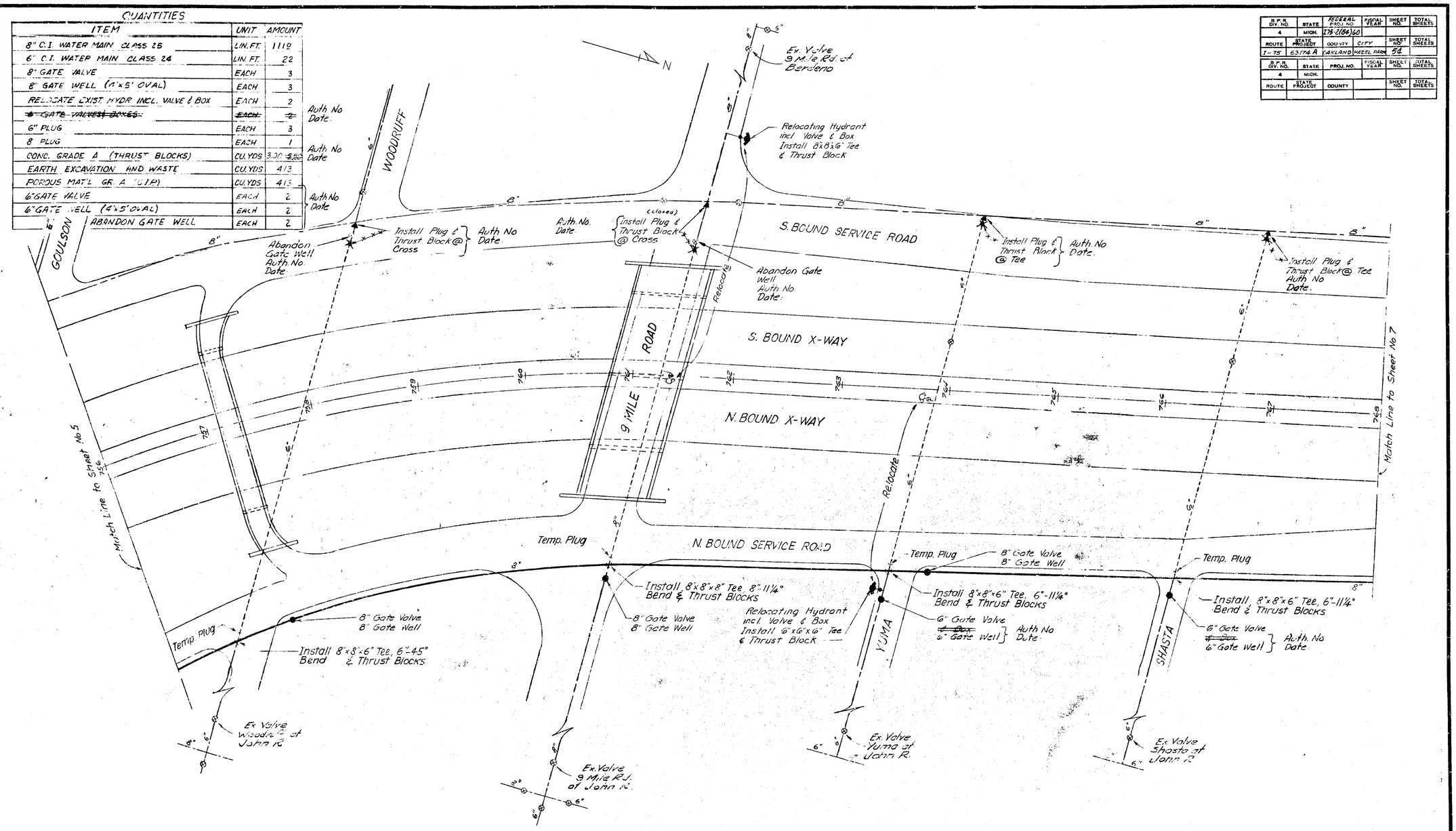
QUANTITIES

ITEM	UNIT	AMOUNT
8" C.I. WATER MAIN CLASS 25	LIN. FT.	1119
6" C.I. WATER MAIN CLASS 24	LIN. FT.	22
8" GATE VALVE	EACH	3
8" GATE WELL (4'x5' OVAL)	EACH	3
RELOCATE EXIST. HYDR. INCL. VALVE & BOX	EACH	2
~~6" GATE VALVES BOXES~~	~~EACH~~	~~2~~
6" PLUG	EACH	3
8" PLUG	EACH	1
CONC. GRADE A (THRUST BLOCKS)	CU. YDS	3.00 ~~2.50~~
EARTH EXCAVATION AND WASTE	CU. YDS	413
POROUS MAT'L GR. A (G.I.P.)	CU. YDS	413
6" GATE VALVE	EACH	2
6" GATE WELL (4'x5' OVAL)	EACH	2
ABANDON GATE WELL	EACH	2

Auth. No Date.

Auth. No Date

Auth. No Date



WATER MAINS

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C52	63174A	I75-2(184)60	52

S.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(24)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	55	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES

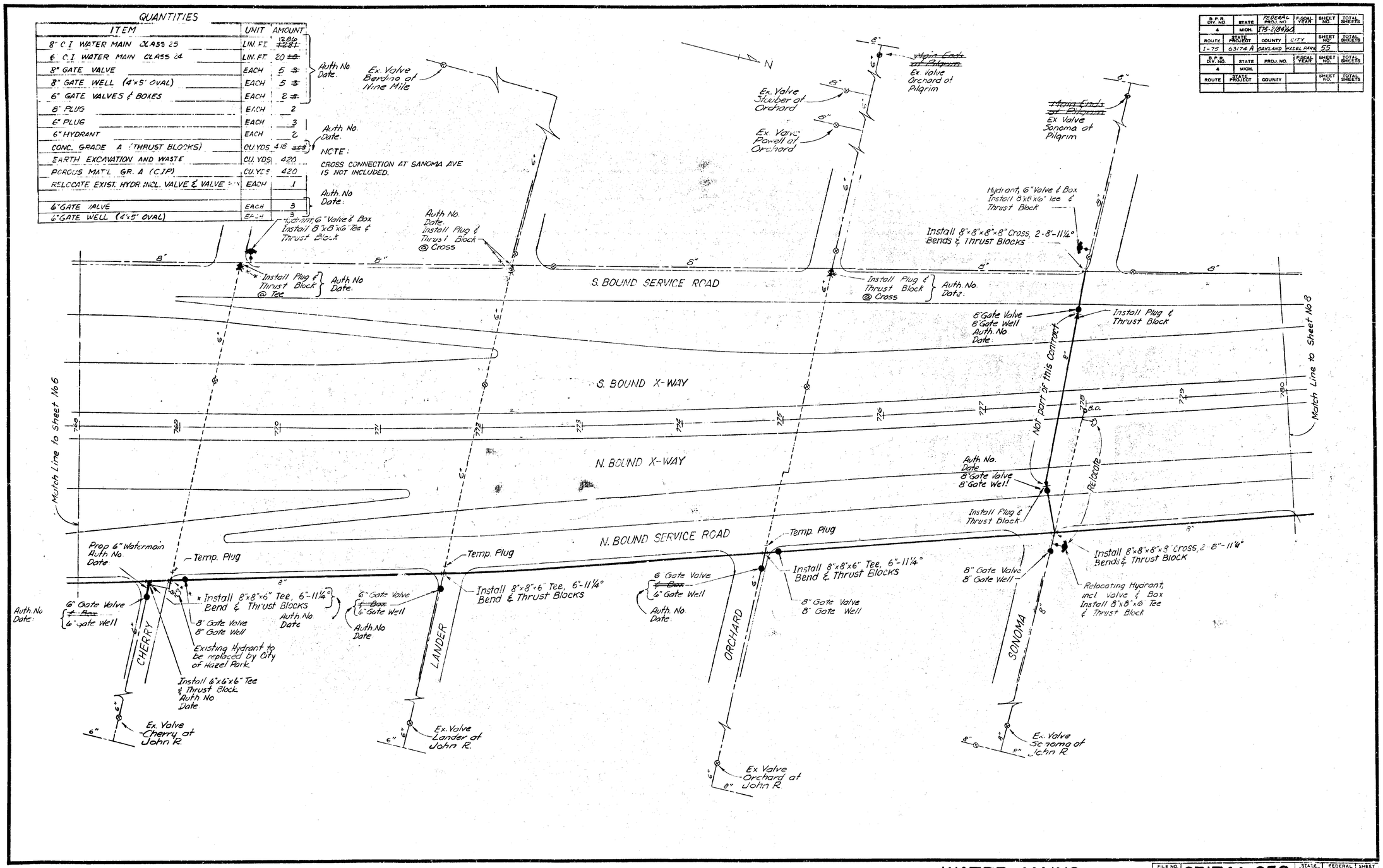
ITEM	UNIT	AMOUNT
8" C.I. WATER MAIN CLASS 25	LIN. FT.	1380 ~~1281~~
6" C.I. WATER MAIN CLASS 24	LIN. FT.	20 ~~10~~
8" GATE VALVE	EACH	5 ~~4~~
8" GATE WELL (4'x5' OVAL)	EACH	5 ~~4~~
6" GATE VALVES & BOXES	EACH	2 ~~4~~
8" PLUG	EACH	2
6" PLUG	EACH	3
6" HYDRANT	EACH	2
CONC. GRADE A (THRUST BLOCKS)	CU. YDS.	416 ~~308~~
EARTH EXCAVATION AND WASTE	CU. YDS.	420
POROUS MAT'L GR. A (CIP)	CU. YDS.	420
RELOCATE EXIST. HYDR. INCL. VALVE & VALVE BOX	EACH	1
6" GATE VALVE	EACH	3
6" GATE WELL (4'x5' OVAL)	EACH	3

Auth. No. Date.

Auth. No. Date.

NOTE:
CROSS CONNECTION AT SANOMA AVE IS NOT INCLUDED.

Auth. No. Date.



WATER MAINS

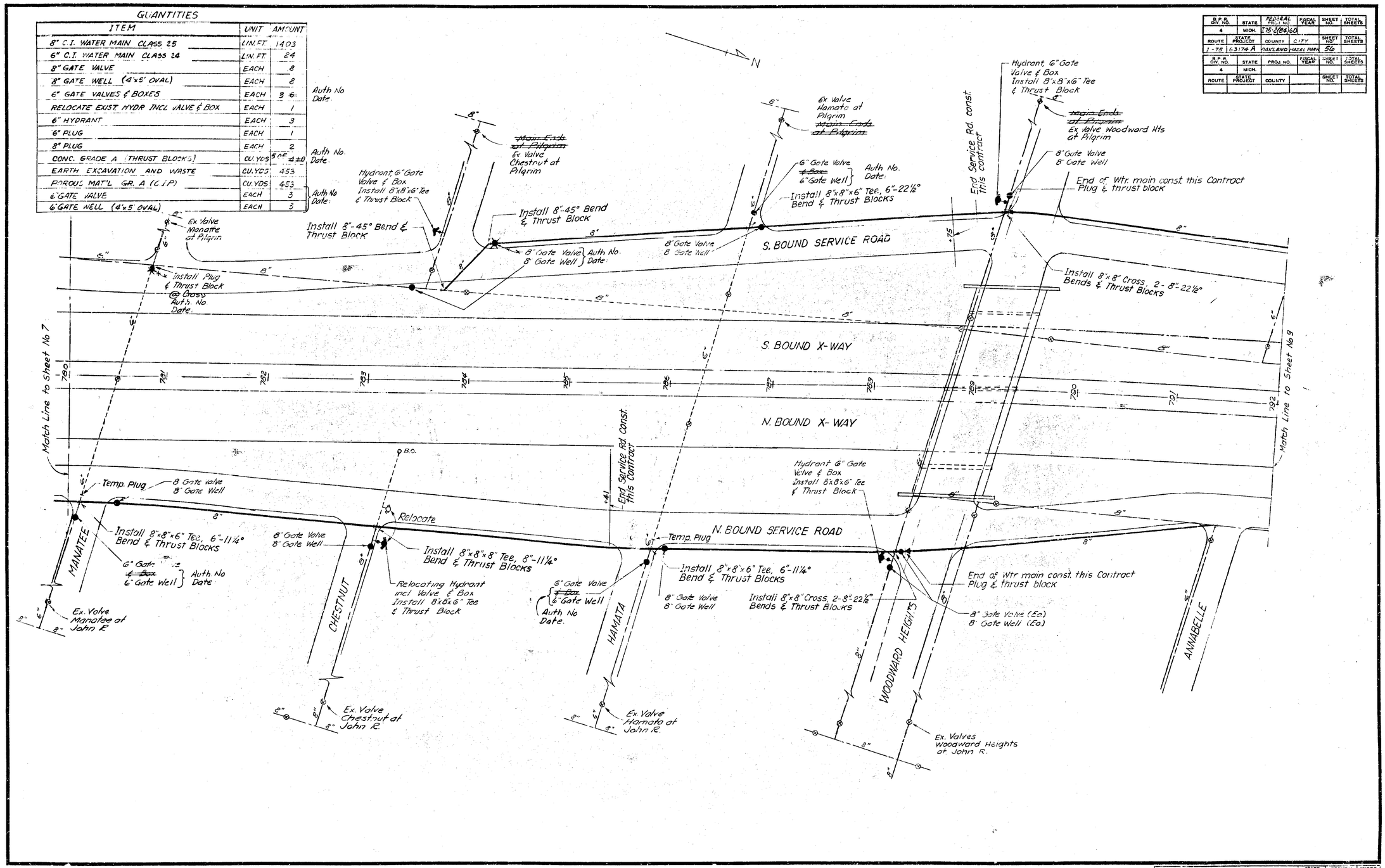
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C52	63174 A	I-75-2(24)60	55

QUANTITIES

ITEM	UNIT	AMOUNT	
8" C.I. WATER MAIN CLASS 25	LIN. FT.	1403	
6" C.I. WATER MAIN CLASS 24	LIN. FT.	24	
8" GATE VALVE	EACH	8	
8" GATE WELL (4'x5' OVAL)	EACH	8	
6" GATE VALVES & BOXES	EACH	3 ~~6~~	Auth No Date
RELOCATE EXIST. HYDR. INCL. VALVE & BOX	EACH	1	
6" HYDRANT	EACH	3	
6" PLUG	EACH	1	
8" PLUG	EACH	2	
CONC. GRADE A (THRUST BLOCKS)	CU. YDS.	~~5~~ 4.8	Auth. No. Date.
EARTH EXCAVATION AND WASTE	CU. YDS.	453	
POROUS MAT'L GR. A (C.I.P.)	CU. YDS.	453	
6" GATE VALVE	EACH	3	Auth No Date
6" GATE WELL (4'x5' OVAL)	EACH	3	

B.P.R. DIV. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	56	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

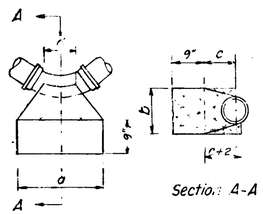


WATER MAINS

FILE NO.	STATE ROUTE	STATE PROJECT	SHEET NO.
63174A,C52	I-75	63174A	56

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	T15-2(190)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	57	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Plan

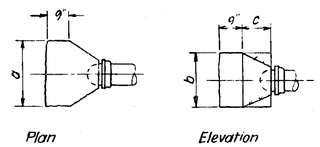
Section A-A

Size of Bend	Degree of Bend	Dimensions a	b	c	d	Conc. Cu. Yds.	
6"	90°	2'-6"	1'-9"	1'-0"	0'-9"	0.19	0.23
8"	90°	3'-4"	2'-6"	1'-0"	1'-2"	0.36	0.44
12"	90°	5'-0"	3'-0"	1'-4"	1'-8"	0.73	0.90
16"	90°	5'-6"	4'-6"	2'-0"	2'-3"	1.47	1.94
6"	45°	2'-4"	1'-8"	0'-10"	0'-9"	0.16	0.19
8"	45°	2'-4"	2'-0"	1'-0"	1'-4"	0.21	0.27
12"	45°	3'-6"	2'-6"	1'-4"	1'-4"	0.43	0.53
16"	45°	5'-0"	3'-0"	1'-9"	2'-0"	0.86	1.07
6"	22½°	2'-0"	1'-6"	0'-9"	0'-9"	0.12	0.14
8"	22½°	2'-2"	1'-6"	0'-9"	1'-2"	0.13	0.16
12"	22½°	2'-6"	2'-0"	1'-0"	1'-4"	0.22	0.27
16"	22½°	3'-4"	2'-6"	1'-9"	1'-2"	0.48	0.58
6"	11¼°	2'-0"	1'-3"	0'-9"	0'-9"	0.10	0.12
8"	11¼°	2'-0"	1'-3"	0'-9"	1'-2"	0.10	0.12
12"	11¼°	2'-3"	1'-9"	1'-0"	1'-4"	0.18	0.22
16"	11¼°	3'-0"	2'-3"	1'-6"	1'-4"	0.37	0.44

DETAIL OF STD. THRUST BLOCKS FOR BENDS

NO SCALE

Auth. No
Date:



Plan

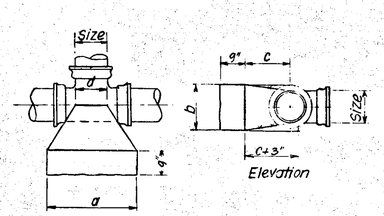
Elevation

Size	Dimensions a	b	c	Conc. Cu. Yds	
6"	2'-6"	1'-0"	1'-3"	0.13	0.15
8"	3'-0"	2'-0"	1'-4"	0.32	0.36
12"	4'-0"	3'-0"	1'-10"	0.71	0.86
16"	5'-0"	4'-0"	2'-3"	~~1.40~~	1.91

DETAIL OF STD. THRUST BLOCKS FOR PLUGS

NO SCALE

Auth. No.
Date:



Plan

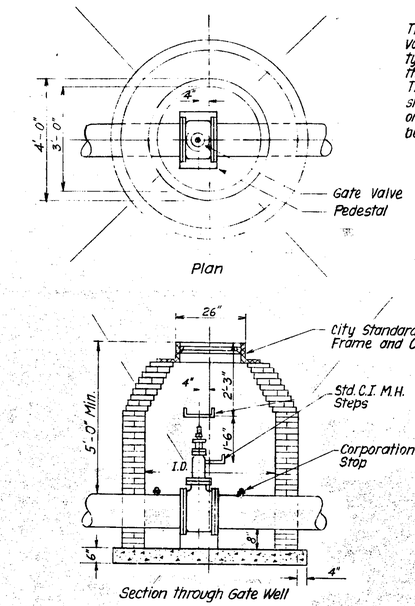
Elevation

Size	Dimensions a	b	c	d	Conc. Cu. Yds	
6"	2'-6"	1'-0"	1'-3"	1'-0"	0.13	0.15
8"	3'-0"	2'-0"	1'-4"	1'-0"	0.30	0.33
12"	4'-0"	3'-0"	1'-10"	1'-4"	0.69	0.86
16"	5'-0"	4'-0"	2'-9"	1'-10"	1.45	1.95

DETAIL OF STD. THRUST BLOCKS FOR TEES & Y's

NO SCALE

Auth. No.
Date:



Plan

Section through Gate Well

The height of the corbel is subject to variation, as directed, according to the type of material used for construction of the gate well.
The pedestal to support the gate valve shall be constructed of brick, conc. block or conc. & the base of the gate well shall be constructed of unreinforced conc. Gr. A.

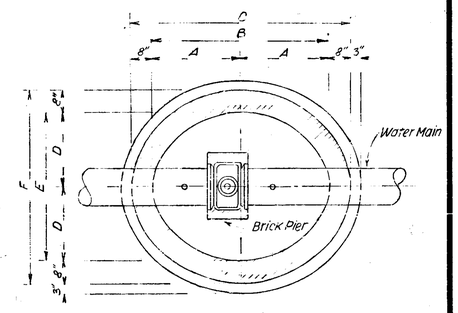
DETAIL OF GATE WELL

NO SCALE

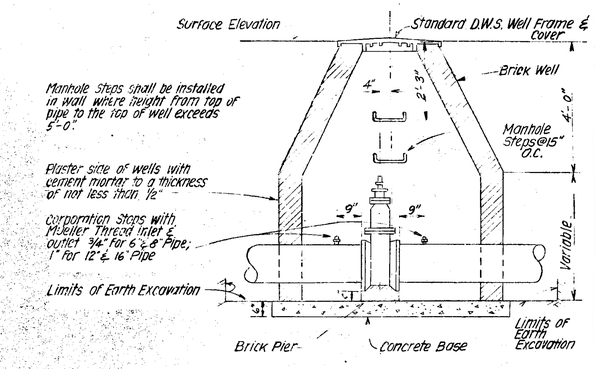
Auth. No
Date:

Note: A corporation stop is to be placed on each side of valves 6 & 8 inches and larger that are located in gate wells. } Auth. No. Date.

Size of Main	I. D. of Gate Well
6" & 8"	4'-0"
10" & 12"	5'-0"



PLAN



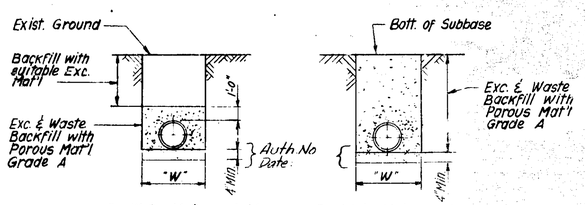
SECTION THROUGH GATE WELL

SCHEDULE OF GATE WELL DIMENSIONS						
SIZE	A	B	C	D	E	F
6"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
8"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
12"	2'-9"	5'-6"	6'-10"	2'-3"	4'-6"	5'-10"
16"	3'-0"	6'-0"	7'-4"	2'-9"	5'-6"	6'-10"

DETAIL OF STANDARD GATE WELLS

NO SCALE

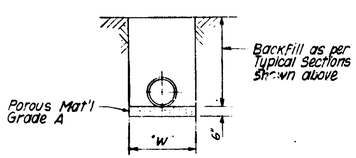
Auth. No.
Date:



For Water Mains outside of Paved Sections

For Water Mains under Exist. or prop. Pavement

Auth. No
Date:

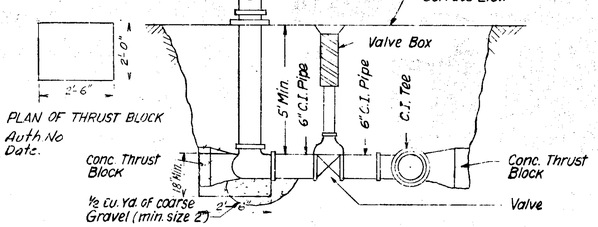


For Water Mains in Clay or Rock

TYPICAL WATER MAIN TRENCH SECTIONS

NO SCALE

Note: "W" shall not exceed the inside diameter of pipe plus 24" except that a trench width less than 36" will not be required.

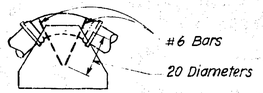


Auth. No
Date.

DETAIL OF HYDRANT INSTALLATION FOR RELOC. OR PROP. HYDRANT

NO SCALE

Note: Hydrants without exist. valves shall be reinstalled without valves furnished by the City. } Auth. No Date



Detail showing method of tying down vertical Bends

No scale

MICHIGAN STATE HIGHWAY DEPARTMENT

WATER MAIN DETAILS

SQUAD	
DRAWN BY	
CHKD BY	

WATER MAINS

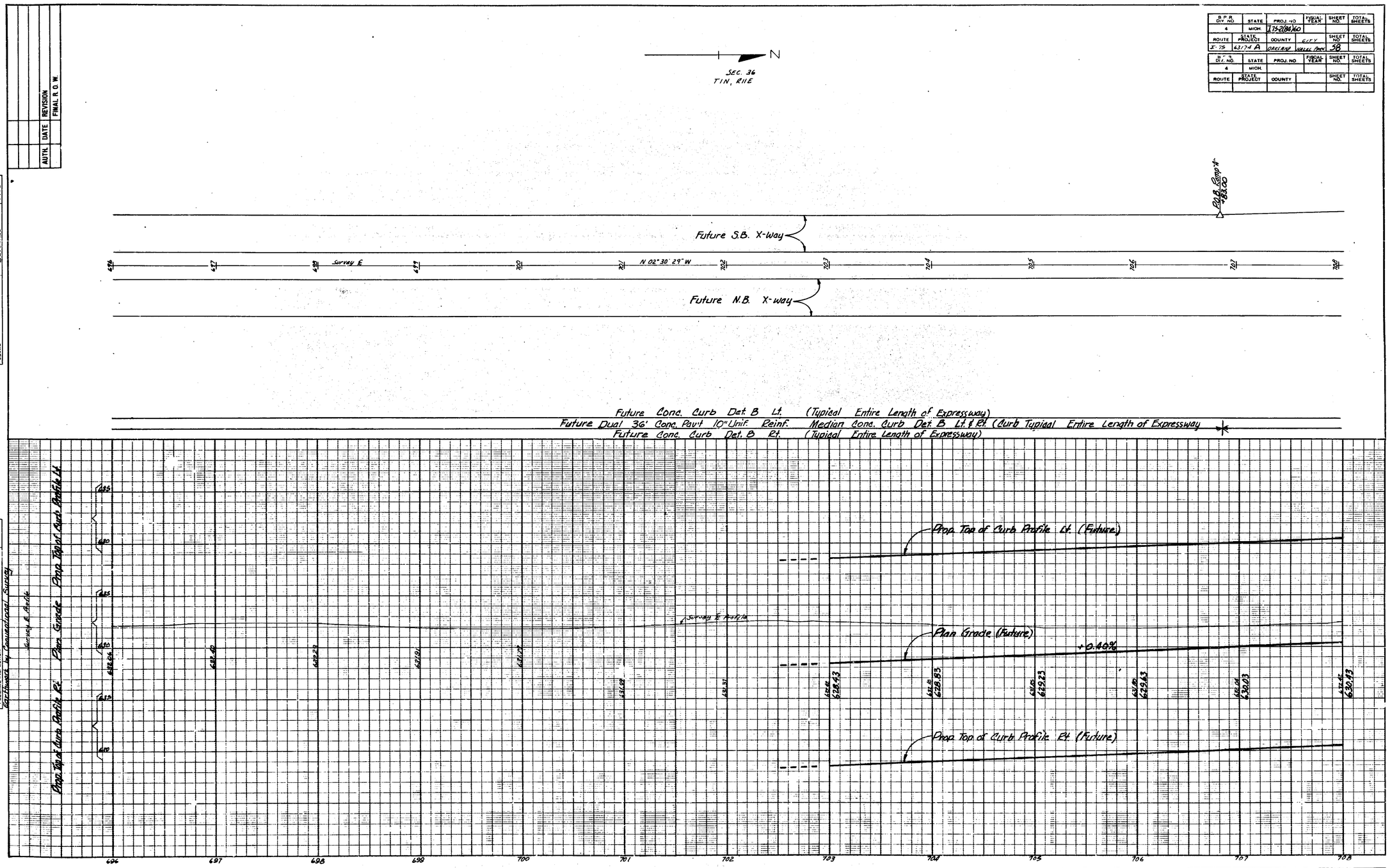
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C52	63174A	T15-2(190)60	57

B.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(86)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	WALLED LAKE	58	

B.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W.		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SIGNED	[illegible]	1962



OPERATION	BY	DATE
SURVEYED	R.G. TIBBETT	7-8-62
PLATTED	R.A. MILLER	10-8-62
PLAN CHECKED	R.D. ABBEY	9-6-62
PROFILE PLOTTED	D.V. HILL	
PROFILE CHECKED		
PRELIMINARY GRADE		
GRADE INSPECTION		
CERTIFICATION		

EXPRESSWAY NOT PART OF THIS CONTR. FOR INFORMATION ONLY

63174A, C-52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I75-2(86)60	58

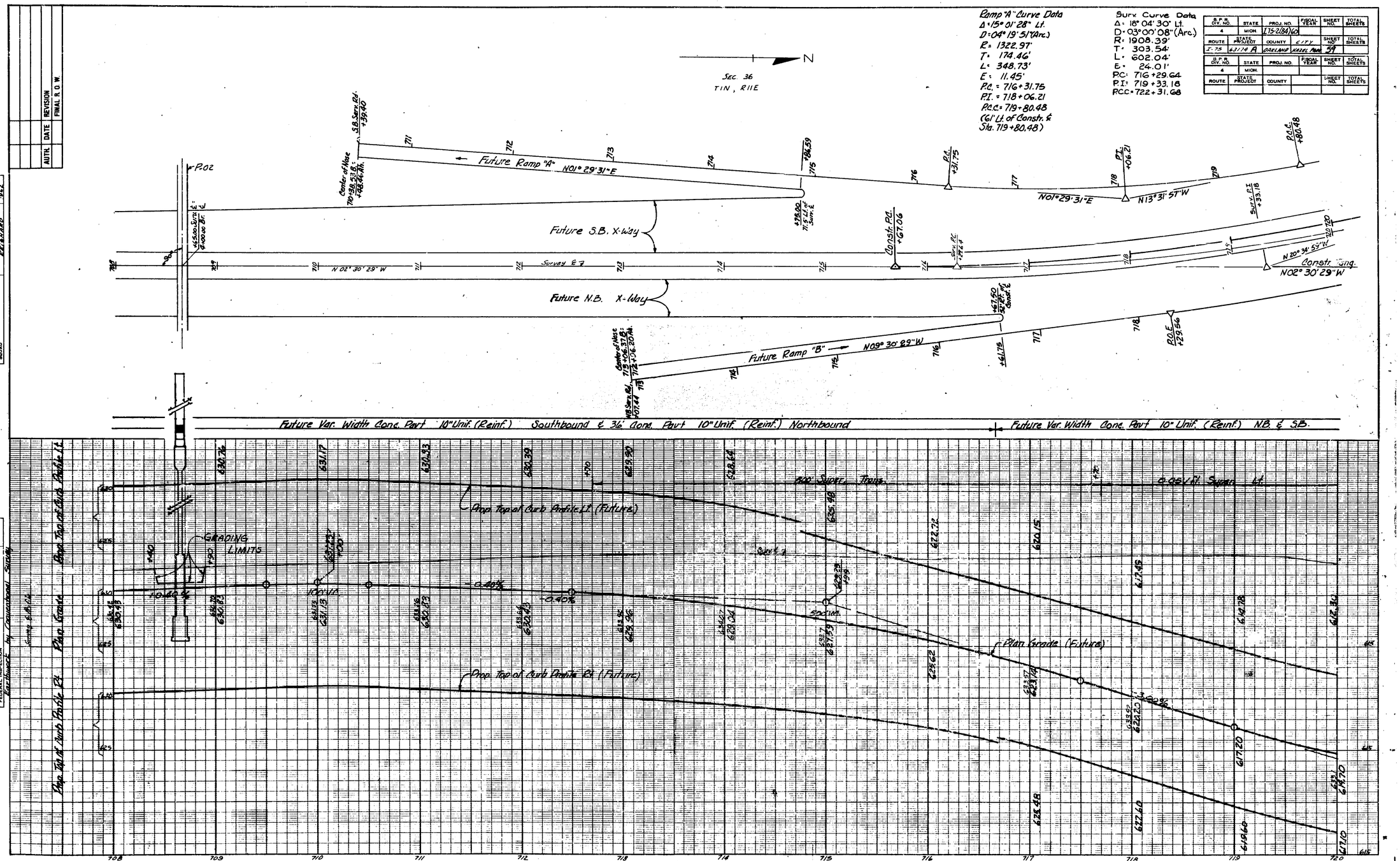
AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUAD.		
QUAD. CHECKED		
SIGNED		

PRELIMINARY 1962

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED	F.S. HUNT	9-62
PLAN CHECKED	F.S. HUNT	10-62
PROFILE PLOTTED	F.S. HUNT	9-62
PROFILE CHECKED	D.U. HILL	
PRELIMINARY GRADE		
FIELD CHECKED		
FIELD INSPECTION		

Earthwork by Conventional Survey



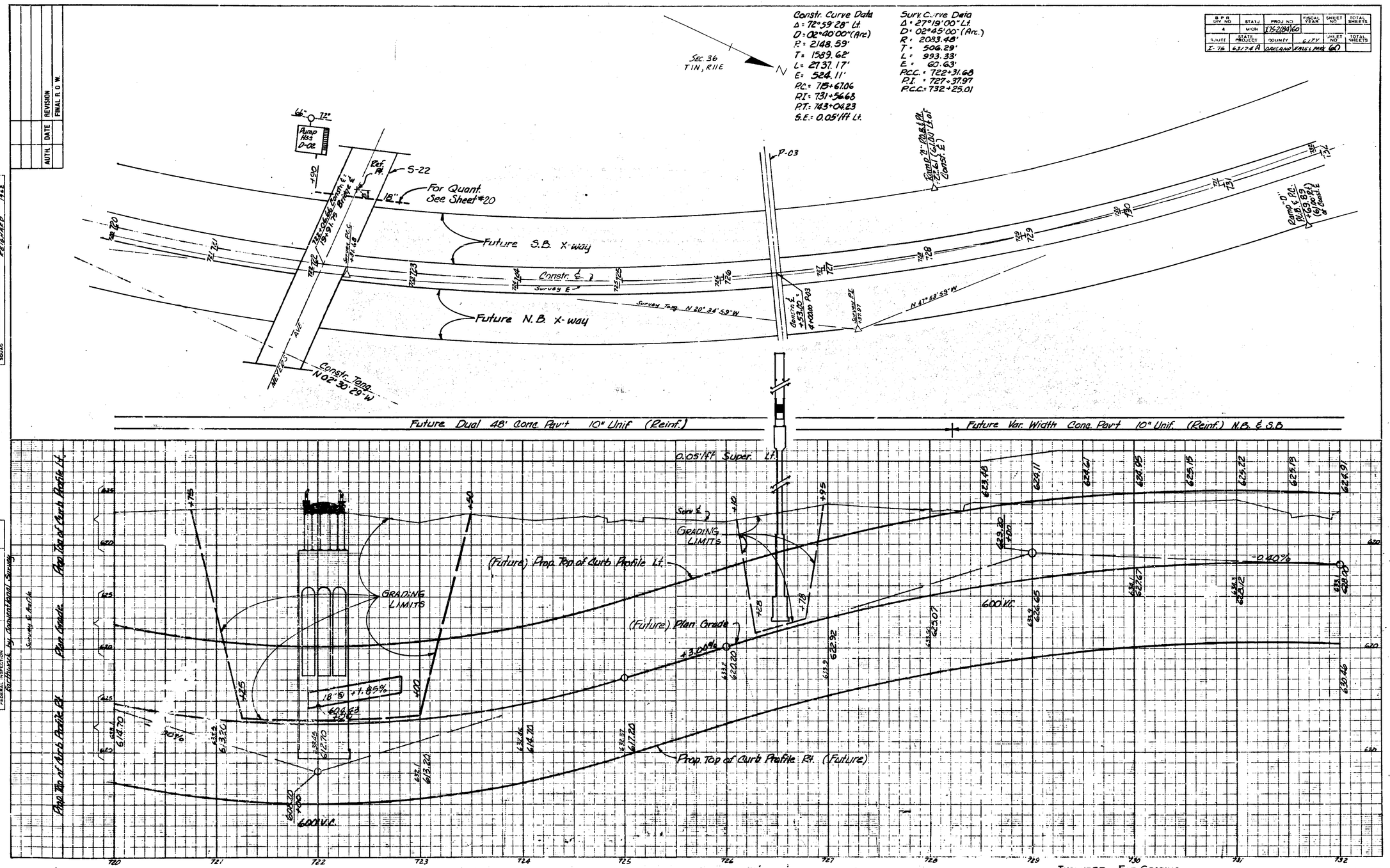
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	ROYAL OAK	59	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

EXPRESSWAY INCLUDED FOR GRADING LIMITS & INFORMATION

63174A, C-52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I 75-2(84)60	59



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	WALL PARK	60	

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD	REIGNARD	1962

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED	E.O. ABBEY	9-62
PLAN CHECKED	R.J. MILLER	10-5-62
PROFILE PLOTTED	E.O. ABBEY	9-62
PROFILE CHECKED	D.J. HILL	10-62
PRELIMINARY GRADE		
GRADE INSPECTION		
FEDERAL INSPECTION		

EXPRESSWAY INCLUDED FOR GRADING LIMITS, SEWER DETAILS AND INFORMATION 63174A, C52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I75-2(84)60	60

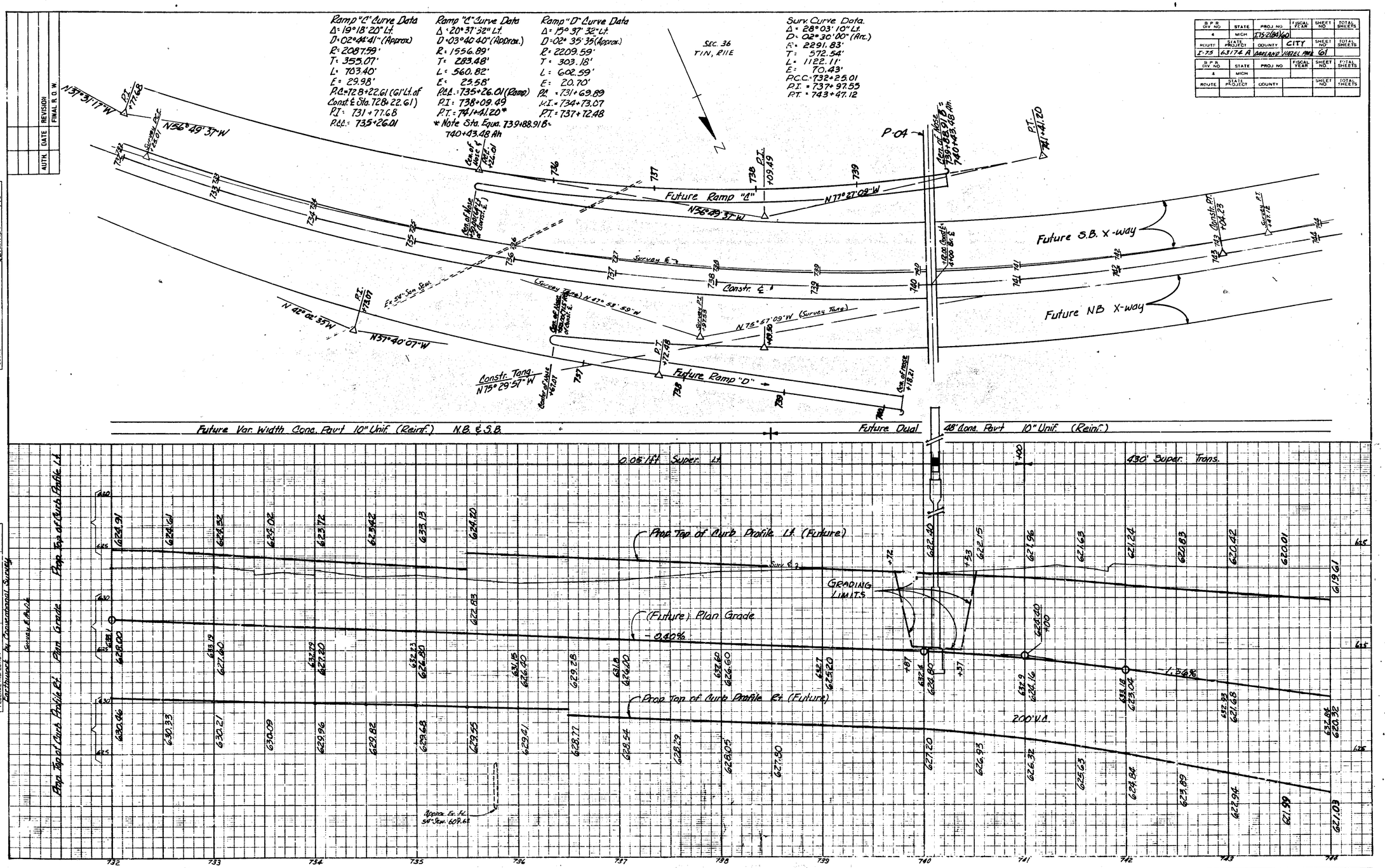
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	61	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
FINAL R.O.W.		
FINAL R.O.W. CHECK		
QUANTITIES COMPUTED		
QUANTITIES CHECKED		
SQUAD		

REVISED P.R. 1962



OPERATION	BY	DATE
SURVEYED	P.J. Hibbel	3-2-5
PLAN PLOTTED	R.T. Miller	10-5-62
PLAN CHECKED	R.E. Hibbel	9-62
TOPOGRAPHY PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE		
FINAL GRADE		
FEDERAL INSPECTION		

EXPRESSWAY INCLUDED FOR GRADING LIMITS AND INFORMATION

63174A. C52

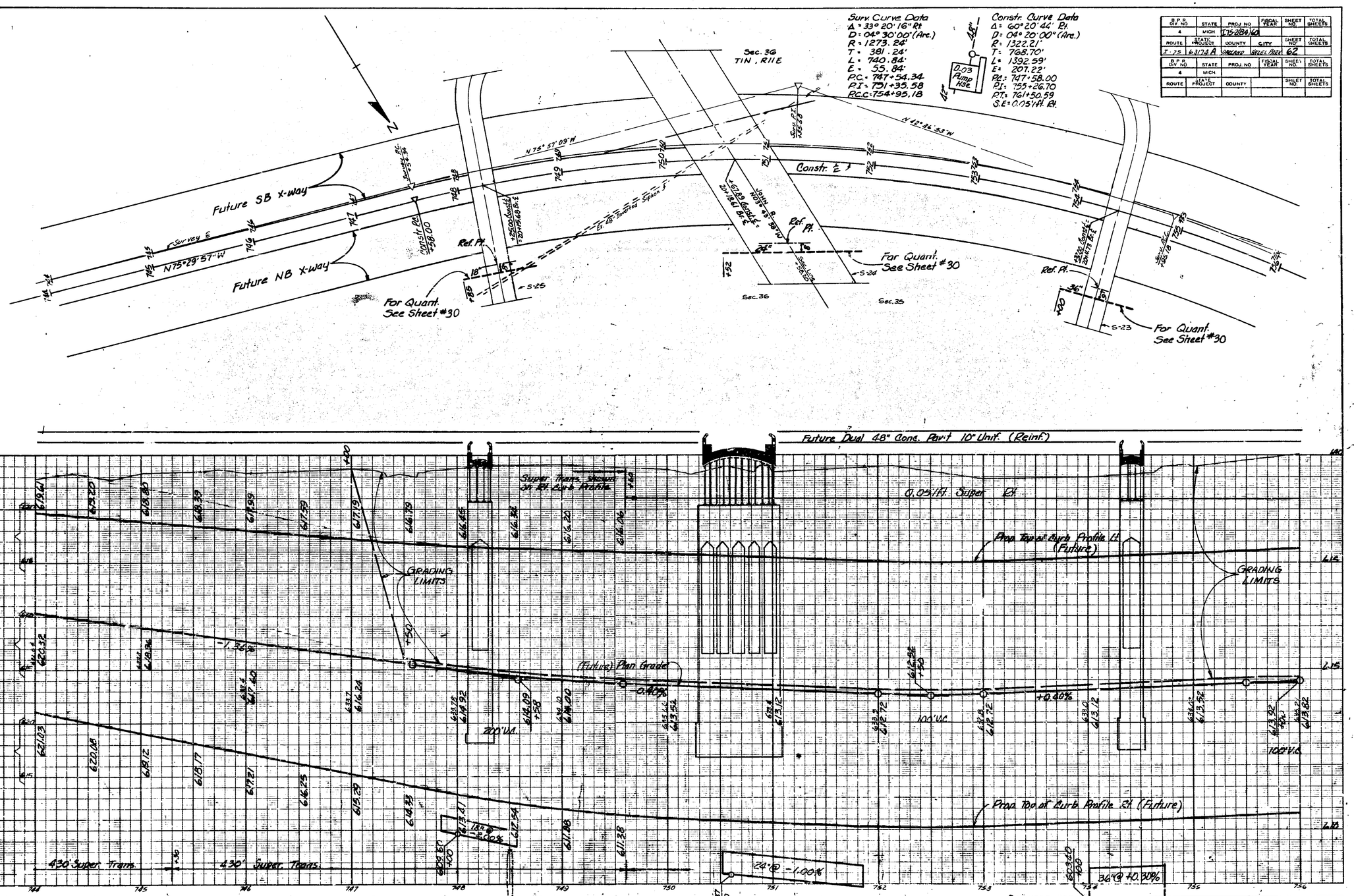
PROJECT	FISCAL YEAR	SHEET NO.
63174A	I75-2(84)60	61

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
PLAN COMPLETED		
FINAL DESIGN CHECKED		
PLAN COMPLETED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
BOUND		1962

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED	E.D. Bailey	9-61
PLAN CHECKED	E.E. Meier	10-61
PROFILE PLOTTED	E.E. Meier	10-61
PROFILE CHECKED	E.E. Albert	3-62
PRELIMINARY GRADE	D.L. Hill	
FIELD INSPECTION		
FEDERAL INSPECTION		

Recommend by Conventional Survey



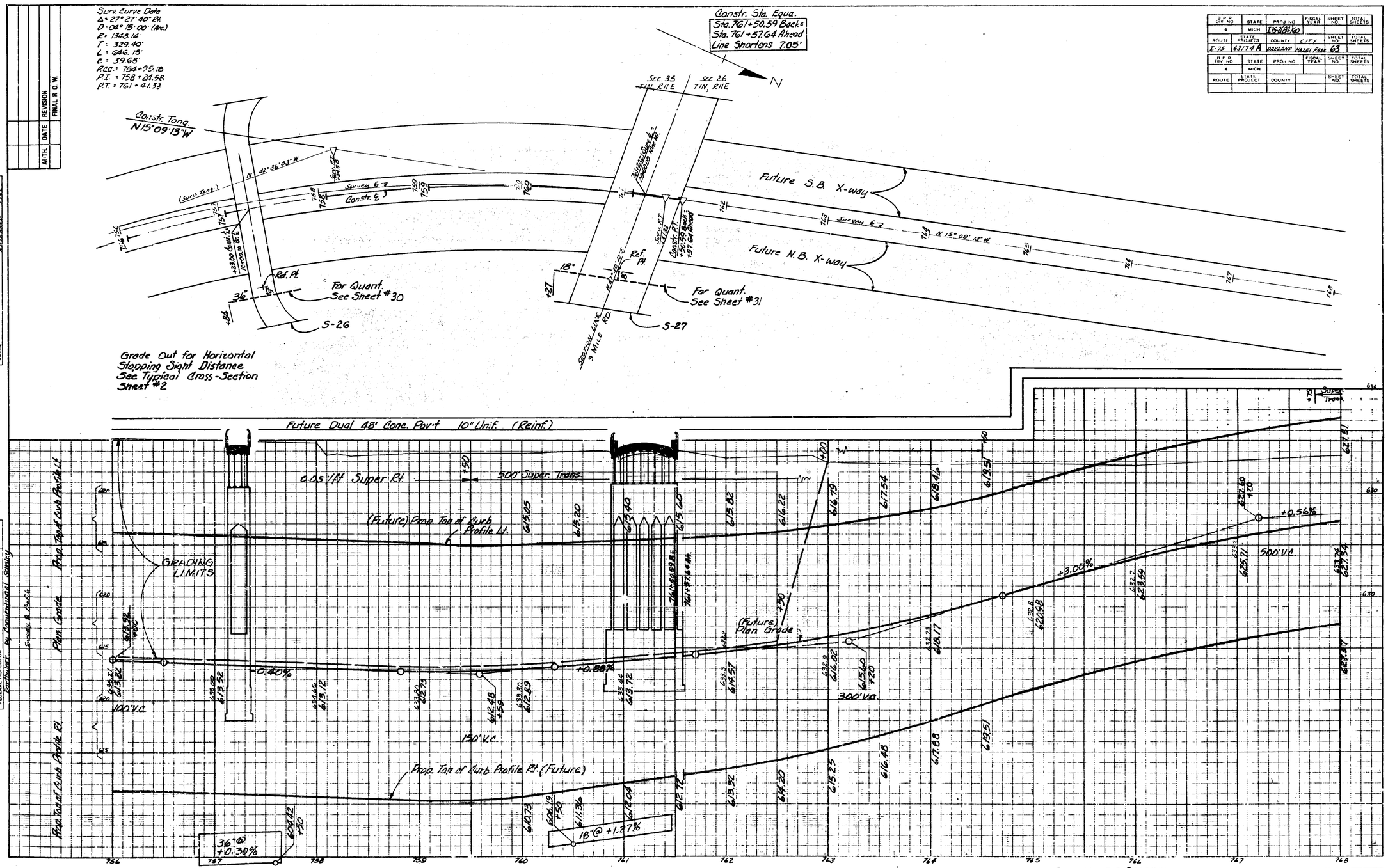
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(134)40			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	ROYAL OAK	62	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

EXPRESSWAY INCLUDED FOR GRADING LIMITS, SEWER DETAILS AND INFORMATION

63174A, C52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I-75-2(134)40	62



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	63	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

ALTH.	DATE	REVISION
		FINAL R.O.W.

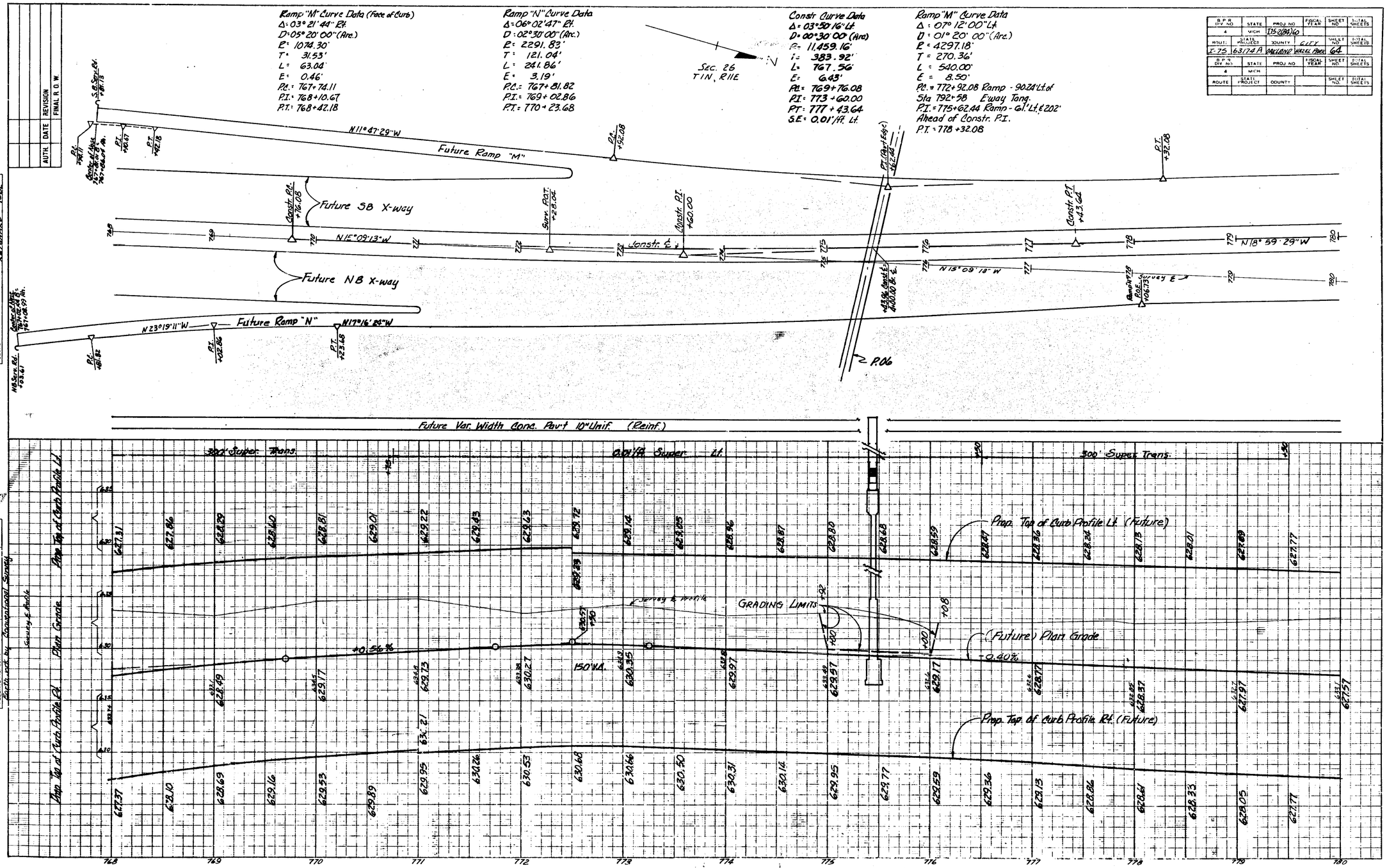
OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD		

OPERATION	BY	DATE
SURVEYED	R.O. ABBEY	9-62
PLAN PLOTTED	R.J. MILLER	10-5-62
PLAN CHECKED	R.O. ABBEY	9-62
PROFILE PLOTTED	D.J. HILL	
PROFILE CHECKED		
PRELIMINARY GRADE		
GRADE INSPECTION		
FEDERAL INSPECTION		

EXPRESSWAY INCLUDED FOR GRADING LIMITS, SEWER DETAILS AND INFORMATION

63174A, C52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I75-2(84)60	63



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I15-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	WAZEL PARK	64	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD		

REICHARD 1962

OPERATION	BY	DATE
SURVEYED	R.O. ABBEY	9-62
PLAN PLOTTED	R.T. MILLER	10-5-62
PLAN CHECKED	R.O. ABBEY	10-6-62
PROFILE PLOTTED	D.J. HILL	
PROFILE CHECKED		
PRELIMINARY GRADE		
GRADE INSPECTION		
FEDERAL INSPECTION		

EXPRESSWAY INCLUDED FOR GRADING LIMITS & INFORMATION

63174A, C52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I15-2(84)60	64

AUTH.	DATE	REVISION
		FINAL R.O.W.

Surv Curve Data
Δ = 04°25'02" Lt.
D = 02°00'00" (Arc.)
R = 2864.79'
T = 110.49'
L = 220.86'
E = 2.13'
P.C. = 780+42.72
P.I. = 781+53.21
P.T. = 782+63.58

Constr. Curve Data
Δ = 06°00'38" Rt.
D = 00°40'00" (Arc.)
R = 8594.37'
T = 451.21'
L = 901.58'
E = 11.84'
P.C. = 787+04.46
P.I. = 791+55.67 (4293' Lt. of Sta. 791+38.09 Surv. ℄)
P.T. = 796+06.04
S.E. = 0.01'/ft. Rt.

H.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	65	

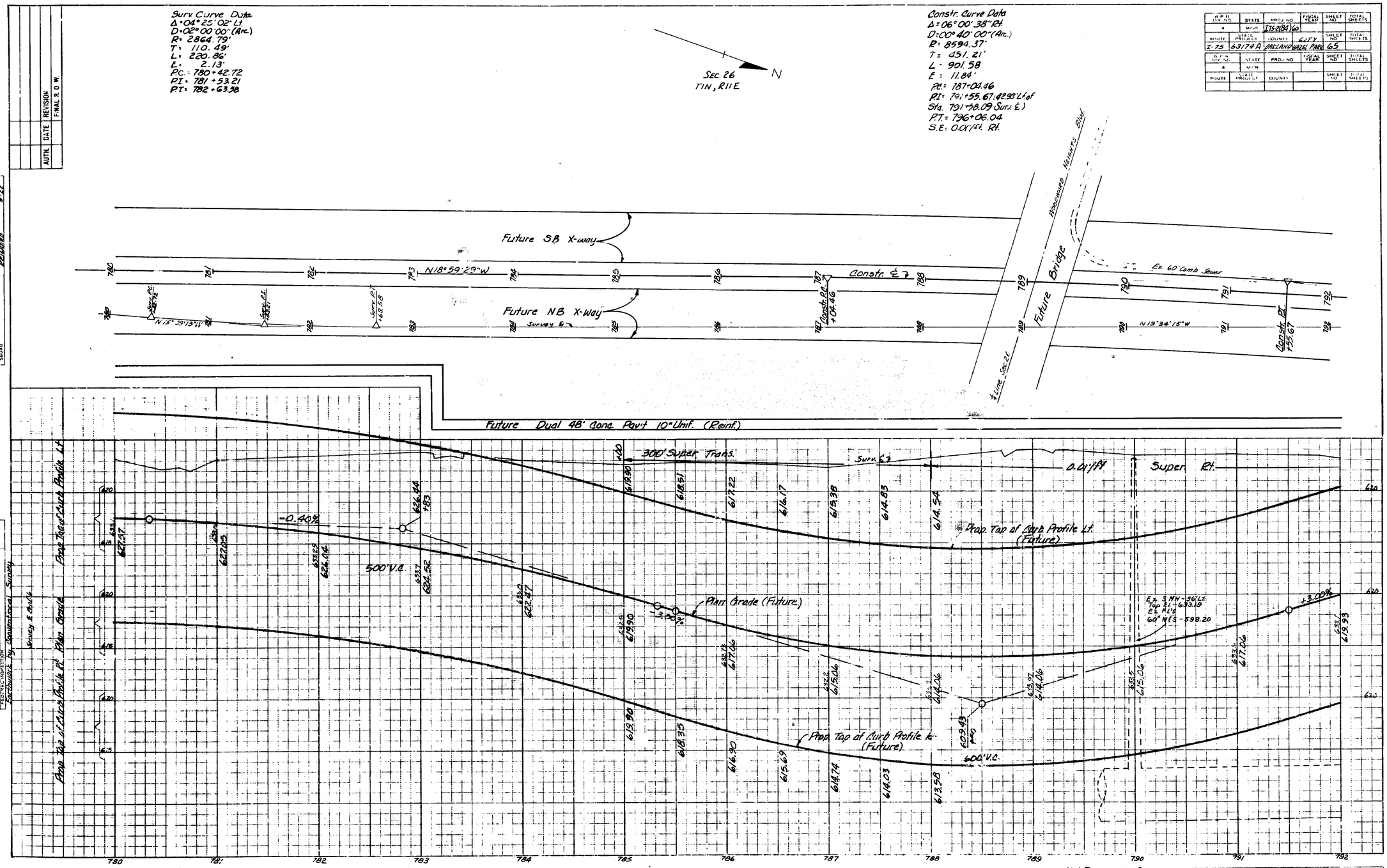
H.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL ROW		
FINAL DESIGN CHECKED		
TRACED R.O.W. CHECK		
FINAL R.O.W.		
QUANTITIES		
QUANTITIES CHECKED		
SIGNED		3-22

RECEIVED

OPERATION	BY	DATE
SURVEYED	R.S. SAMEK	8-62
LAYOUT CHECKED	R.S. SAMEK	10-62
PLAN SHOWN	R.S. SAMEK	3-21
PROFILE NOTED	R.S. SAMEK	10-62
PROFILE CHECKED	D.E. HILL	
PLAN APPROVED		
GRADE INSPECTION		
FIELD INSPECTION		

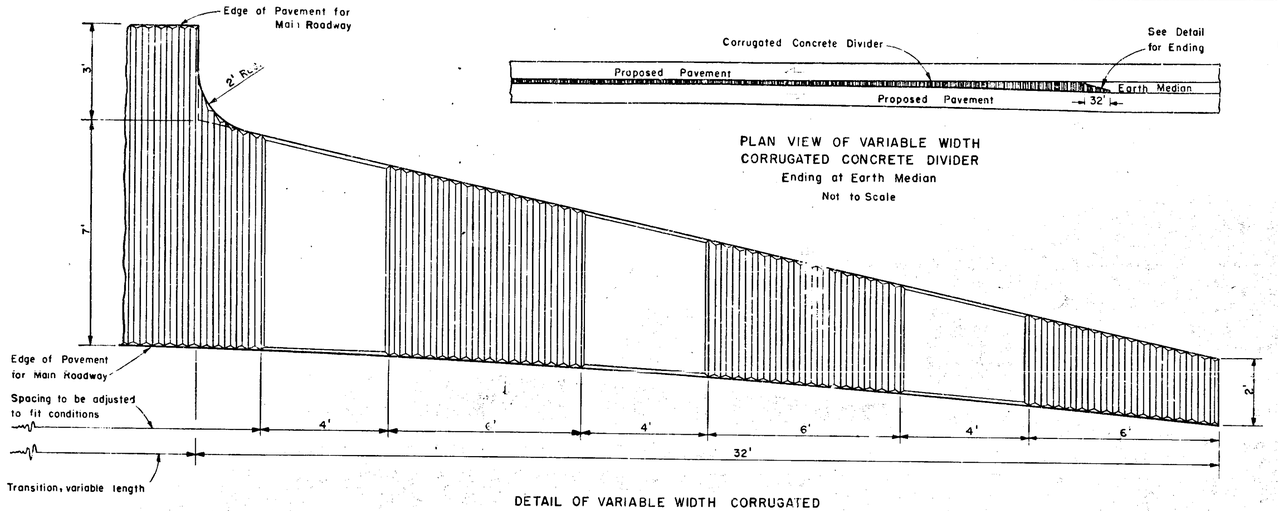
Earthwork by Conventional Survey



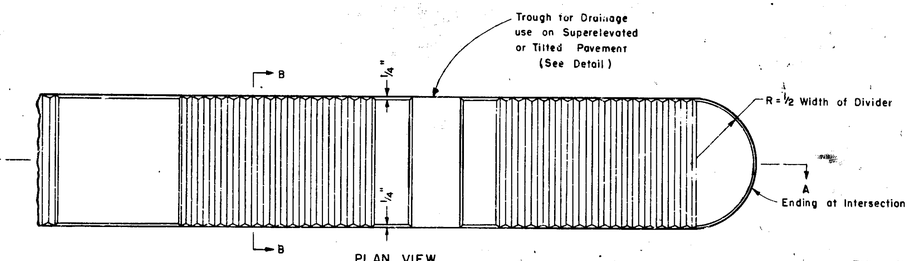
EXPRESSWAY Not Part of This Contract For Information Only. 63174A, C52

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I-75-2(84)60	65

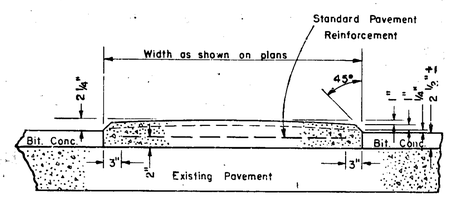
PLAN VIEW OF VARIABLE WIDTH CORRUGATED CONCRETE DIVIDER
Ending at Earth Median
Not to Scale



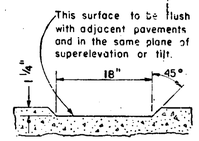
DETAIL OF VARIABLE WIDTH CORRUGATED CONCRETE DIVIDER ENDING
1/2" = 1' 0"



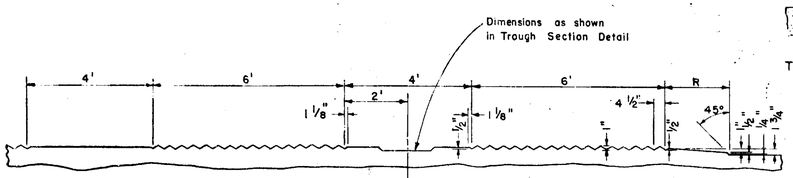
PLAN VIEW
CORRUGATED CONCRETE DIVIDER
TYPE I & II



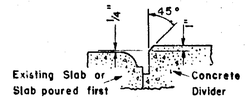
SECTION B-B
TYPE II
To be used where Divider is over Existing Pavement
1" = 1' 0"



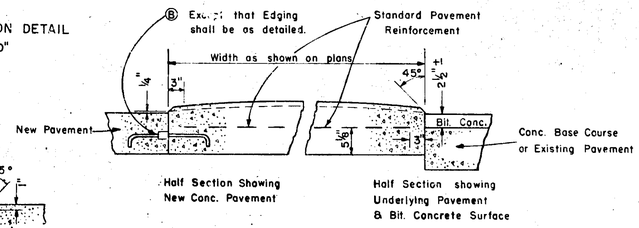
TROUGH SECTION DETAIL
1" = 1' 0"



CORRUGATED CONCRETE DIVIDER - SECTION A-A
TYPE I & II
1/2" = 1' 0"



EDGING DETAIL
1" = 1' 0"



Half Section Showing New Conc. Pavement

Half Section showing Underlying Pavement & Bit. Concrete Surface

SECTION B-B
TYPE I
To be used in New Pavement Areas
1" = 1' 0"

NOTES:

All material and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications. Grade A A Concrete shall be used in the Corrugated Concrete Divider.

Joints in Type I Corrugated Concrete Divider.

One inch expansion joints without load transfer shall be placed in the Divider in line with expansion joints in the adjacent Concrete Pavement.

Contraction or plane of weakness joints without load transfer shall be placed in the Divider in line with construction, contraction or plane of weakness joints in adjacent Concrete Pavement or Base Course.

Joints in Type II Corrugated Concrete Divider.

One inch expansion joint without load transfer shall be placed in the Divider directly above expansion joints in underlying Concrete Pavement.

Contraction joints without load transfer shall be placed in the Divider directly above construction, contraction or plane of weakness joints in underlying pavement.

Joint material shall be considered incidental to the construction of the Concrete Divider.

Hook Bolts shall be considered part of the construction of the adjacent pavement.

Concrete Divider of the type specified will be measured and paid for by area in square yards.

Pavement Reinforcement will be measured by area in square yards and paid for separately. The area paid for shall be equal to the square yards of Concrete Divider required to be reinforced with no allowance for necessary laps and splices.

		I75-2(84)60			
			CITY		
I-75	63174 A	OAKLAND	Hazel Park	66	

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

CORRUGATED CONCRETE DIVIDER

DESIGN AND TRAFFIC DIVISIONS

CHECKED R. E. Campbell — ENGINEER OF DESIGN — 12-30-57 DATE

RECOMMENDED FOR APPROVAL Harold L. Bauerle — TRAFFIC ENGINEER — 1-6-58 DATE

RECOMMEDED FOR APPROVAL H. L. Pfeffer — ENGINEER OF BRIDGE AND ROAD DESIGN — 1-6-58 DATE

OFFICE OF ENGINEERING AND CONSTRUCTION

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ CHIEF ENGINEER _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

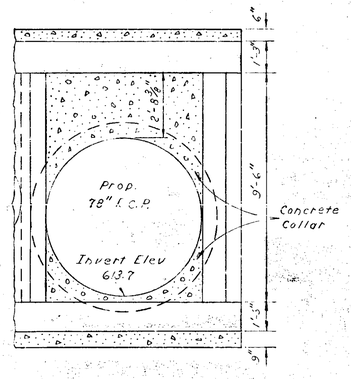
BY _____ DEPUTY COMMISSIONER - ENGINEERING _____ DATE

DRAWN BY R.J.M. CHECKED BY R.H.R. TRACED BY R.J.M. APPROVED BY R.

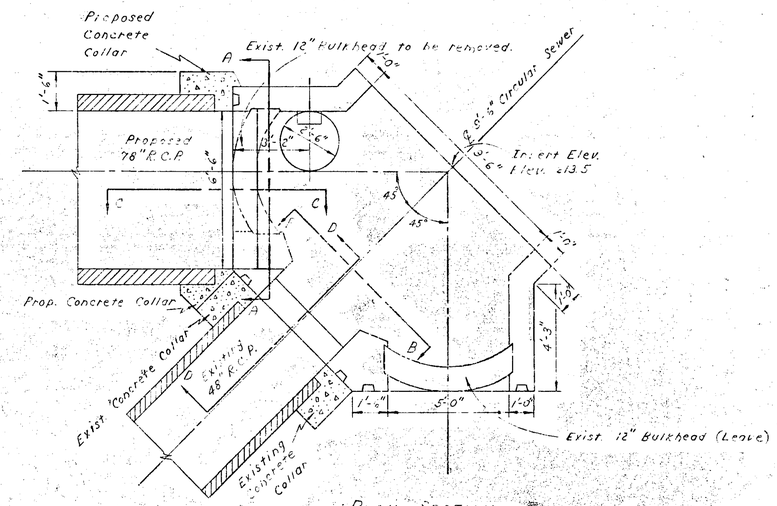
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A, C-52	63174A	I75-2(84)60	66

STATE PROJECT 63174A, C-52

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	67	
DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

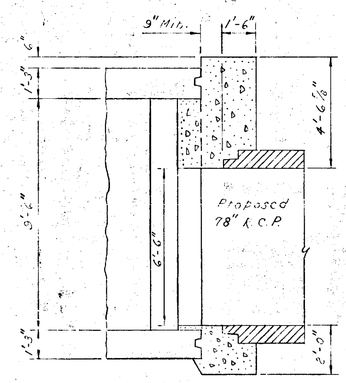


SECTION A-A

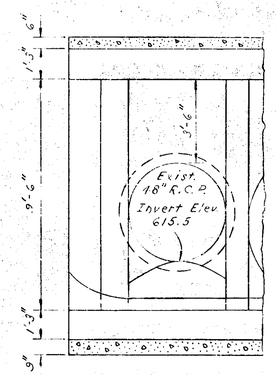


PLAN SECTION

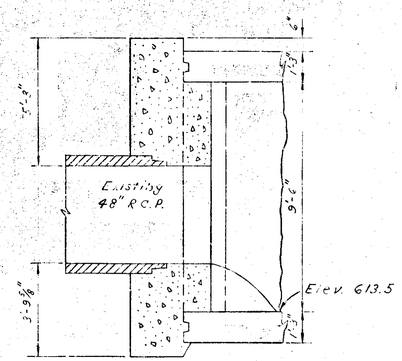
NOTE:
All concrete used in this Junction Chamber Reconstruction shall be Grade "A".
The existing Bulkhead and a sufficient amount of the existing structure shall be removed to provide a 78" opening in the manhole. The pay item for this work shall be Reconstructing - Junction Chamber.
The Pay item Reconstructing - Junction Chamber shall include all construction and alterations necessary to accomplish connection of the 78" sewer as detailed. Any necessary work involved in replacing the existing manhole shall be considered incidental.



SECTION C-C



SECTION B-B



SECTION D-D

JUNCTION CHAMBER
RECONSTRUCTION ON TWELVE
TOWNS DRAIN AT OTIS
DRAWN BY C.B.M. 7-24-64
CHECKED BY J.D.C. 7-27-64

FILE NO. USE NO. 350 SYMBOL	63174A, C-52	ATS. SHEET	FEDERAL PROJECT	SHEET NO.
		63174A	I75-2(84)60	67

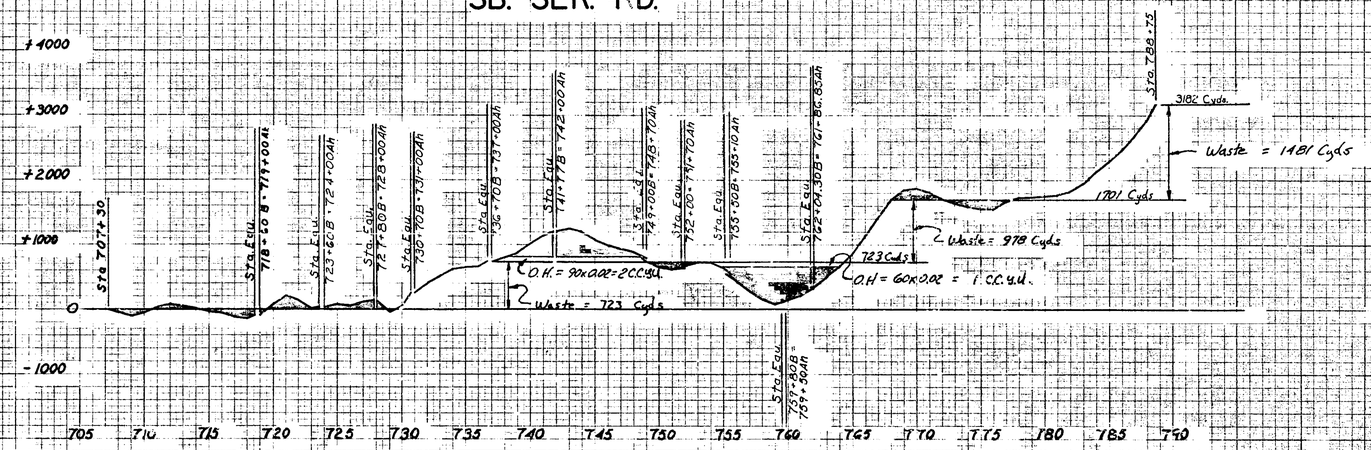
R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)X60			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND HAZEL PARK		68	

DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

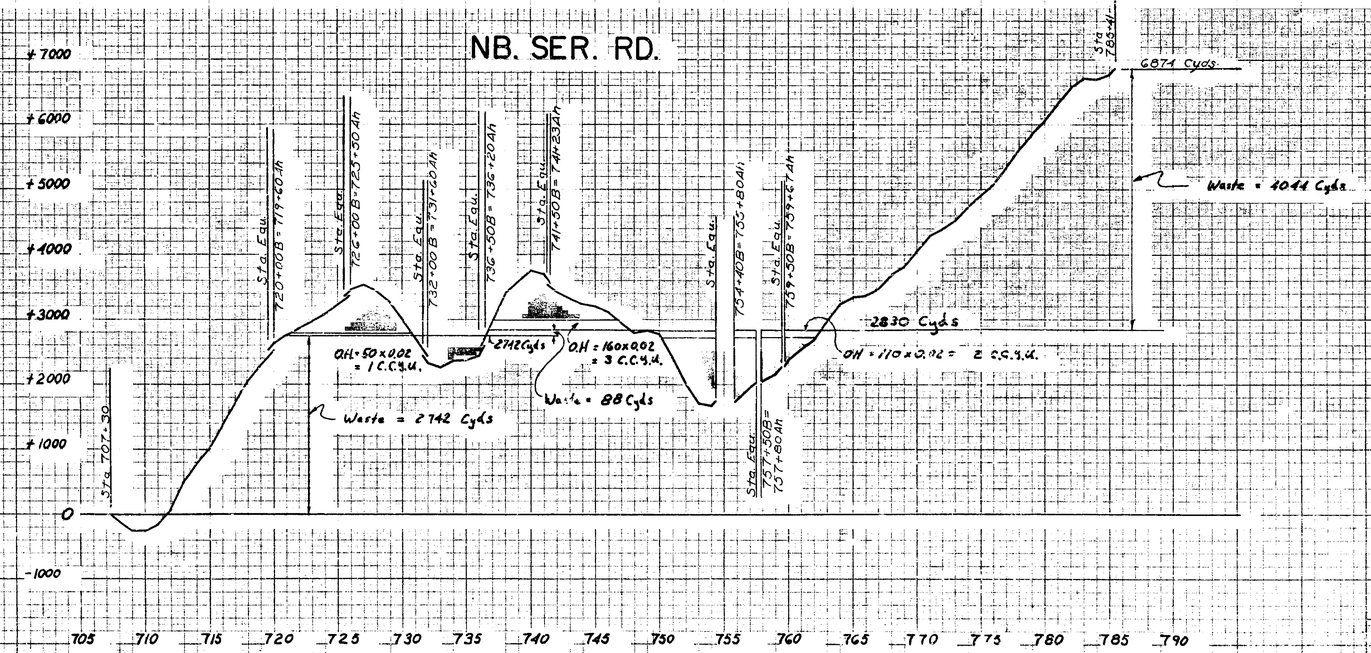
MASS DIAGRAM

SCALES { HOR. 1" = 500 FT.
VER. 1" = 1000 CU. YDS.

SB. SER. RD.



NB. SER. RD.



		DATE
PLOTTED	R.C.	7/64
COMPUTED	D.W.J.	7/64
CHECKED	D.W.H.	7/64

Sgard - Reighard - 1964

63174A,C-52 63174A I75-2(84)X60 68

QUANTITY SHEET-D

SURFACING (SQ. YD.) – CURB AND GUTTER (LIN. FT.)

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(84)60			

ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	69	

AS PER PLANS

	STA. TO STA.	LENGTH Ft.	WIDTH Ft.	Conc. Pav't 9" Unif. Syds.	Conc. Pav't 7" Unif. Syds.	Conc. Base Cse 8" Unif. Syds.	Pav't Reinf. Syds.	Bit. Conc. Level Cse Tons	Bit. Conc. Wear Cse Tons	Bit. Bond Coat Gal.	Conc. Curb Det. 2 Lin. Ft.	Conc. Curb Spec. Lin. Ft.	4" Conc. S.W. Sft.	Cl. A Shldr Cyds.	Agg Base Cse Cyds.	Cl. A Appr. Cyds.	Bit. Appr. Mix Tons.	Conc. Pav't Patching 9" Unif. Syds.	Patching Pav't with Bit. Mat. Tons.	REMARKS
NORTH BOUND	Milton														16		12			
	Bernhard																4			
	707+30 710+00	230	36	2369		(High Early Strength Concrete)	1169				363		1145	167						
	Elza														12	2	9			
	710+00 722+00	1240	Var.	5272			5272				2495		5145							Sta. Equation
	Granet													28	45		25			
	Temp. Rd.			2085										277						
	722+00 734+00	1290	30	4972	124		4972				2749	80	5856							Sta. Equation
	734+00 746+00	1257	Var.	5742	38		4915				2637	77	5575	55			5			Sta. Equation
	Temp. S.W.																12			
	746+00 758+00	1030	Var.	6246	10	510	6304	25	23	75	2767		6370			6	7			Sta. Equation
	758+00 770+00	1183	Var.	5828	28	527	5514	31	28	94	2509		4660	45	12	2	12			Sta. Equation
	770+00 782+00	1200	30	4469			4469				2443		5390							
	Lander															2	4			
	Sonoma														12		9			
	782+00 785+41	341	30	1887	12		1246				522		1735	97						
	Hamata														17		13		3	
	788+96																	33		
SOUTHBOUND	707+30 710+00	270	Var.	2538			1297				362		660	164						
	710+00 722+00	1160	30	4352	43		4352				2292		2505							Sta. Equation
	722+00 734+00	1110	30	4597			4597				2337		5060							Sta. Equation
	Meyers																4			
	Granet																5			
	734+00 746+00	1147	Var.	5842	9		5330				2565		3340	39						Sta. Equation
	746+00 758+00	1300	Var.	6976	182	589	7198	34	32	106	2705		1705							Sta. Equation
	758+00 770+00	1247.45	Var.	7545	237		6964				2512		1800	54						Sta. Equation
	770+00 782+00	1200	30	4559			4452				2298		1800	28					3	
	Lander														12		9			
	782+00 788+75	675	30	3404	76		2531				1248		3200	114		2				
TRUNK SEWER	702+50																	39		
	710+00 722+00													(Comp. In Place)	(Comp. In Place)	(Comp. In Place)			20	
	722+00 734+00																		11	
	734+00 746+00																		14	
	746+00 758+00																		17	
	TOTALS			78683	759	1626	70582	90	83	275	32604	157	56546	1068	126	14	130	72	68	

AS CONSTRUCTED

	STA. TO STA.	LENGTH Ft.	WIDTH Ft.	Conc. Pav't 9" Unif. Syds.	Conc. Pav't 7" Unif. Syds.	Conc. Base Cse 8" Unif. Syds.	Pav't Reinf. Syds.	Bit. Conc. Level Cse Tons	Bit. Conc. Wear Cse Tons	Bit. Bond Coat Gal.	Conc. Curb Det. 2 Lin. Ft.	Conc. Curb Spec. Lin. Ft.	4" Conc. S.W. Sft.	Cl. A Shldr Cyds.	Agg Base Cse. Cyds.	Cl. A Appr. Cyds.	Bit. Appr. Mix Tons.	Conc. Pav't Patching 9" Unif. Syds.	Patching Pav't with Bit. Mat. Tons.	EXPLANATION OF CHANGES
North Bound	Milton																			
	Bernhard																			
	707+30 710+00	230	36	2321.8		(High Early Strth. Concrete)	1153						716							
	Elza																			
	710+00 722+00	1240	Var.	5166.7	48.1		5199				1651		5759		7		5.00			
	Granet														13					
	Temp. Rd.			2043.4																
	722+00 734+00	1290	30	4872.7	290.9		4903				2762	74.2	6511	205.0			21.00			
	734+00 746+00	1257	Var.	5627.3	42.4		4846				2479		5838	116.0	2		17.00	9.1		
	Temp. S.W.																			
	746+00 758+00	1030	Var.	6121.3	17.7	854.3	6216		47.00	125	2568		6234		26	6	21.00			
	758+00 770+00	1183	Var.	5711.6	88.1	646.6	5437		51.15	136	2767		4612	57.0	26		16.00			
	770+00 782+00	1200	30	4379.8			4407				2398		5665				49.00			
	Lander														3					
	Sonoma														21					
	782+00 785+41	341	30	1849.3	17.0		1228				367		1577	72.0			29.11			
	Hamata														34					
	788+96																			
South Bound	707+30 710+00	270	Var.	2487.5			1279				179		60					3.4		
	710+00 722+00	1160	30	4265.1	66.3		4290				2328		2946				7.00			
	722+00 734+00	1110	30	4505.2	28.8		4533				2379		4822							
	Meyers																			
	Granet														14					
	734+00 746+00	1147	Var.	5725.5	9.6		5256				2478		4364	53.0				17.0		
	746+00 758+00	1800	Var.	6836.7	157.8	401.5	7098		37.10	99	2696		2874							
	758+00 770+00	1247.45	Var.	7394.3	294.5		6867				2392		2824	57.0						
	770+00 782+00	1200	30	4468.0	43.4		4390				2153		4601							
	Lander																			
	782+00 788+75	675	30	3336.0	46.1		2496			255	1173		3379	122.6						
Trunk Sewer	702+50																			
	710+00 722+00																			
	722+00 734+00																			
	734+00 746+00																			
	746+00 758+00																			
				Auth. 42F	Auth. 35F	Auth. 42F	Auth. 42F	Auth. 36F	Auth. 36F	Auth. 36F	Auth. 35F	Auth. 35F	Auth. 35F	Auth. 37F (Comp. In Place)	Auth. 37F (Comp. In Place)	Auth. 37F (Comp. In Place)	Auth. 36F	Auth. 42F	Auth. 36F Entire Project	
	TOTALS			77,111.8	1,150.7	1,902.4	69,598	0	135.25	615	39,770	74.2	62,782	682.6	146	6	165.11	29.5	169.17	

REMOVALS

AS PER PLANS

	STA. TO STA.	Trees (Ea.) 8-12"	Trees 13-24"	Trees 25-36"	Trees 37"+	Stumps (Ea.) 8-12"	Stumps 13-36"	Old Pav't Syds.	Sidewalk Syds.	Masonry & Conc. Cyds.	Curb Lft.	Clearing Acres	Grubbing Sq. Rds.
Northbound	724+80 Temp. Rd.							2085					
	734+00 Temp. Rd.							827					
	746+00 Temp. Rd.							585					
	758+00 Temp. Rd.							898					
Southbound	704+00 Temp. Rd.							1154					
	745+00 Temp. Rd.							512					
	754+00 Temp. Rd.							427					
	765+00 Temp. Rd.							581					
	784+00 Temp. Rd.							553					
Removal	P.O.B. to 708+00	4	4	1				1171	337	33			
	708+00 to 720+00	14	31	12			1	9552	1301	117		0.3	54
	720+00 to 732+00	14	38	8		1		11545	1720	85	20	0.3	44
	732+00 to 744+00	16	26	8		1		13156	2504	91	78	0.1	19
	744+00 to 756+00	14	11	2	1			14492	3030	149	339	(Incidental to Earth Excavation)	(Incidental to Earth Excavation)
	756+00 to 768+00	28	35	10		1		12041	2000	88	183		
	768+00 to 780+00	25	15	5		3		8498	1655	138			
	780+00 to P.O.E.	12	8	1				5108	1529	93			
	TOTALS	127	148	47	1	6	1	83185	14076	794	620	—	—

AS CONSTRUCTED

	STA. TO STA.	Trees (Ea.) 8-12"	Trees 13-24"	Trees 25-36"	Trees 37"+	Stumps (Ea.) 8-12"	Stumps 13-36"	Old Pav't Syds.	Sidewalk Syds.	Masonry & Conc. Cyds.	Curb Lft.	Clearing Acres	Grubbing Sq. Rds.	EXPLANATION OF CHANGES
Northbound	724+80 Temp. Rd.							1396						
	734+00 Temp. Rd.							1300						
	746+00 Temp. Rd.							998						
	758+00 Temp. Rd.							629						
Southbound	704+00 Temp. Rd.							0						
	745+00 Temp. Rd.							571						
	754+00 Temp. Rd.							565						
	765+00 Temp. Rd.							1150						
	784+00 Temp. Rd.							721						
	P.O.B.-708+00	6	4	1				1038	581	7				
	708+00-720+00	19	28	8		1	2	8471	1871	23				
	720+00-732+00	20	42	7			2	10238	2726	17	12			
	732+00-744+00	12	26	9			2	11667	3815	18	23			
	744+00-756+00	14	11	2	1		1	12852	7391	30				
	756+00-768+00	30	33	11		3	5	10678	3775	18	431			Auth. No. ___
	768+00-780+00	21	25	5		6		7536	2876	28				Date
	780+00-P.O.E.	4	13	1				4530	2318	19	164	(Incidental to Earth Excavation)	(Incidental to Earth Excavation)	
		Auth 1020	Auth 1020	Auth 1020		Auth 1020	Auth 1020	Auth. 33F	Auth. 33F	Auth. 33F	Auth. 33F			
	TOTALS	126	182	44	1	10	12	74340	25353	160	630	—	—	

GRADING (Cyds.)

	AS PER PLANS Sheet #	Earth Exc.	Waste	Emb. + Shr.	AS CONST Sheet #	Earth Exc.	Waste	Emb. + Shr.
Northbound	26	3207	3207		26	3278	3278	
	27	34,982	33,999	983	27	35758	34,775	983
	28	5010	5010		28	5122	5122	
	29	8810	3482	5328	29	9005	3677	5328
	30	216929	216,929		30	221,742	221,742	
	31	294	294		31	302	302	
	32	10595	7861	2734	32	10830	8096	2734
	33	1073	1073		33	1098	1098	
Southbound	19	3124	799	2325	19	3193	868	2325
	20	137	137		20	140	140	
	21	104	104		21	106	106	
	22	4154	1960	2194	22	4246	2052	2194
	23	202	202		23	206	206	
	24	2984	1896	1088	24	3050	1962	1088
	25	576	576		25	589	589	
	8-17	4229	4229		13-17	4323	4323	
	72	~~3838~~ 3813	~~3838~~ 3873		72	3958	3958	
	Total	~~300248~~ 300253	285,596 285,631	14,652	Total	306,946 Auth. 39F	292,294	14,652

STEEL BEAM GUARD RAIL

	AS PER PLANS Sta. to Sta.	Lft.	AS CONST. Sta. to Sta.	Lft.	Explanation of Changes
Northbound	Bernhard	78.5	Bernhard	0	
	718+80.27-721+50	316.0	718+80.27-721+50	316.0	
	721+96-724+78.52	291.0	721+96-724+78.52	291.0	
	745+09.73-764+17.25	1733.5	745+09.73-764+17.25	1,746.0	
	Hamata	78.5	Hamata	0	
Southbound	717+48.12-722+18	432.0	717+48.12-722+18	444.5	
	722+60-727+26.32	441.0	722+60-727+26.32	441.0	
	746+84.59-764+77.22	1712.0	746+84.59-764+77.22	1712.0	
	TOTALS	5083	TOTALS	4,950.5	Auth. 38F

MISCELLANEOUS

AS PER PLANS		AS CONSTRUCTED			
Corrugated Conc. Divider Type II	250 Syds.	Corrugated Conc. Divider Type II	302.6 Syds.		
Part Width Construction	6 Inters	Part Width Construction	5 Inters	Auth.	39F
Calcium Chloride Applied	11 Tons	Calcium Chloride Applied	7.07 Tons	Auth.	37F
Water	29 Units	Water	22.5 Units	Auth.	37F
48" Chain Link Fence	80 Lft.	48" Chain Link Fence	51.5 Lft.	Auth.	38F
Fine Grading and Cleanup	159 Sta's.	Fine Grading and Cleanup	159.0 Sta's.	Auth.	
Topsoil Surface	882 Cyds.	Top soil Surface	851.0 Cyds.	Auth	39F
Elm Tree Spray Applied	267 Gals.	Elm Tree Spray Applied	267.0 Gals.		
Barricades	51 Ea.	Barricades	53 Ea.	Auth	39F
Mulching	8 Tons	Mulching	0 Tons	Auth.	1030
Class A Seeding	4 Acres	Class A Seeding	0 Acres	Auth.	1030
Subgrade Undercutting	2500 Cyds.	Subgrade Undercutting	7425 Cyds.	Auth.	34F
Temp. Steel Beam G.R.	2575 Lft.	Temp. Steel Beam G.R.	1250 Lft.	Auth.	38F
Sand-Lime Mixture	500 Cyds	Sand-Lime Mixture	0 Cyds		
Protective Fence	250 lnds	Protective Fence	0 lnds		
T. Curb & Snow Fence F & I	1000 lft	T. Curb & Snow Fence F & I	0 lft		
T. Curb & Snow Fence Rel.	500 lft	T. Curb & Snow Fence Rel.	0 lft		
Non-Federal Participation		Non-Federal Participation			
Inspection Fee	3 Ea.	Inspection Fee	4 Ea.	Auth.	1013
T. Curb & Snow Fence Remove	100 lft	T. Curb & Snow Fence Remove	0 lft		

All totals are shown to nearest whole unit.

Length of Project 1.479 Miles

CHECKED ... SECTION 6-17-68

LIGHTING (TEMPORARY ROAD)

AS PER PLANS

STA. TO STA.	Wood Poles (Each) 35' Cl.4	Wood Poles (Each) 40' Cl.2	200W Clear M.V. O.H. Std. Ltg. Unit (Each)	2-#6 O.H. Lines Lft.	3-#6 O.H. Lines Lft.	Rem. Wood Poles (Each)	Rem. O.H. St. Ltg. Unit (Each)	Rem. 2-#6 O.H. Lines Lin. Ft.	Rem. 3-#6 O.H. Lines Lin. Ft.
725+00 to 736+00	~~5~~	~~2~~	~~4~~	~~360~~	~~655~~	~~7~~	~~4~~	~~360~~	~~655~~
TOTALS	~~5~~	~~2~~	~~4~~	~~360~~	~~655~~	~~7~~	~~4~~	~~360~~	~~655~~

AS CONSTRUCTED

STA. TO STA.	Wood Poles (Each) 35' Cl.4	Wood Poles (Each) 40' Cl.2	200W Clear M.V. O.H. Std. Ltg. Unit (Each)	2-#6 O.H. Lines Lft.	3-#6 O.H. Lines Lft.	Rem. Wood Poles (Each)	Rem. O.H. Std. Ltg. Unit (Each)	Rem. 2-#6 O.H. Lines Lin. Ft.	Rem. 3-#6 O.H. Lines Lin. Ft.
AUTH # 2-22-65									
TOTALS	0	0	0	0	0	0	0	0	0

PLAN ESTIMATE BY Lee & Cooley DATE Dec. 15, 1964 CHECKED BY Bekmanis & Hall DATE Dec. 17, 1964 DATA COMPLETED John R. Bramer DATE 3-28-68 HISTORY CHECKED Donald R Moore DATE 3-28-68 ENTERED ON PLANS BY Andrew Turner

2-22-65

FILE NO. 63174A, C-52 — STATE PROJECT 63174A — FEDERAL PROJECT I-75-2(84)60 — SHEET NO. 69

63174A, C-52

QUANTITY SHEET — E

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174A	OAKLAND	HAZEL PARK	70	

SEWERS (LIN. FT.) CATCHBASINS, MANHOLES (EACH)

AS PER PLANS — Sewers

STATION	6.0' Deep or Less Sewer 12"	12" C76 II	12" C76 III	18" C76 II	6.1' to 14.0' Depth Sewer 12"	12" C76 II	15"	15" C76 II	18"	18" C76 II	24"	30"	36"	48"	54"	60"	14.1' to 25.0' Depth Sewer 12"	18"	24"	42"	48"	54"	60"	66"	72"	78"
NORTHBOUND SERVICE ROAD																										
705+00			116																							
708+15																										
709+20																										
710+93																										
712+00	150	153																								
713+10		27			110			301																		
713+70																										
716+10		85					316																			
716+43																										
719+10																										
719+30		77			268																					
721+50																										
721+60	225	30																								
724+10		36																								
726+90																										
727+00	156	70																								
727+40																										
729+70																										
730+30	92	88			320																					
733+65	20	83					372																			
737+50	32	180																								
739+90		72				158																				
742+10	160	95					244																			
743+70	66	90																								
745+20																										
746+90																			136							
748+10		93							72										152							
749+60																			132							
750+90		240									132								210							
751+50																										
753+00		123							116																	
754+10		38					232						72													
758+05	20	82					115						72													
759+15							108																			
760+40	220	178			23				120																	
762+25																										
763+30		90																								
764+85																										
767+10	22	222																								
767+45																										
768+85	30	70			174																					
771+80	79	69			294																					
773+15																										
775+00		162						312																		
776+15					296																					
778+00	24	155						308																		
778+90					280																					
780+00	25	95							483																	
781+70					277																					
782+80		90							285																	
784+45					268																					
785+70		47					100																			
786+40																										
786+60																										
787+15							275																			
788+65							144																			
TRUNK SEWER																										
702+50														74*												
705+50															292**											
708+15																273**										
710+95							20																280**			
713+70							20			214													274**			
716+40							26																			
719+50																								550**		
721+80																								220**		
722+50					32				66*																75**	
725+70																									285**	
729+05																									314**	
732+40										230															310**	
734+90																										256**
738+90																										365**
741+15																										235**
745+40																										402**
750+55											58*															535**
752+75																										268**
For Totals See Sheet #																										

AS PER PLANS — Catchbasins, Manholes

STATION	6.0' Deep or less MH 1A	CB 6G	Inlet 5M	6.1' to 14.0' Depth Catchbasin 6M	6G	3A	3D	3G	3M	Manhole A 1	Sewer Size 48"	54"	60"	14.1' to 25.0' Depth C B 3A	3M	Manhole A 1	Sewer Size 48"	54"	60"	66"	72"	78"	Reconst. MH	Reconst. CB	Adjust MH Cover	Adjust CB	Remove MH	Remove CB	Abandon MH	Abandon CB	Cover A	Cover D	Porous Material Gr. A Cyds.
NORTHBOUND SERVICE ROAD																																	
705+00		2																										1					
708+15										1																							
709+20	1																																
710+93																									1			2					
712+00									3																								
713+10						1			1																								
713+70																									1			2					Comp in Place
716+10				1					2	1																							
716+43										1																							
719+10										1																							
719+30				1					2	1																							
721+50										1																							
721+60									2																								220
724+10				1					1	1																				2			
726+90										1																							
727+00				1					3	1																							
727+40																												1					
729+70																												2		2			
730+30				2					2	1																							
733+65				2		1			2																			3					256
737+50				3					2																								
739+90						1			2																								
742+10				1					1														1										
743+70				1				1	2																								
745+20																											2	3					211
746+90																1							1		1								
748+10				2					1							1							1									1	
749+60																									2								
750+90									4							1																	
751+50	1																								1		1	3	1	3			
753+00				1					2							1																1	
754+10				1					1	1													1		1							1	1112
758+05				1					2	1																							
759+15										1																							
760+40				1					3	1				1																			
762+25										1																							
763+30				2					1																							1	
764+85										1																							
767+10				3	1			1	1																								
767+45										1																	1						
768+85					1			1	1	1																							294
771+80				2					1	1																							
773+15										1																							
775+00				1					2	1																							
776+15										1															Method #1	Method #1							
778+00				2	1			1	1	1																							
778+90										1																							
780+00				2					2					1																			
781+70										1																							1370
782+80				2					1	1																							
784+45										1																							
785+70									1	1																							
786+40																														1			
786+60					1																												
787+15										1																							
788+65																1																	1073
TRUNK SEWER																																	
702+50											1*	1**																					970
705+50													1**																				
708+15													1**																				
710+95																			1**														693
713+70																				1**													
716+40																																	
719+50																				1**			1										
721+80																					1**												
722+50										1*											1**		1										
725+70																					1**		1										390
729+05																					1**												
732+40																						1**											
734+90																						1**											1154
738+90																						1**	1										
741+15																						1**											
745+40																						1**											
750+55										1*												1**											1022
752+75																																	

AS CONSTRUCTED — Sewers

STATION	6.0' Deep or Less Sewer 12" C*	12" C76 II	12" C76 III	18" C76 II	6.1' to 14.0' Depth Sewer 12" C*	12" C76 II	15" C*	15" C76 II	18" C*	18" C76 II	24" C*	30"	36" C76 III	48"	54"	60"	14.1' to 25.0' Depth Sewer 12"	18"	24" C76 IV	42"	48"	54"	60"	66"	72"	78"
705+00																										
708+15																										
709+20		86				81																				
710+93																										
712+00		155			199																					
713+10		27			109			313																		
713+70																										
716+10	53	118					318																			
716+43																										
719+10																										
719+30	48	111			254																					
721+50	224	30																								
722+60																										
724+10	73	65																								
726+90																										
727+00	156	86																								
727+40																										
729+70																										
730+30		195			325																					
733+65	20	84					373																			
737+50	25	205																								
739+90		103				179																				
742+10	170	122					512																			
743+70	63	86																								
745+20																										
746+90																			141							
748+10		124							72										152							
749+60																			137							
750+90		231									132								204							
751+50																										
753+00		89							124				72													
754+10		87					228																			
758+05	67	76					118						72													
759+15	78	49					110																			
760+40	224	106			24				120																	
762+25																										
763+30		94																								
764+85																										
767+10	31	226																								
767+45																										
768+85		145			173																					
771+80	136	96			297																					
773+15																										
775+00		174						313																		
776+15					297																					
778+00	7	157						308																		
778+90					278																					
780+00	8	97							497																	
781+70					277																					
782+80		104							282																	
784+45					272																					
785+70		56																								
786+40																										
786+60							76																			
787+15							278																			
788+65							141																			
702+50													8	74												
705+50															304											
708+15																276										
710+95																							277			
713+70										219													276			
716+40																										
719+50																								551		
721+80																								217		
722+56									63																71	
725+70																									297	
729+05																									313	
732+40										230															307	
734+90																										256
738+90																										394
741+15																										213
745+40																										403
750+55											54															546
752+75																										249
For Totals See Sheet #																										

AS CONSTRUCTED — Catchbasins, Manholes

STATION	6.0' Deep or less MH 1A	CB 6G	Inlet 5M	6.1' to 14.0' Depth Catchbasin 6M	6G	3A	3D	3G	3M	Manhole A 1	Sewer Size 48"	54"	60"	14.1' to 25.0' Depth C B 3A	3M	Manhole A 1	Special	Sewer Size 48"	54"	60"	66"	72"	78"	Reconst. MH	Reconst. CB	Adjust MH Cover	Adjust CB	Remove MH	Remove CB	Abandon MH	Abandon CB	Cover A	Cover D	Porous Material Gr. A Cyds.
705+00																																		
708+15										1																								
709+20										2																								
710+93																										1			2					
712+00																																		
713+10						1			1																									
713+70																										1			2					Comp. in Place
716+10				1					1																									
716+43										1																								
719+10										1																								
719+30				1					2	1																								
721+50									2																									
722+60																																		458
724+10									2	1																					2			
726+90										1																								
727+00				1					3	1																								
727+40																													1					
729+70																													2		2			
730+30				2					2	1																								
733+65			1	1		1			2																				3					314
737+50				1					1																									
739+90						2			1																									
742+10				2																				1										
743+70				1				1	2																									
745+20																												1	3					202
746+90																1								1		1								
748+10				4					1							1								1							1		1	
749+60																										2								
750+90	1								4							1																		
751+50																										1		1	3	1	3			
753+00									2							1																	1	
754+10				1					1	1														1									1	660
758+05				1					2	1																								
759+15				1						1																								
760+40				1					2					1		1																		
762+25										1																								
763+30				2					1																									
764+85										1																								
767+10		1		3				1	1																									
767+45										1																		1						
768+85		1								1																								696
771+80				2					1	1																								
773+15										1																								
775+00									1	1																								
776+15										1																								
778+00		1							1	1																								
778+90										1																								
780+00									1					1																				
781+70										1																Method #1	Method #1							1802
782+80				1					1	1																								
784+45										1																								
785+70										1																								
786+40																															1			
786+60					1																													
787+15										1																								
788+65																1																		962
702+50											1	1																						204
705+50													1																					
708+15													1																					
710+95																				1														397
713+70																					1													
716+40																					1													
719+50																					1													
721+80																						1												
722+56																						1												
725+70																						1												316
729+05																						1												
732+40																							1											
734+90																							1											684
738+90																							1											
741+15																							1											
745+40																							1											
750+55																							1											2080
752+75																		1																

CHECKED … DATE 6/12/68

PLAN ESTIMATE BY Lee & Cooley DATE Dec. 15, 1964 CHECKED BY Bekmanis & Hall DATE Dec. 17, 1964 DATE DATA COMPLETED John R. Bramer DATE 3-28-68 HISTORY CHECKED ENTERED ON PLANS BY D. Moore & A. Turner DATE 3-28-68

QUANTITY SHEET – E

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	71	

AS PER PLANS — SOUTHBOUND SERVICE ROAD

Station	6.0' Deep or Less Sewer 12"	12" C76 II	12" C76 III	18" C76 II	6.1' to 14.0' Depth Sewer 12"	12" C76 II	15"	15" C76 II	18"	18" C76 II	24"	30"	36"	48"	54"	60"	14.1' to 25.0' Depth Sewer 12"	18"	24"	42"	48"	54"	60"	66"	72"	78"
POB to 722+00																										
705+00																										
705+25																										
705+85																										
708+15																										
709+25		46																								
710+95		56																								
713+60																										
716+05					6																					
716+42																										
719+45	38	78																								
722+60		44		92																						
722+90		18																								
726+00	42	117																								
729+25		48																								
731+70		16																								
732+35		48																								
733+00																										
735+70		30			7																					
738+30																										
738+90		80																								
741+00																										
743+00		40			7																					
744+10		37	30																							
744+80																										
745+40		41			7																					
745+50																										
747+00																										
748+45																										
748+65		35			5																					
748+80																										
750+30	90	105																								
751+00																										
752+70		55																168			64					
754+45		40																156								
755+60		38																146								
757+10	25	72															280									
759+10																										
759+70	165	95																								
Nine Mile																										
763+10																										
764+00																										
765+50																										
766+10	163	104																								
767+10																										
767+75		30			168																					
770+00		45					225																			
772+35																										
773+00	92	143							300																	
775+60																										
776+50	50	77							350																	
777+90																										
780+20		35									525															
780+90																										
782+20		50											207													
783+50																										
786+50	55	90										77	428													
789+20																				265		47				
Entire Proj. (Basement Backfill)																										
Entire Proj. (Pavt. Removal)																										
Entire Proj. (To Replace Subgrade Undercutting)																										
Water Mains																										
TOTALS	2041	4553	146	92	2542	158	2197	921	1792	494	715	77	779	74	292	273	280	470	630	265	64	47	554	770	984	206

Station	6.0' Deep or Less MH 1A	CB 6G	Inlet 5M	6.1' to 14.0' Depth Catchbasin 6M	6G	3A	3D	3G	3M	Manhole A 1	Sewer Size 48"	54"	60"	14.1' to 25.0' Depth CB 3A	CB 3M	Manhole A 1	Sewer Size 48"	54"	60"	66"	72"	78"	Reconst. MH	Reconst. CB	Adjust MH Cover	Adjust CB Cover	Remove MH	Remove CB	Abandon MH	Abandon CB	Cover A	Cover D	Porous Material Gr. A Cyds.
POB to 722+00																																	76
705+00																								1								1	
705+25																									1								
705+85																															1		
708+15																									3			2		1			
709+25									2																								
710+95									1															1	4				1				
713+60																									2				1				
716+05									1																								
716+42																									3	2	1		1	2			
719+45				1					2																1				1				
722+60				1					1																								137
722+90								1																									
726+00				2					3																					2		1	
729+25									1																								
731+70				1					1																1	1		1					
732+35				1					1																								
733+00																									1								
735+70				1					1																								104
738+30																												1		2			
738+90				1					2																								
741+00																													2				
743+00			1												1																		
744+10									1																1	1		1		1			
744+80																										1					1		
745+40				1					1																								
745+50																									1			1		1			
747+00																									1	1		1					982
748+45										1																							
748+65				1											1																		
748+80																									3								
750+30				1					3																								
751+00																									1			1		1			
752+70									1								1								2			3					
754+45				1					1							1							1										
755+60									1							1							1		1					1			
757+10				2					2					1									1									1	
759+10																							1		1	1		3	1				202
759+70				2					2	2																							
Nine Mile																									3			2	1				
763+10																									1								
764+00																											1	1		3			
765+50																												2					
766+10				2					2	1																							
767+10																											1	1					
767+75									1	1																							
770+00				1						1																							415
772+35																							1		1		1	4		2			
773+00				1	1			1	2	1																							
775+60																									1								
776+50	1			1					1					1																			
777+90																							1		1		1	1		1			
780+20				1					1	1																							
780+90																									1			2	1	2			
782+20				1			1			1																							576
783+50																									1								
786+50				1					2	1																							
789+20																		1															
Entire Proj. (Basement Backfill)																																	2800
Entire Proj. (Pavt. Removal)																																	1000
Entire Proj. (To Replace Subgrade Undercutting)																																	2500
Water Mains																																	~~3828~~ 3873
																									Method #1	Method #1							Comp. in Place
TOTALS	3	2	1	57	5	3	1	6	86	21	1	1	2	4	2	7	1	1	1	2	4	6	14	2	43	7	0	44	10	27	2	7	21,430

AS CONSTRUCTED

Station	6.0' Deep or Less Sewer 12" C-14	12" C76 II	12" C76 III	18" C76 II	6.1' to 14.0' Depth Sewer 12" C-14-X	12" C76 II	15" C-14-X	15" C76 II	18" C-14-X	18" C76 II	24" [illegible]	30" C-16 V	36" C-16 V	48"	54"	60"	14.1' to 25.0' Depth Sewer 12"	18" C-16 IV	24" C-16 IV	42"	48"	54"	60"	66"	72"	78"
P.O.B.-722+00																										
705+00																										
705+25																										
705+85																										
708+15																										
709+25		51																								
710+95		58																								
713+60																										
716+05					6		6																			
716+42																										
719+42	32	84																								
722+50		47		92																						
722+90																										
725+70	65	120																								
729+05		34																								
731+70																										
732+35		21																								
733+00	29	54																								
735+70		30			7																					
738+30																										
738+90		82																								
741+00																										
743+00																										
744+10	70	71			7																					
744+80																										
745+40		40			5																					
745+50																										
747+00																										
748+45		29			5																					
748+65																										
748+80																										
750+30	90	102																								
751+00																										
752+70		81																306			59					
754+45		42																156								
755+60		45																140								
757+25	30	58			281																					
759+10		29																								
759+70	164	110																								
761+00	30											320														
Nine Mile																										
763+10																										
764+00																										
765+50																										
766+10	156	109																								
767+10																										
767+45		32			171																					
770+00		38						228																		
772+35																										
773+00	8	148							359																	
775+60																										
776+50	56	68							287																	
777+90																										
780+20		38									532															
780+90																										
782+20		64											210													
783+50																										
786+50	56	101										80	426													
789+20																				268		48				
Entire Proj. (Basement Backfill)																										
Entire Proj. (Pavement Removal)																										
Entire Proj. (To Replace Subgrade Undercutting)																										
Water Mains		43F			43F																					
		Auth. #			Auth. #																					
TOTALS	2169	5760	0	92	2937	260	2160	1162	1804	502	718	400	788	74	304	276	0	602	634	262	59	48	553	768	988	2061

Station	6.0' Deep or Less MH 1A	CB 6G	Inlet 5M	6.1' to 14.0' Depth Catchbasin 6M	6G	3A	3D	3G	3M	Manhole A 1	Sewer Size 48"	54"	60"	14.1' to 25.0' Depth CB 3A	CB 3M	Manhole A 1	Special	Sewer Size 48"	54"	60"	66"	72"	78"	Reconst. MH	Reconst. CB	Adjust MH Cover	Adjust CB Cover	Remove MH	Remove CB	Abandon MH	Abandon CB	Cover A	Cover D	Porous Material Gr. A Cyds.
P.O.B.-722+00																																		82
705+00																																		
705+25																																		
705+85																																		
708+15																										3			2		1			
709+25									1																									
710+95									1																1	4				1	1			
713+60																										2				1				
716+05									1																	3	2	1		1	2			
716+42																																		
719+42				1					2															1		1				1				
722+50				1					1	1																								140
722+90																																		
725+70				2					3															1							2		1	
729+05									1																									
731+70																																		
732+35																										1	1		1					
733+00									1																			1						
735+70				1					1																									105
738+30																																		
738+90				1					2															1					1		2			
741+00																														2				
743+00																																		
744+10																										1			2		1			
744+80			1												1											1			1		1			
745+40				1					1																									
745+50																																		
747+00																										1	1		1					235
748+45				1											1	1																		
748+65																																		
748+80																										3								
750+30				1					3	1																								
751+00																										1			1		1			
752+70									2							1										2			3					
754+45									1							1								1										
755+60									1	1														1		1								
757+25				1					1					1		1								1									1	
759+10				1																						1			4	2				2633
759+70				1					3	1																								
761+00										2																2			3	2				
Nine Mile																																		
763+10																										1								
764+00																												1	1		3			
765+50																													2					
766+10									2	1																								
767+10																												1	1					
767+45									1	1																								
770+00				1						1																								276
772+35																								1		1		1	2		2			
773+00				1					1	1																								
775+60																										1								
776+50	1								1					1																				
777+90																								1		1		1	1		1			
780+20									1	1																								
780+90																										1			2	1	2			
782+20									1	1																								562
783+50																										1								
786+50									2																									
789+20																			1															
Entire Proj. (Basement Backfill)																																		438
Entire Proj. (Pavement Removal)																																		7425
Entire Proj. (To Replace Subgrade Undercutting)																																		3939
Water Mains				43F																				43F				33F			43F			34F
	Auth. #1010			Auth. #			Auth. #1014																	Auth. #		Method #1	Method #1	Auth. #		Auth. #1017	Auth. #			Auth. # Comp. in Place
TOTALS	2	3	2	40	1	4	0	2	73	40	1	1	2	4	2	10		1	1	1	2	4	6	12	1	39	4	9	44	12	28	0	5	24,610

Auth. No. 1025 Except as shown.
Date

CHECKED CONSTRUCTION SECTION DATE 6/12/68

PLAN ESTIMATE BY Lee & Cooley DATE Dec. 15, 1964 CHECKED BY Bekmanis & Hall DATE Dec. 17, 1964 DATE
DATA COMPLETED John R. Bramer DATE 3-28-68 HISTORY CHECKED ENTERED ON PLANS BY D. Moore & A. Turner DATE 3-28-68

QUANTITY SHEET – E

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2 (84) 60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	72	72

WATER MAIN ALTERATIONS

AS PER PLANS

Auth. No. ____ Date: ____

Sta.	to Sta.	Water Main 6" L.Ft.	Water Main 8" L.Ft.	~~6" C.I. Water Main Lft.~~	~~8" C.I. Water Main Lft.~~	~~8" Gate Well Ea.~~	~~4" Gate Valve & Box Ea.~~	6" Gate Valve & Box Ea.	8" Gate Valve Ea.	Wells 6" Ea.	Wells 8" Ea.	Reloc. Hyd. Incl. Valve & Box (Ea.)	6" Fire Hydrant Ea.	6" Gate Valve Ea.	Abandon Gate Wells Ea.	6" Plug Ea.	8" Plug Ea.	8" Tapping Valve Ea.	Conc. Gr. "A" Cyds.	Earth Exc. & Waste Cyds.	Por. Matl. Gr. "A" Cyds. (Comp. in Place)
P.O.B.	710+00	11	278	11	278	1		1 ~~3~~	1	2	1		1	2			1		0.79 ~~0.58~~	89	89
710+00	722+00	11	1734	11	1721	2		1 ~~3~~	4 ~~2~~	4	4		1	4	3	2 ~~3~~	2		2.69 ~~3.20~~	656	656
722+00	734+00	102	2412	12	2397	3	3	1 ~~2~~	4 ~~1~~	4	4	1	1	4					4.23 ~~3.31~~	804 ~~289~~	789
734+00	745+00	9	2145	9	2145	5		1 ~~2~~	3	2	5	1	1	2		1		2	4.68 ~~3.80~~	677	677
745+00	756+00		965		965	1			1		1	1				3 ~~2~~	1		2.29 ~~1.85~~	341	341
756+00	768+00	22	1119	22	1119	3		~~2~~	3	5 2	5 3	2		2	2	3	1		3.00 ~~2.50~~	413	413
768+00	780+00	20	1286	10	1281	3		2 ~~5~~	5 ~~4~~	4×3	4×5	1	2	3		3	2		4.13 ~~3.08~~	420	420
780+00	P.O.E.	24	1403	24	1403	3		3 ~~6~~	8	3	8	1	3	3		1	2		5.05 ~~4.16~~	453	453
		Class No. 24	Class No. 25																		
TOTALS		199	11344	99	11309	26	3	9 ~~25~~	29 ~~24~~	30	31	7	9	20	5	13	9	2	27 ~~22~~	For Totals See Sheet #69	

AS CONSTRUCTED

Sta.	to Sta.	Water Main 6" Lft.	Water Main 8" Lft.	~~6" C.I. Water Main Lft.~~	~~8" C.I. Water Main Lft.~~	~~8" Gate Well Ea.~~	~~4" Gate Valve & Box Ea.~~	6" Gate Valve & Box Ea. (Auth. K1007)	8" Gate Valve Ea. (Auth. 1024)		Reloc. Hyd. Incl. Valve & Box (Ea.) (Auth. 1024)	6" Fire Hydrant Ea.		6" Plug Ea. (Auth. 1024)	8" Plug Ea. (Auth 1024)	8" Tapping Valve (Ea.)	Conc. Gr. "A" Cyds. (Auth. 1024)	Earth Exc. & Waste Cyds.	Por. Matl. Gr. A Cyds. (Comp. in Place)
P.O.B.	710+00	5	267					1	1			1					0.81		
710+00	722+00	14	1712					1	2			1		3			2.93		
722+00	734+00	75	2396					1	4		1	1					4.81		
734+00	745+00	13	2110					1	3		1	1				2	5.21		
745+00	756+00	35	970						1		2			1	1		2.41		
756+00	768+00	16	1111						3		2			2	1		3.72		
768+00	780+00	29	1261					2	4		2	2		3			5.13		
780+00	P.O.E.	18	1387					3	7		1	3		1	2		4.98		
		Class No. 24	Class No. 25																
TOTALS		See Sheet #72-A		0	0	0	0	9	25		9	9		10	4	2	30.00	For Totals See Sheet #69	

SIGNAL AND LIGHTING

AS PER PLANS

	Sta.	Encased Conduit 1-3" Lft.	Encased Conduit 2-3" Lft.	1-3" & 1-4" Lft.	Two 3-Way Traffic Signals on New Span Wire - F&I (Ea.)	2-Way Internally Illuminated Case Sign On Span Wire-F&I (Ea.)	Steel Shaft Pole F&I on New Foundation (Ea.)	Traffic Signal Controller & Cabinet F&I On Steel Shaft Pole (Ea.)	2-Way (Walk-Don't Walk) Traffic Signal & 8ft. Pedestal F&I on New Foundation (Ea.)	2-Way (Walk-Don't Walk) Bracket Arm Traffic Signal - F&I (Ea.)	Build Traffic Signal Handhole (Ea.)	Fit-Up Wood Pole As A Sec. Cable Pole (Ea.)	600V-Two 9/c #6 Plastic Jacketed Sec. Power Cables - F&I (Lft.)
N.B.	~~709+55~~		~~44~~										
S.B.	773+05	40											
S.B.	735+60	40											
	John R.	668		12	2	2	4	1			5	1	207
	9 Mile	553		12	2	2	4	1	4	4	5	1	195
		1301	44	24	4	4	8	2	4	4	10	2	402

AS CONSTRUCTED

	Sta.	Encased Conduit 1-3" Lft.	Encased Conduit 2-3" Lft.	1-3" & 1-4" Lft.	Two 3-Way Traffic Signals on New Span Wire - F&I (Ea.)	2-Way Internally Illuminated Case Sign On Span Wire-F&I (Ea.)	Steel Shaft Pole F&I on New Foundation (Ea.)	Traffic Signal Controller & Cabinet F&I On Steel Shaft Pole (Ea.)	2-Way (Walk-Don't Walk) Traffic Signal & 8ft. Pedestal F&I on New Foundation (Ea.)	2-Way (Walk-Don't Walk) Bracket Arm Traffic Signal F&I (Ea.)	Build Traffic Signal Handhole (Ea.)	Fit Up Wood Pole As A Sec. Cable Pole (Ea.)	600V-Two 9/c #6 Plastic Jacketed Sec. Power Cables - F&I (Lft.)
N.B.	709+55		45	40F									
S.B.	773+05	40											
S.B.	735+60	40											
	John R	690	Auth. 40F	Auth. 14.5	2	2	4	1			5	1	Auth. 40F 212
	9 Mile	535		14.0	2	2	4	1	4	4	5	1	195
	TOTALS	1305	45	28.5	4	4	8	2	4	4	10	2	407

Auth. 40F

TRAPS, TAPS, AND BULKHEADS (Ea.)

AS PER PLANS

	Sta.	Bulkheads 6"	10"	12"	15"	18"	24"	36"	48"	Tile Traps 12"	15"	18"	24"	Sewer Taps 12"	15"	24"	30"	48"	54"	Reconstructing Junction Chamber
Southbound Ser. Rd.	708+15		2																	
	709+25									1*										
	710+95									1*										
	716+05									1*										
	716+42			2																
	719+45				1					2*										
	722+60									1*										
	722+90									1*										
	726+00									1*										
	729+25									1*										
	731+70									1*										
	732+35									1*										
	735+70									1*										
	738+90									1*										
	743+00									1*										
	744+10			3						1*				2						
	745+40									1*										
	745+50	1		2																
	747+00			1																
	748+65									1*										
	750+30									2*										
	752+70			1						1								1		
	754+45									1										
	755+60									1										
	757+10											1								
	Nine Mile			1																
	776+50												1							
	782+20									1										
	786+50									2							1			
	789+20																		1	
Northbound Ser. Rd.	710+93			2	1															
	713+10											1*								
	713+70			2	1															
	733+40											1*								
	737+50					1														
	739+90										1									
	742+10									1										
	743+70									1										
	746+90															1				
	748+10									1										
	749+60			1												2				
	750+90									2										
	753+00									1										
	754+10									1										
	758+05									1										
	760+40										1									
	770+10		1																	
	780+00												1							
Trunk Sewer	702+50							1	1*											
	716+40														1					
	750+55						1*													
	752+75																			1**
	TOTALS	1	3	15	3	1	1	1	1	34	2	3	2	2	1	3	1	1	1	1

* 100% City Cost
** Negotiated City Participation
Applies to Sheets 70, 71, & 72

AS CONSTRUCTED

	Sta.	Bulkheads 6"	10"	12"	15"	18"	24"	36"	48"	Tile Traps 12"	15"	18"	24"	Sewer Taps 12"	15"	24"	30"	48"	54"	Reconstructing Junction Chamber
Southbound Service Rd.	708+15		2																	
	709+25									1				1						
	710+95									1										
	716+05			2						1										
	716+42																			
	719+45				1					2										
	722+60									1										
	722+90																			
	726+00									1										
	729+25									1										
	731+70																			
	732+35									2										
	735+70									1										
	738+90									1										
	743+00																			
	744+50			2						1										
	745+40									1										
	745+50			2																
	747+00			1																
	748+65									1										
	750+30									2										
	752+70			1						2				1			1	1		
	754+45									1										
	755+60									1										
	757+10											1								
	758+75									1										
	776+50									1			1							
	782+20									1										
	786+50									2							1			
	789+20																		1	
North Bound Service Rd.	710+93			2	1									1						
	713+10											1								
	713+70			2	1															
	721+60				1									1						
	733+40											1								
	737+50					1														
	739+90										2									
	742+10									1										
	743+70									1										
	746+90															1				
	748+10									1										
	749+60			1												2				
	750+90									3										
	753+00									1										
	754+10									1										
	758+05																			
	760+40										1									
	770+10																			
	780+00												1							
Trunk Sewer	702+50							1	1											
	716+40														1					
	750+55																			
	752+75																			1
	Auth.	Auth. 1025	Auth. 1025	(43F) Auth.	(43F) Auth.		Auth. 1025			(43F) Auth.	Auth 1014			Auth. 1015			Auth U1013			
	TOTALS	0	2	13	4	1	0	1	1	35	3	3	2	4	1	3	2	1	1	1

PLAN ESTIMATE BY Lee & Cooley DATE Dec. 15, 1964 CHECKED BY Bekmanis & Hall DATE Dec. 17, 1964 DATA COMPLETED John R. Bramer (PROJ. ENG.) DATE 3-28-68 HISTORY CHECKED ENTERED ON PLANS BY D. Moore & A. Turner DATE 3-28-68

CANCELLED CONTRACT SECTION DATE 6/12/68

FILE NO. USE NO. 380 STENCIL	63174A,C-52	STATE PROJECT 63174A	FEDERAL PROJECT I75-2(84)60	SHEET NO. 72

63174A, C-52

ITEM	UNIT	QUANTITY	DATE
EXTRAS			Authorization Numbers
Abandon Gate Wells	EA.	0	G2002, 2014
Manhole 1A (Special) 6.1' to 14.0' Deep	EA.	1	C2001
6" Cast Iron Watermain Class 24	lft.	205	G2002, H2003, 2014
8" Cast Iron Watermain Class 25	lft.	11,214	G2002, H2003, 2014
12" Cast Iron Watermain Class 26	lft.	266	2014
6" Gate Well (4'x5' Oval)	EA.	20	G2002, H2003
Connect Existing Watermain	EA.	2	2014
8" Gate Well (4'x5' Oval)	EA.	28	G2002, H2003, 2014
12" Gate Well (4.5'-5.5' Oval)	EA.	5	2014
6" Gate Valve	EA.	18	G2002
8" Gate Valve	EA.	2	H2003
12" Gate Valve	EA.	6	2014
Removing Stumps 25" to 36"	EA.	3	2010
Removing Stumps 37" & Over	EA.	1	2010
Bituminous Aggregate Surface Course 4:11	Tons	1,333	2009, 2012
Aggregate Base Course (22A)	Tons	6,708	2009, 2012, 37F
Temporary Double Steel Beam Guard Rail	lft.	562.5	2011
Concrete Curb & Gutter - Detail #10	lft.	1,864.4	S2006, 45F
Concrete Curb & Gutter - Detail #8	lft.	79	2011
Catch Basin 3K (6.1' to 14' Deep)	EA.	5	S2006
Catch Basin 3M (6' Deep or Less)	EA.	10	R2005, 2015
Catch Basin 3G (6' Deep or Less)	EA.	2	2015
Catch Basin 6D (6.1' to 14' Deep)	EA.	0	R2005, 2015
Catch Basin 3D (6' Deep or Less)	EA.	1	2012
Catch Basin 6M (6' Deep or Less)	EA.	22	R2005, 2015
Catch Basin 6D (6' Deep or Less)	EA.	4	2015
15" Sewer (0'-6' Deep)	lft.	48	2015
30" Sewer (14.1' to 25.0' Deep)	lft.	636	T2007, 2015
24" Sewer (0'-6' Deep)	lft.	64	2015
Concrete Nose Type I	EA.	6	2011
Force Account - Adjust Fire Hydrant	Lump Sum	$223.69	2016
Force Account - Temporary Aggregate Approaches	Lump Sum	$324.31	2017
Decrease Monies - Expansion Joints	lft.	-5,226	2008, 42F
Decrease Monies - Contraction Joints	lft.	-5,469	2008, 42F
Cold Weather Protection - Concrete Curb	lft.	6,325	2013
Cold Weather Protection - Concrete Pavement	Sqds.	30,096	2013
Modify Existing Drainage Structures	EA.	12	2018
Catch Basin - Special	EA.	2	2018
6" Sewer	lft.	56	2018
Liquidated Damages	Day	1	2018

PLAN EXTRAS

DATE	DESCRIPTION	UNIT	QUANTITY ESTIMATE	QUANTITY FINAL

CHECKED
CONTRACT SECTION
DATE 6/12/68

MICHIGAN STATE HIGHWAY DEPARTMENT

BILL OF MATERIAL

I 75-2(84)

SQUAD BOSS		
DRAWN BY		
TRACED BY		
CHECKED BY		
SHEET	OF	
State Project	Federal Project	Sheet No.
63174A	I75-2(84)60	72 A

63174A, C-52

TRUNK SEWER—COST ANALYSIS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(84)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK		

AS PER PLANS

REACH #	LOCATION		C DESIGN Q CFS.	D STATE Q CFS	CITY Q CFS	PIPE SIZE	DEPTH CLASS	PAY ITEMS	QUANTITY	UNIT PRICE	JOINT COST	P/C PERCENT CITY	A CITY SHARE	STATE SHARE
	HAYES													
									SUB	TOTAL				
1	HAYES	MILTON	53.94	18.90	37.04	54"	6-14	MHA-54"	1 Ea.	1550.00	1550.00			
								MHA-60"	1 Ea.	1610.00	1610.00			Existing Proj.
								54" Sewer	292 LFt.	30.00	8760.00			
								E&W-P.M.	65 Cyd.	3.90	253.50			
									SUB	TOTAL	12,173.50	66.21	8206.07	4113.93
2	MILTON	707+00	71.69	33.19	38.50	60"	6-14	60" Sewer	157 LFt.	34.00	5338.00			
								E&W-P.M.	372 Cyd.	3.90	1450.80			
									SUB	TOTAL	6788.80	53.70	3645.59	3143.21
2A	707+00	BERNARD	73.90	35.82	38.08	60"	6-14	MHA-60"	1 Ea.	1610.00	1610.00			
								60" Sewer	116 LFt.	34.00	3944.00			
								E&W-P.M.	283 Cyd.	3.90	1103.70			
									SUB	TOTAL	6657.70	51.52	3430.05	3227.65
3	BERNARD	709+25	75.72	35.39	40.33	60"	14-25	60" Sewer	107 LFt.	40.00	4280.00			
								E&W-P.M.	133 Cyd.	3.90	518.70			
									SUB	TOTAL	4798.70	53.26	2555.79	2242.91
4	709+25	ELZA	76.04	36.09	40.00	60"	14-25	MHA-60"	1 Ea.	1770.00	1770.00			
								60" Sewer	173 LFt.	40.00	6920.00			
									SUB	TOTAL	8690.00	52.60	4570.94	4119.06
5	ELZA	MARLOW	78.98	36.36	42.12	60"	14-25	MHA-66"	1 Ea.	2200.00	2200.00			
								60" Sewer	274 LFt.	40.00	10960.00			
								E&W-P.M.	258 Cyd.	3.90	1006.20			
									SUB	TOTAL	14,166.20	53.67	7603.00	6563.20
6	MARLOW	716+04	94.39	44.35	49.99	66"	14-25	66" Sewer	236 LFt.	47.00	11,092.00	52.99	5877.65	5214.35
7	716+04	EVELYN	94.18	44.77	49.41	66"	14-25	66" Sewer	39 LFt.	47.00	1833.00	52.46	961.59	871.41
8	EVELYN	MADGE	96.13	44.61	51.57	66"	14-25	MHA-66"	1 Ea.	2200.00	2200.00			
								66" Sewer	275 LFt.	47.00	12925.00			
								Patch-Bit.	17 Ton	25.00	425.00			
								E&W-P.M.	308 Cyd.	3.90	1201.20			
									SUB	TOTAL	16,751.20	53.62	8981.99	7769.21
9	MADGE	Pump House	98.49	45.55	52.94	66"	14-25	MHA-72"	1 Ea.	2325.00	2325.00			
								66" Sewer	220 LFt.	47.00	10340.00			
								E&W-P.M.	73 Cyd.	3.90	284.70			
									SUB	TOTAL	12,949.70	53.75	6960.46	5989.24
10	Pump House	MEYERS	121.85	69.60	52.25	72"	14-25	MHA-72"	1 Ea.	2325.00	2325.00			
								72" Sewer	75 LFt.	56.00	4200.00			
								E&W-P.M.	66 Cyd.	3.90	257.40			
									SUB	TOTAL	6782.40	42.88	2908.29	3879.11
11	MEYERS	GRANET	125.29	69.30	55.94	72"	14-25	MHA-72"	1 Ea.	2325.00	2325.00			
								72" Sewer	285 LFt.	56.00	15960.00			
								E&W-P.M.	110 Cyd.	3.90	429.00			
									SUB	TOTAL	18,714.00	44.67	8359.54	10354.46
12	GRANET	HARRY	126.56	69.80	56.76	72"	14-25	MHA-72"	1 Ea.	2325.00	2325.00			
								72" Sewer	314 LFt.	56.00	17584.00			
								Patch-Bit.	5 Ton	25.00	125.00			
								E&W-P.M.	82 Cyd.	3.90	319.80			
									SUB	TOTAL	20353.80	44.85	9128.68	11,225.12
13	HARRY	731+25	126.25	68.50	57.75	72"	14-25	72" Sewer	168 LFt.	56.00	9408.00	45.74	4303.22	5104.78
14	731+25	CALEDONIA	128.31	71.14	57.17	72"	14-25	MHA-78"	1 Ea.	2375.00	2375.00			
								72" Sewer	142 LFt.	56.00	7952.00			
									SUB	TOTAL	10327.00	44.56	4601.71	5725.29
15	CALEDONIA	734+95	136.37	76.72	59.65	78"	14-25	MHA-78"	1 Ea.	2375.00	2375.00			
								78" Sewer	236 LFt.	67.00	15752.00			
									SUB	TOTAL	19527.00	43.74	8541.11	10985.89
16	734+95	735+70	139.77	75.89	63.88	78"	14-25	78" Sewer	78 LFt.	67.00	5226.00	45.70	2388.88	2837.72
17	735+70	737+15	140.49	76.86	63.63	78"	14-25	78" Sewer	116 LFt.	67.00	7772.00	45.29	3519.94	4252.06
18	737+15	738+85	143.52	80.28	63.24	78"	14-25	MHA-78"	1 Ea.	2375.00	2375.00			
								78" Sewer	171 LFt.	67.00	11457.00			
								Patch-Bit.	7 Ton	25.00	175.00			
								E&W-P.M.	192 Cyd.	3.90	748.80			
									SUB	TOTAL	14735.80	44.06	6501.41	8234.39
19	738+85	HIGHLAND	143.42	80.72	62.70	78"	14-25	MHA-78"	1 Ea.	2375.00	2375.00			
								78" Sewer	235 LFt.	67.00	15745.00			
								Patch-Bit.	7 Ton	25.00	175.00			
								E&W-P.M.	541 Cyd.	3.90	2109.90			
									SUB	TOTAL	20409.90	43.72	8921.02	11488.88
20	HIGHLAND	743+00	159.18	78.69	79.49	78"	14-25	78" Sewer	164 LFt.	67.00	10988.00	49.94	5487.41	5500.59
21	743+00	745+40	158.84	80.00	78.84	78"	14-25	MHA-78"	1 Ea.	2375.00	2375.00			
								78" Sewer	238 LFt.	67.00	15946.00			
								E&W-P.M.	421 Cyd.	3.90	1641.90			
									SUB	TOTAL	19962.90	49.63	9907.59	10055.31
22	745+40	748+65	158.10	80.22	77.88	78"	14-25	78" Sewer	325 LFt.	67.00	21775.00	49.26	10726.37	11048.63
23	748+65	750+56	155.99	79.30	76.69	78"	14-25	MHA-78"	1 Ea.	2375.00	2375.00			
								78" Sewer	210 LFt.	67.00	14070.00			
								Patch-Bit.	8 Ton	25.00	200.00			
								E&W-P.M.	539 Cyd.	3.90	2102.10			
									SUB	TOTAL	18747.10	49.16	9216.07	9531.03
24	750+56	0715 MH	165.35	79.64	85.41	78"	14-25	Tracerset Wire & Chkr.	1 Ea	2100.00	2100.00			
								78" Sewer	268 LFt.	67.00	17956.00			
								Patch-Bit.	9 Ton	25.00	225.00			
								E&W-P.M.	436 Cyd.	3.90	1700.40			
									SUB	TOTAL	21981.40	51.75	11375.37	10606.03
										TOTAL	322626.10		158,533.14	164,092.96

NOTE: E&W-P.M. = Earth Excl. & Waste and Porous Material @ 1.40+2.50 = 3.90

AS CONSTRUCTED

100% CITY PAY ITEMS	QUANTITY	UNIT PRICE	B 100% CITY COST	A+B TOTAL COST
MHA-48"	1 Ea.	1460.00	1460.00	
48" Sewer	74 LFt.	29.76	2202.24	
48" Blk'hd.	1 Ea.	175.00	175.00	
Patch-Conc.	39 Syd.	10.00	390.00	
E&W-P.M.	117 Cyd.	3.90	456.30	
		SUB TOTAL	4683.54	
Existing Proj. 12" Tile Trap	19 Ea.	50.00	950.00	
Existing Proj. 18" Tile Trap	2 Ea.	90.00	180.00	
		SUB TOTAL	1130.00	
MHA 6-14	1 Ea.	325.00	325.00	
18" Sewer 6-14	66 LFt.	7.40	488.40	
12" Sewer 6-14	32 LFt.	5.38	172.16	
E&W-P.M.	96 Cyd.	3.90	374.40	
		SUB TOTAL	1359.96	
24" Sewer 6-14	58 LFt.	10.80	626.40	
24" Blk'hd.	1 Ea.	80.00	80.00	
E&W-P.M.	47 Cyd.	3.90	183.30	
		SUB TOTAL	1214.70	
			8,388.20	166,921.34

For Reference Only
Not Part of Original Plans

PLAN ESTIMATE BY REIGHARD DATE 3-17-65 CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED _____ PROJ. ENG. _____ DATE _____ HISTORY CHECKED _____ ENTERED ON PLANS BY _____ DATE _____

FILE NO. LBR NO. 380 STENCIL 63174A, C-52 STATE ROUTE 63174A FISCAL YEAR I75-2(84)60 SHEET NO. 3

63174,061

CS: 63174

ID: 061

ROUTE	STATE PROJECT	FEDERAL NO	SHEET NO	TOTAL SHEETS
I 75	63174B	I75-2(92) 62	1	42

BORROW REQUIREMENTS

WHERE REQUIRED STA. TO STA.	AMT REQUIRED CYDS.	AMT AVAILABLE CYDS.	SOILS SERIES	BORROW AREA LOCATION

Contractor Furnished

MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT 1965 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS

DESIGN SPEED: 60 MPH - FREEWAY.
35 MPH - SERVICE RD.

PLANS OF PROPOSED

MICHIGAN PROJECT I 75-2 (92) 62
STATE PROJECT I 63174 B, C61 PARTS 1-3
DETROIT - BAY CITY ROAD

OAKLAND COUNTY

CITY OF ROYAL OAK

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

BLUE PRINT SECTION
FEB 9 1968
DEPT. OF STATE HIGHWAYS

ROAD PLANS	SHEET NO'S.
TITLE	-- 1
TYPICAL CROSS-SECTIONS	-- 2 - 4
NOTES & SPECIAL PROVISIONS	-- 5
LOCATION & INDEX	-- 6
BENCH MARKS & WITNESSES	-- 6
1" = 100' SCALE SCHEMATIC	-- 7
NB SERV. RD. - PLAN & PROFILE	-- 8 - 11
FREEWAY - PLAN & PROFILE	-- 12 - 15
11 MILE RD. - PLAN & PROFILE	-- 16
RAMP PROFILES	-- 17 - 18
REMOVALS	-- 19 - 23
UTILITIES - (LIGHTING)	-- 24 - 26, 26A, 26B
UTILITIES - (WATER MAINS)	-- 27 - 32
SPECIAL DETAILS	-- 33 - 37
MASS DIAGRAM	-- 38 - 40
QUANTITIES	-- 41 - 42
BRIDGE TITLE SHEET	-- 101

LEGEND

PROPOSED PROJECT
T L OR F A PAVED
T L OR F A BITUMINOUS
T L OR F A GRAVEL
T L OR F A UNIMPROVED
NON T L OR F A PAVED
NON T L OR F A BITUMINOUS
NON T L OR F A GRAVEL
NON T L OR F A UNIMPROVED
COUNTY LINE
CITY OR VILLAGE LIMITS
TOWNSHIP LINE
SECTION LINE
RAILROADS

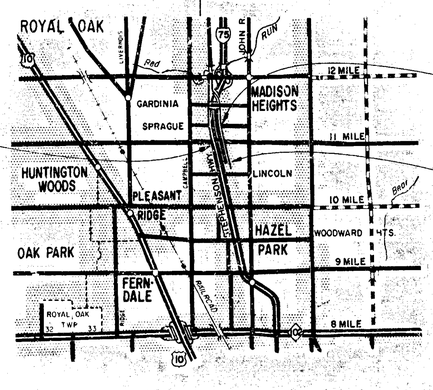
S-31 OF 63174 B, PART 2
STA. 871 + 27.50

D-07 OF 63174 B, PART 3
STA. 870 + 06

N

R 11 E

T 1 N



POINT OF ENDING
MICH. PROJ. I 75-2 (92) 62
STATE PROJ. I 63174 B, C61, PART 1
STA. 882 + 74.16 (NBD)

POINT OF BEGINNING
MICH. PROJ. I 75-2 (92) 62
STATE PROJ. I 63174 B, C61, PART 1
STA. 855 + 00 (NBD)

ITEM: 757

CONTRACT FOR G.&D.S. & SURF. FOR N.B. SERV. RD. & FREEWAY. STRUCTURE: UTILITY ALT.

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 7-7-65
RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE & ROAD DESIGN — DATE

OFFICES OF DESIGN & CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE
APPROVED — CHIEF OF DESIGN — DATE

APPROVED BY — DEPARTMENT OF STATE HIGHWAYS APPROVAL
HOWARD E. HILL - DIRECTOR
ASST. DIRECTOR - ENGINEERING — DATE

PLANS PREPARED BY
DEPARTMENT OF STATE HIGHWAYS
RICHARD SOUL

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
[redacted]
DIVISION ENGINEER — DATE

63174 B, C61

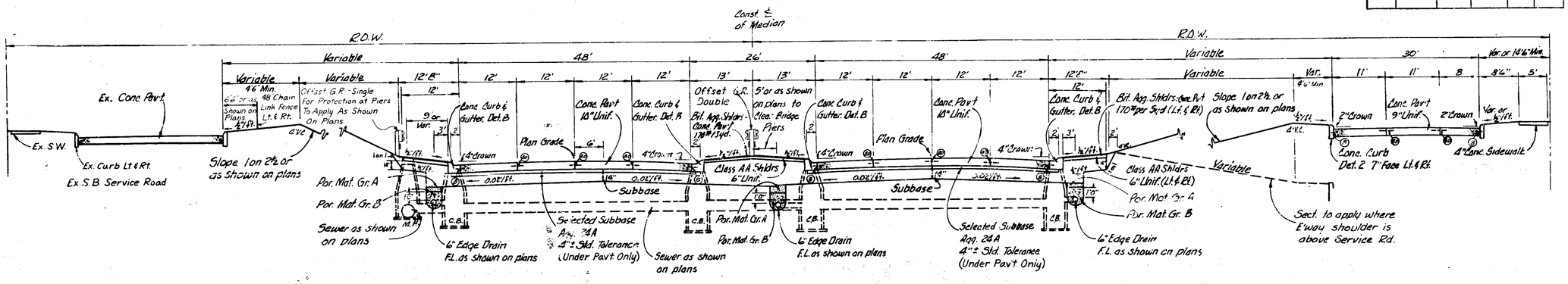
STATE PROJECT	FEDERAL PROJECT	SHEET NO
63174B,C61	I 75-2(92) 62	1

STATE PROJECT I 63174 B, C61

F.A.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174.B	OAKLAND	ROYAL OAK MADISON HTS	2	42

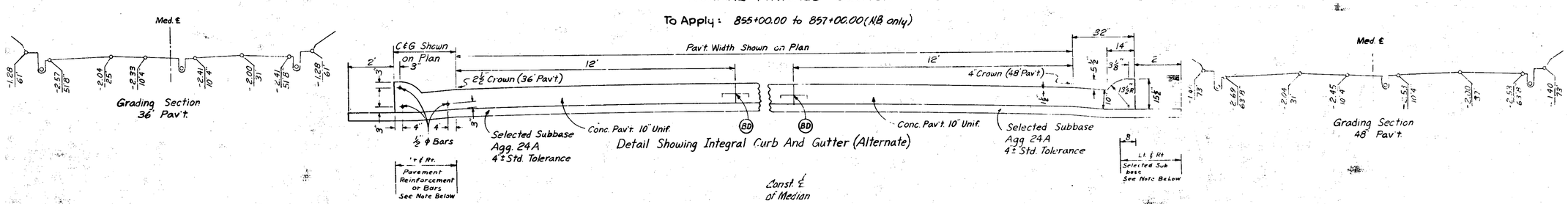
F.A.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

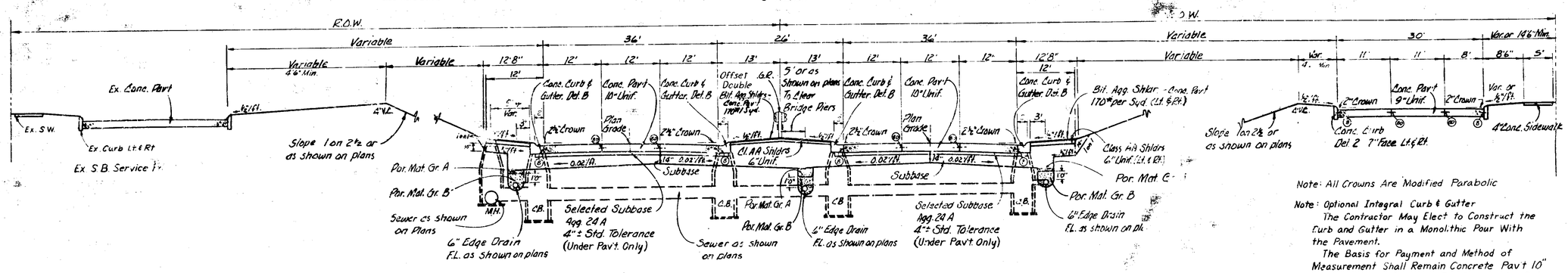
TYPICAL CROSS-SECTIONS



NORMAL FINISHED SECTION

To Apply: 855+00.00 to 857+00.00 (NB only)





NORMAL FINISHED SECTION

To Apply: 857+00.00 to 875+19.33

Note: All Crowns Are Modified Parabolic

Note: Optional Integral Curb & Gutter

The Contractor May Elect to Construct the Curb and Gutter in a Monolithic Pour With the Pavement.

The Basis for Payment and Method of Measurement Shall Remain Concrete Pavt 10" Uniform Syds., Pavement Reinforcement Syds., and Concrete Curb and Gutter Det "B" Lft.

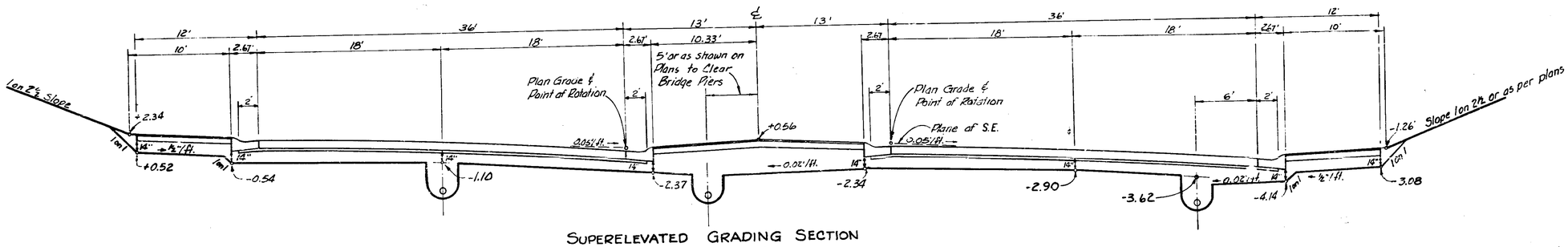
Additional Selected Subbase Will Be Required in Electing This Option of Approximately 494 Tons (See Detail Above). If Integal Curb & Gutter is Used, This Additional Quantity Will Be Considered Incidental to, and Part of the Payment for, Concrete Curb & Gutter Det "B".

Standard Pavement Reinforcement May Be Substituted for the Lower Two ½ ϕ Bars. Pavement Reinforcement for Such Shall Be Incidental to the Conc. Curb & Gutter Det. "B".

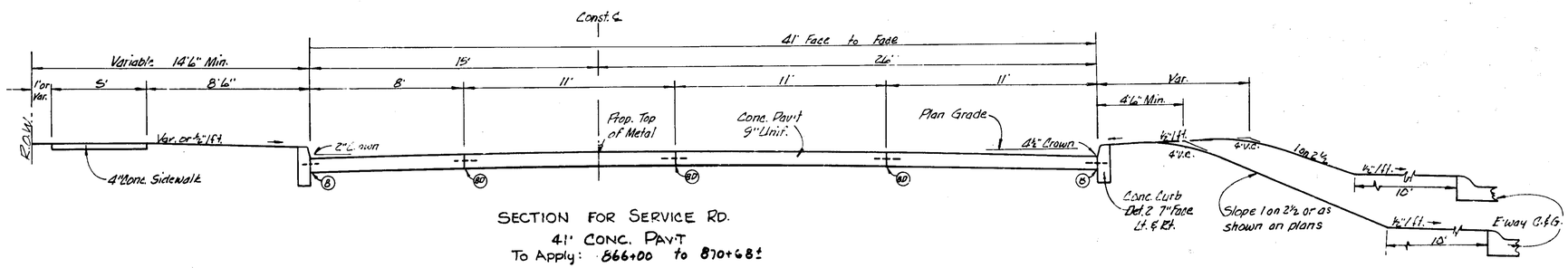
Plotted: RJM 10-4
Cad: 1-0-14

TYPICAL CROSS-SECTIONS

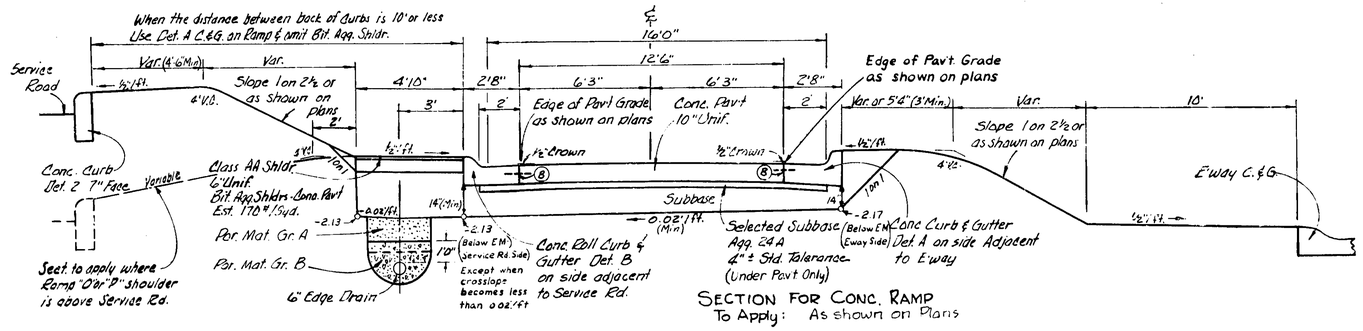
R.P.M.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(72)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	CARLAND	ROYAL OAK MADISON RTE	3	42



SUPERELEVATED GRADING SECTION
DUAL 36' CONC. PAV'T
(0.05/ft S.E.)
To Apply: 875+19.33 to P.O.E.



SECTION FOR SERVICE RD.
41' CONC. PAV'T
To Apply: 866+00 to 870+68±



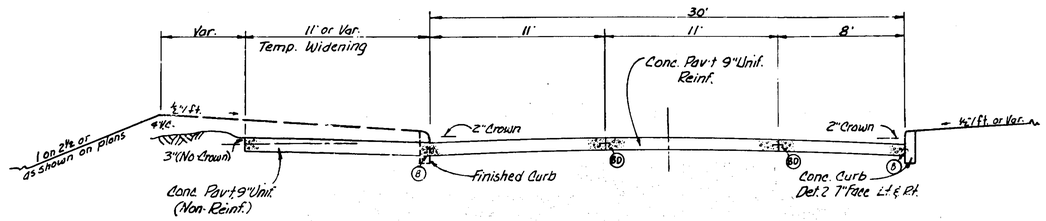
SECTION FOR CONC. RAMP
To Apply: As shown on Plans

Note: All crowns are modified parabolic

FILE NO.	SHEET NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 B,C61		63174B	I75-2(92)62	3

TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	FAOJ NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-B	OAKLAND	ROYAL OAK MADISON HTS.	4	42
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

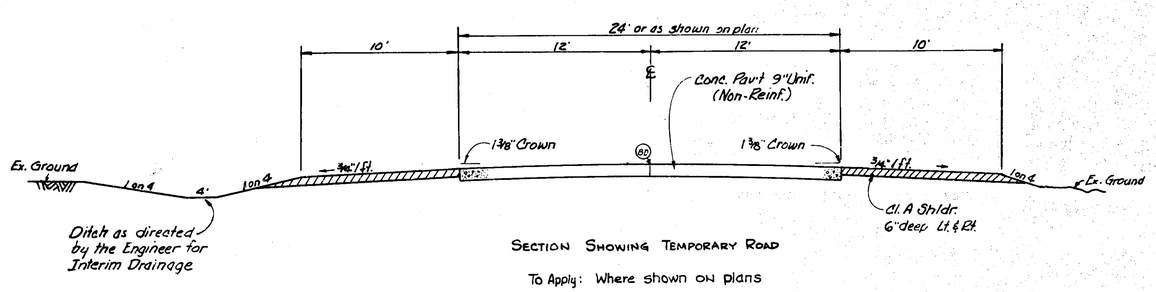


SECTION SHOWING NORMAL SERVICE ROAD WITH TEMPORARY WIDENING

To Apply: Where shown on plans

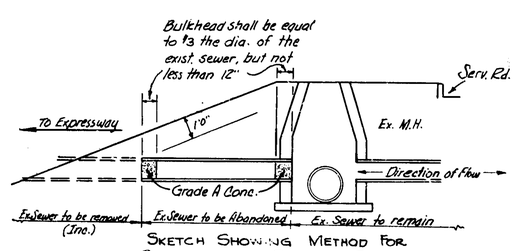
SKETCH SHOWING 3" ENCASED CONDUIT

For details, see E-18-A-4



SECTION SHOWING TEMPORARY ROAD

To Apply: Where shown on plans



SKETCH SHOWING METHOD FOR BULKHEADING SEVERED SEWERS

NOTES:

Stockpiling of topsoil can be avoided on this Contract. No topsoil shall be haul from the site until topsoil surfacing requirements have been ascertained & assured.

The Area between the Outside Service Road Curb and the property line shall be finished according to the Specifications for Class A Slopes. Topsoil Surface, obtained from Freeway area or as directed by the engineer, Class A Seeding, and fertilizing shall be applied to this area

The Area between the top of Slope from the freeway to the inside Service Road Curb shall be finished according to Specifications for Class A Slopes. Topsoil Surface, Class I Seeding, and Fertilizing shall be applied to this area.

The Area between the freeway shoulder and top of slope shall be finished according to Specifications for Class A Slopes. Class B Sodding shall be applied to this area. Where pegging is required, the sod shall be pegged with wooden pegs.

Seeded Areas shall be mulched at the rate of 2½ Tons per Acre.

All crowns are modified parabolic

JOINT LEGEND

D - Longitudinal Lane Tie Joint with Tie Bars according to Special Details.

B - Longitudinal Bulkhead Construction Joint according to Special Details.

BD - Optional B or D.

TEMPORARY CONCRETE PAVEMENT

Omit Transverse Expansion and Contraction Joints and Place, at 50-Foot Intervals, Transverse Plane of Weakness Joints According to Detail No. 5 of Special Details - Sheet No. 37. Omit Longitudinal Lane Tie Bars at "D" Joints.

B.P.R. DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	175-2(192)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
175	63174 B	OAKLAND	ROYAL OAK	5	42

SPECIAL PROVISIONS

GRADES FOR INTERSECTIONS

ALL INTERSECTIONS ARE TO BE CONSIDERED AS COMPLETE UNITS AND THEIR GRADES DETERMINED BEFORE CONSTRUCTION IS STARTED.

TRANSVERSE JOINTS IN CONCRETE PAVEMENT

TRANSVERSE JOINTS IN CONCRETE PAVEMENT SHALL BE PLACED ACCORDING TO DETAILS ON STANDARD PLAN E-4-A-135C AND E-4-A-127B.

HAND FINISHING

HAND FINISHING, ACCORDING TO 4.14.03-q-1 OF THE STANDARD SPECIFICATIONS, WILL BE PERMITTED ON INTERSECTIONS OUTSIDE OF THE NORMAL TRAFFIC LANES.

POSTS IN VICINITY OF LIGHT STANDARDS

FENCE POSTS AND GUARD RAIL POSTS SHALL NOT BE LOCATED WITHIN 2 FEET OF STREET LIGHTING STANDARDS, TO AVOID THE POSSIBILITY OF DAMAGING THE UNDERGROUND LIGHTING CABLE. THE EXACT LOCATION OF ALL CABLES SHALL BE DETERMINED BEFORE POSTS ARE LOCATED.

MANHOLES, CATCH BASINS, AND INLETS WITHIN LIMITS OF ROADBED

THE MAXIMUM PAY LIMITS FOR BACKFILLING WITH SAND GRAVEL MATERIALS SHALL BE THE SPACE FOR A DISTANCE OF 18 INCHES FROM THE OUTSIDE SURFACE OF THE STRUCTURE AT ITS MAXIMUM DIAMETER AND FROM THE BOTTOM OF THE FOOTING TO THE ELEVATION OF THE EARTH GRADE. THE VOLUME OF THE STRUCTURE TO BE DEDUCTED.

*** CLASS B SODDING**

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS.

FINE GRADING AND CLEANUP STA. 849 + 50 TO STA. 882 + 17.28 N.B. SER.RD., 33 STAS. STA. 855 + 00 TO STA. 892 + 00 N.B. EXPRESSWAY, RAMPS, AND STA. 857 + 00 TO STA. 892 + 00 S.B. EXPRESSWAY 82 STAS.	115	STAS.
TOPSOIL SURFACE (ON UNSODDED SLOPES AND DITCHES)	1344	CU.YDS.
BARRICADES	7	EACH
COMPLETING UNDER TRAFFIC STA. 849 + 50 TO STA. 882 + 17.28 N.B. SER. RD., .62 MI. STA. 855 + 00 TO STA. 892 + 00 N.B. EXPRESSWAY, RAMPS AND STA. 857 + 00 TO STA. 892 + 00 S.B. EXPRESSWAY 1.57 MI.	2.19	MILES
MULCHING (SLOPES, AS DIRECTED BY THE ENGINEER)	13	TONS
CLASS 1 SEEDING	4	ACRES
CLASS A SEEDING	1	ACRE
CHEMICAL FERTILIZER	3100	LBS.
UREA NITROGEN FERTILIZER	352	LBS.
CONTRACTION JOINTS	3900	LIN.FT.
EXPANSION JOINTS	1850	LIN.FT.
END OF POUR CONSTRUCTION JOINTS	300	LIN.FT.
FIELD OFFICE - CONCRETE PROPORTIONING	1	EACH
FIELD OFFICE - BITUMINOUS	1	EACH
POST AND DELINEATOR - SINGLE CRYSTAL POST AND DELINEATOR - DOUBLE YELLOW	31 27	EACH EACH
PROTECTIVE FENCE	45	LIN.RDS.
TIMBER CURB AND SNOW FENCE - FURNISH AND INSTALL	500	LIN.FT.
TIMBER CURB AND SNOW FENCE - RELOCATE	250	LIN.FT.
TIMBER CURB AND SNOW FENCE - REMOVE	500	LIN.FT.

* CLASS B SODDING FOR THIS PROJECT SHALL BE OBTAINED FROM UPLAND PASTURE LAND.

MISCELLANEOUS ESTIMATES CON'T.

THE FOLLOWING ITEMS ARE ESTIMATED FOR THE ENTIRE PROJECT TO BE USED WHERE DESIGNATED BY THE ENGINEER.

SUBGRADE UNDERCUTTING	3700	CU.YDS.
SAND-GRAVEL MATERIAL C.I.P (SUBGRADE UNDERCUTTING)	3700	CU.YDS.
GRANULAR BLANKET	900	CU.YDS.
6" BANK DRAINS	2400	LIN.FT.
EXCAVATION (WASTE FROM BANK DRAIN TRENCHES)	1200	CU.YDS.
POROUS MATERIAL - GRADE B (COMPACTED IN PLACE)	2200	CU.YDS.
POROUS MATERIAL - GRADE A C.I.P.	1240	CU.YDS.
TEMP. STEEL BEAM GUARD RAIL	450	LIN.FT.

GENERAL PLAN NOTES

PROPERTY OWNERS

PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY AND THEIR ACCURACY IS NOT GUARANTEED.

POLES

NO POLES WILL BE PERMITTED WITHIN THE LIMITED ACCESS RIGHT OF WAY. ON THE BALANCE OF THE PROJECT, THE EXACT LOCATION OF POLES WILL BE DETERMINED BY THE ENGINEER.

PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED ON OUR SURVEYS DATED DECEMBER 1960 AND JUNE 1961. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY HIMSELF AS TO ITS ACCURACY OR OF HIS RESPONSIBILITY IN CASE UTILITIES HAVE BEEN CONSTRUCTED OR REMOVED SINCE THE ABOVE SURVEY DATE.

NAME OF OWNER	KIND OF UTILITY	SIZE	LOCATION
CITY OF ROYAL OAK	WATER	8"	P.O.B. TO P.O.E., BETWEEN SW AND EXIST. S.B. STEVENSON
CITY OF ROYAL OAK AND/OR CITY OF MADISON HEIGHTS		8"	ELEVEN MILE RD., CROSSES ℄, N. OF S. SW
CITY OF MADISON HEIGHTS		8"	P.O.B. TO STA. 881 + 93.19, E. SIDE EXIST. N.B. STEVENSON
		8"	N. OF N. LINE OF SPRAGUE, E. SIDE OF NEW N.B. SERV. RD.
		6"	SIXTH ST., N. SIDE EXIST. SURF., E. FROM 8"
		6"	ANDOVER ST., S. SIDE EXIST. SURF., E. FROM 8"
		6"	FOURTH ST., N. SIDE EXIST. SURF. E. FROM 8"
		8"	ELEVEN MI. RD. S. OF N. SW, E. FROM 8"
		6"	MACE ST. N. OF EXIST. SURF., E. FROM 8"
		8"	BAXTER ST. N. OF EXIST. SURF. E. FROM 8"
		6"	UNIVERSITY ST. N. OF EXIST. SURF. E. FROM 8"

SPECIAL PROVISIONS (CONT'D)

NO OVERHAUL WILL BE ALLOWED IN WASTING SUBGRADE UNDERCUT MATERIAL.

PUBLIC UTILITIES CONT'D.

NAME OF OWNER	KIND OF UTILITY	SIZE	LOCATION
CONSUMERS POWER CO. (UNLESS OTHERWISE SHOWN MAINS ARE LOW PRESSURE)	GAS MAINS	12" HP	P.O.B. TO P.O.E., (NEW OR UNDER CONSTRUCTION) 3' E.OF E. CURB, EXIST. S.B. STEVENSON
		8" HP	P.O.B. TO P.O.E. (ABANDONED IN PLACE-REPLACED BY ABOVE 12") 40' ± W. OF SURVEY ℄
		4" MP	SIXTH ST. TO ELEVEN MI., (ABANDONED IN PLACE-REPLACED BY ABOVE 12") E. OF EXIST. N.B. STEVENSON
		2"	ELEVEN MI. TO SPRAGUE (ABANDONED IN PLACE-REPLACED BY ABOVE 12") W. OF S.W. N.B. STEVENSON
		2"	ANDOVER AVE., N. OF S. SW
		2"	FOURTH ST., S. OF N. SW
		6" H.P.	ELEVEN MI. RD., N. OF S. SW
		6" H.P.	ELEVEN MI. RD., N. OF PAVT.
		2"	MACE ST., S. SIDE OF ST., CROSSES SURV. ℄
		2"	BAXTER ST. S. SIDE OF ST. CROSSES SURV. ℄
		2"	UNIVERSITY ST. S. SIDE OF ST. CROSSES SURV. ℄
		2"	SPRAGUE ST N. SIDE OF ST. CROSSES SURV. ℄
MICHIGAN BELL TEL. CO.	TELEPHONE SYSTEM	O'HEAD CABLE & SERVICE	P.O.B. TO SIXTH ST. ALLEY E. OF STEVENSON
		O'HEAD CABLE	867 + 50 RT. TO ALLEY S. OF ELEVEN MI., ALLEY E. OF STEVENSON
		U'GROUND CABLE	ELEVEN MILE RD., NORTH SIDE CROSSES SURV. ℄
		O'HEAD CABLE	ELEVEN MILE RD. SOUTH SIDE
		O'HEAD CABLE	ALLEY N. OF ELEVEN MILE TO P.O.E., ALLEY E. OF STEVENSON
DETROIT EDISON	OVERHEAD POWER LINES	8 WIRE 2 X ARM	SIXTH ST., N. SIDE, CROSSES SURV. ℄
		7 WIRE PRIMARY	P.O.B. TO ELEVEN MI., ALLEY EAST OF STEVENSON
		3 WIRE SERVICE	ANDOVER ST., N.B. STEVENSON
		9 WIRE PRIMARY	LENOX ST., WEST SIDE
		SERV. & ST. LIGHT	FOURTH ST., SOUTH SIDE
		SERV. & ST. LIGHT PRIMARY	ALLEY SOUTH OF ELEVEN MILE ALLEY E. OF STEVENSON TO P.O.E., ALLEY EAST OF STEVENSON
OAKLAND COUNTY DRAIN COMMISSION	SEWERS	DOUBLE 14' BOX 66" CIR.	P.O.B. TO P.O.E., UNDER S.B. STEVENSON P.O.B. TO P.O.E., 10' TO 15' E. OF E. CURB EXISTING S.B. STEVENSON
MICHIGAN STATE HIGHWAY DEPARTMENT	STORM SEWERS	BRANCH SEWERS	P.O.B. TO P.O.E. EXISTING S.B. STEVENSON (TO REMAIN IN SERVICE) P.O.B. TO P.O.E. EXISTING N.B. STEVENSON (TO BE ADANDONED OR REMOVED)
CITY OF MADISON HEIGHTS	COMB. STORM & SANITARY SEWERS	18"	P.O.B. TO ALLEY S. OF ANDOVER, ALLEY E. OF STEVENSON
		15"	ALLEY S. OF ANDOVER TO ANDOVER, ALLEY E. OF STEVENSON
		12"	ALLEY S. OF ANDOVER
		15"	ANDOVER TO FOURTH, E. SIDE LENOX ST.
		12"	FOURTH ST. TO ALLEY S. OF ELEVEN MILE, ALLEY EAST OF STEVENSON
		12"	ALLEY SOUTH OF ELEVEN MILE
		12"	ALLEY NORTH OF ELEVEN MILE
		18"	ALLEY NORTH OF ELEVEN MILE TO P.O.E., ALLEY EAST OF STEVENSON

THE OWNERS OF EXISTING POLES AND OTHER SERVICE STRUCTURES THAT ARE WITHIN THE LIMITED ACCESS RIGHT OF WAY WILL MOVE THEM TO LOCATIONS DESIGNATED BY THE ENGINEER ON FREE ACCESS RIGHT OF WAY, OR WILL REMOVE THEM ENTIRELY FROM THE HIGHWAY RIGHT OF WAY. OWNERS OF PUBLIC UTILITIES WILL NOT BE REQUIRED BY THE DEPARTMENT TO MOVE ADDITIONAL POLES AND STRUCTURES THAT ARE NOT WITHIN GRADING OR STRUCTURE LIMITS IN ORDER TO FACILITATE THE OPERATION OF CONSTRUCTION EQUIPMENT, UNLESS IT IS DETERMINED BY THE ENGINEER THAT SUCH POLE LINE OR STRUCTURES CONSTITUTE A HAZARD TO THE PUBLIC OR ARE EXTRAORDINARILY DANGEROUS TO THE CONTRACTOR'S OPERATIONS.

NOTES APPLYING TO STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

EDGE DRAINS	E-4-A-9F, DETAIL 5
BANK DRAINS	E-4-A-9F, DETAIL 4
SODDING	E-4-A-10D
GRANULAR BLANKET	E-4-A-10D, DETAIL 2
PAVEMENT REINFORCEMENT	E-4-A-21F
GRADING CROSS SECTIONS	E-4-A-26D
MANHOLES, CATCH BASINS & INLETS	E-4-A-27R-4
COVER A	E-4-A-27A-3
COVER H	E-4-A-27H
COVER J	E-4-A-27J
COVER M	E-4-A-27M
MONUMENT BOX (MONUMENT BOXES FURNISHED BY THE STATE)	E-4-A-27F-3
COVER G	E-4-A-27G-4
CONCRETE CURB, ROLL CURB AND CURB AND GUTTER	E-4-A-29F
CURB AND GUTTER HEADERS	E-4-A-29F, DETAIL 9
DRIVEWAY RETURNS AND DRIVEWAY OPENINGS	E-4-A-29F
CONCRETE END HEADER	E-4-A-29F, DETAIL 20
BRIDGE HEADER	E-4-A-29F, DETAIL 21
PAVEMENT JOINTS	ACCORDING TO SPECIAL DETAILS
SUPERELEVATION OF CURVES	E-4-A-49C (EXCEPT THAT RATE OF SUPER-ELEVATION IS TO BE AS CALLED FOR ON PLANS)
PAVEMENT CROWNS	ACCORDING TO SPECIAL DETAILS
4" CONCRETE SIDEWALK	E-4-A-110B, DETAIL 2
CONCRETE PAVEMENT 7" UNIFORM	E-4-A-110B, DETAIL 4
TYPICAL JOINT LAYOUT	E-4-A-127C
TILE TRAP	E-4-A-129
DOWEL BAR INSTALLATION FOR LOAD TRANSFER AT TRANSVERSE CONTRACTION AND EXPANSION JOINTS	E-4-A-130E
BASE PLATES FOR TRANSVERSE PAVEMENT JOINTS	E-4-A-138 (EXCEPT THAT SPOT WELDS MAY BE SUBSTITUTED FOR RIVETS TO ATTACH THE 1" ANGLE)
CONCRETE STEPS	E-4-A-132A
LOCATION OF TRANSVERSE EXPANSION & CONTRACTION JOINTS IN CONCRETE PAVEMENT	E-4-A-135C
LOCATION OF GUARD RAIL AT STRUCTURES	E-4-A-12C
CONCRETE NOSE	E-4-A-145
BARRICADE	E-6-A-55F
STEEL BEAM GUARD RAIL	E-4-A-137E
CONCRETE STREET LIGHT STANDARDS	E-18-A-1
ALUMINUM STREET LIGHT STANDARDS	E-18-A-2
STEEL STREET LIGHT STANDARDS	E-18-A-3
ELECTRICAL CONDUIT DETAILS	E-18-A-4
OFFSET GUARD RAIL-SINGLE	E-4-A-148
OFFSET GUARD RAIL-DOUBLE	E-4-A-149
TRUSS FOUNDATION TYPE B,C	ACCORDING TO SPECIAL DETAILS
LOCATION OF GUARD RAIL AT TRAFFIC SIGNS	ACCORDING TO SPECIAL DETAILS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
FINAL R.O.W. CHECKED		
QUANTITIES		
QUANTITIES CHECKED		
ISSUED		

OPERATION	BY	DATE
SURVEYED		
PLANIMETERED		
PLAN CHECKED		
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE		
CROSS SECTION		
FIELD INSPECTION		

63174B, C61	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	63174B	175-2(192)62	5

COORDINATES & WITNESSES TO TRANSIT POINTS

Sta. 840 + 00 ; H.C.P. #44 — N 17,783.71 / E 14,945.50

N	27°	W	145.4'	P. Pole
N	09°	E	123.7'	P. Pole
S	57°	E	52.8'	Intersect. Walks

P.I. Sta. 843 + 89.33 (No. Curve) ; H.C.P. #45 — N 18,160.69 / E 18,848.23

℄ Lincoln St. P.K. Nail

N	35°	37'	21" E	43.09' N&C P. Pole
S	54°	52'	39" E	71.85' N.W. Cor. Bldg.
S	33°	37'	21" W	44.00' N&C T. Pole

Sta. 848 + 00 ; H.C.P. #46 — N 18,558.50 / E 14,746.26

N	62°	W	59.2	2.5' X 4' Conc.
N	41°	E	50.3'	Intersect. Walks
S	37°	E	93.8'	Intersect. Walks

Sta. 852 + 00 ; H.C.P. #47 — N 18,945.97 / E 14,646.93

N	37°	W	109.0'	P. Pole
N	11°	E	87.5'	Light Pole
S	80°	E	35.7'	G. Pole

Sta. 856 + 00 ; H.C.P. #48 — N 19,333.44 / E 14,547.61

N	32°	W	142.4'	2.5' X 4' Conc.
N	03°	E	132.8'	P. Pole
S	33°	E	93.0'	P. Pole

Sta. 860 + 00 ; H.C.P. #49 — N 19,720.91 / E 14,448.29

S	59°	W	4[illegible].1'	Light Pole
N	09°	E	93.7'	Light Pole
S	33°	E	92.8'	P. Pole

P.O.T. Sta. 862 + 00 — N 19,914.65 / E 14,398.62

P.K. Nail

N	16°	E	71.59'	N&C P. Pole
N	34°	E	78.93'	N.W. Cor. Brick Box
S	70°	E	77.85'	S.W. Cor. Church

Sta. 864 + 00 ; H.C.P. #50 — N 20,108.38 / E 14,348.96

N	83°	W	172.0'	Light Pole
N	22°	E	57.4'	P. Pole
S	26°	E	140.4'	P. Pole

Sta. 868 + 00 ; H.C.P. #51 — N 20,495.86 / E 14,249.64

N	33"	W	169.4'	P. Pole
N	02°	E	138.3'	Light Pole
S	48°	E	55.7	P. Pole

Sta. 871 + 00 ; H.C.P. #52 — N 20,786.46 / E 14,175.14

S	77°	W	63.1'	
S	75°	W	106.2'	G. Pole
S	11°	W	154.1'	P. Pole

P.O.T. Sta. 871 + 27.50 — N 20,813.10 / E 14,168.31

P.K. Nail & Cap

S	30°	E	70.99'	Drill hole in curb
S	56°	W	67.81'	Light Pole
N	23°	E	56.80'	Power Pole

P.I. Sta. 879 + 83.76 — N 21,642.54 / E 13,955.70

Boat Spike

N	41°	W	58.17'	N&C G. Pole
N	47°	E	78.56'	N&C Fence Post
S	58°	E	104.84'	S.W. Cor. House #318

T1N, R11E

N

BENCH MARKS

82 — Elev. 636.64
52' Rt. Sta. 838 + 09
Kalama and Stephenson, S.E. Cor.

81 — Elev. 638.12
177' Lt. Sta. 852 + 81
S.W. Cor. Sixth & Stephenson

80 — Elev. 637.94
153' Lt. Sta. 864 + 94
N.W. Cor. Middlesex & Stephenson

79 — Elev. 638.54
165' Lt. Sta. 872 + 24
Chisleri Square on Concrete Sign Base
N.W. Cor. 11 Mile & Stephenson (Shell Service Station)

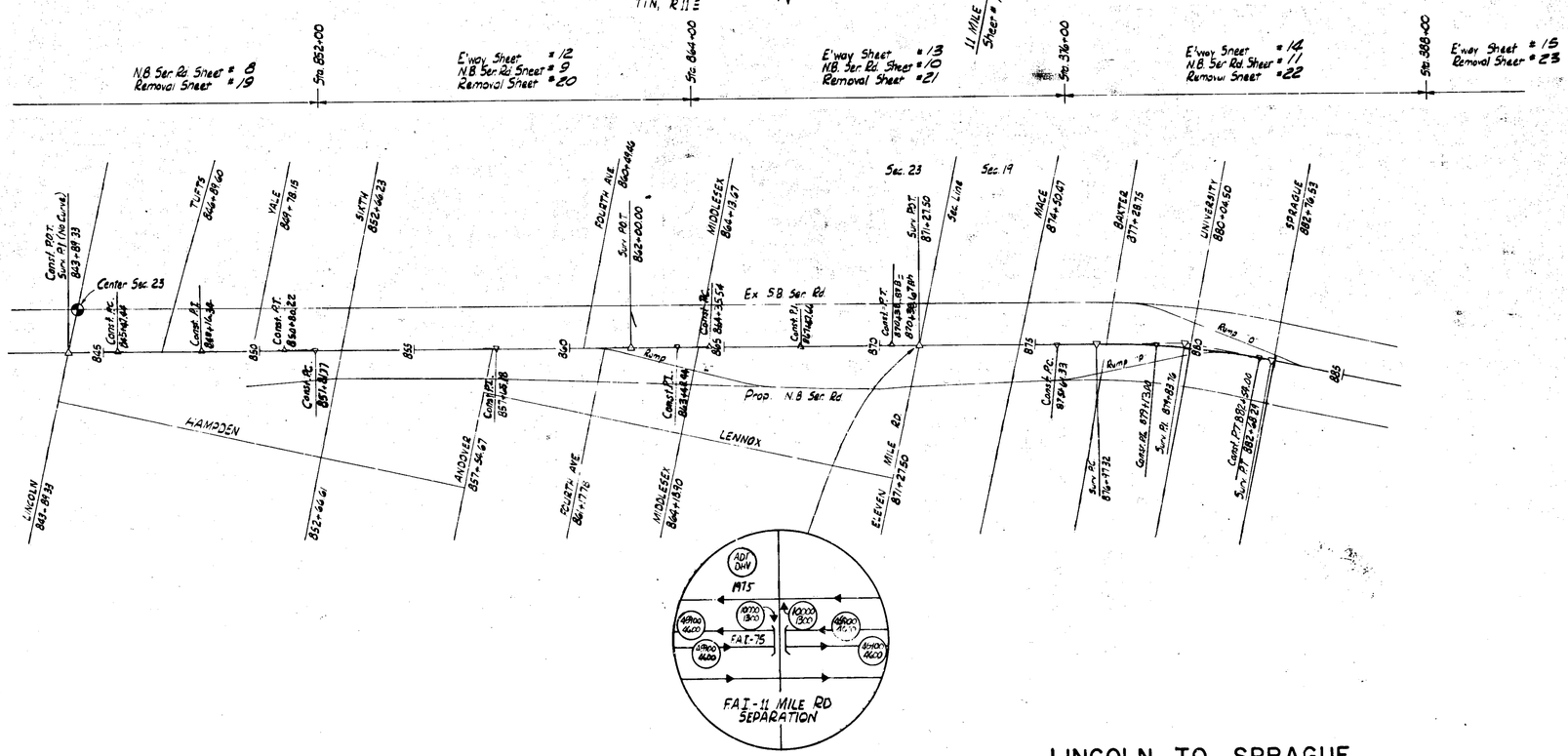
78 — Elev. 635.52
202' Rt. Sta. 880 + 28
M.S.H.D. Tag ;
S.W. Root 23" Box Elder

77 — Elev. 636.96
143' Lt. Sta. 885 + 57
R.R. Spike in
Street Light Pole

83A — Elev. 638.10
N.E. Cor. Kenneth & Helene

BENCH MARK ELEVATIONS SHOWN ARE TO TOP OF ARROW ON FIRE HYDRANT, UNLESS OTHERWISE NOTED.

175-2(98)62
CITY
I-75 63174B Junction ROYAL OAK 6 42

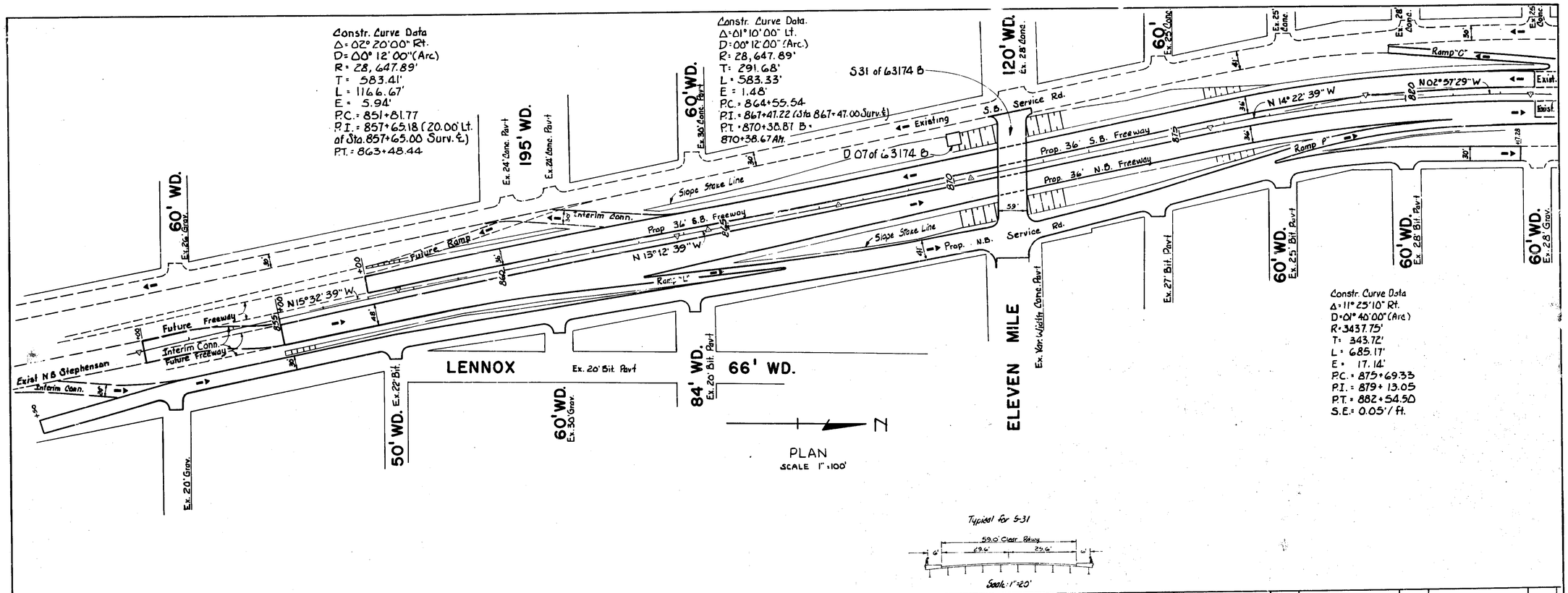


LINCOLN TO SPRAGUE

BENCH MARKS, WITNESSES, LOCATION & INDEX

63174B, C61	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	63174B	175-2(98)62	6

Speck. Regard 8-64



63174 B. C61

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-B	I75-2(82)58	7

U.P.D. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62		-	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK	8	42

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

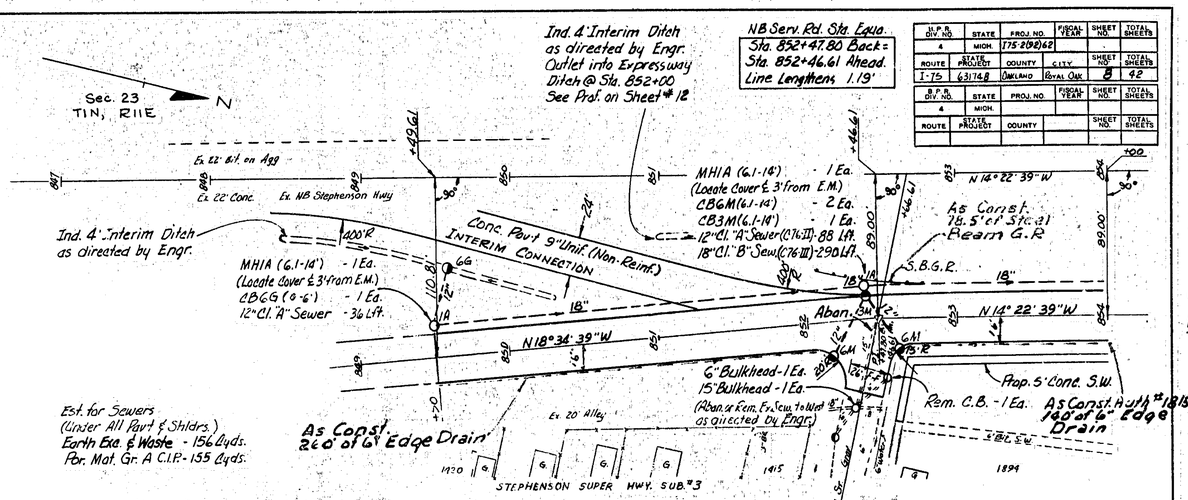
AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN CHECKED		
PLANS CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
ISSUED		

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED (Tracer)	R.J. Miller	4-5-68
PLAN REVIEWED		
PROFILE PLOTTED (Tracer)	R.J. Miller	4-5-68
PROFILE CHECKED		
FINAL DESIGN CHECKED		
GRADE INSPECTION		
CROSS SECTIONS		

Conventional Sign

Earthwork

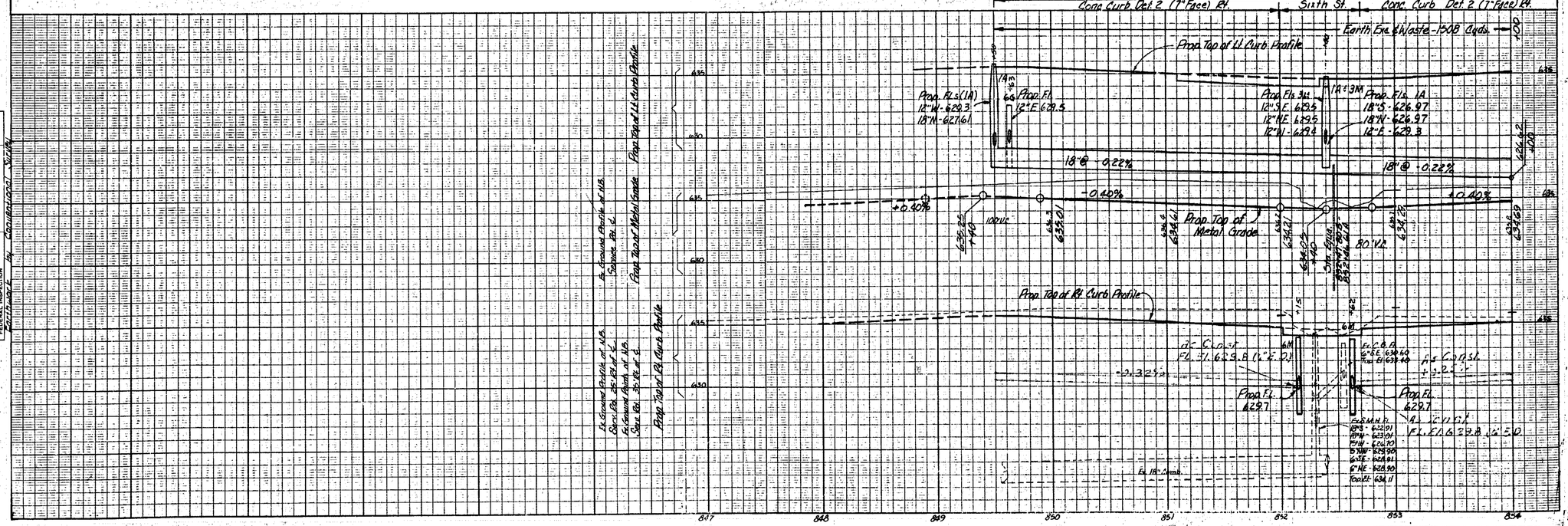


Est. for Sewers
(Under All Pav't & Shldrs.)
Earth Exc. & Waste - 156 Cyds.
Por. Mat. Gr. A C.I.P. - 155 Cyds.

Existing sewers, necessary to provide drainage for Existing Stephenson, shall be maintained in service by the contractor until completion of Proposed Service Road and removal of all pavement on Existing Stephenson. Sufficient drainage outlets will be maintained, after pavement is removed, to provide outlet for existing ditches along Stephenson. Abandoning and removal of the residual system will be included in the Freeway Excavation

Estimated Removal of undesirable material & debris from basements within the prop. pav't area as directed by the engineer.
Earth Exc. & Waste - 700 Cyds.
Sand-Gravel Mat. C.I.P. - 700 Cyds.

Conc. Pav't 9" Unif. (Temp.) - 631 Syds.
Conc. Pav't 9" Unif. - 1611 Syds.
Pav't Reinf. - 1611 Syds.
Conc. Curb Det. 2 - 786 L.ft.
4" Conc. S.W. - 840 Sft.
Cl. A Shldrs. - 192 Tons
Steel Beam Guard Rail - 18.5 L.ft.



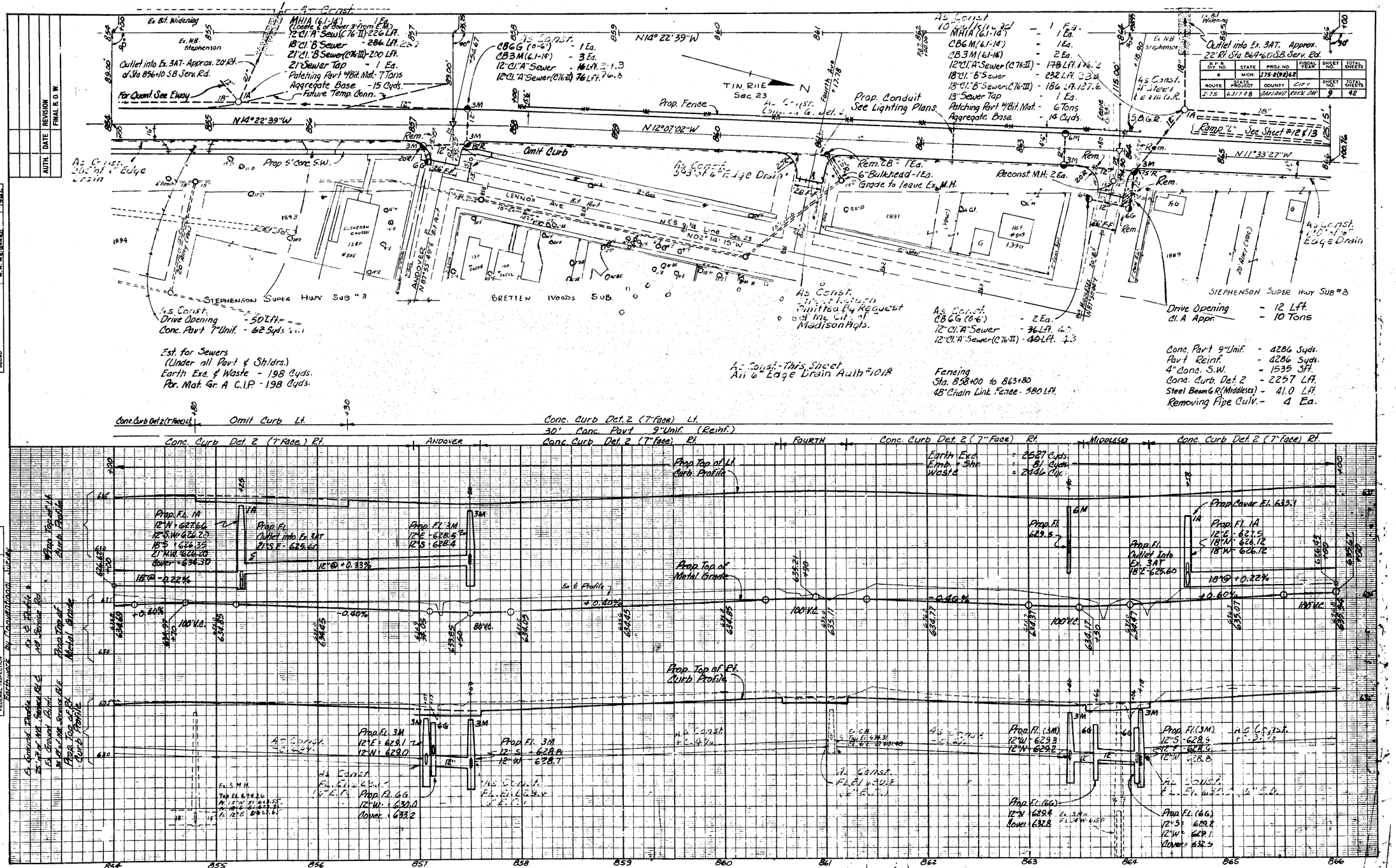
N.B. SERVICE RD.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B.C 61	63174B	I75-2(92)62	8

AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED		
FINAL DESIGN CHECKED		
TRACED		
PLANS R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
COMP.		

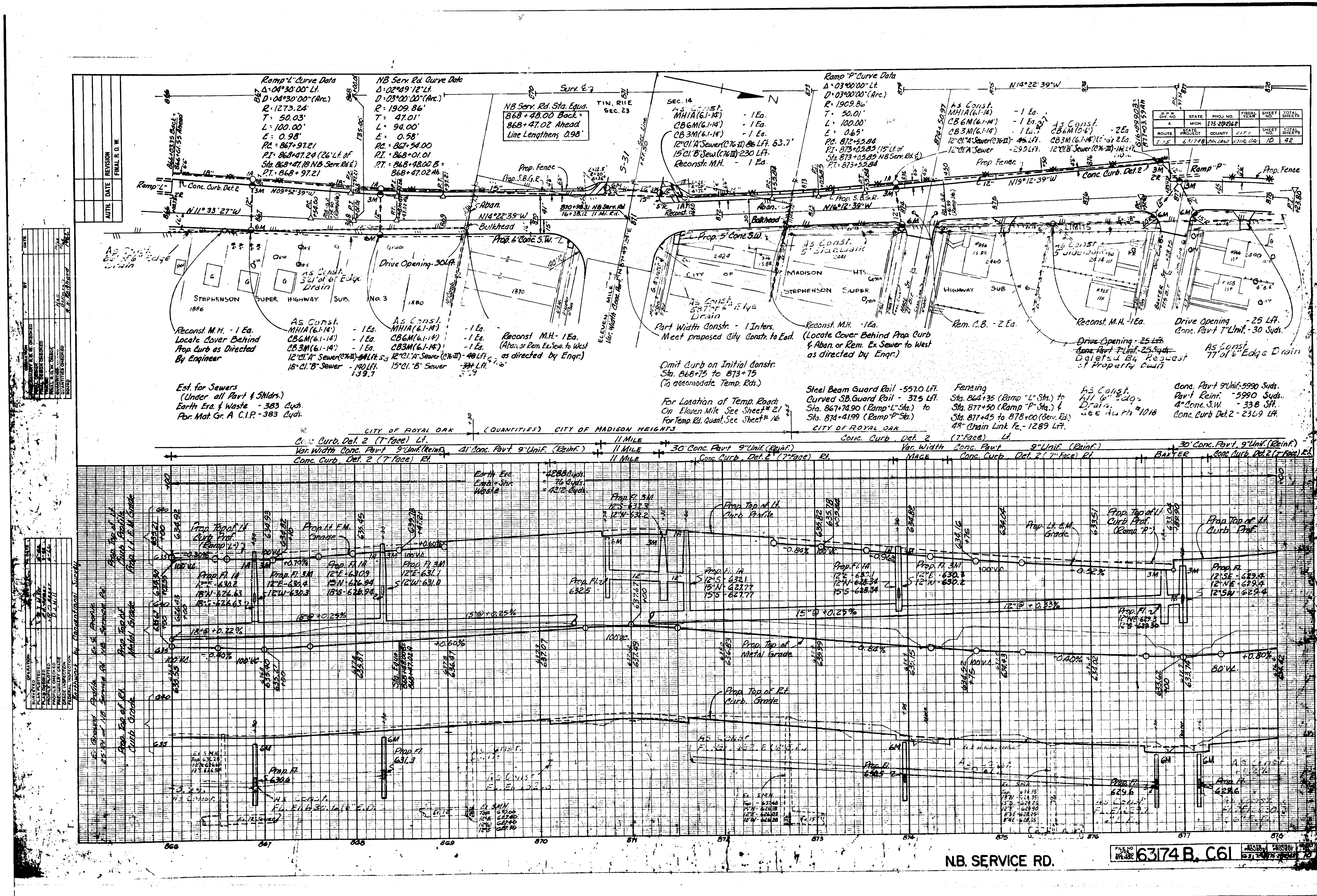
OPERATION	BY	DATE
SURVEYED		
PLANS COMPUTED		
PLAN CHECKED		
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE		
GRADE INSPECTION		
Earthwork by Roadway Survey		



D. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK	9	42

N.B. SERVICE RD.

FILE NO. 1965 NEW 330 | 63174 B, C61 | STATE PROJECT 63174B | FEDERAL PROJECT 175-2(92)62 | SHEET NO. 9

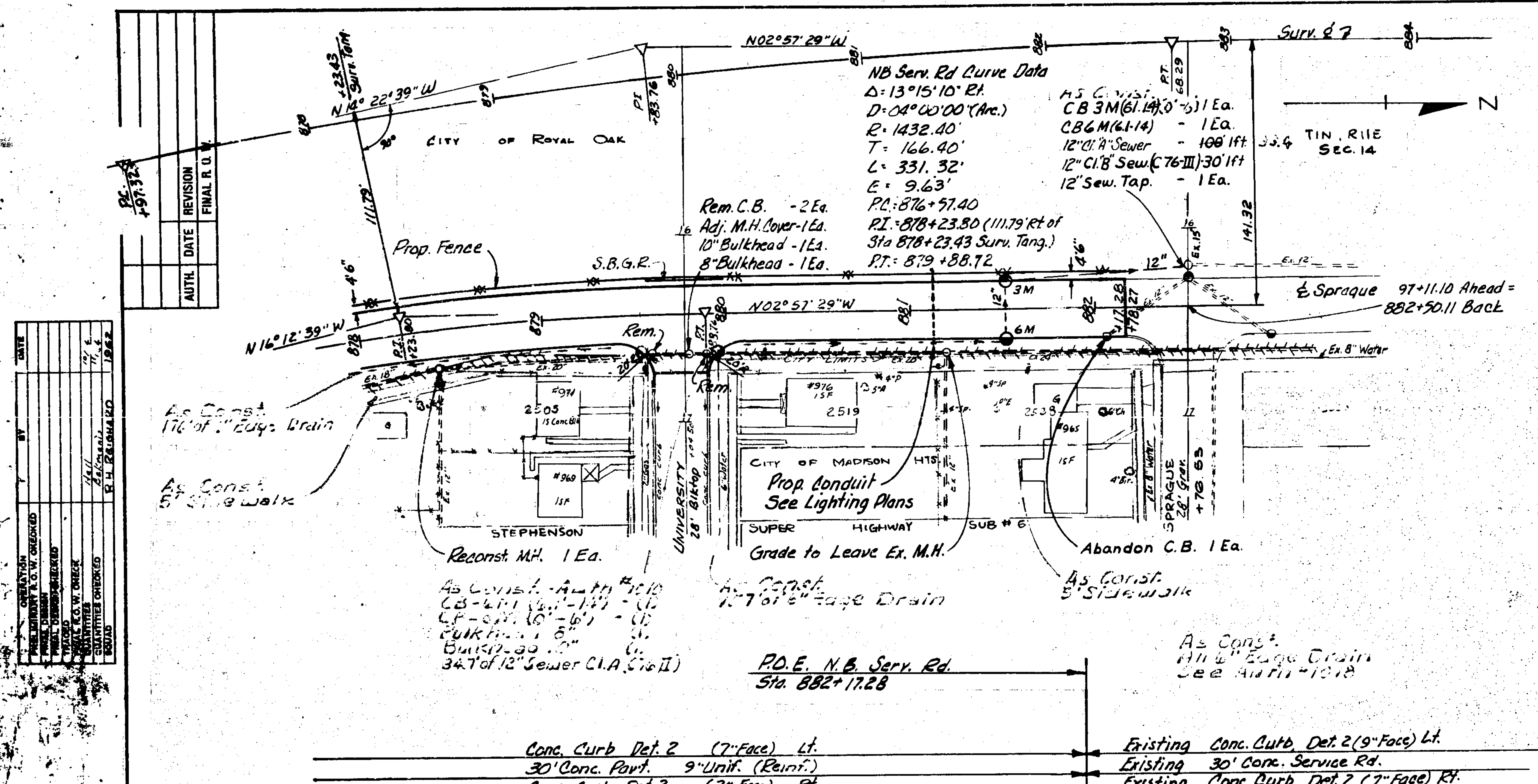

Ramp "L" Curve Data
Δ = 04°30'00" Lt.
D = 04°30'00" (Arc.)
R = 1273.24'
T = 50.03'
L = 100.00'
E = 0.98'
P.C. = 867+97.21
P.I. = 868+47.24 (26' Lt. of Sta. 868+47.18 NB Serv. Rd. ℄)
P.T. = 868+97.21
NB Serv. Rd. Curve Data
Δ = 02°49'12" Lt.
D = 03°00'00" (Arc.)
R = 1909.86'
T = 47.01'
L = 94.00'
E = 0.58'
P.C. = 867+54.00
P.I. = 868+01.01
P.T. = 868+48.00 B = 868+47.02 Ah.
NB Serv. Rd. Sta. Equa.
868+48.00 Back = 868+47.02 Ahead
Line Lengthens 0.98'
T1N, R11E Sec. 23
Sec. 14
As Const.
MH1A (6.1-14') - 1 Ea.
CB6M (6.1-14') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) 86 Lft. 83.7'
15" Cl. "B" Sew. (C76-III) - 230 Lft.
Reconstr. M.H. - 1 Ea.
Ramp "P" Curve Data
Δ = 03°00'00" Lt.
D = 03°00'00" (Arc.)
R = 1909.86'
T = 50.01'
L = 100.00'
E = 0.65'
P.C. = 872+55.84
P.I. = 873+05.85 (15' Lt. of Sta. 873+05.85 NB Serv. Rd. ℄)
P.T. = 873+55.84
As Const.
MH1A (6.1-14) - 1 Ea.
CB6M (6.1-14') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 45 Lft.
12" Cl. "A" Sewer - 29.0 Lft.
As Const.
CB6M (0-6') - 2 Ea.
CB3M (6.1-14') - 2 Ea.
12" Cl. "B" Sewer (C76-III) - 112 Lft.
B.P.R. DIV. NO	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK	10	42
Ramp "L"
Conc. Curb. Det. 2
N09°52'39"W
N11°33'27"W
N14°22'39"W
N16°12'39"W
N19°12'39"W
Surv. ℄
Prop. Fence
Prop. S.B.G.R.
Bulkhead
Aban.
870+98.31 NB Serv. Rd = 16+38.12 11 Mi. Rd.
Prop. 6' Conc. S.W.
Prop. 5' Conc. S.W.
As Const. 5' Sidewalk
Ramp "P"
Eleven Mile Var. Width Conc. Pav't
N87°49'24"E
Sec. Line
As Const. 86' of 6" Edge Drain
As Const. 321' of 6" Edge Drain
As Const. 587' of 6" Edge Drain
Drive Opening - 30 Lft.
Stephenson Super Highway Sub. No. 3
City of Madison Hts.
Reconst. M.H. - 1 Ea. Locate Cover Behind Prop. Curb as Directed By Engineer
As Const.
MH1A (6.1-14') - 1 Ea.
CB6M (6.1-14') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 54 Lft. 53
18" Cl. "B" Sewer - 140 Lft. 139.7
As Const.
MH1A (6.1-14') - 1 Ea.
CB6M (6.1-14') - 1 Ea.
CB3M (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 48 Lft. 47.6'
15" Cl. "B" Sewer - 33 Lft.
Reconst M.H. - 1 Ea. (Aban. or Rem. Ex. Sew. to West as directed by Engr.)
Part Width Constr. - 1 Inters. Meet proposed City Constr. to East.
Reconst. M.H. - 1 Ea. (Locate Cover Behind Prop. Curb & Aban. or Rem. Ex. Sewer to West as directed by Engr.)
Rem. C.B. - 2 Ea.
Reconst. M.H. - 1 Ea.
Drive Opening - 25 Lft. Conc. Pav't 7" Unif. - 30 Syds.
Drive Opening - 25 Lft. Conc. Pav't 7" Unif. 25 Syds. Deleted By Request of Property Own
As Const. 77' of 6" Edge Drain
Est. for Sewers (Under all Pav't & Shldrs.)
Earth Exc. & Waste - 383 Cyds.
Por. Mat. Gr. A C.I.P. - 383 Cyds.
Omit Curb on Initial Constr. Sta. 868+75 to 873+75 (To accomodate Temp. Rds.)
For Location of Temp. Roads On Eleven Mile See Sheet # 21
For Temp. Rd. Quant. See Sheet # 16
Steel Beam Guard Rail - 557.0 Lft.
Curved SB. Guard Rail - 37.5 Lft.
Sta. 867+74.90 (Ramp "L" Sta.) to Sta. 874+41.99 (Ramp "P" Sta.)
Fencing
Sta. 864+35 (Ramp "L" Sta.) to Sta. 877+50 (Ramp "P" Sta.) & Sta. 877+45 to 878+00 (Serv. Rd.)
48" Chain Link Fe. - 1289 Lft.
As Const. All 6" Edge Drain. See Auth #1016
Conc. Pav't 9" Unif. - 5990 Syds.
Pav't Reinf. - 5990 Syds.
4" Conc. S.W. - 338 Sft.
Conc. Curb Det. 2 - 2369 Lft.
City of Royal Oak (Quantities) City of Madison Heights City of Royal Oak
Conc. Curb. Det. 2 (7" Face) Lt.
Var. Width Conc. Pav't 9" Unif. (Reinf.)
41' Conc. Pav't 9" Unif. (Reinf.)
11 Mile
30' Conc. Pav't 9" Unif. (Reinf.)
Conc. Curb, Det. 2 (7" Face) Rt.
Mace
Baxter
Earth Exc. = 4288 Cyds.
Emb. + Shr. = 76 Cyds.
Waste = 4212 Cyds.
Prop. Top of Lt. Curb Prof. (Ramp "L")
Prop. Lt. E.M. Grade
Prop. Top of Lt. Curb Profile
Prop. Top of Lt. Curb Prof. (Ramp "P")
Prop. Top of Metal Grade
Prop. Top of Rt. Curb Grade
Ex. Ground Profile Ex. ℄ Profile 25' Rt. of NB Service Rd.
Earthwork by Conventional Survey
18" @ +0.22%
18" @ +0.25%
15" @ +0.25%
12" @ +0.33%
Prop. Fl. 1A 12" E - 630.2 18" N - 626.63 18" S - 626.63
Prop. Fl. 3M 12" E - 630.4 12" W - 630.3
Prop. Fl. 1A 12" E - 630.9 18" N - 626.94 18" S - 626.94
Prop. Fl. 3M 12" E - 631.1 12" W - 631.0
Prop. Fl. 3M 12" S - 632.3 12" N - 632.2
Prop. Fl. 2 632.5
Prop. Fl. 1A 12" S - 632.1 15" N - 627.77 15" S - 627.77
Prop. Fl. 1A 12" E - 631.1 12" N - 628.34 15" S - 628.34
Prop. Fl. 3M 12" E - 630.3 12" W - 630.2
Prop. Fl. 12" SE - 629.4 12" NE - 629.4 12" SW - 629.4
Prop. Fl. 2 12" NE - 629.3 12" S - 629.30
Prop. Fl. 630.6
Prop. Fl. 631.3
Prop. Fl. 630.5
Prop. Fl. 629.6
Prop. Fl. 629.6
866 867 868 869 870 871 872 873 874 875 876 877 878
N.B. SERVICE RD.
FILE NO. 63174 B. C61

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			

ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK MADISON HGHTS	11	42

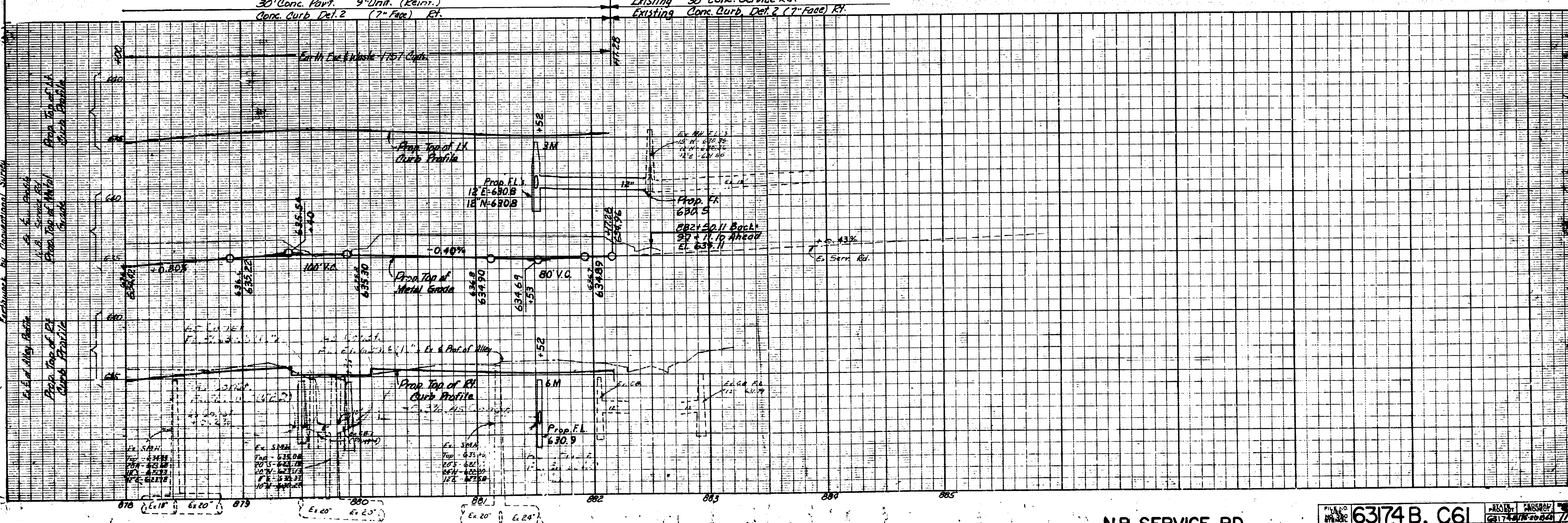
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				

ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Conc. Pav't 9" Unif. - 1462 Syds.
Pav't Reinf. - 1462 Syds.
Conc. Curb, Det. 2 - 819 Lft.
Steel Beam Guard Rail - 41.0 Lft.

Fencing
Sta. 878+00 to 882+17.28
48" Chain Link Fe - 417 Lft.



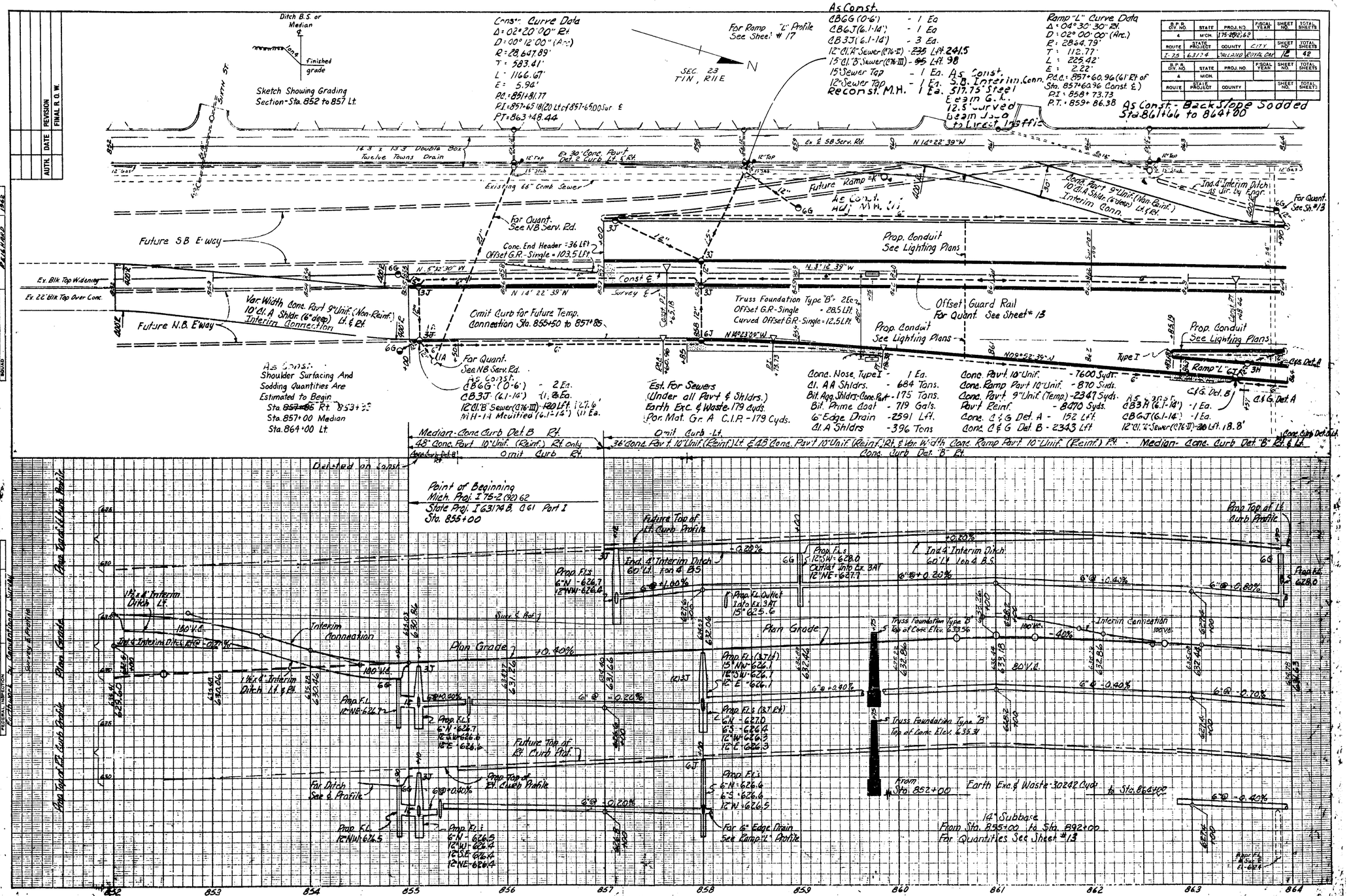
N.B. SERVICE RD.

FILE NO. 63174 B, C61

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	ROYAL OAK	12	42

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.



EXPRESSWAY

FILE NO.	PROJECT	PROGRAM	SHEET
63174B, C61	63174B	I75-8(092)62	12

R.O.W. DWG. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-8(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	Royal Oak	13	42

AUTH.	DATE	REVISION
		FINAL R.O.W.

As Const.
CB3J (6.1-14') - 3 Ea.
CB6G (0-6') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 136 Lft. 143.5'
15" Cl. "A" Sewer (C76-II) - 39 Lft. 39.3'
15 Cl. "B" Sewer (C76-III) - 79 Lft. 81.6'
15" Sewer Tap - 1 Ea.
with 14 (Modified) (1 Ea.)

Est. for Sewers
(Under all Pav't & Shldrs.)
Earth Exc. & Waste - 583 Cuyds.
Por. Mat. Gr. A C.I.P. - 583 Cuyds.

Const. Curve Data
Δ = 01°10'00" Lt.
D = 00°12'00" (Arc.)
R = 28,647.89'
T = 291.68'
L = 583.33
E = 1.48'
P.C. = 864+55.54
P.I. = 867+47.22 (867+47.00 Surv.E)
P.T. = 870+38.87 β = 870+38.67 Ah.

Const. & Sta. Equa.
870+38.87 Back =
870+38.67 Ahead
Line Lengthers 0.20'

N
T1N, R11E
Sec. 23
Sec. 14

As Const.
MH1A (0-6') - 1 Ea.
CB3J (6.1-14') - 3 Ea.
CB6J (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 62 Lft. 61.5'
12" Cl. "B" Sewer (C76-III) - 300 Lft. 30.5'
15" Cl. "A" Sewer (C76-II) - 49 Lft. 49.6'

Steel Beam Guard Rail
(At Middlesex) - 41.0 Lft.

MIDDLESEX
SBGR
12" Gas
Ex. 14" x 13.3" Double Box Culvert for Foons Drain
N.14° 22' 39" W
Ex. 30" Conc. Pav't
Curb Lft. Rt.
Prop. Curb Det. 2
For Quant. See 11 Mi. Rd. Sheet #16
Ex. 41" Conc. Pav't
Det. 2 Curb Lt. & Rt.
Ex. 12" Gas
Prop. Fence
As Const.
Ex. 66" Comb. Sewer
Steel Beam Guard Rail - 1540 Lft.
Curved S.B. Guard Rail - 750 Lft.
Sta. 868+57.75 to Pump Hse. &
Pump Hse. to 11 Mi. Bridge
Reconst. M.H. - 1 Ea.
8' Sump Chamber
see Pumphouse Plans D-07
Pump Hse. D-07
Prop. 4" Gate
(Not to be started until Bridge is open to Traffic)
For Quant.
See Bridge Plans
Prop. Fence
Steel Beam Guard Rail - 328.5 Lft.
Curved S.B. Guard Rail - 12.5 Lft.
11 Mi. Bridge to Sta. 875+28.00
As Const.
Offset Guard Rail - Single - 128.5 Lft.
Curved Offset G.R. - Single - 12.5 Lft.
For Quant.
See NB Serv. Rd.
Proposed S.B. X-Way
Const. ℄
N.14° 22' 39" W
Proposed N.B. X-Way
Offset Guard Rail - Double = 2325.0 Lft.
Offset Guard Rail - Single - 550.0 Lft.
Median Guard Rail P.O.B. to P.O.E.
(Bridge & Sign Foundation)
Bridge S-31
Const. Pt. 47.93
For Quant. See NB Serv. Rd.
Prop. Fence
Ramp "L"
As Const.
CB3J (6.1-14') - 3 Ea.
CB6J (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 108 Lft. 108.9
As Const.
CB3J (6.1-14') - 3 Ea.
CB6J (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-III) - 112 Lft. 116.4
12" Cl. "B" Sewer (C76-III) - 300 Lft. 29.9
24" Cl. "B" Sewer (C76-III) - 130 Lft. 61.3
Offset Guard Rail - Single = 128.5 Lft.
Curved Offset G.R. - Single = 12.5 Lft.
For Quant.
See Bridge Plans
As Const.
MH1A (0-6') - 1 Ea.
CB3J (6.1-14') - 3 Ea.
CB6J (6.1-14') - 1 Ea.
12" Cl. "A" Sewer (C76-II) - 62 Lft. 61.6
15" Cl. "A" Sewer (C76-II) - 46 Lft. 46.4
18" Cl. "A" Sewer (C76-II) - 200 Lft. 204.7
48" Chain Link Fence - 1126 Lft.
(Sta. 864+00 to Sta. 876+00 SB)
4' Walk Gate for 48" Chain Link Fence - 1 Ea.

Conc. Pav't 10" Unif. - 10151 Syds.
Conc. Ramp Pav't 10" Unif. - 315 Syds.
Pav't Reinf. - 10466 Syds.
Conc. C & G Det. A - 413 Lft.
Conc. C & G Det. B - 4801 Lft.
Cl. AA Shldrs. - 1756 Tons.
Bit. Agg. Shldrs. - Conc. Pav't - 448 Tons.
Bit. Prime Coat - 1844 Gals.
6" Edge Drain - 3905 Lft.

Conc. Curb Det. "B" Lt.
36' Conc. Pav't 10" Unif. (Reinf.) Lt. & Var. Width Conc. Pav't 10" Unif. (Reinf.) Rt.
Median Conc. Curb Det. "B"
Conc. Curb Det. "B" Rt.
Dual 36' Conc. Pav't 10" Unif. (Reinf.)
Median Conc. Curb Det. "B" Rt. & Lt.

Sod Backslope NB & SB Edwy.
Sta. 864+00 to Sta. 879+00
Lt. & Sodding - 9582 Syds.

500' Super Transition
First Ground Profile (℄ Datum)
Prop. Top of Lt. Curb Prof.
Prop. Top of Rt. Curb Profile
Plan Grade
Sump Chamber
600' VC
Prop. Top of Rt. Curb Profile
Prop. Top of Lt. Curb Profile
Plan Grade
Survey & Profile
Prop. Top of Lt. Curb Profile

Earth Exc. = 115,187 Cuyds
Emb. + Shr. = 865 Cuyds
Waste = 114,302 Cuyds
To Sta. 876+00

12" Subbase
From Sta. 855+00 to B92+00
Subbase C.I.P. = 21,466 Cuyds

OPERATION	BY	DATE
PREL. HORIZ. & VERT. CALCULATED		
PRELIM. DESIGN		
PRELIM. DESIGN CHECKED		
FINAL DESIGN		
FINAL R.O.W. CHECK		
PREL. R.O.W. CHECKED		
QUANTITIES CHECKED		
SOLVED		
RELEASED		

OPERATIONS	BY	DATE
SURVEYED		
PLOTTED		
PLAN CHECKED		
PROFILE CHECKED		
PREL. R.O.W.		
PRELIMINARY GRADE		
FINAL R.O.W.		
FEDERAL INSP. OFFICE		

Fairbanks - Morse Construction Service

EXPRESSWAY

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B, C61	63174B	175-8(92)62	13

AUTH.	DATE	REVISION
		FINAL R. O. W.

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	TOTAL PROJ. LENGTH	SHEET NO.	TOTAL SHEETS
I-75	63174B	WAYNE	6.6 Mi.	12	42

Ramp "O" Curve Data

Δ = 11°53'04" Rt.
D = 06°00'00" (Arc.)
R = 954.93'
T = 99.39'
L = 198.07'
E = 5.16'
PC = 878+00.00
PI = 878+99.39
PT = 879+98.07

E'way Surv. Curve Data

Δ = 04°00'00" Lt.
D = 02°00'00" (Arc.)
R = 2864.79'
T = 100.04'
L = 200.00'
E = 1.75
PC = 885+98.63
PI = 886+98.67
(80' Lt. of 886+98.59 Const. ℄ NB Rdwy.)
PT = 887+98.63 (80' Lt. of 887+98.63 Const ℄ NB Rdwy.)

E'way Const. Curve Data

Δ = 11°25'10" Rt.
D = 01°40'00" (Arc.)
R = 3437.75'
T = 343.72'
L = 685.17'
E = 17.14'
PC = 875+69.33
PI = 879+13.05
PT = 882+54.50
S.E. = 0.05 ft/ft Rt.

Location of CB's as directed by the Engineer To clear Ex. 12" Gas Main

Adj. M.H. Cov. - 1 Ea.

Est. for Sewers (Under all Pav't & Shldrs)
Earth Exc. & Waste - 279 Cyds.
Por. Mat. Gr. A C.I.P. - 278 Cyds.

Steel Beam G.R. - 41.0 Lft.

Prop. Conc. Curb Det. 2

Prop. Fence

Steel Beam Guard Rail - 41 Lft.

Ex. 30' Conc. Pav't Conc. Curb Det. 2 Lt. & Rt.

Prop. Cons. Curb Det. 2

Ex. SB Serv. Rd.

Aban. or Rem. Ex. Culv. (Inc) Prop. Fence

12" Bulkhead - 1 Ea.

Ex. 41' Conc. Pav't Conc. Curb Det. 2 Lt. & Rt.

12" Gas

Prop. Fence

Steel Beam Guard Rail - 41.0 Lft.

N 10°50' 33" W

Prop. Conc. Curb, Det. 2

Aban. C.B. - 1 Ea.
Rem. M.H. - 1 Ea.

Aban. or Rem. Ex. Culv. (Inc)

Prop. Conc. C&G. Det. A

Prop. Conduit See Lighting Plans

N 02°57' 29" W

Ramp "O"

Type I

Cov. A 1 Ea.

Ex. 36' Conc. Pav't Conc. C&G. Det. B Rt.

Ex. SB Expressway

N 02° 57' 29" W

Ex. Double S.B.G.R.

Ex. 36' Conc. Pav't Conc. C&G. Det. B Lt.

Const. ℄ 6317.7-C14

Ex. NB Expressway

Offset Guard Rail For Quant. See Sh. # 13

Type II

Ramp "P"

N 04° 27' 27" W

Rem. M.H. - 1 Ea.
Rem. Ex. 15" Sew. & Edge Drain (Inc.)

MH1 (6.1-14') with Solv. J Cover - 1 Ea.
18" Class "B" Sewer (C76-III) - 14 Lft.
As Const.

As Const. End Ramp "P" Sta. 877+03 - 851+42

Prop. Conc. Curb Det. 2

Steel Beam Guard Rail - 41 Lft.

Prop. Fence

Prop. Cons. Curb. Det. 2

Ex. NB Serv. Rd.

Far Quant. See Sh. #10

N 19°11' 39" W

N 08°06' 28" W

MH1A (6.1-14') - 1 Ea.
CB5M (0-6') - 1 Ea.
CB6J (6.1-14') - 1 Ea.
CB3J (6.1-14') - 4 Ea.
CB3H (6.1-14') - 3 Ea.
12" Cl. "A" Sewer (C76-II) - 119 Lft.
12" Cl. "B" Sewer (C76-II) - 28 Lft.
15" Cl. "B" Sewer - 42 Lft.
15" Cl. "B" Sewer (C76-III) - 39 Lft.
18" Cl. "B" Sewer - 224 Lft.
18" Sewer Tap - 1 Ea.

Ramp "P" Curve Data.
Δ = 11°06'11" Rt.
D = 03° 26' 00" (Arc.)
R = 1718.87'
T = 167.07'
L = 333.09'
E = 8.10'
PC = 876+88.74 B
PI = 878+69.50 (69.38' Rt. of Const. ℄ Sta. 878+60.74)
PT = 880+35.52
63.76' Rt. of Const. PT. Sta. 882+54.50

Ramp "P" Curve Data.
Δ = 03° 38' 59" Rt.
D = 01° 40' 00" (Arc.)
R = 3437.75'
T = 109.53'
L = 218.98'
E = 1.74'
PC = 880+35.52
PI = 881+45.05
PT = 882+54.50 B = 882+61.12 Ah.
63.76' Rt. of Const. PT. Sta. 882+54.50

CB6J (6.1-14') - 1 Ea.
CB3J (6.1-14') - 3 Ea.
12" Cl. "A" Sewer (C76-II) - 62 Lft.
12" Cl. "B" Sewer (C76-III) - 39 Lft.

Prop. Conduit See Lighting Plans

Steel Beam Guard Rail - 41 Lft.

Adj. CB Cov. - 1 Ea.

48" Chain Link Fence - 1439 Lft.
SB Sta. 876+00 to Sta. 882+44 (Const. ℄ Sta.)
℄ Sta. 885+86 to Sta. 888+00 (Const. ℄ 63174 D-C14)
NB Sta. 882+38 (Const. ℄ Sta.) to Sta. 888+00 (Const. ℄ 63174 D-C14)

City Limit

Ex. Dual 36' Conc. Pav't w/Conc. Curb Det. "B" in Median

Conc. Curb Det. B Lt. (To Sta. 892+00 Const. ℄ 63174D-C14)
Dual 36' Conc. Pavt 10" Unif. (Reinf.) Median Conc. Curb Det. B
Conc. Curb Det. B Rt. (To Sta. 892+00 Const. ℄ 63174D-C14)

Var. Width Conc. Ramp Pavt 10" Unif. (Reinf.) Rt. & Lt.

Sta. 883+03.19 SB Serv. Rd. is 116.26' Lt. of 882+78.11 Surv. ℄

Sta. Relation (E'way) Sta. 882+74.77 Const. ℄ is 14.00' Rt. of Sta. 882+76.53 Surv. ℄ is 31.00' Lt. of Sta. 882+81.58 NB Rdwy. Const. ℄

Sta. Relation (Ramp "O") Sta. 882+97.85 Back = Sta. 882+81.51 Ahead 109.10' Lt. of 882+82.45 Const. ℄ N.B. Rdwy

For Ramp "O" & "P" Profiles See Sheet # 18

Conc. Pav't 10" Unif. - 5356 Syds.
Conc. Ramp Pav't 10" Unif. - 2289 Syds.
Conc. Pav't 9" Unif. - 496 Syds.
Pav't Reinf. - 8141 Syds.
Conc. C&G Det. A - 882 Lft.
Conc. C&G Det. B - 4345 Lft.
Conc. Curb Det. 2 - 1189 Lft.
Conc. Nose Type I - 1 Ea.
Conc. Nose Type II - 1 Ea.
Cl. AA Shldrs - 1254 Tons
Bit. Agg. Shldrs-Conc. Pavt - 320 Tons
Bit. Prime Coat - 1317 Gals.
6" Edge Drain - 2927 Lft.

500' Super. Trans.

0.05 ft/ft Superelevation Rt.

500' Super. Transition

Prop. Top of Lt. Curb Profile

Set into 3:1 in Median

Prop. Top of Rt. Curb Profile

Sod Backslope NB & SB Ramp Sta. 864+00 to Sta. 879+00 For Quant. See Sheet # 13

Outlet into 3:1 In Median

Prop. Fl.
12" E - 620.3
12" S - 620.3

Prop. Top of Med. Curb Profile

Plan Grade

Prop. Top of Rt. Curb Profile

Prop. Top of Rt. Curb Profile

Prop. Fl. (3:1 Lt.)
6" N W - 623.5
6" NE - 622.5
12" E W 620.7

Prop. Fl. (3:1 Rt.)
12" E W - 620.8

Prop. Fl.
6" N - 621.2
12" W - 621.1

Prop. Fl.
6" N - 628.2
12" W - 626.8
12" SE - 626.8

Prop. Fl. (3:1 Lt.)
6" N W - 630.5
6" NE - 629.5
12" E - 626.4
15" W - 626.4

Prop. Fl. (3:1 Rt.)
12" E W - 626.6

Prop. Kos.
15" E W - 626.2
For Continuation of Sewer See Ramp "O" Profiles

Curv. Rd. & Profile

Point of Ending Mich. Proj. I 75-2(92)62
Sta. 882+74.16 State Proj. I 63174 B, C61 Part 1

Existing

Earth Exc. = 18768 Cyds.
Emb. + Shr. = 4518 Cyds.
Waste = 14,250 Cyds.

From Sta. 876+00

To Sta. 892+00

For Continuation of Sewer See Ramp "P" Profiles

14" Subbase From Sta. 855+10 to 892+00 For Quant. See Sheet # 13

1900' V.C.

654.83
885+93.18
886+00.00 Ah.
Sta. Relation

Sta. Relation
885+93.18
886+00.00 Ah.
Cl. 63.00

876 877 878 879 880 881 882

EXPRESSWAY

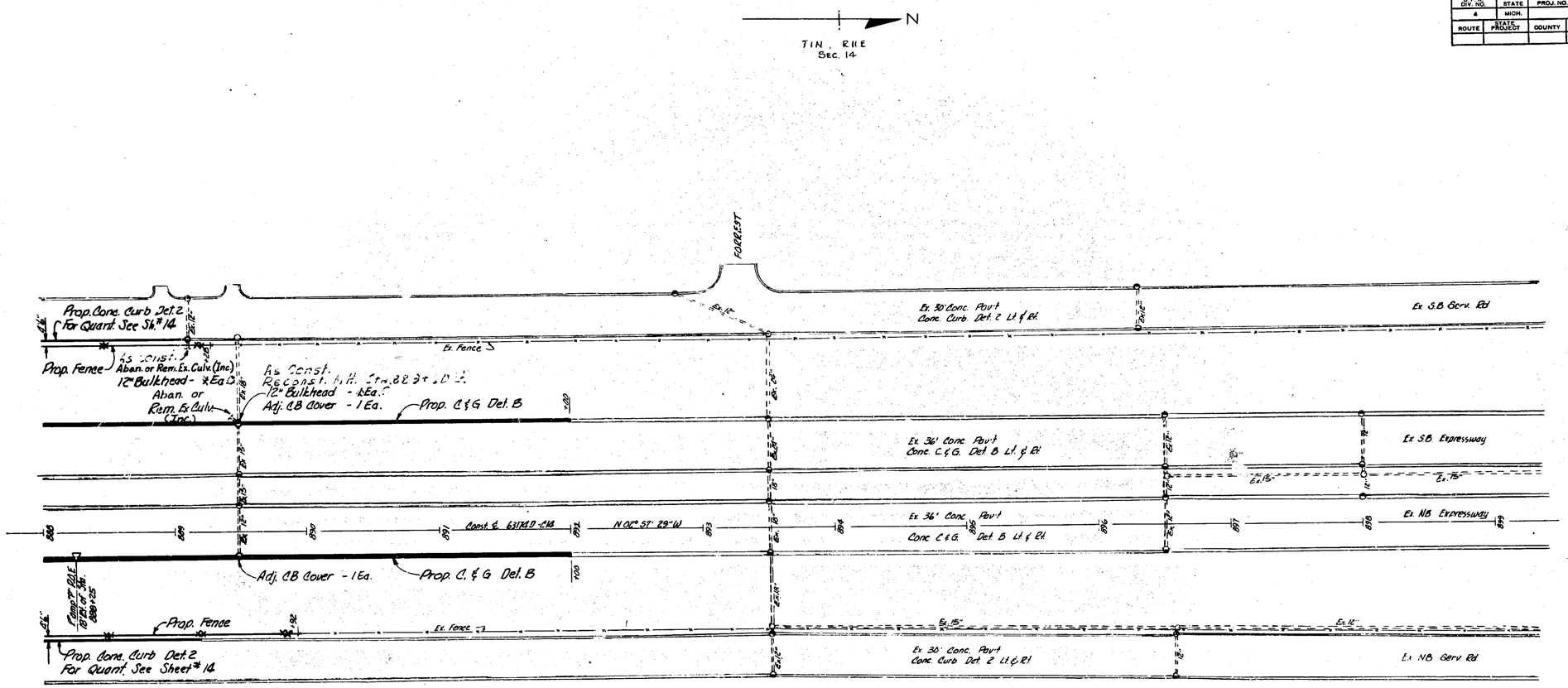
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B, C61	63174B	I 75-2(92)62	12

OPERATION	DATE
SURVEYED	
PLAN PLOTTED	
PROFILE PLOTTED	
PROFILE CHECKED	
GRADE INSPECTION	
Earthwork by Conventional Survey	

CHANGE ORDER	BY	DATE
PRELIMINARY R. O. W. RECORD		
PROJ. DESIGN CHECKED		
PROJ. PLANS		
PROJECT		
PROJECT		
CONTRACTS		
CONTRACTS		
BUILT		

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK MADISON HTS.	15	42

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

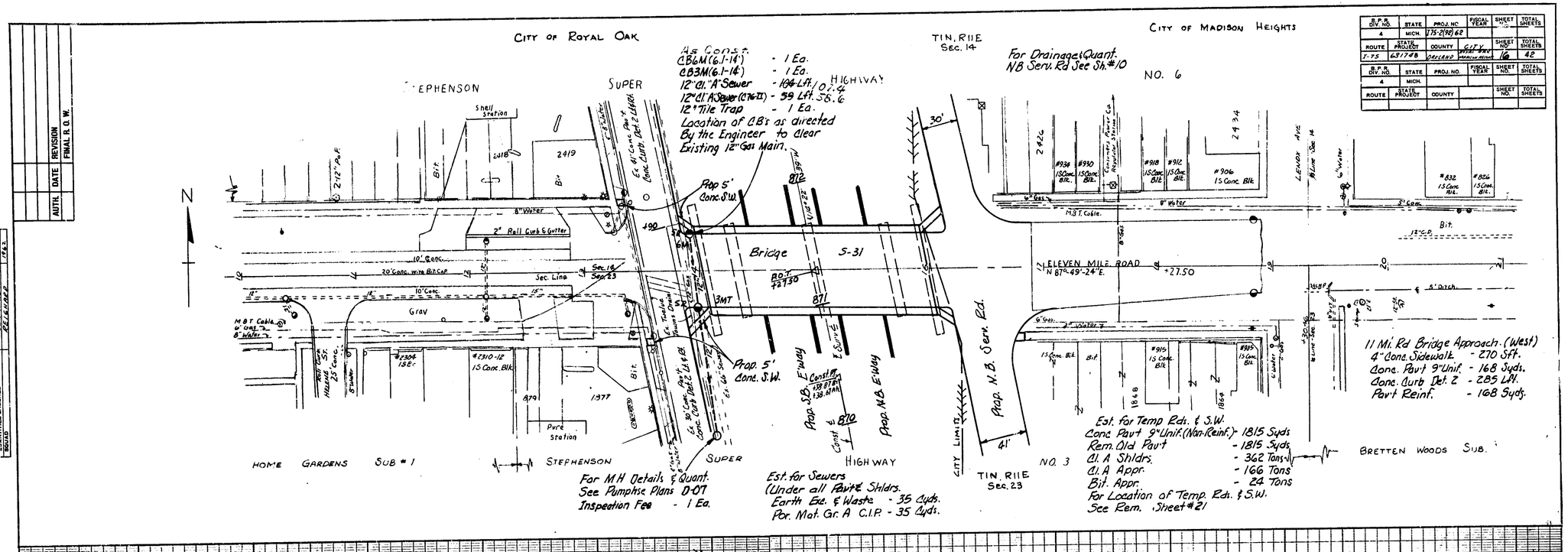


48" Chain Link Fence - 320 Lft.
SB Sta 888+00 to 889+28
NB Sta 888+00 to 889+92

Conc. C.&G. Det. B - 800 Lft.
Cl. A & Shldr. - 277 Tons
Bit. Agg. Shldr-Conc. Pav't - 71 Tons
Bit. Prime Coat - 290 Gals.

EXPRESSWAY

FILE I.D.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B.C61	63174B	175-2(92)62	15



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK MADISON HEIGHTS	16	42

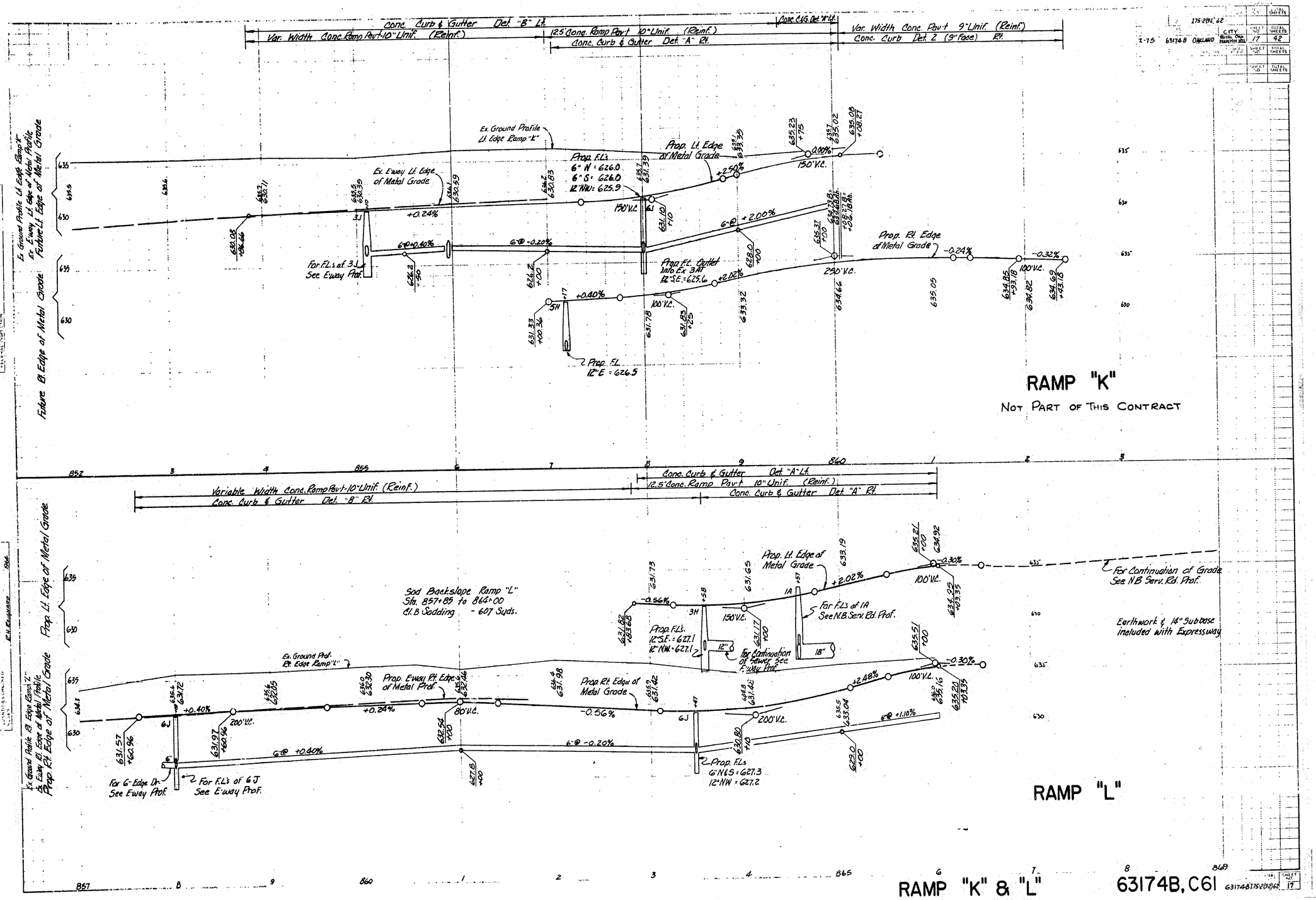
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD		

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED Traced	R. Hill	7-62
PLAN CHECKED	R.J. Miller	8-62
PROFILE PLOTTED	R. Hill	7-62
PROFILE CHECKED	R.O. Abbey	8-62
PRELIMINARY GRADE		
GRADE INSPECTION		
FEDERAL INSPECTION		

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 B. C61	63174B	I75-2(92)62	16

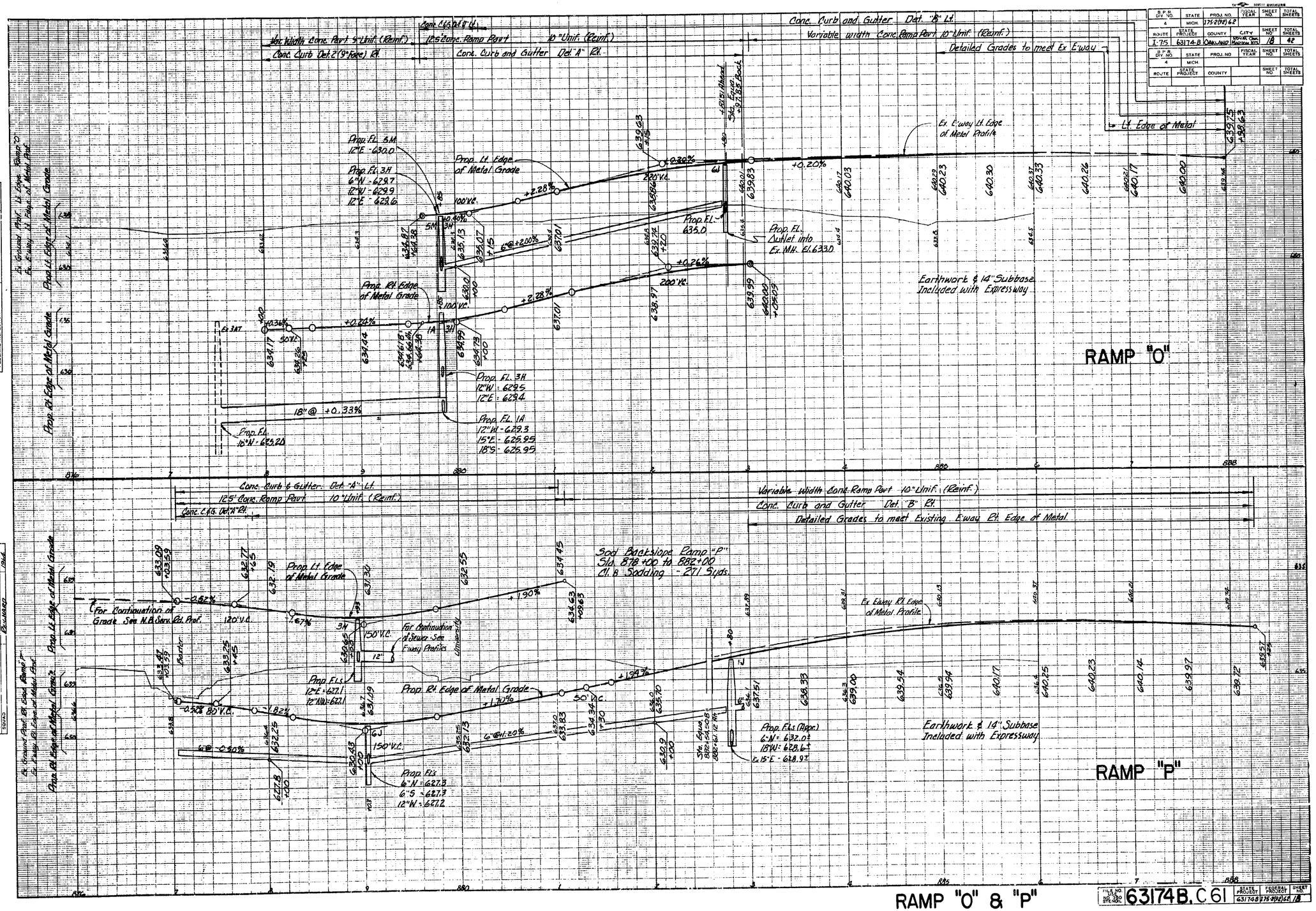

Conc. Curb & Gutter Det. "B" Lt.
Var. Width Conc. Ramp Pav't-10" Unif. (Reinf.)
12.5' Conc. Ramp Pav't 10" Unif. (Reinf.)
Conc. Curb & Gutter Det. "A" Rt.
Var. Width Conc. Pav't 9" Unif. (Reinf.)
Conc. Curb Det 2 (9" Pave) Rt.
Ex. Ground Profile Lt. Edge Ramp "K"
Ex. Eway Lt. Edge of Metal Profile
Future Lt. Edge of Metal Grade
Prop. F.L.s 6" N: 626.0 6" S: 626.0 12" NW: 625.9
Prop. Lt. Edge of Metal Grade
Ex. Eway Lt. Edge of Metal Grade
For F.L.s at 3J See Eway Prof.
Prop. F.L. Outlet into Ex. 3AT 12" S.E.: 625.6
Prop. Rt. Edge of Metal Grade
Prop. F.L. 12" E = 626.5
RAMP "K"
NOT PART OF THIS CONTRACT
Conc. Curb & Gutter Det. "A" Lt.
Variable Width Conc. Ramp Pav't-10" Unif. (Reinf.)
12.5' Conc. Ramp Pav't 10" Unif. (Reinf.)
Conc. Curb & Gutter Det. "B" Rt.
Conc. Curb & Gutter Det. "A" Rt.
Sod Backslope Ramp "L" Sta. 857+89 to 864+00 cl. B Sodding - 607 Syds.
Prop. Lt. Edge of Metal Grade
For F.L.s of 1A See N.B. Serv. Rd. Prof.
For Continuation of Grade See N.B. Serv. Rd. Prof.
Earthwork & 14" Subbase included with Expressway
Ex. Ground Prof. Rt. Edge Ramp "L"
Prop. Eway Rt. Edge of Metal Prof.
Prop. Rt. Edge of Metal Grade
For Continuation of Sewer See E'way Prof.
Prop. F.L.s 6" N & S = 627.3 12" NW = 627.2
For 6" Edge Dr. See Eway Prof.
For F.L.s of 6J See E'way Prof.
Ex. Ground Profile Lt. Edge Ramp "L"
Ex. Eway Rt. Edge of Metal Profile
Prop. Rt. Edge of Metal Grade
Prop. Lt. Edge of Metal Grade
RAMP "L"
RAMP "K" & "L"
63174B, C61

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175(98)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-B	OAKLAND	VOCAL CHAR. MAGISTRAL RTS	18	42

B.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

OPERATION	BY	DATE
DATA PLOTTED		
PLAN PLOTTED		
PLAN CHECKED		
PROFILE PLOTTED		
PROFILE CHECKED		
FIELD EDITS MADE		
FIELD EDITS CHECKED		
FIELD INSPECTION		
FEDERAL INSPECTION		

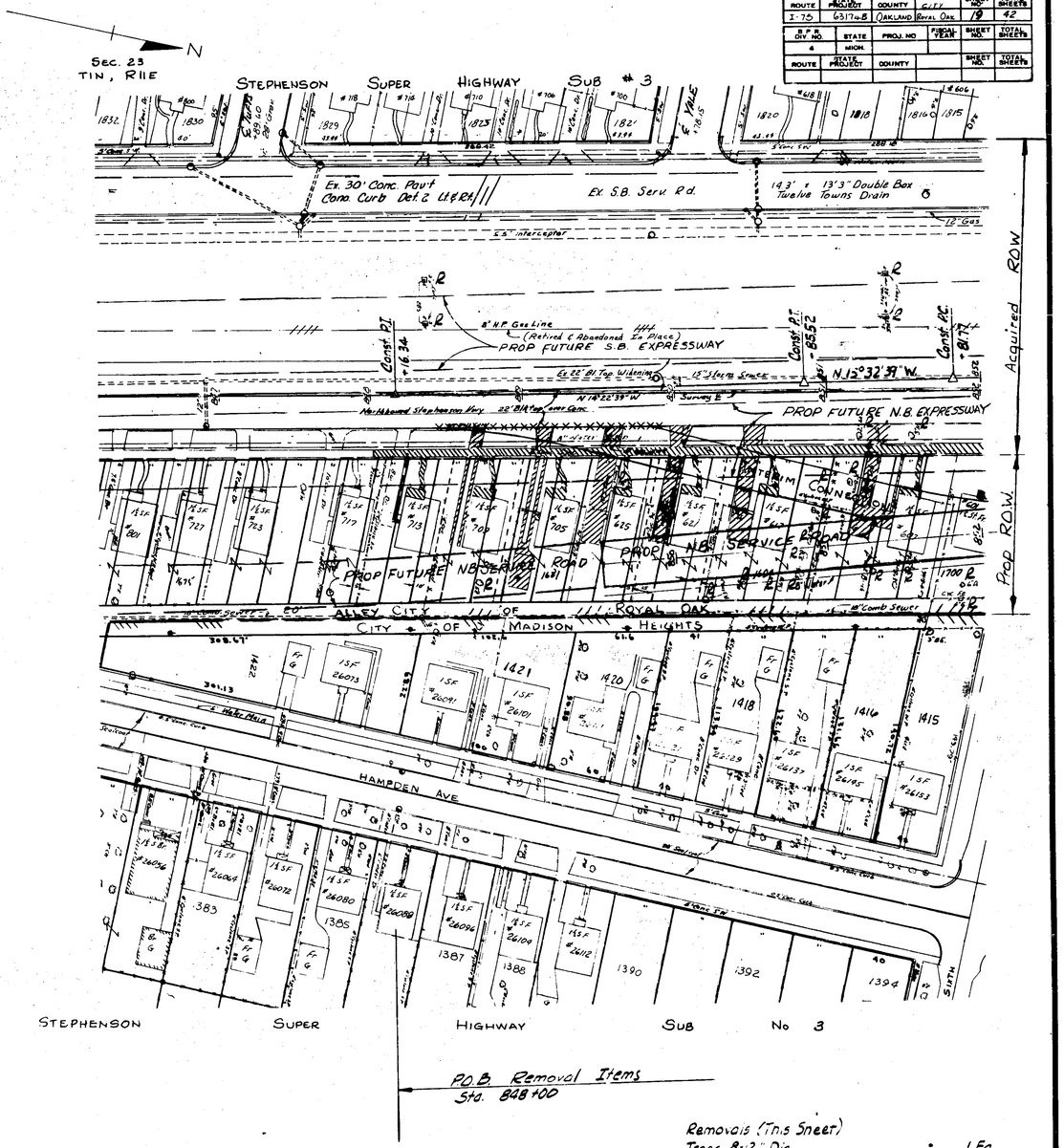
OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN CHECKED		
PLANS CHECKED		
FIELD R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SOLD		



RAMP "O" & "P"

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B.C61	63174B	175-(98)62	18

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	Royal Oak	19	42
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



P.O.B. Removal Items
Sta. 848+00

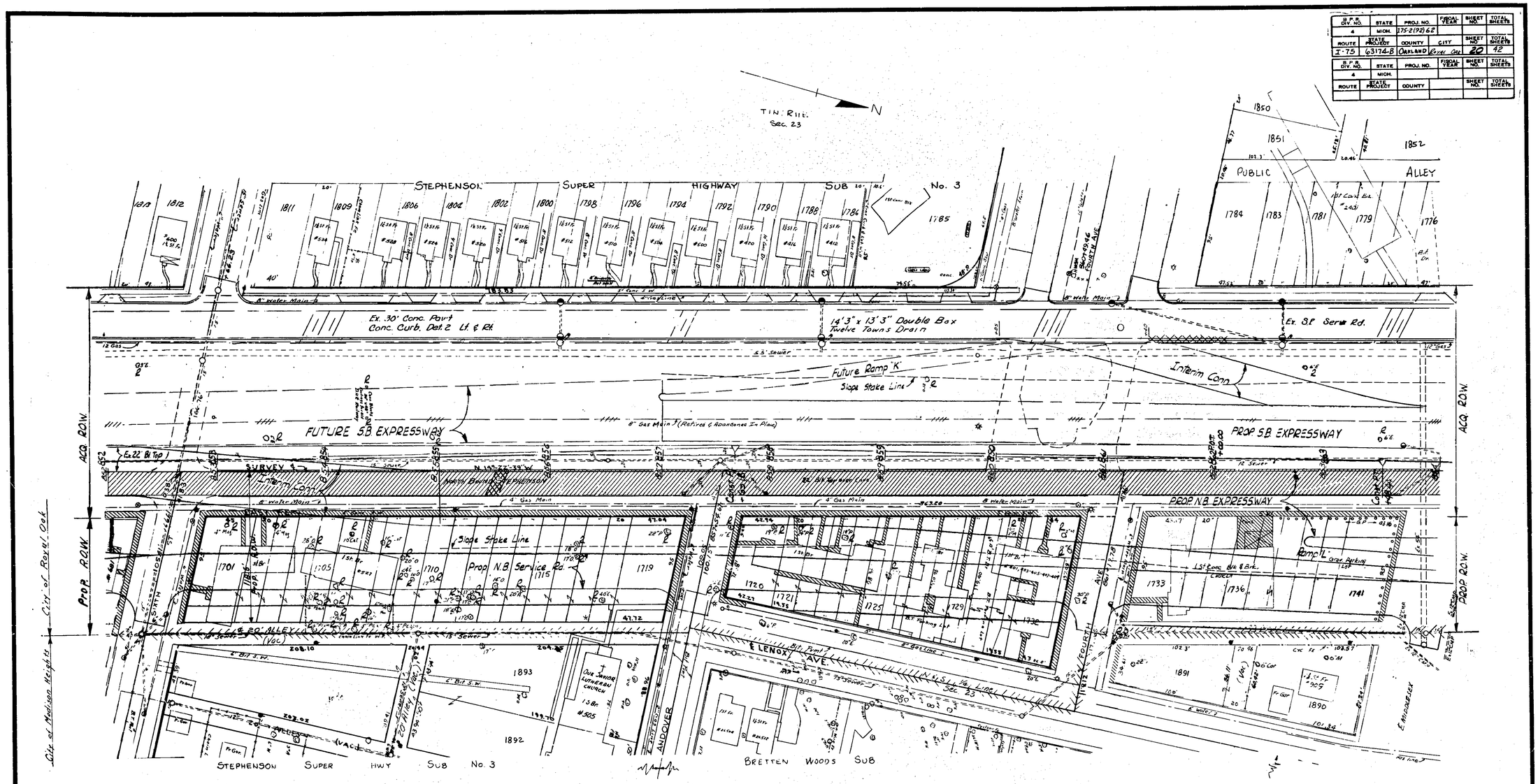
Removals (This Sheet)

Trees 8-12" Dia.	1 Ea.
Dia Pav't. Shown	502 Syds.
Masonry & Conc. Structures	48 Cuds.
Sidewalk Shown	349 Syds.
Curb	156 Lft.

REMOVAL

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 B. C61	63174B	175-2(92)62	19

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(192)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-B	OAKLAND	Royal Oak	20	42
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



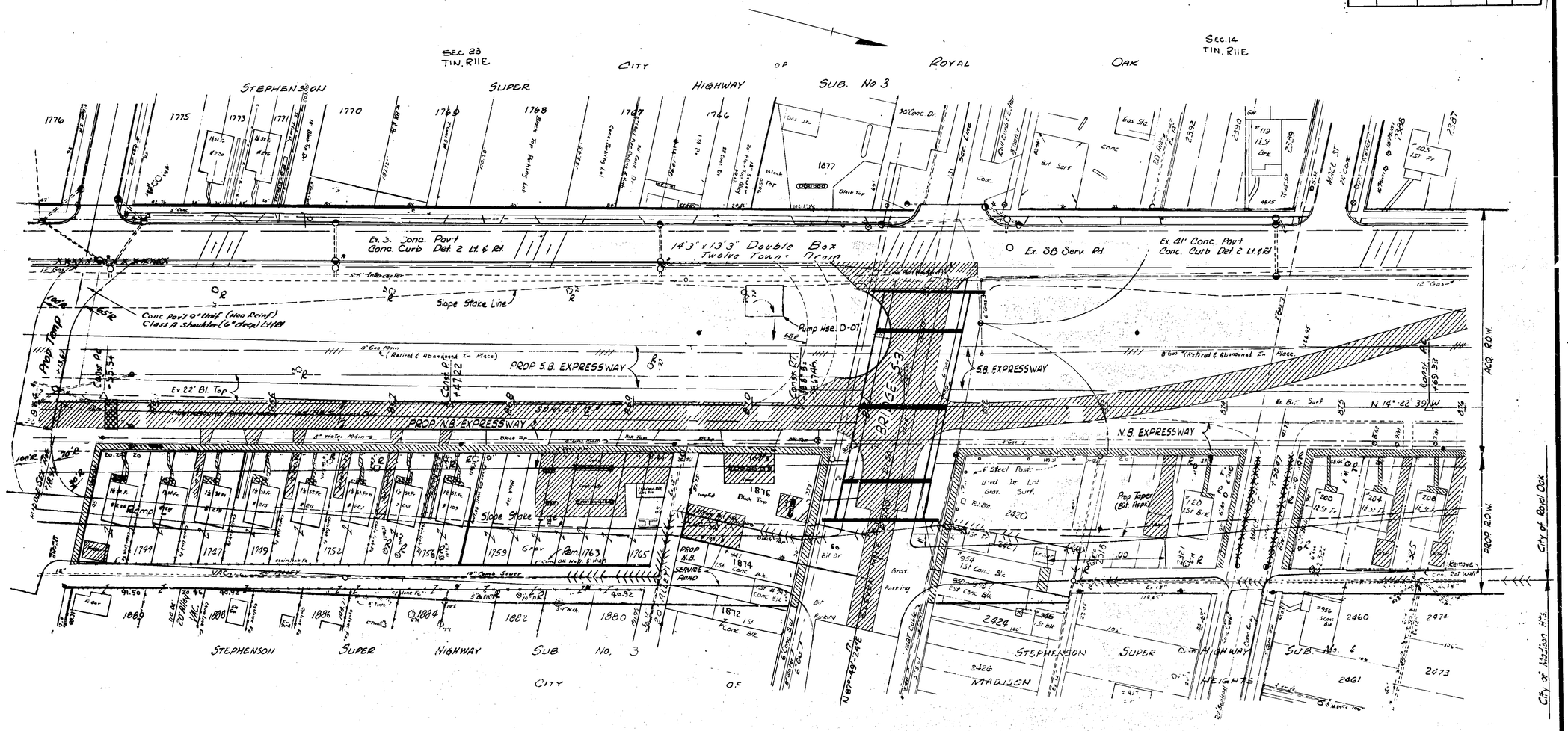
Removals (This Sheet)

Trees 8-2 Dia	-	5 Ea.
3-24 Dia	-	20 Ea.
25-36 Dia	-	3 Ea.
37" Dia +	-	Ea.
Old Pav't Shown	-	2906 Syds
Masonry & Conc Structures	-	138 Cyds
Sidewalk Shown	-	1433 Syds
Curb	-	68 L.F.
Old Pav't (Patching) Shown	-	27 Syds.

REMOVAL

FILE NO. STATE DIV. NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 B, C61	63174 B	175-2(192)62	20

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-B	OAKLAND	ROYAL OAK	21	42
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Note: Pav't Removal at Temp. Roads Included on Plan Sheets.

Removals (This Sheet)

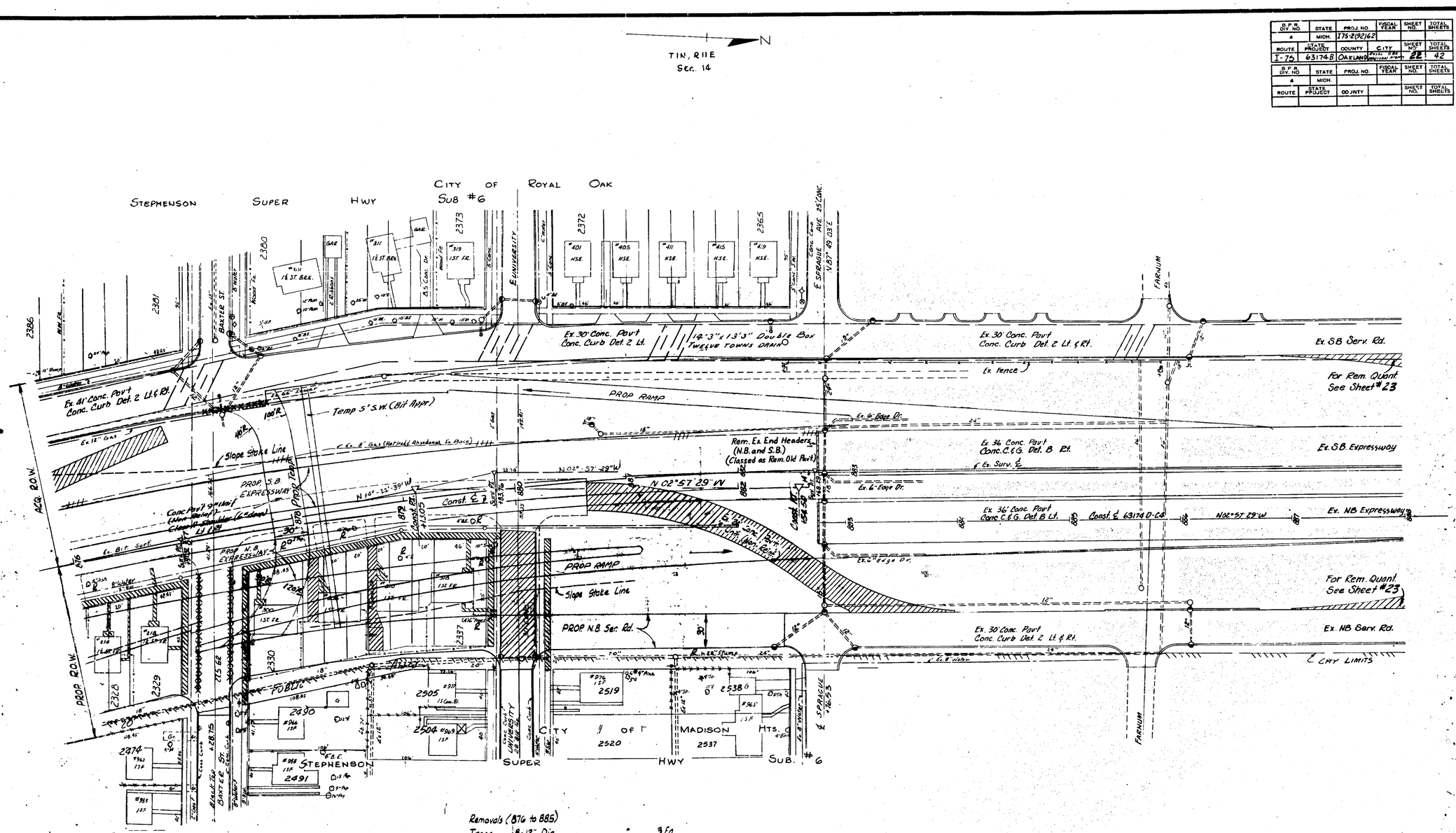
Trees 8-12 Dia	-	5 Ea
3-24 Dia	-	1 Ea
Dis. Pav't Shown	-	5896 Syds
Masonry & Conc. Structures	-	120 Cyds
Sidewalk Shown	-	1061 Syds.
Curb	-	377 L.F.
Old Pav't (Patching) Shown	-	25 Syds.

REMOVAL

FILE NO.	BRIDGE NO.	STATE	PROJECT	SHEET NO.
63174 B.C61		63174-B	I75-2(92)62	21

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK	22	42

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	CO JNTY		SHEET NO.	TOTAL SHEETS



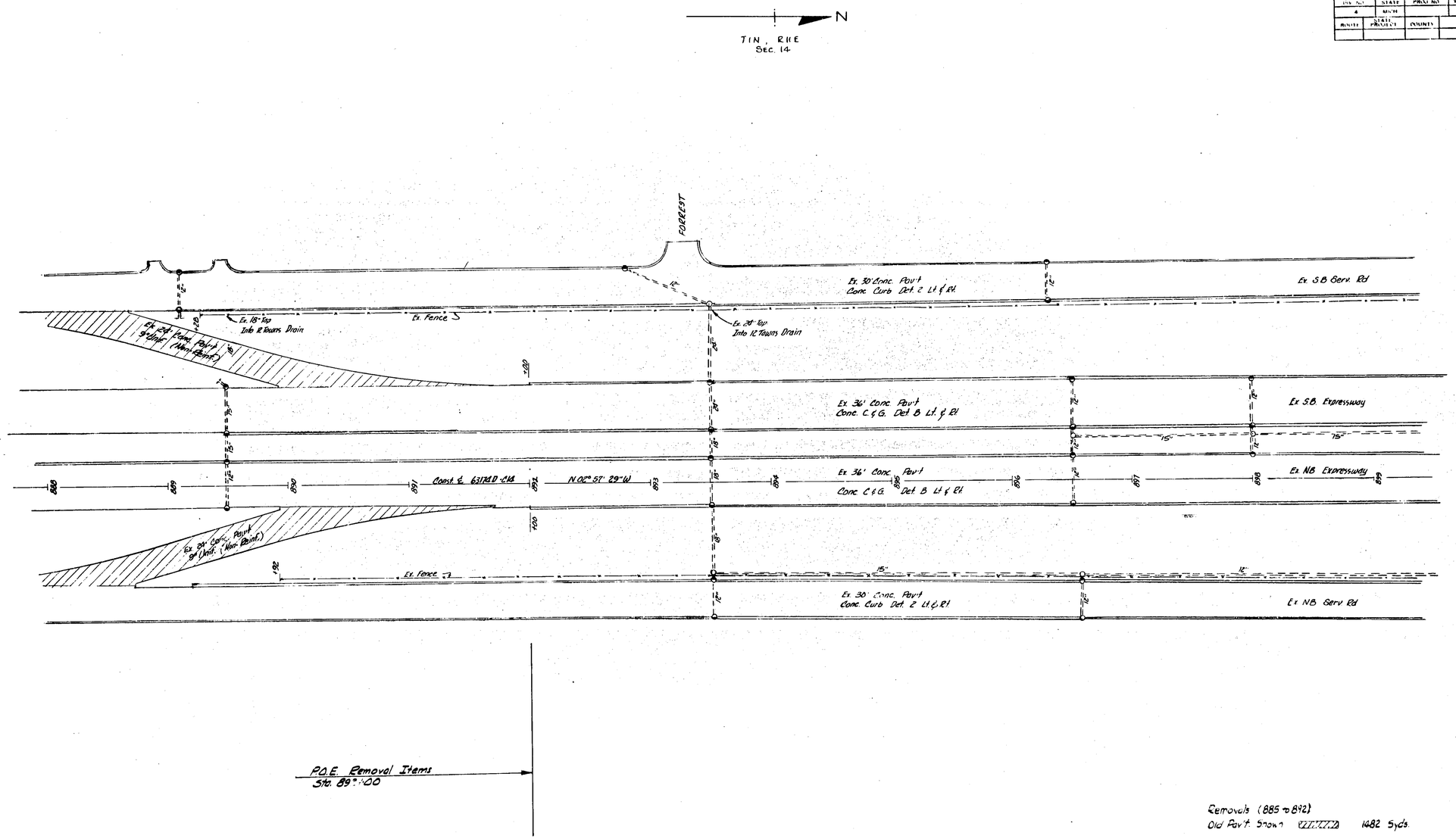
Removals (876 to 885)

Trees 8-12" Dia.	=	3 Ea.
Stumps 25-36" Dia.	=	1 Ea.
Old Pav't Shown	=	1392 Syds.
Masonry & Conc. Structures	=	16 Cyds.
Sidewalks Shown	=	517 Syds.
Curb	=	208 Lft.

REMOVAL

FILE NO. 63174.B.G.61

D.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	Royal Oak Madison Hts.	23	42
D.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

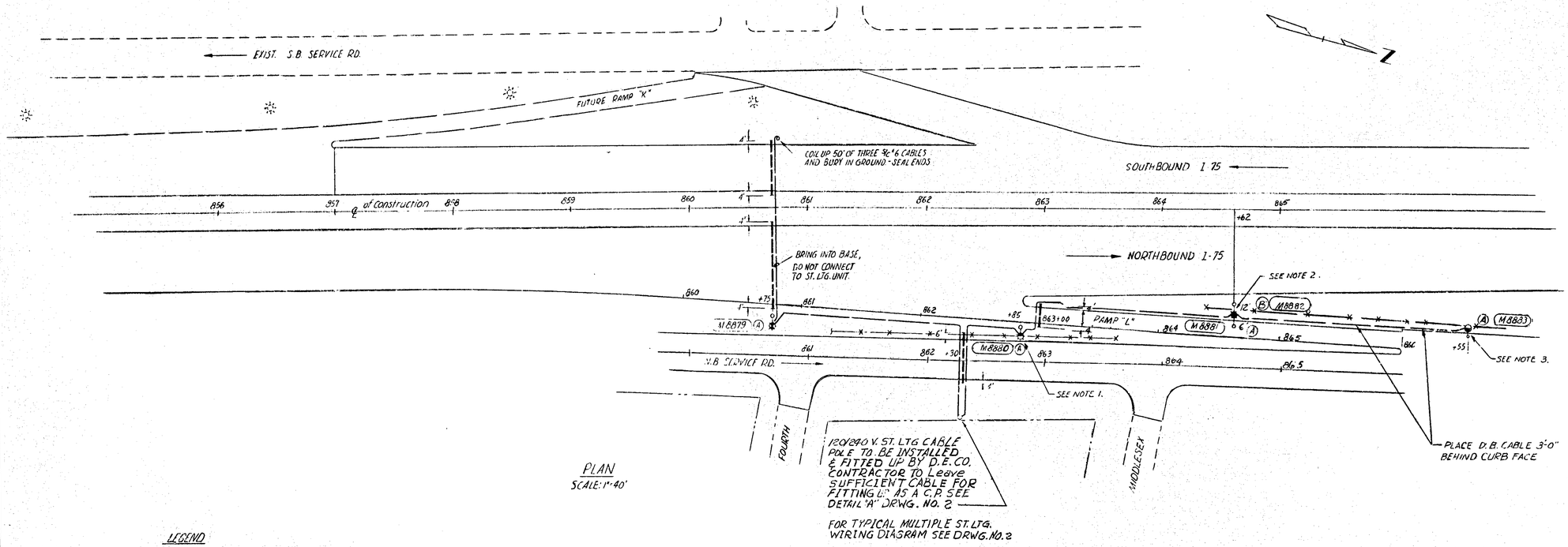


Removals (885 to 892)
Old Pav't. Shown 1482 Syds.

REMOVAL

FILE NO. USE NO. 380 STENCIL	63174 B, C61	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174B	I75-2(92)62	23

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	75-2B862			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	Oakland	Royal Oak Madison Hts	24	42
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
SCALE: 1"=40'

FOR TYPICAL MULTIPLE ST. LTG. WIRING DIAGRAM SEE DRWG. No. 2

LEGEND

- FUTURE U.G.-FED STREET LIGHTING UNIT
- 12' 6' UG. FED 400 W CLEAR M.V. ANCHOR BASE ST. LTG. UNIT WITH DBL. ARM (6' & 12') ON NEW FDN. I.E.S. TYPE II LUMINAIRE DISTRIBUTION
- UG. FED 400 W CLEAR M.V. ANCHOR BASE ST. LTG. UNIT WITH 10' ARM ON NEW FDN. I.E.S. TYPE II LUMINAIRE DISTRIBUTION
- UG.-FED 400 W. CLEAR M.V. ANCHOR BASE ST. LTG. UNIT WITH 15' ARM ON NEW FDN. I.E.S. TYPE II LUMINAIRE DISTRIBUTION
- 1-3" ENCASED CONDUIT
- 600 V., THREE #6 CABLES
- 600 V., 2 THREE #6 CABLES
- (M8880) INDICATES ST. LTG. STD. NUMBER
- INDICATES CHAIN LINK FENCE

NOTES:

1. PLACE STANDARD FOUNDATION 3'-0" FROM EDGE OF N.B SERV. RD. PAVEMENT.
2. PLACE STANDARD FOUNDATION 6'-0" FROM EDGE OF RAMP "L". EXACT LOCATION OF FOUNDATION TO BE DETERMINED BY ENG. IT MAY CONFLICT WITH PROP. M.H.
3. PLACE STANDARD FOUNDATION 3'0" FROM EDGE OF RAMP "L".

MATERIAL ON THIS SHEET

ITEM	QUANTITIES
1-3" ENCASED CONDUIT	171 LIN.FT.
600 V. THREE #6 CABLES	807 LIN.FT.
600 V., 2 THREE #6 CABLES	100 LIN.FT.
ST. LTG. STD. WITH 10' ARM ON NEW FDN.	2 EACH
ST. LTG. STD WITH 15' ARM ON NEW FDN.	1 EACH
400 W. CLEAR M.V. LUMINAIRE	5 EACH
2-3" G.I.P. UP CABLE/POLE	12 LIN.FT.
ST. LTG STD. WITH DBL. ARM (6' & 12') ON NEW FDN.	1 EACH

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE
DRAWN BY: G.M.
CHECKED BY: J.H. G.
APPROVED BY: J.H.

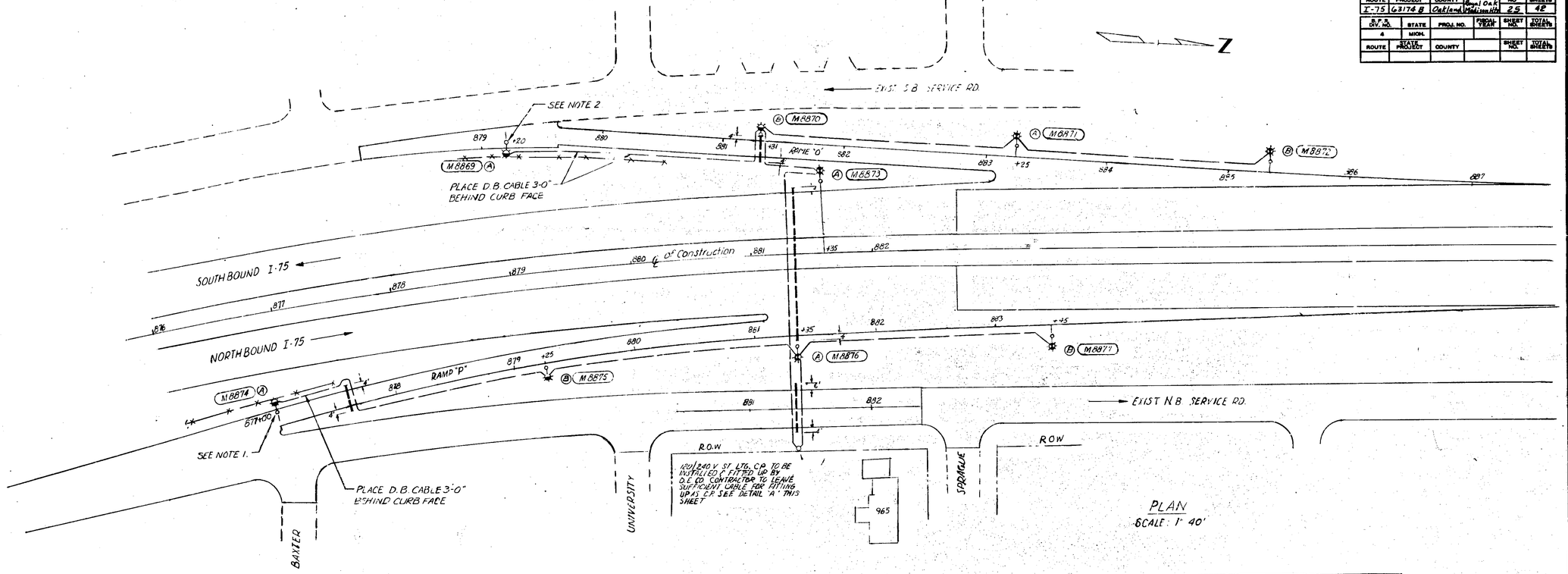
I-75 FREEWAY
LIGHTING PLAN RAMP "L" IN CITY OF ROYAL OAK

FILE NO	DRWG. NO.	DATE
CEA C RL	1 OF 3	10-23-64

LIGHTING

FILE NO. 63174 B. C61 | STATE PROJECT 63174 B | PROJECT 75-2B862 | SHEET 24

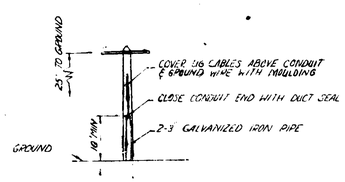
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	Oakland	Royal Oak Madison Hts	25	42
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



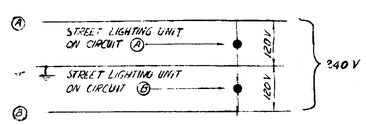
PLAN
SCALE: 1" 40'

MATERIAL ON THIS SHEET	
ITEM	QUANTITIES
1-3" INCASED CONDUIT	210 LIN.FT.
600 V. THREE S/C #6 CABLE	1197 LIN.FT.
600 V. 2-THREE S/2 #6 CABLE	167 LIN.FT.
ST. LTG. STD. WITH 10' ARM ON NEW FDN.	4 EACH
ST. LTG. STD. WITH 15' ARM ON NEW FDN.	5 EACH
400 W. CLEAR M.V. LUMINAIRE	9 EACH
2-3" G.I.P. UP CABLE	12 LIN.FT.

NOTES:
1. PLACE STANDARD FOUNDATION 3'-0" FROM EDGE OF RAMP "P"
2. PLACE STANDARD FOUNDATION 3'-0" FROM EDGE OF RAMP "C"



DETAIL "A"
WORK TO BE DONE BY CONTRACTOR



TYPICAL MULTIPLE ST. LTG. WIRING DIAGRAM

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE
DRAWN BY BM
CHECKED BY
APPROVED BY

I-75 FREEWAY
LIGHTING PLAN
RAMP "O" & "P"
IN CITY OF ROYAL OAK

FILE NO.	DRWG NO.	DATE
CEA C RL	2 OF 3	10-23-64

LIGHTING

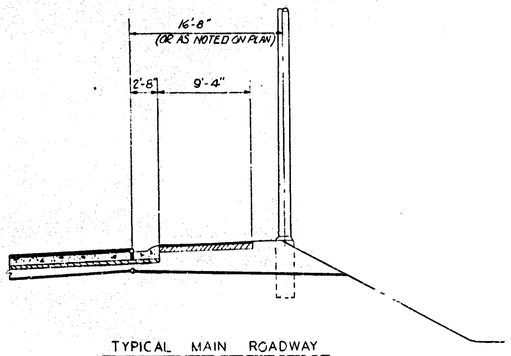
FILE NO. 63174 B, C61 STATE PROJECT 63174 B FEDERAL PROJECT

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			

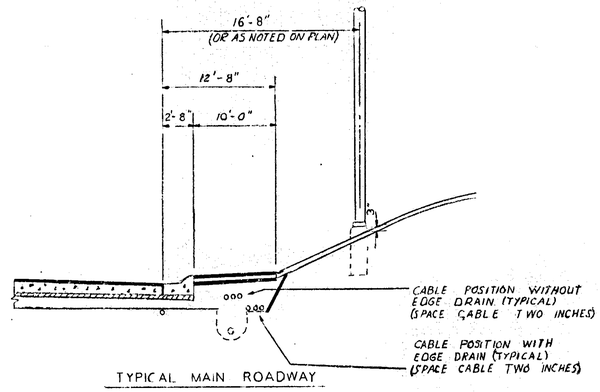
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	Oakland	Royal Oak Mckinnon	26	42

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				

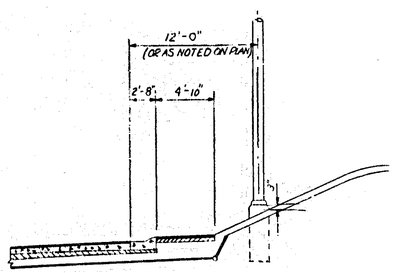
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



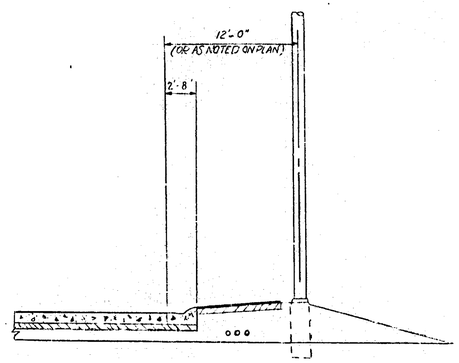
TYPICAL MAIN ROADWAY



TYPICAL MAIN ROADWAY



TYPICAL RAMP IN CUT



TYPICAL RAMP IN FILL

I-75 FREEWAY
LOCATION OF LIGHTING UNITS ON RAMPS & ROADWAY

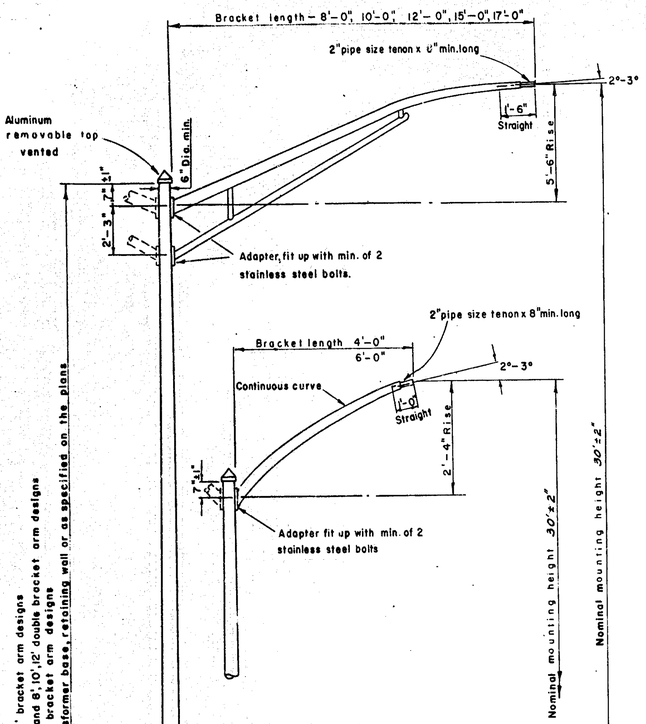
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE
DRAWN BY
CHECKED BY
APPROVED BY

FILE NO.	DRWG. NO.	DATE
CEA C RL	3 OF 3	10-23-64

LIGHTING

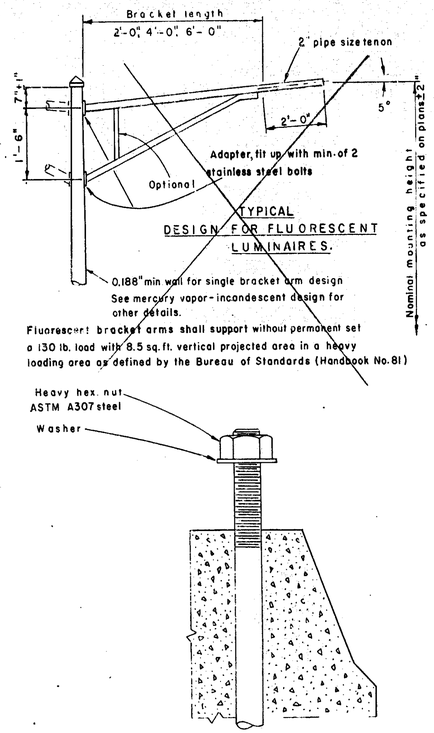
FILE NO. 63174 B,C61 STATE PROJECT 63174 B PROGRAM PROJECT 26



ANCHOR BOLT PLAN.

TYPICAL DESIGN FOR MERCURY AND INCANDESCENT LUMINAIRES.

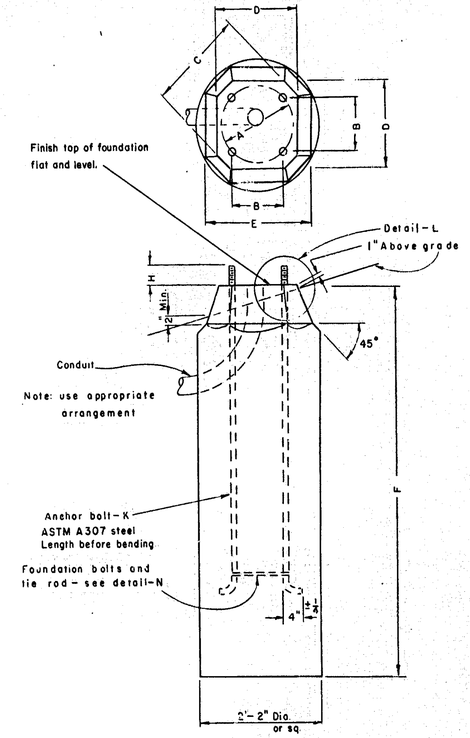
Note:
Bracket arms shall support without permanent set a 75 lb. load with 3.3 sq.ft. vertical projected area in heavy loading area as defined by the Bureau of Standards (Handbook No. 81)



TYPICAL DESIGN FOR FLUORESCENT LUMINAIRES.

Fluorescent bracket arms shall support without permanent set a 130 lb. load with 8.5 sq.ft. vertical projected area in a heavy loading area as defined by the Bureau of Standards (Handbook No. 81)

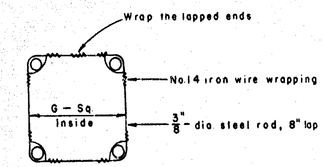
DETAIL – L



TYPICAL LIGHT STANDARD FOUNDATION.

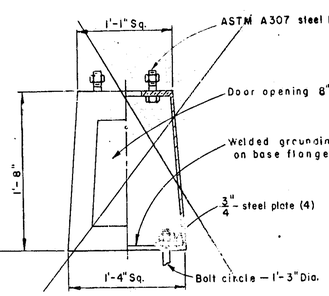
(FOUNDATION INCIDENTAL TO LIGHT STANDARD)

Note
Supply $\frac{1}{8}$" elastomeric fabric bound pad for mounting between aluminum transformer base or street light standard base and concrete foundation. (Incidental)
Use same shaft for single or double bracket arm design unless otherwise noted.
Supply bracket arm fitters for each arm used only.
Couplings, studs, nuts, washers, and 8" of threaded ends of foundation bolts shall be (Hot-Dip) zinc coated per ASTM A153.



DETAIL – N

FOUNDATION BOLTS & TIE ROD.



TYPICAL ALUMINUM TRANSFORMER BASE.

	A	B	C	D	E	F	G	H	I	J	K
Mercury vapor anchor base, 30 ft. mounting height and 4 or 6 ft. bracket arm	11"	7¾"	1'-4¼"	1'-1½"	1'-9¼"	5'-0"	8¾"	2⅝"			1"ø x 3'-9"
Mercury vapor anchor base, 30 ft. mounting height and 8, 10, 12, 15 ft bracket arm	11"	7¾"	1'-4¼"	1'-1½"	1'-9¼"	6'-0"	8¾"	2⅝"			1"ø x 5'-0"
Fluorescent anchor base, 30 ft. mounting height and 2, 4 or 6 ft bracket arm	11"	7¾"	1'-4¼"	1'-1½"	1'-9¼"	6'-0"	8¾"	2⅝"			1¼"ø x 4'-0"
Anchor base for 30 ft. mounting height and cast aluminum transformer base	1'-3"	10⅝"		1'-6"	1'-8⅝"	6'-0"	1'-0⅜"	3"			1"ø x 5'-0"
Mercury vapor anchor base 30 ft. mounting height and 17 ft. bracket arm.	11"	7¾"	1'-4¼"	1'-1½"	1'-9¼"	6'-0"	8¾"	2⅝"			1¼"ø x 5'-0"

MICHIGAN STATE HIGHWAY DEPARTMENT
PLAN FOR

ALUMINUM STREET LIGHT STANDARDS.

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE

RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE

RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE & ROAD DESIGN — DATE

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE

APPROVED — ENGINEER OF DESIGN & TRAFFIC — DATE

STATE HIGHWAY DEPARTMENT APPROVAL

DIRECTOR

APPROVED BY — DEPUTY DIRECTOR – ENGINEERING — DATE

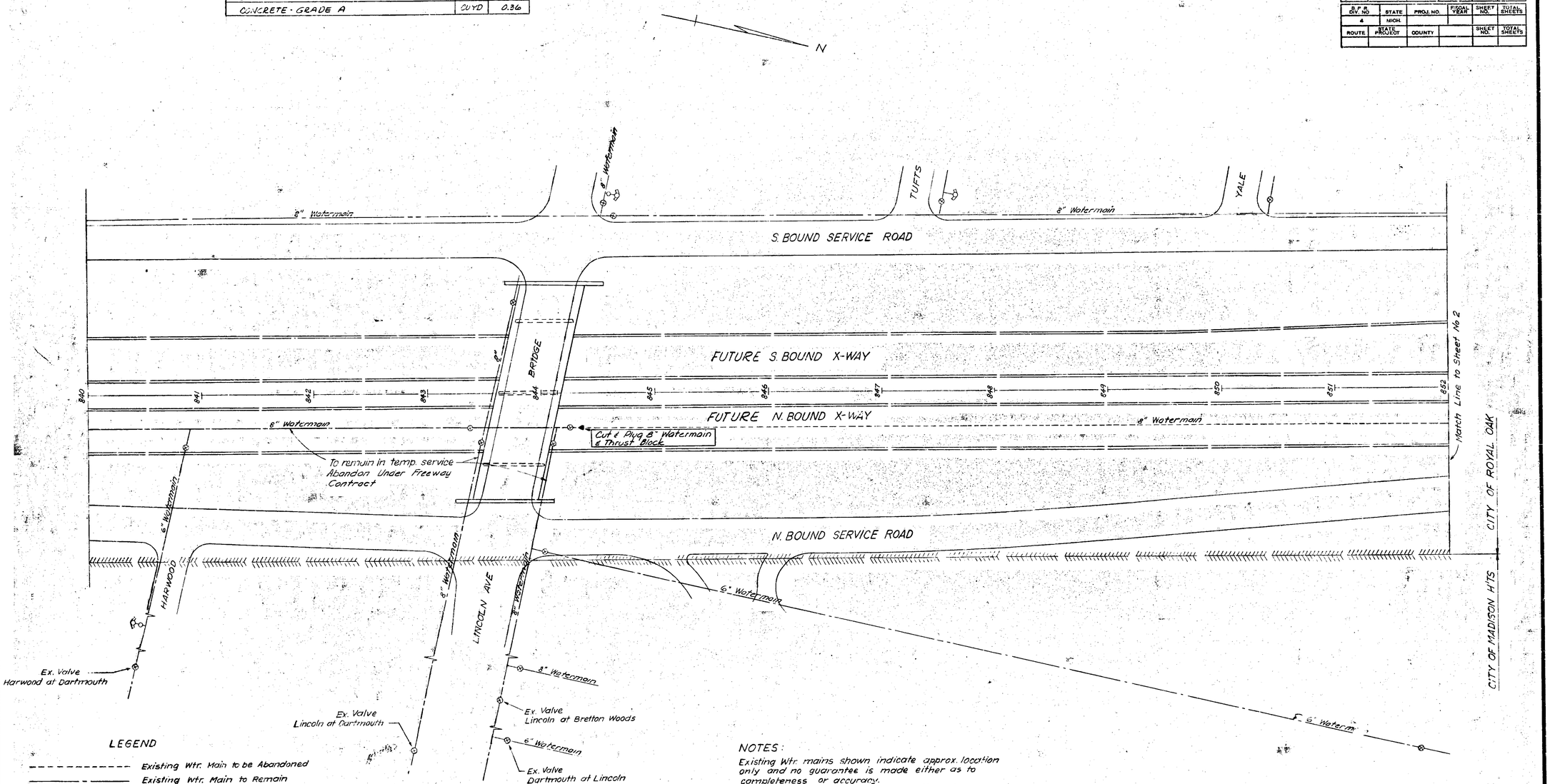
63174 B, C 61

SK 26A

QUANTITIES

ITEM	UNIT	AMOUNT
CUT & PLUG 8" WATERMAIN	EACH	1
CONCRETE - GRADE A	CUYD	0.36

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	OAKLAND	ROYAL OAK MADISON HTS	27	42
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



LEGEND

- Existing Wtr. Main to be Abandoned
- Existing Wtr. Main to Remain
- Proposed Wtr. Main
- Existing Valve
- Proposed Valve
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Plug & Thrust Block
- City Limits

NOTES:

Existing Wtr. mains shown indicate approx. location only and no guarantee is made either as to completeness or accuracy.
All Wtr. mains will be installed with minimum 5' cover, except this may vary to meet existing conditions where connecting to existing mains.
Location of Fire Hyd. are approx. only. Exact location subject to approval by city.
Valves will be installed in standard gate wells unless otherwise indicated; all fire hydrant valve will be install with valve boxes.
Removal of existing Wtr. main as required for clearance to construct new main is incidental to pipe laying.
Proposed Wtr. mains shall be Cast Iron Pipe Class 250, A.S.A. Thickness Class No. 35 for 8" Watermains.

J.V.M. 6-22-65

WATER MAIN

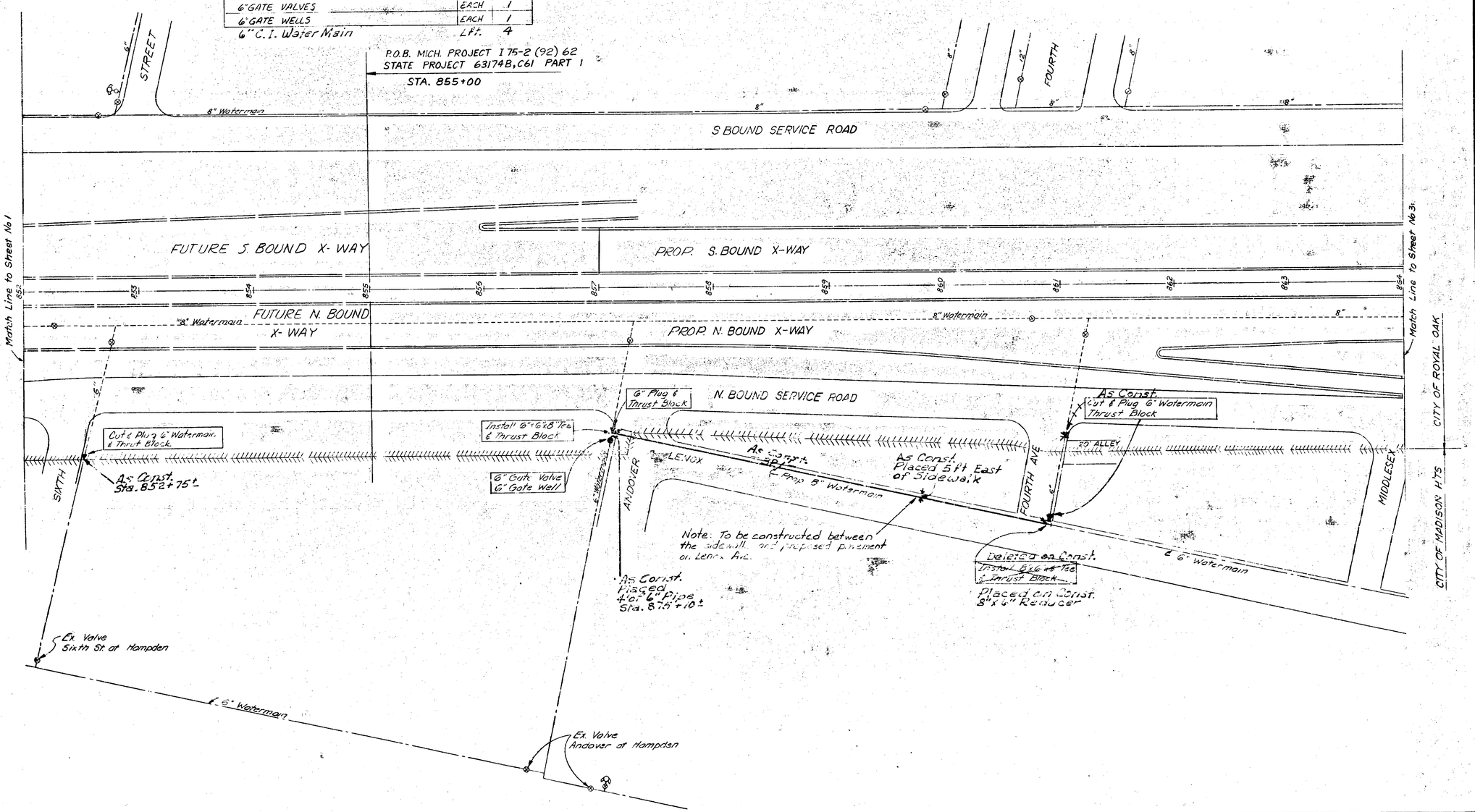
FILE NO. USE NO. 350 STENCIL	63174B,C61	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174 B	I75-2(92)62	27

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174-B	OAKLAND	ROYAL OAK & MADISON HTS.	28	42

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES As Const.

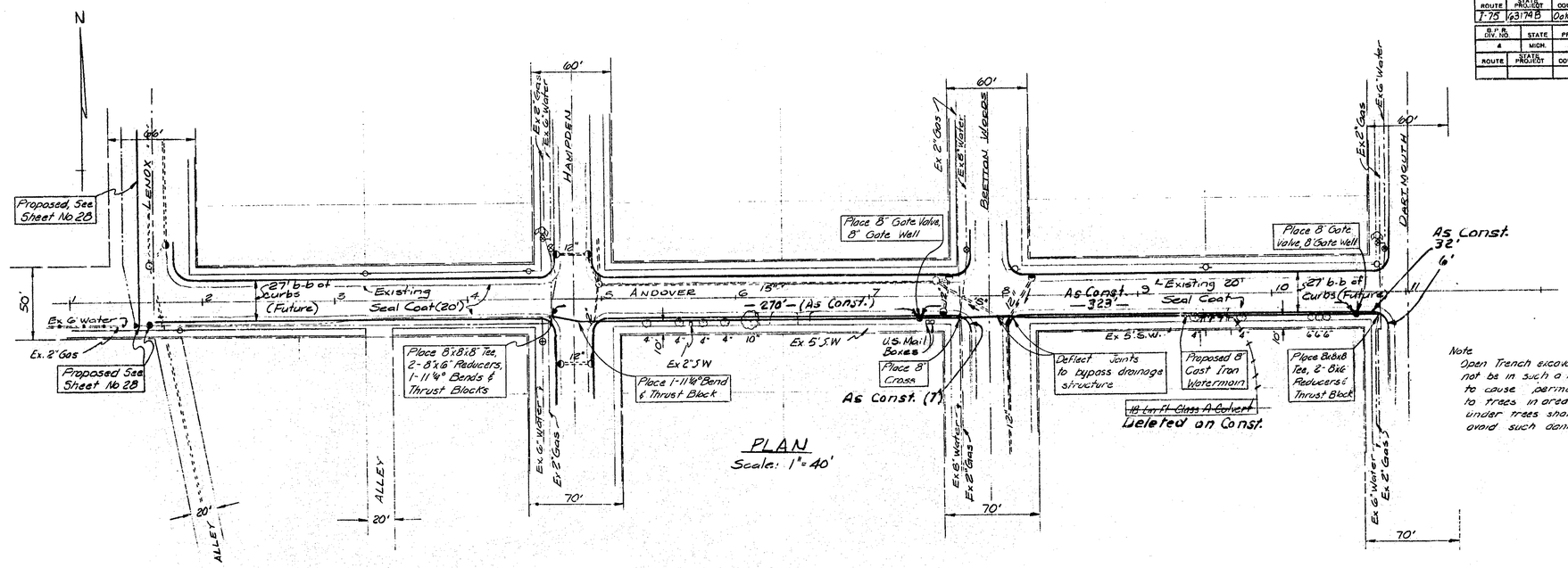
ITEM	UNIT	AMOUNT
8" C.I. WATER MAIN	LIN. FT.	~~387~~ 381
6" PLUG	EACH	1
CUT & PLUG 6" WATERMAIN	EACH	2
CONC. GRADE A (THRUST BLOCKS)	CU. YDS	0.57
EARTH EXCAVATION AND WASTE	CU. YDS	130
POROUS MAT'L GR. A C.I.P.	CU. YDS	162
6" GATE VALVES	EACH	1
6" GATE WELLS	EACH	1
6" C.I. Water Main	L.Ft.	4



WATER MAIN

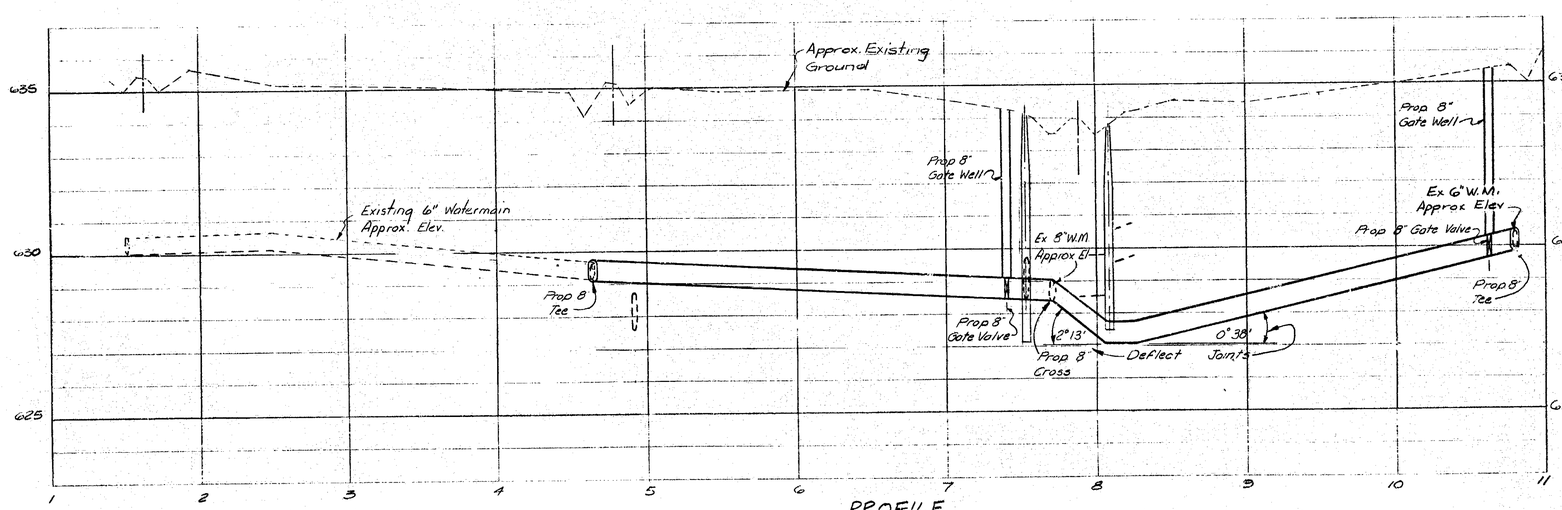
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B,C61	63174-B	I75-2(92)62	28

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(96)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	Oakland	Madison Hts	29	42
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
Scale: 1" = 40'

Note
Open Trench excavation shall not be in such a manner as to cause permanent damage to trees in area. Tunneling under trees shall be used to avoid such damage.



PROFILE
Scale Horiz 1" = 40'
Vert 1" = 2'

As Const.

MISCELLANEOUS QUANTITIES		
ITEM	UNIT	AMOUNT
8" C.I. WATERMAIN	LIN FT	~~617~~ 638
8" GATE WELLS	EACH	2
8" GATE VALVES	EACH	2
CONCRETE GRADE A	CU. YDS.	~~0.00~~ 0.33
EARTH EXCAVATION & WASTE	CU. YDS.	~~159~~ 167
POROUS MATERIAL GRADE A (C.I.P.)	CU. YDS.	~~187~~ 153
* CLASS "A" APPROACH	TONS	26
* BITUMINOUS APPROACHES	TONS	~~5~~ 4
~~12" CLASS "A" CULVERT~~	~~LIN FT~~	~~18~~
~~12" PRECAST CONCRETE RING~~	~~EACH~~	~~2~~

Deleted on Const.
As Per Mr. Nowak (City Engr.) Madison Hgts.

As Const.
* Included in Road Quantities

As Const.
All Water Main Figures are Final Field Measurements by Geo. Kurkowski (Const. Insp.)

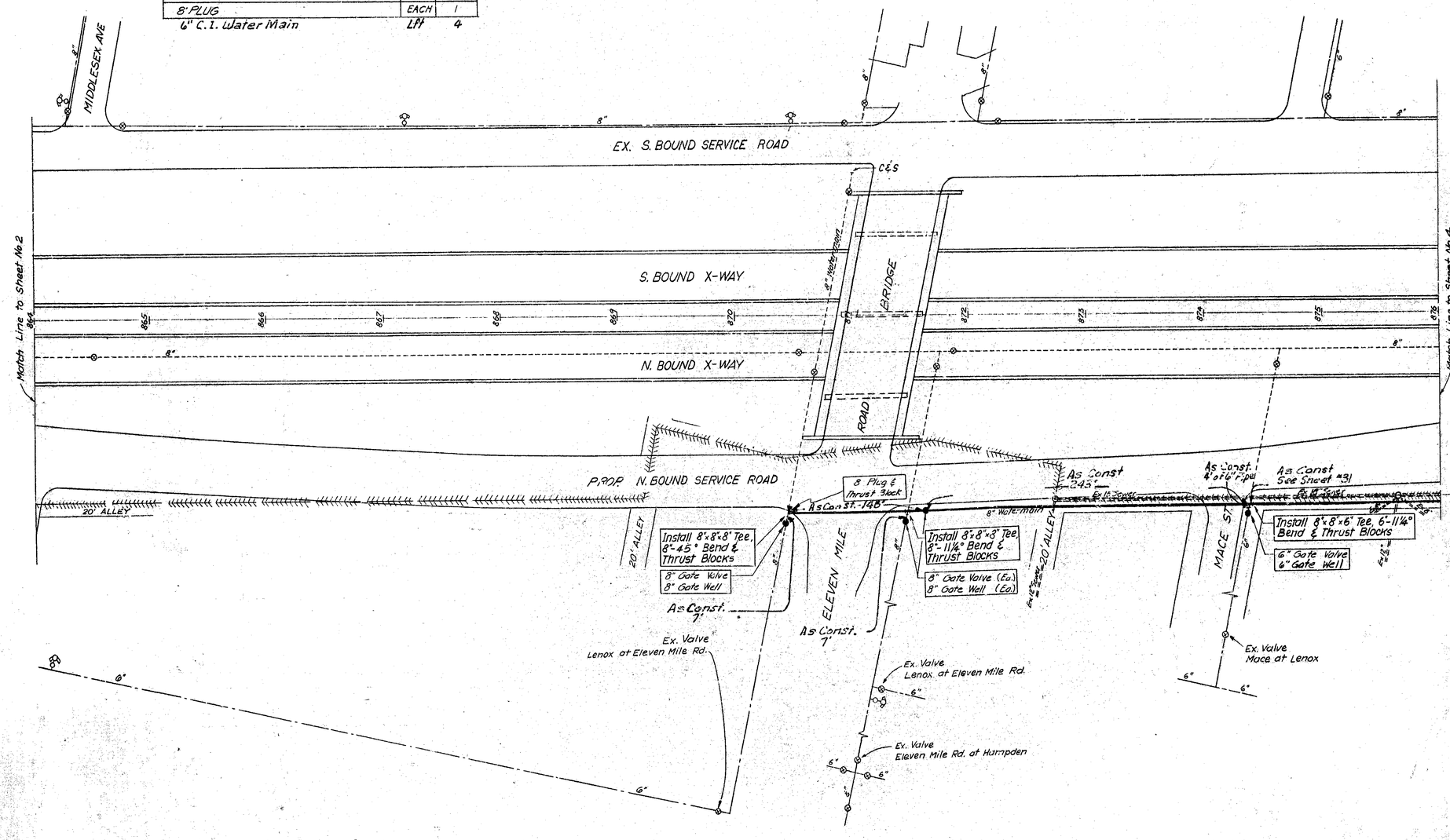
FILE NO. USE NO. 350 STENCIL	63174 B, C61	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174B	I-75-2(96)62	29

QUANTITIES		As Const
ITEM	UNIT	AMOUNT
8" C.I. WATER MAIN	LIN.FT.	~~564~~ 565
8" GATE VALVES	EACH	3
8" GATE WELLS	EACH	3
CONC. GRADE A (THRUST BLOCKS)	CU.YDS	1.68
EARTH EXCAVATION AND WASTE	CU.YDS	198
POROUS MAT'L GR. A (C.I.P.)	CU.YDS	247
6" GATE VALVES	EACH	1
6" GATE WELLS	EACH	1
8" PLUG	EACH	1
6" C.I. Water Main	LFT	4

As Const.
All Water Main Figures are
Final Field Measurements
by Geo. Kurkowski (Const. Insp.)

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	OAKLAND	CITY OF ROYAL OAK & CITY OF MADISON HTS.	30	42

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



WATER MAIN

FILE NO.	STATE PROJECT	PROGRAM PROJECT	SHEET NO.
63174B.C61	63174 B	175-2(92)62	30

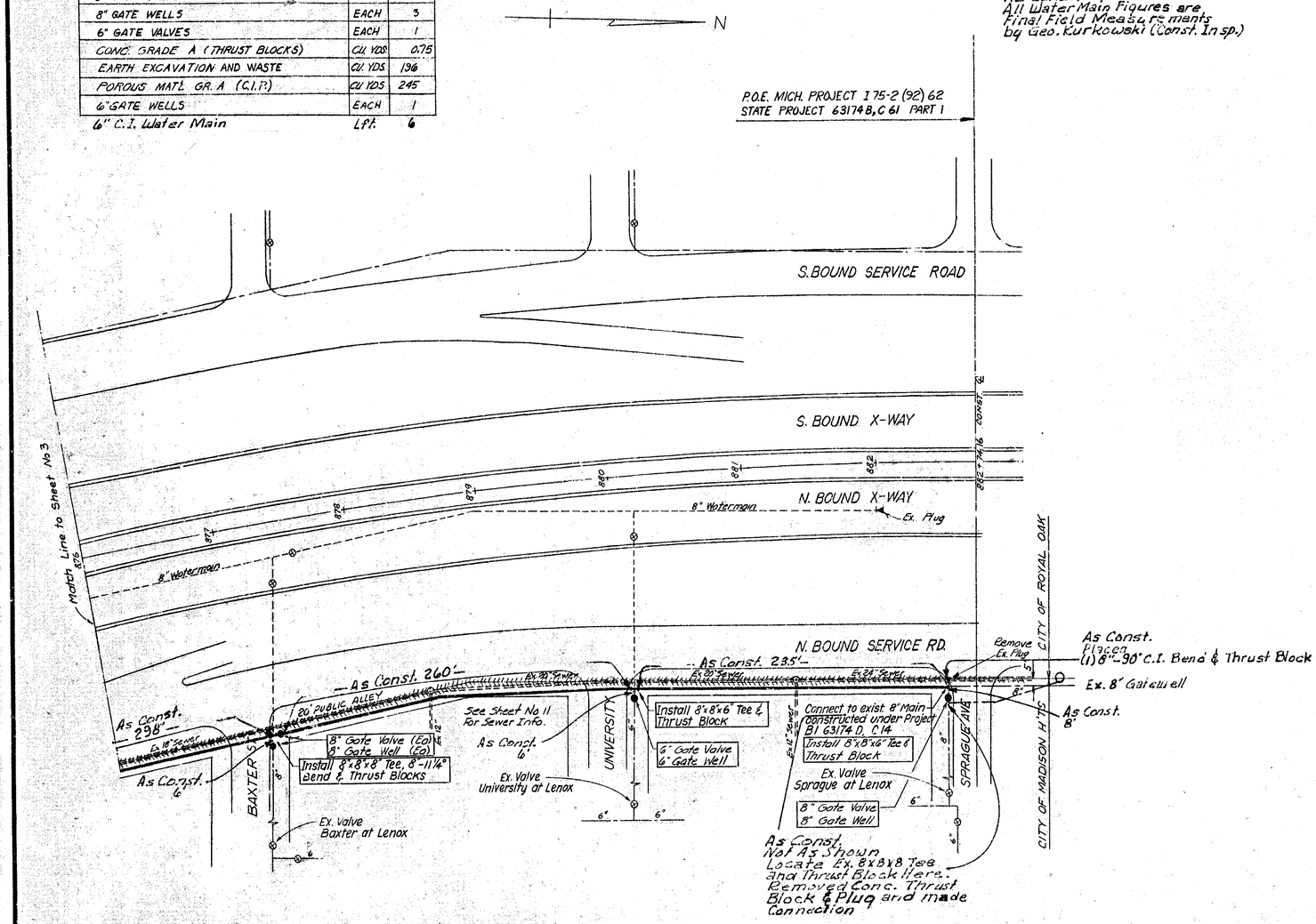
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY TOWN OR VILLAGE	SHEET NO.	TOTAL SHEETS
I-75	63174 B	OAKLAND	ROYAL OAK	31	42

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUANTITIES As Const.

ITEM	UNIT	AMOUNT
8" C.I WATER MAIN	LIN. FT.	~~229~~ 307
8" GATE VALVES	EACH	3
8" GATE WELLS	EACH	3
6" GATE VALVES	EACH	1
CONC. GRADE A (THRUST BLOCKS)	CU. YDS.	0.75
EARTH EXCAVATION AND WASTE	CU. YDS.	196
POROUS MAT'L GR. A (C.I.P.)	CU. YDS.	245
6" GATE WELLS	EACH	1
6" C.I. Water Main	L.F.	6

As Const.
All Water Main Figures are
Final Field Measurements
by Geo. Kurkowski (Const. Insp.)

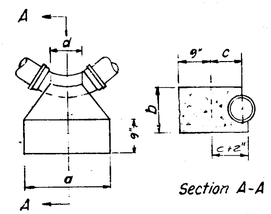


WATER MAIN

FILE NO.	STATE PROJECT	FISCAL YEAR PROJECT	SHEET NO.
63174B,C61	63174-B I75-2(92)62		37

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175(192)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	Cleland	Southfield, Oakland Co.	32	42

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



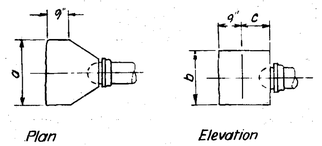
Plan

Section A-A

Size of Bend	Degree of Bend	Dimensions a	b	c	d	Conc. Cu. Yds.
6"	90°	2'-6"	1'-9"	1'-0"	0'-9"	0.25
8"	90°	3'-4"	2'-5"	1'-0"	1'-0"	0.44
12"	90°	5'-0"	3'-0"	1'-4"	1'-8"	0.90
16"	90°	5'-6"	4'-6"	2'-0"	2'-3"	1.94
6"	45°	2'-4"	1'-8"	0'-10"	0'-9"	0.19
8"	45°	2'-4"	2'-0"	1'-0"	1'-4"	0.27
12"	45°	3'-6"	2'-6"	1'-4"	1'-4"	0.53
16"	45°	5'-0"	3'-0"	1'-9"	2'-0"	1.07
6"	22½°	2'-0"	1'-6"	0'-9"	0'-9"	0.14
8"	22½°	2'-2"	1'-6"	0'-9"	1'-2"	0.16
12"	22½°	2'-6"	2'-0"	1'-0"	1'-6"	0.37
16"	22½°	3'-4"	2'-6"	1'-9"	1'-2"	0.58
6"	11¼°	2'-0"	1'-3"	0'-9"	0'-9"	0.12
8"	11¼°	2'-0"	1'-3"	0'-9"	1'-2"	0.12
12"	11¼°	2'-3"	1'-9"	1'-0"	1'-4"	0.22
16"	11¼°	3'-0"	2'-3"	1'-6"	1'-4"	0.44

DETAIL OF STD. THRUST BLOCKS FOR BENDS

NO SCALE



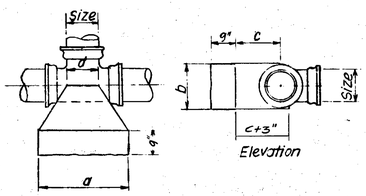
Plan

Elevation

Size	Dimensions a	b	c	Conc. Cu. Yds.
6"	2'-6"	1'-0"	1'-3"	0.15
8"	3'-0"	2'-0"	1'-4"	0.36
12"	4'-0"	3'-0"	1'-10"	0.86
16"	5'-0"	4'-0"	2'-3"	1.91

DETAIL OF STD. THRUST BLOCKS FOR PLUGS

NO SCALE



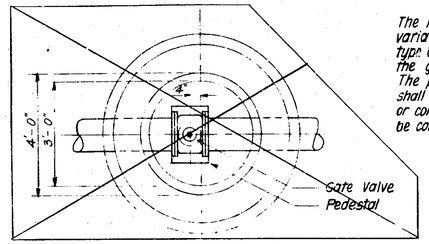
Plan

Elevation

Size	Dimensions a	b	c	d	Conc. Cu. Yds.
6"	2'-6"	1'-0"	1'-3"	1'-0"	0.15
8"	3'-0"	2'-0"	1'-4"	1'-0"	0.33
12"	4'-0"	3'-0"	1'-10"	1'-4"	0.86
16"	5'-0"	4'-0"	2'-9"	1'-10"	1.95

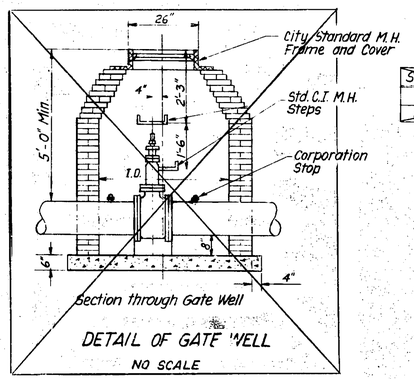
DETAIL OF STD. THRUST BLOCKS FOR TEES & Y's

NO SCALE



Plan

The height of the corbel is subject to variation, as directed, according to the type of material used for construction of the gate well.
The pedestal to support the gate valve shall be constructed of brick, conc. block or conc. & the base of the gate well shall be constructed of unreinforced conc. Gr. A.

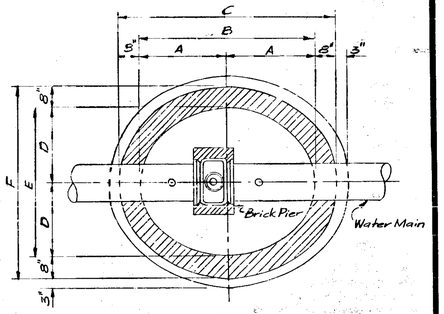


DETAIL OF GATE WELL

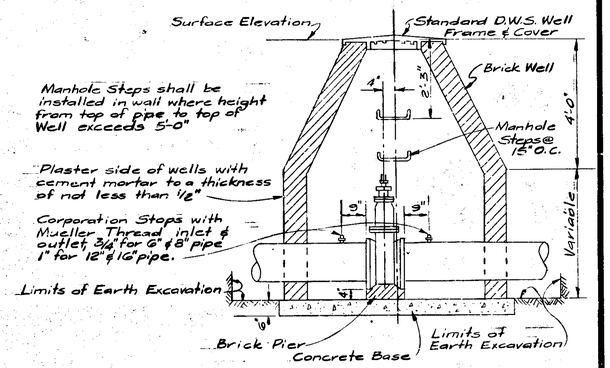
NO SCALE

Size of Main	I.D. of Gate Well
6" & 8"	4'-0"
10" & 12"	5'-0"

Note: A corporation stop is to be placed on each side of valves 6 inches and larger that are located in gate wells.



PLAN

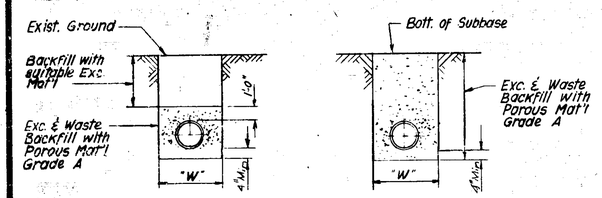


SECTION THOUGH GATE WELL

SCHEDULE OF GATE WELL DIMENSIONS						
SIZE	A	B	C	D	E	F
6"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
8"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
12"	2'-9"	5'-6"	6'-10"	2'-3"	4'-6"	5'-10"
16"	3'-0"	6'-0"	7'-4"	2'-[illegible]	5'-6"	6'-10"

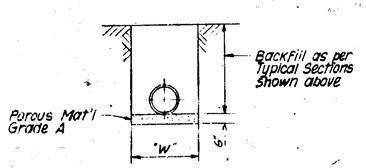
DETAIL OF STANDARD GATE WELLS

NO SCALE



For Water Mains outside of Paved Sections

For Water Mains under exist. or prop. Pavement

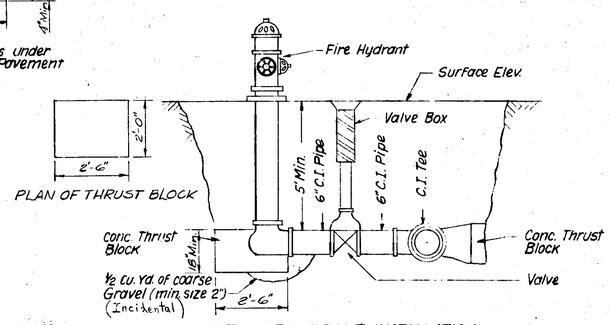


For Water Mains in Clay or Rock

TYPICAL WATER MAIN TRENCH SECTIONS

NO SCALE

Note: "W" shall not exceed the inside diameter of pipe plus 24" except that a trench width less than 36" will not be required.

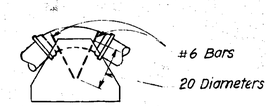


PLAN OF THRUST BLOCK

DETAIL OF HYDRANT INSTALLATION FOR RELOC. OR PROP. HYDRANT

NO SCALE

Note: Hydrants without exist. valves shall be reinstalled with valves furnished by city



Detail showing method of tying down vertical Bends

No scale

MICHIGAN STATE HIGHWAY DEPARTMENT

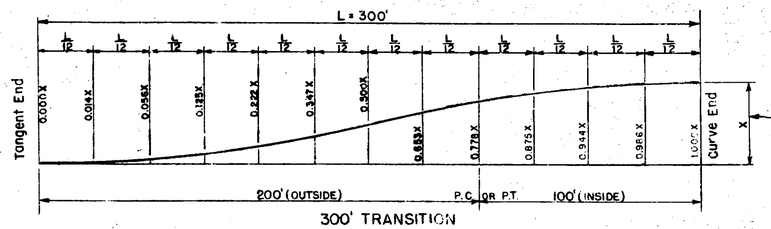
WATER MAIN DETAILS

SQUAD		
DRAWN BY	[illegible]	5-8-65
CHK'D BY		

WATER MAIN

FILE NO.			
63174B.C61			

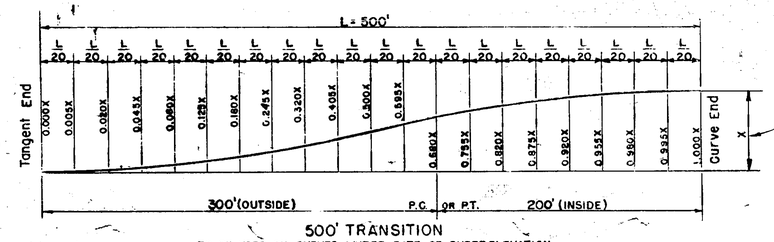
STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B	175(192)62	32



300' TRANSITION

TO BE USED ON CURVES WHERE RATE OF SUPERELEVATION IS LESS THAN 0.04 FOOT PER FOOT UNLESS OTHERWISE SHOWN ON PLANS

X= Superelevation at start of Transition

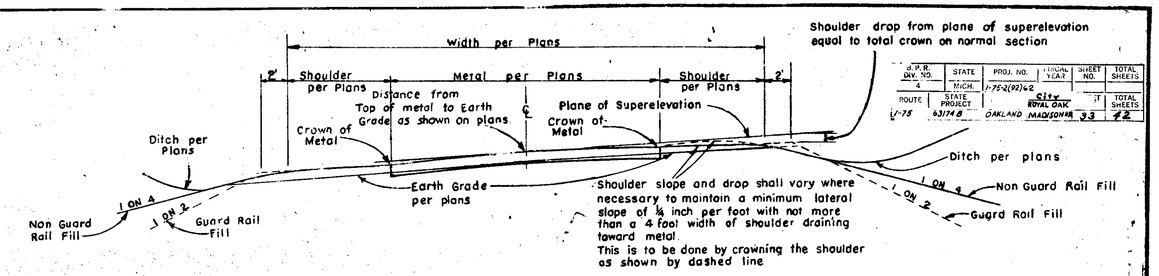


500' TRANSITION

TO BE USED ON CURVES WHERE RATE OF SUPERELEVATION IS 0.04 FOOT PER FOOT OR GREATER UNLESS OTHERWISE SHOWN ON PLANS

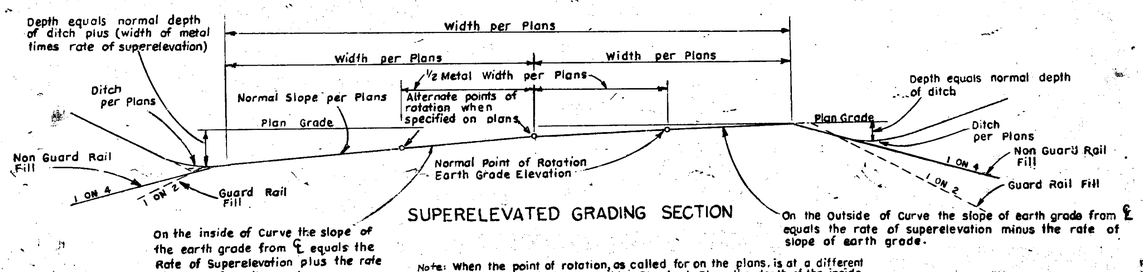
TRANSITION VERTICAL REVERSE CURVES

The transition from normal section of metal to the superelevated section shall be made by means of the proper reverse vertical curve shown above. This curve shall be applied to all grade lines which are to be depressed or raised in the superelevation transition. For spiraled curves, the length of the superelevation transition equals the length of the inside spiral



d.P.W. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(92)42			
ROUTE	STATE PROJECT			OF	TOTAL SHEETS
I-75	63174B	OAKLAND MADISON	City ROYAL OAK	33	42

SUPERELEVATED FINISHED SECTION

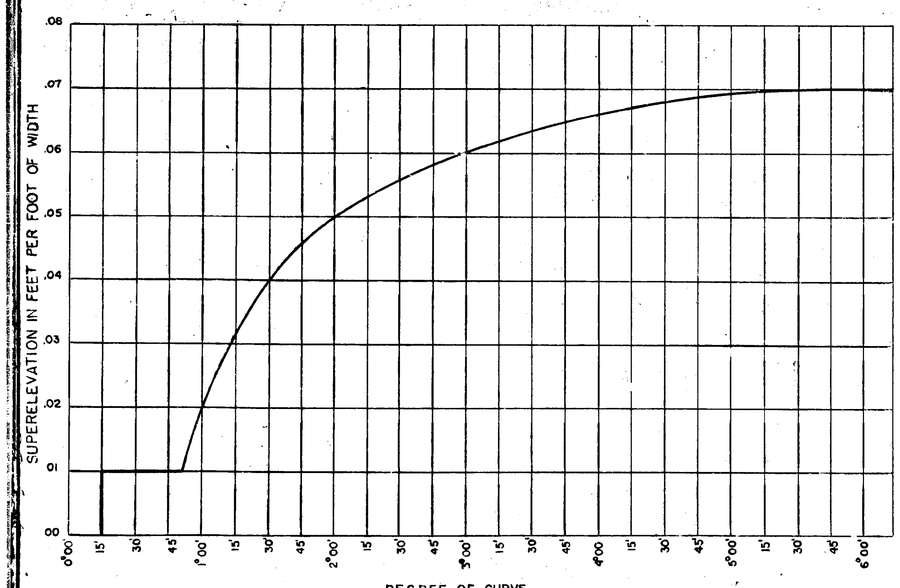


On the inside of Curve the slope of the earth grade from ℄ equals the Rate of Superelevation plus the rate of slope of earth grade

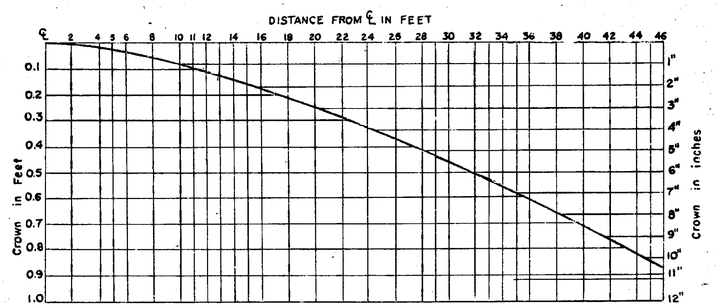
On the outside of Curve the slope of earth grade from ℄ equals the rate of superelevation minus the rate of slope of earth grade.

SUPERELEVATED GRADING SECTION

Note: When the point of rotation, as called for on the plans, is at a different point than that shown on this Standard Plan, the depth of the inside ditch will be the normal depth of ditch plus (width of metal inside the point of rotation, times rate of superelevation).
The depth of the outside ditch will be the normal depth of ditch minus (width of metal outside the point of rotation times the rate of superelevation)



CURVE FOR DETERMINING RATE OF SUPERELEVATION



The above curve is based on a modified parabolic crown of 3" for 40 ft. pavement.

Width of Pavement in Feet	Crown in inches
10	⅜"
11	½"
20	1⅛"
22	1¼"
24	1⅜"
26	1⅝"
28	1¾"
30	2"
32	2⅛"
33	2½"
36	2½"

Width of Pavement in Feet	Crown in inches
38	2¾"
40	3"
44	3½"
48	4"
56	5"
58	5¼"
64	6⅛"
66	6⅜"
70	7"
90	10⅛"

FORMULA FOR MODIFIED PARABOLIC CROWN

$$y = \frac{d \times x^{3/2}}{L^{3/2}}$$

y = crown at any point in inches
d = total crown of pavement in inches
x = distance from ℄ to any point in feet
L = half the width of pavement in feet

Using a 3" crown for a 40 ft pavement the above formula becomes $y = .03354 \times x^{3/2}$

PAVEMENT CROWNS

GENERAL NOTES

Where property is closely built up in municipalities, at intersections and where other special speed restrictions exist, the rate of superelevation is to be modified to conform to reasonable speed requirements.
Where special cases exist caused by grade differences occuring at or near horizontal curvature, transitions shall be modified as shown on plans or as directed by the Engineer.
In modifying transitions, the grades, width of metal, point of rotation, crowns, etc, shall be considered in order to secure a finished road surface with good riding qualities and appearance.

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLAN FOR

SUPERELEVATION AND PAVEMENT CROWNS

ROAD DIVISION APPROVAL

CHECKED — P.E. Lambrick 4-28-44 (CHIEF ROAD DRAFTSMAN) — (MUNICIPAL ENGINEER) — R.H. Lamont 5-4-44 (ASSISTANT ENGINEER OF ROAD DESIGN)

RECOMMENDED FOR APPROVAL — Geo. W. Tiedeman (ENGINEER OF ROAD DESIGN) — 5-5-44 DATE

APPROVED — Leamter (ASSISTANT ROAD ENGINEER) — 5-7-44 DATE

APPROVED — Scott W. Baker (CONSTRUCTION ENGINEER) — 5-31-44 DATE

STATE HIGHWAY DEPARTMENT APPROVAL

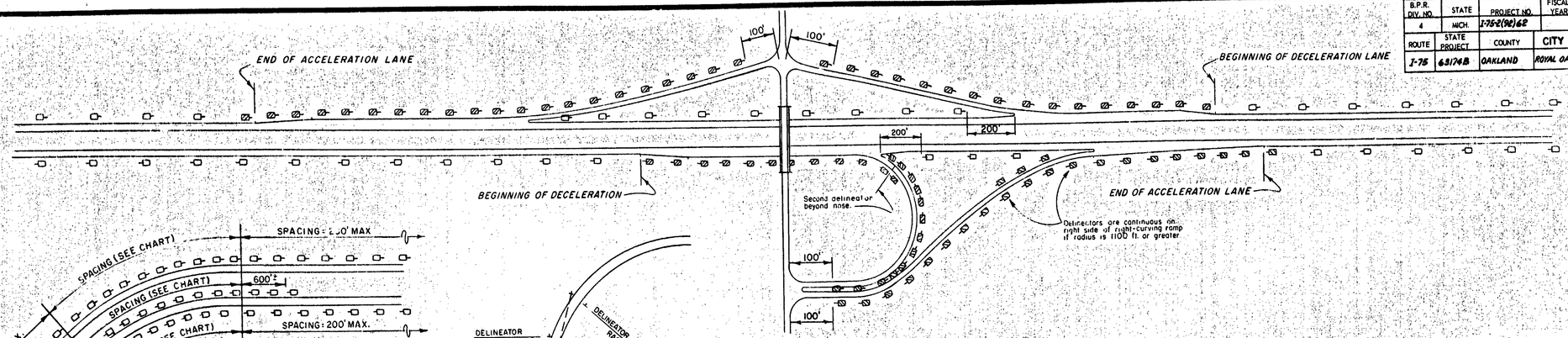
APPROVED — CHARLES M. ZIEGLER, STATE HIGHWAY COMMISSIONER

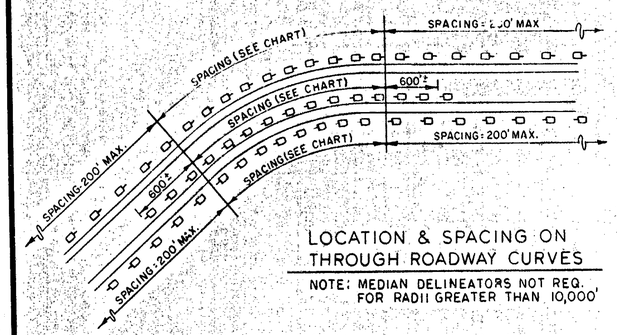
BY — H. G. Moons (DEPUTY COMMISSIONER, CHIEF ENGINEER) — 6/16/44 DATE

DRAWN BY L.D.C. — CHECKED — TRACED BY — APPROVED P.R.A. 6-23-

FILE NO 63174B.C61 — STATE PROJECT 63174B — FEDERAL PROJECT I-75-2(92)42 — SHEET NO. 33

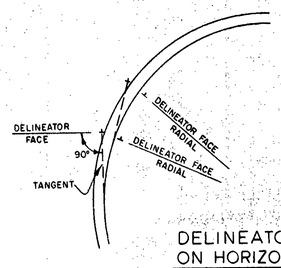
B.P.R. DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK	34	42





LOCATION & SPACING ON THROUGH ROADWAY CURVES

NOTE: MEDIAN DELINEATORS NOT REQ. FOR RADII GREATER THAN 10,000'



DELINEATOR ORIENTATION ON HORIZONTAL CURVES

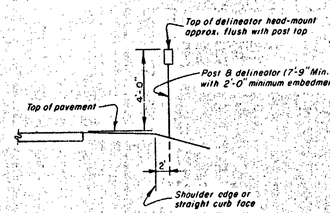
SPACING FOR HIGHWAY DELINEATORS ON HORIZONTAL CURVES

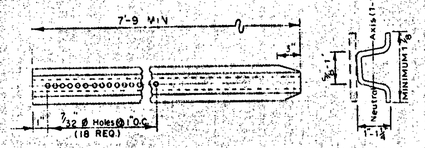
DEGREE OF CURVE	RADIUS IN FEET	SPACING ON CURVE	SPACING IN ADVANCE AND BEYOND CURVE		
			1 ST SPACE	2ND SPACE	3RD SPACE
1	10,000	200	200	200	200
		152	200	200	200
	5,000	141	200	200	200
	3,000	109	196	200	200
2		106	191	200	200
	2,500	99	178	200	200
	2,000	88	158	200	200
3		86	155	200	200
	1,800	84	151	200	200
	1,600	78	140	200	200
4		74	133	200	200
	1,400	74	133	200	200
	1,200	68	122	200	200
5		66	119	198	200
	1,000	62	112	186	200
	900	58	104	174	200
7		55	99	165	200
	800	55	99	165	200
	700	51	92	153	200
9		48	86	144	200
	600	47	85	141	200
	500	42	76	126	200
12		41	74	123	200
	400	37	67	111	200
15		36	65	108	200
	350	35	63	105	200
18		33	59	99	198
	300	32	58	96	192
21		30	54	90	180
	250	28	50	84	168
25		28	50	84	168
	200	24	43	72	144
30		24	43	72	144
	150	20	36	60	120
40		19	34	57	114
	100	14	25	42	84

THE SPACING S ON THE CURVE IS FOUND FROM THE FORMULA $S = 2\sqrt{R - 50}$, WHERE R IS THE RADIUS OF THE CURVE IN FEET. THE SPACING TO THE FIRST DELINEATOR IN ADVANCE OF AND BEYOND THE CURVE IS 1.5S, TO THE NEXT DELINEATOR 3S, AND TO THE NEXT 6S, BUT NOT TO EXCEED 200 FEET.

MINIMUM SPACING = 10 FEET

REST AREA & WEIGH STATION





NOTE: *Minimum weight - 1.33 lbs. per ft*
Minimum thickness - 3/32 in.
Minimum moment of inertia about 1-1 axis - 0.040 in.4

Dimensions shown are minimum and maximum permissable.

GALVANIZED POST DETAIL

NOTES:

1. *Single crystal delineators @ 200' max. spacing*
   Double yellow delineators @ 100' max. spacing
2. *Delineators shall be placed two feet beyond the outer edge of the roadway shoulder, two feet beyond the face of a barrier curb, or in the line of the guard rail.*
3. *Delineators shall be located along the outside of the ramps, i.e., on the left side for right-curving ramps and on the right for others. Delineators shall also be located on the right for right-curving ramps which have radii of 1100 ft. or greater.*
4. *Where delineation on one side of the roadway or ramp ends and delineation on the other side appears, the delineators should be overlapped for a distance required to place a minimum of two units.*
5. *On speed change lanes, delineators shall be located on right for right-hand connections and on the left for left-hand connections.*
6. *Delineators shall be omitted along the through roadway between interchanges where fixed source lighting exists but shall be placed on all roadways at all interchanges, whether or not the interchanges are lighted.*

MICHIGAN STATE HIGHWAY DEPARTMENT
POST & DELINEATOR

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	[illegible] TRIPLE REFLECTIVE UNIT	[illegible]	[illegible]

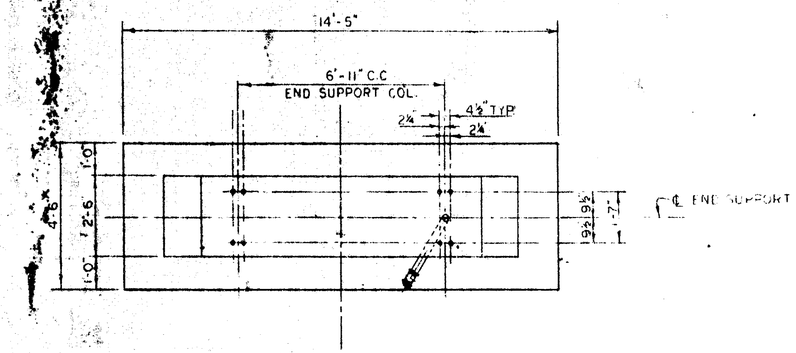
ROAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET 1 OF 2

SIGNS

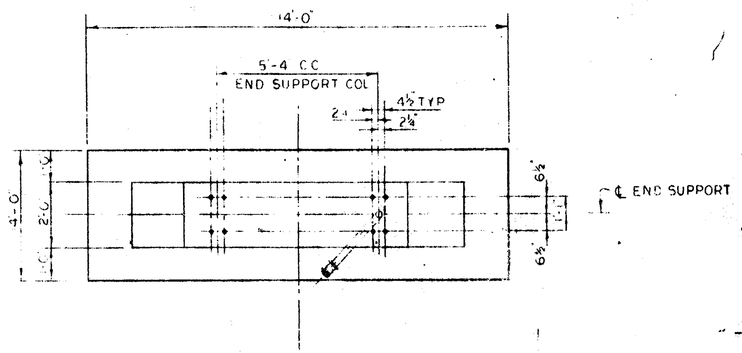
63174B,C61

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B	I-75-2(92)62	34

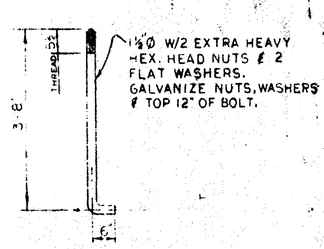
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174B	OAKLAND	ROYAL OAK	33	42



PLAN

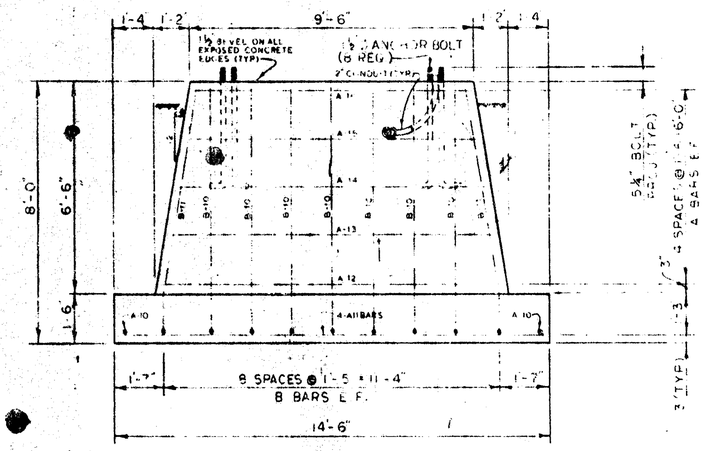


PLAN

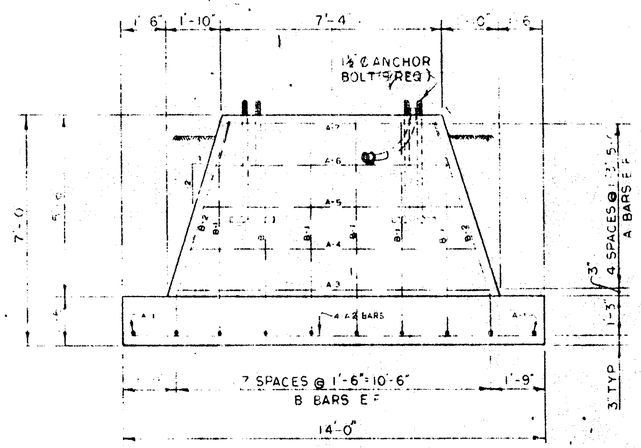


ANCHOR BOLT DETAIL

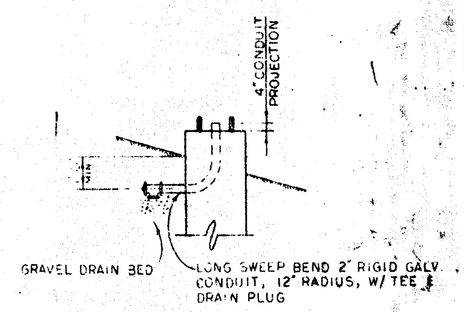
DIRECTION OF TRAFFIC



ELEVATION



ELEVATION



CONDUIT DETAIL

NOTES:

1. CONDUIT SHALL BE INSTALLED ON ROADWAY SIDE OF RIGHT FOUNDATION OR AS DIRECTED BY ENGINEER.
2. TOP OF CONC. SHALL BE 3" MIN. ABOVE GROUND (DESIRABLE).

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ.
A-10	#4	3'-6"	2
A-11	#4	13'-11"	2
A-12	#4	11'-3"	2
A-13	#4	10'-8"	2
A-14	#4	10'-2"	2
A-15	#4	9'-7"	4
A-16	#4	3'-1"	2
B-10	#4	7'-6" / 2'-9"	14
B-11	#4	7'-7" / 2'-9"	4

6.6 CU. YDS. CONC
228# REINF. STEEL

TYPE C

SCALE ½"=1'-0"

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ.
A-1	#4	3'-6"	2
A-2	#4	13'-6"	4
A-3	#4	10'-4"	2
A-4	#4	9'-6"	2
A-5	#4	8'-8"	2
A-6	#4	7'-10"	2
A-7	#4	7'-0"	2
B-1	#4	6'-9" / 2'-3"	12
B-2	#4	6'-9" / 2'-3"	4

6.82 CU. YDS. CONC.
196# REINF. STEEL

TYPE B

SCALE ½"=1'-0"

MICHIGAN STATE HIGHWAY DEPARTMENT

TRUSS FOUNDATION

TYPE B, C

REVISIONS

NO.	DESCRIPTION	DATE	BY

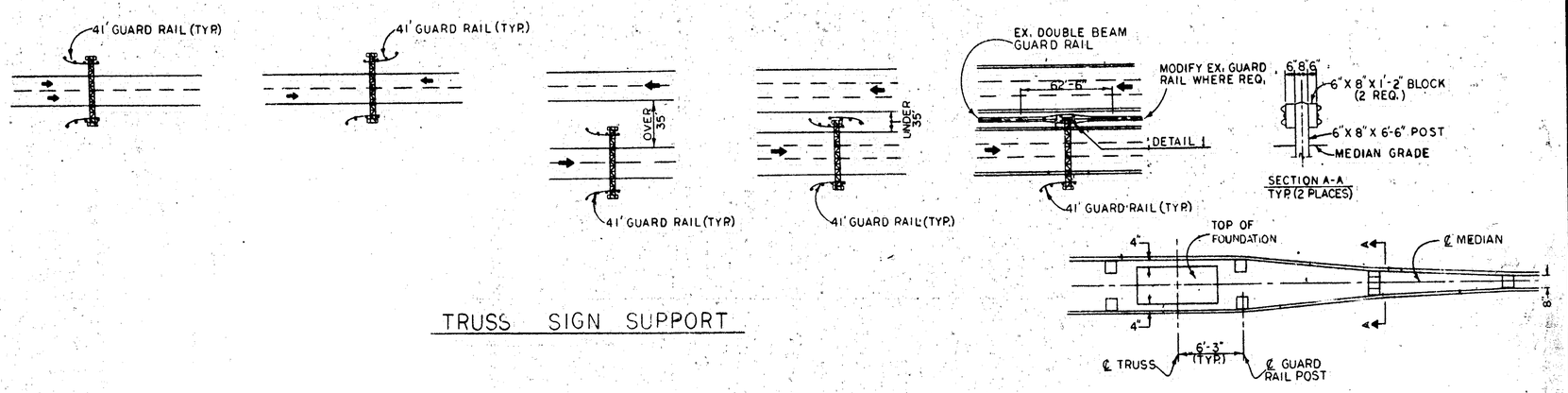
DRAWN
TRACED
CHECKED
APPROVED

S8.1d.

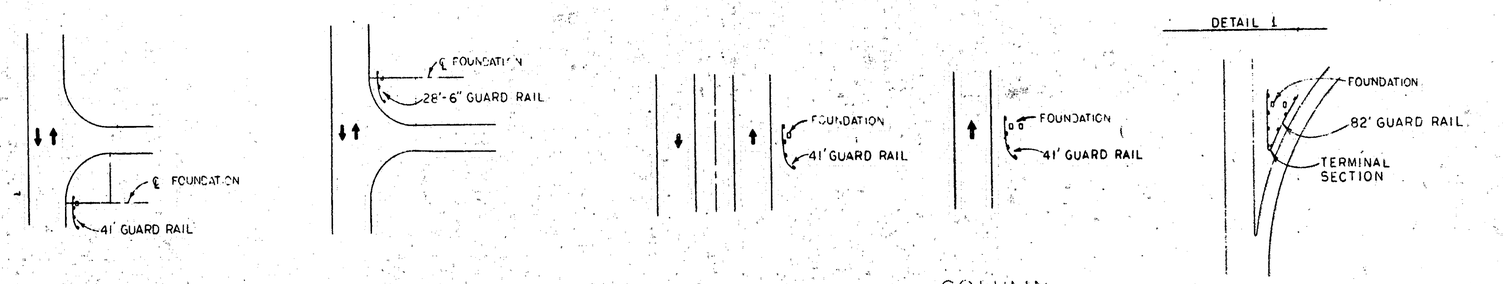
FILE NO. 63174B.C61

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B	I75-2(92)62	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)42			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	OAKLAND	ROYAL OAK	36	42



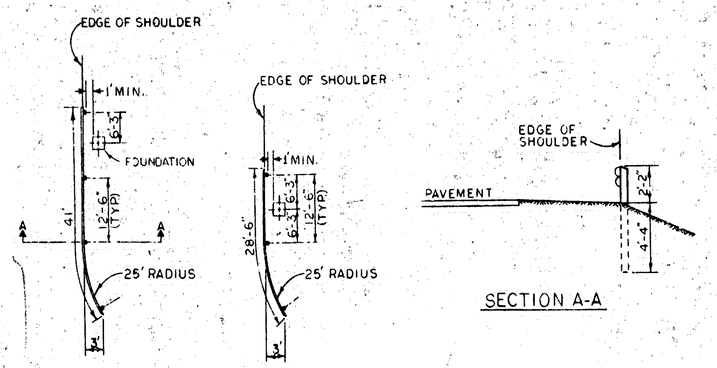
TRUSS SIGN SUPPORT



CANTILEVER SIGN SUPPORT

COLUMN SIGN SUPPORT

GORE LOCATION



PLAN

SECTION A-A

NOTE:
Details Shown are for "Steel Beam Guard Rail," Std. Plan E-4-A-137-E. Plans Call for "Offset Guard Rail-Single," Shown in Special Details. The 25' Radius Shown for Beam Element Shall Apply also to Channel Element.

NOTES:

1. FOR GUARD RAIL DETAILS SEE SPECIAL DETAIL SHEET #32
2. WHERE STRAIGHT CURB EXISTS NO GUARD RAIL SHALL BE INSTALLED.

REV. 4-13-64

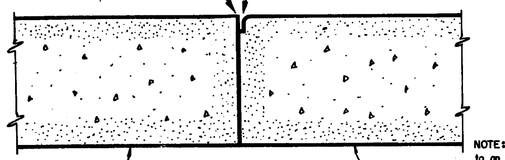
MICHIGAN STATE HIGHWAY DEPARTMENT JOHN C. MACKIE, COMMISSIONER TRAFFIC DIVISION	LOCATION OF GUARD RAIL AT TRAFFIC SIGNS	DRAWN R.D.S. DATE Oct 62 SCALE — SHEET 1 OF 1 PLAN S11.10

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B.C61	63174B	I75-2(92)42	36

JOINT EDGING

The First Slab shall be edged with a 90° Edger. The Edger shall have a 1/2" lip with no radius at the angle.

Edging Tool to be guided and rested on hardened concrete of the first pour and have a 3/4" lip with a radius of 1/8" to 1/4".



NOTE: When widening to an existing slab previously edged, the second slab shall be edged with a Long Lip Edger with 3/8" to 1/2" R.

METHOD OF EDGING

Where one Slab is poured against another in place.

Symbol (L)

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT
FOR FUTURE PAVEMENT WIDENING

This Joint shall be constructed according to Detail No. 2 except that the "Second Pour" and the "Second Half" of the Joint Dowel Hook Bolt shall be omitted. The threaded hole in the Hook Bolt Coupling shall be filled with S.A.E. 40 Viscosity Petroleum-based Oil and plugged with a Natural Cork Plug. The Plug shall be of proper dimension to completely seal the hole and shall not project more than 1/8" after inserting.

DETAIL No. 3

Symbol (L1)

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT
FOR WIDENING EXISTING CONCRETE PAVEMENT WHERE JOINT DOWEL HOOK BOLTS HAVE PREVIOUSLY BEEN PROVIDED

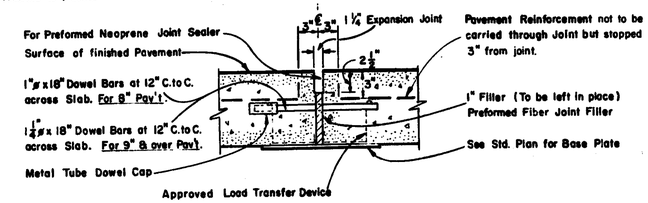
This Joint shall be constructed according to Detail No. 2, except that the "First Pour" and the "First Half" of the Joint Dowel Hook Bolt has previously been provided. The Natural Cork Plug shall be removed, the threads of the coupling shall be retapped and the "Second Half" of the Joint Dowel Hook Bolt shall be provided and installed.

DETAIL No. 4

Symbol (E)

TRANSVERSE EXPANSION JOINT (SAWED) WITH LOAD TRANSFER

The Transverse Expansion joint shall be sawed to a depth of 2 1/4" inches and a width of 1 1/4" inches, unless otherwise specified. The sawing shall be done before any transverse cracks develop and in all cases, within 24 hours after the concrete is placed.



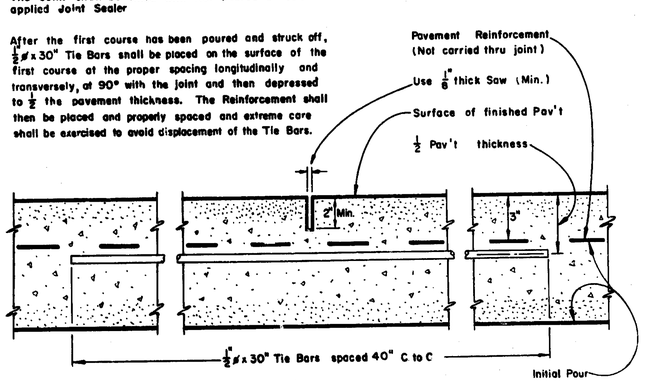
DETAIL No. 7

Symbol (D)

LONGITUDINAL LANE TIE JOINT

The Joint shall be filled with Hot poured or Cold applied Joint Sealer

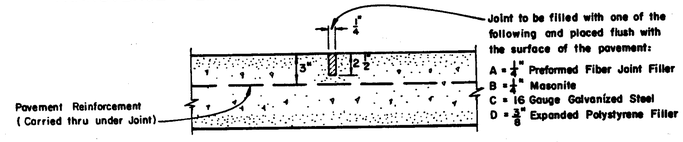
After the first course has been poured and struck off, 1/2"ø x 30" Tie Bars shall be placed on the surface of the first course at the proper spacing longitudinally and transversely, at 90° with the joint and then depressed to 1/2 the pavement thickness. The Reinforcement shall then be placed and properly spaced and extreme care shall be exercised to avoid displacement of the Tie Bars.



DETAIL No. 1

Symbol (U)

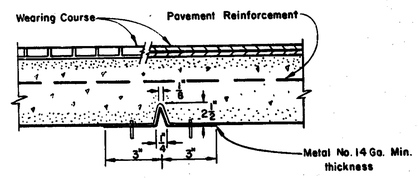
TRANSVERSE PLANE OF WEAKNESS JOINT FOR BASE COURSE



ALTERNATE No. 1

The Joint in ALTERNATE No. 1 shall be formed while the Concrete is fresh and shall be true to position and line.

NOTE: A bulkhead joint shall be constructed at the end of the day's pour or when there is an unavoidable interruption of the work for more than one-half hour. The steel reinforcement shall extend at least 18 inches beyond the bulkhead joint into the suceeding pour.



ALTERNATE No. 2

The metal Form shall be firmly fastened to the Subgrade in a vertical position and held in true alignment by iron pins or other approved methods. 'The Base Course Concrete' shall be poured on both sides simultaneously so as to insure true position and line.

DETAIL No. 5

TRANSVERSE END OF POUR CONSTRUCTION JOINT

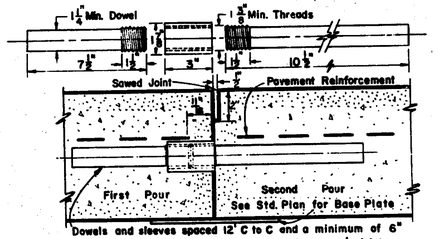
Prior to placing concrete in first pour, the sleeved dowels and contraction basket assembly with bulkhead shall be firmly secured to the subgrade, true to line and position.

The bulkhead shall be sufficiently rigid to prevent deformation when concrete is placed and shall conform to the crown of the finished pavement. The day after placing the first pour, the half of basket and dowels outside the first pour shall be carefully removed to avoid rupturing the fresh concrete. The open end of the sleeve shall be plugged in the same manner as required for Joint Dowel Hook Bolts.

Prior to placing concrete in second pour, the dowels to the second pour shall be screwed into the sleeves and coated. The contractor placing the second pour shall be responsible for cleaning out of the sleeve, tapping if necessary, supplying the dowel for the second pour. This includes supplying preformed fiber filler, and dowel caps, if the location requires an expansion joint. After the second pour the joint shall be finished according to current specification for Contraction Joints.

This detail shall be used for all transverse construction joints when it is anticipated that the second pour will be placed more than seven (7) days after the first pour.

When the construction (second pour) of the pavement will continue within seven (7) days, the 2-piece dowels will not be required and the joint will be formed as a Standard Construction Joint.



Dowels and sleeves spaced 12" C to C and a minimum of 6" from edge of pavement placed at right angles to pav't. joint.

DETAIL No. 8

GENERAL NOTES:

The materials and workmanship called for on this plan shall be in accordance with current Standard Specifications.

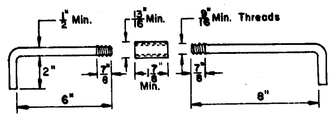
All Steel Bars, Bolts, Plates and Filler used in Pavement Joints will be considered incidental to the construction of The Joint. Tie Bars shall be deformed.

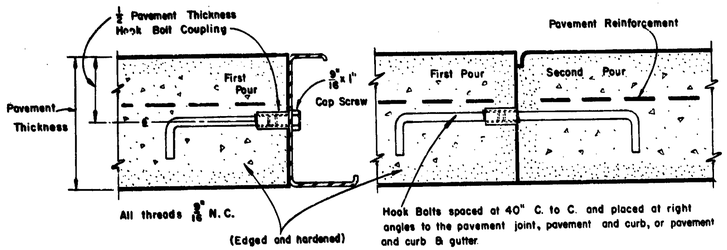
Drawings on this sheet are not to scale.

Symbol (B)

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT

Other methods of holding the first half of the Hook Bolt in position will be permitted, if approved by the Engineer.



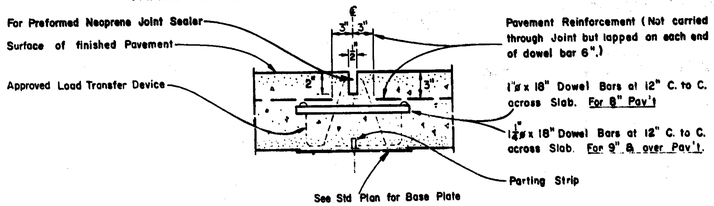


JOINT DOWEL HOOK BOLT

DETAIL No. 2

Symbol (C)

TRANSVERSE CONTRACTION JOINT (SAWED)



The contraction joints shall be sawed to a depth of 2 inches and a width of 1/8 inch, unless otherwise specified. The sawing shall be done before any transverse cracks develop and in all cases, the transverse joints shall be sawed within 24 hours after the concrete is placed.

DETAIL No. 6

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

CONCRETE PAVEMENT JOINTS

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 8-27-65

RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE

RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE 8-27-65

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE 8-27-65

APPROVED — CHIEF DESIGN ENGINEER — DATE 8/27/65

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED

BY — DIRECTOR OF ENGINEERING - CHIEF ENGINEER — DATE 8/27/65

DRAWN BY ____ CHECKED BY MHC TRACED BY DEM APPROVED B.R.R. ____

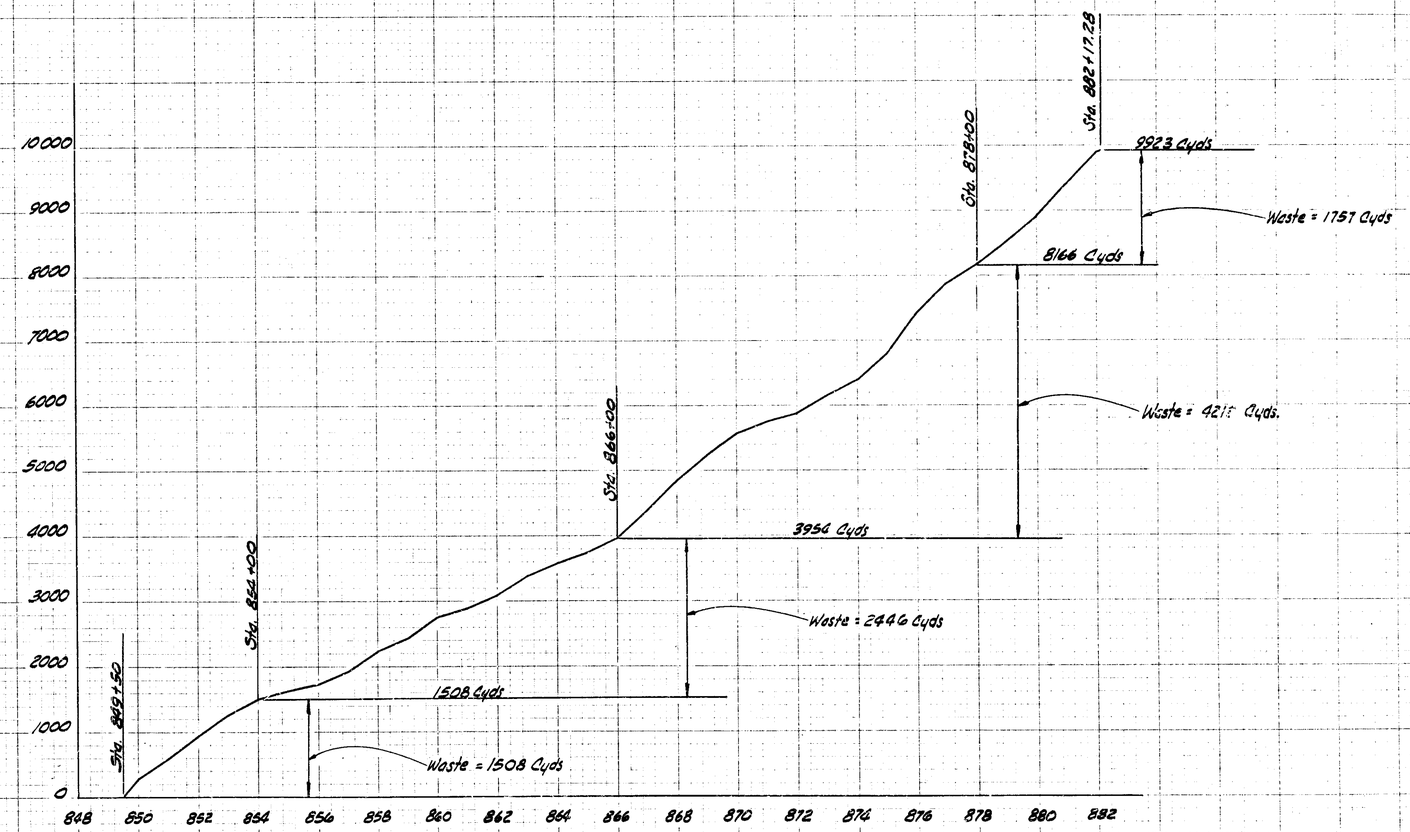
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B.C61	63174 B	175-2(92) 62	37

MASS DIAGRAM

SCALES { HOR. 1" = 200 FT.
VER. 1" = 1000 CU. YDS.

4	MICH	I75-2(92)62			
I-75	63174B	Oakland	City Royal Oak & Madison Tp.	38	42
4	MICH				

N. B. SERVICE ROAD



PLOTTED	A. BEKMANIS	12-64
COMPUTED	A. BEKMANIS	12-64
CHECKED		

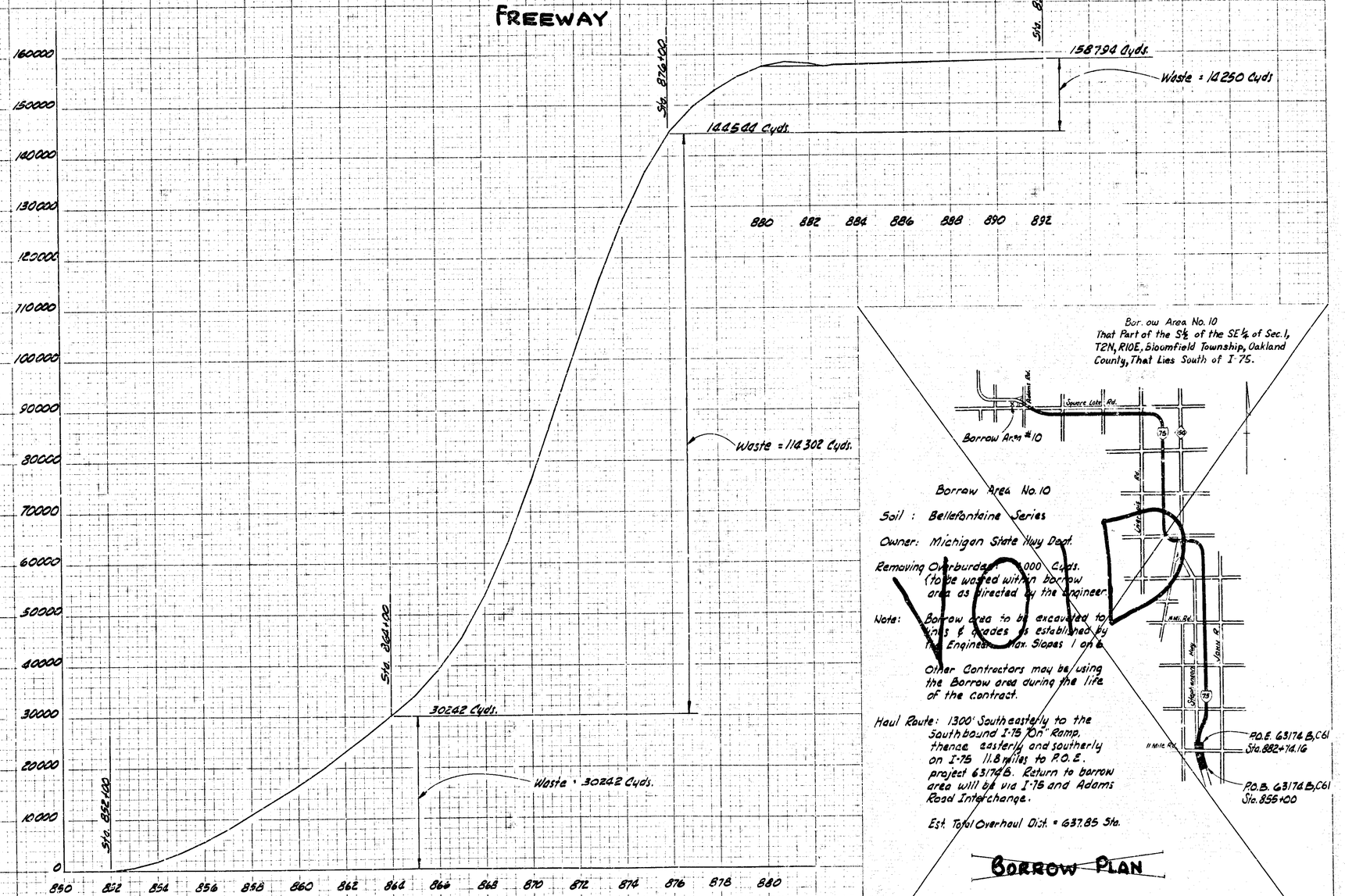
N.B. SERVICE RD. MASS DIAGRAM 63174B,C61 63174B I75-2(92)62 38

MASS DIAGRAM

SCALES { HOR. 1" = 200 FT. / VER. 1" = 10000 CU. YDS.

B.P.R. REF. NO.	STATE		FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	175-2(92)62			
I-75	63174B	COUNTY Oakland	CITY ROYAL OAK Madison Hts.	39-40	42
B.P.R. REF. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

FREEWAY



Borrow Area No. 10
That Part of the S½ of the SE¼ of Sec. 1, T2N, R10E, Bloomfield Township, Oakland County, That Lies South of I-75.

Borrow Area No. 10

Soil : Bellefontaine Series

Owner: Michigan State Hwy Dept.

Removing Overburden: 1,000 Cyds. (to be wasted within borrow area as directed by the Engineer.)

Note: Borrow area to be excavated to lines & grades as established by the Engineer. Max. Slopes 1 on 6.

Other Contractors may be using the Borrow area during the life of the contract.

Haul Route: 1300' Southeasterly to the Southbound I-75 "On" Ramp, thence easterly and southerly on I-75 11.8 miles to P.O.E. project 63174B. Return to borrow area will be via I-75 and Adams Road Interchange.

Est. Total Overhaul Dist. = 637.85 Sta.

VOID

~~BORROW PLAN~~

To Be Used For Subbase, Porous Material Grade A, Subgrade Undercutting Backfill, And Sand Gravel Material.

PLOTTED	BY	DATE
COMPUTED	AB	12-64
CHECKED	AB	12-64

FREEWAY MASS DIAGRAM AND BORROW PLAN 63174B,C61

63174B 175-2(92)62 39-40

QUANTITY SHEET-D

SURFACING (SQ. YD.) – CURB AND GUTTER (LIN. FT.)

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 B	OAKLAND	Royal Oak Madison Hts.	41	42

AS PER PLANS

	STA. TO STA.		LENGTH	WIDTH	Conc. Pav't 10" Unif.	Conc. Pav't 9" Unif.	Conc. Pav't 7" Unif.	Conc. Ramp Pav't 10" Unif.	Pav't Reinf. Syds.	Conc. C&G Det. A	Conc. C&G Det. B	Conc. Curb Det. 2	4" Conc. S.W. Sft.	Cl. A Appr. Tons	Cl. A Shldrs. Tons	Cl. AA Shldrs. Tons	Selected Subbase Tons	Bit. Appr. Tons	Bit. Agg. Shldrs. Tons	Bit. Prime Coat Gals.	Patch Pav't w/Bit. Mat'l. Tons	REMARKS
Ser. Rd.	849+50	854+00				2292			1611			786	840		192				Conc. Pav't			Sta. Equation (Ser. Rd.)
Ser. Rd.	854+00	866+00				4286	62		4286			2257	1535	10							13	
Ser. Rd.	866+00	878+00				5990	55		5990			2369	338									Sta. Equation
Ser. Rd.	878+00	882+17.28				1462			1462			819										
E-Way	852+00	864+00			7600	2347		870	8470	152	2343				396	684			175	719		
E-Way	864+00	876+00			10151			315	10466	413	4801					1756			448	1844		Sta. Equation (Expway)
E-Way	876+00	888+00			5356	496		2289	8141	882	4345	1189				1254			3[illegible]0	1317		Sta. Equation
E-Way	888+00	892+00									800					277			71	290		
E-Way	Eleven Mi. Rd.					1983			168			283	270	166	362			24				
E-Way	Entire Project																6949					
	Water Main Andover St.													26				5				
	TOTALS				23107	18856	117	3474	40594	1447	12289	7705	2983	202	950	3971	6949	29	1014	4170	13	

AS CONSTRUCTED

	STA. TO STA.		LENGTH	WIDTH	Conc. Pav't 10" Unif.	Conc. Pav't 9" Unif.	Conc. Pav't 7" Unif.	Conc. Ramp Pav't 10" Unif.	Pav't Reinf. Syds.	Conc. C&G Det. A	Conc. C&G Det. B	Conc. Curb Det. 2	4" Conc. S.W. Sft.	Cl. A Appr. Tons	Cl. A Shldrs. Tons	Cl. AA Shldrs. Tons	Selected Subbase Tons	Bit. Appr. Tons	Bit. Agg. Shldrs. Tons	Bit. Prime Coat Gals.	Patch Pav't w/Bit. Mat'l. Tons	EXPLANATION OF CHANGES
SER. RD	849+50	854+00				2392			1609			774	860		257.1			38.1	Conc. Pav't	99		
SER. RD	854+00	866+00				4184	61.1		4135			2415	1509	7.5								
SER. RD	866+00	878+00				5884	75.5		5884			2403	2872									
SER. RD	878+00	882+17.28				1474			1474			833	2065									
EXPWAY	852+00	864+00			7571	2631		878	8449	153	2283				274.4	707.7		83.7	173.6			
EXPWAY	864+00	876+00			10161			309	10470	405	4762	53				1816.8			444.6			
EXPWAY	876+00	888+00			5348	278		2435	8061	1078	4351	1042				1297.4			317.5			
EXPWAY	888+00	892+00									721.5	194				286.5			70.5	116		
EXPWAY	ELEVEN MI. RD.					2184			237			392	409	230.3	152.4			12.7			13.35	
EXPWAY	ENTIRE PROJ.																6514					
	WATER MAIN ANDOVER ST																				4	
					Auth. #1014	Auth. #1014	Auth. #1005, 1014	Auth. #1014	Auth. #1014	Auth. #1014	Auth. #1014	Auth. #1014	Auth. #1005 1015	Auth. #1015	Auth. #1015	Auth. #1015	Rec. 30F	Auth. #1015	Auth. #1015	Auth. #1015	Auth. # 1015	
	TOTALS				23080	19027	136.6	3622	40369	1636	12117.5	8106	7715	237.8	683.9	41084	6514	154.5	10[illegible]62	215	17.35	

LIGHTING

AS PER PLANS

STA. TO STA.		1-3" Encased Conduit Lin. Ft.	600V-Three 1/c #6 Cables Lin. Ft.	600V 2-Three 1/c #6 Cables Lin. Ft.	Street Lighting Standard on New Fdn. Double (6'&12') Arm Each	10' Arm Each	15' Arm Each	400W Clear MV Luminaire Each	2-3" G.I.P. up Cable Pole Lin. Ft.	REMARKS
856+00	867+00	171	807	100	1	2	1	5	12	
876+00	887+00	210	1197	164		4	5	9	12	
TOTALS		381	2004	264	1	6	6	14	24	

AS CONSTRUCTED

STA. TO STA.		1-3" Encased Conduit Lin. Ft.	600V-Three 1/c #6 Cables Lin. Ft.	600V 2-Three 1/c #6 Cables Lin. Ft.	Street Lighting Standard on New Fdn. Double (6'&12') Arm Each	10' Arm Each	15' Arm Each	400W Clear MV Luminaire Each	2-3" G.I.P. up Cable Pole Lin. Ft.	EXPLANATION OF CHANGES
856+00	867+00	195			1	2	1	5	12	
876+00	887+00	165				4	5	9	12	
		Rec. #29	Rec. #21F	Rec. #21F						
TOTALS		360	0	0	1	6	6	14	24	

REMOVALS

AS PER PLANS

STA. TO STA.	Pipe Culverts Ea.	Trees Ea. 8-12"	Trees 13-24"	Trees 25-36"	Trees 37"+	Stumps Ea. 25-36"	Old Pav't (Patching) Syds.	Old Pav't Syds.	S.W. Syds.	Misc. Conc. Struct. Cyds.	Curb Lft.
848+00-852+00		1						502	349	48	156
852+00-864+00		5	20	3	1		27	2906	1433	138	68
864+00-876+00		5	1				25	5896	1061	120	377
876+00-885+00		3				1		1392	517	16	208
885+00-892+00								1482			
11 Mile Temp. Rds.								1315			
Andover & Middlesex	4										
Totals	4	14	21	3	1	1	52	13993	3360	322	809

AS CONSTRUCTED

STA. TO STA.	Pipe Culverts Ea.	Trees Ea. 8-12"	Trees 13-24"	Trees 25-36"	Trees 37"+	Stumps Ea. 25-36"	Old Pav't (Patching) Syds.	Old Pav't Syds.	S.W. Syds.	Misc. Conc. Struct. Cyds.	Curb Lft.	EXPLANATION OF CHANGES
848+00-852+00		6	1	0	0		9.3	6015	381.9	3.5	185	
852+00-864+00		5	17	4	1			3921.5	1419.2	76.4	354	
864+00-876+00		10	2	1	0			5316.2	1324.5	110.2	213.5	
876+00-885+00		3	3	0	0	0		2270.5	44.4	10.7	448.5	
885+00-892+00		0	0	0	0			1502.9				
Eleven Mi. Rd. Temp.								1824.9				
Andover & Middlesex	4											
		Auth. #1005 & 1011	Auth. #1011	Auth. #1011	Auth. #1011	Auth. #1011	Auth. #1011	Auth. #1011	Auth. #1011 Rec. 29F	Auth #1011	Auth #1011	
Totals	4	24	23	5	1	0	9.3	14937	3537	2008	1201	

WATER MAIN ALTERATIONS

AS PER PLANS

Sta. to Sta.	Cut And Plug 6" Water Main Ea.	Cut And Plug 8" Water Main Ea.	8" Plug Ea.	8" C.I. Water Main Lft.	8" Gate Well Ea.	6" Gate Well Ea.	8" Gate Valve Ea.	6" Gate Valve Ea.	6" Plug Ea.	Conc. Gr. A Cyds.	Earth Exc. & Waste Cyds.	Por. Mat. Gr. A Cyds.
P.O.B.-852+00		1								0.36		
852+00-864+00	2			387		1		1	1	0.57	130	162
864+00-876+00			1	554	3	1	3	1		1.68	198	247
876+00-P.O.E.				629	3	1	3	1		0.75	196	245
Andover St.				617	2		2			0.90	150	187
												Compacted in Place
TOTALS	2	1	1	2187	8	3	8	3	1	4	For Totals See Sheet #42	

AS CONSTRUCTED

Sta. to Sta.	Cut And Plug 6" Water Main Ea.	Cut And Plug 8" Water Main Ea.	8" Plug Ea.	8" C.I. Water Main Lft.	8" Gate Well Ea.	6" Gate Well Ea.	8" Gate Valve Ea.	6" Gate Valve Ea.	6" Plug Ea.	Conc. Gr. A Cyds.	Earth Exc. & Waste Cyds.	Por. Mat. Gr. A Cyds.	EXPLANATION OF CHANGES
PoB-852+00		1								0.36			
852+00-864+00	1			381		1		1	1	0.63			
864+00-876+00			1	565	3	1	3	1		1.68			
876+00-R.O.E.				647	3	1	3	1		1.37			
Andover St				638	2		2			0.33			
	Auth. #1003			Auth. #1003 1012						Auth #1003 1012	See 35 Constructed Plan Sheet #42	Compacted See As Const. in Place Sheet #42	
TOTALS	1	1	1	2231	8	3	8	3	1	4.37	For Totals See Sht #42		

GUARD RAIL (LIN. FT.)

AS PER PLANS

STATION	Steel Beam	Offset Double	Curved Steel Beam	Offset Single	Curved Offset Single
Sixth St. N.B.	78.5				
Middlesex N.B.	41.0				
867+75-874+42	557.0		37.5		
University N.B.	41.0				
859+75 Rt.				28.5	12.5
856± to 857±				103.5	
Middlesex S.B.	41.0				
868+58-11 Mile	157.0		75.0		
11 Mi. Bridge Lt. & Rt.				257.0	25.0
P.O.B. to P.O.E.		2325.0		550.0	
11 Mi.-875+28	328.5		12.5		
Baxter S.B.	41.0				
University S.B.	41.0				
Sprague N.B. & S.B.	82.0				
Farnum N.B. & S.B.	82.0				
TOTALS	1490	2325	125	939	38

AS CONSTRUCTED

STATION	Steel Beam	Offset Double	Curved Steel Beam	Offset Single	Curved Offset Single	REMARKS
Sixth St. NB	78.5					
Middlesex NB	41.0					
867+75-874+42	557		37.5			
University NB	41					
859+75 Rt				28.6	12.5	
856± to 857±						
Middlesex SB	41					
868+58-11 Mi.	169.6		75.0			Auth. # 1016
11 Mi. Bridge L&R				257.0	25.0	
POB to POE		2332.3		475.0		
11 Mi.-875+28	332.9		12.5			
Baxter S.B.	41					
University SB	41					
Sprague N&SB	82					
Farnum N&SB	82					
S.B. Int. Conn.	107.7		12.5			
TOTALS	[illegible]	2332.3	137.5	760.5	37.5	

MISCELLANEOUS

AS PER PLANS	AS CONSTRUCTED	
48" Chain Link Fence - 3171 Lft.	48" Chain Link Fence - 5323.6 LFT	Auth. # 1017, 29F
4' Walk Gate for 48" Chain Link Fence - 1 Ea.	4' Gate For 48" Chain Link Fence - 1EA	
Conc. Nose Type I - 2 Ea.	Conc. Nose Type I - 2EA	
Conc. Nose Type II - 1 Ea.	Conc. Nose Type II - 1EA	
Part Width Construction - 1 Inters.	Part width Construction - 1 Inters.	
Aggregate Base (L.M.) - 29 Cyds.	Aggregate Base (LM) 0	Auth. # 1015
Water 1000 Gal. Units - 145 Units	Water 1000 Gal. units - 45.8 units	Auth. # 1015
Calcium Chloride - 49 Tons	Calcium Chloride - 46.6 tons	Auth. # 1015
Barricades - 7 Ea.	Barricades - 7EA	
Fine Grading and Cleanup - 115 Sta.	Fine Grading & Cleanup - 115.57 Sta.	Auth. # 1015
Topsoil Surfacing (L.M.) * 1344 Cyds.	Topsoil Surfacing (LM) - 1287.6	Auth. # 1016
Mulching - 13 Tons	Mulching - 23.32 Tons	
Class 1 Seeding - 4 Acres	Class 1 Seeding - 7.34 Acres	Auth. # 1016
Class A Seeding - 1 Acres	Class A Seeding - 1.25 Acres	Auth. # 1016, 29F
Chemical Fertilizer - 3100 Lbs.	Chemical Fertilizer - 5170 Lbs	Auth. # 1016
Urea Nitrogen Fertilizer - 352 Lbs.	Urea Nitrogen Fertilizer - 0	Auth. # 1016
Granular Blanket - 700 Cyds.	Granular Blanket - 0	Rec. 30F
Temp. Steel Beam Guard Rail - 450 Lft.	Temp. Steel Beam Guard Rail - 0	Auth. # 1016
Completing under traffic - 2.19 Mi.	Completing under traffic - 1.070 Mi.	Auth. # 1017
Inspection Fee (Non-Fed. Participation) - 1 Ea.	INSPECTION FEE 1EA	
TOTAL LENGTH OF PROJECT	= 0.525 Miles	

* Est. to be obtained from Waste.

ALL TOTALS, EXCEPT COMPLETING UNDER TRAFFIC, ARE SHOWN TO THE NEAREST WHOLE UNIT.

CONT. [illegible] DATE 6/25/68

PLAN ESTIMATE BY A. Bekmanis & R. Cooley DATE 11-18-64 CHECKED BY D.W. Hall & R.J. Miller DATE 2-24-65 DATE DATA COMPLETED ____ PROJ. ENG. DATE ____ HISTORY CHECKED ____ ENTERED ON PLANS BY ____ DATE ____

Bernhard Series 1964

63174 B. C61

FILE NO. USE NO. 350 STENCIL	63174B. C61	STATE PROJECT 63174B	FEDERAL PROJECT I75-2(92)62	SHEET NO. 41

QUANTITY SHEET — E

MANHOLES CATCH BASINS (EACH) — SEWERS (LIN. FT.)

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(92)62			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 B	OAKLAND	Royal Oak & Madison Hts.	42	42

AS PER PLANS — Manholes (0-6.0', 6.1-14.0') and Class "A" Sewer

	Sta.	0-6.0' MH1A	0-6.0' 6G	0-6.0' 6M	0-6.0' 5M	6.1-14.0' MH1A	6.1-14.0' MH1	6.1-14.0' 6M	6.1-14.0' 6J	6.1-14.0' 6	6.1-14.0' 3M	6.1-14.0' 3H	6.1-14.0' 3J	Class "A" Sewer 12"	Class "A" 12" C76-II	Class "A" 15" C76-II	Class "A" 18" C76-II	12" Cl.A Culv.	12" Pre Cast Conc. Rings
Ser. Rd.	Entire Proj																		
	P.O.B.-854																		
	849+50		1			1								36					
	852+30																		
	852+40					1		2			1				88				
	852+55																		
	854-866						With Salvaged J Cover			With Salvaged J Cover									
	855+25					1									226				
	857+50		1								3			16	76				
	861+05																		
	863+65		2											36	40				
	864+60					1		1			2				178				
	866-P.O.E.																		
	866+55																		
	866+90					1		1			1				54				
	868+30					1		1			1				48				
	869+25																		
	871+60					1		1			1				86				
	872+70																		
	873+90					1		1			1			290	45				
	874+10																		
	875+60																		
	876+80			2							2								
	878+40																		
	879+80																		
	882+05							1			1			100					
E-Way	P.O.B.-864																		
	855+10		2										2						
	858+45		1						1				3		235				
	863+60								1			1			20				
	864-876																		
	864+60		1										4		136	39			
	867+00								1				3		108				
	869+45																		
	870+00								1				3		112				
	871+70	1							1				3		62	45	200		
	873+70	1							1				3		62	49			
	876-P.O.E.																		
	876+70								1				3		62				
	879+00																		
	879+70				1	1			1			3	4		113				
	880+70																		
	882+75						1			1					16				
	886+10																		
	889+10																		
	889+50																		
	Eleven Mi.							1			1			104	59				
	Entire Proj.																		
	Water Mains																	18	2
	Totals	2	8	2	1	9	1	9	8	1	14	4	28	582	1826	133	200	18	2

AS PER PLANS — Class "B" Sewer and Miscellaneous

Sta.	Cl. "B" 12" C76-III	Cl. "B" 15"	Cl. "B" 15" C76-II	Cl. "B" 18"	Cl. "B" 18" C76-II	Cl. "B" 21" C76-III	Cl. "B" 24" C76-II	Reconst. M.H.	Aban. C.B.	Rem. M.H.	Rem. C.B.	Adj. Cov. M.H.	Adj. Cov. C.B.	Cover A	Bulkheads 6"	8"	10"	12"	15"	Sewer Taps 12"	15"	18"	21"	Tile Traps 12"	6" Bank Drain Lft.	6" Edge Drain Lft.	Sand-Grav. Mat. Cyds	Porous Material Gr.A Cyds.	Gr.B Cyds.
Entire Proj																											875		
P.O.B.-854																												194	
849+50																													
852+30															1				1										
852+40					290							Method #1	Method #1																
852+55											1																		
854-866																												247	
855+25				286		200																	1						
857+50																													
861+05											1				1														
863+65								2																					
864+60				232	186																	1							
866-P.O.E.																												479	
866+55								1																			Compacted in Place	Compacted in Place	Compacted in Place
866+90				140																									
868+30		331																											
869+25								1																					
871+60			230					1																					
872+70								1																					
873+90																													
874+10											2																		
875+60								1																					
876+80	112																												
878+40								1																					
879+80											2	1				1	1												
882+05	30								1											1									
P.O.B.-864																										2591		224	
855+10	120																												
858+45			95																	1	1								
863+60																													
864-876																										3905		729	
864+60	79																				1								
867+00																													
869+45								1																					
870+00	300						170																						
871+70																													
873+70	300																												
876-P.O.E.																										2927		348	
876+70	39																												
879+00												1																	
879+70	79	42	39	224																		1							
880+70									1	1																			
882+75					14			1		1			1	1															
886+10																		1											
889+10																		1											
889+50													2					1											
Eleven Mi.																								1			775	44	
Entire Proj.																									2400				2200
Water Mains																												841	
Totals	1059	373	364	882	490	200	170	10	2	2	6	2	3	1	2	1	1	3	1	2	2	2	1	1	2400	9423	—	—	2200

AS CONSTRUCTED — Manholes (0-6.0', 6.1-14.0') and Class "A" Sewer

Sta.	0-6.0' MH1A	0-6.0' 6G	0-6.0' 6M	0-6.0' 5M	6.1-14.0' MH1A	6.1-14.0' MH1	6.1-14.0' 6M	6.1-14.0' 6J	6.1-14.0' 6	6.1-14.0' 3A	6.1-14.0' 3M	6.1-14.0' 3H	6.1-14.0' 3J	Class "A" Sewer 12"	12" C76-II	15" C76-II	18" C76-II	12" Cl."A" Culv.	12" Pre Cast Conc. Rings
Entire Proj.																			
P.O.B.-854																			
849+50		1			1									36					
852+30																			
852+40					1		2				1				88.2				
852+55						With Salvaged J Cover			With Salvaged J Cover										
854-866																			
855+25					1										226				
857+50		1									3			29.3	76.8				
861+05																			
863+65		2												40.0	43.0				
864+60					1		1				2				176.2				
866-P.O.E.																			
866+55																			
866+90					1		1				1				53.0				
868+30					1		1				1				47.6				
869+25																			
871+60					1		1				1				83.7				
872+70																			
873+90					1		1				1			290.1	43.7				
874+10																			
875+60																			
876+80																			
878+40																			
879+70			3				1								34.7				
882+05							1							99.4					
P.O.B.-864																			
855+10		2											1						
858+45		1						1					3		241.5				
863+60								1				1			18.8				
864-876																			
864+60		1											3		140.9	39.3			
867+00								1					3		108.4				
869+45																			
870+00								1					3		110.4				
871+70	1							1					3		61.6	46.9	204.7		
873+70	1							1					3		61.5	48.6			
876-P.O.E.																			
876+70								1					3		61.9				
879+00																			
879+70				1	1		AUTH. #1010	1		Rec. #32F		3	4	AUTH. #1018	110.8				
880+70																			
882+25						1			1						18.2				
886+10																			
889+10																			
889+50		AUTH. #1010											AUTH. #1010			AUTH. #1018	AUTH. #1018	AUTH. #1018	AUTH. #1018
Eleven Mi.							1				1			107.4	58.6				
Entire Proj.															AUTH. #1018			0	0
Water Mains																			
Totals	2	8	3	1	9	1	10	8	1		11	4	2	602.2	1866	134.5	204.7	0	0

AS CONSTRUCTED — Class "B" Sewer and Miscellaneous

Sta.	Cl. "B" 12" C76-III	15"	15" C76-II	18"	18" C76-II	21" C76-II	24" C76-II	Reconst. M.H.	Aban. C.B.	Rem. M.H.	Rem. C.B.	Adj. Cov. M.H.	Adj. Cov. C.B.	Cover A	Bulkheads 6"	8"	10"	12"	15"	Sewer Taps 12"	15"	18"	21"	Tile Traps 12"	6" Bank Drain Lft.	6" Edge Drain Lft.	Sand-Grav. Mat. Cyds	Porous Material Gr.A Cyds.	Gr.B Cyds.
Entire Proj.																										400			
P.O.B.-854																													
849+50																													
852+30															1				1										
852+40					290.2							Method #1	Method #1																
852+55											1																		
854-866																										1088			
855+25				287.0		200.2																	1						
857+50																													
861+05								1			1				1														
863+65								2																					
864+60				233.0	187.6												1					1							
866-P.O.E.																										1382			
866+55								1																			Compacted in Place	Compacted in Place	Compacted in Place
866+90				139.7																									
868+30		327.0																											
869+25								1																					
871+60			230.0																										
872+70								1																					
873+90																													
874+10											2																		
875+60								1																					
876+80	110.2																												
878+40								1																					
879+70											2	1				1	1			2									
882+05	30.0								1											1									
P.O.B.-864																										2594			
855+10	127.6																												
858+45			98.0					1													1								
863+60												1																	
864-876																										3816	See Grading For As Const.	See Grading For As Const.	
864+60			81.6																		1								
867+00																													
869+45								1																					
870+00	292.9						161.3					1																	
871+70																													
873+70	303.0																												
876-P.O.E.																										2968			
876+70	39.0																												
879+00												1																	
879+70	83.7	37.9	39.0	227.3																		1							Rec. #30F
880+70									1	1																			
882+25					21.0					1			1	1						1									
886+10	AUTH. #1018																	1											
889+10		AUTH. #1018	AUTH. #1018	AUTH. #1018	AUTH. #1018	AUTH. #1018	AUTH. #1018					REC. #29F						1	AUTH. #1010		AUTH. #1018				AUTH. #1018	AUTH. #1018			
889+50													2					1											
Eleven Mi.																								1					
Entire Proj.																													1171.5
Water Mains																													
Totals	986.4	368.9	448.6	887	498.8	200.2	161.3	10	2	2	6	4	3	1	2	1	2	3	1	4	2	2	1	1	0	12,248			1171.5

GRADING

AS PER PLANS

	Sta. to Sta.		Sand-Gravel Material Cyds.	Subbase Cyds.	Earth Exc. Cyds.	Subgrade Undercutting Cyds.	Porous Mat'l Grade A Cyds.	Emb.+Shr.+Loss Cyds.	Waste Cyds.		Overhaul CCYU	Remarks
Ser. Rd.	P.O.B.	854+00	Compacted in Place	Compacted in Place	1508	(Includes Waste by Contractor)	Compacted in Place		1508			
	854+00	866+00			2527			81	2446			
	866+00	878+00			4288			76	4212			
	878+00	P.O.E.			1757				1757			
E-Way	P.O.B.	864+00			30242				30242			
	864+00	876+00			115137			885	114302			
	876+00	P.O.E.			18768			4518	14250			
	Waste from Sewer Trenches											
	Serv. Rd.	P.O.B.-P.O.E.			737				737			
	E. Way	P.O.B.-P.O.E.			1041				1041			
	Eleven Mi. Rd.				35				35			
	Entire	Proj.	1920									B'fill for Basement & 11 Mi. Bridge
	Waste from Water Main Trenches											
	Entire	Proj.			674				674			
	Estimate For Removal of Debris											
	Entire	Proj.			700				700			
	855+00	892+00		21,466								
	Estimate to Correct Unstable Subgrade											
	Entire	Proj.	3700			3700			3700			
	Waste From Bank Drain Trenches											
	Entire	Proj.			1200				1200			
	Entire	Proj.					1240					Edge Drains & Bank Drains
	Entire	Proj.					2485					Sewer & Water Mains
	Totals		5020	21,466	178,664	3700	3725	5560	176,804			

AS CONSTRUCTED

	Sta. to Sta.		Sand-Gravel Mat'l Cyds.	Subbase Cyds.	Earth Exc. Cyds.	Subgrade Undercutting Cyds.	Porous Mat'l Grade A Cyds.	Emb.+Shr.+Loss Cyds.	Waste Cyds.		Overhaul CCYU	Explanation of Changes
Serv. Rd.	P.O.B.	854+00	Compacted in Place	Compacted in Place	1656.1		Compacted in Place					
	854+00	866+00			3245.4							
	866+00	878+00			4518.6							
	878+00	P.O.E.			1163.3							
E'Way	P.O.B.	864+00			28,286.3							
	864+00	876+00			113,295.9							
	876+00	P.O.E.			18959.8							
	WASTE FROM SEWER TRENCHES											
	SERV. RD.	P.O.B.-P.O.E.			713.9		Rec. #30F		713.9			
	E'WAY	P.O.B.-P.O.E.			1129.4				1129.4			
	ELEVEN MI. RD.				65.0				65.0			
	ENTIRE	PROJ.	389									BRIDGE B'FILL
	WASTE FROM WATER MAIN TRENCHES											
	ENTIRE	PROJ.			576.0				527.0			WATER MAIN EX. & B'F.
	ESTIMATE FOR REMOVAL OF DEBRIS											
	ENTIRE	PROJ.	383		466.0							DEBRIS REM. & B'FILL
	855+00	892+00		17,767								
	ESTIMATE TO CORRECT UNSTABLE SUBGRADE											
	ENTIRE	PROJ.	19,057			19,057						
	WASTE FROM BANK DRAIN TRENCHES											
	ENTIRE	PROJ.	Rec. #30F	Rec. #30F	Rec. #30F	Rec. #30F						
	ENTIRE	PROJ.			1396.3				677.7			
	ENTIRE	PROJ.							1908.3			SEWERS ONLY
	Totals		19,829	17,767	175,472.0	19,057			3113.0			

SODDING

AS PER PLANS

Sta. to Sta.		Cl. B Syds.	Remarks
857+85	864+00	607	Ramp "L"
864+00	879+00	9552	E-Way
878+00	882+00	271	Ramp "P"
TOTAL		10430	

AS CONSTRUCTED

Sta. to Sta.		Cl. B Syds.	Explanation of Changes
857+85	864+00	1255.7	
864+00	879+00	9446.4	
878+00	882+00	504.9	
FLOOD DAMAGE		428.0	WORK order #11F
TOTAL		11635	AUTH. #1016

MISCELLANEOUS

	As Per Plans		As Constructed		Remarks
	Conc. End Header	36 Lft.	CONC. END HEADER	66	AUTH. #1014
	Truss Foundation Type "B"	2 Ea.	TRUSS FOUNDATION-TYPE "B"	2 EA	
Non Federal Part.	Field Office-Conc. Proportioning	1 Ea.	FIELD OFFICE-CONC. PROPORTIONING	1 EA	
	Field Office-Bituminous	1 Ea.	FIELD OFFICE-BITUMINOUS	1 EA	
	Protective Fence	45 L.Rds.	PROTECTIVE FENCE	12.1 RDS	AUTH. #1013
	End of Pour Const. Joints	300 Lft.	END OF POUR CONST. JTS.	150 LFT	AUTH. #1014
	Contraction Joints	3900 Lft.	CONTRACTION JOINTS	2683.1	AUTH. #1004, 1014
	Expansion Joints	1850 Lft.	EXPANSION JOINTS	558.7	AUTH. #1004, 1014
	Post & Delineator -		POST & DELINEATOR		
	Single Crystal	31 Ea.	SINGLE CRYSTAL	31 EA	
	Double Yellow	27 Ea.	DOUBLE YELLOW	27 EA	
	Timber Curb & Snow Fence -		TIMBER CURB & SNOW FENCE		
	F & I	500 Lft.	F & I	000	AUTH. #1013
	Relocate	250 Lft.	RELOCATE	000	AUTH. #1013
	Remove	500 Lft.	REMOVE	000	AUTH. #1013
	PLAN EXTRAS		SEE SHEET #105		

CHECKED CONTRACT SECTION DATE 6/5/68

63174 B. C61

PLAN ESTIMATE BY A. Baltmanis & R. Cooley DATE 11-18-64 CHECKED BY R.W. Hall & R.J. Miller DATE 2-24-65 DATE
DATA COMPLETED ____ PROJ. ENG. ____ DATE ____ HISTORY CHECKED ENTERED ON PLANS BY ____ DATE ____

FILE NO. USE NO. 350 STENCIL	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174B. C61	63174B	I75-2(92)62	42

BRUNING

123

N-20-A-5

63174
63-39 C4
63174
63-39 C4

CS: 63174

ID: 63-39 C4 N-20-A-5

WHERE REQUIRED STA. TO STA.	AMOUNT REQUIRED	AMOUNT AVAILABLE	SOILS SERIES	PIT LOCATION

MICHIGAN
STATE HIGHWAY DEPARTMENT

CHARLES M. ZIEGLER
STATE HIGHWAY COMMISSIONER

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

F.A. RTE.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
M-150	63-39	Oakland	Hazel Park	1	

F.A. RTE.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

Control Section 63131U

PLAN AND PROFILE OF PROPOSED

STATE PROJECT M63-39

STEPHENSON HIGHWAY

OAKLAND COUNTY

CITY of HAZEL PARK

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1 TITLE
2 TYPICAL CROSS-SECTIONS
3 SPECIAL PROVISIONS
4-12 PLAN AND PROFILE
13-14 SPECIAL DETAIL
15-16 QUANTITIES

STANDARD PLANS

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E-4-A-21F
E-4-A-26D
E-4-A-27R-3
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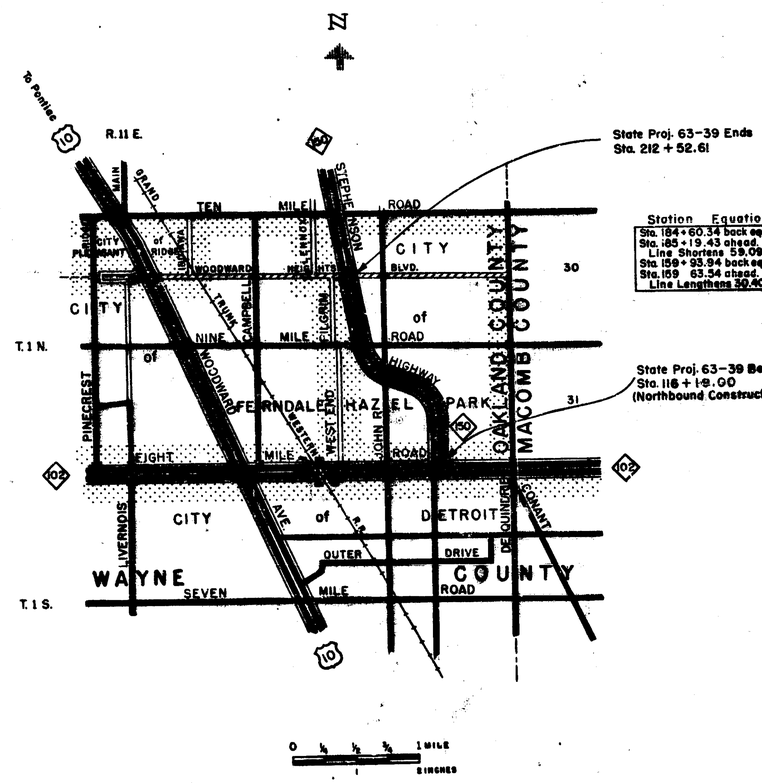
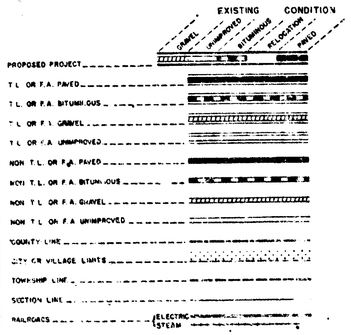
E-4-A-27B-3
E-4-A-27E-3
E-4-A-29D
E-4-A-33D
E-4-A-49B-7
E-4-A-110B
E-4-A-127A
E-4-A-129
E-4-A-130
E-4-A-131
E-4-A-135A
E-6-A-85D



Station Equations

Sta. 184+60.34 back equals
Sta. 185+19.43 ahead.
Line Shortens 59.09Ft.
Sta. 159+93.94 back equals
Sta. 159 63.54 ahead.
Line Lengthens 30.40Ft.

TITLE SHEET LEGEND



CONTRACT FOR Concrete Pavement & Bituminous Concrete Class I

A.E.G. 4/9/53

DIVISION APPROVAL

CHECKED — CHIEF ROAD DIVISION — 4-8-53 DATE

CHECKED — CHIEF ENGINEER OF ROAD DESIGN — 4-10-53 DATE

RECOMMENDED FOR APPROVAL — ENGINEER OF ROAD DESIGN — 4-10-53 DATE

RECOMMENDED FOR APPROVAL — CONSTRUCTION ENGINEER — 4-10-53 DATE

APPROVED — ROAD ENGINEER — 4-10-53 DATE

BRIDGE DIVISION APPROVAL

RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE DESIGN — 4-10-53 DATE

APPROVED — BRIDGE ENGINEER — 4-10-53 DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED — CHARLES M. ZIEGLER, STATE HIGHWAY COMMISSIONER

BY — DEPUTY COMMISSIONER - CHIEF ENGINEER — 4-10-53 DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER — DATE

APPROVED

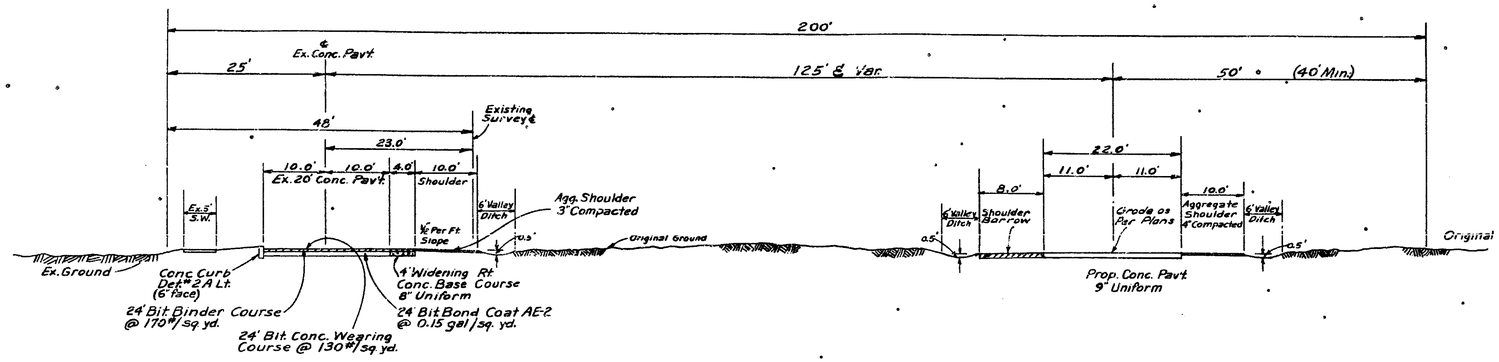
DIVISION ENGINEER — DATE

63-39 C4

FILE NO.	PLAN NO.	DATE OF PROJECT	PLAN FOLDING	SHEET NO.
N·20·A·5		63-39		1

F.A.P. NO.	STATE	COUNTY		SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT		SHEET TITLE	SHEET NO.	TOTAL SHEETS
150	63-39	Oakland	Hazel Park	2	
F.A.P. NO.	STATE	COUNTY		SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

TYPICAL CROSS-SECTIONS



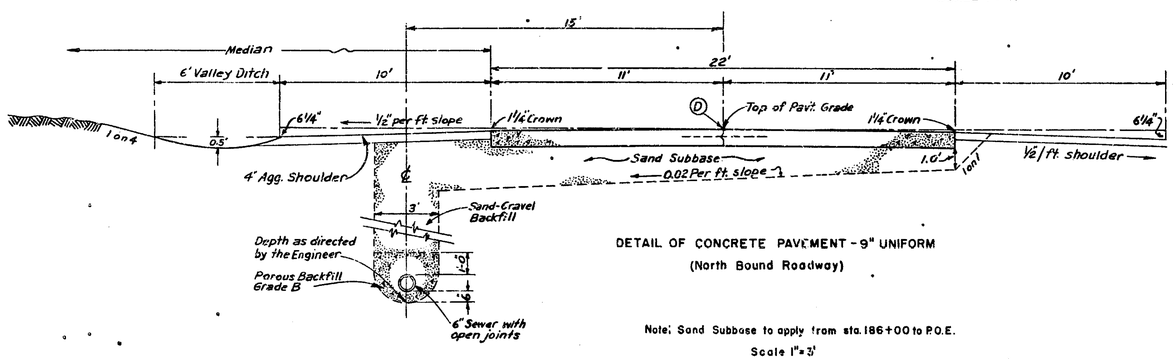
PROPOSED SOUTH BOUND ROADWAY

To apply as shown P.O.B. to John R. Road except existing pavement to be replaced with 24' Conc. Base Course Sta. 145+04.72 to Sta. 150+97.81.

PROPOSED NORTH BOUND ROADWAY

STEPHENSON HIGHWAY

SCALE 1" = 10'

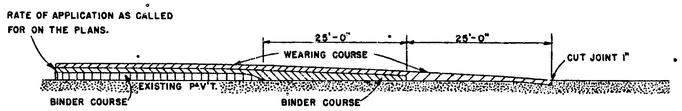


DETAIL OF CONCRETE PAVEMENT - 9" UNIFORM

(North Bound Roadway)

Note: Sand Subbase to apply from sta. 186+00 to P.O.E.

Scale 1" = 3'



SKETCH SHOWING DISTANCE TO START VARIOUS BITUMINOUS COURSES FROM CUT JOINT.

NOTES:

The Concrete pavement and 24' Concrete Base Course Shall be reinforced according to Standard Plan E-4-A-21F

Class A Slopes will be required on this project.

The edges of existing pavement shall be thoroughly Cleaned before Concrete Base widening and Curb are placed

D - - - - Longitudinal Lane Tie Joint with Tie Bars, according to Standard Plan E-4-A-33D Detail 1 or 2
Substitute Experimental Joints
Auth 1008

N·20·A·5 63-39 2

SPECIAL PROVISIONS

GRADES FOR INTERSECTIONS

All intersections are to be considered as complete units and their grades determined before construction is started.

TRANSVERSE JOINTS IN CONCRETE PAVEMENT

Transverse joints in concrete pavement shall be placed according to details on Standard Plan E-4-A-135A and E-4-A-127A.

TRANSVERSE PLANE OF WEAKNESS JOINTS IN CONCRETE BASE COURSE

Transverse plane of weakness joints shall be placed according to Standard Plan E-4-A-127A.

TRANSVERSE JOINTS IN CONCRETE BASE COURSE

In the concrete base course widening, transverse plane of weakness joints shall be placed in line with expansion joints in the existing concrete pavement, approximately 100' intervals.

PAVEMENT REINFORCEMENT

The concrete pavement shall be reinforced throughout with mesh, bar mat, or expanded metal mesh reinforcement.

BASE COURSE REINFORCEMENT

The 24 Ft. width concrete base course shall be reinforced with mesh, bar mat, or expanded metal mesh reinforcement.

BITUMINOUS CONCRETE WEARING COURSE AND AGGREGATE APPROACH

Bituminous Concrete Wearing Course where called for on plans shall be placed to a line 30 feet from the edge of the slab, unless otherwise shown.

Where used as a base for bituminous concrete wearing course, the aggregate approach shall have a thickness of 5" compacted. The bituminous concrete wearing course shall be 2½" thick, compacted, and the aggregate approach shall be depressed 2½" to receive the bituminous material.

HAND FINISHING

Hand finishing according to 4.14.03-Q-1 of the Standard Specifications will be permitted on intersections outside of the normal traffic lanes.

TIE BARS FOR LONGITUDINAL JOINTS IN CONCRETE PAVEMENT OR CONCRETE BASE COURSE

When deformed steel bars with deformations conforming to A.S.T.M. Designation: A 305 are used as tie bars in the longitudinal joints in Concrete Pavement or Concrete Base Course (Standard Plan E-4-A-33D), including tie bars for curb or curb and gutter (Standard Plan E-4-A-29D), the minimum length of the bar required will be 30 inches instead of 48 inches as called for on the plans.

The bars shall be centered across the joint unless otherwise shown on the plans.

PAVEMENT REINFORCEMENT

The pavement reinforcement shall conform to Standard Plan E-4-A-21F except that the length of sheet or mat for 12-foot lanes may be 15'-0" instead of 10'-0". The laying lap for 15-foot length sheet or mat shall be 13 inches. The computed weight of steel per standard sheet is as follows:

Type of Reinforcement	Weight per 15-foot length of Standard Sheet for 12-foot Lane in Lbs.
Mesh	128.9
Bar Mat	142.2
Expanded Metal	138.0

MANHOLE COVERS IN SHOULDER AREAS

All manhole covers occurring within shoulder areas shall be set at an elevation 3" to 4" below the normal shoulder elevation."

The following items of work shall be done as they apply throughout the project. These items are not catalled or included on the Plan and Profile Sheets.

Fine Grading and Cleanup - 22' to 24' Width (North Bound)	P.O.B. to P.O.E.	102 Stas.
(South Bound)	Sta. 145+04.72 to Sta. 150+97.81 and Sta. 116+53 to Sta. 145+04.72 and Sta. 150+97.81 to John R.	40 Stas.
*Seeding		3 Acres
SHOULDER BORROW (To be obtained from selected waste)	P.O.B. - P.O.E.	1330 Cyds.

The following items are estimated for the entire project to correct possible unstable subgrade conditions where designated by the Engineer.

Earth Excavation (Frost Heave)	1000 Cu. Yds.
**Borrow	1200 Cu. Yds.
Overhaul (Borrow)	600 Comp.Cu.Yd.Mi.
8" Sewer with Open Joints	3350 Lin. Ft.
Excavation (Waste from Sewer Trenches)	2100 Cu. Yds.
Porous Backfill, Grade 8 (Loose Measure)	770 Cu. Yds.
**Sand Gravel Backfill	1640 Cu. Yds.
Overhaul (Sand Gravel Backfill)	800 Comp.Cu.Yd.Mi.

*To be done by Maintenance Division
**Classed as Earth Excavation from Pit

PUBLIC UTILITIES

The following public utilities are represented on this project:

Telephone Poles	Michigan Bell Telephone Co.
Power Poles	Detroit-Edison Co.
Gas Mains	Consumers Power Co.
Water Mains	Royal Oak Township
Sewers	City of Hazel Park

The owners of existing poles and other service structures that are within grading limits and that will interfere with construction operations will move them to locations designated by the Engineer or will remove them entirely from the highway right of way.

Owners of public utilities will not be required by the Department to move additional poles and structures in order to facilitate the operation of construction equipment.

GENERAL PLAN NOTES

POLES

The exact location of poles will be determined by the Engineer.

PROPERTY OWNERS

Property owners' names, where shown, are for information only and their accuracy is not guaranteed.

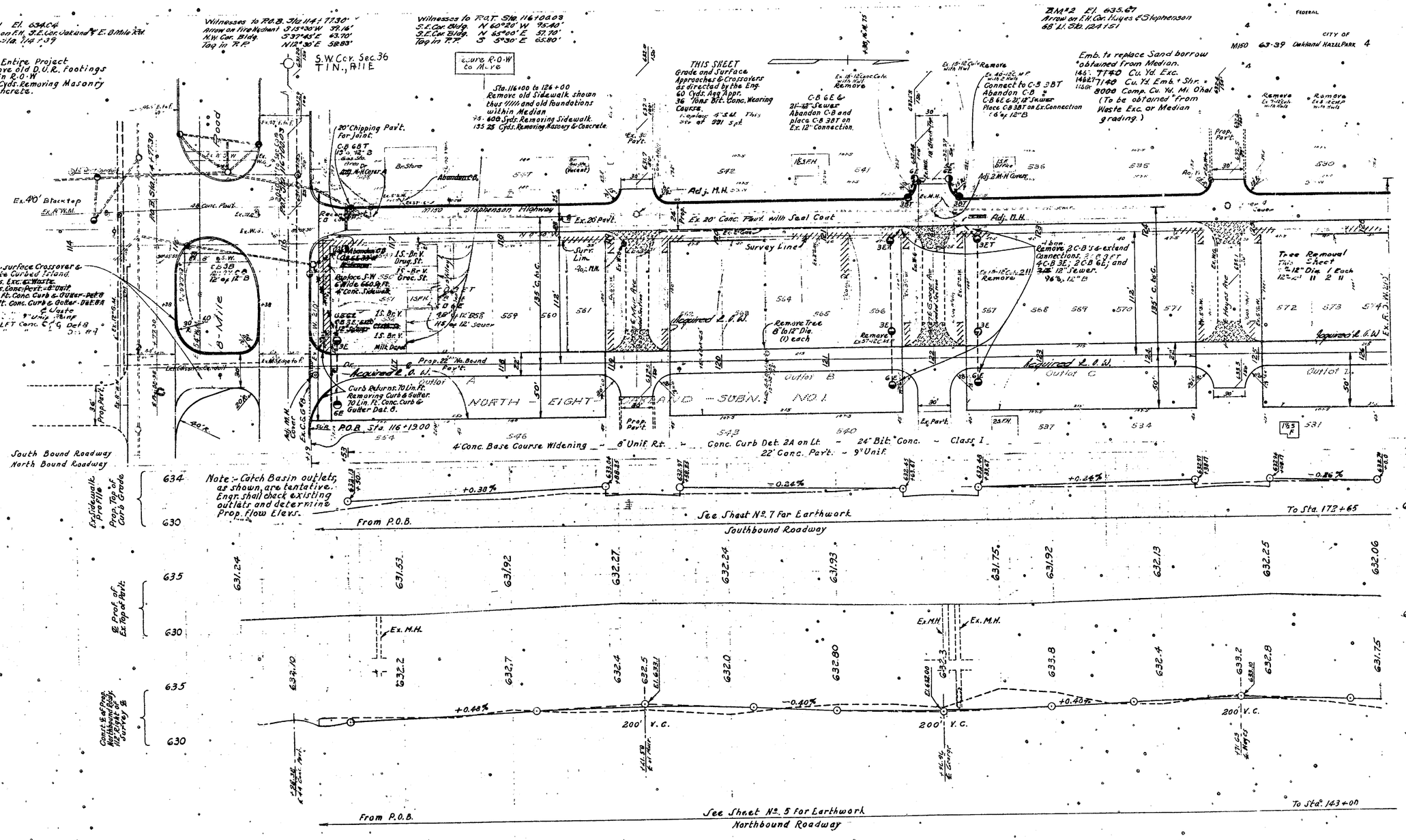
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SEC.	SHEET NO.	TOTAL SHEETS
7	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
150	63-39	Oakland	Hazel Park	3	
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SEC.	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

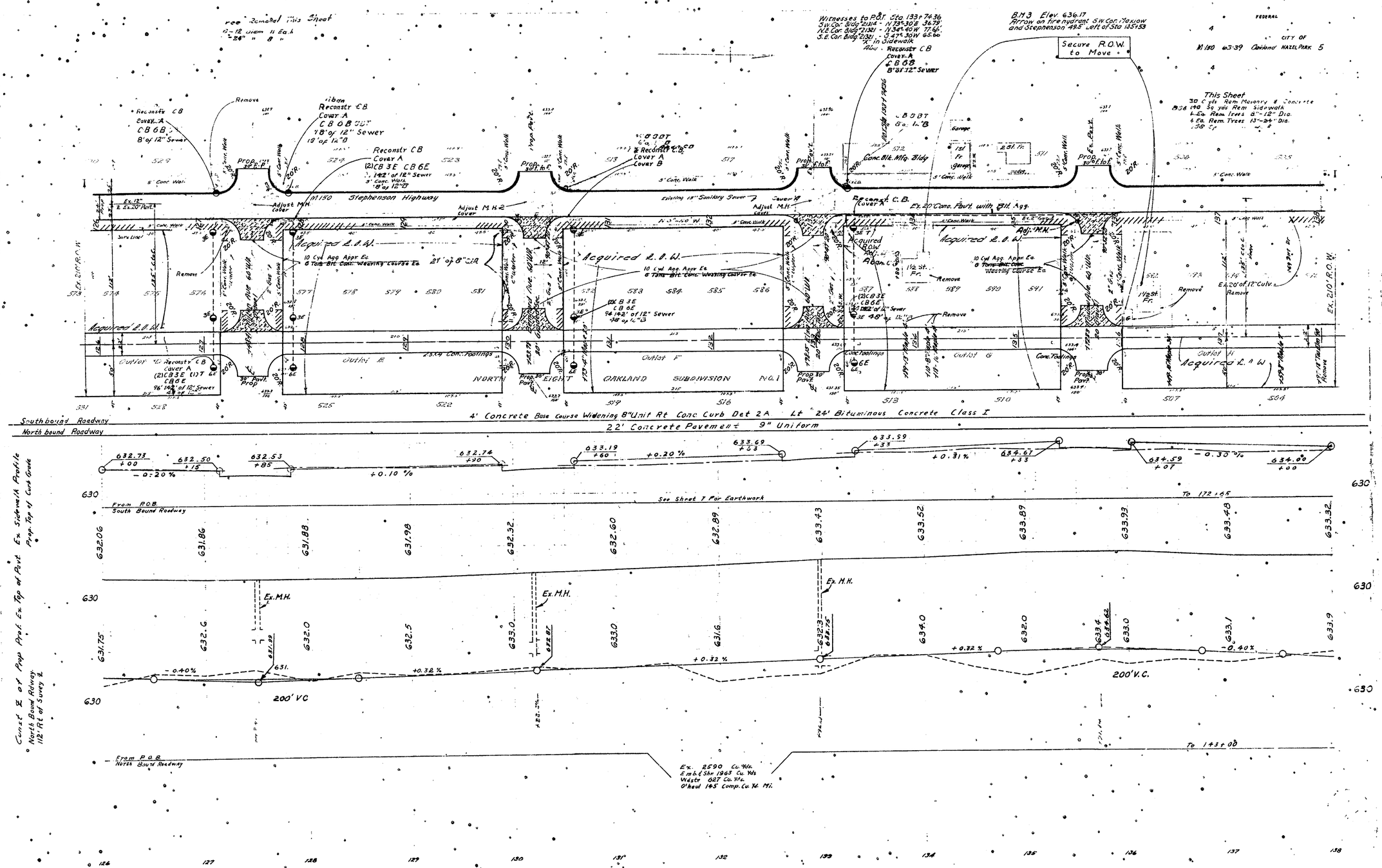
NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans they are to be constructed according to the Standard Plan given below opposite each item unless otherwise indicated.

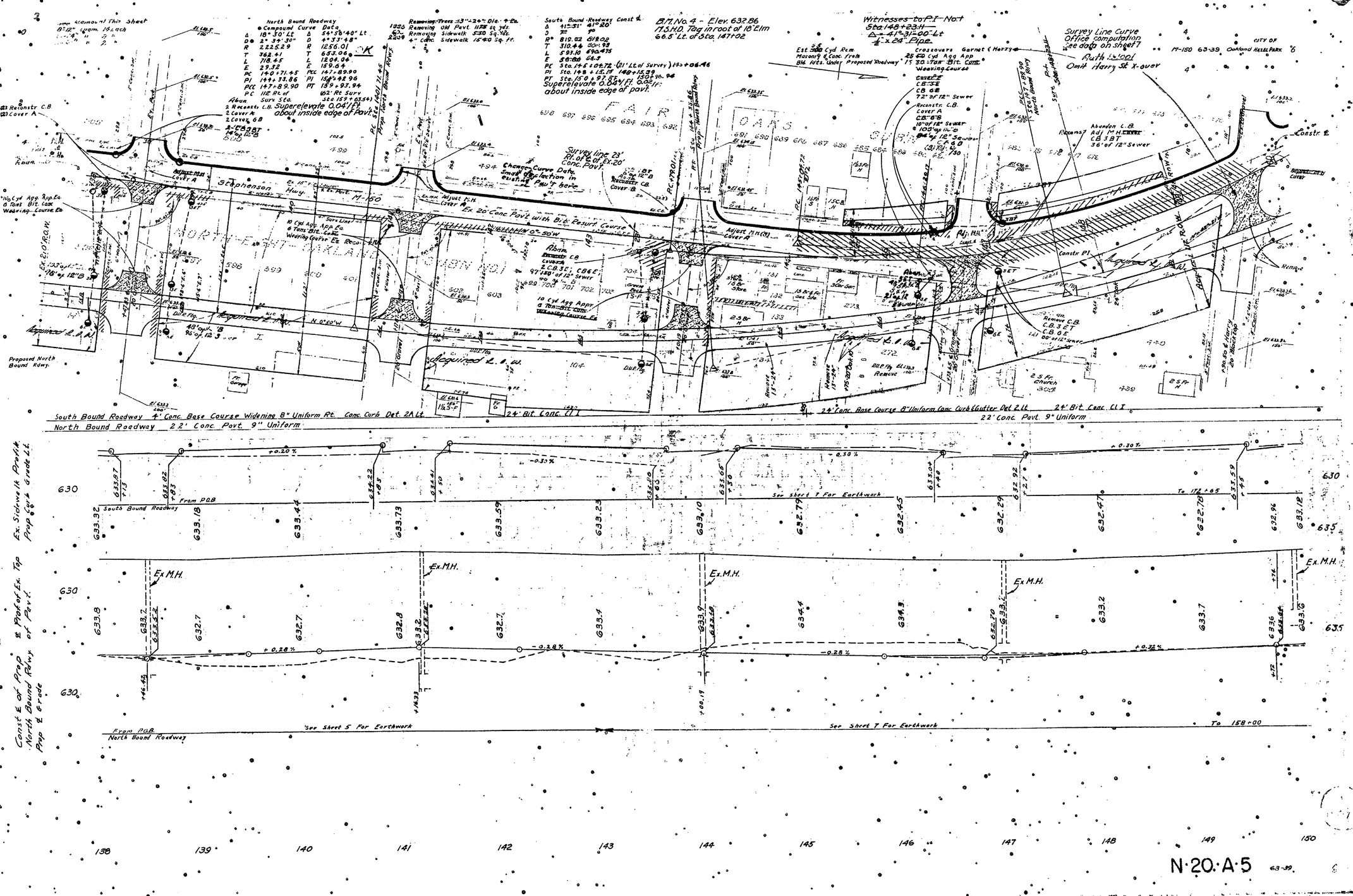
Sewer with Open Joints	E-4-A-9C, Detail 5 (except that Grade 8 Porous Backfill shall be used, and that the estimated sewer trench width shall be 36")
Pavement Reinforcement	E-4-A-21F
Manholes, Catch Basins and Inlets	E-4-A-27R-3
Cover A	E-4-A-27A-3
Cover B	E-4-A-27B-3
Cover E	E-4-A-27E-3
Concrete Curb, Roll Curb and Curb and Gutter	E-4-A-29D
Curb and Gutter Endings	E-4-A-29D, Detail 14
Driveway Returns and Driveway Openings	E-4-A-29D (Except that on Detail 18 the radius shall be 10')
Pavement Joints	E-4-A-33D
Superelevation of Curves	E-4-A-599-7 (except that rate of super. elevation is to be as called for on plans)
Pavement Crowns	E-4-A-899-7
4" Concrete Sidewalk	E-4-A-1108, Detail 2
Typical Joint Layout	E-4-A-127A
Tile Trap	E-4-A-129
Dowel Bar Installation for Load Transfer at Transverse Contraction Joints	E-4-A-130
Dowel Bar Installation for Load Transfer at Expansion Joints	E-4-A-131
Location of Transverse Expansion and Contraction Joints in Concrete Pavement	E-4-A-135A
Barricade and Project Sign	E-6-A-55E

FW:aj
4-6-53


BM #1 El. 634.04
Arrow on F.H. S.E. Cor. Oakland & E. 8 Mile Rd.
10' Lt. Sta. 114+39
Entire Project
Remove old D.O.R. Footings within R.O.W.
222 Cyds. Removing Masonry & Concrete.
Witnesses to P.O.B. Sta. 114+77.30'
Arrow on fire Hydrant S 15°30' W 39.16'
N.W. Cor. Bldg. S 37°45' E 63.70'
Tag in T.P. N 12°30' E 58.83'
Witnesses to P.O.T. Sta. 116+00.03
S.E. Cor. Bldg. N 60°20' W 95.40'
S.E. Cor. Bldg. N 65°00' E 57.70'
Tag in T.P. S 5°50' E 65.80'
S.W. Cor. Sec. 36 T1N., R11E
Future R.O.W. to Move
Sta. 116+00 to 126+00
Remove old Sidewalk shown thus ////// and old foundations within Median
75.600 Syds. Removing Sidewalk.
135.25 Cyds. Removing Masonry & Concrete.
BM #2 El. 635.67
Arrow on F.H. Cor. Hayes & Stephenson
68' Lt. Sta. 124+51
FEDERAL
CITY OF OAKLAND HAZELPARK
M150 63-39
THIS SHEET
Grade and Surface Approaches & Crossovers as directed by the Eng.
60 Cyds. Agg. Appr.
36 Tons Bit. Conc. Wearing Course.
Emb. to replace Sand borrow *obtained from Median.
146 C.Y. T140 Cu. Yd. Exc.
146 C.Y. 7140 Cu. Yd. Emb. + Shr.
1166 C.Y. 8000 Comp. Cu. Yd. Mi. Haul
(To be obtained * from Waste Exc. or Median grading.)
Connect to C-5 3BT
Abandon C-B
C-B 6E & 21.12" Sewer
Place C-B 3BT on Ex. Connection
Remove 2 C-B's & extend connections.
4 C-B 3E; 2 C-B 6E; and
96 L.F. 12" Sewer.
Remove Tree 8" to 12" Dia. (1) each
Tree Removal This Sheet
8-12" Dia. 1 Each
12"-24" 11 2 11
Ex. 40' Blacktop
Ex. 8" W.M.
Stephenson Highway
Ex. 20' Pavt.
Ex. 20' Conc. Pavt. with Seal Coat
Adj. M.H.
Survey Line
Required R.O.W.
Outlot A
Outlot B
Outlot C
Outlot D
NORTH - EIGHT - ACRES - SUBN. NO. 1
Grade & surface Crossover & complete Curbed Island.
100 Cyds. Exc. & Waste.
240 Syds. Conc. Pavt. - 8" Unif.
106 Lin. Ft. Conc. Curb & Gutter - Det. 8A
44 Lin. Ft. Conc. Curb & Gutter - Det. 8A
Curb Returns. 70 Lin. Ft.
Removing Curb & Gutter.
70 Lin. Ft. Conc. Curb & Gutter Det. 8.
P.O.B. Sta. 116+19.00
4" Conc. Base Course Widening - 8" Unif. Rt. - Conc. Curb Det. 2A on Lt. - 24" Bit. Conc. - Class I
22' Conc. Pavt. - 9" Unif.
South Bound Roadway
North Bound Roadway
Note:- Catch Basin outlets, as shown, are tentative. Engr. shall check existing outlets and determine Prop. Flow Elevs.
Existing Profile
Prop. Top of Curb Grade
+0.38%
-0.24%
+0.24%
-0.26%
From P.O.B.
See Sheet No. 7 For Earthwork
Southbound Roadway
To Sta. 172+65
Prof. of Ex. Top of Pavt.
Cont. & of Prop. Northbound Roadway 12" Pavt. of Curve B
+0.48%
-0.40%
+0.40%
200' V.C.
Ex. M.H.
From P.O.B.
See Sheet No. 5 For Earthwork
Northbound Roadway
To Sta. 143+00
N·20·A·5 63-39


Stephenson Highway
Acquired R.O.W.
Outlot E
Outlot F
Outlot G
Outlot H
NORTH EIGHT OAKLAND SUBDIVISION No. 1
Conc. Blk. Mfg. Bldg
Secure R.O.W. to Move
4' Concrete Base Course Widening 8" Unit Rt Conc Curb Det 2A Lt 24' Bituminous Concrete Class I
Southbound Roadway
North bound Roadway
22' Concrete Pavement ± 9" Uniform
See Sheet 7 For Earthwork
From P.O.B. South Bound Roadway
From P.O.B. North Bound Roadway
200' VC
200' V.C.
Ex. M.H.
Ex. 2590 Cu. Yds.
Emb. & Shr 1963 Cu. Yds
Waste 627 Cu. Yds.
O'haul 145 Comp. Cu. Yd. Mi.

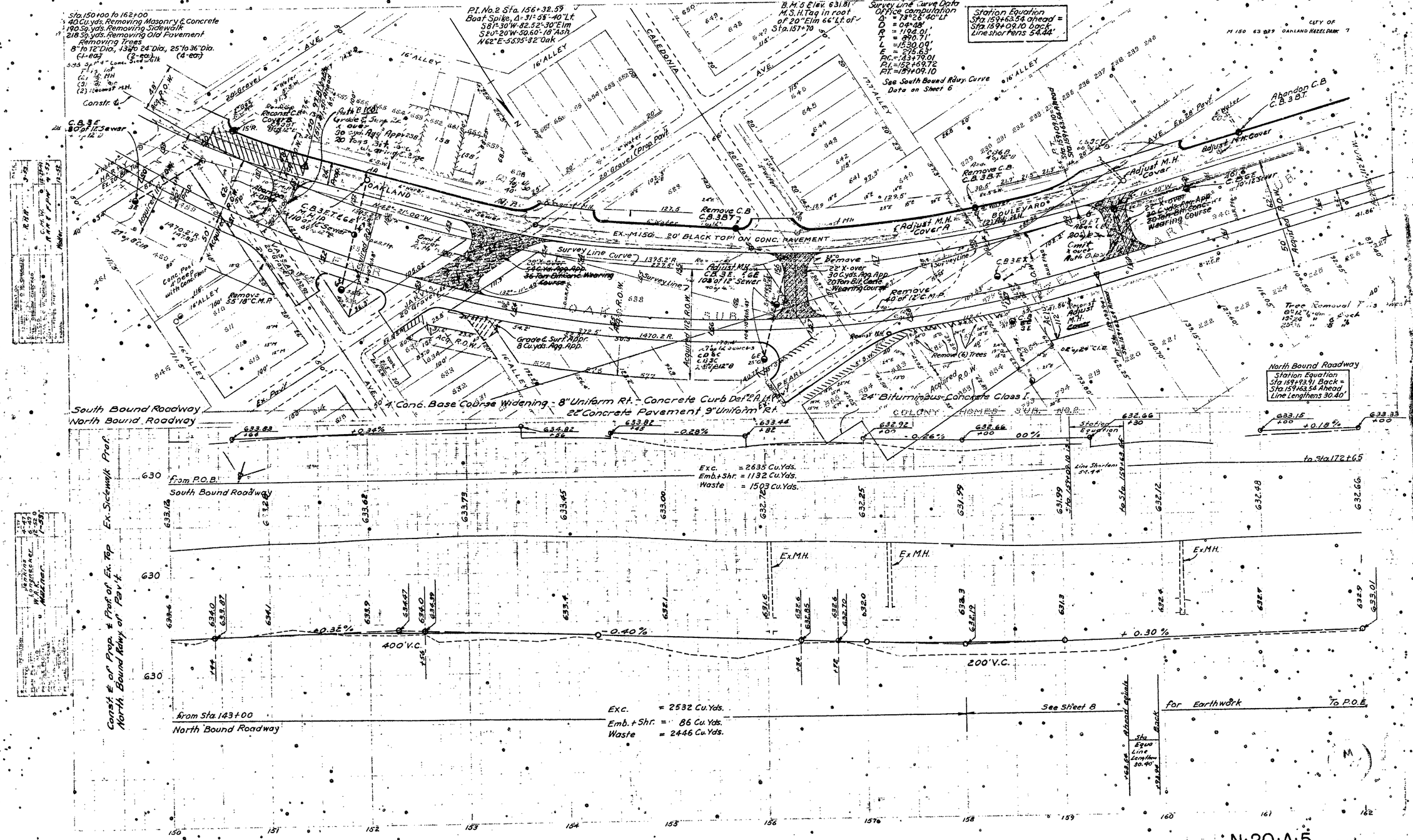
N·20·A·5 63-39 5

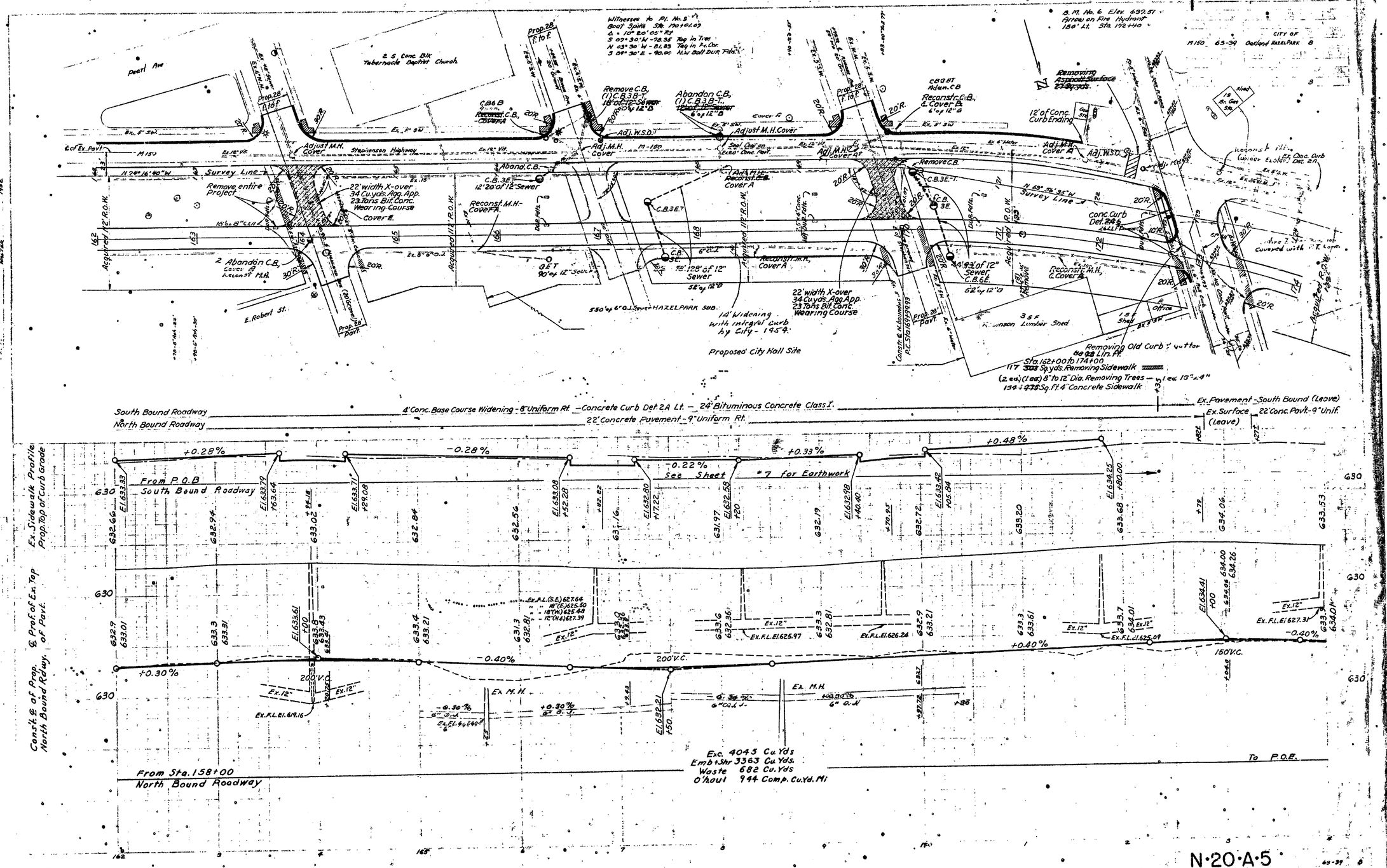


North Bound Roadway
Compound Curve Data
Δ 18° 30' Lt
D 2° 34' 30"
R 2225.29
T 362.41
L 718.45
E 29.32
PC 140+71.45
PI 144+33.86
PCC 147+89.90
PC 112 Rt of Surv Sta.
Δ 54°58'40" Lt
D 4°33'48"
R 1256.01
T 653.06
L 1204.04
E 159.64
PCC 147+89.90
PI 159+42.96
PT 159+93.94
(62' Rt Surv Sta 159+63.54)
Superelevate 0.04'/ft. about inside edge of Pavt.
Removing Old Pavt. 1175 sq. yds.
Removing Sidewalk 530 Sq. Yds.
4" Conc. Sidewalk 1540 Sq. ft.
South Bound Roadway Const ℄
Δ 41°31' 41°20'
D 7° 90
R 819.02 819.02
T 310.44 300.93
L 593.10 590.475
E 58.86 58.3
PC Sta. 145+04.72 (21' Lt of Survey) 145+06.46
PI Sta. 148+15.19 148+15.39
PT Sta. 150+97.84 150+96.94
Superelevate 0.04'/ft. about inside edge of pavt.
B.M. No. 4 - Elev. 632.86
M.S.H.D. Tag in root of 18" Elm
66.5' Lt. of Sta. 147+02
Witnesses to P.I. No. 1
Sta. 148+23.11
Δ = 41°31'00" Lt
½ x 24" Pipe
Crossovers Garnet & Harry
Survey Line Curve
Office computation
See data on sheet 7
Auth 1/1/001
Omit Harry St. X-over
Survey line 23' Rt. of ℄ of Ex. 20' Conc. Pavt.
Change Curve Data. Small deflection in existing Pavt here
Stephenson Hwy. M-150
Ex. 20' Conc. Pavt with Bit. Resurf. Course
Proposed North Bound Rdwy.
Acquired L.O.W.
South Bound Roadway 4' Conc. Base Course Widening 8" Uniform Rt. Conc. Curb Det. 2A Lt.
24' Bit. Conc. Cl. I
24' Conc. Base Course 8" Uniform Conc. Curb & Gutter Det. 2 Lt.
24' Bit. Conc. Cl. I
22' Conc. Pavt. 9" Uniform
North Bound Roadway 22' Conc. Pavt. 9" Uniform
Ex. Sidewalk Profile
Prop. Curb Grade Lt.
Const ℄ of Prop North Bound Rdwy Prop ℄ Grade
℄ Prof. of Ex. Top of Pavt.
From P.O.B. South Bound Roadway
See Sheet 7 For Earthwork
To 172+65
Ex. M.H.
From P.O.B. North Bound Roadway
See Sheet 5 For Earthwork
See Sheet 7 For Earthwork
To 158+00
630
635
138
139
140
141
142
143
144
145
146
147
148
149
150

N·20·A·5

63-39


Sta. 150+00 to 162+00
40 Cu. yds. Removing Masonry & Concrete
190 Sq. yds. Removing Sidewalk
218 Sq. yds. Removing Old Pavement
Removing Trees
8" to 12" Dia., 13 ea. 24" Dia., 25" to 36" Dia.
(1-ea.) (2-ea.) (4-ea.)
P.I. No. 2 Sta. 156+32.59
Boat Spike, Δ = 31° 55' 40" Lt.
S81°-30'W-82.52'-30" Elm
S20°-20'W-50.60'-18" Ash
N62°-E-56.95'-32" Oak
B.M. 6 Elev. 631.81
M.S.H. Tag in root
of 20" Elm 66' Lt. of
Sta. 157+70
Survey Line Curve Data
Office computation
Δ = 73°26'40" Lt
D = 04°48'
R = 1194.91'
T = 890.71'
L = 1530.09'
E = 275.63'
P.C. = 143+79.01
P.I. = 152+69.72
P.T. = 159+09.10
See South Bound Rdwy. Curve Data on Sheet 6
Station Equation
Sta. 159+63.54 ahead =
Sta. 159+09.10 back.
Line short pens 54.44'
CITY OF OAKLAND MAPEL PARK
M 150 63 039
Constr. ℄
C.B. 3 E.
80' of 12" Sewer
Reconst. C.B. Cover & B.
Grade & Surf. App.
30 cu. yds. Agg. App.
20 Tons Bit. Conc. Wearing Course
Remove C.B.
C.B. 3 B.T.
Adjust M.H. Cover
Remove C.B.
C.B. 3 B.T.
Adjust M.H. Cover
Abandon C.B.
C.B. 3 B.T.
Adjust M.H. Cover
EX. M150 20' BLACK TOP ON CONC. PAVEMENT
Survey Line Curve
Remove 20' X-over
30 Cu. yds. Agg. App.
20 Ton Bit. Conc. Wearing Course
Remove 40' of 12" C.M.P.
Remove C.B.
Remove 55' 18" C.M.P.
Grade & Surf. App.
8 Cu. yds. Agg. App.
Acquired 12' R.O.W.
Remove (6) Trees
Tree Removal
North Bound Roadway
Station Equation
Sta. 159+93.91 Back =
Sta. 159+63.54 Ahead
Line Lengthens 30.40'
South Bound Roadway
North Bound Roadway
4" Conc. Base Course Widening - 8" Uniform Rt. - Concrete Curb Det. P.D. 1
22" Concrete Pavement, 9" Uniform Rt.
24" Bituminous Concrete Class I.
COLONY HOMES SUB. NO. 2
Station Equation
+0.34%
-0.28%
-0.26%
00%
+0.18%
to Sta. 172+65
Exc. = 2635 Cu. Yds.
Emb. + Shr. = 1132 Cu. Yds.
Waste = 1503 Cu. Yds.
from P.O.B.
South Bound Roadway
Const. ℄ of Prop. ℄ Prof. of Ex. Top
North Bound Rdwy. of Pav't.
Ex. Sidewalk Prof.
Ex. M.H.
Ex. M.H.
Ex. M.H.
+0.32%
-0.40%
+0.30%
400' V.C.
200' V.C.
Exc. = 2532 Cu. Yds.
Emb. + Shr. = 86 Cu. Yds.
Waste = 2446 Cu. Yds.
from Sta. 143+00
North Bound Roadway
See Sheet 8
for Earthwork
To P.O.E.
Ahead
Back
Sta. Equa.
Line Lengthen 30.40'
150
151
152
153
154
155
156
157
158
159
160
161
162
N·20·A·5
63-39



Pearl Ave
Tabernacle Baptist Church
Stephenson Highway
Survey Line
Remove entire Project
22' width X-over 34 Cu.yds. App. App. 23 Tons Bit. Conc. Wearing Course
Cover E.
Abandon C.B.
Reconst. M.H. Cover A.
Remove C.B.
Adjust M.H. Cover
Adj. W.S.O.
Adjust M.H. Cover
Remove C.B.
Reconst. C.B., & Cover B.
12' of Conc. Curb Ending
Removing Asphalt Surface
Reconst. M.H., Cover A
Reconst. M.H., & Cover B
Conc. Curb Det. 2A Lt.
Acquired 112' R.O.W.
E. Robert St.
Prop. 28' Pavt.
14' Widening with integral curb by City - 1954
Proposed City Hall Site
22' width X-over 34 Cu.yds. App. App. 23 Tons Bit. Conc. Wearing Course
Removing Old Curb & Gutter
Sta. 162+00 to 174+00
117 Sq.yds. Removing Sidewalk
(2 ea.) (1 ea.) 8" to 12" Dia. Removing Trees — 1 ea. 13"x4"
134 Sq.ft. 4" Concrete Sidewalk
Ex. Pavement - South Bound (Leave)
Ex. Surface (Leave)
22' Conc. Pavt. - 9" Unif.
South Bound Roadway
North Bound Roadway
4' Conc. Base Course Widening - 8" Uniform Rt. — Concrete Curb Det. 2A Lt. — 24" Bituminous Concrete Class I.
22' Concrete Pavement - 9" Uniform Rt.
+0.28%
-0.28%
-0.22%
+0.33%
+0.48%
From P.O.B. South Bound Roadway
See Sheet #7 for Earthwork
Ex. Sidewalk Profile Prop. Top of Curb Grade
℄ Prof. of Ex. Top of Pavt.
Const. ℄ of Prop. North Bound Rdwy.
+0.30%
-0.40%
200' V.C.
150' V.C.
+0.40%
-0.40%
Ex. M.H.
Exc. 4045 Cu.Yds
Emb+Shr 3363 Cu.Yds.
Waste 682 Cu.Yds.
O'haul 944 Comp. Cu.Yd. Mi
From Sta. 158+00 North Bound Roadway
To P.O.E.
N·20·A·5

Witnesses to P.I. #4
Boot Spike Sta. 178+06.88
L 20° 42' 10" Rt.
S 85°30'W - 62.10' Tag in L.P.
S 45°00'W - 49.20' S.E. Cor. Bldg.
N 57°00'E - 60.70' Tag in T.P.

Witnesses to P.I. #5
Boot Spike Sta. 179+37.75
Δ 18° 15' 00" Rt.
N. 75°00'W 53.60' Tag in 24" Elm
S 31°30'W 44.00' Tag in L.P.
N 16°00'E 89.15' Tag in PP

B.M. #7 El. 635.06
Chiseled "X" N.E. Cor. Stop
39' Lt. Sta. 180+78

Witnesses to P.I. #6
Boot Spike Sta. 184+54.00
Δ 12° 54' 50" Rt.
S 23°20'W 72.60' Tag in Fe. Cor.
N 58°00'E 87.00' Tag in P.P.
N 8°30'E 58.99' Tag in P.P.

CITY OF Oakland PARKS DEPT. 9

N 150 63-39

Ex. Conc. Curb Det. 2A on Lt. this Sheet.

Ex. 24' Conc. Pavt. with BCC

Ex. 8" Storm Sewer

Ex. 12" Sewer

Ex. 10" Sewer

Acquired R.O.W.

John R. Road

Adj. M.H. Cover

Adj. M.H. Cover

Abandon C.B.

16 Cu. Yd. Agg. Appr.
10 Tons Bit. Conc. Wearing Course

10 Cu. Yds. Agg. Appr.
5 Tons Bit. Conc. Wearing Course

Survey Δ is in error
Original pkt. shows West R.O.W. line is 1520' R. Field adjustment necessary to maintain 80' c.to c.

Required 82' R.O.W.

Ex. Pavt.

9 Mile Rd. Inter.
176'-135' Removing Curb

45 22 Sq. Yds. Rem. Old Pavt.
38'-58' L.F. Conc. Curb Det. 2A.
45 22 Sq. Yds. Conc. Pavt. 8" Unif.
C.B. 3B
C.B. 6B
45'-142' of 12" Sewer
96' of 12" B

C.B. 3E
C.B. 6E
40'-98' of 12" Sewer
54' of 12" B

C.B. 6E
C.B. 3E
44'-92' of 12" Sewer
-8' of 12" B

C.B. 3B

C.B. 6B

Acquired R.O.W.

Mil 1A
2 C.B. 6E
10'-48' of 12" Sewer
48' of 12" B

23 F.H.

As Constructed
Δ = 60° 49'
D = 4°03'30"
R = 1412.11
T = 828.76
L = 1498.66
P.C. = 169+85.30
P.I. = 178+12.06
P.T. = 184+84.96
No Superelevation

This Sheet
7.3 Sq. Yds. Rem. S.W.

Tree Removal This Sheet
8" - 12" Diam. 2 Each
10" - 24" " 1 "

Proposed North Bound Rdwy.
Δ = 62°12'5" Rt.
D = 4°45'15"
R = 1345.18
T = 810.28
L = 1457.84
E = 224.48
Pc = 178+2.50
PI = 178+12.78
PT = 184+60.34 - 62' Rt.
Superelevate 0.04'/ft. about inside edge of pavt.

North Bound Rdwy. Conct. ℄

STATION EQUATION
Sta. 184+84.86
Sta. 185+47.16
Line shortens 60.30

S 85°-17'-50" - 184+05 R
Sta. 182+00 To 184+20
170 L.F. of 6" Sewer With Open Joints
28 Cu. Yds. Exc. & Waste
Remove 10 Cyds. Masonry & Concrete
" 114 Syds. Sidewalk
Place 855 Sq. Ft. 4" Conc. Sidewalk

Southbound Roadway
Northbound Roadway

Existing Pavement
22" Conc. Pavement 9" Uniform

Ex. Sidewalk Profile & Ground Profile

℄ Profile of Ex. Top. of Pavement

Const. ℄ of Prop. Northbound Rdwy.

630

633.65 633.72 634.08 634.49 634.57 634.42 634.07 633.82 633.45 633.45 633.44 633.93 634.04

Ex. M.H.

12" 12"

633.61 +5.6

633.9 633.6 633.9 636.10 +9.5 633.2 632.8 633.0 633.6 633.6 633.6 633.8 634.02 +7.4 633.54

-0.40% +0.40% -0.40% +0.38% -0.24%

150' V.C. 200' V.C. 150' V.C. 150' V.C.

3E

Filled

Prob. 6" O.J. Sewer @ +0.38%

Prob. F.L. 629.30

6" O.J. Sewer

℄ Gardena Ave. ℄ Woodcraft ℄ New Hite Ave.

FL 627.60

From Sta. 158+00 North Bound Roadway

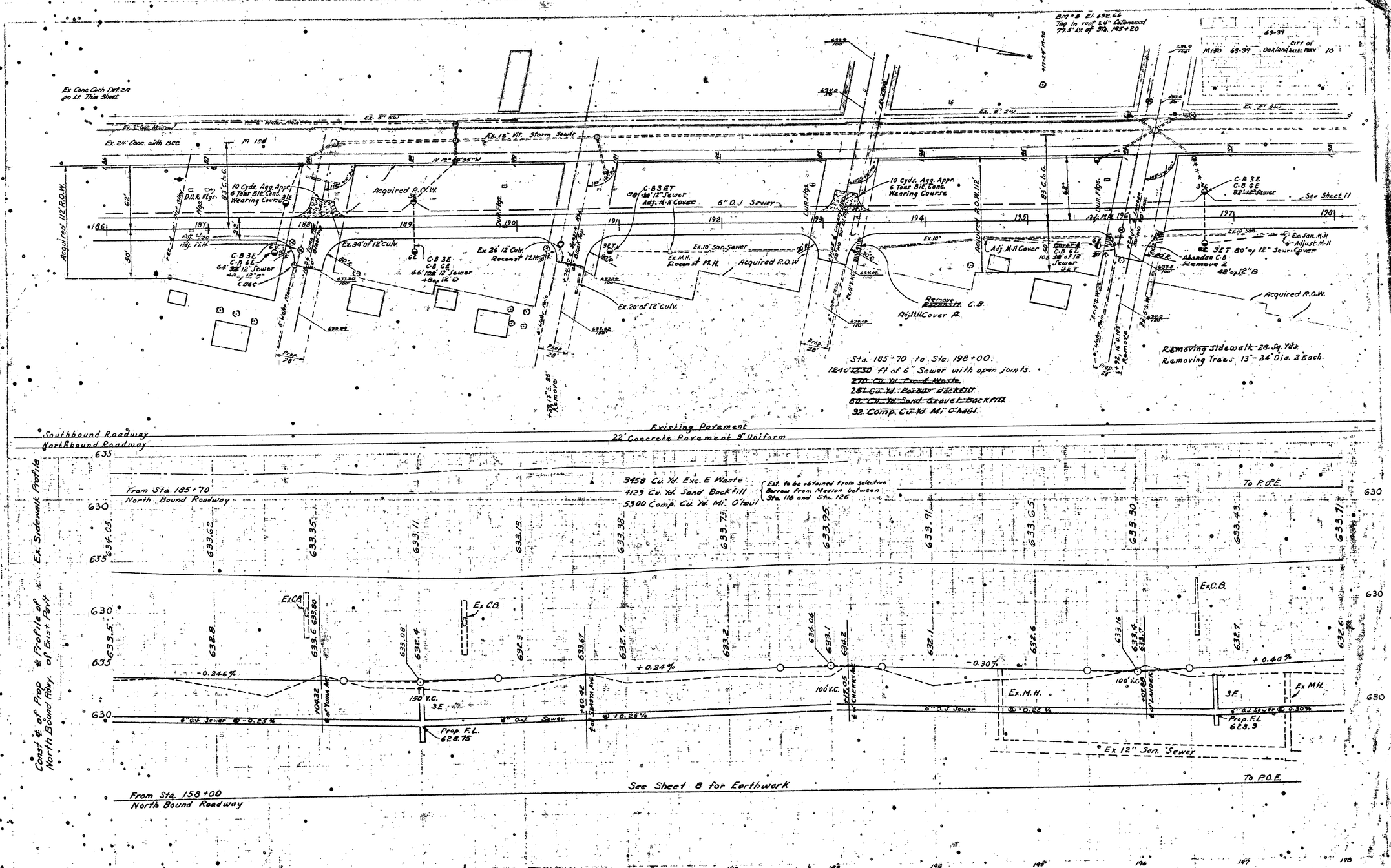
See Sheet 8 For Earthwork

To P.O.E.

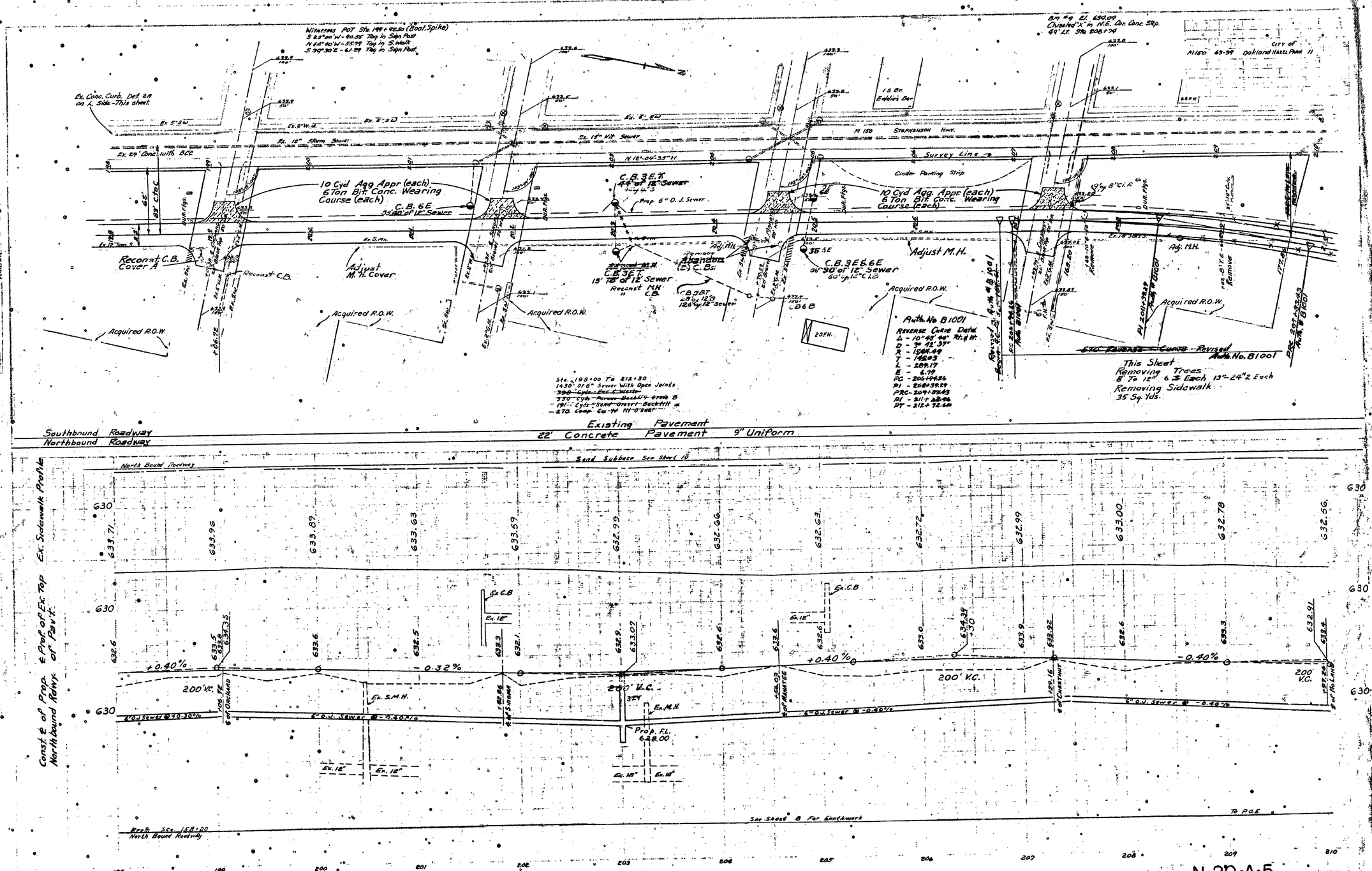
174 175 176 177 178 179 180 181 182 183 184 185 186

Units H.W.P.
W.A.K. 12-1952
Sanker-Hoener 12-52

N·20·A·5 63-39 9.

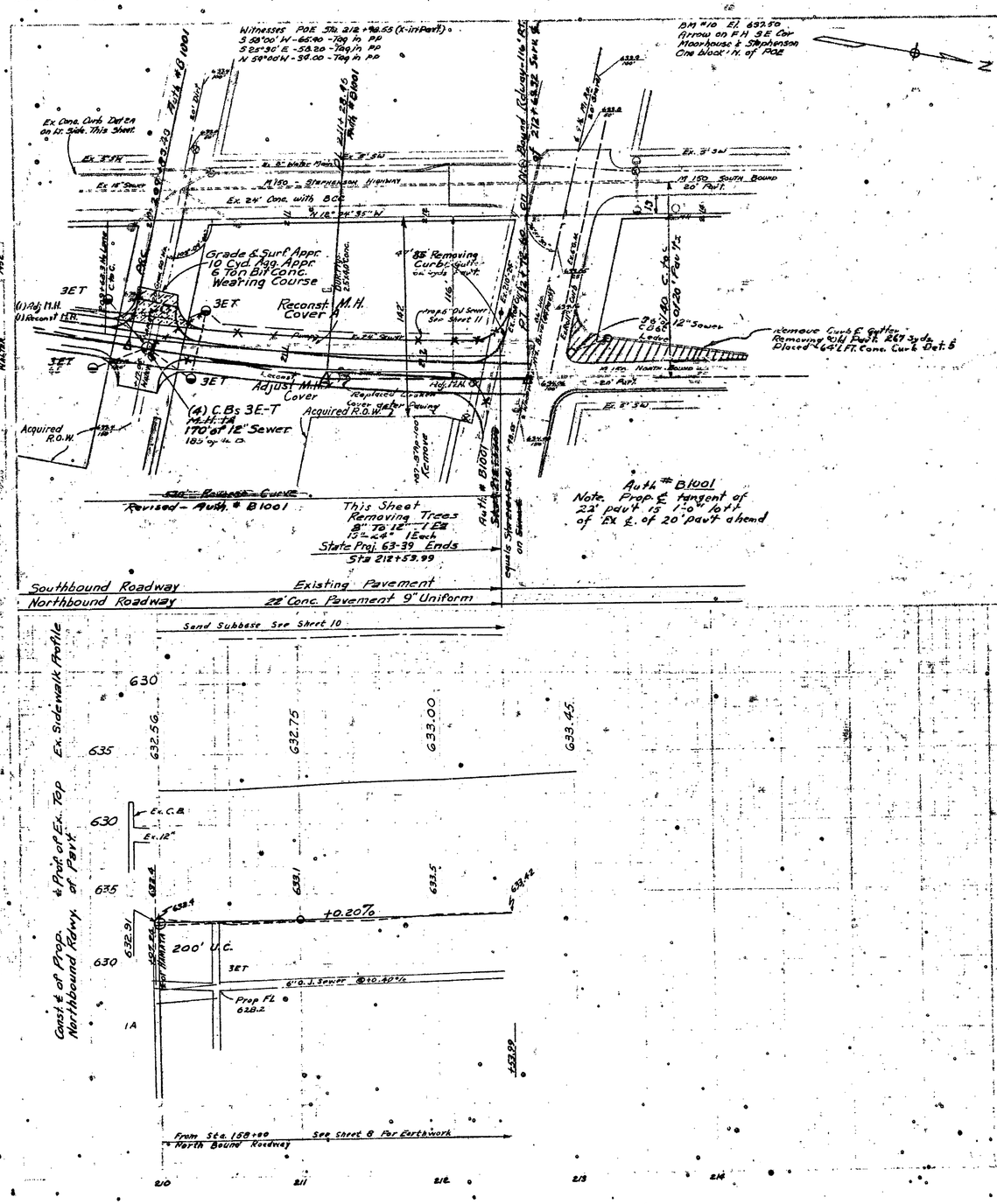


Sta. 185+70 to Sta. 198+00.
1240' 1230 ft of 6" Sewer with open joints.
270 Cu. Yd. Exc. & Waste
281 Cu. Yd. Porous Backfill
80 Cu. Yd. Sand Gravel Backfill
92 Comp. Cu. Yd. Mi. O'haul.
Removing Sidewalk - 28 Sq. Yds.
Removing Trees 13"-24" Dia. 2 Each.
Existing Pavement
22' Concrete Pavement 9" Uniform
Southbound Roadway
Northbound Roadway
From Sta. 185+70
North Bound Roadway
3458 Cu. Yd. Exc. & Waste
4129 Cu. Yd. Sand Backfill
5300 Comp. Cu. Yd. Mi. O'haul
Est. to be obtained from selective Borrow from Median between Sta. 116 and Sta. 126
To P.O.E.
Ex. Sidewalk Profile
Const. ℄ of Prop. North Bound Rdwy.
℄ Profile of Exist. Pavt.
-0.246%
+0.24%
-0.30%
+0.40%
Ex. C.B.
Ex. M.H.
Prop. F.L. 628.75
Prop. F.L. 628.9
Ex. 12" San. Sewer
See Sheet 8 for Earthwork
From Sta. 158+00
North Bound Roadway
To P.O.E.
N·20·A·5


Witness POT Sta. 199+92.50 (Boat Spike)
S 23°00'W - 40.58' Tag in Sign Post
N 64°00'W - 55.99' Tag in S. Walk
S 30°30'E - 61.89' Tag in Sign Post
Ex. Conc. Curb Det. 2A on L. Side - This sheet.
Ex. 5" S.W.
Ex. 8" W.M.
Ex. 12" Storm Sewer
Ex. 24" Conc. with BCC
Ex. 12" Vit. Sewer
N 12°04'35" W.
Survey Line
Cinder Parking Strip
10 Cyd Agg. Appr. (each) 6 Ton Bit. Conc. Wearing Course (each)
C.B. 6E
30'40" of 12" Sewer
C.B. 3E.T.
44'00" of 12" Sewer
Prop. 6" O.J. Sewer
Reconst. C.B. Cover A
Reconst. C.B.
Adjust M.H. Cover
Ex. S.M.H.
Acquired R.O.W.
Adj. M.H.
Remove
Abandon (2) C.Bs.
C.B. 3E.T.
15' 12" of 12" Sewer
Reconst. M.H.
C.B. 3E.T.
25'00" 12" 12.9
126.9' 12" Sewer
C.B. 6B
C.B. 3E.6.6E
26'90" of 12" Sewer
50' of 12" C.I.P.
Adjust M.H.
Auth. No. B1001
REVERSE CURVE DATA
Δ - 10°45'44" Rt. & Lt.
D - 3° 42' 37"
R - 1598.49
T - 149.03
L - 289.17
E - 6.79
PC - 206+94.26
PI - 208+39.29
PRC - 209+33.43
PI - 211+ 28.96
PT - 212+ 72.60
Revised Auth. No. B1001
Revised Auth. No. B1001
This Sheet
Removing Trees
8" To 12" 6 Each, 13"-24" 2 Each
Removing Sidewalk
35 Sq. Yds.
Sta. 198+00 To 212+30
1430' Of 6" Sewer With Open Joints
390 Cyds. Ex. & Waste
330 Cyds. Porous Backfill Grade B
191 Cyds. Sand Gravel Backfill
270 Comp. Co. At 11°0'00"
Existing Pavement
Southbound Roadway
Northbound Roadway
22' Concrete Pavement 9" Uniform
Sand Subbase See Sheet 10
North Bound Roadway
Const. ℄ of Prop. Northbound Rdwy.
℄ Prof. of Ex. Top of Pav't.
Ex. Sidewalk Profile
+0.40%
-0.32%
-0.40%
200' V.C.
6" O.J. Sewer @ -0.40%
Ex. S.M.H.
Ex. M.H.
Prop. F.L. 628.00
Ex. C.B.
Ex. 12"
Ex. 18"
6" S. NORTH
6" ORCHARD
6" MINATEE
6" CHESTNUT
See Sheet 8 For Earthwork
To P.O.E.
North Bound Roadway
198
199
200
201
202
203
204
205
206
207
208
209
210

N·20·A·5

63-39



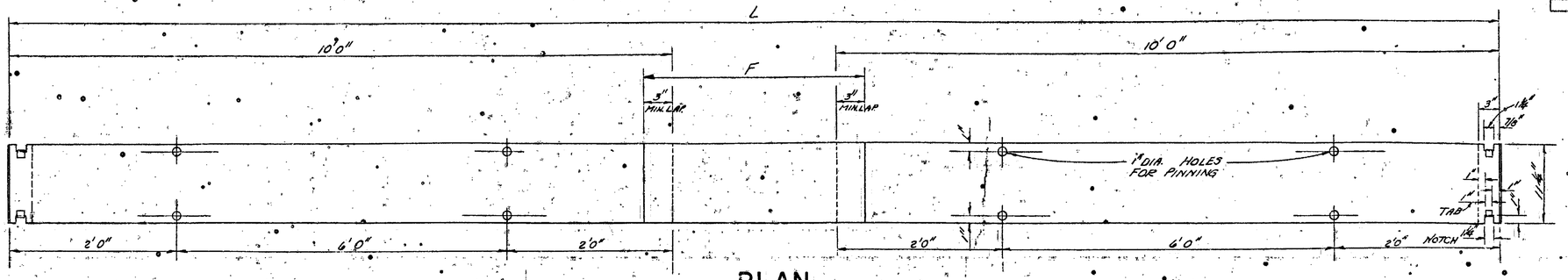
63-39

M150 63-39 Oakland City of Hazelpark 12

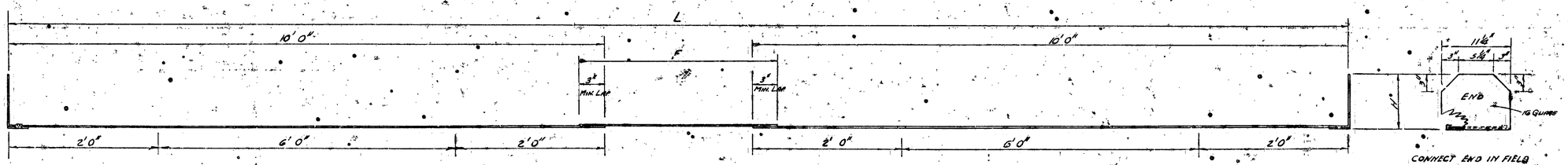
N·20·A·5 63-39 12

U.P. # CHY. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

U.P. # CHY. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN



CONNECT END IN FIELD

ELEVATION

L	F
24'0"	4'8"
22'0"	2'8"
20'0"	0'8"
11'0" Widening	1'4"
12'0" Widening	2'4"

10'0" LENGTHS ARE STANDARD

H
0'6½"
0'7½"
0'8½"
0'9½"

MATERIAL:

The base plate metal, shall be No. 16 gauge copper bearing steel having a 2-ounce uniform coating of prime spelter. The prime spelter coating shall be applied by the hot process to the base metal by an approved method which forms a perfect bond and amalgamation between the base metal and the coating and produces a finished sheet having an etched or matlike surface. The finished sheet, coated by any process, shall be free from spangles and shall withstand the forming and shaping required for the sheet without flaking or powdering of the coating.

Ref. Standard Plan E-4-A-1N M.S.H.D.

MICH. STATE HIGHWAY DEPT.

METAL SHIELD for EXPANSION JOINT

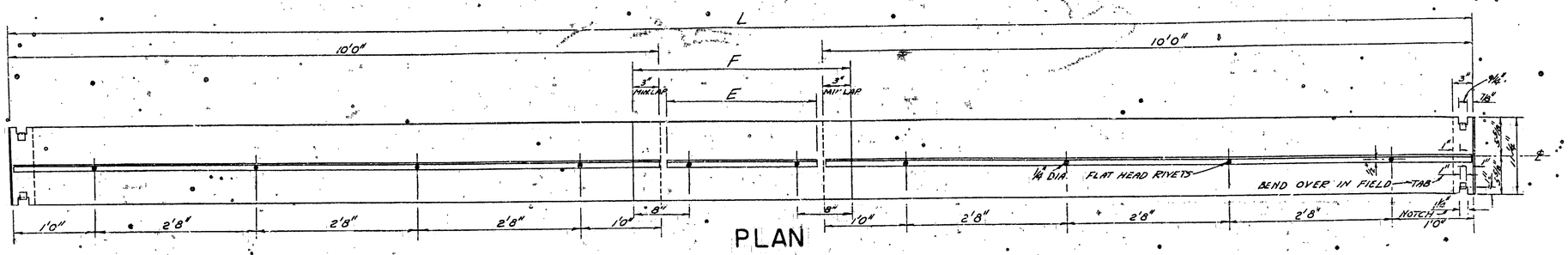
Rev. 1-2-53

Revised 2-3-53 R.H.R.

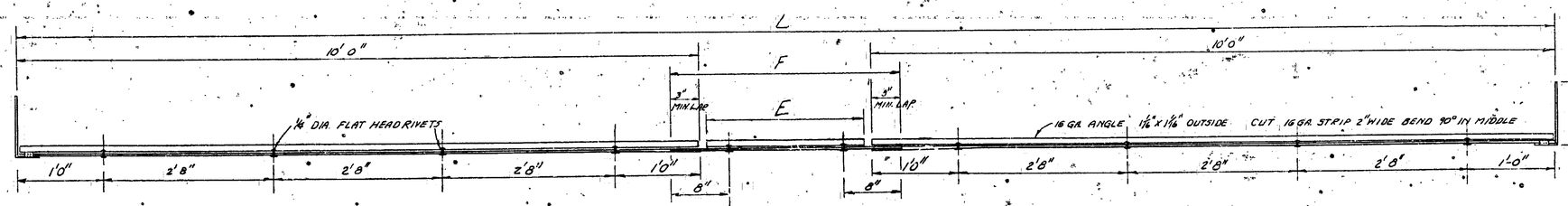
PLAN NO. E-3-A-449

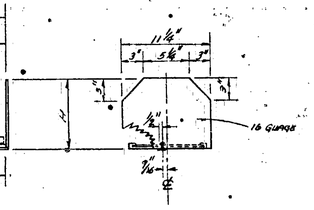
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

DIV. NO. SYM. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

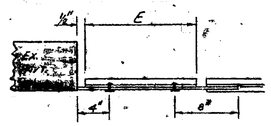


PLAN





ELEVATION



DETAIL for WIDENING

L	F	E
24' 0"	4' 8"	3' 11"
22' 0"	2' 8"	1' 11"
20' 0"	0' 8"	0' 0"
11'0" Widening	1' 4"	0' 11"
12'0" Widening	2' 4"	1' 11"

10'0" Lengths are Standard

H
0' 6 1/2"
0' 7 1/2"
0' 8 1/2"
0' 9 1/2"

MATERIAL:

The base plate metal shall be No. 16 gauge copper bearing steel having a 2-ounce uniform coating of prime spelter. The prime spelter coating shall be applied by the hot process to the base metal by an approved method which forms a perfect bond and amalgamation between the base metal and the coating and produces a finished sheet having an etched or mattlike surface. The finished sheet, coated by any process, shall be free from spangles and shall withstand the forming and shaping required for the sheet without flaking or powdering of the coating.

Ref. Standard Plan E-4-A-130 M.S.H.D.

MICH. STATE HIGHWAY DEPT.

METAL SHIELD for TRANSVERSE CONTRACTION JOINT

Rev. 1-2-53

FILE NO. DIV. NO. SYMBOL	E-3-A-450	STATE PROJECT	FEDERAL PROJECT	SHEET NO.

QUANTITY SHEET - D

FED ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
M-150	63-39	Oakland	Hazel Park	13	

AS PER PLANS

STA. TO STA.		LENGTH	WIDTH	Conc. Pav't 9" Unif. Sq. Yd.	Conc. Base Course 8" Unif. Sq. Yd.	Pav't. Reinforcement Sq. Yd.	Conc. Curb Det. 2 L. Ft.	Conc. Curb Det. 2A L. Ft.	Bituminous Bond Coat A.E 2 Gal.	Bituminous Binder Course Tons	Bituminous Conc. Wearing Course Tons	Aggregate Approach L.M. Cu. Yd.	Aggregate Shoulder L.M. Cu. Yd.	4" Conc. Side Walk Sq. Ft.	Removing Old Pav't. Sq. Yd.	Removing Masonry & Concrete Cu. Yd.	Removing Side Walk Sq. Yd.	Removing Curb Sq. Yd.	Asphalt Surface Sq. Yd.	Chipping Pav't. for Joint L. Ft.	REMARKS
8 Mile Rd.																					
Median				240																	
P.O.B.	126+00			2672	610	2672	142	784	408	231	208	60	215	660		25	600			20	
126+00	138+00			3253	876	3276	251	980	530	300	278	80	270			30	140				
138+00	145+04.72				577		188	435	321	182	139										
145+04.72	150+00				1542	1542	512		231	131	100				1175						
138+00	150+00			3418		3418					66	110	270	1540		100	530				
150+00	162+00			3448	840	3808	220	690	540	304	309	122	270		218	40	190				
162+00	174+00			3161	855	3161	263	834	480	275	254	68	270	975			303	98	27		
174+00	186+00			3016		2994		30			16	26	150		22		73	175			
186+00	198+00			3253		3253					24	40	150				28				
198+00	210+00			3253		3253					24	40	150				35				
210+00	,,			747		747					6	10	75					85			
Entire Proj. - D.U.R. Footings.																200					
TOTALS				26461	5300	28124	1576	3813	2510	1423	1424	556	1820	3175	1415	395	1899	358	27	20	

AS CONSTRUCTED

STA. TO STA.		LENGTH	WIDTH	Conc Pav't 9" Unif	Conc Base 8" Unif	Pav't Reinf	Conc Curb Det 2	Conc Curb Det 2A	Bituminous Bond Coat AE-2	Bituminous Binder Course	Bituminous Conc Wearing Course	Aggregate Approach L.M.	Aggregate Shoulder L.M.	4" Conc Side Walk	Removing Old Pav't	Removing Masonry & Conc	Removing Side Walk	Removing Curb	Removing Asphalt Surface	Chip Pav't Joints	EXPLANATION OF CHANGES
8 Mi	Road				41.0																
8 Mi	Median			465.6		465.6								191	2						
P.O.B.	126+00			2798.7	243.0	2842.7	142	784	460	230	170	60	230	140	34	135	957		5	49	
126+00	138+00			3276.1	892.8	3322.1	251	980	490	275	240	80	285	938	22		836			58	
138+00	145+00				811.5	236.5	188	435												58	
145+00	150+00				1565.0	1120.0	512							2055	1313		60				
138+00	150+00			3470.2		3470.2			477	280	260	110	306	154	22	55	443			24	
150+00	162+00			3758.6	762.8	3758.6	220	690	670	417	259	122	306	585	195	34	73			86	
162+00	174+00			3218.9	907.2	3218.9	243	834	850	400	390	68	306	1344			117				
174+00	186+00			3133.4		3133.4		38	10		4	26	165	855	49	15	114	176	52		
186+00	198+00			3386.2		3386.2						40	165		21						
198+00	210+00			3444.5		3444.5			75		37	40	165	610					104	20	
210+00	P.O.E.			937.4		937.4						10	83		62						
N. of	P.O.E.														267						
Ent Proj	DUR. Footings															222					
				Auth. I-1005 J-1006 R-1010	Auth. R-1011	Auth. I-1005 R-1011	Auth. R-1011	Auth. R-1011	Auth. I-1005 5-1012	Auth. I-1005 K-1007 5-1012	Auth. I-1005 5-1012	Auth. R-1011	Rec'd	Auth. I-1005 J-1006 R-1011	Auth. I-1005 R-1011	Auth. R-1011	Auth. I-1005 J-1006 R-1011	Auth. I-1005 R-1011	Auth. 5-1012	Auth. I-1005 5-1012	
TOTALS				27888.5	5220	29335	1576	3821	3032	1602	1360	556	2011	6872	1987	461	2600	176	161	289	

MANHOLES, CATCH BASINS, INLETS (EACH) - SEWER (LIN. FT.)

AS PER PLANS

STA. TO STA.		1A	3B	6B	3E	6E	Covers A	Covers B	Covers E	Tile Trap	Adj MH Cover	Adj CB Cover	Adj Man. H.S.O.	Reconstruct C.B.	Reconstruct M.H.		12" Sewer	Removing C.B.	Abandoning C.B.
P.O.B.	117+00			1	1	2					2						153		2
122+00	L&R		2		4	4				2	2						357	2	2
127+48	L&R			2	4	2	4				1			4			300		
130+24	L&R				2	1	1	1			1			2			142		
133+00	L&R				2	1	2				1			1			142		
138+40	L&R			2	4	2	4				1			4			300		
141+18											1								
144+01					1	1	1	1			1			2			130		
146+74	L&R		1	1	2	2	1		1	2	1			1			178		1
149+90											1								
150+00	L&R				1			1						1			80		
152+05		1			1	1				1							110		
156+00	157+00		1		1	1				2	1						103	1	
158+00	159+00		1		1	1				2	2							1	
160+00	161+50		1			1	1			1	2						10		1
164+00									1		1								1
165+75							1								1				
166+85			1		2		1			1	1		1	1			38	1	1
168+20			1		1		1			1	1			1			140		1
168+55							1								1				
169+60					2	1		1		2	1			1			93	1	
171+00	173+00						1				1		1		1				
173+90		1				2											48		
176+30											1								
178+20											1								1
182+31					2	2											180		
185+37	R		1	1													148		
187+70					1	1											92		
189					1	1											106		
190+90					1					1	1						60		
194+60											1								
195+70						1	1										14		1
196+70					1	1											82		
197+50											1								
198+85	R						1							1					
200+50											1						40		
201+55						1											62		
203+15					2					2	1						90		2
204+00	206+00				1	1					1						170		
210+00	P.O.E.	1			4		1			4	1				1				
TOTALS		3	9	7	42	30	22	4	2	21	31	•	2	19	4		3368	6	13

AS CONSTRUCTED

STA. TO STA.		MH 1A	3B	6B	3E	6E	3C	6C	COVERS A	COVERS B	COVERS E	Tile Traps	Adj MH Cover	Adj Mon & w/SO	Reconstruct M.H.	Reconstruct C B	12" Sewer	12" Cl B Sewer	Remove C.B.	Abn C.B.	8" Cl A Sewer	24" Cl.B	EXPLANATION OF CHANGES
P.O.B	117+00		1	1	2	1			2			2				1	115	73		1			Abj C.B Cover / Cover D
119+23	Int.												2				211	162		4			
122+00	Int L&R		2		5	3						4	3										
124+73	Int								1				2										
127+48	L&R		2		4	2			2			4	3			2	220	109		2			
130+23	L&R		1		2	1			1			2	2			1	94	54		1	27		
133+00	L&R		1		2	1			2			2	1	1		1	94	56		2			
135+73	L&R												1										
138+98	L&R		2		4	2			2			4	4		1	1	204	110		3			
141+18									1				1		1		97	64		2			
144+01	L&R		1		2	1			1			2	3							3			
146+79	L&R		1	1	2	2			1			3	1	3	1	1	117	199					
150+00	L&R		1		1							2	2	3	2		28	57	1		27		
152+20	155+00	1			1	1						1	1	2	1		44	69					
155+00	158+00		1		1	1	1	1	1			2	2		2		75	83	2	3		52	
158+00	162+00		1	1	3		2					3	3		1		20	72		2	18		
164+00	R&L								1				1		1					2			
165+80	167+00		1	1	2							3	1		1		102	50	1	1			
167+50	168+20		1		2				2			2	2				78	58					
168+55	R								1						1								
169+60	L&R		1		2	1			1			2	1				44	58	1	1			
171+00	174+00								1				1	1	2								
174+00		1			1	1						1					10	48					
176+50	R												1							1			
178+20	R												1										
181+00	183+00R&L				2	2											84	102					
185 (9M)	Int.		1	1									1				45	96					
187+00	188+00				1	1		1					1	1			64	48					
189+00					1	1											46	48					
190+00	192+00				1							1			2		88						
193+30	R												1						1				
194+60													1										
196+00					1							1	1				105			2			
196+50	197+60				2							1	1				90	48					
199+00	R								1							2							
200+50													1										
201+60						1											33						
203+00					2							1				1	15	48					
203+10	204+60R		1	1								1	1				126	28		2			
204+80	210+00				1	1							2				36	50					
210+00	P.O.E.				3	1			2			2	3		3			185					
213+00	213+50																136						
TOTALS		2	19	6	50	24	3	3	23	0	0	46	52	11	20	10	2311	1965	10	28	81	52	0 / 0

AS PER PLANS STATION	DETAIL NO.			AS CONSTRUCTED STATION	DETAIL NO.				REMARKS
TOTALS				TOTALS					

MISCELLANEOUS

AS PER PLANS		AS CONSTRUCTED		
MONUMENT BOXES =	EACH	MONUMENT BOXES =	EACH	
*CLASS SEEDING =	ACRES	=		
*To be done by Maintenance Division				
Shoulder Borrow Cyds.	1330	Shoulder Borrow Cyds	2936	Auth. 5-1012
Conc. Curb & Gutter Det. 8 L. Ft	106	Conc. Curb & Gutter Det 8 L.Ft	347	Auth. J-1006 R-1011
Conc. Curb & Gutter Det. 8A L. Ft	44	" " " " 8A "	11	Auth. J-1006
Removing Curb & Gutter L. Ft	70	Removing Curb & Gutter L.Ft	361	Auth. I-1005 J-1006
Seeding*	3 Ac.			

LENGTH OF 22' FOOT PAVEMENT	= 1.818	MILES
" " 24 " "	= 1.043	"
" " " "	=	"
" " " "	=	"
TOTAL LENGTH OF MUNICIPAL SHARE	=	"
TOTAL LENGTH OF PROJECT	= 1.818	"

PLAN ESTIMATE BY ______ DATE ______ CHECKED BY ______ DATE ______ DATE ______

DATA COMPLETED C. J. Kole PROJ. ENG. DATE 1-29-54

HISTORY CHECKED ______ ENTERED ON PLANS BY [illegible] DATE 5/12/54

FILE NO. USE NO. 150 STENCIL N-20-A-5 STATE PROJECT 63-39 FEDERAL PROJECT SHEET 15

QUANTITY SHEET-F

D.P.W. DIV. NO.	STATE	FROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
ROUTE	HIGH STATE PROJECT	COUNTY	CITY	SHEET NO	TOTAL SHEETS
M-150	63-39	Oakland	Hazel Park	14	

CULVERTS

AS PER PLANS

CULV. NO.	STATION	STANDARD PLAN		SIZE	LENGTH	GRADE A CONCRETE CU. YDS.	STEEL REINF. LBS.	LIN. FT. CIRC. CLASS A	LIN. FT. CIRC. CLASS B
TOTAL CULVERTS 20 FT. SPAN OR UNDER									
TOTAL CULVERTS OVER 20 FT. SPAN									

AS CONSTRUCTED

CULV. NO.	STATION	STANDARD PLAN		SIZE	LENGTH	GRADE A CONCRETE CU. YDS.	STEEL REINF. LBS.	LIN. FT. CIRC. CLASS A	LIN. FT. CIRC. CLASS B	EXPLANATION OF CHANGES
TOTAL CULVERTS 20 FT. SPAN OR UNDER										
TOTAL CULVERTS OVER 20 FT. SPAN										

GUARD RAIL

AS PER PLANS

STA. TO STA.	CABLE G. RAIL LIN. FT.	GUARD POSTS EACH	EXPANSION TAKEUPS EACH	BRACED END PANELS EACH
TOTALS				

AS CONST.

STA. TO STA.	CABLE G. RAIL LIN. FT.	GUARD POST EACH	EXPANSION TAKEUPS EACH	BRACED END PANELS EACH	EXPLANATION OF CHANGES
TOTALS					

GRADING

AS PER PLANS

STA. TO STA.	EARTH EXC. CU. YDS.	BORROW CU. YDS.	ROCK EXC. CU. YDS.		EMB. + SHR. + LOSS CU. YDS.	WASTE CU. YDS.		OVERHAUL COMP. CU. YD. MIS.
SOUTH BOUND ROADWAY								
P.O.B.-172+35	2635					1132	1503	
8 Mi. Median								
NORTH BOUND ROADWAY								
Roadway								
P.O.B.-143+00	2590					1963	627	145
143+00-158+00	2532					86	2446	
158+00-P.O.E.	4095					3363	682	944
Subbase								
	3458	4129				4129	3458	5300
6" Sewer Trenches								
183+00-P.O.E.	696	271				271	696	362
Misc. Est.	2100	1540				1540	2100	800
Restoring Borrow Pit								
	7140					7140		8000
Frost Heave (Misc. Est.)								
P.O.B.-182+00	1000	1200				1200	1000	600
TOTALS	26196	7140				20824	12,512	16151

AS CONSTRUCTED

STA. TO STA.	EARTH EXC. CU. YDS.	BORROW CU. YDS.	ROCK EXC. CU. YDS.		EMB. + SHR. + LOSS CU. YDS.	WASTE CU. YDS.		EXHAUL COMP. CU. YD. MIS.	EXPLANATION OF CHANGES
SOUTH BOUND ROADWAY									
	539					258			
NORTH BOUND ROADWAY									
Roadway									
	6236				24256			11680	
	1579	211			1790			108	
	6980				6980				
Subbase									
	4583	5646			5646			7466	
6" Sewer Trenches									
	1017	489			489			520	
	421	209			209			160	
Topsoil Removal & Replacement									
	2721	3828						3272	
Strip Borrow									
	1720								
TOTALS	29250	14627			43619	258		25561	

Auth. O-1009 Pg. 21

Auth. O-1009 Pg. 21

FILM ESTIMATE BY F.P.W. & R.H.R. DATE 4-1-53 CHECKED BY ____ DATE ____ DATA COMPLETED C.J. Kole DATE ____

6" SEWER WITH OPEN JOINTS

AS PER PLANS

STA. TO STA.	6" O.J. L. Ft.	Porous Backfill Gravel Backfill Cyd(in)	Sand Backfill Cyd	
182+40 189+20	180	34		
185+70 198+00	1230	281	80	
198+00 212+30	1430	330	191	
Misc. Est.				
P.O.B. 182+00	3350	770	1540	
			1811	
TOTALS	6190	1415		

AS CONSTRUCTED

STA. TO STA.	6" O.J. L. Ft.	Porous Backfill Grade B Cyd(in)	EXPLANATION OF CHANGES
164+85 170+95R	550	122	
178+50 184+08R	558	124	
182+65 184+35L	170	38	
185+60 192+00L	640	142	
192+00 197+00L	500	111	
197+00 203+00L	600	133	
203+00 209+35L	635	142	
209+35 210+40L	105	23	
210+40 213+25R	130	42	
Included as borrow			
TOTALS	3948	877	

Auth. O-1009

Auth. O-1009

DATE 1-29-54

REMOVING TREES (EACH)

AS PER PLANS

STA. TO STA.	8"-12" Dia.	13"-24" Dia.	25"-36" Dia.
P.O.B. 126+00	1		
126+00 138+00	1	4	
138+00 150+00		4	
150+00 162+00	1	8	4
162+00 174+00	1		
186+00 198+00		2	
198+00 210+00	3		
TOTALS	7	12	4

AS CONSTRUCTED

STA. TO STA.	8"-12" Dia.	13"-24" Dia.	25"-36" Dia.	EXPLANATION OF CHANGES
P.O.B. 126+00	1	2		
126+00 138+00	1	8		
138+00 150+00	1	8	2	
150+00 162+00	2	6	5	
162+00 174+00	2	1		
174+00 186+00	2	1		
186+00 198+00		2		
198+00 210+00	6	2		
210+00 P.O.E.		1		
Auth. F-1003				
Auth. F-1003				
Auth. F-1003				
TOTALS	38	31	7	

MISCELLANEOUS

AS PER PLANS	AS CONSTRUCTED	EXPLANATION OF CHANGES
Fine Grading & Cleanup (4' Widening & Curb) 49 Sta.	Fine Grading & Cleanup (4' Widening & Curb) 49 Sta.	
Fine Grading & Cleanup (22' & 24' Width Pavt.) 102 Sta.	Fine Grading & Cleanup (22' & 24' Width Pavt.) 102 Sta.	
EXTRA		
Conc Patching 610.5 Sq.Yds @ $10.50	$6410.25	Auth. O-2003
Conc Curb Det 5 288.5 Lft @ 2.50	721.25	Auth. H-2003
& Gutter Det 6 262 Lft @ 2.50	655.00	Auth. H-2003
Length		

HISTORY CHECKED DATE
ENTERED ON PLANS MACHINE & CHECKED DATE 3/12/53

N-20-A-5 63-39

N-20-A-5
63-39

124

T-27-C-3

63174
63-39 C5,6
63174
63-39 C5+6

CS: 63174

ID: 63-39 C5 C6 T-27-C-3

BORROW REQUIREMENTS

WHERE REQUIRED STA. TO STA.	AMOUNT REQUIRED	AMOUNT AVAILABLE	SOILS SERIES	PIT LOCATION

MICHIGAN
STATE HIGHWAY DEPARTMENT

CHARLES M. ZIEGLER

STATE HIGHWAY COMMISSIONER

PLAN AND PROFILE OF PROPOSED

STATE PROJECT 63-039

OAKLAND COUNTY

CITY OF ROYAL OAK

TROY TOWNSHIP

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY-TWP.	SHEET NO.	TOTAL SHEETS
M-150	63-39	Oakland	Royal Oak-Troy	1	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

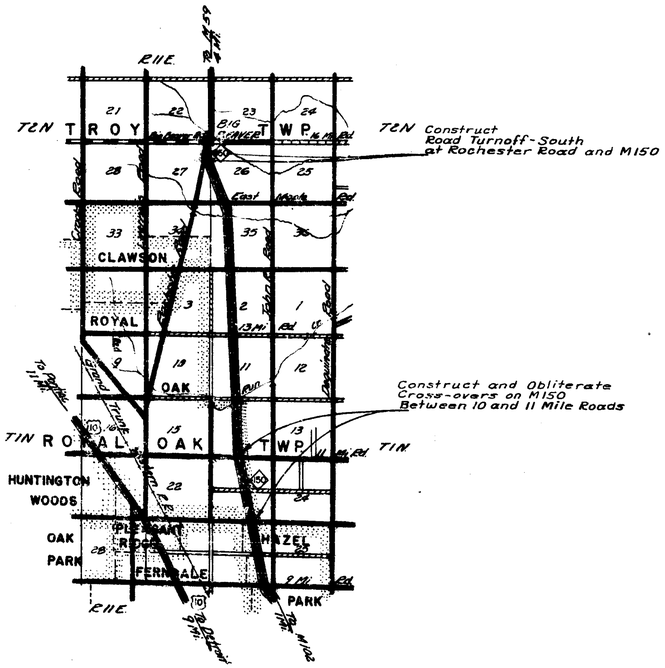
INDEX OF SHEETS

1-TITLE SHEET

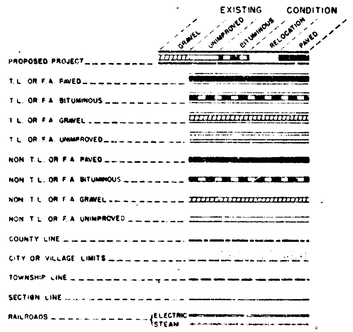
3-4 PLAN " (CROSSOVERS)
5-PLAN " (TURNOFF)

STANDARD PLANS

E-4-A-26D
E-4-A-75C-2
E-6-A-55E



TITLE SHEET LEGEND



Approved For R.O.W. only
By C. A. Weber 10-3-55
Deputy Commissioner - Chief Engr.

CONTRACT FOR Grading & Surfacing Cross-overs - Asph. Surf. Course & Bit. Concrete
Grading & Surfacing Turnoff - Asph. Surf. Course & Bit. Concrete

DIVISION APPROVAL

CHECKED	Carl J. Hueller, CHIEF ROAD DRAFTSMAN	11-15-55 DATE
CHECKED	ASS'T ENGINEER OF ROAD DESIGN	DATE
RECOMMENDED FOR APPROVAL	F. R. Lamoreaux, ENGINEER OF ROAD DESIGN	11-16-55 DATE
RECOMMENDED FOR APPROVAL	N. Rautter, CONSTRUCTION ENGINEER	11-16-55 DATE
APPROVED	C. H. Old, ROAD ENGINEER	11/17/55 DATE

BRIDGE DIVISION APPROVAL

RECOMMENDED FOR APPROVAL	N. E. Jones, ASS'T ENGINEER OF BRIDGE DESIGN	11-17-55 DATE
APPROVED	H. L. Pepper, BRIDGE ENGINEER	11-17-55 DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED CHARLES M. ZIEGLER, STATE HIGHWAY COMMISSIONER

BY C. A. Weber, DEPUTY COMMISSIONER - CHIEF ENGINEER B — 11-15-55 DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL

[redacted]

DISTRICT ENGINEER — DATE

APPROVED

[redacted]

DIVISION ENGINEER — DATE

63-39 C 5-6

FILE NO.			
1.00-300 STA-300	T-27-C-3	PAR. INDEX 63-39	PROJECT

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
M-150	63-39	Oakland	Royal Oak	3	

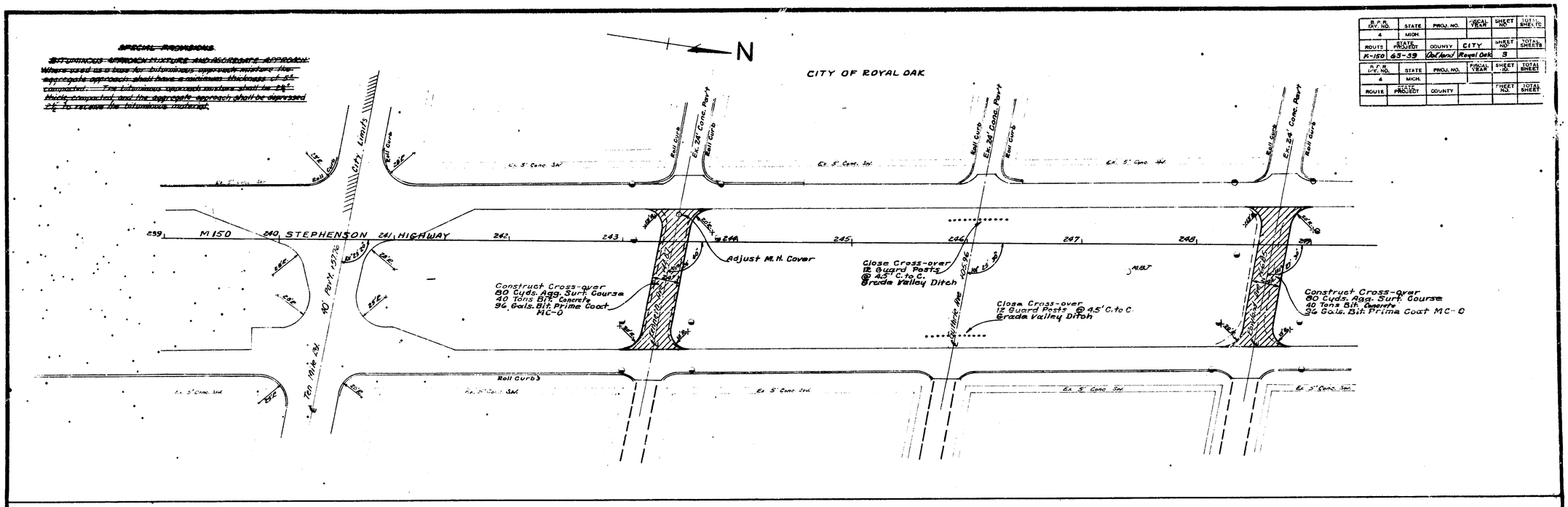
R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEET

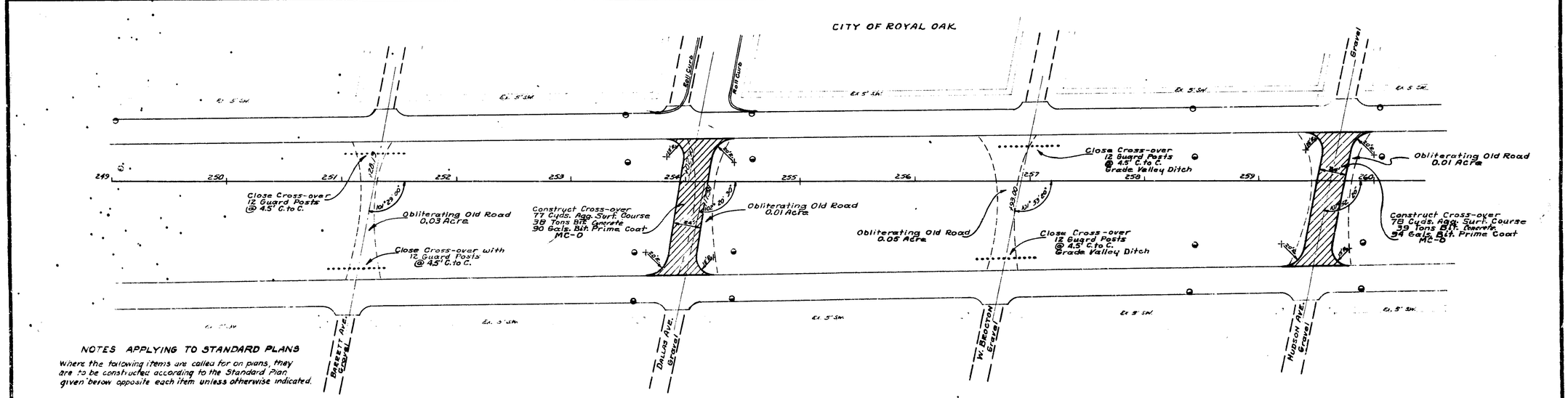
~~SPECIAL PROVISIONS~~

~~BITUMINOUS APPROACH MIXTURE AND AGGREGATE APPROACH:~~
~~Where used as a base for bituminous approach mixture the aggregate approach shall have a minimum thickness of 8" compacted. The bituminous approach surface shall be 2½" thick compacted and the aggregate approach shall be depressed 2½" to receive the bituminous material.~~

FINAL DESIGN W.H.S. 8-55
TRACED J.N.A. 9-55
QUANTITIES W.J.S. 9-55
SQUAD LESHEE 55

PLAN PLOTTED T.W.L.





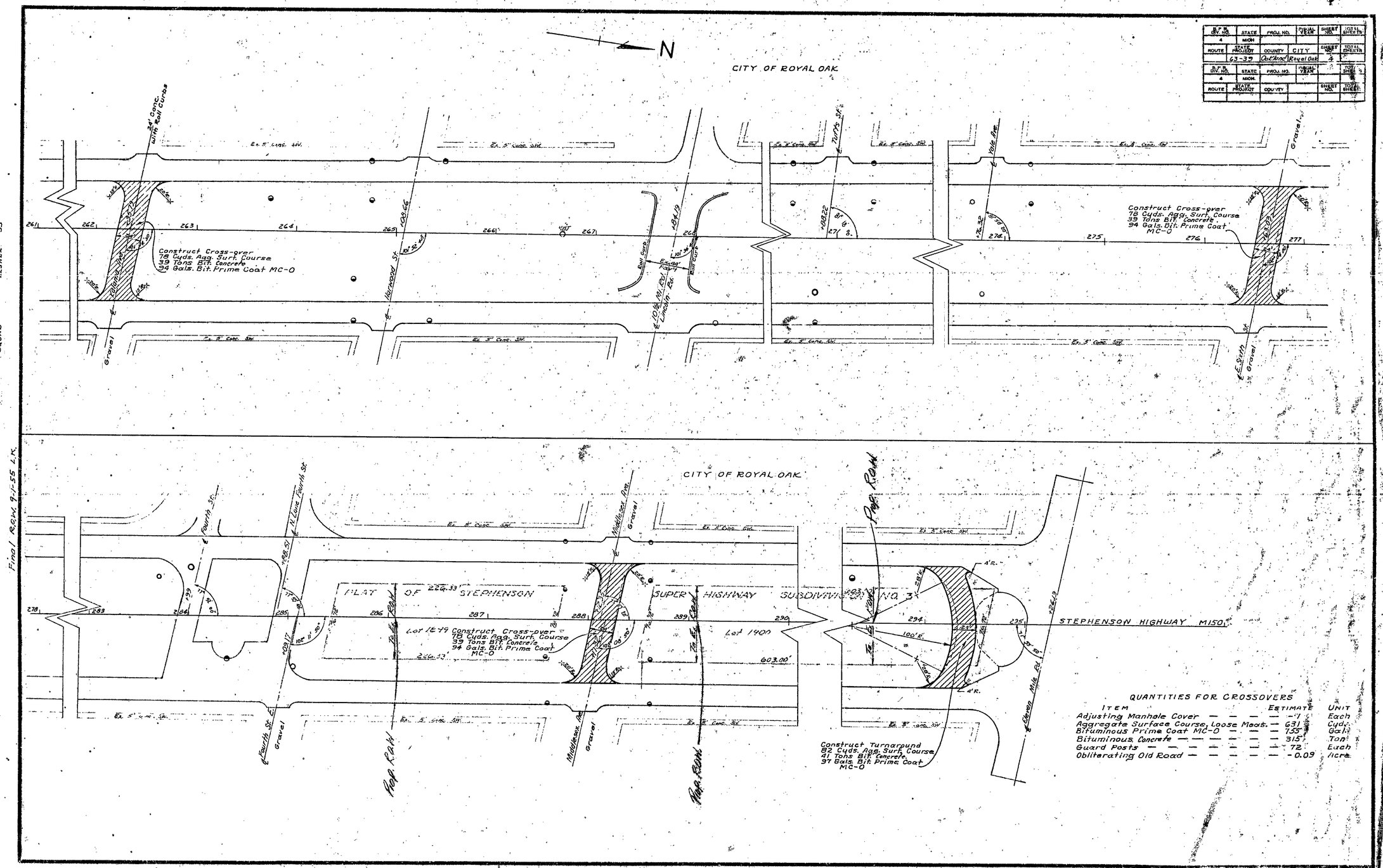
NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the Standard Plan given below opposite each item unless otherwise indicated.

Grading Cross-Sections	E-4-A-26 D
Two Cable Guard Rail and Guard Posts	E-4-A-15 C-2
Barricade and Project Sign	E-6-A-55E.

FILE NO.	PROJECT	FISCAL PROJECT	SHEET NO.
T-27-C-3	63-39		3

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	63-39	Oakland	Royal Oak	4	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR		TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



QUANTITIES FOR CROSSOVERS

ITEM	ESTIMATE	UNIT
Adjusting Manhole Cover	-1	Each
Aggregate Surface Course, Loose Meas.	631	Cyd.
Bituminous Prime Coat MC-0	755	Gal.
Bituminous Concrete	315	Ton
Guard Posts	72	Each
Obliterating Old Road	-0.09	Acre

FINAL DESIGN U.H.S. 8-55
TRACED J.N.A. 9-55
QUANTITIES U.H.S. 9-55
SQUAD LESHER 55

PLAN PLOTTED T.W.L.

Final R.O.W. 9-1-55 L.K.

FILE NO.	SHEET NO.	STATE PROJECT	ROUTE PROJECT	SHEET NO.
T-27-C-3		63-39		4

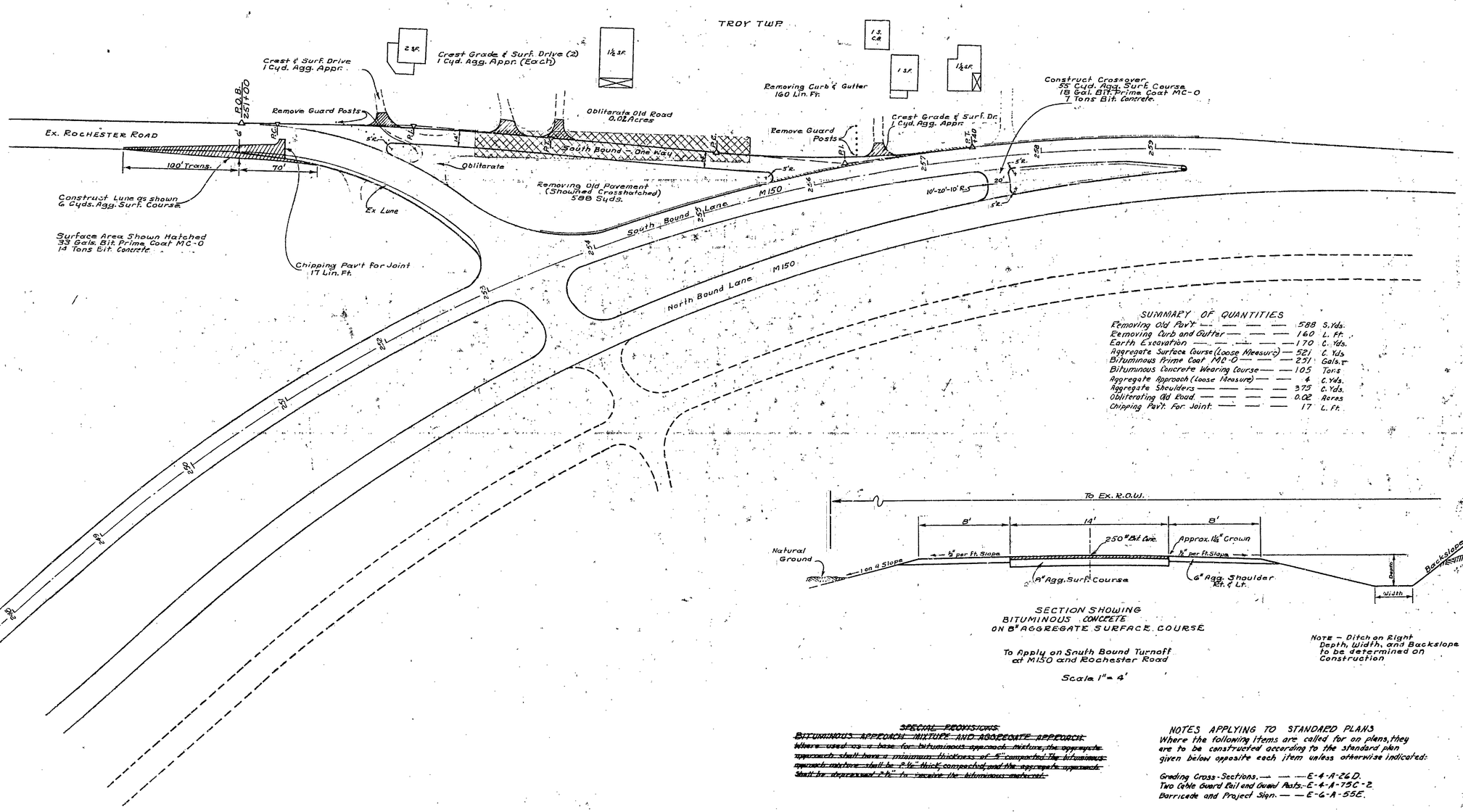
B.P.R. DIV. NO.	STATE	FEDL. NO.	FISCAL YEAR	SHEET NO.	TO. AL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
	63-39	Oakland	Troy	5	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

South Bound (West Edge of Pav't)
Curve Data
$\Delta = 4°11'$
$D = 1°45'$
$R = 3274.17'$
$T = 119.58'$
$L = 239.05'$
$E = 2.18'$
P.C. = 251+32.22
P.I. = 252+51.80
P.T. = 253+71.27

South Bound Turnoff
Grade and Surface
170 Cyd. Emb.
460 Cyd. Agg. Surf. Course
3 Ton Calcium Chloride (Applied)
200 Gal. Bit. Prime Coat MC-0
84 Ton Bit. Concrete.
375 Cyd. Agg. Appr. (Shoulder)

South Bound (West Edge of Pav't)
Curve Data
$\Delta = 13°59'$
$D = 6°15'$
$R = 917.19'$
$T = 112.48'$
$L = 223.73'$
$E = 6.87'$
P.C. = 255+16.27
P.I. = 256+28.75
P.T. = 257+40.00



SUMMARY OF QUANTITIES

Removing Old Pav't	588	S. Yds.
Removing Curb and Gutter	160	L. Ft.
Earth Excavation	170	C. Yds.
Aggregate Surface Course (Loose Measure)	521	C. Yds.
Bituminous Prime Coat MC-0	251	Gals.
Bituminous Concrete Wearing Course	105	Tons
Aggregate Approach (Loose Measure)	4	C. Yds.
Aggregate Shoulders	375	C. Yds.
Obliterating Old Road	0.02	Acres
Chipping Pav't. For Joint	17	L. Ft.

SECTION SHOWING
BITUMINOUS CONCRETE
ON 8" AGGREGATE SURFACE COURSE

To Apply on South Bound Turnoff
at M150 and Rochester Road

Scale 1" = 4'

NOTE – Ditch on Right
Depth, Width, and Backslope
to be determined on
Construction

~~SPECIAL PROVISIONS~~

~~BITUMINOUS APPROACH MIXTURE AND AGGREGATE APPROACH.~~
~~Where used as a base for bituminous approach mixture, the aggregate approach shall have a minimum thickness of 5" compacted. The bituminous approach mixture shall be 2½" thick, compacted, and the aggregate approach shall be depressed 2½" to receive the bituminous material.~~

NOTES APPLYING TO STANDARD PLANS
Where the following items are called for on plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated:

Grading Cross-Sections. — — — E-4-A-26D.
Two Cable Guard Rail and Guard Posts. E-4-A-75C-2.
Barricade and Project Sign. — — E-6-A-55E.

FINAL DESIGN. W.H.S. 8-55
TRACED U.N.R. 9-55
QUANTITIES U.H.S. 8-55
SQUAD LESHER 55

PLAN PLOTTED – T.W.L.

T-27-C-3

STATE PROJECT 63-39

63174, 064
82252, 063

CS: 63174

ID: 064

ROUTE	CONTROL SECTION	FEDERAL NO	SHEET NO	TOTAL SHEETS
I-75	82252 L 63174 A	I 75-1(98)59 I 75-2(98)59	"	

ALL BORROW
CONTRACTOR FURNISHED

MICHIGAN
STATE HIGHWAY DEPARTMENT

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT 1965 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS

DESIGN SPEED:
M-102 (8 Mile Rd.) = 50MPH
Service Roads = 35 MPH
Freeway = 60 MPH

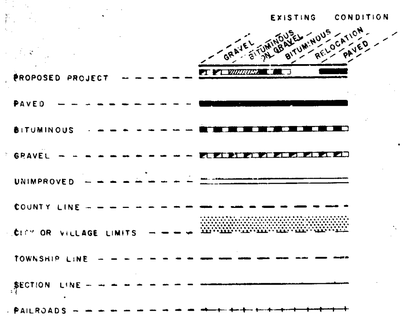
PLANS OF PROPOSED

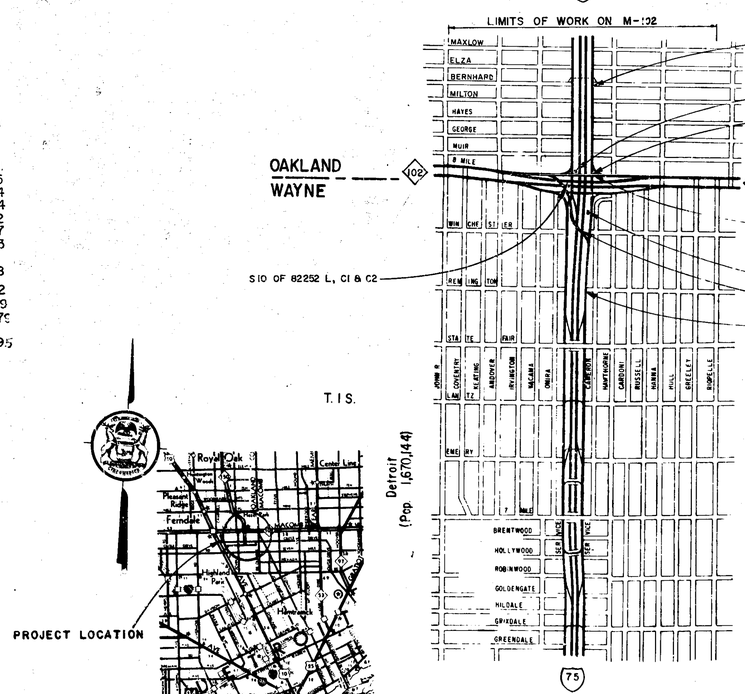
MICHIGAN PROJECT I 75-1(98)59; I 75-2(98)59
STATE PROJECT BI 82252L, C63, PART I; I 63174A, C64, PART I
WALTER P. CHRYSLER FREEWAY

WAYNE COUNTY
CITY OF DETROIT
OAKLAND COUNTY
CITY OF HAZEL PARK

ROAD PLANS	SHEET NO'S
TITLE	1
TYPICALS	2-8
NOTES	9,10
ALIGNMENT	11-13
BENCH MARKS & TRAFFIC VOLUMES	14
8 MILE PAVEMENT, WATER, SEWER PLAN	15
CONSTRUCTION SEQUENCE	16-21
TEMPORARY PAVEMENT	22-25
REMOVALS	26-34
PLAN & PROFILE (I75 SERVICE ROADS)	35-44
PLAN & PROFILE (8 MILE ROAD)	45-62
RAMPS & SERVICE STREETS	63-67
FREEWAY PLANS (FOR REF ONLY)	68-73
MASS DIAGRAM	74
SPECIAL DETAILS	75-78
SEWERS	79-92
WATER	93-119
LIGHTING	120-179
QUANTITIES	180-195
ADDITIONAL SHEETS	
CONSTRUCTION PROCEDURE-STAGES 1 to 5	21A
TRUSS FOUNDATIONS - TYPE B, C	78A

TITLE SHEET LEGEND





AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

63174 ITEM NO.— 796
82252 ITEM NO.— 797

CONTRACT FOR SERVICE RDS, UTILITY ALTERATIONS, 2 BRIDGES & 2 PUMPHOUSES

DIVISION APPROVAL

CHECKED — H. W. Quinnand, ENGINEER OF DESIGN — 3-15-65 DATE
RECOMMENDED FOR APPROVAL — H. H. Boyer, TRAFFIC ENGINEER — 4-22-65 DATE
RECOMMENDED FOR APPROVAL — D. E. Jones, ENGINEER OF BRIDGE & ROAD DESIGN — 4-22-65 DATE

OFFICES OF DESIGN & CONSTRUCTION

APPROVED — Chas. L. Goodlin, CONSTRUCTION ENGINEER — 4-23-65 DATE
APPROVED — Lynne Lovely, CHIEF OF DESIGN — 4/22/65 DATE

STATE HIGHWAY DEPARTMENT APPROVAL
HOWARD E. HILL, ACTING DIRECTOR
APPROVED BY — J. E. Meyer, DIRECTOR OF ENGINEERING - CHIEF ENGINEER — 4-23-65 DATE

PLANS PREPARED BY
MICHIGAN STATE HIGHWAY DEPARTMENT

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED [redacted]
DIVISION ENGINEER — DATE

CONTROL SECTION 82252 L, C63; 63174 A, C64

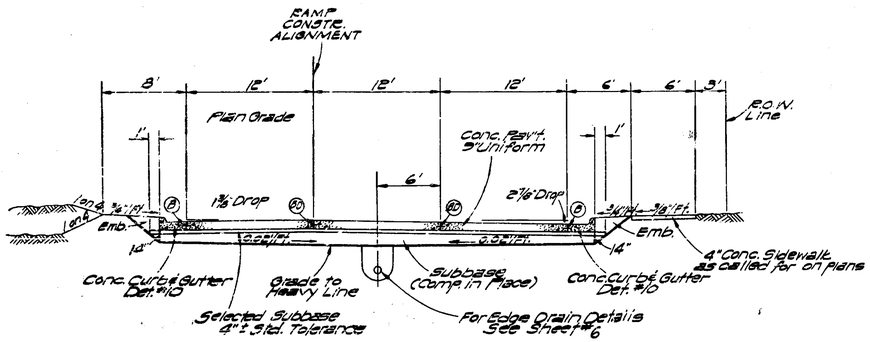
82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1( )	
63174A	I 75-2(98) 5	

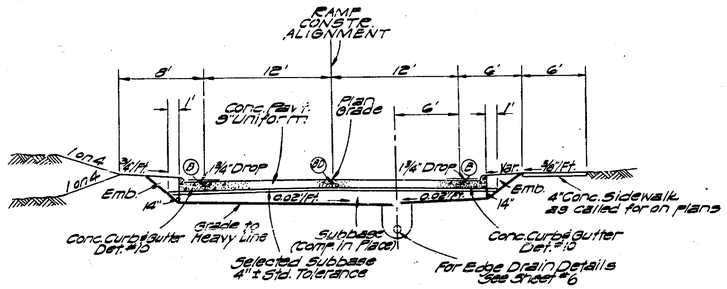
S.P.R. DIV. NO.	STATE	Mich.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-75-1(5+5)5 1-75-2(5+8)85			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne Oakland Macomb		2	

S.P.R. DIV. NO.	STATE	PROJ. NO.		FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.					
ROUTE	STATE PROJECT	COUNTY			SHEET NO.	TOTAL SHEETS

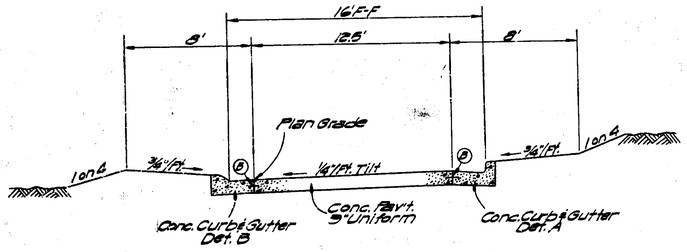
TYPICAL CROSS-SECTIONS



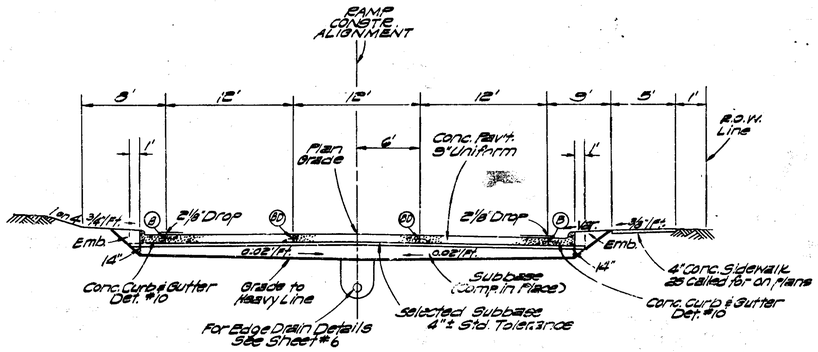
36' SERVICE ROAD RAMP (82252 L)
TO APPLY AS CALLED FOR ON PLANS



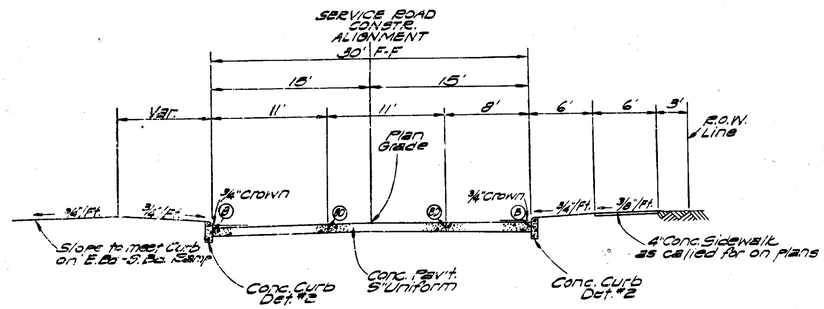
24' SERVICE ROAD RAMP
TO APPLY AS CALLED FOR ON PLANS



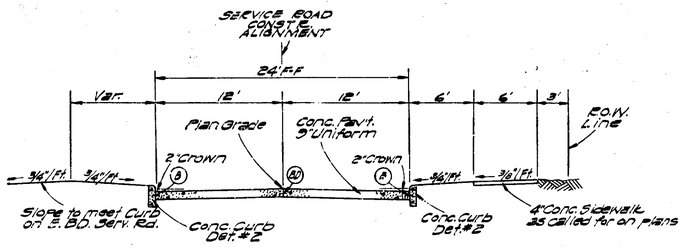
12.5' SERVICE ROAD
TO APPLY AS CALLED FOR ON PLANS



36' SERVICE ROAD RAMP (63174 A)
TO APPLY AS CALLED FOR ON PLANS



30' SERVICE ROAD
TO APPLY AS CALLED FOR ON PLANS



24' SERVICE ROAD
TO APPLY AS CALLED FOR ON PLANS

NOTE:

Class "A" Slopes will be required on this project, on unsodded slopes.

The edges of the existing pavement shall be thoroughly cleaned before concrete widening is placed.

Where temporary pavement is placed adjacent to proposed permanent pavement on "L" joint shall be installed to attach curb or curb and gutter after removal of temporary pavement.

Topsoil may be stripped within the limits of the R.O.W. for this project for use as "Topsoil Surface." No allowance for overhaul will be made for stripping or rehandling of material used for "Topsoil Surface."

Bituminous Bond Coat estimated at 0.05 gallon per Syd. has been included in the quantities, for a tack coat between each layer of bituminous material.

JOINT LEGEND:

B- Longitudinal Bulkhead Construction Joint, according to Standard Plan E-4-A-33H, Det. 2.

D- Longitudinal Lane Tie Joint with Tie Bars, according to Standard Plan E-4-A-33H, Det. 1.

BD- Optional B or D.

E1 - 1" Expansion Joint without Load Transfer Device.

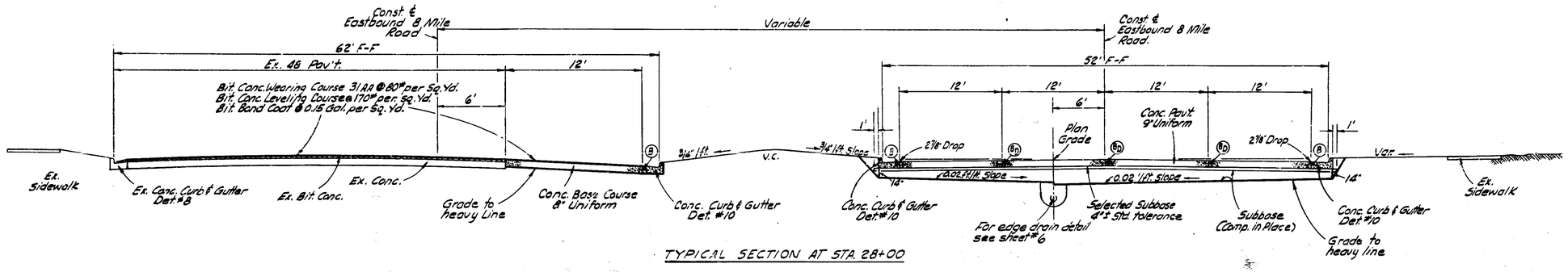
Kaufman Squad. 1982-45

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	1-75-1 (5+5) 5= 1-75-2(5+8)85	6

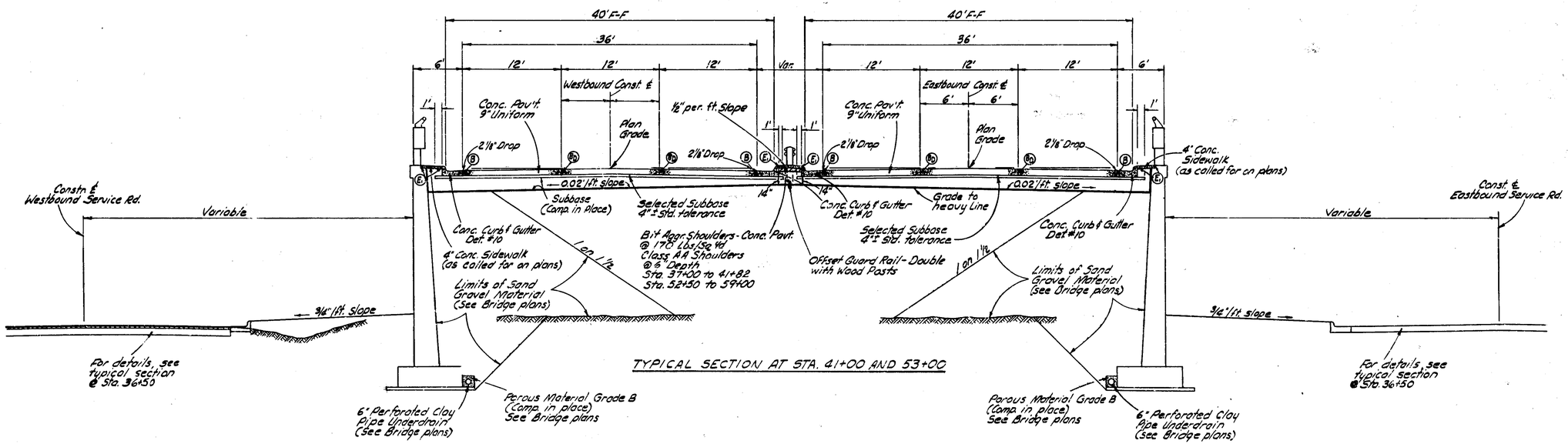
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	[illegible]			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
F-10	82252L 63174A	Oakland Wayne	Redford Detroit	3	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



TYPICAL SECTION AT STA. 28+00



TYPICAL SECTION AT STA. 41+00 AND 53+00

8 MILE RD. (RELOCATED)

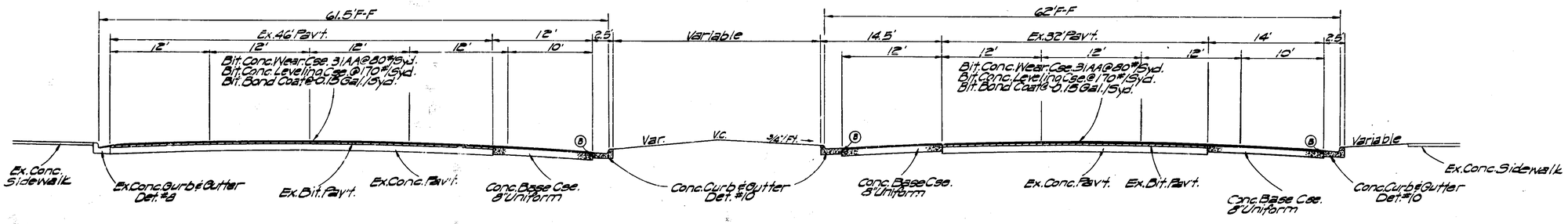
Kaufman Squad 1962-65

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	I 75-1 (98) 59 I 75-2 (56) 55	3

TYPICAL CROSS-SECTIONS

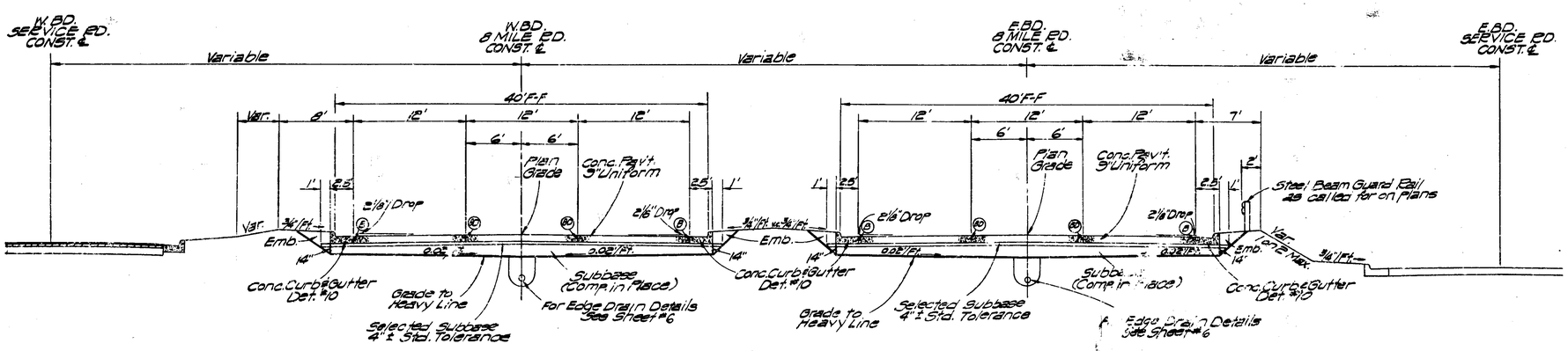
B.P.R. DIV. NO.	STATE	Mich.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	[illegible]			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Waterford	4	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



TYPICAL SECTION AT STA.68+00
W.BD. 8 MILE RD.

TYPICAL SECTION AT STA.68+00
E.BD. 8 MILE RD.



TYPICAL SECTION AT STA.36+50 & STA.59+50

TYPICAL SECTION AT STA.36+50 & STA.59+50

TYPICAL CROSS SECTIONS
ON 8 MILE RD. RELOCATED

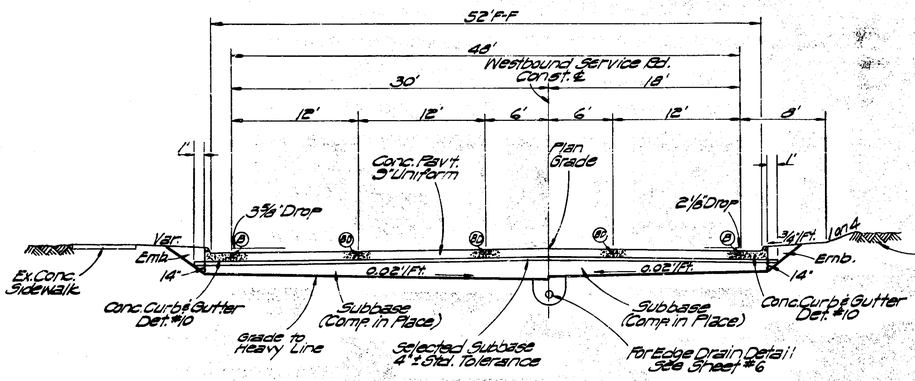
Kaufman Squad 1952-'65

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	4
	63174A	I 75-2 (98) 59	

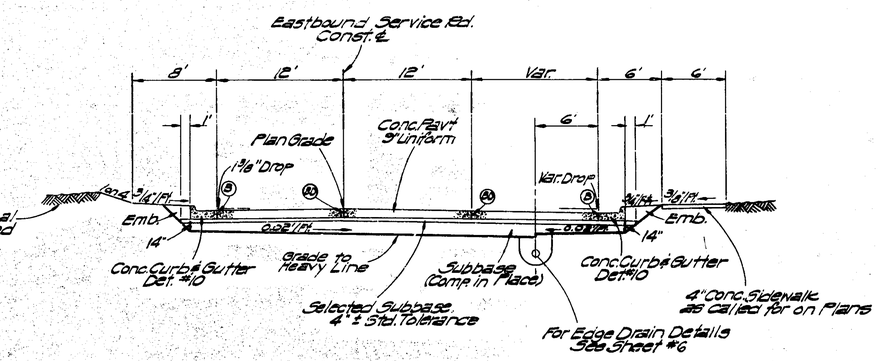
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	Mich. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	[illegible]			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Sutton Hazelwood	5	

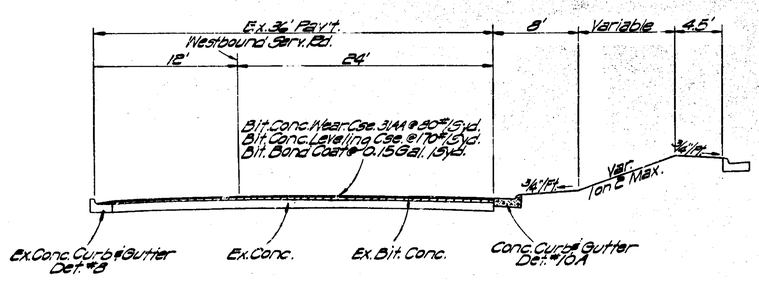
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



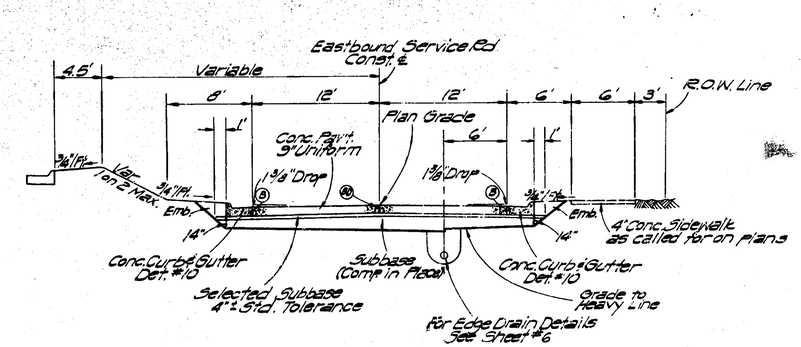
TYPICAL SECTION STA. 52+00



TYPICAL SECTION STA. 52+00



TYPICAL SECTION STA. 38+00



TYPICAL SECTION STA. 38+00

8 MILE SERVICE RD.

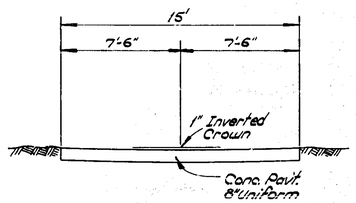
Kautman Squad 1962-'65

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	5

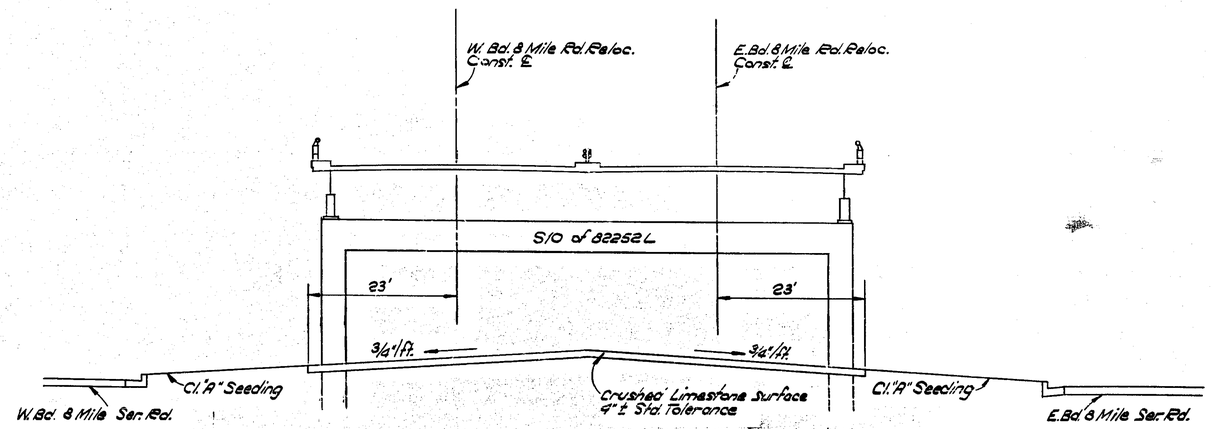
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	Mich PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	[illegible]			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 63174A	Wayne Oakland	Detroit Hazelpark	6	

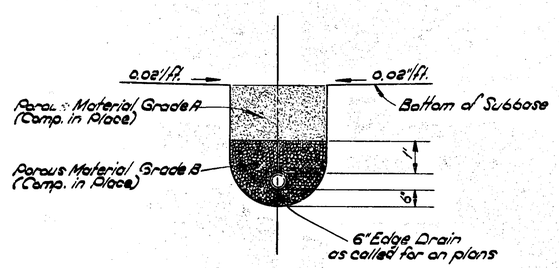
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



15' ALLEY
as called for on plans



DETAIL OF CRUSHED LIMESTONE SURFACE
UNDER BRIDGE, 8 MILE ROAD RELOCATED
Sta. 41+82 to Sta. 52+50



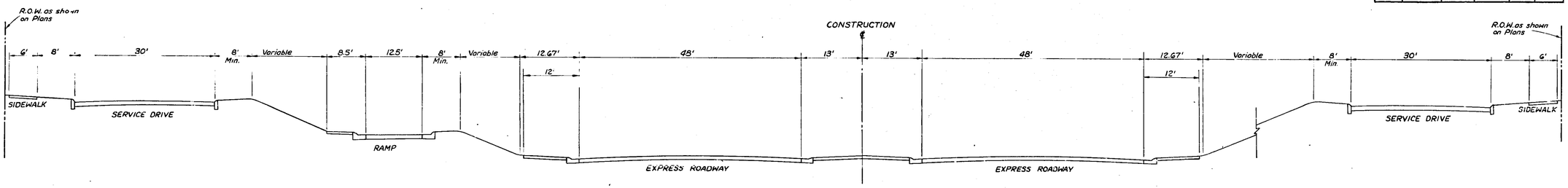
EDGE DRAIN DETAIL
as called for on plans

Kaufman, Squad 1962-'65

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	6

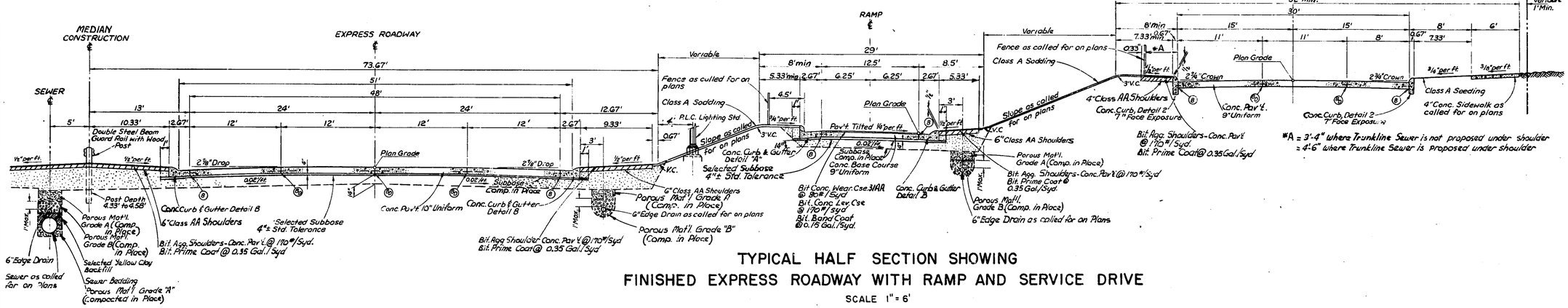
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	M-I-75-1(98)59 C63,C64,A,L 63174A,L 82252L			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A 63174L	WAYNE	DETROIT	7	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



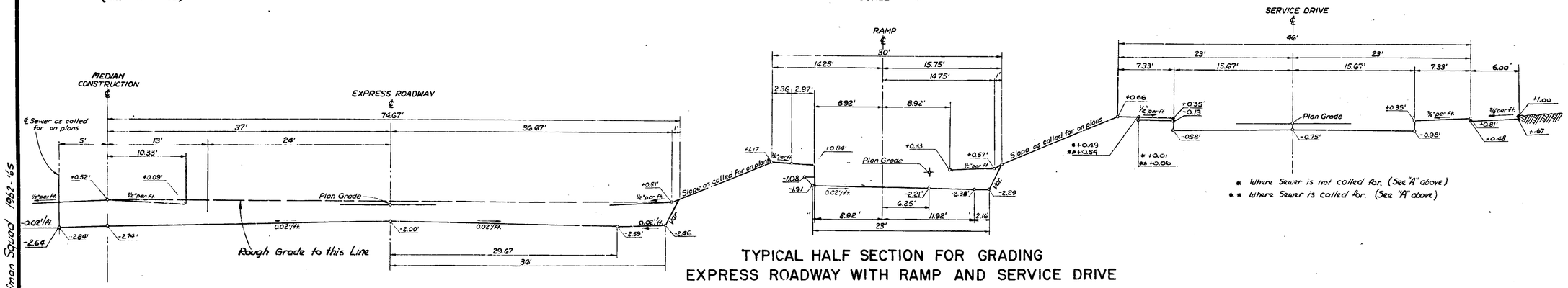
GENERAL TYPICAL CROSS SECTION

SCALE 1" = 10'



TYPICAL HALF SECTION SHOWING FINISHED EXPRESS ROADWAY WITH RAMP AND SERVICE DRIVE

SCALE 1" = 6'



TYPICAL HALF SECTION FOR GRADING EXPRESS ROADWAY WITH RAMP AND SERVICE DRIVE

SCALE 1" = 6'

(FOR REFERENCE ONLY) 48' ROADWAY

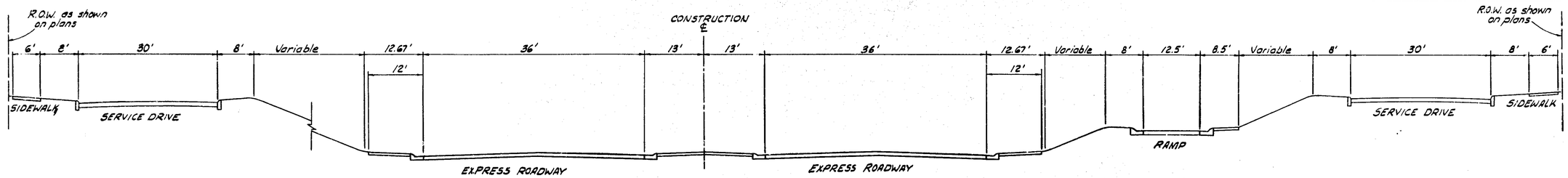
82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	7

Kaufman Squad 1962-65

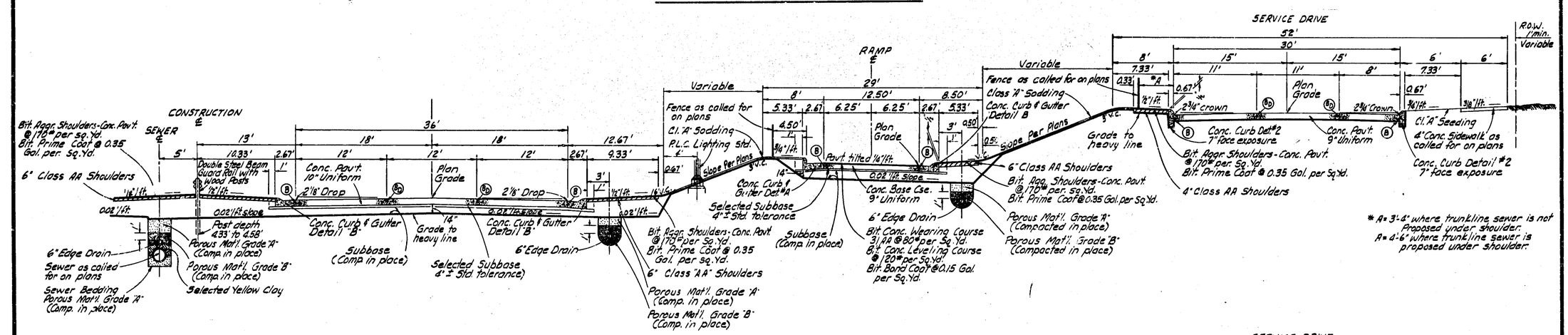
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	Mich. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59 I-75-2(93)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 63174A	Wayne Oakland	Hazel Park	8	

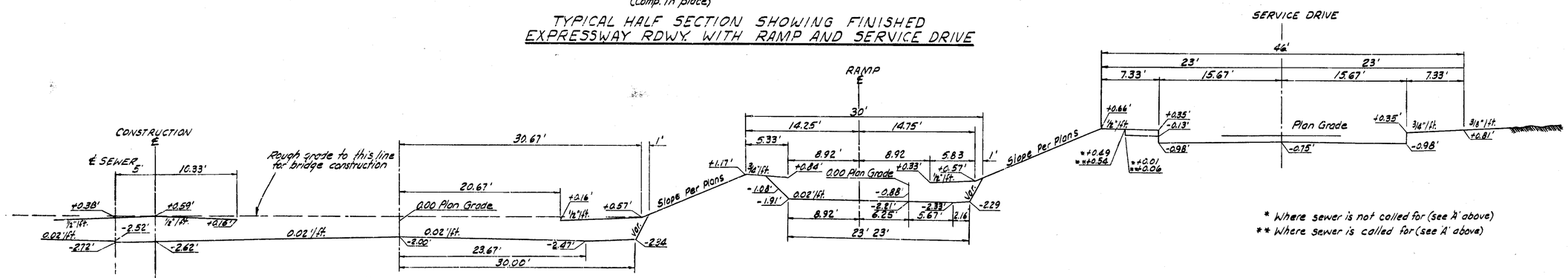
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



GENERAL TYPICAL CROSS-SECTION



TYPICAL HALF SECTION SHOWING FINISHED EXPRESSWAY RDWY. WITH RAMP AND SERVICE DRIVE



TYPICAL HALF SECTION SHOWING GRADING EXPRESSWAY RDWY. WITH RAMP AND SERVICE DRIVE

Kaufman Squad 1962-'65

(FOR REFERENCE ONLY)

82252 L, C63, 63174A, C64	STATE PROJECT 82252L	MICHIGAN PROJECT I 75-1 (98) 59	SHEET NO. 8

SPECIAL PROVISIONS

TRIMMING TREES AND SHRUBS

ROADSIDE TREES AND SHRUBS ARE TO BE TRIMMED AND UNDESIRABLE TREES OUTSIDE OF CONSTRUCTION LIMITS ARE TO BE REMOVED BY THE MAINTENANCE FORCES UNDER DIRECTION OF THE MICHIGAN STATE HIGHWAY DEPARTMENT FORESTER AS PART OF THIS PROJECT BUT NOT A PART OF THE ROAD CONTRACT.

GRADES FOR INTERSECTIONS

ALL INTERSECTIONS ARE TO BE CONSIDERED AS COMPLETE UNITS AND THEIR GRADES DETERMINED BEFORE CONSTRUCTION IS STARTED.

TRANSVERSE JOINTS IN CONCRETE PAVEMENT

TRANSVERSE JOINTS IN CONCRETE PAVEMENT SHALL BE PLACED ACCORDING TO DETAILS ON STANDARD PLAN E-4-A-135B AND E-4-A-127B.

TRANSVERSE JOINTS IN CONCRETE BASE COURSE

IN THE CONCRETE BASE COURSE WIDENING, TRANSVERSE PLANE OF WEAKNESS JOINTS SHALL BE PLACED IN LINE WITH EXPANSION JOINTS IN THE EXISTING CONCRETE PAVEMENT.

BITUMINOUS MATERIAL ON APPROACHES

WHERE USED AS A BASE FOR BITUMINOUS SURFACING MIXTURE, THE APPROACH AGGREGATE SHALL HAVE A MINIMUM THICKNESS OF 5" COMPACTED. THE BITUMINOUS MATERIAL MIXTURE SHALL BE 2-1/2" THICK, COMPACTED, AND THE APPROACH AGGREGATE SHALL BE DEPRESSED 2-1/2" TO RECEIVE THE BITUMINOUS MATERIAL.

HAND FINISHING

HAND FINISHING, ACCORDING TO 4.14.03-q-1 OF THE STANDARD SPECIFICATIONS, WILL BE PERMITTED ON INTERSECTIONS OUTSIDE OF THE NORMAL TRAFFIC LANES.

OPEN HEARTH SLAG
OPEN HEARTH SLAG WILL NOT BE PERMITTED AS AN ALTERNATE FOR POROUS MATERIAL - GRADE A DESIGNATED AS BACKFILL FOR SEWER TRENCHES WHERE OPEN JOINT SEWER HAS BEEN INSTALLED.

TRENCH BACKFILL SPECIAL
WHERE NATURAL SAND 2NS IS CALLED FOR ON PLANS THE PAY ITEM WILL BE TRENCH BACKFILL - SPECIAL

GENERAL PLAN NOTES

PROPERTY OWNERS

PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY AND THEIR ACCURACY IS NOT GUARANTEED.

POLES

THE EXACT LOCATION OF POLES WILL BE DETERMINED BY THE ENGINEER.

NOTES APPLYING TO STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

EDGE DRAINS	E-4-A-9F, DETAIL 5
PAVEMENT REINFORCEMENT	E-4-A-21F
GRADING CROSS SECTIONS	E-4-A-26D
MANHOLES, CATCH BASINS & INLETS	E-4-A-27R-4
COVER A	E-4-A-27A-3
COVER AD	ACCORDING TO SPECIAL DETAILS
COVER H	E-4-A-27H
COVER J	E-4-A-27J
COVER K	E-4-A-27K
COVER M	E-4-A-27M
COVER D	E-4-A-27D-4
COVER E	E-4-A-27E-3
CONCRETE CURB, ROLL CURB AND CURB AND GUTTER	E-4-A-29F
CURB AND GUTTER HEADERS	E-4-A-29F, DETAIL 9
DRIVEWAY RETURNS AND DRIVEWAY OPENINGS	E-4-A-29F
BRIDGE HEADER	E-4-A-29F, DETAIL 21
PAVEMENT JOINTS	E-4-A-33H
4" CONCRETE SIDEWALK	E-4-A-110B, DETAIL 2
CONCRETE PAVEMENT 7" UNIFORM	E-4-A-110B, DETAIL 4
TYPICAL JOINT LAYOUT	E-4-A-127B - (EXCEPT THAT THE JOINT SPACING SHALL BE AS CALLED FOR IN THE SUPPLEMENTAL SPECIFICATIONS)
TILE TRAP	E-4-A-129
DOWEL BAR INSTALLATION FOR LOAD TRANSFER AT TRANSVERSE CONTRACTION AND EXPANSION JOINTS	E-4-A-130E
BASE PLATES FOR TRANSVERSE PAVEMENT JOINTS	E-4-A-138 - (EXCEPT THAT SPOT WELDS MAY BE SUBSTITUTED FOR RIVETS TO ATTACH THE 1" ANGLE)
LOCATION OF TRANSVERSE EXPANSION & CONTRACTION JOINTS IN CONCRETE PAVEMENT	E-4-A-135B -(EXCEPT THAT THE JOINT SPACING SHALL BE AS CALLED FOR IN THE SUPPLEMENTAL SPECIFICATION)
OFFSET GUARD RAIL-DOUBLE	ACCORDING TO SPECIAL DETAILS
CORRUGATED CONCRETE DIVIDER	ACCORDING TO SPECIAL DETAILS
BARRICADE	E-6-A-55E
STEEL BEAM GUARD RAIL	E-4-A-137E

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS.

	BI 82252L, C63	I 63174A, C64	
FINE GRADING AND CLEANUP			
N. BD. SERVICE ROAD	18.74	13.31	
S. BD. SERVICE ROAD	19.14	13.28	
E. BD. 8 MILE RD. RELOC.	30.23		
W. BD. 8 MILE RD. RELOC.	31.48		
E. BD. SERVICE RD. 8 MILE	25.08		
W. BD. SERVICE RD. 8 MILE	27.37		
N. BD. TO W. BD. RAMP	9.90		
E. BD. TO S. BD. RAMP	8.54		
SERVICE STREETS	5.54		
TOTAL	176 STAS.	27 STAS.	
TOPSOIL SURFACE (ON UNSODDED SLOPES AND DITCHES)	1830	400	CU.YDS.
* BARRICADES - INSTALL.	28	15	EACH
~~BARRICADES~~	~~28~~	~~15~~	~~EACH~~
* BARRICADES - REMOVE	28	15	EACH
MAINTAINING TRAFFIC	LUMP SUM	LUMP SUM	
CLASS A SEEDING	6.8	1.5	ACRES
CHEMICAL FERTILIZER	4500	1000	LBS.
PROTECTIVE FENCE	125	30	LIN.RDS.
PATCHING PAVEMENT WITH BITUMINOUS MATERIAL	23	25	TONS
AGGREGATE BASE LM	75	83	CU.YDS.

THE FOLLOWING ITEMS ARE ESTIMATED FOR THE ENTIRE PROJECT TO BE USED WHERE DESIGNATED BY THE ENGINEER

SUBGRADE UNDERCUTTING	3550	450	CU.YDS.
POROUS MATERIAL - GRADE A (COMPACTED IN PLACE)	3550	450	CU.YDS.
TEMP. STEEL BEAM GUARD RAIL	514		LIN.FT.

* Per Auth. # 2014 . Dated 6-28-65

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	63174A 82252L			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A 82252L	WAYNE	DETROIT	9	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED ON OUR SURVEYS DATED 1961. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY HIMSELF AS TO THEIR ACCURACY OR OF HIS RESPONSIBILITY IN CASE UTILITIES HAVE BEEN CONSTRUCTED OR REMOVED SINCE THE ABOVE SURVEY DATE.

GAS

OWNER	SIZE OR CAPACITY	LOCATION
MICHIGAN CONSOLIDATED GAS COMPANY (IN DETROIT)	8"	IN OAKLAND STA. 255 + 00 TO 8 MILE RD.
	12"	39' RT. OF ℄ E.BD. 8 MILE - POB TO POE
	4"	IN JOHN R. @ 8 MILE RD.
	4"	IN COVENTRY @ 8 MILE RD.
	4"	IN KEATING @ 8 MILE RD.
	4"	IN ANDOVER @ 8 MILE RD.
	4"	IN IRVINGTON @ 8 MILE RD.
	4"	IN YACAMA @ 8 MILE RD.
	4"	IN OMIRA @ 8 MILE RD.
	4"	IN CAMERON @ 8 MILE RD.
	4"	IN HAWTHORNE @ 8 MILE RD.
	4"	IN CARDONI @ 8 MILE RD.
	4"	IN RUSSELL @ 8 MILE RD.
	4"	IN HANNA @ 8 MILE RD.
	4"	IN HULL @ 8 MILE RD.
	4"	IN GREENLEY @ 8 MILE RD.
	4"	IN RIOPELLE @ 8 MILE RD.
CONSUMERS POWER (IN HAZEL PARK)	2"	IN MUIR AVENUE
	2"	IN GEORGE AVENUE
	OIL	
DETROIT SOUTHERN PIPELINE	6"	37' RT OF ℄ E. BD. 8 MILE RD. POB TO POE
	WATERMAINS	
CITY OF DETROIT	8"	IN OAKLAND STA. 255 + 00 TO 8 MILE RD.
	8"	IN W. BD. 8 MILE - YACAMA TO POE
	54"	8 MILE MEDIAN POB TO POE
	8"	36' RT OF ℄ E. BD. 8 MILE POB TO POE
	12"	IN JOHN R. SOUTH OF 8 MILE
	6"	IN COVENTRY SOUTH OF 8 MILE
	8"	IN KEATING SOUTH OF 8 MILE
	8"	IN ANDOVER SOUTH OF 8 MILE
	8"	IN IRVINGTON SOUTH OF 8 MILE
	8"	IN YACAMA SOUTH OF 8 MILE
	6"	IN OMIRA SOUTH OF 8 MILE
	6"	IN CAMERON SOUTH OF 8 MILE
	8"	IN HAWTHORNE SOUTH OF 8 MILE
	6"	IN CARDONI SOUTH OF 8 MILE
	8"	IN RUSSELL SOUTH OF 8 MILE
	6"	IN HANNA SOUTH OF 8 MILE
	8"	IN HULL SOUTH OF 8 MILE
	6"	IN GREELEY SOUTH OF 8 MILE
	8"	IN RIOPELLE SOUTH OF 8 MILE
CITY OF HAZEL PARK	6"	IN S. BD. STEPHENSON, 8 MILE TO POE
	6"	IN MUIR
	6"	IN GEORGE
	6"	IN HAYES
	6"	IN MILTON
	8" & 30"	IN JOHN R. NORTH OF 8 MILE
	6"	IN CALADONIA NORTH OF 8 MILE
	6"	IN HUGHES NORTH OF 8 MILE
	12"	IN W. BD. 8 MILE, JOHN R. TO 240' EAST.
	16"	IN W. BD. 8 MILE 240' EAST OF JOHN R. TO HIGHLAND

PUBLIC UTILITIES
(CONTINUED ON NEXT SHEET)

B.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	63174A, 82252L			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174A 82252L	WAYNE & OAKLAND	MICHIGAN DEPARTMENT OF HIGHWAYS	10	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

BI 82252L, C63
I 63174A, C64

PUBLIC UTILITIES (CONTINUED)

SEWERS

CITY OF DETROIT	3'-6" CYL.	STA. 255 + 00 TO WINCHESTER
	12" & 15"	STA. 253 + 90 TO 8 MILE IN ALLEY EAST OF OMIRA
	12"	STA. 254 + 23 TO 8 MILE IN ALLEY WEST OF OMIRA.
	30"	STA. 264 + 25 LT
	24"	STA. 264 + 25 RT
	18"	IN OAKLAND AVE.-WINCHESTER TO 8 MILE RD.
CITY OF HAZEL PARK	12" & 15"	STA. 274 + 70 LT & RT
	5'-6" CYL.	IN MUIR STA. 276 + 20 LT & RT
	12" & 15"	IN MUIR STA. 276 + 40 LT & RT.
	21"	IN GEORGE STA. 279 + 00 LT & RT
	48"	STA. 281 + 50 110' LT.
	15"	IN HAYES STA 281 + 65 LT. & RT.
	12"	IN MILTON STA. 284 + 40 LT. & RT.
MICHIGAN STATE HIGHWAY DEPARTMENT	12"	IN JOHN R. & 8 MILE RD.
	12"	IN 8 MILE RD. @ KEATING
	12"	IN 8 MILE RD. @ ANDOVER
	5-6" CYL.	STA. 35 + 70 RT. 8 MILE RD.
	12"	IN 8 MILE RD. @ IRVINGTON
	12"	ANDOVER TO IRVINGTON 125' TO 100' RT.
	12"	IRVINGTON TO YACAMA 100'-75' RT.
	12"	YACAMA TO POE 70' RT
	12"	YACAMA TO OAKLAND 15' LT.
	12"-15"-18"	IN S. BD. STEPHENSON - 8 MILE TO BERNHARD
	54"-60"	STA. 281 + 50 - 110' LT. FROM HAYES TO POE

ELECTRIC

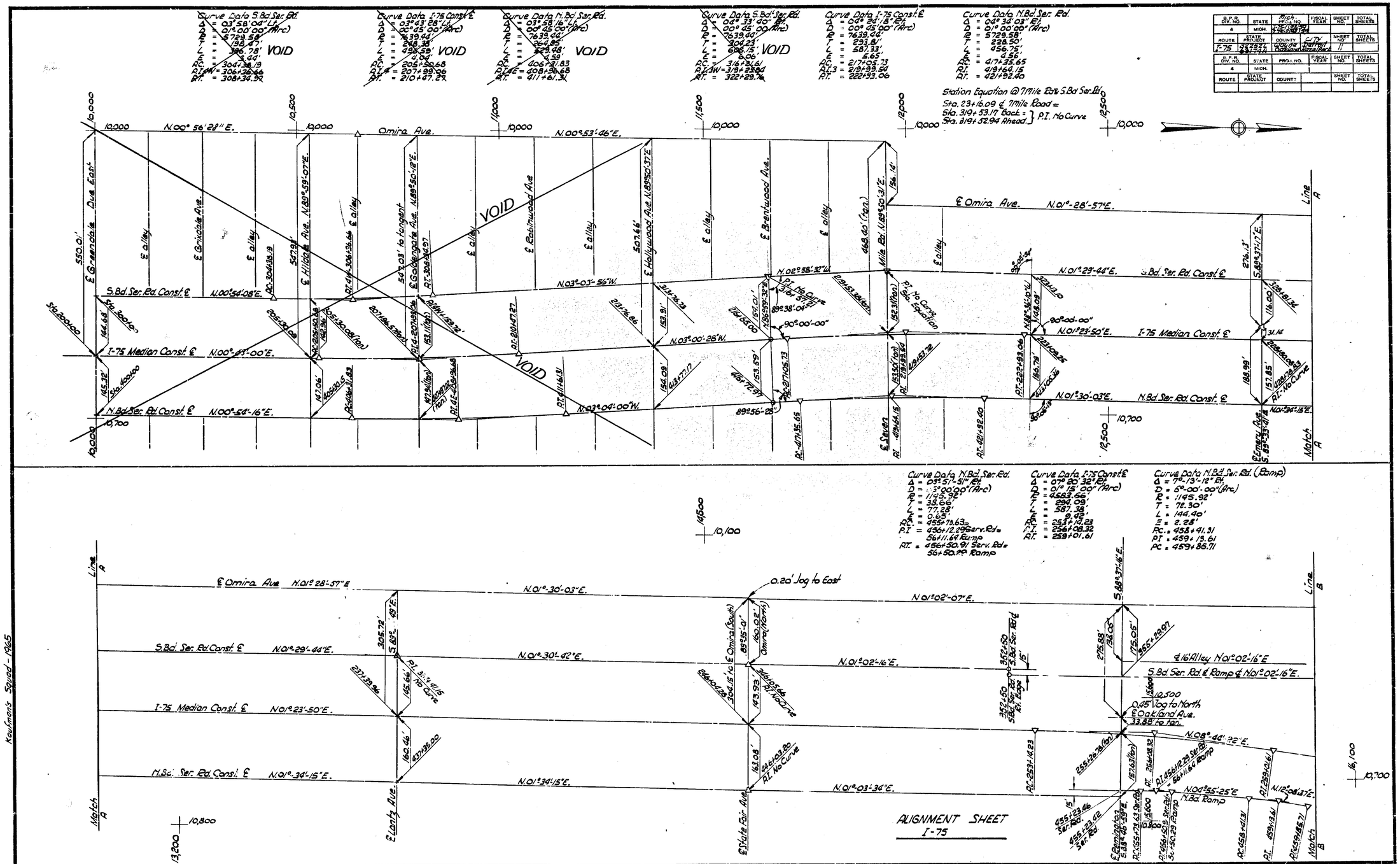
DETROIT EDISON	LINES ON POLE	STA. 255 + 00 TO 8 MILE - IN ALLEY EAST OF OMIRA
	LINES ON POLE	STA. 255 + 00 TO 8 MILE - IN ALLEY EAST OF OAKLAND
	LINES ON POLE	STA. 255 + 00 TO 8 MILE - IN ALLEY WEST OF CAMERON
	LINES ON POLE	STA. 271 + 40 LT. & RT.
	LINES ON POLE	STA. 274 + 50 LT. & RT.
	LINES ON POLE	IN MUIR AVENUE
	LINES ON POLE	IN GEORGE AVENUE
	LINES ON POLE	IN MILTON AVENUE
	2-120KV LINES ON TOWERS	IN 8 MILE RD. MEDIAN - POB TO POE
	LINES ON POLES	I-75 - 8 MILE TO POE - 160' LT.
	LINES ON POLES	I-75 - 8 MILE TO POE - 15' RT.
	CABLE UNDERGROUND	W. BD. 8 MILE - WEST OF S. BD. TO POE
	CABLE UNDERGROUND	I-75 STA. 269 + 10 TO W. BD. 8 MILE 35' RT.

TELEPHONE

MICHIGAN BELL TELEPHONE	CABLE ON POLE	STA. 255 + 00 TO 8 MILE - IN ALLEY EAST OF OMIRA AVENUE
	CABLE ON POLE	STA. 255 + 00 TO 270 + 40 - IN ALLEY WEST OF CAMERON
	CABLE ON POLE	ON NORTH SIDE OF 8 MILE RD.
	CABLE ON POLE	IN ALLEY NORTH OF 8 MILE RD.
	CABLE ON POLE	ON WEST SIDE OF S. BD. STEPHENSON 8 MILE RD. TO POE
	CABLE ON POLE	ON EAST SIDE OF N. BD. STEPHENSON 8 MILE RD. TO POE
	CABLE ON POLE	STA. 277 + 50 130' RT.
	CABLE ON POLE	ON NORTH SIDE OF GEORGE
	CABLE ON POLE	ON SOUTH SIDE OF MILTON

THE OWNERS OF EXISTING POLES AND OTHER SERVICE STRUCTURES THAT ARE WITHIN THE LIMITED ACCESS RIGHT OF WAY WILL MOVE THEM TO LOCATIONS DESIGNATED BY THE ENGINEER ON FREE ACCESS RIGHT OF WAY, OR WILL REMOVE THEM ENTIRELY FROM THE HIGHWAY RIGHT OF WAY.

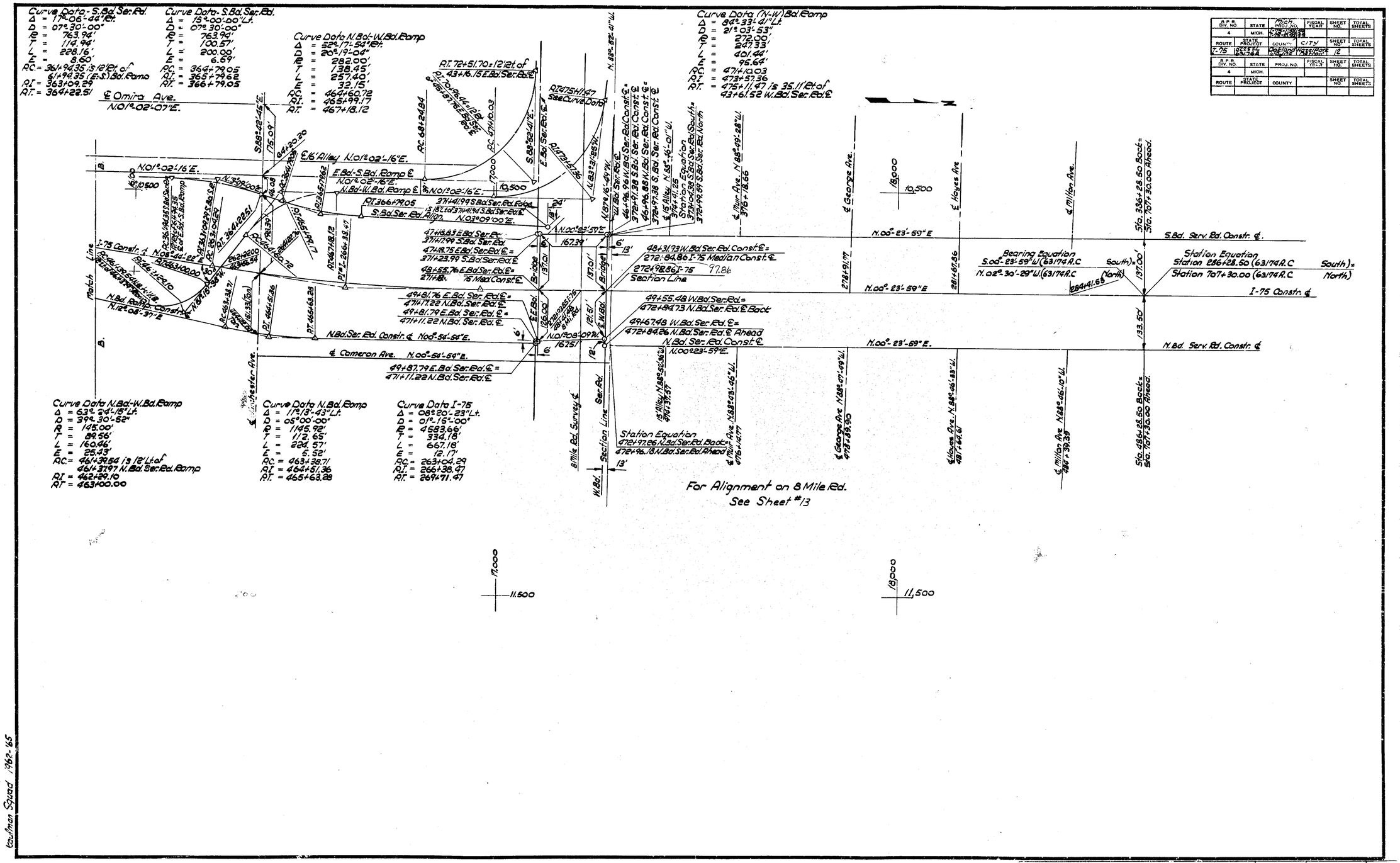
OWNERS OF PUBLIC UTILITIES WILL NOT BE REQUIRED BY THE DEPARTMENT TO MOVE ADDITIONAL POLES AND STRUCTURES THAT ARE NOT WITHIN GRADING OR STRUCTURE LIMITS IN ORDER TO FACILITATE THE OPERATION OF CONSTRUCTION EQUIPMENT, UNLESS IT IS DETERMINED BY THE ENGINEER THAT SUCH POLE LINE OR STRUCTURES CONSTITUTE A HAZARD TO THE PUBLIC OR ARE EXTRAORDINARILY DANGEROUS TO THE CONTRACTOR'S OPERATIONS



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	Mich. 1-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252 L, 63174 A	Oakland	Hatton Road	11	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
822521	I-75-1(98)59	11

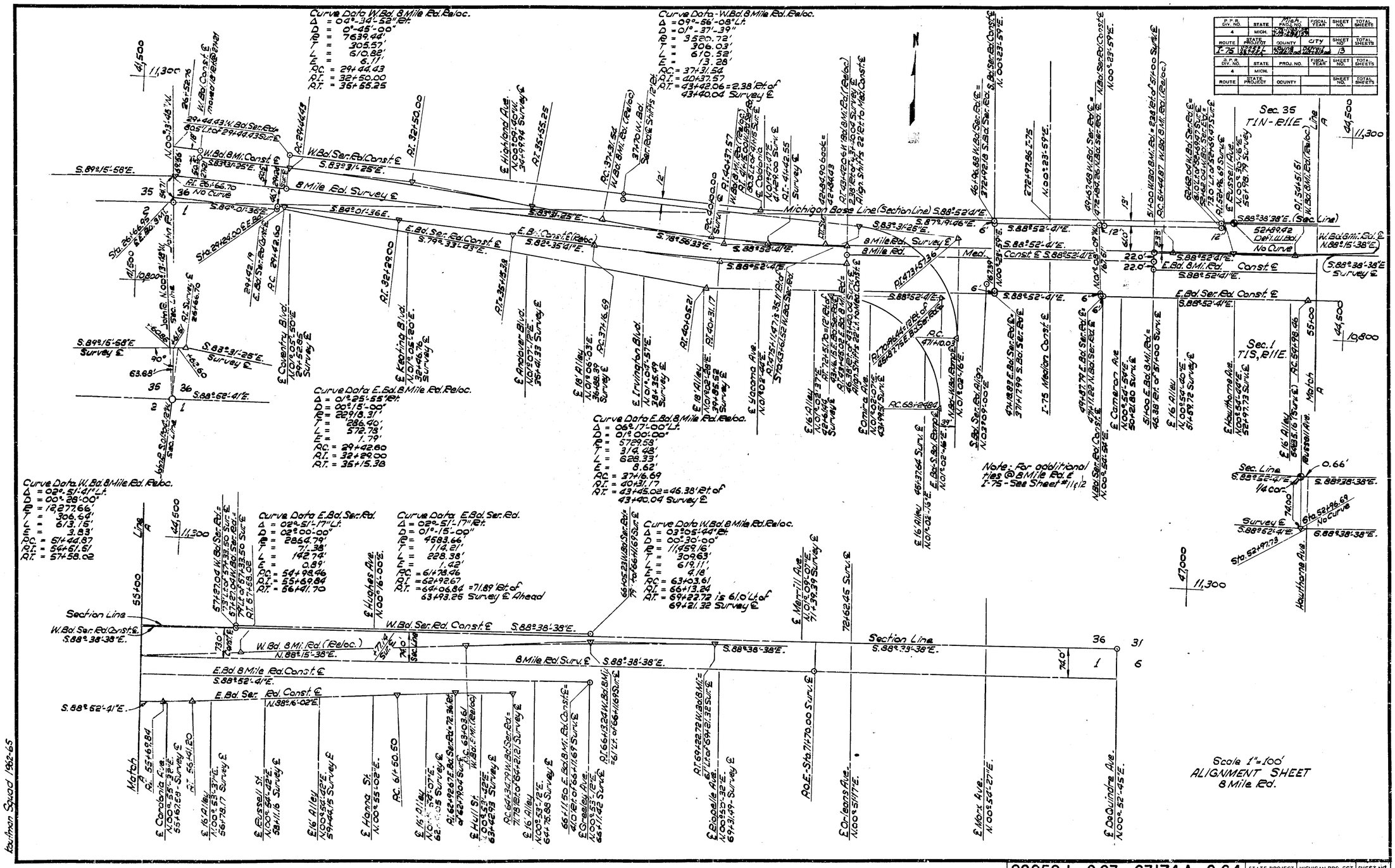


B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(93)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Oakland Wayne	Hazel Park Detroit	12	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

Kaufman Squad 1962-'65

82252 L, C63; 63174 A, C64 | STATE PROJECT 82252L | MICHIGAN PROJECT I-75-1(93)59 | SHEET NO. 12



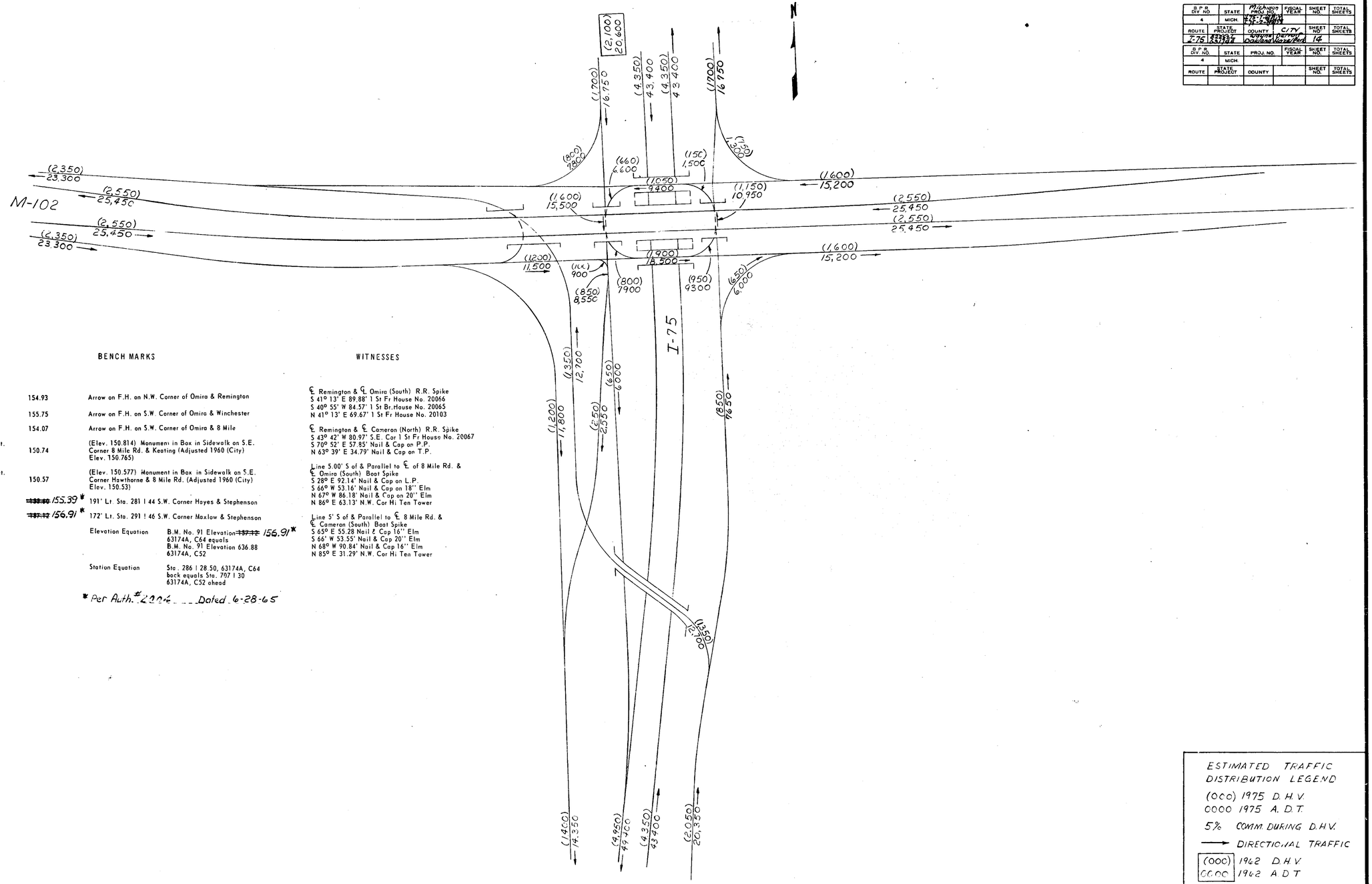
P.P.R. DIV. NO.	STATE	Mich. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L, 63174 A	Wayne, Oakland	Detroit, Hazel Park	13	
P.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	13
63174A	175-2 (98) 59	

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-75-1 (98) 59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	14	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



BENCH MARKS

9	154.93	Arrow on F.H. on N.W. Corner of Omira & Remington
10	155.75	Arrow on F.H. on S.W. Corner of Omira & Winchester
11	154.07	Arrow on F.H. on S.W. Corner of Omira & 8 Mile
City of Det. 37-253A	150.74	(Elev. 150.814) Monument in Box in Sidewalk on S.E. Corner 8 Mile Rd. & Keating (Adjusted 1960 (City) Elev. 150.765)
City of Det. 37-258	150.57	(Elev. 150.577) Monument in Box in Sidewalk on S.E. Corner Hawthorne & 8 Mile Rd. (Adjusted 1960 (City) Elev. 150.53)
92	~~[illegible]~~ 155.39*	191' Lt. Sta. 281 I 44 S.W. Corner Hayes & Stephenson
91	~~[illegible]~~ 156.91*	172' Lt. Sta. 291 I 46 S.W. Corner Maxlow & Stephenson

Elevation Equation: B.M. No. 91 Elevation ~~157.12~~ 156.91* 63174A, C64 equals B.M. No. 91 Elevation 636.88 63174A, C52

Station Equation: Sta. 286 I 28.50, 63174A, C64 back equals Sta. 707 I 30 63174A, C52 ahead

* Per Auth. # 2004 Dated 6-28-65

WITNESSES

℄ Remington & ℄ Omira (South) R.R. Spike
S 41° 13' E 89.88' 1 St Fr House No. 20066
S 40° 55' W 84.57' 1 St Br. House No. 20065
N 41° 13' E 69.67' 1 St Fr House No. 20103

℄ Remington & ℄ Cameron (North) R.R. Spike
S 43° 42' W 80.97' S.E. Cor 1 St Fr House No. 20067
S 70° 52' E 57.85' Nail & Cap on P.P.
N 63° 39' E 34.79' Nail & Cap on T.P.

Line 5.00' S of & Parallel to ℄ of 8 Mile Rd. & ℄ Omira (South) Boat Spike
S 28° E 92.14' Nail & Cap on L.P.
S 66° W 53.16' Nail & Cap on 18" Elm
N 67° W 86.18' Nail & Cap on 20" Elm
N 86° E 63.13' N.W. Cor Hi Ten Tower

Line 5' S of & Parallel to ℄ 8 Mile Rd. & ℄ Cameron (South) Boat Spike
S 65° E 55.28 Nail & Cap 16" Elm
S 66' W 53.55' Nail & Cap 20" Elm
N 68° W 90.84' Nail & Cap 16" Elm
N 85° E 31.29' N.W. Cor Hi Ten Tower

ESTIMATED TRAFFIC DISTRIBUTION LEGEND

(000) 1975 D.H.V.
0000 1975 A.D.T.
5% COMM. DURING D.H.V.
→ DIRECTIONAL TRAFFIC
(000) 1962 D.H.V.
0000 1962 A.D.T.

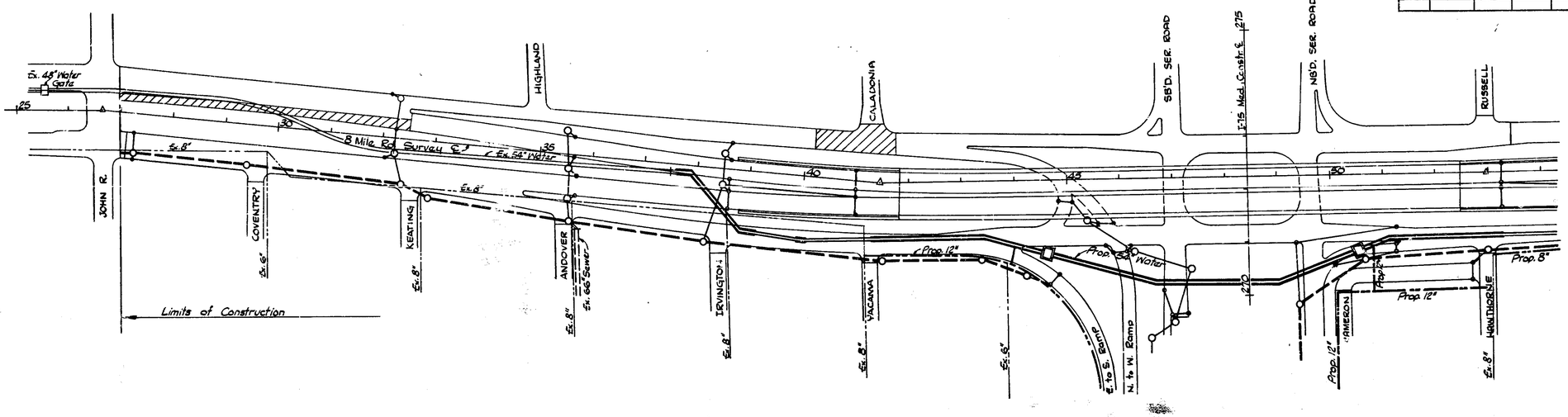
Kaufman Squad 1962-'65

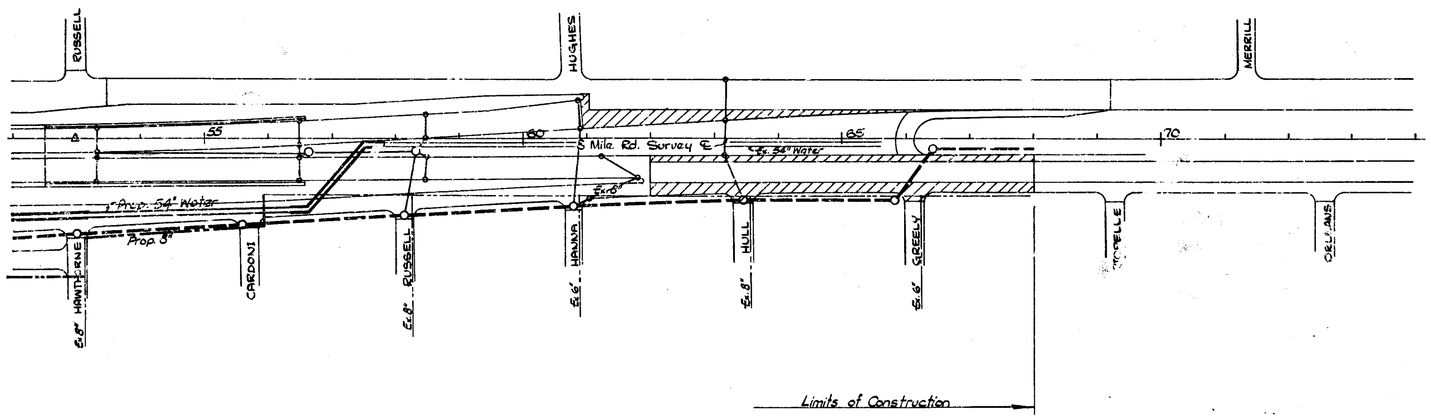
82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	1-75-2 (98) 59	14
82252L	1-75-1 (98) 59	

B.P.R. DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	Michigan 1-75-2(98)59 1-75-2(98)55			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne & Oakland	Detroit & Hazel Park	15	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS





LEGEND

Ex. Pav't
Prop. Conc. Base
Prop. Conc. Pav't
Ex. Water Line
Prop. Water Line
Prop. Trunk Sewer
Prop. MH & CB

GENERAL PLAN SHOWING
SEWER, WATER & PAVEMENT ON

8 MILE ROAD

82252 L, C63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	I-75-1 (98) 59 I-75-2 (98) 55	5

Roulman Squad 1962-65 Drawn by: M. Witkowski 3-65

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1(98)59 I-75-2(98)59		16	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park		

STAGE 1

ALL TRAFFIC REMAINS ON EXISTING PAVEMENTS.

** ~~1. CONSTRUCT PERMANENT NORTH & SOUTHBOUND PAVEMENTS BETWEEN EXISTING EAST & WESTBOUND 8 MILE RD.~~

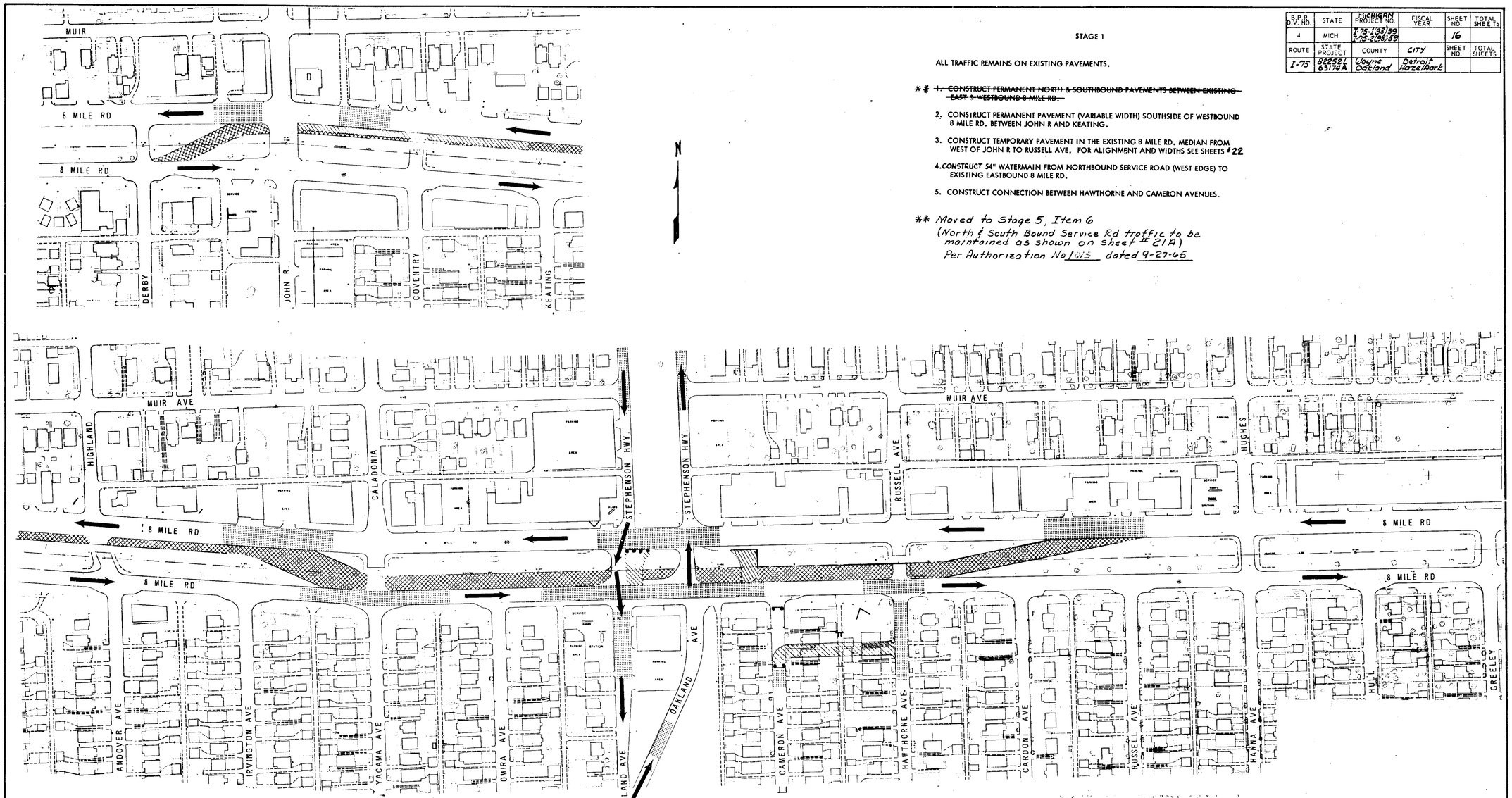
2. CONSTRUCT PERMANENT PAVEMENT (VARIABLE WIDTH) SOUTHSIDE OF WESTBOUND 8 MILE RD. BETWEEN JOHN R AND KEATING.

3. CONSTRUCT TEMPORARY PAVEMENT IN THE EXISTING 8 MILE RD. MEDIAN FROM WEST OF JOHN R TO RUSSELL AVE. FOR ALIGNMENT AND WIDTHS SEE SHEETS #22

4. CONSTRUCT 54" WATERMAIN FROM NORTHBOUND SERVICE ROAD (WEST EDGE) TO EXISTING EASTBOUND 8 MILE RD.

5. CONSTRUCT CONNECTION BETWEEN HAWTHORNE AND CAMERON AVENUES.

** Moved to Stage 5, Item 6
(North & South Bound Service Rd traffic to be maintained as shown on sheet # 21A)
Per Authorization No 1615 dated 9-27-65



ITEM	UNIT	BI 82252L C63 Furnish & Install	Relocate	Remove	63174A C64 Furnish & Install	Relocate	Remove
S-40 Barricade	Lin. Ft.	100					

LEGEND

- Existing Pavement
- Temporary Pavement
- Permanent Pavement, this stage
- Permanent Pavement constructed on previous stages
- Timber Curb & Splash Boards
- S-40 Barricades

CONSTRUCTION PROCEDURE STAGE I

OPERATION	BY	DATE
PRELIMINARY PLAN CHECKED		
FINAL DESIGN	Rollhaver	2-1965
FINAL DESIGN CHECKED	Kaufman	2-1965
FINAL R.O.W. CHECKED		
QUANTITIES CHECKED	Lowitzki	2-1965
ISSUED	Kaufman	1965-66

OPERATION	BY	DATE
SURVEYS	Miller	1965
PLAN PLOTTED	Rollhaver	1-1965
PLAN CHECKED	Kaufman	1-1965
PROFILE PLOTTED		
PROFILE CHECKED	Kaufman	
CROSS SECTIONS		
CROSS SECTIONS CHECKED		
FEDERAL INSPECTION	Kaufman Wagner R. Hall	2-1965 8-1965

AUTH.	DATE	REVISION
		FINAL R.O.W.

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	16

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1(98)59 I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82252L 63174A	Wayne Oakland	Detroit Hazel Park	17	

STAGE 2

NORTH & SOUTHBOUND STEPHENSON TRAFFIC REMAINS ON EXISTING PAVEMENTS.

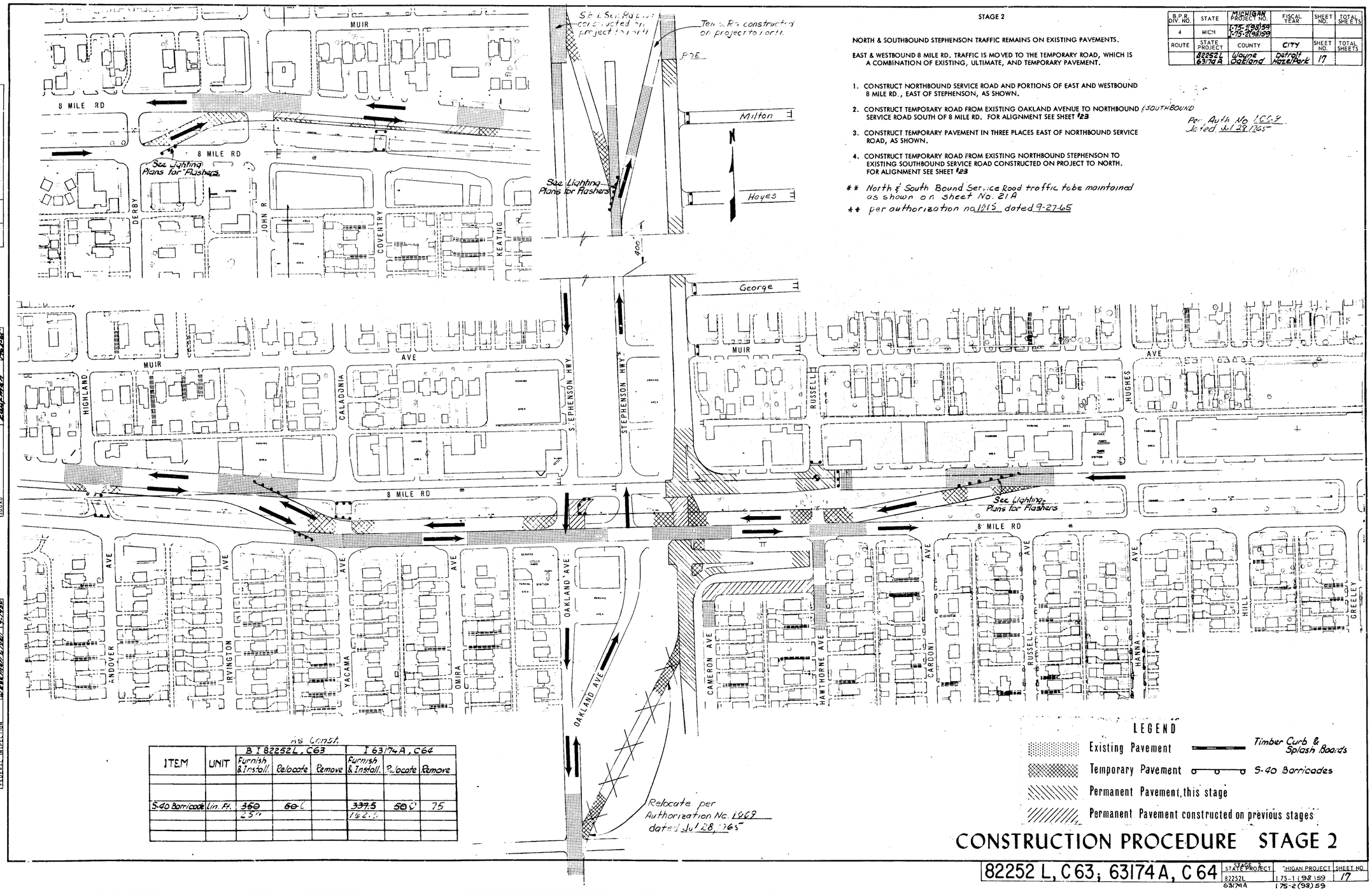
EAST & WESTBOUND 8 MILE RD. TRAFFIC IS MOVED TO THE TEMPORARY ROAD, WHICH IS A COMBINATION OF EXISTING, ULTIMATE, AND TEMPORARY PAVEMENT.

1. CONSTRUCT NORTHBOUND SERVICE ROAD AND PORTIONS OF EAST AND WESTBOUND 8 MILE RD., EAST OF STEPHENSON, AS SHOWN.
2. CONSTRUCT TEMPORARY ROAD FROM EXISTING OAKLAND AVENUE TO NORTHBOUND (SOUTHBOUND) SERVICE ROAD SOUTH OF 8 MILE RD. FOR ALIGNMENT SEE SHEET #23
3. CONSTRUCT TEMPORARY PAVEMENT IN THREE PLACES EAST OF NORTHBOUND SERVICE ROAD, AS SHOWN.
4. CONSTRUCT TEMPORARY ROAD FROM EXISTING NORTHBOUND STEPHENSON TO EXISTING SOUTHBOUND SERVICE ROAD CONSTRUCTED ON PROJECT TO NORTH. FOR ALIGNMENT SEE SHEET #23

Per Auth No. 1069 dated Jul 28 1965

** North & South Bound Service Road traffic to be maintained as shown on sheet No. 21A

** per authorization no. 1915 dated 9-27-65



ITEM	UNIT	As Const. B I 82252L, C63 Furnish & Install	Relocate	Remove	I 63174A, C64 Furnish & Install	Relocate	Remove
S-40 Barricade	Lin. Ft.	~~360~~ 250	~~60~~ 0		~~337.5~~ 162.5	~~500~~ 0	75

Relocate per Authorization No. 1069 dated Jul 28, 1965

LEGEND

- Existing Pavement
- Temporary Pavement
- Permanent Pavement, this stage
- Permanent Pavement constructed on previous stages
- Timber Curb & Splash Boards
- S-40 Barricades

CONSTRUCTION PROCEDURE STAGE 2

82252 L, C63; 63174 A, C64	STAGE 2 STATE PROJECT	HIGAN PROJECT	SHEET NO.
	82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	17

OPERATION	BY	DATE
PRELIMINARY R/W CHECKED	Mattfeldt	7-26-65
FINAL DESIGN	Kaufman	7-26-65
FINAL DESIGN CHECKED		
FINAL R.O.W. CHECKED	Mattfeldt	7-26-65
QUANTITIES CHECKED	Kaufman	7-26-65
SQUAD	Kaufman	7-26-65

OPERATION	BY	DATE
SURVEYED	Mattfeldt	7-26-65
PLAN PLOTTED	Mattfeldt	7-26-65
PROFILE CHECKED	Mattfeldt	7-26-65
PROFILE PLOTTED		
PROFILE CHECKED		
FINAL PLAN		
GRADE INSPECTION	Acra	4-7-66
FEDERAL INSPECTION	Kaufman & Wilson	4-7-66

AUTH.	DATE	REVISION
		FINAL R.O.W.

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1 (98) 59 I-75-2 (98) 59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	18	

STAGE 3

EAST & WESTBOUND 8 MILE RD. REMAINS ON TEMPORARY ROAD.

~~* * NORTHBOUND TRAFFIC MOVES TO NORTHBOUND SERVICE ROAD (ULTIMATE LOCATION EXCEPT WHERE CROSSING EXISTING EASTBOUND 8 MILE RD.) SOUTHBOUND TRAFFIC MOVES TO EXISTING NORTHBOUND STEPHENSON.~~

1. CONSTRUCT 54" WATERMAIN IN EASTBOUND SERVICE ROAD WEST OF IRVINGTON TO EAST OF SOUTHBOUND SERVICE ROAD.
2. CONSTRUCT SOUTHBOUND SERVICE ROAD SOUTH OF EXISTING EASTBOUND 8 MILE.
3. CONSTRUCT SOUTHBOUND SERVICE ROAD NORTH OF 8 MILE TEMPORARY ROAD.
4. CONSTRUCT WESTBOUND 8 MILE WEST OF SOUTHBOUND SERVICE ROAD TO WEST OF CALADONIA.

~~* * 5. WIDEN SOUTHBOUND SERVICE ROAD SOUTH OF EASTBOUND SERVICE ROAD WITH TEMPORARY PAVEMENT TO 24' WIDTH AND CONNECT WITH EXISTING OAKLAND AVE.~~

6. WIDEN WESTBOUND SERVICE ROAD WEST OF SOUTHBOUND SERVICE ROAD WITH TEMPORARY PAVEMENT TO 33' WIDTH.

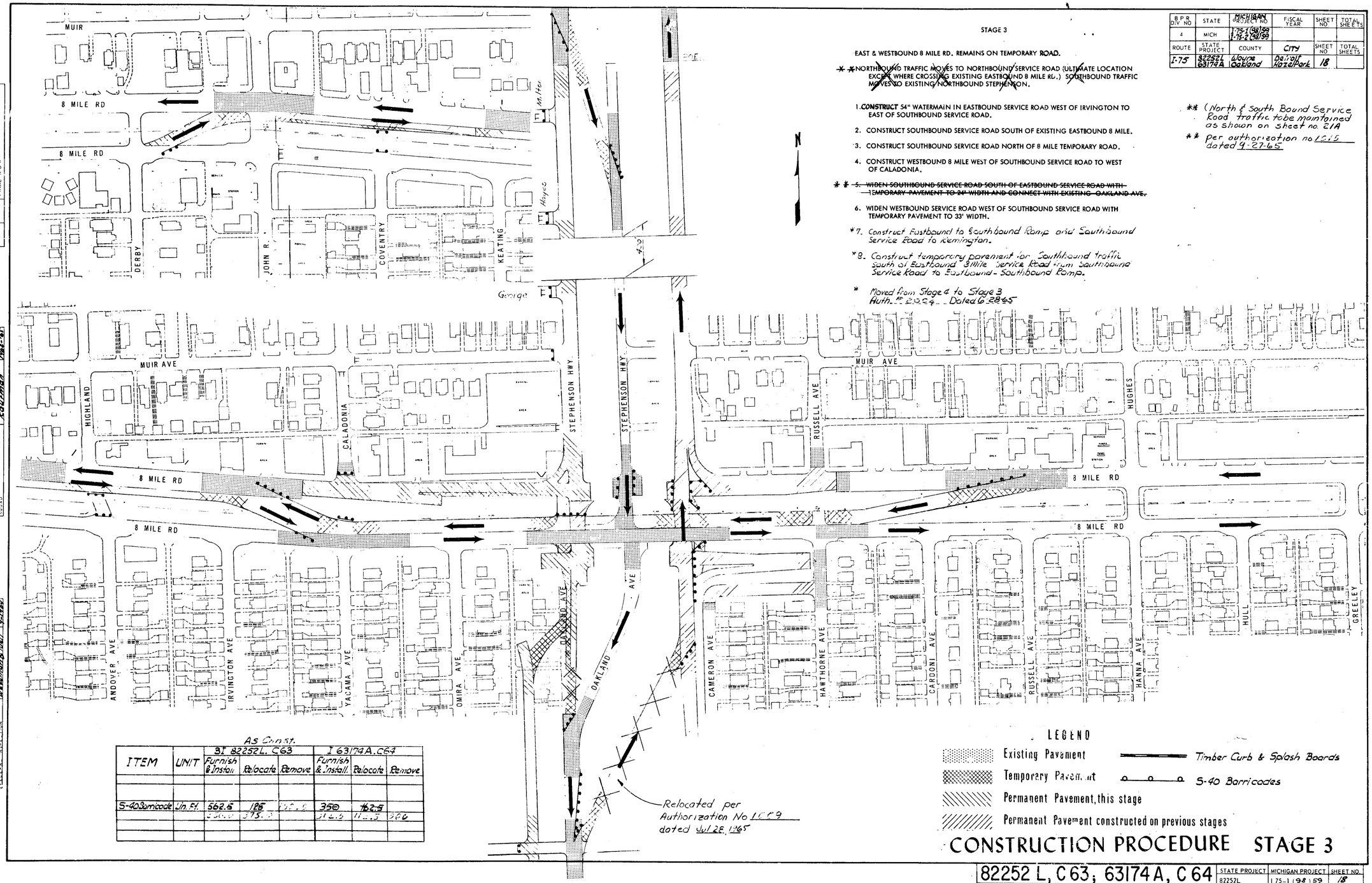
*7. Construct Eastbound to Southbound Ramp and Southbound Service Road to Remington.

*8. Construct temporary pavement for Southbound traffic south of Eastbound 8 Mile Service Road from Southbound Service Road to Eastbound-Southbound Ramp.

* Moved from Stage 4 to Stage 3 Auth. No. 2924 Dated 6-28-65

** (North & South Bound Service Road traffic to be maintained as shown on sheet no. 21A

** per authorization no 1215 dated 9-27-65



ITEM	UNIT	As Const. I 82252L. C63 Furnish & Install	Relocate	Remove	I 63174A. C64 Furnish & Install	Relocate	Remove
S-40 Barricade	Lin. Ft.	562.5	185	[illegible]	350	162.5	
		[illegible]	375.[illegible]		[illegible]	[illegible]	366

LEGEND

- Existing Pavement
- Temporary Pavement
- Permanent Pavement, this stage
- Permanent Pavement constructed on previous stages
- Timber Curb & Splash Boards
- S-40 Barricades

CONSTRUCTION PROCEDURE STAGE 3

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	18

OPERATION	BY	DATE
PRELIM. DESIGN	Mathews	7-1-66
FINAL DESIGN	Kaufman	7-1-66
TABULATION CHECKED		
FINAL R/W CHECKED		
QUANTITIES CHECKED	Kaufman	7-1-66
QUANTITIES CHECKED	Kaufman	7-1-66

OPERATION	BY	DATE
SURVEYS	Miller	7-1-66
MAIN PROFILES	Mathews	7-1-66
PROFILE PASSED	Wilkerson	7-1-66
PROFILE CHECKED		
PROOF PLAN		
ORIG. MAP	Aaron	7-1-66
FIELD INSPECTION	Weismann, Bell	7-1-66

AUTH.	DATE	REVISION
		FINAL R/W

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1(98)59 I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	19	

STAGE 4

EAST AND WESTBOUND 8 MILE RD. TRAFFIC REMAINS ON TEMPORARY ROAD

POE

** NORTHBOUND TRAFFIC REMAINS ON NORTHBOUND SERVICE ROAD (ULTIMATE LOCATION EXCEPT WHERE CROSSING EASTBOUND)

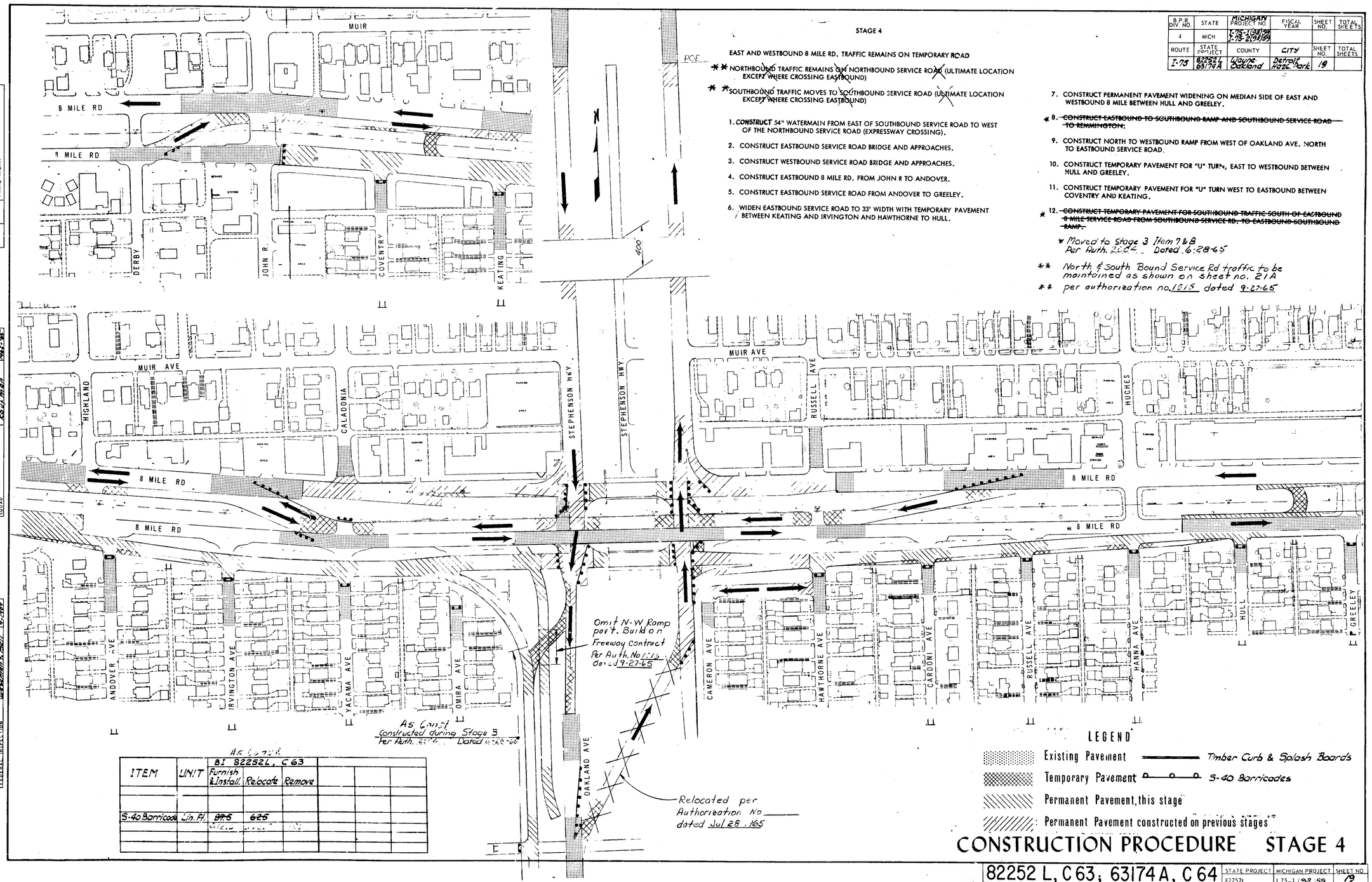
** SOUTHBOUND TRAFFIC MOVES TO SOUTHBOUND SERVICE ROAD (ULTIMATE LOCATION EXCEPT WHERE CROSSING EASTBOUND)

1. CONSTRUCT 54" WATERMAIN FROM EAST OF SOUTHBOUND SERVICE ROAD TO WEST OF THE NORTHBOUND SERVICE ROAD (EXPRESSWAY CROSSING).
2. CONSTRUCT EASTBOUND SERVICE ROAD BRIDGE AND APPROACHES.
3. CONSTRUCT WESTBOUND SERVICE ROAD BRIDGE AND APPROACHES.
4. CONSTRUCT EASTBOUND 8 MILE RD. FROM JOHN R TO ANDOVER.
5. CONSTRUCT EASTBOUND SERVICE ROAD FROM ANDOVER TO GREELEY.
6. WIDEN EASTBOUND SERVICE ROAD TO 33' WIDTH WITH TEMPORARY PAVEMENT / BETWEEN KEATING AND IRVINGTON AND HAWTHORNE TO HULL.
7. CONSTRUCT PERMANENT PAVEMENT WIDENING ON MEDIAN SIDE OF EAST AND WESTBOUND 8 MILE BETWEEN HULL AND GREELEY.
8. ~~CONSTRUCT EASTBOUND TO SOUTHBOUND RAMP AND SOUTHBOUND SERVICE ROAD TO REMMINGTON.~~ *
9. CONSTRUCT NORTH TO WESTBOUND RAMP FROM WEST OF OAKLAND AVE. NORTH TO EASTBOUND SERVICE ROAD.
10. CONSTRUCT TEMPORARY PAVEMENT FOR "U" TURN, EAST TO WESTBOUND BETWEEN HULL AND GREELEY.
11. CONSTRUCT TEMPORARY PAVEMENT FOR "U" TURN WEST TO EASTBOUND BETWEEN COVENTRY AND KEATING.
12. ~~CONSTRUCT TEMPORARY PAVEMENT FOR SOUTHBOUND TRAFFIC SOUTH OF EASTBOUND 8 MILE SERVICE ROAD FROM SOUTHBOUND SERVICE RD. TO EASTBOUND SOUTHBOUND RAMP.~~ *

* Moved to Stage 3 Item 7 & 8 Per Auth. 2004 Dated 6-28-65

** North & South Bound Service Rd traffic to be maintained as shown on sheet no. 21A

** per authorization no. 1215 dated 9-27-65



As Const.

ITEM	UNIT	BI 82252L, C63 Furnish & Install	Relocate	Remove			
S-40 Barricade	Lin. Ft.	~~875~~ 875	~~625~~ 625				

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	McNiece	2-24-65
FINAL BRIDGE	McNiece	2-24-65
TRACED BRIDGE CHECKED	Kowalski	2-24-65
FINAL R.O.W. CHECKED	Lovalbury	2-26-65
QUANTITIES CHECKED	Kaufman	2-26-65
SOLID	Kaufman	2-26-65

OPERATION	BY	DATE
SURVEY CO.	McNiece	2-24-65
PLAN PLOTTED	McNiece	2-24-65
PLAN ACCEPTED	McNiece	2-24-65
PROFILE PLOTTED	McNiece	2-24-65
PROFILE CHECKED	McNiece	2-24-65
PROFILE ACCEPTED	McNiece	2-24-65
GRADE INSPECTION	McNiece	2-24-65
FEDERAL INSPECTION	Williams	2-24-65

CONSTRUCTION PROCEDURE STAGE 4

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO
	82252L 63174A	I-75-1(98)59 I-75-2(98)59	19

B.P.R. DIV. NO.	STATE	Michigan PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1(98)59 I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne Oakland	Detroit Hazel Park	20	

STAGE 5

** NORTHBOUND TRAFFIC USES ULTIMATE PAVEMENT EXCEPT FOR TEMPORARY PAVEMENT BETWEEN 8 MILE SERVICE ROAD.

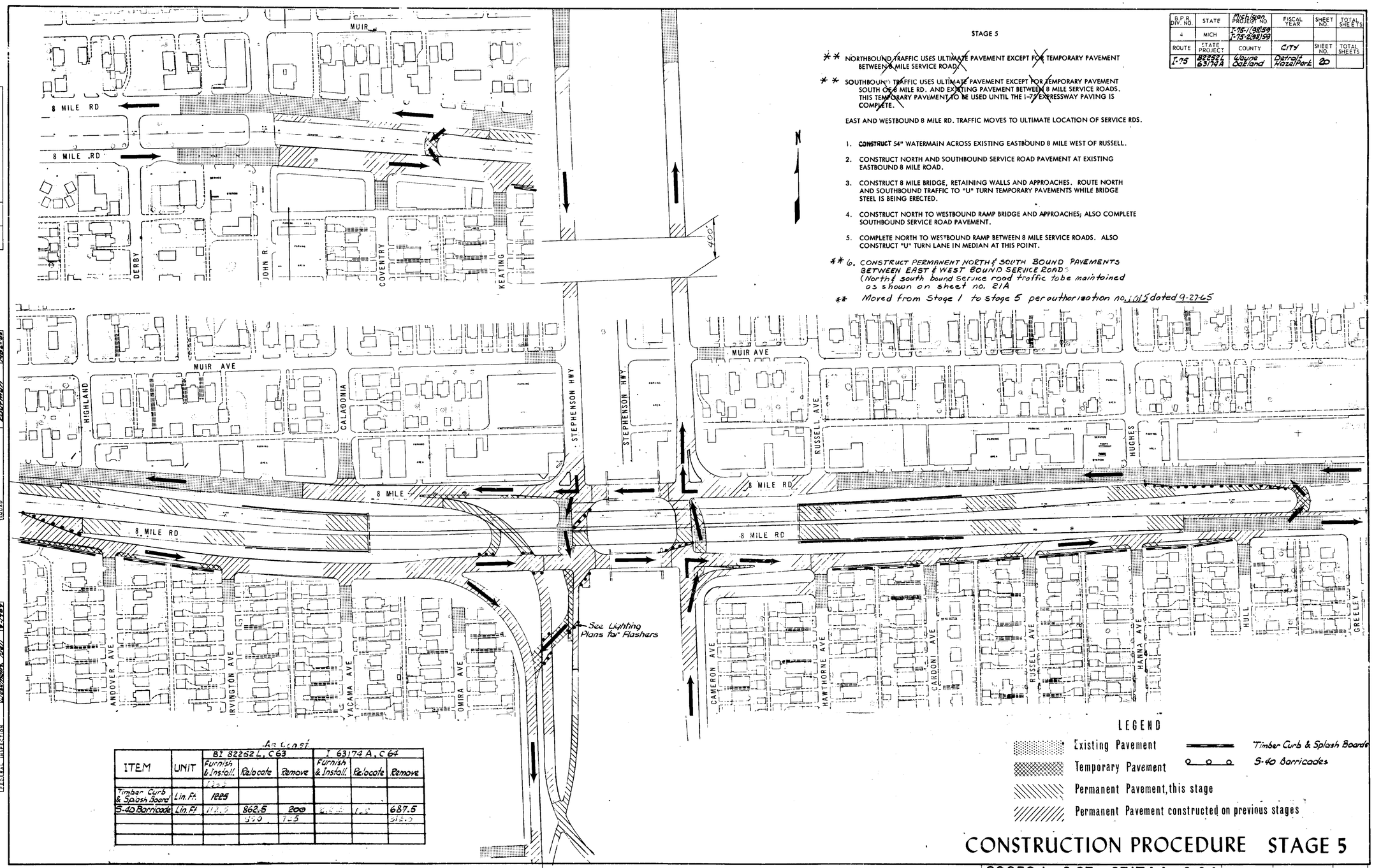
** SOUTHBOUND TRAFFIC USES ULTIMATE PAVEMENT EXCEPT FOR TEMPORARY PAVEMENT SOUTH OF 8 MILE RD. AND EXISTING PAVEMENT BETWEEN 8 MILE SERVICE ROADS. THIS TEMPORARY PAVEMENT TO BE USED UNTIL THE I-75 EXPRESSWAY PAVING IS COMPLETE.

EAST AND WESTBOUND 8 MILE RD. TRAFFIC MOVES TO ULTIMATE LOCATION OF SERVICE RDS.

1. CONSTRUCT 54" WATERMAIN ACROSS EXISTING EASTBOUND 8 MILE WEST OF RUSSELL.
2. CONSTRUCT NORTH AND SOUTHBOUND SERVICE ROAD PAVEMENT AT EXISTING EASTBOUND 8 MILE ROAD.
3. CONSTRUCT 8 MILE BRIDGE, RETAINING WALLS AND APPROACHES. ROUTE NORTH AND SOUTHBOUND TRAFFIC TO "U" TURN TEMPORARY PAVEMENTS WHILE BRIDGE STEEL IS BEING ERECTED.
4. CONSTRUCT NORTH TO WESTBOUND RAMP BRIDGE AND APPROACHES; ALSO COMPLETE SOUTHBOUND SERVICE ROAD PAVEMENT.
5. COMPLETE NORTH TO WESTBOUND RAMP BETWEEN 8 MILE SERVICE ROADS. ALSO CONSTRUCT "U" TURN LANE IN MEDIAN AT THIS POINT.

** 6. CONSTRUCT PERMANENT NORTH & SOUTH BOUND PAVEMENTS BETWEEN EAST & WEST BOUND SERVICE ROADS (North & south bound service road traffic to be maintained as shown on sheet no. 21A

** Moved from Stage 1 to stage 5 per authorization no. 1015 dated 9-27-65



ITEM	UNIT	BI 82252 L, C63 Furnish & Install	BI 82252 L, C63 Relocate	BI 82252 L, C63 Remove	I 63174 A, C64 Furnish & Install	I 63174 A, C64 Relocate	I 63174 A, C64 Remove
Timber Curb & Splash Board	Lin. Ft.	1225					
S-40 Barricade	Lin. Ft.	112.5	862.5	200	[illegible]	[illegible]	687.5
			550	7.5			512.5

LEGEND

- Existing Pavement
- Temporary Pavement
- Permanent Pavement, this stage
- Permanent Pavement constructed on previous stages
- Timber Curb & Splash Board
- S-40 Barricades

CONSTRUCTION PROCEDURE STAGE 5

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	20

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
FINAL R.O.W. CHECKED	Pettibone	2-1-65
FINAL DESIGN	Pettibone	2-1-65
FINAL DESIGN CHECKED	Pettibone	
FINAL R.O.W.	Pettibone	2-1-65
FINAL R.O.W. CHECKED	Pettibone	
QUANTITIES	Wilkinson	2-1-65
QUANTITIES CHECKED	Wilkinson	2-1-65
SQUAD	Coulman	10-21-65

OPERATION	BY	DATE
SURVEY ADDED	Pettibone	2-1-65
PLAN ADDED	Pettibone	2-1-65
PLAN CHECKED	Pettibone	
PROFILE ADDED	Pettibone	2-1-65
PROFILE CHECKED		
PRELIMINARY GRADE		
PRELIMINARY CHECKED		
FEDERAL INSPECTION	Berger, Ball, Weckbacker	9-27-65

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59 I-75-2(91)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	21	

STAGE 6

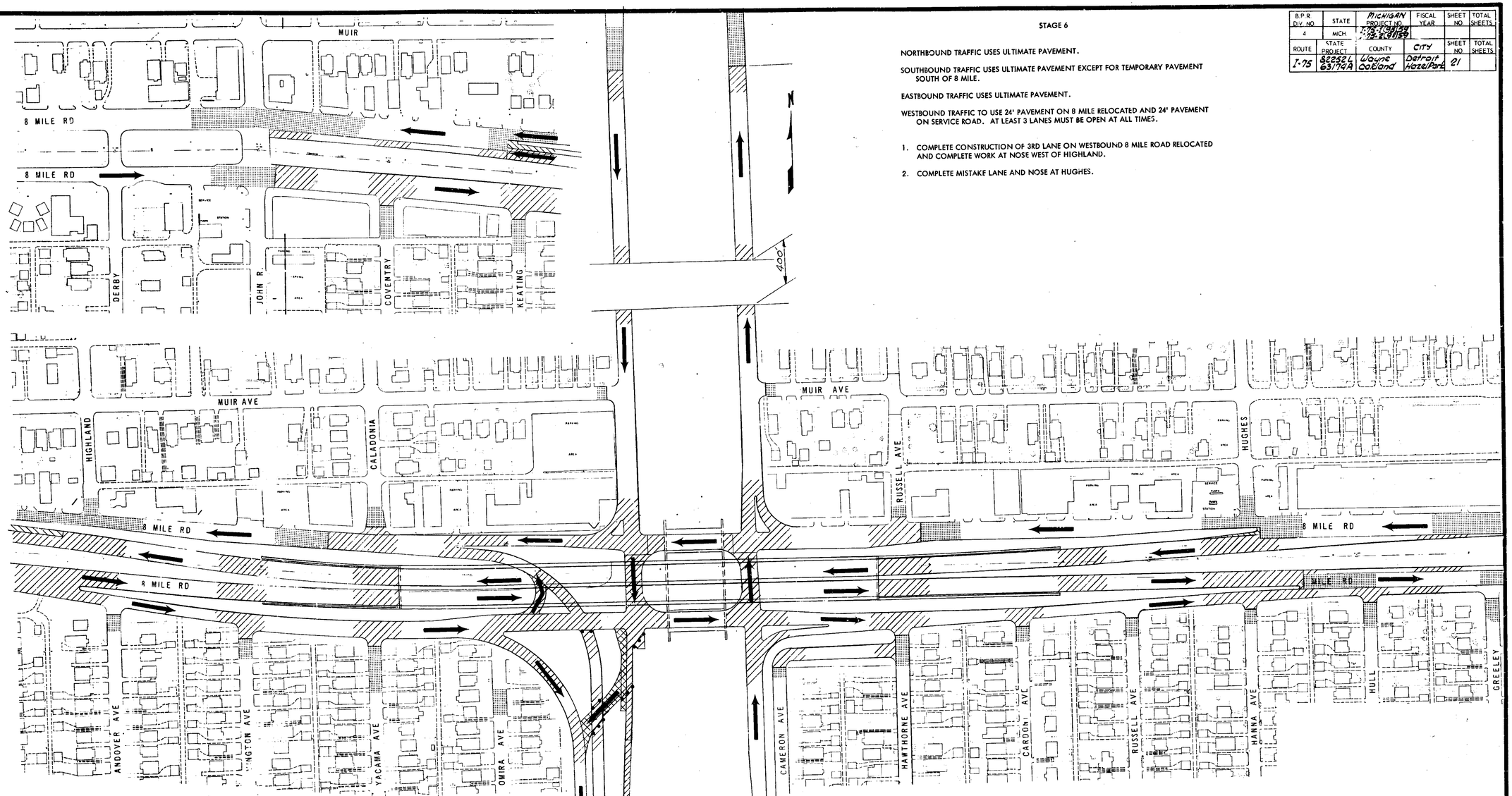
NORTHBOUND TRAFFIC USES ULTIMATE PAVEMENT.

SOUTHBOUND TRAFFIC USES ULTIMATE PAVEMENT EXCEPT FOR TEMPORARY PAVEMENT SOUTH OF 8 MILE.

EASTBOUND TRAFFIC USES ULTIMATE PAVEMENT.

WESTBOUND TRAFFIC TO USE 24' PAVEMENT ON 8 MILE RELOCATED AND 24' PAVEMENT ON SERVICE ROAD. AT LEAST 3 LANES MUST BE OPEN AT ALL TIMES.

1. COMPLETE CONSTRUCTION OF 3RD LANE ON WESTBOUND 8 MILE ROAD RELOCATED AND COMPLETE WORK AT NOSE WEST OF HIGHLAND.
2. COMPLETE MISTAKE LANE AND NOSE AT HUGHES.



ITEM	UNIT	BI 82252L, C63 Furnish & Install.	Relocate	Remove	I 63174A, C64 Furnish & Install.	Relocate	Remove
5-40 Barricade	Lin. Ft.			700			

NOTE: 162.5 Lin. Ft. of 5-40 Barricade to remain in place as directed by Engineer until Freeway Completion

LEGEND

- Existing Pavement
- Temporary Pavement
- Permanent Pavement, this stage
- Permanent Pavement constructed on previous stages
- Timber Curb & Splash Boards
- 5-40 Barricades

CONSTRUCTION PROCEDURE STAGE 6

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	21
63174A	I 75-2 (98) 59	

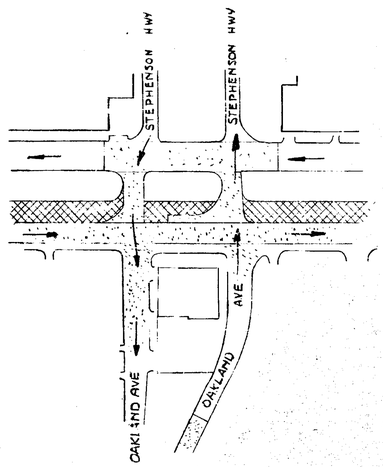
AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	Malthaner	2-1965
FINAL DESIGN	Kaufman	2-1965
FINAL DESIGN CHECKED		
TRACED	Wittevoen	2-1965
FINAL R.O.W. CHECKED	Kaufman	2-1965
QUANTITIES	Kaufman	1962
QUANTITIES CHECKED		
SQUAD		

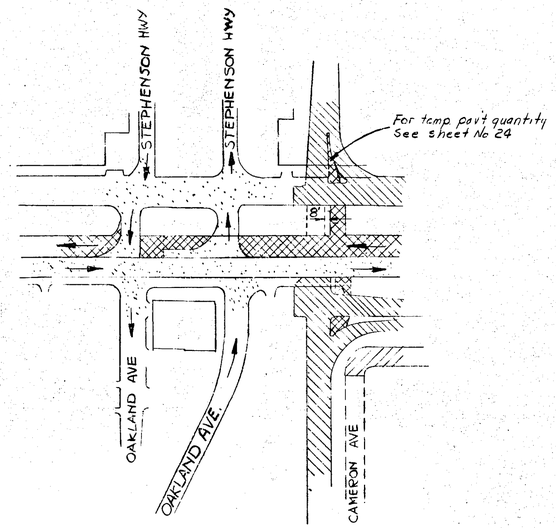
OPERATION	BY	DATE
SURVEYED	Miller	1960
PLAN PLOTTED	Malthaner	1-1965
PLAN CHECKED	Wittevoen	1-1965
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE	Beran	2-1967
GRADE INSPECTION	Weberman & Noll	2-1967
FEDERAL INSPECTION		

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	Michigan F-8-(18)20 F-75-2(18)20			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63074 A	WAYNE	Oakland Heights	21A	

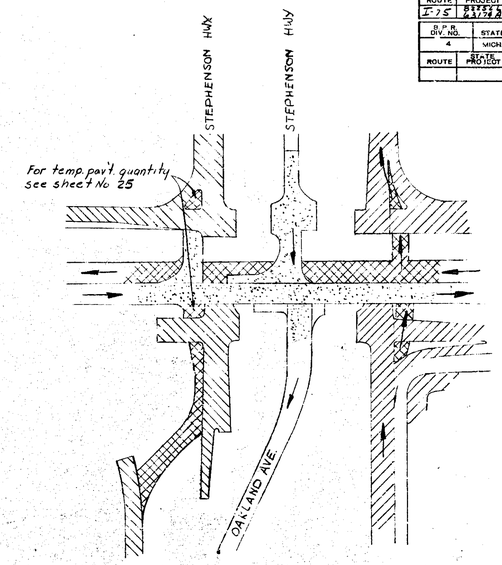
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



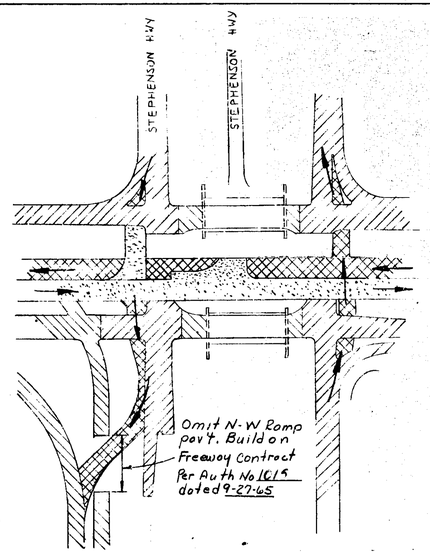
STAGE 1



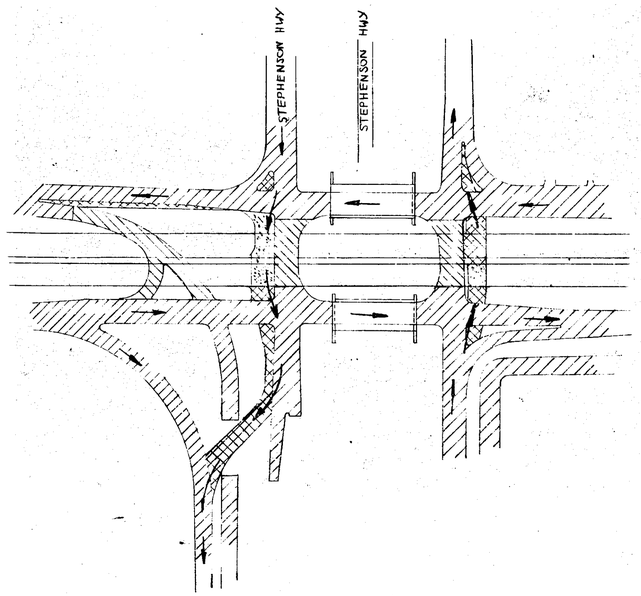
STAGE 2



STAGE 3



STAGE 4



STAGE 5

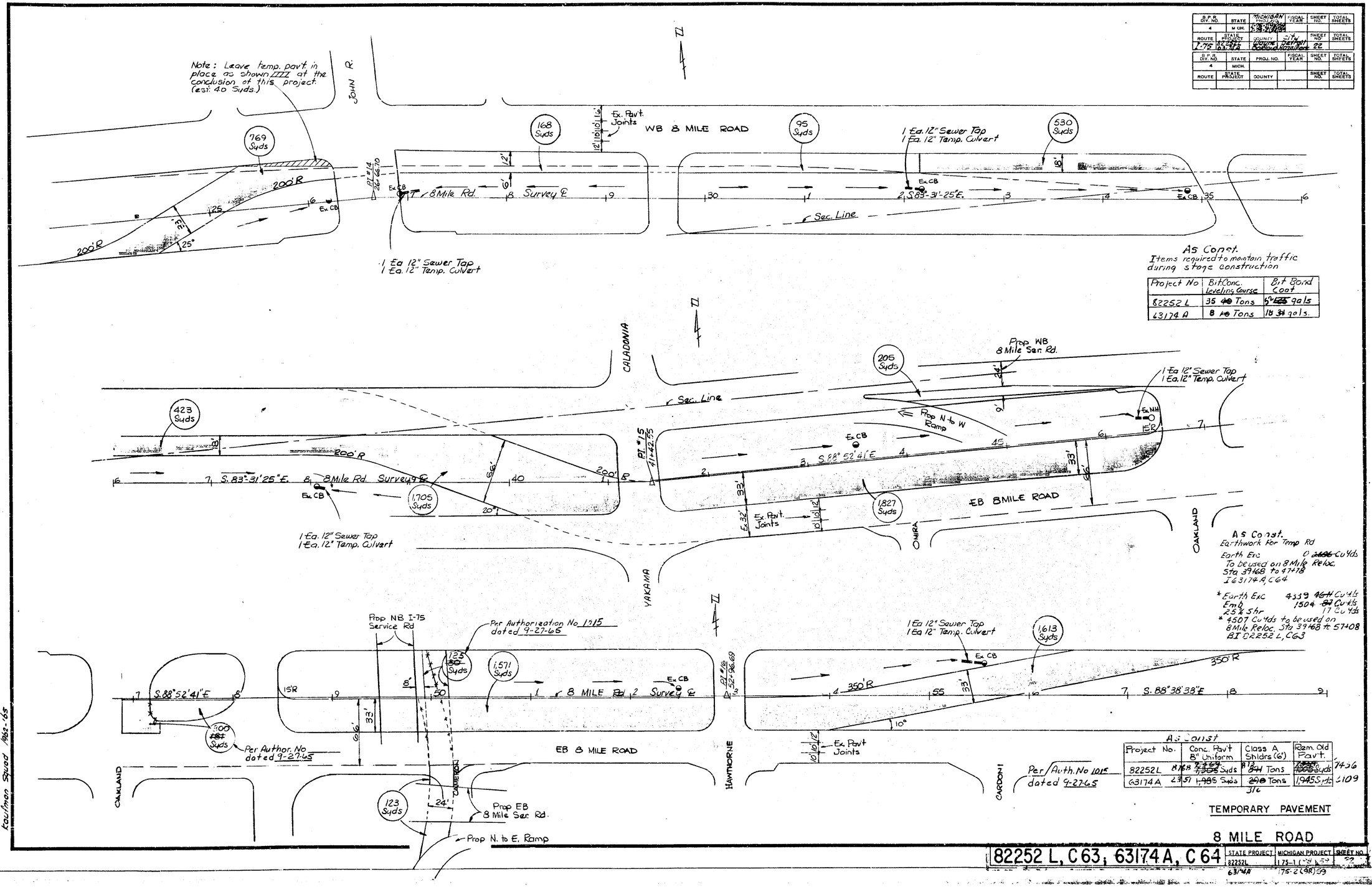
This sheet added to the plans per authorization no. 1015 dated 9-27-65 to be used for the Maintaining of N. & S Bound Traffic.

CONSTRUCTION PROCEDURE STAGE 1 thru 5

L82252 L, C63; 63174A, C64

STATE PROJECT	FED. PROJECT	SHEET NO.
82252 L 63074 A	F-8-(18)20 F-75-2(18)20	21A

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-1(98)59 / 175-2(98)59			
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazelwood	22	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.
Items required to maintain traffic during stage construction

Project No	Bit Conc. Leveling Course	Bit Bond Coat
82252 L	35 ~~40~~ Tons	5 ~~125~~ gals
63174 A	8 ~~10~~ Tons	18 ~~31~~ gals.

As Const.
Earthwork for Temp Rd
Earth Exc 0 ~~2686~~ Cu Yds
To be used on 8 Mile Reloc.
Sta 39+68 to 47+78
I 63174 A, C64

* Earth Exc 4339 ~~4611~~ Cu Yds
Emb 1504 ~~87~~ Cu Yds
25% Shr 17 Cu Yds
* 4507 Cu Yds to be used on 8 Mile Reloc. Sta 39+68 to 57+08
BI 82252 L, C63

As Const

Project No.	Conc. Pav't 8" Uniform	Class A Shldrs (6")	Rem. Old Pav't.	
82252L	8768 ~~7,305~~ Syds	813 ~~841~~ Tons	~~7,305~~ Syds	7456
63174A	2357 ~~1,985~~ Syds	~~290~~ Tons 316	1,945 Syds	2109

TEMPORARY PAVEMENT

8 MILE ROAD

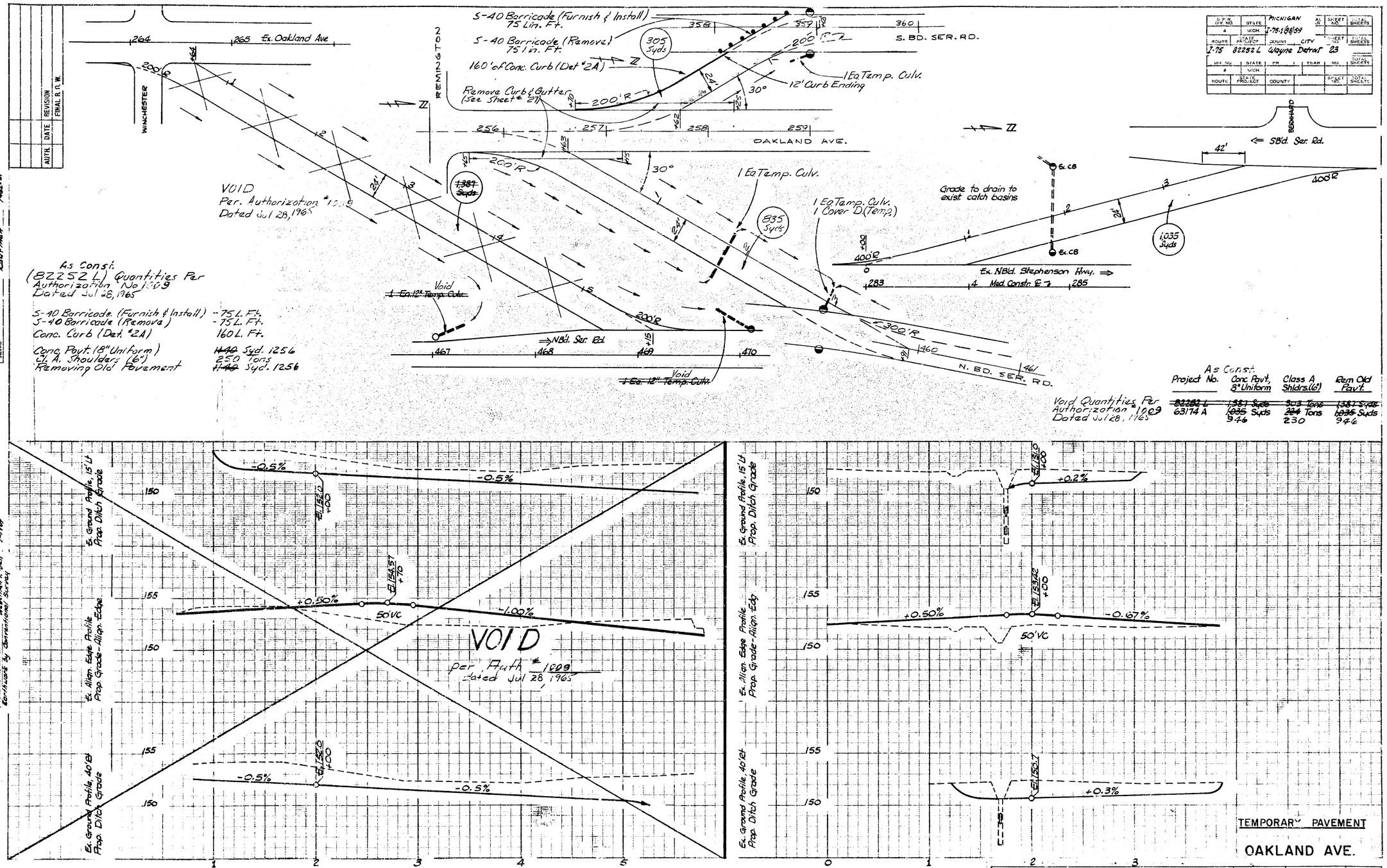
82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	22
63174A	175-2 (98) 59	

Kaufman Squad 1962-65

AUTH.	DATE	REVISION
		FINAL R. O. W.

PROCEDURE	BY	DATE
PRELIM. RLWY. R.O.W. CHECKED	McHarg	2-65
FINAL DESIGN	Kaufman	2-65
FINAL DESIGN CHECKED		
TRACED	McHarg	2-65
FINAL R.O.W. CHECK	Kaufman	2-65
FINAL R.O.W. CHECKED		
SURVEYED		
CALC. NOTES		
CALC. NOTES CHECKED		
ZU. NTS / RES CHECKED		
REVISED		



S.P. NO. DIV. NO.	STATE	MICHIGAN	AL. JR.	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L	Wayne	Detroit	23	

DIV. NO.	STATE	FR.	TO	YEAR	NO.	TOTAL SHEETS
4	MICH.					
ROUTE	STATE PROJECT	COUNTY			SHEET NO.	TOTAL SHEETS

As Const.
(82252 L) Quantities Per
Authorization No 1009
Dated Jul 28, 1965

S-40 Barricade (Furnish & Install)	75 L. Ft.
S-40 Barricade (Remove)	75 L. Ft.
Conc. Curb (Det. #2A)	160 L. Ft.
Conc. Pavt. (8" Uniform)	~~1140~~ Syd. 1256
Cl. A. Shoulders (6")	250 Tons
Removing Old Pavement	~~1140~~ Syd. 1256

As Const.

Project No.	Conc. Pavt. 8" Uniform	Class A Shldrs. (6")	Rem Old Pav't
~~82252 L~~	~~1,381 Syds~~	~~303 Tons~~	~~1,381 Syds~~
63174 A	~~1,035~~ Syds 946	~~224~~ Tons 230	~~1,035~~ Syds 946

Void Quantities Per Authorization #1009 Dated Jul 28, 1965

SURVEY C.	MILLER
PLAN PLOTTED	LOUNSBURY
PLAN REVIEWED	GRAY
PROF. & PLOTTED	KOCKER
PROF. REVIEWED	
CROSS SECTIONS	
CARE. NOMOGRAPH	
ZU. NTS / RES.	
REVISED by Construction Survey	Mark Wesemann & Dall

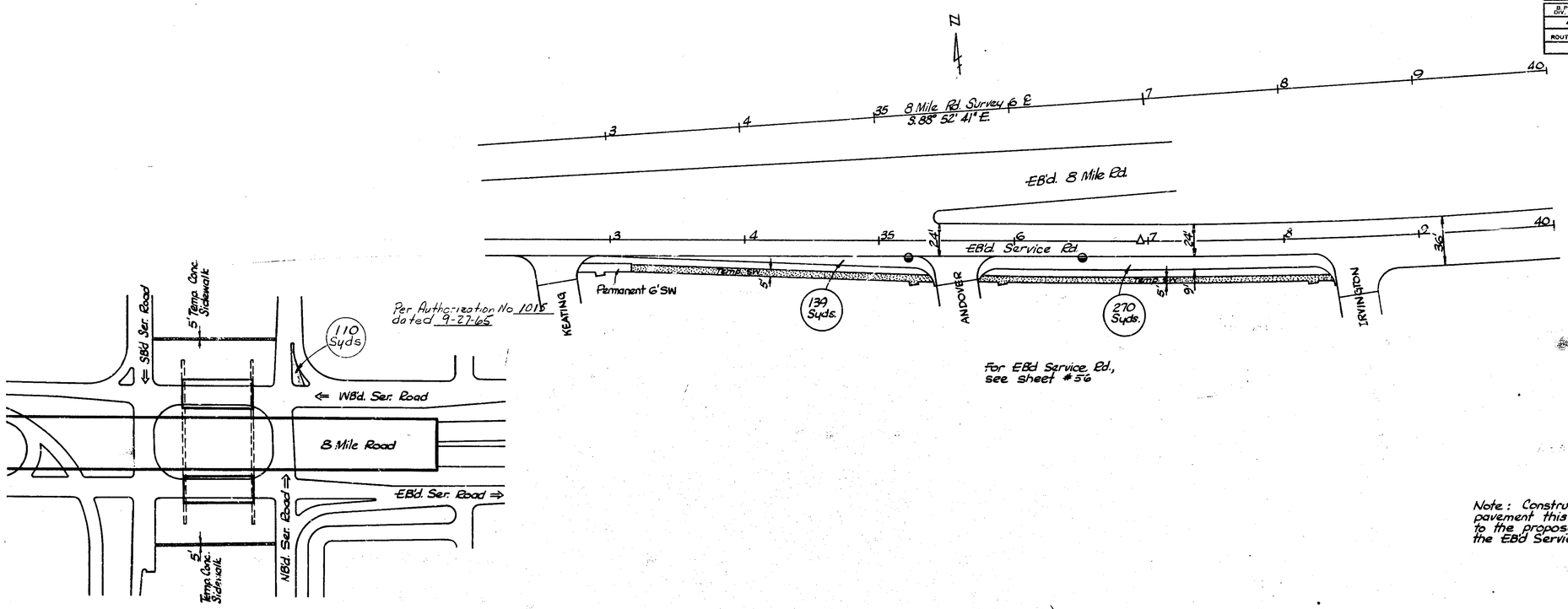
TEMPORARY PAVEMENT

OAKLAND AVE.

82252 L, C 63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	23

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-1(98)59 1-76-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne Oakland	Detroit Hazel Park	24	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

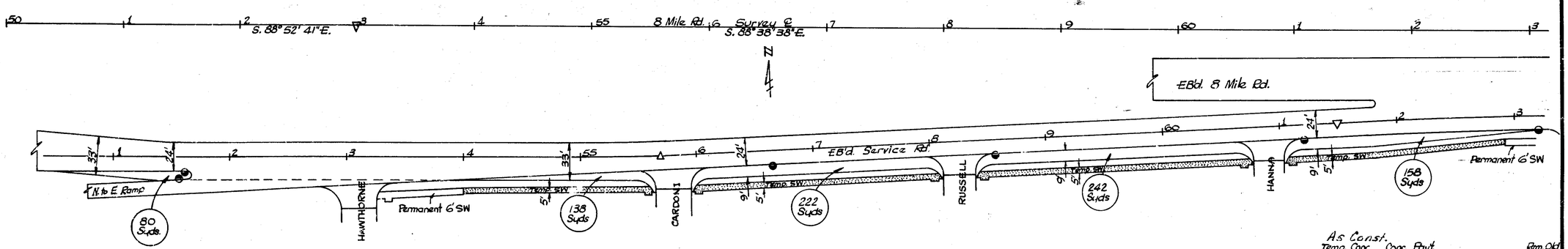


For EB'd Service Rd., see sheet #56

Per Authorization No. 1015 dated 9-27-65

Sketch showing Temporary Concrete Sidewalk @ 8 Mile Rd & I-75 Interchange

Note: Construct temporary pavement this sheet to drain to the proposed Basins on the EB'd Service Road.



For EB'd Service Rd., see sheet #58

Per Auth No. 1015 dated 9-27-65

Project	Location	As Const. Temp. Conc. Sidewalk	Conc. Pavt., 8" Uniform		Ram. Old Pavt.
82252 L	EB'd S. Rd.	6,333 ~~1,612~~ Sq. Ft.	1,359 ~~1,249~~ Syds.	1,245	1,247 ~~1,249 Syds.~~
63174 A	WB'd. S. Rd.	1,140 Sq. Ft.			

TEMPORARY PAVEMENT

EASTBOUND SER. ROAD

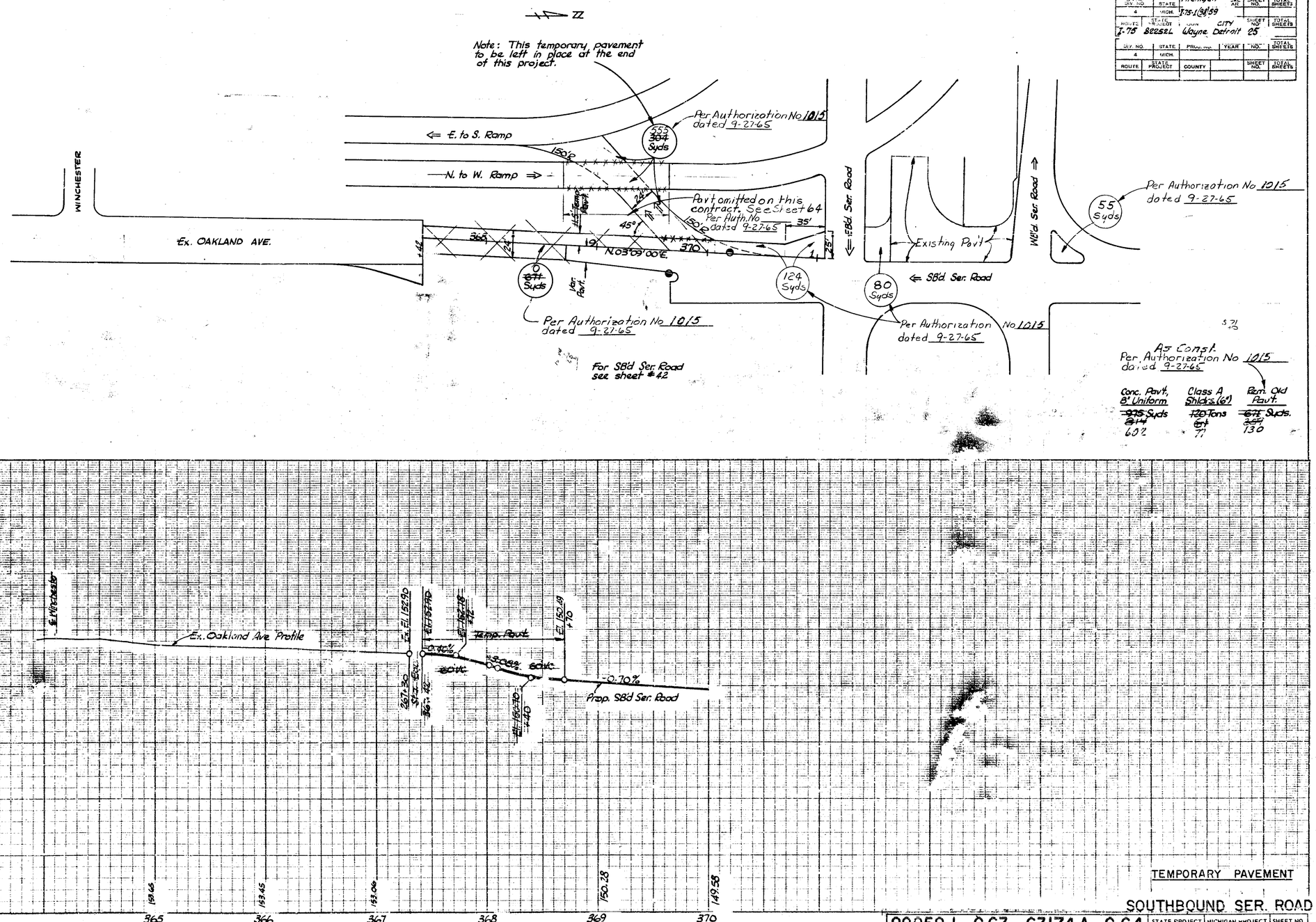
Kaufman Squad. 1962-65

82252 L, C63, 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	175-1(98)59 175-2(98)59	24

B.P.R. DIV. NO.	STATE		SAL. AIR.	SHEET NO.	TOTAL SHEETS
4	MICH.	Michigan 175-1(98)59			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne Detroit		25	

DIV. NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

CONTROL OPERATION	BY	DATE
PRELIMINARY (F.A.) CHECKED		
FINAL DESIGN	Miller	2-65
FINAL DESIGN CHECKED	Miller	2-65
PREPARED	Miller	2-65
FINAL R.O.W. CHECK	Miller	2-65
FINAL R.O.W. CHECKED	Miller	2-65
QUANTITIES	Gardner	2-65
QUANTITIES CHECKED	Gardner	2-65
SQUAD	Gardner	1-66



SURVEYS	OPERATION	BY	DATE
PLANS FROM PROJECT		Miller	2-65
PLANS CHECKED		Miller	1-66
PROFILE		Cinder	1-66
PROFILE CHECKED		Cinder	1-66
PROJECT LINE		Robbins	1-66
PROJECT LINE CHECKED		Robbins	1-66
CROSS SECTIONS		Marcum	1-66
CROSS SECTIONS CHECKED		Marcum	1-66
FIELD BOOK NO.			

Continuous by Contract Gardner 1-30-67

TEMPORARY PAVEMENT

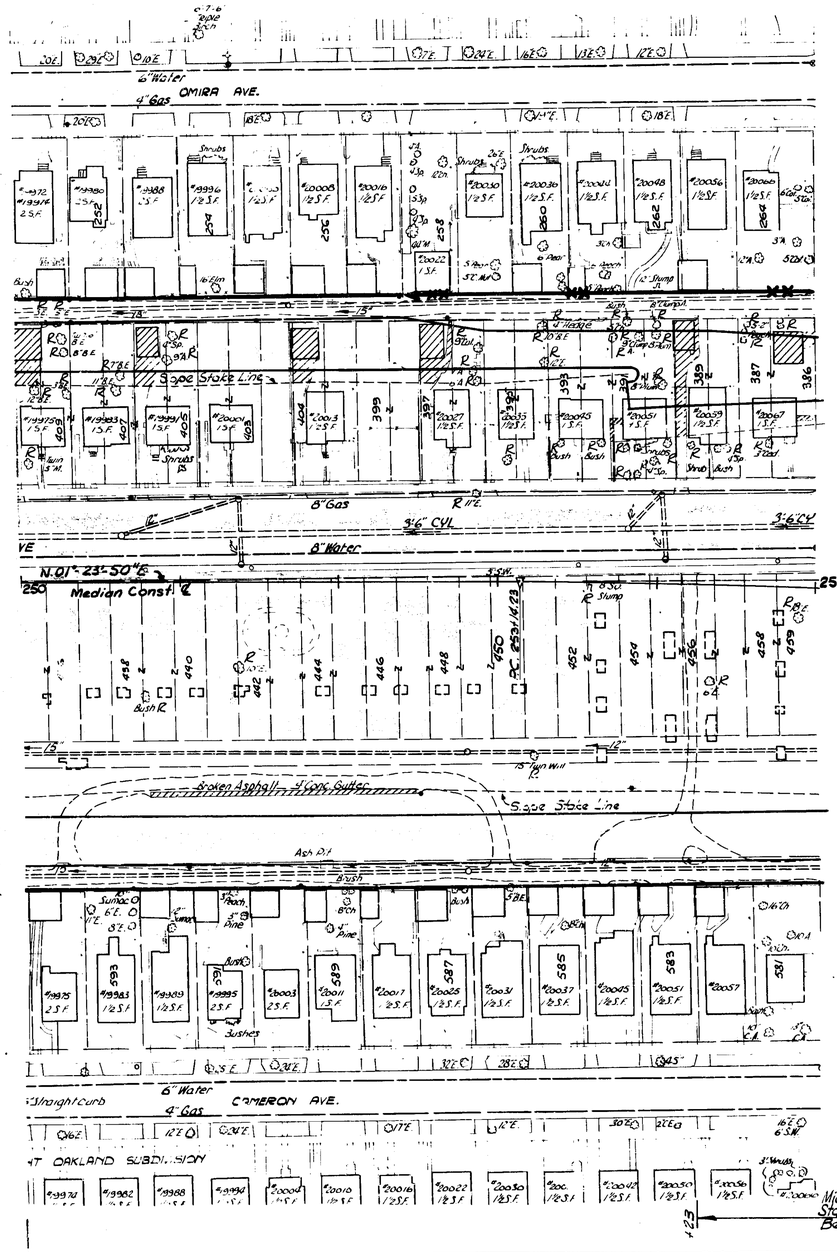
SOUTHBOUND SER. ROAD

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1(98)59	25

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252K	Wayne	Detroit	26	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

Removal Quantities this sheet

Removing Trees

8"-12" dia. 4 ~~Ea.~~ 3 Ea.

13"-24" 1 Ea.

Rem. Sidewalks 130 132 Syds

Rem. Mas. & Conc. Struct. 0 ~~3~~ Cyds

Mich. Proj. I75-1(98)59
State Proj. BI 82252 L C63
Begins Sta. 454+23

REMOVAL

Kaufman's Squad - 1965

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	26

REMINGTON AVE. WINCHESTER AVE.

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	27	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

Relocated per Authorization No 1009 dated Jul 28, 1965

Slope Stake Line

As Const.

Removal Quantities this sheet:

Removing Trees -
8"-12" dia. 15 ~~27~~ Ea.
13"-24" dia. 21 ~~10~~ Ea.
25"-36" dia. 2 ~~1~~ Ea.

Rem. Old Pavt. 9[illegible] ~~1,026~~ Syds
~~Rem. Sidewalks 1,696 Syds~~
~~Rem. Curb & Gutter 666 L.Ft.~~
Rem. Mas. & Conc. Struct. 32 Cyds

Abandoning Catch Basins 2 Ea.

Rem. Sidewalks 16 ~~1,937~~ 85 Syds
Rem. Curb & Gutter ~~971~~ 630.2 Lin. Ft.

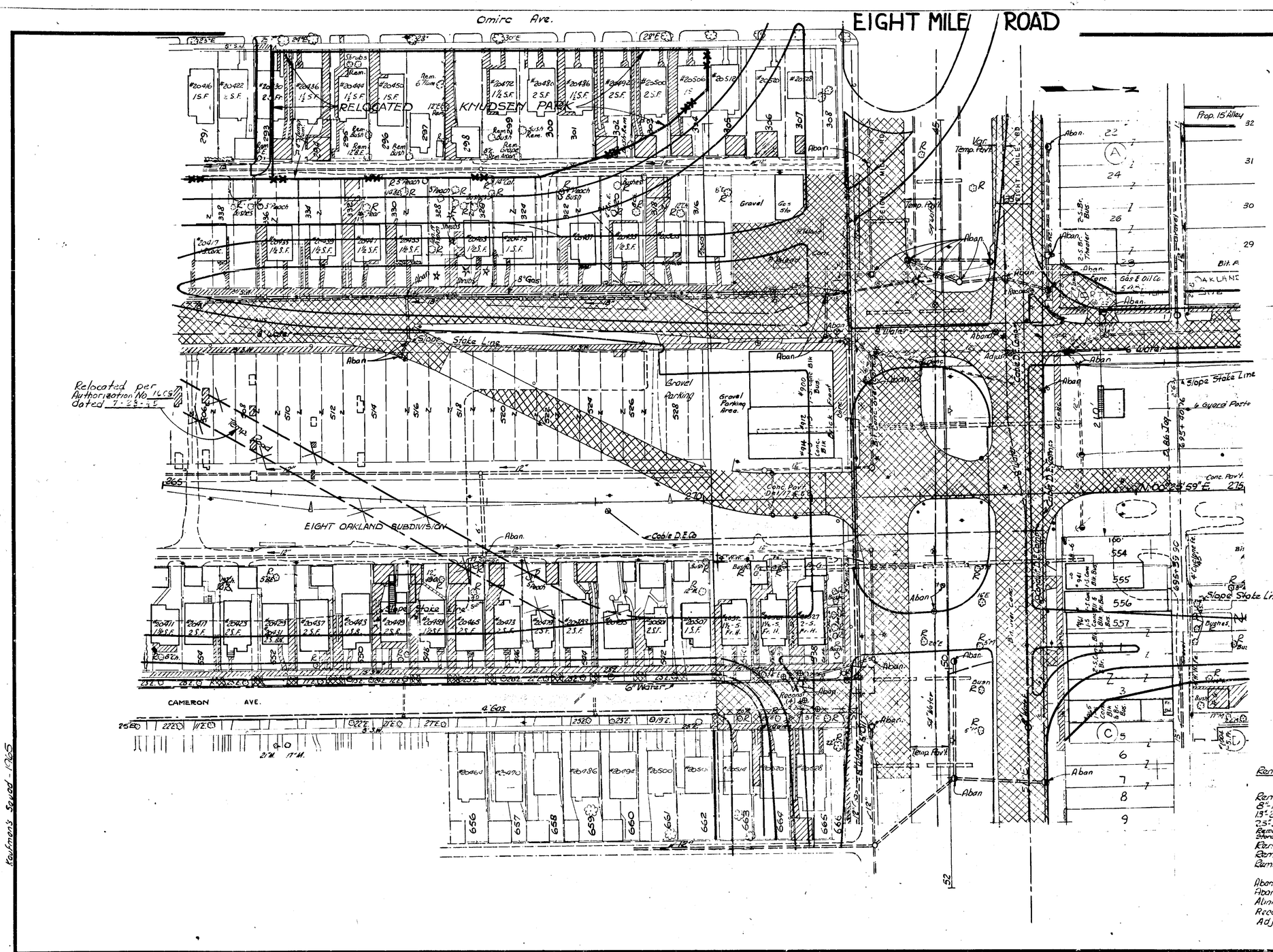
Quantities Changed Per Authorization No. 1003 Dated J[illegible] 28 1965. See Sheet 23

REMOVAL

Kaufman's Saved - 1965

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	27



B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-75-1 (98) 59 / 1-75-2 (98) 59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne Oakland	Warren Hazel Park	28 28	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

NOTE:
3- Underground Storage Tanks at the N.W. corner of 8 Mile Rd. and Oakland Ave. are of unknown size.
7- Underground Storage Tanks at the S.W. corner of 8 Mile Rd. and Oakland Ave. have the following Sizes:
1 - 550 Gallon
3 - 6000 Gallon
2 - 4000 Gallon
1 - 1000 Gallon

As Const.

Removal Quantities this sheet:

	82252L	63174A
Removing Trees -		
8"-12" dia.	8 Ea.	1 Ea.
13"-24" dia.	9 ~~19~~ Ea.	1 Ea.
25"-36" dia.	0 ~~5~~ Ea.	
Remove Underground Gasoline Storage Tanks including Backfill	7 Ea.	3 Ea.
Rem. Old Pav't.	13.096 Syds	~~2506~~ Syds
Rem. Sidewalks	~~2896~~ Syds	~~332~~ Syds
Rem. Mas. & Conc. Struct.	23 Cyds	314 2310
Abandoning Manholes	9 ~~10~~ Ea.	4 ~~3~~ Ea.
Abandoning Catch Basins	11 Ea.	5 Ea.
Abandoning Gate Wells	6 5 Ea.	6
Reconst. Gate Wells	4 ~~6~~ Ea.	6
Adjust Gate Wells	2 ~~7~~ Ea.	1 Ea.

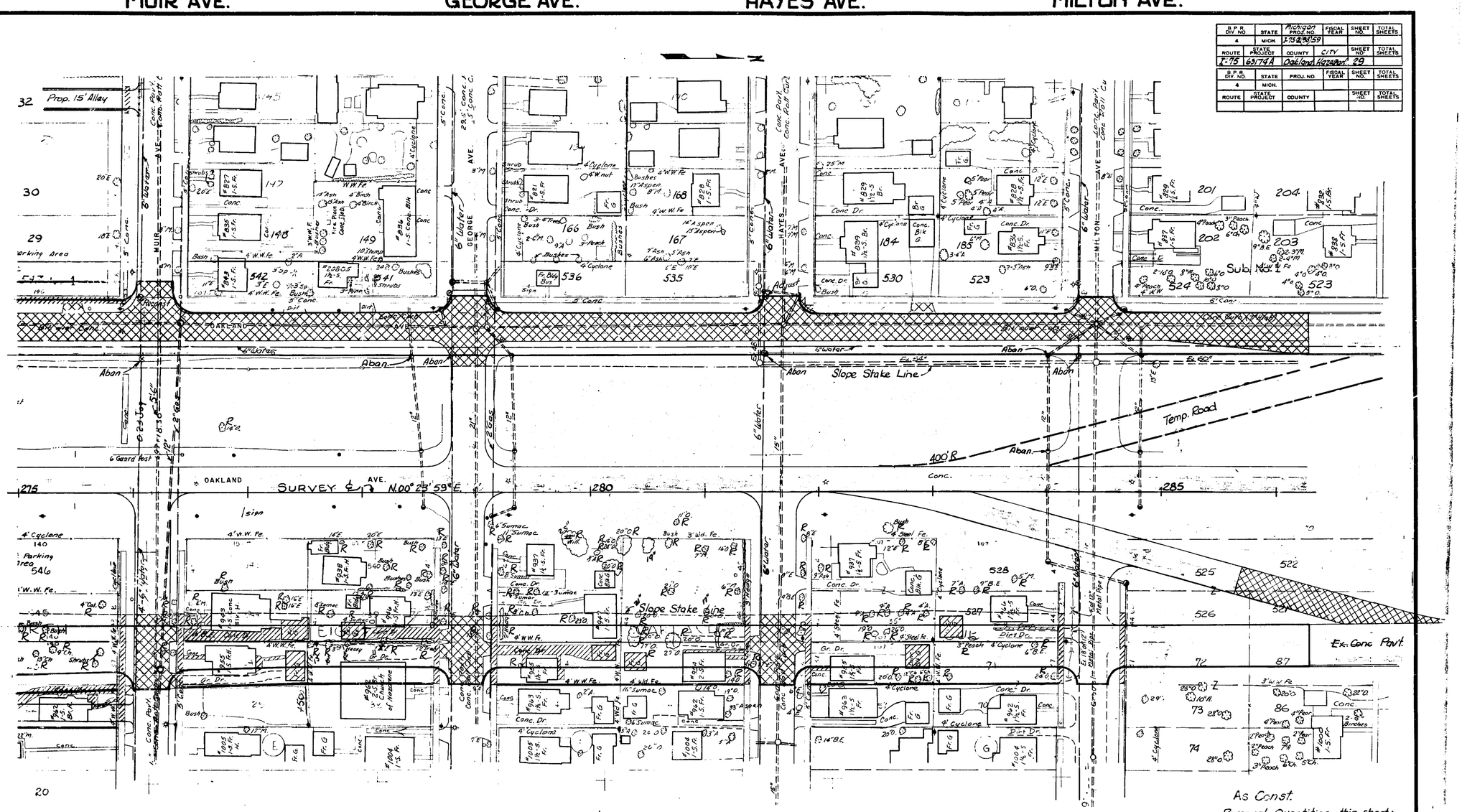
REMOVAL

82252 L, C 63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	1-75-1 (98) 59	28
63174A	1-75-2 (98) 59	

S.P.R. DIV. NO.	STATE	MICHIGAN PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2 98/59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Royal Oak	29	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

Removal Quantities this sheet:

Removing Trees -
8"-12" dia. 20 16 Ea.
13"-24" dia. 39 35 Ea.
25"-36" dia. 3 2 Ea.
Abandon Gate Wells 4 Ea.
Rem. Old Pavt. 4600 Syds 44.19
* Rem. Sidewalks 1,215 Syds 7.76
Rem. Curb and Gutter 26 Lin. Ft. 4.8
Adjust Gate Wells 1 Ea.
Abandoning Catch Basins 3 each
Reconst. Gate Wells 1 Ea.
* Quantity shown includes removing sidewalk @ pedestrian bridge @ Bernhard.

REMOVAL

Kaufman's Squad - 1965

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2 98 59	29

JOHN R. ST. COVENTRY AVE. KEATING AVE.

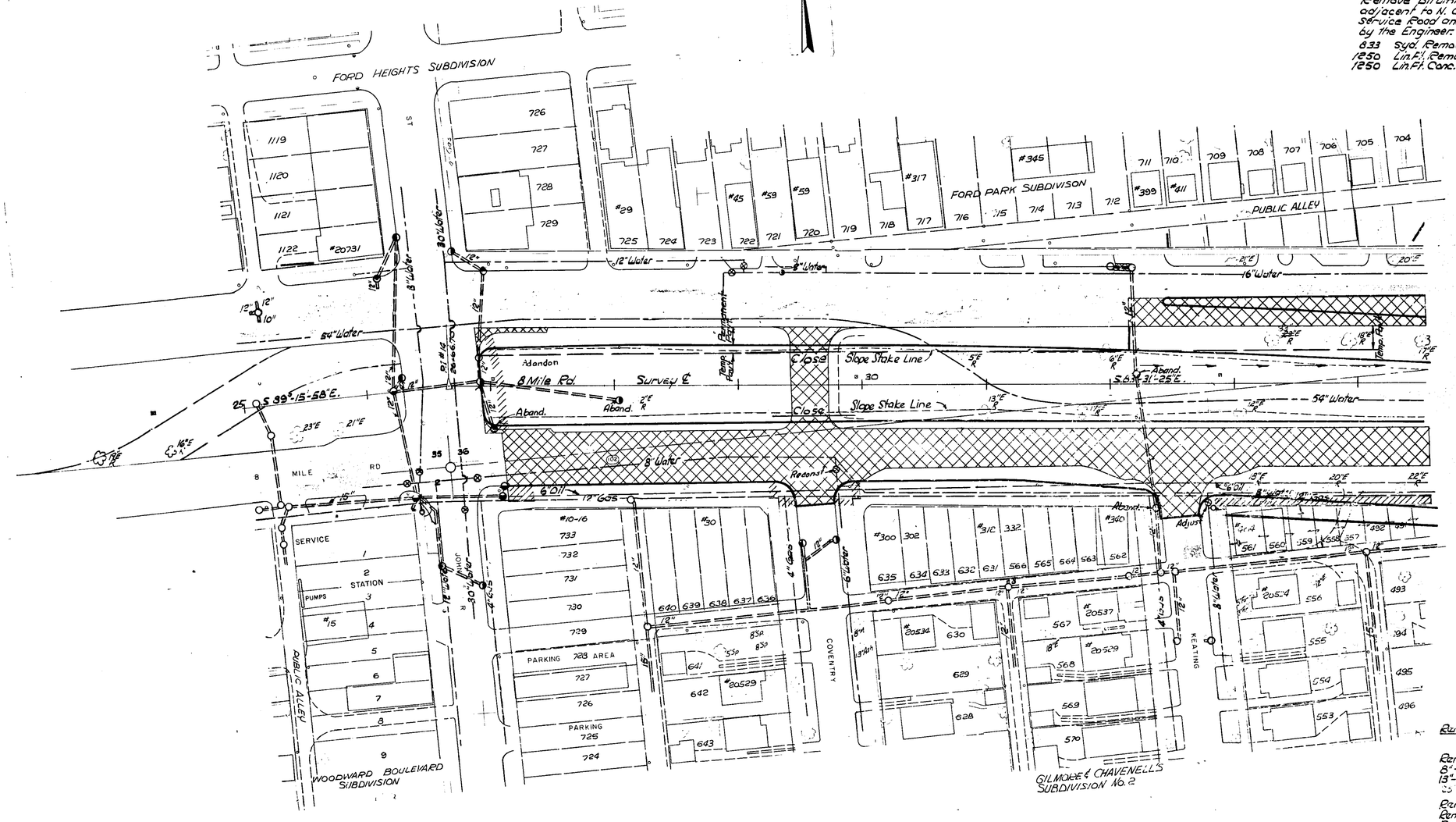
B.M. #37-253 Elev. 152.11
City of Detroit S.E. Corner
John R. and 8 Mile Rd.

B.M. #37-253A Elev. 150.73
City of Detroit S.E. Corner
Keating and 8 Mile Rd.

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	K.A. 2168.59 / K.A. 2168.59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne Oakland	Detroit Hazel Park	30	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

63174 A
Remove Bituminous Surface (est. 6') adjacent to N. Curb on W. Bd. 8 Mile Service Road and replace curb as directed by the Engineer.
833 Syd. Removing Bit. Surface
1250 Lin. Ft. Removing Curb & Gutter
1250 Lin. Ft. Conc. Curb & Gutter, Det. #8A



As Const

Removal Quantities this sheet:

	82252 L	63174 A
Removing Trees - 8"-12" dia.	0 1 Ea.	
13"-24" dia.	3 4 Ea.	7 6 Ea.
25"-36" dia.	29 70	1 Ea.
Rem. Old Pav't.	2,908 Syds	1312 Syds
Rem. Old Pav't. (Patch.)	32 Syds	25 12 Syds
Rem. Sidewalks	34190 Syds	50 Syds
Abandoning Catch Basins	1 Ea.	3 2 Ea.
Abandoning Manholes	1 Ea.	1 Ea.
Reconst Gate Wells	0 + Ea.	0
Adjust Gate Wells	2 + Ea.	4 Ea.

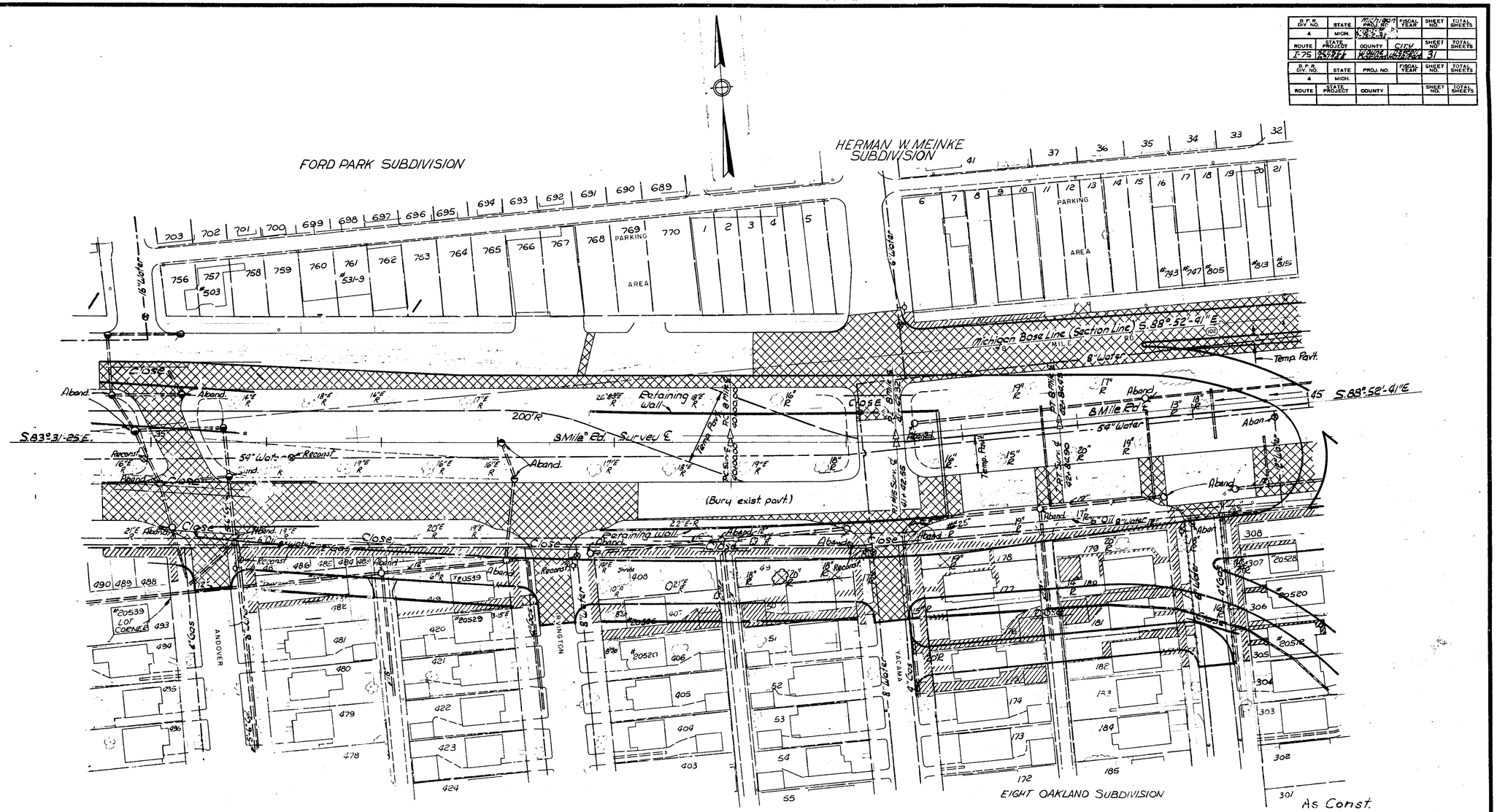
REMOVAL

Kaufman's Squad - 1965

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	30
	63174A	I 75-2 (98) 59	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75		WAYNE	DETROIT	31	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

Removal Quantities this sheet:

	82252L	63174A
Removing Trees –		
8"-12" dia.	4 Ea.	
13"-24" dia.	36 Ea.	3 Ea
25"-36"	Ea.	2 Ea
Rem. Old Pavt.	5482 Syds	196 Syds
Rem. Old Pavt. (Patch.)	10 Syds	24 Syds
Rem. Sidewalks	1,829 Syds	74 Syds
Rem. Curb & Gutter	209 L.Ft.	
Abandoning Manholes	14 Ea.	
Abandoning Catch Basins	5 Ea.	2 Ea
Abandoning Gate Wells	2 Ea.	
Reconst. Gate Wells	6 Ea.	

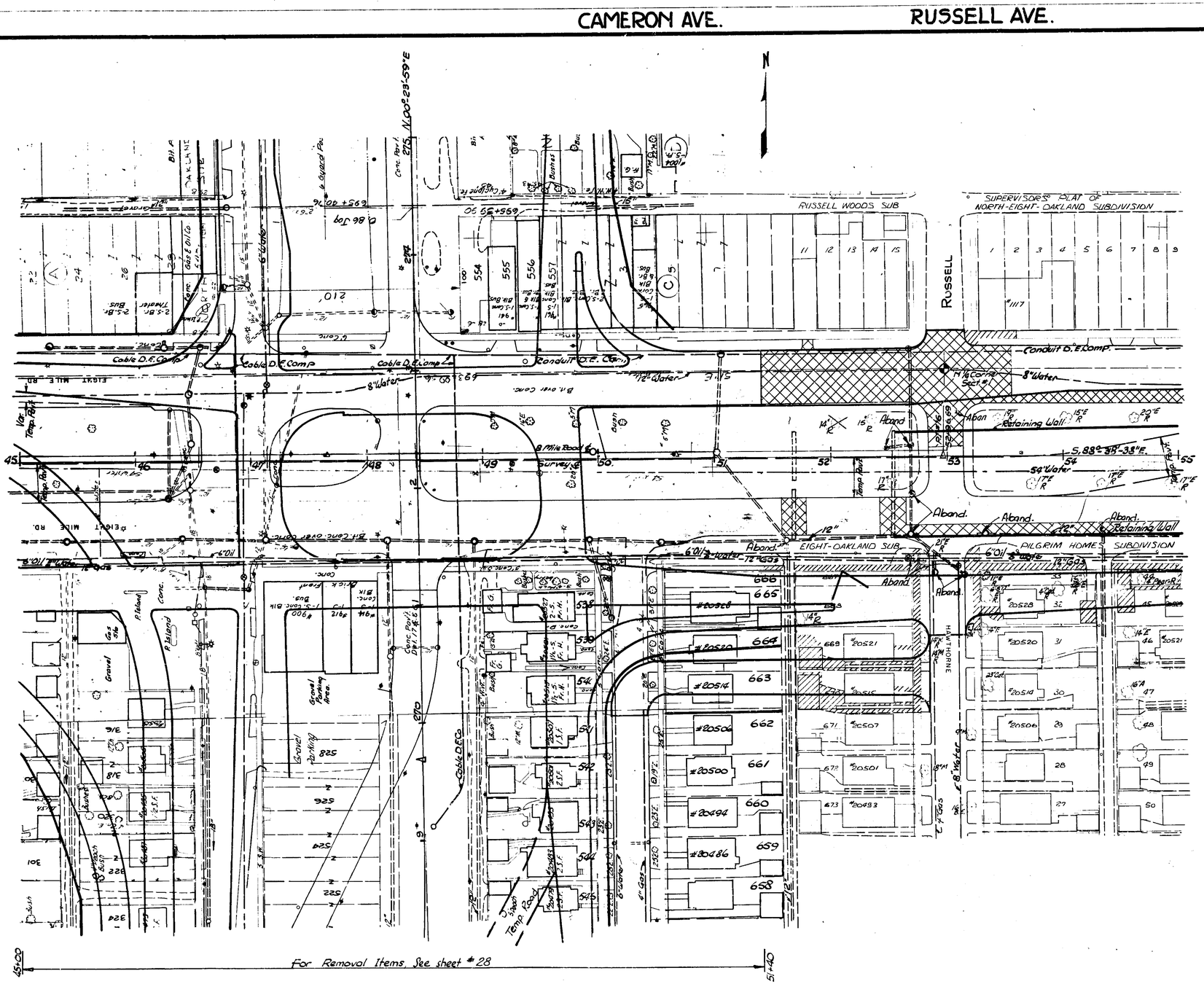
REMOVAL

Kaukman's Squad - 1965

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	31
	63174A	I 75-2 (38) 59	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	M(H)1(90) 175-3-98(59) 175-2-98(59)			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	WAYNE	C164	32	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

Removal Quantities this sheet:

	82252 L	63174 A
Removing Trees –		
8"-12" dia.	10 ~~2~~ Ea	
13"-24" dia.	21 ~~13~~ Ea.	
25"-54" dia.	2 ~~64~~	
Rem. Old Pav't	1299 1,447 Syds.	502 528 Syds
Rem. Sidewalks	647 715 Syds.	32 ~~36~~ Syds
Rem. Curb & Gutter	204 L.ft.	53 L.ft.
Abandoning Manholes	5 ~~4~~ Ea.	
Abandoning Catch Basins	4 ~~5~~ Ea.	
Abandon Gate Wells	3 Ea	

REMOVAL

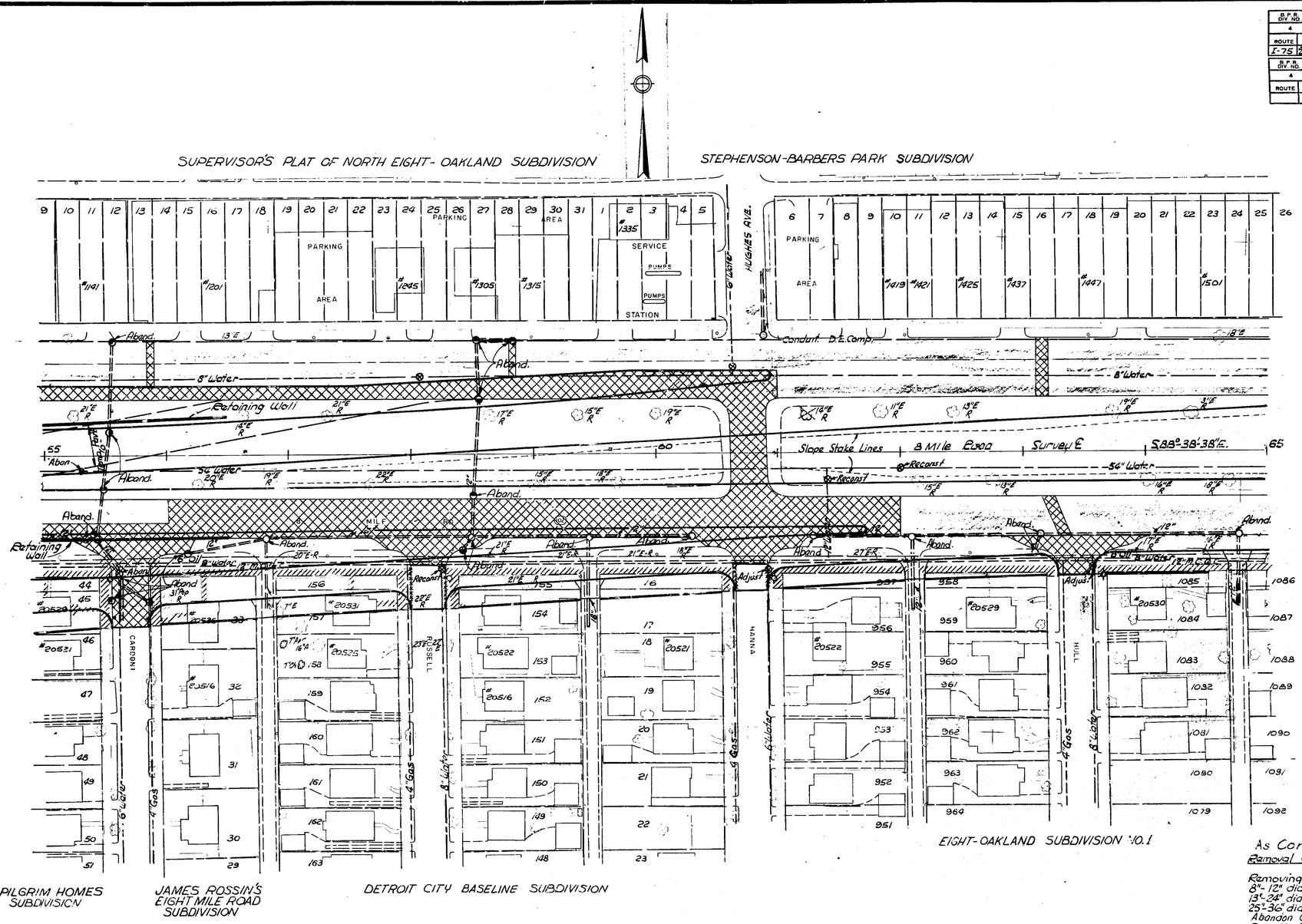
82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	32
	63174A	I 75-2 (98) 59	

Kaufman's Squad - 1965

HUGHES AVE.

S.P.R. DIV. NO.	STATE	MICHIGAN PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1798(59) I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	WAYNE	DETROIT	33	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

Removal Quantities this sheet:

	82252 L	63174 A
Removing Trees –		
8"-12" dia.	1 Ea.	
13"-24" dia.	26 28 Ea.	
25"-36" dia.	1 2 Ea.	
Abandon Gate Wells	2 Ea.	
Rem. Old Pavt.	4428 Syds	
Rem. Old Pavt. (Patch.)	172 Syds	48 Syds
Rem. Sidewalks	613 Syds	
Rem. Curb & Gutter	290 L.Ft.	6 L.Ft.
Abandoning Manholes	12 Ea.	
Abandoning Catch Basins	8 Ea.	3 Ea.
Reconst. Gate Wells	3 Ea.	
Adjust Gate Wells	5 Ea.	

REMOVAL

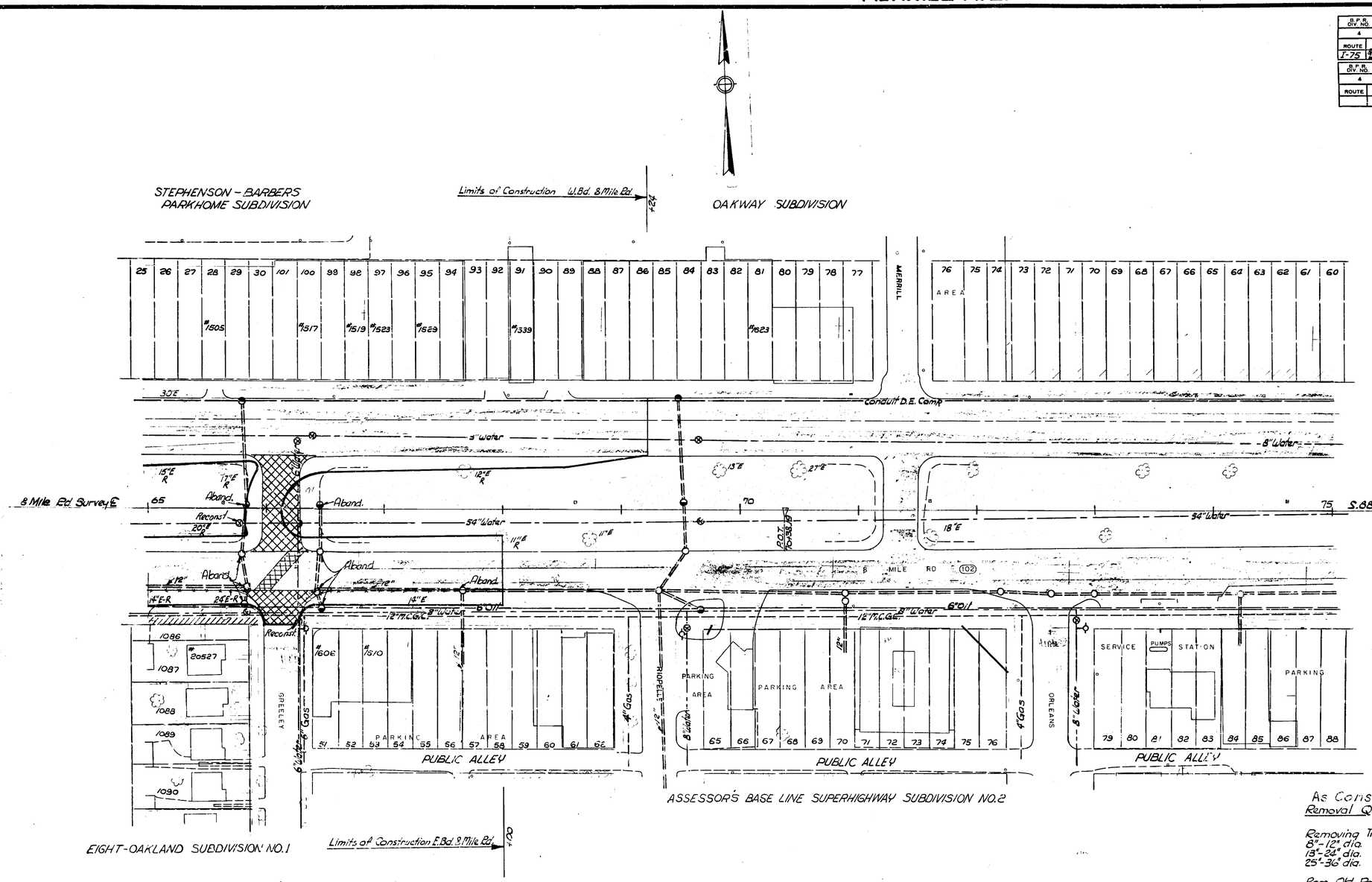
Kaufman's Sued - 1965

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1798 (59)	33
	63174A	I 75-2 (98) 59	

MERRILL AVE.

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-75-1 (98) 59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L 63174 A	Wayne Oakland	Wayne Pleasant	34	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.
Removal Quantities this sheet:
82252L

Removing Trees –
8"-12" dia. 2 Ea.
13"-24" dia. ~~4-6~~ Ea.
25"-36" dia. 1 Ea.

Rem. Old Pav't. 405 Syds 430
Rem. Old Pav't (Patch.) 48 Syds 3.8
Rem. Sidewalks 54 Syds 18
Rem. Curb & Gutter 215 L.Ft.

Abandoning Manholes ~~5~~ Ea.
Abandoning Catch Basins 4 Ea.
Reconst. Gate Wells 2 Ea.
Adj. Gate Wells 3 Ea.

REMOVAL

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	175-1 (98) 59	34
	63174 A	175-2 (98) 59	

Kaufman's Squad - 1965

B.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252	Wayne	Detroit	35	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED		
FINAL DESIGN CHECKED		
PROJECT		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
BOUND		

SURVEYED	OPERATION	BY	DATE
	PLAN PLOTTED		
	PLAN CHECKED		
	PROFILE PLOTTED		
	PROFILE CHECKED		
	PRELIMINARY GRADE		
	FIELD INSPECTION		
	FEDERAL INSPECTION		

Earthwork by Conventional Method

As Const. Drainage Inlet Sheet

Station	Tile Trans 12" SM	6'x6' Catch Basin 6'-8"	4'x4' Catch Basin 4'-0" deep	12" C.I.A. Sewer 5½" TL	
	Ea	Ea	Ea	Ft	
454+90	1	1	1	44	Lt.
Totals	1	1	1	44	Rt.

As Const. Driveways This Sheet

Station	Det #9 Open	Conc. Pavt. 7" Unif.	
454+30	16	16	Lt
Totals		16	
			17

As Const. 444 Sq. Ft. 4" Conc. Sidewalk 454 This Sheet

Prop. 5'6" Sewer – For Details See Sheet #79

N. 0°-03'-34" E.
Const. ℄ N. Bd. Service Rd.

ROW is existing Alley Line

As Const. Autn. 1911
Excavation & Backfill around Structures & Sewers
R.O.B. to R.O.E.

	Natural Sand ~~2 H.S.~~	Earth Exc. & Waste	Porous Mat'l. Gr. A (C.I.P.)	Porous Mat'l. Gr. B (C.I.P.)
BI 82252L, C63	~~1,148~~ Cyds 1,228	~~9,248~~ cyds. 12,114	~~6,500~~ cyds.	1,600 cyds.
I 63174A, C64		~~1,770~~ cyds. 2,918	~~1,770~~ cyds. 1,425	~~600~~ cyds. 418

Michigan Project I-75-1(98)59
State Project BI-82252L, C62
Ends Station 454+23.00

Michigan Project I-75-1(98)59
State Project BI 82252L, C63
Begins Station 454+2300

NOTE:
All Limited Access Fencing to be constructed on Freeway Contract.

Trench Backfill Special

Conc. Curb Det. #2
Conc. Curb Det. #2

Prop. Top of Curb Profile for West Curb Section 1A

Prop. Top of Curb Profile for West Curb Ramp

Existing Profile-Align. Line
Prop. Top of Pavt. Grade

Existing Ground Profile (5'R)
Existing Ground Sec. 3-30'R
Prop. Top of Curb Profile for East Curb & Ramp

For Subbase Quantities See Sheet #36

Prop. F.L. El. 146.10 (12")
El. 144.50 (12")

Transition
Top of C. from 6" to 15" ft
Bit. Conc. C. to 18" C.

30' V.C.

-0.40%

To Sta. 472+97

For Earthwork Quantities See Sheet #37

Ex. F.L. 139.40 (5.15')
Ex. EL. 139.50 (N/12")

-0.70%

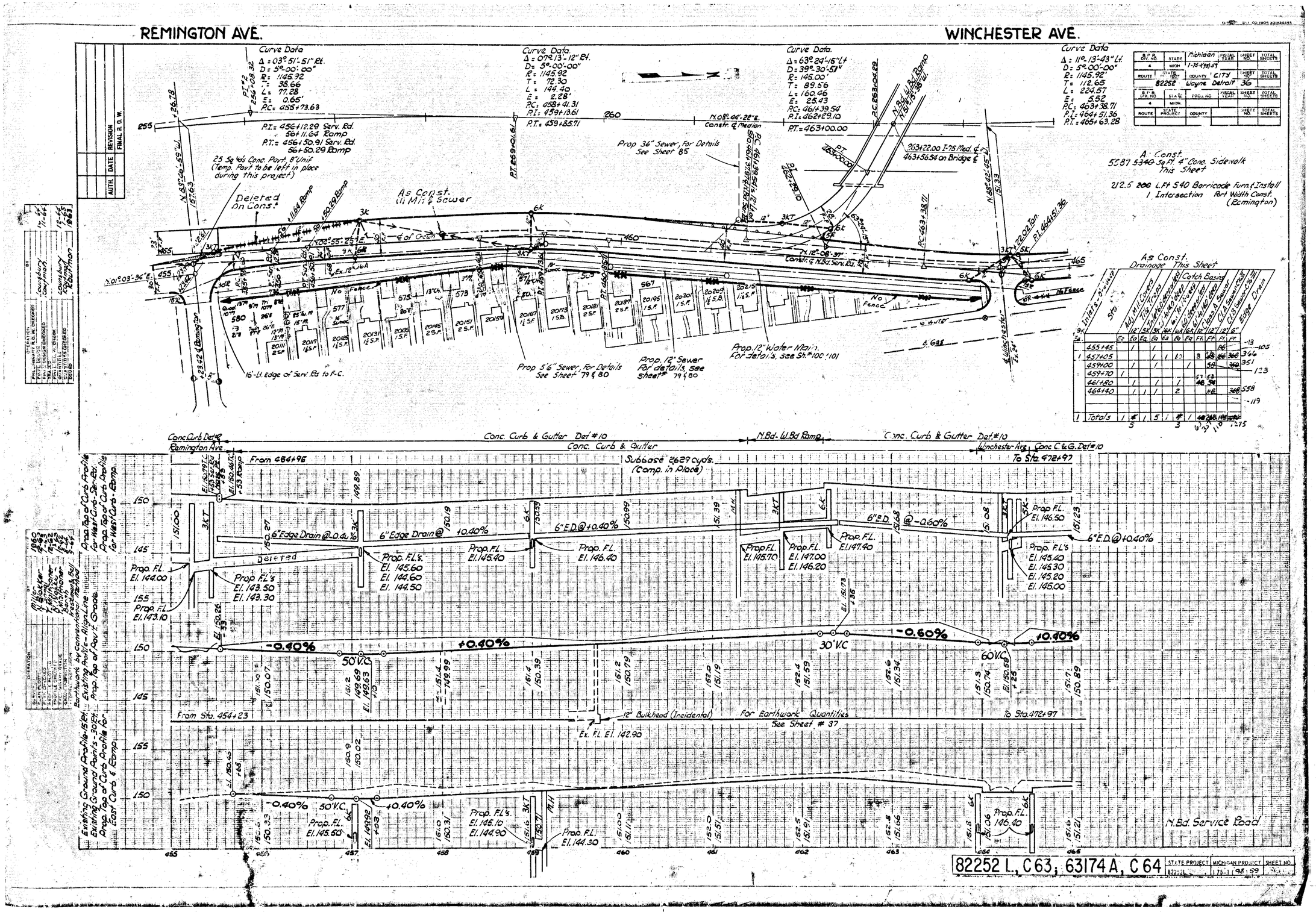
N. Bd. Service Road

Prop. F.L. El. 146.30

450 451 452 453 454 455

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1(98)59	35



Sta.	Interst. Q-Ramp	Adj. Mil. Corners	Tile Trons	Inst. Reducers	Catch Basins											
					12"	15"	18"	24"	36"	12"	15"	18"	12"	15"	18"	24"
					Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ft.	Ft.	Ft.	Ft.
455+45		/		/										86		
457+05				/	/	/	/			3		28	166	366	366	366
459+00		/		/				/				58			360	351
459+70	/										22	63				
461+80		/						/			46	56				
464+40		/	/	/				2					116		366	538
Totals	/	4	/	5	/	1	1	2	/	3	68	205	116	86	1192	1275

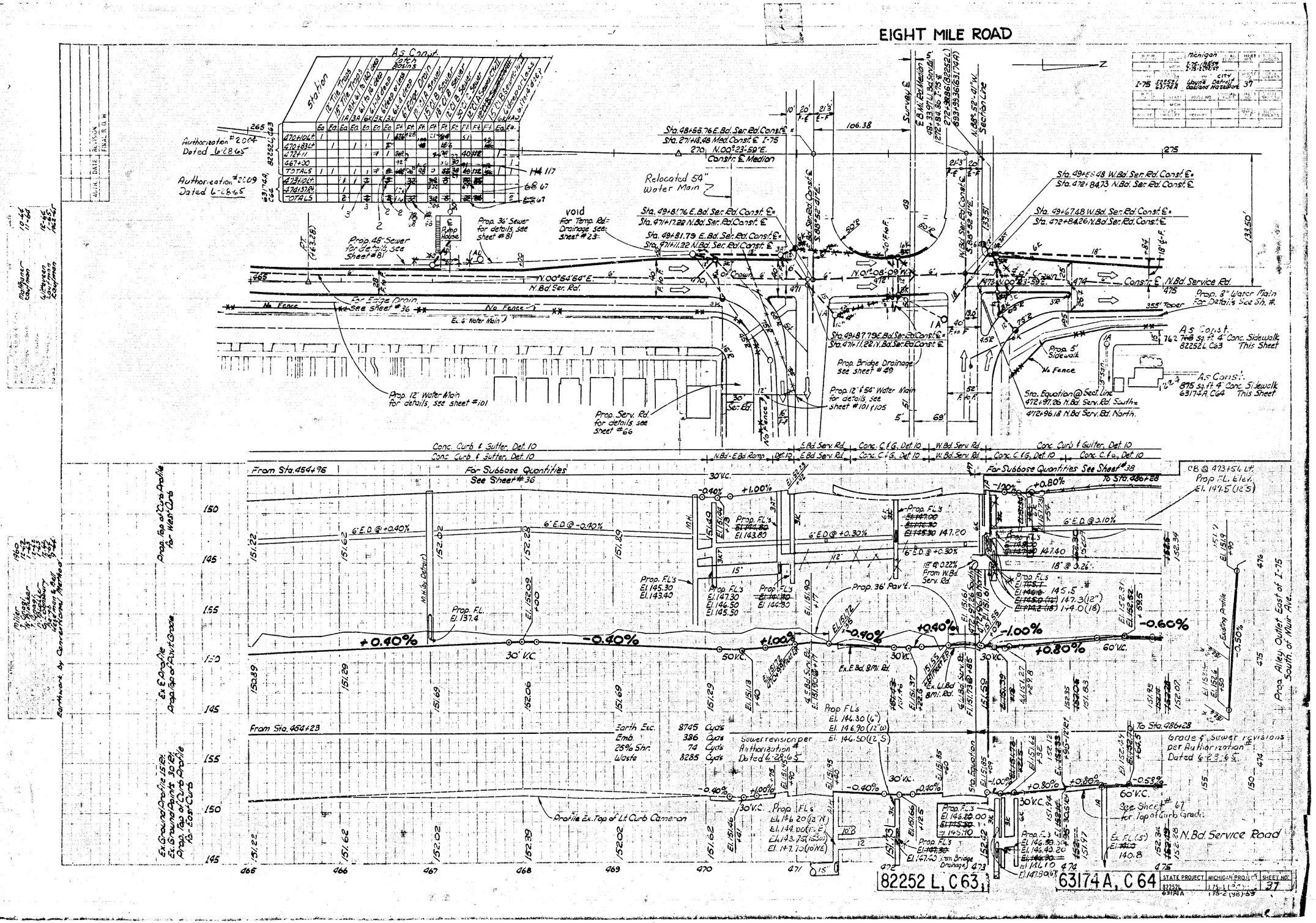
STATE	MICH.	COUNTY	CITY
Michigan	1-75-4(93)59	Wayne	Detroit

ROUTE	STATE PROJECT	COUNTY	SHEET NO.	TOTAL SHEETS
82252			36	

ROUTE	STATE PROJECT	COUNTY	SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R. O. W.

EIGHT MILE ROAD



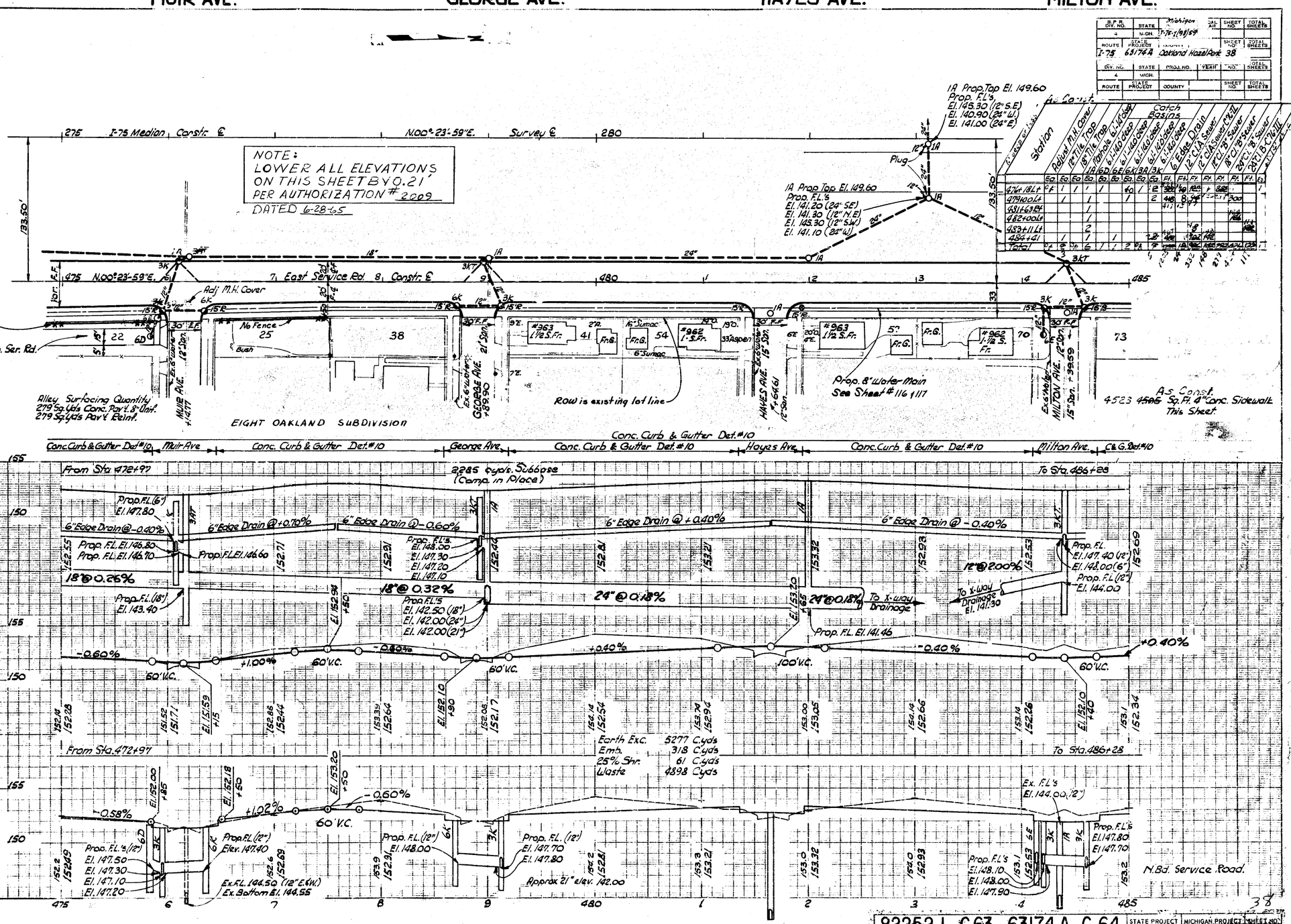
F.A.P. NO. DIV. NO.	STATE		SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(89)59		
ROUTE I-75	STATE PROJECT 63174A	COUNTY Oakland Hazel Park	SHEET NO. 38	TOTAL SHEETS

DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R. O. W.

OFFICE ETION	BY	DATE
PRELIMINARY R. O. W. CHECKED		
FIN'L L. DESIGN	Wilmer	10-65
FINAL DESIGN CHECKED	Kaufman	11-65
TRACE		
FINAL R. O. W. CHECK		
QUANTITIES	Lounsbury	12-65
QUANTITIES CHECKED	Kaufman	12-65
SQUAD		

SUBMITTED FOR APPROVAL	BY	DATE
PLAN PLOTTED	Miller	12-65
PLAN CHECKED	Kaufman	12-65
PROFILE PLOTTED	Miller	12-65
PROFILE CHECKED	Kaufman	12-65
CROSS SECT. & ADE	Lounsbury	12-65
CROSS SECT. CHECKED	Kaufman	12-65
BRIDGE LOCATION		
BRIDGE STRUCTURE	Weisenberg	12-65
82-4042 By Conventional Method		



STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-1(89)59	38

82252 L, C63; 63174 A, C 64

FED. AID PROJ. NO.	STATE		FINAL	SHEET NO.	TOTAL SHEETS
4	MICH	Michigan I-75-1(98)59			
ITR	STATE PROJECT				TOTAL SHEETS
I-75 63174A Oakland Hazelhurst 39					

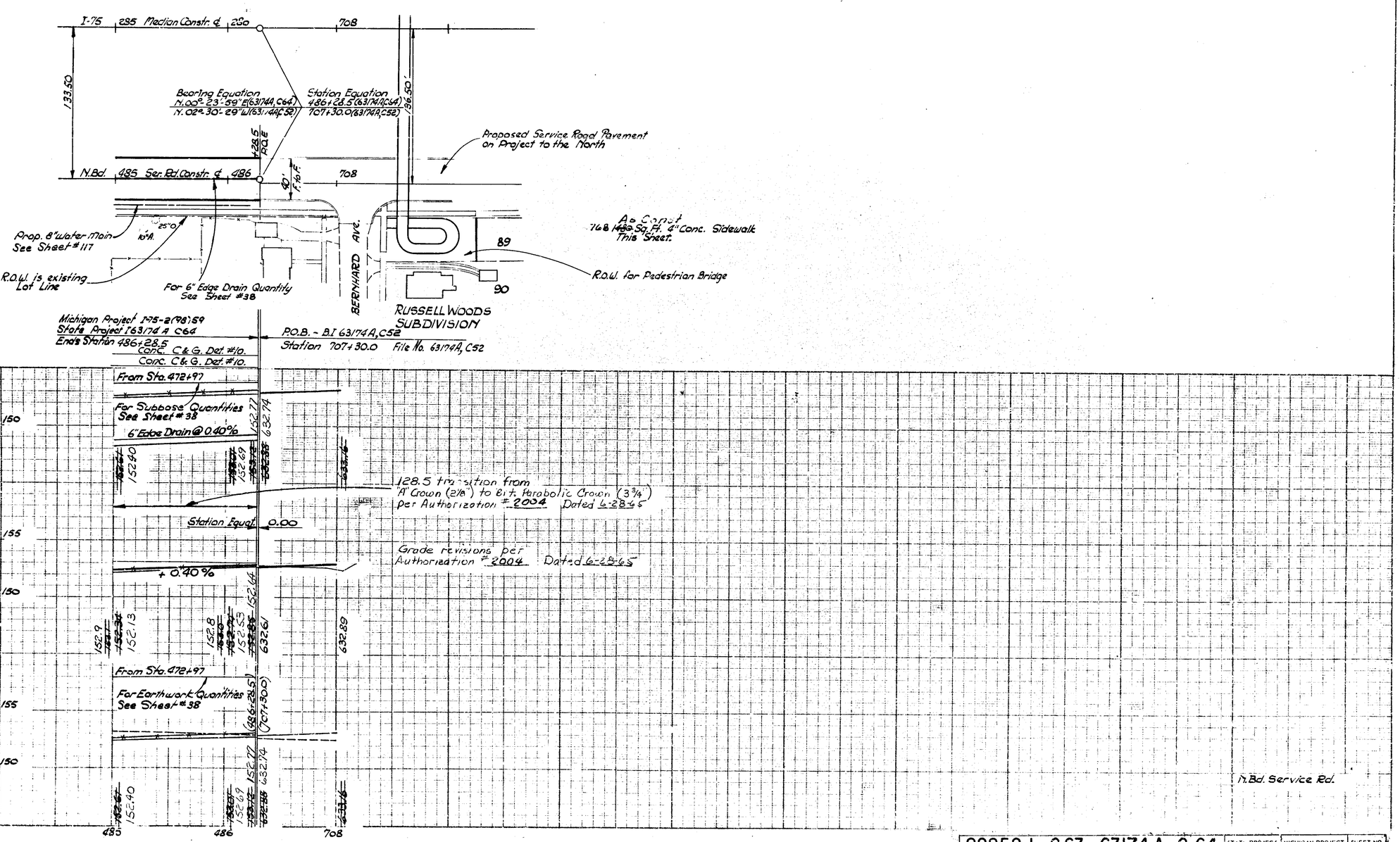
DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
6	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED	Mathaner	12-64
FINAL DESIGN CHECKED	Mathaner	11-64
PROJECT		
FINAL R.O.W. CHECK		
QUANTITIES	Wittyeer	12-64
PLANS TYPED	Lechner	1-65
PLANS CHECKED	Rahmer	1964
ESTIMATE		

OPERATION	BY	DATE
SURVEY EST.	Mathaner	7-60
PLAN EST.	Mathaker	7-60
PLAN THROUGH	Mathaner	6-61
PLAN FINAL	Mathaner	6-61
PROFILE (HI)	Mathaner	6-61
PROFILE (HI) CHKD	Mathaner	6-61
GRID PLAN (SHEET)	Mathaner	9-61
GRID PLAN CHKD	Mathaner	9-61
RESULTS INST. (PRC)		
RESULTS INST. (PRC) CHKD		

Earthwork by Construction Maintenance Division, Oakland Rd.



82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(98)59	39

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN	Hoffmann	11-65
FINAL DESIGN CHECKED	Kaufman	11-65
PROJECT		
FINAL R.O.W. CHECK		
QUANTITIES	Witt Fitzer	6-67
QUANTITIES CHECKED	Kaufman	6-67
SQUAD	Wilkins - Bell	12-67

OPERATION	BY	DATE
SURVEY PLOTTED	Hoffman	4-67
PLAN PLOTTED	Hoffman	4-67
PLAN CHECKED	Lockerby	4-67
PROFILE PLOTTED	Lockerby	4-67
PROFILE CHECKED	Lockerby	4-67
PRELIMINARY GRADE	Hoffman	4-67
FIELD INSPECTION	Wilkins	2-68
FEDERAL INSPECTION	Wilkins - Bell	2-68

B.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	M-8(1)189 M-18-1(8)189 M-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L, 63174A, C63, C64	Wayne	Detroit	40	

B.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

Curve Data
Δ = 6° 00' 00" Rt.
D = 5° 00' 00"
R = 1146.92'
T = 50.03'
L = 100.00'
E = 1.09'
P.C. = 353+90.00
P.I. = 354+40.03 = 22' Lt. of 354+40.03 S.Bd. Serv. Rd. ℄
P.T. = 354+90.00

ROW is existing alley line (no fence)

As Const. C. & G. Dist. 13

200 L.Ft. S40 Barricade Furn. & Install
1 Intersection Part Width Construction

REMINGTON AVE.

End Taper 12' Lt. of Sta. 355+54.3 S.Bd. Ramp Align.

As Const. Drainage This Sheet

Station	Edge Drain 6" Ft.
355+00	174
Totals	174

660 Sq. Ft. 4" Conc. Sidewalk This Sheet

As Const. C. & G. Det. A

Limits of Work BI 82252L, C63

P.C. 353+90

P.I. Sta. 354+40.03 = 22' Lt. of Sta. 354+40.03 S.Bd. Serv. Rd. ℄

P.T. 354+90.00

N.01° 23' 50" E.
Const. ℄ Median

Conc. Curb Det. #2

Conc. Curb & Gutter Det. #10

"ON" Ramp

To Sta. 373+00
For Subbase Quantities
See Sheet # 41

Prop. F.L. El. 146.50

To Sta. 473+00
For Earthwork Quantities
See Sheet # 42

Ex. F.L. El. 139.40 (S)

Ex. F.L. El. 139.30 (N)

Prop. F.L.'s 142.60 142.60

B.L. Para. Crown

Conc. "A" Crown

See Sheet # 72 For Same Grade

15" Sewer @ +0.40%

Prop. F.L. El. 141.00

Prop. F.L.'s 145.10 144.90

+0.40%

Prop. F.L.'s 146.30 146.10

Prop. F.L. 144.80

Prop. F.L. 145.90

Prop. F.L.'s 145.10 (6" F.D.) 144.70 144.60

6" Edge Drain @ 0.40%

S.Bd. Service Road

Ex. Ground Profile 12' Lt. Ex. Ground Points - 30' Lt. Prop. Top of Curb Profile for West Curb - 2' & 14' Lt.

Ex. ℄ Profile Ex. Profile Align. Edge Prop. Top of Pav't. Grade

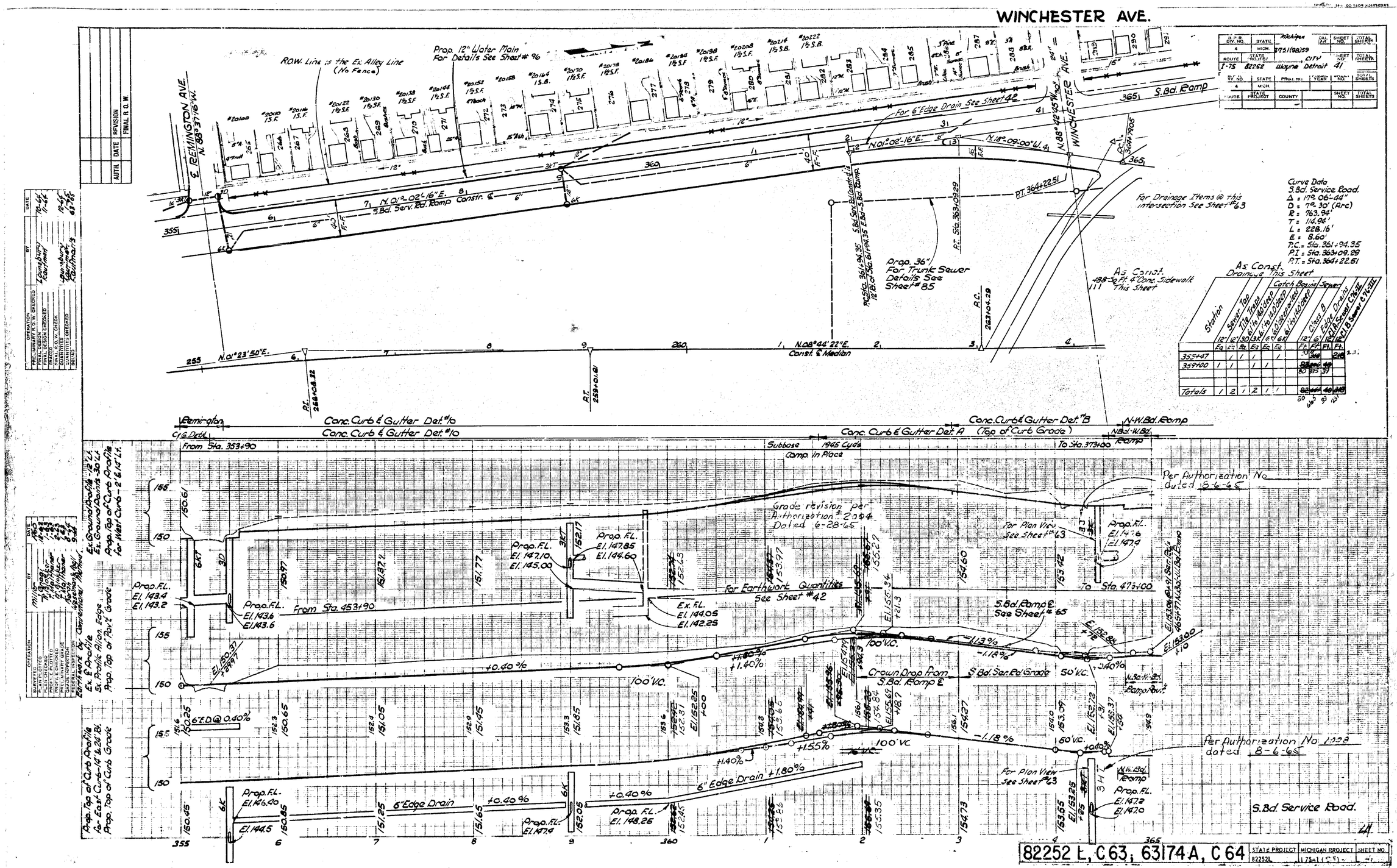
Prop. Top of Curb Profile for East Curb - 14' & 24' Rt. Prop. Top of Curb Grade

155 / 150 / 145

352 353 354 355

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L 63174A	I 75-1 (98) 59 I 75-1 (98) 59	40



Station	Sewer Tap 12" Eq	Sewer Tap 12" Ec	Tile Trap 30" Rb	Tile Trap 30" Rs	Catch Basin Sewer 6" Ex	Catch Basin Sewer 6" Ea	Catch Basin Sewer 6" Ex	Catch Basin Sewer 6" Ea	Class B Edge Drains 12" Ft	Class B Edge Drains 6" Ft	Class B Edge Drains 12" Ft	Class B Edge Drains 12" Ft
355+47		/	/	/		/			30	~~36~~		~~216~~
359+00	/	/		/	/				~~82~~ 80	~~495~~ 495	~~49~~ 49	
									80	495	49	
Totals	/	2	/	2	/	/			~~82~~ 80	~~495~~ 495	~~49~~ 49	~~216~~ 216

L.S.

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

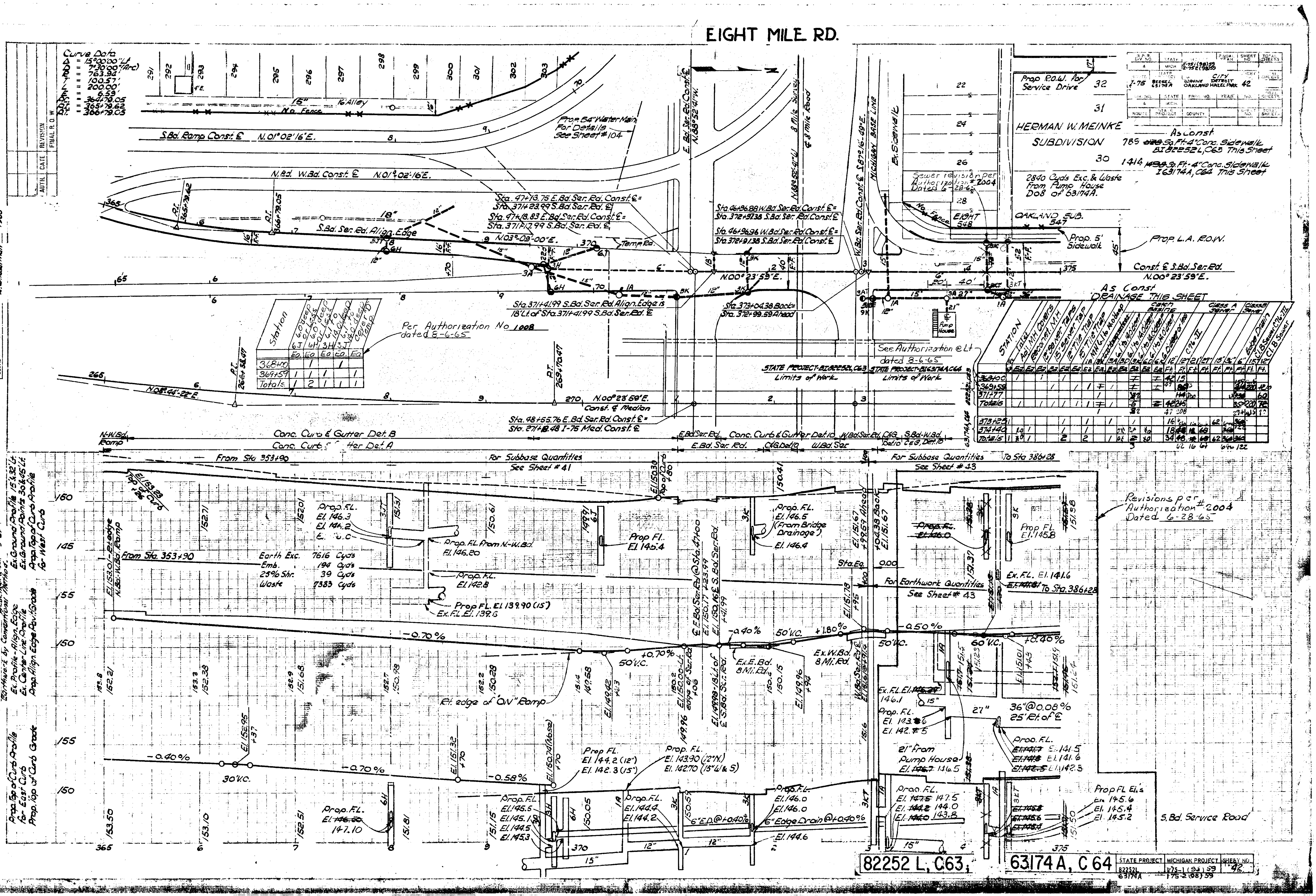
DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	3751(98)59			
ROUTE I-75	STATE PROJECT 82252	COUNTY Wayne Detroit		SHEET NO. 41	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. ORDERED		
FINAL DESIGN	L. Dunsbury	10-64
FINAL DESIGN CHECKED	Kaufman	11-64
PROJECT PREPARED		
FINAL R.O.W. CHECK		
QUANTITIES	Dunsbury	12-64
QUANTITIES CHECKED	Kaufman	12-64
PLANS REVIEWED	Rathbun	63-65
BOUND	Rathbun	63-65

OPERATION	BY	DATE
SURVEY COMPLETED		
PLAN CHECKED		
PROFILE PREPARED		
PROFILE CHECKED		
PRELIMINARY GRADE		
PRELIMINARY REVIEW		
FEDERAL INSPECTION		
BOUND		

OPERATION	BY	DATE
SURVEY COMPLETED	Millington	1-63
PLAN CHECKED	M. Blaser	1-63
PROFILE PREPARED	R. Kaufman	2-63
PROFILE CHECKED	R. Kaufman	2-63
PRELIMINARY GRADE	R. Kaufman	2-63
PRELIMINARY REVIEW	Wakefield	9-64
FEDERAL INSPECTION		
BOUND		



Station	6.0' deep or Less 6J	6.0 deep or Less 6H	6.1 to 14.0 deep 3H	6.1' to 14.0 deep 3J	Cover "D" Temp.
	Ea.	Ea.	Ea.	Ea.	Ea.
368+00		1		1	
369+59	1	1	1		1
Totals	1	2	1	1	1

As Const DRAINAGE THIS SHEET

	STATION	Inlet	Adj. MH Covers	Reconst. MH	12" Sewer Taps	15" Sewer Tap	12" Tile Trap	15" Tile Trap	MH 6.1 to 14.0 deep 1A	3K	Catch Basins 6.1 to 14.0 deep 3A	3D	3K	6D	6K 6.0 deep or less	C76-II 12"	12"	21"	27"	Class A Sewer 15"	36"	Class B Sewer 6" Edge Drain	15" C.I.B. Sewer C76-III	12" C.I.B. Sewer
		Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.
82252L, C63	368+00	1		1		1							1		1	42	15					155		
	369+59				1		1	1	1	1			1		1	47	86					214	220	12
	371+77								1				2				144					139		60
	Totals	1		1	1	1	1	1	1	1			5		2	42	245					35	220	72
									1				2			47	208					294	215	12
63174A, C64	373+25	1				1		1		1			1			16				62		360		
	374+40		1.0	1		1		1			2		2		1	18	48	12	68			360		
	Totals	1	1.0	1		2		2		1	2		2		1	34	48	12	68	62	360	360		
													3			62	16	64				122		

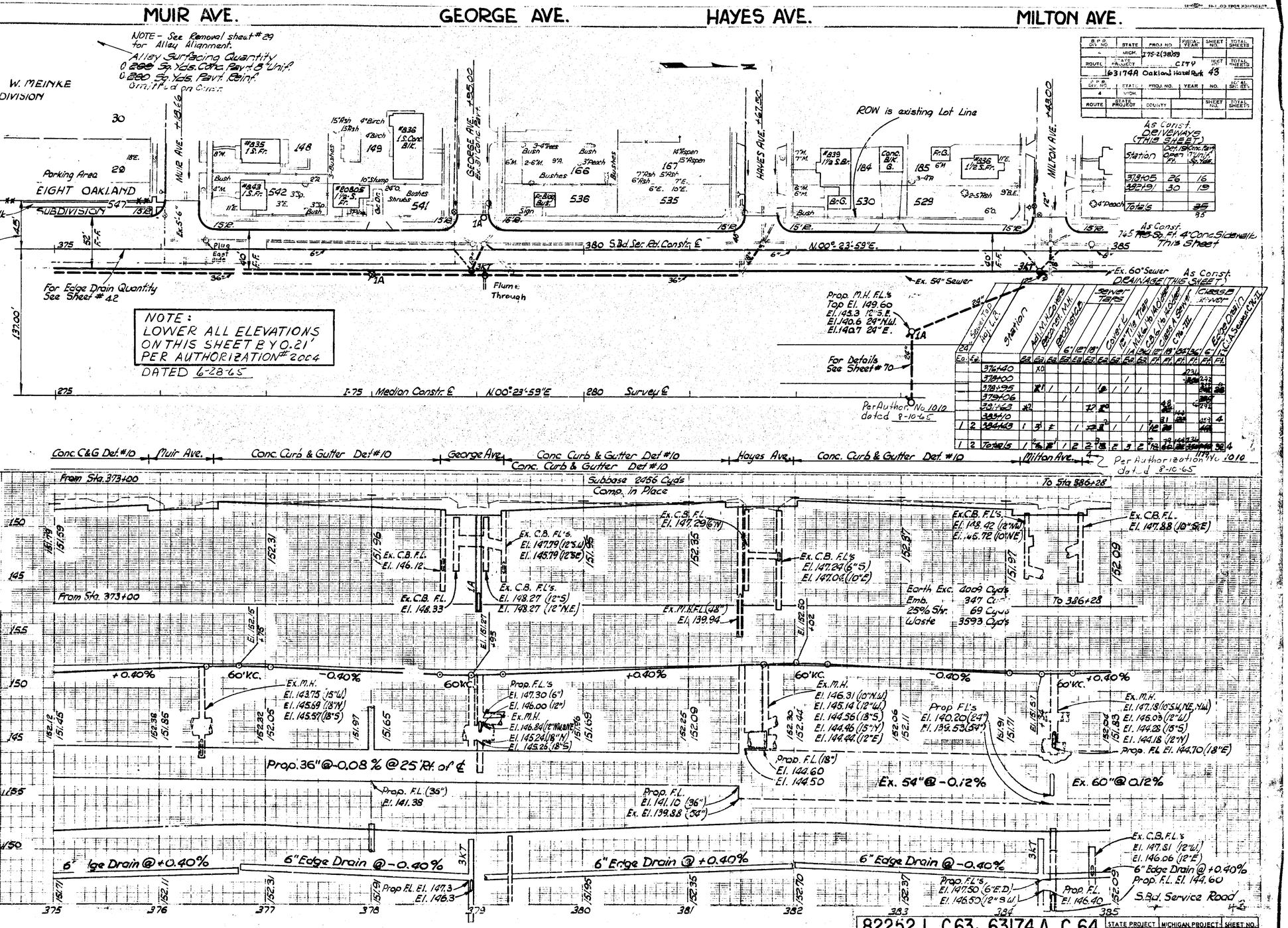
82252 L, C63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L 63174A	I75-1 (98) 59 I75-2 (98) 59	42

B.P.R. DIV. NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75-1 (98) 59 I-75-2 (98) 59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	WAYNE OAKLAND	DETROIT HAZEL PARK	42	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(38)59			
ROUTE	STATE PROJECT	CITY		NEXT DIV.	TOTAL SHEETS
	63174A	Oakland Hazel Park		43	

B.P.R. DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	SH. AL. SH. STA.
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Station	Adj. M.H. Covers Backfill, M.H. Boxes	Sewer Taps 6"	12"	18"	Cover & Fill 6"	12"	18"	Wye & Tee Fill 6"	12"	18"	Cleans & Clears 6"	12"	18"	Cleans & Clears 24"	Cleans & Clears 36"	Class B Sewer 6"	12"	18"	Ex. Drain Basin F.L. C.I.A. Sewer 4"	6"
376+40		X0																	236	
378+00								1											238	238
378+95	1	1		1			1	1	1										240	240
379+06					1														242	
381+63	X2					1	X						48						242	
382+10								1					31	164					163	4
384+43	1 3	1		1		2	2		1		1	12	20						166	
Totals	1 6	2	1	2	1	2	3	3	2	3	2	12	99	164	236				1179	32 4

Per Authorization No. 1010 dated 8-10-65

SURVEYED	OPERATION
PLAN PLOTTED	PRELIMINARY O.K. TO PROCEED
PLAN REVIEWED	FINAL DESIGN
PROF. & EDIT'D	FINAL DESIGN CHECKED
PROFILE EDIT'D	FINAL R.O.W.
PROFILE CHECKED	FINAL R.O.W. CHECK
WELL DATA	QUANTITIES
GRADE TSK'D	QUANTITIES CHECKED
FIELD INSPECTION	SQUAD

AUTH.	DATE	REVISION	BY	DATE
		FINAL R. O. W.		

SURVEYED	BY	DATE
PLAN PLOTTED		
PLAN REVIEWED		
PROF. & EDIT'D		
PROFILE EDIT'D		
PROFILE CHECKED		
WELL DATA		
GRADE TSK'D		
FIELD INSPECTION		

EARTWORK BY CONTRACT

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(38)59	43

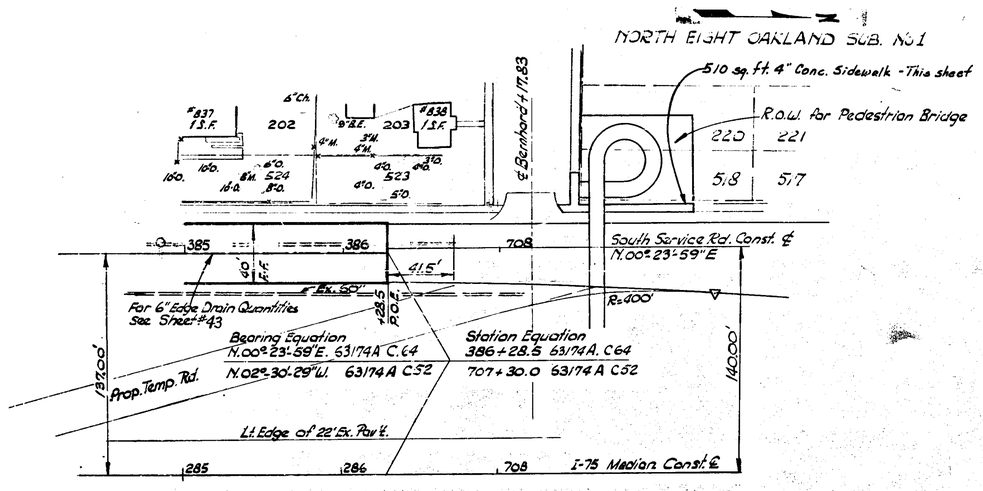
82252 L, C63; 63174A, C 64

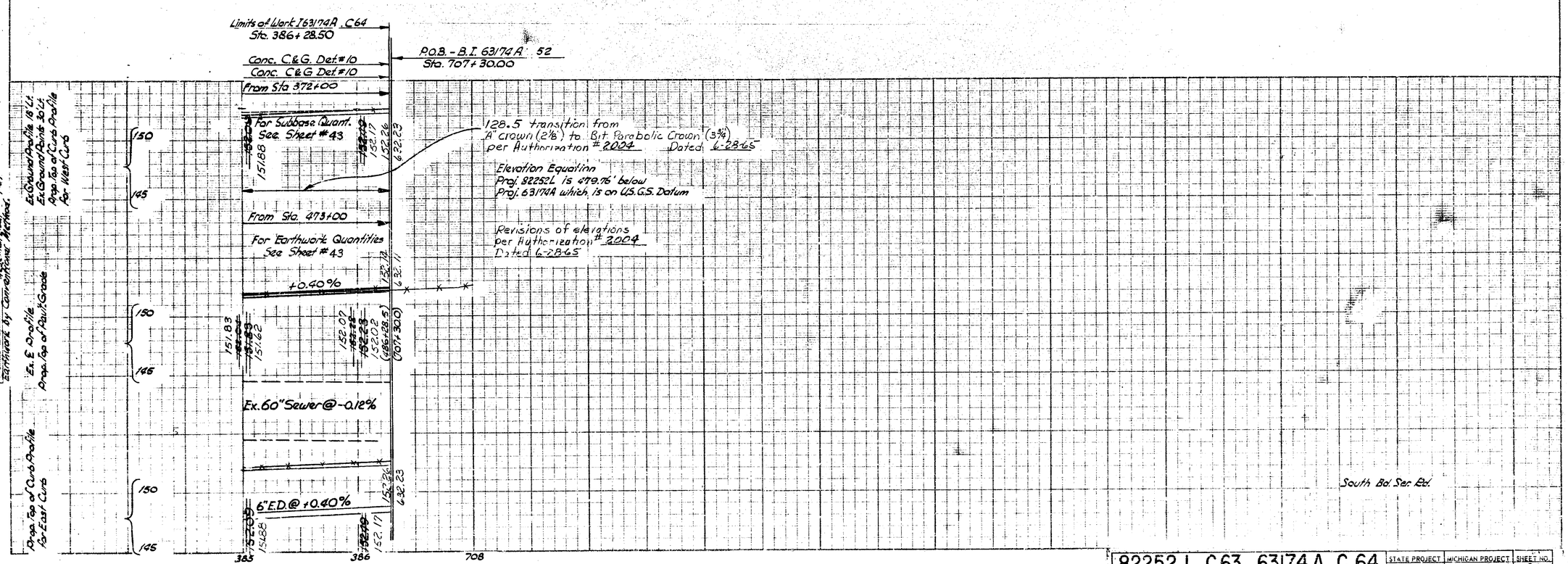
BERNHARD ST.

AUTH.	DATE	REVISION
		FINAL R.O.W.

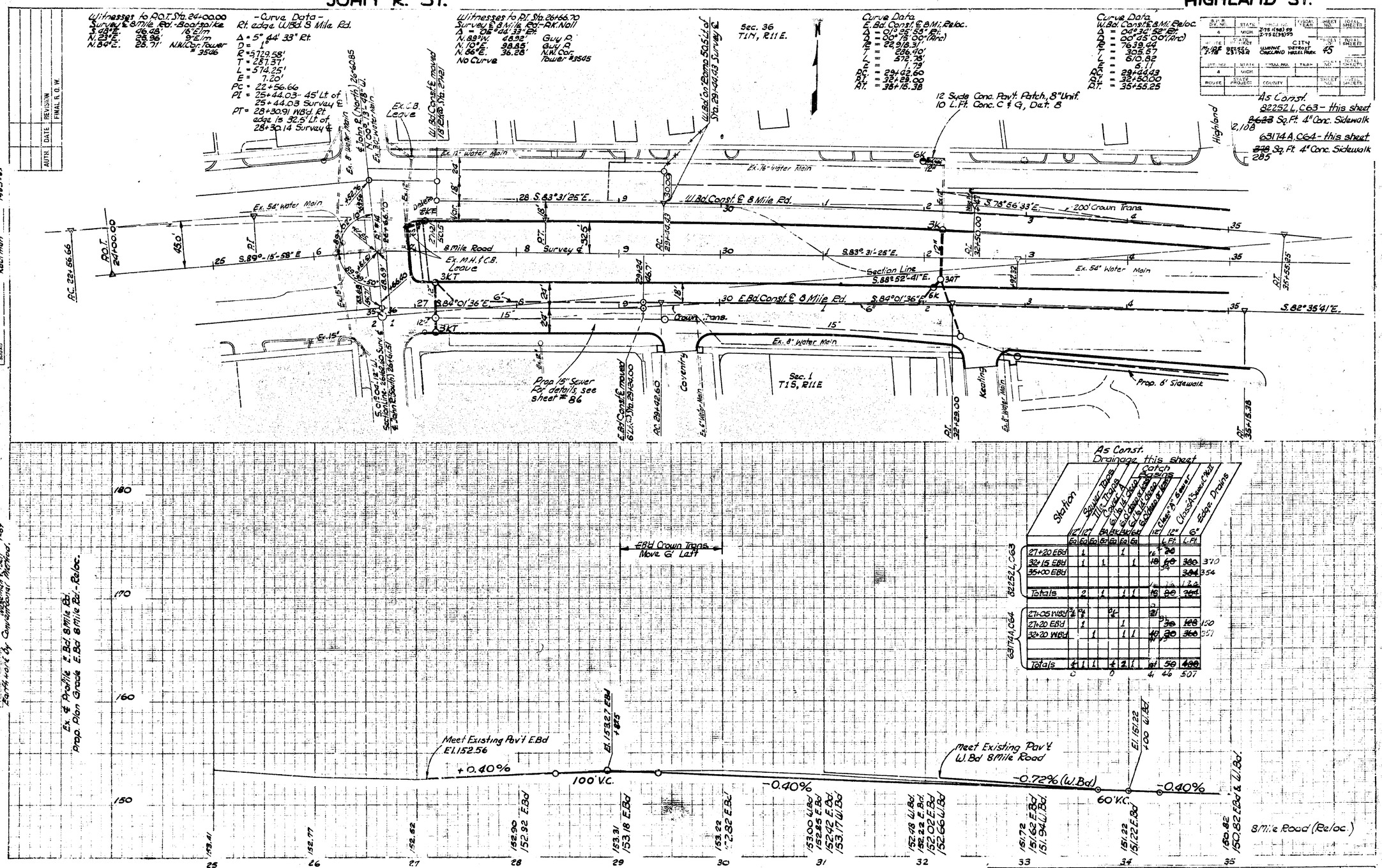
H.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I-75 2(98)59			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland Hazel Park	CITY	44	

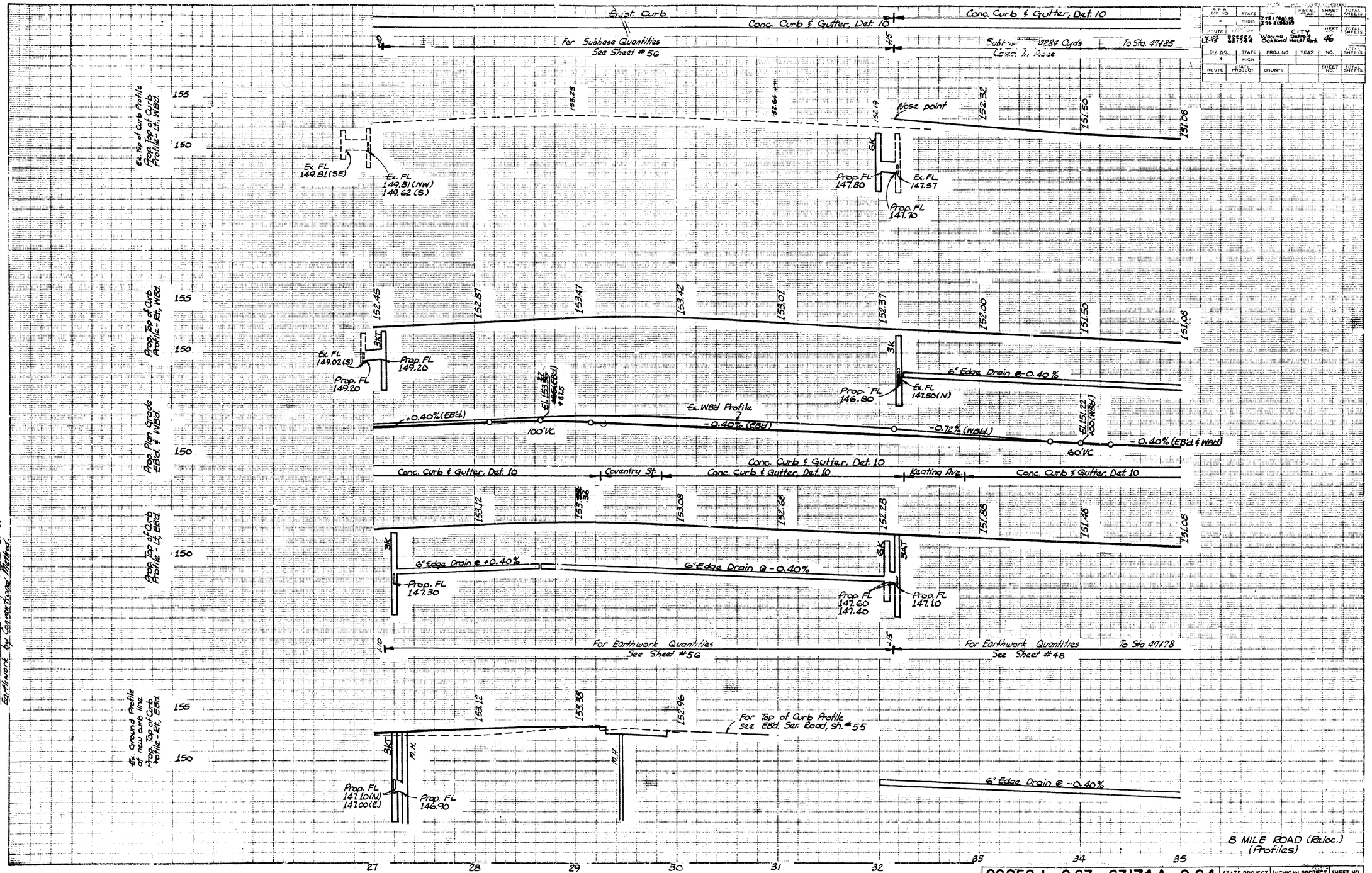
DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS





82252 L, C63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	63174A	I-75-2(98)59	44


JOHN R. ST.
HIGHLAND ST.
Witnesses to P.O.T. Sta. 24+00.00
Survey ℄ 8 Mile Rd. - Bootpike
S. 04°E. 26.68' 15"/m
N. 23°E. 28.96' 9"/m
N. 84°E. 25.71' N.W. Cor. Tower # 3546
- Curve Data -
Rt. edge W.Bd. 8 Mile Rd.
Δ = 5° 44' 33" Rt.
D = 1°
R = 5729.58'
T = 287.37'
L = 574.25'
E = 7.20'
PC = 22+56.66
PI = 25+44.03 - 45' Lt. of 25+44.03 Survey ℄
PT = 28+30.91 WBd. Rt. edge is 32.5' Lt. of 28+30.14 Survey ℄
Witnesses to PT. Sta. 26+66.70
Survey ℄ 8 Mile Rd. - RR. Nail
Δ = 06°44'33" Rt.
N. 89°W. 48.92' Guy P.
N. 10°E. 98.85' Guy P.
N. 66°E. 36.28' N.W. Cor. Tower # 3505
No Curve
Sec. 36 T1N, R11E.
Curve Data
E.Bd. Const. ℄ 8 Mi. Reloc.
Δ = 01° 25' 53" Rt.
D = 00° 13' 00" (Arc)
R = 22,918.31'
T = 286.40'
L = 572.79'
E = 1.79'
PC = 29+42.60
PI = 32+28.00
PT = 35+15.38
Curve Data
W.Bd. Const. ℄ 8 Mi. Reloc.
Δ = 04°32'52" Rt.
D = 00°45'00" (Arc)
R = 7639.44
T = 305.27
L = 610.82
E = 6.11
PC = 29+44.43
PI = 32+50.00
PT = 35+55.25
12 Syde Conc. Pav't. Patch, 8" Unif.
10 L.Ft. Conc. C & G, Det. B
As Const.
82252 L, C63 - this sheet
~~8623~~ 2,108 Sq. Ft. 4" Conc. Sidewalk
63174 A, C64 - this sheet
~~278~~ 285 Sq. Ft. 4" Conc. Sidewalk
Ex. C.B. Leave
W.Bd. Const. ℄ moved 18' Rt. Sta. 27+47
W.Bd. on 12" Pipe 50.5' Lt. of Sta. 29+44.43 Survey ℄
Ex. 12" Water Main
Ex. 8" Water Main
Ex. 54" Water Main
Ex. 16" Water Main
W.Bd. Const. ℄ 8 Mile Rd.
S. 83°31'25"E.
S. 78°56'33"E.
200' Crown Trans.
8 Mile Road
Survey ℄
Ex. M.H. & C.B. Leave
Section Line
S. 88°52'41"E.
S. 89°-15'-58" E
S. 83°-31'-25" E.
E.Bd. Const. ℄ 8 Mile Rd.
S. 84°01'36"E.
S. 82°35'41"E.
Crown Trans.
Ex. 8" Water Main
Prop. 15" Sewer For details, see Sheet # 86
Sec. 1 T1S, R11E
Coventry
Keating
Prop. 6' Sidewalk
Highland
P.O.T. 24+00.00
P.C. 22+56.66
P.T.
P.C. 29+42.60
P.T. 32+29.00
P.T. 32+50.00
P.T. 32+55.25
P.T. 35+15.38
Ex. & Proposed E.Bd. 8 Mile Rd.
Prop. Plan Grade E.Bd. 8 Mile Rd. - Reloc.
EBd Crown Trans. Move 6' Left
Meet Existing Pav't. E.Bd
El. 152.56
+0.40%
100' V.C.
-0.40%
Meet Existing Pav't. W.Bd. 8 Mile Road
-0.72% (W.Bd.)
60' V.C.
-0.40%
El. 151.22 100' W.Bd.
8 Mile Road (Reloc.)
As Const.
Drainage this sheet
Station
Sewer Tees
Wye Tees
Conc. Pipe
Catch Basins
Closed Sewer Pipe
Edge Drains
82252 L, C63
63174 A, C64
27+20 EBd
32+15 EBd
35+00 EBd
Totals
27+05 WBd
27+20 EBd
32+20 WBd
Totals
82252 L, C63; 63174 A, C64
STATE PROJECT
MICHIGAN PROJECT
SHEET NO.
45



R.P.N. DIV. NO.	STATE		FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75 1(98)59 I-75 2(98)59			
ROUTE		CITY		SHEET NO.	TOTAL SHEETS
M-102 I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	46	
DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

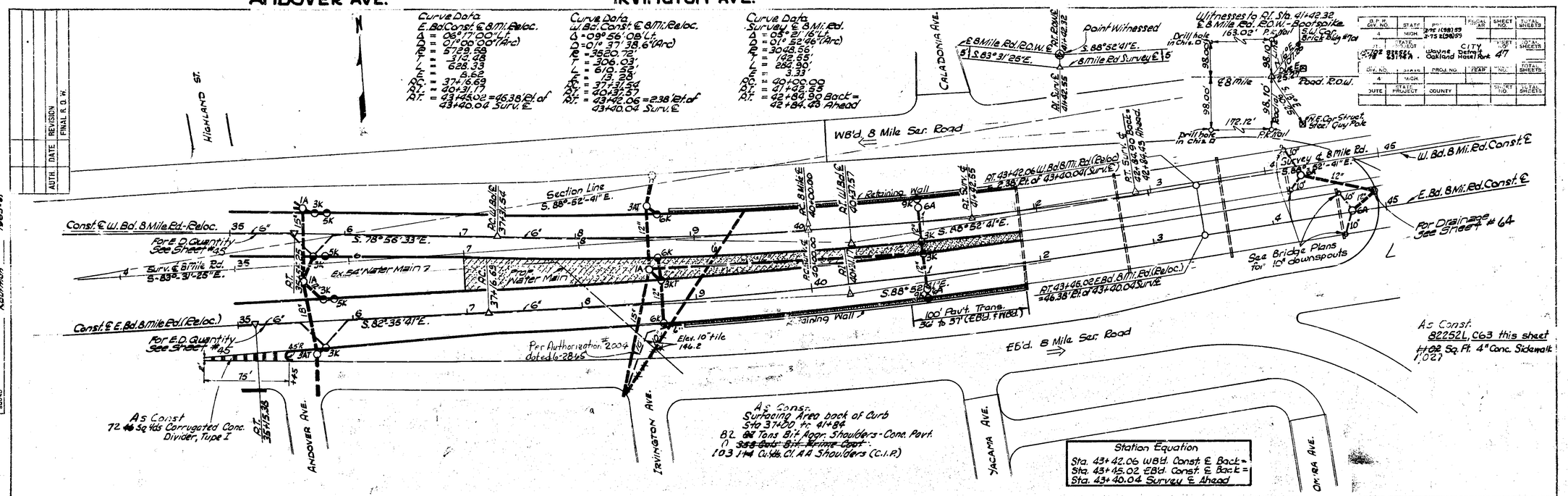
OPERATION	BY	DATE
SURVEYED	Miller	1960
PLAN PLOTTED		
PLAN CHECKED	N. Bolder	1-64
PROFILE PLOTTED	J. Ginaglia	1-64
PROFILE CHECKED	J. Timbrhaner	5-64
PRELIMINARY GRADE	Bosch	8-64
GRADE INSPECTION	Wesemann & Bell	9-64
FEDERAL INSPECTION		

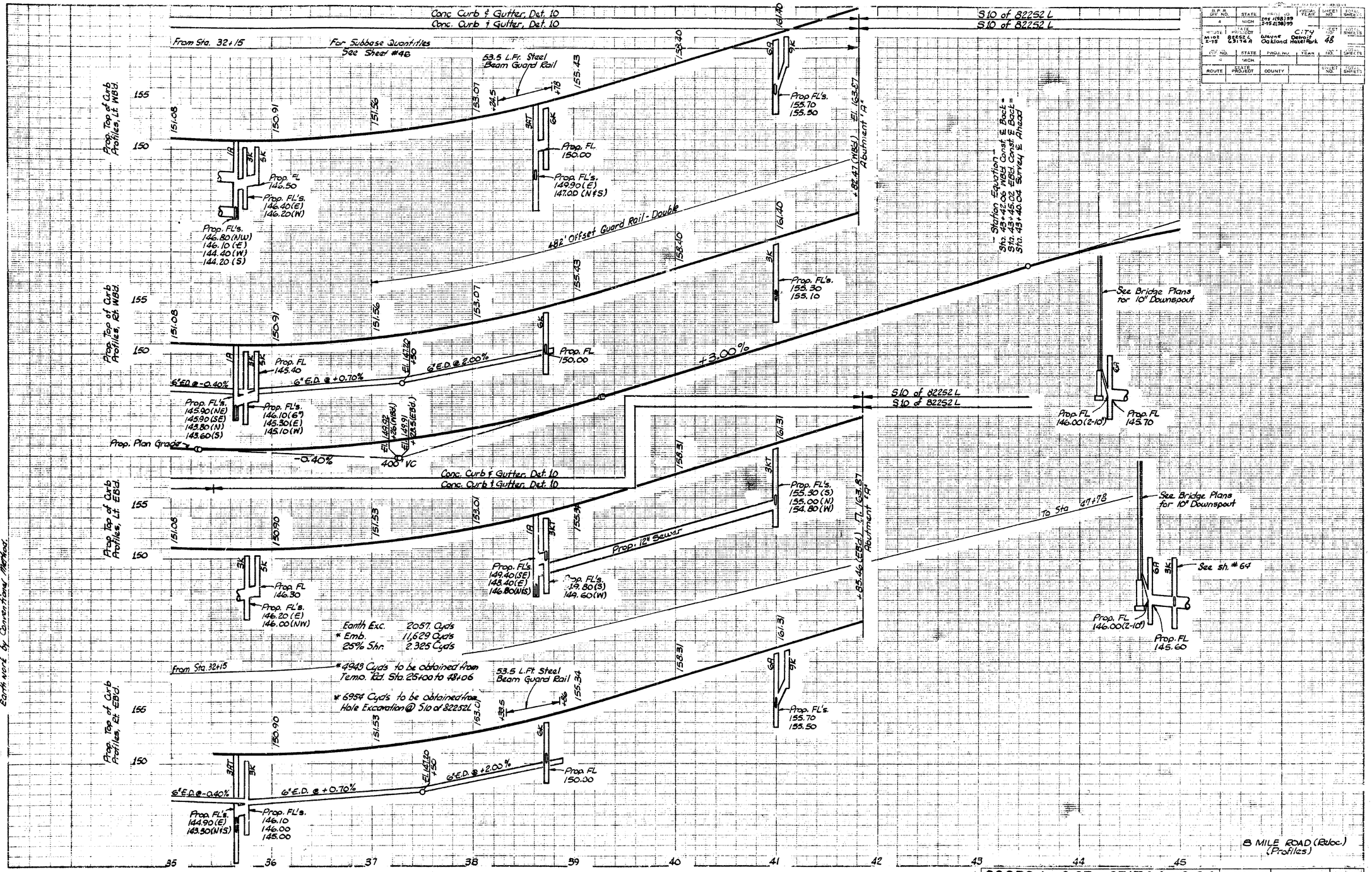
OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	Louisbury	1-65
FINAL DESIGN CHECKED	Kaufman	1-65
FINAL R.O.W. CHECK	Wittgreen	2-65
QUANTITIES	Kaufman	2-65
QUANTITIES	Kaufman	63-65
SQUAD		

Earthwork by Conventional Method.

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1 (98) 59	46
63174 A	I-75-2 (98) 59	


ANDOVER AVE.
IRVINGTON AVE.
Curve Data
E.Bd Const. ℄ 8 Mi. Reloc.
Δ = 06°17'00" Lt.
D = 01°00'00" (Arc)
R = 5729.58
T = 316.98
L = 628.33
E = 8.62
P.C. = 37+16.69
P.T. = 40+31.17
P.I. = 43+42.02 = 46.38' Rt. of 43+40.04 Surv. ℄
Curve Data
W.Bd. Const. ℄ 8 Mi. Reloc.
Δ = 09°56'08" Lt.
D = 01° 37' 38.6" (Arc)
R = 3520.72'
T = 306.03'
L = 610.52'
E = 13.28'
P.C. = 37+31.54
P.T. = 40+31.57
P.I. = 43+42.06 = 2.38' Rt. of 43+40.04 Surv. ℄
Curve Data
Survey ℄ 8 Mi. Rd.
Δ = 05° 21' 16" Lt.
D = 01° 52' 46" (Arc)
R = 3048.56'
T = 142.62'
L = 282.90'
E = 3.33'
P.C. = 40+00.00
P.T. = 41+42.90
P.I. = 42+84.48 Back = 42+84.48 Ahead
HIGHLAND ST.
CALADONIA AVE.
℄ 8 Mile Rd. R.O.W. ℄ Pt. Curve 41+42.32
S. 88° 52' 41" E.
S. 83° 31' 25" E.
℄ 8 Mile Rd Survey ℄
Point Witnessed
Witnesses to Pt. Sta. 41+42.32
℄ 8 Mile Rd. R.O.W. - Bootspike.
Drill hole in Chis. ℄
163.02'
P.K. Nail
Brick Bldg. #7a
℄ 8 Mile
Road. R.O.W.
172.12'
Drill hole in Chis. ℄
P.K. Nail
N.E. Cor. Street Sign. Guy Pole
W.B.'d. 8 Mile Sas. Road
Section Line
S. 88°-52'-41" E.
Const. ℄ W. Bd. 8 Mile Rd.-Reloc.
For E.D. Quantity See Sheet #35
S. 78° 56' 33" E.
Surv. ℄ 8 Mile Rd.
S. 83°-31'-25" E.
Ex. 54" Water Main
Prop. Water Main
Retaining Wall
S. 88° 52' 41" E.
Rt. 43+42.06 W. Bd. 8 Mi. Rd. (Reloc.) = 2.38' Rt. of 43+40.04 (Surv. ℄)
Rt. 43+46.02 E. Bd. 8 Mi. Rd. (Reloc.) = 46.38' Rt. of 43+40.04 Surv. ℄
Rt. Surv. ℄ 42+84.48 Back = 42+84.48 Ahead
Survey ℄ 8 Mile Rd.
W. Bd. 8 Mi. Rd. Const. ℄
E. Bd. 8 Mi. Rd. Const. ℄
For Drainage See Sheet #64
See Bridge Plans for 10" downspouts
Const. ℄ E. Bd. 8 Mile Rd. (Reloc.)
For E.D. Quantity See Sheet #35
S. 82° 35' 41" E.
Per Authorization #2004 dated 6-28-65
Elev. 10" tile 146.2
100' Pavt. Trans. 32' to 37' (E.B.d. & W.B.d.)
E.B.'d. 8 Mile Sas. Road
As Const. 82252L, C63 this sheet
1,027 Sq. Ft. 4" Conc. Sidewalk
75'
As Const 72.46 Sq. Yds Corrugated Conc. Divider, Type I
ANDOVER AVE.
IRVINGTON AVE.
As Const. Surfacing Area back of Curb Sta 37+20 to 41+84
82 Tons Bit. Aggr. Shoulders - Conc. Pavt.
0 ~~338 Gals. Bit. Prime Coat~~
103.1+4 Cu. Yds. Cl. AA Shoulders (C.I.P.)
YACAMA AVE.
OK. RA AVE.
Station Equation
Sta. 43+42.06 W.B.d. Const. ℄ Back = Sta. 43+45.02 E.B.d. Const. ℄ Back = Sta. 43+40.04 Survey ℄ Ahead
As Const. Drainage this sheet
Tile Traps
Inlets
Catch Basins
Class A Sewer
Class B Sewer
Class D Drain
Class B Sewer
Station
35+64 Lt. W.B.d.
Totals
35+64 Rt. W.B.d.
35+68 Rt. E.B.d.
38+63 Lt. W.B.d.
38+68 Lt. E.B.d.
41+00 Lt. E.B.d.
44+39 W.B.d.
44+70 E.B.d.
Totals
82252L, C63 63174A, C64
Ex. ℄ Prop. 8 Mile E.Bd. 8 Mile Road (E.Bd.) Prop. Plan Grade (8 Mile E.Bd.-Reloc. W.Bd.)
Ex. ℄ Prop. 8 Mile Road (Reloc.)
400' V.C.
-0.40%
+3.00%
43+40.04 Ahead El. 168.40'
43+45.02 Back E.Bd. 8 Mi. Rd. (Reloc) El. 168.40'
43+42.06 Back W.Bd. 8 Mi. Rd. (Reloc) El. 168.40'
Abut.-W.Bd. 8 Mi. Rd. +132.49-El. 163.61
Abut.-E.Bd. 8 Mi. Rd. +185.46-El. 163.62
8 Mile Road (Reloc.)
47
82252 L, C63; 63174 A, C64
STATE PROJECT
MICHIGAN PROJECT
SHEET NO.



SUB & DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I75-1(98)59 I-75-2(98)59			

ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
M-102 I-75	82252 L 63174 A	Wayne Detroit Oakland Hazel Park	CITY	48	

REV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH				

ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

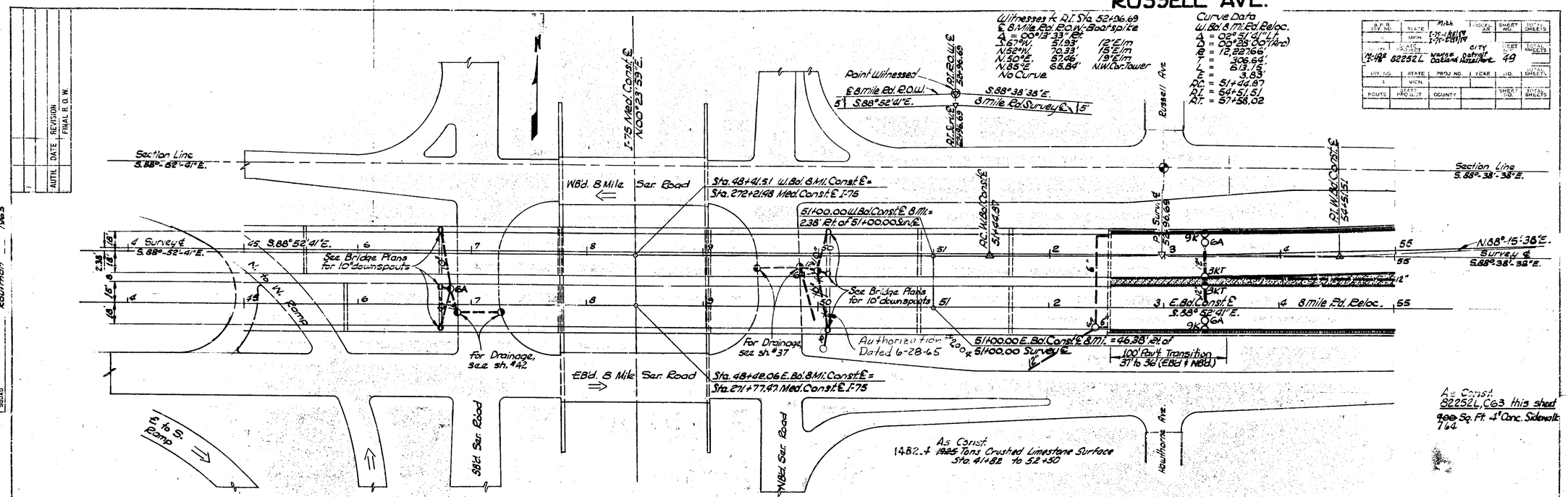
OPERATION	BY	DATE
SURVEYED	Louisbury	1-65
PLAN PLOTTED	Coulman	
PLAN REVISED		
PROFILE PLOTTED	Louisburg	2-65
PROFILE CHECKED	Coulman	2-65
PLAN & PROF. REVISED	Coulman	4-65
GRADE INSPECTION	Mc Cann & Bell	7-65
FEDERAL INSPECTION	Glassmann & Bell	9-65

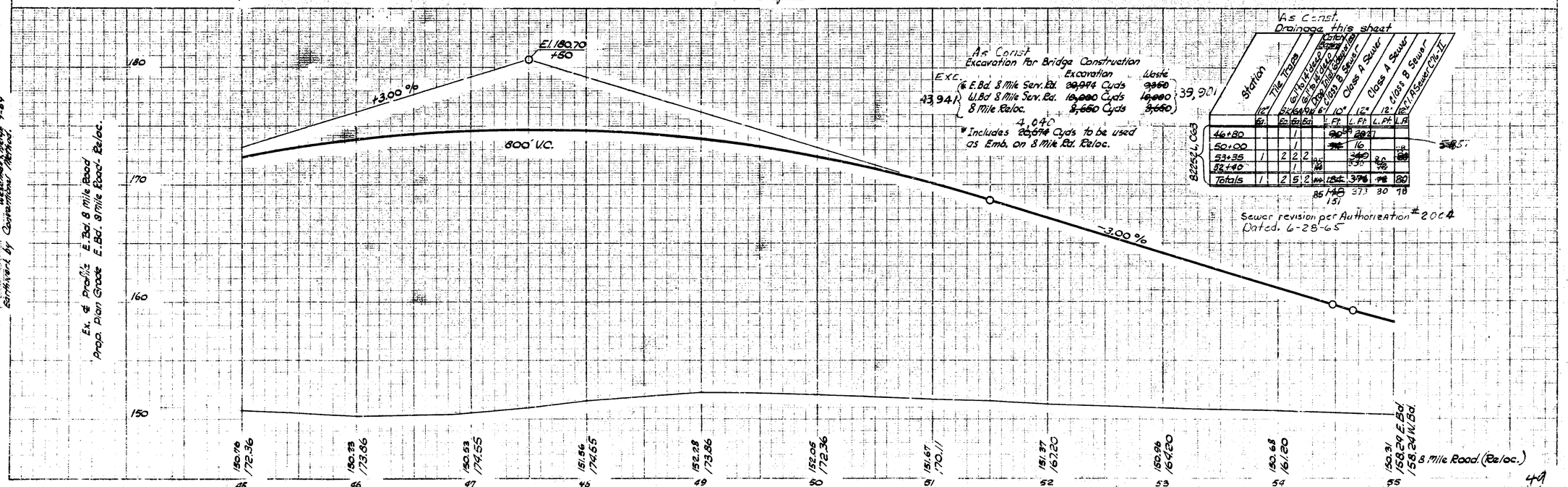
OFFICE OF CONCRETE	BY
PLAN & PROF. PLOTTED	
PLAN & PROF. CHECKED	
TRACED	
FINAL & C.W. CHECK	
QUANTITIES	
COMPUTED	
QUANTITIES CHECKED	
SQUAD	

Earth work by Conventional Method.

82252 L, C63, 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I75-1(98)59	48
	63174A	I75-2(98)59	

RUSSELL AVE.





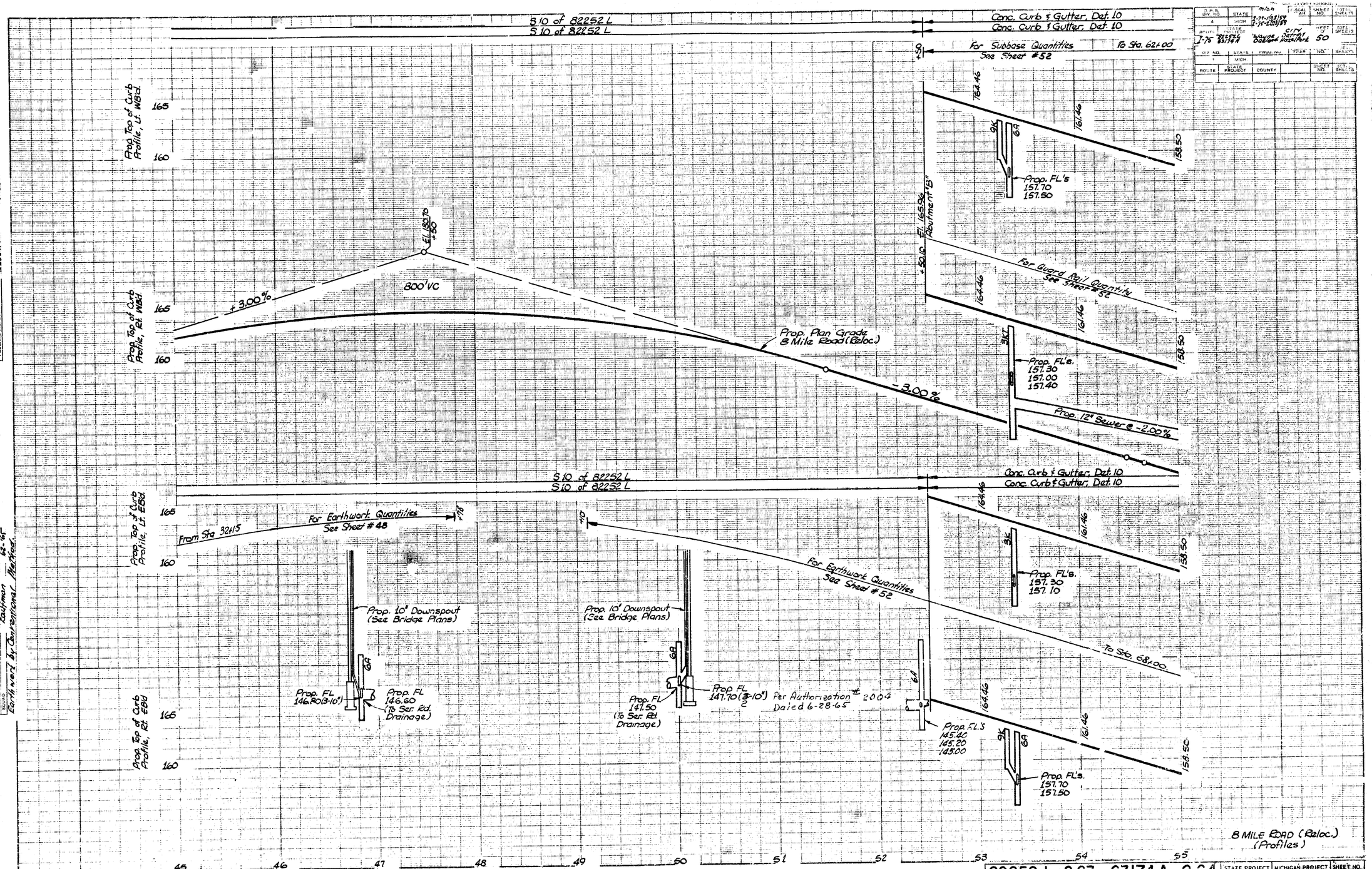
Station	Tile Trap 12" Ea.	Tile Trap 24" Ea.	Tile Trap 36" Ea.	Catch Basin Type C Ea.	Catch Basin Type C Ea.	Catch Basin Type B Ea.	Class B Sewer 10" L.Ft.	Class A Sewer 12" L.Ft.	Class A Sewer 12" L.Ft.	Class B Sewer 12" L.Ft.
46+80			1				90	382		
50+00			1				16			
53+35	1	2	2	2			340		86	80
53+40			1				330		70	
Totals	1	2	5	2			376	382	156	80
							151	37.3	30	70

82252L, C63

49

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 109	49
63174A	I 75-2 (98) 59	



8 MILE ROAD (Reloc.)
(Profiles)

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	175-1 (98) 59	50
	63174A	175-2 (98) 59	

OPERATION		DATE
SURVEYED	Miller	1960
PLAN PLOTTED		
PLAN INSPECTED		
PROFILE PLOTTED	J. Graff	3-61
PROFILE CHECKED	J. Moulder	3-61
WORK STATION	J. Hardenbergh	3-61
GRADE INSPECTION		3-61
FEDERAL INSPECTION	Weissman	3-61

OPERATION		DATE
FINAL HWY. R.O.W. DEDICATED		
FINAL PLAN PREPARED	Lounsbury Kaufman	7-65
FINAL DESIGN CHECKED		7-65
FINAL R.O.W. CHECK		
QUANTITIES PREPARED	Lounsbury Kaufman	8-65
QUANTITIES CHECKED		8-65
BOND		8-65

Earthwork by Conventional Method.

D.P.S. DIV. NO.	STATE	FISCAL YR.	SHEET NO.	TOT. SHEETS
4	MICH	1-75-1(98)59 1-75-2(98)59		
ROUTE	STATE PROJECT		SHEET NO.	TOT. SHEETS
I-75	82252 L 63174 A	Wayne Oakland Counties	50	

DIV. NO.	STATE	FROM INV.	YEAR	SHEET NO.	TOT. SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOT. SHEETS

AUTH.	DATE	REVISION
		FINAL R. O. W.

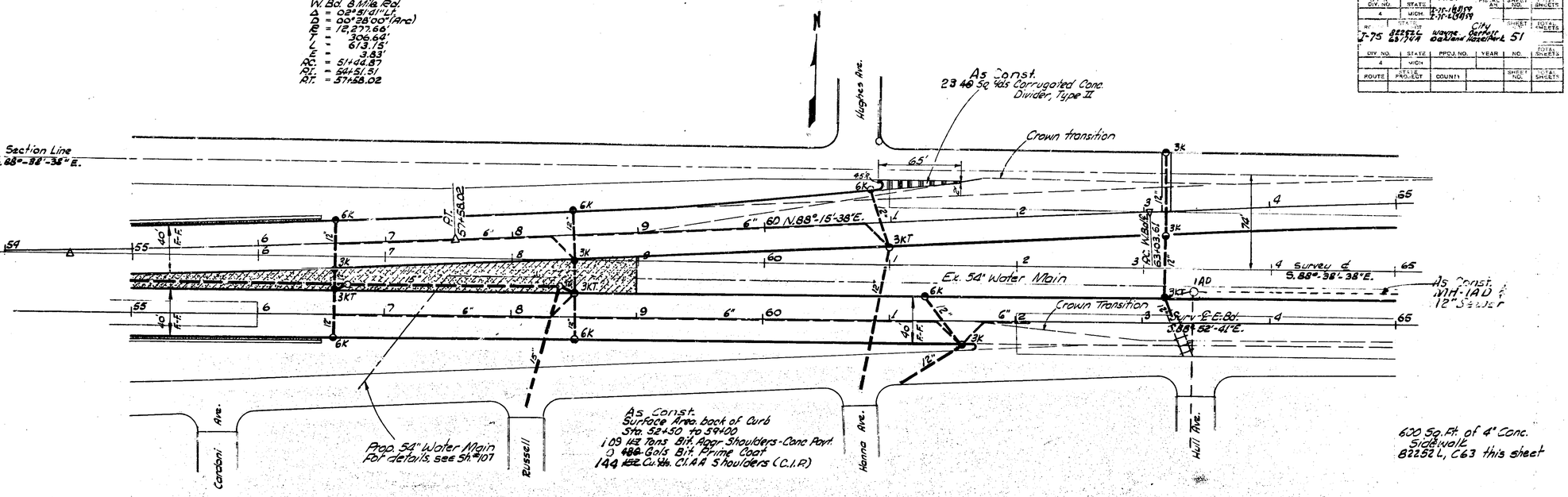
OPERATION	BY	DATE
PRELIM. MINIMUM R.O.W. ENGINEERED	T.J.M. & R.B.	6-66
PRELIM. GRADE ENGINEERED	T.J.Cogan	5-66
FINAL DESIGN ENGINEERED	T.J.M. & R.B.	7-66
TRACED	T.J.McMahon	7-66
FIELD C. & W. ENGIN.	Louis Bucy	12-66
QUANTITIES	E.Kaufman	1-67
QUANTITIES ENGINEERED	Reuben	1-67
CHECKED		

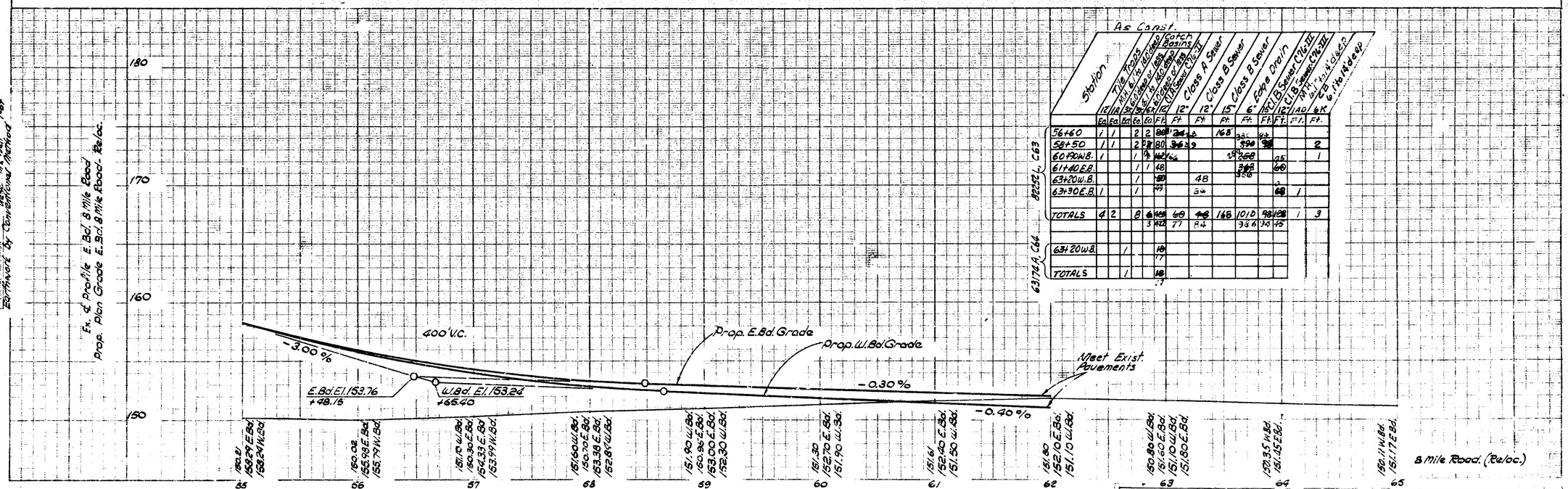
OPERATION	BY	DATE
SURVEYED		
PLOTTED		
ALIGN. ENGINEERED		
PROFILE ENGINEERED		
FIELD C. & W. ENGIN.		
PREL. VERT. GRADE	T.J.M. & R.B.	6-66
GRADE INSPECTION	T.J.Cogan	5-66
FINAL INSPECTION	T.J.McMahon	7-66
	Earthwork by Conventional Method	

DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Royal Oak	51	

CARDONI AVE. RUSSELL AVE. HUGHES AVE. HULL AVE.

Curve Data
W. Bd. 8 Mile Rd.
Δ = 02°51'11" Lt.
D = 00°28.00' (Arc)
R = 12,277.66'
T = 306.64'
L = 613.15'
Ord = 3.83'
P.C. = 54+44.87
P.I. = 54+51.51
P.T. = 57+58.02



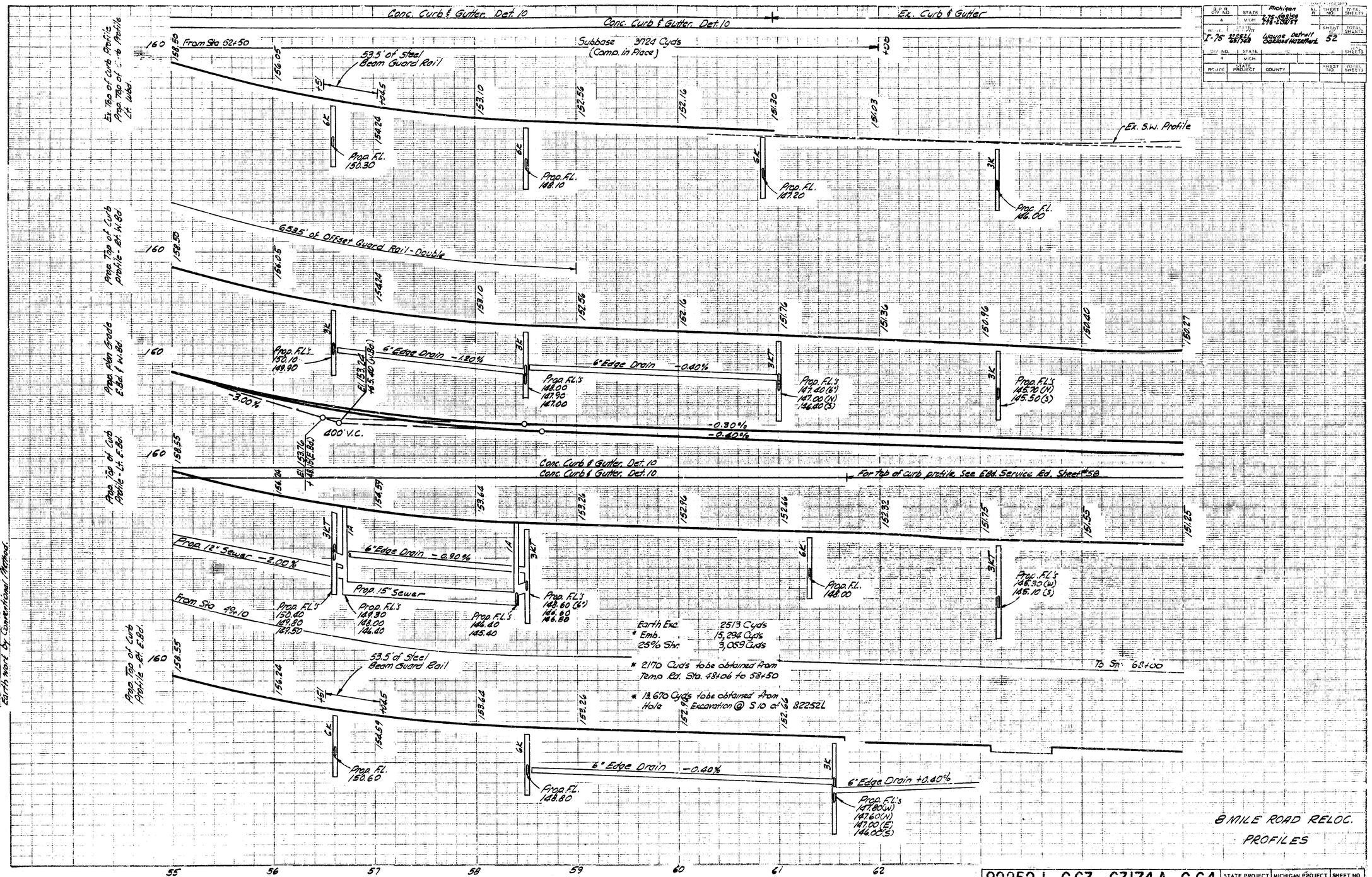


As Const.

Station	12" Tile Trapp Mat'l & Lay Incl. Excav. & Backfill	18" Tile Trapp Mat'l & Lay Incl. Excav. & Backfill	Catch Basins 12" Tile Sewer C76-VII	Class A Sewer 12"	Class B Sewer 12"	Class B Sewer 15"	Foundation Drain 6"	Class B Sewer C76-VII 12"	Class B Sewer C76-VII 12"	MH-1AD Sewer C76-VII 48"	CB 6'x4'x6'deep 6K
	Ea.	Ea.	Ea.	Ea.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.
82252 L, C63											
56+60	1	1		2	2	80	24	168	35	43	
58+50	1	1		2	2	80	24		39	98	2
60+20 W.B.	1			1	1	42	24		28	28	1
61+40 E.B.				1	1	48			35	60	
63+20 W.B.				1		80		48		2	
63+30 E.B.	1			1		77		34		68	1
TOTALS	4	2		8	6	465	60	48	168	101.0	98	108	1	3
63174 A, C64					3	422	77	84		38.6	75	75		
63+20 W.B.			1			18								
						17								
TOTALS			1			18								
						17								

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	51
63174A	I 75-2 (98) 59	

82252 L, C63; 63174 A, C64



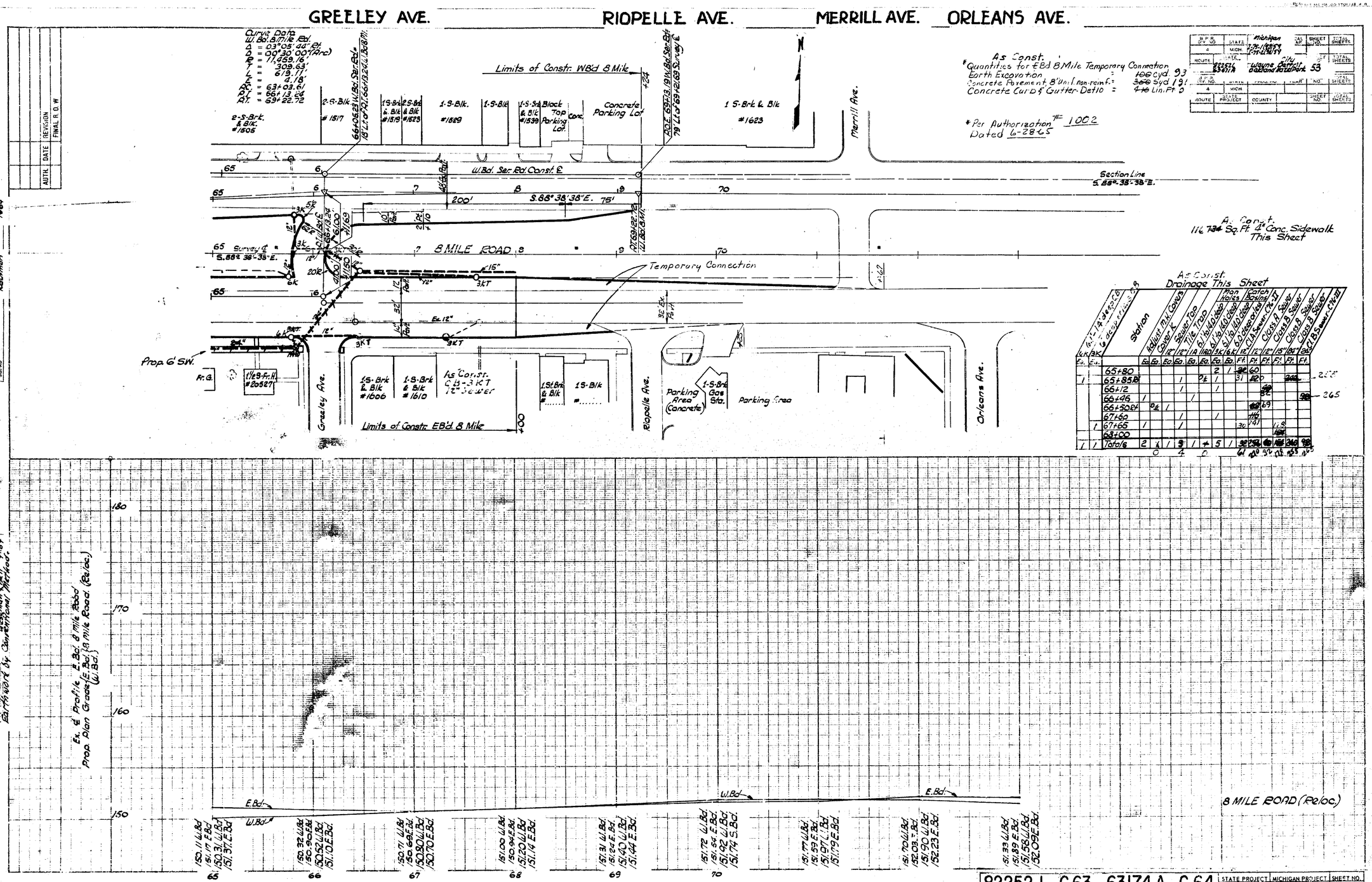
B.P.R. DIV. NO.	STATE				SHEET NO.	TOTAL SHEETS
4	MICH.					
ROUTE	STATE PROJECT	COUNTY			SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Detroit Oakland Hazelhurst			52	

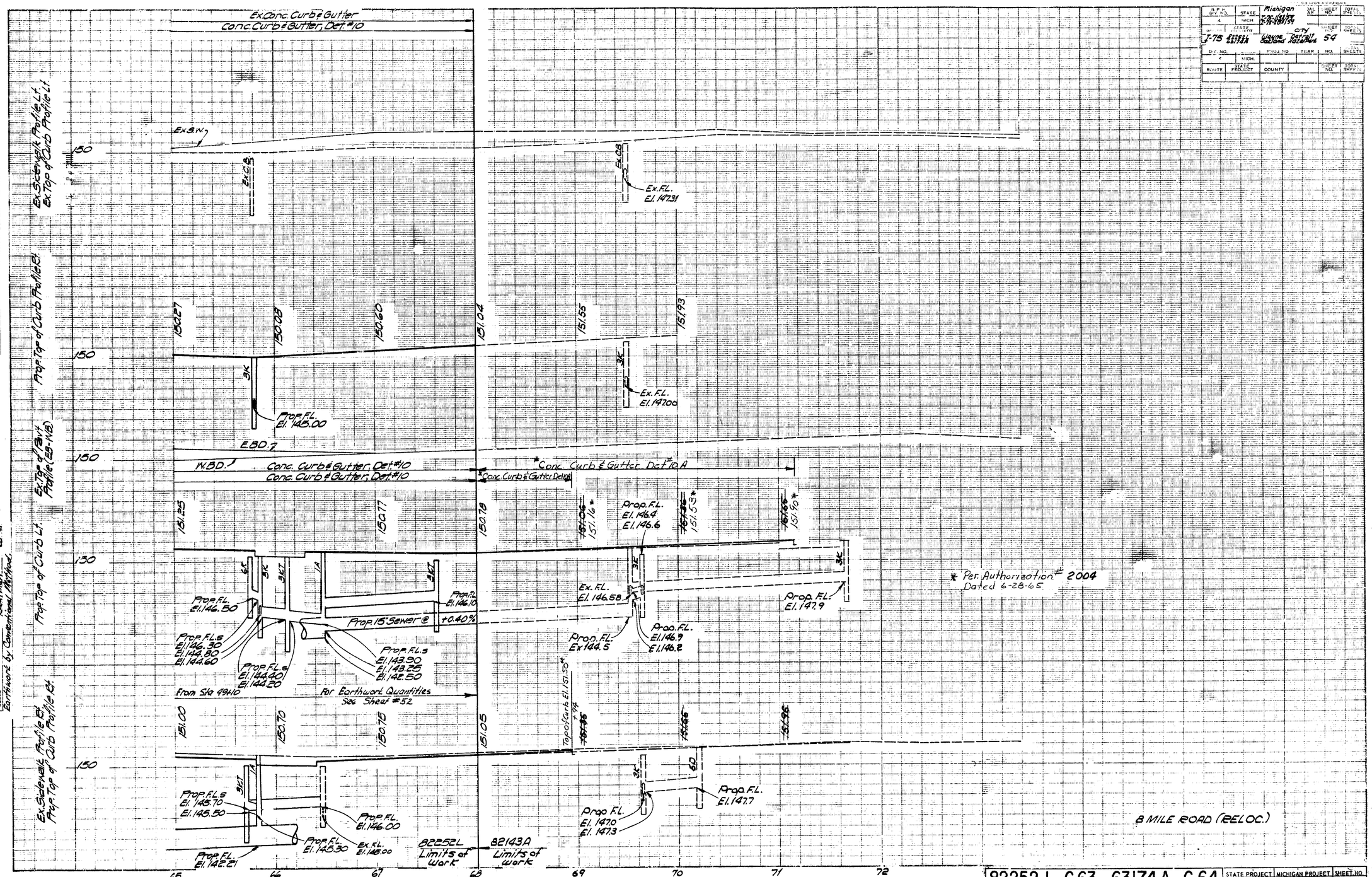
DIV. NO.	STATE				SHEET NO.	TOTAL SHEETS
4	MICH.					
ROUTE	STATE PROJECT	COUNTY			SHEET NO.	TOTAL SHEETS

OPERATION	BY	DATE
SURVEYED		1986
PLAN PLOTTED		
PLAN CHECKED		
PROFILE PLOTTED		
PROFILE CHECKED		
PRIM. LINE & TRAV.		
PRIM. LINE & TRAV. CHECKED		
GRADE INSPECTION		
FEDERAL INSPECTION		

OPERATION	BY	DATE
PRELIMINARY R/W GRADE		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R/W CHECK		
FINAL R/W CHECKED		
QUANTITIES CHECKED		
BOUND		

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I-75-1 (93) 59	52
	63174A	I-75-2 (98) 59	


GREELEY AVE.
RIOPELLE AVE.
MERRILL AVE.
ORLEANS AVE.
Curve Data
W. Bd. 8 Mile Rd.
Limits of Constr. WB'd 8 Mile
Concrete Parking Lot
Block Top Parking Lot
Merrill Ave.
W.Bd. Ser. Rd. Const. ℄
Section Line
S.88°-38'-38"E.
8 MILE ROAD
Temporary Connection
Prop. 6' SW.
Greeley Ave.
Riopelle Ave.
Orleans Ave.
Parking Area (Concrete)
Parking Area
Limits of Constr. EB'd 8 Mile
As Const. CB-3KT 12" Sewer
Ex. ℄ Profile E.Bd. 8 Mile Road
Prop. Plan Grade (E.Bd.) 8 Mile Road (Reloc.)
(W.Bd.)
E.Bd.
W.Bd.
8 MILE ROAD (Reloc.)
Earthwork by Conventional Method
As Const.
Quantities for EBd 8 Mile Temporary Connection
Earth Excavation = 100 cyd. 93
Concrete Pavement, 8" Unif. non-reinf. = 350 Syd 191
Concrete Curb & Gutter-Det 10 = 410 Lin. Ft. 0
* Per Authorization # 1002
Dated 6-28-65
As Const.
116 734 Sq. Ft. 4" Conc. Sidewalk
This Sheet
As Const.
Drainage This Sheet
Station
Adjust M.H. Covers
Cover K
Sewer Top
Tile Trap
Man Holes
Catch Basins
Class A Sewer
Class B Sewer
Class B Sewer
Class B Sewer
Total 6
65+80
65+85
66+12
66+46
66+50
67+60
67+65
68+00
Totals
82252 L, C 63; 63174 A, C 64
STATE PROJECT
MICHIGAN PROJECT
SHEET NO.
82252L
63174A
175-1 (98) 59
175-2 (98) 59
53



SURVEYED	OPERATION		1960
PLAN PLOTTED			
PROFILE PLOTTED			
PROFILE CHECKED			
TRIAL GRADE CHECKED			
GRADE INSPECTOR			
FEDERAL INSPECTOR			

		DATE
FINAL NOTES & W.W. CHECKED		
FINAL SIGN PLATE CHECKED	Springbury	1-65
FINAL DESIGN CHECKED	Eastman	1-65
FINAL B.O.M.		
FINAL R.O.W. CHECK		
QUANTITIES	Wilkerson	2-65
QUANTITIES CHECKED	Eastman	2-65
BOARD		2-23-65

B.P.R. GV NO.	STATE	Michigan	SHEET NO. / TOTAL SHEETS
A	MICH.	82-252-L&A / 82-143-A	
I-75	STATE PROJECT	CITY Detroit	54
GV NO.	PROJ. NO.	YEAR	NO. / SHEETS
ROUTE	STATE PROJECT	COUNTY	SHEET NO. / TOTAL SHEETS

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
822521	I 75-1 (98) 59	54
63174A	I 75-2 (98) 59	

AUTH.	DATE	REVISION
		FINAL R. O. W.

			DATE
PRELIMINARY R.O.W. ON LOCATED			
FINAL DESIGN			
FINAL DESIGN CHECKED			
PLANS			
*PLANS R.O.W. CHECK			
QUANTITIES			
QUANTITIES CHECKED			
SIGNAL			

OPERATION	BY	DATE
PLAN TRACED		
PLAN CHECKED		
PROFILE		
PROFILE CHECKED		
PRELIM. FIELD GRADE		
FINAL FIELD GRADE		
FEDERAL INSPECTION		

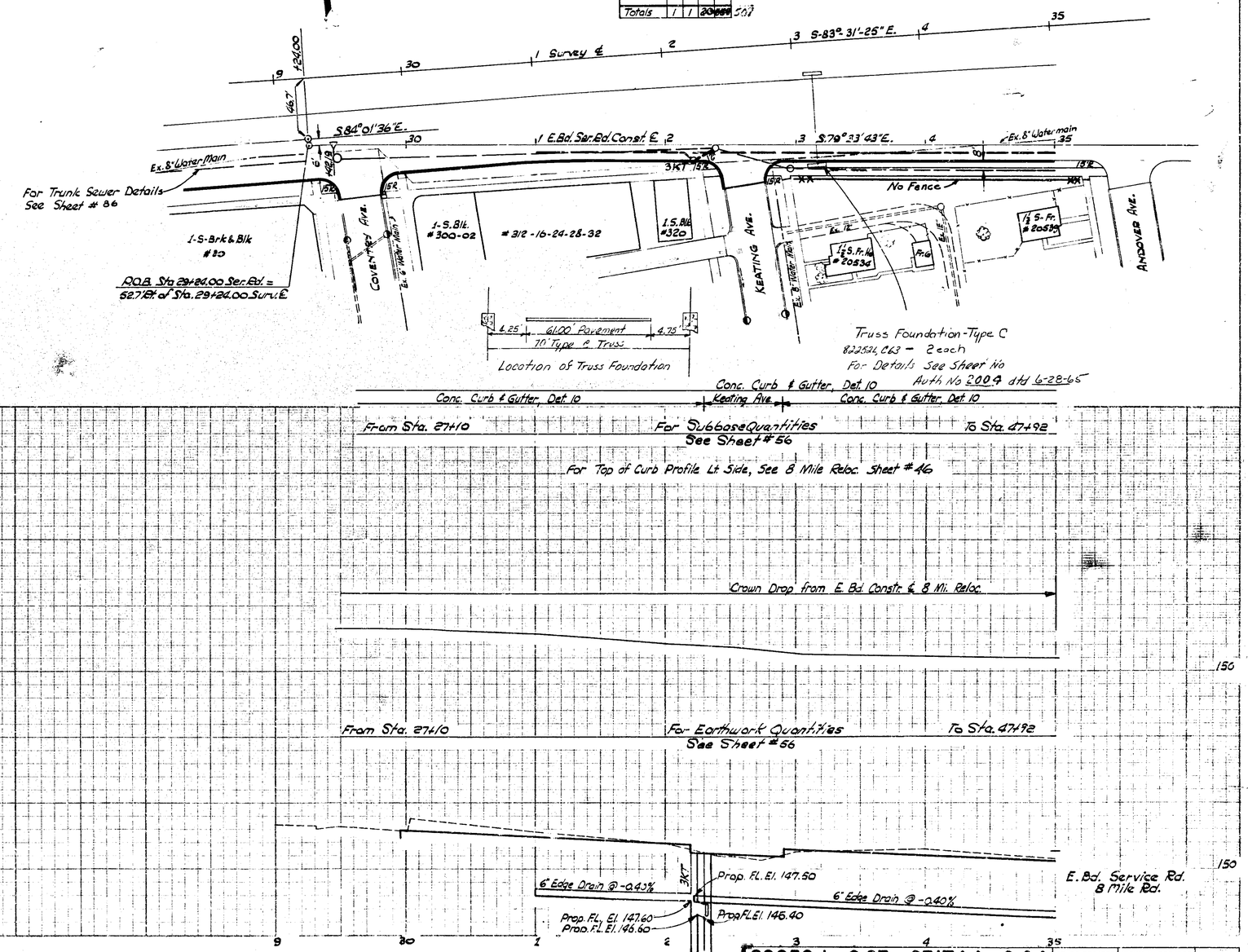
COVENTRY AVE. KEATING AVE. ANDOVER AVE.

As Const. - Drainage This Sheet

Station	Tile Trans. 12" Ea.	Tile Trans. 18" Ea.	C.B. & To No. Step Fr.	C.I.A. Sewer C.N.I. Fr.	Edge Drain 6" Ft.
32 + 22	1	1	30	186	1.5
35 + 00			75	430	3.5
Totals	1	1	20	616	5.0

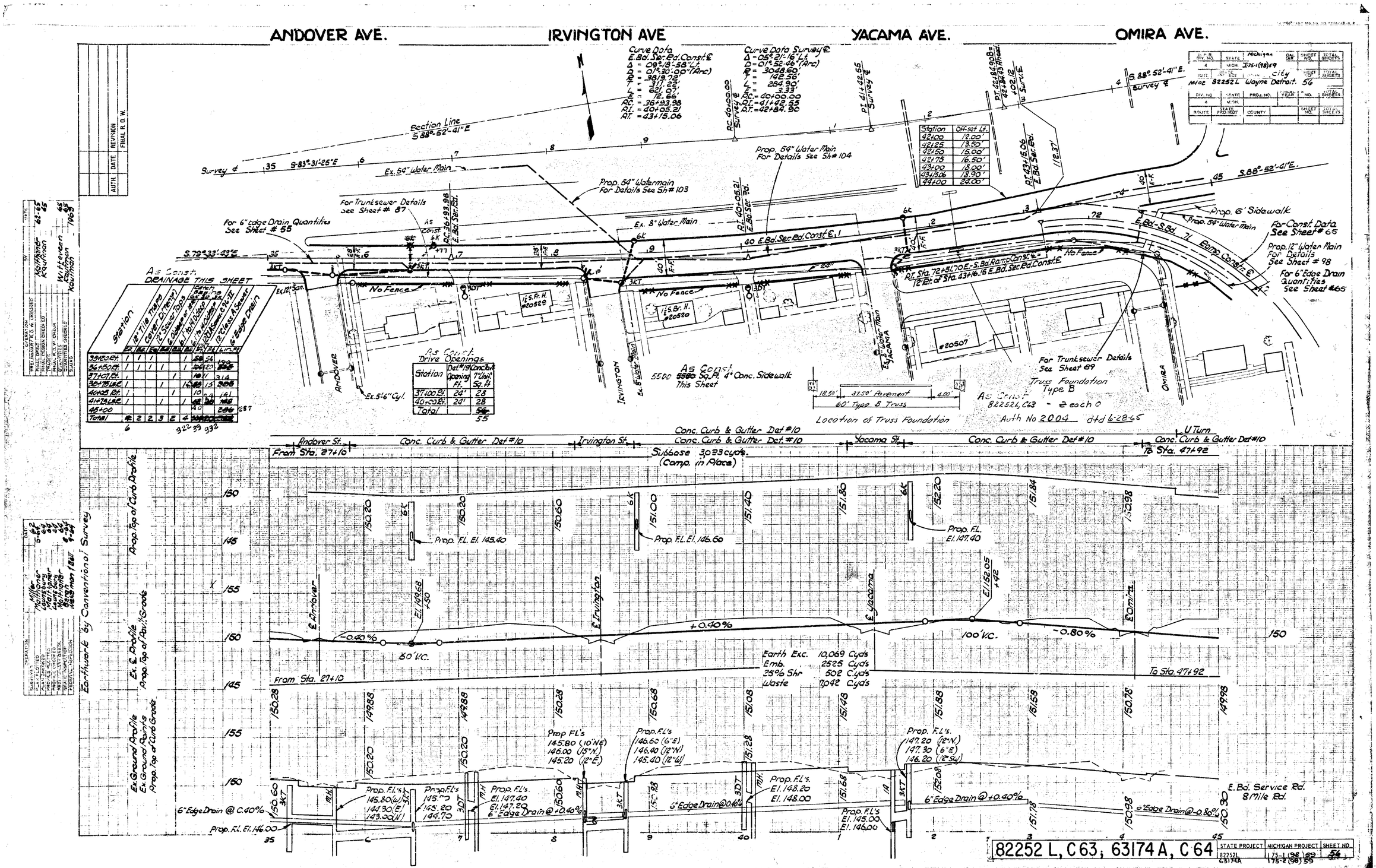
S.P. & R. DIV. NO.	STATE	Michigan	FEDERAL YEAR	SHEET NO.	TOTAL SHEETS
2	MICH.	I-75-1(98)59			
NO. 12	PROJECT	COUNTY City		SHEET NO.	TOTAL SHEETS
M-10L 82252L		Wayne Detroit		55	

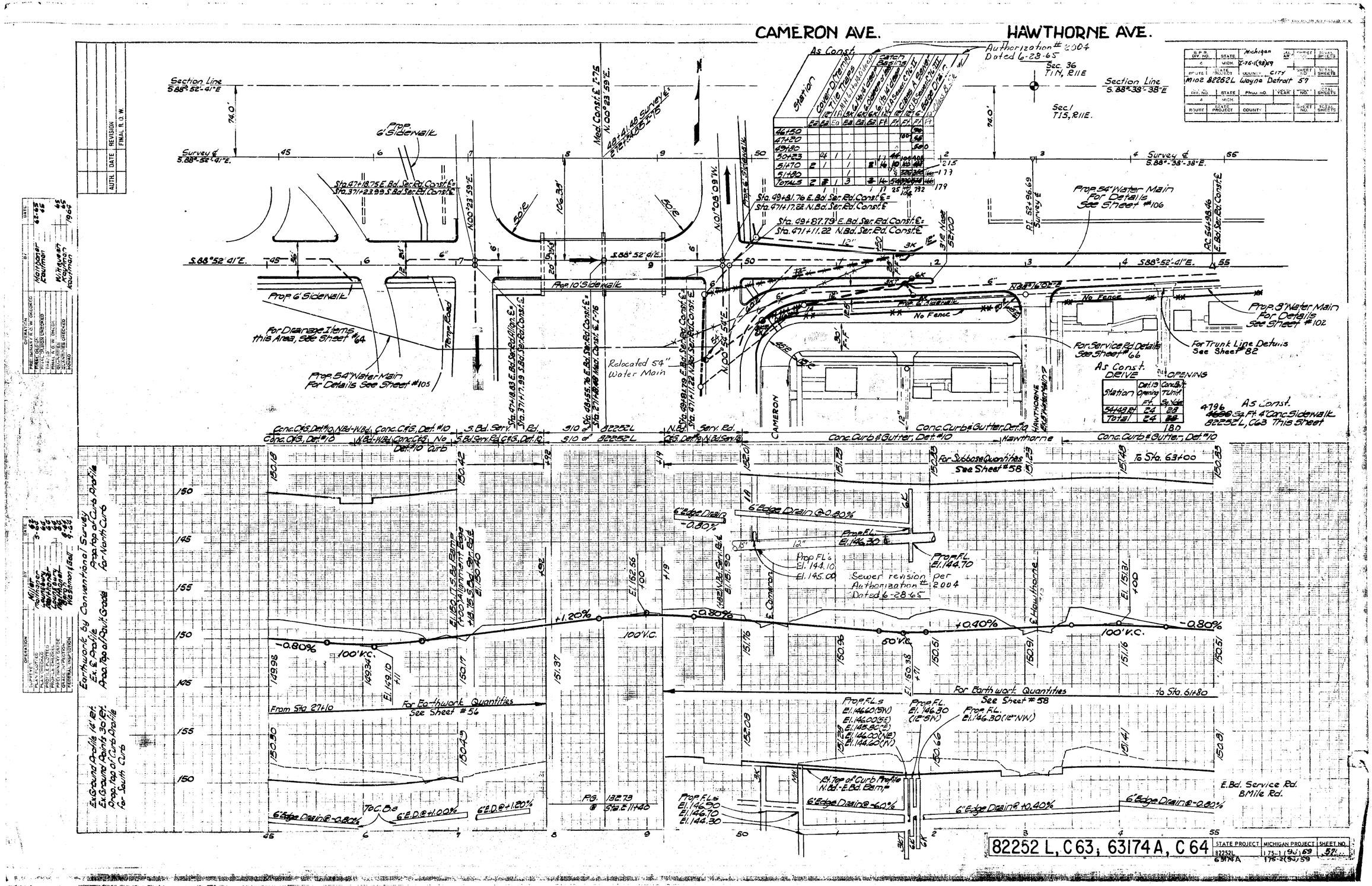
DIV. NO.	STATE	PF	3	YEAR	NO.	TOTAL SHEETS
4	MICH.					
NO. 12	STATE PROJECT	COUNTY			SHEET NO.	TOTAL SHEETS

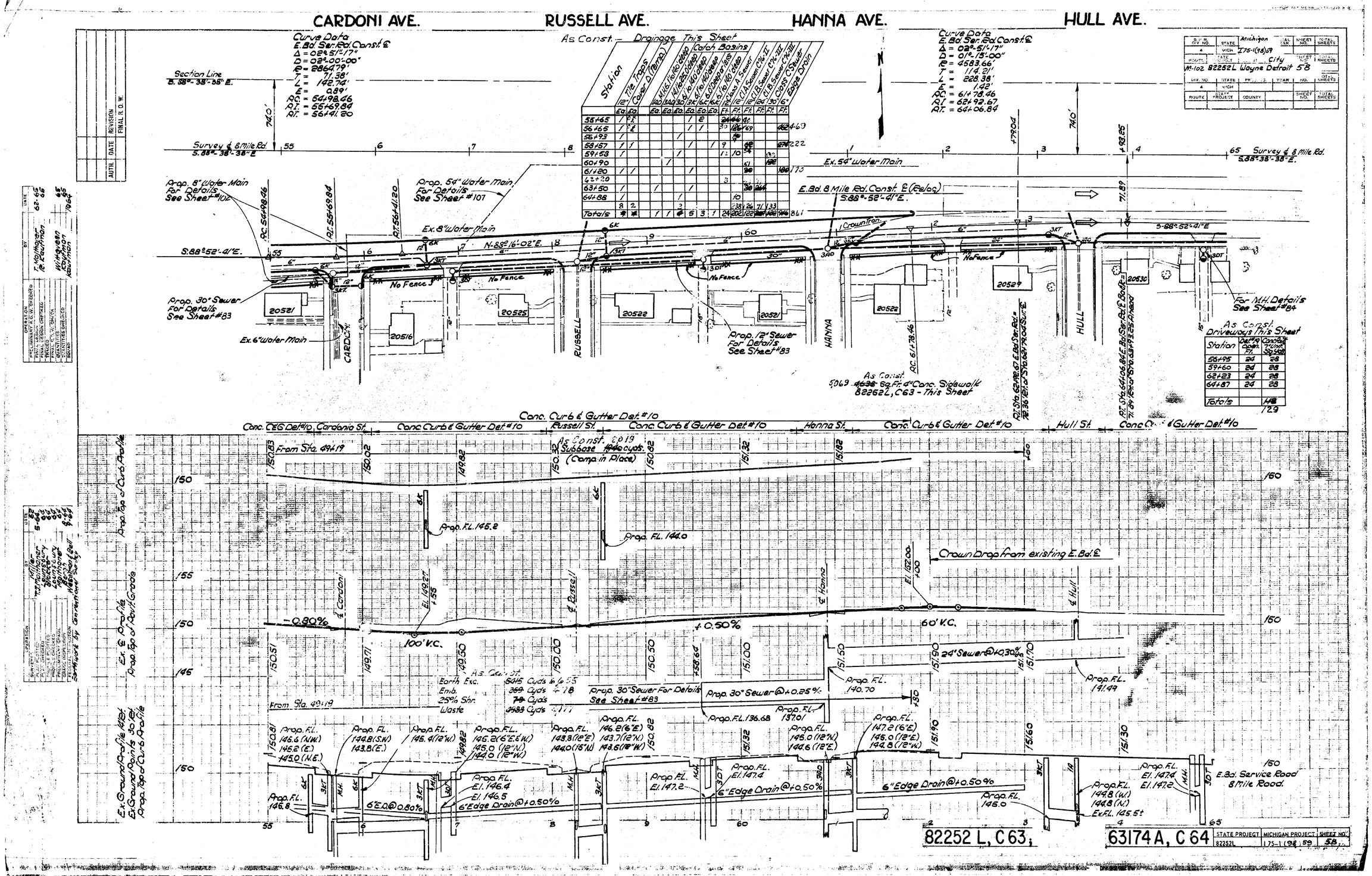


82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L 63174A	I 75-1 (98) 59 I 75-2 (98) 59	55


ANDOVER AVE.
IRVINGTON AVE
YACAMA AVE.
OMIRA AVE.
Curve Data
E.Bd. Ser. Rd. Const. ℄
Δ = 09°-18'-58" Lt.
D = 01°-30'-00" (Arc)
R = 3819.72'
T = 377.22'
L = 621.05'
E = 12.66'
P.C. = 36+93.98
P.T. = 40+05.21
P.T. = 43+15.06
Curve Data Survey ℄
Δ = 05°-21'-16" Lt.
D = 01°-52'-46" (Arc)
R = 3048.60'
T = 142.56'
L = 284.90'
E = 3.33'
P.C. = 40+00.00
P.T. = 41+42.55
P.T. = 42+84.90
Section Line S 88°-52'-41" E
Survey ℄ S-83°-31'-26" E
Ex. 54" Water Main
Prop. 54" Watermain For Details See Sh # 103
Prop. 54" Water Main For Details See Sh # 104
For Trunksewer Details See Sheet # 87
For 6" Edge Drain Quantities See Sheet # 55
As Const. DRAINAGE THIS SHEET
Station | 12" Tile Inlet | Cover Diffuser | 12" Sewer Pipe | 6" Outlet or Weep | 6" Pipe to Ditch | 12" Pipe to Ditch | 24" Sewer C76 II | 12" Class A Sewer | 6" Edge Drain
35+50 Rt. | 1 | 1 | 1 | | | 1 | 56 | 56 | 420
36+50 Rt. | 1 | | 1 | 1 | | 1 | 56 | 20 | 225
37+01 Rt. | 1 | | | | 1 | | 10 | 11 | 314
38+78 Lt. | 1 | | | 1 | | 1 | 10 | 15 | 305
40+05 Rt. | 1 | | | | 1 | | 10 | 14 | 161
41+79 Lt. | 1 | | | 1 | | 1 | 10 | 20 | 115
45+00 | | | | | | | 40 | | 286 | 287
Total | 6 | 2 | 2 | 3 | 2 | 4 | 322 | 39 | 932
As Const. Drive Openings
Station | Det #19 Opening Ft. | Conc. Bk. 7" Unit Sq. Ft.
37+00 Rt. | 24' | 28
40+00 Rt. | 24' | 28
Total | | 56
55
Ex. 12" Con.
Ex. 5'-6" Cyl.
No Fence
1½ S.Br. H. #20520
1½ S.Br. H. #20530
#20507
Ex. 8" Water Main
Ex. 8" Water Main
Ex. 8" Water Main
Ex. 8" Water Main
As Const. 5500 Sq. Ft. 4" Conc. Sidewalk This Sheet
Prop. 6' Sidewalk
Prop. 54" Water Main
For Const. Data See Sheet # 65
Prop. 12" Water Main For Details See Sheet # 98
For 6" Edge Drain Quantities See Sheet # 65
E.Bd. S.Bd. Ramp Const. ℄
Pt. Sta. 72+51.70 E-S.Bd. Ramp Const. ℄ = 12' Rt. of Sta. 43+16.15 E.Bd. Ser. Rd. Const. ℄
For Trunksewer Details See Sheet 69
Truss Foundation Type B
As Const. 822521, C63 - 2 each @ Auth No 2004 dtd 6-28-65
Location of Truss Foundation
18.50' 31.50' Pavement 4.00'
60' Type B Truss
Station | Off-set Lt.
42+00 | 12.00'
42+25 | 13.50'
42+50 | 15.00'
42+75 | 16.50'
43+00 | 18.00'
43+50 | 18.90'
44+00 | 22.00'
Michigan
Michigan I-75-1 (98) 59
Wayne City Detroit
822521 L
Conc. Curb & Gutter Det #10
Andover St.
Irvington St.
Yacama St.
U Turn
From Sta. 27+10
To Sta. 47+92
Subbase 3023 cyds. (Comp. in Place)
Prop. Top of Curb Profile
Ex. ℄ Profile Prop. Top of Pav't Grade
Ex. Ground Profile Ex. Ground Pavt's Prop. Top of Curb Grade
Earthwork by Conventional Survey
Prop. F.L. El. 145.40
Prop. F.L. El. 146.60
Prop. F.L. El. 147.40
℄ Andover
℄ Irvington
℄ Yacama
℄ Omira
El. 149.68 +50
El. 152.05 +92
+0.40%
-0.40%
-0.80%
80' V.C.
100' V.C.
Earth Exc. 10,069 Cyds
Emb. 2525 Cyds
25% Shr 502 Cyds
Waste 7042 Cyds
Prop. F.L's 145.80 (10' NE) 146.00 (15' N) 145.20 (12' E)
Prop. F.L's 146.60 (6' E) 146.40 (12' N) 145.40 (12' W)
Prop. F.L's. 147.20 (12' N) 147.30 (6' E) 146.20 (12' S.W.)
Prop. F.L's. El. 147.40 El. 147.20 6" Edge Drain @ +0.40%
Prop. F.L's. El. 148.20 El. 148.00
Prop. F.L's El. 148.00 El. 148.00
6" Edge Drain @ 0.40%
6" Edge Drain @ +0.40%
6" Edge Drain @ -0.80%
Prop. F.L. El. 146.00
E.Bd. Service Rd. 8 Mile Rd.
82252 L, C63; 63174 A, C64
STATE PROJECT
MICHIGAN PROJECT
SHEET NO.
822521 L
63174A
I 75-1 (98) 63
I 75-2 (90) 53
54


CAMERON AVE.
HAWTHORNE AVE.
Section Line S.88°-52'-41"E
Survey ℄ S.88°-52'-41"E.
Prop. 6' Sidewalk
Prop. 10' Sidewalk
For Drainage Items this Area, See Sheet #64
Prop. 54" Water Main For Details See Sheet #105
Relocated 54" Water Main
Prop. 54" Water Main For Details See Sheet #106
Prop. 8" Water Main For Details See Sheet #102
For Service Rd. Details See Sheet #66
For Trunk Line Details See Sheet #82
As Const. DRIVE OPENING
As Const. 4796 Sq. Ft. 4" Conc. Sidewalk 82252L, C63 This Sheet
Authorization # 2004 Dated 6-28-65
Sec. 36 T1N, R11E
Sec. 1 T1S, R11E.
Sewer revision per Authorization # 2004 Dated 6-28-65
For Subbase Quantities See Sheet #58
To Sta. 63+00
For Earthwork Quantities See Sheet #56
From Sta. 27+10
For Earthwork Quantities See Sheet #58
To Sta. 61+80
Earthwork by Conventional Survey
Ex. ℄ Profile
Prop. Top of Pavt. Grade
Ex. Ground Profile 14' Rt.
Ex. Ground Points 30' Rt.
Prop. Top of Curb Profile for South Curb
Rt. Top of Curb Profile N.Bd.-E.Bd. Ramp
E.Bd. Service Rd. 8 Mile Rd.
82252 L, C63; 63174 A, C64
STATE PROJECT 82252L 63174A
MICHIGAN PROJECT 175-1 (98) 59 175-2 (98) 59
SHEET NO. 57


CARDONI AVE.
RUSSELL AVE.
HANNA AVE.
HULL AVE.
Curve Data
E.Bd. Ser. Rd. Const. ℄
Δ = 02°-51'-17"
D = 02°-00'-00"
R = 2864.79'
T = 71.38'
L = 142.74'
E = 0.89'
P.C. = 54+98.46
P.I. = 55+69.84
P.T. = 56+41.20
Section Line
S.88°-38'-38" E.
Survey ℄ 8 Mile Rd.
S.88°-38'-38" E
As Const. - Drainage This Sheet
Catch Basins
Station
Tile Traps
Cover D (Temp.)
Ex. 54" Water Main
E.Bd. 8 Mile Rd. Const. ℄ (Reloc)
S.88°-52'-41" E.
Prop. 8" Water Main For Details See Sheet #102
Prop. 54" Water Main For Details See Sheet #107
Ex. 8" Water Main
N-88°-16'-02" E.
Prop. 30" Sewer For Details See Sheet #83
Ex. 6" Water Main
Prop. 12" Sewer For Details See Sheet #83
For M.H. Details See Sheet #84
No Fence
CARDONI
RUSSELL
HANNA
HULL
As Const. Driveways This Sheet
As Const. 5069 Sq. Ft. 4" Conc. Sidewalk 82252L, C63 - This Sheet
Conc. Curb & Gutter Det. #10
Conc. C&G Det. #10
Cardonia St.
Russell St.
Hanna St.
Hull St.
From Sta. 49+19
As Const. 2019 Subbase 1940 cyds. (Comp. in Place)
Prop. Top of Curb Profile
Ex. ℄ Profile
Prop. Top of Pavt. Grade
Ex. Ground Profile 141 Ft.
Ex. Ground Points 30 Ft.
Prop. Top of Curb Profile
Prop. F.L. 145.2
Prop. F.L. 144.0
Crown Drop from existing E.Bd. ℄
-0.80%
+0.50%
100' V.C.
60' V.C.
24" Sewer @ +0.30%
Prop. 30" Sewer For Details See Sheet #83
Prop. 30" Sewer @ +0.25%
Prop. F.L. 136.68
Prop. F.L. 137.01
Prop. F.L. 140.70
Prop. F.L. 141.49
6" Edge Drain @ +0.50%
6" E.D. @ 0.80%
E.Bd. Service Road 8 Mile Road.
82252 L, C63;
63174 A, C64
STATE PROJECT 82252L
MICHIGAN PROJECT I75-1(98)59
SHEET NO. 58

HIGHLAND ST.

F.A.P. OR S.P. NO.	STATE		SHEET NO.	TOTAL SHEETS
4	MICH.	Michigan I-75-2(98)59		
ROUTE	S.B.M. OR FED. AID PROJ.	COUNTY	SHEET NO.	TOTAL SHEETS
I-75 82252L	Wayne	Detroit City	59	

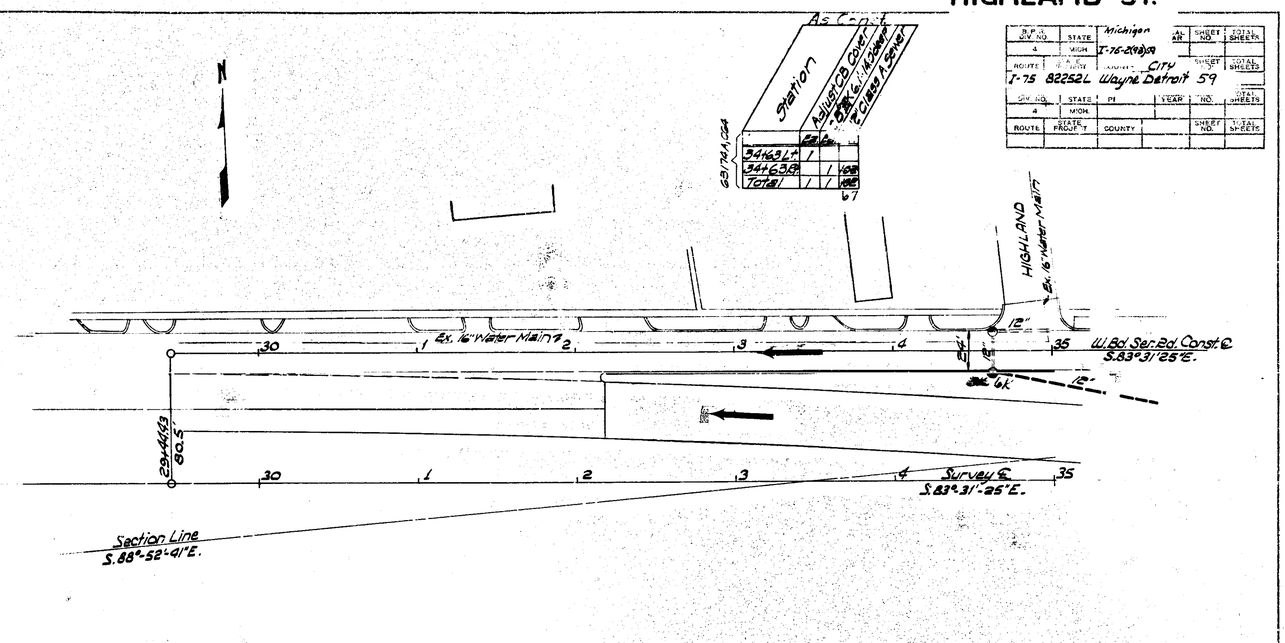
STA. NO.	STATE	PH	YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJ. NO.	COUNTY		SHEET NO.	TOTAL SHEETS

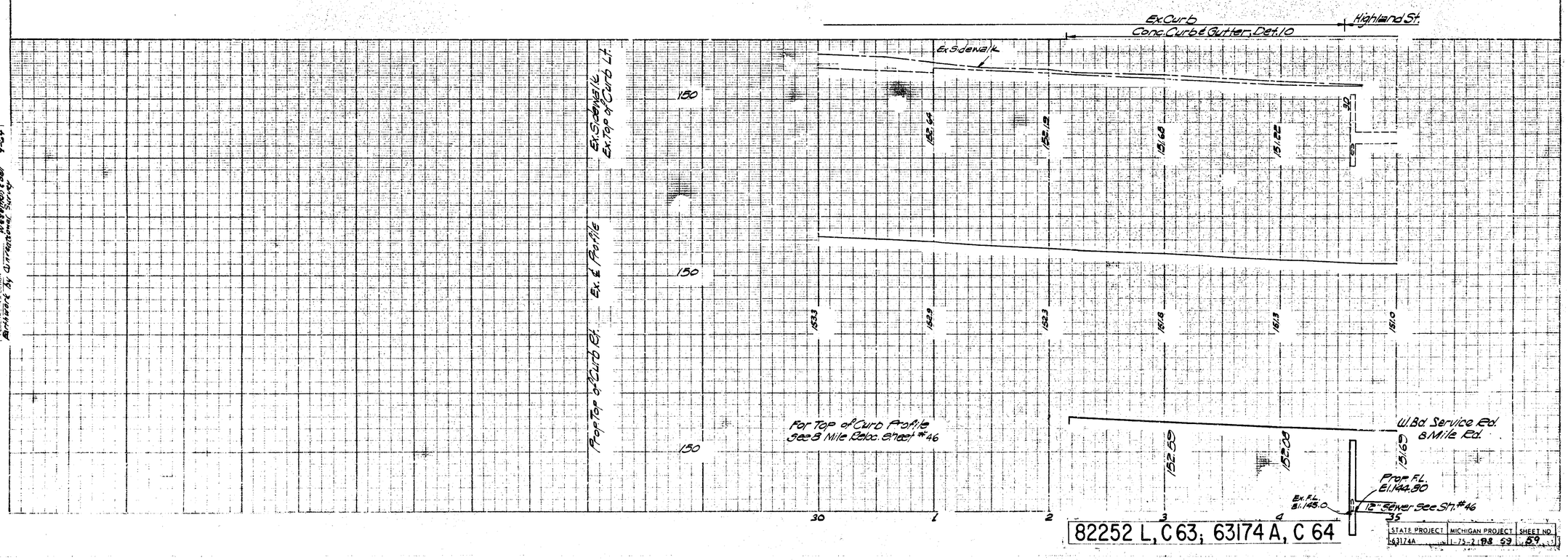
OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED	MO. Hatter	62-4-5
FINAL DESIGN CHECKED	Ed. Mayer	4-5
PLANS PREPARED		
FINAL R.O.W. CHECK		
QUANTITIES	Wm. Porter	6-5
QUANTITIES CHECKED	Ed. Mayer	6-5
BID FIG		1964

OPERATION	BY	DATE
CONVERTED		
PLAN PLOTTED		
PLAN CHECKED	E. J. Nolthamer	5-64
PROFILE PLOTTED	L. Wilsbury	5-64
PROFILE CHECKED	B. Rodden	5-64
PRELIMINARY GRADE	W. Wilson	5-64
FINAL GRADE		5-64
FINAL GRADE CHECKED		5-64
READY FOR INSPECTION		1964

Bridge & Structure Div. of Highways

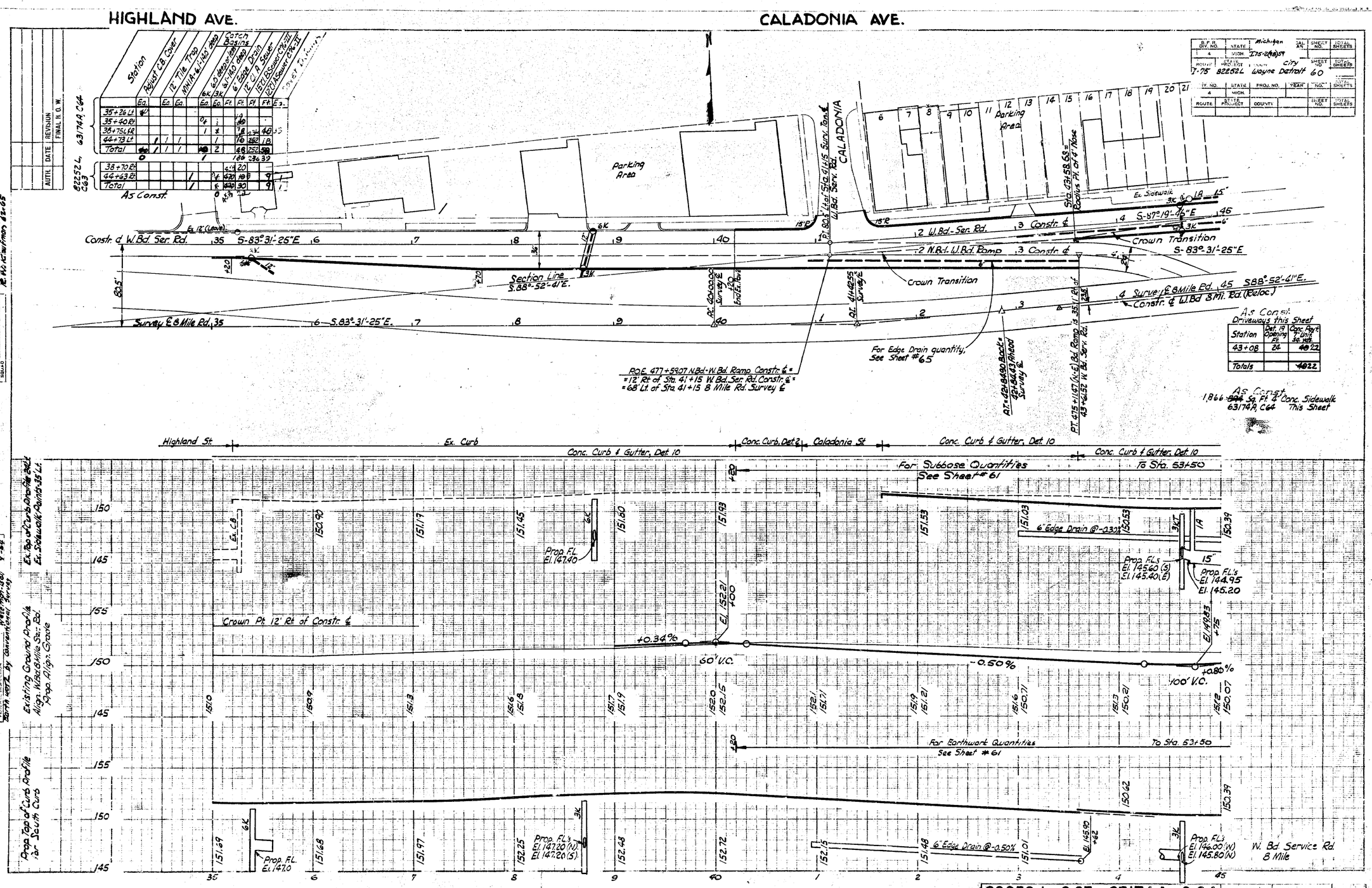
AUTH.	DATE	REVISION
		FINAL R.O.W.





82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(98) 59	59



Station	Adjust C.B. Cover	12" Tile Trap	MH1A-6.1'-14.0' deep	Catch Basins 6.0' deep or less	6.1'-14.0' deep	6" Edge Drain	12" Cl. A Sewer	15" Cl. B Sewer C76-III	12" Cl. A Sewer C76-III	Cover Inlet
	Ea.	Ea.	Ea.	6K	3K	Ft.	Ft.	Ft.	Ft.	Ea.
35+26 Lt.										
35+40 Rt.										
38+75 Lt. & Rt.				1	1					
44+73 Lt.	1	1	1		1					
Total	1	1	1		2					
38+70 Rt.										
44+63 Rt.			1							
Total			1							

63174A, C64 — 82252L, C63

As Const.

B.P.R. DIV. NO.	STATE	Michigan	CAL. AR.	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(98)59			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne Detroit		60	

DIV. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

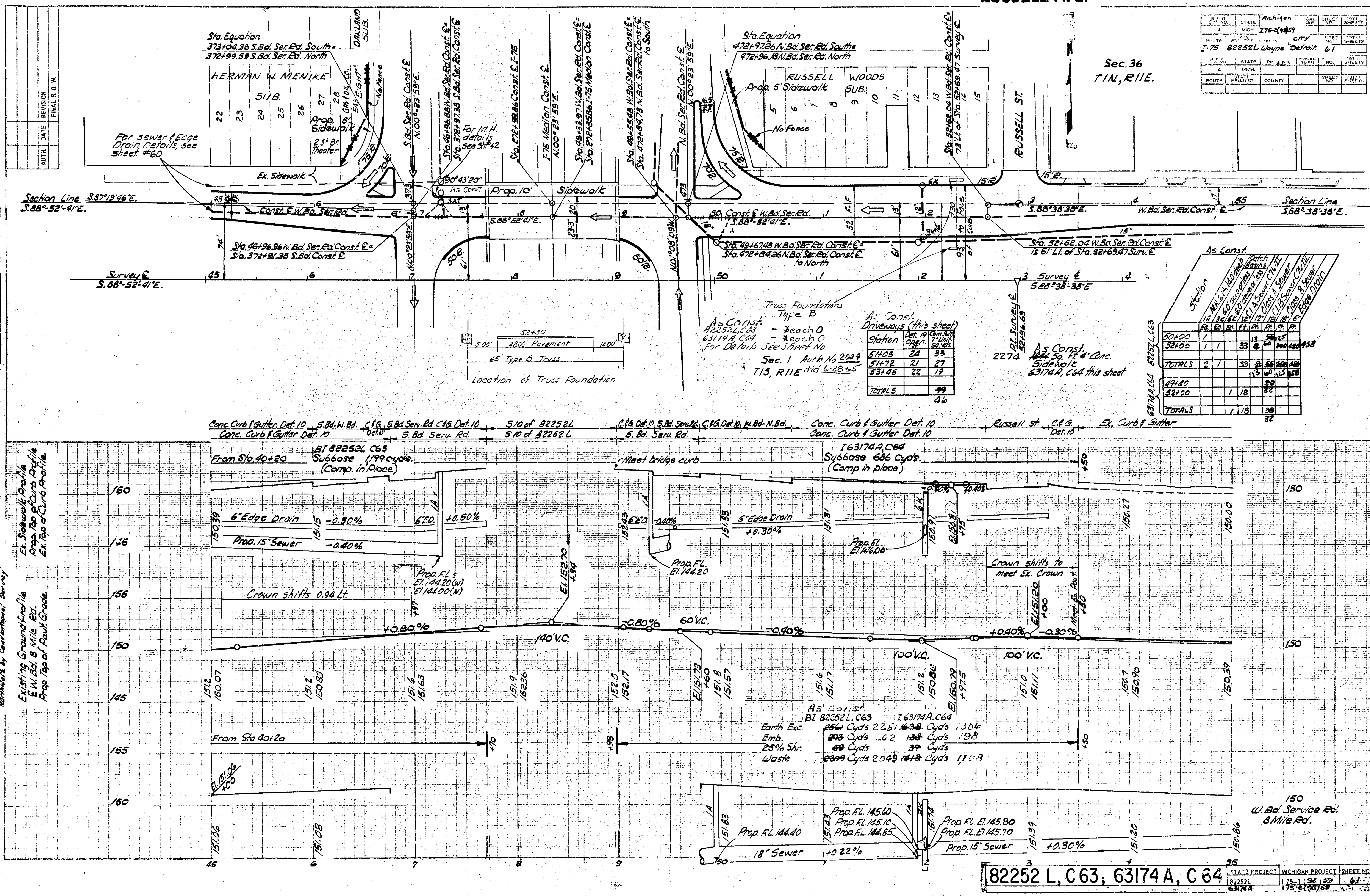
OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	Malthaner	62-65
FINAL DESIGN	Kaufman	65
FINAL DESIGN CHECKED	Wittersen	65
TRACE	Kaufman	65
FINAL R.O.W. CHECK	R.W. Kaufman	62-65
QUANTITIES		
QUANTITIES CHECKED		
SQUAD		

OPERATION	BY	DATE
SURVEYED	T. Malthaner	5-64
PLAN PLOTTED	Gaunsbury	6-64
PLAN CHECKED	T. Malthaner	5-64
PROFILE PLOTTED	Gaunsbury	6-64
PROFILE CHECKED	T. Malthaner	5-64
PRELIMINARY ORIGINAL	Bergh	8-64
GRADE INSPECTION	Wesemon-Bell	9-64
FEDERAL INSPECTION		

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-2(98)59 / I75-2(38)59	60

82252 L, C63; 63174 A, C64

RUSSELL AVE.



As Const. Driveways (this sheet)

Station	Det. 19 Open. Ft.	Conc. Pvt. 7" Unif. Sq. Yds.
51+08	24	33
51+72	21	27
53+46	22	19
TOTALS		~~49~~ 46

As Const.

	Station	M.H. 6' to 14.0' deep	6.0' deep or less	6.0' deep or less	12" Cl. A Sewer C76-II	12" Class A Sewer	18" Cl. B Sewer C76-III	18" Class B Sewer	6" Edge Drain
		1A Ea.	3K Ea.	6K Ea.	Ft.	Ft.	Ft.	Ft.	Ft.
82252L, C63	50+00	1				13	55	25	
	52+00	1	1		33	8	60	200	450 458
	TOTALS	2	1		33	8 13	55 60	200 125	450 458
63174A, C64	49+40						20		
	52+00			1	18		32		
	TOTALS			1	18		38 32		

B.P.R. DIV. NO.	STATE	Michigan	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	61	

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L 63174A	I 75-1(98)59 I 75-2(98)59	61

OPERATION	BY	DATE
Preliminary R.O.W. Checked / Final Design	Malthaner / Kaufman	62-65
Final Design Checked / Traced / Final R.O.W. Check / Quantities / Quantities Checked / Squad	Wittgreen / Kaufman / Kaufman	1964

OPERATION	BY	DATE
Survey / Plan Plotted / Plan Checked / Profile Plotted / Profile Checked / Preliminary Grade / Grade Inspected / Federal Inspection	T.J. Malthaner / Lounsbury / T.J. Malthaner / Lounsbury / T.J. Malthaner / Bergh / Wagemann & Bell	5-64 / 5-64 / 5-64 / 8-64 / 9-64

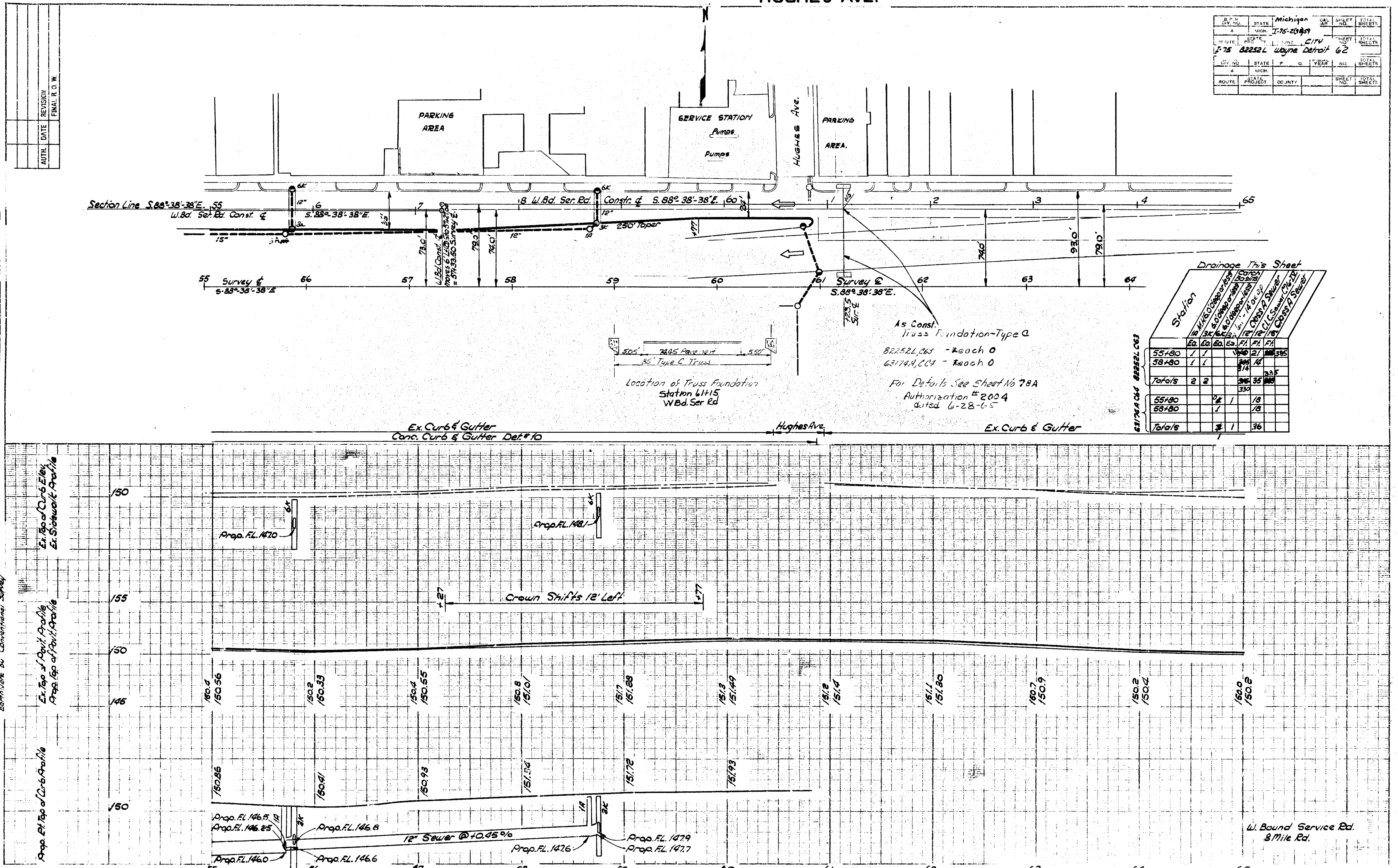
AUTH.	DATE	REVISION
		FINAL R.O.W.

HUGHES AVE.

B.P.R. DIV. NO.	STATE	Michigan	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	62	
DIV. NO.	STATE	P. O.	FISCAL YEAR	NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN	Malthaner	62-65
FINAL DESIGN CHECKED	Kaufman	65
TR. CFD		
FINAL R.O.W. CHECK	Witteveen	65
QUANTITIES	Kaufman	65
QUANTITIES CHECKED	Kaufman	1960-65
SQUAD		



OPERATION	BY	DATE
SURVEYED	Miller	62
PLAN PLOTTED	N. Blekkar	5-64
PLAN CHECKED	Lounsbury	5-64
PROFILE PLOTTED	N. Blekkar	5-64
PROFILE CHECKED	Lounsbury	64
PRELIMINARY GRADE	Malthaner	64
GRADE INSPECTION	Bergh	8-64
FEDERAL INSPECTION	Wassman - Bell	9-64

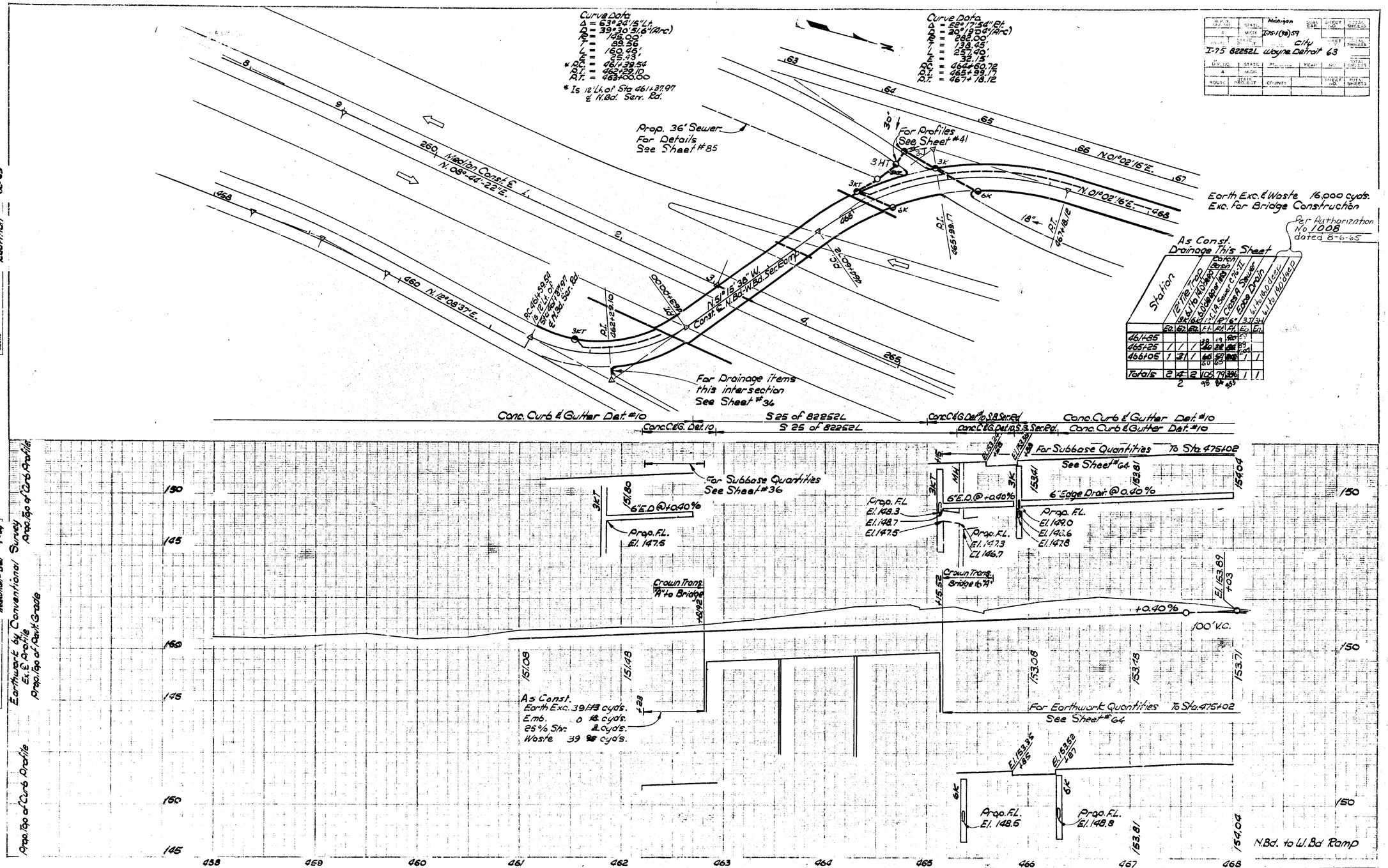
Earthwork by Conventional Survey

Drainage This Sheet

	Station	1A M.H. 6.0' deep or less	3K 6.0' deep or less (Catch Basins)	6K 6.0' deep or less	3A 14' deep	12" Class A Sewer	12" C.I.C. Sewer C76-IV	15" Class A Sewer	
		Ea.	Ea.	Ea.	Ea.	Ft.	Ft.	Ft.	
82252L C63	55+80	1	1			~~140~~	21	~~395~~	395
	58+80	1	1			~~205~~ 314	14		
	Totals	2	2			~~345~~ 330	35	~~385~~ 385	
63174A C64	55+80			~~2~~ 0	1		18		
	58+80			1			18		
	Totals			~~3~~ 1	1		36		

82252 L, C63; 63174 A, C64

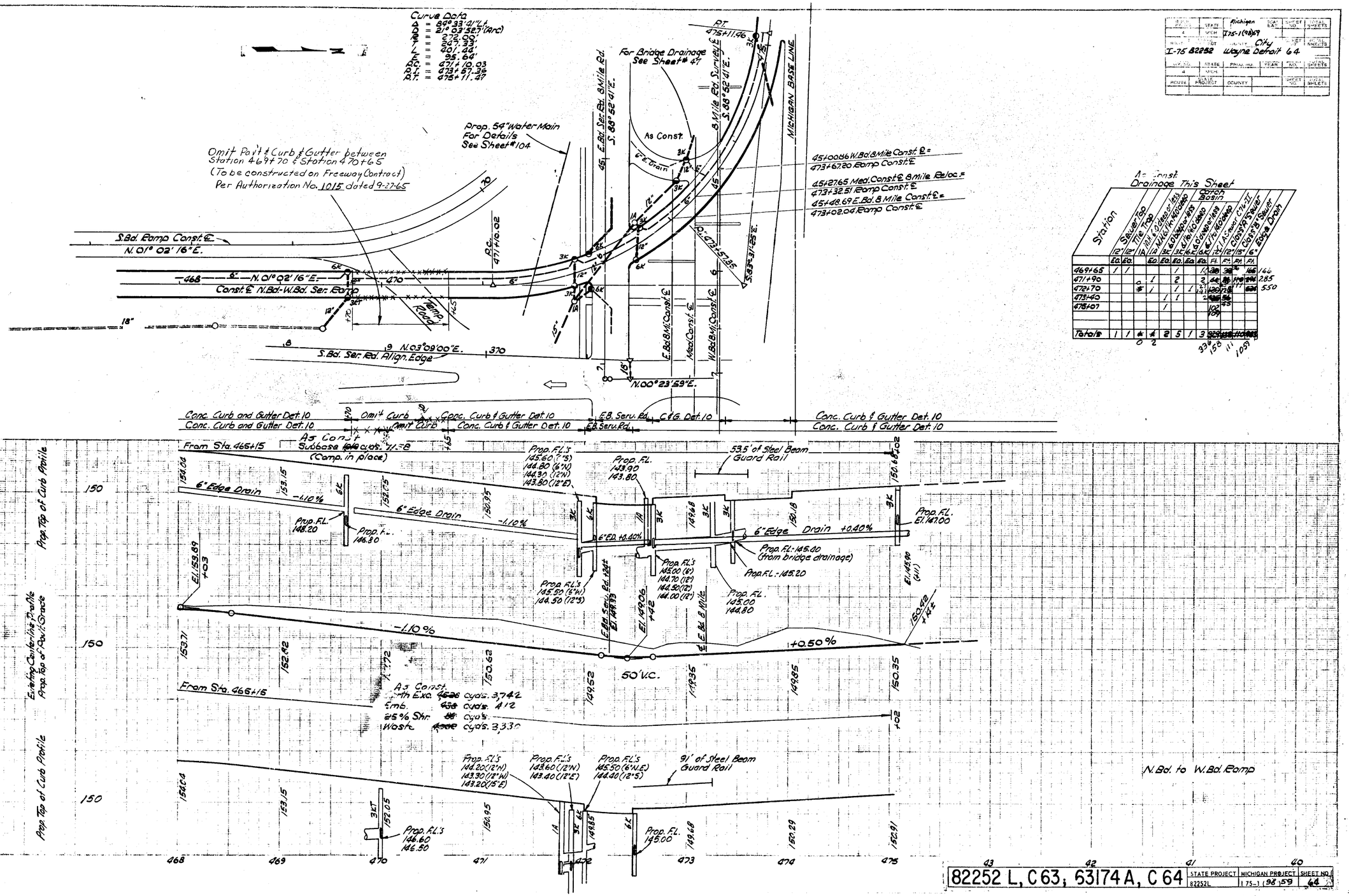
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	62
~~63174A~~	~~I 75-2 (99) 59~~	


Curve Data
Δ = 63°24'15" Lt.
D = 39°30'51.6" (Arc)
Rp = 145.00'
T = 88.56'
L = 160.46'
E = 25.13'
* P.C. = 461+38.54
P.I. = 462+29.10
P.T. = 463+20.00
* Is 12' Lt. of Sta 461+37.97 ℄ N.Bd. Serv. Rd.
Curve Data
Δ = 50°17'54" Rt.
D = 20°19'04" (Arc)
Rp = 282.00'
T = 138.45'
L = 257.70'
E = 32.15'
P.C. = 464+60.72
P.I. = 465+99.17
P.T. = 467+18.12
Prop. 36" Sewer For Details See Sheet #85
For Profiles See Sheet #41
Median Const. ℄
N.08°44'22"E.
N.12°08'37"E.
N.01°02'16"E.
N.15°15'36"W.
Const. ℄ N.Bd.-W.Bd. Ser. Rd.
For Drainage Items this Intersection See Sheet #36
Earth Exc. & Waste 16,000 cyds.
Exc. for Bridge Construction
Per Authorization No 1008 dated 8-4-65
As Const. Drainage This Sheet
Station
12" Tile Trap
6" to 18" Trap
8" to 24" Trap
Sewer C.W.-T.
Cross R. Sewer
Edge Drain
4" to 18" Outlet
6" to 18" Outlet
461+85
465+25
466+05
Totals
Conc. Curb & Gutter Det. #10
S 25 of 82252L
Conc. C&G. Det. 10
Conc. C&G. Det. to S.B. Ser. Rd.
For Subbase Quantities To Sta. 475+02 See Sheet #64
For Subbase Quantities See Sheet #36
6" E.D. @ +0.40%
Prop. F.L. El. 147.5
Prop. F.L. El. 148.3
El. 148.7
El. 147.5
Prop. F.L. El. 149.0
El. 149.6
El. 147.8
Prop. F.L. El. 147.3
El. 146.7
Crown Trans. "A" to Bridge
+0.40%
100' V.C.
As Const.
Earth Exc. 39,173 cyds.
Emb. 0 cyds.
25% Shr. 2 cyds.
Waste 39,171 cyds.
For Earthwork Quantities To Sta. 475+02 See Sheet #64
Prop. F.L. El. 148.6
Prop. F.L. El. 148.8
N.Bd. to W.Bd. Ramp
Earthwork by Conventional Survey
Ex. & Profile
Prop. Top of Pavt. Grade
Prop. Top of Curb Profile
Prop. Top of Curb Profile
Michigan
I-75(98)59
City
I-75 82252L Wayne Detroit 63
82252 L, C63; 63174A, C64
STATE PROJECT
MICHIGAN PROJECT
SHEET NO.
82252L
63174A
I 75-1(98)59
I 75-2(98)59
43

STATE			SHEET NO.	TOTAL SHEETS
Michigan				
I-75-1(98)59				
ROUTE	PROJECT	COUNTY	SHEET NO.	TOTAL SHEETS
I-75 82252	Wayne	Detroit	64	

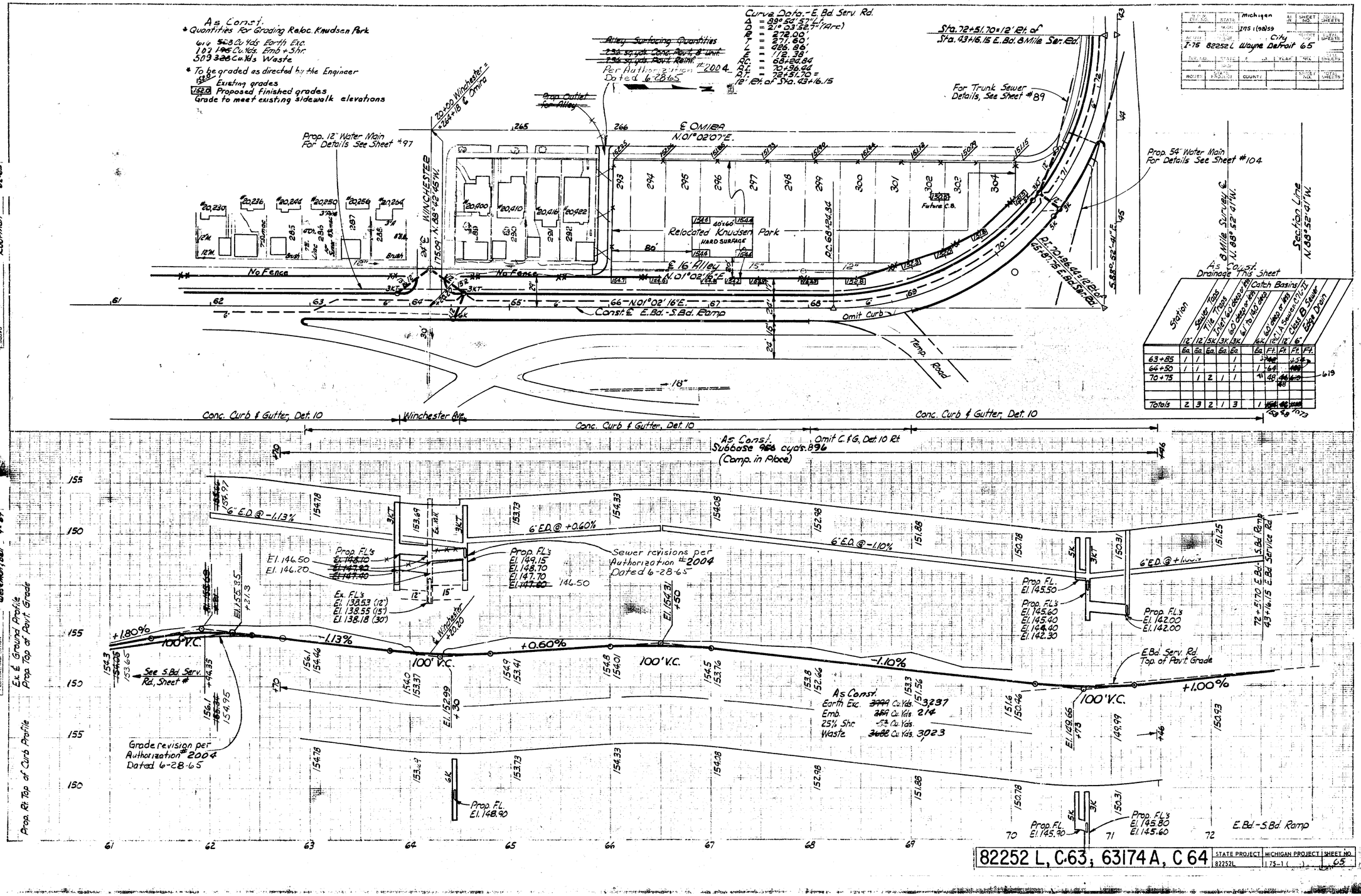
W.P. NO.	STATE	PROJ. NO.	YEAR	ROUTE	SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

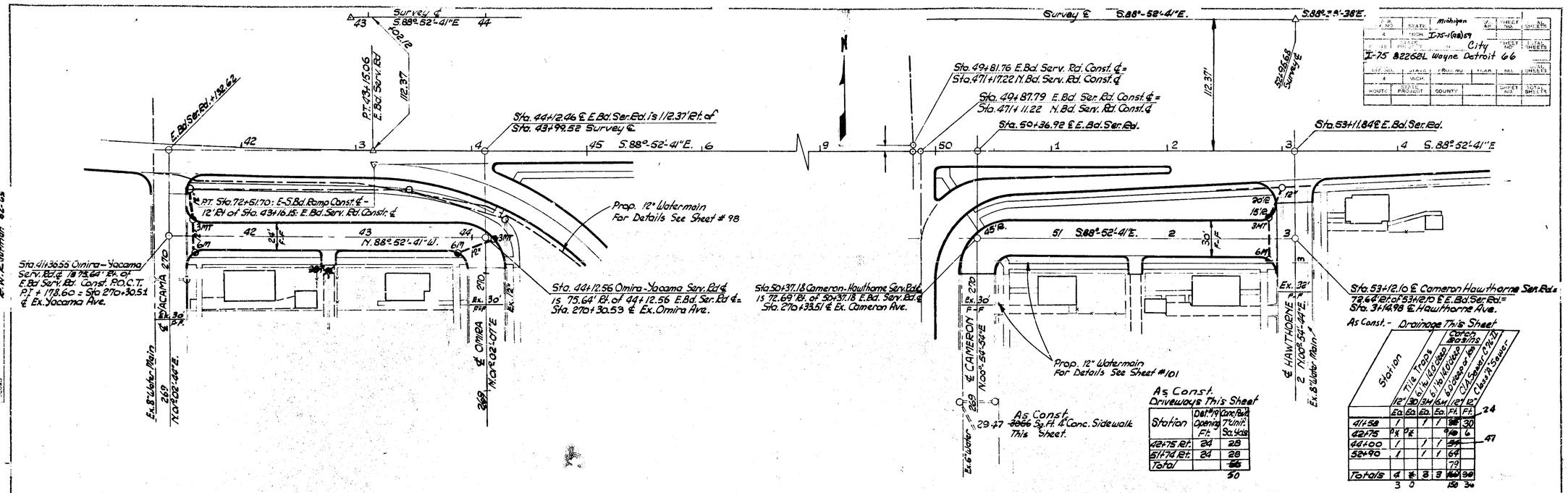
Curve Data
Δ = 88°33'21"Lt.
D = 21°03'52.7"(Arc)
R = 272.00'
T = 267.33'
L = 401.44'
E = 95.64'
P.C. = 471+10.03
P.I. = 473+57.36
P.T. = 475+11.47



Station	Sewer Tap 12"	Sewer Tap 12"	Tile Trap 18"	Mill & Clean or Less 6" Mich. Th. 60/60	Mill & Clean or Less 6" Mich. Th. 60/60	Mill & Clean or Less 6" Mich. Th. 60/60	Mill & Clean or Less 6" Mich. Th. 60/60	Mill & Clean or Less 6" Mich. Th. 60/60	Mill & Clean or Less 6" Mich. Th. 60/60	Mill & Clean or Less 6" Mich. Th. 60/60	Catch Basin 1-A Heavy City III	Catch Basin Class "B" Sewer	Catch Basin Class "B" Sewer	Catch Basin Edge Drain
	Ec.	Ec.		Ec.	Ec.	Ec.	Ec.	Ec.	Ec.	Ec.	Fl.	Fl.	Fl.	Fl.
						3K	3K	6K	6K	12"	12"	15"	6"	
469+65	1	1					1				1	38	38	166 / 166
471+90				1			2				2	44	88	119 / 285
472+70				1			1		1		2	120	118	77 / 550
473+40						1	1				2	56	56	
478+07						1					1	43	102	
													109	
Totals	1	1	1	2	0	2	5	1	1	3	330	150	11	1059

43	42	41	40
82252 L, C63; 63174 A, C64	STATE PROJECT 82252L	MICHIGAN PROJECT I 75-1 (98) 59	SHEET NO. 64


As Const.
* Quantities For Grading Reloc. Knudsen Park
616 Cu. Yds. Earth Exc.
102 Cu. Yds. Emb + 5 Shr.
509 Cu. Yds. Waste
* To be graded as directed by the Engineer
Existing grades
Proposed finished grades
Grade to meet existing sidewalk elevations
Alley Surfacing Quantities
Per Authorization #2004
Dated 6-28-65
Curve Data - E. Bd. Serv. Rd.
Δ = 89° 58' 57" Lt.
D = 21° 03' 32.7" (Arc)
R = 272.00'
T = 271.80'
L = 426.96'
E = 112.38'
P.C. = 68+24.84
P.T. = 70+96.44
Sta. 72+51.70 = 12' Rt. of Sta. 43+16.15
Sta. 72+51.70 = 12' Rt. of Sta. 43+16.15 E. Bd. 8 Mile Ser. Rd.
For Trunk Sewer Details, See Sheet #89
Prop. 12" Water Main For Details See Sheet #97
Prop. 54" Water Main For Details See Sheet #104
20+00 Winchester = 264+18 ℄ Omira
℄ OMIRA N.01°02'07"E.
WINCHESTER
Relocated Knudsen Park
HARD SURFACE
℄ 16' Alley N.01°02'16"E.
Const. ℄ E. Bd. - S. Bd. Ramp
Omit Curb
Temp. Road
Future C.B.
No Fence
Conc. Curb & Gutter, Det. 10
Winchester Ave.
8 Mile Survey ℄ N. 88°52'41" W.
Section Line N.88°52'41" W.
As Const. Drainage This Sheet
Station | Sewer Tees 12" Ea. | Sewer Tees 12" Ea. | Tile Tees 5K Ea. | Inlet 6.0' deep or less 3K Ea. | Catch Basins/Inlets 6.0' deep or less 3K Ea. | Catch Basins/Inlets 6.0' deep or less 6K Ea. | 12" C.I.A. Sewer Ft. | 12" Ft. | Class B Sewer 12" Ft. | Edge Drain 6" Ft.
63+85 | 1 | 1 | | | 1 | | 35 | 48 | | 35 48
64+50 | 1 | 1 | | | 1 | | 1 | 64 | | 64
70+75 | | 1 | 2 | 1 | 1 | | 41 | 48 | 46 | 46 619
| | | | | | | | | 48 | | 48
Totals | 2 | 3 | 2 | 1 | 3 | | 1 | 154 | 46 | 200 1073
Conc. Curb & Gutter, Det. 10
As Const. Subbase 896 cu. yds. (Comp. in Place)
Omit C. & G. Det. 10 Rt.
6" E.D. @ -1.13%
6" E.D. @ +0.60%
6" E.D. @ -1.10%
6" E.D. @ +1.00%
+1.80%
-1.13%
+0.60%
-1.10%
+1.00%
100' V.C.
Prop. F.L.'s El. 146.50 El. 146.20
Prop. F.L.'s El. 149.15 El. 148.70 El. 147.70 146.50
Sewer revisions per Authorization #2004 Dated 6-28-65
Ex. F.L.'s El. 138.53 (12") El. 138.55 (15") El. 138.18 (30")
Prop. F.L. El. 145.50
Prop. F.L.'s El. 145.60 El. 145.40 El. 144.40 El. 142.30
Prop. F.L.'s El. 142.00 El. 142.00
E. Bd. Serv. Rd. Top of Pavt. Grade
See S. Bd. Serv. Rd. Sheet #
Grade revision per Authorization #2004 Dated 6-28-65
Prop. F.L. El. 148.90
Prop. F.L. El. 145.90
Prop. F.L.'s El. 145.80 El. 145.60
E. Bd. - S. Bd. Ramp
As Const. Earth Exc. 3,237 Cu. Yds.
Emb. 214 Cu. Yds.
25% Shr. Cu. Yds.
Waste 3,023 Cu. Yds.
Ex. & Ground Profile Prop. Top of Pavt. Grade
Prop. Rt. Top of Curb Profile
82252 L, C.63; 63174 A, C 64
STATE PROJECT 82252L
MICHIGAN PROJECT I 75-1 (
SHEET NO. 65



Station	Dat. #19 Conc. Back Opening 7" Unit. Ft.	Sq. Yds.
42+75 Rt.	2d	28
51+74 Rt.	2d	28
Total		~~56~~ 50

Station	Tile Traps 6" to 14" Lead	6" to 14" Lead	6" to 14" Lead	Catch Basins 60" Dia. or less	C.I.A. Sewer 0'-6'	Class B Sewer
	12" Ea.	30" Ea.	36" Ea.	64" Ea.	12" Ft.	12" Ft.
41+58	1		1	1	~~38~~	30
42+75	~~1~~	~~1~~		1	~~40~~	6
44+00	1		1	1	~~54~~	
52+90	1		1	1	64	
					79	
Totals	4	~~5~~	3	3	~~160~~	~~90~~
	3	0			150	36

24

47

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 159	66

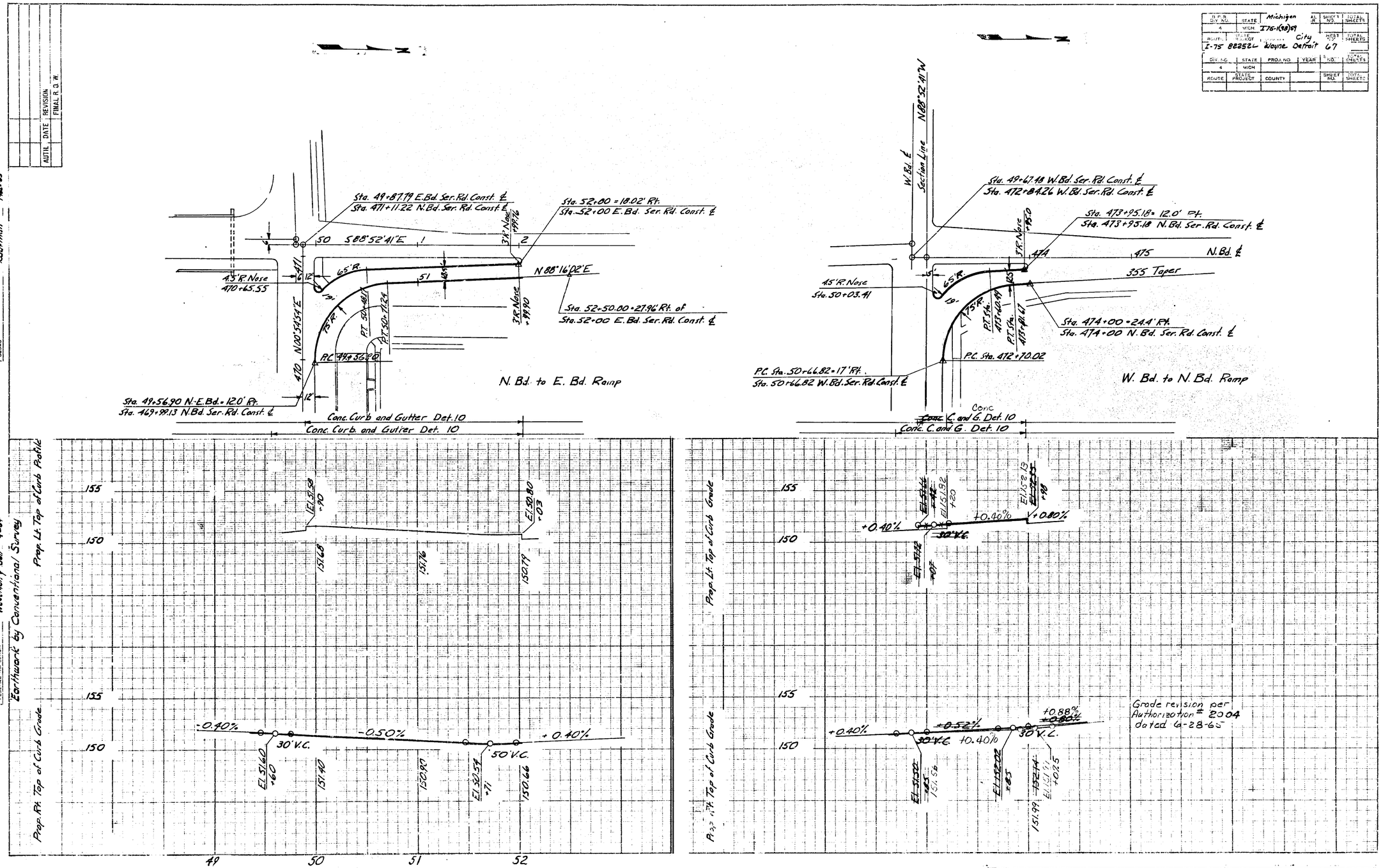
AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. DRAWN	Miller	6-5-65
FINAL R.O.W. DRAWN	Kaufman	6-5-65
FINAL R.O.W. CHECKED	Kaufman	6-5-65
TRACED	Wittenhoff	6-5-65
FINAL R.O.W. CHECK	Kaufman	6-5-65
QUANTITIES DRAWN	Kaufman	7-16-65
QUANTITIES CHECKED	Kaufman	
GROUND		

OPERATION	BY	DATE
SURVEY	Miller	4-2-65
PLAN TRACED	Wittenhoff	4-2-65
PLAN TRACED	Wittenhoff	4-2-65
PROJECT PLANS	Wittenhoff	4-2-65
PROJECT PLANS	Kaufman	4-2-65
PRELIMINARY GRADE	Kaufman	4-2-65
GRADE REVISIONS	Kaufman	8-3-65
FEDERAL INSPECTION	Wittenhoff	8-3-65

R.P.R. CY. NO.	STATE		AL JR.	SHEET NO.	TOTAL SHEETS
4	MICH	Michigan I 75-1(98)159			
ROUTE	STATE PROJECT	City		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne Detroit		67	

CY. NO.	STATE	PROJ. NO.	YEAR	NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



82252 L, C 63; 63174 A, C 64

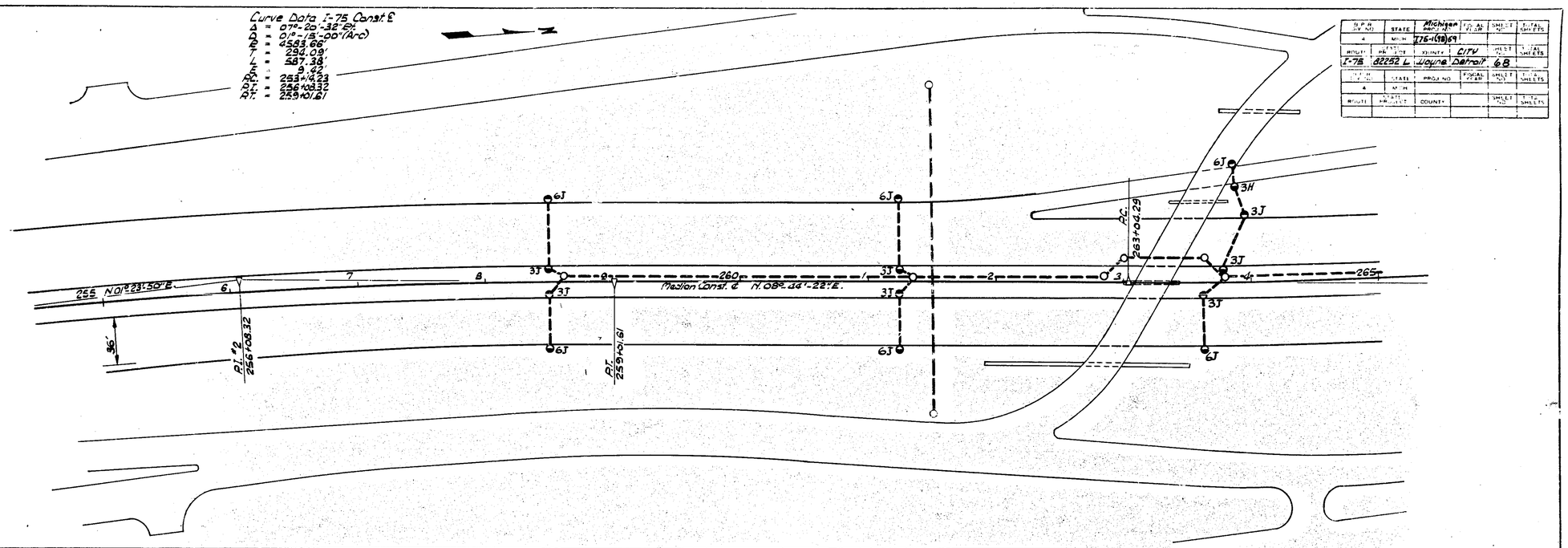
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1(98)159	67

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	T.Kaliszewski	62-6-5
FINAL DESIGN CHECKED	Kaliszewski	62-6-5
FINAL DESIGN		
TRACED		
FINAL R.O.W. CHECK.	W.Wiernik	66
TRACED	G.Bridges	66
QUANTITIES CHECKED	R.W. Kaufman	68
SEALED		

Curve Data I-75 Const. ℄

Δ = 07°-20'-32" Rt.
D = 01°-15'-00" (Arc)
R = 4583.66'
T = 292.09'
L = 587.38'
E = 9.22'
D.P.C. = 253+14.23
P.T. = 256+08.32
P.T. = 259+01.61

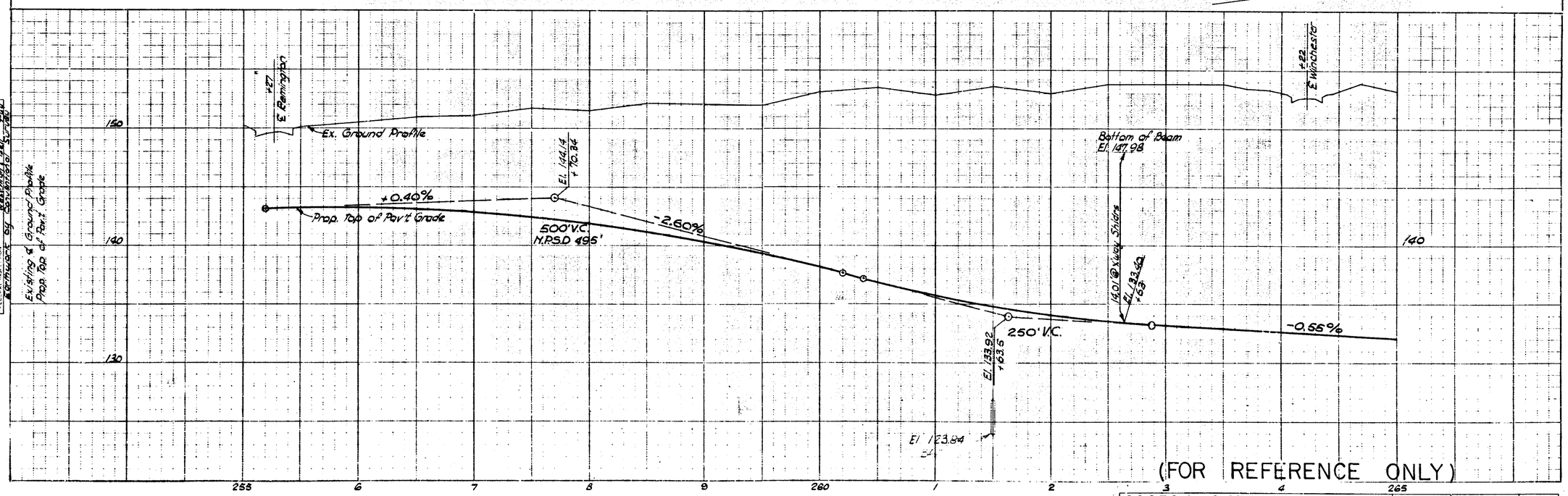


SPR. (Y. NO.)	STATE	Michigan	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	MICH.	175-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L	Wayne	Detroit	68	

SPR. (Y. NO.)	STATE	PROJ. NO.	FINAL STAMP	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

OPERATION	BY	DATE
SURVEYED	Miller	62
PLOTTED	G.Crosby	62
PLAN OUTLINED	R.Kaliszewski	62
PROFILE PLOTTED	R.Kaliszewski	62
PROFILE CHECKED	G.Hoffmann	62
PRELIMINARY	G.Hoffmann	62
GRADE LINE IN	40-20	62
GRADE LINE OUT	W.Wiernik / R.W.	66
	R.W. Kaufman / Sr. Engr.	68

Existing & Ground Profile
Prop. Top of Pav't Grade



(FOR REFERENCE ONLY)

82252 L, C63; 63174 A, C64

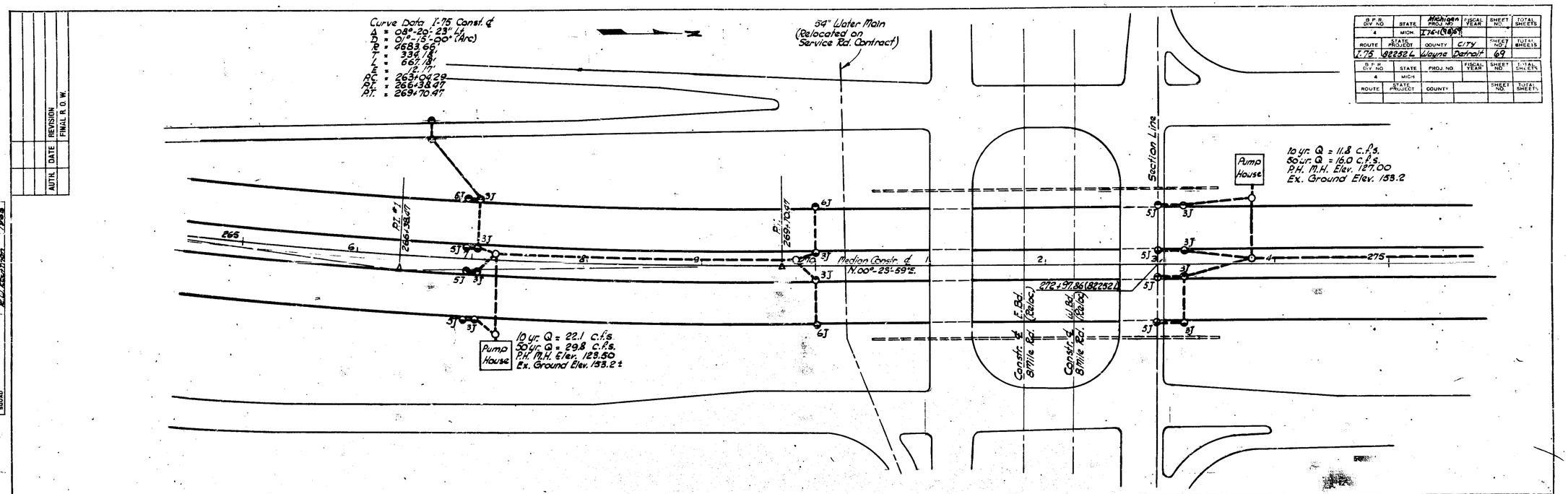
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	68

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	Michigan I 75-1(98)55			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L	Wayne	Detroit	69	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

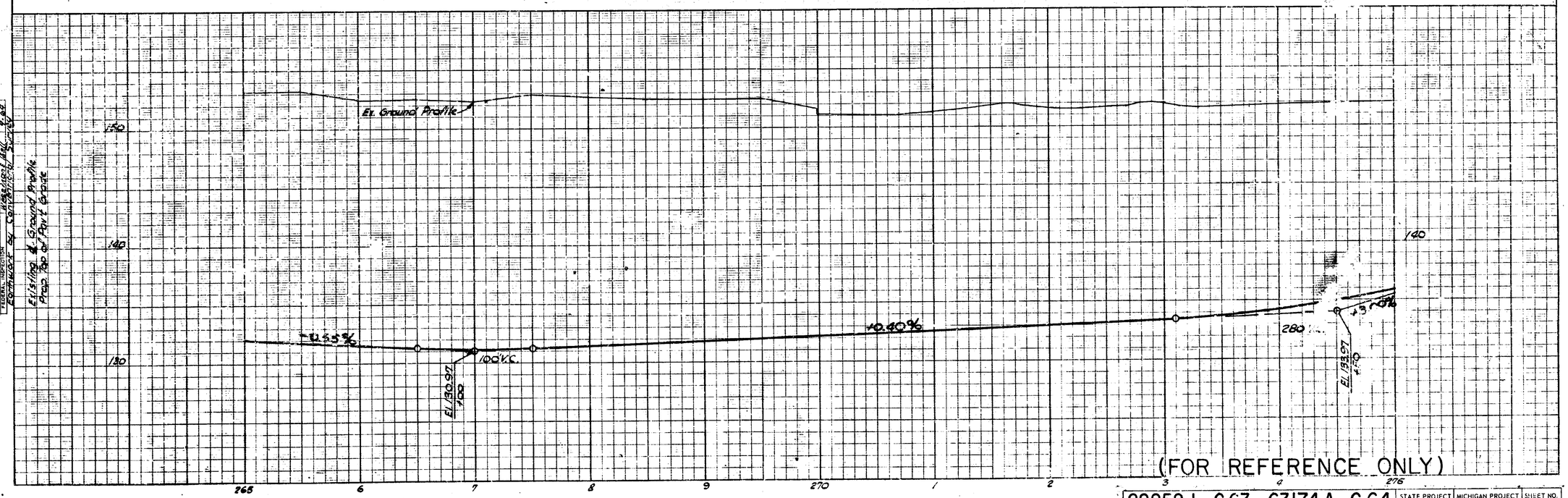
OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	T. Nolan	62-6-5
FINAL DESIGN	L. Gaul/Final	62
FINAL R.O.W. PROCESSED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES	M.P.W.	6-8
QUANTITIES CHECKED		6-8
BID-AID		



OPERATION	BY	DATE
SURVEYED	Miller	6-2
PLAN PLOTTED	J. Rodgers	6-3
PROFILE PLOTTED	S. Wolfram	6-3
PROFILE CHECKED		6-4
TRACED	J. Rodgers	6-5
PROFILE CHECKED		6-6
GRADE INSPECTION		6-6
FEDERAL INSPECTION		6-6

Existing Ground at ℄ of Pavement

Profile of Ground at ℄ of Pavement



(FOR REFERENCE ONLY)

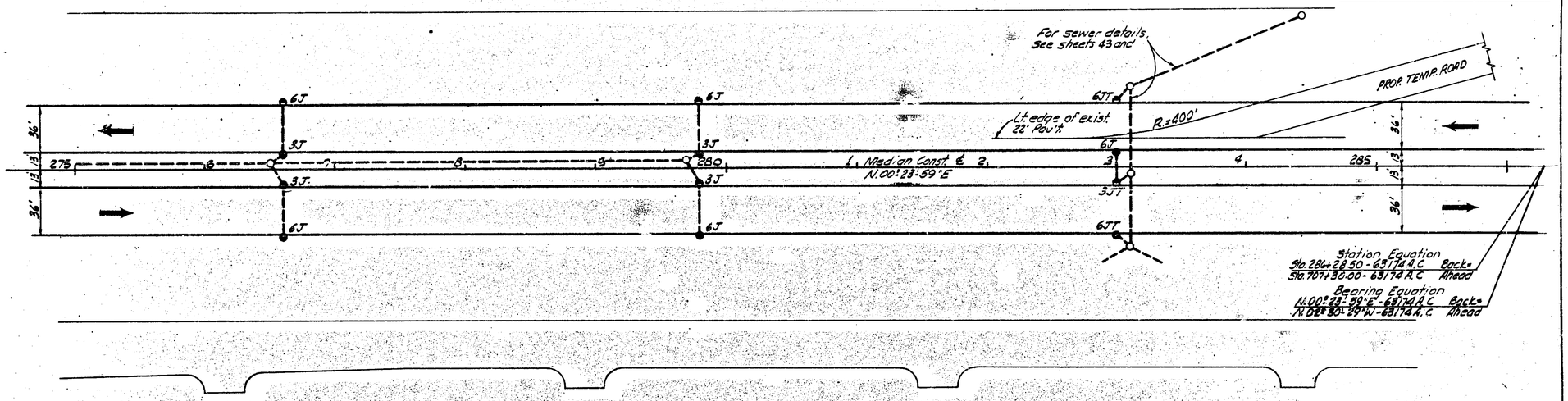
82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 55	69

F.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-1(98)59			
ROUTE	STATE PROJECT	COUNTY			
I-75	82252L	Wayne	City of Detroit	70	

F.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY			

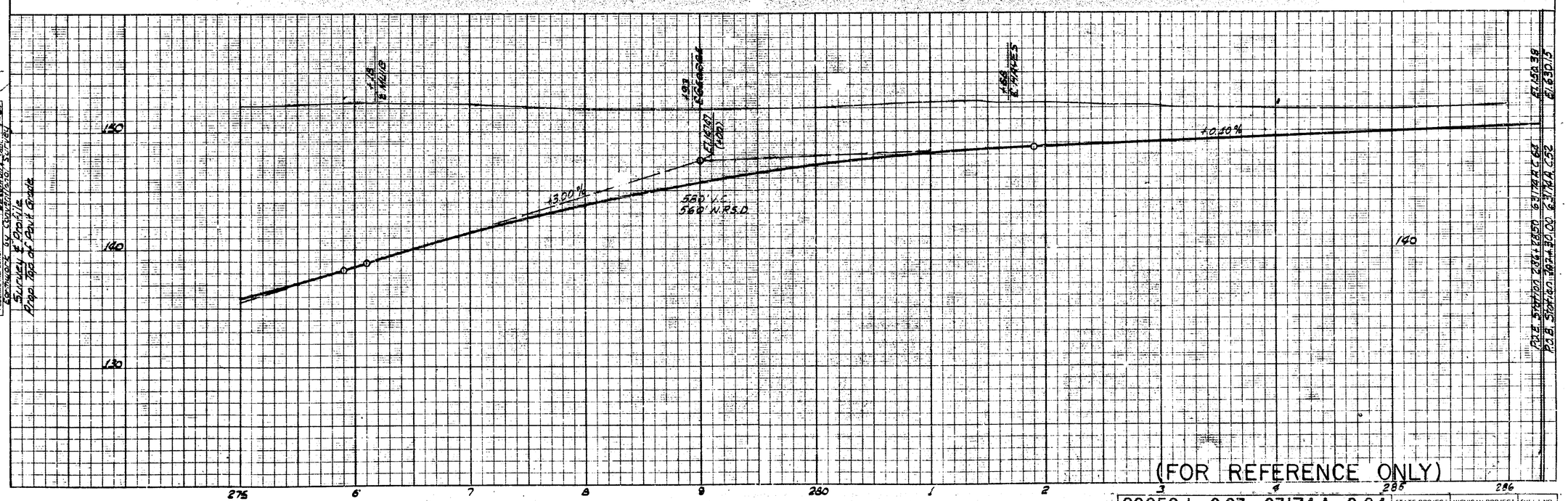
AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN	L. Mathews	12-62
FIELD REVIEW CHECKED	R. Kaufman	6-63
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES	W.H.Fairchild	6-63
QUANTITIES CHECKED	E.W. Koltz	6-63
ESTIMATE	E.W. Koltz	12-62



OPERATION	BY	DATE
SURVEYED	N. Lister	6-62
PLAN PLOTTED	N. Lister	6-62
PLAN REVIEWED	R. Kaufman	6-63
PROFILE PLOTTED	G. Lauckner	6-63
PROFILE REVIEWED	R. Kaufman	6-63
PROFILE CHECKED	G. Lauckner	6-63
ROADWAY DESIGN	E. Koltz	6-63
STRUCTURE DESIGN	Berch Schirmer	6-63
DESIGN INSPECTION	Berch	6-63
FEDERAL INSPECTOR	Weisbrodt, Sec.	6-6-63

Contractor's Construction Survey
Prop. Top of Pav't Grade



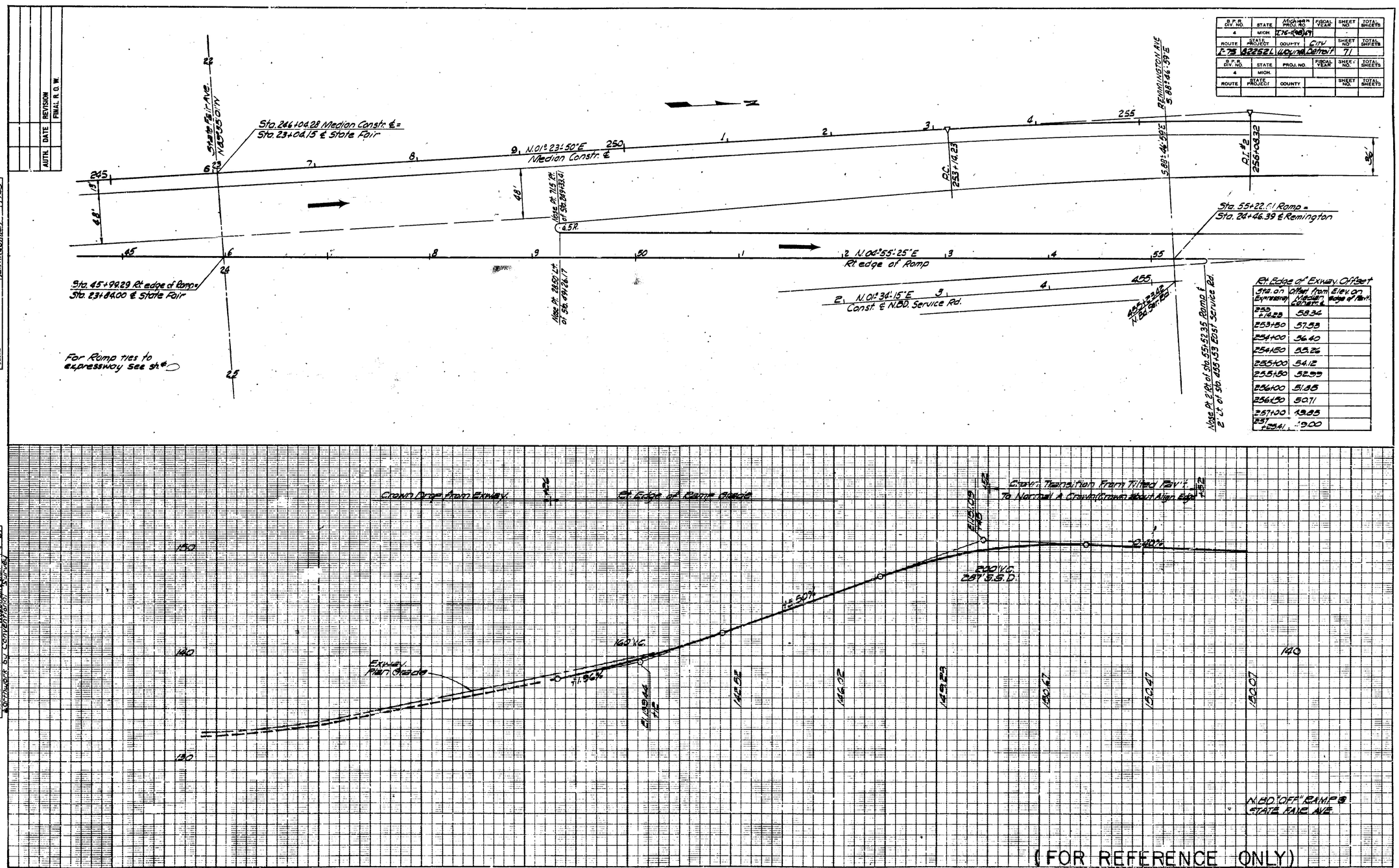
(FOR REFERENCE ONLY)

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	70

B.P.R. DIV. NO.	STATE	MICHIGAN PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-1(97)58			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	71	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R. O. W.



Rt. Edge of Exway. Offset		
Sta. on Expressway	Offset from Median Const. ℄	Elev. on edge of Pavm.
250 +14.23	58.34	
253+50	57.53	
254+00	56.40	
254+50	55.26	
255+00	54.12	
255+50	52.99	
256+00	51.85	
256+50	50.71	
257+00	49.85	
257 +25.41	49.00	

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN	F. Hollinger	8-2-82
FINAL DESIGN CHECKED	R. Schuitema	8-2-82
THREAD		
FINAL R.O.W. CHECK		
QUANTITIES	W. Hawkins	4-5-82
QUANTITIES CHECKED	E.W. Kowalski	4-5-82
BOUND	E.W. Kowalski	7/16/83

OPERATION	BY	DATE
SURVEYED	Hilliker	5-82
PLAN PLOTTED	H. Slocker	5-82
PLAN REVIEW	R. Schuitema	5-82
PROFILE PLOTTED	R. Schuitema	5-82
PROF. & CHECKED	R. Laughbaum	5-82
PRELIMINARY GRADE	Ray Hill	5-82
GRADE INSPECTION	Bob Scott (BBL)	6-82
FEDERAL INSPECTION	Bob Scott (BBL)	6-82
R.O.W. Agent	R. J. Contestabile	

(FOR REFERENCE ONLY)

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (97) 58	71

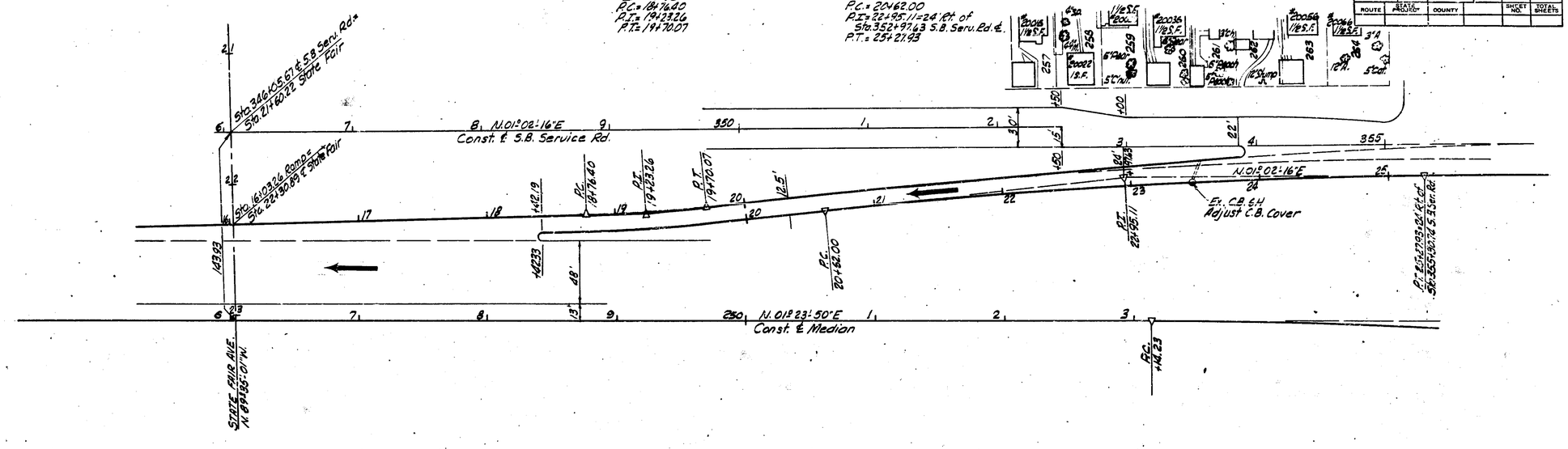
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252 L	Wayne	Detroit	72	
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

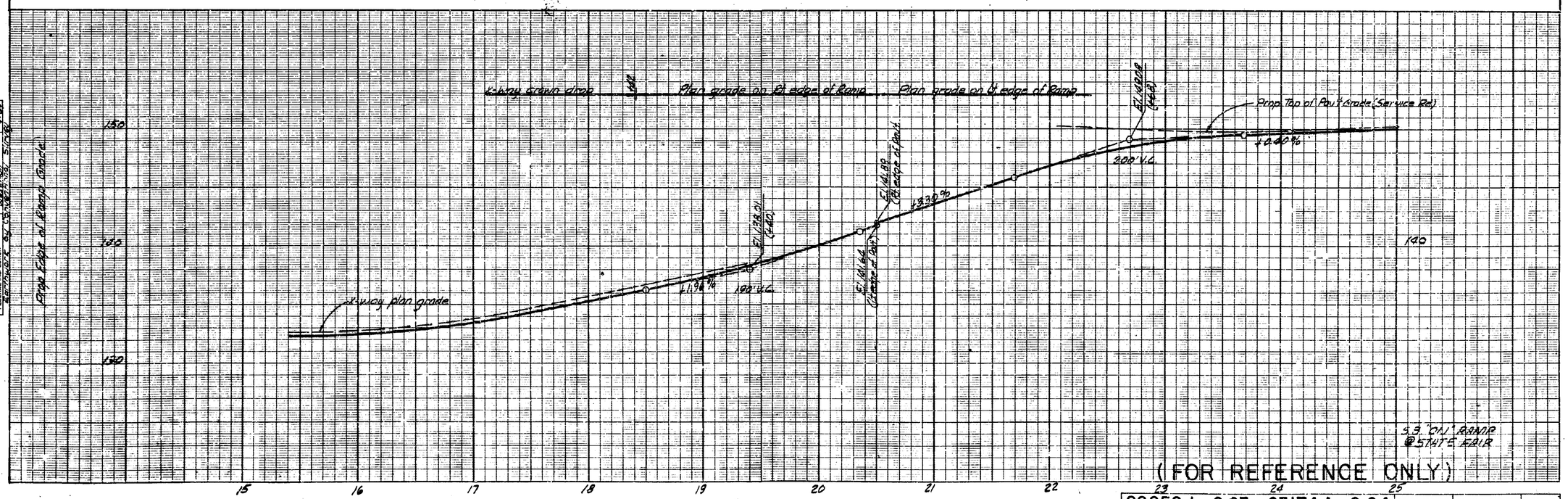
AUTH.	DATE	REVISION
		FINAL R. O. W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. DESIGNED	T. Ostrowski	8-27-63
PRELIMINARY R.O.W. CHECKED	F. Ostrowski	8-27-63
FINAL DESIGN CHECKED		
PRICED		
FINAL R.O.W. DESIGN	W.H. Ruhl	8-27-63
QUANTITIES	E.A. Ostrowski	8-27-63
QUANTITIES CHECKED	E.A. Ostrowski	8-27-63
BRIDGE	W.L. Cox	8-27-63

Ramp Curve Data
Curve #1
Δ = 04°41'01" Lt
D = 5°00'00"
R = 1145.92
T = 46.86
L = 93.67
E = 0.96
P.C. = 18+76.40
P.I. = 19+23.26
P.T. = 19+70.07

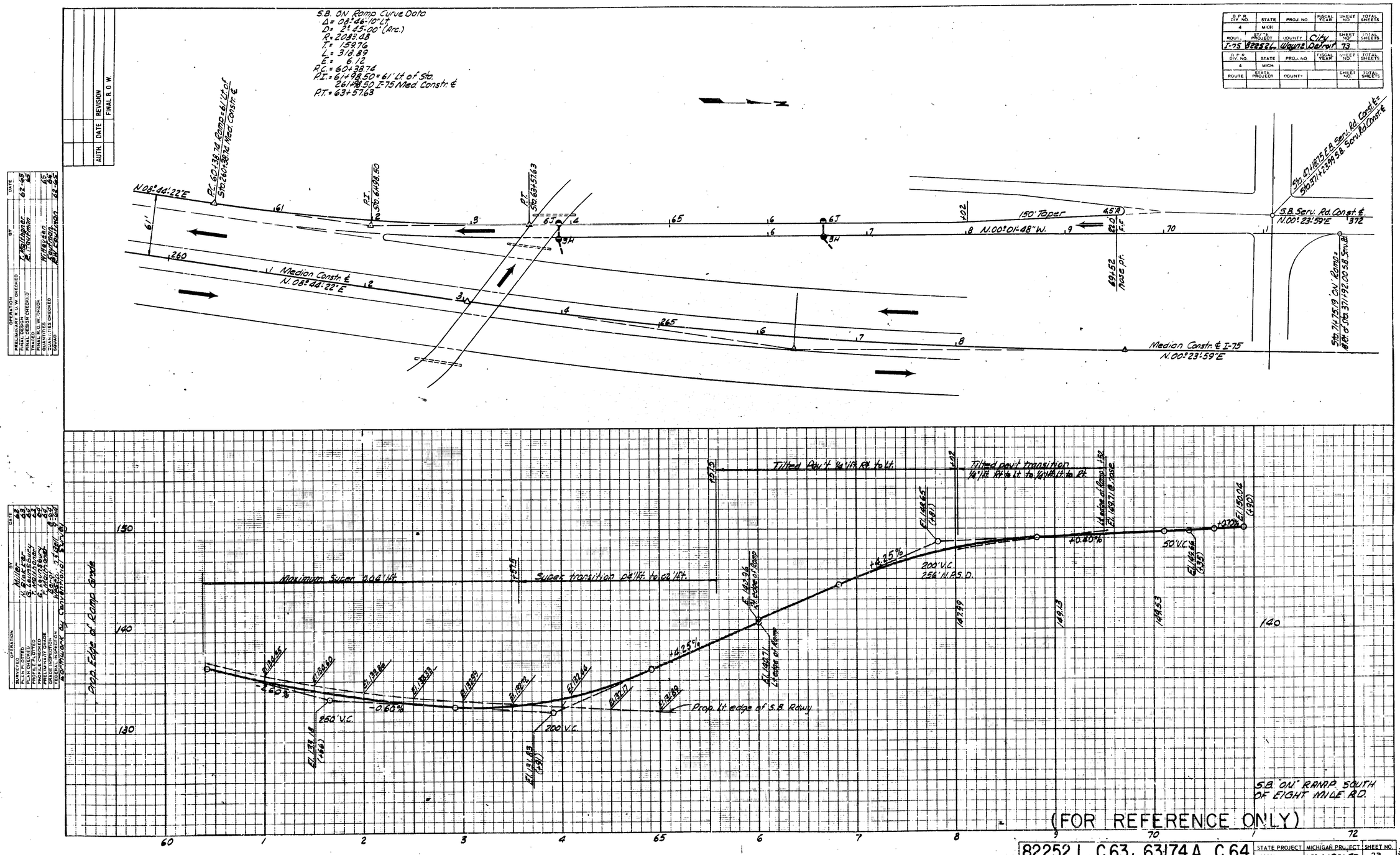
Ramp Curve Data
Curve #2
Δ = 05°49'27" Rt
D = 1°15'00"
R = 4583.66
T = 233.11
L = 465.93
E = 5.92
P.C. = 20+62.00
P.I. = 22+95.11 = 24' Rt. of Sta. 352+97.63 S.B. Serv. Rd. ℄
P.T. = 25+27.93





(FOR REFERENCE ONLY)

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I75-1 (98) 59	72



B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	73	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED	T. Malthaner	62-65
FINAL DESIGN CHECKED	R. Lautman	65
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK	W. Heyden	65
QUANTITIES	Lautman	66
QUANTITIES CHECKED	R.W. Lautman	62-65
SQUAD		

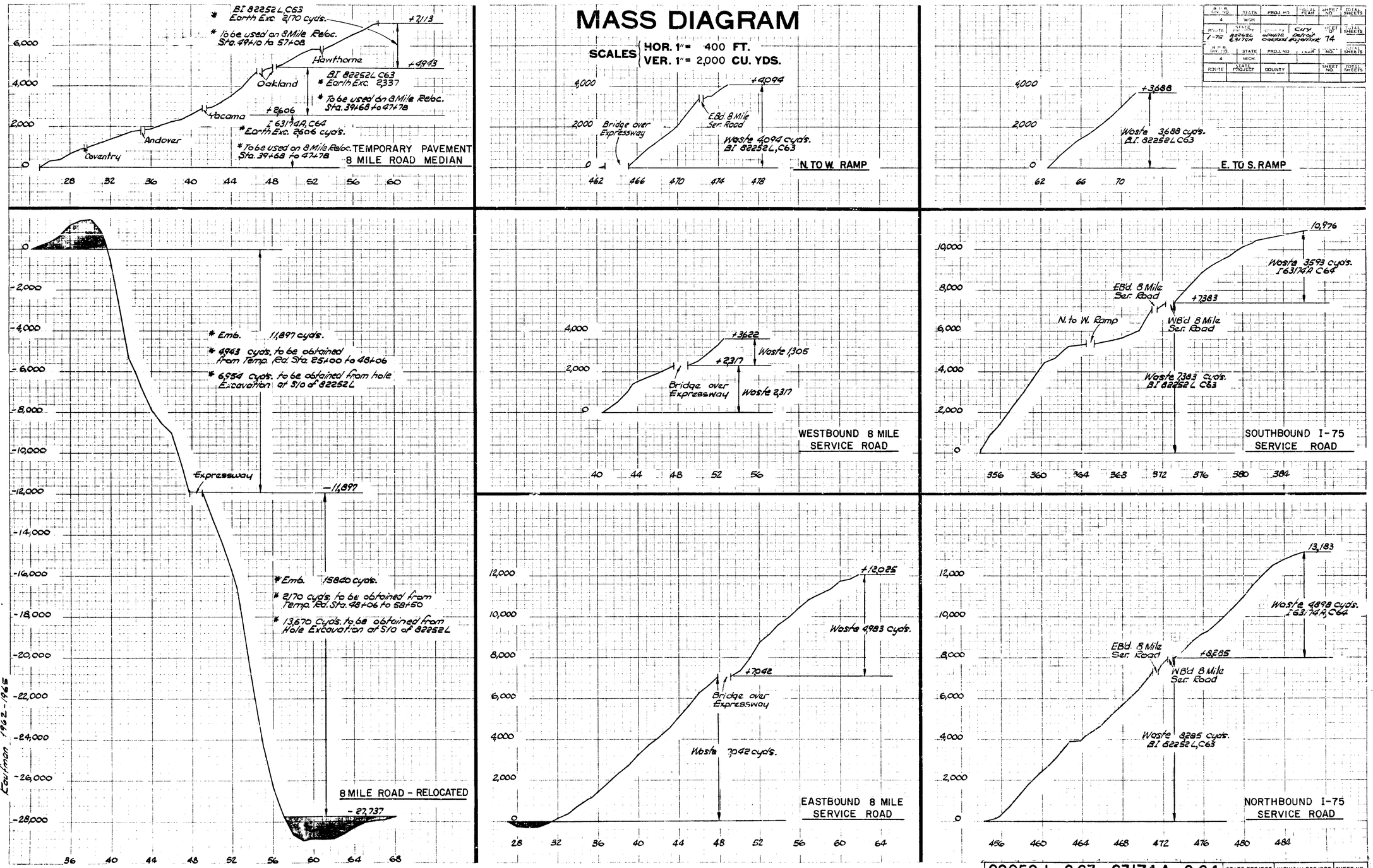
OPERATION	BY	DATE
SURVEYED	Miller	62
PLAN PLOTTED	N. Blakker	63
PLAN CHECKED	G. Lounsbury	63
PROFILE PLOTTED	T. Malthaner	63
PROFILE CHECKED	G. Lounsbury	63
PRELIMINARY GRADE	T. Malthaner	63
GRADE INSPECTION	Aerial	8-64
FEDERAL INSPECTION	Wesley, Jr. Bell	8-64
Earthwork by Conventional Survey		

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	73

82252 L, C 63; 63174 A, C 64

MASS DIAGRAM

SCALES { HOR. 1" = 400 FT. / VER. 1" = 2,000 CU. YDS.



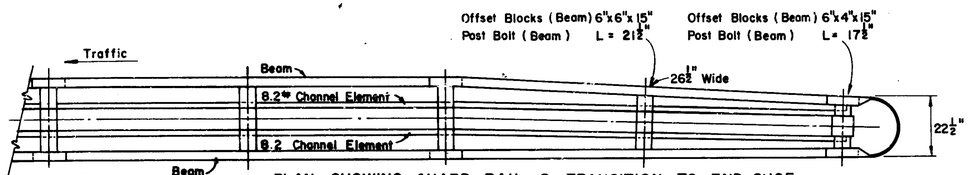
B.P.R. DIV. NO.	STATE	PROJ. NO.	TOTAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	74	
B.P.R. DIV. NO.	STATE	PROJ. NO.	YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

PLOTTED	BY	DATE
COMPUTED	Witteveen	2-65
CHECKED	Baxter	2-65

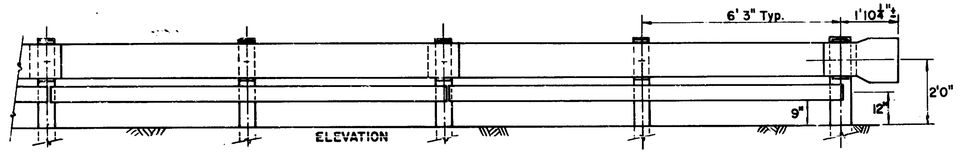
82252 L, C63; 63174 A, C64

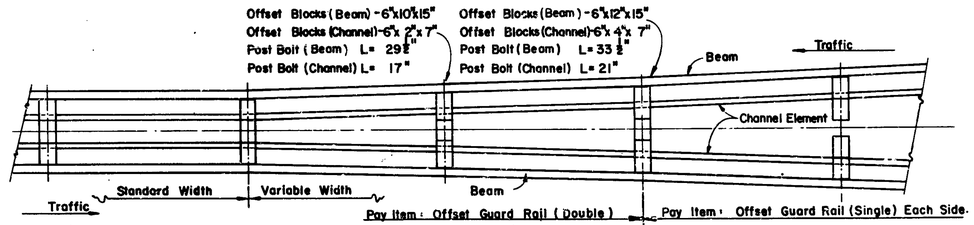
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	74
63174A	I 75-2 (98) 59	

B.P.R. DIV. NO	STATE	MICHIGAN PROJECT NO			
4	Mich	I-75-3(98)59 I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Hazel Park	75	

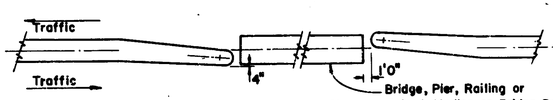


PLAN SHOWING GUARD RAIL & TRANSITION TO END SHOE

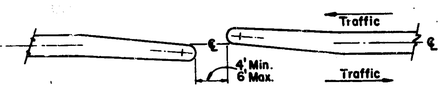




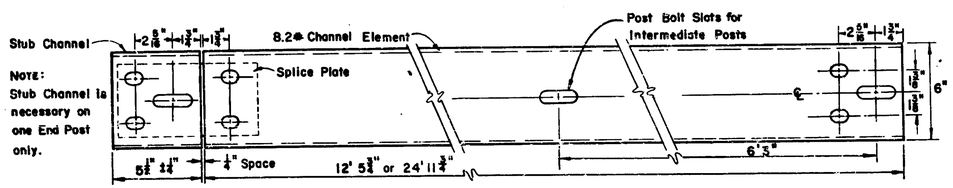
PLAN SHOWING TRANSITION FROM DOUBLE FACED TO TWO SINGLE FACED RAILS



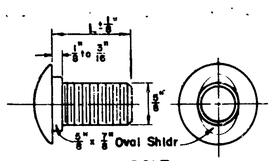
BRIDGE DETAIL



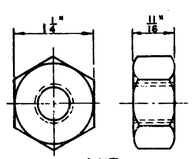
MOTORCYCLE TURNAROUND



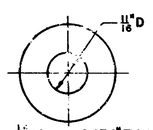
DETAIL SHOWING 8.2# CHANNEL, STUB CHANNEL & SPLICE PLATE LOCATION



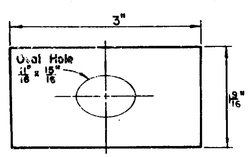
BOLT



NUT



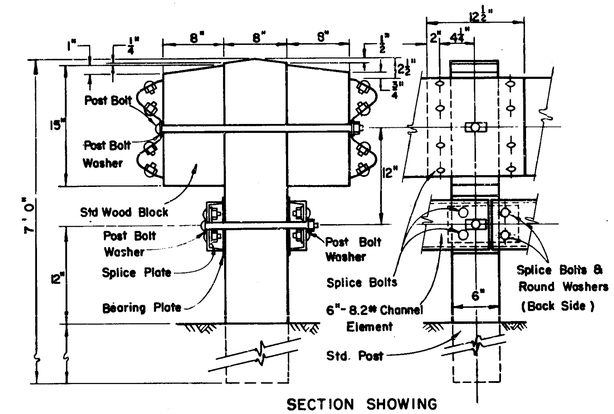
1½" Dia. x 0.134" Thick
ROUND WASHER
(10 Gauge)



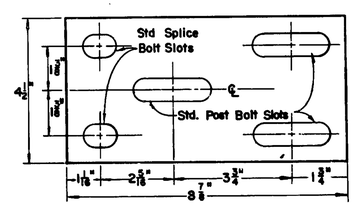
POST BOLT WASHER (⅛" Thick)
2 Reqd per Post Bolt

SPLICE BOLT (Beam)	L =	1½"	8 Req'd per Splice
SPLICE BOLT (Beam End Shoe)	L =	1½"	8 Req'd per End Shoe
SPLICE BOLT (Channel)	L =	1¼"	4 Req'd per Splice
POST BOLT (Beam)	*L =	25½"	1 Req'd per Post
POST BOLT (Channel)	*L =	13"	1 Req'd per Post

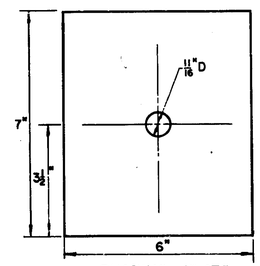
*Except as shown on Plan Views



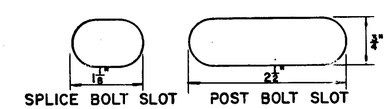
SECTION SHOWING
SPLICES & ATTACHMENT TO POSTS



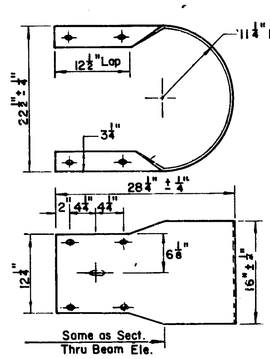
SPLICE PLATE ⅜" Thick
1 Req'd per Channel Splice



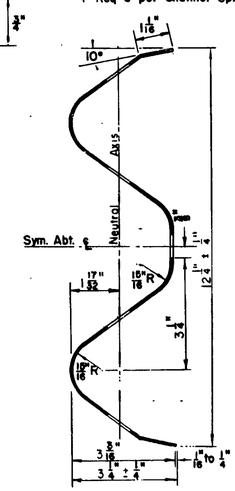
BEARING PLATE
1/16" Thick
1 Req'd per Channel Splice



SPLICE BOLT SLOT POST BOLT SLOT



DOUBLE END SHOE



SECTION THRU BEAM ELEMENT

NOTES:

Materials and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications.

All [redacted] posts and blocks shall conform to dimensions shown and shall be of Douglas Fir, Long Leaf Pine, Short Leaf Pine, White Oak, Red Oak, Beech, White Ash, Western Hemlock, Sugar Maple, or other approved wood.

Beam elements shall be lapped in the direction of traffic.

All brackets, fittings, plates, washers, and bolts shall be in accordance with the Standard Specifications. Bolts shall be cut off not to exceed 1/2" from the nut on the back side of the post.

The bolting pattern for beam element splice joints may be optional to conform to tensile strength requirements for assembled beam elements in accordance with the Standard Specifications.

Beam elements and channel elements shall be pre-formed to plan radius for curves less than 150 feet. Curved end panels and straight end panels shall be used, as required in the note in the upper left hand corner of this sheet. These panels will not be paid for separately but will be paid at the contract unit price per lineal foot for Offset Guard Rail - Single.

The beam element and end shoe shall be 12 gage. The channel element shall conform to current specifications for structural steel ASTM Designation: A36, *and Galvanized in accordance with Article 7.15 Table I on Beam Element.*

At bridges, the end of the end shoe shall be one foot from the bridge railing or pier.

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

OFFSET GUARD RAIL-DOUBLE

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 3-9-65
RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE
APPROVED — CHIEF OF DESIGN — DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED

DIRECTOR OF ENGINEERING - CHIEF ENGINEER — DATE

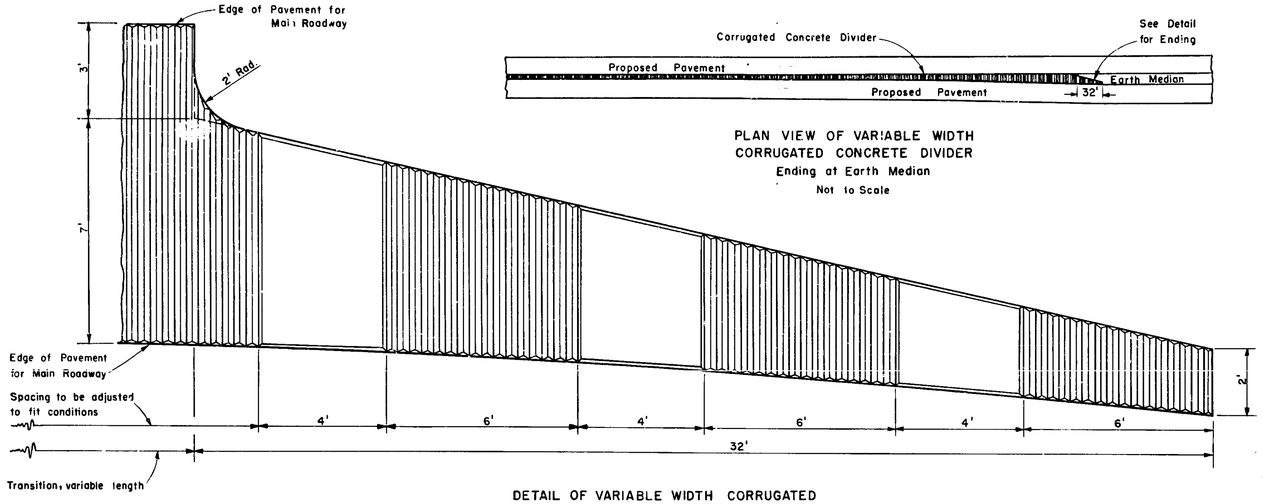
DRAWN BY R.J.M. CHECKED BY R.H.P. TRACED BY R.J.M. APPROVED B.P.R.

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L 63174A	I-75-1 (98) 59 I-75-2 (98) 59	75

ORIGINAL

Kaufman Squad 1962-65



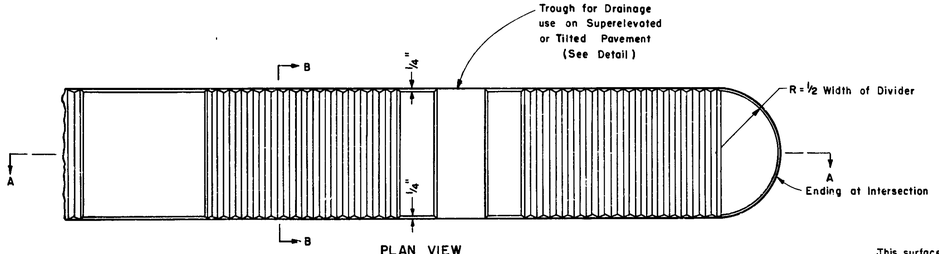
DETAIL OF VARIABLE WIDTH CORRUGATED CONCRETE DIVIDER ENDING

½" = 1' 0"

PLAN VIEW OF VARIABLE WIDTH CORRUGATED CONCRETE DIVIDER

Ending at Earth Median

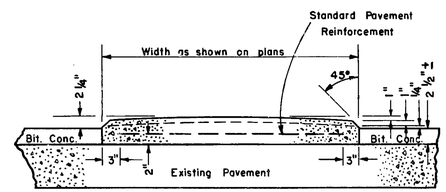
Not to Scale



PLAN VIEW

CORRUGATED CONCRETE DIVIDER

TYPE I & II

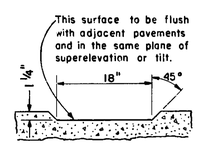


SECTION B-B

TYPE II

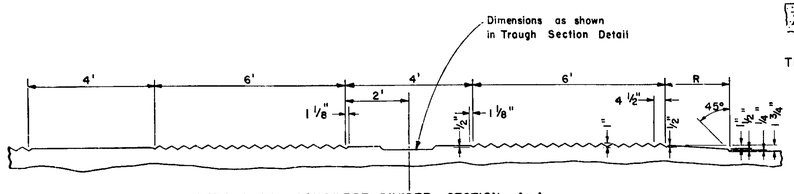
To be used where Divider is over Existing Pavement

1" = 1' 0"



TROUGH SECTION DETAIL

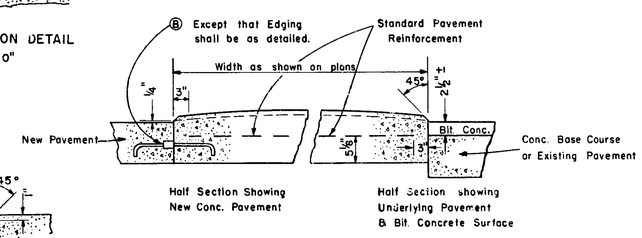
1" = 1' 0"



CORRUGATED CONCRETE DIVIDER - SECTION A-A

TYPE I & II

½" = 1' 0"

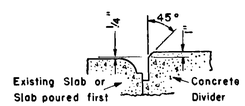


SECTION B-B

TYPE I

To be used in New Pavement Areas

1" = 1' 0"



EDGING DETAIL

1" = 1' 0"

NOTES:

All material and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications. Grade A A Concrete shall be used in the Corrugated Concrete Divider.

Joints in Type I Corrugated Concrete Divider.

One inch expansion joints without load transfer shall be placed in the Divider in line with expansion joints in the adjacent Concrete Pavement.

Contraction or plane of weakness joints without load transfer shall be placed in the Divider in line with construction, contraction or plane of weakness joints in adjacent Concrete Pavement or Base Course.

Joints in Type II Corrugated Concrete Divider.

One inch expansion joint without load transfer shall be placed in the Divider directly above expansion joints in underlying Concrete Pavement.

Contraction joints without load transfer shall be placed in the Divider directly above construction, contraction or plane of weakness joints in underlying pavement.

Joint material shall be considered incidental to the construction of the Concrete Divider.

Hook Bolts shall be considered part of the construction of the adjacent pavement.

Concrete Divider of the type specified will be measured and paid for by area in square yards.

Pavement Reinforcement will be measured by area in square yards and paid for separately. The area paid for shall be equal to the square yards of Concrete Divider required to be reinforced with no allowance for necessary laps and splices.

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

CORRUGATED CONCRETE DIVIDER

DESIGN AND TRAFFIC DIVISIONS

CHECKED — ENGINEER OF DESIGN — DATE 12-30-57

RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE 1-6-58

RECOMMEDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE 1-6-58

OFFICE OF ENGINEERING AND CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE

APPROVED — CHIEF ENGINEER — DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY — DEPUTY COMMISSIONER - ENGINEERING — DATE

DRAWN BY R.J.M. CHECKED BY R.H.R. TRACED BY R.J.M. APPROVED B.F.R.

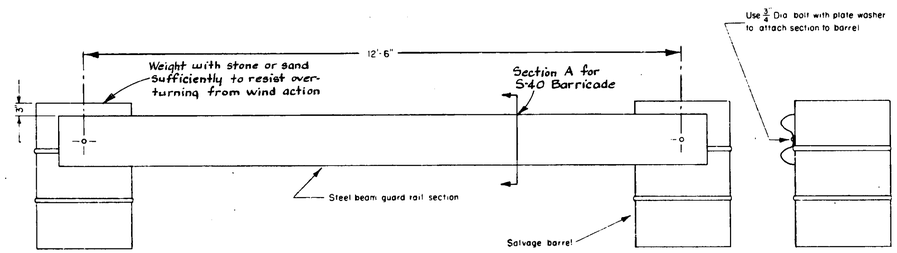
82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98, 99)	76

Squad - Kaufman, 1965

S.P.R. DIV. NO.	STATE	MICHIGAN PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.	I-75-1(98)59 I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Macomb	Detroit Hazelwood	77	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



SECTION A
S-40 BARRICADE

NOTES & SPECIFICATIONS:

1. This barricade may be substituted for the revised standard types S-32 and S-33 (see Road File No E-6-A-55E)
2. Steel beam guard rail section shall conform with standard specifications defined in M.S.H.D. standard plan No. E-4-A-137C (or D)
3. Face of guard rail shall be reflectorized in accordance with either of the following requirements:
   a. Face shall be entirely reflectorized by dropping glass beads, which conform with M.S.H.D. specifications, onto freshly applied white paint or acceptable equivalent method
   b. Face shall be partially reflectorized with white or silver beaded sheet material covering 25% of surface area placed in the form of horizontal (1½ - 2" width) or vertical (4" - 6" width) stripes. Remaining portion shall be painted white.
4. Baricade supports shall be 30 - 60 gallon salvage barrels painted highway yellow (non-reflectorized) and provided with drain holes

MICHIGAN
STATE HIGHWAY DEPARTMENT

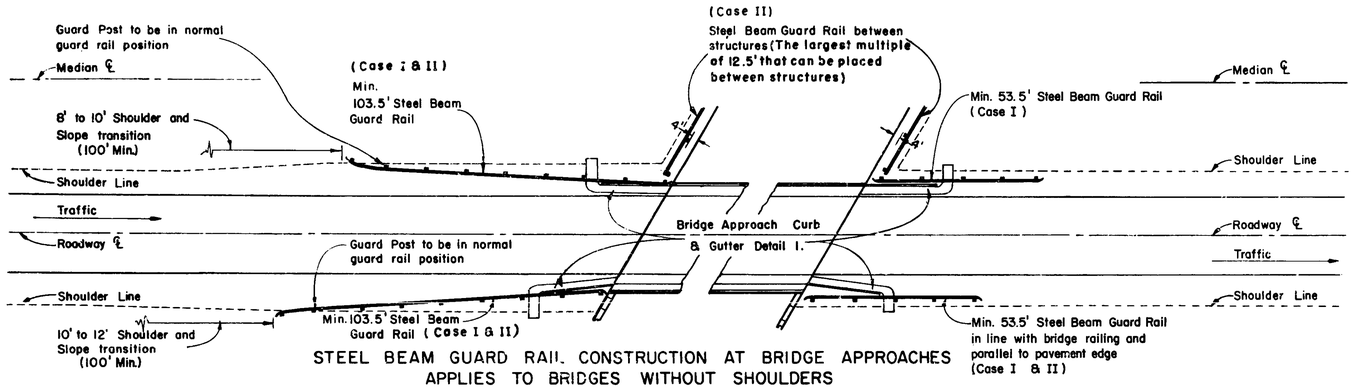
TRAFFIC DIVISION

S-40
ALTERNATE BARRICADE
12' SECTION

Squad: Kaufman 1965

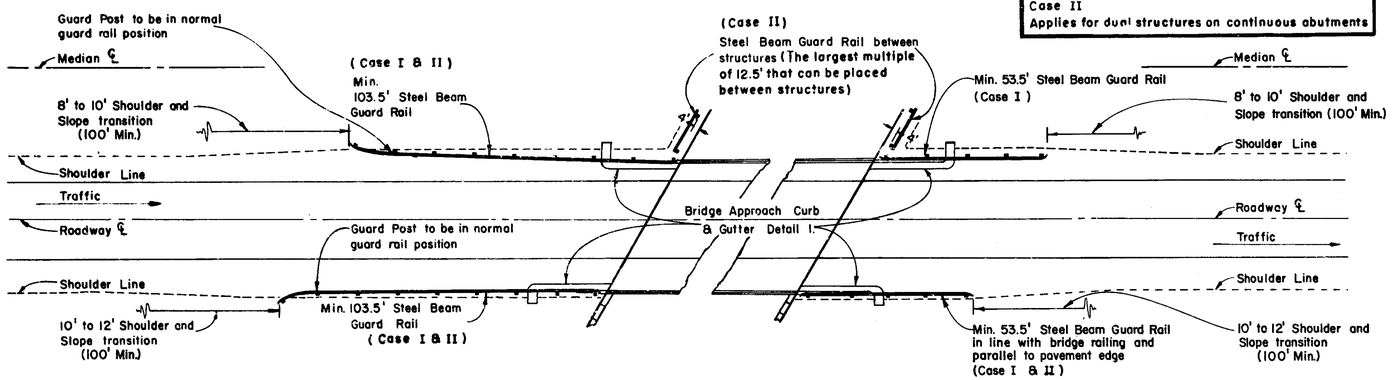
82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2 (98) 59	77
82252L	I-75-1 (98) 59	



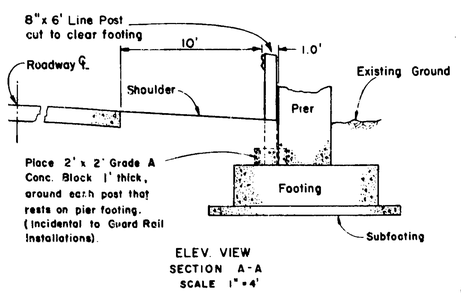
STEEL BEAM GUARD RAIL CONSTRUCTION AT BRIDGE APPROACHES
APPLIES TO BRIDGES WITHOUT SHOULDERS
SCALE 1" = 20'

Case I
Applies for dual structures on separate abutments
Case II
Applies for dual structures on continuous abutments

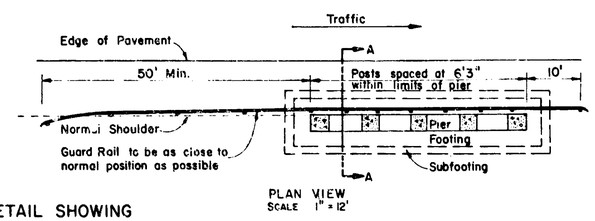


STEEL BEAM GUARD RAIL CONSTRUCTION AT BRIDGE APPROACHES
APPLIES TO BRIDGES WITH SHOULDERS
SCALE 1" = 20'

For Guard Rail adjacent to overpasses on crossroads use 53.5 lin. ft (Min.) at each corner of structure.

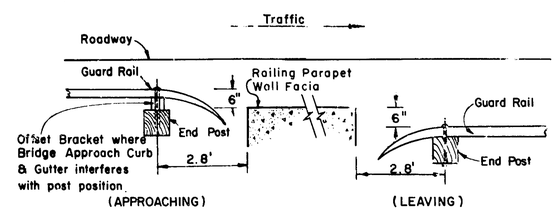


ELEV. VIEW
SECTION A-A
SCALE 1" = 4'



PLAN VIEW
SCALE 1" = 12'

DETAIL SHOWING
STEEL BEAM GUARD RAIL PROTECTION AT PIERS
FOR ROADWAY UNDER BRIDGES



DETAIL SHOWING END POST
FOR ROADWAY OVER BRIDGES
SCALE 1/2" = 1'0"

PLAN NOTES:

The length of Bridge Approach Curb and Gutter shall be varied to locate the spillway clear of guard rail posts. The spillway shall extend two feet beyond the shoulder.

Where Steel Beam Guard Rail is to be used in the proximity of Bridge Approach Curb and Gutter, the shoulder shall be sloped down from the curb.

The vertical alignment shall be modified to lower the rail element nearest the bridge 0.5' and a straight line transition used to the fifth post from the bridge, at which point the rail element shall be normal height above ground.

All materials and workmanship shall be in accordance with current Michigan State Highway Department Standard Specifications.

Construction shall be in accordance with Standard Plan for Steel Beam Guard Rail.

Offset Brackets for wood posts are to be 4" x 4" x 14" long made of the same kind of wood and with the same kind of preservative treatment as specified for wood guard rail posts. They shall be drilled in the center with an 11/16" hole, 7" from either end.

Offset Brackets for steel posts are to be 4" steel channel, weighing 7.25 lbs. per lin. ft. They shall be 14" long, drilled through both flanges in the center of the flange, with an 11/16" hole, 7" from either end. Painting shall be as specified for steel guard rail posts.

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

LOCATION OF GUARD RAIL AT STRUCTURES
(DUAL HIGHWAYS)

CHECKED	ENGINEER OF DESIGN	3-23-64 DATE
RECOMMENDED FOR APPROVAL	TRAFFIC ENGINEER	4-6-64 DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF BRIDGE AND ROAD DESIGN	3/24/64 DATE
APPROVED	CONSTRUCTION ENGINEER	DATE
APPROVED	CHIEF ENGINEER OF DESIGN	4/6/64 DATE

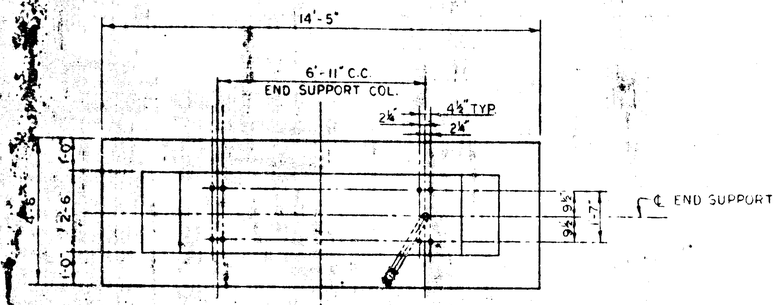
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY DIRECTOR OF ENGINEERING-CHIEF ENGINEER 4/6/64 DATE

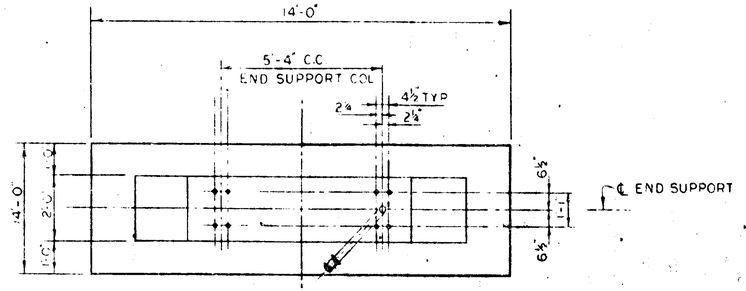
DRAWN BY: R.J.M. CHECKED BY: R.H.R. TRACED BY: R.J.M. APPVD BRR

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L 63174A	175-1(98)59 175-2(98)59	78

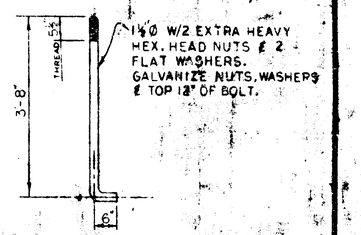
Layman Squad 1962-'65



PLAN

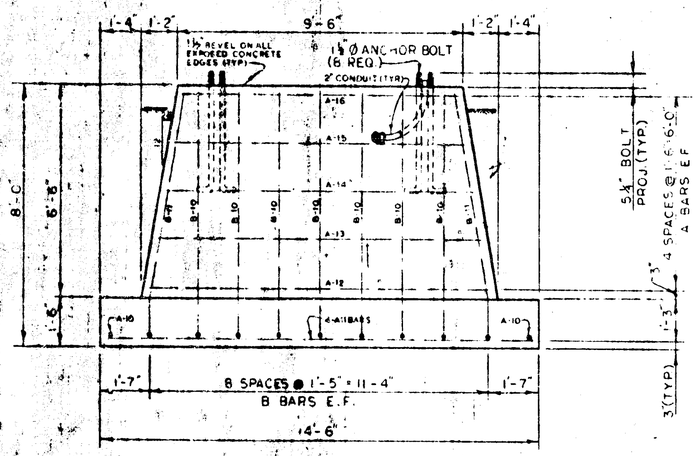


PLAN

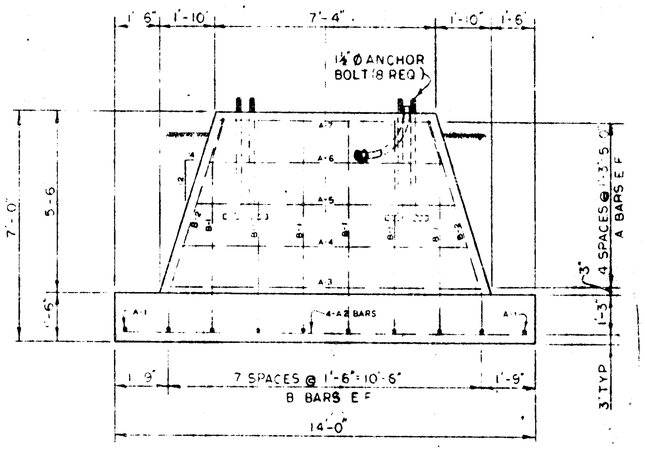


ANCHOR BOLT DETAIL

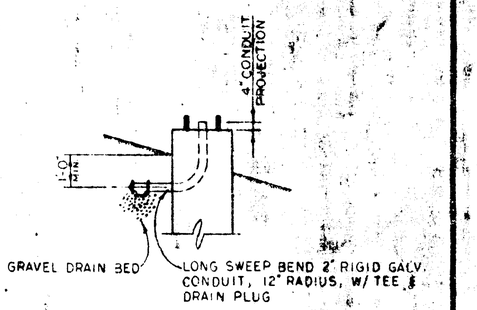
DIRECTION OF TRAFFIC



ELEVATION



ELEVATION



CONDUIT DETAIL

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ
A-18	#4	3'-6"	2
A-17	#4	13'-11"	2
A-16	#4	11'-3"	2
A-13	#4	10'-8"	2
A-14	#4	10'-2"	2
A-15	#4	9'-7"	4
A-16	#4	9'-1"	2
B-10	#4	7'-10" / 2'-9"	14
B-11	#4	7'-7" / 2'-6"	4

100 CU. YDS. CONC
228# REINF. STEEL

TYPE C
SCALE ½"=1'-0"

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ
A-1	#4	3'-6"	2
A-2	#4	13'-6"	4
A-3	#4	10'-4"	2
A-4	#4	9'-6"	2
A-5	#4	8'-8"	2
A-6	#4	7'-10"	2
A-7	#4	7'-0"	2
B-1	#4	6'-9" / 2'-3"	12
B-2	#4	6'-9" / 2'-3"	4

6.82 CU. YDS. CONC.
196# REINF. STEEL

TYPE B
SCALE ½"=1'-0"

NOTES:

1. CONDUIT SHALL BE INSTALLED ON ROADWAY SIDE OF RIGHT FOUNDATION OR AS DIRECTED BY ENGINEER.
2. TOP OF CONC. SHALL BE 3" MIN. ABOVE GROUND (DESIRABLE).
3. THE FOUNDATION WHICH IS ON THE SIDE WHERE THE GROUND IS THE HIGHEST SHOULD BE 3" OUT OF THE GROUND AND THE OTHER FOUNDATION SHOULD BE AT THE SAME ELEVATION.

Authorization # 2004 - dated - 6-28-65

MICHIGAN STATE HIGHWAY DEPARTMENT

TRUSS FOUNDATION

TYPE B, C

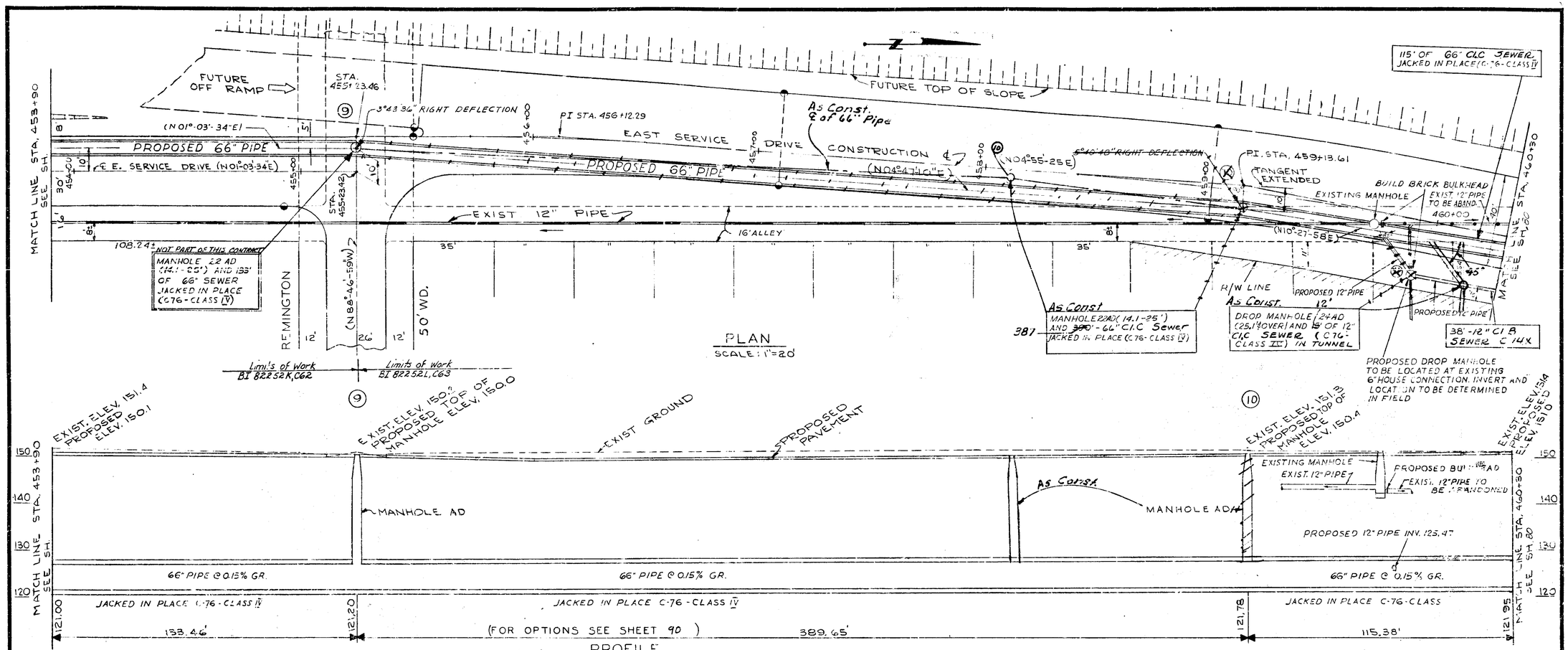
REVISIONS

DESCRIPTION	DATE	BY

R.O.S. 1-4-2
D.M.C.
S8.1C

82252 L, C63, 63174A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET
82252 L	175-1(98)59	78 A
63174A	178-2(98)59	



LEGEND

- PROPOSED SEWERS, 4'-0" OR MORE
- PROPOSED SEWERS, LESS THAN 4'-0"
- EXIST. SEWERS, 4'-0" OR MORE
- EXIST. SEWERS, LESS THAN 4'-0"
- CATCH BASIN & DRAIN
- WATER, OVER 12" — W
- WATER, 12" OR LESS — W
- GAS — G
- D. E. CO. CONDUIT — E
- M.B.T. CONDUIT — T
- P.L.C. CONDUIT — L
- CATCH BASIN & DRAIN (PROPOSED)

NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED AND ARE NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS
3. FOR DISPOSITION OF SEWERS AND MANHOLES TO BE ABANDONED, SEE ROAD PLANS

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE DATE 3-8-65

DESIGNED BY Bernice L. Bergeman
DRAWN BY J. BLANCHARD
CHECKED BY H. E. Barker
APPROVED BY
SANITARY ENGINEER
ASST. CITY ENGINEER
CITY ENGINEER

SEC. C-6 SH. 5-5
SHEET 5 OF 17 SHEETS

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATIONS
EAST SERVICE DRIVE-STA. 453+90 TO 460+30
S. OF REMINGTON TO S. OF WINCHESTER
PLAN AND PROFILE

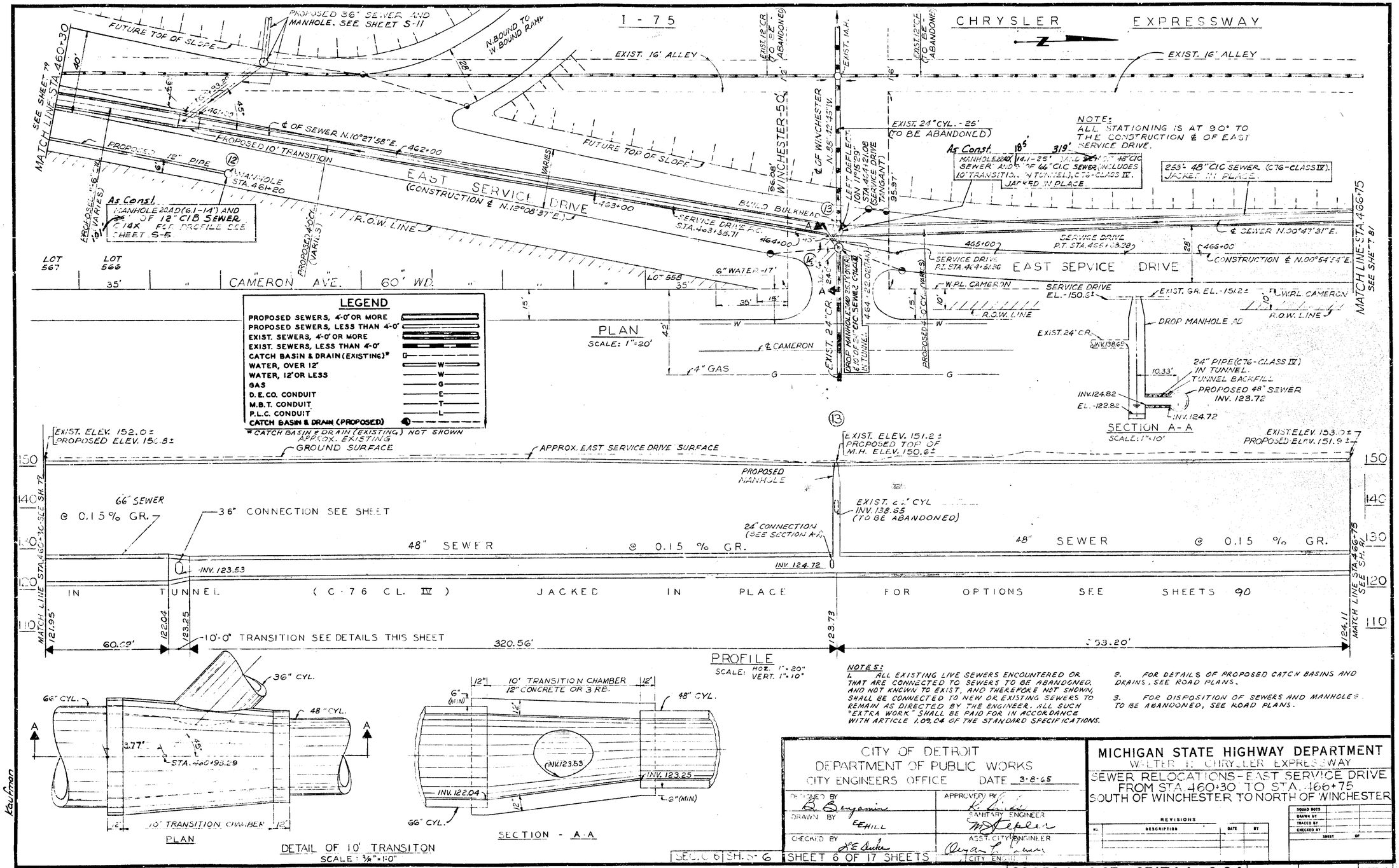
REVISIONS

NO	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	79



NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF SEWERS AND MANHOLES TO BE ABANDONED, SEE ROAD PLANS.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE DATE 3-8-65

DESIGNED BY B. Benjamin
DRAWN BY E.E. HILL
CHECKED BY K.E. Sieber
APPROVED BY K. Fischer, SANITARY ENGINEER
M. Stepler, ASST. CITY ENGINEER
Organ L. Lewis, CITY ENGINEER

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATIONS - EAST SERVICE DRIVE
FROM STA. 460+30 TO STA. 466+75
SOUTH OF WINCHESTER TO NORTH OF WINCHESTER

REVISIONS

NO.	DESCRIPTION	DATE	BY

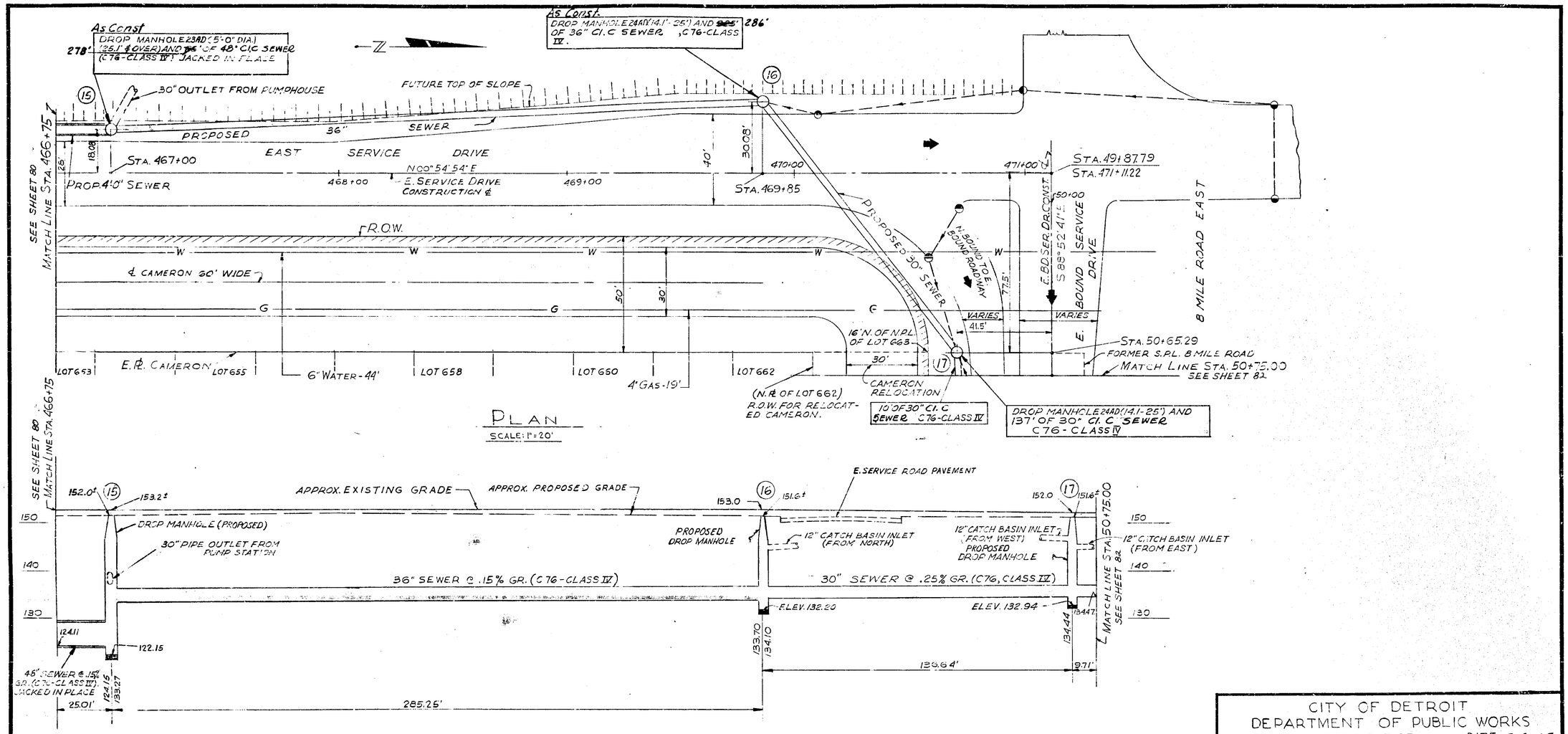
SQUAD NO. 73
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

SEC. C 6 | SH. S-6 | SHEET 6 OF 17 SHEETS

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	80

Kaufman



LEGEND

PROPOSED SEWERS, 4'-0" OR MORE	
PROPOSED SEWERS, LESS THAN 4'-0"	
EXIST. SEWERS, 4'-0" OR MORE	
EXIST. SEWERS, LESS THAN 4'-0"	
CATCH BASIN & DRAIN (EXISTING)*	
WATER, OVER 12"	W
WATER, 12" OR LESS	W
GAS	G
D.E.CO. CONDUIT	E
M.B.T. CONDUIT	T
P.L.C. CONDUIT	L
CATCH BASIN & DRAIN (PROPOSED)	

* CATCH BASIN & DRAIN (EXISTING) NOT SHOWN

NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE DATE 3-8-65

DESIGNED BY Bennie L. Benjamin	APPROVED K. Sinks SANITARY ENGINEER
DRAWN BY J.W.D.	M. Kepler ASST. CITY ENGINEER
CHECKED BY K.E. Duke	Cayce L. Palmer CITY ENGINEER

SHEET 7 OF 17 SHEETS

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATIONS - EAST SERVICE DRIVE
FROM STA. 466+75 TO STA. 50+75
NORTH OF WINCHESTER TO WEST OF HAWTHORNE

REVISIONS

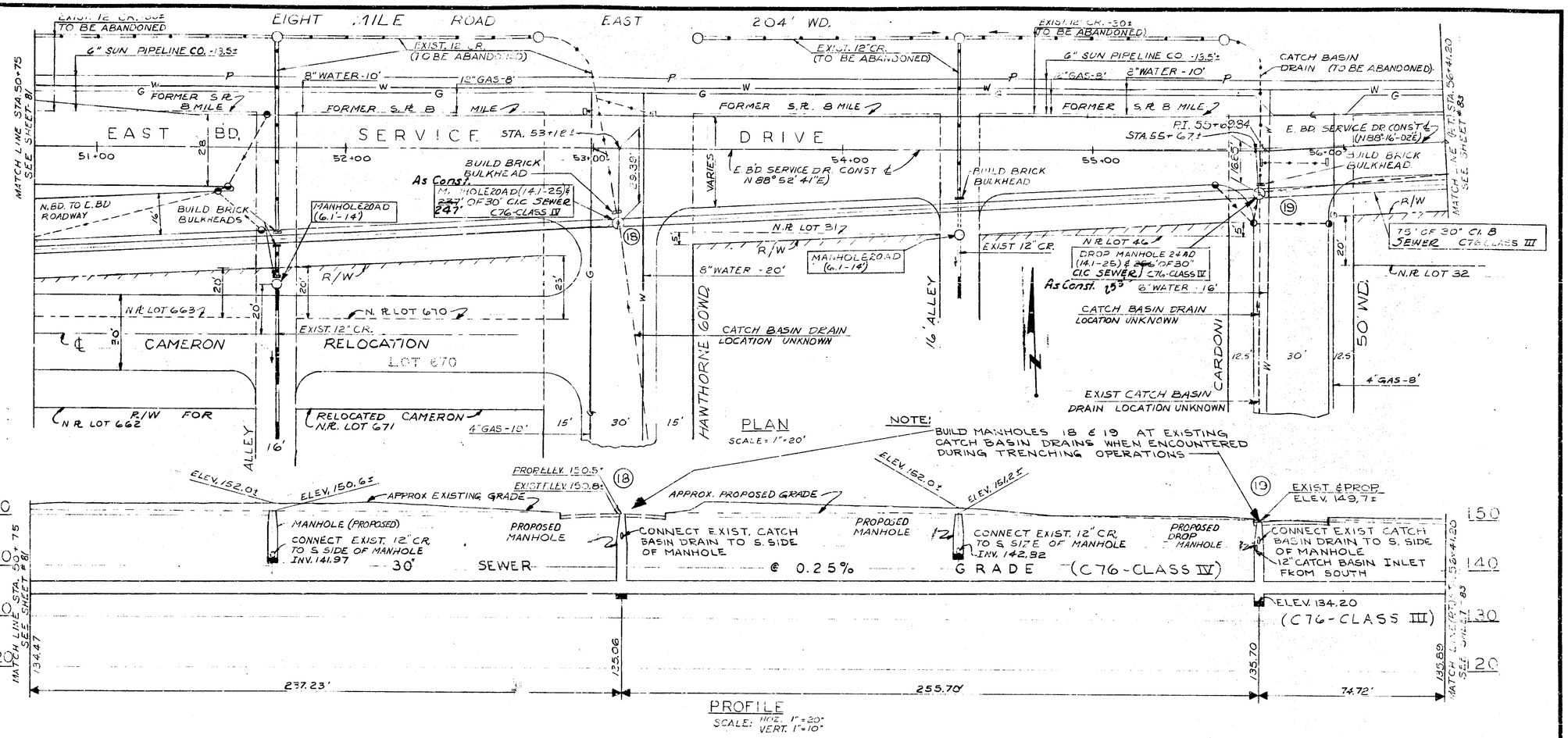
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

SEC. C-6 | S-7

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	81



NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN, AS DIRECTED BY THE ENGINEER. ALL SUCH EXTRA WORK SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.03.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF MANHOLES AND SEWERS TO BE ABANDONED, SEE ROAD PLANS.
4. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.

*CATCH BASIN & DRAIN (EXISTING) NOT SHOWN EXCEPT AT HAWTHORNE & CARDONI

LEGEND

- PROPOSED SEWERS, 4'-0" OR MORE
- PROPOSED SEWERS, LESS THAN 4'-0"
- EXIST. SEWERS, 4'-0" OR MORE
- EXIST. SEWERS, LESS THAN 4'-0"
- CATCH BASIN & DRAIN (EXISTING)*
- WATER, OVER 12" — W
- WATER, 12" OR LESS — W
- GAS — G
- D.E.CO. CONDUIT — E
- M.B.T. CONDUIT — T
- P.L.C. CONDUIT — L
- CATCH BASIN & DRAIN (PROPOSED)

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE DATE 5-8-65

DESIGNED BY Bennie L. Benjamin	APPROVED BY
DRAWN BY E.E. HILL	SANITARY ENGINEER
CHECKED BY	ASST. CITY ENGINEER Bryce L. Palmer
SHEET 8 OF 17 SHEETS	CITY ENGINEER

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATIONS
L.BD. SERVICE DRIVE (8 MILE RD.) STA. 50+75 TO 56+41.20
W. OF HAWTHORNE TO E. OF CARDONI

REVISIONS

NO.	DESCRIPTION	DATE	BY

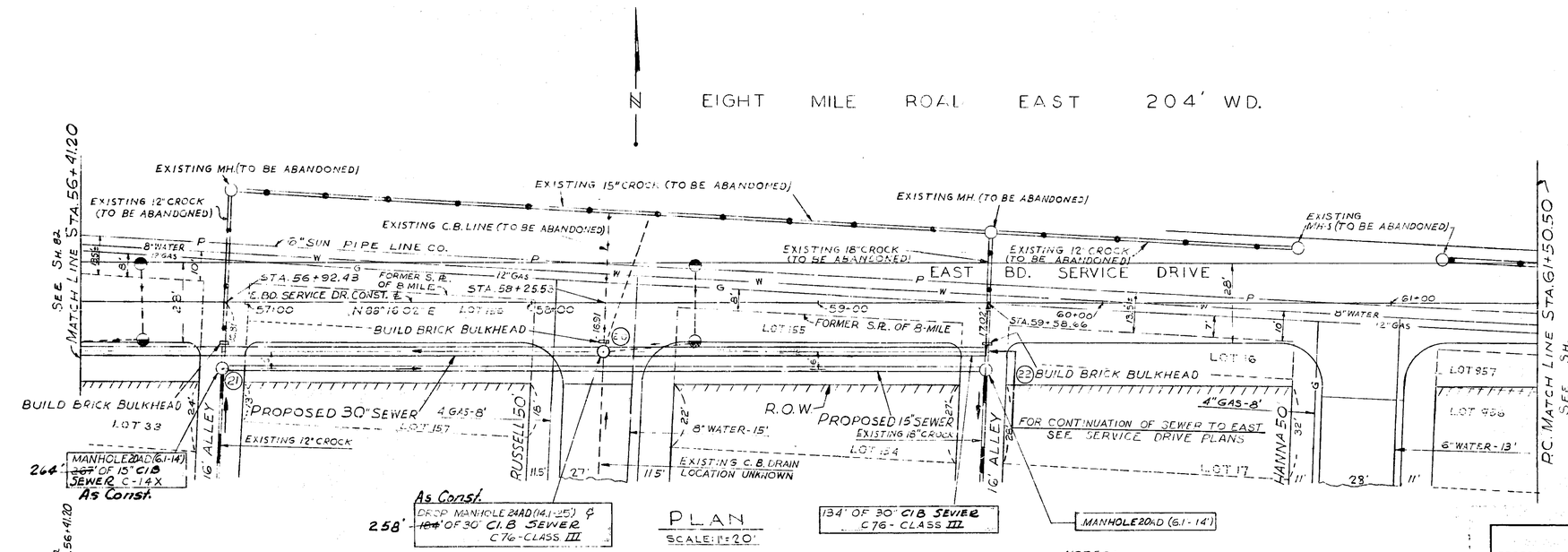
SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET	OF

SEC. C6 | SH S-8

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	82

Kaufman



PLAN

SCALE: 1" = 20'

NOTE:
BUILD M.H. (20) ON EXISTING C.B. DRAIN WHEN ENCOUNTERED DURING TRENCING OPERATIONS.

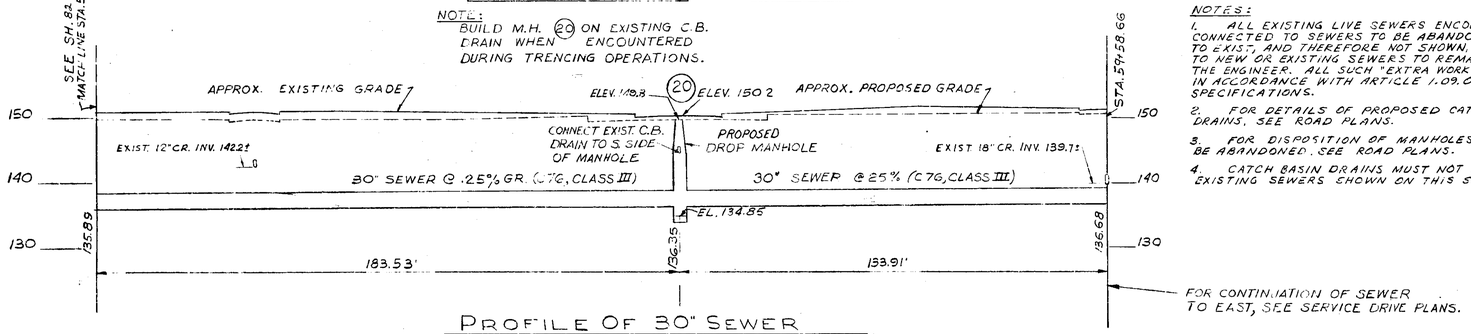
NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF MANHOLES AND SEWERS TO BE ABANDONED, SEE ROAD PLANS.
4. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.

LEGEND

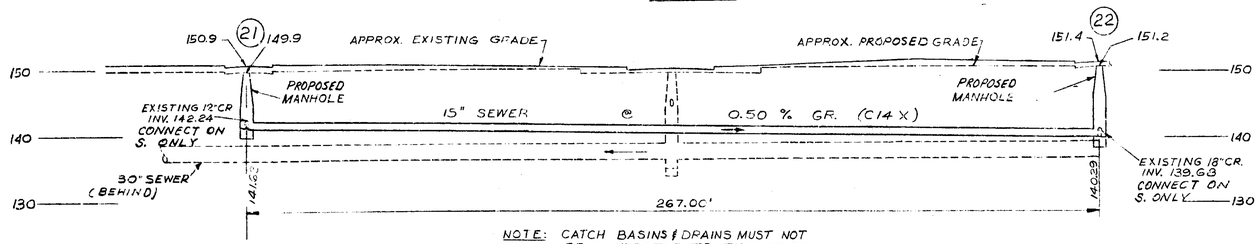
PROPOSED SEWERS, 4'-0" OR MORE	
PROPOSED SEWERS, LESS THAN 4'-0"	
EXIST. SEWERS, 4'-0" OR MORE	
EXIST. SEWERS, LESS THAN 4'-0"	
CATCH BASIN & DRAIN (EXISTING)*	
WATER, OVER 12"	W
WATER, 12" OR LESS	W
GAS	G
D.E.CO. CONDUIT	E
M.B.T. CONDUIT	T
P.L.C. CONDUIT	L
CATCH BASIN & DRAIN (PROPOSED)	

*CATCH BASIN & DRAIN (EXISTING) NOT SHOWN EXCEPT AT RUSSELL.



PROFILE OF 30" SEWER

SCALE: HORZ. 1" = 20' VERT. 1" = 10'



NOTE: CATCH BASINS & DRAINS MUST NOT BE CONNECTED TO THIS SEWER

PROFILE OF 15" SEWER

SCALE: HORZ. 1" = 40' VERT. 1" = 10'

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
DATE 3-8-65

DESIGNED BY Bernice L. Benjamin	APPROVED
DRAWN BY J.W.D.	SANITARY ENGINEER
CHECKED BY	ASST. CITY ENGINEER
SHEET 9 OF 17 SHEETS	CITY ENGINEER

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATION STA. 56+41.21 TO 61+50.50
EAST BD. SERVICE DRIVE (8 MILE RD.)
E. OF CARDONI TO E. OF HANNA

REVISIONS

NO	DESCRIPTION	DATE	BY

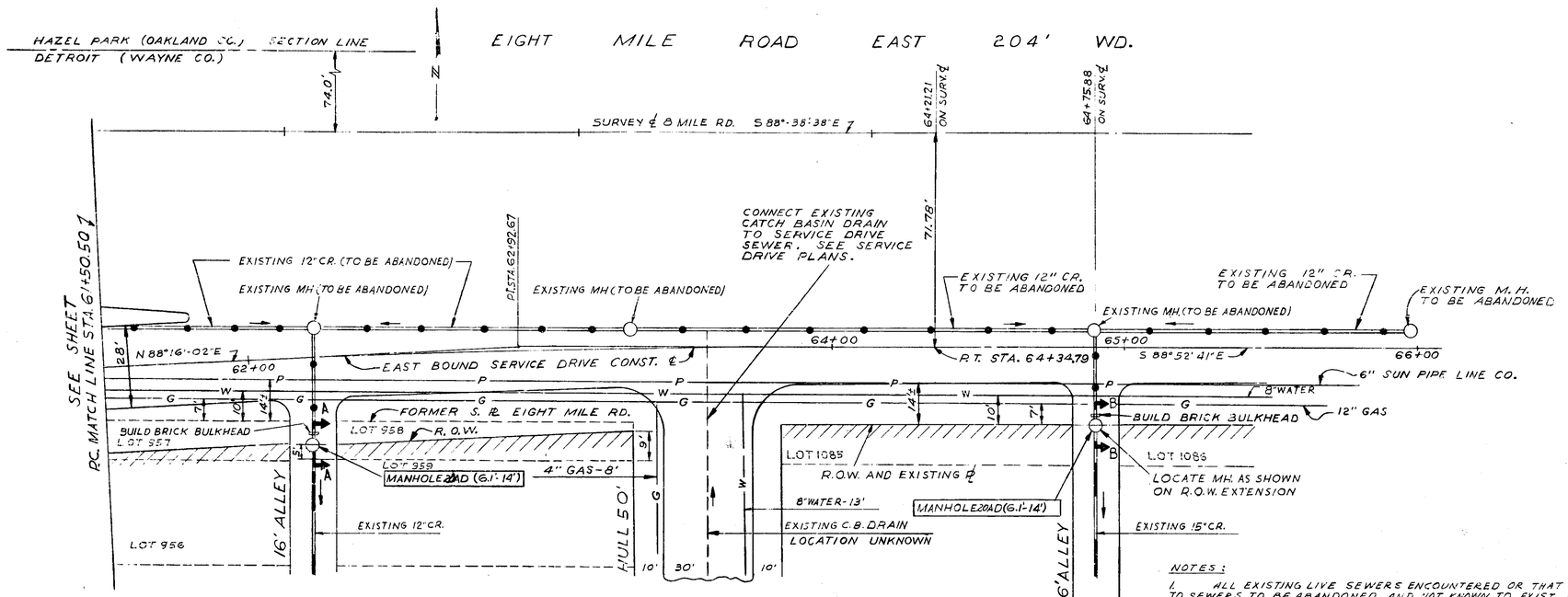
SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET	OF

SEC. C-6 | S-9

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) S9	83

Kaufman

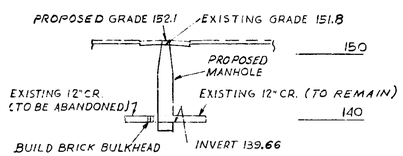


PLAN

SCALE: 1"=20'

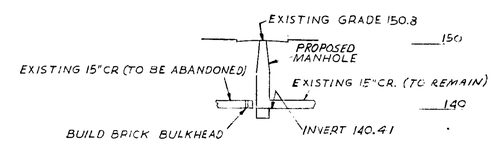
NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF MANHOLES AND SEWERS TO BE ABANDONED, SEE ROAD PLANS.
4. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.



SECTION A-A

SCALE: HORZ. 1"=20' VERT. 1"=10'



SECTION B-B

SCALE: HORZ. 1"=20' VERT. 1"=10'

LEGEND

PROPOSED SEWERS, 4'-0" OR MORE	
PROPOSED SEWERS, LESS THAN 4'-0"	
EXIST. SEWERS, 4'-0" OR MORE	
EXIST. SEWERS, LESS THAN 4'-0"	
CATCH BASIN & DRAIN (EXISTING)*	
WATER, OVER 12"	W
WATER, 12" OR LESS	W
GAS	G
D.E.CO. CONDUIT	E
M.B.T. CONDUIT	T
P.L.C. CONDUIT	L
CATCH BASIN & DRAIN (PROPOSED)	

* CATCH BASIN & DRAIN (EXISTING) NOT SHOWN EXCEPT AT HULL.

Kaufman

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE DATE 3-8-65

DESIGNED BY Bennie L. Benjamin	APPROVED K. Linke SANITARY ENGINEER
DRAWN BY J.W.D.	M. J. Kepler ASST. CITY ENGINEER
CHECKED BY J.E. Duke	Ayden L. Paemer CITY ENGINEER

SHEET 10 OF 17 SHEETS

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
MANHOLE RELOCATIONS
EAST BOUND SERVICE DRIVE (EIGHT MILE ROAD)
STA. 61+50.5 TO 66+00
E. OF HANNA TO E. OF HULL

REVISIONS

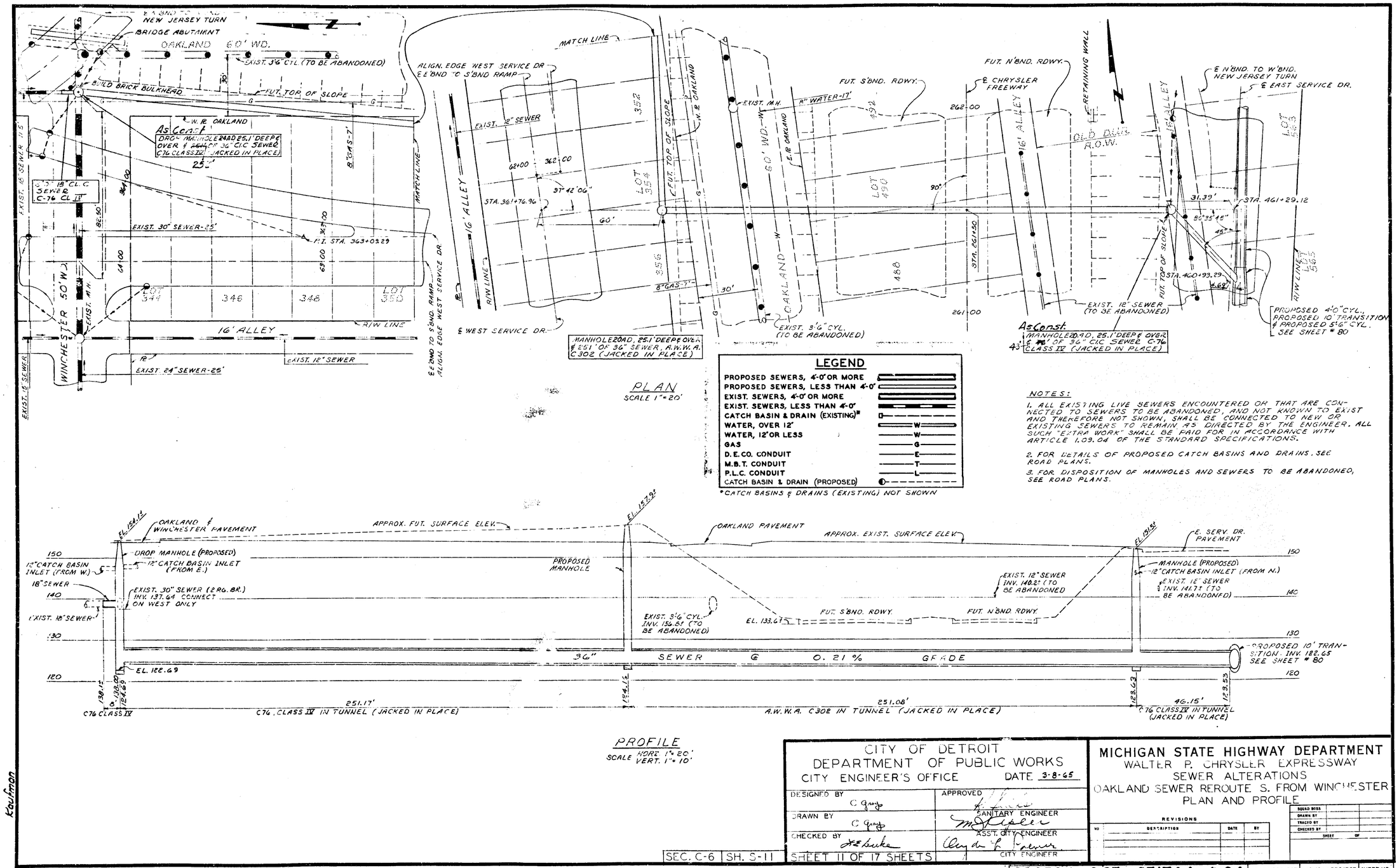
NO	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

SEC C-6 | S-10

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	84



CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
DATE 3-8-65

DESIGNED BY C. Gray	APPROVED
DRAWN BY C. Gray	SANITARY ENGINEER
CHECKED BY	ASS'T. CITY ENGINEER
	CITY ENGINEER

SEC. C-6 | SH. S-11

SHEET 11 OF 17 SHEETS

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER ALTERATIONS
OAKLAND SEWER REROUTE S. FROM WINCHESTER
PLAN AND PROFILE

REVISIONS

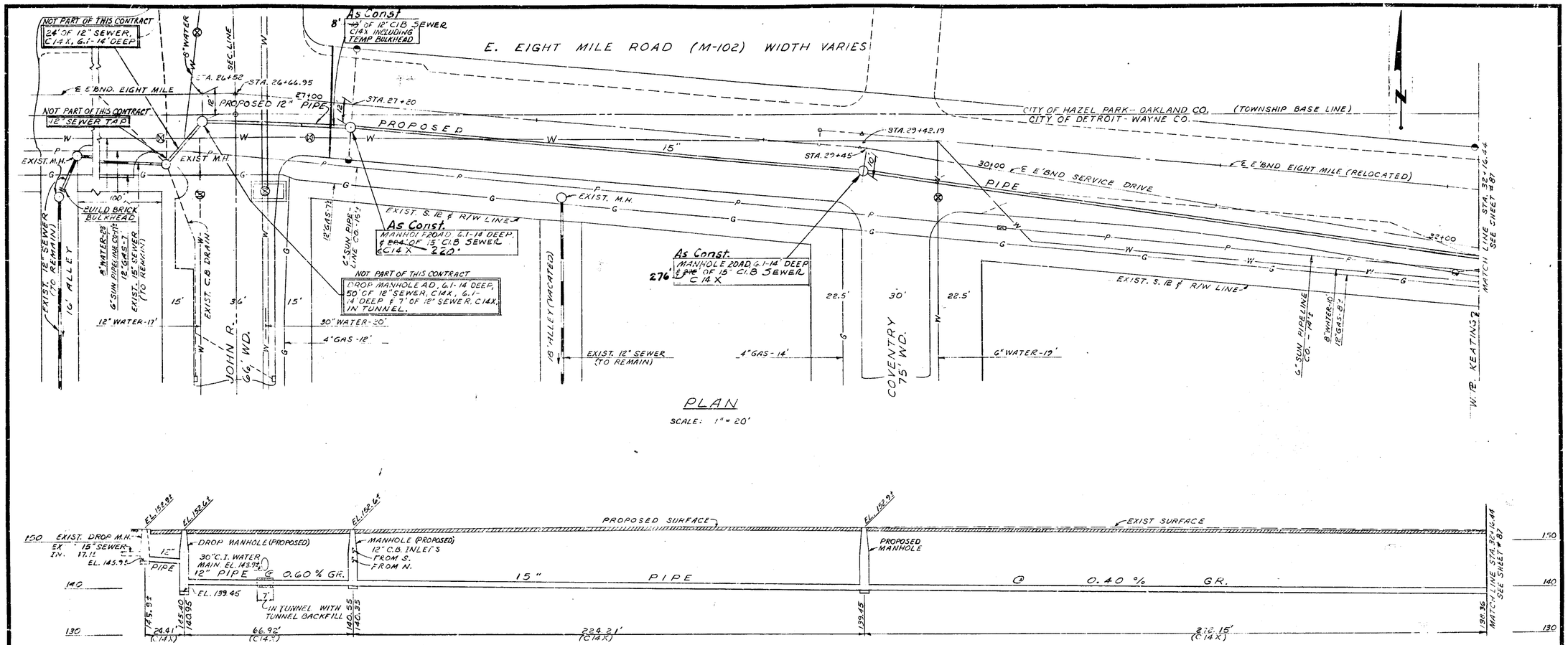
NO	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) S9	85

82252 L, C63, 63174 A, C64

Kaufman



PLAN

SCALE: 1" = 20'

Limits of Work
BI 822521, 063

PROFILE

SCALE: HORZ. 1" = 20'
VERT. 1" = 10'

LEGEND

PROPOSED SEWERS, 4'-0" OR MORE	
PROPOSED SEWERS, LESS THAN 4'-0"	
EXIST. SEWERS, 4'-0" OR MORE	
EXIST. SEWERS, LESS THAN 4'-0"	
CATCH BASIN & DRAIN (EXISTING)*	
WATER, OVER 12"	W
WATER, 12" OR LESS	W
GAS	G
D. E. CO. CONDUIT	E
M.B.T. CONDUIT	T
P.L.C. CONDUIT	L
SUN PIPELINE CO	P
CATCH BASIN & DRAIN (PROPOSED)	

* CATCH BASINS & DRAINS NOT SHOWN EXCEPT AT JOHN R.

NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE DATE 3-8-65

DESIGNED BY C. Gray	APPROVED: SANITARY ENGINEER
DRAWN BY C. Gray	ASST. CITY ENGINEER
CHECKED BY H. E. Sukha	CITY ENGINEER
SHEET 12 OF 17 SHEETS	

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATION EIGHT MILE ROAD
EASTBOUND SERVICE DRIVE
WEST OF JOHN R. TO KEATING

REVISIONS

NO	DESCRIPTION	DATE	BY

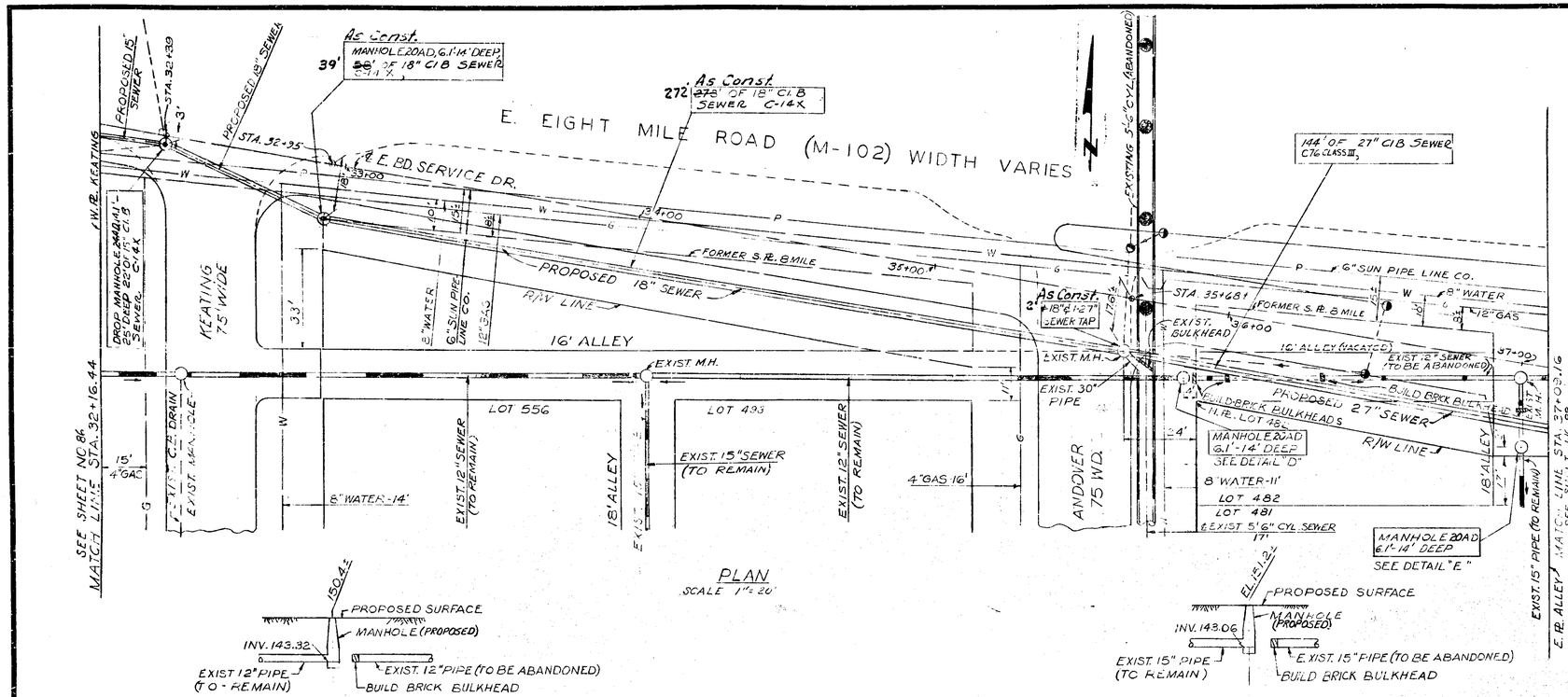
SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

SEC. C 6 | 5 | 1, 3-42

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	86

82252 L, C63; 63174 A, C64

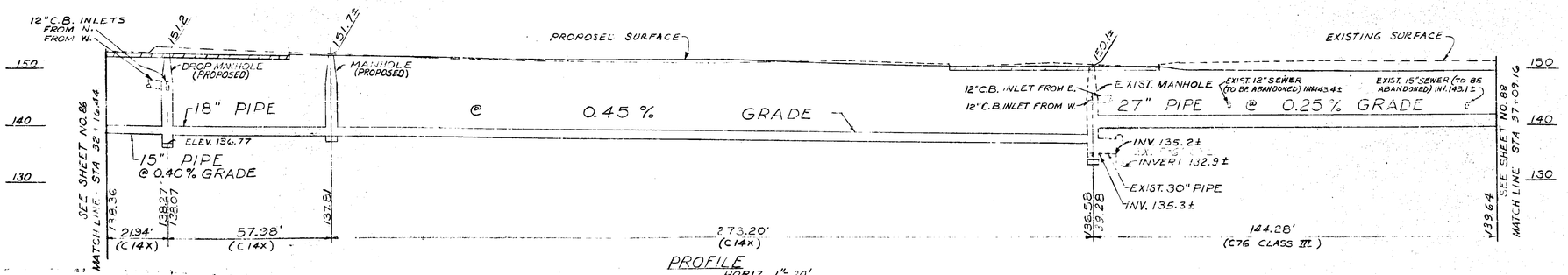
Kaufman



PLAN
SCALE 1" = 20'

DETAIL "D"
SCALE: HOZ. 1" = 20' VERT. 1" = 10'

DETAIL "E"
SCALE: HOZ. 1" = 20' VERT. 1" = 10'



PROFILE
SCALE: HORIZ. 1" = 20' VERT. 1" = 10'

NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF MANHOLES AND SEWERS TO BE ABANDONED, SEE ROAD PLANS.
4. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.

LEGEND

- PROPOSED SEWERS, 4'-0" OR MORE
- PROPOSED SEWERS, LESS THAN 4'-0"
- EXIST. SEWERS, 4'-0" OR MORE
- EXIST. SEWERS, LESS THAN 4'-0"
- CATCH BASIN & DRAIN (EXISTING)*
- WATER, OVER 12" — W
- WATER, 12" OR LESS — W
- GAS — G
- D.E.CO. CONDUIT — E
- M.B.T. CONDUIT — T
- P.L.C. CONDUIT — L
- PROPOSED CATCH BASIN DRAIN

* CATCH BASINS & DRAINS (EXISTING) NOT SHOWN EXCEPT IN KEATING.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
DATE 3-8-65

DESIGNED BY C.G.	APPROVED
DRAWN BY D. KAHN, E. HILL	SANITARY ENGINEER
CHECKED BY L.E. Barker	ASS'T CITY ENGINEER Owen L. Palmer
	CITY ENGINEER

SHEET 13 OF 17 SHEETS

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATION EIGHT MILE ROAD
EAST BOUND SERVICE DRIVE
KEATING TO ALLEY EAST OF ANDOVER

REVISIONS

NO.	DESCRIPTION	DATE	BY

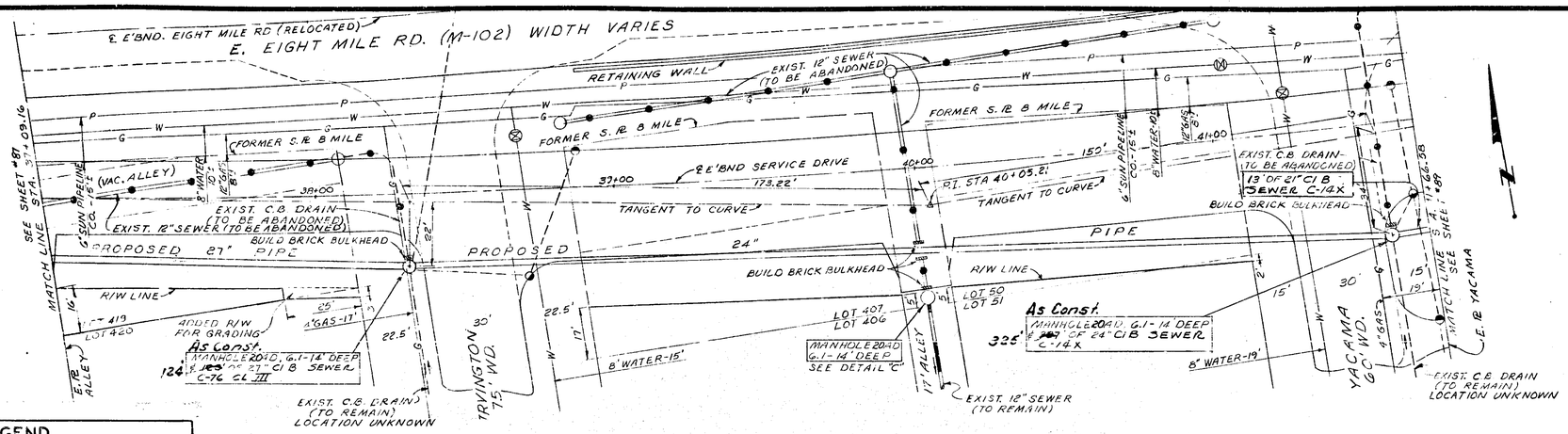
SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

SEC.	SH.
C-6	5-13

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) S9	87

Kaufman



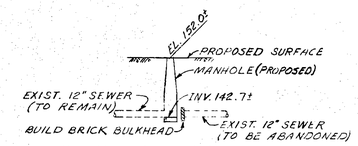
PLAN

SCALE 1"=20'

LEGEND

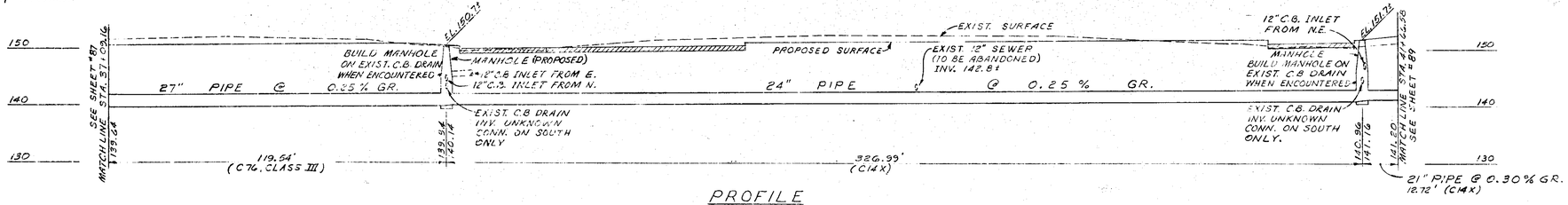
PROPOSED SEWERS, 4'-0" OR MORE	
PROPOSED SEWERS, LESS THAN 4'-0"	
EXIST. SEWERS, 4'-0" OR MORE	
EXIST. SEWERS, LESS THAN 4'-0"	
CATCH BASIN & DRAIN (EXIST.)*	
WATER, OVER 12"	W
WATER, 12" OR LESS	W
GAS	G
D.E.CO. CONDUIT	E
M.B.T. CONDUIT	T
P.L.C. CONDUIT	L
SUN PIPELINE CO.	P
CATCH BASIN & DRAIN (PROPOSED)	

*CATCH BASINS & DRAINS (EXIST.) NOT SHOWN EXCEPT IN IRVINGTON & YACAMA.



DETAIL "C"

SCALE: HORZ. 1"=20' VERT. 1"=10'



PROFILE

SCALE: HORZ. 1"=20' VERT. 1"=10'

NOTES:

1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECTED BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF SEWERS AND MANHOLES TO BE ABANDONED, SEE ROAD PLANS.
4. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE DATE 3-8-65

DESIGNED BY C Gray	APPROVED
DRAWN BY C Gray	SANITARY ENGINEER
CHECKED BY	ASST. CITY ENGINEER
SHEET 14 OF 17 SHEETS	CITY ENGINEER

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATION EIGHT MILE ROAD
EASTBOUND SERVICE DRIVE
ALLEY EAST OF ANDOVER TO YACAMA

REVISIONS

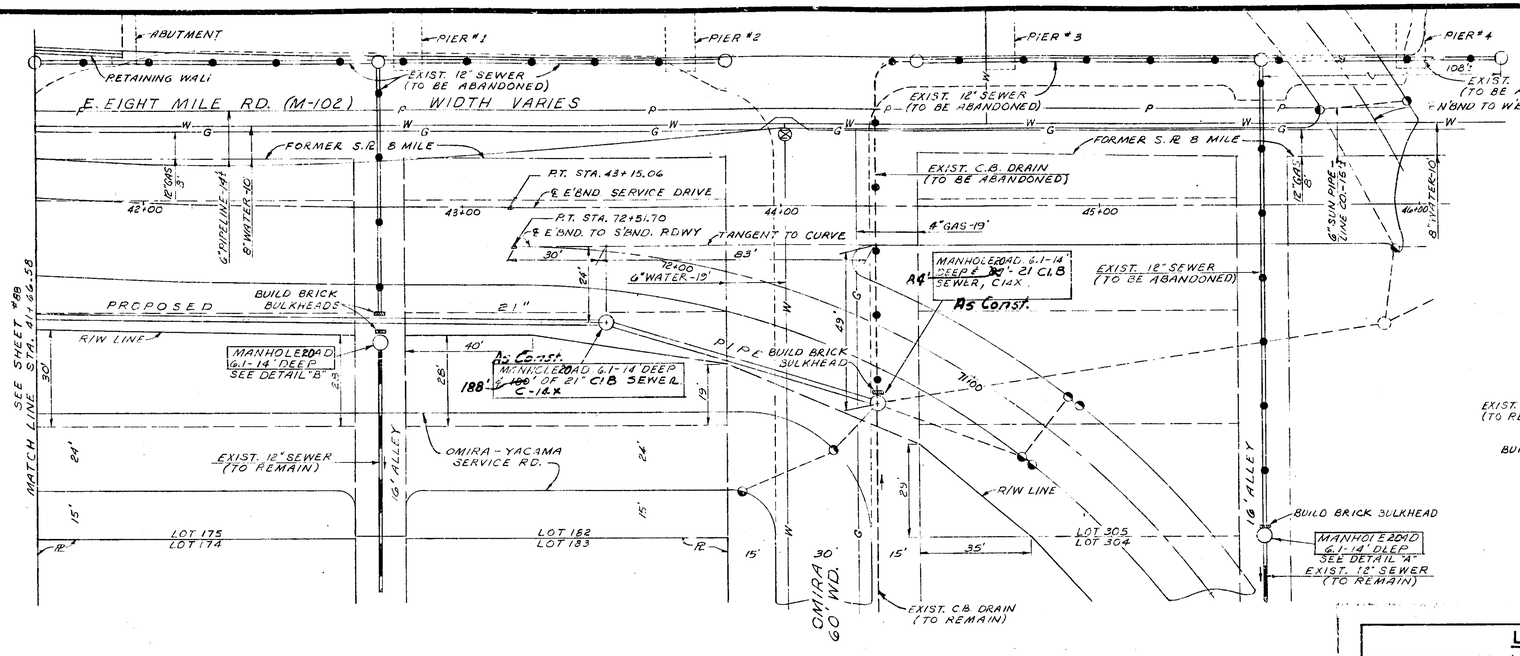
NO	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

SEC. C TL C 14

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	98



NOTES:

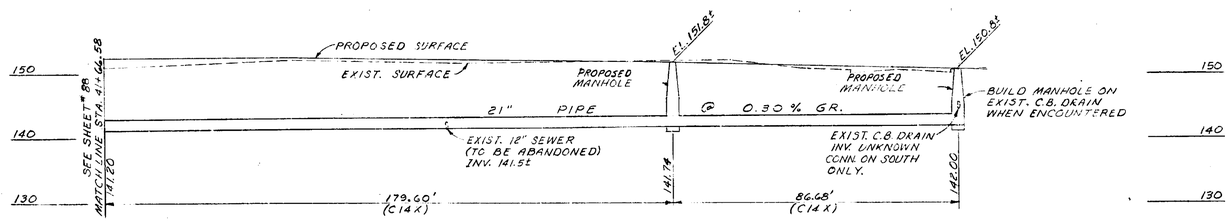
1. ALL EXISTING LIVE SEWERS ENCOUNTERED OR THAT ARE CONNECTED TO SEWERS TO BE ABANDONED, AND NOT KNOWN TO EXIST, AND THEREFORE NOT SHOWN, SHALL BE CONNECTED TO NEW OR EXISTING SEWERS TO REMAIN AS DIRECT BY THE ENGINEER. ALL SUCH "EXTRA WORK" SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 1.09.04 OF THE STANDARD SPECIFICATIONS.
2. FOR DETAILS OF PROPOSED CATCH BASINS AND DRAINS, SEE ROAD PLANS.
3. FOR DISPOSITION OF SEWERS AND MANHOLES TO BE ABANDONED, SEE ROAD PLANS.
4. CATCH BASIN DRAINS MUST NOT BE CONNECTED TO EXISTING SEWERS SHOWN ON THIS SHEET.

PLAN
SCALE 1"=20'

LEGEND

PROPOSED SEWERS, 4'-0" OR MORE	
PROPOSED SEWERS, LESS THAN 4'-0"	
EXIST. SEWERS, 4'-0" OR MORE	
EXIST. SEWERS, LESS THAN 4'-0"	
CATCH BASIN & DRAIN (EXIST.)*	
WATER, OVER 12"	W
WATER, 12" OR LESS	W
GAS	G
D.E.CO. CONDUIT	E
M.B.T. CONDUIT	T
P.L.C. CONDUIT	L
SUN PIPELINE CO.	P
CATCH BASIN & DRAIN (PROPOSED)	

*CATCH BASINS & DRAINS (EXIST.) NOT SHOWN EXCEPT IN OMIRA.



PROFILE
SCALE: HORZ. 1"=20' VERT. 1"=10'

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
DATE 3-8-65

DESIGNED BY C Gray	APPROVED
DRAWN BY C Gray	SANITARY ENGINEER
CHECKED BY	ASS'T CITY ENGINEER
SHEET 15 OF 17 SHEETS	CITY ENGINEER

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATION EIGHT MILE ROAD
EASTBOUND SERVICE DRIVE
YACAMA TO EAST OF OMIRA

REVISIONS			
NO	DESCRIPTION	DATE	BY

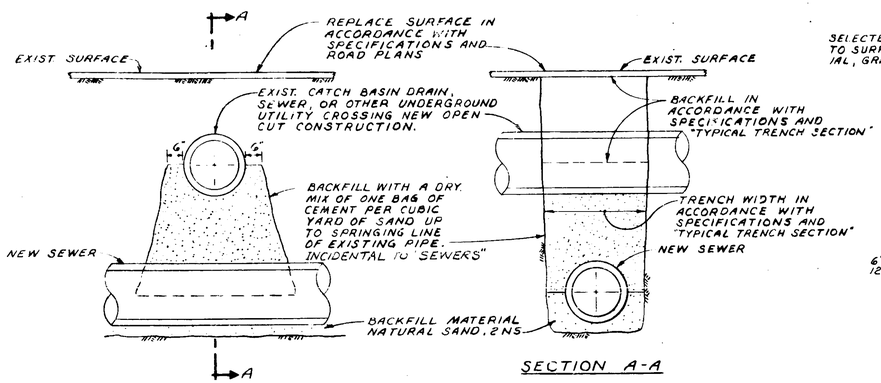
SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET	OF

SEC. C-E SH. 3-15

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 159	89

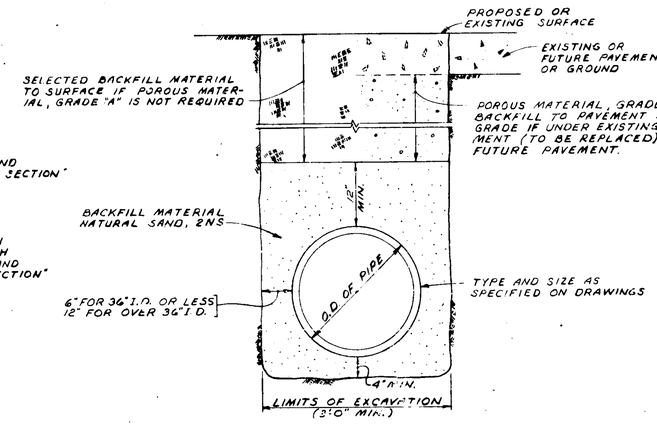
Kaufman



SECTION A-A

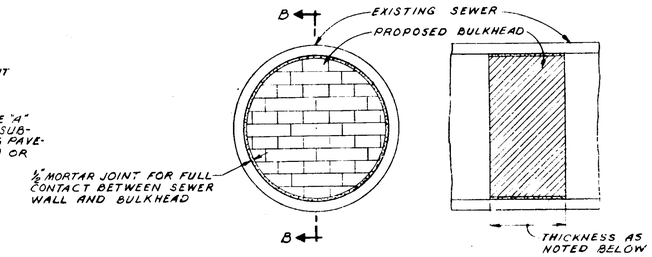
TYPICAL DETAIL AT CROSSING UNDER EXISTING UTILITIES

NO SCALE



TYPICAL TRENCH SECTION

NO SCALE

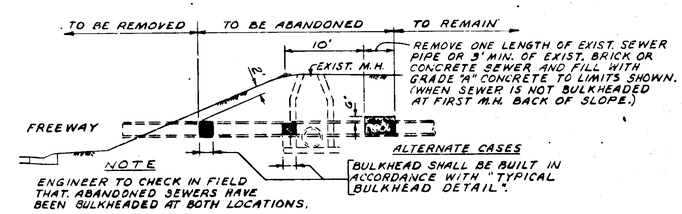


SECTION B-B

GENERAL NOTES:
1. ALL BULKHEADS SHALL BE BUILT OF BRICK. THE THICKNESS OF EACH BULKHEAD SHALL BE A MINIMUM OF 12" FOR HEIGHT OF SEWER OF 27" OR LESS AND 16" FOR HEIGHT OF SEWER EXCEEDING 27", UNLESS OTHERWISE SPECIFIED ON DRAWINGS.
2. SURFACE OF CONTACT BETWEEN EXISTING SEWER AND NEW BULKHEAD SHALL BE THOROUGHLY WIRE BRUSHED, CLEANED, AND WETTED BEFORE BUILDING BULKHEAD.
3. CARE SHALL BE EXERCISED IN PLACING BULKHEADS TO INSURE A TIGHT SEAL.
4. NO BRICK OR BRICK FRAGMENT SHALL BE IN CONTACT WITH THE WALL OF THE SEWER TO BE BULKHEADED.

TYPICAL BULKHEAD DETAIL

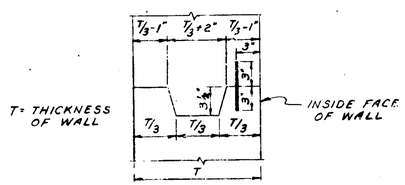
NO SCALE



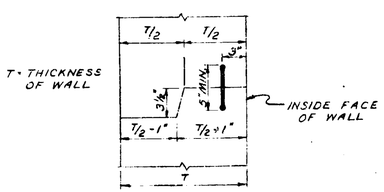
NOTE
ENGINEER TO CHECK IN FIELD THAT ABANDONED SEWERS HAVE BEEN BULKHEADED AT BOTH LOCATIONS.

SKETCH SHOWING METHOD FOR BULKHEADING EXISTING SEVERED SEWERS

NO SCALE



(SHOWING METAL TYPE WATERSTOP)



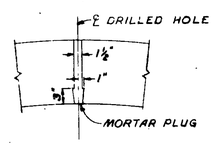
(SHOWING RUBBER TYPE WATERSTOP)

NOTE:
EITHER TYPE OF WATERSTOP MAY BE USED WITH EITHER TYPE OF CONSTRUCTION JOINT.

ALTERNATE CONSTRUCTION JOINTS AND WATERSTOP DETAIL

NO SCALE

NOTE:
WATERSTOPS REQUIRED ONLY WHERE SPECIFIED ELSEWHERE IN THESE PLANS

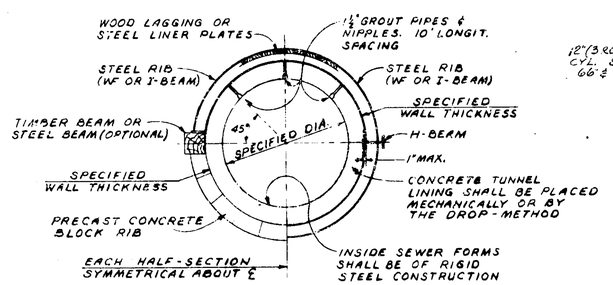


ALTERNATE GROUT HOLE

NO SCALE

NOTES
EITHER FULL RING OF STEEL RIBS & LAGGING OR 1/2 RING OF STEEL RIBS & LAGGING AND 1/2 RING OF CONCRETE BLOCK CONSTRUCTION METHOD MAY BE USED.

PROTRUSION OF STEEL RIBS & TIMBER BEAMS INTO THE SEWER WALL WILL NOT BE PERMITTED. PROTRUSION OF H-BEAM INTO THE SEWER WALL SHALL NOT EXCEED 1".

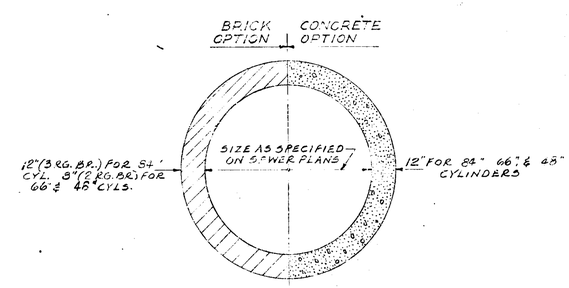


STEEL ARCH WITH CONCRETE BLOCK INVERT

COMPLETE STEEL RIBS

TYPICAL TUNNEL SECTION

NO SCALE



OPTIONS FOR TUNNEL SEWERS (84", 66" & 48")

SCALE: 3/16" = 1'-0"

REVISIONS	

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE — DATE 12-22-64

DESIGNED BY: A. Somerville	APPROVED: R. Burke, SANITARY ENGINEER
DRAWN BY: C. Grego	M. Jipson, ASST. CITY ENGINEER
CHECKED BY: H. E. Burke	Arthur F. Skewes, CITY ENGINEER
SHEET 16 OF 17 SHEETS	

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER EXPRESSWAY

MISCELLANEOUS SEWER DETAILS

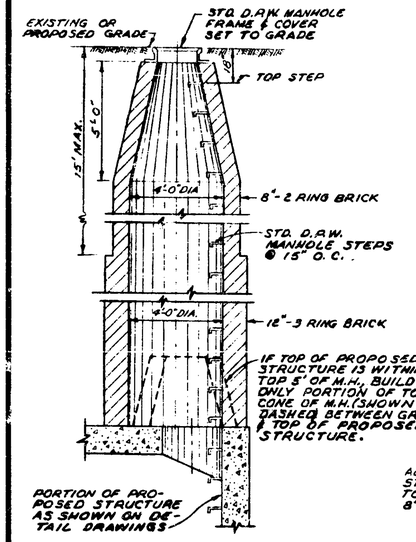
ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

SEC.	C-5 & 6	5-16

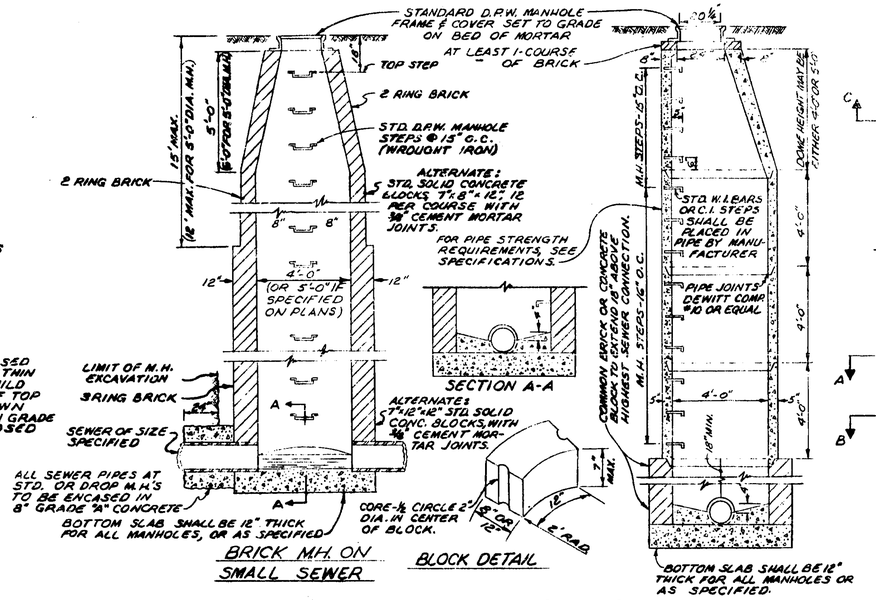
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	90

82252 L, C63; 63174 A, C64

Kaufman Squad 1962-1965



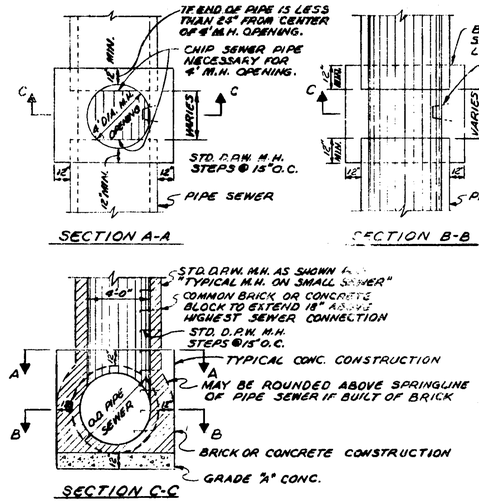
TYPICAL MANHOLE ON BOX SECTION
SCALE: 1/4"=1'-0"
(MANHOLE 21AD)



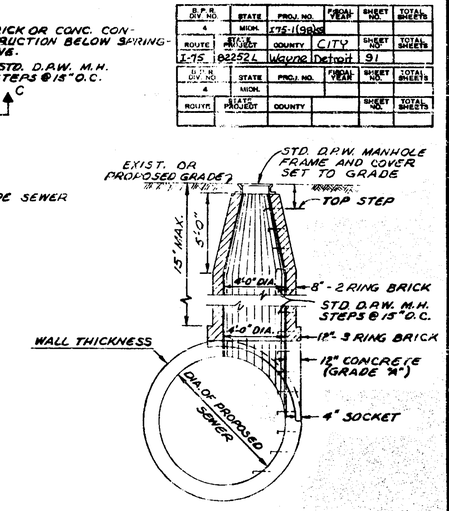
BRICK M.H. ON SMALL SEWER

PRECAST M.H. ON SMALL SEWER

ALTERNATE CONSTRUCTION
SCALE: 1/4"=1'-0"
(MANHOLE 20AD)



TYPICAL MANHOLE ON LARGE PIPE SEWERS
SCALE: 1/4"=1'-0"

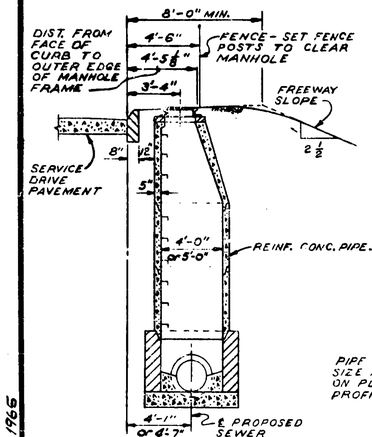


TYPICAL MANHOLE ON CIRCULAR SECTION
SCALE: 1/4"=1'-0"
(MANHOLE 22AD)

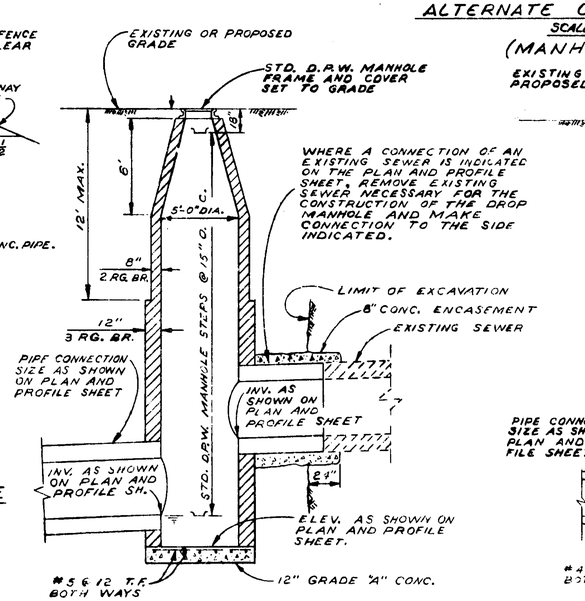
GENERAL NOTES

When constructing structures 20AD thru 24AD the contractor may use Precast Reinforced Concrete Units within the limitation of the 1966 M.S.H.D. Standard Specifications.

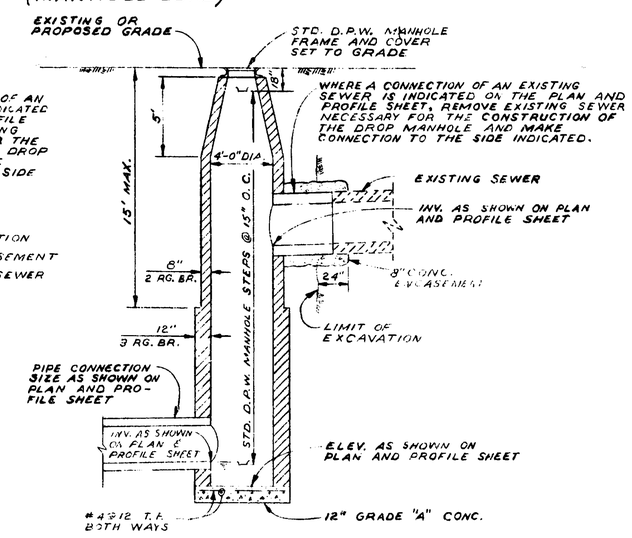
Where manholes are called for between the expressway fence and the service road curb the top portion shall be constructed with a straight side according to the detail shown on this sheet to make it accessible from the service roads.



DETAIL OF TYPICAL MANHOLE LOCATION BACK OF SERVICE DRIVE
SCALE: 1/4"=1'-0"



TYPICAL DROP MANHOLE (5'-0" DIA.) AND CONNECTION DETAILS
SCALE: 1/4"=1'-0"
(DROP MANHOLE 23AD - 5'-0" DIA.)



TYPICAL DROP MANHOLE AND CONNECTION DETAILS
SCALE: 1/4"=1'-0"
(DROP MANHOLE 24AD)

D.P.W. DIV. NO.	STATE	PROJ. NO.	FUNDING YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-1(98)59			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	91	
D.P.W. DIV. NO.	STATE	PROJ. NO.	FUNDING YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

D.P.W. SPECIAL DETAIL FOR MANHOLES
REVISED

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE DATE 10/2/64

DESIGNED BY C. Bonnville
DRAWN BY
CHECKED BY

R. Sturkes SANITARY ENGINEER
M. Kepler ASST. CITY ENGINEER
Gordon F. Palmer CITY ENGINEER

SEC. 0.516 S-17 SHEET 17 OF 17 SHEETS

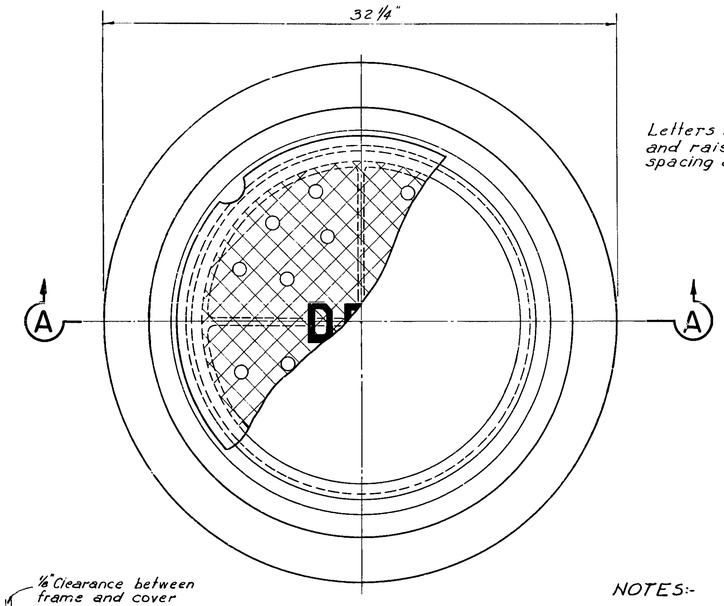
82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	91

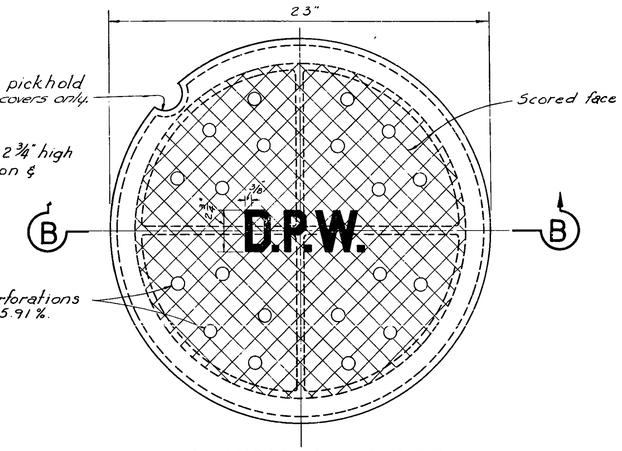
Kaufman Squad 1962-1966

FED. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75 (98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	92	

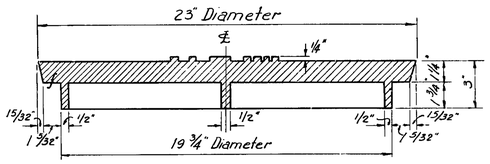
FED. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



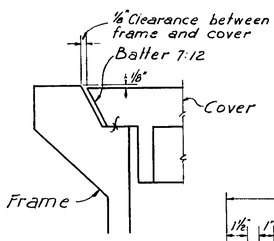
PLAN VIEW OF FRAME



PLAN VIEW OF COVER

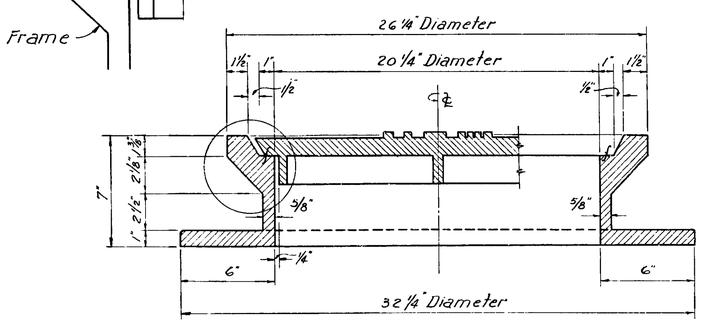


SECTION B-B



NOTES:-

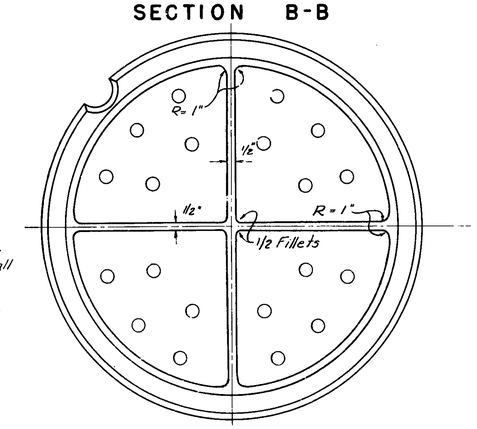
Frame and cover to be gray iron castings.
Total weight = 409# (Perf cover)
Manhole frame = 262#
Cover (Perf) = 147#
Cover (Blank) = 157#



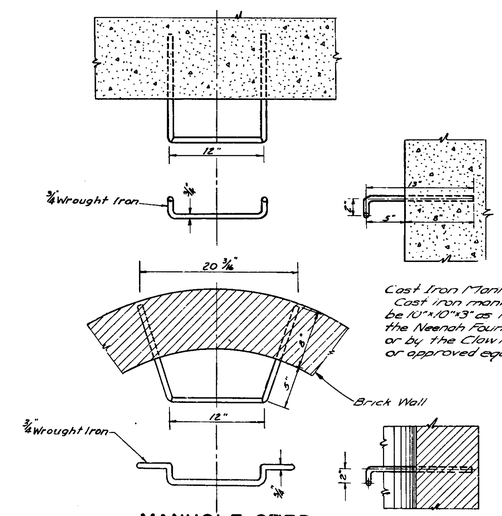
SECTION A-A

The seating face of the cover and the seat for same on the frame shall be machine finished so that the cover shall have an even bearing on its seat at all points without rocking or tilting.

SCALE 3" = 1'



BOTTOM VIEW OF COVER



Cast Iron Manhole Steps:
Cast iron manhole steps shall be 10"x10"x3" as manufactured by the Neenah Foundry Co. R-1980E, or by the Clow National F-3650, or approved equal.

MANHOLE STEP
SCALE 1 1/2" = 1'

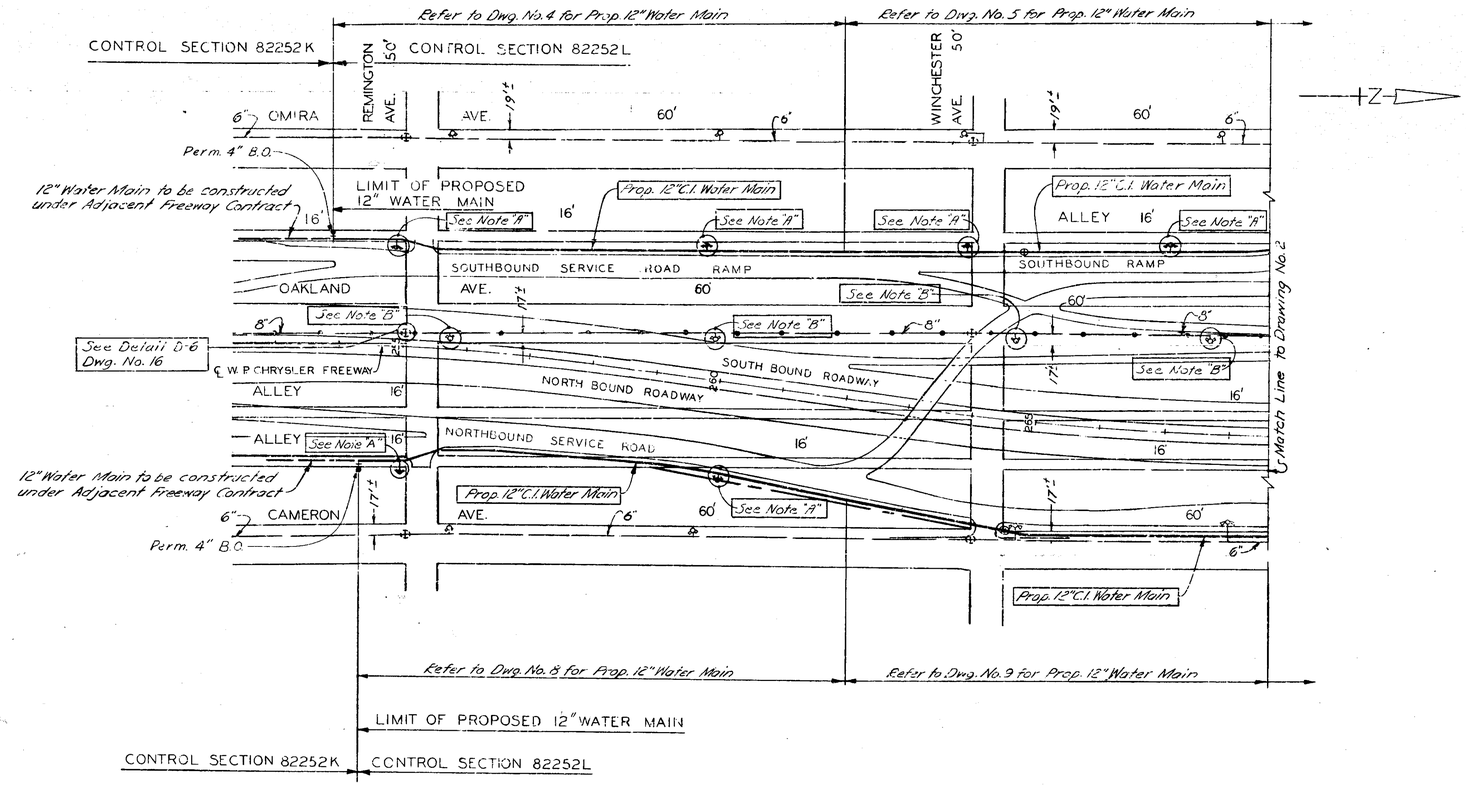
Note	No.	Descriptions	Dev	CAD	APD	Date
	0					
	C					
	B	Added Specs for C.I. Manhole Steps	S.S.	J.L.	J.M.D.	1-4-64
	A	Deleted "Hole Steel" from M.H. Steps	S.S.	J.L.	J.M.D.	1-4-64
		REVISIONS				

Kaufman Squad 1962-1965

SPECIAL DETAIL OF MANHOLE FRAME AND COVER AD

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	92



GENERAL PLAN
Scale: 1" = 100'

Note "A"
Contractor shall install 6" Tested Fire Hydrant.

Note "B"
Contractor shall relocate Exist. 6" Fire Hydrant.

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY
WATER SYSTEM ALTERATIONS
REMINGTON AVE. TO EIGHT MILE RD.
GENERAL PLAN

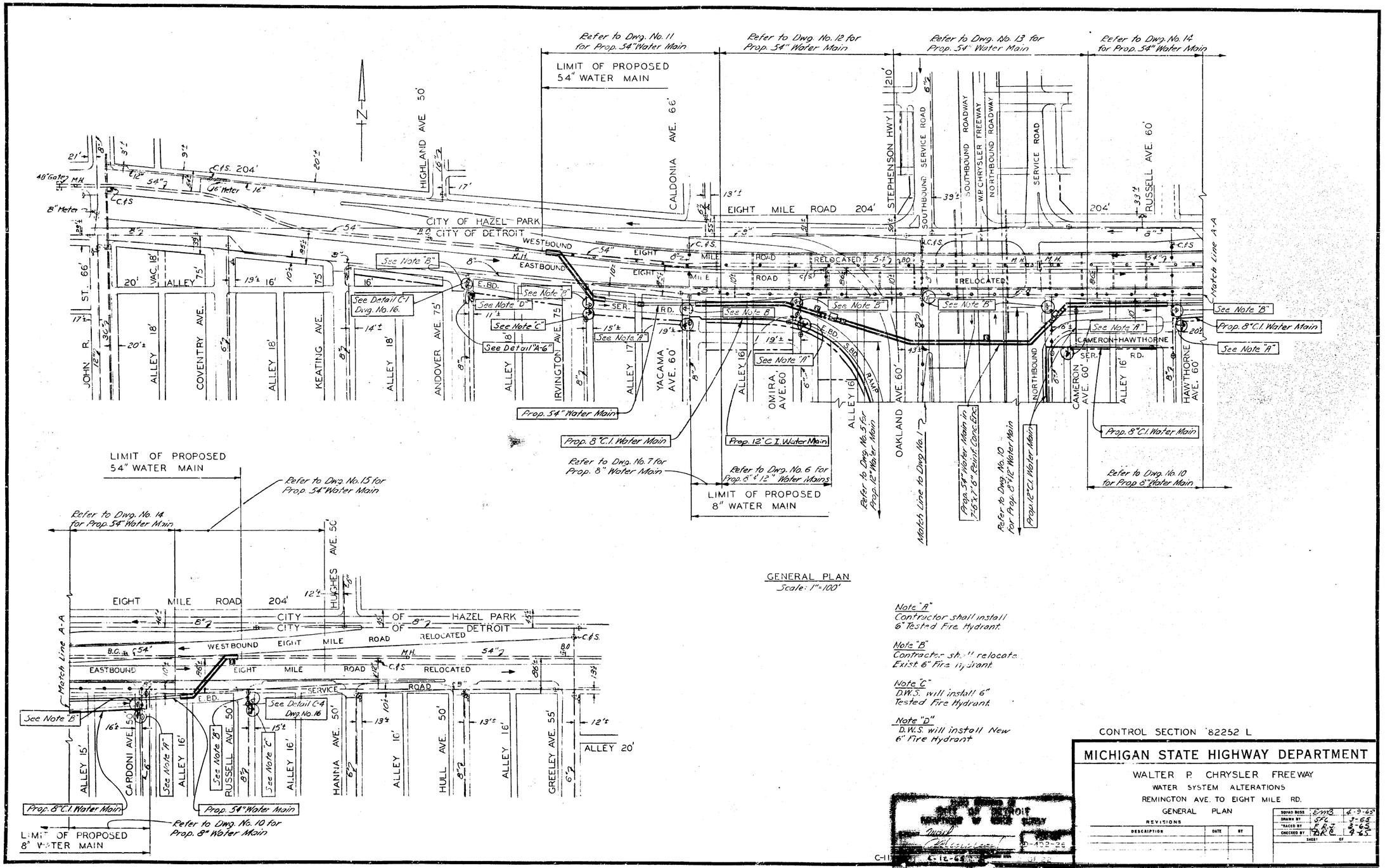
REVISIONS

DESCRIPTION	DATE	BY

SQUAD BOSS	BONADEO	4-9-65
DRAWN BY	SFL	3-65
TRACED BY	ERT	3-65
CHECKED BY	DRC	4-65
SHEET		OF

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	93



GENERAL PLAN
Scale: 1"=100'

Note "A"
Contractor shall install 6" Tested Fire Hydrant.

Note "B"
Contractor shall relocate Exist. 6" Fire Hydrant.

Note "C"
D.W.S. will install 6" Tested Fire Hydrant.

Note "D"
D.W.S. will install New 6" Fire Hydrant

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY
WATER SYSTEM ALTERATIONS
REMINGTON AVE. TO EIGHT MILE RD.
GENERAL PLAN

REVISIONS

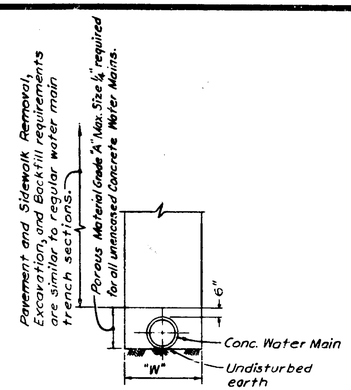
DESCRIPTION	DATE	BY

SQUAD BOSS	EMB	4-9-65
DRAWN BY	SFL	3-65
TRACED BY	F.R.J.	3-65
CHECKED BY	DRC	4-65
SHEET	OF	

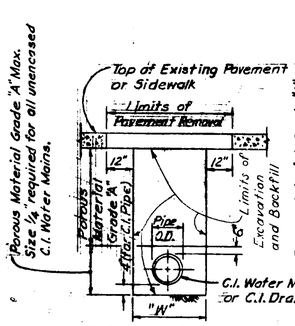
C-11

82252 L, C63; 63174 A, C64

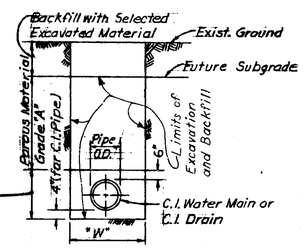
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	94



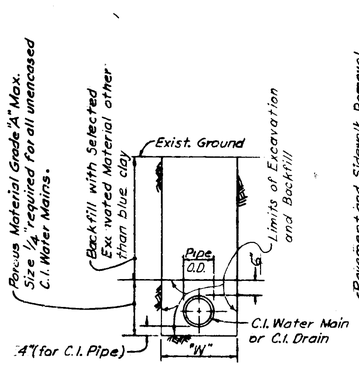
For Reinf. Conc. Water Mains



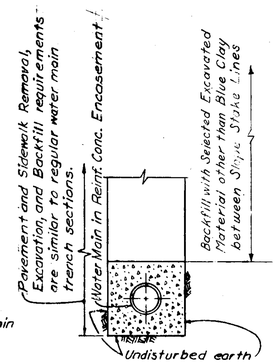
For C.I. Water Mains and C.I. Drains under Existing Pavements, Curbs and Sidewalks



For C.I. Water Mains and C.I. Drains under proposed Pavement, Curbs and Sidewalks



For C.I. Water Mains and C.I. Drains outside of Pavements, Curbs and Sidewalks



For Water Main in Reinf. Concrete Encasement

TYPICAL WATER MAIN TRENCH SECTIONS

No Scale

TRENCH SECTION NOTES

Removal and replacement of pavement, curb, and sidewalk will be paid for separately, based on the standard trench sections. Quantities are included in the Road Plan Quantities.

For pay limits of Pavement Removal and Replacement, "W" shall not exceed outside diameter of the pipe plus 24" for Pipe larger than 36" diameter, 12" for pipe up to and including 36" diameter. A trench width of less than 36" will not be required.

Trenches outside of pavement, curbs, and sidewalks where the center line of the trench is less than 4 feet from the face of curb, edge of pavement or edge of sidewalk shall be backfilled to the subgrade with porous material Grade "A".

Bedding for C.I. Pipe shall consist of 4" of Porous Material, Grade "A", maximum size ¼". Reinforced concrete pipe shall be laid on undisturbed earth.

Encasements and thrust blocks shall be poured against undisturbed earth. Bottom 3" of encasement may be poured separate from encasement and used as a subfooting.

All encasements and thrust blocks shall terminate at the face of pipe bells.

Sheeting and Bracing where required is incidental to pipe laying.

LEGEND

New Water Main	Under 24"	24" and over
Existing Water Main	Under 24"	24" and over
Future Water Main	Under 24"	24" and over
New Water Main Connection by D.W.S.		
Water Mains to be Abandoned		
New Gate Valve and Well		
Existing Gate Valve and Well		
New Hydrant or Relocated Hydrant		
Existing Hydrant		
Existing Sewer or Drain	Under 24"	24" and over
Gas Main		
Telephone and Telegraph Conduit or Underground Cable		
Electric Power Conduit or Underground Cable		
Petroleum Products Line		
Steam Line		
Trees		Size
Utility Pole		Owner
Boulevard Light		
Police and Fire Alarm Box	O P.B	O F.B
Traffic Signals		
Mailbox, Parking Meter, or Small Sign		
Large Sign		
Gas Stop or Drip		
Catch Basin	Proposed	Existing
Sewer Manhole	Proposed	Existing
Pole Anchor		
Elevation Control Monument		x B.M.
Existing Ditch		
Section Line		
Freeway Right of Way Line		

NOTES

Existing water mains, as shown, indicate approximate location only as shown by D.W.S. records and no guarantee is made as to completeness or accuracy.

Elevations of existing water mains are not known. Approximate elevations shown on the Profiles are based on the assumption of average depth. The grades of the proposed water mains are subject to change to suit actual elevations of existing water mains.

Excavation and backfilling for the entire work shall be done by the Contractor, including excavation and backfilling for work to be done by D.W.S., except for service connections and curb box relocations.

The Contractor shall furnish all waterworks material required for the entire work, including work indicated on the drawings to be done by D.W.S., except for service connection materials.

Service connections and their relocations will be made by D.W.S. Abandoned water services on existing water mains to remain in service will be abandoned at the existing water main by D.W.S. Services to be abandoned at the existing water main or to be reconnected to the new water mains are not all shown on the plans.

Temporary bracing is incidental to pipe laying and shall be installed by the Contractor.

Removal of abandoned water mains as required for clearance to construct the proposed water mains is incidental to pipe laying.

The locations and elevations of existing utilities are shown in accordance with available data. The Contractor shall expose these utilities, where required, to determine actual locations.

Other utilities may be making alterations to their existing systems in the vicinity of the water main construction shown on the plans. These utilities should be consulted for the latest information regarding the location of their facilities

A minimum clearance of one foot vertically and three and one half feet horizontally shall be maintained between the water main and other utilities, unless otherwise shown on the plans or approved by the Engineer. If a conflict is indicated between the water main and any other utility, that utility should be consulted.

The Reference Numbers called for on Water Plans refer to Dept. of Water Supply Drawing Numbers.

The location of fire hydrants, as shown, are approximate. D.F.D. will give exact location of proposed fire hydrants prior to installation.

Contractor shall build all Concrete Thrust Blocks and Gate Wells.

Elevation Datum is City of Detroit Datum

Quantities are shown on Dwg. No. 4

Abandoning, Adjusting, or Reconstructing Gate Wells quantities are called for on Removal Sheets # 26 to #34

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P CHRYSLER FREEWAY

GENERAL NOTES AND TYPICAL TRENCH SECTIONS

WATER SYSTEM ALTERATIONS

ROAD DES	E.W.B.	4-9-65
DRAWN BY	J.W.	11-4-64
TRACED BY		
CHECKED BY	R.R.C.	4-65
SHEET	OF	

REVISIONS

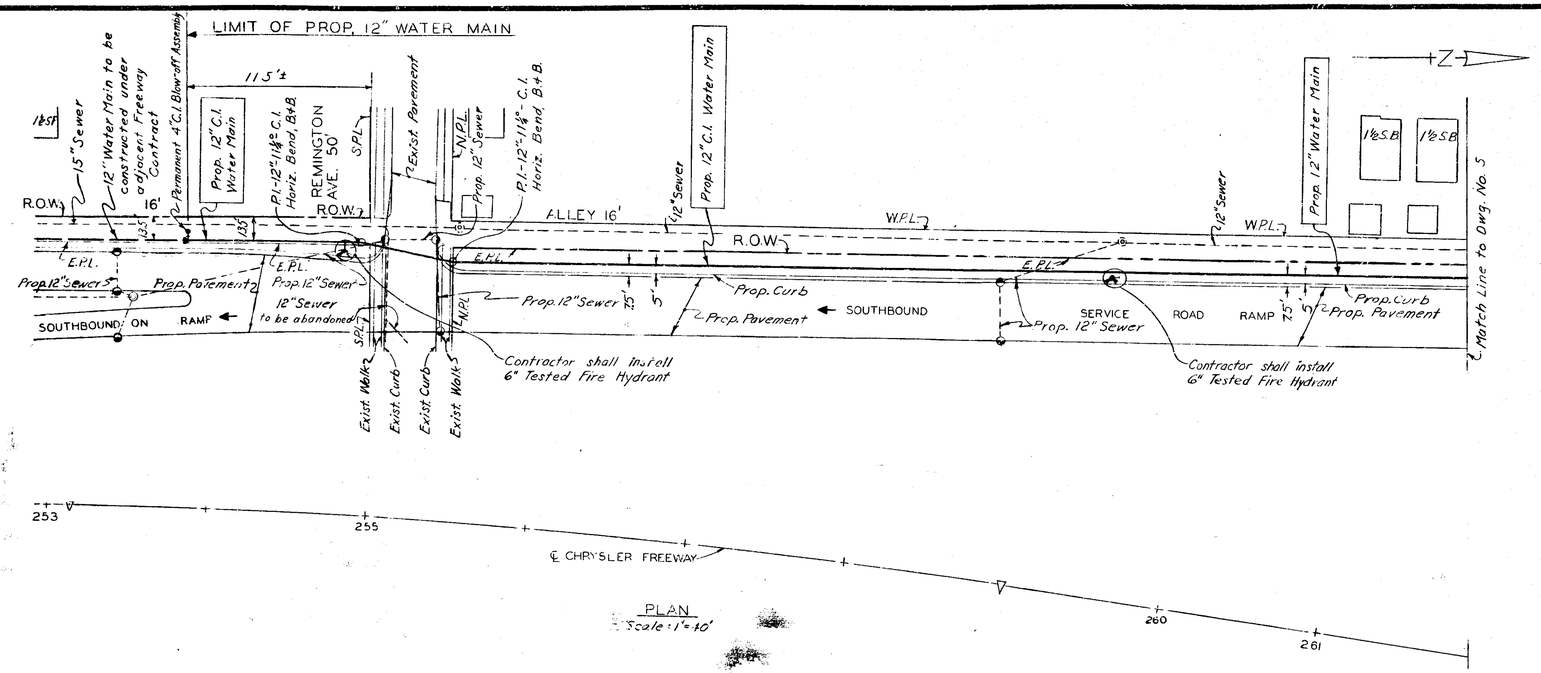
NO.	DESCRIPTION	DATE	BY

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY

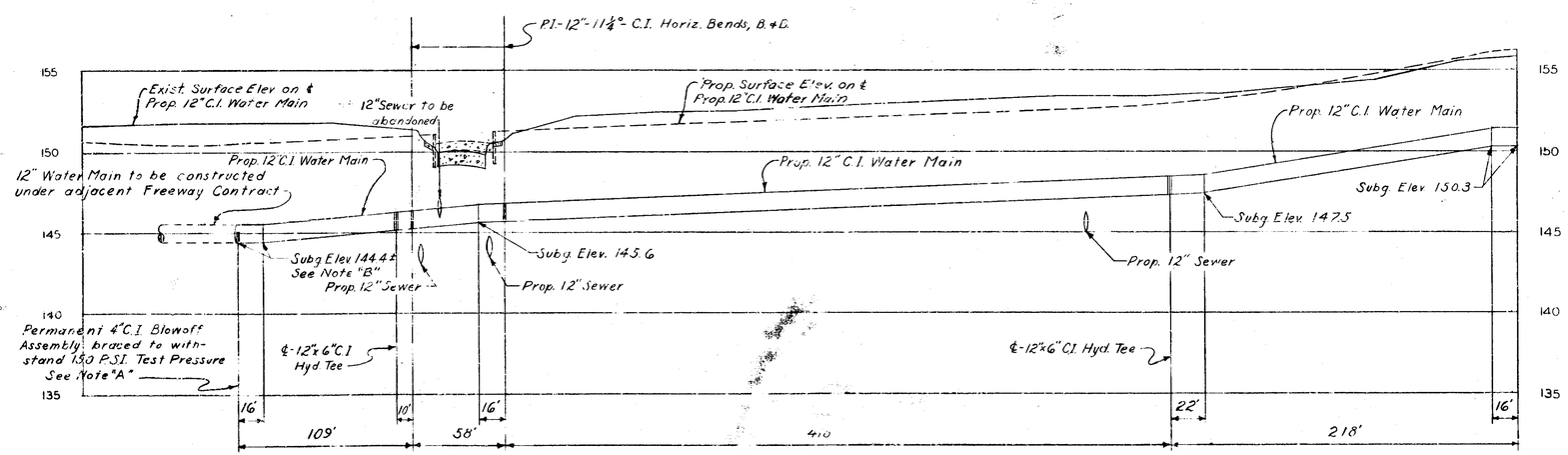
CORRECT: W.E.G.
APPROVED: [illegible]
DATE: 4-12-65
JOB NO. 0-402-26
DRAWING NO. 1 OF 22

C-11

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	95



PLAN
Scale: 1" = 40'



PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 4'

Note "A"
Permanent 12" x 4" C.I. Tee and permanent 12" C.I. Plug included in permanent 4" C.I. Blowoff Assembly

Note "B"
℄ of the Proposed Water Main shall meet ℄ of the Exist. Water Main.

Note:
Quantities for this Drawing are included in the quantities shown below.

QUANTITIES

ITEM	AMOUNT	As Const.
Concrete Grade "A" (For Water Main Encasements and Thrust Blocks.)	~~204~~ cu.yds	2,052.8
Steel Reinforcement (For Water Main Encasements	~~14,700~~ lbs.	146,658
6" C.I. Water Main, Furnished	~~64~~ lin. ft.	51
8" C.I. Water Main	~~85~~ lin. ft.	85
8" C.I. Water Main, Furnished	~~187~~ lin. ft.	240
8" C.I. Water Main	~~777~~ lin. ft.	779
12" C.I. Water Main, Furnished	~~8~~ lin. ft.	10
12" C.I. Water Main	~~3,540~~ lin. ft.	3,540
36" Steel Plate Pipe	~~15~~ lin. ft.	12.24
54" Prestressed Concrete Water Main	~~2,212~~ lin. ft.	2,203.42
6" Gate Wells	3 each	
8" Gate Wells	6 each	
12" Gate Wells	4 each	
Special 8" Blow-off Wells	3 each	
36" Cone Valve Wells	2 each	
6" Gate Valves, Furnished	3 each	
8" Gate Valves, Furnished	3 each	
8" Gate Valves	3 each	
12" Gate Valves	4 each	
36" Cone Valves	2 each	
4" Permanent Blow-offs	2 each	
8" Permanent Blow-offs	3 each	
Relocating Hydrants	13 each	
6" Fire Hydrants, Furnished	1 each	
6" Gate Valves and Boxes, Furnished	3 each	
6" Gate Valves and Boxes	1 each	
Entrance Manhole Wells	4 each	
Water Main Trench (For work done by D.W.S.)	~~301~~ lin. ft.	298
Sand-Lime Mixture (Compacted in place)	~~700~~ cu. yds.	0
4" C.I. Pipe Drain	32 lin. ft.	

*	Earth Excavation	4,190 cu. yds.	5,064
*	Porous Material Grade "A" (Compacted in place)	4,190 cu. yds.	4,323

Quantities for all Drawings are shown above
* These items are summarized with Road Plan Quantities

REFERENCE DRAWINGS

General Plan _____ Dwg. No. 1
General Notes _____ Dwg. No. 3
Miscellaneous Details _____ Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS WEST SIDE OF FREEWAY
12" WATER MAIN FROM 115' SOUTH OF REMINGTON AVE. TO
638' NORTH OF REMINGTON AVE.

REVISIONS

NO.	DESCRIPTION	DATE	BY

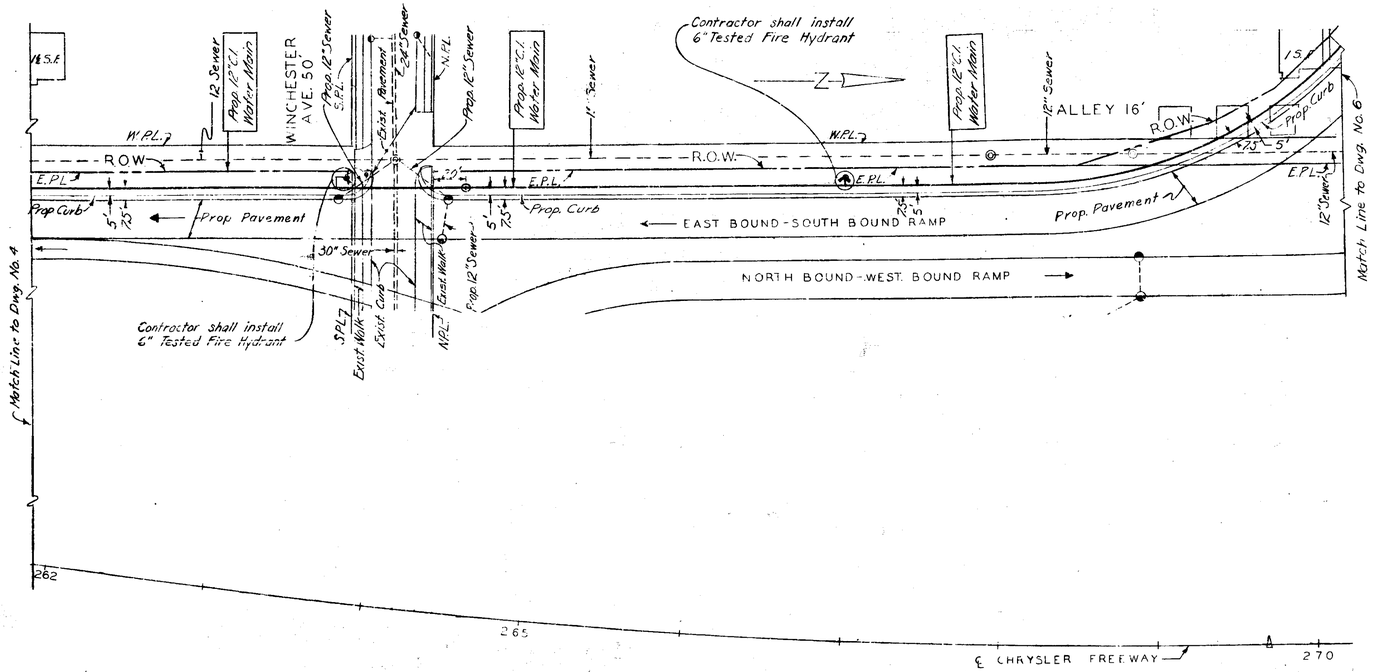
SQUAD BOSS	EMS	4-9-65
DRAWN BY	FEJ	2-61
TRACED BY	GEF	8-61
CHECKED BY	ARC	4-65
SHEET	OF	

D-402-26

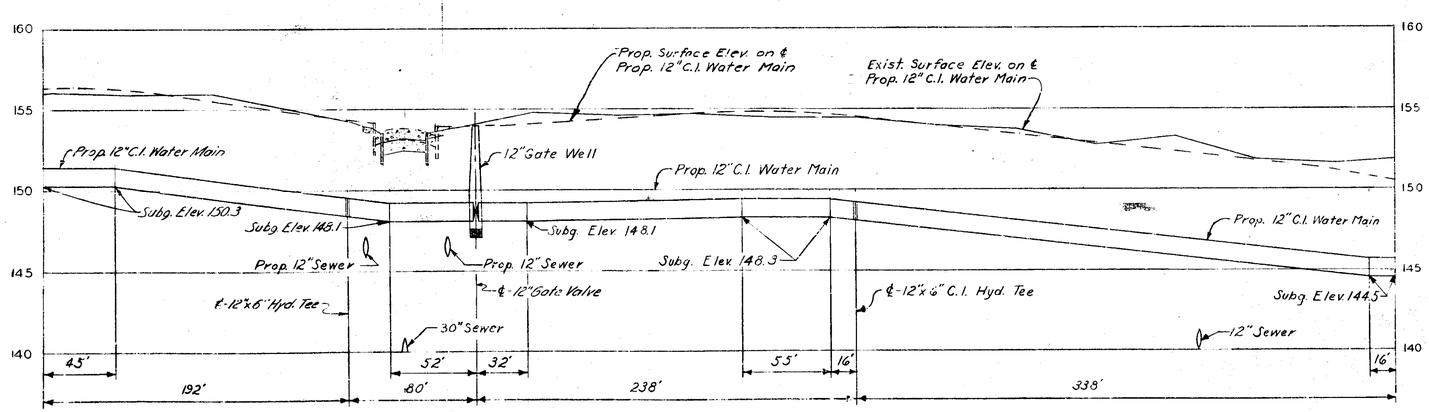
C-11

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	96

82252 L, C 63, 63174 A, C 64



PLAN
Scale: 1" = 40'



PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 4'

Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4.

REFERENCE DRAWINGS

General Plan	Dwg. No. 1
General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS WEST SIDE OF FREEWAY
12" WATER MAIN FROM 638' NORTH OF REMINGTON AVE.
TO 568' NORTH OF WINCHESTER AVE.

REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	EMB	4-9-65
DRAWN BY	C.P.B.	2-65
TRACED BY	E.R.J.	5-65
CHECKED BY	DRC	4-65

SHEET OF

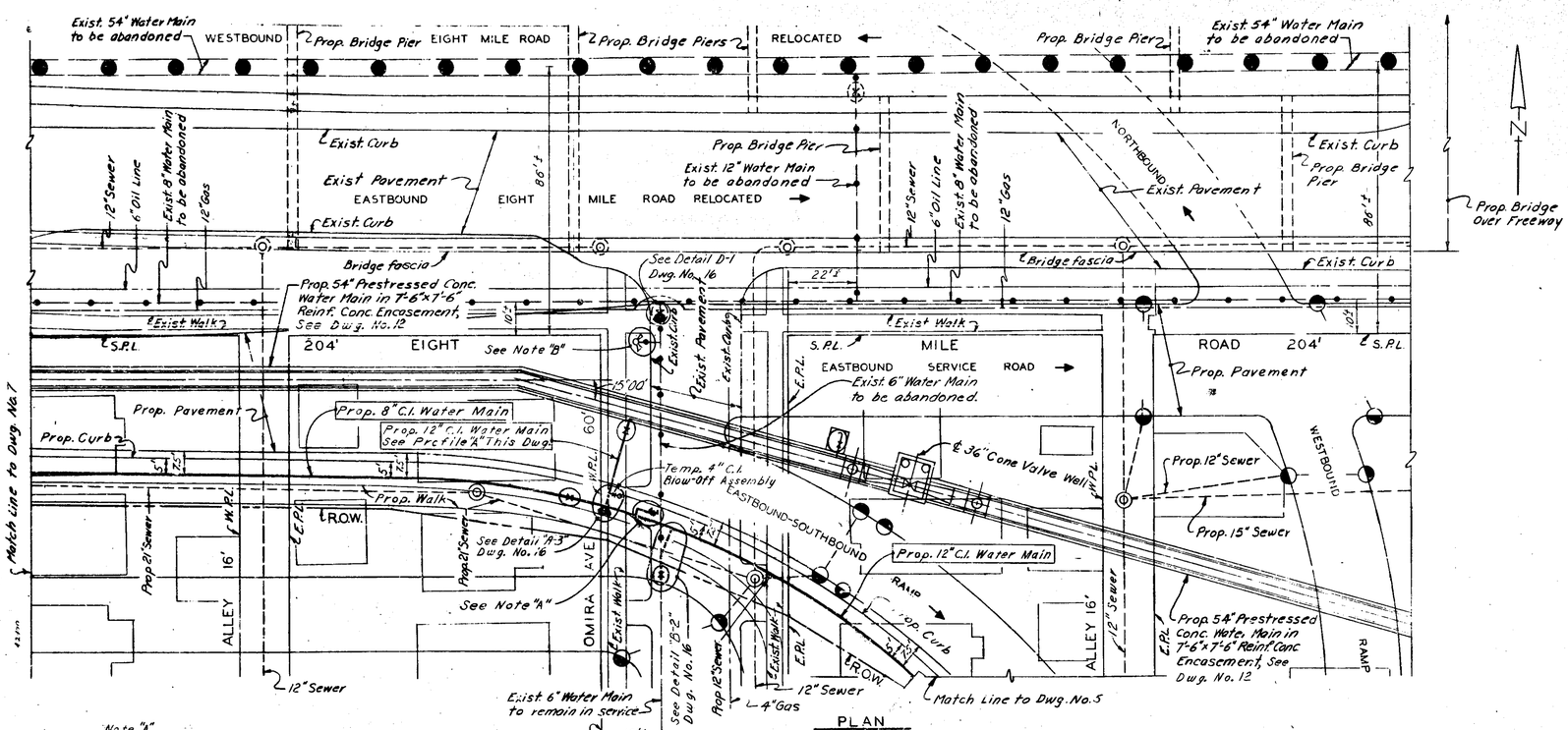
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
D-402-26
4-12-65
5 OF 22

C-11

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	97

Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4.

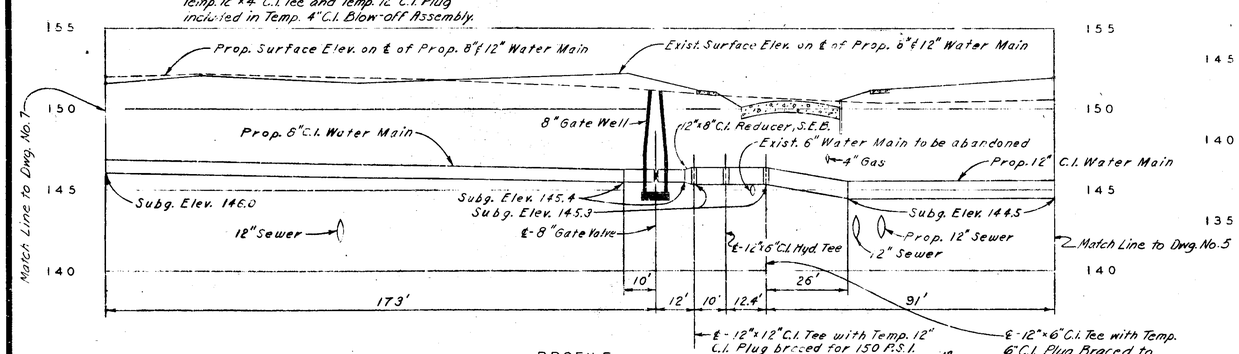


PLAN
Scale: 1" = 20'

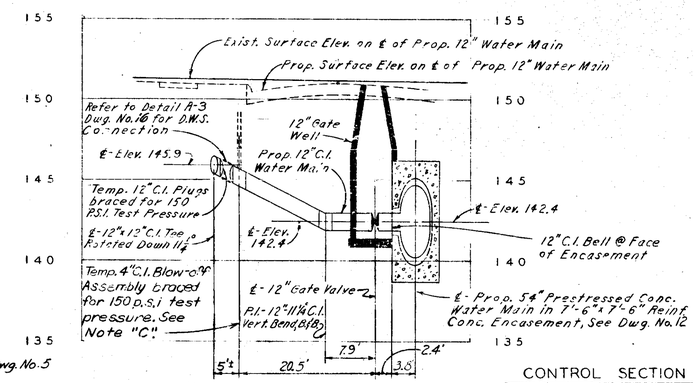
Note "A"
Contractor shall install Tested 6" Fire Hydrant.

Note "B"
Contractor shall Relocate Exist. 5" Fire Hydrant.

Note "C"
Temp. 12"x4" C.I. Tee and Temp. 12" C.I. Plug included in Temp. 4" C.I. Blow-off Assembly.



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 4'



PROFILE "A"
12" WATER MAIN CONNECTION
Scale: Horiz. 1" = 10'
Vert. 1" = 4'

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 54" Water Main	Dwg. No. 12
D.W.S. Connection Details No. 1	Dwg. No. 16
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

12" & 8" WATER MAIN FROM 658' N. OF WINCHESTER AVE. TO 182' W. OF OMIRA AVE.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

ROAD DESIGN	[illegible]	4-9-65
DRAWN BY	C.T.W.	3-65
TRACED BY	C.P.T.	3-65
CHECKED BY	[illegible]	4-65
SHEET		

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF WATER SUPPLY
[illegible]
4-12-65

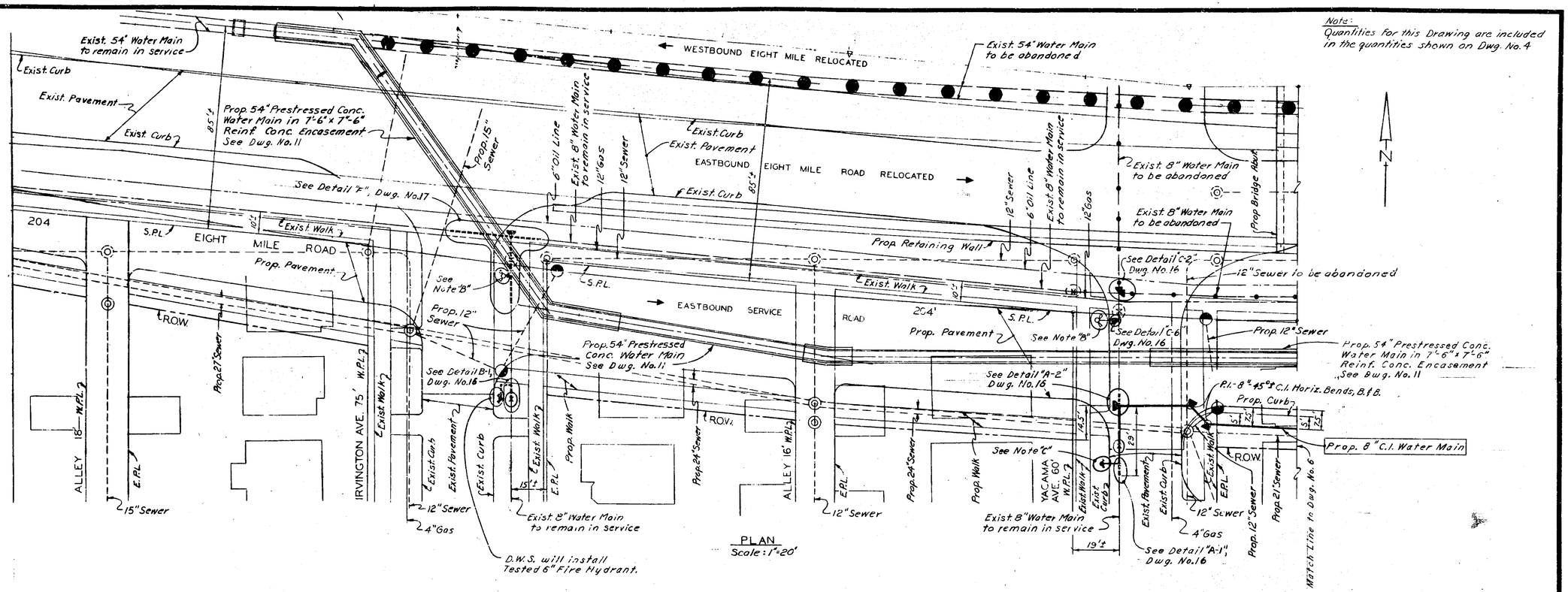
JOB NO. D-402-26
DRAWING NO. 6 OF 22

C-11

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	98

Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4



PLAN
Scale: 1" = 20'

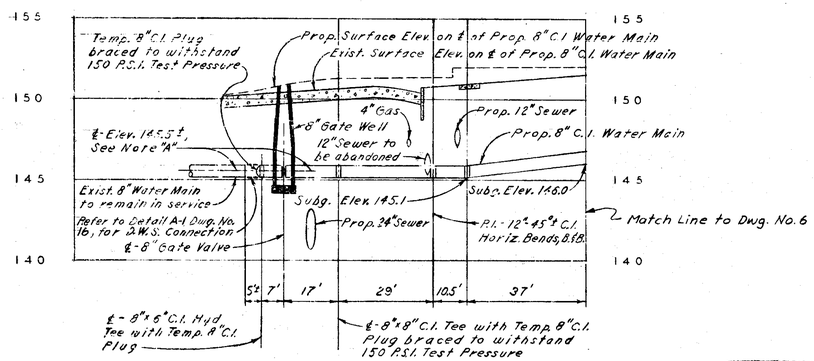
Note "A"
℄ of Proposed Water Main shall meet ℄ of Existing Water Main.

Note "B"
Contractor shall Relocate Exist. 6" Fire Hydrant.

Note "C"
Contractor shall install Tested 6" Fire Hydrant.

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 54" Water Main	Dwg. No. 11
D.W.S. Connection Details No. 1	Dwg. No. 16
D.W.S. Connection Details No. 2	Dwg. No. 17
Miscellaneous Details	Dwg. No. 22



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 4'

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
CONTROL NO. 7060
JOB NO. 3-402-26
4-12-65
1 OF 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

8" WATER MAIN FROM 152' W. OF OMIRA AVE. TO W.P.L. OF IRVINGTON AVE.

DESIGN BASIS	EMR	4-9-65
DRAWN BY	C.T.K.	3-65
TRACED BY	F.R.J.	3-65
CHECKED BY	D.R.C.	4-65
SHEET	OF	

REVISIONS

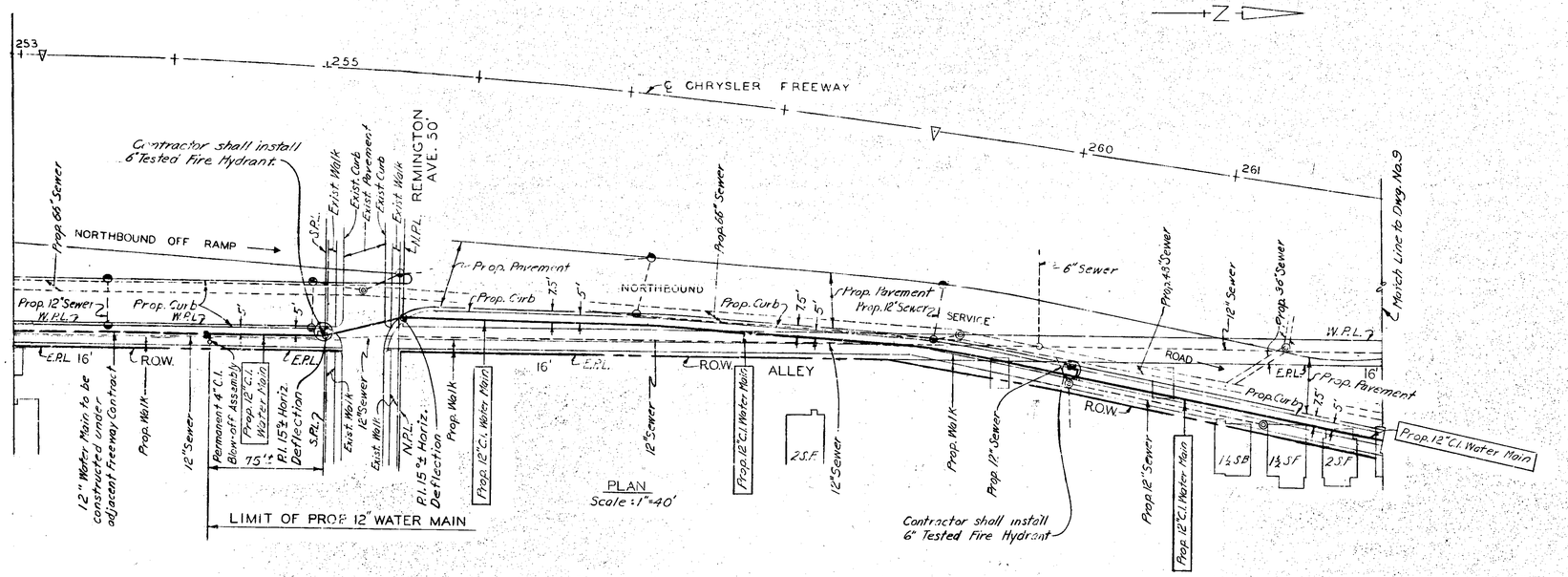
NO.	DESCRIPTION	DATE	BY

C-11

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (93) 59	99

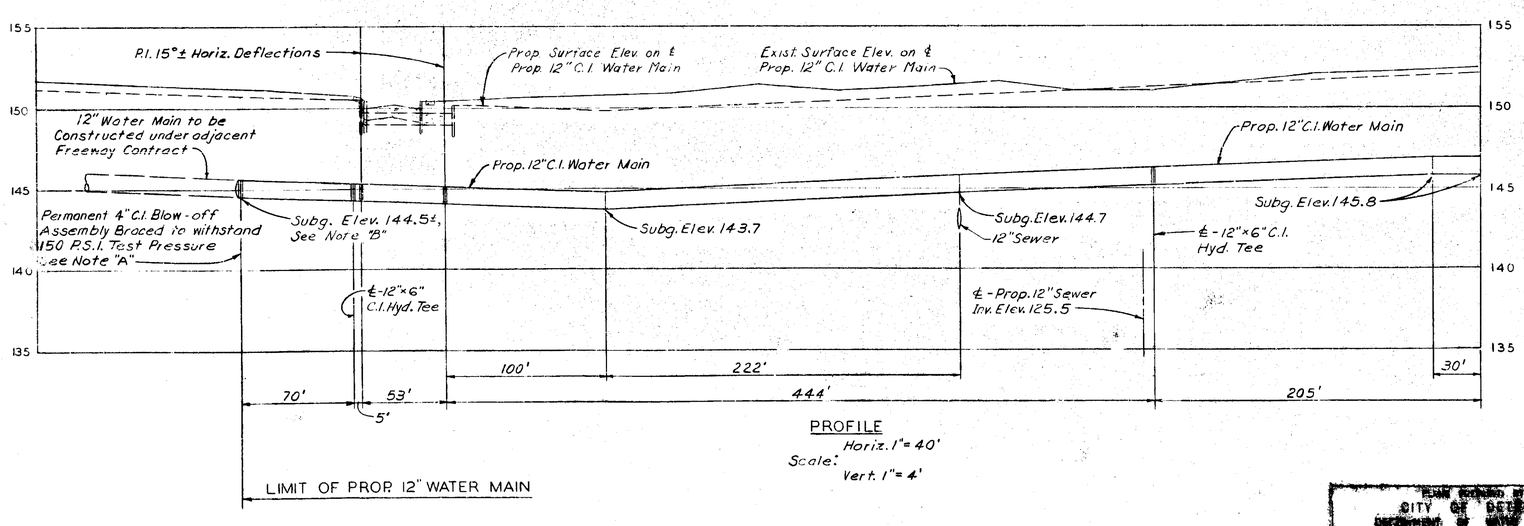
Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4.



PLAN
Scale: 1"=40'

Note "A"
Permanent 12"× 4" C.I. Tee & Permanent 12" C.I. Plug included in Permanent 4" C.I. Blow-off Assembly.

Note "B"
℄ of the Prop. Water Main shall meet ℄ of the Exist. Water Main.



PROFILE
Scale: Horiz. 1"= 40'
Vert. 1"= 4'

REFERENCE DRAWINGS

General Plan	Dwg. No. 1
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS EAST SIDE OF FREEWAY

12" WATER MAIN FROM 75' SOUTH OF REMINGTON AVE. TO 640' NORTH OF REMINGTON AVE.

REVISIONS

NO.	DESCRIPTION	DATE	BY

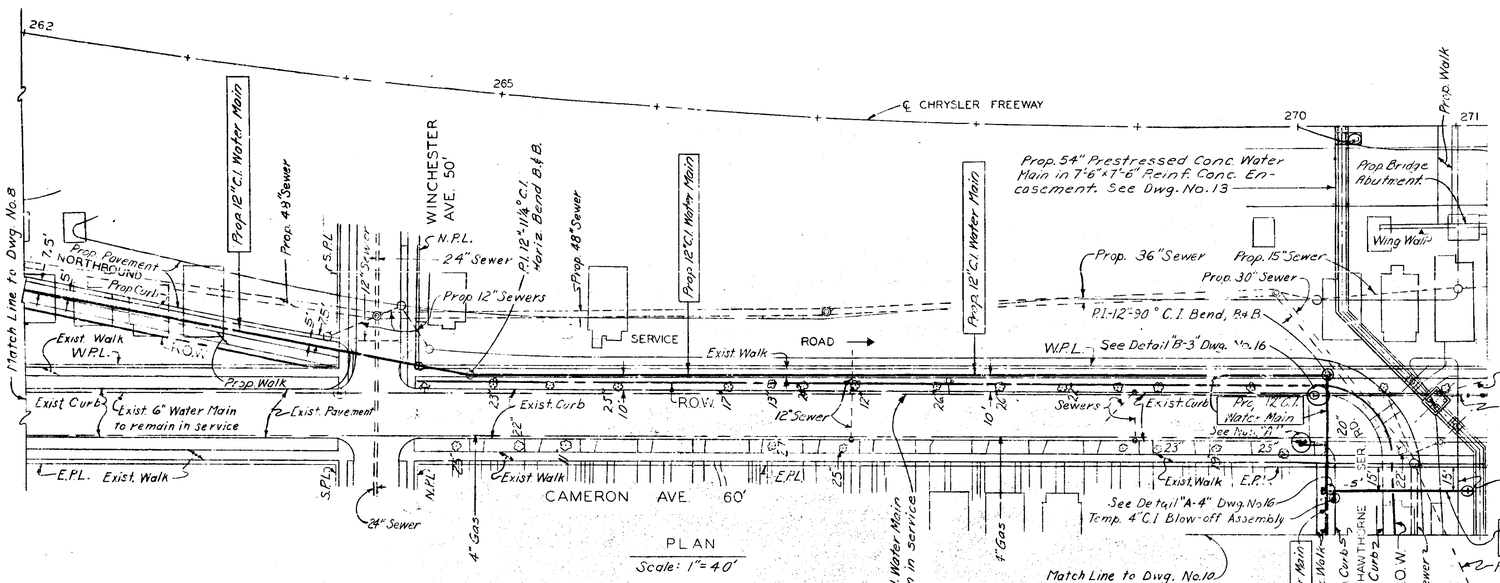
SQUAD BOSS	EMB	4-9-65
DRAWN BY	CWB, JW	3-65
TRACED BY	FRJ	3-65
CHECKED BY	DRC	4-65
SHEET	OF	

PLAN REVIEWED BY CITY OF DETROIT DEPARTMENT OF WATER SUPPLY
JOB NO. D-402-26
8 OF 22

82252 L, C63, 63174 A, C64

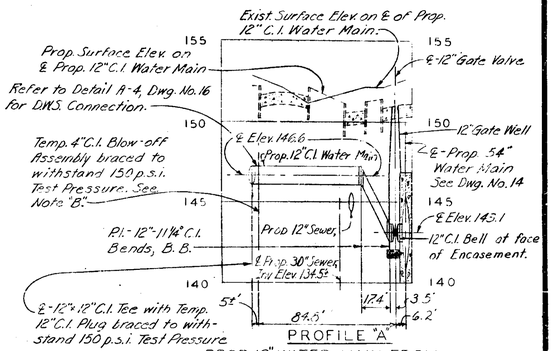
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	100

Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4.



PLAN

Scale: 1" = 40'



PROFILE "A"

PROP. 12" WATER MAIN FROM CAMERON-HAWTHORNE SER. RD. TO E'BD. SER. RD.

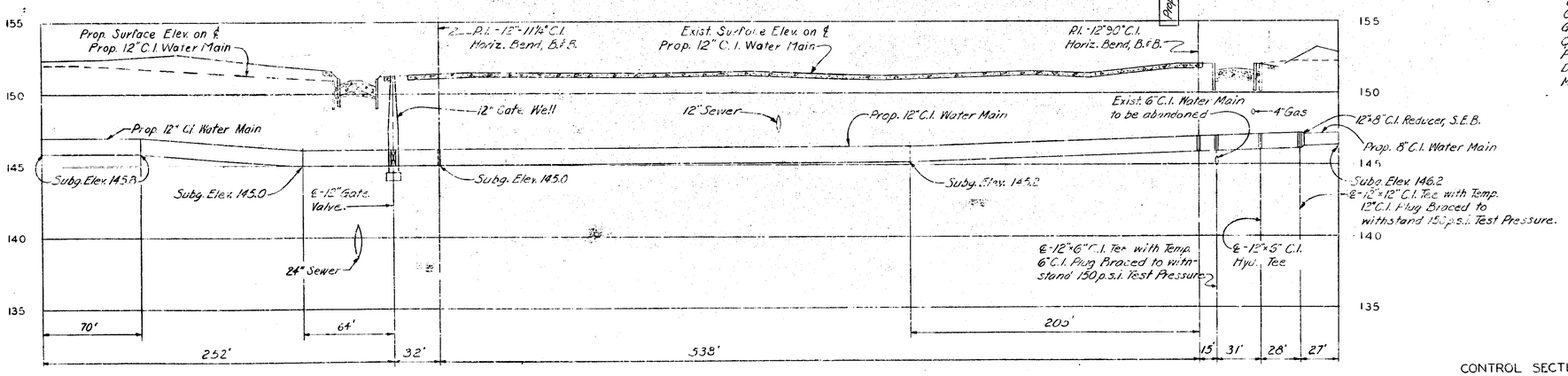
Scale: Horiz. 1" = 40'
Vert. 1" = 4'

Note "A"
Contractor shall install 6" Tested Fire Hydrant.

Note "B"
Temp. 12" x 4" C.I. Tee & Temp. 12" C.I. Plug included in Temp. 4" C.I. Blow-off Assembly.

REFERENCE DRAWINGS

General Plan	Dwg. No. 1
General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 54" Water Main	Dwg. No. 13
D.W.S. Connection Details No. 1	Dwg. No. 16
Miscellaneous Details	Dwg. No. 22



PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 4'

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS EAST SIDE OF FREEWAY

12" & 8" WATER MAINS FROM 640' NORTH OF REMINGTON AVE. TO 42' EAST OF CAMERON AVE.

REVISIONS

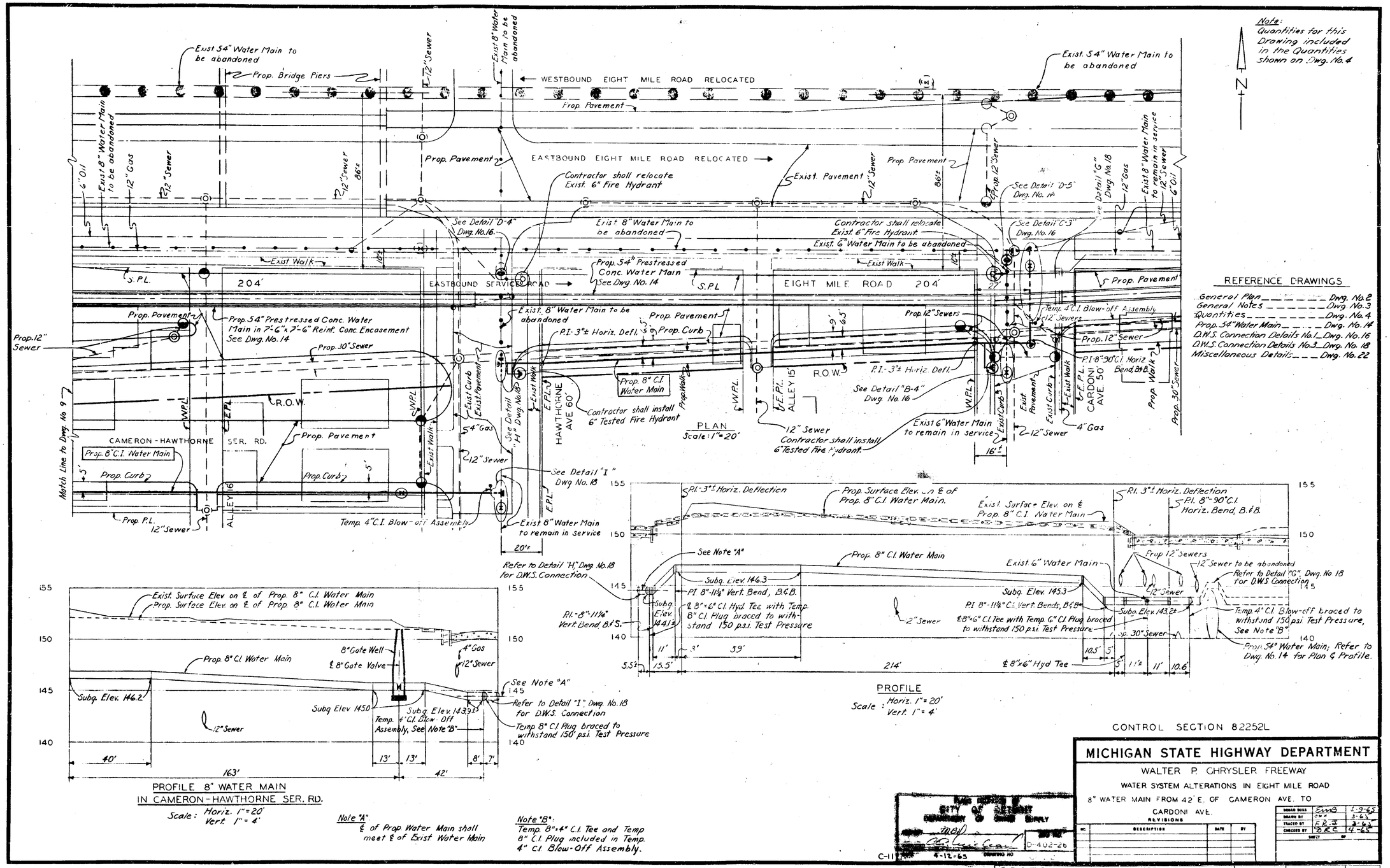
DESCRIPTION	DATE	BY

SQUAD BOSS	DWB	4-9-65
DRAWN BY	CRF	3-65
TRACED BY	FRJ	3-65
CHECKED BY	DKC	4-65

SHEET OF

C-11 [illegible] 9 OF 35

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252 L, C63; 63174 A, C64 — 82252L	175-1 (98) 59	101



REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 54" Water Main	Dwg. No. 14
D.W.S. Connection Details No. 1	Dwg. No. 16
D.W.S. Connection Details No. 3	Dwg. No. 18
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

8" WATER MAIN FROM 42' E. OF CAMERON AVE. TO CARDONI AVE.

REVISIONS

NO.	DESCRIPTION	DATE	BY

DRAWN BY	EWB	1-9-63
TRACED BY	CWD	3-63
CHECKED BY	RZ	3-63
	DEE	4-63

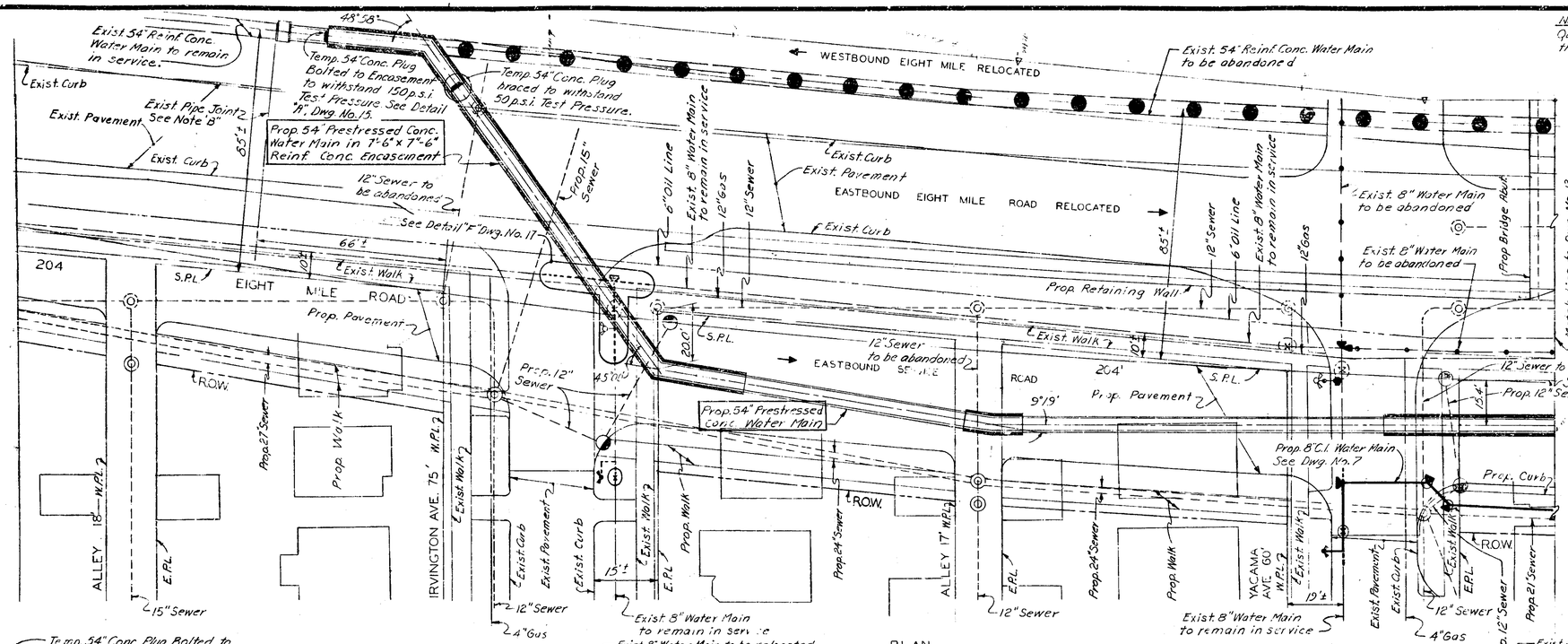
SHEET OF

C-11 4-12-63 D-402-26

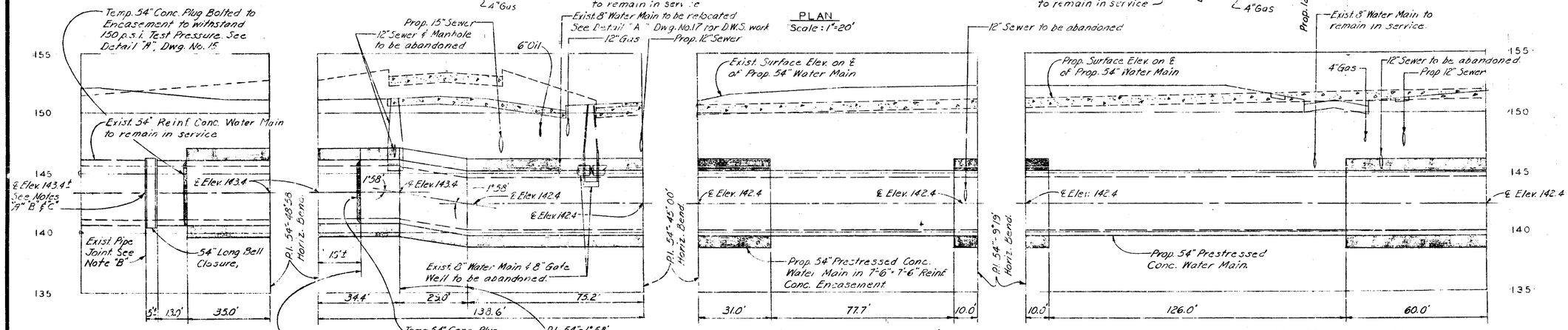
82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98,59)	102

Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4



PLAN
Scale: 1" = 20'



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 4'

Note "A"
℄ - of Prop. Water Main shall meet ℄ of Exist. Water Main.

Note "B"
Contractor shall locate Exist. 54" Water Main (including critical pipe joints) in Eight Mile Rd. at Russell Ave. and also west of Irvington Ave. prior to construction of the New 54" Water Main.

Note "C"
Contractor shall provide and install temporary bulkhead to prevent trench water and/or foreign material from entering the existing 54" Water Main

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 8" Water Main	Dwg. No. 7
Encasement Details & Bulkhead Details	Dwg. No. 15
D.W.S. Connection Details No. 2	Dwg. No. 17
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

54" WATER MAIN FROM 66' W. OF IRVINGTON AVE. TO 34' E. OF YACAMA AVE.

REVISIONS

NO.	DESCRIPTION	DATE	BY

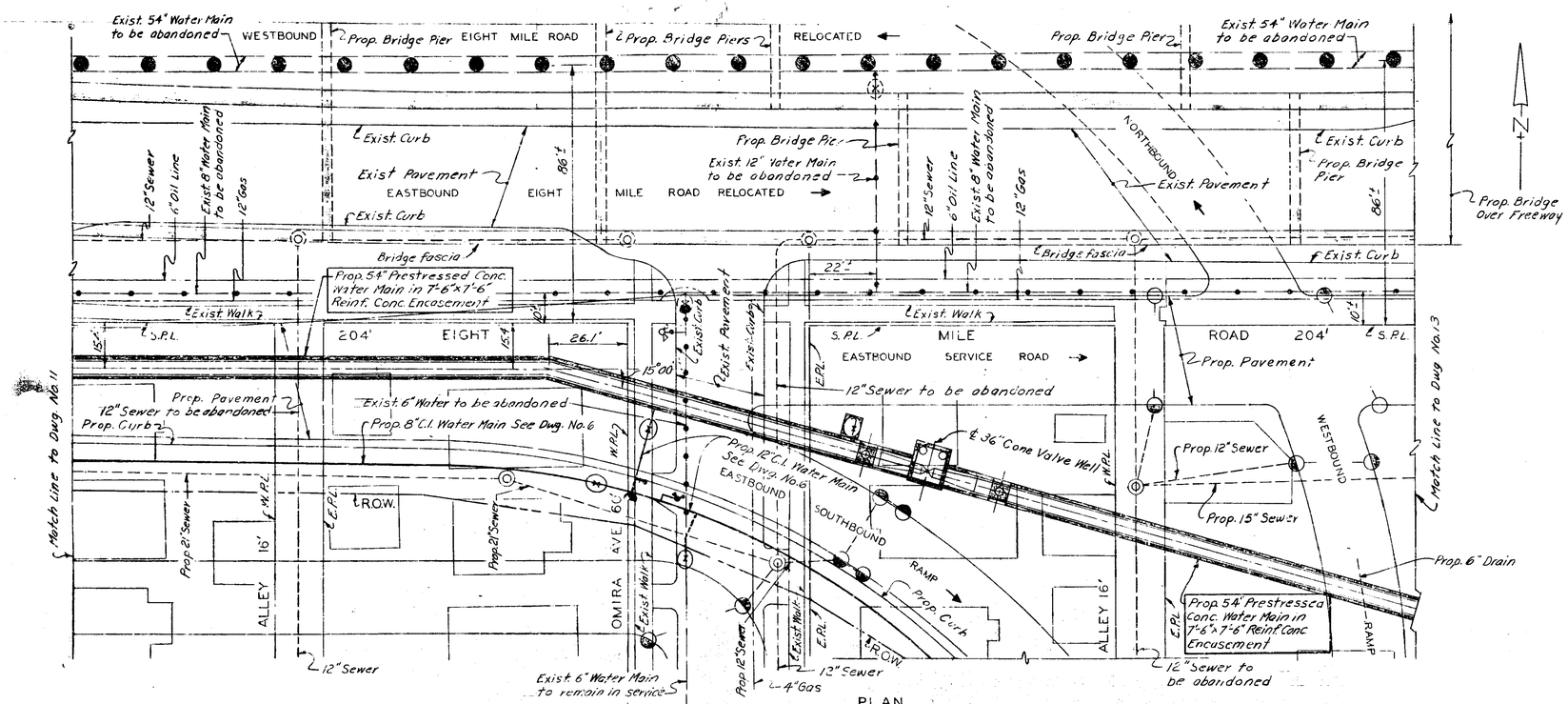
SQUAD BOSS	EWB	1-9-63
DRAWN BY	F.R.J.	2-63
TRACED BY	G.W.B.	2-63
CHECKED BY	D.R.C.	4-63
SHEET	OF	

C-11

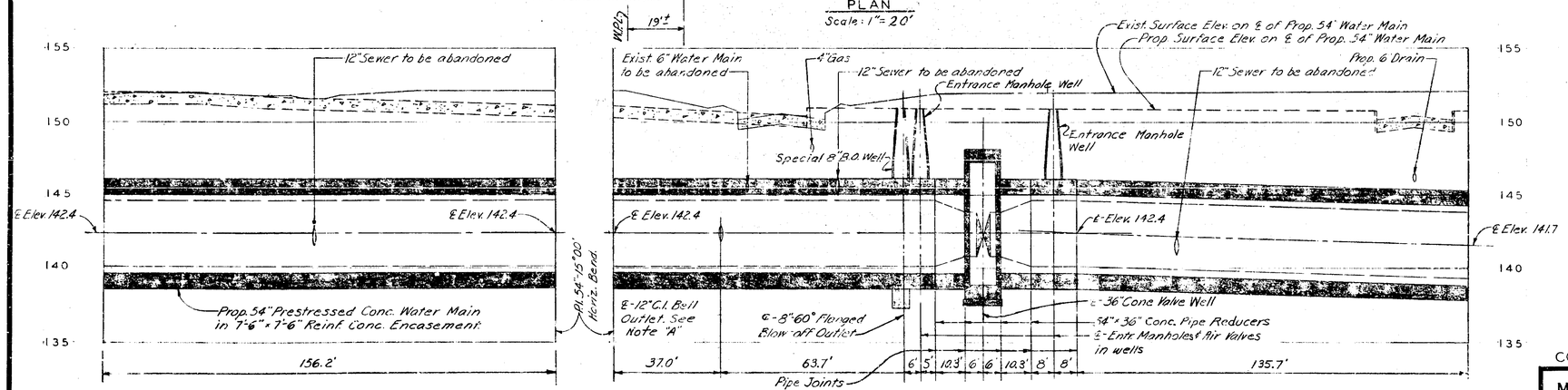
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	103

82252 L, C 63; 63174 A, C 64

Note:
Quantities for this Drawing are included in the quantities shown on Dwg. 4.



PLAN
Scale: 1" = 20'



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 4'

Note "A"
Face of 12" C.I. Bell Outlet to be flush with face of Encasement

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 8" Water Main	Dwg. No. 6
Encasement Details	Dwg. No. 15 & 20
8" Blow-off Well Details	Dwg. No. 19
Entrance Manhole Well Details	Dwg. No. 20
36" Cone Valve Well Details	Dwg. No. 21
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

54" WATER MAIN FROM 34' E. OF YACAMA AVE. TO 200' E. OF OMIRA AVE.

REVISIONS

DESCRIPTION	DATE	BY

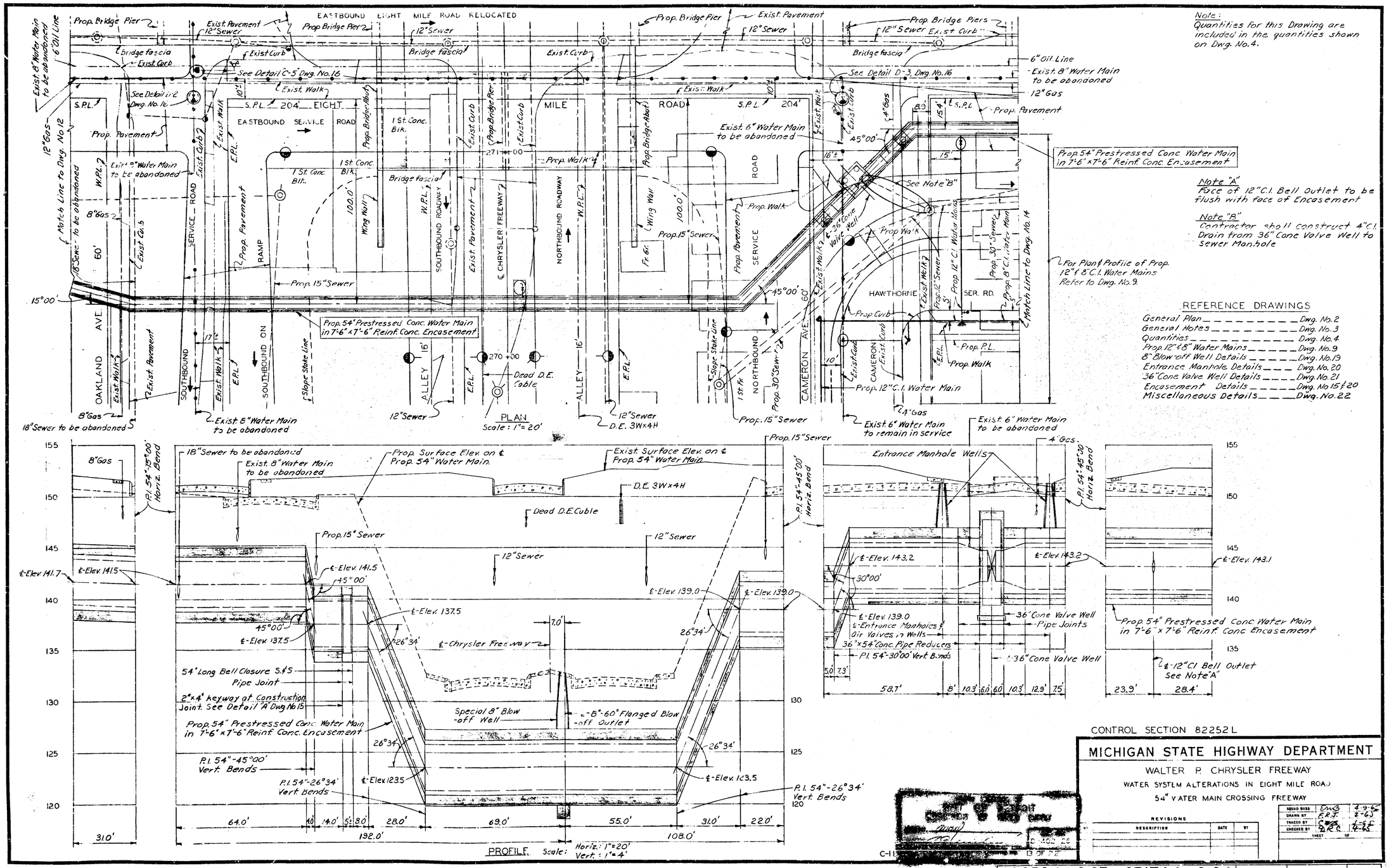
SQUAD BOSS	EWB	4-9-65
DRAWN BY	E.R.J.	2-65
TRACED BY	[illegible]	3-65
CHECKED BY	[illegible]	4-65
SHEET		OF

D-402-26

C-11

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	104



Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4.

Note "A"
Face of 12" C.I. Bell Outlet to be flush with face of Encasement

Note "B"
Contractor shall construct 4" C.I. Drain from 36" Cone Valve Well to Sewer Manhole

For Plan & Profile of Prop. 12" & 8" C.I. Water Mains Refer to Dwg. No. 9.

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 12" & 8" Water Mains	Dwg. No. 9
8" Blow-off Well Details	Dwg. No. 19
Entrance Manhole Details	Dwg. No. 20
36" Cone Valve Well Details	Dwg. No. 21
Encasement Details	Dwg. No. 15 & 20
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252 L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

54" WATER MAIN CROSSING FREEWAY

REVISIONS

DESCRIPTION	DATE	BY

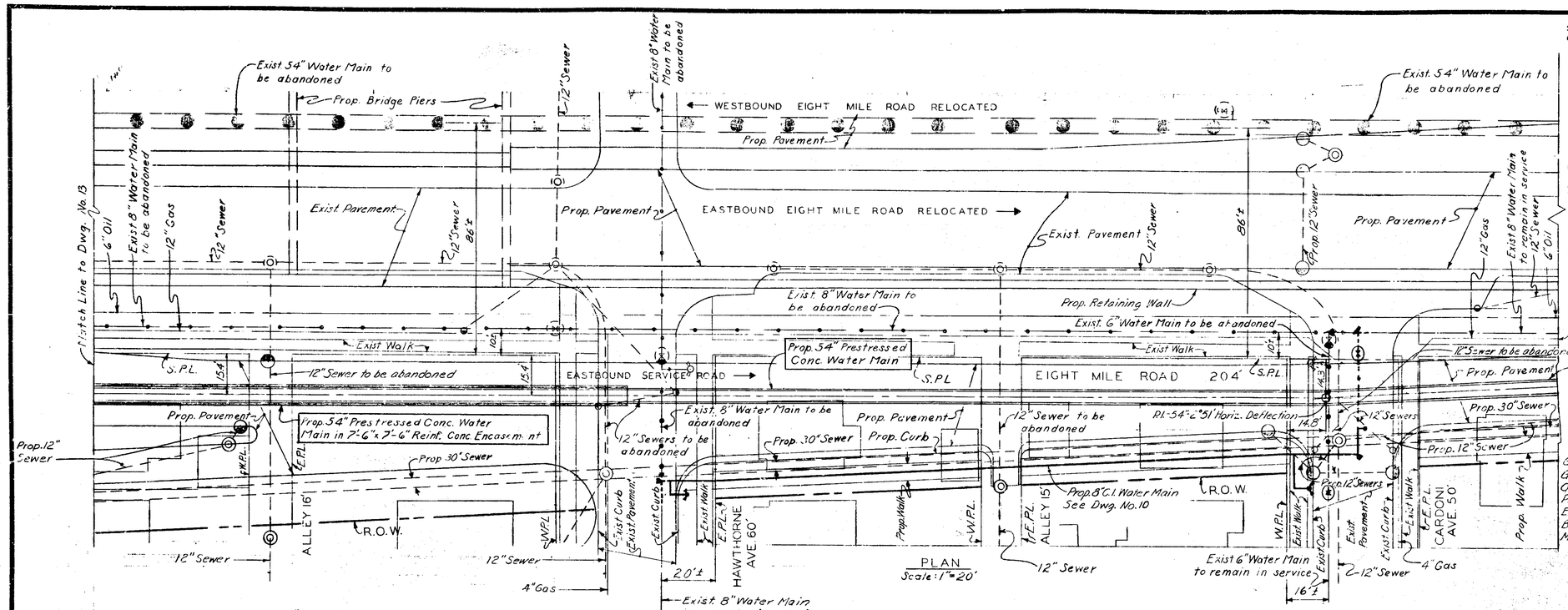
SQUAD BOSS	EWB	4-9-65
DRAWN BY	F.R.J.	2-65
TRACED BY	[illegible]	1-65
CHECKED BY	DRC	4-65

SHEET OF

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	105

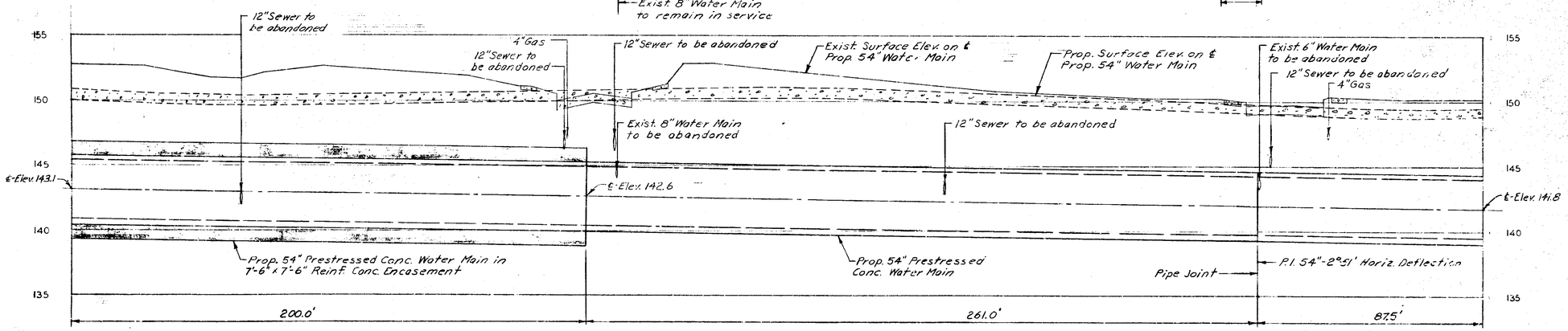
Note:
Quantities for this Drawing are included in the quantities shown on Dwg. No. 4.



PLAN
Scale: 1"=20'

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Prop. 8" Water Main	Dwg. No. 10
Encasement Details & Bulkhead Details	Dwg. No. 15
Miscellaneous Details	Dwg. No. 22



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=4'

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD

54" WATER MAIN FROM 42' E. OF CAMERON AVE. TO 52' E. OF CARDONI AVE.

REVISIONS

DESCRIPTION	DATE	BY

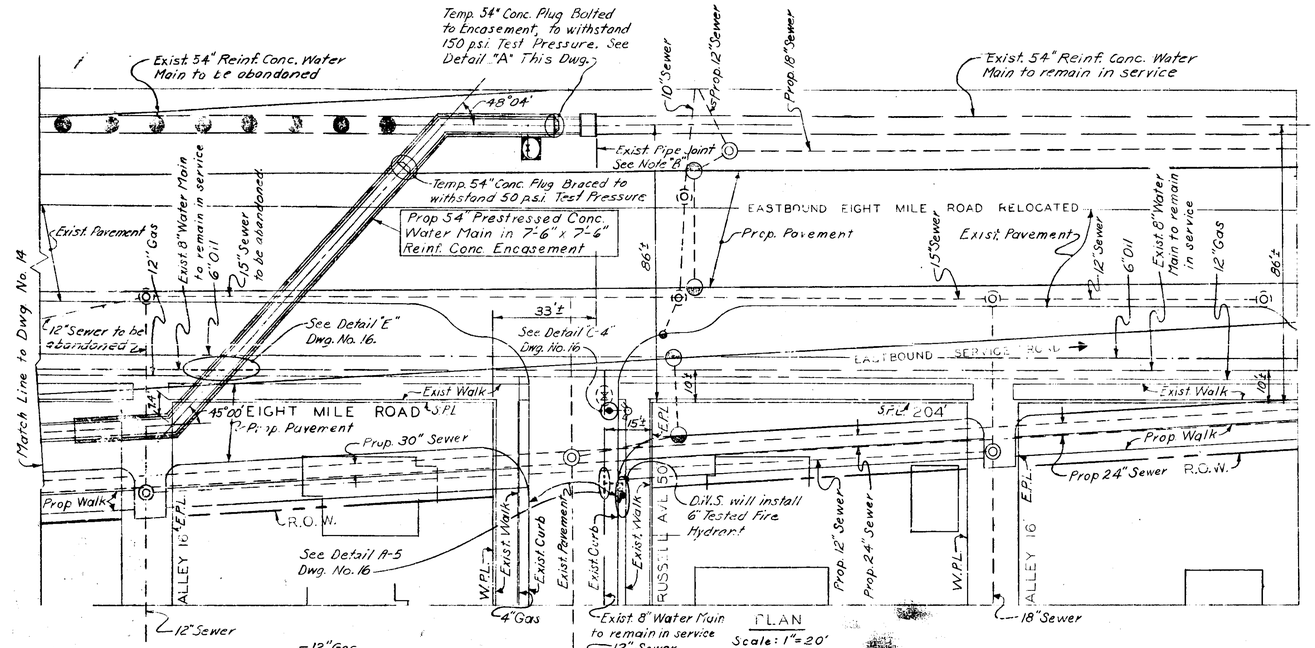
SQUAD BOSS	EMB	4-9-65
DRAWN BY		2-63
TRACED BY	F.R.J.	3-63
CHECKED BY	DKC	4-65
SHEET	OF	

D-402-26

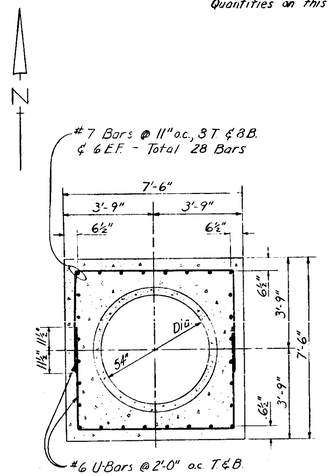
C-11

82252 L, C 63; 63174 A, C 64

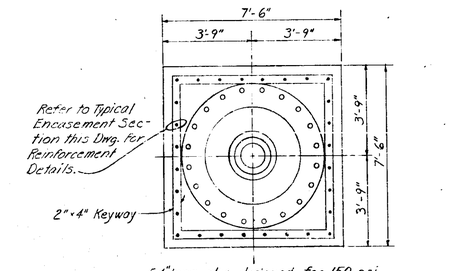
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	106



Note:
Quantities on this Dwg. are included in the Quantities shown on Dwg. No. 4.

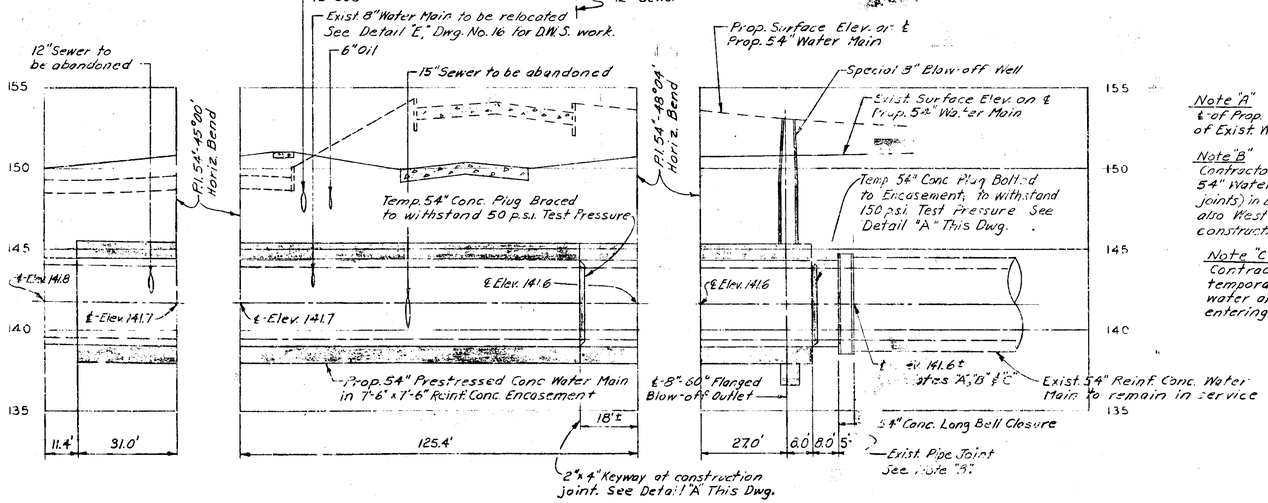


TYPICAL SECTION OF 7'-6" WIDE x 7'-6" HIGH REINF. CONC. ENCASEMENT FOR 54" PRESTRESSED CONC WATER MAIN
STEEL REINFORCEMENT DETAILS
Scale ⅜" = 1'-0"



54" temp plug designed for 150 p.s.i. pressure test. Contractor shall submit details of plug & anchor bolts for approval by Engineer prior to fabrication.

DETAIL "A"
Scale: ⅜" = 1'-0"



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 4'

Note "A"
℄ of Prop. Water Main shall meet ℄ of Exist. Water Main

Note "B"
Contractor shall locate the exist 54" Water Main (including critical pipe joints) in Eight Rd. at Russell Ave. and also West of Irvington Ave. prior to the construction of the New 54" Water Main.

Note "C"
Contractor shall provide and install temporary bulkhead to prevent trench water and/or foreign material from entering the existing 54" Water Main

REFERENCE DRAWINGS

General Plan	Dwg. No. 2
General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
8" Blow-off Well Details	Dwg. No. 19
Miscellaneous Details	Dwg. No. 22

CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
D 402-26
4-12-65

CONTROL SECTION 82252L

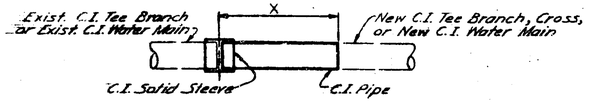
MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER FREEWAY
WATER SYSTEM ALTERATIONS IN EIGHT MILE ROAD
54" WATER MAIN FROM 52'E OF CARDONI AVE. TO RUSSELL AVE.

REVISIONS		
DESCRIPTION	DATE	BY

SQUAD BOSS	EMS	2-9-65
DRAWN BY	CTB	2-65
TRACED BY	ERJ	3-65
CHECKED BY	RC	3-65
SHEET	OF	

C-11 IN OF 22

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	107



PLAN

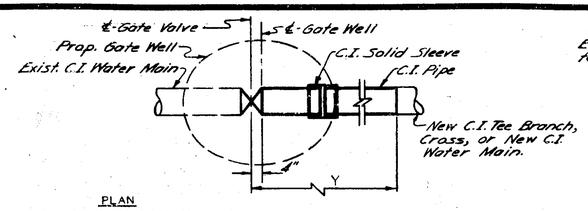
DETAILS A-1 THRU A-4

(No Scale)

SCHEDULE FOR DETAIL "A"

DETAIL NO.	FROM DWG. NO.	NEW WATER MAIN SIZE	NEW TEE SIZE	SIZE OF C.I. PIPE FURNISHED	X
A-1	7	8"	—	8"	5'
A-2	7	8"	—	8"	5'
A-3	6	12"	—	12"	4'
A-4	9	12"	—	12"	4'
*A-5	15	Exist. 8"	—	8"	5'
*A-6	2	Exist. 8"	—	8"	5'

*8"×6" C.I. Hydrant Tee included in this Connection



PLAN

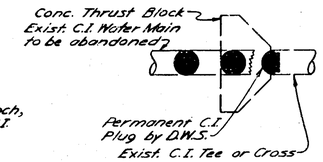
DETAILS B-1 THRU B-4

(No Scale)

SCHEDULE FOR DETAIL "B"

DETAIL NO.	FROM DWG. NO.	NEW WATER MAIN SIZE	NEW TEE SIZE	SIZE OF C.I. PIPE FURNISHED	SIZE OF GATE VALVE FURNISHED	Y
*B-1	7	Exist. 8" C.I. Water Main	—	8"	8"	7.5'
B-2	6	—	12"×6"	6"	6"	16'
B-3	9	—	12"×6"	6"	6"	10'
B-4	10	—	8"×6"	6"	6"	14'

* 8"×6" C.I. Hydrant Tee included in this Connection



PLAN

DETAILS C-1 THRU C-4

(No Scale)

SCHEDULE FOR DETAIL "C"

DETAIL NO.	FROM DWG. NO.	PORTION OF TEE OR CROSS TO BE PLUGGED	SIZE OF TEE OR CROSS	PLUG SIZE
C-1	2	West Run	8"x6"	6"
C-2	7	North & East Branch	8"x8"	8"
C-3	10	East Run	8"x6"	8"
C-4	15	East Run	8"x6"	6"
C-5	13	East Run	8"x6"	6"
C-6	7	West Run	8"x6"	6"

Note:
Quantities for this Drawing are included in the Quantities shown on Dwg. No. 4

NOTES FOR D.W.S. WORK

D.W.S. work is shown by solid lines. Adjacent contractor's work and/or existing mains are indicated by dashed lines.

D.W.S. will cut & cap or plug existing Water Mains to remain in service where required.

D.W.S. will remove all temporary C.I. Plugs, Tees and Blow-off assemblies unless otherwise specified.

D.W.S. will install all C.I. Pipe & Fittings necessary to complete the connections shown.

Contractor shall construct all Concrete Thrust Blocks and Gate Wells.

Contractor shall provide all temporary bracing for Water Main work.

On all C.I. Pipe larger than 8" in diameter, Horizontal Bends larger than 11¼° will require Thrust Blocks. 8" C.I. Pipe will require Thrust Blocks for Horizontal Bends larger than 22½°.

On all C.I. Pipe larger than 8" in diameter, Vertical Bends larger than 11¼° will require Thrust Blocks. 8" C.I. Pipe will require Reinforced Concrete Thrust Blocks for Vertical Bends larger than 22½°.

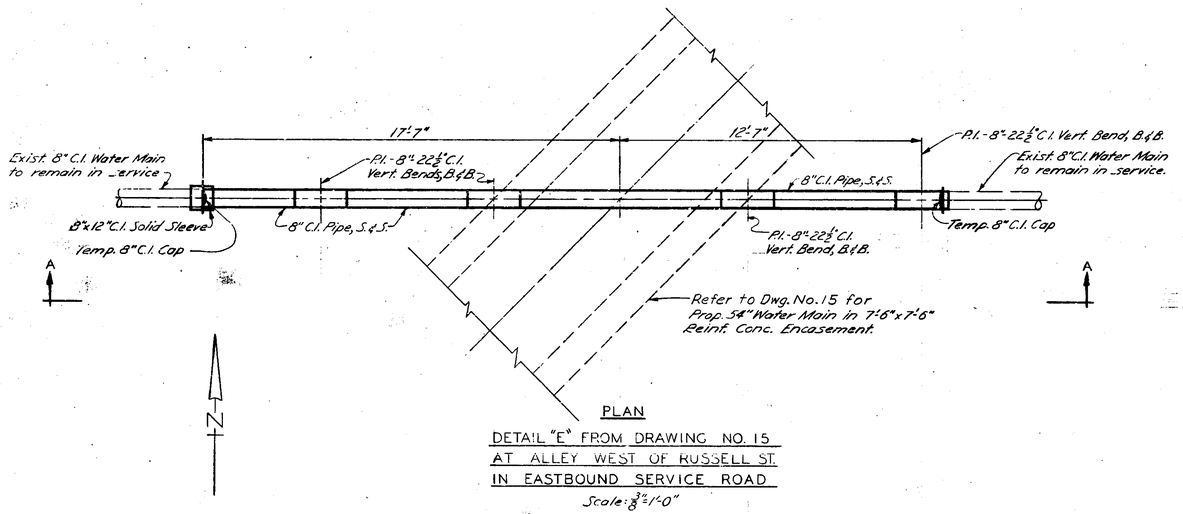
Scheduling of Connections shall be governed by the Sequence of Operations as outlined in the Water Main portion of Supplementary Specifications.

NOTES FOR DETAILS "A" & "B"

4" C.I. Blow-off Assemblies, C.I. Plugs and Caps to be removed by D.W.S. have not been shown.

It is not normally anticipated that Thrust Blocks will be required within the dimensions X or Y.

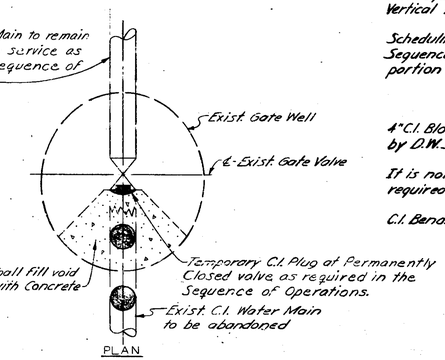
C.I. Bends have not been shown within the dimensions X or Y.



PLAN

DETAIL "E" FROM DRAWING NO. 15
AT ALLEY WEST OF RUSSELL ST.
IN EASTBOUND SERVICE ROAD

Scale: 3/8" = 1'-0"



PLAN

DETAILS D-1 THRU D-6

(No Scale)

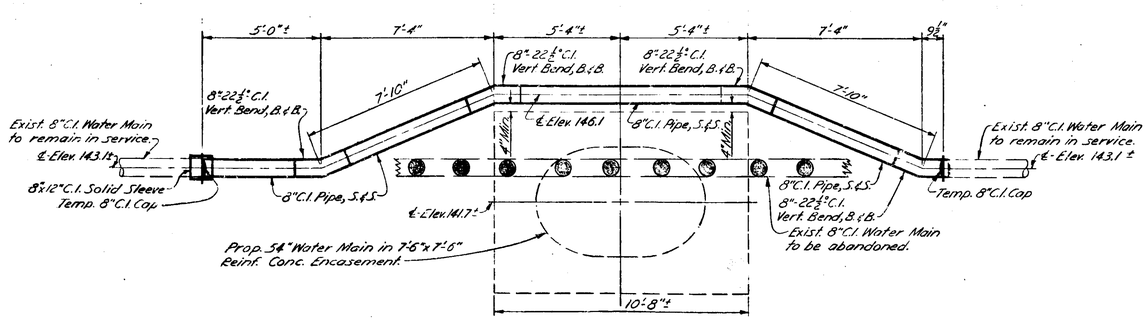
SCHEDULE FOR DETAIL "D"

DETAIL NO.	FROM DWG. NO.	*VALVE #	SIDE OF VALVE TO BE PLUGGED	SIZE OF VALVE	PLUG SIZE
D-1	6	#11	South side	6"	6"
D-2	13	#10	South Side	8"	8"
D-3	13	#9	South Side	6"	6"
D-4	10	#7	South Side	8"	8"
D-5	10	#6	South Side	6"	6"
D-6	1	#35	North Side	8"	8"

* Valve # refers to number used in Sequence of Operations.

REFERENCE DRAWINGS

General Plan _____ Dwg. No. 1
General Plan _____ Dwg. No. 2
General Notes _____ Dwg. No. 3
Quantities _____ Dwg. No. 4
Plan & Profile _____ Dwg. No's. 6, 7, 9, 10, 13, 15
Miscellaneous Details _____ Dwg. No. 22



ELEVATION A-A

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY
D.W.S. CONNECTION DETAILS NO. 1

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF WATER SUPPLY

CORRECT: [illegible]
APPROVED: [illegible]
DATE: 4-12-65

NO. D-402-26

DRAWING NO. 16 OF 22

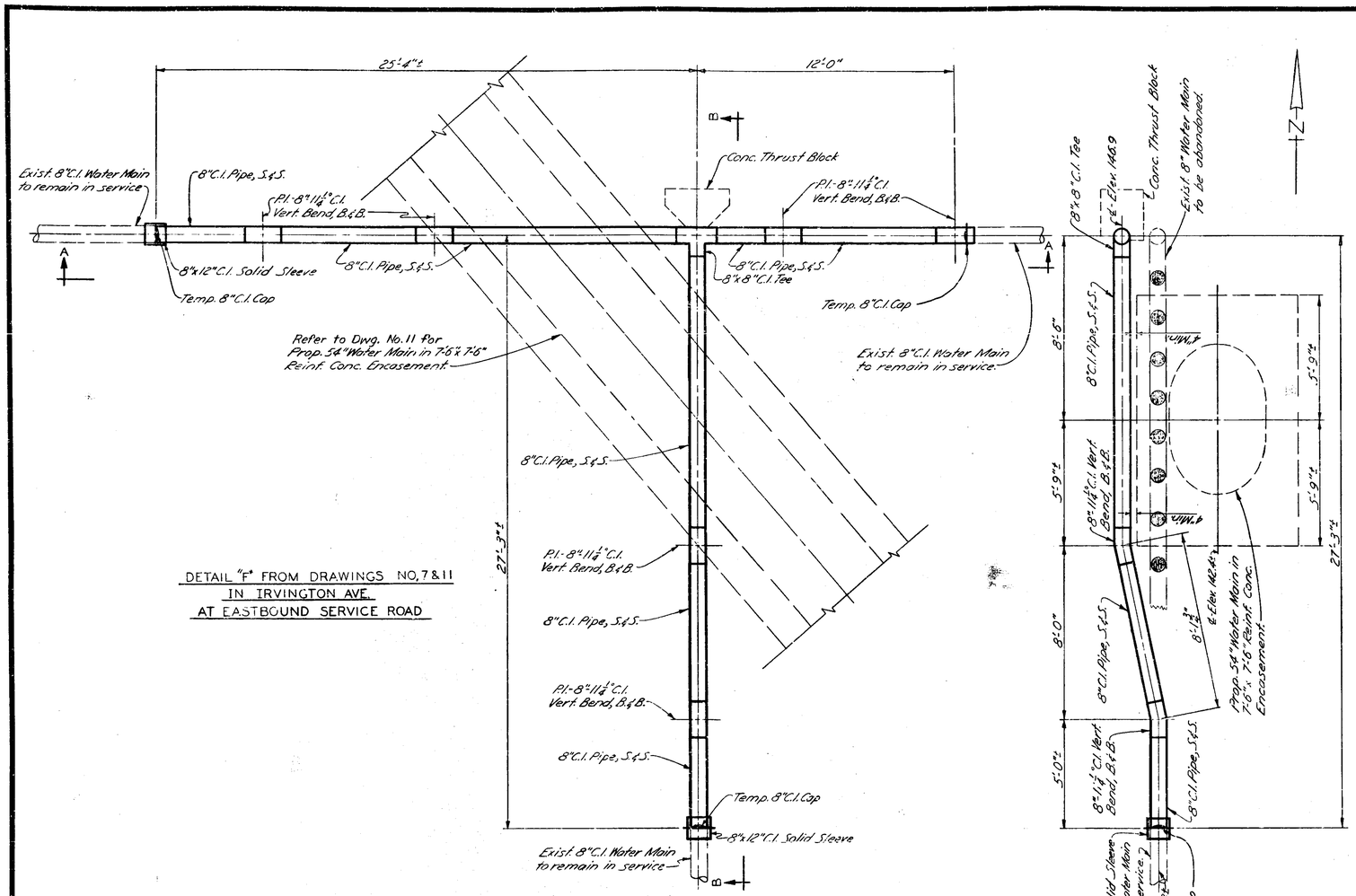
C-11

REVISIONS			
NO.	DESCRIPTION	DATE	BY

DESIGN BASIS	[illegible]	4-9-65
DRAWN BY	G.F.L.	3-63
TRACED BY	R.O.J.	3-65
CHECKED BY	R.L.C.	4-65
SHEET	OF	

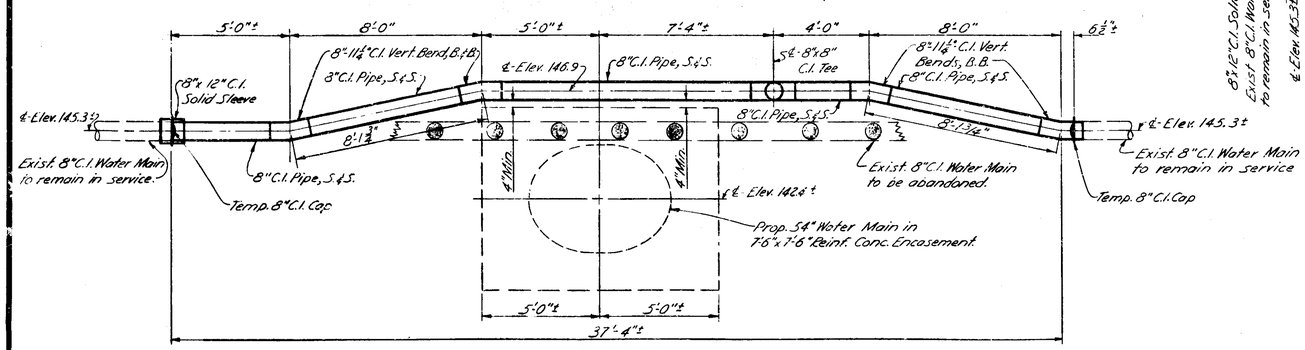
82252 L, C63; 63174 A, C64	STATE PROJECT 82252L	MICHIGAN PROJECT I 75-1 (98) 59	SHEET NO. 108

Note:
Quantities for this Drawing are included in the Quantities shown on Dwg. No. 4



DETAIL "F" FROM DRAWINGS NO. 7 & 11
IN IRVINGTON AVE.
AT EASTBOUND SERVICE ROAD

ELEVATION B-B



ELEVATION A-A

NOTE:
Notes for D.W.S. work shown on Drawing No. 16 apply to this Drawing.

REFERENCE DRAWINGS

General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Plan & Profile	Dwg. No. 7 & 11
Notes for D.W.S. work	Dwg. No. 16
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY
D.W.S. CONNECTION DETAILS NO. 2

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY

CORRECT 9/7/810
APPROVED [signature]
DATE 4-12-65

JOB NO D-402-26

C-11
SCALE: 3/8"=1'-0"

DRAWING NO. 17 OF 22

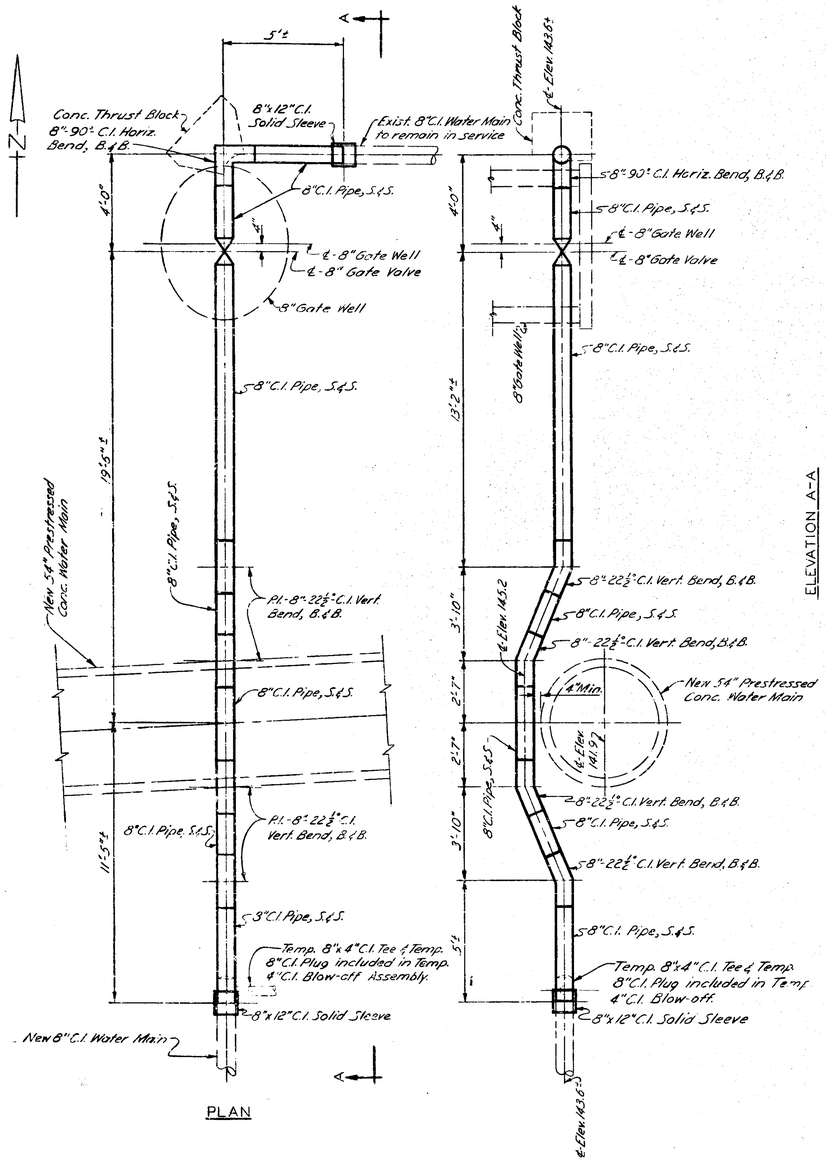
REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	EWB	4-9-65
DRAWN BY	GFL	3-65
TRACED BY	FRJ	3-65
CHECKED BY	DRC	4-65
SHEET	OF	

82252 L, C63; 63174 A, C64

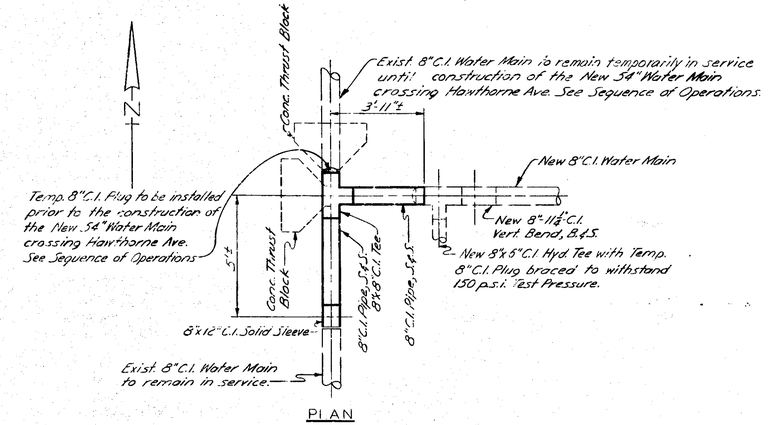
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	109



PLAN

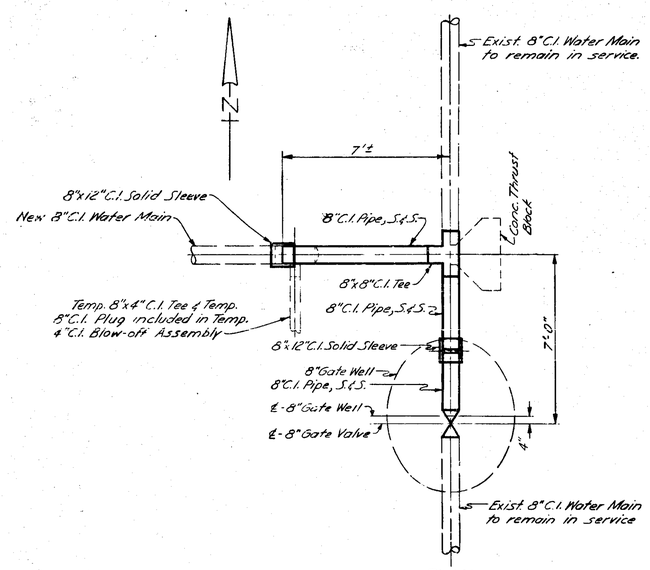
ELEVATION A-A

DETAIL "G" FROM DRAWING NO. 10
IN CARDONI AVE.
AT EASTBOUND SERVICE ROAD



PLAN

DETAIL "H" FROM DRAWING NO. 10
IN HAWTHORNE AVE.
AT EASTBOUND SERVICE ROAD



PLAN

DETAIL "I" FROM DRAWING NO. 10
IN HAWTHORNE AVE.
AT HAWTHORNE-CAMERON SERVICE ROAD

Note:
Quantities for this Drawing are included in the Quantities shown on Dwg. No. 4

NOTE:
Notes for D.W.S. work shown on Drawing No. 16 apply to this Drawing.

REFERENCE DRAWINGS

General Notes	Dwg. No. 3
Quantities	Dwg. No. 4
Plan & Profile	Dwg. No. 10
Notes for D.W.S. work	Dwg. No. 16
Miscellaneous Details	Dwg. No. 22

CONTROL SECTION 32252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY
D.W.S. CONNECTION DETAILS NO. 3

REVISIONS

NO	DESCRIPTION	DATE	BY

SQUAD BOSS	EWB	4-9-65
DRAWN BY	GFL	3-65
TRACED BY	FRJ	3-65
CHECKED BY	DRC	4-65

SHEET OF

SCALE: 3/8" = 1'-0"

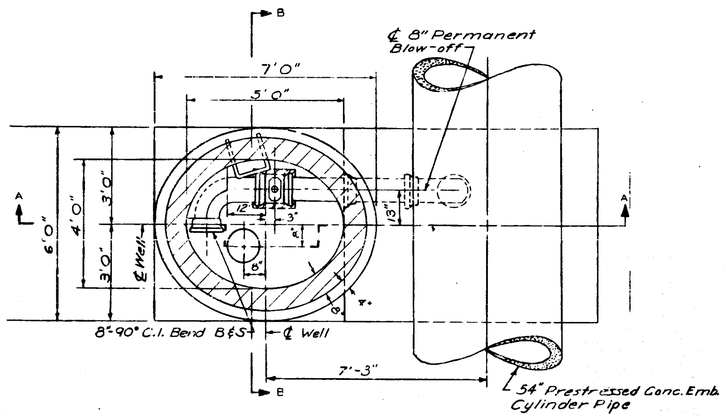
C-11

D-406-26

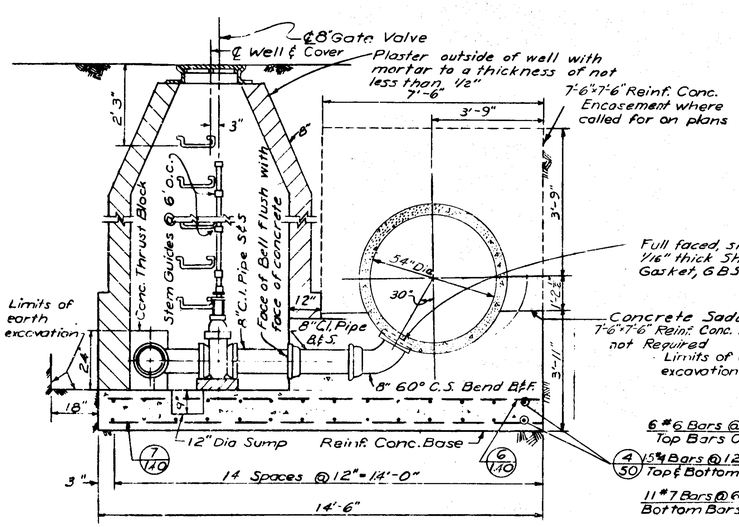
18 OF 22

82252 L, C63; 63174 A, C64

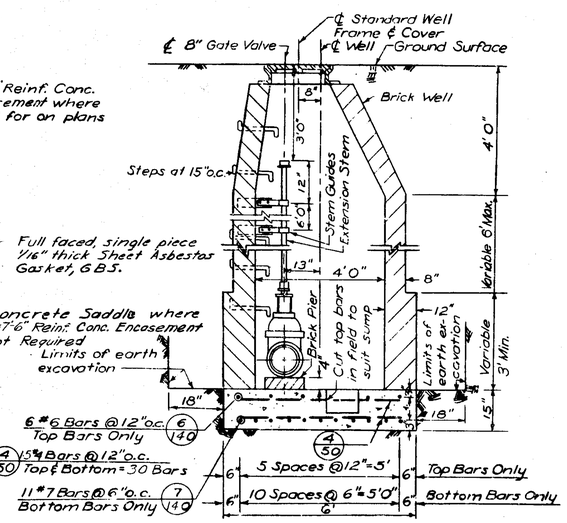
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1(98)59	110



PLAN



SECTION A-A



SECTION B-B

DETAIL OF SPECIAL 8" BLOW-OFF WELL

Scale: None

SCHEDULE OF REINFORCING BARS				
Mark	No.	Size	Length	Remarks
4-50	30	4	5'0"	Straight
6-140	6	6	14'0"	"
7-140	11	7	14'0"	"

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
CORRECT: MAW
APPROVED: Rebecca Crail
DATE: 4-2-62
Standard No.
JOB NO. D-402-26
SHEET 3 OF 22

C-11

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

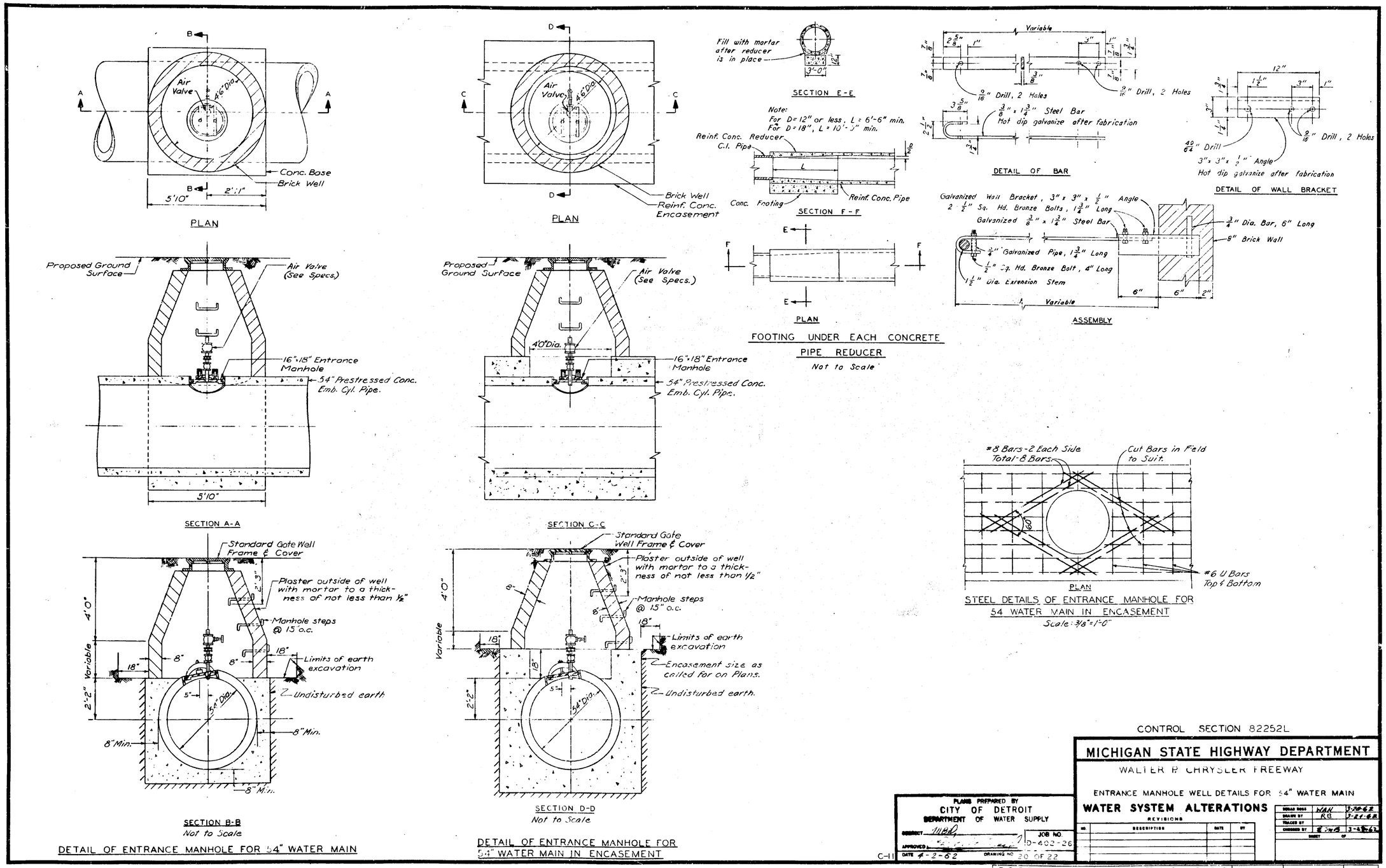
BLOW-OFF WELL DETAILS FOR 54" WATER MAIN

WATER SYSTEM ALTERATIONS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SIGNS DONE	W.A.H.	3-28-62
DRAWN BY	R.J.B.	3-29-62
TRACED BY	P.M.	3-29-62
CHECKED BY	E.J.B.	3-21-62
SHEET	OF	

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	111



CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

ENTRANCE MANHOLE WELL DETAILS FOR 54" WATER MAIN

WATER SYSTEM ALTERATIONS

REVISIONS

NO.	DESCRIPTION	DATE	BY

DESIGN BY	WAH	3-20-62
DRAWN BY	RB	3-21-62
TRACED BY		
CHECKED BY	[illegible]	3-[illegible]-62
SHEET	OF	

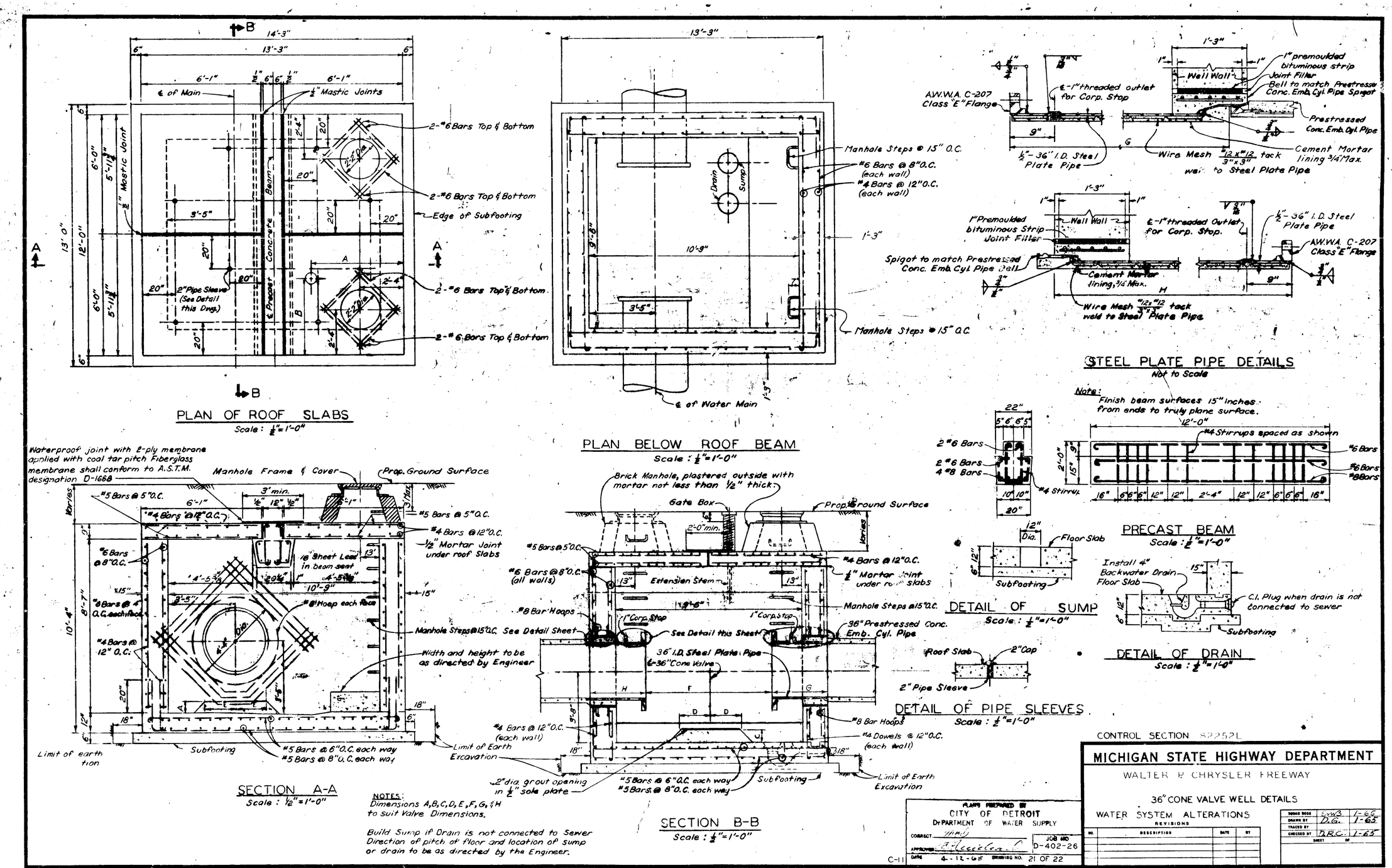
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY

CORRECT [illegible]
APPROVED [illegible]
DATE 4-2-62
DRAWING NO. 20 OF 22
JOB NO. D-402-26

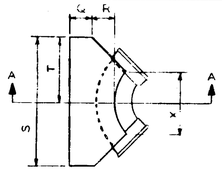
C-11

82252 L, C 63; 63174 A, C 64

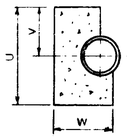
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	112



PLAN OF ROOF SLABS
Scale: 1/2"=1'-0"
PLAN BELOW ROOF BEAM
Scale: 1/2"=1'-0"
STEEL PLATE PIPE DETAILS
Not to Scale
Note: Finish beam surfaces 15" inches from ends to truly plane surface.
PRECAST BEAM
Scale: 1/2"=1'-0"
DETAIL OF SUMP
Scale: 1/2"=1'-0"
DETAIL OF DRAIN
Scale: 1/2"=1'-0"
DETAIL OF PIPE SLEEVES
Scale: 1/2"=1'-0"
SECTION A-A
Scale: 1/2"=1'-0"
SECTION B-B
Scale: 1/2"=1'-0"
NOTES:
Dimensions A,B,C,D,E,F,G,&H to suit Valve Dimensions.
Build Sump if Drain is not connected to Sewer
Direction of pitch of floor and location of sump or drain to be as directed by the Engineer.
CONTROL SECTION 82252L
MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER FREEWAY
36" CONE VALVE WELL DETAILS
WATER SYSTEM ALTERATIONS
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
JOB NO. D-402-26
DATE 4-12-65
DRAWING NO. 21 OF 22
C-11
82252 L, C63; 63174 A, C64
STATE PROJECT 82252L
MICHIGAN PROJECT 175-1(98)59
SHEET NO. 113



PLAN

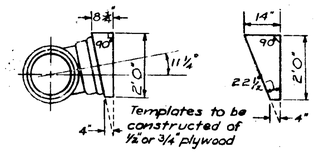


SECTION A-A

SCHEDULE OF THRUST BLOCK DIMENSIONS								
BEND SIZE	CODE							
	Q	R	S	T	U	V	W	X
8" 90°	0' 9"	1' 0"	3' 4"	1' 8"	2' 6"	1' 3"	1' 11"	1' 2"
12" 90°	0' 9"	1' 4"	5' 6"	2' 9"	3' 0"	1' 6"	2' 4"	1' 8"
16" 90°	1' 0"	1' 8"	6' 0"	3' 0"	5' 0"	2' 6"	3' 0"	2' 8"
8" 45°	0' 9"	1' 0"	2' 4"	1' 2"	2' 0"	1' 0"	1' 11"	1' 4"
12" 45°	0' 9"	1' 4"	3' 6"	1' 9"	2' 6"	1' 3"	2' 4"	1' 4"
16" 45°	1' 0"	1' 8"	5' 4"	2' 8"	3' 0"	1' 6"	3' 0"	2' 6"
12" 22½°	0' 9"	1' 0"	2' 6"	1' 3"	2' 0"	1' 0"	2' 0"	1' 4"
16" 22½°	1' 0"	1' 8"	3' 4"	1' 8"	2' 6"	1' 3"	3' 0"	1' 2"

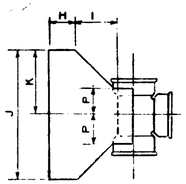
DETAIL OF STANDARD THRUST BLOCKS FOR BENDS

No Scale

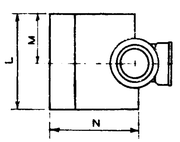


TEMPLATE FOR SETTING TEES AT 11¼° & 22½° ANGLES

No Scale



PLAN



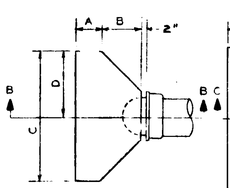
ELEVATION

SCHEDULE OF THRUST BLOCK DIMENSIONS										
TEE SIZE	CODE									
	H	I	J	K	L	M	N		P	
8" x 8"	0' 9"	1' 0"	3' 0"	1' 6"	2' 0"	1' 0"	8	2' 3"	8	0' 6"
12" x 8"							12	2' 3"	12	0' 8"
16" x 8"							16	2' 9"	16	0' 6"
12" 12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	12	2' 9"	8	0' 8"
16" x 12"							16	3' 1"	8	0' 8"
16" x 16"	1' 0"	1' 8"	5' 0"	2' 6"	4' 0"	2' 0"	16	3' 8"	16	0' 11"

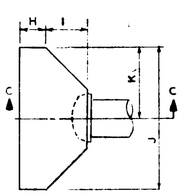
DETAIL OF STANDARD THRUST BLOCKS FOR TEES

No Scale

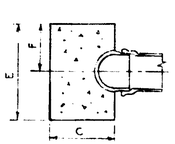
NOTE
The back face of all thrust blocks shall be poured against undisturbed earth.



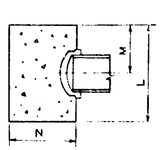
PLAN



PLAN



SECTION B-B

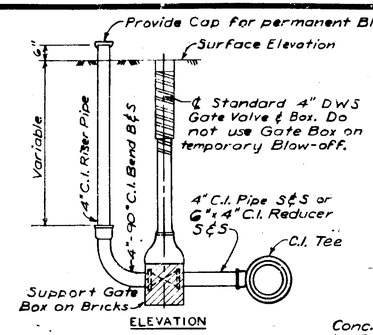


SECTION C-C

SCHEDULE OF THRUST BLOCK DIMENSIONS							
PLUG SIZE	CODE						
	A	B	C	D	E	F	G
6" & 8"	0' 9"	1' 2"	3' 0"	1' 6"	2' 0"	1' 0"	1' 11"
12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	2' 1"
16"	1' 0"	1' 8"	5' 0"	2' 6"	4' 0"	2' 0"	2' 8"
CAP SIZE	CODE						
	H	I	J	K	L	M	N
6" & 8"	0' 9"	1' 2"	3' 0"	1' 6"	2' 0"	1' 0"	1' 11"
12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	2' 1"
16"	1' 0"	1' 8"	5' 0"	2' 6"	4' 0"	2' 0"	2' 8"

DETAIL OF STANDARD THRUST BLOCKS FOR PLUGS & CAPS

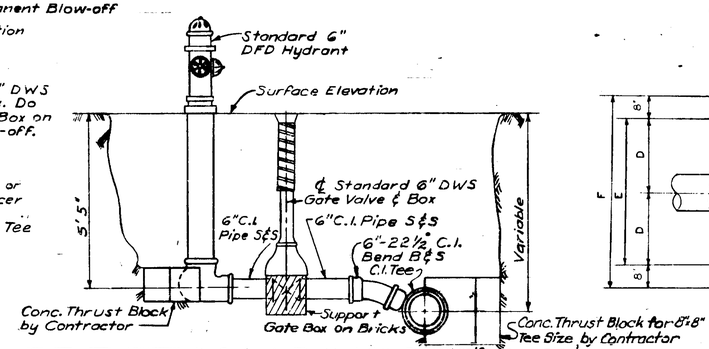
No Scale



ELEVATION

DETAIL OF 4" C.I. BLOW-OFF

No Scale



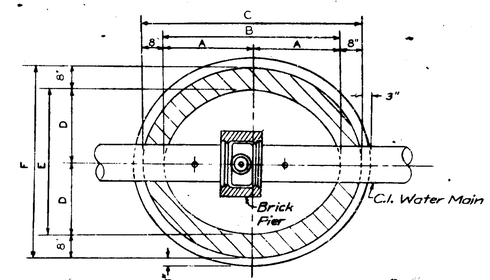
From the new main the Contractor shall install the Tee, 6"-22½° C.I. Bend B&S, 6" C.I. Pipe, 6" D.W.S. Gate Valve & Box, 6" C.I. Pipe, Concrete Thrust Blocks, and Hydrant.

From any existing main the complete Hydrant installation will be done by D.W.S. except for the Concrete Thrust Blocks which shall be placed by the Contractor.

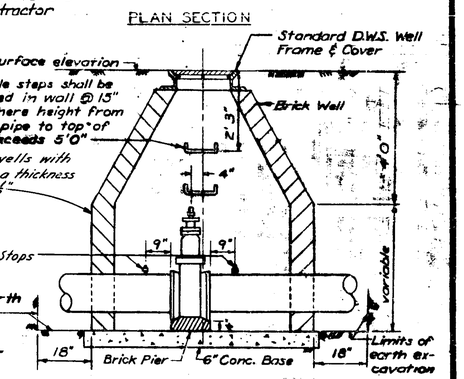
Hydrants to be a minimum of 3' behind the curb.

DETAIL OF 6" HYDRANT INSTALLATION

No Scale



PLAN SECTION

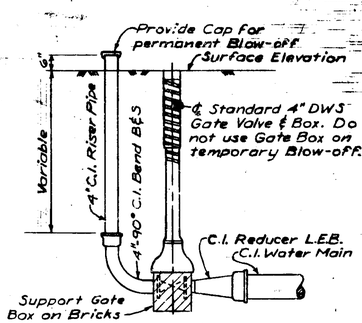


SECTION THROUGH GATE WELL

SCHEDULE OF GATE WELL DIMENSIONS						
SIZE	A	B	C	D	E	F
6"	2' 6"	5' 0"	6' 4"	2' 0"	4' 0"	5' 4"
8"	2' 6"	5' 0"	6' 4"	2' 0"	4' 0"	5' 4"
12"	2' 9"	5' 6"	6' 10"	2' 3"	4' 6"	5' 10"
16"	3' 0"	6' 0"	7' 4"	2' 9"	5' 6"	6' 10"

DETAIL OF STANDARD GATE WELLS

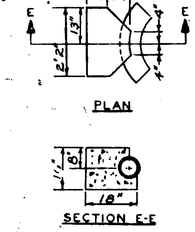
No Scale



ELEVATION

DETAIL OF 4" C.I. BLOW-OFF

No Scale

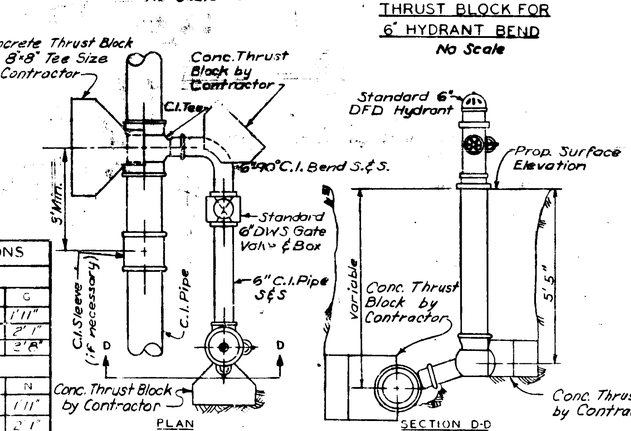


PLAN

SECTION E-E

THRUST BLOCK FOR 6" HYDRANT BEND

No Scale



PLAN

SECTION D-D

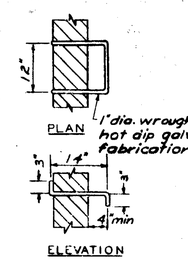
From the new main the Contractor shall install the Tee, 6"-90° C.I. Bend S.&S., 6" C.I. Pipe, 6" D.W.S. Gate Valve & Box, 6" C.I. Pipe Concrete Thrust Blocks and Hydrant.

From any existing main the complete Hydrant installation will be done by D.W.S. except for the Concrete Thrust Blocks which shall be placed by the Contractor.

Hydrants to be a minimum of 3' behind the curb.

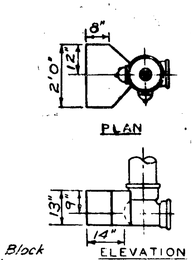
DETAIL OF 6" HYDRANT INSTALLATION

No Scale



DETAIL OF MAN-HOLE STEPS

No Scale



THRUST BLOCK FOR 6" HYDRANT

No Scale

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY

MISCELLANEOUS DETAILS

WATER SYSTEM ALTERATIONS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

ROAD BOSS	W.A.H.	3-28-62
DRAWN BY	R.J.B.	3-29-62
TRACED BY		
CHECKED BY	E.M.B.	3-27-62
SHEET	OF	

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY

JOB NO. D-402-26

DRAWING NO. 22 OF 22

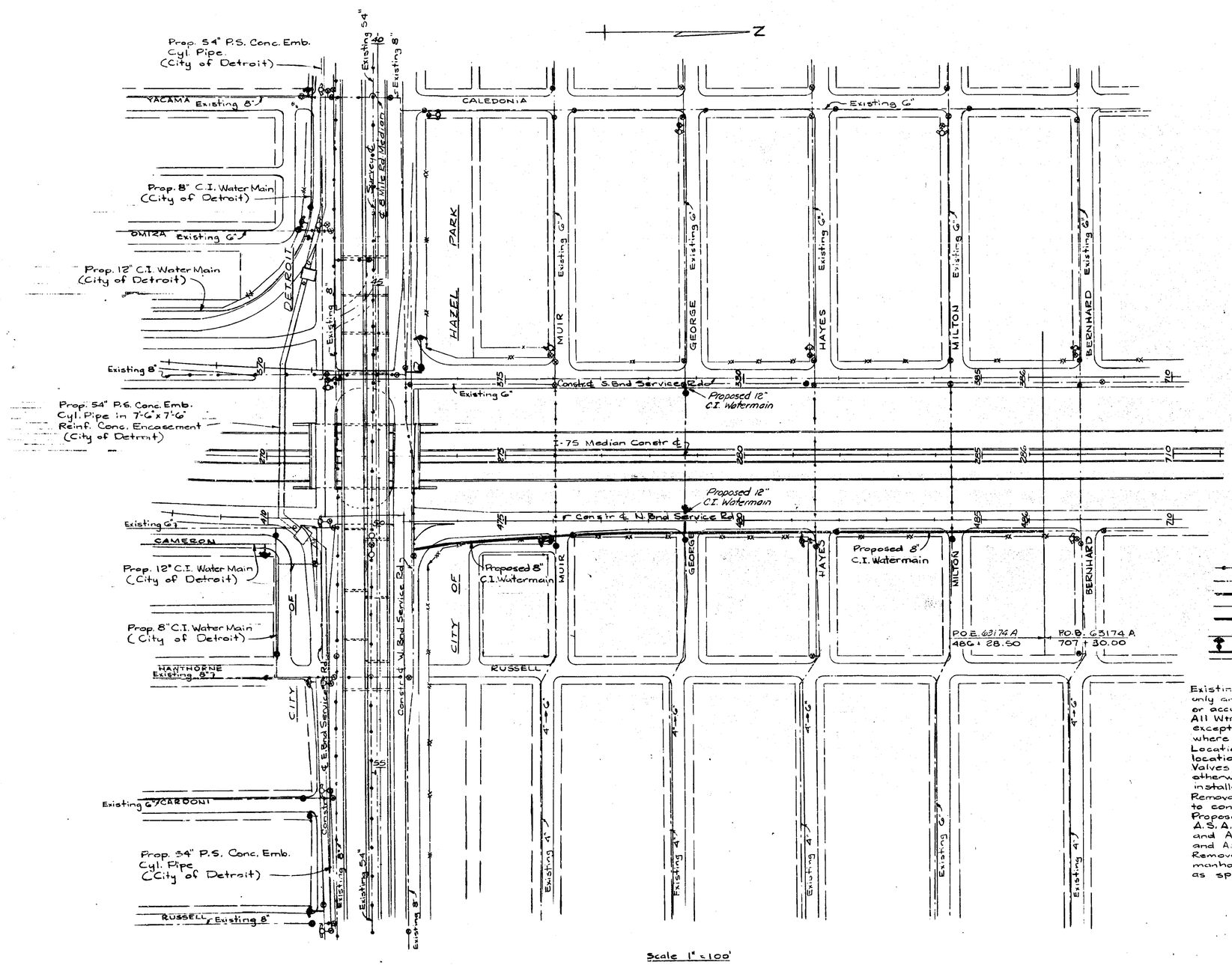
C-11

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	114

B.P.R. DIV. NO.	STATE	MICHIGAN PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	F-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazelpark	115	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Scale 1" = 100'

LEGEND

- Existing Wtr. Main to be Abandoned
- Existing Wtr. Main to remain
- Proposed Wtr. Main
- Existing Valve
- Proposed Valve
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Plug & Thrust Block

NOTES

Existing Wtr. Mains shown indicate approximate location only and no guarantee is made either as to completeness or accuracy.

All Wtr. Mains will be installed with minimum 5' Cover, except this may vary to meet existing conditions where connecting to existing mains.

Location of Fire Hyd. are approximate only. Exact location subject to approval by city.

Valves will be installed in standard gate wells unless otherwise indicated; all fire hydrant valves will be installed with valve boxes.

Removal of existing Wtr. Main as required for clearance to construct new main is incidental to pipe laying.

Proposed Wtr. Mains shall be Cast Iron Pipe Class 250 A.S.A. thickness Class No. 24 for 6" watermains and A.S.A. thickness Class No 25 for 8" watermains. and A.S.A. thickness Class No. 26 for 12" watermains.

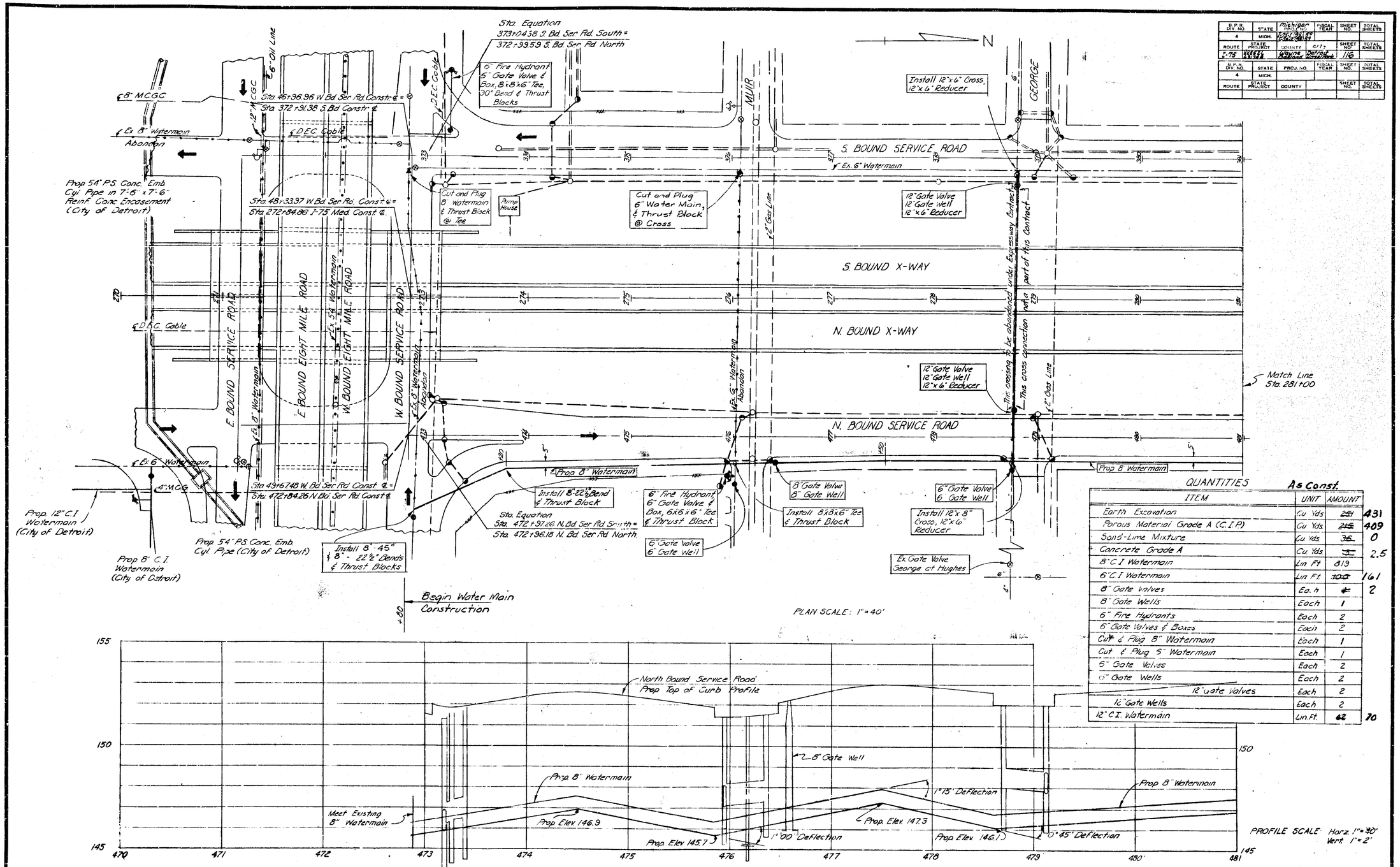
Removal, abandonment or reconstruction of existing manholes and adjustment of manhole covers will be as specified on road plans.

WATER MAINS

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(98)59	115

B.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2 (98) 59 I-75-2 (98) 59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L 63174A	Wayne Oakland	Detroit Wind Park	116	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



QUANTITIES

ITEM	UNIT	AMOUNT	As Const.
Earth Excavation	Cu. Yds.	~~251~~	431
Porous Material Grade A (C.I.P.)	Cu. Yds.	~~215~~	409
Sand-Lime Mixture	Cu. Yds.	~~36~~	0
Concrete Grade A	Cu. Yds.	~~3~~	2.5
8" C.I. Watermain	Lin. Ft.	819	
6" C.I. Watermain	Lin. Ft.	~~100~~	161
8" Gate Valves	Each	~~1~~	2
8" Gate Wells	Each	1	
6" Fire Hydrants	Each	2	
6" Gate Valves & Boxes	Each	2	
Cut & Plug 8" Watermain	Each	1	
Cut & Plug 6" Watermain	Each	1	
6" Gate Valves	Each	2	
6" Gate Wells	Each	2	
12" Gate Valves	Each	2	
12" Gate Wells	Each	2	
12" C.I. Watermain	Lin. Ft.	~~62~~	70

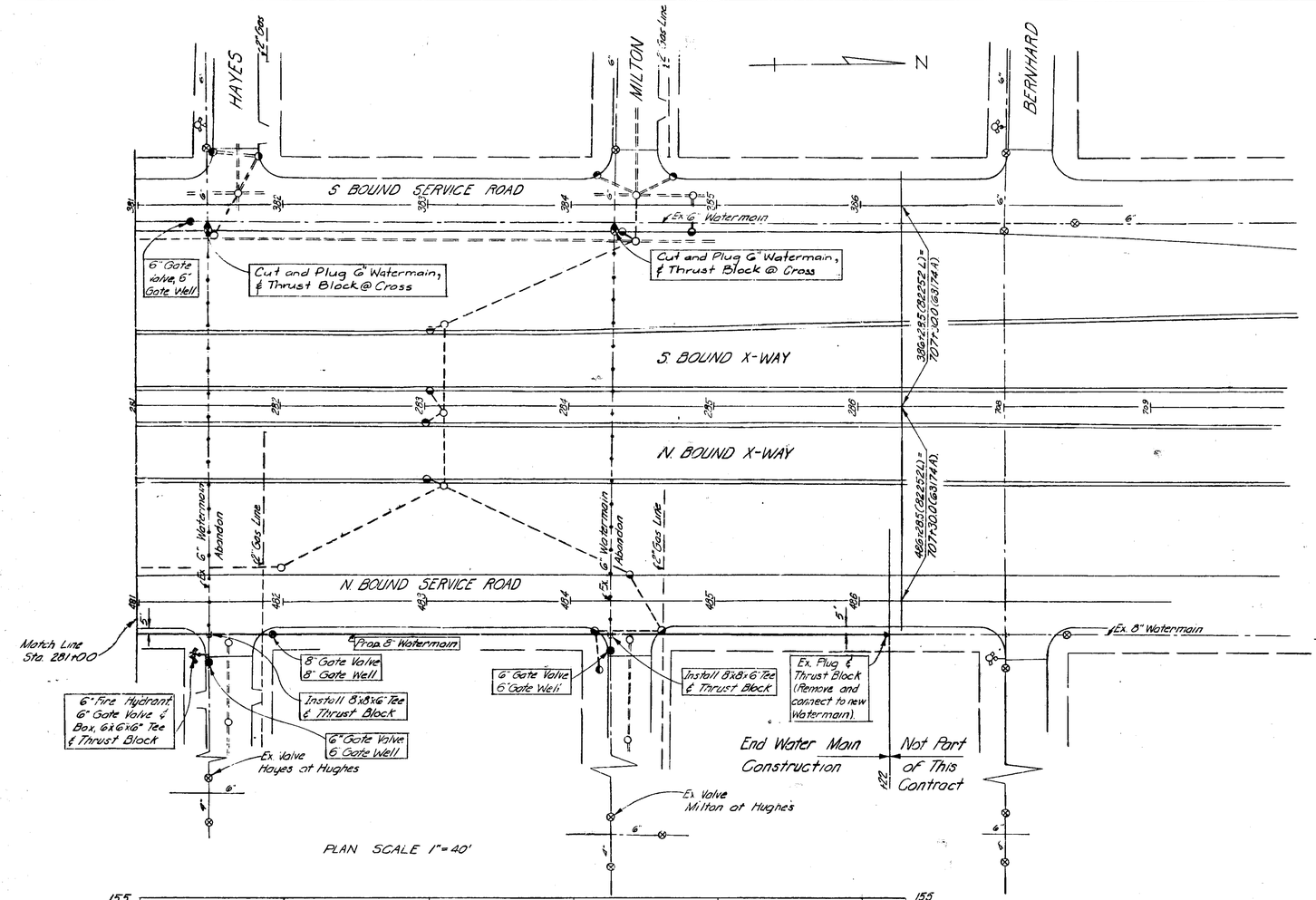
WATER MAINS

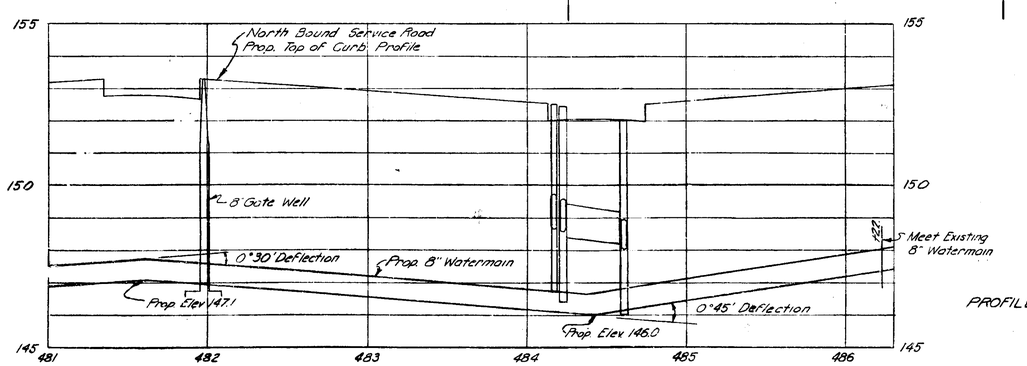
82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2 (98) 59	116
82252L	I-75-2 (98) 59	

H.P.R. DIV. NO.	STATE	Michigan PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	117	

H.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS





PROFILE SCALE: Horz. 1" = 40'
Vert. 1" = 2'

QUANTITIES

ITEM	UNIT	AMOUNT	As Const.
Earth Excavation	Cu. Yds.	~~140~~	284
Porous Material Grade A (C.I.P.)	Cu. Yds.	~~125~~	269
Sand-Lime Mixture	Cu. Yds.	~~4~~	0
Concrete Grade A	Cu. Yds.	~~1~~	1.1
8" C.I. Watermain	Lin. Ft.	~~522~~	531
8" Gate Wells	Each	1	
8" Gate Valves	Each	1	
6" Fire Hydrants	Each	1	
5" Gate Valves & Boxes	Each	1	
Cut and Plug 6" Watermain	Each	2	
6" Gate Valves	Each	3	
6" Gate Wells	Each	3	

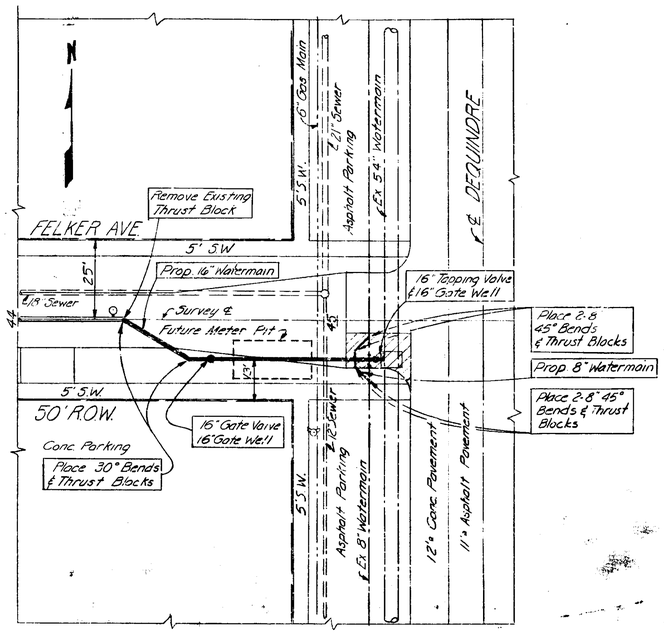
WATER MAINS

82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(98)59	117

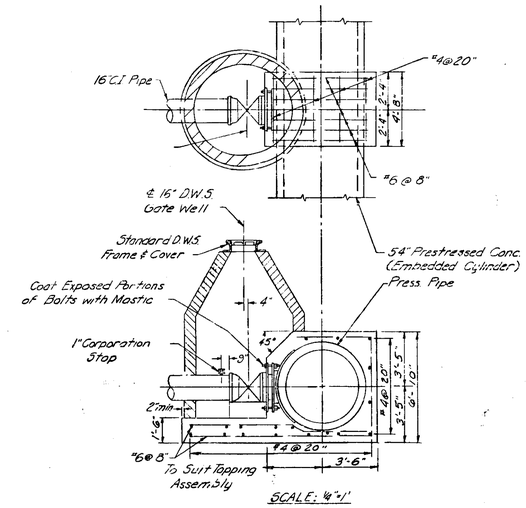
S.P.R. DIV. NO.	STATE	Michigan PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2 98 39			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	118	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN SCALE: 1" = 20'

DETAIL A

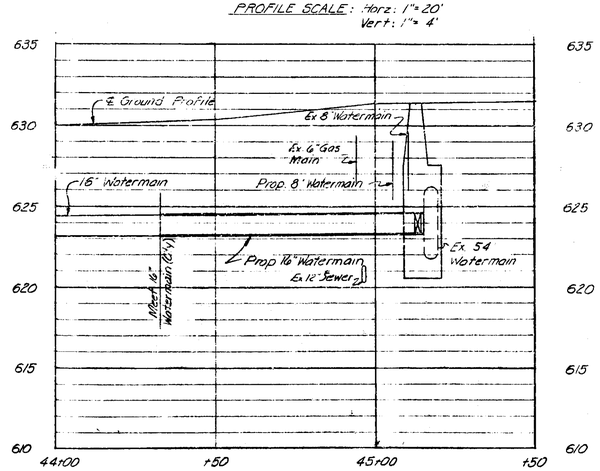


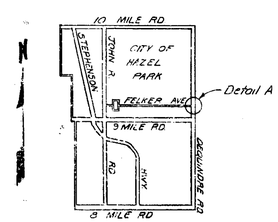
SCALE: 1/4" = 1'

54" x 16" PRESSURE TAP VALVE & WELL ASSEMBLY

Note:
All work by contractor.
Tap on 54" main per requirements of Detroit D.W.S.
All other work subject to the requirements of City of Hazel Park.
Tapping of existing 54" watermain will be under supervision of the Detroit D.W.S. and a representative of Lock Joint Pipe Company.

PROFILE SCALE: Horz: 1" = 20'
Vert: 1" = 4'





GENERAL VICINITY MAP
NO SCALE

QUANTITIES

ITEM	UNIT	As Const. AMT.
EARTH EXCAVATION	CU. YDS.	62
POROUS MATERIAL GRADE A (C.I.P.)	CU. YDS.	57
CONCRETE - GRADE A	CU. YDS.	9.4
STEEL REINFORCEMENT	LBS.	458
* REMOVING OLD PAVEMENT		
* CONCRETE PAVEMENT PATCHING 8" UNIF.		
* AGGREGATE BASE (L.M.)		
16" CAST IRON WATERMAIN	LIN. FT.	82.5
8" CAST IRON WATERMAIN	LIN. FT.	11
16" GATE WELL	EACH	2
16" GATE VALVE	EACH	1
16" TAPPING VALVE	EACH	1

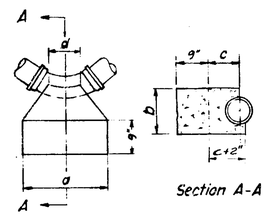
* Included in Road Quantities

82252 L, C63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2 98 39	118

S.P.R. CIV. NO.	STATE	Highway PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	F-75-1(84)	59		
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	Oakland	Hazel Park	119	

S.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



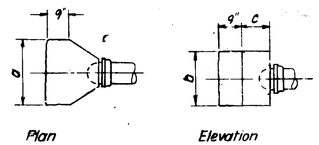
Plan

Section A-A

Size of Bend	Degree of Bend	Dimensions a	b	c	d	Conc. Cu. Yds.
6"	90°	2'-6"	1'-9"	1'-0"	0'-9"	0.23
8"	90°	3'-6"	2'-5"	1'-0"	1'-2"	0.44
12"	90°	5'-0"	3'-0"	1'-4"	1'-8"	0.90
16"	90°	5'-6"	3'-6"	2'-0"	2'-3"	1.94
6"	45°	2'-4"	1'-8"	0'-10"	0'-9"	0.19
8"	45°	2'-4"	1'-8"	1'-0"	1'-4"	0.27
12"	45°	3'-6"	2'-6"	1'-4"	1'-4"	0.55
16"	45°	5'-0"	3'-0"	1'-8"	2'-0"	1.07
6"	22½°	2'-0"	1'-6"	0'-9"	0'-9"	0.14
8"	22½°	2'-6"	1'-6"	0'-9"	1'-2"	0.16
12"	22½°	2'-6"	2'-0"	1'-0"	1'-4"	0.27
16"	22½°	3'-4"	2'-6"	1'-9"	1'-2"	0.58
6"	11¼°	2'-0"	1'-3"	0'-9"	0'-9"	0.12
8"	11¼°	2'-0"	1'-3"	0'-9"	1'-2"	0.12
12"	11¼°	2'-3"	1'-9"	1'-0"	1'-4"	0.22
16"	11¼°	3'-0"	2'-3"	1'-6"	1'-4"	0.44

DETAIL OF STD. THRUST BLOCKS FOR BENDS

NO SCALE



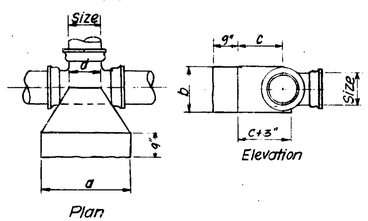
Plan

Elevation

Size	Dimensions a	b	c	Conc. Cu. Yds
6"	2'-6"	1'-0"	1'-3"	0.15
8"	3'-0"	2'-0"	1'-4"	0.36
12"	4'-0"	3'-0"	1'-10"	0.86
16"	5'-0"	4'-0"	2'-3"	1.91

DETAIL OF STD. THRUST BLOCKS FOR PLUGS

NO SCALE



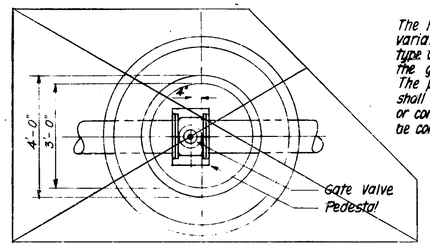
Plan

Elevation

Size	Dimensions a	b	c	d	Conc. Cu. Yds
6"	2'-6"	1'-0"	1'-3"	1'-0"	0.15
8"	3'-0"	2'-0"	1'-4"	1'-0"	0.33
12"	4'-0"	3'-0"	1'-10"	1'-4"	0.86
16"	5'-0"	4'-0"	2'-9"	1'-10"	1.95

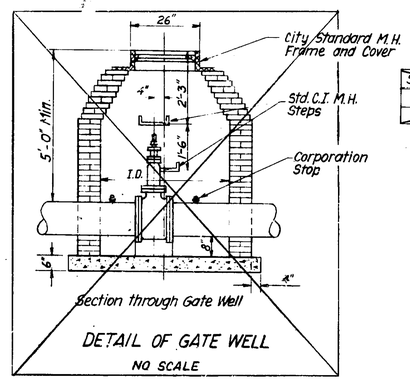
DETAIL OF STD. THRUST BLOCKS FOR TEES & Y's

NO SCALE



Plan

The height of the corbel is subject to variation, as directed, according to the type of material used for construction of the gate well.
The pedestal to support the gate valve shall be constructed of brick, conc. block or conc. & the base of the gate well shall be constructed of unreinforced conc. Gr. A.



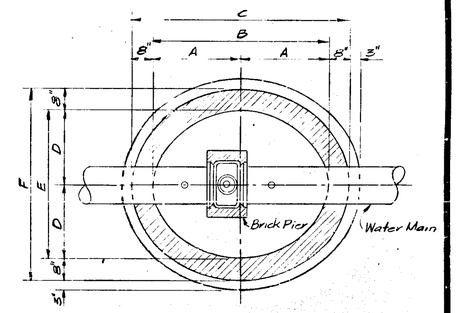
Section through Gate Well

DETAIL OF GATE WELL

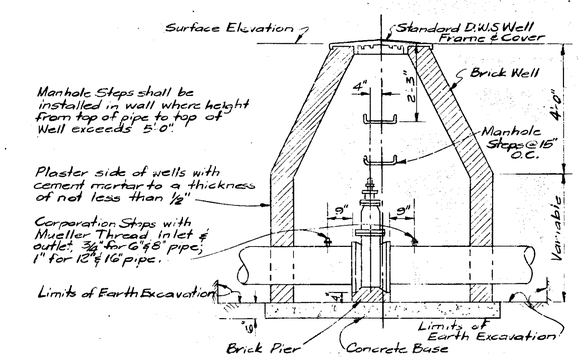
NO SCALE

Note: A corporation stop is to be placed on each side of valves 6 inches and larger that are located in gate wells.

Size of Main	I. D. of Gate Well
6" & 8"	4'-0"
10" & 12"	5'-0"



PLAN

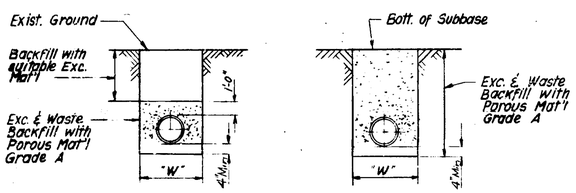


SECTION THROUGH GATE WELL

SCHEDULE OF GATE WELL DIMENSIONS						
SIZE	A	B	C	D	E	F
6"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
8"	2'-6"	5'-0"	6'-4"	2'-0"	4'-0"	5'-4"
12"	2'-9"	5'-6"	6'-10"	2'-3"	4'-6"	5'-10"
16"	3'-0"	6'-0"	7'-4"	2'-9"	5'-6"	6'-10"

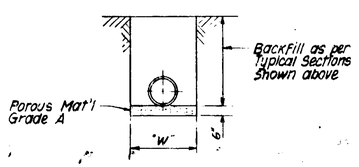
DETAIL OF STANDARD GATE WELLS

NO SCALE



For Water Mains outside of Paved Sections

For Water Mains under exist. or prop. Pavement

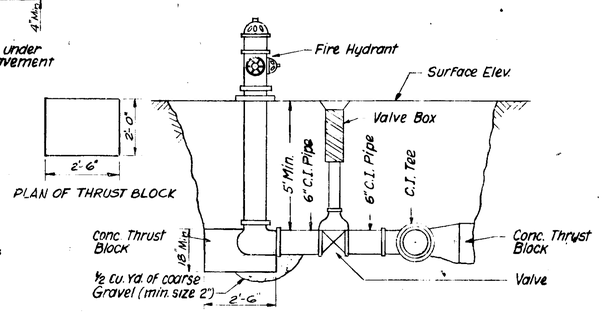


For Water Mains in Clay or Rock

TYPICAL WATER MAIN TRENCH SECTIONS

NO SCALE

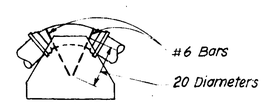
Note: "W" shall not exceed the inside diameter of pipe plus 24" except that a trench width less than 36" will not be required.



DETAIL OF HYDRANT INSTALLATION FOR RELOC. OR PROP. HYDRANT

NO SCALE

Note: Hydrants without exist. valves shall be reinstalled without valves furnished by the City



Detail showing method of tying down vertical Bends

No scale

MICHIGAN STATE HIGHWAY DEPARTMENT

WATER MAIN DETAILS

SQUAD	
DRAWN BY	
CHKD. BY	

WATER MAINS

82252 L, C63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(98)59	119

LEGEND & GENERAL INFORMATION SHEET

USE DRAWINGS 2 THRU 35 WITH THIS SHEET

S.P.R. SH. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. SH. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

UNDERGROUND

- 1234 — EXISTING P.L.C. MANHOLE (2-WAY)
- 5678 — EXISTING P.L.C MANHOLE (3-WAY)
- 9012 — EXISTING P.L.C. MANHOLE (CORNER)
- 3456 — EXISTING P.L.C. MANHOLE (4-WAY)
- M.H. 1234 — BUILD NO. 1 MANHOLE (2-WAY) (EXCEPT WHERE OTHERWISE INDICATED)
- M.H. 5678 — BUILD NO. 1 MANHOLE (3-WAY)
- M.H. 9012 — BUILD NO. 1 MANHOLE (CORNER)
- M.H. 3456 — BUILD NO. 1 MANHOLE (4-WAY)
- H.T.M.H. 1234 — BUILD HIGH TENSION MANHOLE (2-WAY)
- H.T.M.H. 5678 — BUILD HIGH TENSION MANHOLE (3-WAY)
- H.T.M.H. 9012 — BUILD HIGH TENSION MANHOLE (CORNER)
- H.T.M.H. 3456 — BUILD HIGH TENSION MANHOLE (4 WAY)
- EXISTING P.L.C. HANDHOLE
- BUILD STREET TYPE "D" HANDHOLE
- E — EXISTING D.P.D. OR D.F.D. CALL BOX (D.F.D. SHOWN)
- P — BUILD D.P.D. OR D.F.D. CALL BOX FOUNDATION (D.P.D. SHOWN)
- 4.35" — EXISTING P.L.C. DUCT RUN (NO. & SIZE AS INDICATED)
- 4.35" — EXISTING P.L.C. DUCT RUN TO BE ABANDONED
- BUILD 1-3" SINGLE DUCT RUN (EXCEPT AS OTHERWISE INDICATED)
- 2-3"&1-4" — BUILD MULTIPLE DUCT RUN (NO. & SIZE AS INDICATED)
- GALVANIZED IRON PIPE, JACK IN PLACE (NO. & SIZE AS INDICATED)
- P.L.C. DUCT RUN - "NOT A PART OF THIS CONTRACT"
- EXISTING DIRECT BURIAL OR PARKWAY CABLE
- DIRECT BURIAL OR PARKWAY CABLE TO BE REMOVED
- DIRECT BURIAL OR PARKWAY CABLE TO BE ABANDONED
- INSTALL DIRECT BURIAL CABLE (NO., TYPE & SIZE AS INDICATED)
- BUILD TRAFFIC SIGNAL CONTROLLER FOUNDATION
- BUILD TRAFFIC SIGNAL MAST ARM STANDARD FOUNDATION
- BUILD TRAFFIC SIGNAL PEDESTAL FOUNDATION
- BUILD TRAFFIC SIGNAL STEEL SHAFT FOUNDATION
- P — INSTALL COMMUNICATION PARKWAY CABLE NO. & SIZE AS INDICATED. (POLICE SHOWN)
- BUILD 6" SEWER 6.1' TO 14.0' DEEP
- FUTURE U.G.-FED ST. LTG. UNIT
- EXISTING U.G.-FED ST. LTG. UNIT
- REMOVE U.G.-FED ST. LTG. UNIT
- U.G.-FED 250 WATT CLEAR MERCURY VAPOR ANCHOR BASE ST. LTG. UNIT WITH 6' ARM ON NEW FOUNDATION. (EXCEPT AS OTHERWISE NOTED)
- U.G.-FED 400 WATT CLEAR MERCURY VAPOR ANCHOR BASE ST. LTG. UNIT WITH 6' ARM ON NEW FOUNDATION.
- U.G.-FED 400 WATT CLEAR MERCURY VAPOR ANCHOR BASE ST. LTG. UNIT WITH 6' ARM AND SHAFT HANDHOLE SAME SIDE AS BRACKET ARM ON BRIDGE. (ANCHOR BOLTS, HANDHOLE & DUCT NOT A PART OF THIS CONTRACT)
- U.G.-FED 250 WATT CLEAR MERCURY VAPOR ANCHOR BASE ST. LTG. UNIT WITH 6' ARM ON BRIDGE (ANCHOR BOLTS, HANDHOLE & DUCT NOT A PART OF THIS CONTRACT - EXCEPT AS OTHERWISE NOTED)
- U.G.-FED 400 WATT CLEAR MERCURY VAPOR ANCHOR BASE ST. LTG. UNIT WITH 6' ARM AND SHAFT HANDHOLE SAME SIDE AS BRACKET ARM ON RETAINING WALL. SEE DETAIL "A" DRWG. NO. 6
- U.G.-FED 400 WATT CLEAR MERCURY VAPOR ANCHOR BASE ST. LTG. UNIT WITH 10' ARM ON NEW FOUNDATION.

OVERHEAD

- EXISTING WOOD POLE (P.L.C. SHOWN)
- REMOVE WOOD POLE
- REPLACE WOOD POLE - HEIGHT & CLASS AS INDICATED
- INSTALL WOOD POLE - HEIGHT & CLASS AS INDICATED SALVAGED WHERE INDICATED
- EXISTING OVERHEAD LIGHTING UNIT
- REMOVE OVERHEAD LIGHTING UNIT
- INSTALL OVERHEAD LIGHTING UNIT ARM, LUMINAIRE & LAMP SIZE AS INDICATED (SALVAGED WHERE INDICATED)
- REMOVE OVERHEAD LINE - NO. & SIZE OF WIRES AS INDICATED
- INSTALL OVERHEAD LINE - NO. & SIZE OF WIRES AS INDICATED
- INSTALL AND LATER REMOVE OVERHEAD LINE - NO. & SIZE OF WIRES AS INDICATED
- 20 — 1/2" — INSTALL GUY & ANCHOR - CONTACT HEIGHT & SIZE AS INDICATED
- REMOVE GUY & ANCHOR ROD
- P 30 — 3/8" — INSTALL POLE GUY - CONTACT HEIGHT & SIZE AS INDICATED
- A — 1/4" — INSTALL ARM GUY
- 1 POLE A — REMOVE GUY - TYPE AS INDICATED
- IN — MATERIAL TO BE INSTALLED
- RM — MATERIAL TO BE REMOVED
- MSS — INDICATES MAKE POLE SELF-SUPPORTING IN CONCRETE
- XYZ — PHASES OF P.L.C. DISTRIBUTION WIRE
- E — D.E.CO. DISTRIBUTION WIRE
- ES — D.E.CO. SECONDARY WIRE
- CP — CABLE POLE
- C — P.L.C. DISTRIBUTION WIRE
- CS — P.L.C. SECONDARY WIRE
- A — P.L.C. STREET LIGHTING WIRE
- C — INSTALL SUSPENSION INSULATOR
- PALMER PARK 18 SERIES ST. LTG. CIRCUIT (OTHERS SIMILAR) — P-18 (P-18)

WIRING DIAGRAMS & DUCT ALLOCATION

- FUTURE U.G.-FED ST. LTG. UNIT
- U.G.-FED ST. LTG. UNIT
- U.G.-FED ST. LTG. UNIT TO BE REMOVED
- M.H. 1234 / M.H. 5678 — PROPOSED MANHOLE
- EXISTING MANHOLE
- H.H. — PROPOSED HANDHOLE
- H.H. — EXISTING HANDHOLE
- INSTALL U.G. CABLE NO. & SIZE AS INDICATED
- EXISTING U.G. CABLE
- SECTION OF PROPOSED DUCT
- SECTION OF EXISTING DUCT
- DUCT BROKEN OUT IN HANDHOLE
- U.G. CABLE TO BE ABANDONED

TRAFFIC SIGNAL

- INSTALL 3-SECTION TRAFFIC SIGNAL (6 WAY SHOWN)
- INSTALL 3-SECTION TRAFFIC SIGNAL WITH SALVAGED HEADS (2 WAY SHOWN)
- REMOVE 3-SECTION TRAFFIC SIGNAL (3 WAY SHOWN)
- EXISTING 3-SECTION TRAFFIC SIGNAL (4 WAY SHOWN)
- INSTALL 2-SECTION PEDESTRIAN (WALK DON'T WALK) TRAFFIC SIGNAL (2 WAY SHOWN)
- INSTALL 2-SECTION PEDESTRIAN (WALK DON'T WALK) TRAFFIC SIGNAL WITH SALVAGED HEAD (1-WAY SHOWN)
- REMOVE 2-SECTION PEDESTRIAN (WALK DON'T WALK) TRAFFIC SIGNAL (6-WAY SHOWN)
- EXISTING 2-SECTION PEDESTRIAN (WALK DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL JUNCTION BOX (SPAN WIRE OR POLE MTD. AS SHOWN)
- INSTALL SALVAGED JUNCTION BOX (SPAN WIRE OR POLE MTD. AS SHOWN)
- REMOVE JUNCTION BOX (SPAN WIRE OR POLE MTD. AS SHOWN)
- EXISTING JUNCTION BOX (SPAN WIRE OR POLE MTD. AS SHOWN)
- INSTALL OVERHEAD P.J. CABLE (NO. & SIZE AS INDICATED)
- EXISTING OVERHEAD P.J. CABLE
- REMOVE OVERHEAD P.J. CABLE
- FIELD PAINT ALUMINUM
  - INSTALL TRAFFIC SIGNAL CONTROLLER (NEW OR SALVAGED AS INDICATED)
  - 25'-8" — INSTALL TRAFFIC SIGNAL MAST ARM STANDARD: MAST ARM, (25 FT. LENGTH SHOWN)
  - INSTALL 8 FT. TRAFFIC SIGNAL PEDESTAL
  - 30' — INSTALL STEEL SHAFT POLE (30 FT. HEIGHT SHOWN)
- EXISTING TRAFFIC SIGNAL CONTROLLER
- EXISTING MAST ARM STANDARD
- EXISTING PEDESTAL
- EXISTING STEEL SHAFT POLE
- EXISTING 1-WAY INTERNALLY ILLUMINATED CASE SIGN.
- REMOVE 1-WAY INTERNALLY ILLUMINATED CASE SIGN.
- INSTALL 2-WAY INTERNALLY ILLUMINATED CASE SIGN.
- INSTALL SALVAGED 2-WAY INTERNALLY ILLUMINATED CASE SIGN.
- EXISTING 2-WAY INTERNALLY ILLUMINATED CASE SIGN.
- REMOVE 2-WAY INTERNALLY ILLUMINATED CASE SIGN.

GENERAL

- L.A.R.O.W. — PROPOSED LIMITED ACCESS RIGHT OF WAY LINE
- EXISTING PAVEMENT LIMIT
- PROPOSED PAVEMENT LIMIT
- FUTURE PAVEMENT LIMIT
- PROPERTY LINE
- E — DETROIT EDISON CO. DUCT RUN AND MANHOLE (OTHER UNDERGROUND UTILITIES SIMILAR)
- RIGHT OF WAY LINE
- STONE 5-25 / STONE 5-22 — INDICATES NEW STREET LIGHTING STANDARD NUMBER / INDICATES OLD STREET LIGHTING STANDARD NUMBER
- PERMANENT PAVEMENT (PROPOSED)
- TEMPORARY PAVEMENT (PROPOSED)
- PERMANENT PAVEMENT (EXISTING)
- TEMPORARY PAVEMENT (EXISTING)

AS USED ON TEMP. REHOUTING AND TRAFFIC SIGNAL DRAWINGS

GENERAL NOTES

1. UNDERGROUND U.G.-FED ST. LTG. WIRS SHALL BE IN ACCORDANCE WITH M.S.H.D. STANDARD PLANS E-18-A & E-18-A-3.
2. CONTRACTOR TO NOTIFY MICH. CONS. GAS CO. AT WO-5-6000 IF PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
3. TRAFFIC SIGNAL FOUNDATIONS SHOWN ON GENERAL PLANS ARE FOR INFORMATION ONLY AND ARE ITEMIZED ON TRAFFIC SIGNAL DRAWINGS.
4. ALL MANHOLES SHALL BE PROVIDED WITH M.H. SUMP EXCEPT WHERE 6" SEWER IS SHOWN ON PLANS.
5. UNDERGROUND CABLE QUANTITIES ARE ITEMIZED ON GENERAL PLANS ONLY.
6. INSTALLATION OF ARMS FOR EQUIPMENT (CUTOUTS, POTHEADS, TRANSFORMERS ETC) ARE NOT SHOWN ON NEW CABLE AND TRANSFORMER POLES. THEY SHALL BE INSTALLED AS PER THE DETAIL DRWG. REQUIREMENT AND SHALL BE INCIDENTAL TO FITTING-UP THE CABLE AND TRANSFORMER POLE.
7. ALL TRANSFORMER AND CABLE POLES SHALL BE FITTED-UP WITH 120" ARMS (EXCEPT WHERE OTHERWISE NOTED).
8. OVERHEAD WIRE REMOVAL, INSTALLATION AND CIRCUIT CONNECTION REVISIONS SHALL BE AS CALLED FOR ON THE PLANS OR COORDINATED WITH THE ENGINEER WHERE REQUIRED.
9. CONTRACTOR TO NOTIFY MR. CLINTON OF W.C.R.C. TRAFFIC & SAFETY DIV. WE. 3-0980 WHEN NEW TRAFFIC SIGNAL LOAD IS ADDED TO D.E.CO. SERVICE.
10. FIELD PAINT STEEL LIGHT STANDARDS WITH GRAY PAINT MIXTURE NO. 3A(1) IN ACCORDANCE WITH SECTION 7.17.03 OF THE STANDARD SPECIFICATION.

AUTH # 11-15-65

AUTH # 11-15-65

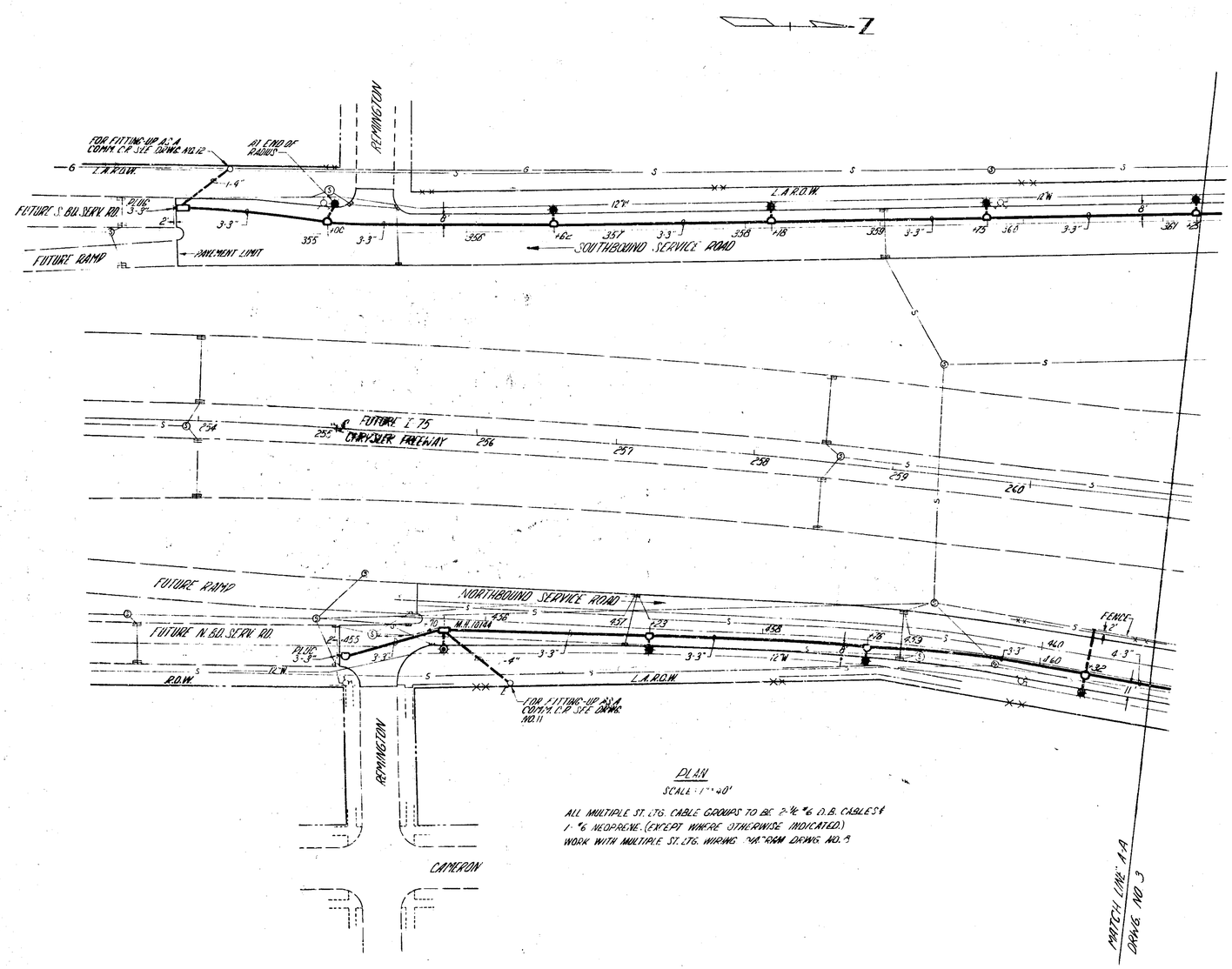
DRAWN BY CEA CHECKED BY AV APPROVED BY	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221	I-75 CHRYSLER FREEWAY REMINGTON TO N. CO. LINE LEGEND & GENERAL INFORMATION
CITY OF DETROIT PUBLIC LIGHTING COMMISSION		
DRAWN BY / DATE	APPROVED / APPROVED / FILE NO. 61009 / SHEET NO. 1	FILE NO. CEA CL / DRWG. NO. 1 OF 35 / DATE 12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-1(98)58	120

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
SCALE: 1" = 40'

ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2-½ #6 D.B. CABLES & 1-#6 NEOPRENE. (EXCEPT WHERE OTHERWISE INDICATED.)
WORK WITH MULTIPLE ST. LTG. WIRING DIAGRAM DRWG. NO. 3

As Const.

MATERIAL ON THIS SHEET				
ITEM	QUANTITIES	PART	NON-PART	Totals
1-3" ENCASED CONDUIT	~~110~~ LIN. FT.	126 LIN. FT.	LIN. FT.	126
3-3" ENCASED CONDUIT	~~1285~~ LIN. FT.	1269 LIN. FT.	LIN. FT.	1269
4-3" ENCASED CONDUIT	47 LIN. FT.	47 LIN. FT.	LIN. FT.	47
1-4" ENCASED CONDUIT	~~132~~ LIN. FT.	95 LIN. FT.	LIN. FT.	95
STREET TYPE "D" HANDHOLES	9 EACH	9 EACH	EACH	9
#1 TWO WAY MANHOLES	2 EACH	2 EACH	EACH	2
600 V, 1-½ #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	~~329~~ LIN. FT.	379 LIN. FT.	LIN. FT.	379
600 V, 2-½ #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	~~604~~ LIN. FT.	907 LIN. FT.	LIN. FT.	907
COMMUNICATION CABLE, 16 GA. PLASTIC JACKETED 3 PR.	~~1089~~ LIN. FT.	840 LIN. FT.	LIN. FT.	840
LIGHTING STANDARD, WITH 6' ARM ON NEW FOUNDATION	9 EACH	9 EACH	EACH	9
250 WATT MERCURY VAPOR LUMINAIRE	8 EACH	8 EACH	EACH	8
400 WATT MERCURY VAPOR LUMINAIRE	1 EACH	1 EACH	EACH	1
COMMUNICATION CABLE, 16 G.A. PLASTIC JACKETED, 6 PR.	~~590~~ LIN. FT.	507 LIN. FT.	LIN. FT.	507
6" SEWER CLASS B	~~46~~ LIN. FT.	34 LIN. FT.	LIN. FT.	34

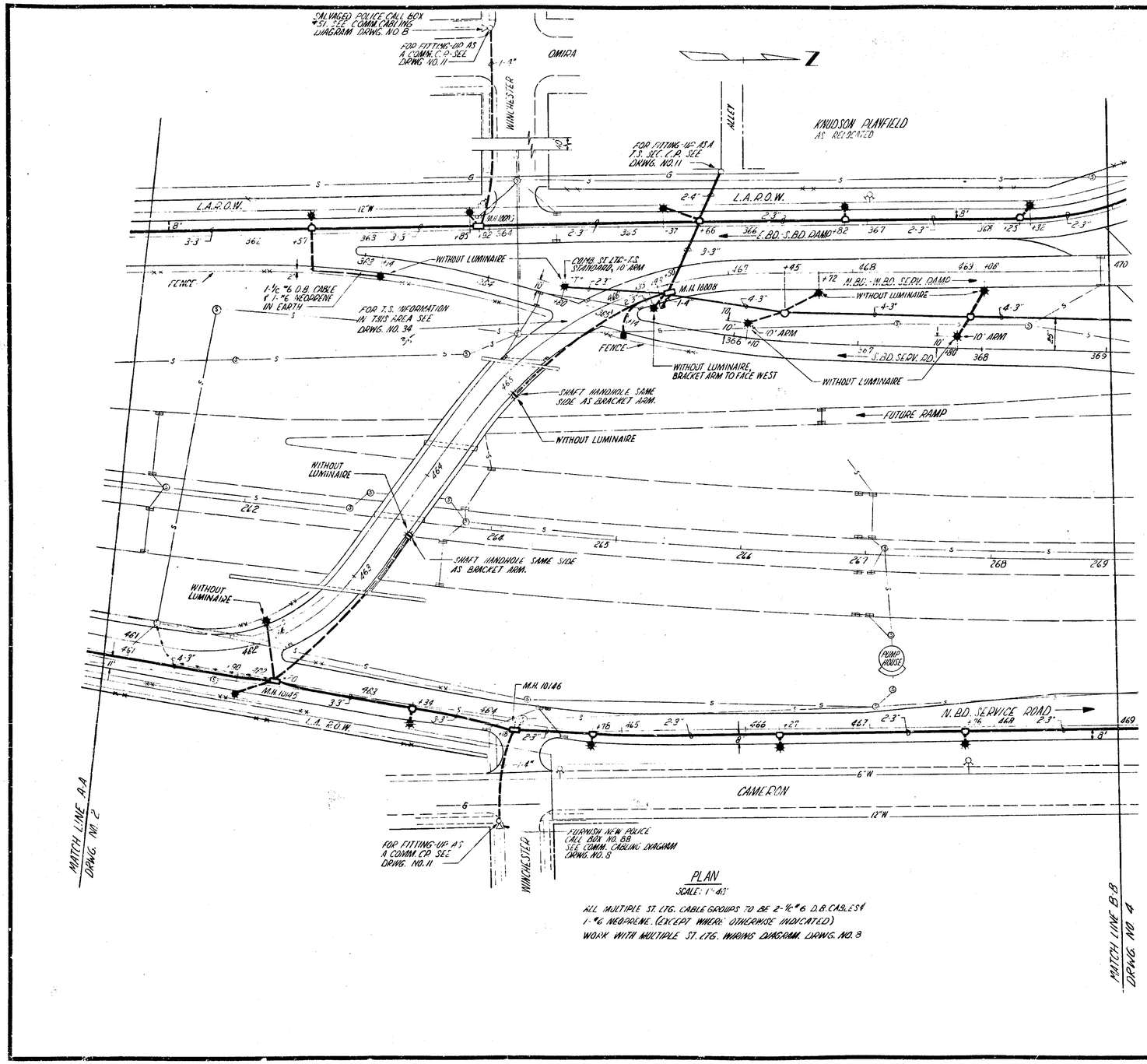
I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
GENERAL PLAN

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 2	CEA C1	2 OF 35	1-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	121



PLAN

SCALE: 1" = 40'

ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2-1/c #6 D.B. CABLES & 1-#6 NEOPRENE. (EXCEPT WHERE OTHERWISE INDICATED)

WORK WITH MULTIPLE ST. LTG. WIRING DIAGRAM. DRWG. NO. 8

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY			TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

MATERIAL ON THIS SHEET — As Const.

ITEM	QUANTITIES	PART	NON-PART	Totals
1-3" ENCASED CONDUIT	~~528~~ LIN. FT.	481 LIN. FT.	78 LIN. FT.	559
2-3" ENCASED CONDUIT	~~1089~~ LIN. FT.	1090 LIN. FT.	LIN. FT.	1090
3-3" ENCASED CONDUIT	~~512~~ LIN. FT.	496 LIN. FT.	LIN. FT.	496
4-3" ENCASED CONDUIT	~~487~~ LIN. FT.	497 LIN. FT.	LIN. FT.	497
1-4" ENCASED CONDUIT	~~230~~ LIN. FT.	277 LIN. FT.	LIN. FT.	217
2-4" ENCASED CONDUIT	~~46~~ LIN. FT.	33 LIN. FT.	LIN. FT.	33
STREET TYPE "D" HANDHOLES	10 EACH	10 EACH	EACH	10
#1 TWO-WAY MANHOLES	4 EACH	4 EACH	EACH	4
600 V., 1-1/c #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT	~~195~~ LIN. FT.	123 LIN. FT.	LIN. FT.	123
600 V., 2-1/c #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT	~~2485~~ LIN. FT.	2343 LIN. FT.	34 LIN. FT.	2477
600 V., 1-1/c #6 D.B. CABLES & 1-#6 NEOPRENE IN EARTH	55 LIN. FT.	LIN. FT.	55 LIN. FT.	55
COMMUNICATION CABLE, 16 GA., PLASTIC JACKETED 3 PR.	~~447~~ LIN. FT.	450 LIN. FT.	LIN. FT.	450
T.S. 7/c #14 R.J. CABLE FOR CHROMOPLAIN	~~372~~ LIN. FT.	379 LIN. FT.	LIN. FT.	379
600 V. 2-1/c #4 L.C. CABLES	~~514~~ LIN. FT.	504 LIN. FT.	LIN. FT.	504
LIGHTING STANDARD WITH 6' ARM ON NEW FDN.	15 EACH	14 EACH	1 EACH	15
LIGHTING STANDARD WITH 10' ARM ON NEW FDN.	2 EACH	EACH	2 EACH	2
LIGHTING STANDARD WITH 6' ARM ON BRIDGE	2 EACH	2 EACH	EACH	2
COMBINATION STREET LIGHT & T.S. STANDARD WITH 10' ARM ON NEW FDN.	1 EACH	1 EACH	EACH	1
250 WATT MERCURY VAPOR LUMINAIRES	10 EACH	10 EACH	EACH	10
600 V., 3-1/c #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT	~~170~~ LIN. FT.	217 LIN. FT.	LIN. FT.	217
COMMUNICATION CABLE, 16 GA., PLASTIC JACKETED 6 PR.	~~427~~ LIN. FT.	489 LIN. FT.	LIN. FT.	489
FURNISHING POLICE CALL BOX	1 EACH	EACH	1 EACH	1
6" SEWER CLASS B	114 LIN. FT.	104 LIN. FT.	LIN. FT.	104

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
GENERAL PLAN

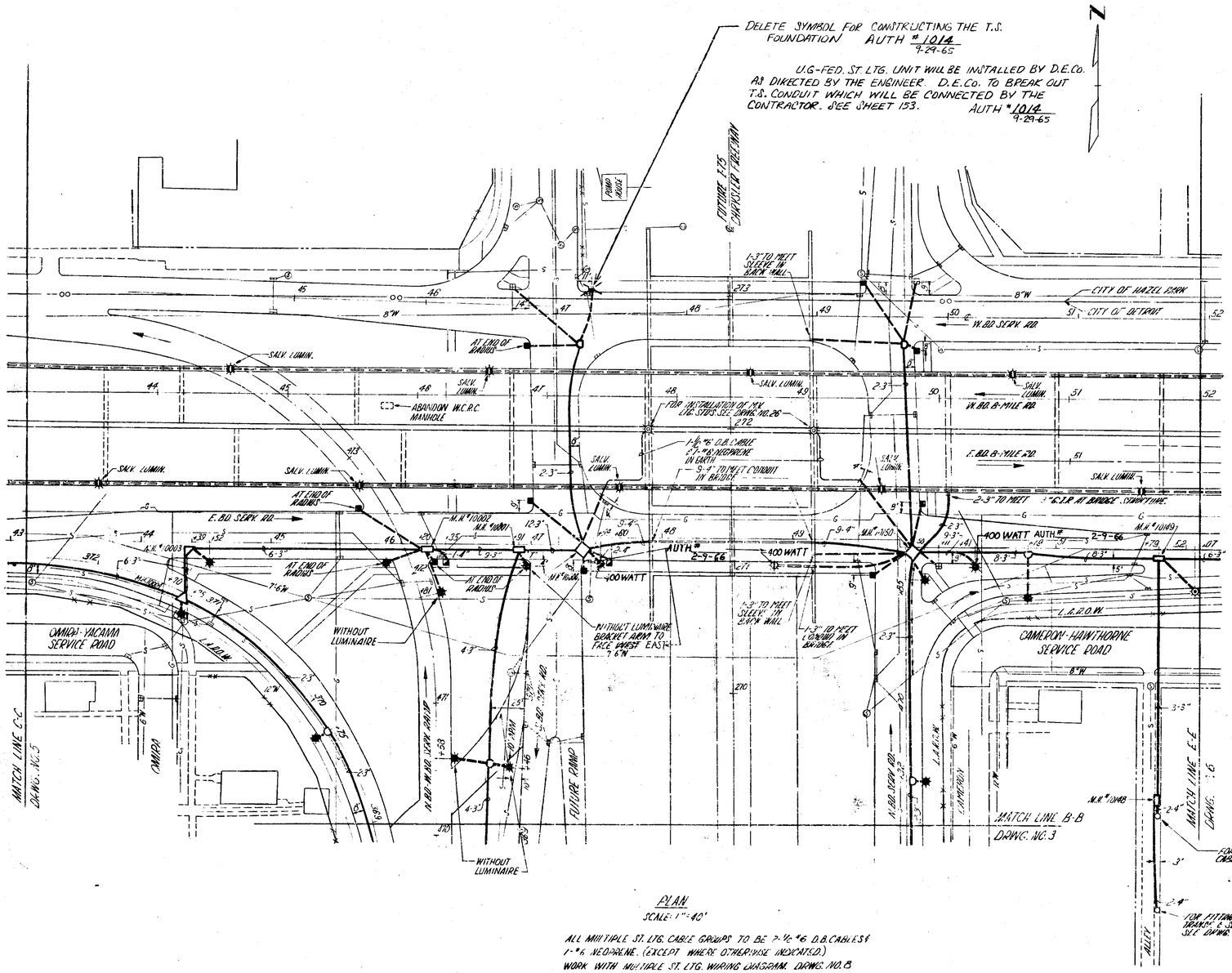
DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO.	[illegible] CL	3 OF 35	[illegible]

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1 (98) 59	122

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
SCALE: 1" = 40'

ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2-1/0 #6 D.B. CABLES & 1-#6 NEOPRENE. (EXCEPT WHERE OTHERWISE INDICATED.)
WORK WITH MULTIPLE ST. LTG. WIRING DIAGRAM. DRWG. NO. 8

As Const.

MATERIAL ON THIS SHEET

ITEM	QUANTITIES	PART	NON-PART
1-3" ENCASED CONDUIT	1050 ~~1008~~ LIN. FT.	841 LIN. FT.	209 LIN. FT.
2-3" ENCASED CONDUIT	778 ~~790~~ LIN. FT.	778 LIN. FT.	LIN. FT.
3-3" ENCASED CONDUIT	168 180 LIN. FT.	168 LIN. FT.	LIN. FT.
4-3" ENCASED CONDUIT	205 LIN. FT.	205 LIN. FT.	LIN. FT.
6-3" ENCASED CONDUIT	347 ~~324~~ LIN. FT.	276 LIN. FT.	71 LIN. FT.
8-3" ENCASED CONDUIT	148 ~~158~~ LIN. FT.	123 LIN. FT.	25 LIN. FT.
9-3" ENCASED CONDUIT	85 ~~83~~ LIN. FT.	69 LIN. FT.	16 LIN. FT.
10-3" ENCASED CONDUIT	40 LIN. FT.	36 LIN. FT.	4 LIN. FT.
1-4" ENCASED CONDUIT	29 ~~45~~ LIN. FT.	29 LIN. FT.	LIN. FT.
2-4" ENCASED CONDUIT	125 ~~96~~ LIN. FT.	125 LIN. FT.	LIN. FT.
3-4" ENCASED CONDUIT	119 ~~117~~ LIN. FT.	102 LIN. FT.	17 LIN. FT.
STREET TYPE "D" HANDHOLE	6 EACH	6 EACH	EACH
#1 TWO-WAY MANHOLE	4 EACH	4 EACH	EACH
#1 CORNER MANHOLE	1 EACH	1 EACH	EACH
#1 THREE WAY MANHOLE	1 EACH	1 EACH	EACH
#1 FOUR WAY MANHOLE	2 EACH	2 EACH	EACH
ABANDON MANHOLE	1 EACH	1 EACH	EACH
600 V., 1-1/0 #6 D.B. CABLE IN CONDUIT	500 ~~457~~ LIN. FT.	100 LIN. FT.	400 LIN. FT.
600 V., 1-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	494 ~~488~~ LIN. FT.	118 LIN. FT.	376 LIN. FT.
600 V., 2-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	3039 ~~3246~~ LIN. FT.	2271 LIN. FT.	768 LIN. FT.
600 V., 3-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	400 ~~359~~ LIN. FT.	1 LIN. FT.	400 LIN. FT.
600 V., 1-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN EARTH	130 ~~158~~ LIN. FT.	130 LIN. FT.	LIN. FT.
REMOVE 600 V., 1-1/0 D.B. CABLE IN CONDUIT	293 ~~303~~ LIN. FT.	LIN. FT.	293 LIN. FT.
600 V., 2-1/0 #12 P.J. CABLE FOR T.S. INTERCONNECTING	895 ~~996~~ LIN. FT.	895 LIN. FT.	LIN. FT.
600 V., 3-1/0 #2/0 L.C. CABLE	504 ~~547~~ LIN. FT.	504 LIN. FT.	LIN. FT.
600 V., 2-1/0 #4 L.C. CABLE	215 ~~235~~ LIN. FT.	215 LIN. FT.	LIN. FT.
600 V., 2-1/0 #6 L.C. CABLE	178 ~~145~~ LIN. FT.	178 LIN. FT.	LIN. FT.
T.S. #14 P.J. CABLE FOR CHRONOPLAN	455 ~~335~~ LIN. FT.	455 LIN. FT.	LIN. FT.
5000 V., 2-1/0 #6 L.C. DISTRIBUTION CABLE	1115 ~~1072~~ LIN. FT.	1115 LIN. FT.	LIN. FT.
7500 V., 2-1/0 #8 L.C. ST. LTG. CABLE	1852 ~~1550~~ LIN. FT.	1852 LIN. FT.	LIN. FT.
LIGHTING STANDARD WITH 6' ARM ON NEW FDN.	13 EACH	7 EACH	6 EACH
LIGHTING STANDARD WITH 10' ARM ON NEW FDN.	7 EACH	EACH	1 EACH
LIGHTING STANDARD WITH 6' ARM ON BRIDGE	10 EACH	9 EACH	1 EACH
250 WATT MERCURY VAPOR LUMINAIRE	7 ~~10~~ EACH	4 EACH	3 EACH
INSTALL SALVAGED 400 WATT MERCURY VAPOR LUMINAIRE	9 EACH	9 EACH	EACH
6" SEWER CLASS B	88 ~~109~~ LIN. FT.	88 LIN. FT.	LIN. FT.
6" SEWER TAPS	2 ~~7~~ EACH	2 EACH	EACH
400 W. MERCURY VAPOR LUMINAIRE	4 ~~7~~ EACH	EACH	4 EACH

AUTH. #1017 2-9-66

AUTH. # 2-9-66

AUTH # 9-29-65

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
GENERAL PLAN

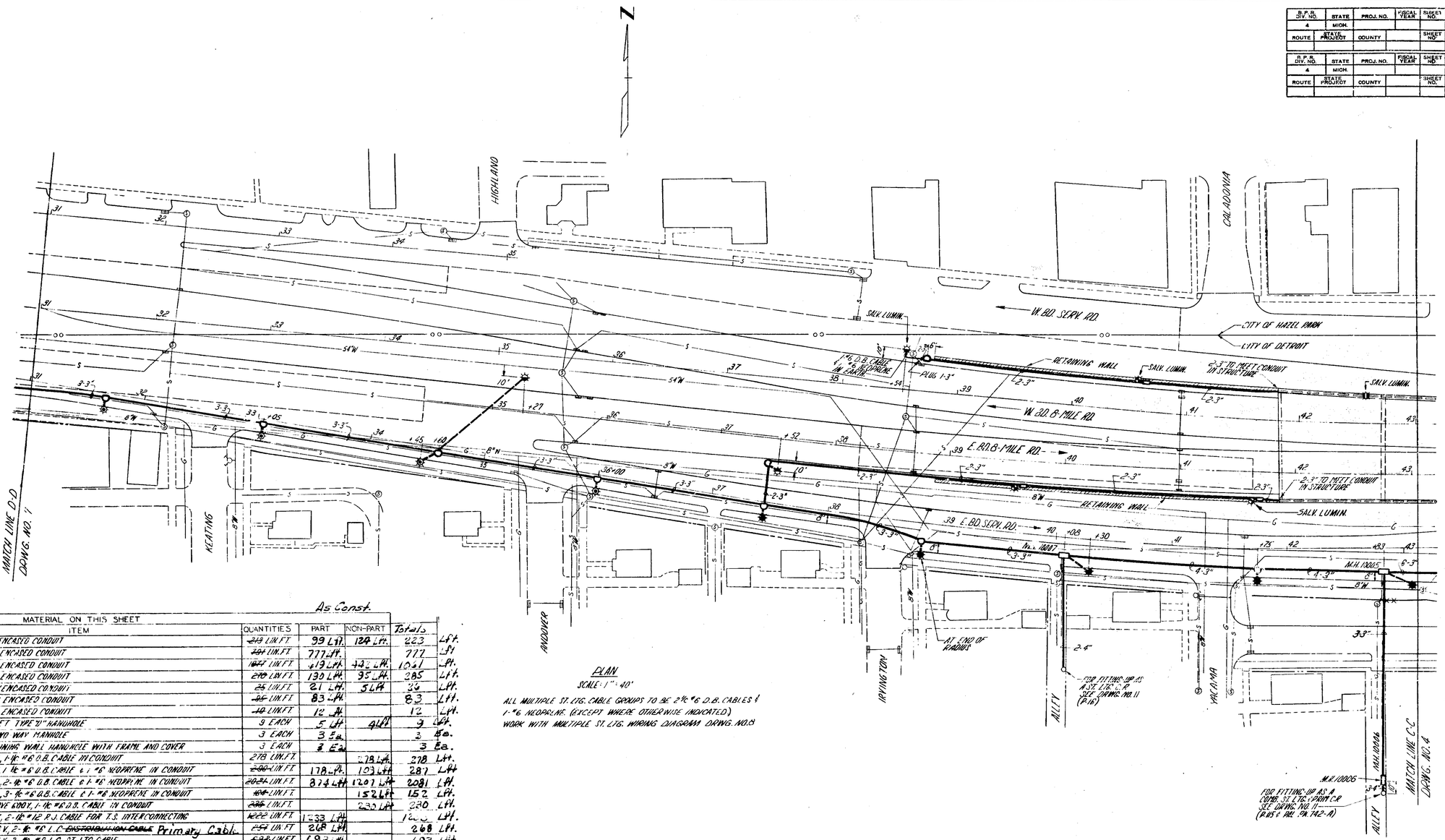
DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED 5-7-64	SHEET NO.	SEE CL	4 OF 35	

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1(98) 59	123

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
SCALE: 1" = 40'

ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2 #6 D.B. CABLES & 1-#6 NEOPRENE. (EXCEPT WHERE OTHERWISE INDICATED.)
WORK WITH MULTIPLE ST. LTG. WIRING DIAGRAM DRWG. NO. 8

MATERIAL ON THIS SHEET

ITEM	QUANTITIES	PART	NON-PART	Totals	As Const.
1-3" ENCASED CONDUIT	~~213~~ LIN.FT.	99 Lft.	124 Lft.	223	Lft.
2-3" ENCASED CONDUIT	~~771~~ LIN.FT.	777 Lft.		777	Lft.
3-3" ENCASED CONDUIT	~~1041~~ LIN.FT.	419 Lft.	622 Lft.	1041	Lft.
4-3" ENCASED CONDUIT	~~290~~ LIN.FT.	190 Lft.	95 Lft.	285	Lft.
6-3" ENCASED CONDUIT	~~25~~ LIN.FT.	21 Lft.	5 Lft.	26	Lft.
2-4" ENCASED CONDUIT	~~85~~ LIN.FT.	83 Lft.		83	Lft.
3-4" ENCASED CONDUIT	~~10~~ LIN.FT.	12 Lft.		12	Lft.
STREET TYPE "D" HANDHOLE	9 EACH	5 Lft.	4 Lft.	9	Lft.
#1 TWO WAY MANHOLE	3 EACH	3 Ea.		3	Ea.
RETAINING WALL HANDHOLE WITH FRAME AND COVER	3 EACH	3 Ea.		3	Ea.
600V, 1-#6 #6 D.B. CABLE IN CONDUIT	278 LIN.FT.		278 Lft.	278	Lft.
600V, 1-#6 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	~~290~~ LIN.FT.	178 Lft.	103 Lft.	281	Lft.
600V, 2-#6 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	~~2021~~ LIN.FT.	874 Lft.	1207 Lft.	2081	Lft.
600V, 3-#6 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT	~~1041~~ LIN.FT.		152 Lft.	152	Lft.
REMOVE 600V, 1-#6 #6 D.B. CABLE IN CONDUIT	~~230~~ LIN.FT.		230 Lft.	230	Lft.
600V, 2-#6 #12 P.J. CABLE FOR T.S. INTERCONNECTING	~~1222~~ LIN.FT.	1233 Lft.		1233	Lft.
5000V, 2-#6 #8 L.C. ~~DISTRIBUTION CABLE~~ Primary Cable	~~257~~ LIN.FT.	268 Lft.		268	Lft.
7500V, 2-#6 #8 L.C. ST. LTG. CABLE	~~693~~ LIN.FT.	693 Lft.		693	Lft.
LIGHTING STD. WITH 6' ARM ON NEW FDN.	9 EACH		9 Ea.	9	Ea.
LIGHTING STD. WITH 10' ARM ON NEW FDN.	3 EACH	3 Ea.		3	Ea.
LIGHTING STD. WITH 6' ARM ON BRIDGE	1 EACH	1 Ea.		1	Ea.
LIGHTING STD. WITH 6' ARM ON RETAINING WALL	3 EACH	3 Ea.		3	Ea.
250 WATT MERCURY VAPOR LUMINAIRE	5 EACH		5 Ea.	5	Ea.
400 WATT MERCURY VAPOR LUMINAIRE	7 EACH	3 Ea.	4 Ea.	7	Ea.
INSTALL SALVAGED 400 WATT MERCURY VAPOR LUMINAIRE	4 EACH	4 Ea.		4	Ea.
600 V., 1-#6 #6 D.B. CABLE & 1-#6 NEOPRENE IN EARTH	~~22~~ LIN.FT.	22 Lft.		22	Lft.
600V, 2-#6 #6 D.B. CABLE IN CONDUIT	~~12~~ LIN.FT.		12 Lft.	12	Lft.
6" SEWER 6" TO 14.0' DEEP	~~47~~ LIN.FT.	47 Lft.		47	Lft.

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
GENERAL PLAN

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

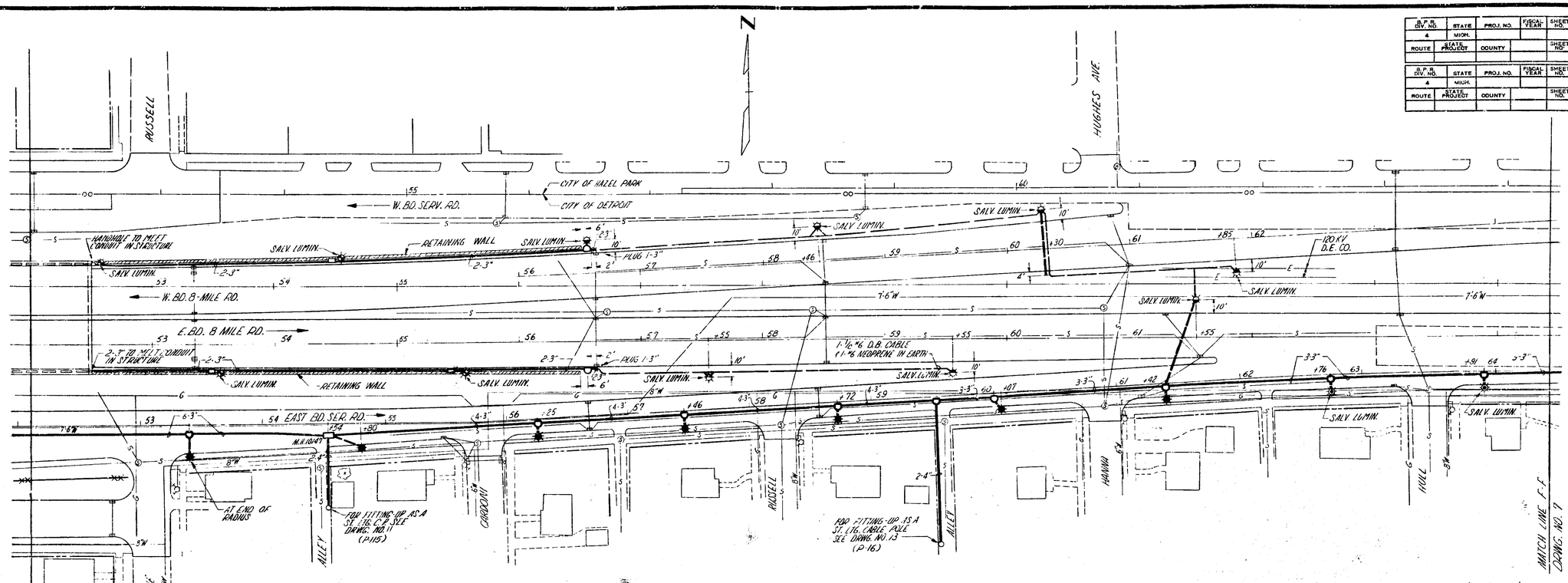
DRAWN BY	APPROVED	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED G.J.	SHEET NO. 5	CLA CL	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (38) 53	124

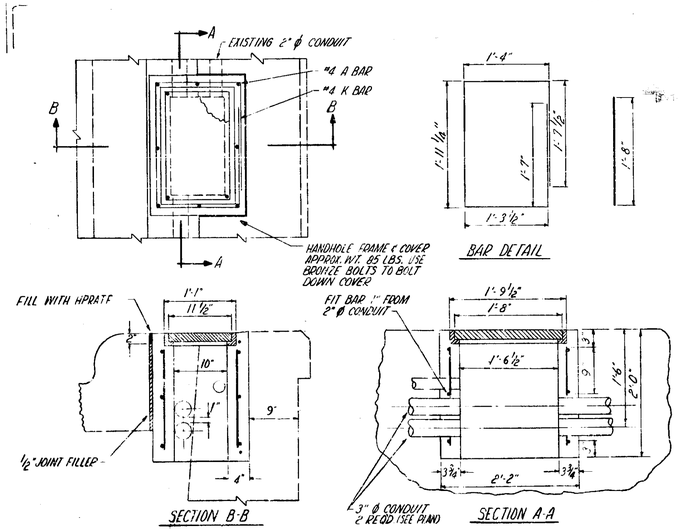
B.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
SCALE: 1" = 40'

ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2-1/0 #6 D.B. CABLES & 1-#6 NEOPRENE (EXCEPT WHERE OTHERWISE INDICATED) WORK WITH MULTIPLE ST. LTG. WIRING DIAGRAM. DRWG. NO. B



DETAIL "A" (RETAINING WALL HANDHOLE WITH FRAME & COVER)
SCALE: 1" = 1'-0"

As Const.

MATERIAL ON THIS SHEET ITEM		QUANTITIES	PART	NON-PART
1-3" ENCASED CONDUIT	247	~~230~~ LIN. FT.	122 LIN. FT.	125 LIN. FT.
2-3" ENCASED CONDUIT	81	~~325~~ LIN. FT.	812 LIN. FT.	LIN. FT.
3-3" ENCASED CONDUIT	486	~~511~~ LIN. FT.	243 LIN. FT.	243 LIN. FT.
4-3" ENCASED CONDUIT	498	~~492~~ LIN. FT.	332 LIN. FT.	166 LIN. FT.
6-3" ENCASED CONDUIT	244	~~240~~ LIN. FT.	183 LIN. FT.	61 LIN. FT.
24" ENCASED CONDUIT	145	~~147~~ LIN. FT.	145 LIN. FT.	LIN. FT.
STREET TYPE "D" HANDHOLES		11 EACH	4 EACH	7 EACH
#1 TWO WAY MANHOLES		1 EACH	1 EACH	EACH
RETAINING WALL HANDHOLE WITH FRAME & COVER		4 EACH	4 EACH	EACH
600 V., 1-1/0 #6 D.B. CABLE IN CONDUIT	237	~~229~~ LIN. FT.	LIN. FT.	237 LIN. FT.
600 V., 2-1/0 #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT	2309	~~2486~~ LIN. FT.	1202 LIN. FT.	1107 LIN. FT.
600 V., 3-1/0 #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT	172	~~156~~ LIN. FT.	LIN. FT.	172 LIN. FT.
REMOVE 600 V., 1-1/0 #6 D.B. CABLE IN CONDUIT	229	~~303~~ LIN. FT.	LIN. FT.	229 LIN. FT.
600 V., 1-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN EARTH	218	~~202~~ LIN. FT.	218 LIN. FT.	LIN. FT.
600 V., 2-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN EARTH	656	~~688~~ LIN. FT.	656 LIN. FT.	LIN. FT.
600 V., 2-1/0 #12 D.B. CABLE FOR T.S. INTERCONNECTING	1261	~~1298~~ LIN. FT.	1261 LIN. FT.	LIN. FT.
1500 V. 2-1/0 #8 L.C. ST. LTG. CABLES	1221	1220 LIN. FT.	1221 LIN. FT.	LIN. FT.
LIGHTING STANDARD WITH 6' ARM ON NEW FDN.		9 EACH	EACH	9 EACH
LIGHTING STANDARD WITH 10 ARM ON NEW FDN.		7 EACH	7 EACH	EACH
LIGHTING STANDARD WITH 6' ARM ON RETAINING WALL		4 EACH	4 EACH	EACH
250 WATT MERCURY VAPOR LUMINAIRE		7 EACH	EACH	7 EACH
INSTALL SALVAGED 400 WATT MERCURY VAPOR LUMINAIRE		13 EACH	11 EACH	2 EACH

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO. 0.0.09
DATE	APPROVED	SHEET NO.

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
GENERAL PLAN

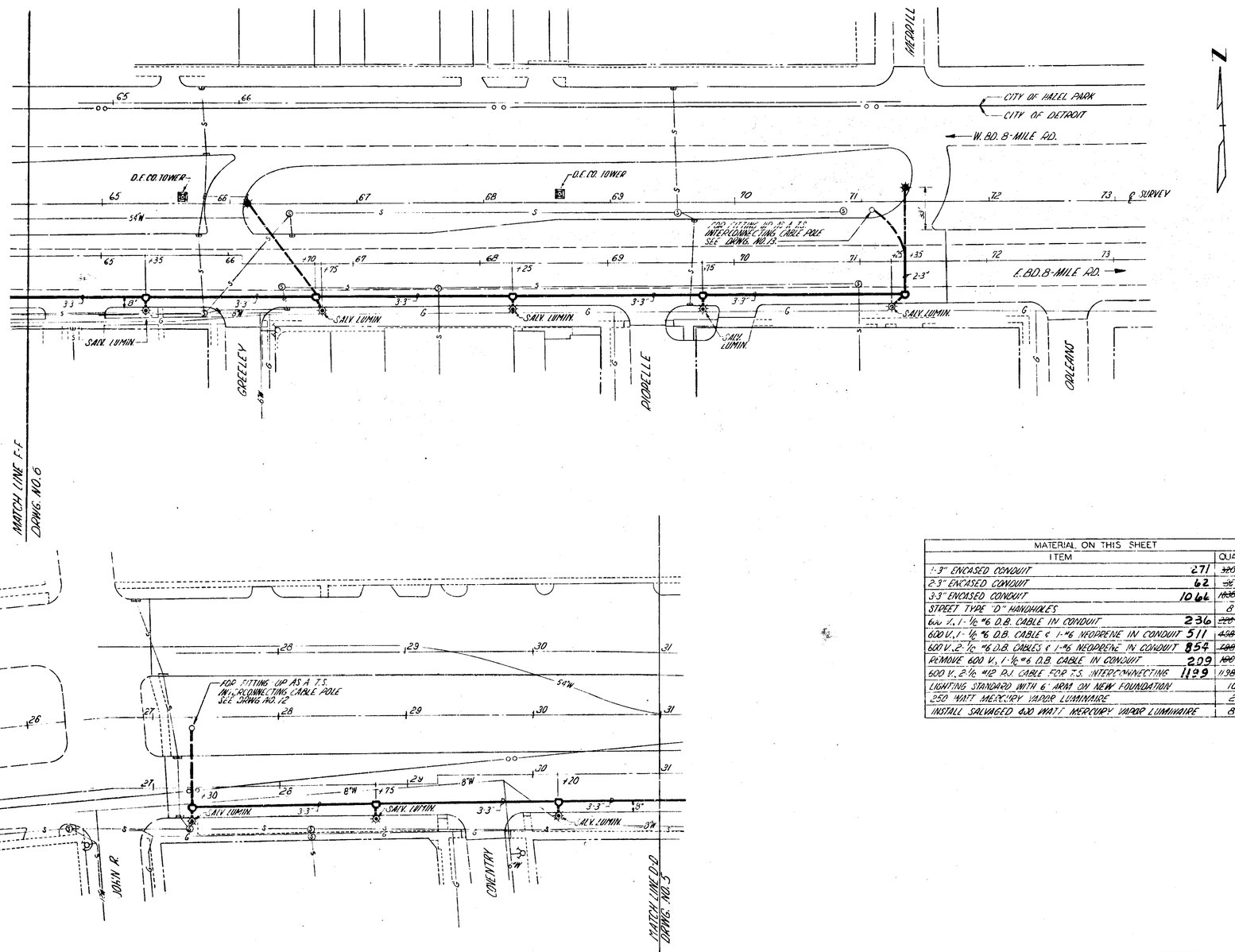
FILE NO.	DRWG NO.	DATE
CLA CL	6 OF 35	1-21-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	725

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
1-3" ENCASED CONDUIT 271	~~270~~ LIN. FT.	76 LIN. FT.	195 LIN. FT.
2-3" ENCASED CONDUIT 62	~~36~~ LIN. FT.	31 LIN. FT.	31 LIN. FT.
3-3" ENCASED CONDUIT 1066	~~1000~~ LIN. FT.	533 LIN. FT.	533 LIN. FT.
STREET TYPE "D" HANDHOLES	8 EACH	2 EACH	6 EACH
600 V. 1-1/0 #6 D.B. CABLE IN CONDUIT 236	~~200~~ LIN. FT.	LIN. FT.	236 LIN. FT.
600 V. 1-1/0 #6 D.B. CABLE & 1-#6 NEOPRENE IN CONDUIT 511	~~450~~ LIN. FT.	LIN. FT.	511 LIN. FT.
600 V. 2-1/0 #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT 854	~~700~~ LIN. FT.	LIN. FT.	854 LIN. FT.
REMOVE 600 V. 1-1/0 #6 D.B. CABLE IN CONDUIT 209	~~190~~ LIN. FT.	LIN. FT.	209 LIN. FT.
600 V. 2-1/0 #12 P.J. CABLE FOR T.S. INTERCONNECTING 1199	1198 LIN. FT.	1199 LIN. FT.	LIN. FT.
LIGHTING STANDARD WITH 6' ARM ON NEW FOUNDATION	10 EACH	EACH	10 EACH
250 WATT MERCURY VAPOR LUMINAIRE	2 EACH	EACH	2 EACH
INSTALL SALVAGED 400 WATT MERCURY VAPOR LUMINAIRE	8 EACH	EACH	8 EACH

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
GENERAL PLAN

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

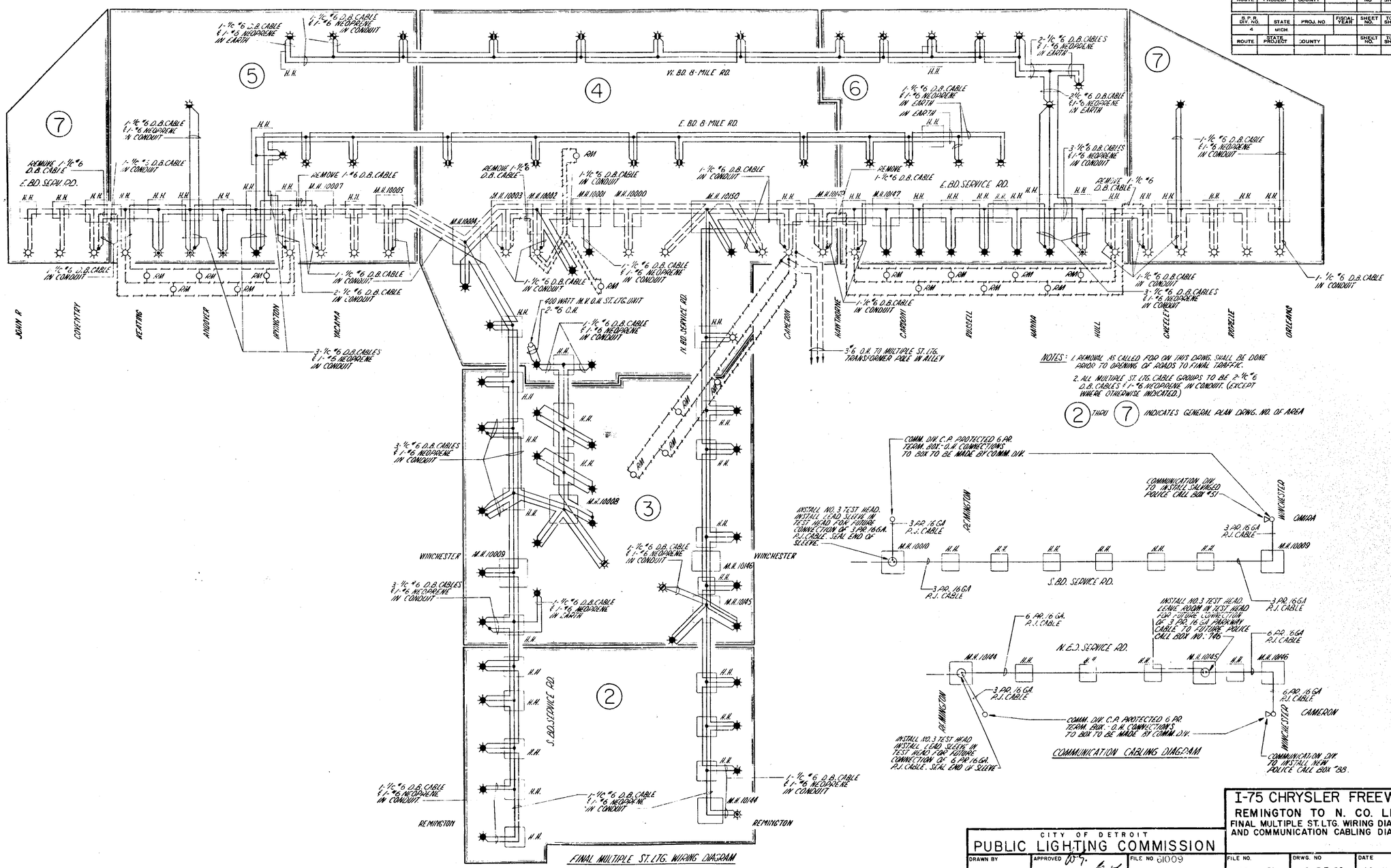
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 7	CEA CL	7 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	126

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



NOTES: 1. REMOVAL AS CALLED FOR ON THIS DRWG. SHALL BE DONE PRIOR TO OPENING OF ROADS TO FINAL TRAFFIC.

2. ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2-1/c #6 D.B. CABLES & 1-#6 NEOPRENE IN CONDUIT. (EXCEPT WHERE OTHERWISE INDICATED.)

(2) THRU (7) INDICATES GENERAL PLAN DRWG. NO. OF AREA

FINAL MULTIPLE ST. LTG. WIRING DIAGRAM

COMMUNICATION CABLING DIAGRAM

I-75 CHRYSLER FREEWAY

REMINGTON TO N. CO. LINE

FINAL MULTIPLE ST. LTG. WIRING DIAGRAM AND COMMUNICATION CABLING DIAGRAM

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

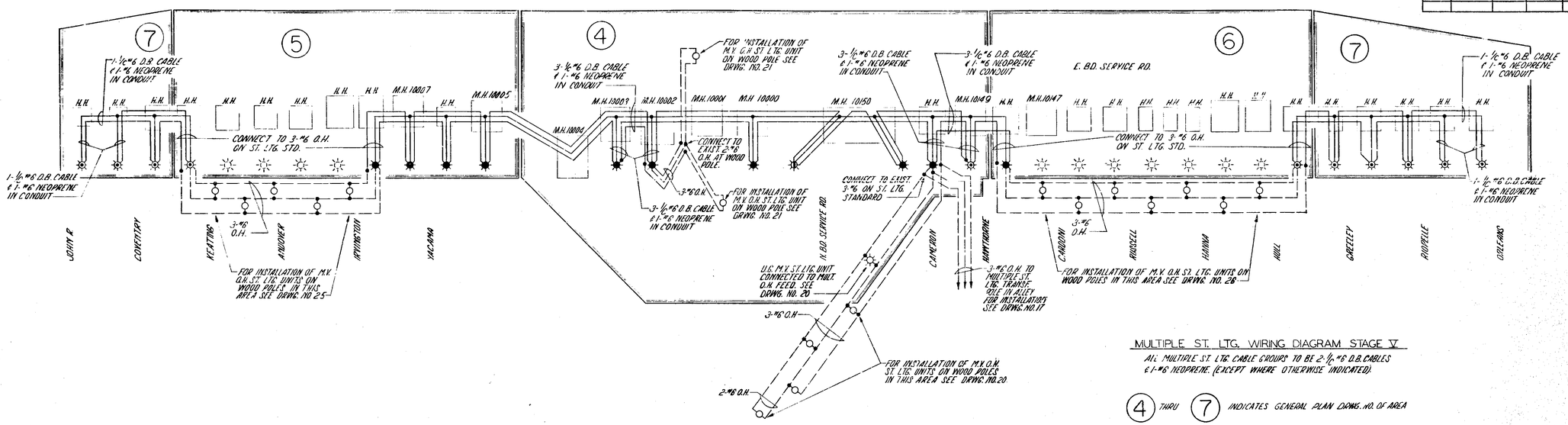
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO	DATE
DATE	APPROVED	SHEET NO.	CEA CL	8 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-1 (98) 59	127

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

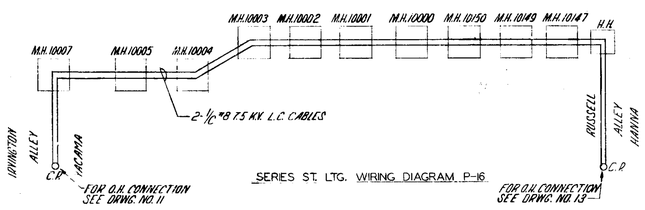
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



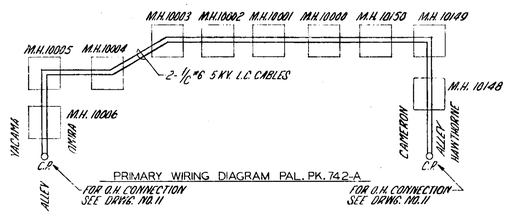
MULTIPLE ST. LTG. WIRING DIAGRAM STAGE V

ALL MULTIPLE ST. LTG. CABLE GROUPS TO BE 2-1/c #6 D.B. CABLES & 1-#6 NEOPRENE. (EXCEPT WHERE OTHERWISE INDICATED).

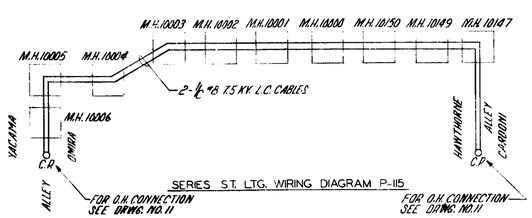
(4) THRU (7) INDICATES GENERAL PLAN DRWG. NO. OF AREA



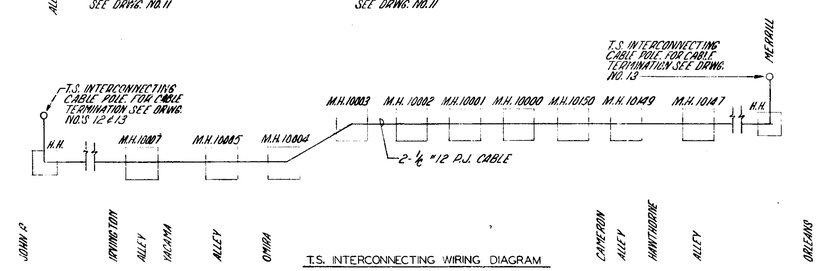
SERIES ST. LTG. WIRING DIAGRAM P-16



PRIMARY WIRING DIAGRAM PAL. PK. 742-A



SERIES ST. LTG. WIRING DIAGRAM P-115



T.S. INTERCONNECTING WIRING DIAGRAM

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
MULT. ST. LTG. WIRING DIAGRAM STAGE V
P-16, P-115, PAL. PK. 742-A & T.S. INTERCONNECTING WIRING DIAGRAM

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

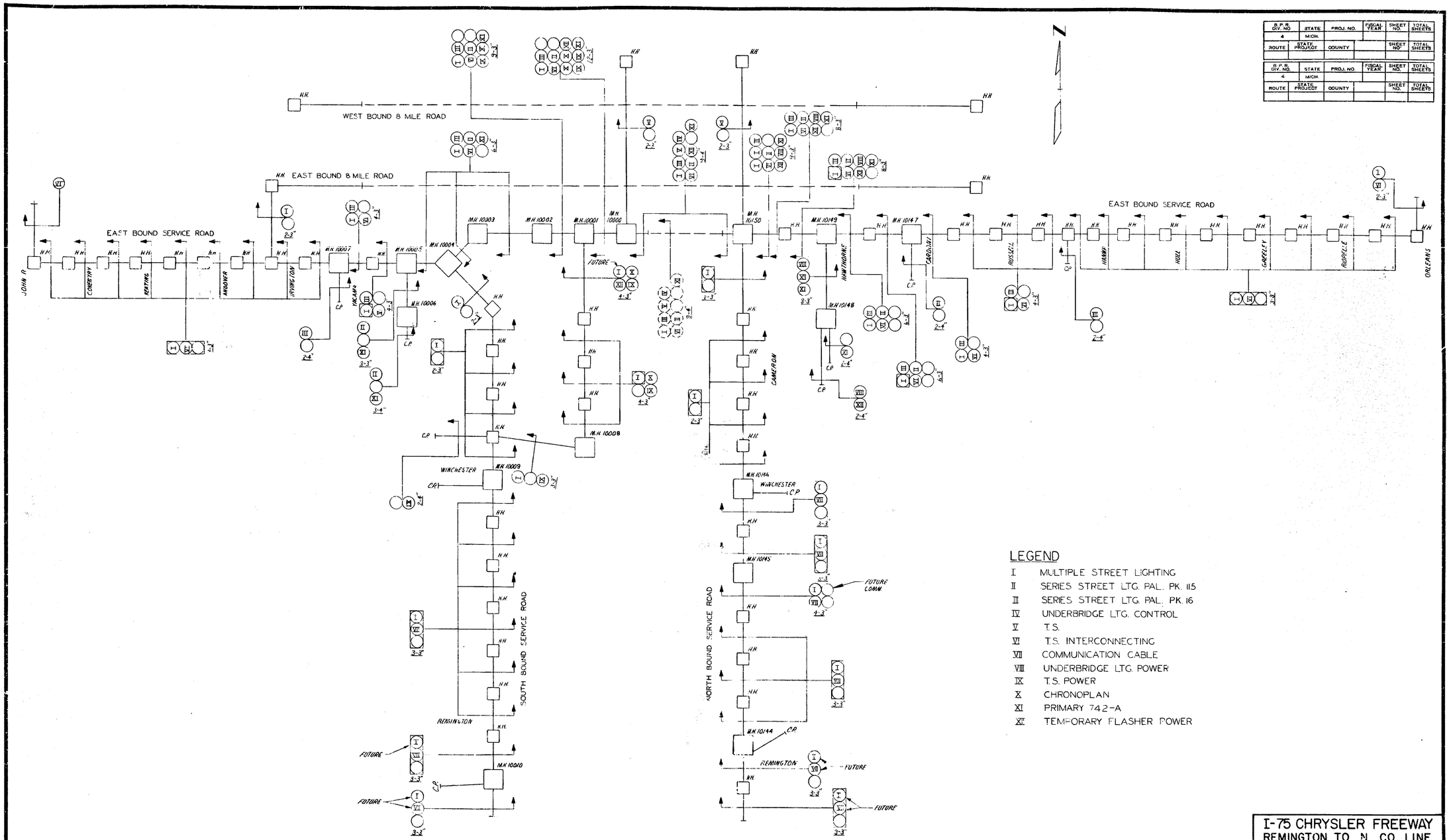
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 9	CLA CL	9 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 159	128

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



LEGEND

- I MULTIPLE STREET LIGHTING
- II SERIES STREET LTG. PAL. PK. 115
- III SERIES STREET LTG. PAL. PK. 16
- IV UNDERBRIDGE LTG. CONTROL
- V T.S.
- VI T.S. INTERCONNECTING
- VII COMMUNICATION CABLE
- VIII UNDERBRIDGE LTG. POWER
- IX T.S. POWER
- X CHRONOPLAN
- XI PRIMARY 742-A
- XII TEMPORARY FLASHER POWER

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
DUCT ALLOCATION

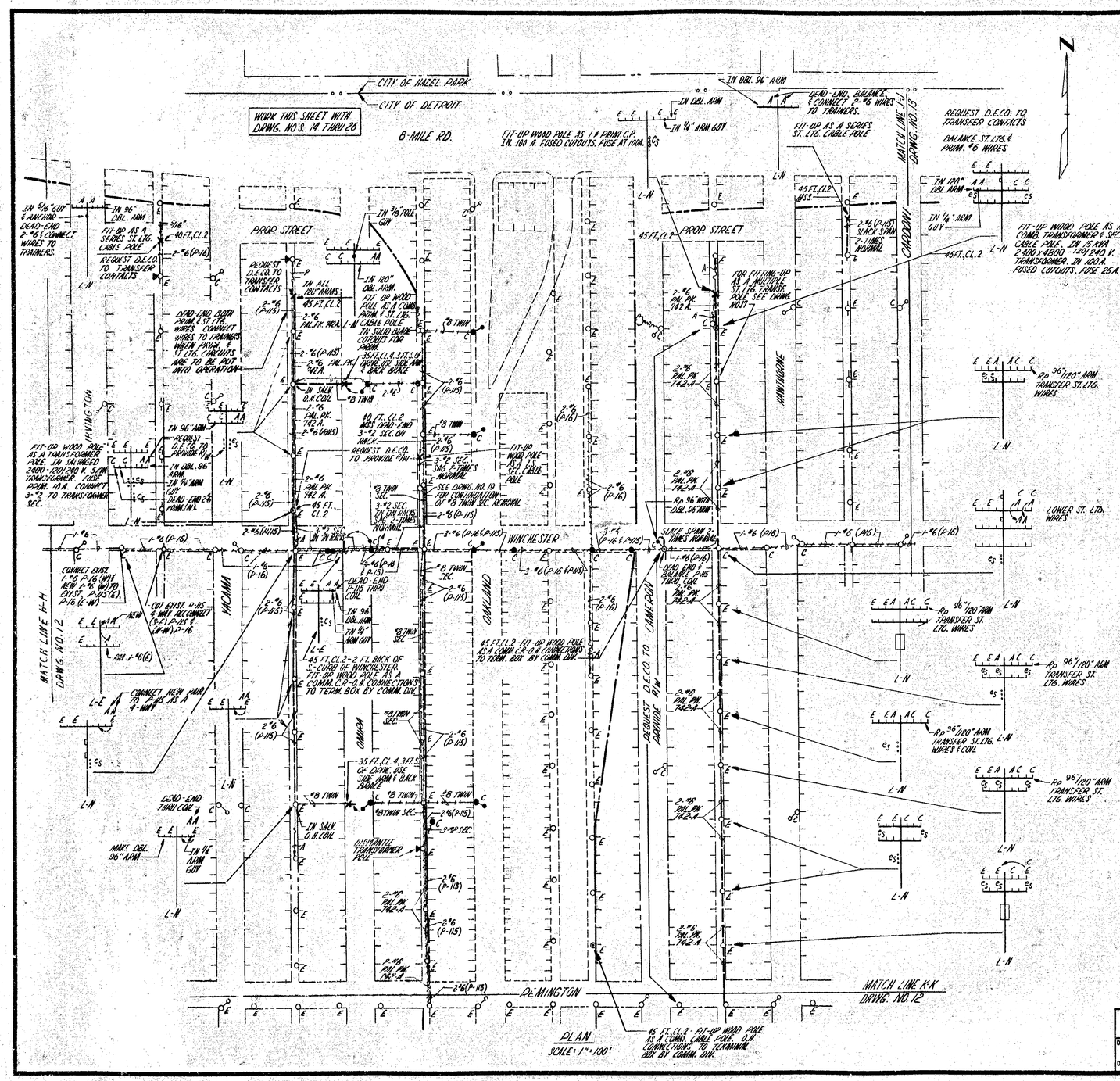
CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 10	CEA CL	10 OF 35	12-31-64

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	129

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNT		SHEET NO.	TOTAL SHEETS

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



WORK OVERHEAD DRAWING NO'S 11, 12, 13 WITH DRWG. NO'S 14 THRU 26

As Const.

MATERIAL ON THIS SHEET

ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES	17	~~16~~ EACH	17 Ea.	
REMOVE 1-#6 O.H. LINE	998	~~1420~~ LIN. FT.	998 L.Ft.	
REMOVE 2-#6 O.H. LINE	1940	~~2405~~ LIN. FT.	1940 L.Ft.	
REMOVE 3-#6 O.H. LINE	688	~~720~~ LIN. FT.	688 L.Ft.	
REMOVE O.H. ST. LTG. UNIT		8 EACH	8 Ea.	
35 FT., CLASS 4 WOOD POLE		2 EACH	2 Ea.	
40 FT., CLASS 2 WOOD POLE		2 EACH	2 Ea.	
45 FT., CLASS 2 WOOD POLE		8 EACH	8 Ea.	
1-#6 O.H. LINE		150 LIN. FT.	146 L.Ft.	
2-#6 O.H. LINE	2956	~~2956~~ LIN. FT.	2956 L.Ft.	
INSTALL SALVAGED O.H. ST. LTG. UNIT		4 EACH	4 Ea.	
FIT-UP WOOD POLE AS A TRANSFORMER POLE (WITH SALVAGED TRANSFORMER)		1 EACH	1 Ea.	
FIT-UP WOOD POLE AS A SERIES ST. LTG. CABLE POLE		2 EACH	2 Ea.	
FIT-UP WOOD POLE AS A COMB. PRIM. & ST. LTG. CABLE POLE		1 EACH	1 Ea.	
FIT-UP WOOD POLE AS A COMB. TRANSFORMER & SEC. CABLE POLE		1 EACH	1 Ea.	
REMOVE 3-#2 O.H. LINE		60 LIN. FT.	60 L.Ft.	
3-#2 O.H. LINE	515.5	~~540~~ LIN. FT.	515.5 L.Ft.	
FIT-UP WOOD POLE AS A COMMUNICATION CABLE POLE		3 EACH	3 Ea.	
Twin #8 Sec.			230 L.Ft.	
Rem. Twin #8 Sec.			970 L.Ft.	

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
OVERHEAD

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

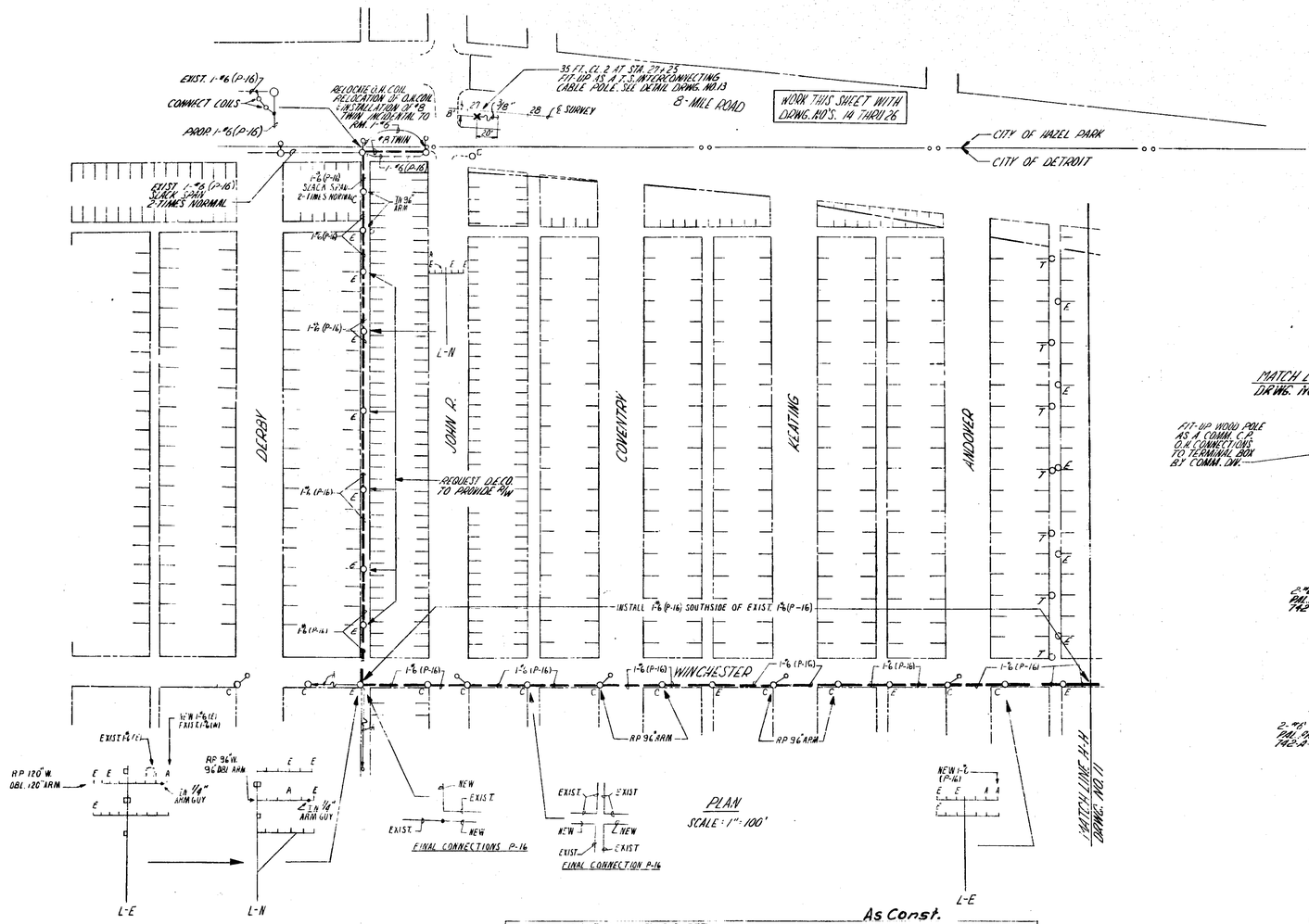
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 11	CEA CL	11 OF 35	12-31 64

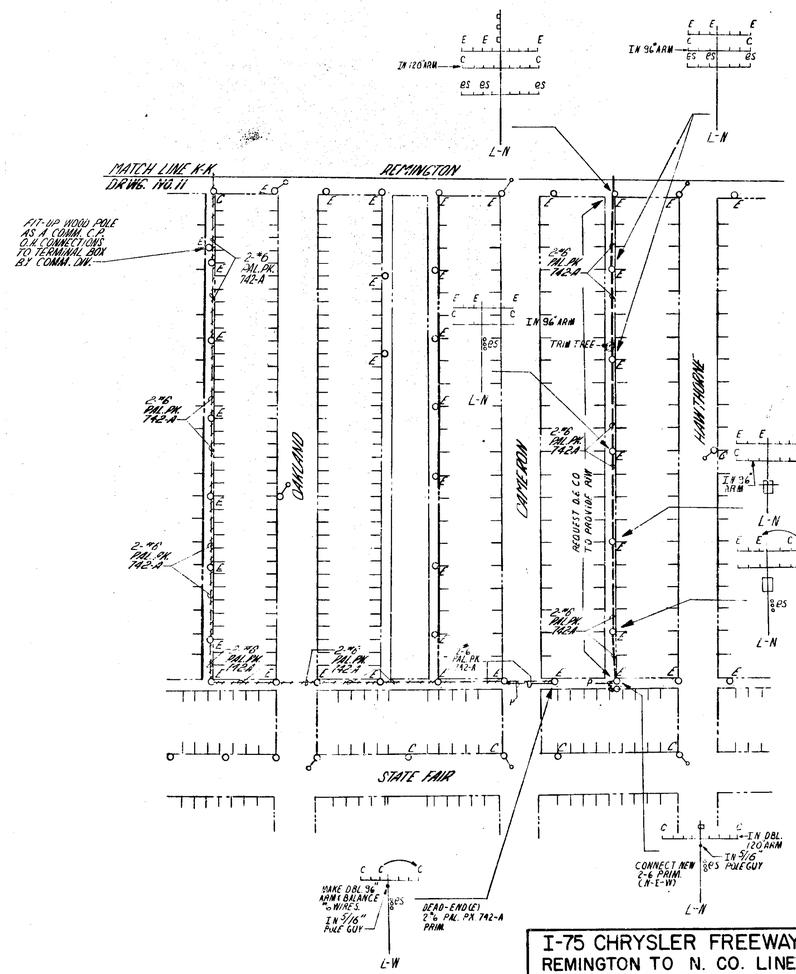
82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	130

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS





MATERIAL ON THIS SHEET

ITEM	QUANTITIES			PART	NON-PART
		As Const.			
REMOVE 2-#6 O.H. LINES	1329	~~1320~~	LIN. FT.	1329 Lft.	
1-#6 O.H. LINE	2128	~~2125~~	LIN. FT.	2126 LFt.	
2-#6 O.H. LINE	773	~~780~~	LIN. FT.	773 LFt.	
45 FT. CLASS 2 WOOD POLE	0	+	EACH		
35 FT. CLASS 2 WOOD POLE		1	EACH	1 Ea.	
FIT-UP WOOD POLE AS A COMM. CABLE POLE		1	EACH	1 Ea.	
FIT-UP WOOD POLE AS A T.S. INTERCONNECTING CABLE POLE		1	EACH	1 Ea.	
Rem. 1-#6 O.H. Line	115 LFt.			115 LFt.	

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
OVERHEAD

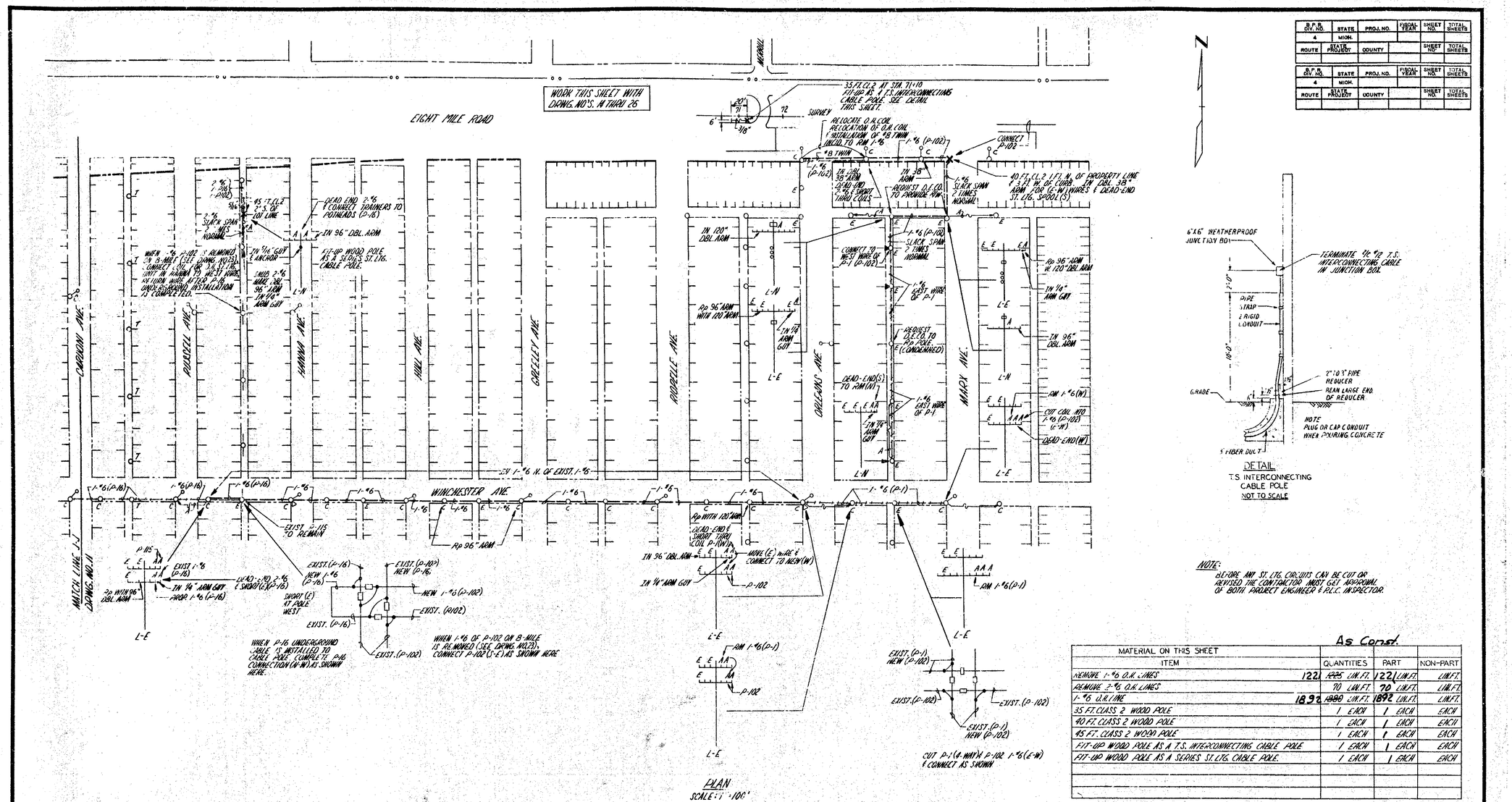
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO.	CEA C1	2 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	131

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



DETAIL
T.S. INTERCONNECTING CABLE POLE
NOT TO SCALE

NOTE:
BEFORE ANY ST. LTG. CIRCUITS CAN BE CUT OR REVISED THE CONTRACTOR MUST GET APPROVAL OF BOTH PROJECT ENGINEER & P.L.C. INSPECTOR.

As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
REMOVE 1-#6 O.H. LINES 1221	~~1225~~ LIN. FT.	1221 LIN. FT.	LIN. FT.
REMOVE 2-#6 O.H. LINES	70 LIN. FT.	70 LIN. FT.	LIN. FT.
1-#6 O.H. LINE 1892	~~1890~~ LIN. FT.	1892 LIN. FT.	LIN. FT.
35 FT. CLASS 2 WOOD POLE	1 EACH	1 EACH	EACH
40 FT. CLASS 2 WOOD POLE	1 EACH	1 EACH	EACH
45 FT. CLASS 2 WOOD POLE	1 EACH	1 EACH	EACH
FIT-UP WOOD POLE AS A T.S. INTERCONNECTING CABLE POLE	1 EACH	1 EACH	EACH
FIT-UP WOOD POLE AS A SERIES ST. LTG. CABLE POLE.	1 EACH	1 EACH	EACH

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
OVERHEAD

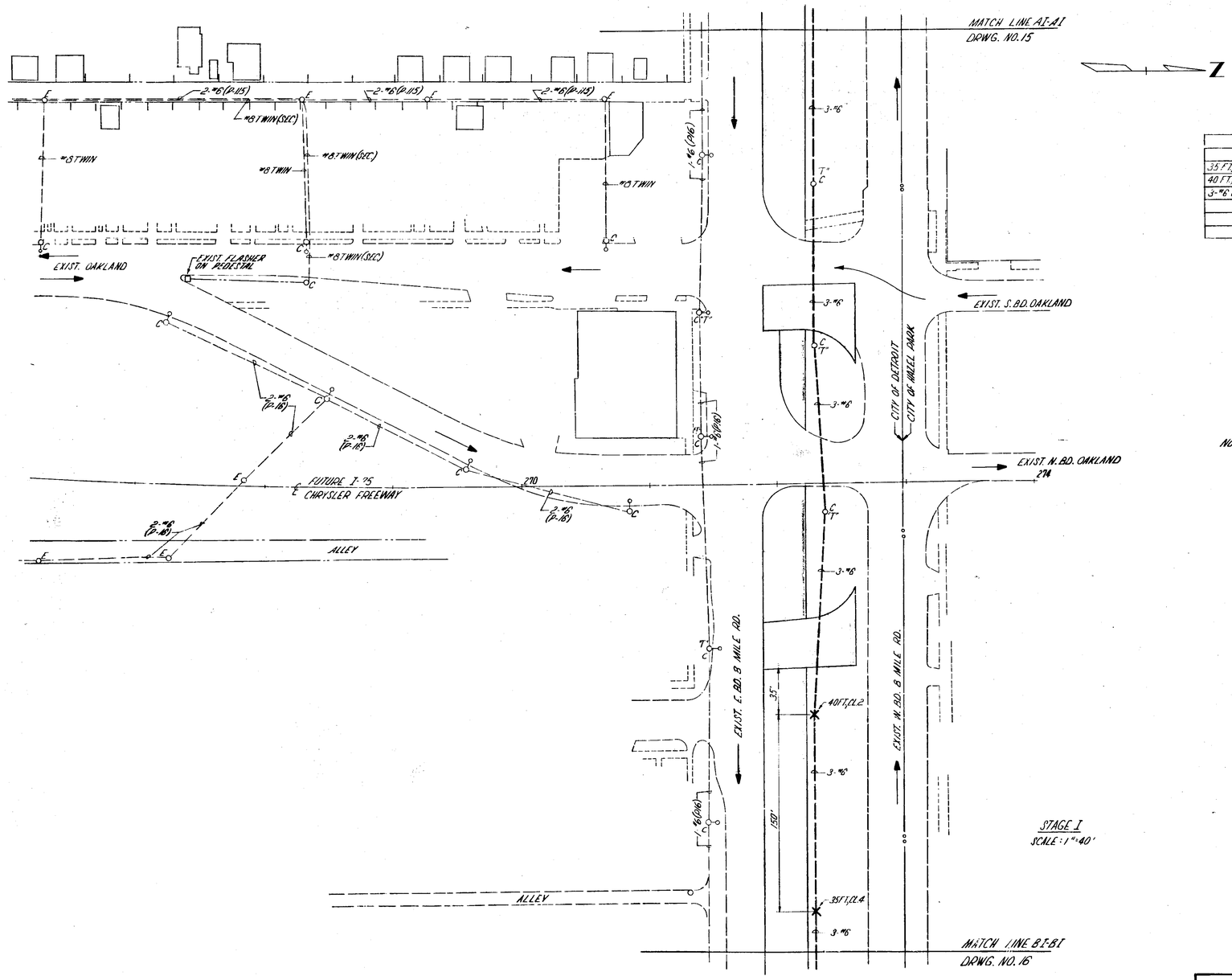
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG NO.	DATE
DATE	APPROVED	SHEET NO. 13	CEA CL	13 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1 (98) 59	132

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

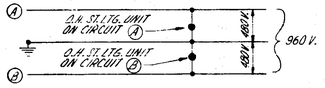


As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
35 FT, CLASS 4 WOOD POLES	1 EACH	1 Ea.	
40 FT, CLASS 2 WOOD POLES	1 EACH	1 Ea.	
3-#6 O.H. LINE	710 LIN. FT.	710 Lin. Ft.	

NOTES:

1. WOOD POLES SHALL BE INSTALLED SO AS NOT TO INTERFERE WITH TRAFFIC AND CONSTRUCTION OF ANY PAVEMENT.
2. O.H. ST. LTG. UNITS SHALL BE INSTALLED WITH A 6' ARM. (EXCEPT AS OTHERWISE NOTED.)
3. ALL O.H. TEMP. ST. LTG. UNITS SHALL BE 400 WATT, CLEAR MERCURY VAPOR, CONNECTED TO 420 V. MULTIPLE SYSTEM. SEE TYPICAL O.H. MULTIPLE ST. LTG. WIRING DIAGRAM BELOW.
4. MULTIPLE ST. LTG. WIRES TO BE INSTALLED ON SEC. RACKS.
5. LIGHTING STANDARDS, FOUNDATION, LUMINAIRES, ON LIGHTING STD'S, & U.G. CABLES INSTALLED DURING TEMP. STAGE CONSTRUCTION ARE ITEMIZED ON GENERAL PLANS.



TYPICAL O.H. MULTIPLE ST. LTG. WIRING DIAGRAM

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

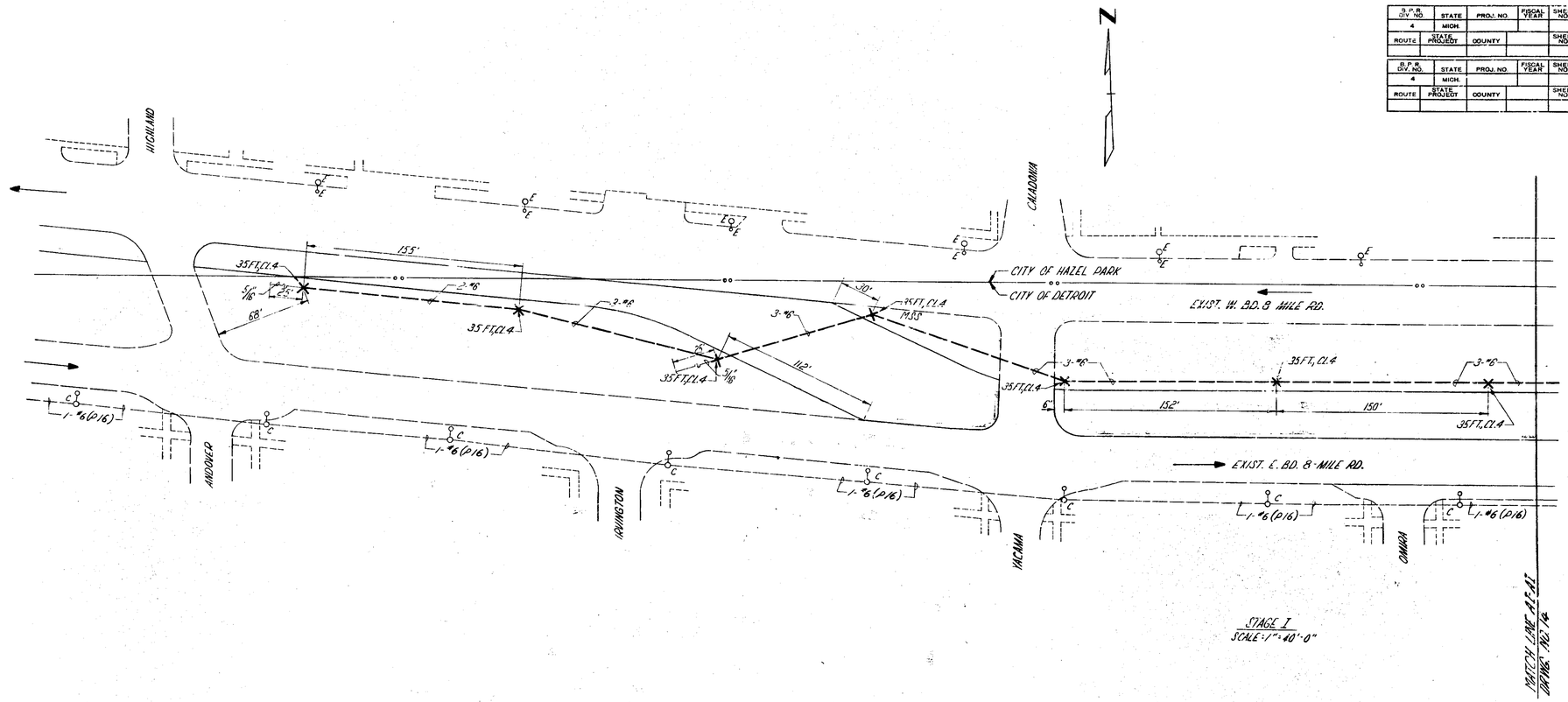
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 1-4	CEA CL	14 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-1 (98) 59	139

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE I
SCALE: 1" = 40'-0"

As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
35 FT. CLASS 4 WOOD POLES	7 EACH	7 EA	
2-#6 O.H. LINE	152 ~~145~~ LIN FT	152 LIN.	
3-#6 O.H. LINE	745 ~~742~~ LIN FT	745 LIN.	

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

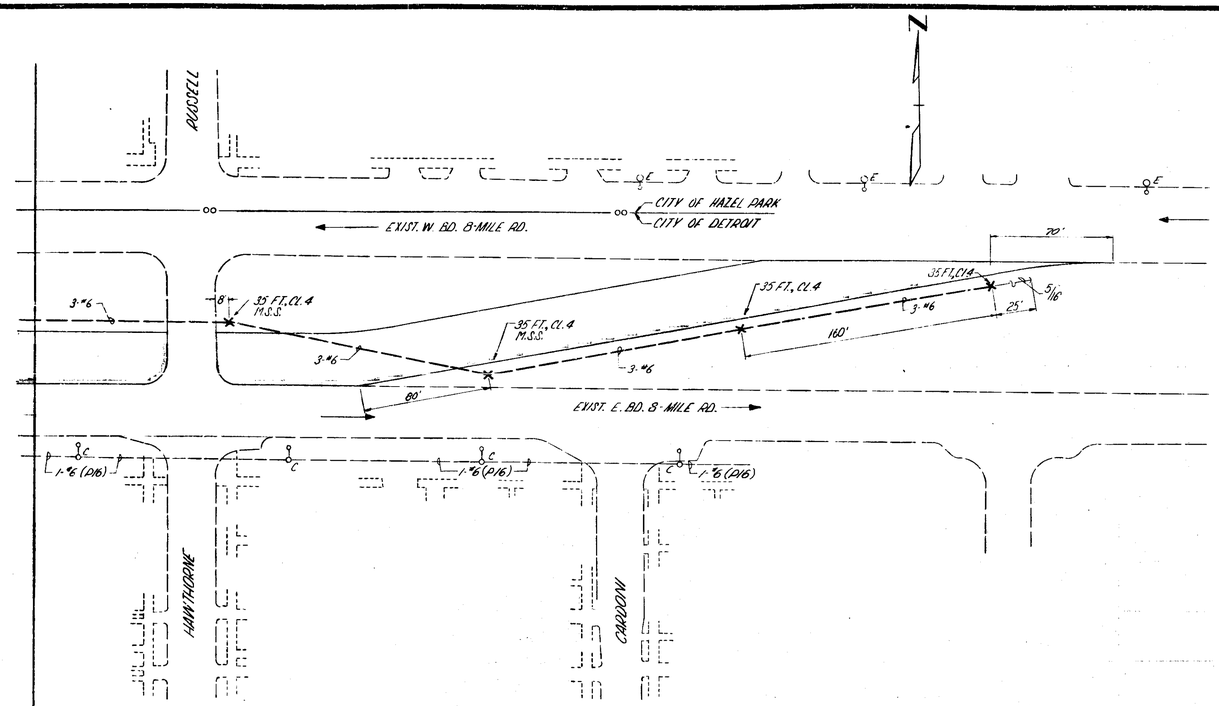
DRAWN BY	APPROVED	FILE NO 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 15	CEA CL	15 OF 35	12-31-64

82252 L, C63; 63174 A, C64

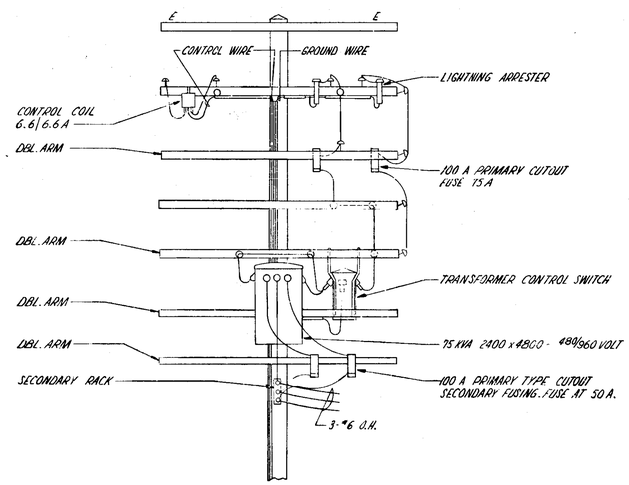
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 5B	134

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE I
SCALE: 1"=40'



ELEVATION - VIEW LOOK - NORTH
MULTIPLE TRANSFORMER POLE

As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
35 FT. CLASS 4 WOOD POLES	4 EACH	1 Ea.	
3-#6 O.H. LINE	555 ~~[illegible]~~ LIN. FT.	555 Lft.	

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

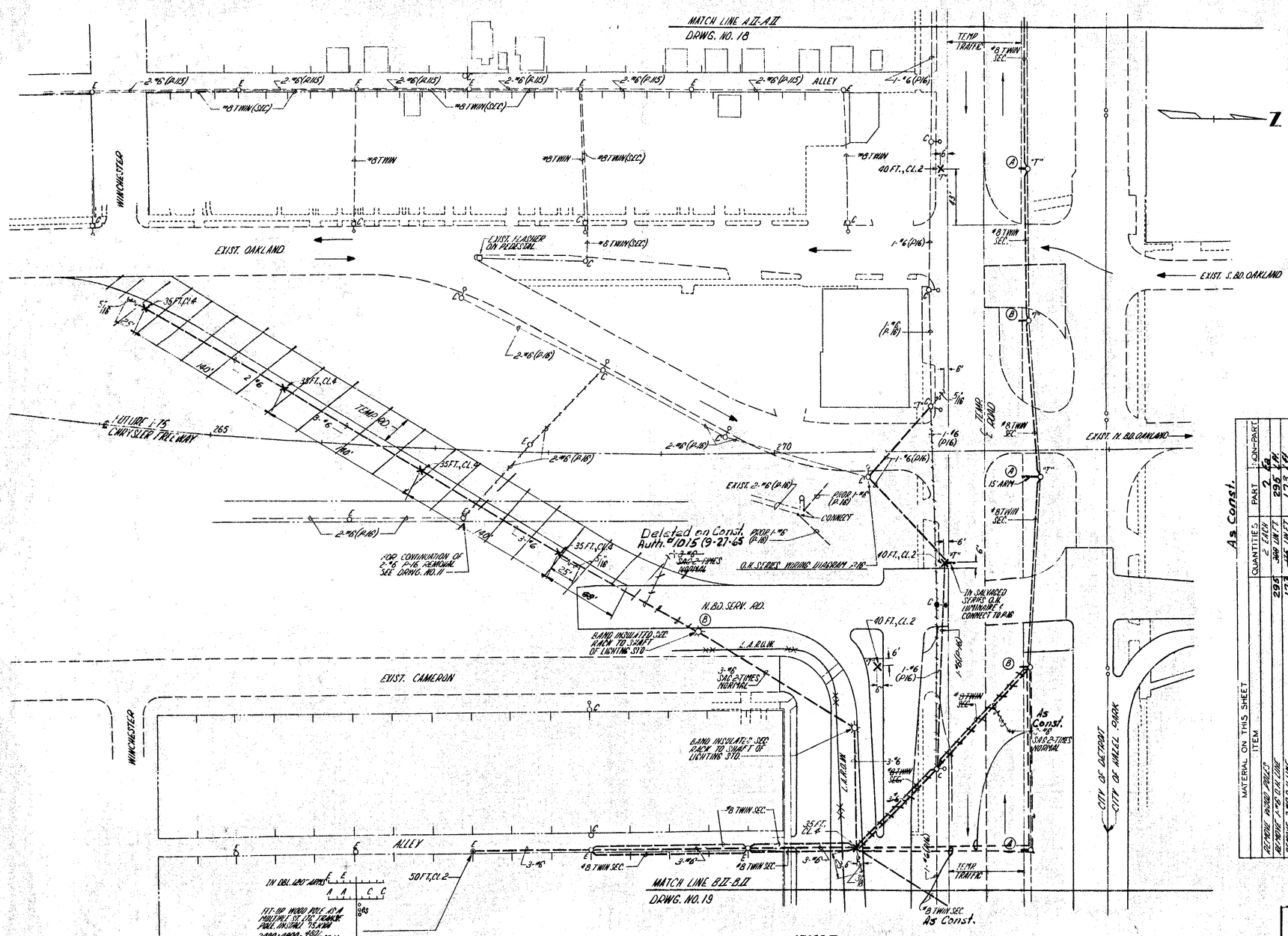
CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO.	CEA CL	16 OF 35	12-31-64

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98 | 59	135

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
REMOVE WOOD POLES	2 EACH	2	Ea.
REMOVE 1-#8 O.H. LINE	295 LIN. FT.	295	LIN. FT.
REMOVE 2-#8 O.H. LINE	173 LIN. FT.	173	LIN. FT.
REMOVE 1-#8 O.H. ST. LTG. UNIT	1 EACH	1	Ea.
33 FT. CLASS 4 WOOD POLES	4 EACH	4	Ea.
40 FT. CLASS 2 WOOD POLES	3 EACH	3	Ea.
50 FT. CLASS 2 WOOD POLES	1 EACH	1	Ea.
1-#8 O.H. LINE	349 LIN. FT.	349	LIN. FT.
2-#6 O.H. LINE	122 LIN. FT.	122	LIN. FT.
3-#6 O.H. LINE	986 LIN. FT.	986	LIN. FT.
400 WATT M.V. O.H. ST. LTG. UNIT	5 EACH	5	Ea.
INSTALL SALVAGED O.H. ST. LTG. UNIT	1 EACH	1	Ea.
FIT-UP WOOD POLE AS A MULT. ST. LTG. TRANSFORMER POLE	1 EACH	1	Ea.
1-#8 TWIN SEC.	1467 LIN. FT.	1467	LIN. FT.

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO 17	CEA CL.	17 OF 35	12-31-64

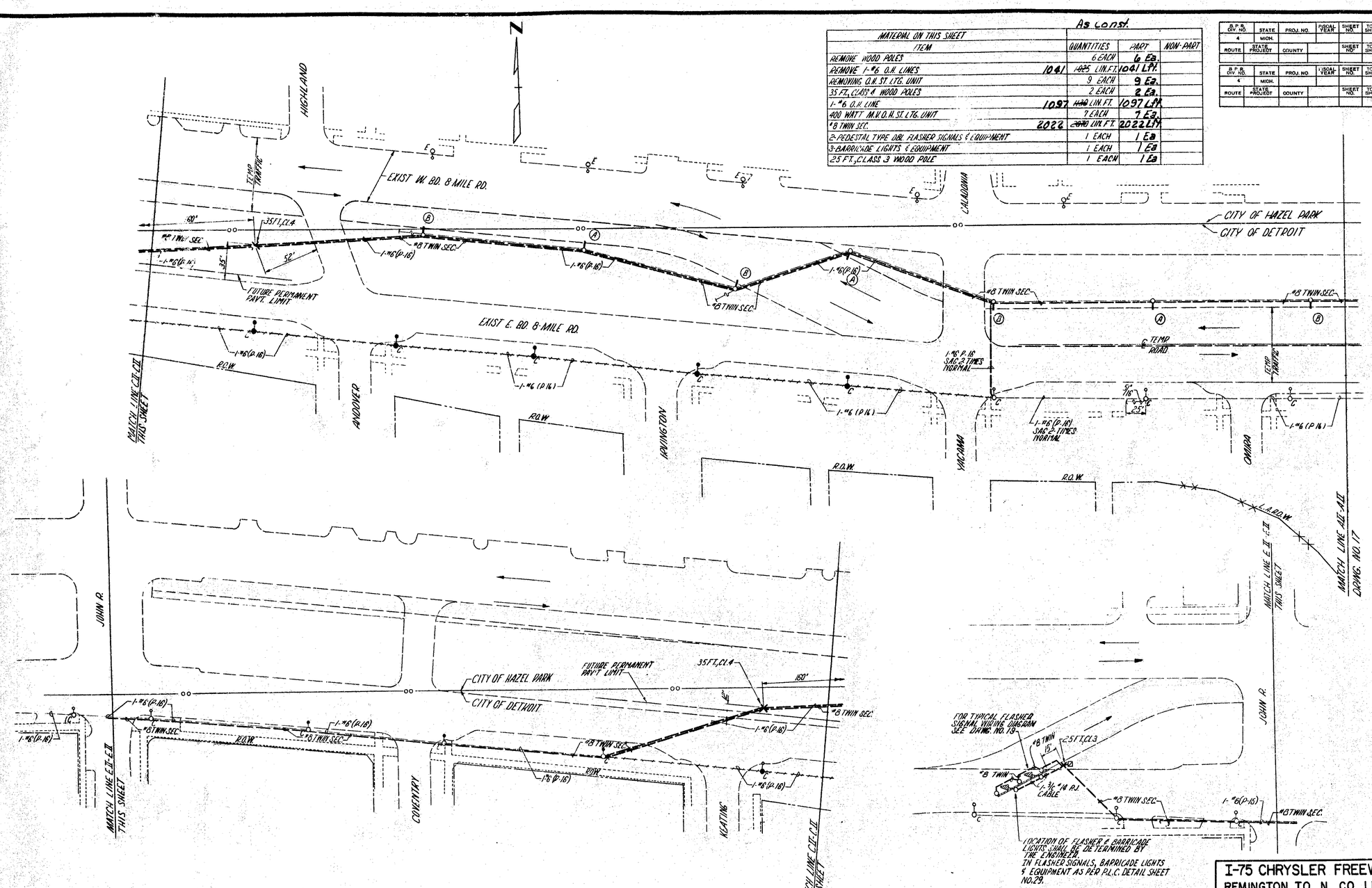
82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-1(98)59	136

MATERIAL ON THIS SHEET		As const.		
ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES		6 EACH	6 Ea.	
REMOVE 1-#6 O.H. LINES	1041	~~1025~~ LIN.FT.	1041 LIN.	
REMOVING O.H. ST. LTG. UNIT		9 EACH	9 Ea.	
35 FT., CLASS 4 WOOD POLES		2 EACH	2 Ea.	
1-#6 O.H. LINE	1097	~~1110~~ LIN.FT.	1097 LIN.	
400 WATT M.V. O.H. ST. LTG. UNIT		7 EACH	7 Ea.	
#8 TWIN SEC.	2022	~~2040~~ LIN.FT.	2022 LIN.	
2-PEDESTAL TYPE DBL FLASHER SIGNALS & EQUIPMENT		1 EACH	1 Ea	
3-BARRICADE LIGHTS & EQUIPMENT		1 EACH	1 Ea	
25 FT., CLASS 3 WOOD POLE		1 EACH	1 Ea	

R.P.W. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

R.P.W. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE II
SCALE: 1" = 40'

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

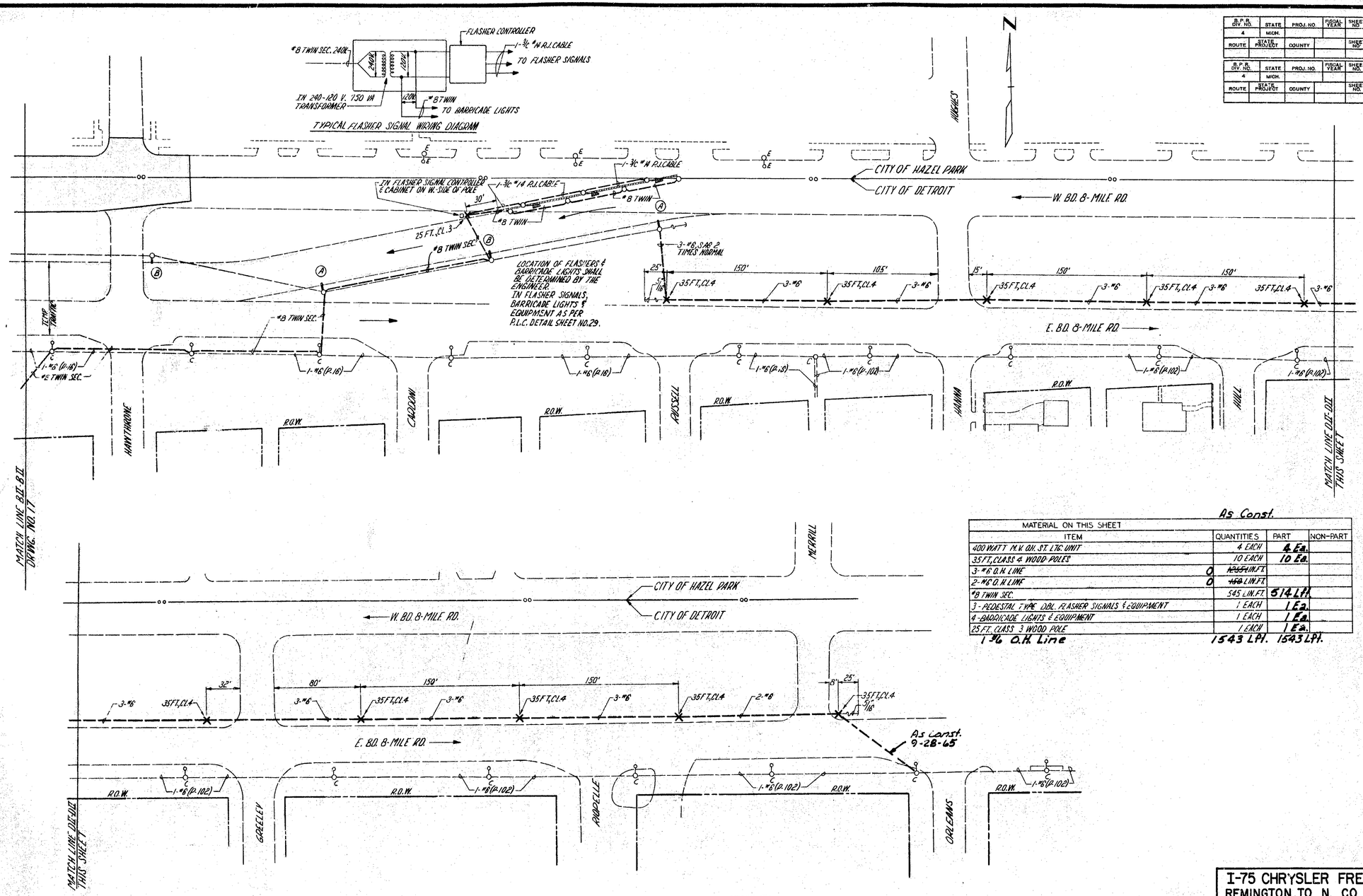
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 18	CF-4 CL	18 OF 35	12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	137

B. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE II
SCALE: 1" = 40'

As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
400 WATT M.V. OH. ST. LTG. UNIT	4 EACH	4 Ea.	
35 FT., CLASS 4 WOOD POLES	10 EACH	10 Ea.	
3-#6 O.H. LINE	0 ~~1295~~ LIN. FT.		
2-#6 O.H. LINE	0 ~~450~~ LIN. FT.		
#8 TWIN SEC.	545 LIN. FT.	514 LFt.	
3-PEDESTAL TYPE DBL. FLASHER SIGNALS & EQUIPMENT	1 EACH	1 Ea.	
4-BARRICADE LIGHTS & EQUIPMENT	1 EACH	1 Ea.	
25 FT. CLASS 3 WOOD POLE	1 EACH	1 Ea.	
1 #6 O.H. Line	1543 LFt.	1543 LFt.	

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

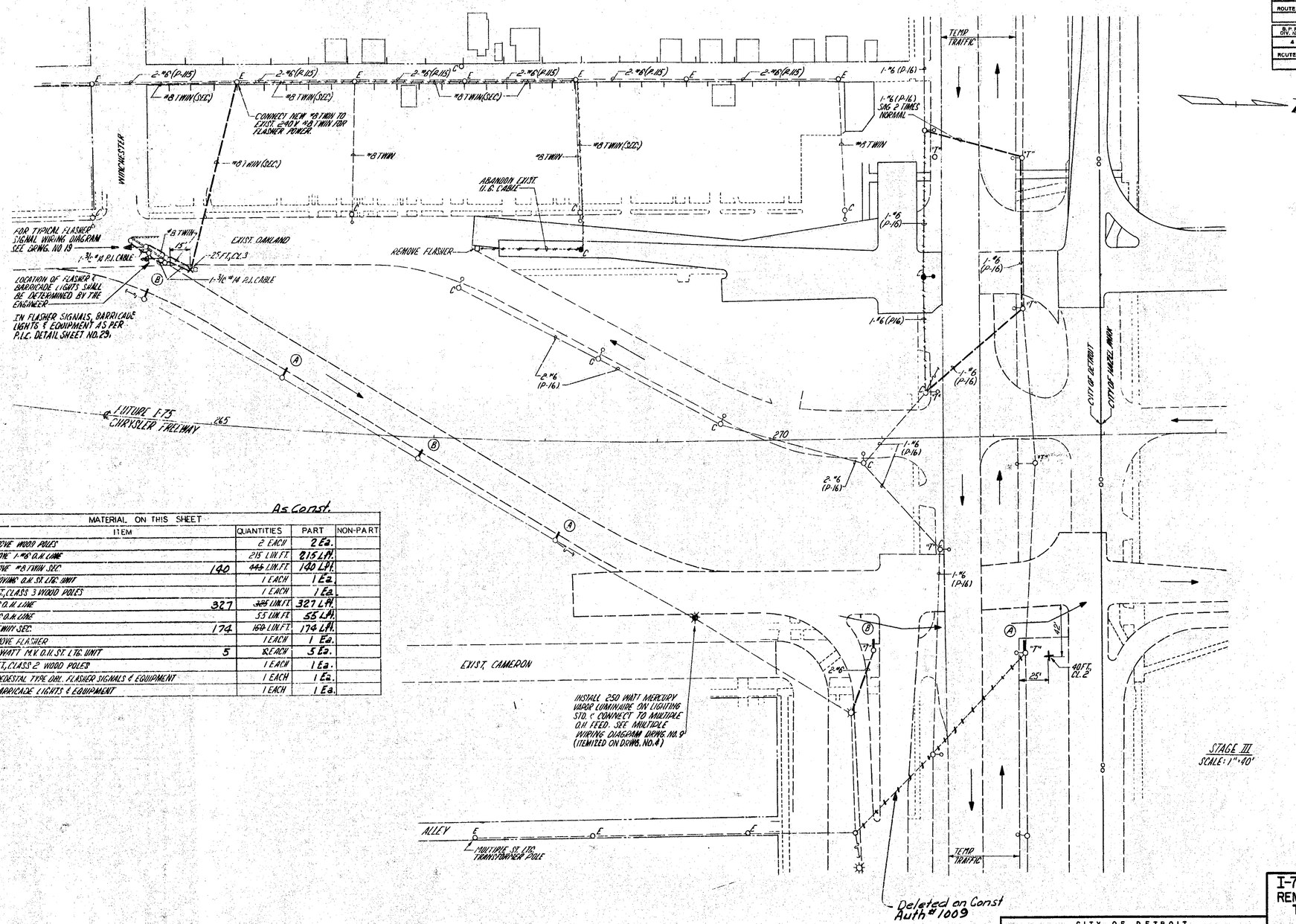
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 19	CEA CL	19 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	130

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET				
ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES		2 EACH	2 Ea.	
REMOVE 1-#6 O.H. LINE		215 LIN. FT.	215 Lft.	
REMOVE #8 TWIN SEC.	140	~~445~~ LIN. FT.	140 Lft.	
REMOVING O.H. ST. LTG. UNIT		1 EACH	1 Ea.	
25 FT., CLASS 3 WOOD POLES		1 EACH	1 Ea.	
1-#6 O.H. LINE	327	~~325~~ LIN. FT.	327 Lft.	
2-#6 O.H. LINE		55 LIN. FT.	55 Lft.	
#8 TWIN SEC.	174	~~160~~ LIN. FT.	174 Lft.	
REMOVE FLASHER		1 EACH	1 Ea.	
400 WATT M.V. O.H. ST. LTG. UNIT	5	~~8~~ EACH	5 Ea.	
40 FT., CLASS 2 WOOD POLES		1 EACH	1 Ea.	
2 - PEDESTAL TYPE DBL. FLASHER SIGNALS & EQUIPMENT		1 EACH	1 Ea.	
3 - BARRICADE LIGHTS & EQUIPMENT		1 EACH	1 Ea.	

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

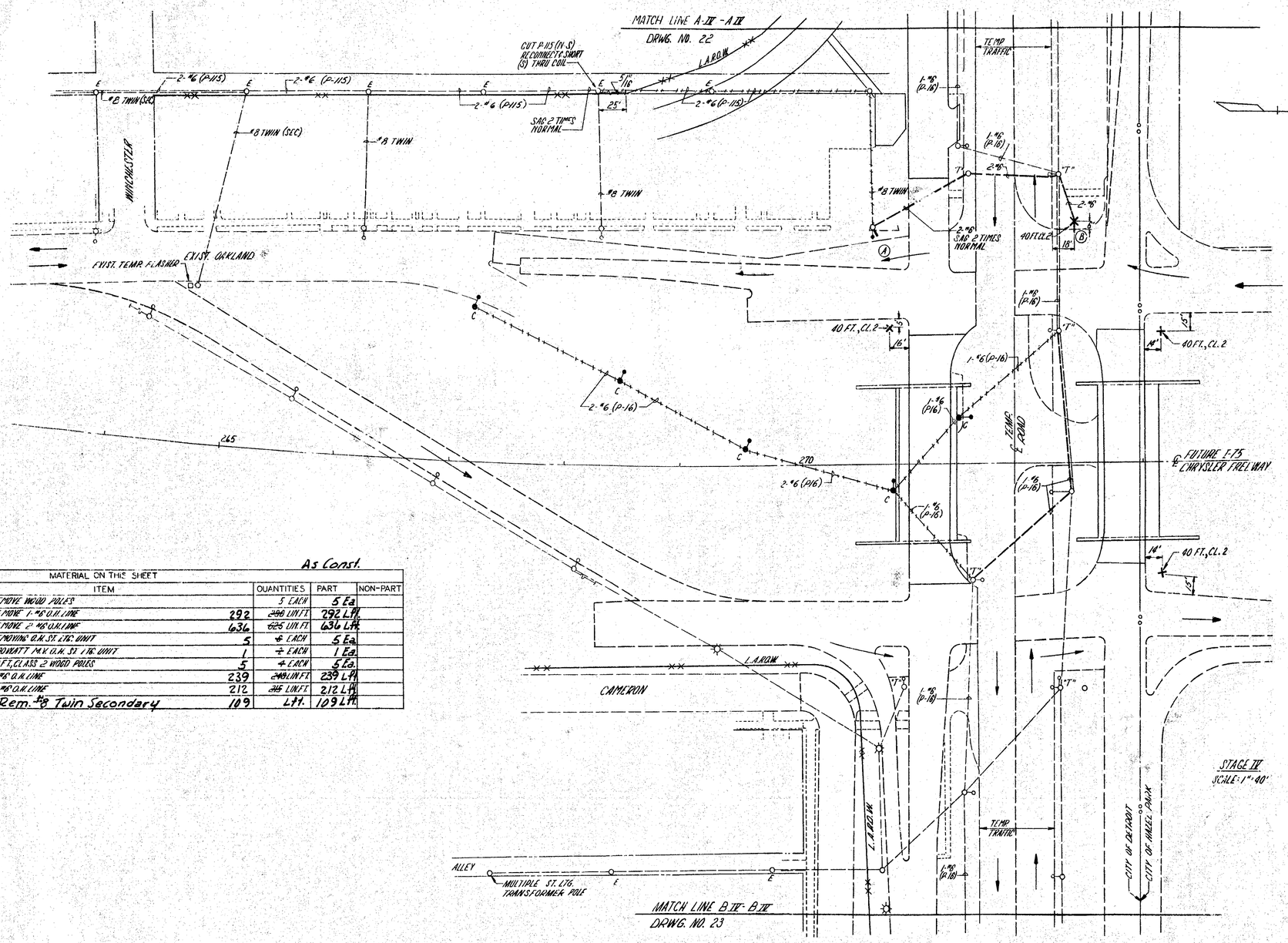
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED G.L.	SHEET NO. 20	CEA CL	20 OF 35	12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	139

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET				
ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES		5 EACH	5 Ea	
REMOVE 1-#6 O.H. LINE	292	~~290~~ LIN FT	292 Lft.	
REMOVE 2-#6 O.H. LINE	636	~~625~~ LIN FT	636 Lft.	
REMOVING O.H. ST. LTG. UNIT	5	~~4~~ EACH	5 Ea.	
400 WATT M.V. O.H. ST. LTG. UNIT	1	~~2~~ EACH	1 Ea.	
40 FT. CLASS 2 WOOD POLES	5	~~4~~ EACH	5 Ea.	
1-#6 O.H. LINE	239	~~240~~ LIN FT	239 Lft.	
2-#6 O.H. LINE	212	~~215~~ LIN FT	212 Lft.	
Rem. #8 Twin Secondary	109	Lft.	109 Lft.	

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

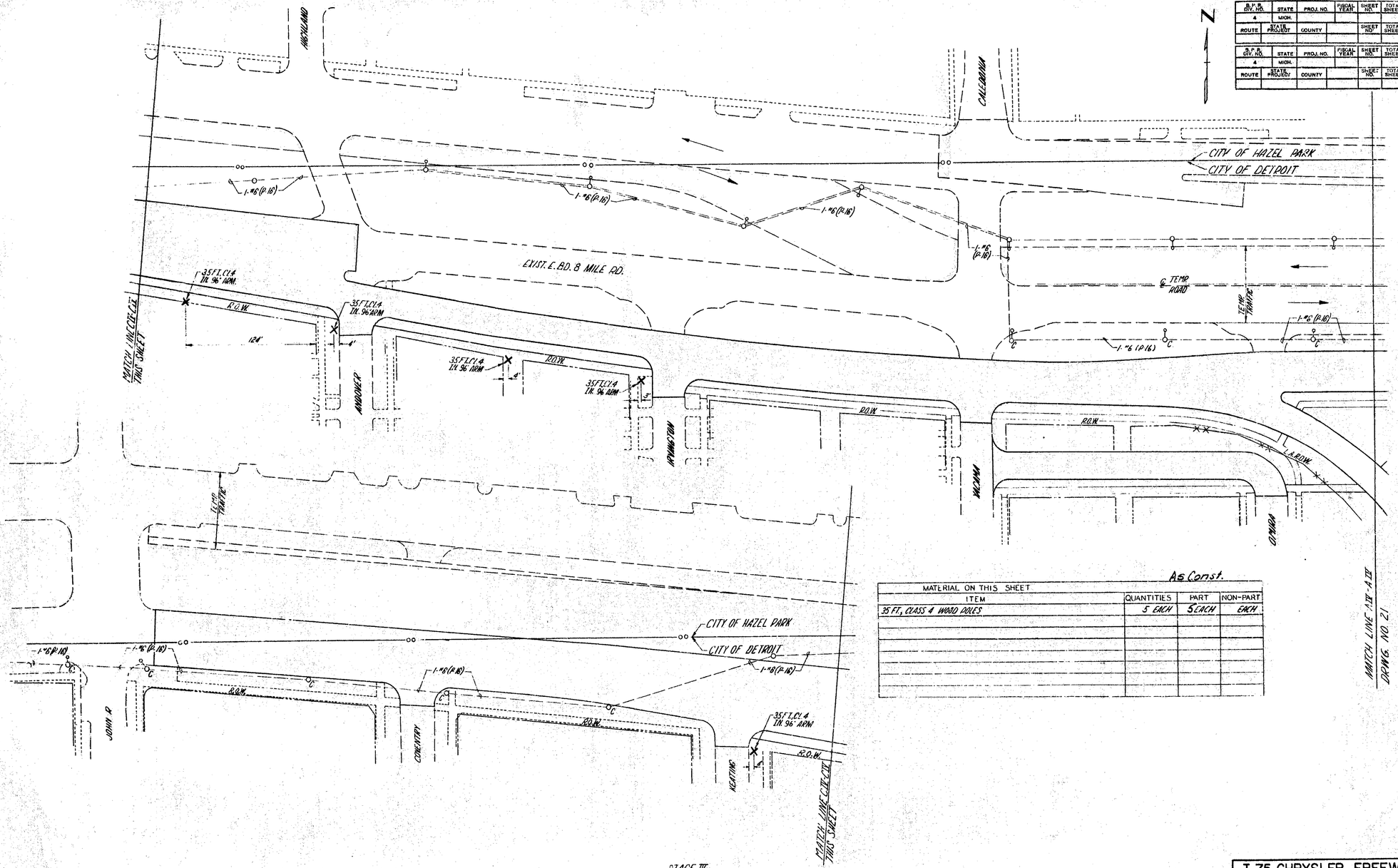
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 21	CFA-CL	21 OF 35	12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (90) 59	140

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE IV
SCALE: 1" = 40'

As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
35 FT., CLASS 4 WOOD POLES	5 EACH	5 EACH	EACH

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

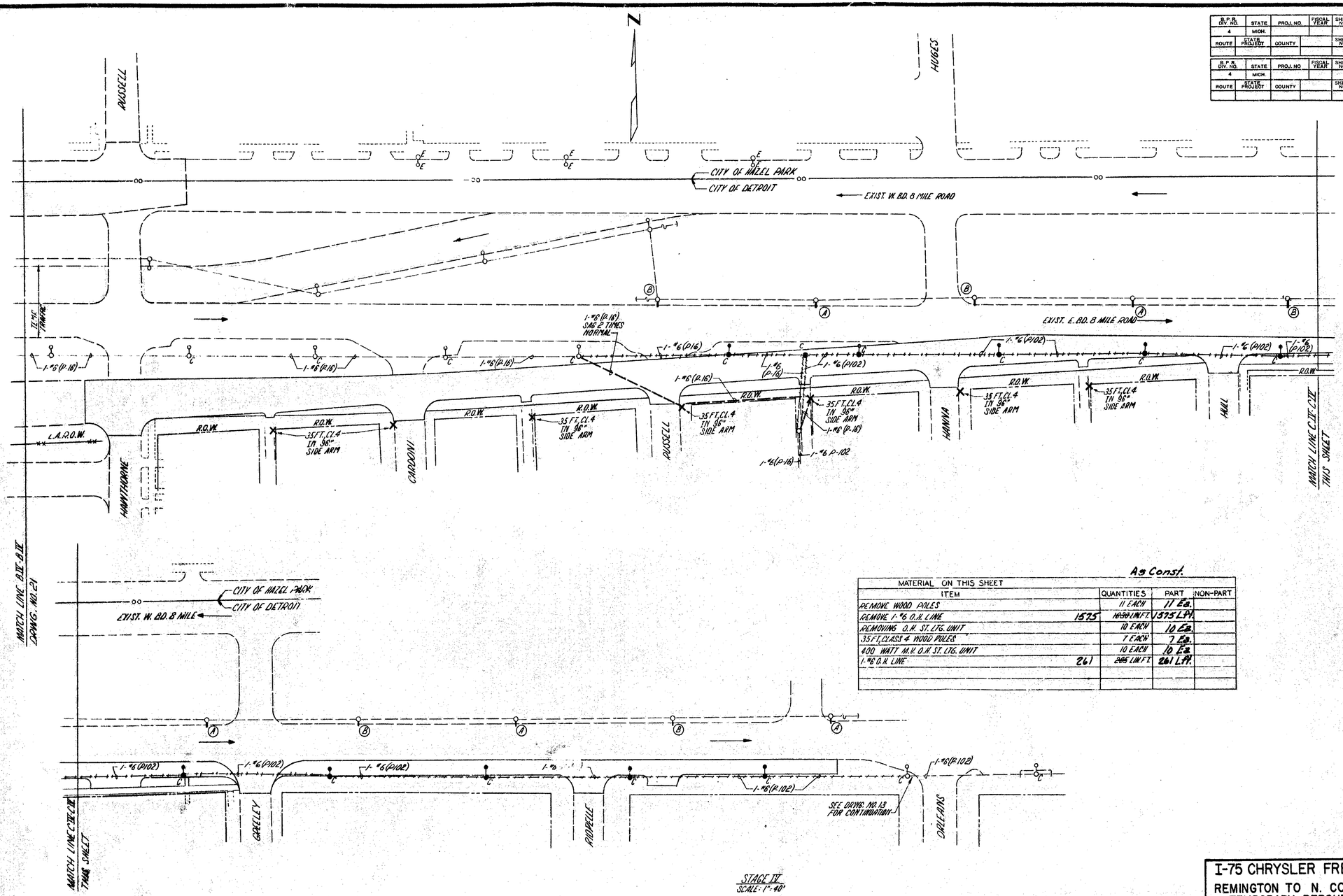
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED J.L.	SHEET NO. 22	CLA CL	22 OF 35	12-31-64

82252 L, C 63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1 (98) 18	141

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES		11 EACH	11 Ea.	
REMOVE 1-#6 O.H. LINE	1575	1690 LIN FT	1575 LFt.	
REMOVING O.H. ST. LTG. UNIT		10 EACH	10 Ea.	
35 FT. CLASS 4 WOOD POLES		7 EACH	7 Ea.	
400 WATT M.V. O.H. ST. LTG. UNIT		10 EACH	10 Ea.	
1-#6 O.H. LINE	261	~~245~~ LIN FT	261 LFt.	

I-75 CHRYSLER FREEWAY

REMINGTON TO N. CO. LINE TEMPORARY REROUTING

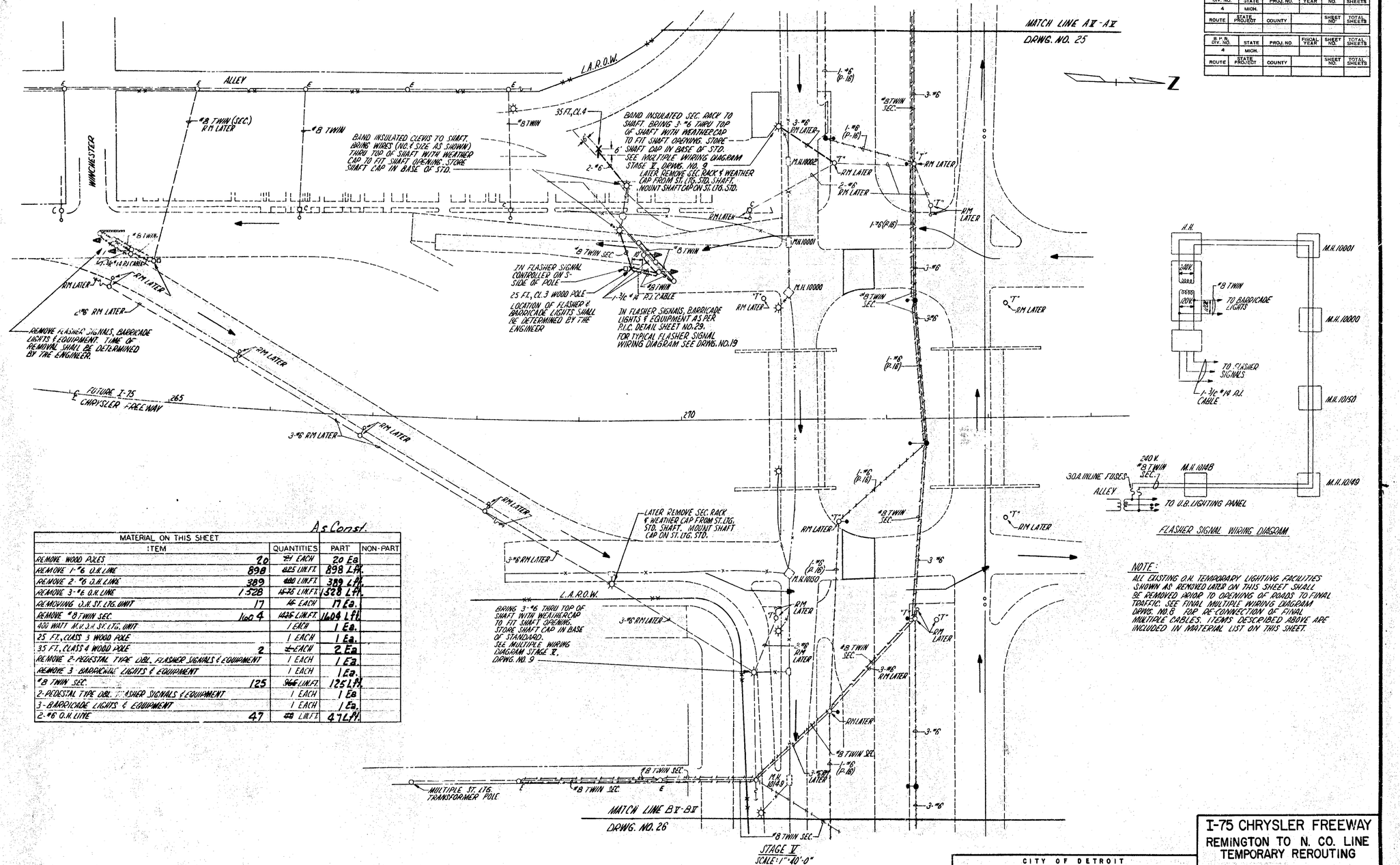
CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 23	CEA CL	23 OF 35	12-31-64

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I-75-1(98)59	142

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES	20	~~21~~ EACH	20 Ea	
REMOVE 1-#6 O.H. LINE	898	~~825~~ LIN.FT.	898 LFt.	
REMOVE 2-#6 O.H. LINE	389	~~400~~ LIN.FT.	389 LFt.	
REMOVE 3-#6 O.H. LINE	1528	~~1535~~ LIN.FT.	1528 LFt.	
REMOVING O.H. ST. LTG. UNIT	17	~~16~~ EACH	17 Ea.	
REMOVE #8 TWIN SEC.	1604	~~1425~~ LIN.FT.	1604 LFt.	
400 WATT M.V. O.H. ST. LTG. UNIT		1 EACH	1 Ea.	
25 FT., CLASS 3 WOOD POLE		1 EACH	1 Ea.	
35 FT., CLASS 4 WOOD POLE	2	~~1~~ EACH	2 Ea.	
REMOVE 2-PEDESTAL TYPE DBL. FLASHER SIGNALS & EQUIPMENT		1 EACH	1 Ea.	
REMOVE 3-BARRICADE LIGHTS & EQUIPMENT		1 EACH	1 Ea.	
#8 TWIN SEC.	125	~~966~~ LIN.FT.	125 LFt.	
2-PEDESTAL TYPE DBL. FLASHER SIGNALS & EQUIPMENT		1 EACH	1 Ea.	
3-BARRICADE LIGHTS & EQUIPMENT		1 EACH	1 Ea.	
2-#6 O.H. LINE	47	~~48~~ LIN.FT.	47 LFt.	

NOTE:
ALL EXISTING O.H. TEMPORARY LIGHTING FACILITIES SHOWN AS REMOVED LATER ON THIS SHEET SHALL BE REMOVED PRIOR TO OPENING OF ROADS TO FINAL TRAFFIC. SEE FINAL MULTIPLE WIRING DIAGRAM DRWG. NO. 8 FOR RE-CONNECTION OF FINAL MULTIPLE CABLES. ITEMS DESCRIBED ABOVE ARE INCLUDED IN MATERIAL LIST ON THIS SHEET.

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

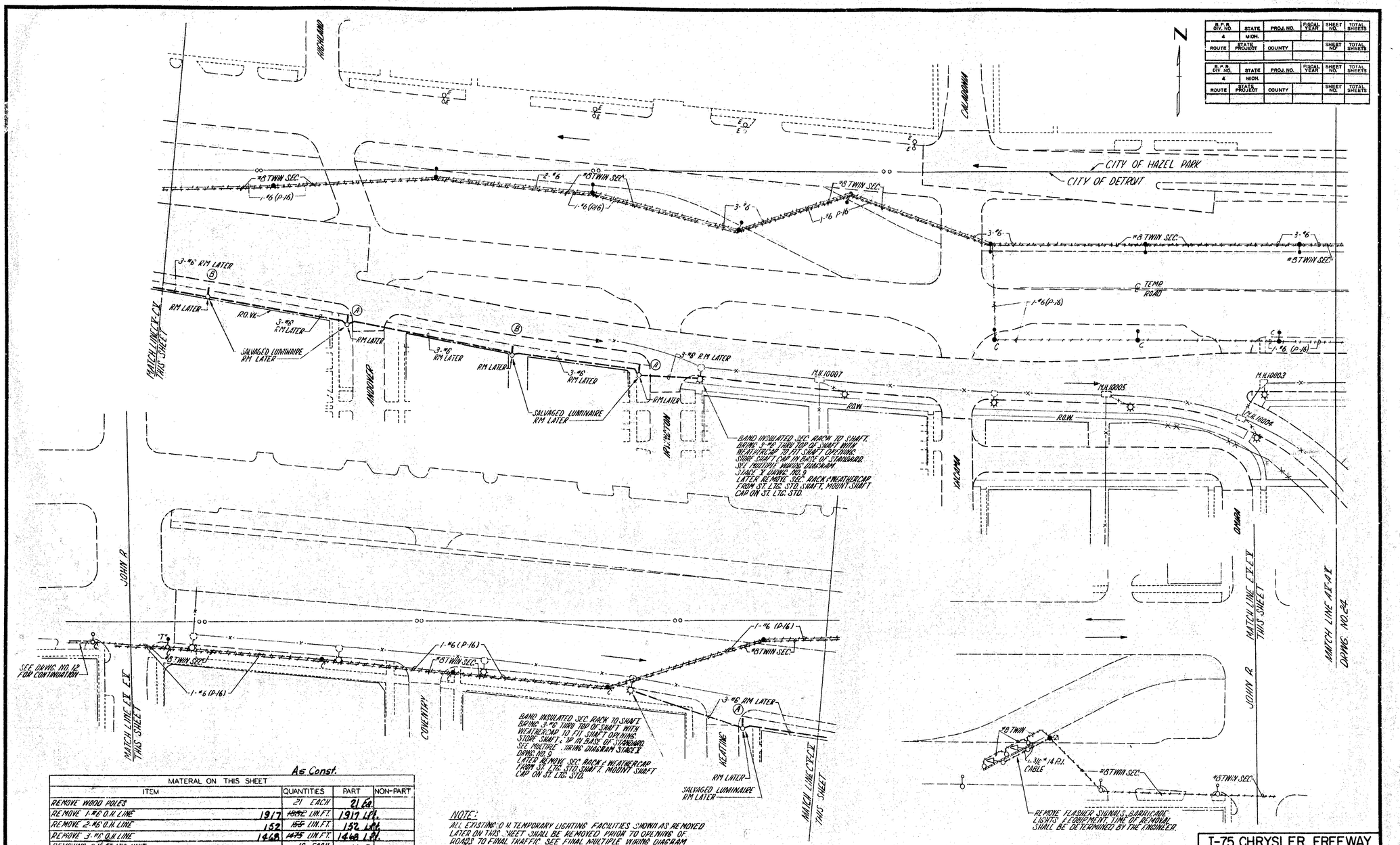
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 24	CEA CL	24 OF 35	12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-1(98)58	143

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
REMOVE WOOD POLES	21 EACH	21 Ea.	
REMOVE 1-#6 O.H. LINE 1917	~~1982~~ LIN.FT.	1917 Lft.	
REMOVE 2-#6 O.H. LINE 152	~~155~~ LIN.FT.	152 Lft.	
REMOVE 3-#6 O.H. LINE 1468	~~1475~~ LIN.FT.	1468 Lft.	
REMOVING O.H. ST. LTG. UNIT	16 EACH	16 Ea.	
INSTALL SALVAGED 400 WATT M.V. O.H. ST. LTG. UNIT	5 EACH	5 Ea.	
3-#6 O.H. LINE 715	~~725~~ LIN.FT.	715 Lft.	
REMOVE #8 TWIN SEC. 1985	~~2070~~ LIN.FT.	1985 Lft.	
REMOVE 2-PEDESTAL TYPE DBL. FLASHER SIGNALS & EQUIPMENT	1 EACH	1 Ea.	
REMOVE 3 BARRICADE LIGHTS & EQUIPMENT	1 EACH	1 Ea.	

NOTE:
ALL EXISTING O.H. TEMPORARY LIGHTING FACILITIES SHOWN AS REMOVED LATER ON THIS SHEET SHALL BE REMOVED PRIOR TO OPENING OF ROADS TO FINAL TRAFFIC. SEE FINAL MULTIPLE WIRING DIAGRAM DRWG. NO. 8 FOR RE-CONNECTION OF FINAL MULTIPLE CABLES.
ITEMS DESCRIBED ABOVE ARE INCLUDED IN MATERIAL LIST ON THIS SHEET.

STAGE V
SCALE: 1"=40'

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

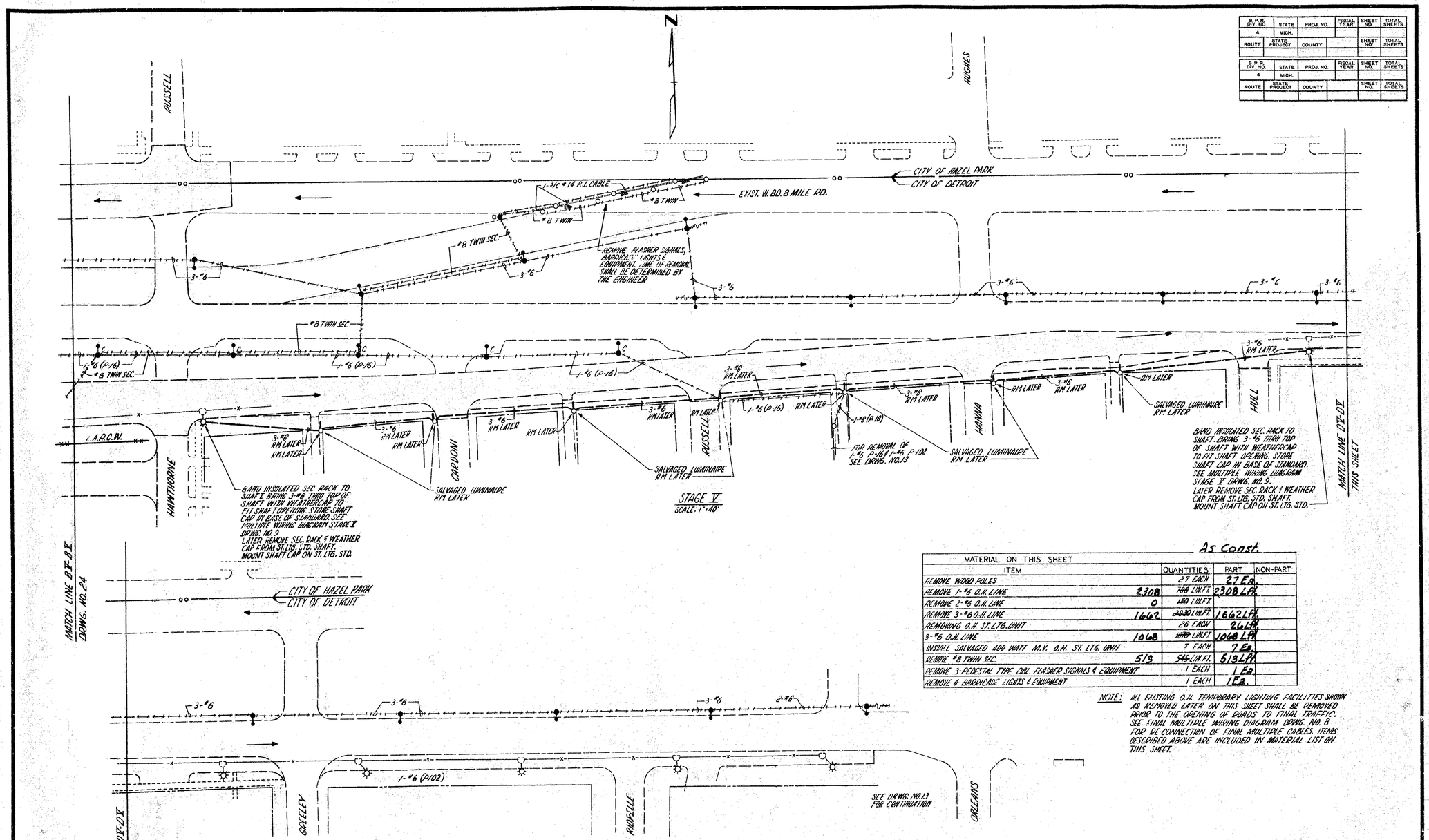
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED D.L.	SHEET NO. 25	CEA-CL	25 OF 35	12-31-64

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	144

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



As Const.

MATERIAL ON THIS SHEET				
ITEM		QUANTITIES	PART	NON-PART
REMOVE WOOD POLES		27 EACH	27 Ea.	
REMOVE 1-#6 O.H. LINE	2308	~~188~~ LIN.FT.	2308 LFt.	
REMOVE 2-#6 O.H. LINE	0	~~150~~ LIN.FT.		
REMOVE 3-#6 O.H. LINE	1662	~~2930~~ LIN.FT.	1662 LFt.	
REMOVING O.H. ST. LTG. UNIT		26 EACH	26 LFt.	
3-#6 O.H. LINE	1068	~~1070~~ LIN.FT.	1068 LFt.	
INSTALL SALVAGED 400 WATT M.V. O.H. ST. LTG. UNIT		7 EACH	7 Ea.	
REMOVE #8 TWIN SEC.	513	~~545~~ LIN.FT.	513 LFt.	
REMOVE 3-PEDESTAL TYPE DBL. FLASHER SIGNALS & EQUIPMENT		1 EACH	1 Ea.	
REMOVE 4-BARRICADE LIGHTS & EQUIPMENT		1 EACH	1 Ea.	

NOTE: ALL EXISTING O.H. TEMPORARY LIGHTING FACILITIES SHOWN AS REMOVED LATER ON THIS SHEET SHALL BE REMOVED PRIOR TO THE OPENING OF ROADS TO FINAL TRAFFIC. SEE FINAL MULTIPLE WIRING DIAGRAM DRWG. NO. 8 FOR RECONNECTION OF FINAL MULTIPLE CABLES. ITEMS DESCRIBED ABOVE ARE INCLUDED IN MATERIAL LIST ON THIS SHEET.

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY REROUTING

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

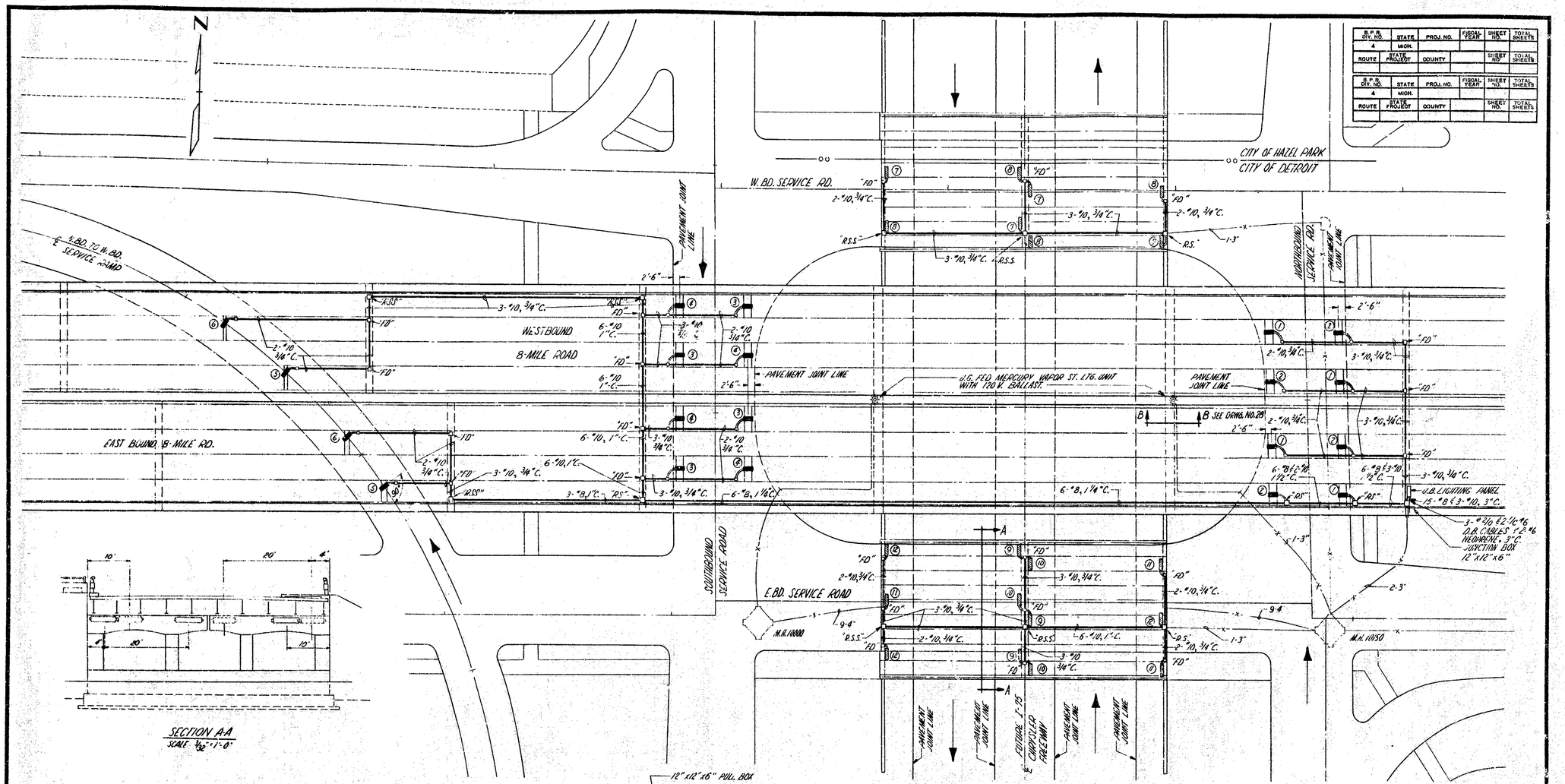
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED D.L.	SHEET NO. 26	CEA CL	26 OF 35	12-31-64

82252 L, C63, 63174 A, C64

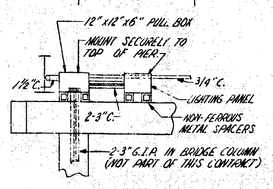
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	145

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



SECTION A-A
SCALE: 3/32" = 1'-0"



DETAIL
N.T.S.

PLAN
SCALE: 1" = 20'

WORK THIS SHEET WITH WIRING DIAGRAM DRWG. NO. 27

NOTE:
ALL JUNCTION BOXES TYPE "FS" EXCEPT WHERE OTHERWISE INDICATED.

LEGEND: THIS DRWG. & DRWG. NO 28 ONLY.

- U.B. LTG. UNIT MOUNTED BETWEEN BRIDGE BEAMS
- U.B. LTG. UNIT MOUNTED ON PIER.

As Const.

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
* UNDERBRIDGE WIRING SYSTEM	LUMP SUM	Lump Sum	
UNDERBRIDGE LIGHTING UNITS MOUNTED ON PIERS	D ~~16~~ EACH		
UNDERBRIDGE LIGHTING UNITS MOUNTED BETWEEN BRIDGE BEAMS	20 EACH	20 Ea.	
LIGHTING STD. WITH 10' ARM AND 5"x8' SHAFT ON NEW FDN.	2 EACH	2 Ea.	
** 400 WATT MERCURY VAPOR LUMINAIRE	2 EACH	2 Ea.	

* UNDERBRIDGE WIRING SYSTEM SHALL INCLUDE CONDUIT, JUNCTION BOXES, LTG. PANEL, AND ALL WIRING FROM LTG. PANEL TO U.B. LTG. UNITS.

** 400 WATT MERCURY VAPOR LUMINAIRE WITH 120 V. BALLAST AND INDIVIDUAL PHOTOELECTRIC CONTROL AS AN INTEGRAL PART OF THE LUMINAIRE. (TO BE INCIDENTAL TO LUMINAIRE).

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
UNDERBRIDGE LTG.—8-MILE RD.

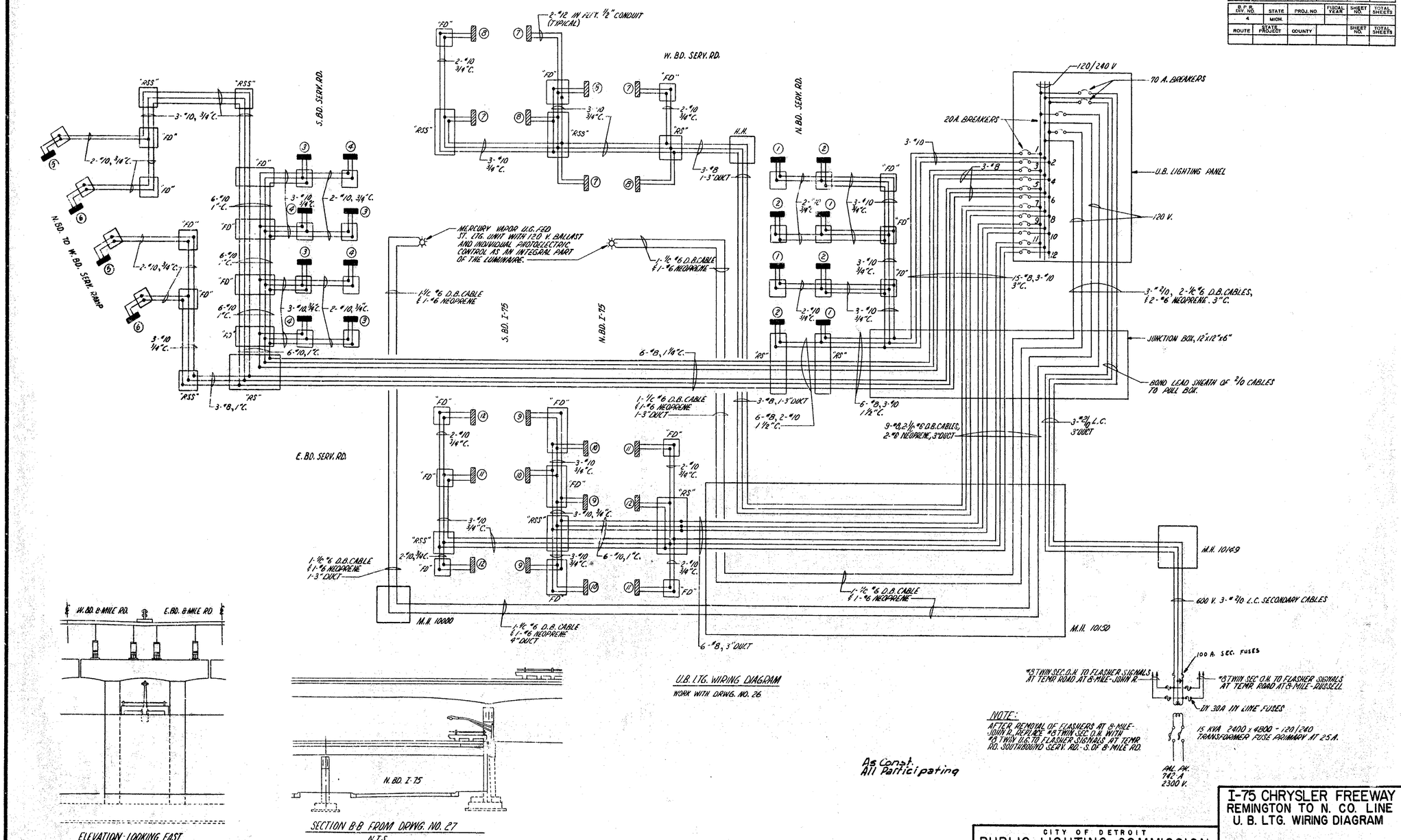
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 27	CLA CL	27 OF 35	12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	146

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
U. B. LTG. WIRING DIAGRAM

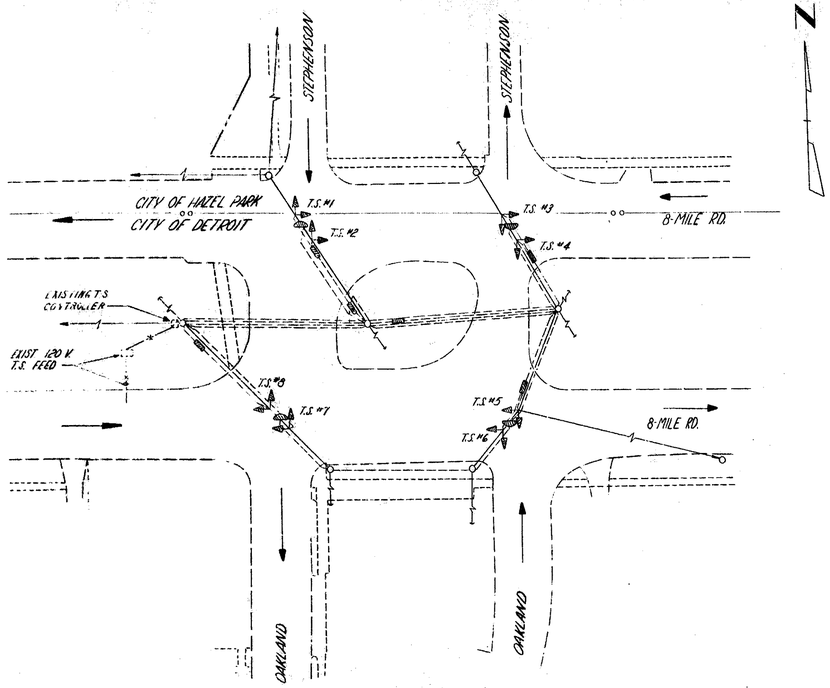
DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 28	CEA CL	23 OF 35	12-31-64

82252 L, C63, 63174 A, C64

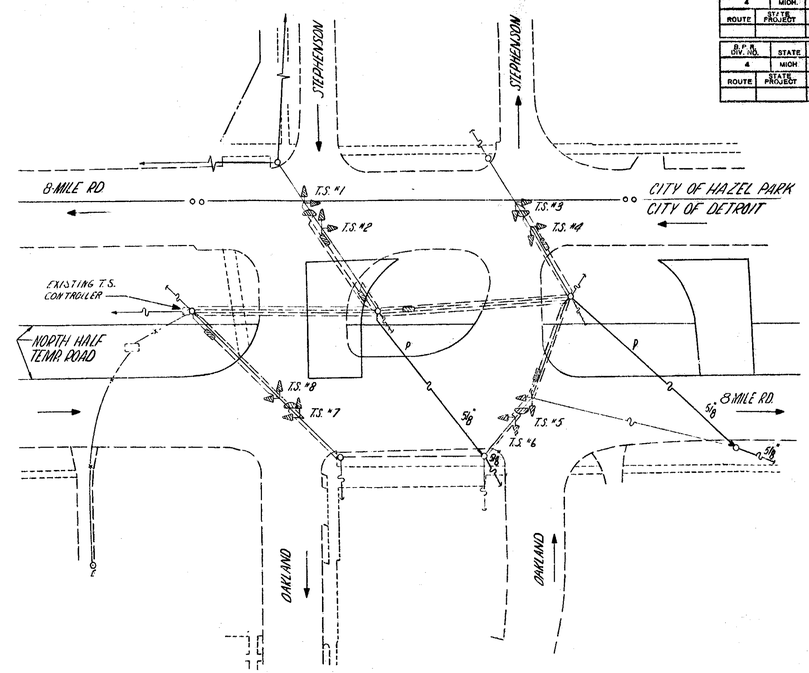
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I75-1(98)59	147

B.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

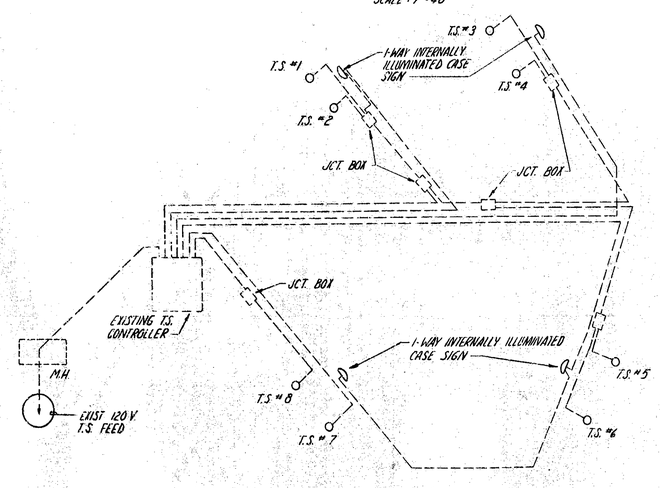
B.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



EXISTING SIGNALS
SCALE: 1" = 40'



STAGE I
SCALE: 1" = 40



8-MILE RD. – OAKLAND – STEPHENSON
EXISTING WIRING DIAGRAM

STAGE I

EASTBOUND AND WESTBOUND TRAFFIC ON EXISTING EASTBOUND AND WESTBOUND 8-MILE ROAD.

NORTHBOUND TRAFFIC ON EXISTING OAKLAND AND STEPHENSON.

SOUTHBOUND TRAFFIC ON EXISTING OAKLAND AND STEPHENSON.

NORTH HALF TEMPORARY ROAD UNDER CONSTRUCTION.

PIECE OF NORTHBOUND AND SOUTHBOUND SERVICE ROADS UNDER CONSTRUCTION.

STAGE I NOTE

REMOVAL AND INSTALLATION OF TRAFFIC SIGNAL GUYS SHALL BE INCIDENTAL TO THE INSTALLATION OF THE TRAFFIC SIGNAL HEADS IN STAGE II.

WIRING DIAGRAM AS SHOWN FOR EXISTING SIGNALS IS THE SAME.

GENERAL NOTES:

ALL NEW TRAFFIC SIGNAL ANCHOR GUYS SHALL BE INSTALLED ON AN 1:1 RATIO OR AS NEARLY AS POSSIBLE.

EXISTING 120 V. TRAFFIC SIGNAL FEED TO REMAIN IN SERVICE UNTIL FINAL TRAFFIC SIGNALS ARE PUT INTO OPERATION.

As Const.
All Participating

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY TRAFFIC SIGNALS

WAYNE COUNTY ROAD COMMISSION

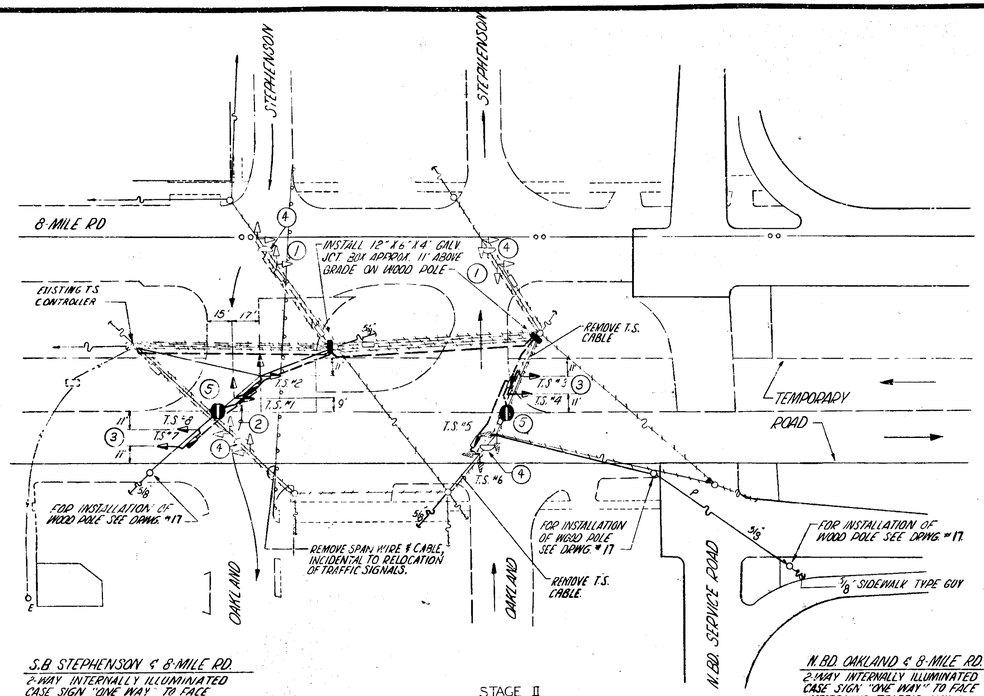
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 29	CEA CL	29 OF 35	12-31-64

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	449

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



S.B STEPHENSON & 8-MILE RD.
2-WAY INTERNALLY ILLUMINATED CASE SIGN "ONE WAY" TO FACE EASTBOUND TRAFFIC & "NO TURN" TO FACE WESTBOUND TRAFFIC

STAGE II
SCALE: 1" = 40'

N.BD. OAKLAND & 8-MILE RD.
2-WAY INTERNALLY ILLUMINATED CASE SIGN "ONE WAY" TO FACE NORTHBOUND TRAFFIC & "NO TURN" TO FACE EASTBOUND TRAFFIC.

N

STAGE II
TEMPORARY ROAD IN USE FOR 8-MILE EASTBOUND & WESTBOUND TRAFFIC.

SOUTHBOUND STEPHENSON AND OAKLAND IN USE FOR SOUTHBOUND TRAFFIC.

NORTHBOUND STEPHENSON AND OAKLAND IN USE FOR NORTHBOUND TRAFFIC.

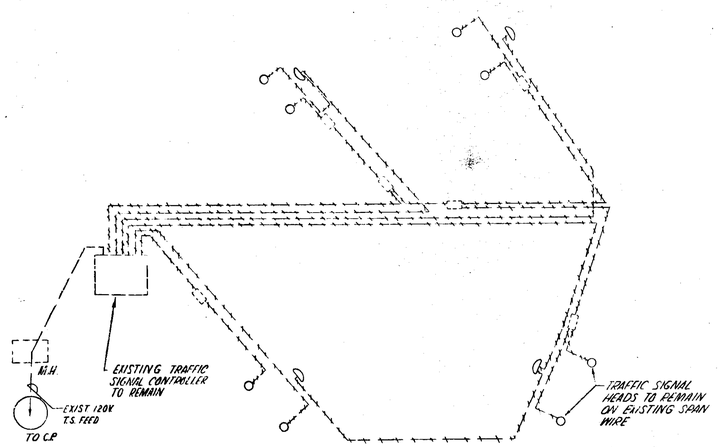
NORTHBOUND SERVICE ROAD UNDER CONSTRUCTION.

As Const.

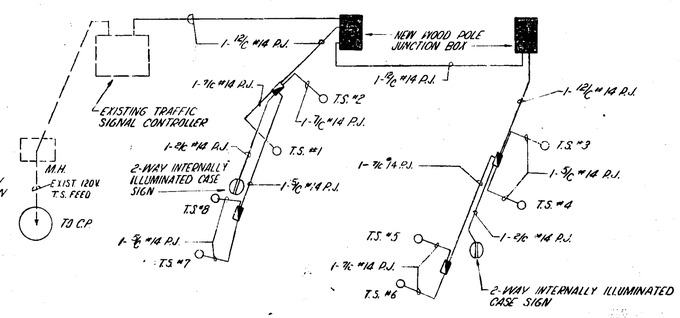
NO.	MATERIAL ON THIS SHEET — ITEM	QUANTITIES	PART	NON-PART
1	REMOVING (2) SPAN WIRE TRAFFIC SIGNALS & SPAN WIRE	2 EACH	2 Ea	
2	RELOCATE (2) SPAN WIRE TRAFFIC SIGNALS ON NEW SPAN WIRE	1 EACH	1 Ea.	
3	TWO 1-WAY TRAFFIC SIGNALS (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	2 EACH	2 Ea.	
4	REMOVING 1-WAY INTERNALLY ILLUMINATED CASE SIGN.	4 EACH	4 Ea.	
5	~~2-WAY INTERNALLY ILLUMINATED CASE SIGN ON EXISTING SPAN WIRE~~ (SEE NOTE 1.)	0 ~~2 EACH~~		AUTH. # 2006 6/10/65
5	INSTALL 2-WAY INTERNALLY ILLUMINATED CASE SIGN SUPPLIED BY OTHERS ON EXISTING SPAN WIRE (SEE NOTE 1.)	2 EACH.	2 Ea.	AUTH. # 2006 6/10/65

AUTH. #
6/10/65

NOTE:
1. CONTRACTOR SHALL EXCHANGE THE FOUR 1-WAY INTERNALLY ILLUMINATED CASE SIGNS FOR TWO 2-WAY ILLUMINATED CASE SIGNS TO BE FURNISHED BY THE WAYNE COUNTY ROAD COMMISSION.



STAGE II
REMOVAL WIRING DIAGRAM



STAGE II
WIRING DIAGRAM

SAG SCHEDULE				
PLAN STAGE II T.S. SPAN	EAST POLE Y1	SOUTH POLE Y2	WEST POLE Y3	SAG BELOW LOWER SUPPORT WITH LOAD
SOUTHBOUND OAKLAND & 8-MILE RD.	5'-0"	7'-0"	6'-0"	5'-0"
PLAN STAGE II T.S. SPAN	EAST POLE Y1	NORTH POLE Y2	WEST POLE Y3	SAG BELOW LOWER SUPPORT WITH LOAD
NORTHBOUND OAKLAND & 8-MILE RD.	7'-6"	5'-6"	5'-0"	5'-0"

AUTH. # 6/10/65

AUTH. # 6/10/65

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY TRAFFIC SIGNALS

WAYNE COUNTY ROAD COMMISSION

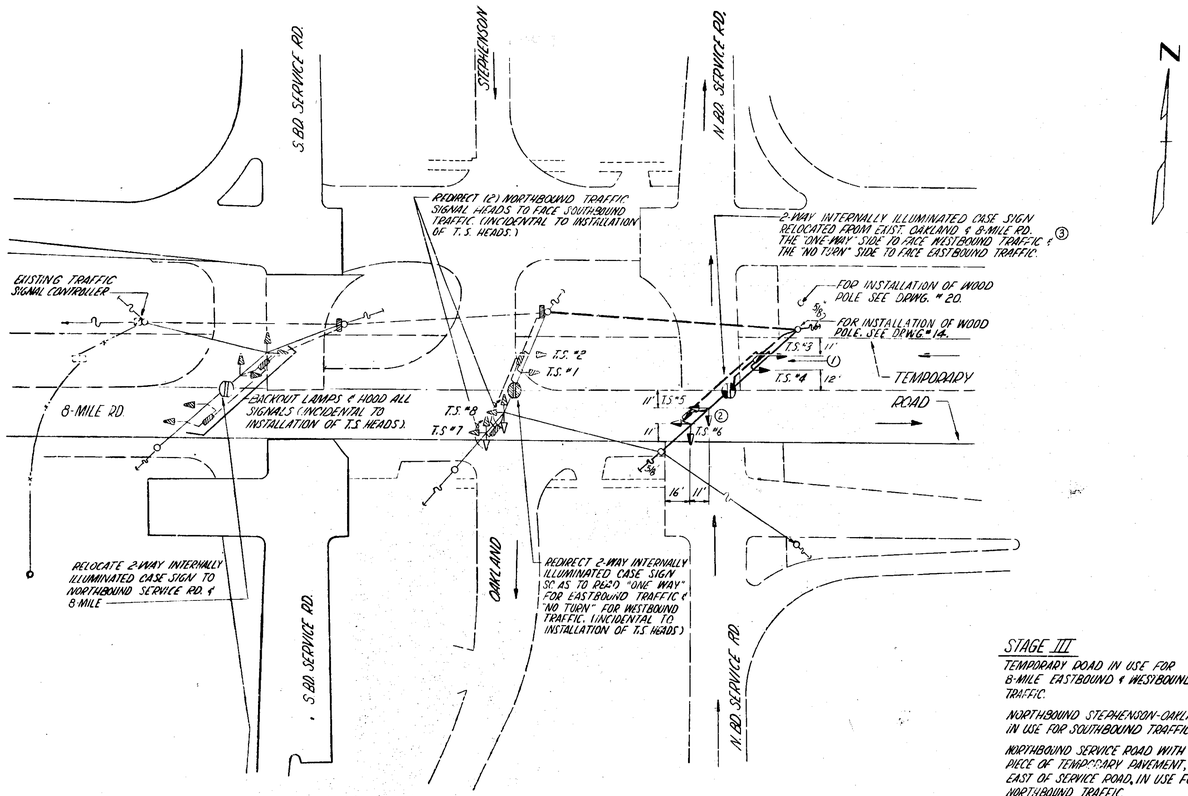
DRAWN BY	APPROVED	FILE NO. 8009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 30	CEA CL	30 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	149

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE III
SCALE: 1"=40'

STAGE III

TEMPORARY ROAD IN USE FOR 8-MILE EASTBOUND & WESTBOUND TRAFFIC.

NORTHBOUND STEPHENSON-OAKLAND IN USE FOR SOUTHBOUND TRAFFIC.

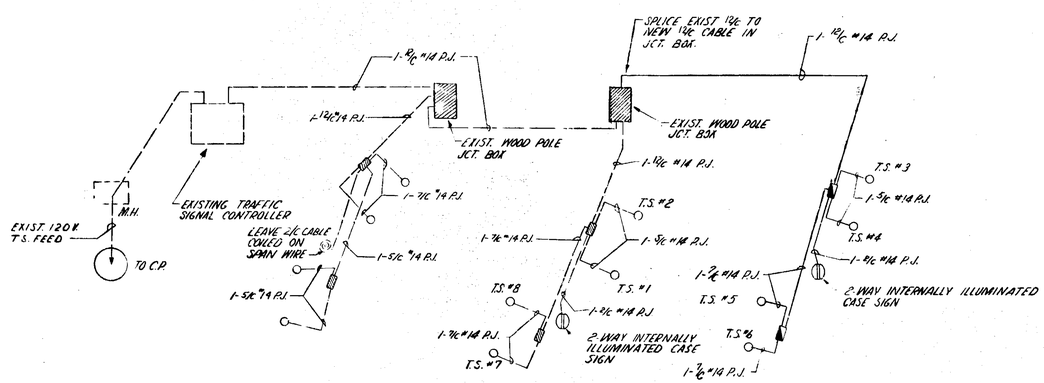
NORTHBOUND SERVICE ROAD WITH PIECE OF TEMPORARY PAVEMENT, EAST OF SERVICE ROAD, IN USE FOR NORTHBOUND TRAFFIC.

SOUTHBOUND SERVICE ROAD UNDER CONSTRUCTION.

As Const.

MATERIAL ON THIS SHEET				
	ITEM	QUANTITIES	PART	NON-PART
①	TWO 1-WAY TRAFFIC SIGNALS ON NEW SPAN WIRE	1 EACH	1 Ea.	
②	TWO 2-WAY TRAFFIC SIGNALS (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	1 EACH	1 Ea.	
③	RELOCATE 2-WAY INTERNALLY ILLUMINATED CASE SIGN ON EXISTING SPAN WIRE	1 EACH	1 Ea.	

SAG SCHEDULE			
PLAN STAGE III T.S. SPAN	NORTHEAST POLE Y1	SOUTHWEST POLE Y2	SAG BELOW LOWER SUPPORT WITH LOAD
TEMP. ROAD & NORTHBOUND SERVICE RD.	5'-6"	4'-6"	4'-6"



STAGE III
WIRING DIAGRAM

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY TRAFFIC SIGNALS

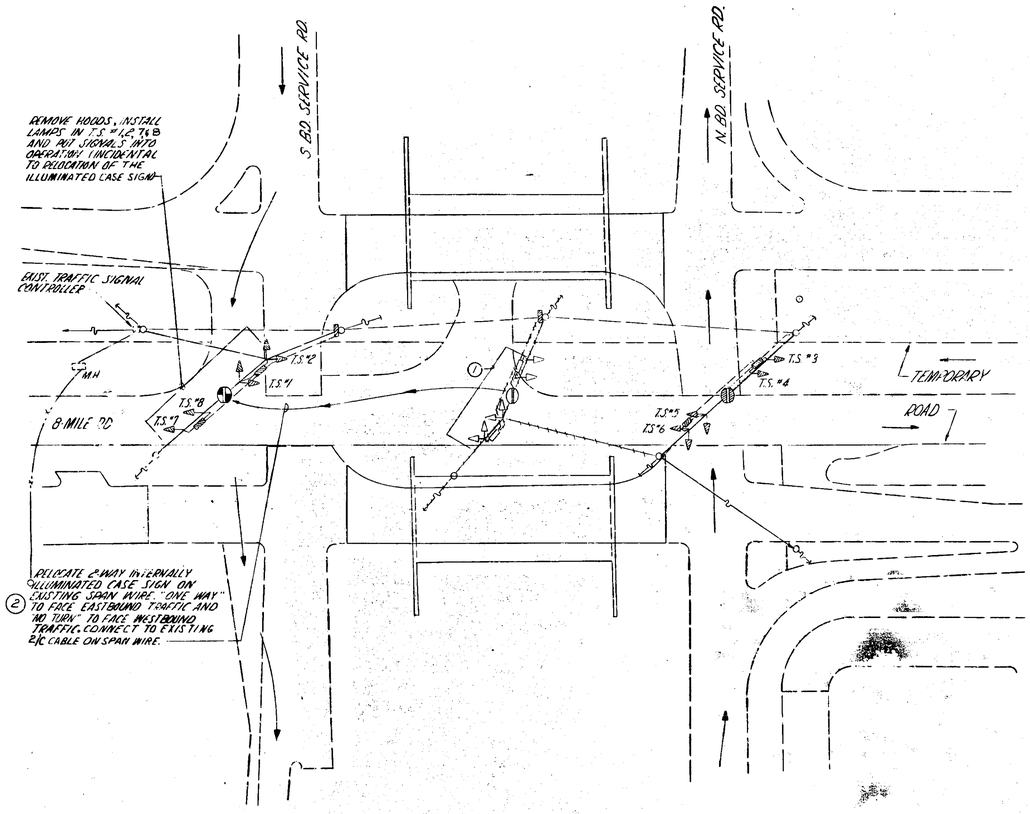
WAYNE COUNTY ROAD COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 21	CEA CL	31 OF 35	12-31-64

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	150

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE IV
SCALE: 1:40

N

As Const.

MATERIAL ON THIS SHEET				
	ITEM	QUANTITIES	PART	NON-PART
①	REMOVING 4 SPAN WIRE TRAFFIC SIGNALS & SPAN WIRE	1 EACH	1 Ea.	
②	RELOCATE 2-WAY INTERNALLY ILLUMINATED CASE SIGN ON EXISTING SPAN WIRE	1 EACH	1 Ea.	

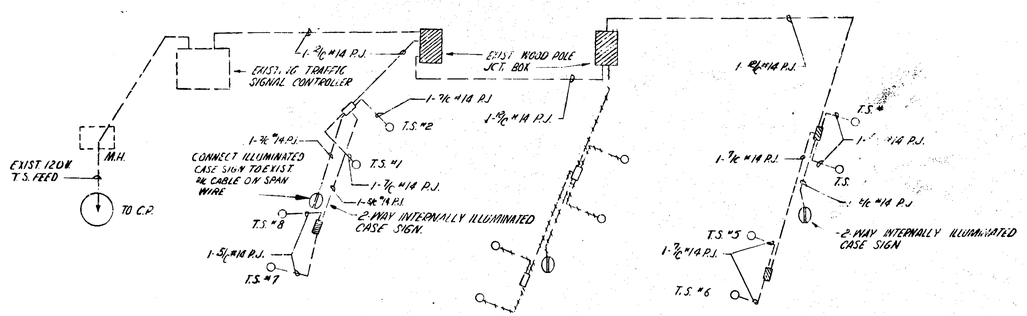
STAGE IV

TEMPORARY ROAD IN USE FOR 8-MILE RD. EASTBOUND & WESTBOUND TRAFFIC.

NORTHBOUND SERVICE RD. & PIECE OF TEMPORARY PAVEMENT EAST OF SERVICE RD. IN USE FOR NORTHBOUND TRAFFIC.

SOUTHBOUND SERVICE RD. & PIECE OF TEMPORARY PAVEMENT WEST OF SERVICE RD. IN USE FOR SOUTHBOUND TRAFFIC.

EASTBOUND & WESTBOUND 8-MILE RD. PAVEMENT BETWEEN SERVICE ROADS (UNDER CONSTRUCTION).



STAGE IV
WIRING DIAGRAM

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY TRAFFIC SIGNALS

WAYNE COUNTY ROAD COMMISSION

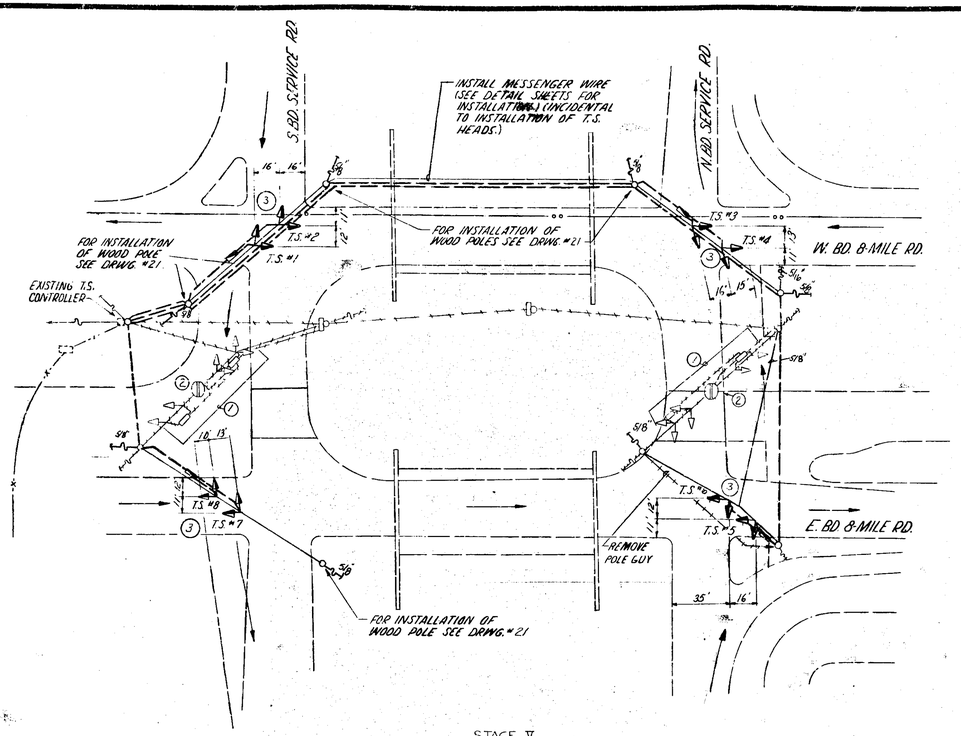
DRAWN BY	APPROVED	FILE NO. 6009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 32	CEA CL	32 OF 35	12-31-64

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	151

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



STAGE V
SCALE: 1"=40'

STAGE V

WESTBOUND 8-MILE RD. IN USE FOR WESTBOUND TRAFFIC.

EASTBOUND 8-MILE RD. IN USE FOR EASTBOUND TRAFFIC.

NORTHBOUND SERVICE RD. & PIECE OF TEMPORARY PAVEMENT EAST OF SERVICE RD. IN USE FOR NORTHBOUND TRAFFIC.

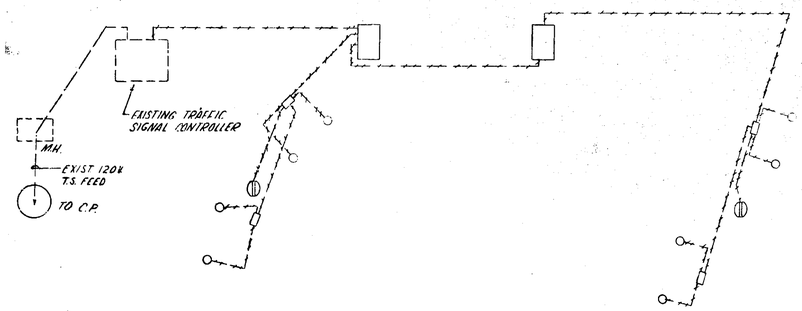
SOUTHBOUND SERVICE RD. & PIECE OF TEMPORARY PAVEMENT WEST OF SERVICE RD. IN USE FOR SOUTHBOUND TRAFFIC.

TEMPORARY ROAD ABANDON.

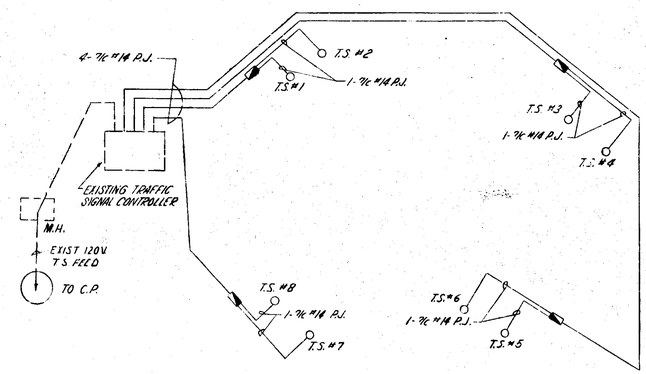
CENTER PIECE OF NORTHBOUND AND SOUTHBOUND SERVICE ROADS (UNDER CONSTRUCTION)

As Const.

MATERIAL ON THIS SHEET				
	ITEM	QUANTITIES	PART	NON-PART
1	REMOVING 4 SPAN WIRE TRAFFIC SIGNALS & SPAN WIRE	2 EACH	2 Ea.	
2	REMOVING 2-WAY INTERNALLY ILLUMINATED CASE SIGN	2 EACH	2 Ea.	
3	TWO 2-WAY TRAFFIC SIGNALS (WITH SALVAGED HEADS) ON NEW SPAN WIRE	4 EACH	4 Ea.	



STAGE V
REMOVAL WIRING DIAGRAM



STAGE V
WIRING DIAGRAM

SAG SCHEDULE			
PLAN STAGE V T.S. SPAN	EAST POLE Y1	WEST POLE Y2	SAG BELOW LOWER SUPPORT WITH LOAD
S. BD. SERVICE RD. & W. BD. 8-MILE RD.	4'-6"	6'-0"	4'-6"
N. BD. SERVICE RD. & W. BD. 8-MILE RD.	5'-0"	5'-0"	5'-0"
S. BD. SERVICE RD. & E. BD. 8-MILE RD.	5'-6"	5'-0"	5'-0"
PLAN STAGE V T.S. SPAN	NORTH POLE Y1	SOUTH POLE Y2	WEST POLE Y3	SAG BELOW LOWER SUPPORT WITH LOAD
N. BD. SERVICE RD. & E. BD. 8-MILE RD.	8'-0"	3'-0"	6'-0"	3'-0"

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
TEMPORARY TRAFFIC SIGNALS

WAYNE COUNTY ROAD COMMISSION

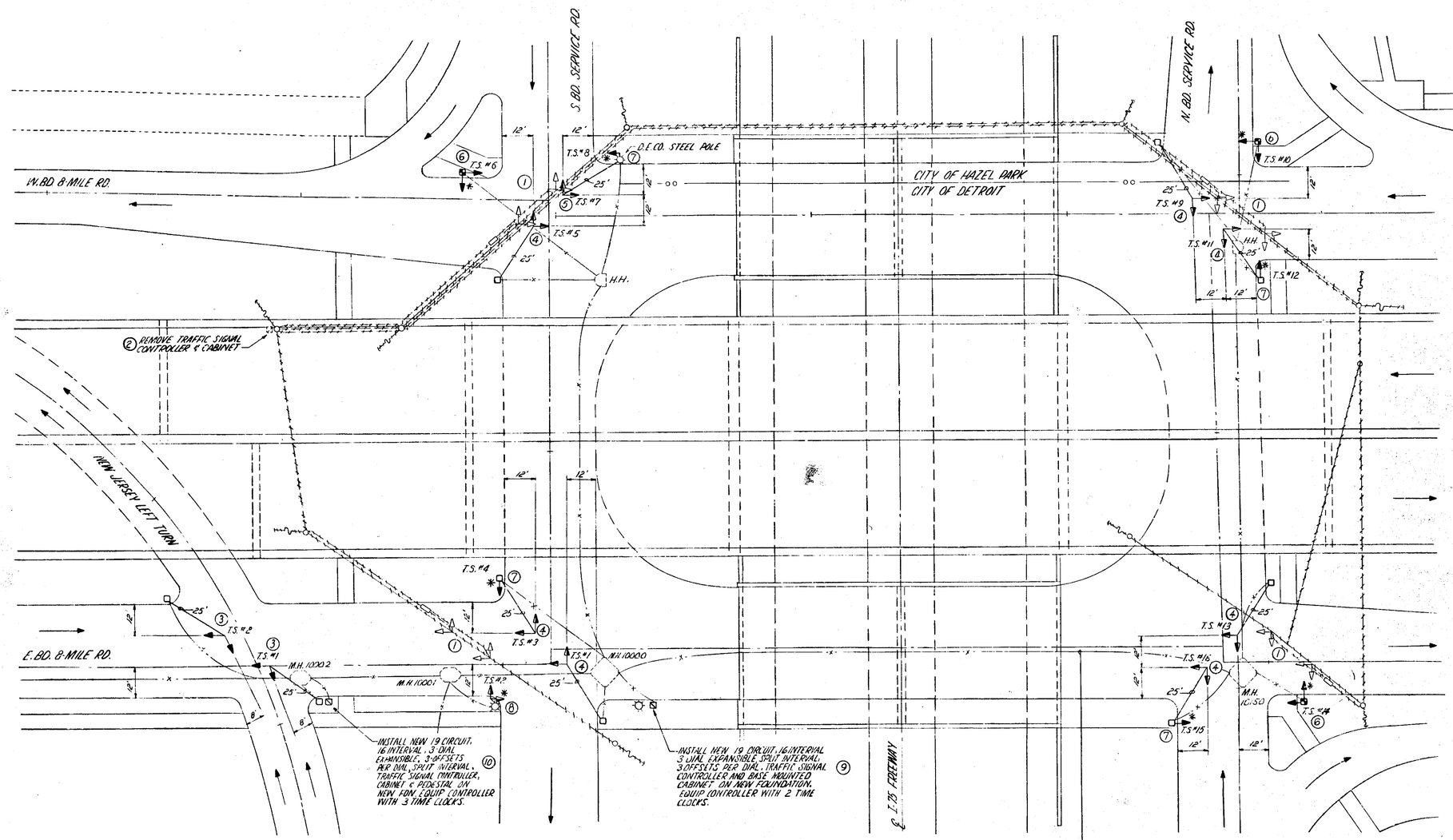
DRAWN BY	APPROVED	FILE NO. 61009	FILE NO	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 33	CEA CL	33 OF 35	12-31-64

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1(98)59	132

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



* INSTALL "WAIT" LENS IN PLACE OF RED LENS & "WALK" LENS IN PLACE OF GREEN LENS IN 3-SECTION HEAD.

As Const.
All Participating

NOTE:
FOR MATERIAL QUANTITIES ON THIS SHEET AND WIRING DIAGRAM FOR FINAL SIGNALS SEE DRWG #35

8 MILE ROAD AND I-75
FINAL SIGNALS
SCALE: 1" = 20'

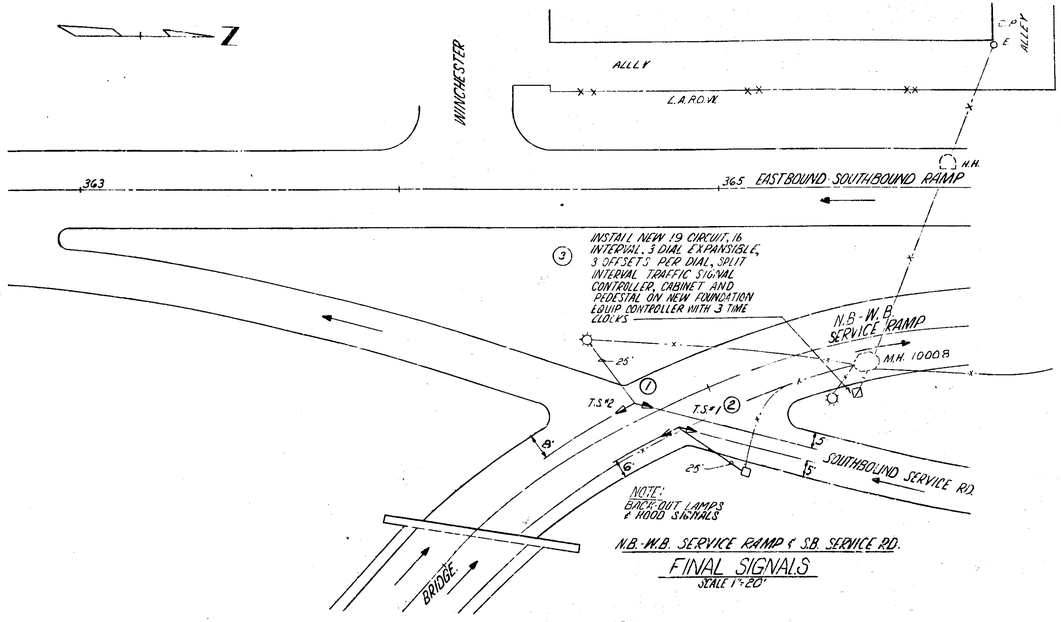
NOTE:
FOR T.S. INTERCONNECTING WIRING DIAGRAM SEE DRWG #9

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
FINAL TRAFFIC SIGNALS

WAYNE COUNTY ROAD COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 34	CEA CL	34 OF 35	6-31-64

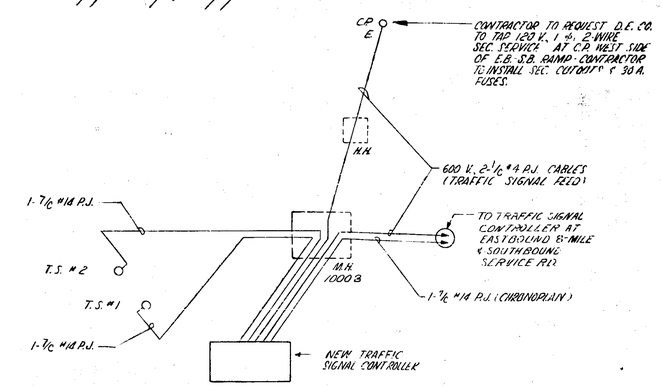
82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I-75-1 (98) 59	153



N.B.-W.B. SERVICE RAMP & S.B. SERVICE RD.

FINAL SIGNALS

SCALE 1"=20'



W.BD.-W.BD. SERVICE RAMP & S.BD. SERVICE RD.

FINAL SIGNALS

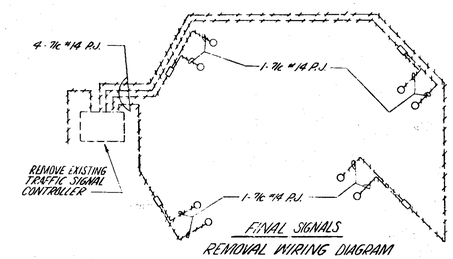
WIRING DIAGRAM

As Const.

MATERIAL FOR NEW JERSEY LEFT TURN & S.B. SERVICE RD.				
NO.	ITEM	QUANTITIES	PART	NON-PART
1	2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS) & MAST ARM	1-EACH	1 Ea.	
2	2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS), MAST ARM & STANDARD ON NEW FOUNDATION	1-EACH	1 Ea.	
3	TRAFFIC SIGNAL CONTROLLER CABINET & PEDESTAL ON NEW FOUNDATION	1-EACH	1 Ea.	

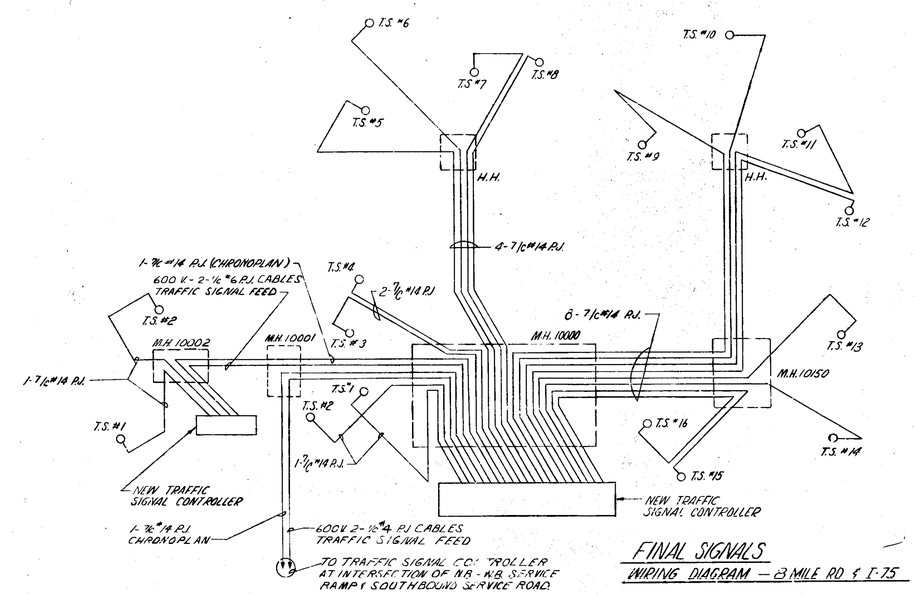
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FINAL SIGNALS

REMOVAL WIRING DIAGRAM



FINAL SIGNALS

WIRING DIAGRAM — 8 MILE RD & I-75

As Const

MATERIAL ON DRWG. NO. 34				
NO.	ITEM	QUANTITIES	PART	NON-PART
1	REMOVING 2 SPAN WIRE TRAFFIC SIGNALS & SPAN WIRE	4 EACH	4 Ea.	
2	REMOVING TRAFFIC SIGNAL CONTROLLER & CABINET	1 EACH	1 Ea.	
3	2-WAY MAST ARM TRAFFIC SIGNAL, MAST ARM & STANDARD, ON NEW FOUNDATION	2 EACH	2 Ea.	
4	2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS) MAST ARM & STANDARD, ON NEW FOUNDATION	7 EACH	7 Ea.	
5	2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS) & MAST ARM	1 EACH	1 Ea.	
6	2-WAY TRAFFIC SIGNAL ON 8 FT. PEDESTAL ON NEW FOUNDATION	3 EACH	3 Ea.	
7	1-WAY BRACKET ARM TRAFFIC SIGNAL	4 EACH	4 Ea.	
8	2-WAY BRACKET ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS)	1 EACH	1 Ea.	
9	T.S. CONTROLLER WITH BASE MOUNTED CABINET, ON NEW FDN.	1 EACH	1 Ea.	
10	T.S. CONTROLLER, CABINET & PEDESTAL, ON NEW FDN.	1 EACH	1 Ea.	

NOTE:

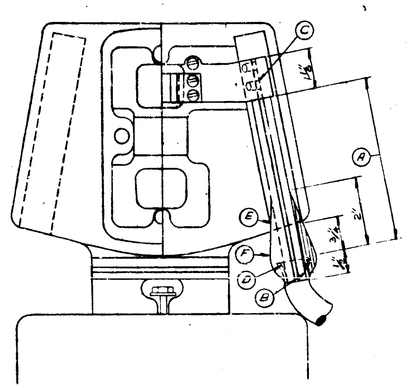
FOR REMOVAL OF STAGE V TRAFFIC SIGNALS AND INSTALLATION OF FINAL TRAFFIC SIGNALS, SEE DRWG. #34.

I-75 CHRYSLER FREEWAY
REMINGTON TO N. CO. LINE
FINAL TRAFFIC SIGNALS

WAYNE COUNTY ROAD COMMISSION

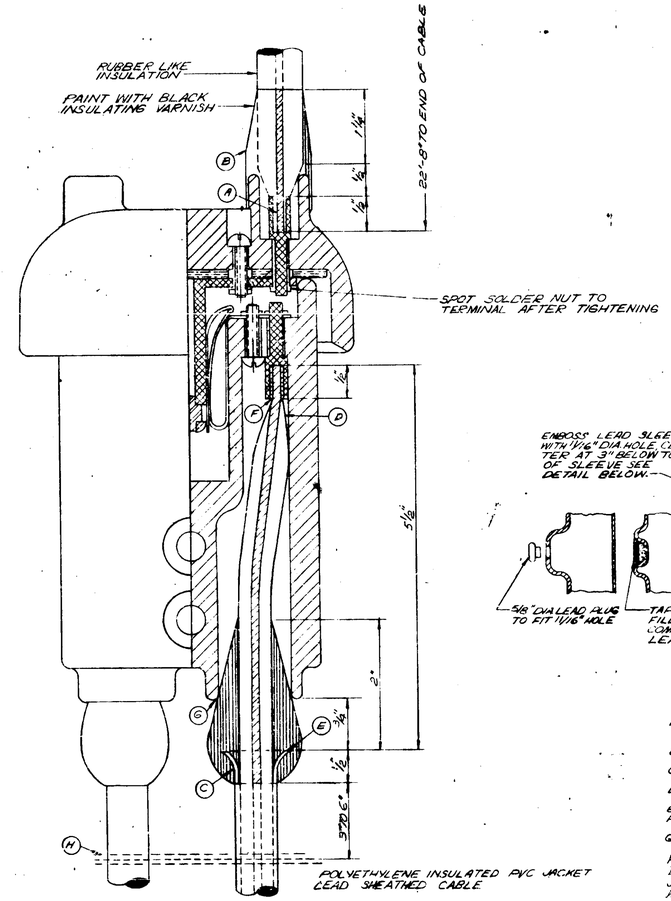
DRAWN BY	APPROVED	FILE NO. 61000	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO. 35	CEA CL	35 OF 35	1-31-64

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	154



CABLE CONNECTION TO SERIES CUTOUT ON COMBINATION COIL

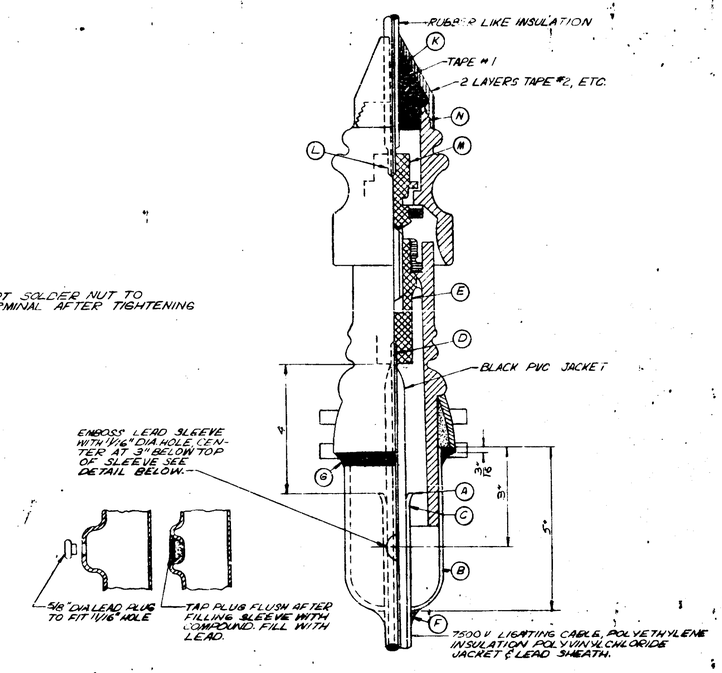
A- THIS DISTANCE VARIES DEPENDING UPON MANUFACTURE OF COIL, 3 3/4 OR 5", NOT INCLUDING BARED CONDUCTOR.
B- USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON DO NOT BREAK BY BENDING.
C- REMOVE INSULATION AT END FOR CONNECTION.
D- BELL LEAD SHEATH EVENLY, REMOVE TAPE FROM INSULATION, INCLUDING AS MUCH AS POSSIBLE FROM WITHIN BELLED LEAD SHEATH. FILL SHEATH CAVITY WITH ELECTRICAL GRADE RUBBER CEMENT.
E- APPLY RUBBER TAPE #1 OVER BELL TO FORM A TIGHT FIT INTO PORCELAIN.
F- COVER TAPE #1 WITH 70 LAYERS OF TAPE #2 TO APPROX. 3/4" FROM UPPER END OF TAPE #1 PAINT TAPE OVERALL WITH BLACK INSULATING VARNISH.



CONNECTION FOR SERIES CUTOUT

A- SWEAT TERMINAL & PENCIL RUBBER INSULATION TO FIT SNUGLY IN PORCELAIN CAP OPENING SO THAT THE CONNECTOR NUT IS TIGHTENED, THE OPENING IS COMPLETELY & TIGHTLY FILLED.
B- BUILD UP WITH #1 TAPE AS SHOWN & COVER WITH 2 LAYERS HALF LAP WITH #2 TAPE. PAINT WITH ONE COAT OF BLACK INSULATING VARNISH.
C- USE TUBE CUTTER TO SCORE LEAD SHEATH & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
D- CUT INSULATION & PENCIL SMOOTHLY.
E- BELL LEAD SHEATH REMOVE TAPE COMPLETLY, INCLUDING AS MUCH CAN BE REMOVED INSIDE OF BELL. FILL SHEATH CAVITY WITH RUBBER CEMENT.
F- SWEAT CONDUCTOR INTO TERMINAL.
G- APPLY TAPE #1 OVER BELL AS SHOWN TO FORM A TIGHT FIT BETWEEN INSULATION AND PORCELAIN AT 12" WHEN IT IS TIGHTENED. COVER TAPE #1 WITH 2 LAYERS OF TAPE #2 APPROX. 3/4" FROM END OF TAPE #1.
H- #8 SERVICE WIRE OR BRAID 4 WRAPS BETWEEN CABLES & SWEATED TO LEAD SHEATH FOR BOND TIE TO GROUND WIRE.

NOTE:
FOR PARKWAY CABLE STRIP JUTE & STEEL TAPE DOWNWARD TO DUCT ENTRANCE.

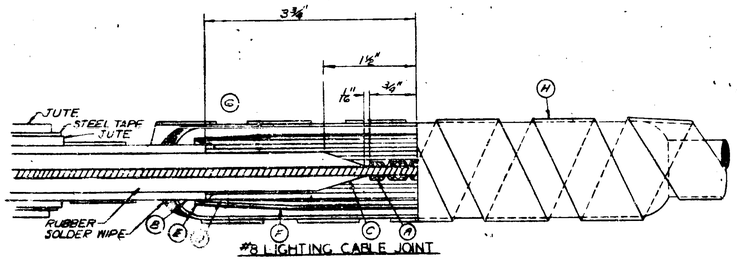


CONNECTIONS FOR V/C 7500 POTHEAD

A- USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON DO NOT BREAK OFF BY BENDING. 4" OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
B- FORM BOTTOM OF EMBOSSED SLEEVE & SLIP OVER CABLE, HOLE IN FRONT.
C- BELL LEAD SHEATH REMOVE TAPE FROM INSULATION, INCLUDING AS MUCH AS MUCH AS POSSIBLE FROM WITHIN BELLED SHEATH.
D- SWEAT CONDUCTOR INTO TERMINAL & PENCIL INSULATION SMOOTHLY FOR 3/4".
E- MOUNT TERMINAL FIRMLY INTO PORCELAIN.
F- PUSH SLEEVE INTO CAST IRON COLLAR AND WIPE SMOOTHLY TO LEAD SHEATH.
G- INVERT & FILL JOINT BETWEEN IRON COLLAR AND SLEEVE WITH EPOXY RESIN.
H- LAY POTHEAD HORIZONTAL & FILL COMPLETELY WITH APPROVED COMPOUND
I- INSERT LEAD PLUG INTO EMBOSSED HOLE, TAP FLUSH & FILL WITH LEAD.
J- TRAIN CABLE & MOUNT POTHEAD ON CROSSARM.
K- SLIP THE CONE SHAPED RUBBER BUSHING ON THE RUBBER INSULATED CABLE BELOW.
L- SWEAT CONDUCTOR INTO TERMINAL FIRMLY INTO THE POTHEAD CAP.
M- MOUNT THE TERMINAL FIRMLY INTO THE POTHEAD CAP.
N- BUILD UP WITH TAPE #1 AND CARRY 2 LAYERS OVER THE CAP TO POINT "B" AS SHOWN COVER WITH 2 LAYERS TAPE #2 HALF LAP PAINT WITH BLACK INSULATION VARNISH.

MATERIAL TYPES

TAPE #1- CORONA RESISTING HIGH VOLTAGE RUBBER TAPE ONLY.
TAPE #2- BLACK PLASTIC ELECTRICAL TAPE



#8 LIGHTING CABLE JOINT

A- 1 1/2" #8 TINNED COPPER SLEEVE, 2 CIRCUMFERENTIAL CRIMPS ON EACH END.
B- SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OF BY BENDING.
C- CUT INSULATION & PENCIL SMOOTHLY AS SHOWN, AFTER REMOVING TAPE.
D- APPLY TAPE #1 TO APPROXIMATELY 1" DIAMETER OVERALL.
E- OVERLAP WITH TAPE #1 APPROXIMATELY 1/4" FROM END OF LEAD OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
G- 1 1/4" x 3 1/2" LEAD SLEEVE
H- TWO LAYERS OF TAPE #2 HALF LAP, ON ARMORED PARKWAY CABLE ONLY.

REVISIONS	

DRAWN BY JCB	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS
CHECKED BY JG	16580 WYOMING DETROIT, MICH. 48221
APPROVED BY	
DATE 12-31-64	DRAWING NO. / FILE NO. C-A-CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 12-31-64	FILE NO. 61009
DATE	APPROVED 12/21/64	SHEET NO. 1

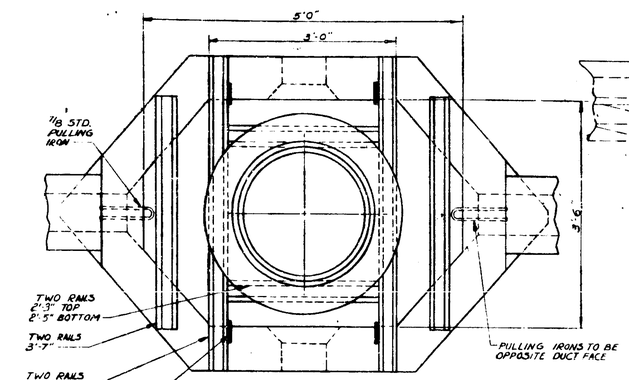
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
CABLE SPLICES & CONNECTIONS
(RUBBER INSULATION, LEAD SHEATH)

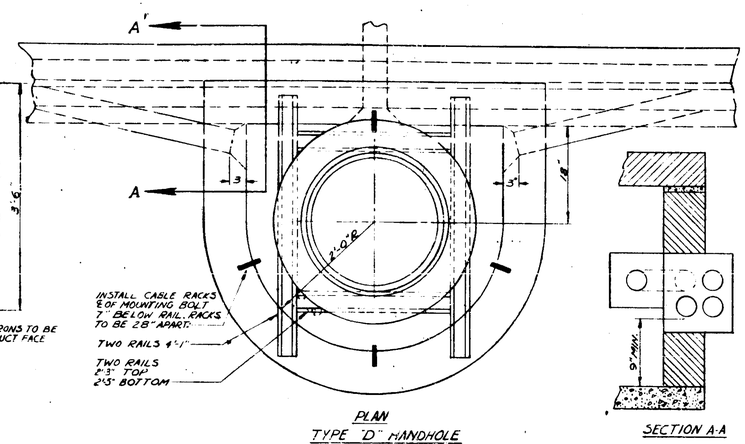
ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (96) 59	155

82252 L, C63; 63174 A, C64

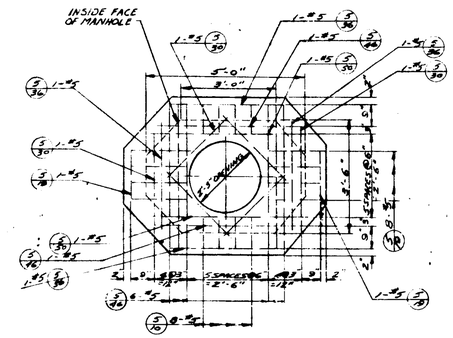


PLAN
TYPE "S" HANDHOLE
1"=12"

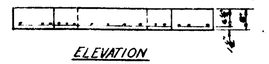


PLAN
TYPE "D" HANDHOLE
1"=12"

SECTION A-A



PLAN
1/2"=12"

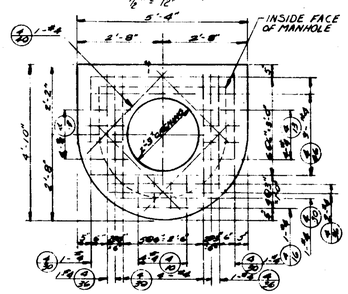


ELEVATION
ALTERNATE ROOF-TYPE "S" HANDHOLE
MSHD GRADE A(6B) CONCRETE

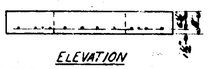
USE FOR STANDARD TYPE "S" H.H. ONLY

TABLE FOR #5 BARS

MARK	NO	LENGTH
S-50	2	5'-0"
S-46	18	4'-6"
S-36	6	3'-6"
S-30	6	3'-0"
S-19	10	2'-1"
S-10	8	1'-2"



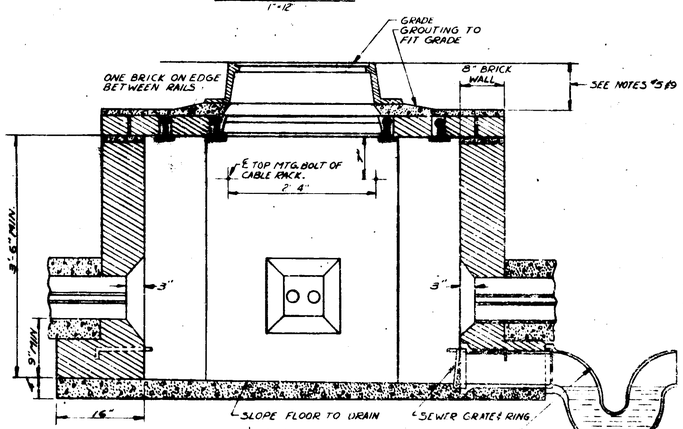
PLAN
1/2"=12"



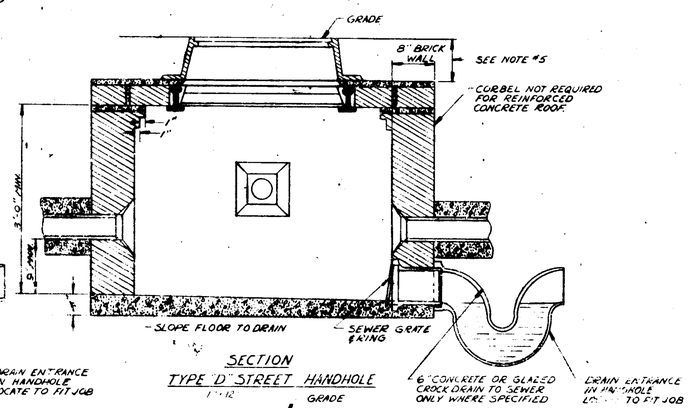
ELEVATION
ALTERNATE ROOF TYPE "D" HANDHOLE
MSHD GRADE A. (6B) CONCRETE

TABLE FOR #4 BARS

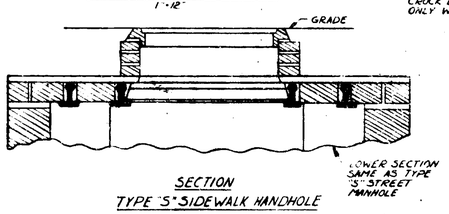
MARK	NO	LENGTH
1-44	3	4'-6"
1-40	4	4'-0"
1-29	4	3'-9"
1-26	4	3'-6"
1-30	3	3'-0"
1-16	1	1'-8"
1-13	8	1'-5"
1-10	4	1'-2"



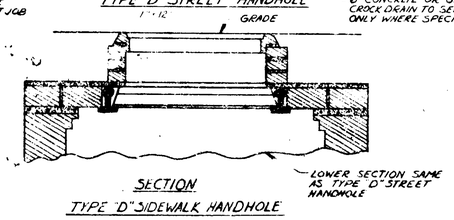
SECTION
TYPE "S" STREET HANDHOLE
1"=12"



SECTION
TYPE "D" STREET HANDHOLE
1"=12"



SECTION
TYPE "S" SIDEWALK HANDHOLE



SECTION
TYPE "D" SIDEWALK HANDHOLE

NOTES:

1. DUCT ENTRANCE TO BE BUILT AS REQUIRED.
2. ALL RAILS TO BE 50#/YD. OR HEAVIER.
3. CABLE PULLING IRONS TO BE GALVANIZED.
4. CABLE RACKS AND ARMS TO BE GALVANIZED.
5. IN PAVEMENT PROVIDE AT LEAST 3" BETWEEN ROOF AND BASE OF PAVEMENT. WHERE EXISTING GRADE IS HIGHER THAN PROP. FUTURE GRADE INSTALL BRICK RING OR GROUT (AS REQ'D) UNDER FRAME TO ALLOW FOR FUTURE FRAME ADJUSTMENT.
6. BAR NUMBERS DENOTE THE SIZE OF BAR REQUIRED IN ACCORDANCE WITH CURRENT USAGE SPECIFIED BY THE CONCRETE REINFORCING STEEL INSTITUTE.
7. EXCAVATION LIMITS FOR PUBLIC LIGHTING COMMISSION HANDHOLES SHALL BE ON VERTICAL PLANES OF THE FOOTING OUTLINE.
8. INSTALL ANCHORS & CABLE-RACKS AS SHOWN.
9. WHERE HANDHOLES ARE LOCATED BACK OF CURB, ROOF MUST BE BUILT 18" BELOW CURB GRADE, TO PROVIDE FOR FUTURE WIDENING.

REVISIONS

DRAWN BY	C.I.B.
CHECKED BY	H. K.
APPROVED BY	MPB
DATE	2-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWING NO. | FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY ____ DATE ____
APPROVED 10-31-64 FILE NO. 61009
APPROVED 10/31/64 SHEET NO. 2

MICHIGAN STATE HIGHWAY DEPARTMENT

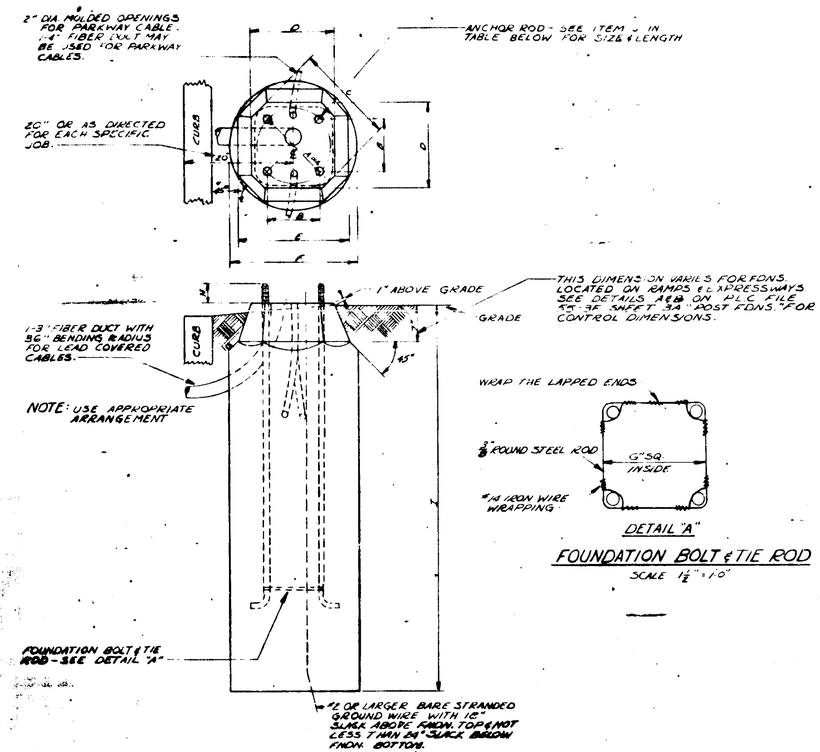
P.L.C. DETAILS
HANDHOLES

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	136

HSE 17-0153 5-64



TYPICAL LAMP POST FOUNDATION

SCALE 1" = 1'-0"

DETAIL "A"

FOUNDATION BOLT & TIE ROD

SCALE 1½" = 1'-0"

	A	B	C	D	E	F	G	H	I	J
INCANDESCENT COMB. TRANSF. BASE, 30 FT. MTG. HT. & 6 FT. BRACKET ARM										
MERCURY VAPOR LAMP ANCHOR BASE 30 FT. MTG. HT. & 6 FT. BRACKET ARM - FOR SERVICE ROADS	11"	7 3/4"	16 1/4"	13 1/2"	21 1/4"	26"	8 3/4"	2 11/16"	60"	1"x60" 1"x40"
MERCURY VAPOR COMB. STD. 30 FT. MTG. HT. & 6 FT. OR 10 FT. ARM - FOR SERVICE ROADS. ANCHOR BASE	13 1/2"	9 9/16"	18 1/2"	16 1/8"	21 3/8"	30"	11 1/16"	3 3/8"	72"	1 1/2"x60"
MERCURY VAPOR ANCHOR BASE 30 FT. MTG. HT. & 15 FT. BRACKET ARM - FOR EXPRESSWAY.	11"	7 3/4"	16 1/4"	13 1/2"	21 1/4"	26"	8 3/4"	2 11/16"	72"	1"x60"
FLUORESCENT ANCHOR BASE 30 FT. MTG. HT. & 8 FT. BRACKET ARM (RAMP & EXP. W.)	11"	7 3/4"	16 1/4"	13 1/2"	21 1/4"	26"	8 3/4"	2 5/8"	72"	1 1/4"x48"
MERCURY VAPOR TRANFS. BASE 30 FT. MTG. HT. (NOMINAL) 6 FT. BRACKET ARM FOR SERVICE RDS.	15"	10 5/8"		18"	20 3/8"	26"	12 3/8"	3"	60"	1"x40"

REVISIONS

DRAWN BY C.J.B.
CHECKED BY
APPROVED BY
DATE 12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWING NO.
FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY
DATE
APPROVED
APPROVED
FILE NO. 61009
SHEET NO. 3-B

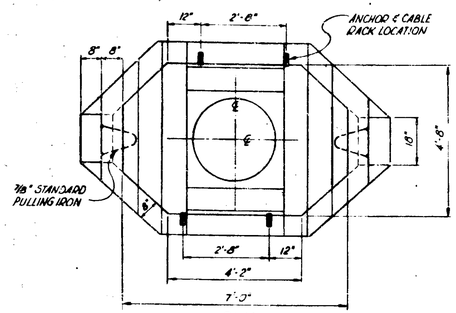
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAIL
POST FOUNDATIONS

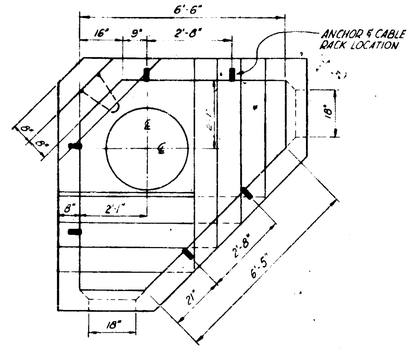
ISSUE NO.
COUNTY JOB
SHEET NO.
STATE PROJECT

82252 L, C 63, 63174 A, C 64

STATE PROJECT
MICHIGAN PROJECT
175-1 (98) 59



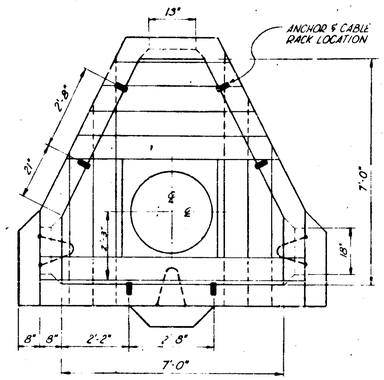
PLAN



PLAN

NO.1 CORNER MANHOLE

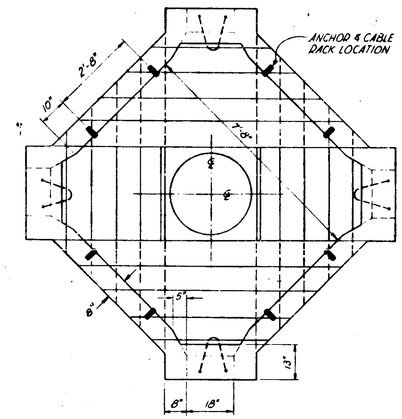
Scale: 1/8" = 12"



PLAN

NO.1 3-WAY MANHOLE

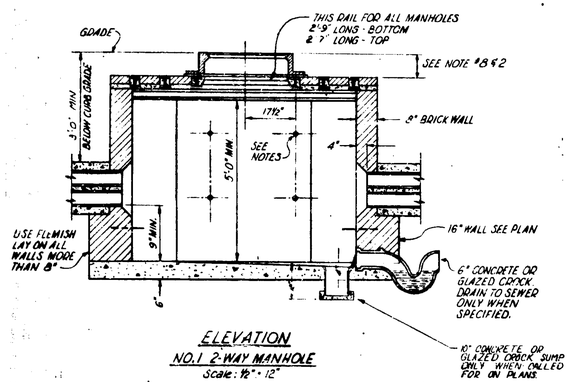
Scale: 1/8" = 12"



PLAN

NO.1 4-WAY MANHOLE

Scale: 1/8" = 12"



ELEVATION

NO.1 2-WAY MANHOLE

Scale: 1/8" = 12"

RAILS REQUIRED							
2-WAY M.H.		CORNER M.H.		3-WAY M.H.		4-WAY M.H.	
NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
2	SPECIAL*	1	4'-0"	2	SPECIAL*	2	SPECIAL*
2	4'-8"	2	4'-3"	1	3'-8"	4	3'-9"
2	6'-0"	1	4'-9"	1	4'-5"	4	5'-3"
2	6'-3"	2	4'-10"	2	4'-10"	4	6'-10"
		2	5'-8"	1	5'-2"	4	8'-4"
		2	6'-5"	1	5'-11"	4	9'-10"
				2	6'-3"		
				1	6'-8"		
				1	7'-9"		
				1	8'-4"		

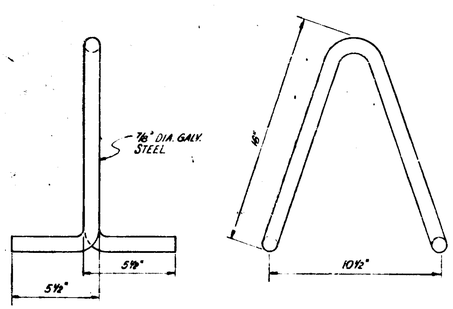
* SPECIAL RAIL DIMENSIONS: 2 - 7' LONG TOP
2 - 3' LONG BOTTOM

NOTE:

EXCAVATION LIMITS FOR PUBLIC LIGHTING COMMISSION MANHOLES SHALL BE ON VERTICAL PLANES ON THE FOOTING OUTLINE.

NOTES:

1. MANHOLE ROOF TO HAVE 80#/YD. OR HEAVIER "T" RAILS SPACED ONE BRICK APART WITH ONE ROW OF BRICKS ON EDGE BETWEEN RAILS.
2. WHERE MANHOLES ARE LOCATED BACK OF CURB, ROOF MUST BE BUILT 18" BELOW CURB GRADE, TO PROVIDE FOR FUTURE WIDENING.
3. MANHOLE NUMBER TO BE INSTALLED ON MANHOLE WALL.
4. BOLTS, RACKS AND PULLING IRONS TO BE HOT DIP GALVANIZED.
5. MANHOLES TO HAVE 5'-0" MIN. HEADROOM EXCEPT WHERE MORE THAN SIX DUCTS ARE USED, IN WHICH CASE HEADROOM TO BE 5'-6".
6. MOUNTING HEIGHT FOR LOWER BOLT OF THE CABLE RACKS SHALL BE THE AVERAGE HEIGHT OF THE BOTTOM OF LOWEST DUCTS IN THE MAIN CONDUITS. INSTALL RACKS ON ALL WALLS.
7. ℄ OF RAILS UNDER M.H. FRAME FLANGE TO BE APPROX. 18" FROM ℄'S OF FRAME.
8. IN PAVEMENT PROVIDE AT LEAST 3" BETWEEN ROOF AND BASE OF PAVEMENT. WHERE EXISTING GRADE IS HIGHER THAN PROPOSED FUTURE GRADE INSTALL BRICK DING OR GROUT (AS REQUIRED) UNDER FRAME TO ALLOW FOR FUTURE FRAME ADJUSTMENT.
9. 8" THICK BRICK CHIMNEYS WHERE SPECIFIED SHALL BE INCIDENTAL TO APPLICABLE M.H. ITEM.



PULLING IRON

Scale: 1/4" = 1'

REVISIONS	

DRAWN BY R.M.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221	
CHECKED BY		
ATTENTION BY		
DATE 12-31-64	DRAWING NO	FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY ____ APPROVED 12-31-64 FILE NO. 61009
DATE ____ APPROVED 10/21/64 SHEET NO. 7

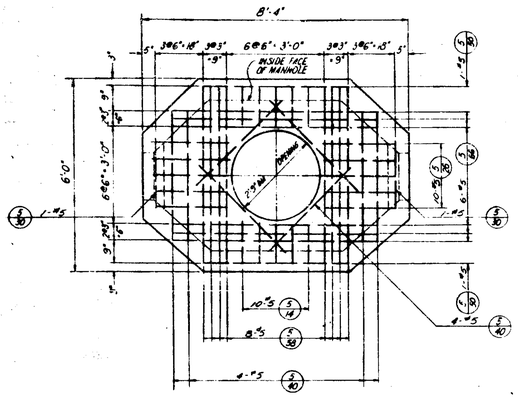
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
MANHOLES

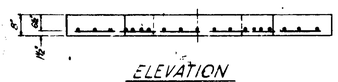
ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-I 198 J 59	158

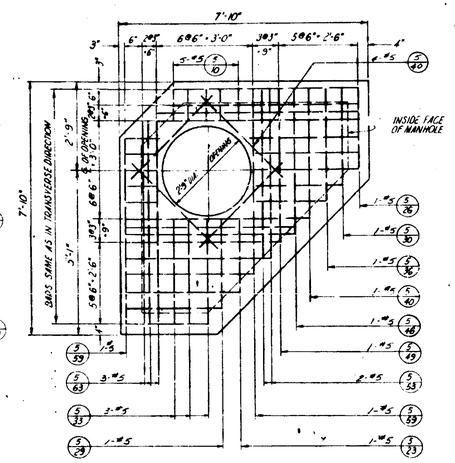


PLAN

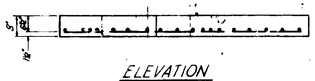


ELEVATION
FOR NO.1 2-WAY MANHOLE
Scale: 1/2" = 12"

TABLE FOR #5 BARS		
MARK	NO.	LENGTH
5-66	6	6'-6"
5-58	8	5'-8"
5-50	2	5'-0"
5-40	8	4'-0"
5-30	2	3'-0"
5-26	10	2'-6"
5-14	10	1'-4"

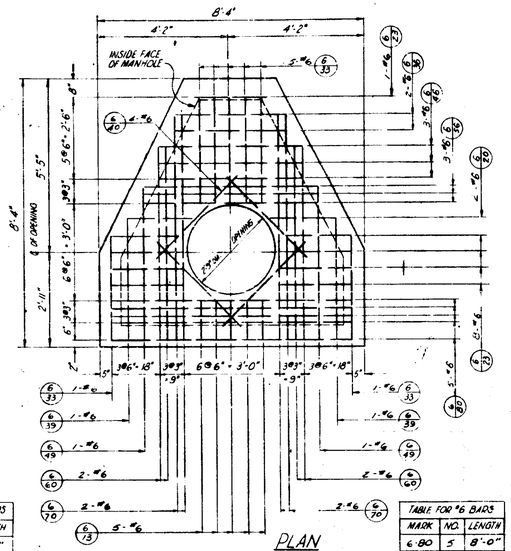


PLAN

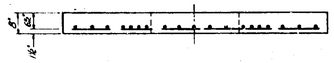


ELEVATION
FOR NO.1 CORNER MANHOLE
Scale: 1/2" = 12"

TABLE FOR #5 BARS		
MARK	NO.	LENGTH
5-63	6	6'-3"
5-59	4	5'-9"
5-53	4	5'-3"
5-49	2	4'-9"
5-46	2	4'-6"
5-40	6	4'-0"
5-36	2	3'-6"
5-33	6	3'-3"
5-30	2	3'-0"
5-29	2	2'-9"
5-26	2	2'-6"
5-23	2	2'-3"
5-10	10	1'-0"

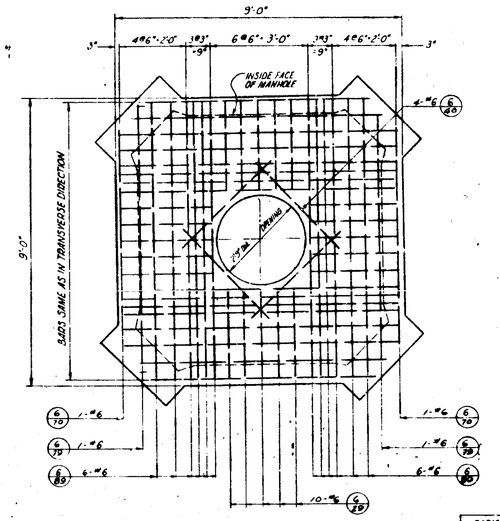


PLAN

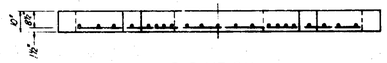


ELEVATION
FOR NO.1 3-WAY MANHOLE
Scale: 1/2" = 12"

TABLE FOR #6 BARS		
MARK	NO.	LENGTH
6-80	5	8'-0"
6-70	4	7'-0"
6-60	4	6'-0"
6-56	3	5'-6"
6-49	2	4'-9"
6-46	3	4'-6"
6-40	4	4'-0"
6-39	2	3'-9"
6-36	2	3'-6"
6-33	7	3'-3"
6-23	9	2'-3"
6-20	2	2'-0"
6-13	5	1'-3"



PLAN



ELEVATION
FOR NO.1 4-WAY MANHOLE
Scale: 1/2" = 12"

TABLE FOR #6 BARS		
MARK	NO.	LENGTH
6-89	24	8'-9"
6-83	4	8'-3"
6-73	4	7'-3"
6-40	4	4'-0"
6-29	20	2'-9"

NOTES.
1. WORK THIS SHEET WITH PLC DETAILS MANHOLES.
2. ALL CONCRETE IS MSHD GRADE A (6B).
3. BAR NUMBERS DENOTE THE SIZE OF BAR REQUIRED IN ACCORDANCE WITH CURRENT USAGE SPECIFIED BY THE CONCRETE REINFORCING STEEL INSTITUTE

DRAWN BY: J.M.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221
CHECKED BY:	
APPROVED BY:	
DATE: 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 10-21-64	FILE NO. 61009
DATE	APPROVED 10/21/64	SHEET NO. 7A

MICHIGAN STATE HIGHWAY DEPARTMENT

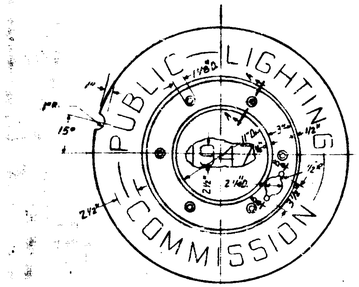
P.L.C. DETAILS
ALTERNATE MANHOLE ROOFS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

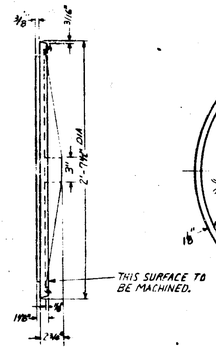
REVISIONS

82252 L, C 63; 63174 A, C 64

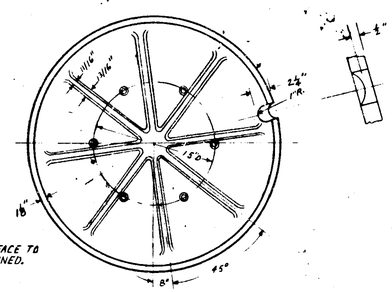
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	159

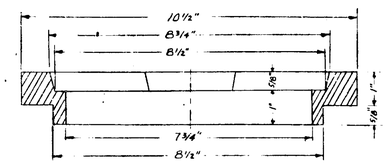


LETTERING & BEAD RAISED 3/16" ABOVE FACE.
YEAR ON COVER TO BE YEAR OF CASTING
CONTRACTOR TO CHANGE PATTERN IF REQUIRED.

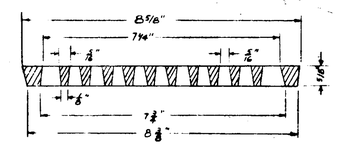


A.S.T.M. CLASS 30 GREY IRON
P.L.C. PATT. NO 418
APPROX. WT. – 245#

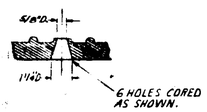




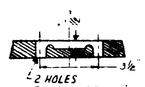
SECTION D-D



SECTION E-E

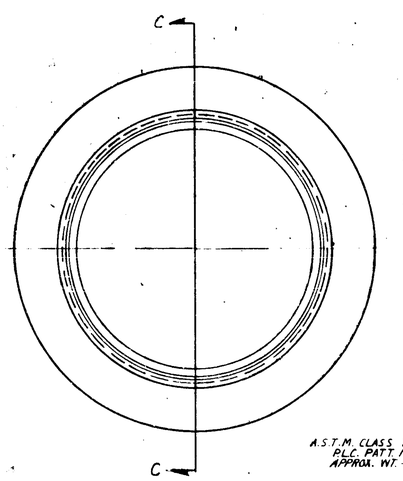


SECTION A-A

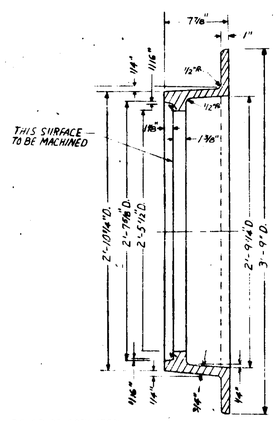


SECTION B-B

MANHOLE COVER
SCALE 1½" = 12"



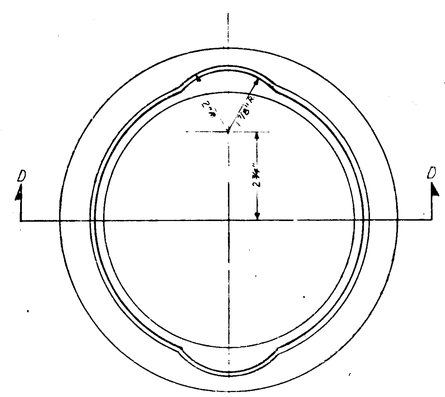
A.S.T.M. CLASS 20 OR 30 GREY IRON
P.L.C. PATT. NO. 417
APPROX. WT. – 410 #



SECTION C-C

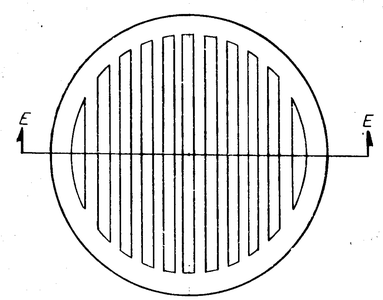
MANHOLE FRAME
SCALE 1½" = 12"

NOTE: FRAMES MAY BE A.S.T.M. CLASS 30 GREY IRON IF THE CONTRACTOR SO ELECTS.



A.S.T.M. CLASS 20 OR 30 GREY IRON
P.L.C. PATT. NO 318-A
APPROX. WT. 9#

SEWER RING
SCALE: HALF-SIZE



A.S.T.M. CLASS 20 OR 30 GREY IRON
P.L.C. PATT. NO. 318
APPROX. WT – 4.5#

SEWER GRATE
SCALE: HALF SIZE

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APPROVED BY	
DATE 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 10/21/64 FILE NO. 61009
DATE	APPROVED 10/21/64 SHEET NO. 8

MICHIGAN STATE HIGHWAY DEPARTMENT

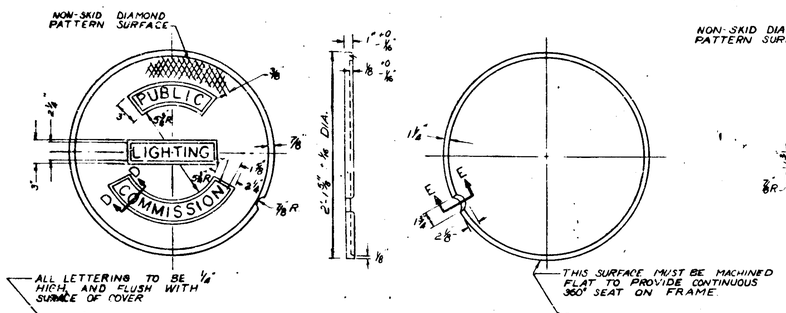
P.L.C. DETAILS
MANHOLE FRAME & COVER
SEWER GRATE & RING

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

REVISIONS

82252 L, C63; 63174 A, C64

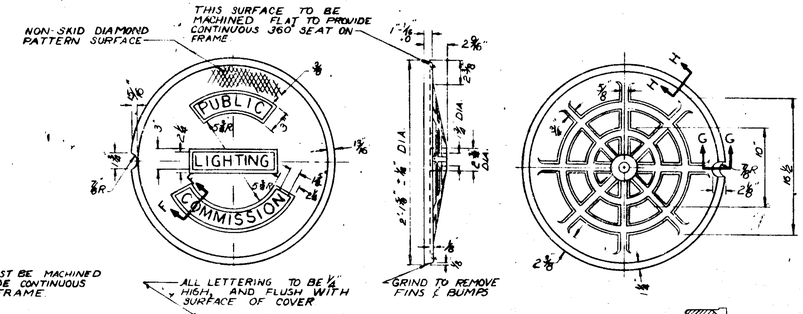
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1(98)59	160



SECTION D-D

P.L.C. PATTERN NO. 419
A.S.T.M. CLASS 30 GRAY IRON
SIDEWALK TYPE COVER

SECTION E-E

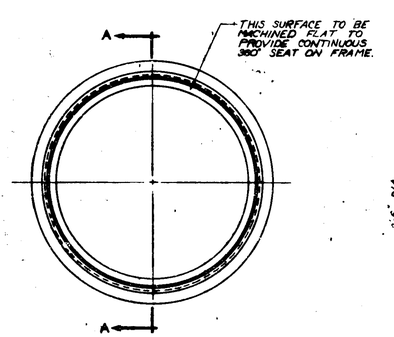


SECTION F-F

P.L.C. PATTERN NO. 2A
A.S.T.M. CLASS 30 GRAY IRON
APPROX. WT. 145 LBS.
STREET COVER

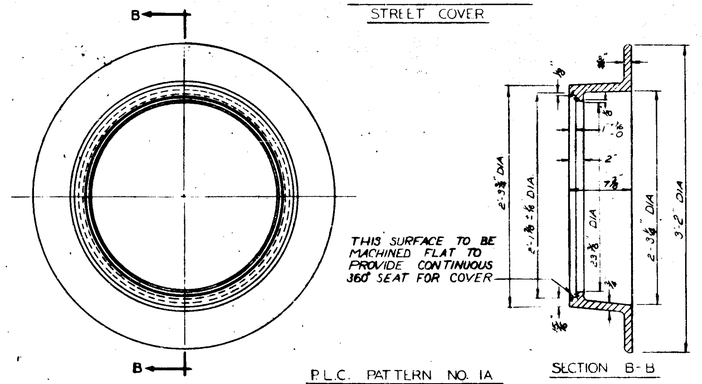
SECTION G-G

SECTION H-H



SECTION A-A

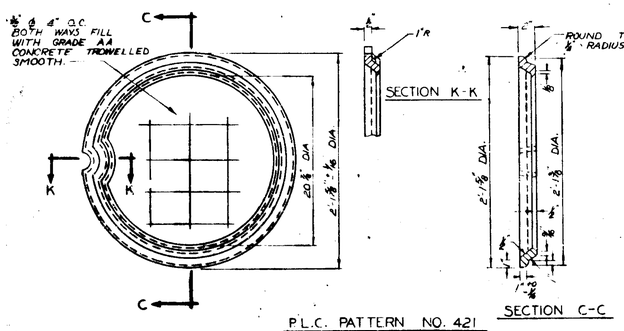
P.L.C. PATTERN NO. 420
A.S.T.M. CLASS 20 OR 30 GRAY IRON
APPROX. WT. 122 LBS.
SIDEWALK TYPE FRAME



SECTION B-B

P.L.C. PATTERN NO. 1A
A.S.T.M. CLASS 20 OR 30 GRAY IRON
APPROX. WT. 251 LBS.
STREET TYPE FRAME

ALL FILLETS ARE 1/2" RADIUS
ALL ROUNDS ARE 1/4" RADIUS

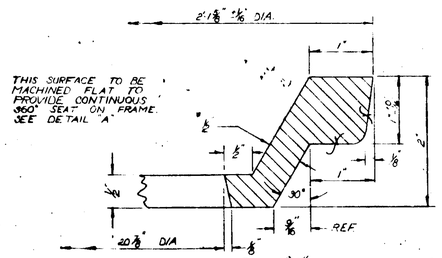


SECTION K-K

SECTION C-C

P.L.C. PATTERN NO. 421
A.S.T.M. CLASS 30 GRAY IRON
APPROX. WT. 44 LBS.
SIDEWALK TYPE
CONCRETE FILLED COVER

NOTE:
FRAMES MAY BE A.S.T.M. CLASS 30 GRAY IRON IF THE CONTRACTOR SO ELECTS.



DETAIL "A"
(FULL SCALE)

REVISIONS

DRAWN BY M.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC ENGINEERING CONSULTANTS 15580 WYOMING DETROIT, MICH. 48221
CHECKED BY	
APPROVED BY	
DATE 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 12-31-64	FILE NO. 61009
DATE	APPROVED 10/21/64	SHEET NO. 9

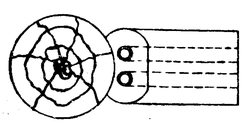
MICHIGAN STATE HIGHWAY DEPARTMENT

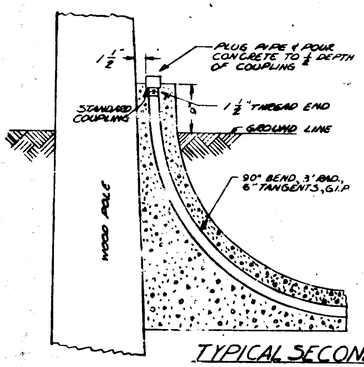
P.L.C. DETAILS
HANDHOLE FRAMES & COVERS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C 63; 63174 A, C 64

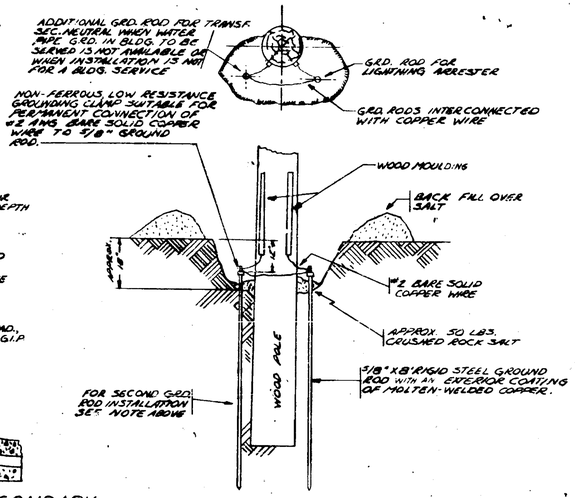
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	161





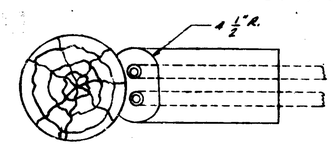
TYPICAL SECONDARY CABLE POLE G.I.P. CONN.

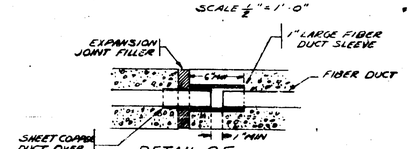
SCALE 1"=1'-0"



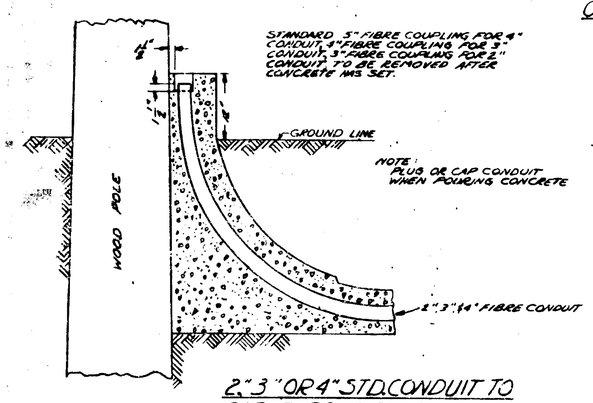
GROUND ROD INSTALLATION.

SCALE 1/2"=1'-0"



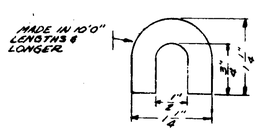


DETAIL OF EXPANSION JOINT ON BRIDGE



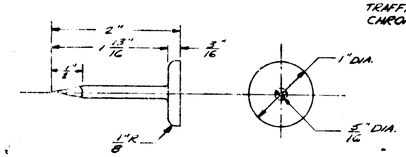
2", 3" OR 4" STD. CONDUIT TO CABLE POLE CONN.

SCALE 1"=1'-0"



CYPRESS MOULDING

FULL SCALE



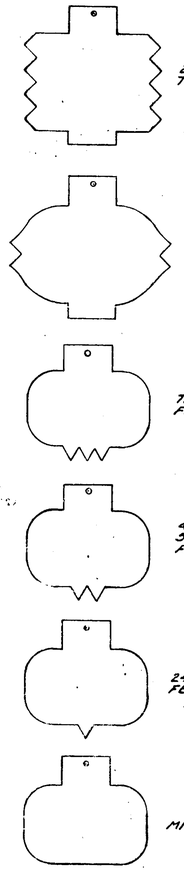
CAST BRONZE POLE MARKER FOR A.L. WOOD POLES

TYPICAL MARKING

C 45 — PLC 45' POLE
60 — SET IN 1960

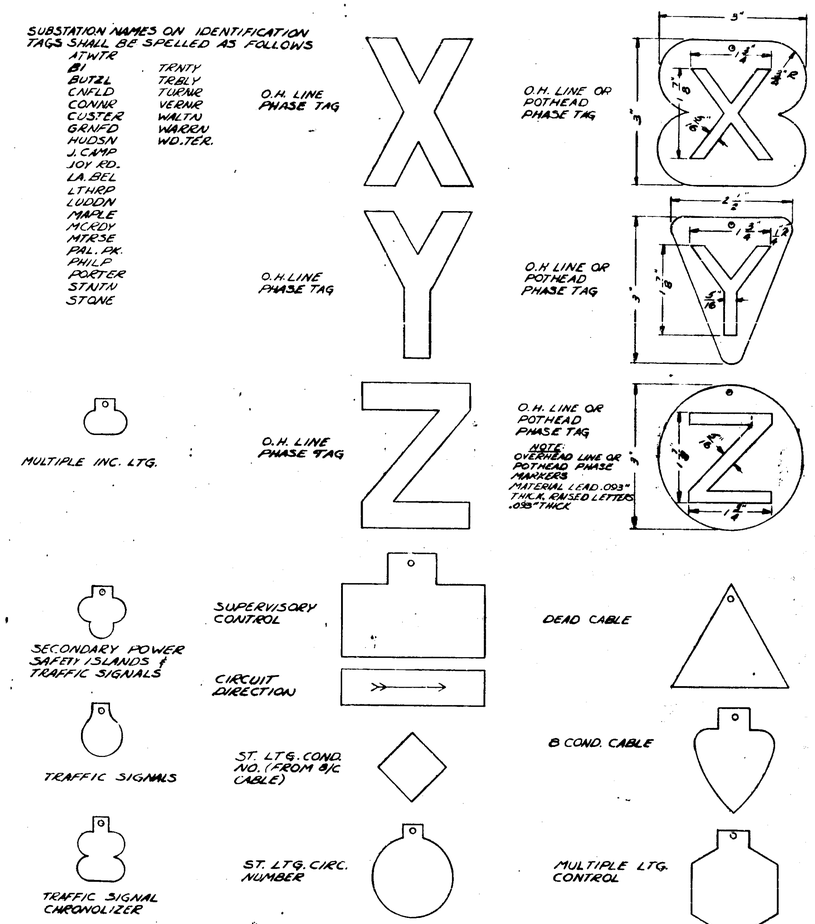
USE 1" STEEL STAMP FOR LETTERING P/N SET MARKER 7'-0" ABOVE GRADE

FACE OF HEAD TO BE ROUGH-GROUND. P.L.C. PATTERN PROVIDES FOR 40 MARKERS PER POURING



SUBSTATION NAMES ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS

ATWTR	
BI	TRNTY
BUTZL	TRBLY
CNFLD	TUBNG
CONNR	VERNR
CUSTER	WALTN
GRNFD	WARRN
HUDSN	WD.TER.
J.CAMP	
JOY RD.	
LA.BEL	
LTHRP	
LUDDN	
MAPLE	
MCRDY	
MTRSE	
PAL.PK.	
PHILP	
PORTER	
STATN	
STONE	



IDENTIFICATION TAGS

MATERIAL LEAD
SCALE 3/4"=1"

NOTE:
CABLE TAG MARKINGS SUCH AS SUBSTATION OR CABLE MARKINGS WILL BE AS SHOWN ON PLANS OR WILL BE FURNISHED BY P.L.C.

REVISIONS	

DRAWN BY I.C.B.
CHECKED BY C.E.K.
APPROVED BY W.R.
DATE 12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWING NO.
FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY
DATE
APPROVED 12-31-64
APPROVED 10/21/64
FILE NO. 61009
SHEET NO. 10

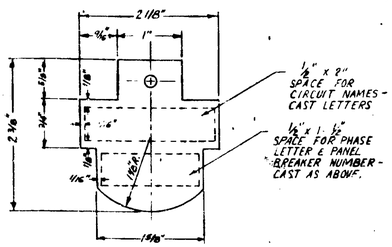
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
CABLE POLE & CABLE MARKING TAGS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	162



SUBSTATION NAMES ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS:

CONSTANCE	CONST.
FULLERTON	FULTN.
KEELER	KEELR.
7-MILE	7-MILE
MEYERS	MEYRS.
SCHAEFER	SCHFR.
FREELAND	FRELD.
WATSON	WATSN.
CONGRESS	CNGRS.
MONTCALM	MTCLM.
FERRY	FERRY
HOLBROOK	HOLBK.
FORD	FORD

TRANSCLOSURE:

FORD
8-MILE

MULTIPLE MERCURY LIGHTING
IDENTIFICATION TAGS
FREEWAYS

DRAWN BY B. A.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221
CHECKED BY	
APPROVED BY	
DATE 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 10-31-64	FILE NO. 61009
DATE	APPROVED 10/21/64	SHEET NO. 10-A

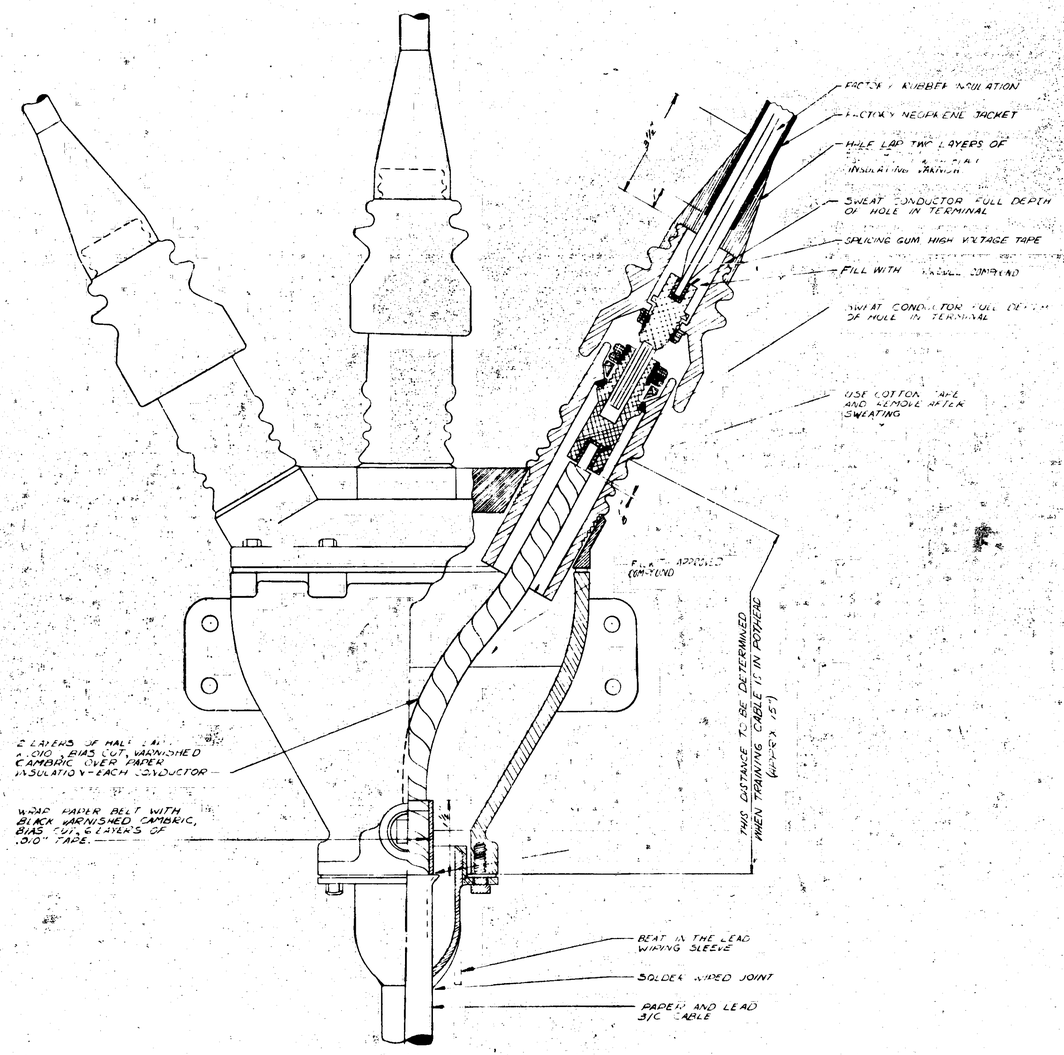
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
CABLE MARKING, TAGS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

REVISIONS

82252 L, C 63; 63174 A, C 64	STATE PROJECT 82252L	MICHIGAN PROJECT L15-3 (98) 59	SHEET NO. 163

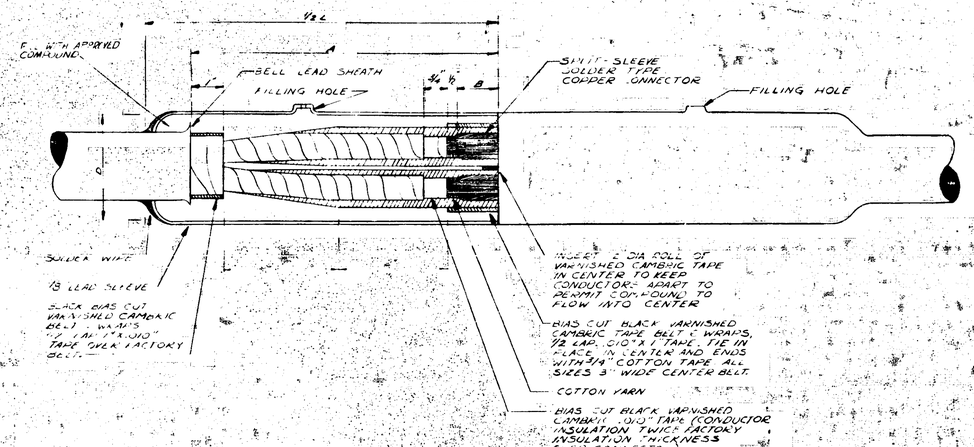


5000 & 7500V 3/C DISC. POTHEAD

NOT TO SCALE

NOTE: SEE SPECIFICATIONS FOR P.L.C. WHERE REQUIRED.

NOTE: FOR COMPLETE DETAILS ON MAKING THIS SPLICE SEE SPECIFICATIONS.



3 CONDUCTOR 5000 OR 7000 VOLT PAPER & LEAD SPLICE

NOT TO SCALE

	#4/0 CABLE	#2 CABLE	350 MCM CABLE	#2/0 CABLE
A	9 1/2"	7 1/2"	10 1/2"	9 1/2"
B	1 1/4"	1"	1 1/4"	1"
D	3 1/2"	3"	4"	3 1/2"
L	24"	18"	24"	24"

REVISIONS

DRAWN BY	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221
CHECKED BY	
APPROVED BY	
DATE 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED	FILE NO. 61009
DATE	APPROVED 10/21/64	SHEET NO. 11

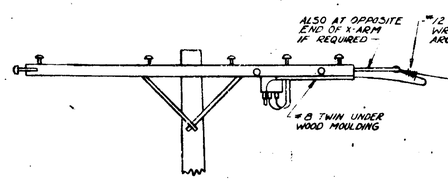
MICHIGAN STATE HIGHWAY DEPARTMENT

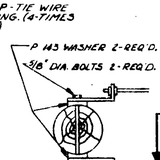
P.L.C. DETAILS
5000 V. - 7000 V. POTHEADS & CABLE SPLICES

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

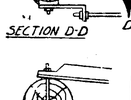
82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	164

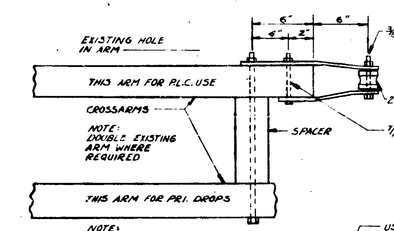




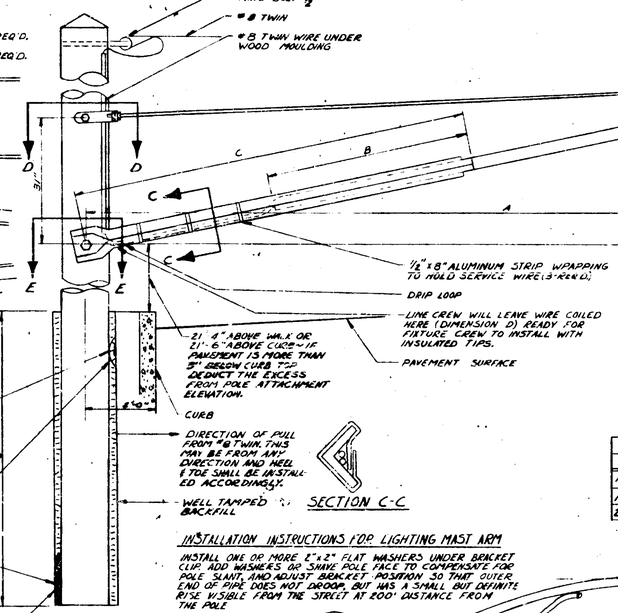
SECTION D-D



SECTION E-E



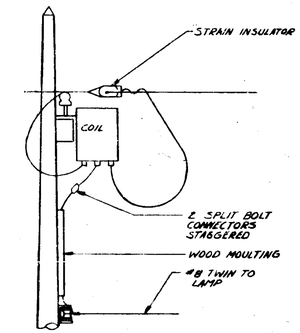
END OF ARM CONSTRUCTION FOR STREET LIGHTING AT TRANSFORMER OR CABLE POLES



SECTION C-C

DIMENSIONS			
A	B	C	D
16'-0"	48"	96"	18'
18'-0"	60"	108"	20'
20'-0"	72"	120"	22'

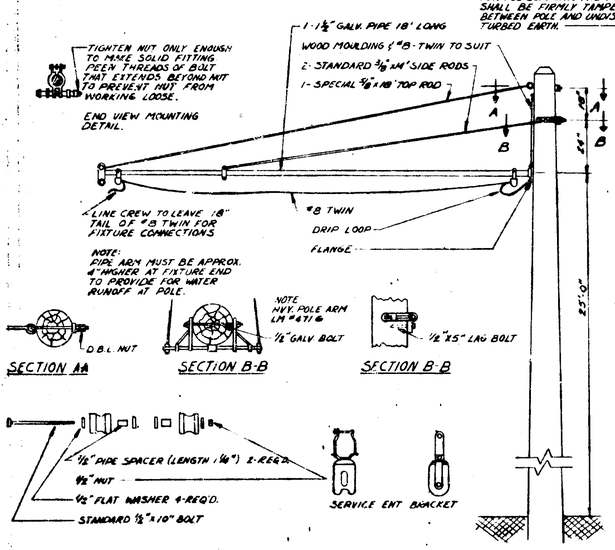
NOTE: TIPS TO BE CRIMPED TO PLASTIC WIRE AND STAGGERED JOINTS TO BE WRAPPED WITH TWO HALF LAPPED LAYER OF PLASTIC TAPE "20 (P.V.C.) (1-TIP-12" & 1-TIP-14")



TYPICAL COIL INSTALLATION

INSTALLATION INSTRUCTIONS FOR LIGHTING MAST ARM

INSTALL ONE OR MORE 2" x 2" FLAT WASHERS UNDER BRACKET CLIP. ADD WASHERS OR SHAVE POLE FACE TO COMPENSATE FOR POLE SLANT, AND ADJUST BRACKET POSITION SO THAT OUTER END OF PIPE DOES NOT DROOP, BUT HAS A SMALL BUT DEFINITE RISE VISIBLE FROM THE STREET AT 200' DISTANCE FROM THE POLE

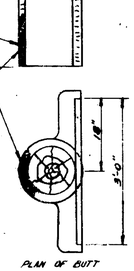


SECTION A-A

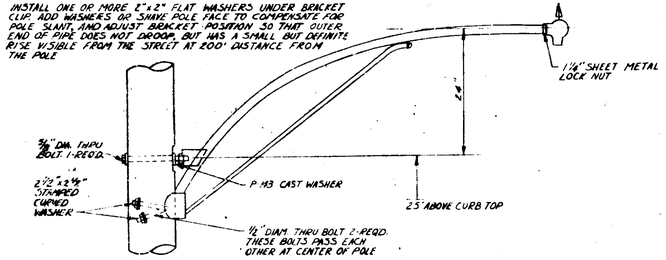
SECTION B-B

SECTION B-B

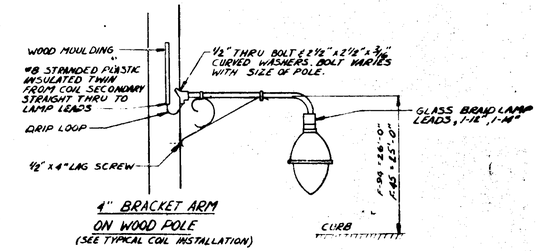
NOTE: TYPICAL INSTALLATION OF MODIFIED F100 MAST ARM ON 35' POLE



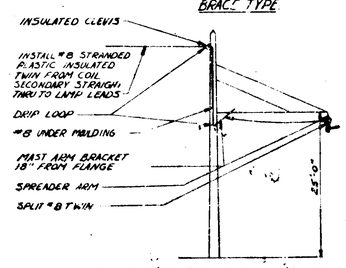
PLAN OF BUTT



6 FT. OR 10 FT. UPSWEEP STREET LIGHTING BRACKET - PIPE & BRACE TYPE



4" BRACKET ARM ON WOOD POLE
(SEE TYPICAL COIL INSTALLATION)



18' PIPE MAST ARM ON SEPARATE WOOD POLE WITH FORM NO. 100 LUMINAIRE

REVISIONS	

DRAWN BY	CLE
CHECKED BY	
APPROVED BY	MJ
DATE	12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWING NO. | FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY | APPROVED 12-31-64 | FILE NO. 61009
DATE | APPROVED 12/31/64 | SHEET NO. 14

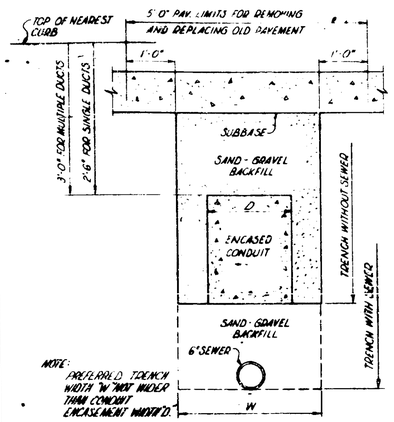
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
STREET LIGHTING MAST ARM

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

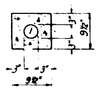
82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1 (98) 152	165

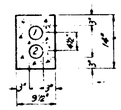


TYPICAL SECTION OF TRENCH

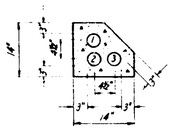
Scale: 1/4" = 1'-0"



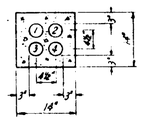
1-3" DUCT



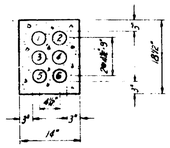
2-3" DUCTS



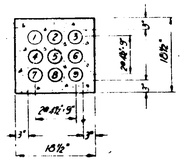
3-3" DUCTS



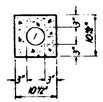
4-3" DUCTS



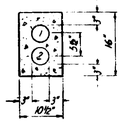
6-3" DUCTS



9-3" DUCTS



1-4" DUCT



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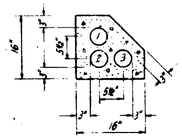

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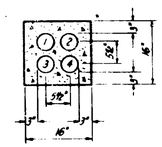

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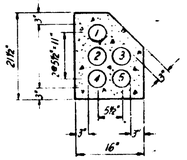

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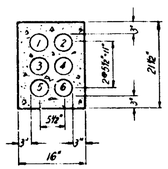

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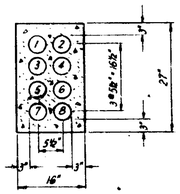
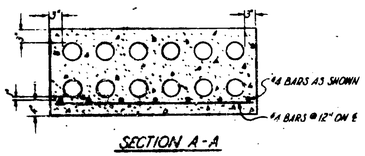
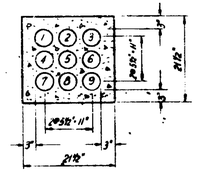


8-4" DUCTS



SECTION A-A



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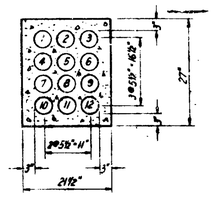
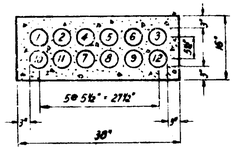
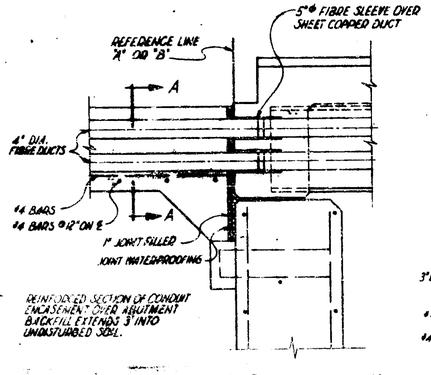


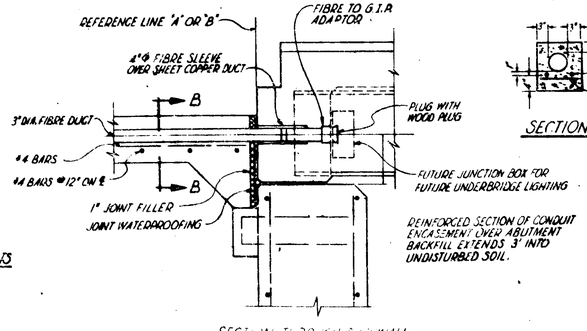
12-4" DUCTS



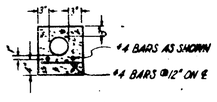
12-4" IN BRIDGE APPROACH



SECTION THROUGH BACKWALL SHOWING SUPPORTS FOR 12-4" ENCASED CONDUIT & EXPANSION JOINTS



SECTION THROUGH BACKWALL SHOWING SUPPORTS FOR 12-3" ENCASED CONDUIT & EXPANSION JOINTS FOR UNDERBRIDGE LIGHTING



SECTION B-B

REVISIONS

DRAWN BY C.J.B.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16560 WYOMING DETROIT, MICH. 48221	
DATE 3-3-64	DRAWING NO.	FILE NO. P.L.C.

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

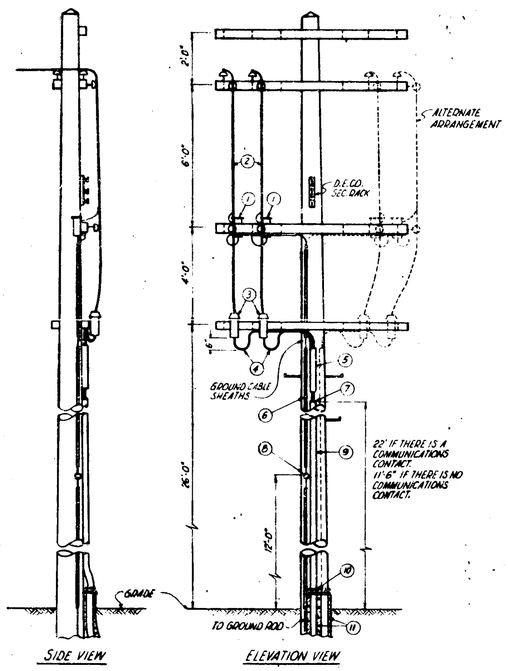
DRAWN BY	APPROVED	FILE NO. 61009
DATE	APPROVED	SHEET NO. 2

MICHIGAN STATE HIGHWAY DEPARTMENT

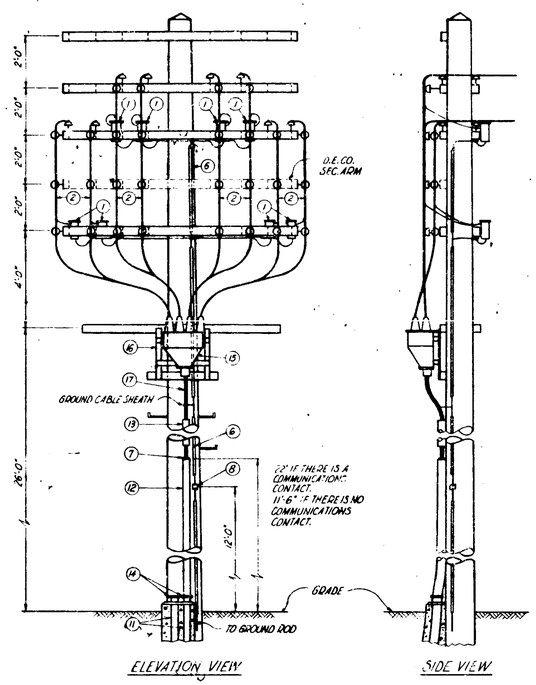
P.L.C. DETAIL
MISCELLANEOUS DUCT SECTION

ISSUE NO. | DATE
COUNTY JOB | SHEET NO.
STATE PROJECT

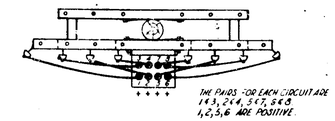
82252 L, C63, 63174 A, C64 | STATE PROJECT 82252L | MICHIGAN PROJECT | 1 | 98 | 59 | 700



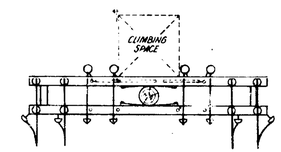
TYPICAL STREET LIGHTING CABLE POLE
NOT TO SCALE



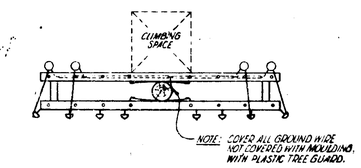
TYPICAL 8/c STREET LIGHTING CABLE POLE
NOT TO SCALE



PLAN AT FIFTH GAIN
INCLUDING 8/c POTHEAD



PLAN AT THIRD ARM

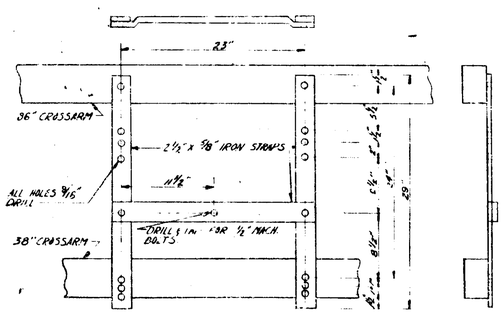


PLAN AT FIFTH ARM

NOTES:

1. SEE SHEET 10 OF P.L.C. DETAILS FOR GROUND ROD AND CONDUIT INSTALLATION.
2. INSTALL STEPS ON POLE FROM 8'-0" ABOVE GROUND TO 48" BELOW POTHEAD ARM.
3. INSTALL BRASS TAG ON EACH P.H. CAP & P.H. BODY. TAGS TO BE STAMPED WITH THE FOLLOWING INFORMATION: STREET LIGHTING CIRCUIT NUMBER & "PLUS" TO INDICATE POSITIVE LEAD.

DETAIL ITEMS	
1	LIGHTNING ARRESTER
2	#6 OVERHEAD TRAINING WIRE
3	1/c POTHEAD
4	1/c #8 L.C. CABLE
5	3" SPLIT FIBRE DUCT ABOVE G.I.P. TO 8" BELOW CROSSARM
6	#2 GROUND WIRE UNDER WOOD MOULDING
7	LEAD WEATHERCAP & GALV. BUSHING
8	FOUR SCREW CONNECTOR
9	2½" G.I.P. RISER
10	2½" x 4" REDUCER ADAPTER
11	4" FIBRE CONDUIT
12	3" G.I.P. RISER
13	4" SPLIT FIBRE DUCT
14	3" x 4" REDUCER ADAPTER
15	8/c POTHEAD
16	8/c POTHEAD MOUNTING BRACKET-(SEE DETAIL "A")
17	8/c L.C. CABLE



BRACKET FOR 8/c POLE TYPE POTHEAD
DETAIL "A"

REVISIONS	

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWN BY R.M.
CHECKED BY
APPROVED BY
DATE 12-31-64
DRAWING NO.
FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY
DATE
APPROVED 10-21-64
APPROVED 10/21/64
FILE NO. 61009
SHEET NO. 26

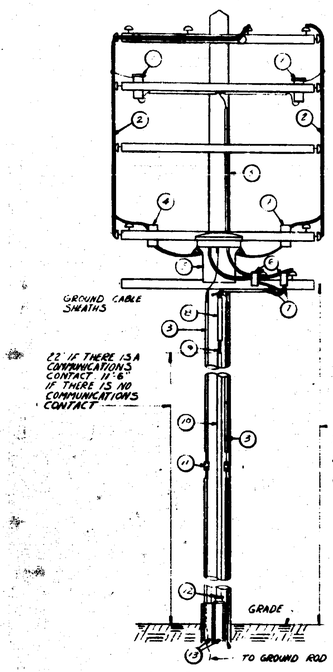
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
CABLE POLES

ISSUE NO. | DATE
COUNTY JOB | SHEET NO.
STATE PROJECT

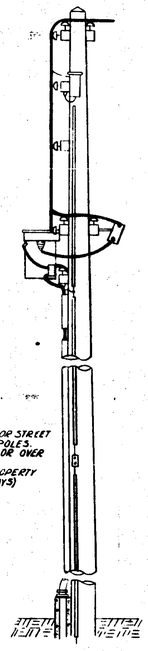
82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	167

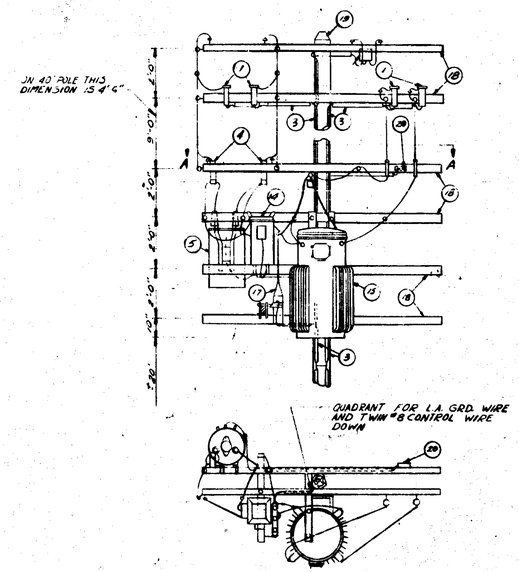


ELEVATION VIEW

TYPICAL DISTRIBUTION TRANSFORMER POLE



SIDE VIEW



SECTION A-A

TYPICAL POLE MOUNTED C.C. REGULATOR ON STREET LIGHTING CIRCUIT

DETAIL ITEMS

1	LIGHTNING ARRESTER
2	OVERHEAD TRAINING WIRE (#8-#2-#4/0-#4/0 AS SPECIFIED)
3	#2 GROUND WIRE UNDER WOOD MOULDING
4	PRIMARY FUSE CUTOUT
5	1φ DISTRIBUTION TRANSFORMER
6	KEARNEY TYPE "A" SECONDARY FUSE CUTOUT
7	1/0 L.C. SECONDARY CABLE
8	3" SPLIT FIBRE DUCT ABOVE S.I.P. TO 8" BELOW CROSSARM
9	LEAD WEATHER CAP & 1 1/2" GALV. BUSHING
10	G.I.P. RISER (SIZE TO CABLE OR AS SPECIFIED)
11	FOUR SCREW CONNECTOR
12	1 1/2" X 4" REDUCER ADAPTER
13	4" FIBRE CONDUIT
14	A.C.D.C. RELAY
15	30 KW C.C. REGULATOR
16	6 3/4 oz L COIL
17	CAPACITOR
18	120" X-ARM
19	45' HEAVY CL. 2 POLE UNLESS 40' POLE IS SPECIFIED; SELF-SUPPORT IN GRAVEL.
20	TEST RECEPTACLE FOR KEYLESS SCREW SHELL LAMP RECEPTACLE, IS A PLUG FUSE

(5) & (13) VOLTAGE RATING OF EQUIPMENT AND SIZE OF TRANSFORMERS SHALL BE AS SHOWN ON THE PLAN DRAWINGS.

NOTES

SEE SHEET 10 OF P.L.C. DETAILS FOR GROUND ROD & CONDUIT INSTALLATION.

REVISIONS

DRAWN BY C.J.B.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221	
CHECKED BY		
DATE 12-31-64	DRAWING NO.	FILE NO. CEA CL

CITY OF DETROIT

PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 12-31-64	FILE NO. 61009
DATE	APPROVED 12/31/64	SHEET NO. 27

MICHIGAN STATE HIGHWAY DEPARTMENT

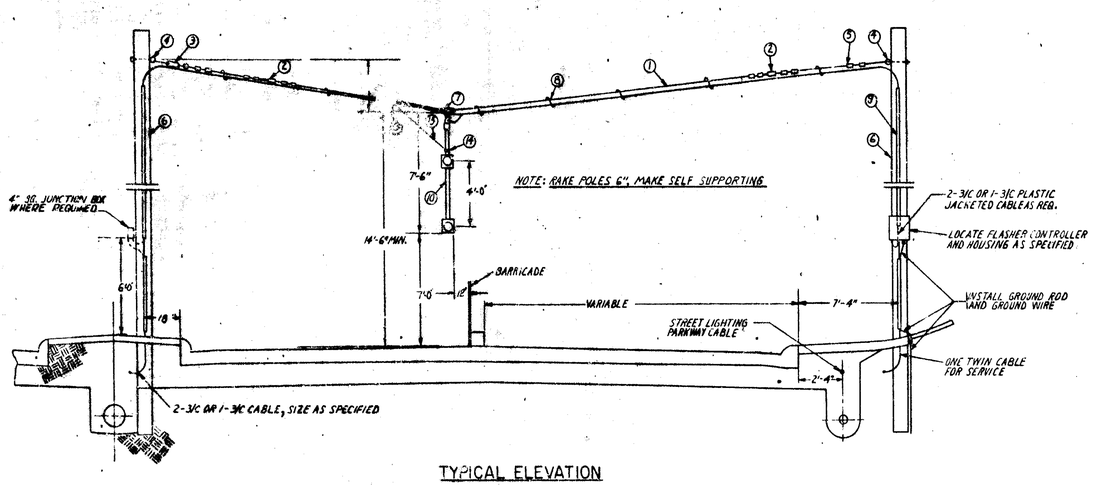
P.L.C. DETAILS

OVERHEAD TRANSFORMER INSTALLATION

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1-(8)-98	[illegible]

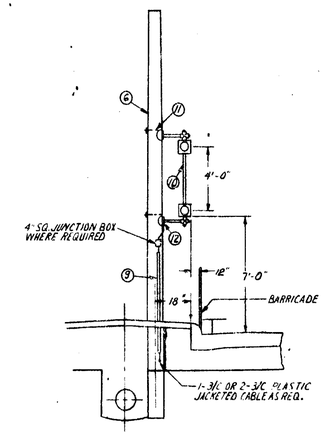


TYPICAL ELEVATION

SUSPENSION TYPE MOUNTING OF DOUBLE FLASHER SIGNAL

DETAIL 'A'

N.T.S.



ELEVATION

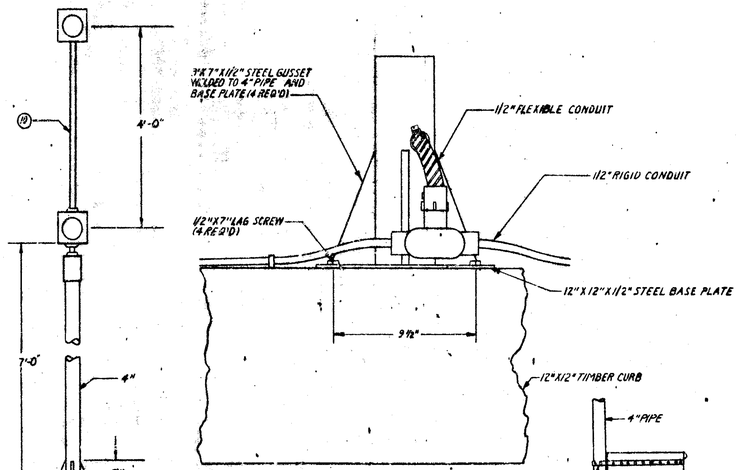
BRACKET TYPE MOUNTING OF DOUBLE FLASHER SIGNAL

DETAIL 'B'

N.T.S.

DETAIL NOTES

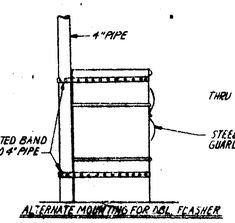
NO.	DESCRIPTION
1	1/4" GUY WIRE
2	STRAIN INSULATOR
3	5/8" X 18" TURNBUCKLE
4	5/16" EYE BOLT
5	WIRE CLIPS
6	25' CLASS 3, OR BETTER, WOOD POLE
7	SPAN WIRE HANGER
8	PREFORMED STEEL LASHINGS
9	WOOD MOULDING
10	DOUBLE FLASHER ASSEMBLY
11	1/2" X 16" THRU-BOLT AT TOP OF POLE PLATE AND 1/2" X 5" LAG SCREWS AT SIDE
12	POLE PLATE FOR 1-1/2" PIPE WITH BUSHED CABLE ENTRANCE
13	ONE BOLT GUY CLAMP
14	1-1/2" PIPE CLAMP - 1/4" X 1" MATERIAL
15	60" X 3/16" X 3/4" GALVANIZED IRON BAR



ELEVATION

PEDESTAL TYPE MOUNTING OF DOUBLE FLASHER SIGNAL

DETAIL 'C'



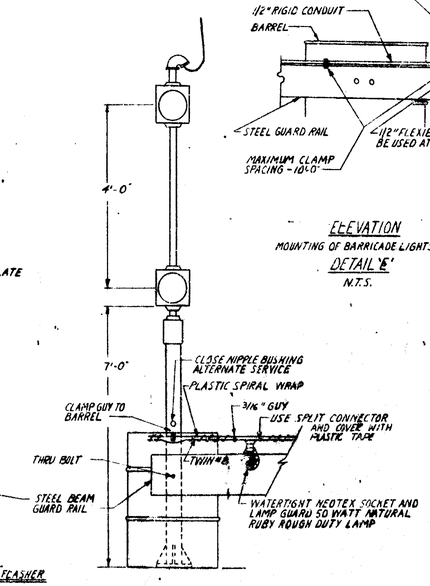
ALTERNATE MOUNTING FOR DBL. FLASHER

ELEVATION

MOUNTING OF BARRICADE LIGHTS & FEED

DETAIL 'E'

N.T.S.

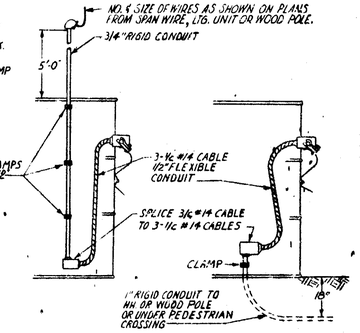


ELEVATION

PEDESTAL TYPE MOUNTING IN BARREL OF DOUBLE FLASHER SIGNAL

DETAIL 'D'

N.T.S.



FOR OH FEED

FOR UG FEED

DRAWN BY	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 13580 WYOMING DETROIT, MICH. 48221	
CHECKED BY		
APPROVED BY		
DATE 12-31-64	DRAWING NO.	FILE NO. CEA'C L

CITY OF DETROIT

PUBLIC LIGHTING COMMISSION

DRAWN BY ____ APPROVED ____ FILE NO. 61009

DATE ____ APPROVED ____ SHEET NO. 29

MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAIL

DOUBLE FLASHER SIGNAL

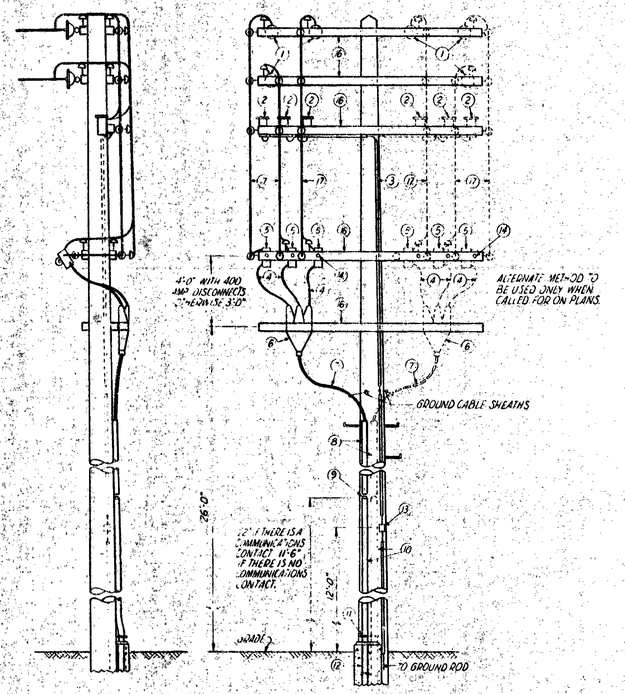
(TYPICAL)

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

REVISIONS

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	L75-1(98)59	70

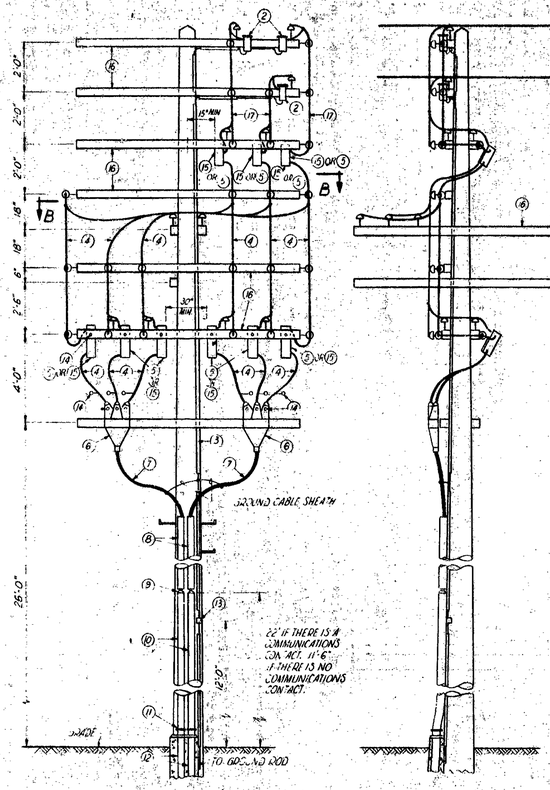
82252 L, C 63, 63174 A, C 64



SIDE VIEW

ELEVATION VIEW

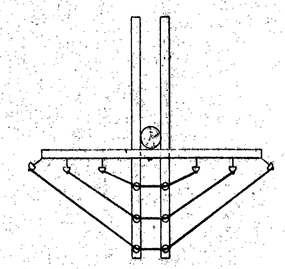
TYPICAL DISTRIBUTION CABLE POLE
NOT TO SCALE



ELEVATION VIEW

SIDE VIEW

TYPICAL LOOP DISTRIBUTION CABLE POLE
NOT TO SCALE



SECTION B-B
NOT TO SCALE

	DETAIL ITEMS
1	SUSPENSION INSULATOR
2	LIGHTNING ARRESTER
3	#2 GROUND WIRE UNDER WOOD MOULDING
4	FLEXIBLE TRAINING WIRE - 4/0 AWG - EXCEPT AS OTHERWISE NOTED.
* 5	PRIMARY SOLID BLADE DISCONNECT
6	3/c POTHEAD
7	L.C. CABLE
8	4" SPLIT FIBRE DUCT ABOVE G.I.P.
9	LEAD WEATHERCAP & GALVANIZED BUSHING
10	3" G.I.P. RISER
11	3"x4" REDUCER ADAPTER
12	4" FIBRE CONDUIT
13	FOUR SCREW CONNECTOR
14	PHASING TAGS
* 15	FUSED DISCONNECTS
16	120" 8PIN STANDARD CROSSARM
17	FLEXIBLE TRAINING WIRE FOR O.H. - SIZE AS INDICATED ON PLANS

* SEE WIRING DIAGRAM ON PLANS FOR FUSE SIZE & ORIENTATION OF FUSED OR SOLID BLADE DISCONNECTS

NOTE:
1. SEE SHEET 10 OF PLC DETAILS FOR GROUND ROD & CONDUIT INSTALLATION.
2. KEEP ALL ELECTRICAL EQUIPMENT OUTSIDE OF THE 30" CLIMBING ZONE.
3. INSTALL STEPS ON POLE FROM 8'-0" ABOVE GROUND TO 48" BELOW MT-LEAD ARM.

REVISIONS

DRAWN BY R.M.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221
CHECKED BY	
APPROVED BY	
DATE 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 10-21-64	FILE NO. 61009
DATE	APPROVED 10/21/64	SHEET NO. 30

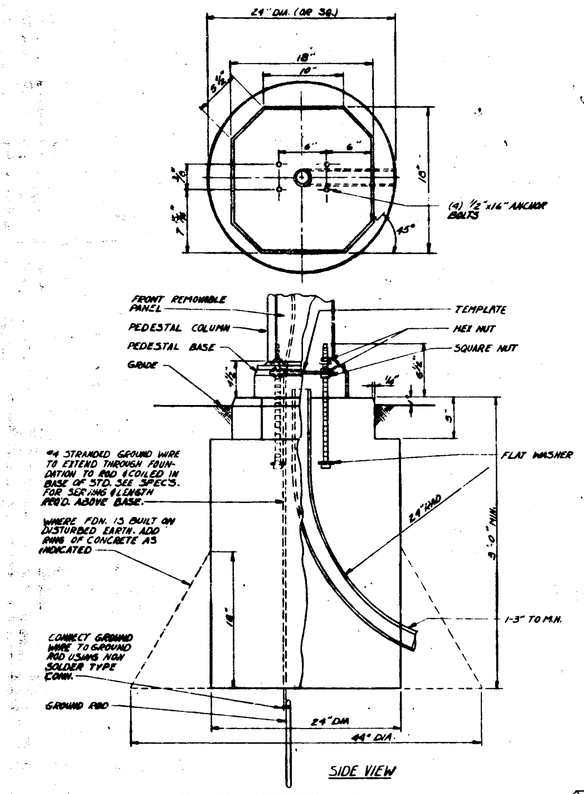
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
5000 V. DISTRIBUTION CABLE POLE

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

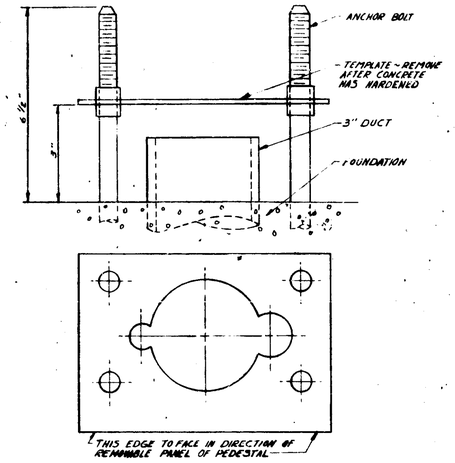
82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	1.75-1.(98)-59	170

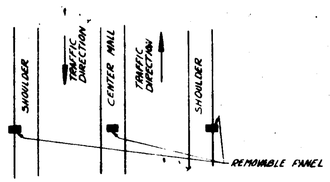


CALL BOX FOUNDATION DETAIL

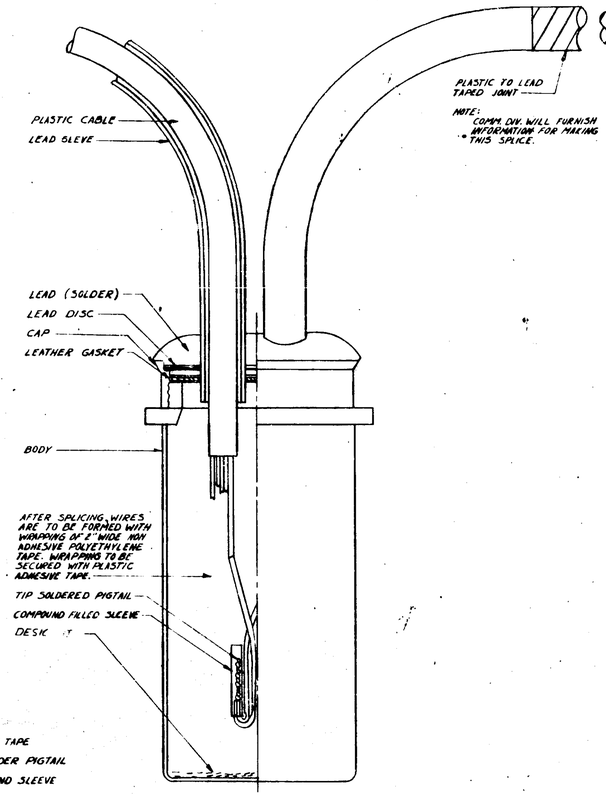
SCALE: 1/8" = 1'0"



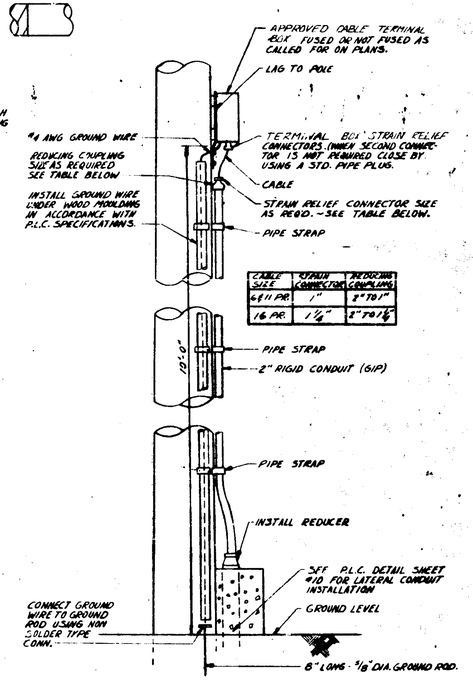
TEMPLATE DETAILS



PEDESTAL LOCATION DETAIL

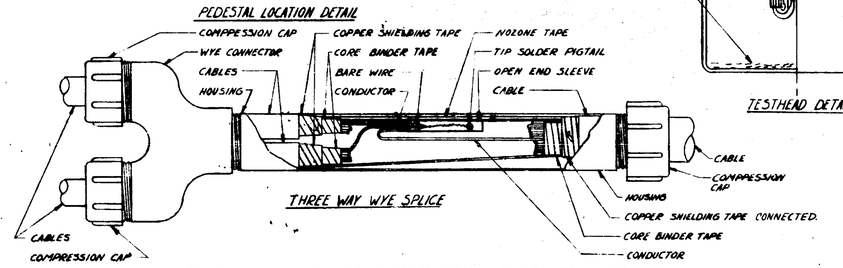


TESTHEAD DETAIL

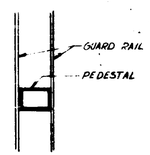


CABLE SIZE	STRAIN CONNECTOR	REDUCING COUPLING
6 & 11 PR.	1"	2" TO 1"
16 PR.	1 1/4"	2" TO 1 1/4"

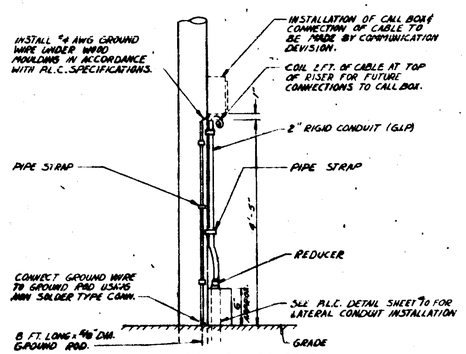
CABLE POLE.



THREE WAY WYE SPLICE

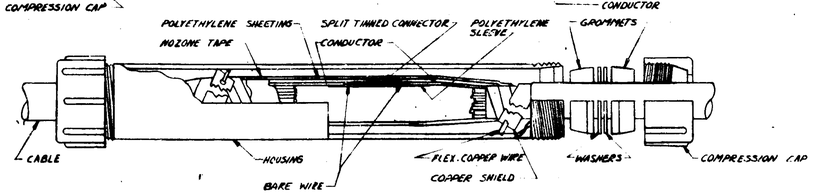


CENTER MALL PEDESTAL



COMMUNICATION CALL BOX POLE

N.T.S.



STRAIGHT SPLICE

PLASTIC SPLICE DETAILS

REVISIONS	

PLAN APPROVAL BY THE BOARD OF WAYNE COUNTY ROAD COMMISSIONERS

CHECKED BY ____ DATE ____
APPROVED ____

ENGINEER OF DESIGN, STRUCTURES AND EXPRESSWAYS

DRAWN BY C.I.B.
CHECKED BY
DESIGNED BY
DATE 12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWING NO. | FILE NO. CEACL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY ____ APPROVED T.M.M. 12/26/64 FILE NO. 61009
DATE ____ APPROVED 10/21/69 SHEET NO. 43

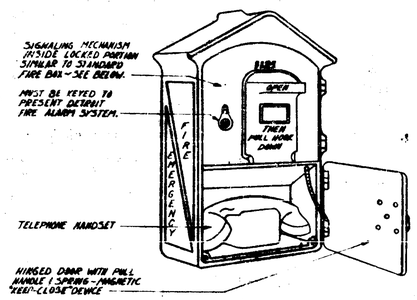
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
COMMUNICATIONS DIVISION
SPECIAL DETAILS

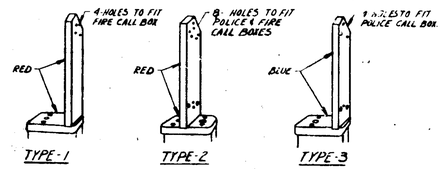
ISSUE NO. | DATE
COUNTY JOB | SHEET NO.
STATE PROJECT

82252 L, C63; 63174 A, C64

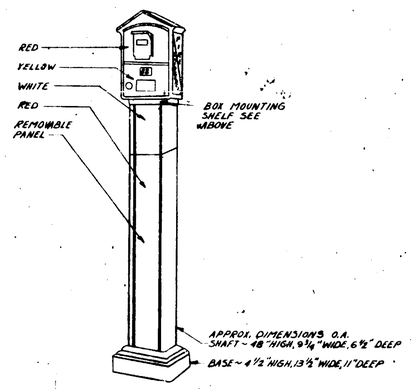
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1(98)59	171



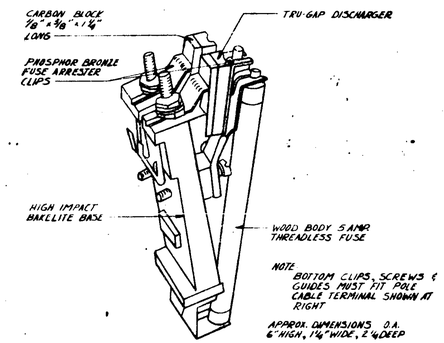
FIRE ALARM BOX WITH TELEPHONE - TYPE B
DETROIT FIRE DEPT. SYSTEM



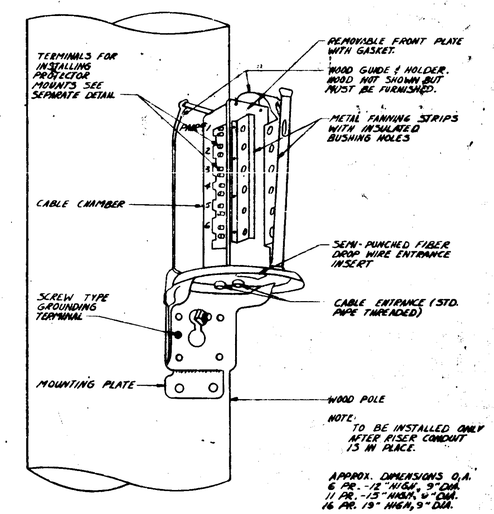
APPROX. DIMENSIONS O.A. 16 3/4" HIGH, 9 3/4" WIDE, & 6 1/2" DEEP



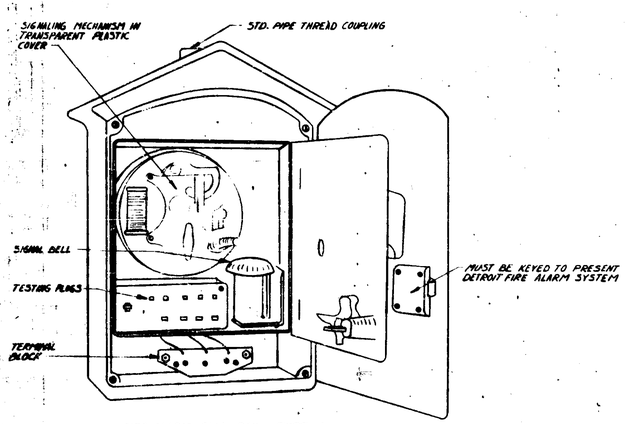
FIRE & POLICE
CALL BOX PEDESTAL



DUAL-GAP PROTECTOR MOUNT

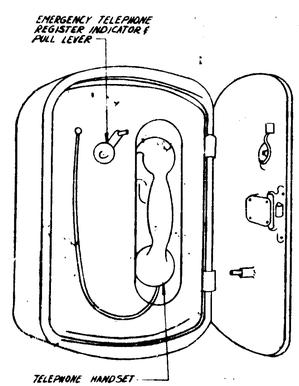


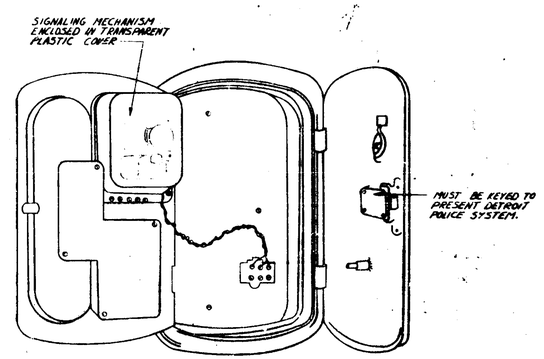
POLE CABLE TERMINAL



FIRE ALARM CALL BOX - TYPE A
DETROIT FIRE DEPT. SYSTEM

APPROX. DIMENSIONS O.A. 17" HIGH, 11" WIDE, 5" DEEP





APPROX. DIMENSIONS O.A. 16" HIGH, 11" WIDE, 6" DEEP.

POLICE CALL BOX
DETROIT POLICE DEPT. SYSTEM

REVISIONS	

PLAN APPROVAL BY THE BOARD OF WAYNE COUNTY ROAD COMMISSIONERS
CHECKED BY ____ DATE ____
APPROVED
ENGINEER OF DESIGN, STRUCTURES AND EXPRESSWAYS

DRAWN BY C.T.B.
CHECKED BY
APPROVED BY
DATE 12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
15580 WYOMING DETROIT, MICH. 48221

DRAWING NO. ____ FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY ____ APPROVED T.M.Jr. 12/21/64 FILE NO. 61009
DATE ____ APPROVED 12/21/64 SHEET NO. 43-A

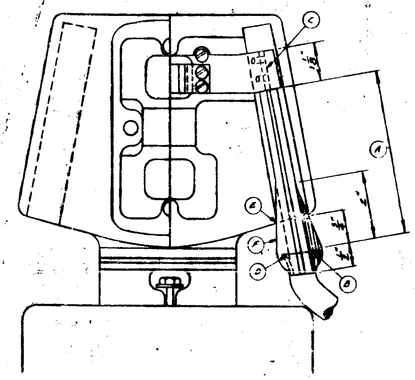
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
COMMUNICATIONS DIVISION
SPECIAL DETAILS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C63, 63174 A, C64

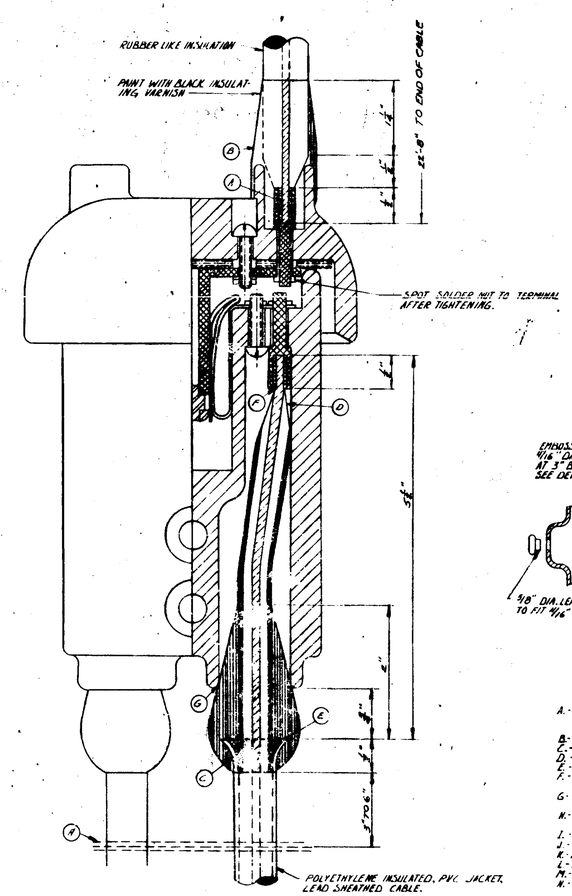
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	172



CABLE CONNECTION TO SERIES CUTOUT ON COMBINATION COIL

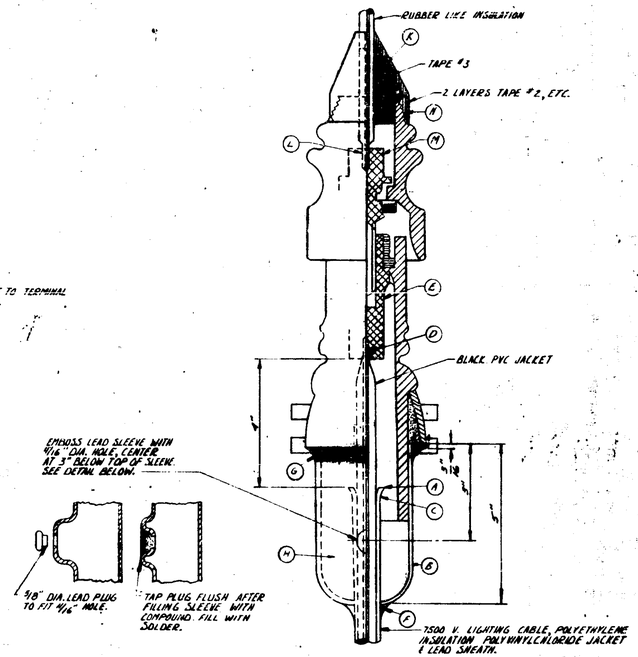
A - THIS DISTANCE VARIES DEPENDING ON MANUFACTURER OF COIL. 3 3/4" TO 5", NOT INCLUDING BARED CONDUCTER.

B - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
C - REMOVE INSULATION AT END FOR CONNECTION.
D - BELL LEAD SHEATH EVENLY AND FILL SHEATH CAVITY WITH APPROVED ADHESIVE.
E - APPLY TAPE #1 OVER BELL TO FORM A TIGHT FIT INTO PORCELAIN.
F - COVER TAPE #1 WITH 2 LAYERS OF TAPE #2 TO APPROX. 3/4" FROM UPPER END OF TAPE #1.



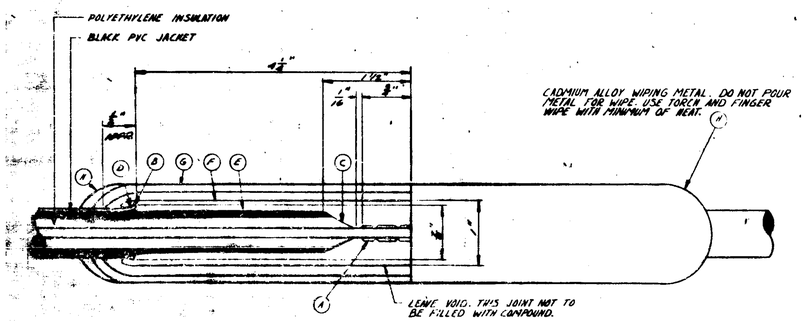
CONNECTION FOR SERIES CUTOUT

A. SWEAT TERMINAL AND PENCIL RUBBER INSULATION TO FIT SNUGLY IN PORCELAIN OPENING SO THAT AS NOT IS DRAWN UP TIGHT THE OPENING IS COMPLETELY AND TIGHTLY FILLED.
B. BUILD UP WITH TAPE #3 AS [illegible] SHOWN AND COVER WITH 2 LAYERS 3/4" HALF LAP. TAPE #2 [illegible] AS NOTED.
C. USE TUBE CUTTER TO SC[illegible] AD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT [illegible] OFF BY BENDING.
D. CUT INSULATION AND PENC[illegible] SMOOTHLY FOR CONNECTION.
E. BELL LEAD SHEATH AND [illegible] SHEATH CAVITY WITH APPROVED ADHESIVE.
F. SWEAT CONDUCTOR INTO [illegible] RMINAL.
G. APPLY TAPE #1 OVER E[illegible] SUFFICIENTLY TO FORM A TIGHT FIT BETWEEN CABLE AND [illegible] CEIVER. AT LOWER TAPE #1 WITH 2 LAYERS OF TAPE #2 [illegible] ABOUT 3/4" FROM END OF TAPE #1.
H. #10 SERVICE WIRE [illegible] BRAID, [illegible] BETWEEN CABLES AND SWEATED TO LEAD SHEATH FOR BOND TIE TO GROUND WIRE



CONNECTIONS FOR 1/c 7500 V. POTHEAD

A. - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING. 4" OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
B. - FORM BOTTOM OF EMBOSSED LEAD SLEEVE AND SLIP OVER CABLE HOLE IN FRONT.
C. - BELL LEAD SHEATH.
D. - SWEAT CONDUCTOR INTO TERMINAL AND PENCIL INSULATION SMOOTHLY FOR 3/4"
E. - MOUNT TERMINAL FIRMLY INTO PORCELAIN HOUSING.
F. - PUSH SLEEVE INTO CAST IRON COLLAR AND FINGER WIPE TO CABLE SHEATH WITH WITH LOW TEMPERATURE CADMIUM ALLOY USE MINIMUM OF HEAT. DO NOT POUR METAL.
G - INVERT & FILL JOINT BETWEEN IRON COLLAR AND LEAD SLEEVE WITH APPROVED EPOXY RESIN
H. - LAY POTHEAD HORIZONTAL & FILL WITH APPROVED COMPOUND. DO NOT HEAT COMPOUND MORE THAN NECESSARY FOR POURING.
I. - INSERT 5/8" DIA. LEAD PLUG INTO SLEEVE HOLE. TAP FLUSH, AND FILL IN WITH SOLDER.
J. - TRIM THE CABLE AND MOUNT THE POTHEAD ON CROSSARM.
K. - SLIP THE CONE SHAPED RUBBER BUSHING ON THE RUBBER INSULATED CABLE RISER.
L. - SWEAT CONDUCTOR INTO TERMINAL [illegible] AND PENCIL INSULATION AS SHOWN.
M. - MOUNT THE TERMINAL FIRMLY INTO THE POTHEAD CAP.
N. - BUILD UP WITH TAPE #3 AND CARRY 2 LAYERS OVER THE END OF THE CAP TO POINT 'N' AS SHOWN. COVER WITH 2 LAYERS TAPE #2 HALF LAP. PAINT WITH APPROVED BLACK INSULATING VARNISH.



#8 LIGHTING CABLE JOINT

A - 1-1/2" "b" TINNED COPPER SLEEVE, 2 CIRCUMFERENTAL CRIMPS ON EACH END

B - SCORE LEAD SHEATH WITH TUBE CUTTER AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
C - CUT INSULATION AND PENCIL SMOOTHLY AS SHOWN.
D - BELL LEAD SHEATH TO DIAMETER SHOWN AND FILL SHEATH CAVITY WITH APPROVED ADHESIVE.

E - APPLY TAPE #1 OVER PVC JACKET AND BELLED SHEATH TO A DIA OF 1" OVERLAP BELLED SHEATH WITH TAPE APPROX. 1/4".
F - 2 LAYERS OF TAPE #2 APPLIED HALF LAP.
G - LEAD SLEEVE 10" LONG, 1/8 WALL, 1 1/8" INSIDE DIAMETER
H - SPECIAL LOW TEMPERATURE CADMIUM ALLOY WIPING METAL.

MATERIAL & SPECIAL PRECAUTIONS

1. TAPE #1 - CLEAR POLYETHYLENE TAPE 0.02" THICK x 3/4" WIDE
   TAPE #2 - BLACK PVC PLASTIC ELECTRICAL TAPE.
   TAPE #3 - APPROVED ASTM RUBBER TAPE
   ADHESIVE - APPROVED ADHESIVE
   FILLING COMPOUND - APPROVED COMPOUND.
   WIPING METAL - APPROVED LOW TEMPERATURE CADMIUM ALLOY WIPING METAL
2. USE SMALL HAND TORCH FOR WIPING JOINTS, AT MINIMUM TEMPERATURE.
3. WHEN IT IS NECESSARY TO SPLICE POLYETHYLENE INSULATED CABLE TO RUBBER CABLE, USE ABOVE MATERIALS.
4. APPLY ADHESIVE INSIDE BELLED SHEATH CAVITY ONLY. APPLY TAPE AFTER ADHESIVE HAS BECOME TACKY

REVISIONS	

DRAWN BY	C.J.B.
CHECKED BY	J.S.
APPROVED BY	A.V.
DATE	12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT, MICH. 48221

DRAWING NO. — FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY ___ APPROVED [illegible] 12-31-64 FILE NO. 61009
DATE ___ APPROVED [illegible] 12/31/64 SHEET NO. 47

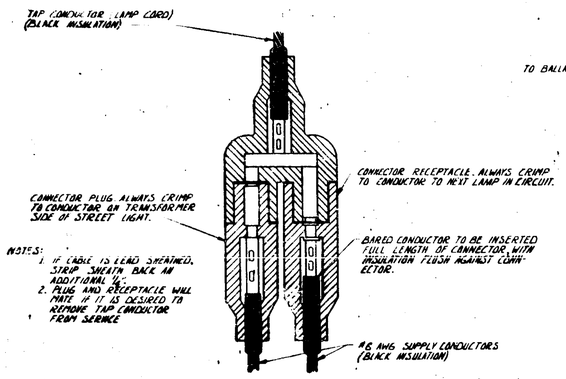
MICHIGAN STATE HIGHWAY DEPARTMENT
P.L.C. DETAILS
POLYETHYLENE INSULATED, POLYVINYLCHLORIDE JACKETED, LEAD SHEATHED CABLE CONNECTION SPECIFICATIONS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C63; 63174A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I.75-1 (98) 59	173

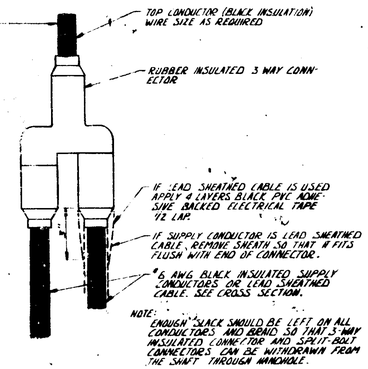
KGE 17-6155 5-65



NOTES:
1. IF CABLE IS LEAD SHEATHED, STRIP SHEATH BACK AN ADDITIONAL ½".
2. PLUG AND RECEPTACLE WILL MATE IF IT IS DESIRED TO REMOVE TAP CONDUCTOR FROM SERVICE

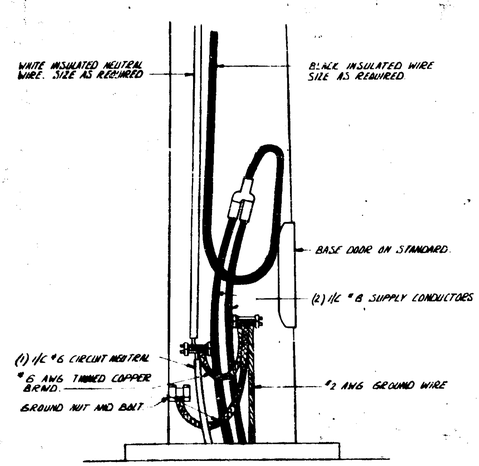
3-WAY CONNECTOR

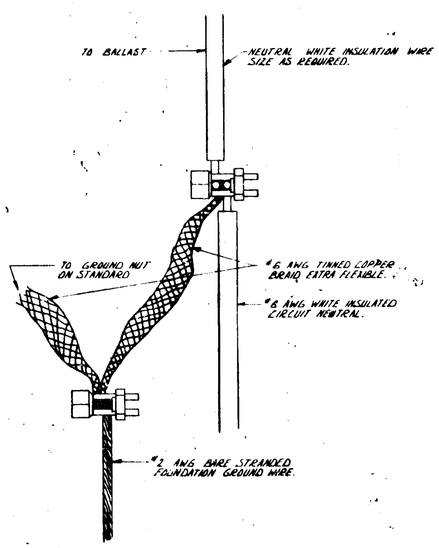
SEE TABLE BELOW



NOTE:
ENOUGH SLACK SHOULD BE LEFT ON ALL CONDUCTORS AND BARED SO THAT 3-WAY INSULATED CONNECTOR AND SPLIT-BOLT CONNECTORS CAN BE WITHDRAWN FROM THE SHAFT THROUGH HANDHOLE.

	SUPPLY CONDUCTORS	TAP CONDUCTOR	
POLYVINYL-CLORIDE INSULATION ONLY	#6 AWG 0.34 IN. O.D.	#12 STRANDED 0.19 IN. O.D.	
	#6 AWG 0.34 IN. O.D.	#10 STRANDED 0.21 IN. O.D.	
	#6 AWG 0.34 IN. O.D.	#8 STRANDED 0.25 IN. O.D.	
POLYVINYL-CLORIDE INSULATION & LEAD SHEATHED.	6 AWG 0.484 IN. O.D.	8 STRANDED 0.26 IN. O.D.	





TYPICAL MULTIPLE STREET LIGHTING CONNECTION UNDERGROUND CABLE CONSTRUCTION

REVISIONS	

DRAWN BY R.M.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221	
ENGINEER BY		
APPROVED BY		
DATE 12-31-64	DRAWING NO.	FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 10-21-64	FILE NO 61009
DATE	APPROVED 10/21/64	SHEET NO. 49-B

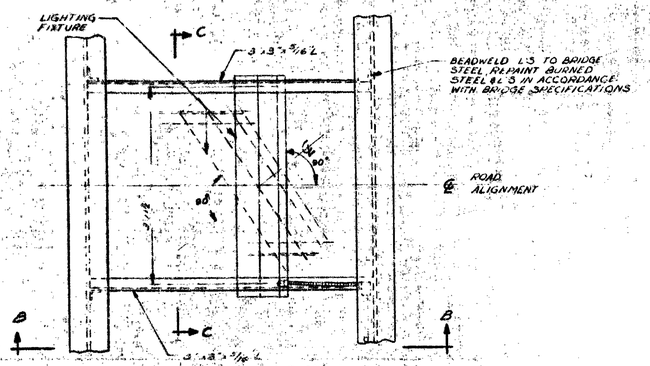
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
TYPICAL MULTIPLE CIRCUIT LIGHTING CONNETION IN BASE OF STANDARD

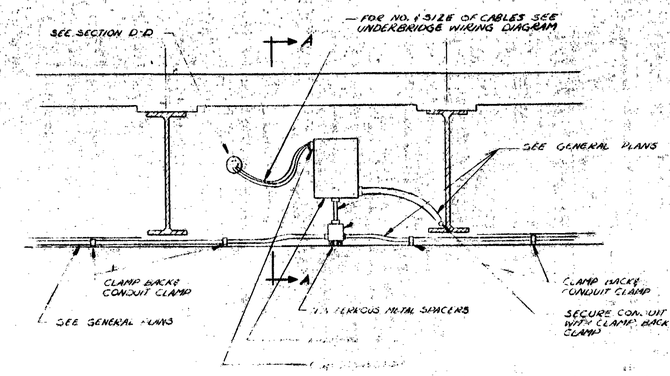
ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

82252 L, C 63, 63174 A, C 64

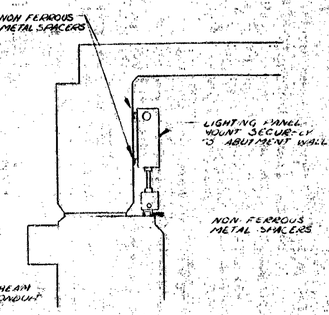
STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	174



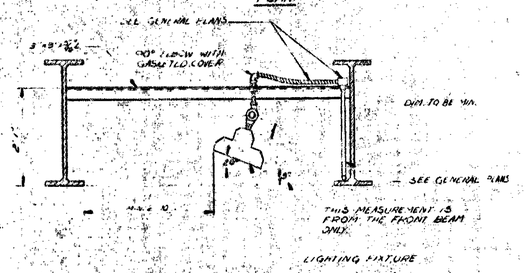
PLAN



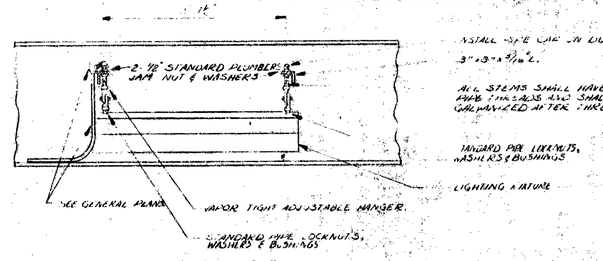
MOUNTING OF UNDERBRIDGE LIGHTING PANEL



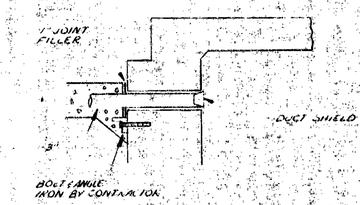
SECTION A-A



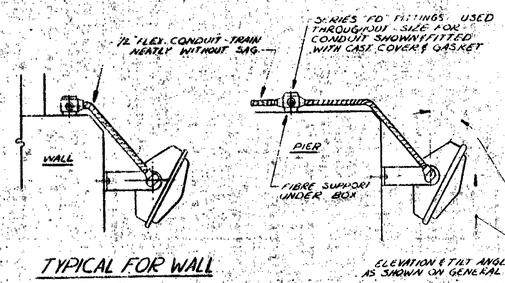
SECTION B-B



SECTION C-C

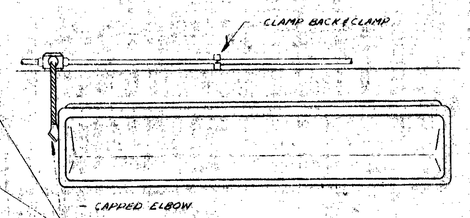


SECTION D-D



TYPICAL FOR WALL

TYPICAL FOR PIER



DETAIL OF MOUNTING BRACKET

FIXTURE MOUNTING DETAILS - WALL & PIER

NOT TO SCALE

DRAWN BY	C. A.
CHECKED BY	K. K.
SUBMITTED BY	W. J. 1/12
DATE	12-31-64

PLAN PREPARED BY
CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16590 WYOMING DETROIT, MICH. 48221

DRAWING NO. — FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY — APPROVED 12-31-64 — FILE NO. 61009
DATE — APPROVED 10/21/64 — SHEET NO. 54

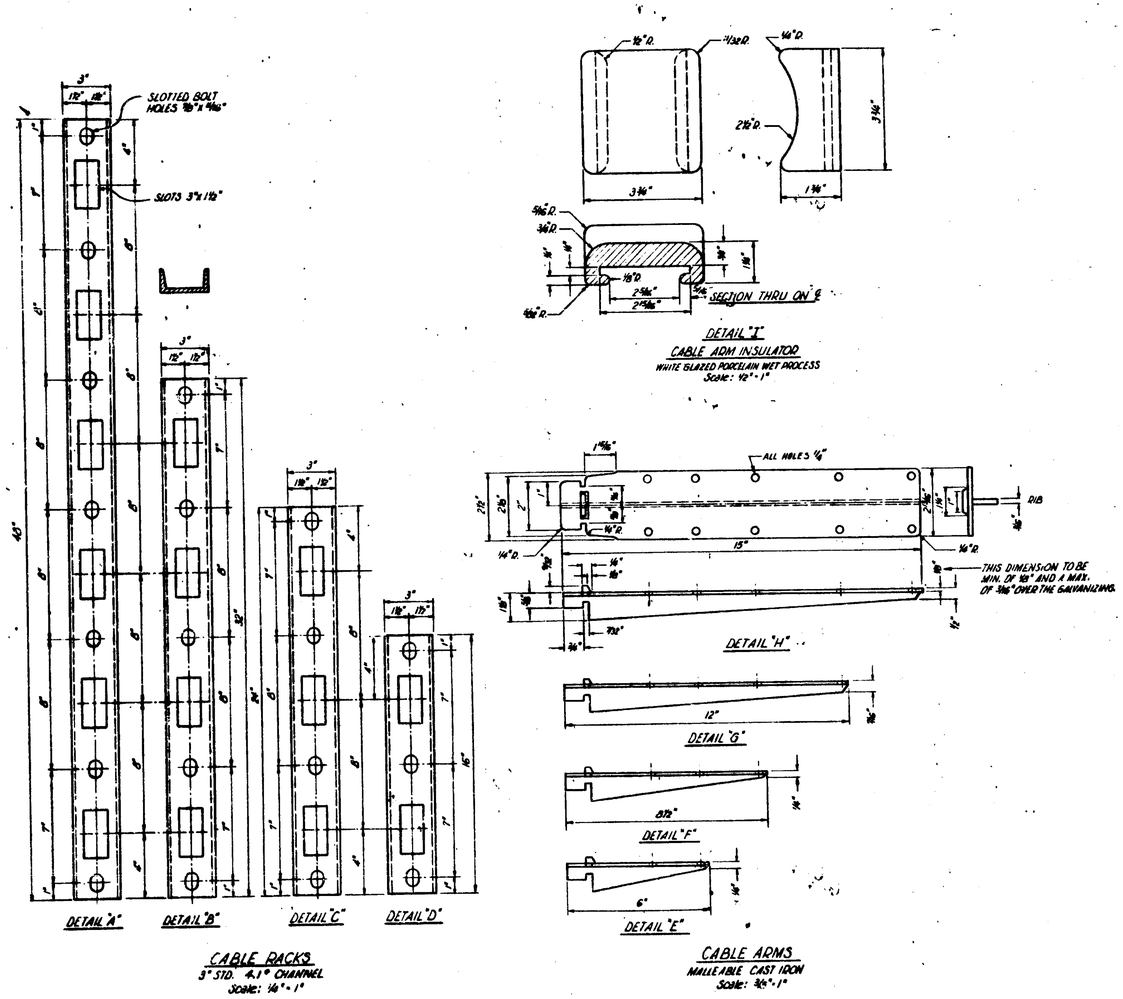
MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
UNDERBRIDGE LIGHTING

ISSUE NO. | DATE
COUNTY JOB | SHEET NO.
STATE PROJECT

REVISIONS

82252 L, C63, 63174A, C64 | STATE PROJECT 82252L | MICHIGAN PROJECT I 75-1 (99) 59 | SHEET NO. 1/54



CABLE RACKS
3" STD. 4.1# CHANNEL
Scale: 1/4" = 1"

DETAIL "I"
CABLE ARM INSULATOR
WHITE GLAZED PORCELAIN WET PROCESS
Scale: 1/2" = 1"

CABLE ARMS
MALLEABLE CAST IRON
Scale: 3/4" = 1"

CABLE RACKS, CABLE ARMS, AND CABLE ARM INSULATORS
Scale: AS SHOWN

NOTE:
CABLE RACKS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-123.
CABLE ARMS SHALL BE GALV. AFTER FAB. IN ACCORDANCE WITH ASTM A-153 53.
ARMS MUST FIT ON INSIDE & OUTSIDE OF RACKS & MUST ALLOW INSULATOR TO FIT LOOSELY.
USE 1/2" GALV. SUPPORTING BOLTS AND EXPANSION ANCHORS.

DRAWN BY R.M.	PLAN PREPARED BY CONSULTING ENGINEERING ASSOCIATES INC. ENGINEERING CONSULTANTS 16580 WYOMING DETROIT, MICH. 48221
DATE 12-31-64	DRAWING NO. / FILE NO. CEA CL

CITY OF DETROIT
PUBLIC LIGHTING COMMISSION

DRAWN BY	APPROVED 10-21-64	FILE NO. 61009
DATE	APPROVED 10/21/64	SHEET NO. 56

MICHIGAN STATE HIGHWAY DEPARTMENT

P.L.C. DETAILS
MISCELLANEOUS DETAILS
CABLE RACKS & ARMS

ISSUE NO.	DATE
COUNTY JOB	SHEET NO.
STATE PROJECT	

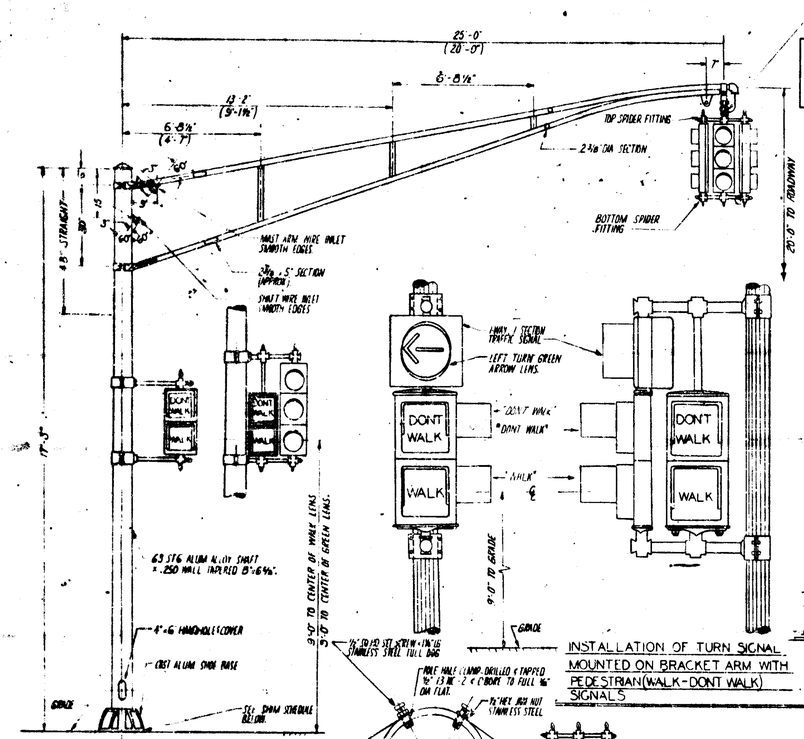
REVISIONS

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252	175-[illegible]	[illegible]

A.P.S. DIV. NO.	STATE	PROJ. NO.	FEDERAL PROJ.	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

A.P.S. DIV. NO.	STATE	PROJ. NO.	FEDERAL PROJ.	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

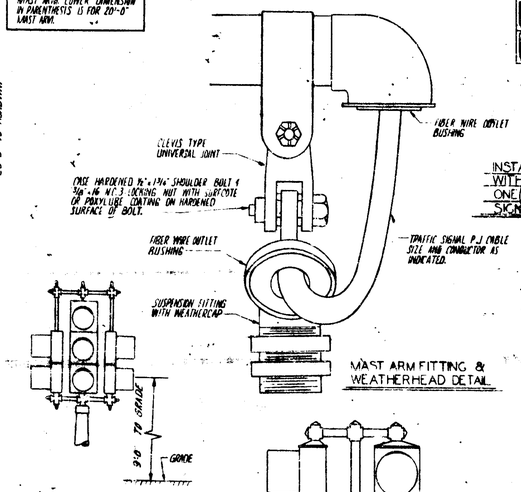


ALUMINUM MAST ARM STANDARD & MAST ARM WITH BRACKET ARM SIGNAL ADDED

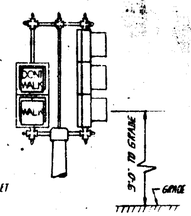
NOTE

UPPER DIMENTION IS FOR 25'-0" MAST ARM. LOWER DIMENSION IN PARENTHESIS IS FOR 20'-0" MAST ARM.

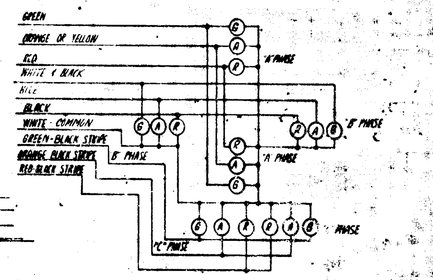
INSTALLATION OF TURN SIGNAL MOUNTED ON BRACKET ARM WITH PEDESTRIAN (WALK-DONT WALK) SIGNALS



MAST ARM FITTING & WEATHERHEAD DETAIL

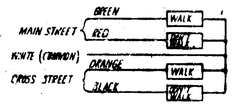


INSTALLATION OF A 2-WAY T.S. WITH ONE 3-SECTION HEAD & ONE WALK-DONT WALK PED. SIGNAL ON T.S. PEDESTAL

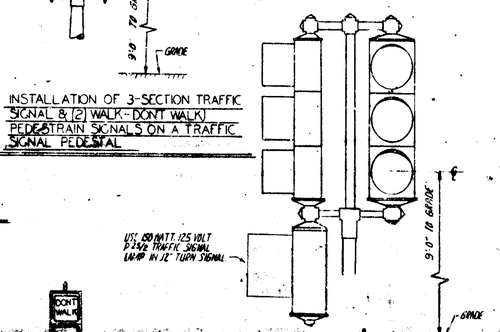


COLOR CODE FOR WIRING, CONNECTING SIGNAL LAMPS

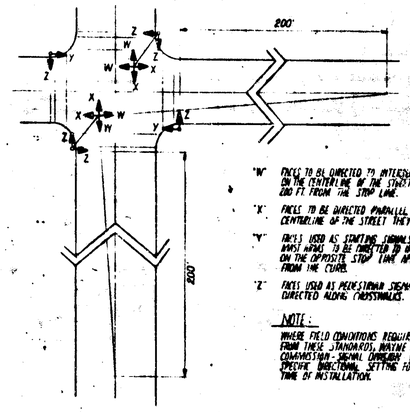
"10 CONDUCTOR SHOWN"



COLOR CODE FOR WIRING AND CONNECTING S/C. CABLE TO (WALK-DONT WALK) SIGNAL LAMPS.



12" TURN SIGNAL MOUNTED WITH VEHICLE SIGNALS



"W" FACES TO BE DIRECTED TO INTERSECT A POINT ON THE CENTERLINE OF THE STREET THEY CONTROL 200 FT. FROM THE STOP LINE.

"X" FACES TO BE DIRECTED PARALLEL TO THE CENTERLINE OF THE STREET THEY CONTROL.

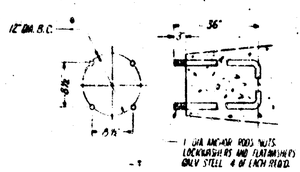
"Y" FACES USED AS STARTING FORMS WITH ARM SIDE WHICH APPEARS TO BE DIRECTED TO INTERSECT A POINT ON THE OPPOSITE STOP LINE APPROXIMATELY 6 FT. FROM THE CURB.

"Z" FACES USED AS PEDESTRIAN SIGNALS TO BE DIRECTED ALONG CROSSWALKS.

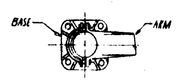
NOTE:

WHERE FIELD CONDITIONS REQUIRE DEVIATION FROM THESE STANDARDS, WAYNE COUNTY ROAD COMMISSION SIGNAL ENGINEER WILL FURNISH SPECIFIC DIRECTIONAL SETTING FOR SIGNALS AT TIME OF INSTALLATION.

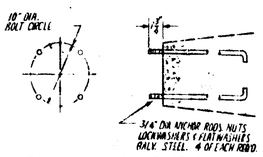
STANDARD FOR DIRECTIONAL SETTINGS OF TRAFFIC SIGNALS



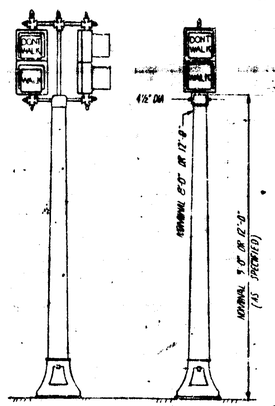
BOLT LAYOUT FOR MAST ARM STANDARD FOUNDATION



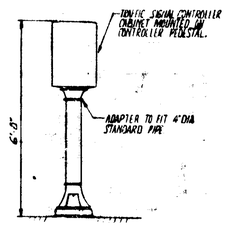
RELATION OF ARM TO BASE



BOLT LAYOUT FOR BASE PEDESTAL FOUNDATION



BASE PEDESTAL



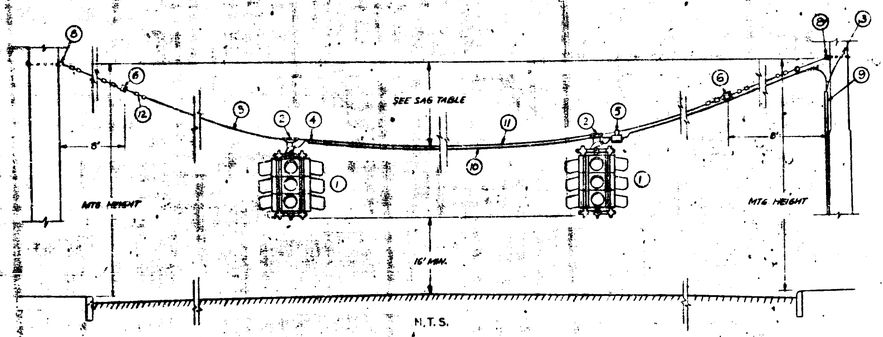
CABINET CONTROLLER

I-75 CHRYSLER FREEWAY
TRAFFIC SIGNAL DETAILS

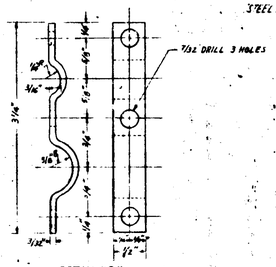
WAYNE COUNTY ROAD COMMISSION

DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE 2-9-65	APPROVED	SHEET NO.	CEA C1		12-31-6

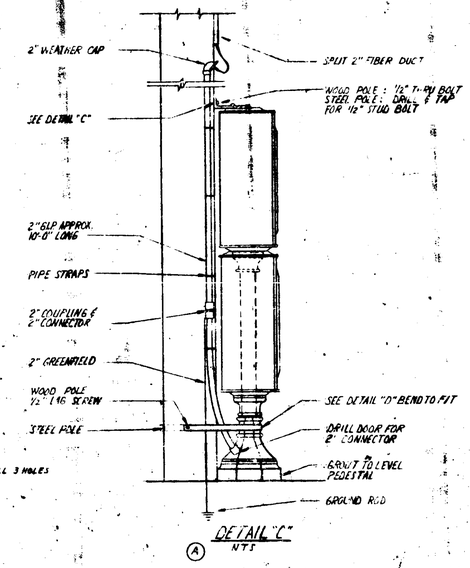
	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252 L, C63, 63174 A, C64	82252L	I 75-1 (98) 59	172



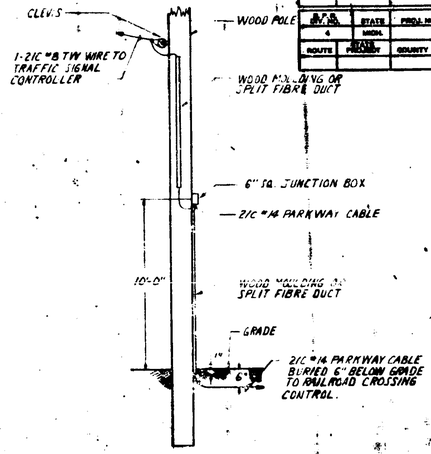
NO.	ITEM
1	2 OR 3 WAY SIGNAL AS REQUIRED
2	SPAN WIRE HANGER
3	1/4" GUY WIRE
4	CABLE HANGER DETAIL "B"
5	SPAN WIRE JUNCTION BOX DETAIL "A"
6	STRAIN INSULATOR
8	5/16" EYEBOLT
9	WOOD MOULDING OR SPLIT FIBRE DUCT
10	#14 T.S CABLE (AS SPECIFIED)
11	CABLE HANGERS & SADDLES
12	WIRE CLIPS
13	2/C - #8 CABLE FOR SERVICE



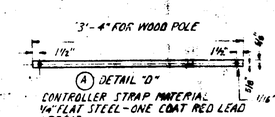
DETAIL "B"
T.S CABLE HANGER
MATERIAL - FLAT STEEL
ONE COAT RED LEAD 2 REQ'D
SCALE: 1" = 1"



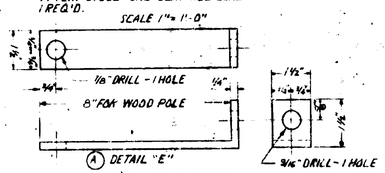
DETAIL "C"
NTS



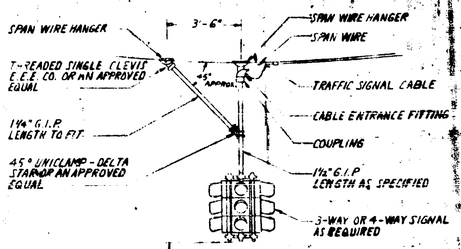
DETAIL "F"
TYPICAL INSTALLATION OF RAILROAD CROSSING CONTROL INTERCONNECTING CABLE
NO SCALE



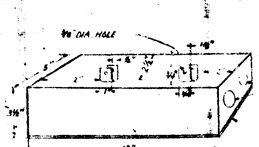
DETAIL "D"
CONTROLLER STRAP MATERIAL
1/4" FLAT STEEL - ONE COAT RED LEAD
1 REQ'D.
SCALE 1" = 1'-0"



DETAIL "E"
CONTROLLER BRACKET MATERIAL
FLAT STEEL - ONE COAT RED LEAD
1 - REQ'D.
SCALE 1/2" = 1"



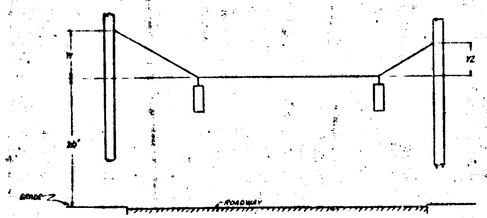
DETAIL "G"
TYPICAL INSTALLATION OF SPAN WIRE TRAFFIC SIGNAL ON EXTENSION PIPE



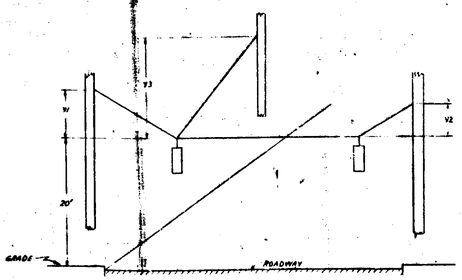
DRILL HOLES FOR STRAIN RELIEF CONNECTORS AS REQ'D.
- USE THOMAS & BETTS CAT. #2534 FOR 7/C CABLE & CAT. #2535 FOR 10/C CABLE WITH APPLETON GASKETS

FLANGED INSIDE COVER

DETAIL "A"
SPAN WIRE JUNCTION BOX
.080 ALUMINUM HELI ARCH WELDER (CUSTOM METAL PRODUCTS CO. #S.O. 85621)



SAG CHART FOR 2-POLE CONTACT



SAG CHART FOR 3-POLE CONTACT

S.P.S. NO.	STATE	PROJ. NO.	PROJ. TOTAL	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

S.P.S. NO.	STATE	PROJ. NO.	PROJ. TOTAL	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

I-75 CHRYSLER FREEWAY
TRAFFIC SIGNAL DETAILS

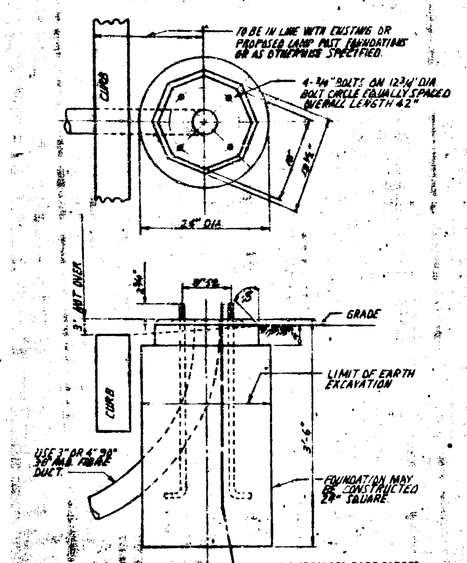
WAYNE COUNTY ROAD COMMISSION

DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE 2-8-5	APPROVED	SHEET NO.	CE 4 CL		12-31-64

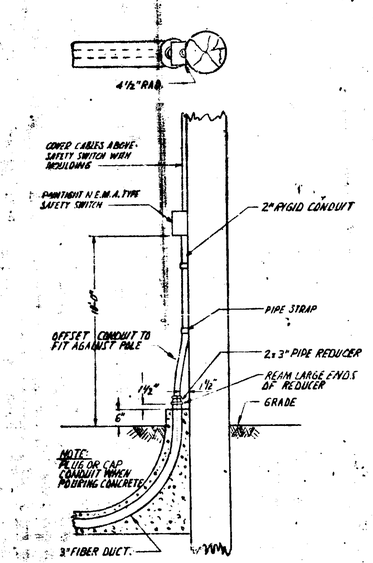
82252 L, C 63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	170

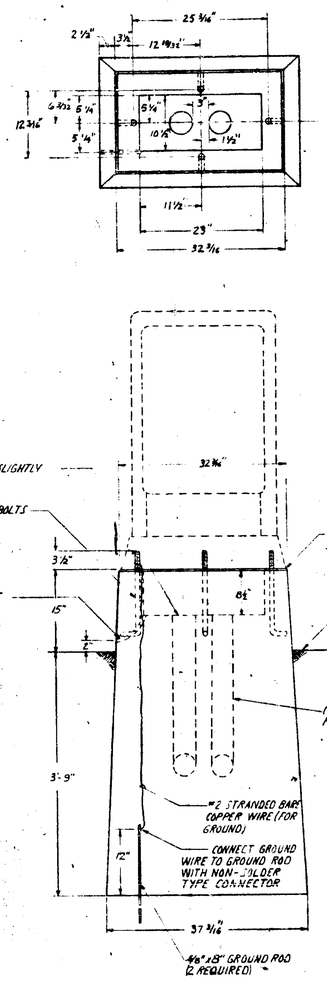
F.A.P. OR DIV. NO.	STATE	PROJ. NO.	FUNCTIONAL CLASS	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
F.A.P. OR DIV. NO.	STATE	PROJ. NO.	FUNCTIONAL CLASS	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



OCTAGON BASE TRAFFIC SIGNAL CONTROLLER PEDESTAL FOUNDATION
SCALE: 1"=1'-0"

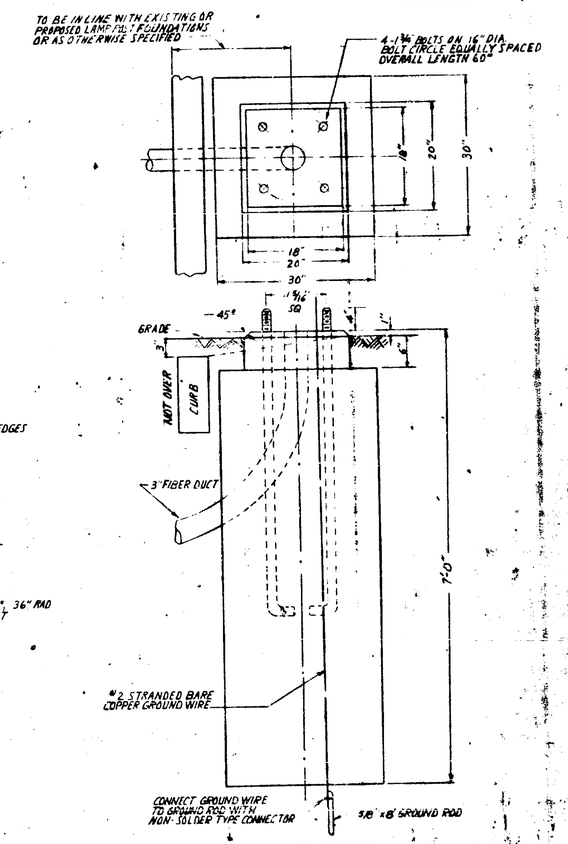


3" STANDARD CONDUIT TO CABLE POLE CONN.
SCALE: 1"=1'-0"



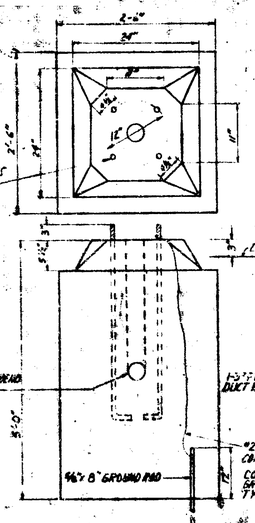
ELEVATION
SCALE: 1"=1'-0"

BASE MOUNTED TRAFFIC SIGNAL CONTROLLER FOUNDATION WITH 2-4" ENTRANCE DUCTS

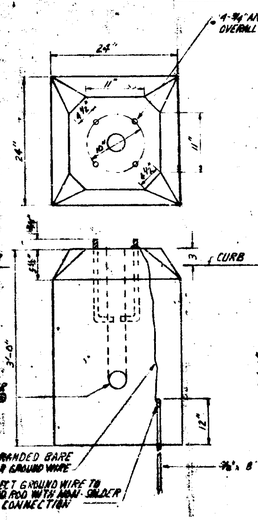


ELEVATION
SCALE: 1"=1'-0"

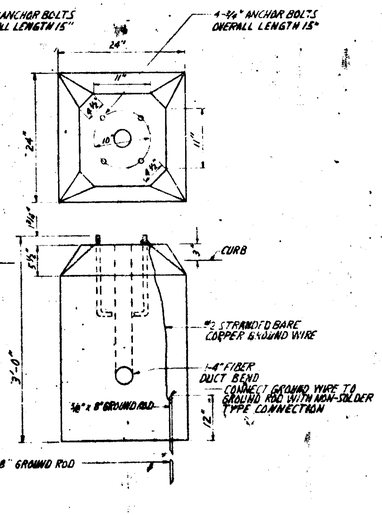
SPAN WIRE STEEL POLE FOUNDATION



ALUMINUM TRAFFIC SIGNAL MAST ARM STANDARD FOUNDATION
N.T.S.
(B)



ALUMINUM TRAFFIC SIGNAL PEDESTAL FOUNDATION
N.T.S.
(B)



ALUMINUM TRAFFIC SIGNAL CONTROLLER PEDESTAL FOUNDATION
N.T.S.
(B)

R E Harrison 1-27-64

WAYNE COUNTY ROAD COMMISSION

I-75 CHRYSLER FREEWAY
TRAFFIC SIGNAL DETAILS

DRAWN BY	APPROVED	FILE NO.	FILE NO.	DRWG. NO.	DATE
DATE	APPROVED	SHEET NO.	JEA CL		12-31-64

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	179

QUANTITY SHEET

GRADING

F.A.P. Div. No.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	180	

AS PER PLANS

STA.	STA.		Earth Exc.	Emb.+ Shr.		Waste	Porous Material (Cap) Gr. "A"	Gr. "B"	Subbase (C.I.P.)	Subgrade Undercutting	Trenching Backfill Special (C.I.P.)			From	to		REMARKS
			Cuds.	Cuds.		Cuds.	Cuds.	Cuds.	Cuds.	Cuds	Cuds						
REGULAR EARTHWORK																	
464+23	472+97	(N.Bd.)	8745	460		8285			2629					(Proj. I 63174A C64)			
353+90	373+00	(S.Bd.)	7616	233		7383			1946								
8 Mile Temp.			12000	4611		104											
62+70	71+46	E-S Ramp	3999	311		3688			966								
462+23	462+82	N-W Ramp	113	21		92											
465+15	475+02	N-W Ramp	4528	526		4002			1010								
27+10	47+92	(E.Bd.)	10069	3027		7042			3023								
49+19	61+80	(E.Bd.)	5415	432		4983			1940								
40+20	53+50	(W.Bd.)	2661	452		2209			1199								
32+15	47+78	(8 Mile)	2057	13964					4284					2606			
49+10	68+00	(8 Mile)	2513	18353					3724								
EXCAVATION FOR BRIDGE & PUMPHOUSE CONSTRUCTION																	
S10 of 82252L			48624			28,000											8 Mile Bridge
S25 of 82252L			16000			16,000											N-W. Bridge
EXCAVATION & BACKFILL FOR SEWERS																	
R.O.B.	R.O.E.		9,248			9,248	6,100	2000			1,148						
SUBGRADE UNDERCUTTING & BACKFILL																	
Entire Project						3550	3550			3550							
KNUDSEN PARK - RELOCATED																	
Sheet # 65			523	195		328											
EXCAVATION & BACKFILL FOR WATER MAIN ALTERATIONS																	
Sheet # 96			4,190			4,190	4,190										
TOTALS			130,812	37,968		92,000	13,840	2,000	20,674	3,550	1,148			2,606			

AS CONSTRUCTED

STA.	STA.		Earth Exc.	Emb.+ Shr.		Waste	Porous Material (Cap) Gr. "A"	Gr. "B"	Subbase (C.I.P.)	Subgrade Undercutting	Trenching Backfill Special (C.I.P.)			From	to		REMARKS
			Cuds.	Cuds.		Cuds.	Cuds.	Cuds.	Cuds.	Cuds	Cuds						
REGULAR EARTH WORK																	
454+23	462+91	(N. Bd.)	8316	425		7891			2,208					(Proj. I 63174 A - C64)			
353+90	373+00	(S. Bd.)	8127	251		7876			1,991								
8 Mile TEMP. ROAD			4339	1,504		2,835											
62+70	71+46	E-S RAMP	3237	214		3,023			896								
462+23	462+82	N-W RAMP	39	—		39											
465+15	475+02	N-W RAMP	3742	412		3,330			1,153								
27+10	47+92	(E. Bd.)	10,183	2,179		8,004			2,134								
49+19	61+80	(E. Bd.)	6,655	478		6,177			2,019								
40+20	53+50	(W. Bd.)	2,251	202		2,049			1,611								
32+15	47+78	(8 Mile)	1,452	13,702					3,636								
49+10	68+00	(8 Mile)	2,154	15,616					3,577								
EXCAVATION FOR BRIDGE AND PUMPHOUSE CONSTRUCTION																	
S10 of 82252L			34,040			30,000											8 MILE BRIDGE
S25 of 82252L			20,640			20,000											N-W BRIDGE
EXCAVATION AND BACKFILL FOR SEWERS																	
R.O.B.	R.O.E.		11,547	629		10,918	6,869	1,675			1,228						
SUBGRADE UNDERCUTTING AND BACKFILL																	
ENTIRE PROJECT						2,321	3,321			2,312							
KNUDSEN PARK - RELOCATED																	
SHEET #65			616	107		509											
EXCAVATION AND BACKFILL FOR WATER MAIN ALTERATIONS																	
SHEET #96			8,429	311		4,753	4,323										
TOTALS			Auth. 125,669	61011 / 21,939		118,145	14,512	1,015	23,117	2,312	1,228						

All Totals shown are to the nearest whole unit.

9/11/67

PLAN ESTIMATE BY Witteveen DATE ____ CHECKED BY Maltzner DATE 3-65 Kaufman DATE 3-65 DATA COMPLETED Roy A. Wilkerson PROJ. ENG DATE 11-13-67 HISTORY CHECKED ENTERED ON PLANS BY ____

82252 L, C63; 63174 A, C64 | STATE PROJECT 82252L | MICHIGAN PROJECT I 75-1 (98) 59 | SHEET NO. 180

BI 82252L, C63

QUANTITY SHEET
DRAINAGE

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	181	

AS PER PLANS

SHEET NO.	Manholes, Catch Basins and Inlets 0-6' Deep 1A EA.	3K EA.	5K EA.	6K EA.	6M EA.	9K EA.	6-14' Deep 1A EA.	1AD EA.	3A EA.	3D EA.	3K EA.	3M EA.	6A EA.	6K EA.	14-25' Deep 3AD EA.	Covers 24"mb EA.	K EA.	Sewers Class A 10" LIN.FT.	12" LIN.FT.	15" LIN.FT.	Class B 6" LIN.FT.	10" LIN.FT.	12" LIN.FT.	15" LIN.FT.	18" LIN.FT.	24" LIN.FT.	Class C 12" LIN.FT.	30" LIN.FT.	C1A-C76-II 12" LIN.FT.	Class B - C76-III 12" LIN.FT.	15" LIN.FT.	18" LIN.FT.	24" LIN.FT.	Edge Drains 6" LIN.FT.
NORTHBOUND I-75 SERVICE ROAD																																		
#35																													64					
#36			1		4						5			1				48											268		192				1096
#37		1								1	3												42	98			30	40			112				688
SOUTHBOUND I-75 SERVICE ROAD																																		
#40																																		163
#41					1					1	2			1									82						40		218				664
#42		1			2			1		1	5							42					72						216			220			352
8 MILE ROAD																																		
#45					1					1	1							18											80						764
#47				2	3		2	2		2	6		4					80	227		120	74	240						120		55	148	100		617
#49								2			2		5					184	376		100		72						80						
#51					6			2			8								60				48	168					420		128	98			1010
#53					1			1	1		5						1		256				40	154		240			32					98	
EASTBOUND 8 MILE SERVICE ROAD																																		
#55											1																		20						559
#56					3					2	4						2		20										304						964
#57											3				2		2		54										16		336				878
#58					3			1		4	5			1	1		4		24								132	202			122			254	916
WESTBOUND 8 MILE SERVICE ROAD																																		
#60											1								30										9						470
#61		1					2												8						200				33				55		450
#62	2	2																	3/5	365							35								
N-W RAMP																																		
#63					2						4								79										105						386
#64		1	2		1			1			5		3						138					110					329						983
E-S RAMP																																		
#65			1	2	1						3												46						154						1063
SERVICE STREETS																																		
#66							3			1	3								30										160						
From Sheet #194																															280			
TOTALS		3	8	5		23	4	4	9	2	5	8	63	4	9	8	1		8	1	264	725	355	500	74	642	530	200	240	35	162	2691		1163	466	153	342	12,025

AS CONSTRUCTED

SHEET NO.	Manholes, Catch Basins and Inlets 0-6' Deep 1A EA.	3K EA.	5K EA.	6K EA.	6M EA.	9K EA.	6-14' Deep 1A EA.	1AD EA.	3A EA.	3D EA.	3K EA.	3M EA.	6A EA.	6K EA.	14-25' Deep 3AD EA.	Covers 24"mb EA.	K EA.	Sewers Class A 10" LIN.FT.	12" LIN.FT.	15" LIN.FT.	Class B 6" LIN.FT.	10" LIN.FT.	12" LIN.FT.	15" LIN.FT.	18" LIN.FT.	24" LIN.FT.	Class C 12" LIN.FT.	30" LIN.FT.	C1A-C76-II 12" LIN.FT.	Class B-C76-III 12" LIN.FT.	15" LIN.FT.	18" LIN.FT.	24" LIN.FT.	Edge Drains 6" LIN.FT.
NORTHBOUND I-75 SERVICE ROAD																																		
#35					1																								85					
#36			1		3		1				5	1	1	1				60					Auth. #1006 & 1011						337		118			1275
#37					1				1	1	2			1									117	100				27	91		–	82		530
SOUTHBOUND I-75 SERVICE ROAD																																		
#40																													39					174
#41					1					1	2			1									80						208		231			665
#42		1			–		1			1	2						1	47					79									215		294
8 MILE ROAD																																		
#43					1					1	1							16											76					124
#47				2	3		2	2		2	6		4					85	224		138	62	242						118		562	157	45	568
#49							2				2		5			Auth. #1002		161	373		85		80						78						
#51					3			2	1		8			3					77				84	168					422		45	925			986
#53		1			1			1	–		5			1			–		270				32	118		2555			61				265	
EASTBOUND 8 MILE SERVICE ROAD																																		
#55											1																		52					507
#56					3			(Auth. #1002)		2	4					2			39					(Auth. #1002)					322					932
#57					1			1			3			1		2			25	(Auth. #1002)			179						17		104	Auth. #1002		732
#58					3				1	3	5			1	1	2			63									133	238		126		71	861
WESTBOUND 8 MILE SERVICE ROAD																																		
#60			1													1			28										91					458
#61			1				2												13							185			33				60	458
#62		2	2																330	3852								35						
N-W RAMP																																		
#63					2						2 (Auth. #1002)								84										98						355
#64			–	2			1		2		5		3						158					111					336						1059
E-S RAMP																																		
#65			1	2	1						3												685						159						1073
SERVICE STREETS																																		
#66						3			–		3								363										150						
CATCH BASINS (EXTRAS) 0-6' DEEP 6J					6M					6-14' DEEP 3J		3M																						
#62 Auth. 2007										1		1																						
#64 Auth. 2007					1		2			1		1																						
Total Extras					1		2			2		2																						
From Sheet #193																					273													
TOTALS			1		1		5		1	5		5		5	1		3		1,000	18,433	3852	1	932.5	551	185	2555	35	1,029	1,861		672	5425	155	326	6,661

All Totals shown are to the nearest whole unit.

C76-IV

C76-IV

BI 82252L, C63

PLAN ESTIMATE BY Vittinen DATE 3-65 CHECKED BY Mellinger / Kaufman DATE 3-65 / DATE 3-65 DATA COMPLETED Karl L. Ledoux PROJ. ENG DATE 11-13-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	181

QUANTITY SHEET

DETROIT TRUNK SEWERS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FEDERAL-AID SERIES	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	182	

AS PER PLANS

STATION OR SHEET NO.	MANHOLES-'AD' 6'1-140'	MH 1-25.0 25'1/Over	MH 1-25.0 25'1/Over (Drop)	MH 1-25.0 25'1/Over (Drop)	MH 1-25.0 25'1/Over (Drop)	C-14X 12"	C-76-III In Tunnel 12"	C-14X 15"	C-14X 18"	C-76-III 18"	C-14X 21"	C-14X 24"	C-76-III In Tunnel 24"	C-76-III 27"	C-76-III 30"	C-76-III 30"	AWWA C302 Jacked in Place 36"	C-76-III Jacked in Place 36"	C-76-III Jacked in Place 48"	C-76-III Jacked in Place 66"	SEWER TAPS 18"	SEWER TAPS 27"
	20	20	20	22	23	24	24															
	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	C/1'8"	C/C"	C/1'8"	C/1'8"	C/C"	C/1'8"	C/1'8"	C/1'8"	C/C"		C/C"	C/C"	C/C"	C/C"	Ea.	Ea.
NORTHBOUND I-75 SERVICE ROAD																						
459+14				1																390		
459+93					5	1/2	1		15													
461+20	1							128														
464+21				1														321	186			
464+21							1						10									
467+00					1													278				
469+85						1											285					
EASTBOUND EIGHT MI. SERVICE ROAD																						
27+10								10														
27+20	1									224												
29+45	1									272												
32+39						1				22												
32+95	1										58											
35+68											273			144							1	1
35+88	1																					
37+03	1																					
38+31	1													120								
40+00	1																					
41+54	1												327									
42+74	1																					
43+45	1											193										
44+30	1											87										
45+50	1																					
50+65						1										137						
51+72	1																					
53+12		1														247						
54+47	1																					
55+67						1										256						
56+92	1									267												
58+26						1									259							
59+59	1														134							
62+22	1																					
64+90	1																					
WINCHESTER ST., S.E.E.																						
Sheet #85		2				1					8						251		297			
TOTALS	19	1	2	2	1	5	3	138	15	785	331	8	280	527	10	264	993	640	251	285	297	599	576	1	1

AS CONSTRUCTED

STATION OR SHEET NO.	MANHOLES-'AD' 6'1-140'	MH 1-25.0 25'1/Over	MH 1-25.0 25'1/Over	MH 1-25.0 25'1/Over (Drop)	MH 1-25.0 25'1/Over (Drop)	MH 1-25.0 25'1/Over (Drop)	C-14X 12"	C-76-III In Tunnel 12"	C-14X 15"	C-14X 18"	C-76-III 18"	C-14X 21"	C-14X 24"	C-76-III In Tunnel 24"	C-76-III 27"	C-76-III 30"	C-76-III 30"	AWWA C302 Jacked in Place 36"	C-76-III Jacked in Place 36"	C-76-III Jacked in Place 48"	C-76-III Jacked in Place 66"	SEWER TAPS 18"	SEWER TAPS 27"
	20	20	20	22	23	24	24																
	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	C/1'8"	C/C"	C/1'8"	C/1'8"	C/C"	C/1'8"	C/1'8"	C/1'8"	C/C"		C/C"	C/C"	C/C"	C/C"	Ea.	Ea.
NORTHBOUND I-75 SERVICE ROAD																							
458+13					1	5 1/2															387		
459+93							1		123														
461+20	1							101															
464+21					1															319	185.3		
464+21							1							11									
467+00						1														277.8			
469+85						1												285.8					
EASTBOUND EIGHT MI. SERVICE ROAD																							
27+10								8															
27+20	1									220													
29+45	1									276													
32+39						1				52													
32+95	1										39												
35+68											272				144							2	1
35+88	1																						
37+03	1																						
38+31	1														124								
40+00	1																						
41+54	1												325.4										
42+74	1																						
43+45	1											188											
44+30	1											84											
45+50	1																						
50+65						1											137.4						
51+72	1																						
53+12		1															247						
54+47	1																						
55+67						1											253						
56+92	1									264													
58+26						1									258								
59+59	1														134.2								
62+22	1																						
64+90	1																						
WINCHESTER ST., S.E.E.																							
Sheet #85		2				1					8						251		295.8				
TOTALS	19	1	2	2	1	5	3	109	12.3	812	311	8	272	325.4	11	260	397.2	637.4	251	285.8	295.8	534.8	572.3	2	1

All Totals shown are to the nearest whole unit.

BI 82252L, C63

PLAN ESTIMATE BY Vitaverzen DATE 3-65 CHECKED BY Matthaeer DATE 3-65 Lautman DATE 3-65 DATA COMPLETED R. L. Anderson PROJ. ENG DATE 11-13-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I-75-1(98)59	182

QUANTITY SHEET

SURFACING

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	183	

BI 82252L, C63

AS PER PLANS

STA.	STA.	LENGTH	WIDTH	CONCRETE 8" UNIF.	PAVEMENT 9" UNIF.	CONC. BASE CSE. 8" UNIF.	PAV'T. REINF.	BIT. AGG. SHLD. (CONC. PAV'T.)	BIT. CONC. LEVEL. CSE.	BIT. CONC. WEAR. CSE. 31AA	BIT. BOND COAT	BIT. PRIME COAT	CONC. PAV'T. PATCH, 8" UNIF.	SHOULDERS CL. A	SHOULDERS CL. AA	SEL. SUBBASE C.I.P.	CALCIUM CHLORIDE	WATER 1000 GAL. UNITS	REMARKS
				Syds.	Syds.	Syds.	Syds.	Tons	Tons	Tons	Gals	Gals	Syds	Tons	Cyds. C.I.P.	Cyds.	Tons	Units	
(NORTHBOUND I-75 SERVICE ROAD)																			
454+23	454+95	72'	30'		240		240												
454+95	456+51	156'	Intersect.		670		670									88	0.79	2.11	Remington & Ramp
456+51	461+39	488'	36'		1952		1952									259	2.33	6.22	
461+39	462+27	88'	Intersect.		592		592									78	0.70	1.87	N. to W. Ramp
462+27	463+95	168'	Var.		513		513									72	0.65	1.73	
463+95	464+55	60'	Intersect.		274		274									36	0.32	0.86	Winchester Ave.
464+55	468+00	345'	24'		920		920									132	1.19	3.17	
468+00	469+50	150'	24'-36'		500		500									69	0.62	1.66	
469+50	470+00	50'	36'		200		200									27	0.24	0.65	
470+00	470+92	92'	Intersect.		437		437									57	0.51	1.37	Ramp
470+92	471+57	(Omit Intersect.)																	E.Bd. 8 Mile Ser. Rd.
471+57	472+44	87'	Var.		381		381									50	0.45	1.20	
472+44	472+96	(Omit Intersect.)																	
																			W.Bd. 8 Mile Ser. Rd.
454+23	Temp. Pav't. @ Remington Ave. 25																		
(SOUTHBOUND I-75 SERVICE ROAD)																			
353+90	355+00	110'	Var.		542		542									35	0.32	0.84	Ramp
355+00	355+60	60'	Intersect.		305		305									39	0.35	0.94	Remington
355+60	361+94	634'	36'		2536		2536									337	3.03	8.09	
361+94	362+95	101'	Intersect.		427		427									56	0.50	1.34	E. to S. Ramp
362+95	368+70	575'	12.5'		799		799												
368+70	369+70	100'	12.5'-18.5'		172		172												
369+70	371+01	131'	Intersect.		633		633									81	0.73	1.94	Ramp
371+01	371+66	(Omit Intersect.)																	E.Bd. 8 Mile Ser. Rd.
371+66	372+48	82'	Var.		348		348									46	0.41	1.10	
372+48	373+04	(Omit Intersect.)																	W.Bd. 8 Mile Ser. Rd.
(EASTBOUND 8 MILE SERVICE ROAD)																			
35+25	35+87	62'	Intersect.		246		246									30	0.27	0.72	Andover Ave.
35+87	38+24	237'	24'		632		632									91	0.82	2.18	
38+24	38+84	60'	Intersect.		301		301									36	0.32	0.86	Irvington Ave.
38+84	41+10	226'	36'		904		904									120	1.08	2.88	
41+10	41+68	58'	Intersect.		303		303									36	0.32	0.86	Yacama Ave.
41+68	44+24	256'	Var.		1254		1254									162	1.46	3.89	E. to S. Ramp
44+24	46+95	271'	36'		1272		1272									172	1.55	4.13	
46+95	47+92.09	97.09'	Intersect.		569		569									69	0.62	1.66	S.Bd. I-75 Ser. Rd.
47+92.09	49+19.42	(S/O of 82252L)																	
49+19.42	50+03	83.58'	Intersect.		517		517									62	0.56	1.49	N.Bd. I-75 Ser. Rd.
50+03	52+78	275'	Var.		1293		1293									181	1.63	4.34	N. to E. Turn Rdwy.
52+78	53+39	61'	Intersect.		344		344									46	0.41	1.10	Hawthorne Ave.
53+39	55+48	209'	Var.		697		697									95	0.86	2.28	
55+48	56+08	60'	Intersect.		234		234									31	0.28	0.74	Cardonia Ave.
56+08	57+98	190'	24'		507		507									72	0.65	1.73	
57+98	58+56	58'	Intersect.		220		220									29	0.28	0.70	Russel Ave.
58+56	60+62	206'	24'		549		549									79	0.71	1.90	
60+62	61+18	56'	Intersect.		216		216									29	0.26	0.70	Hanna Ave.
61+18	61+80	62'	24'		165		165									23	0.21	0.55	
(WESTBOUND 8 MILE SERVICE ROAD)																			
39+68	40+20	52'	Var.						1	1	3								
40+20	41+68	148'	Var.			193	193		16	8	39								
41+68	43+58	190'	Var.		581		581									73	0.66	1.75	N. to W. Ramp
43+58	46+74	316'	Var.		574		574									77	0.69	1.85	
46+74	47+70.30	96.30'	Intersect.		480		480									56	0.50	1.34	S.Bd. I-75 Ser. Rd.
47+70.30	48+97.63	(S/O of 82252L)																	
48+97.63	49+80	82.37'	Intersect.		425		425									50	0.45	1.20	N.Bd. I-75 Ser. Rd.
49+80	52+62	282'	31'		971		971									120	1.08	2.88	
52+62	53+50	88'	Var.		458		458												
53+50	54+12	62'	Var.						64	30	151								
54+12	57+27	315'	19'						57	27	133								
57+27	59+77	250'	19'-7'						31	14	72								
59+77	60+97	120'	7'						8	4	19								
(NORTH TO WEST RAMP)																			
465+16	465+77	61'	24'		163		163									23	0.21	0.55	
465+77	465+96	(Omit)																	S.Bd. I-75 Ser. Rd.
465+96	472+10	614'	24'		1637		1637									235	2.12	5.64	
472+10	472+50	(Omit)																	E.Bd. 8 Mile Ser. Rd.
472+50	475+03	253'	24'		675		675									97	0.87	2.33	
(EAST TO SOUTH RAMP)																			
62+94	63+92	98'	24'		261		261									38	0.34	0.91	
63+92	64+48	56'	Intersect.		253		253									29	0.26	0.70	Winchester Ave.
64+48	71+47	699'	24'		1864		1864									268	2.41	6.43	
65+95 Lt.	(Alley)	116'	17'	236			236												Omira St. East
For	Totals See Sheet #184																		

AS CONSTRUCTED

STA.	STA.	LENGTH	WIDTH	CONCRETE 8" UNIF.	PAVEMENT 9" UNIF.	CONC. BASE CSE. 8" UNIF.	PAV'T. REINF.	BIT. AGG. SHLD. (CONC. PAV'T.)	BIT. CONC. LEVEL. CSE.	BIT. CONC. WEAR. CSE. 31AA	BIT. BOND COAT	BIT. PRIME COAT	CONC. PAV'T. PATCH, 8" UNIF.	SHOULDERS CL. A	SHOULDERS CL. AA	SEL. SUBBASE C.I.P.	CALCIUM CHLORIDE	WATER 1000 GAL. UNITS	REMARKS
				Syds.	Syds.	Syds.	Syds.	Tons	Tons	Tons	Gals	Gals	Sq Yds	Tons	Cyds. C.I.P.	Cyds.	Tons	Units	
NORTHBOUND I-75 SERVICE ROAD																			
454+23	454+95	72'	30'		240		240												
454+95	456+51	156'	Intersect.		632		632									86	0.79	—	Remington & Ramp
456+51	461+39	488'	36'		1930		1930									259	2.33	—	
461+39	462+27	88'	Intersect.		568		568									78	0.45	—	N. to W. Ramp
462+27	463+95	168'	Var.		547		547									73	0.64	—	
463+95	464+55	60'	Intersect.		302		302									39	0.30	—	Winchester Ave.
464+55	468+00	345'	24'		899		899									132	1.10	—	
468+00	469+50	150'	24'-36'		500		500									67	0.62	—	
469+50	470+00	50'	36'		187		187									26	0.24	—	
470+00	470+92	92'	Intersect.		469		469									58	0.51	—	Ramp
470+92	471+57	(Omit Intersect.)																	E.Bd. 8-Mile Ser. Rd.
471+57	472+44	87'	Var.		381		381									48	0.45	—	
472+44	472+96	(Omit Intersect.)																	
																			W.Bd. 8-Mile Ser. Rd.
454+23	Temp. Pav't @ Remington Ave. 54																		
SOUTHBOUND I-75 SERVICE ROAD																			
353+90	355+00	110'	Var.		546		546									34	0.32	—	Ramp
355+00	355+60	60'	Intersect.		314		314									40	0.35	—	Remington Ave.
355+60	361+94	634'	36'		2554		2554									336	2.88	—	
361+94	362+95	101'	Intersect.		431		431									52	0.50	—	E. to S. Ramp
362+95	368+70	575'	12.5'		694		694												
368+70	369+70	100'	12.5'-18.5'		161		161												
369+70	371+01	131'	Intersect.		631		631									80	0.73	—	Ramp
371+01	371+66	(Omit Intersect.)																	E.Bd. 8-Mile Ser. Rd.
371+66	372+48	82'	Var.		352		352									48	0.41	—	
372+48	373+04	(Omit Intersect.)																	W.Bd. 8-Mile Ser. Rd.
EASTBOUND 8-MILE SERVICE ROAD																			
35+25	35+87	62'	Intersect.		240		240									31	0.27	—	Andover Ave.
35+87	38+24	237'	24'		627		627									90	0.82	—	
38+24	38+84	60'	Intersect.		306		306									39	0.32	—	Irvington Ave.
38+84	41+10	226'	36'		849		849									120	1.08	—	
41+10	41+68	58'	Intersect.		304	9	313									37	0.32	—	Yacama Ave.
41+68	44+24	256'	Var.		1307		1307									163	1.46	—	E. to S. Ramp
44+24	46+95	271'	36'		1270		1270									172	1.55	—	
46+95	47+92.09	97.09'	Intersect.		524		524									70	0.62	—	S.Bd. I-75 Ser. Rd.
47+92.09	49+19.42	(S/O of 82252L)																	
49+19.42	50+03	83.58'	Intersect.		462		462									61	0.56	—	N.Bd. I-75 Ser. Rd.
50+03	52+78	275'	Var.		1209		1209									184	1.63	—	N. to E. Turn Rdwy.
52+78	53+39	61'	Intersect.		376	34	410									43	0.36	—	Hawthorne Ave.
53+39	55+48	209'	Var.		722		722									101	0.80	—	
55+48	56+08	60'	Intersect.		291		291									31	0.24	—	Cardonia Ave.
56+08	57+98	190'	24'		485		485									70	0.61	—	
57+98	58+56	58'	Intersect.		217	7	224									28	0.25	—	Russell Ave.
58+56	60+62	206'	24'		559		559									79	0.64	—	
60+62	61+18	56'	Intersect.		205		205									29	0.22	—	Hanna Ave.
61+18	61+80	62'	24'		163		163									24	0.19	—	
WESTBOUND 8-MILE SERVICE ROAD																			
39+68	40+20	52'	Var.						1	1	1								
40+20	41+68	148'	Var.		200		200		—	—	—					28	0.25		
41+68	43+58	190'	Var.		727		727									72	0.66	—	N. to W. Ramp
43+58	46+74	316'	Var.		567		567									78	0.69	—	
46+74	47+70.30	96.30'	Intersect.		455		455									61	0.50	—	S.Bd. I-75 Ser. Rd.
47+70.30	48+97.63	(S/O of 82252L)																	
48+97.63	49+80	82.37'	Intersect.		396		396									51	0.45	—	N.Bd. I-75 Ser. Rd.
49+80	52+62	282'	31'		899		899									120	1.08	—	
52+62	53+50	88'	Var.		299		299									34	0.30		
53+50	54+12	62'	Var.			10	10		57	43	63								
54+12	57+27	315'	19'			36	36		50	38	56								
57+27	59+77	250'	19'-7'						27	20	30								
59+77	60+97	120'	7'						7	6	8								
NORTH TO WEST RAMP																			
465+16	465+77	61'	24'		189		189									23	—	—	
465+77	465+96	(Omit)																	S.Bd. I-75 Ser. Rd.
465+96	472+10	614'	24'		1598		1598									234	1.31	—	
472+10	472+50	(Omit)																	E.Bd 8 Mile Ser. Rd.
472+50	475+03	253'	24'		666		666									97	0.17	—	
EAST TO SOUTH RAMP																			
62+94	63+92	98'	24'		262		262									37	0.34	—	
63+92	64+48	56'	Intersect.		220		220									29	0.26	—	Winchester Ave.
64+48	71+47	699'	24'		1858		1858									267	2.41	—	
65+95	Lt. (Alley)	116'	17'	—(Auth. #1002)			—(Auth. #1002)												Omira St. East
TOTALS	See Sheet #184																		

PLAN ESTIMATE BY Lounsbury DATE 3-65 CHECKED BY Malthoner DATE 3-65 / Kaufman DATE 3-65 DATA COMPLETED 1st L. Lud[illegible] PROJ. ENG. DATE 11-13-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	183

QUANTITY SHEET
SURFACING

R. & P. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	184	

BI 82252L, C63

AS PER PLANS

STA.	STA.	LENGTH	WIDTH	CONCRETE PAVEMENT 8" UNIF. SYDS.	PAVEMENT 9" UNIF. SYDS.	CONC. BASE CSE. 8" UNIF. SYDS.	PAV'T. 22" INF. SYDS.	BIT. AGG. SHLD. (CONC. PAV'T) TONS	BIT. CONC. LEVEL. CSE. TONS	BIT. CONC. WEDGE CSE. 3/4A TONS	BIT. BOND COAT Gals	BIT. PRIME COAT Gals	CONC. PAV'T. PATCH, 8" UNIF. SYDS.	SHOULDERS C.& B. TONS	SHOULDERS CLAY Cyds. C.I.P.	SEL. SUBGRADE C.I.P. Cyds.	CALCIUM CHLORIDE TONS	WATER 1000 GAL. UNITS	REMARKS
(EASTBOUND 8 MILE ROAD)																			
27+10	29+30	220'	Var.		697		697									86	0.77	2.06	
29+30	29+92	62'	Intersect.		348		348									41	0.37	0.98	Coventry Ave.
29+92	32+29	237'	Var.		1301		1301									163	1.47	3.91	
32+29	32+90	61'	Intersect.		465		465									57	0.51	1.37	Keating Ave.
32+90	35+44	254'	Var.		1436		1436									225	2.03	5.40	E. to S. Ramp
35+44	37+17	173'	42'-36'		750		750									98	0.88	2.35	
37+17	40+85.46	368.46'	36'		1474		1474									190	1.76	4.70	
40+85.46	41+85.46	100'	36'-37'		406		406									54	0.49	1.30	
41+85.46	52+50.10	(S/O of 82252L)																	
52+50.10	53+50.10	100'	37'-36'		406		406									54	0.49	1.30	
53+50.10	61+66	815.90'	36'		3264		3264									433	3.90	10.39	
61+66	62+00	134'	Var.		260		260									32	0.29	0.77	E. Bd. 8 Mile Ser. Rd.
62+00	63+13	113'	Var.			377	377		66	31	136								Hull Ave.
63+13	63+73	60'	Intersect.			228	228		35	18	90								
63+73	65+83	210'	58'			1353	1353		179	84	420								
65+83	66+43	60'	Intersect.			228	228		37	18	88								Greely Ave.
66+43	68+00	157'	58'			418	418		94	44	222								
																			Riopelle Ave.
37+00	41+84							87				356			114		0.68	2.72	
52+50	59+00							117				480			152		0.92	3.66	
																			Merrill Ave.
(WESTBOUND 8 MILE ROAD)																			
34+94	37+03	209'	0'-36'		418		418									44	0.40	1.06	
37+03	40+82.47	379.47'	36'		1518		1518									201	1.81	4.82	
40+82.47	41+82.47	100'	36'-37'		406		406									54	0.49	1.30	
41+82.47	52+50.10	(S/O of 82252L)																	
52+50.10	53+50.10	100'	37'-36'		406		406									54	0.49	1.30	
53+50.10	59+20	569.90	36'		2280		2280									303	2.73	7.27	
59+20	60+93	173'	36'-42'		750		750									98	0.88	2.35	
60+93	69+24	83'	Var.			1037	1037		329	155	774								W. Bd. 8 Mile Ser. Rd.
65+80	69+24	(Crossover)			523		523												Greely Ave.
(YACAMA TO OMIRA SERVICE ROAD)																			
41+52	44+28	276'	24'		736		736												
(CAMERON TO HAWTHORNE SERVICE RD.)																			
50+20	52+97	277	30'		923		923												
(TEMPORARY PAVEMENT ON 8 MILE RD.)																			
Stage 1				6397										510			2.56	6.84	
Stage 2				203															
Stage 3				203										27			0.13	0.33	
Stage 4				1249										274			1.27	3.29	
POB to ROE									40		125								For Maint. Traffic
(TEMPORARY PAVEMENT ON OAKLAND AVE.)																			
Stage 2	Sh. # 23			1837										303			1.36	3.64	
Stage 3	Sh. # 25			273										120			0.54	1.44	
Entire Project							86						100						Corrugated Conc. Div.
TOTALS				11,152	50,179	3844	54,345	204	960	434	2292	338	100	1296	266	6084	63	16.1	

AS CONSTRUCTED

STA.	STA.	LENGTH	WIDTH	CONCRETE 8" UNIF. SYDS.	PAVEMENT 9" UNIF. SYDS.	CONC. BASE CSE. 8" UNIF. SYDS.	PAV'T. 22" INF. SYDS.	BIT. AGG. SHLD. (CONC. PAV'T.) TONS	BIT. CONC. LEVEL. CSE. TONS	BIT. CONC. WEDGE CSE. 3/4A TONS	BIT. BOND COAT Gals	BIT. PRIME COAT Gals	CONC. PAV'T. PATCH, 8" UNIF. SYDS.	SHOULDERS C.& B. TONS	SHOULDERS CLAY Cyds. C.I.P.	SEL. SUBGRADE C.I.P. Cyds.	CALCIUM CHLORIDE TONS	WATER 1000 GAL. UNITS	REMARKS
EASTBOUND 8-MILE ROAD																			
27+10	29+30	220'	Var.		752	20	772									86	0.69	—	
29+30	29+92	62'	Intersect.		353		353									40	0.31	—	Coventry Ave.
29+92	32+29	237'	Var.		1239		1239									161	1.36	—	
32+29	32+90	61'	Intersect.		464		464									58	0.50	—	Keating Ave.
32+90	35+44	254'	Var.		1937		1937									226	2.00	—	E. to S. Ramp
35+44	37+17	173'	42'-36'		700		700									98	0.51	—	
37+17	40+85.46	368.46	36'		1547		1547									195	—	—	
40+85.46	41+85.46	100'	36'-37'		405		405									54	—	—	
41+85.46	52+50.10	(S/O of 82252L)																	
52+50.10	53+50.10	100'	37'-36'		404		404									54	—	—	
53+50.10	61+66	815.90'	36'		3262		3262									432	—	—	
61+66	62+00	134'	Var.		252		252									30	—	—	E. Bd. 8 Mile Ser. Rd.
62+00	63+13	113'	Var.			393	393		58	44	65								Hull Ave.
63+13	63+73	60'	Intersect.			275	275		34	26	38								
63+73	65+83	210'	58'			595	595		158	120	176								
65+83	66+43	60'	Intersect.			228	228		33	26	37								Greely Ave.
66+43	68+00	157'	58'			499	499		83	62	93								
68+00	71+47	347	Var.	191 (Auth. 100%)															Riopelle Ave.
37+00	41+84							82					—		105		—	—	
52+50	59+00							109.07					—		144		—	—	
																			Merrill Ave.
WESTBOUND 8-MILE ROAD																			
34+94	37+03	209'	0'-36'		429		429									55	—	—	
37+03	40+82.47	379.47'	36'		1549		1549									200	—	—	
40+82.47	41+82.47	100'	36'-37'		401		401									51	—	—	
41+82.47	52+50.10	(S/O of 82252L)																	
52+50.10	53+50.10	100'	37'-36'		406		406									53	—	—	
53+50.10	59+20	569.90	36'		2378		2378									295	—	—	
59+20	60+93	173'	36'-42'		720		720									96	—	—	
60+93	69+24	83'	Var.			1020	1020		289.53	219.9	325								W. Bd. 8-Mile Ser. Rd.
65+80	69+24	(Crossover)			526		526												
YACAMA TO OMIRA SERVICE ROAD																			
41+52	44+28	276'	24'		820		820												
CAMERON TO HAWTHORNE SERVICE ROAD																			
50+20	52+97	277'	30'		940		940												
TEMPORARY PAVEMENT ON 8-MILE ROAD																			
Stage #1				7044 (Auth. #1012)											609		—	—	
Stage #2				258															
Stage #3				221											309		—	—	
Stage #4				1245											233		—	—	
P.O.B. to P.O.E.									35		52								For Maint. Traffic
TEMPORARY PAVEMENT ON OAKLAND AVE.																			
Stage #2	S. # 23			1256 (Auth. #1002)											277 (Auth. #1002)		—	—	
Stage #3	S. # 25			602											77 (Auth. #1012)		—	—	
Entire Project							180							84.9					Corrugated Conc. Div.
TOTALS				10,871	50,274	3126	53,580	191.07	832.53	605.9	944	—		84.9	1269	247	6143	38.35	—

All Totals shown are to the nearest whole unit.

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED Ken T. Anderson PROJ. ENG DATE 11-13-67 HISTORY CHECKED ENTERED ON PLANS BY _____

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	184

QUANTITY SHEET

DRIVES, SIDEWALKS, CURB AND GUTTER

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	185	

AS PER PLANS

STA.	STA.		Temp Conc. Sidewalk Sq. Ft.	4" Conc. Sidewalk Sq. Ft.	Concrete Curb Det. 2 Lin. Ft.		Concrete Curb and Gutter Det. 10 Lin. Ft.		Det. A Lin. Ft.	Det. B Lin. Ft.		Conc. Pavt. 7" Unif. Sq. Yds.			Remarks
		NORTHBOUND I-75 SERVICE ROAD													
454+23	455+23				157										
Sheet # 35				414								15			
455+23	461+39						1204								
461+39	464+25						699								
Sheet # 36				5340											
464+25	471+17						1331								
471+17	472+96						180								
Sheet # 37				768											
		SOUTHBOUND I-75 SERVICE ROAD													
Sheet # 40				660											
353+90	355+30						155		140	14					
355+30	362+95						1433		101						
362+95	369+70								626	600					
Sheet # 41				138											
369+70	371+24								131						
371+24	373+04						167								
Sheet # 42				828											
		EASTBOUND 8 MILE SERVICE ROAD													
35+25	38+54						646								
38+54	41+39						561								
41+39	44+24						573								
44+24	47+19						641								
Sheet # 56				5550								56			
47+19	49+82						182								
49+82	53+11						962								
53+11	55+78						472								
Sheet # 57				4600								28			
55+78	58+27						487								
58+27	60+90						516								
60+90	61+80						178								
Sheet # 58				4638								112			
		WESTBOUND 8 MILE SERVICE ROAD													
39+68	43+58						396								
43+58	46+97						34[illegible]								
46+97	49+55						84								
49+55	52+92						338								
52+92	60+97						791								
		8 MILE ROAD TEMPORARY													
Sheet # 24			7,512												
TOTALS	For Totals See Sheet # 186														

AS CONSTRUCTED

STA.	STA.		Temp Conc. Sidewalk Sq. Ft.	4" Conc. Sidewalk Sq. Ft.	Concrete Curb Det. 2 Lin. Ft.		Concrete Curb and Gutter Det. 10 Lin. Ft.		Det. A Lin. Ft.	Det. B Lin. Ft.		Conc. Pavt. 7" Unif. Sq. Yds.			Remarks
		NORTHBOUND I-75 SERVICE ROAD													
454+23	455+23				170										
Sheet # 35				464								17			
455+23	461+39						1191								
461+39	464+25						712								
Sheet # 36				5587											
464+25	471+17						1326								
471+17	472+96						180								
Sheet # 37				762											
		SOUTHBOUND I-75 SERVICE ROAD													
Sheet # 40				660											
353+90	355+30						152		140	11					
355+30	362+95						1393		131						
362+95	369+70								669	603					
Sheet # 41				111											
369+70	371+24								140						
371+24	373+04						167								
Sheet # 42				789								32			
		EASTBOUND 8-MILE SERVICE ROAD													
35+25	38+54						636								
38+54	41+39				25		561								
41+39	44+24						580								
44+24	47+19						512								
Sheet # 56				5500								52			
47+19	49+82						228								
49+82	53+11						1033								
53+11	55+78						568								
Sheet # 57				4796								180 (Auth. ±10%)			
55+78	58+27						491								
58+27	60+90						530								
60+90	61+80						180								
Sheet # 58				5069								129			
		WESTBOUND 8-MILE SERVICE ROAD													
39+68	43+58						374								
43+58	46+97						302								
46+97	49+55						153								
49+55	52+92						321								
52+92	60+97						50 (Auth. ±10%)								
		8-MILE ROAD TEMPORARY													
Sheet # 24			6693												
TOTALS	For Totals See Sheet # 186														

PLAN ESTIMATE BY V. H. Kerr DATE 3-65 CHECKED BY Malthaner DATE 3-65 Kaufman DATE 3-65 DATA COMPLETED Kenneth L. Lidman PROJ. ENG. DATE 11-6-61 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	185

C63 82252L 18

QUANTITY SHEET

DRIVES, SIDEWALKS, CURB AND GUTTER

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	186	

AS PER PLANS

STA.	STA.			TEMP. CONC. SIDEWALK SQ. FT.	4" CONC. SIDEWALK SQ. FT.	CONCRETE CURB DET. 2 LIN. FT.			CONCRETE CURB AND GUTTER DET. 10 LIN. FT.		DET. A LIN. FT.	DET. B LIN. FT.		CONC. PAV'T. 7" UNIF. SQ. YDS.			REMARKS
				EASTBOUND 8 MILE ROAD													
27+10	29+61								247								
29+61	32+60								512								
32+60	35+44								699								
Sheet #	45				2623												
35+44	41+85.46								1282								
41+85.46	52+50.10	(S10 of 82252L)															
Sheet #	47				1,102												
52+50.10	61+66								1832								
Sheet #	49				900												
61+66	63+42								354								
63+42	66+13								499								
Sheet #	51				600												
66+13	68+00								337								
Sheet #	53				734												
				WESTBOUND 8 MILE ROAD													
34+94	41+82.47																
41+82.47	52+50.10	(S10 of 82252L)							1167								
52+50.10	60+93								1686								
60+93	66+43								665								
66+43	69+24	(Includes Crossover)							281								
				N.-W. RAMP													
465+16	465+87								128								
465+87	472+30								1056								
472+30	475+03								533								
				E.-S. RAMP													
62+94	64+20								250								
64+20	71+47								1352								
				YACAMA-OMIRA SERVICE ROAD													
41+52	44+28				1776	583								28			
42+76																	
				CAMERON-HAWTHORNE SERVICE ROAD													
50+20	52+97				1290	573								28			
51+74	(16' Alley)																
TOTALS				7512	31,961	1313			25,072		998	614		267			

AS CONSTRUCTED

STA.	STA.			TEMP. CONC. SIDEWALK SQ. FT.	4" CONC. SIDEWALK SQ. FT.	CONCRETE CURB DET. 2 LIN. FT.	DET. 2A	RETA. CURB	CONCRETE CURB AND GUTTER DET. 10 LIN. FT.	DET. 10A	DET. A LIN. FT.	DET. B LIN. FT.	CONC. PAV'T. 7" UNIF. SQ. YDS.				REMARKS
				EASTBOUND 8 MILE ROAD													
27+10	29+61								281								
29+61	32+60								458								
32+60	35+44								369								
Sheet #	45				2108												
35+44	41+85.46								1304								
41+85.46	52+50.10	(S10 of 82252L)															
Sheet #	47				1027												
52+50.10	61+66								1870								
Sheet #	49				764												
61+66	63+42								357								
63+42	66+13								482								
Sheet #	51				604												
66+13	68+00								339 (Auth. @ 1002)								
Sheet #	53				116												
				WESTBOUND 8 MILE ROAD													
34+94	41+82.47								1188								
41+82.47	52+50.10	(S10 of 82252L)							—								
52+50.10	60+93								1710								
60+93	66+43								546								
66+43	69+24	(Includes Crossover)							379								
				N.-W. RAMP													
465+16	465+87								132								
465+87	472+30								1021 (Auth. @ 1021)								
472+30	475+03								533								
				E.-S. RAMP													
62+94	64+20								244								
64+20	71+47								1335								
				YACAMA-OMIRA SERVICE ROAD													
41+52	44+28				1440	586								26			
42+76																	
				CAMERON-HAWTHORNE SERVICE ROAD													
50+20	52+97				1507	583								24			
51+74	(16' Alley)																

~ EXTRAS ~

Sht. #60, 61 & 62 - Auth. #2031										812					
Sht. #36 & 37 - Auth. #2032 & 2033							288	288							
Auth. #2023 - Place and Remove 7" Concrete Pavement for 54" Watermain Pav't. Patch - Lump Sum - 67.2 Svs.															
Auth. #2015 & #2020 - Calcium Chloride (add to pav't & curb concrete) - Force Acct. Cost - $668.77															
Auth. #2014 & Rec. - Decrease Cost - Neoprene to Hot Poured Rubber - 3861 Lin. Ft. @ $4.382/ft. = $16,918.90 (MINUS)															
TOTAL FOR EXTRAS							288	288		812					
TOTALS				6693	31,304	1364	—	—	24,388	—	1080	614	460		

All Totals shown are to the nearest whole unit.

BI 82252L, C63

PLAN ESTIMATE BY Witherego DATE 3-65 CHECKED BY Wolfgang Kaufman DATE 3-65 DATA COMPLETED (PROJ. ENG) DATE 4-6-67 HISTORY CHECKED ENTERED ON PLANS BY DATE

82252 L, C63; 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (MR) 57	186

QUANTITY SHEET

REMOVALS & MISC. DRAINAGE ITEMS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252L	Wayne	Detroit	187	

BI 82252L, C63

AS PER PLAN

SHEET NO.		Rem Old Pav't Syds	Rem Sidewalks Syds	Rem Curb & Gutter L.Ft.	Rem Mas. & Conc. Struct. Cyds	Rem. Trees 8"-12" Ea.	Rem. Trees 13"-24" Ea.	Rem. Trees 25"-36" Ea.	Removing Underground Gasoline Storage Tanks, Including Backfill - Ea.	Rem. Old Pav't (Patches) Syds	Abandoning Manholes Ea.	Abandoning Catch Basins Ea.	Gate Wells Aban. Ea.	Gate Wells Adj. Ea.	Gate Wells Reconst. Ea.	Temp. Culv. Ea.	Adj. M.H. Cov.-Meth #1 Ea.	Sewer Taps 12" Ea.	Sewer Taps 15" Ea.	Tile Traps 12" Ea.	Tile Traps 15" Ea.
#22																		5			
#26			132		5	4															
#27		1,026	1,676	666	32	27	10	1				2									
#28		13,096	2,836		23	8	19	5			10	11	5	1	6						
#30		2,908	190			1	4			32	1			1	1						
#31		5,182	1,829	207		2	43			10	14	5	2		6						
#32		1,417	715			2	13				4	5	3								
#33		4,428	613	290		1	28	2		72	12	8	2	2	3						
#34		409	54	215		2	6	1		48	5	4			2						
#35																				1	
#36																				4	
#37																				1	1
#41																		1		2	
#42																	1	1	1	1	1
#45																				2	
#47																				4	
#49																				1	
#51																				4	
#53																	2	1		3	
#55																				1	
#56																		2		4	
#57																				2	
#58																				9	
#63																				2	
#64																		1		1	
#65																		2		3	
#66																				4	
#28									7												
From Sheet #190											1										
TEMPORARY PAVEMENT REMOVAL																					
#22	8 Mile Rd.	7,305														5					
#24	8 Mile Rd.	1,249																			
#23	Oakland Ave	1,387														2					
#25	Oakland Ave	671																			
TOTALS		39,078	8,065	1,378	60	47	123	9	7	162	47	35	12	4	18	7	4	13	1	49	2

AS CONSTRUCTED

SHEET NO.		Rem. Old Pav't Syds	Rem. Sidewalks Syds	Rem. Curb & Gutter L.Ft.	Rem. Mas. & Conc. Struct. Cyds	Rem. Trees 8"-12" Ea.	Rem. Trees 13"-24" Ea.	Rem. Trees 25"-36" Ea.	Removing Underground Gasoline Storage Tanks, Including Backfill - Ea.	Rem. Old Pav't (Patches) Syds	Abandoning Manholes Ea.	Abandoning Catch Basins Ea.	Gate Wells Aban. Ea.	Gate Wells Adj. Ea.	Gate Wells Reconst. Ea.	Temp. Culv. Ea.	Adj. M.H. Cov.-Meth #1 Ea.	Sewer Taps 12" Ea.	Sewer Taps 15" Ea.	Tile Traps 12" Ea.	Tile Traps 15" Ea.
#22				(Auth. #1009)														6			
#26			130		—	3	1														
#27		900	1685	891	15	15	21	2				2									
#28		12494	3765		33	8	9	—			9	11	6	2	4						
#30		2970	134			—	3			—	1	1		2	—						
#31		4896	2286	315	8	4	36	4		—	14	5	3	1	6						
#32		1299	647	209	4	10	21	2			5	4	3				1				
#33		4562	670	128		1	26	1		64	8	8	2	5	3		3				
#34		430	18	—		2	4	1		9	1	4		3	1		2				
#35																				1	
#36																	1 (Auth. #1011)			5	
#37				42														1		1	1
#41																		1		2	
#42																	1	1	1	1	1
#45																				2	
#47																				3	1
#49																				1	
#51																				4	
#53																	2	1		4	
#55																				1	
#56																		2		6	
#57																				1	
#58																				8	
#63																				2	
#64																		1		1	
#65																		2		3	
#66																				3	
#28									8 (Auth. #1018)												
From Sheet #190																					
TEMPORARY PAVEMENT REMOVAL																					
#22	8 Mile Rd.	7456 (Auth. #1019)														6					
#24	8 Mile Rd.	1247																			
#23	Oakland Ave.	1256 (Auth. #1009)														2 (Auth. #1009)					
#25	Oakland Ave.	130 (Auth. #1015)																			
TOTALS		37,640	9335	1585	60	43	121	10	8	73	38	35	14	13	14	8	10	15	1	49	3

MISCELLANEOUS

AS PER PLAN

STA. To STA.		Crushed Limestone Surface Tons	Corr. Conc. Divider Type 1 Syds	Corr. Conc. Divider Type 2 Syds	Maint. Traffic	Barricades S-40 Ea.	Barricades S-40 Furn & Install Lin. Ft.	Barricades S-40 Relocate Lin. Ft.	Barricades S-40 Remove Lin. Ft.	Timber Curb & Splash Boards Lin. Ft.	Offset Guard Rail-Double Lin. Ft.	St. Beam Gd. Rail Lin. Ft.	Temp. St. Bm. Gd. Rail Lin. Ft.	Topsoil Surface Cyds.	Chemical Fertilizer Lbs.	Class "A" Seeding Acres	Patch Pav't with Bit. Mat'l. - Tons	Aggregate Base (LM) - Cyds	Protective Fence - Lin. Rods	Part-Width Construction - Inters.	Fine Grading & Cleanup - Stas.
Sheet #36 (NB'd)							200														
Sheet #40 (SB'd)							200														
Sheet #48 (8 Mile Rd)											482	107									
41+82	52+50	1925																			
Sheet #52 (8 Mile Rd)											653.5	107									
Sheet #64 (N-W Ramp)												144.5									
Entire Project			46	40	Lump Sum	28							514	1830	4500	6.8	23	75	125	2	176
STAGE CONSTRUCTION - 8 MILE ROAD																					
Sheet #16	Stage 1						100														
Sheet #17	Stage 2						350	50													
Sheet #18	Stage 3						562.5	125													
Sheet #19	Stage 4						87.5	627													
Sheet #20	Stage 5							862.5	200	1,225											
Sheet #21	Stage 6								700												
TOTALS		1925	46	40	Lump Sum	28	1500	1665	900	1,225	1136	359	514	1,830	4,500	6.8	23	75	125	2	176

AS CONSTRUCTED

STA. to STA.		Crushed Limestone Surface Tons	Corr. Conc. Divider Type 1	Corr. Conc. Divider Type 2	Maint. Traffic	Barricades S-40 Install & Rem. Ea.	Barricades S-40 Furn. & Install Lin. Ft.	Barricades S-40 Relocate Lin. Ft.	Barricades S-40 Remove Lin. Ft.	Timber Curb & Splash Boards Lin. Ft.	Offset Guard Rail-Double Lin. Ft.	St. Beam Gd. Rail Lin. Ft.	Temp. St. Bm. Gd. Rail Lin. Ft.	Topsoil Surface Cyds.	Chemical Fertilizer Lbs.	Class A Seeding Acres	Aggregate Base (LM) - Cyds	Patch Pav't with Bit Mat'l. - Tons	Protective Fence - Lin. Rods	Part-Width Construction - Inters.	Fine Grading & Cleanup - Stas.
Sheet #36 (NB'd)							212.5														
Sheet #40 (SB'd)							200														
Sheet #48 (8 Mile Rd)											(Auth. #1027) —	107									
41+82	52+50	1482.4																			
Sheet #52 (8 Mile Rd)											(Auth. #1027) —	107									
Sheet #64 (N-W Ramp)												144.5									
Entire Project			72	23	Lump Sum	28							411.5	1771	4350	6.58	— (Auth. #1023)	— (Auth. #1023)	99.5	2	181
STAGE CONSTRUCTION - 8 MILE ROAD																					
Sheet #16	Stage 1						162.5														
Sheet #17	Stage 2						250	—													
Sheet #18	Stage 3						(Auth. #1009) 250	375	150												
Sheet #19	Stage 4						412.5	375	100												
Sheet #20	Stage 5						112.5	900	(Auth. #1009) 725	1065											
Sheet #21	Stage 6								—												
~ EXTRAS ~																					
Sheet #48 (8 Mile Rd)	Auth. #20[illegible]										479										
Sheet #52 (8 Mile Rd)	Auth. #2024										647										
TOTALS FOR EXTRAS											1126										
TOTALS		1482.4	72	23	Lump Sum	28	1600	1650	975	1065	—	359	412	1771	4350	6.58	—	—	99.5	2	181

All Totals shown are to the nearest whole unit

PLAN ESTIMATE BY W. Heveran DATE 3-65 CHECKED BY Maltbauer DATE 3-65 / Kaufman DATE 3-65 DATA COMPLETED [signature] PROJ. ENG. DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C 63; 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	I 75-1 (98) 59	187

S.P.R. DIV. NO.	STATE	MICHIGAN PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(98)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82252L	Wayne	Detroit	188	

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

BI 82252 L, C 63 WATER

WATER MAIN ALTERATION QUANTITIES

ITEM	UNIT	AS PER PLANS	AS CONSTRUCTED
CONCRETE GRADE A (FOR WATER MAIN ENCASEMENTS AND THRUST BLOCKS).	CU.YDS.	2041	2052.8 Rec. 75F
STEEL REINFORCEMENT (FOR WATER MAIN ENCASEMENTS)	LBS.	141700	146,658 Rec. 75F
6" C.I. WATER MAIN, FURNISHED	LIN.FT.	63	51 Rec. 75F
6" C.I. WATER MAIN	LIN.FT.	88	85 Rec. 75F
8" C.I. WATER MAIN, FURNISHED	LIN.FT.	187	240 Rec. 75F
8" C.I. WATER MAIN	LIN.FT.	777	779 Rec. 75F
12" C.I. WATER MAIN, FURNISHED	LIN.FT.	8	16 Rec. 75F
12" C.I. WATER MAIN	LIN.FT.	3546	3540 Rec. 75F
36" STEEL PLATE PIPE	LIN.FT.	15	12.24 Rec. 75F
54" PRESTRESSED CONCRETE WATER MAIN	LIN.FT	2212	2203.42 Rec. 75F
6" GATE WELLS	EACH	3	3
8" GATE WELLS	EACH	6	6
12" GATE WELLS	EACH	4	4
SPECIAL 8" BLOW-OFF WELLS	EACH	3	3
36" CONE VALVE WELLS	EACH	2	2
6" GATE VALVES, FURNISHED	EACH	3	3
8" GATE VALVES, FURNISHED	EACH	3	3
8" GATE VALVES	EACH	3	3
12" GATE VALVES	EACH	4	4
36" CONE VALVES	EACH	2	2
4" PERMANENT BLOW-OFFS	EACH	2	2
8" PERMANENT BLOW-OFFS	EACH	3	3
RELOCATING HYDRANTS	EACH	13	13
6" FIRE HYDRANTS, FURNISHED	EACH	1	1
6" GATE VALVES AND BOXES, FURNISHED	EACH	3	3
6" GATE VALVES AND BOXES	EACH	11	11
ENTRANCE MANHOLE WELLS	EACH	4	4
WATER MAIN TRENCH (FOR WORK DONE BY D.W.S.)	LIN.FT.	301	298 Rec. 75F
SAND-LIME MIXTURE (COMPACTED IN PLACE)	CU.YDS.	780	— Rec. 75F
4" C.I. PIPE DRAIN	LIN.FT.	32	32

~EXTRA~

Auth. #2036 - Final Cost of Force Account Stand-by Assistance - Lump Sum - $439.94

CHECKED
CONTRACT SECTION
DATE 9/10/68

Wm. A. Anderson
Proj. Eng. 11-14-67

82252 L, C 63; 63174 A, C 64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	I 75-1 (98) 59	188

QUANTITY SHEET – E

S. P. & R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
				189	

AS PER PLANS

DESCRIPTION	TOTAL	UNIT	FED. PART.	NON FED. PART.
REMOVING (4) SPAN WIRE TRAFFIC SIGNAL AND SPAN WIRE	3	EACH	3	–
REMOVE 2-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	2	EACH	2	–
REMOVE 3-BARRICADE LIGHTS AND EQUIPMENT	2	EACH	2	–
REMOVE 3-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	1	EACH	1	–
REMOVE 4-BARRICADE LIGHTS AND EQUIPMENT	1	EACH	1	–
TRAFFIC SIGNAL CONTROLLER, CABINET AND PEDESTAL ON NEW FOUNDATION	?	EACH	2	–
TWO 1-WAY TRAFFIC SIGNALS (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	2	EACH	2	–
TWO 1-WAY TRAFFIC SIGNAL ON NEW SPAN WIRE	1	EACH	1	–
TWO 2-WAY TRAFFIC SIGNAL (WITH SALVAGED HEADS) ON NEW SPAN WIRE	4	EACH	4	–
2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEAD) AND MAST ARM	1	EACH	1	–
TRAFFIC SIGNAL CONTROLLER, WITH BASE MOUNTED CABINET ON NEW FOUNDATION	1	EACH	1	–
2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS) MAST ARM, AND STANDARD ON NEW FOUNDATION	8	EACH	8	–
2-WAY MAST ARM TRAFFIC SIGNAL, MAST ARM AND STANDARD ON NEW FOUNDATION	2	EACH	2	–
TWO 2-WAY TRAFFIC SIGNAL (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	1	EACH	1	–
2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS) AND MAST ARM	1	EACH	1	–
2-WAY TRAFFIC SIGNAL ON 8 FT. PEDESTAL ON NEW FOUNDATION	3	EACH	3	–
1-WAY BRACKET ARM TRAFFIC SIGNAL	4	EACH	4	–
2-WAY BRACKET ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS)	1	EACH	1	–
2-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	3	EACH	3	–
3-BARRICADE LIGHTS AND EQUIPMENT	3	EACH	3	–
3-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	1	EACH	1	–
4-BARRICADE LIGHTS AND EQUIPMENT	1	EACH	1	–

AS CONSTRUCTED

DESCRIPTION	TOTAL	UNIT	FED. PART.	NON FED. PART.
REMOVING (4) SPAN WIRE TRAFFIC SIGNAL AND SPAN WIRE	3	EACH	3	—
REMOVE 2-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	2	EACH	2	—
REMOVE 3-BARRICADE LIGHTS AND EQUIPMENT	2	EACH	2	—
REMOVE 3-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	1	EACH	1	—
REMOVE 4-BARRICADE LIGHTS AND EQUIPMENT	1	EACH	1	—
TRAFFIC SIGNAL CONTROLLER, CABINET AND PEDESTAL ON NEW FOUNDATION	2	EACH	2	—
TWO 1-WAY TRAFFIC SIGNALS (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	2	EACH	2	—
TWO 1-WAY TRAFFIC SIGNAL ON NEW SPAN WIRE	1	EACH	1	—
TWO 2-WAY TRAFFIC SIGNAL (WITH SALVAGED HEADS) ON NEW SPAN WIRE	4	EACH	4	—
2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEAD) AND MAST ARM LOC. OF F	1	EACH	1	—
TRAFFIC SIGNAL CONTROLLER, WITH BASE MOUNTED CABINET ON NEW FOUNDATION	1	EACH	1	—
AUTH# 1028 – 2-WAY MAST ARM TRAFFIC SIGNALS (WITH SALVAGED HEADS) MAST ARM, AND STD. ON NEW	1	EACH	1	—
AUTH# 1028 – 2-WAY MAST ARM TRAFFIC SIGNAL, MAST ARM AND STD. ON NEW FOUNDATION FOUND.	0	EACH	0	—
TWO 2-WAY TRAFFIC SIGNALS (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	1	EACH	1	—
AUTH# 1028 – 2-WAY MAST ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS) AND MAST ARM	1	EACH	1	—
2-WAY TRAFFIC SIGNAL ON 8 FT. PEDESTAL ON NEW FOUNDATION	3	EACH	3	—
1-WAY BRACKET ARM TRAFFIC SIGNAL	4	EACH	4	—
2-WAY BRACKET ARM TRAFFIC SIGNAL (WITH SALVAGED HEADS)	1	EACH	1	—
2-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	3	EACH	3	—
3-BARRICADE LIGHTS AND EQUIPMENT	3	EACH	3	—
3-PEDESTAL TYPE DBL. FLASHER SIGNALS AND EQUIPMENT	1	EACH	1	—
4-BARRICADE LIGHTS AND EQUIPMENT	1	EACH	1	—

EXTRAS

	TOTAL	UNIT	FED. PART.	NON FED. PART.
AUTH# 2025 – ONE 1-WAY TRAFFIC SIGNAL (WITH SALVAGED HEADS) ON EXISTING SPAN WIRE	2	EACH	2	—
AUTH# 2027 – 2-WAY MAST ARM TRAFFIC SIGNAL MAST ARM AND STANDARD ON NEW FOUNDATION (8"/12" SIGNAL LENS)	2	EACH	2	—
AUTH# 2027 – 2-WAY MAST ARM TRAFFIC SIGNAL AND MAST ARM (8"/12" SIGNAL LENS)	1	EACH	1	—
AUTH# 2027 – 2-WAY MAST ARM TRAFFIC SIGNAL MAST ARM AND STANDARD ON NEW FOUNDATION (8"/12" SIGNAL LENS)	7	EACH	7	—
AUTH# 2034 – (DECREASE) – LABOR CHARGE FOR INSTALLATION OF UNDERBRIDGE LIGHTING UNITS MOUNTED ON PIERS	1	LUMP SUM	LUMP SUM	—
REC# 707 DECREASE – SUBSTITUTE RAPID FLASH KWH CABLE AND WITHDRAW FOR THWD CABLE	$ 701.54	LUMP SUM	$ 552.40	$ 249.14

B/822252L, C63 LIGHTING

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED W. A. Anderson DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY _____ DATE _____

82252 L, C63; 63174 A, C64	STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
	82252L	175-1(98)59	189

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			190	
ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

QUANTITY SHEET – E

B1 82252L, C63 LIGHTING

AS PER PLANS – DESCRIPTION	TOTAL	UNIT	FED. PART	NON FED. PAR.	AS CONSTRUCTED – DESCRIPTION		TOTAL	UNIT	FED PART	NON. FED PART.
6" SEWER CLASS B SEE SHEET #181 FOR GRAND TOTAL	280	L.F.	280		6" SEWER CLASS B	Rec 78F	273	L.F.	273	—
6" SEWER TAPS	1	EACH	1	-	6" SEWER TAPS	Rec 76F	2	Each	2	—
REMOVE WOOD POLES	111	EACH	111	-	REMOVE WOOD POLES		111	Each	111	—
REMOVE OVERHEAD STREET LIGHTING UNITS	93	EACH	93	-	REMOVE OVERHEAD STREET LIGHTING UNITS		93	Each	93	—
REMOVE 1-#6 OVERHEAD LINES	9402	L.F.	9402	-	REMOVE 1-#6 OVERHEAD LINES	Rec 76F	10,875	L.F.	10,875	—
REMOVE 2-#6 OVERHEAD LINES	5005	L.F.	5005	-	REMOVE 2-#6 OVERHEAD LINES	Rec 76F	4,689	L.F.	4,689	—
REMOVE 3-#6 OVERHEAD LINES	6700	L.F.	6700	-	REMOVE 3-#6 OVERHEAD LINES	Rec 76F	5,346	L.F.	5,346	—
REMOVE 3-#2 OVERHEAD LINES	60	L.F.	60	-	REMOVE 3-#2 OVERHEAD LINES		60	L.F.	60	—
REMOVE #8 TWIN SEC.	4485	L.F.	4485	-	REMOVE #8 TWIN SEC.	Rec 76F	5,321	L.F.	5,321	—
#1 TWO-WAY MANHOLE	14	EACH	14	-	#1 TWO-WAY MANHOLE		14	Each	14	—
#1 THREE-WAY MANHOLE	1	EACH	1	-	#1 THREE-WAY MANHOLE		1	Each	1	—
#1 FOUR-WAY MANHOLE	2	EACH	2	-	#1 FOUR-WAY MANHOLE		2	Each	[illegible]	—
#1 CORNER MANHOLE	1	EACH	1	-	#1 CORNER MANHOLE		1	Each	1	—
STREET TYPE "D" HANDHOLE	53	EACH	36	17	STREET TYPE "D" HANDHOLE		53	Each	[illegible]	17
RETAINING WALL HANDHOLE WITH FRAME AND COVER	7	EACH	7	-	RETAINING HANDHOLE WITH FRAME AND COVER		7	Each	7	—
ABANDONING MANHOLES SEE SHEET #187 FOR GRAND TOTAL	1	EACH	1	-	ABANDONING MANHOLES		1	Each	1	—
1-3" ENCASED CONDUIT	2441	L.F.	1708	733	1-3" ENCASED CONDUIT	Rec 76F	2476	L.F.	1745	731
2-3" ENCASED CONDUIT	3509	L.F.	3414	95	2-3" ENCASED CONDUIT	Rec 76F	3519	L.F.	3488	31
3-3" ENCASED CONDUIT	4576	L.F.	3354	1222	3-3" ENCASED CONDUIT	Rec 76F	4546	L.F.	3328	1218
4-3" ENCASED CONDUIT	1506	L.F.	1250	256	4-3" ENCASED CONDUIT	Rec 76F	1532	L.F.	1271	261
6-3" ENCASED CONDUIT	589	L.F.	457	132	6-3" ENCASED CONDUIT	Rec 76F	617	L.F.	480	137
8-3" ENCASED CONDUIT	150	L.F.	125	25	8-3" ENCASED CONDUIT	Rec 76F	148	L.F.	123	25
9-3" ENCASED CONDUIT	89	L.F.	77	12	9-3" ENCASED CONDUIT	Rec 76F	85	L.F.	69	16
12-3" ENCASED CONDUIT	40	L.F.	36	4	12-3" ENCASED CONDUIT		40	L.F.	36	4
1-4" ENCASED CONDUIT	327	L.F.	327	-	1-4" ENCASED CONDUIT	Rec 76F	401	L.F.	401	—
2-4" ENCASED CONDUIT	390	L.F.	390	-	2-4" ENCASED CONDUIT	Rec 76F	386	L.F.	386	—
3-4" ENCASED CONDUIT	10	L.F.	10	-	3-4" ENCASED CONDUIT	Rec 76F	12	L.F.	12	—
9-4" ENCASED CONDUIT	117	L.F.	101	16	9-4" ENCASED CONDUIT	Rec 76F	119	L.F.	102	17
1-#6 OVERHEAD LINES	6465	L.F.	6465	-	1-#6 OVERHEAD LINES	Rec 76F	7982	L.F.	7982	—
2-#6 OVERHEAD LINES	4485	L.F.	4485	-	2-#6 OVERHEAD LINES	Rec 76F	4317	L.F.	4317	—
3-#6 OVERHEAD LINES	6349	L.F.	6349	-	3-#6 OVERHEAD LINES	Rec 76F	4779	L.F.	4779	—
3-#2 OVERHEAD LINES	540	L.F.	540	-	3-#2 OVERHEAD LINES	Rec 76F	515.5	L.F.	515.5	—
#8 TWIN SEC.	5005	L.F.	5005	-	#8 TWIN SEC.	Rec 76F	4532	L.F.	4532	—
FIT-UP WOOD POLE AS A TRANSFORMER POLE WITH SALVAGED TRANSFORMER	1	EACH	1	-	FIT-UP WOOD POLE AS A TRANSFORMER POLE WITH SALVAGED TRANSFORMER		1	Each	1	—
FIT-UP WOOD POLE AS A COMBINATION PRIMARY AND STREET LIGHTING CABLE POLE	1	EACH	1	-	FIT-UP WOOD POLE AS A COMBINATION PRIMARY AND STREET LIGHTING CABLE POLE		1	Each	1	—
FIT-UP WOOD POLE AS A SERIES STREET LIGHTING CABLE POLE	3	EACH	3	-	FIT-UP WOOD POLE AS A SERIES STREET LIGHTING CABLE POLE		3	Each	3	—
FIT-UP WOOD POLE AS A MULTIPLE STREET LIGHTING TRANSFORMER POLE	1	EACH	1	-	FIT-UP WOOD POLE AS A MULTIPLE STREET LIGHTING TRANSFORMER POLE		1	Each	1	—
FIT-UP WOOD POLE AS A COMM. CABLE POLE	4	EACH	4	-	FIT-UP WOOD POLE AS A COMM. CABLE POLE		4	Each	4	—
FIT-UP WOOD POLE AS A COMBINATION TRANSFORMER AND SECONDARY CABLE POLE	1	EACH	1	-	FIT-UP WOOD POLE AS A COMBINATION TRANSFORMER AND SECONDARY CABLE POLE		1	Each	1	—
FIT-UP WOOD POLE AS A TRAFFIC SIGNAL INTERCONNECTION CABLE POLE	2	EACH	2	-	FIT-UP WOOD POLE AS A TRAFFIC SIGNAL INTERCONNECTION CABLE POLE		2	Each	2	—
50 FT. CLASS 2-WOOD POLE	1	EACH	1	-	50 FT. CLASS 2-WOOD POLE		1	Each	1	—
45 FT. CLASS 2-WOOD POLE	10	EACH	10	-	45 FT. CLASS 2-WOOD POLE	Rec 76F	9	Each	9	—
40 FT. CLASS 2-WOOD POLE	12	EACH	12	-	40 FT. CLASS 2-WOOD POLE	Rec 76F	13	Each	13	—
35 FT. CLASS 2-WOOD POLE	2	EACH	2	-	35 FT. CLASS 2-WOOD POLE	Rec 76F	3	Each	3	—
25 FT. CLASS 3-WOOD POLE	4	EACH	4	-	25 FT. CLASS 3-WOOD POLE	Rec 76F	3	Each	3	—
35 FT. CLASS 4-WOOD POLE	44	EACH	44	-	35 FT. CLASS 4-WOOD POLE		44	Each	44	—
INSTALL SALVAGED OVERHEAD STREET LIGHTING UNIT	5	EACH	5	-	INSTALL SALVAGED STREET OVERHEAD LIGHTING UNIT.		5	Each	5	—
400 W. MERCURY VAPOR OVERHEAD STREET LIGHTING UNIT	35	EACH	35	-	400 W. MERCURY VAPOR OVERHEAD STREET LIGHTING UNIT	Rec 76F	33	Each	33	—
INSTALL SALVAGED 400 W. MERCURY VAPOR LUMINAIRE	34	EACH	24	10	INSTALL SALVAGED 400 W. MECURY VAPOR LUMINAIRE		34	Each	24	10
INSTALL SALVAGED 400 W. MERCURY VAPOR OVERHEAD STREET LIGHTING UNIT	12	EACH	12	-	INSTALL SALVAGED 400 W. MERCURY VAPOR OVERHEAD STREET LIGHTING UNIT		12	Each	12	—
400 W. MERCURY VAPOR LUMINAIRE	11	EACH	6	5	400 W. MERCURY VAPOR LUMINAIRE (Auth. 1021 +3)		14	Each	6	8
250 W. MERCURY VAPOR LUMINAIRE	42	EACH	22	20	250 W. MERCURY VAPOR LUMINAIRE (Auth. 1021 -3)		39	Each	22	17
7500 V. TWO 1/C #8 LEAD COVERED STREET LIGHTING CABLES	3762	L.F.	3762	-	7500 V. TWO 1/C #8 LEAD COVERED STREET LIGHTING CABLES	Rec 76F	3766	L.F.	3766	—
COMMUNICATION CABLE 16 GA. PLASTIC JACKETED 3 PR.	1226	L.F.	1226	-	COMMUNICATION CABLE 16 GA. PLASTIC JACKETED 3 PR.	Rec 76F	1290	L.F.	1290	—
COMMUNICATION CABLE 16 GA. PLASTIC JACKETED 6 PR.	1019	L.F.	1019	-	COMMUNICATION CABLE 16 GA. PLASTIC JACKETED 6 PR.	Rec 76F	996	L.F.	996	—
5000 V. 2-1/C #6 LEAD COVERED PRIMARY CABLES	1329	L.F.	1329	-	5000 V. 2-1/C #6 LEAD COVERED PRIMARY CABLES	Rec 76F	1383	L.F.	1383	—
600 V. 2-1/C #6 LEAD COVERED CABLES	145	L.F.	145	-	600 V. 2-1/C #6 LEAD COVERED CABLES	Rec 76F	178	L.F.	178	—
600 V. 2-1/C #4 LEAD COVERED CABLES	802	L.F.	802	-	600 V. 2-1/C #4 LEAD COVERED CABLES	Rec 76F	779	L.F.	779	—
600 V. 1-1/C #6 DIRECT BURIAL CABLE IN CONDUIT	1198	L.F.	100	1098	600 V. 1-1/C #6 DIRECT BURIAL CABLE IN CONDUIT	Rec 76F	1241	L.F.	100	1141
600 V. 2-1/C #6 DIRECT BURIAL CABLES IN CONDUIT	10	L.F.	–	10	600 V. 2-1/C #6 DIRECT BURIAL CABLE IN CONDUIT	Rec 76F	12	L.F.	—	12
600 V. 1-1/C #6 DIRECT BURIAL CABLE & 1-#6 NEOPRENE IN CONDUIT	1890	L.F.	814	1076	600 V. 1-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN CONDUIT	Rec 76F	1816	L.F.	798	1018
600 V. 2-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN CONDUIT	11 554	L.F.	7489	4065	600 V. 2-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN CONDUIT	Rec 76F	11,667	L.F.	7497	4170
600 V. 3-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN CONDUIT	888	L.F.	170	718	600 V. 3-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN CONDUIT	Rec 76F	941	L.F.	217	724
600 V. 1-1/C #6 DIRECT BURIAL CABLE & 1-#6 NEOPRENE IN EARTH	425	L.F.	370	55	600 V. 1-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN EARTH		426	L.F.	370	55
600 V. 2-1/C #6 DIRECT BURIAL CABLES & 1-#6 NEOPRENE IN EARTH	600	L.F.	600	-	600 V. 2-1/C #6 DIRECT BURIAL CABLE & 1-#6 NEOPRENE IN EARTH	Rec 76F	656	L.F.	656	—
600 V. 2-1/C #12 PLASTIC JACKETED CABLE FOR TRAFFIC SIGNAL INTERCONNECTION	4565	L.F.	4565	-	600 V. 2-1/C #12 PLASTIC JACKETED CABLE FOR TRAFFIC SIGNAL INTERCONNECTION	Rec 76F	4588	L.F.	4588	—
600 V. 3-1/C #2/0 LEAD COVERED CABLES	547	L.F.	547	-	600 V. 3-1/C #2/0 LEAD COVERED CABLES	Rec 76F	544	L.F.	544	—
LIGHTING STANDARD WITH 6' ARM ON NEW FOUNDATION	65	EACH	30	35	LIGHTING STANDARD WITH 6' ARM ON NEW FOUNDATION		65	Each	30	35
LIGHTING STANDARD WITH 10' ARM ON NEW FOUNDATION	13	EACH	10	3	LIGHTING STANDARD WITH 10' ARM ON NEW FOUNDATION		13	Each	10	3
LIGHTING STANDARD WITH 6' ARM ON BRIDGE	13	EACH	12	1	LIGHTING STANDARD WITH 6' ARM ON BRIDGE		13	Each	12	1
LIGHTING STANDARD WITH 6' ARM ON RETAINING WALL	7	EACH	7	-	LIGHTING STANDARD WITH 6' ARM ON RETAINING WALL		7	Each	7	—
LIGHTING STANDARD WITH 10' ARM & 5'-6" SHAFT ON NEW FOUNDATION	2	EACH	2	-	LIGHTING STANDARD WITH 10' ARM & 5'6" SHAFT ON NEW FOUNDATION		2	Each	2	—
COMBINATION STREET LIGHTING & TRAFFIC SIGNAL STANDARD WITH 10' ARM ON NEW FOUNDATION	1	EACH	1	-	COMBINATION STREET LIGHTING & TRAFFIC SIGNAL STANDARD WITH 10' ARM ON NEW FOUNDATION		1	Each	1	—
FURNISHING POLICE CALL BOXES	1	EACH	–	1	FURNISHING POLICE CALL BOXES		1	Each	—	1
UNDERBRIDGE WIRING SYSTEM	1	LUMP SUM	LUMP SUM	-	UNDERBRIDGE WIRING SYSTEM		1	Lump Sum	Lump Sum	—
UNDERBRIDGE LIGHTING UNIT MOUNTED ON PIERS	20	EACH	20	-	UNDERBRIDGE LIGHTING UNIT MOUNTED ON PIERS		20	Each	20	—
UNDERBRIDGE LIGHTING UNIT MOUNTED BETWEEN BRIDGE BEAMS	20	EACH	20	-	UNDERBRIDGE LIGHTING UNIT MOUNTED BETWEEN BRIDGE BEAMS		20	Each	20	—
REMOVE FLASHER	1	EACH	1	-	REMOVE FLASHER		1	Each	1	—
REMOVE 600 V. 1-1/C #6 DIRECT BURIAL CABLE IN CONDUIT	933	L.F.	–	933	REMOVE 600 V. 1-1/C #6 DIRECT BURIAL CABLE IN CONDUIT	Rec 76F	957	L.F.	—	957
REMOVING 2-WAY INTERNALLY ILLUMINATED CASE SIGN	2	EACH	2	-	REMOVING 2-WAY INTERNALLY ILLUMINATED CASE SIGN		2	Each	2	—
RELOCATE 2-WAY INTERNALLY ILLUMINATED CASE SIGN ON EXISTING SPAN WIRE	2	EACH	2	-	RELOCATE 2-WAY INTERNALLY ILLUMINATED CASE SIGN ON EXISTING SPAN WIRE		2	Each	2	—
RELOCATE (2) SPAN WIRE TRAFFIC SIGNALS ON NEW SPAN WIRE	1	EACH	1	-	RELOCATE (2) SPAN WIRE TRAFFIC SIGNAL NEW SPAN WIRE		1	Each	1	—
REMOVING 1-WAY INTERNALLY ILLUMINATED CASE SIGN	4	EACH	4	-	REMOVING 1-WAY INTERNALLY ILLUMINATED CASE SIGN		4	Each	4	—
~~2-WAY INTERNALLY ILLUMINATED CASE SIGN ON EXISTING SPAN WIRE~~	~~2~~	EACH	~~2~~	-	AUTH.# 1003 6/10/65 2-WAY INTERNALLY ILLUMINATED CASE SIGN		0	Each	0	—
TRAFFIC SIGNAL 7/C #14 PLASTIC JACKETED CABLE FOR CHRONOPLAN	727	L.F.	727	-	TRAFFIC SIGNAL 7/C #14 PLASTIC JACKETED CABLE FOR CHRONOPLAN	Rec 76F	834	L.F.	834	—
REMOVING TRAFFIC SIGNAL CONTROLLER AND CABINET	1	EACH	1	-	REMOVING TRAFFIC SIGNAL CONTROLLER AND CABINET		1	Each	1	—
REMOVING (2) SPAN WIRE TRAFFIC SIGNAL AND SPAN WIRE	6	EACH	6	-	REMOVING (2) SPAN WIRE TRAFFIC SIGNAL AND SPAN WIRE		6	Each	6	—
INSTALL 2-WAY INTERNALLY ILLUMINATED CASE SIGN SUPPLIED BY OTHERS ON EXISTING SPAN WIRE	2	EACH	2	-	AUTH.# 2006 6/10/65 INSTALL 2-WAY INTERNALLY ILLUMINATED CASE SIGN SUPPLIED BY OTHERS ON EXIST. SPAN WIRE		2	Each	2	—

PLAN ESTIMATE BY ________ DATE ________ CHECKED BY ________ DATE ________ DATE ________ DATA COMPLETED *[signature]* PROJ. ENG. DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY ________ DATE ________

82252 L, C 63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
82252L	175-1 (98) 59	190

QUANTITY SHEET

GRADING

R.O.W. Div. No.	STATE & MICH.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Wash Park	191	

AS PER PLAN

STA.	To STA.		Earth Exc. Cyds.	Emb + Shr. Cyds.	Waste Cyds.	Subgrade undercutting Cyds.	Subbase C.I.P. Cyds.	Porous Mat'l (C.I.P.) Grade "A" Cyds.	Porous Mat'l (C.I.P.) Grade "B" Cyds.	From	To	REMARKS
			REGULAR EARTHWORK									
472+97	486+28	(N.Bd)	5277	379	4898		2285					
373+00	386+28	(S.Bd)	4009	416	3593		2456					
8 Mile Temp. Road			2606								2606	
40+20	63+50	(W.Bd)	1638	225	1413		686					
			EXCAVATION FOR PUMPHOUSE CONSTRUCTION									
DOB of 63174A			2840		2840							Pumphouse
			EXCAVATION & BACKFILL FOR SEWERS									
P.O.B.	P.O.E.		1770		1770			1170	600			
			SUBGRADE UNDERCUTTING & BACKFILL									
Entire Project					450	450		450				
			WATERMAIN @ 8 MILE ROAD & NORTH									
			451		451			401				
		921										
TOTALS			18,591	1,020	15,415	450	5,427	2,021	600		2,606	

(Proj. BI 82252L, C63)

AS CONSTRUCTED

STA.	To STA.		Earth Exc. Cyds	Emb + Shr. Cyds.	Waste Cyds.	Subgrade Undercutting Cyds	Subbase C.I.P. Cyds.	Porous Mat'l (C.I.P.) Grade "A" Cyds	Porous Mat'l (C.I.P.) Grade "B" Cyds	From	To
			REGULAR EARTHWORK								
472+97	486+28	(N.Bd)	6790	390	6400		2339				
373+00	386+28	(S.Bd)	5080	501	4579		2562				
8 Mile Temp. Road			1358	350	1008						
40+20	55+50	(W.Bd)	1306	198	1108		891				
26+86	37+05	(W.Bd 8 Mile)	1213	152	1061		666				
26+95	30+63	(E.Bd 8 Mile)	332		332		260				
			EXCAVATION FOR PUMPHOUSE & W.BD. SERV. RD. BR. CONSTRUCTION								
DOB of 63174A W.B.S.R. Bridge S10 of 82252			9901		9901						
			EXCAVATION & BACKFILL FOR SEWERS								
P.O.B.	P.O.E.		2597	321	2276			1425	448		
			SUBGRADE UNDERCUTTING & BACKFILL								
Entire Project					442	442		442			
			WATERMAIN @ 8 MILE & NORTH								
P.O.B.	P.O.E.		777		777			735			
TOTALS			29,354	1912	27,884	442	6718	2602	448		

(Proj. BI 82252L, C63)

DRAINAGE

AS PER PLAN

Sheet No.	MANHOLES, CATCH BASINS & INLETS: 0'-6' deep 3K	5K	6K	6'-14' deep 1A	3A	3D	3K	6D	6E	6K	14'-25' deep	Covers A	Edge Drain K	6"	SEWERS: Class A 12"	21"	27"	Class B 12"	15"	18"	24"	36"	Class C 12"	Cl. "A" C76 II 12"	Cl. "A" C76 III 12"	Cl. "B" C76 III 15"	18"	24"
	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea		Ea	Ea	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.		Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.
NORTHBOUND I-75 SERVICE ROAD																												
#37				2			3			2					32			8		312				22	36			
#38				6	1		7	1	1	2				1222	18			142		282	426			326				122
SOUTHBOUND I-75 SERVICE ROAD																												
#42				2	1	1	2	1						360	34	12	60		62			360		48				
#43				3			2						8	499	12						122	350		32			60	
8 MILE ROAD																												
#45		1			1			1					1	488	61									50				
#47		1	1		1										10									10		28		
#51		1																						18				
WESTBOUND 8 MILE SERVICE ROAD																												
#59							1								102													
#60				2	1		2								48									58		252		
#61				1																				18			30	
#62				2																			36					
TOTALS		3	1	6	15	2	1	18	2	1	4			1 8	309	317	12	60	150	62	594	598	710	36	582	36	280	90	122

AS CONSTRUCTED

Sheet No.	MANHOLES, CATCH BASINS & INLETS: 0'-6' deep 3K	5K	6K	9K	6'-14' deep 1A	3A	3D	3K	6D	6E	6K	14'-25' deep	Covers A	Edge Drain K	6"	SEWERS: Class A 12"	27"	21"	Class B 12"	15"	18"	24"	36"	Class C 12"	Cl. "A" C76 II 12"	Cl. "B" C76 III 12"	15"	18"	24"
	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea		Ea	Ea	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.		Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.
NORTHBOUND I-75 SERVICE ROAD								(North Bound)		(Joint Bound)															(North Bound)		(Joint Bound)		
#37					1	1		2			3				176	68			—	304					67				
#38			2		7	—	1	5	1	1	2			1	1205	24		6	148	279	424				332				117
SOUTHBOUND I-75 SERVICE ROAD																													
#42					2	1	—	3	—					1	122	34	64	16		62		464			62				
#43					3			2					(South Bound)	3	1179	6.6			(North Bound)		1438	236			4			79	
8 MILE ROAD																													
#45		—		1				2						1	507	41									46				
#47		—	1			1		1								41									10			34	
#51		1																							163				
WESTBOUND 8 MILE SERVICE ROAD																													
#59								—		1						67									57			234	
#60		1		1		1		2							185	33									18			315	
#61				1																									
#62				1			1																36						
—EXTRAS—																													
#42-Auth #2021						1																							
#62-Rec #80						1																							
#60-Auth #2024																15													
TOTAL FOR EXTRAS						2										15													
TOTALS		2	1	6	—	15	3	1	17	1	1	6		3	3	3374	—	314.6	64	22	148	62	583	5678	700	36		6229	—	270	105	117

CHECKED
Contract Engineer
4/7/68

All Totals shown are to the nearest whole unit

PLAN ESTIMATE BY Lounsbury DATE 3-65 CHECKED BY Mathanek Lautman DATE 3-65 DATA COMPLETED W. A. Anderson PROJ. ENG DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C63; 63174A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO
63174A	I-75 2 (28) 59	191

I 63174A, C64

5

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	192	

QUANTITY SHEET
SURFACING

I 63174A, C64

AS PER PLANS

STA.	STA.	LENGTH	WIDTH	CONCRETE PAVEMENT 8" Unif. (SQ. YDS.)	9" Unif. (SQ. YDS.)	Patch 8" Unif. (SQ. YDS.)	CONC. BASE CSE. 8" UNIF. (SQ. YDS.)	PAV'T. REINF. (SQ. YDS.)	BIT. CONC. LEVEL. CSE (TONS)	BIT. CONC. WEAR. CSE. 31AA (TONS)	BIT. BOND COAT (GALS.)	CLASS A SHOULDERS (TONS)	SEL. SUBBASE C.I.P. (Cu. Yds.)	CALCIUM CHLORIDE (TONS)	WATER-1000 GAL. UNITS (UNITS)	REMARKS
				NORTHBOUND I-75 SERVICE ROAD												
472+96	473+07	(Omit Intersection)														W.Bd. 8 Mile Serv. Rd.
473+07	475+85	278'	Var.		1196			1196					157	1.41	3.77	
475+85	476+45	60'	Intersect.		303			303					38	0.34	0.91	Muir Ave.
476+45	478+60	215'	36'		860			860					114	1.03	2.74	
478+60	479+20	60'	Intersect.		303			303					38	0.34	0.91	George Ave.
479+20	481+35	215'	36'		860			860					114	1.03	2.74	
481+35	481+95	60'	Intersect.		303			303					38	0.34	0.91	Hayes Ave.
481+95	484+10	215'	36'		860			860					114	1.03	2.74	
484+10	484+70	60'	Intersect.		303			303					38	0.34	0.91	Milton Ave.
484+70	486+28.5	158.50'	36'		634			634					84	0.76	2.02	
474+30	475+85	(15 Alley)		279				279								
				SOUTHBOUND I-75 SERVICE ROAD												
373+00	373+08	(Omit Intersect.)														W.Bd. 8 Mile Serv. Rd.
373+08	373+82	74'	Var.		387			387					49	0.44	1.18	S. to W. Turn. Rdwy
373+82	375+89	207	48'		1104			1104					141	1.27	3.38	
375+89	376+49	60'	Intersect.		360			360					45	0.41	1.08	Muir Ave.
376+49	378+65	216'	36		864			864					115	1.04	2.76	
378+65	379+25	60'	Intersect.		303			303					39	0.35	0.94	George Ave.
379+25	381+38	213'	36'		852			852					113	1.02	2.71	
381+38	381+98	60'	Intersect.		303			303					39	0.35	0.94	Hayes Ave.
381+98	384+13	215'	36'		860			860					114	1.03	2.74	
384+13	384+73	60'	Intersect.		303			303					39	0.35	0.35	Milton Ave.
384+73	386+28.5	155.50'	36'		622			622					83	0.75	1.99	
374+86	375+91	(15' Alley)		200				200								
				WESTBOUND 8 MILE SERVICE ROAD												
32+18	34+56	238'	24'						54	25	127					
34+56	35+20	64'	Intersect.						21	10	49					Highland Ave.
35+20	37+70	250'	24'-36'						71	[illegible]	167					
37+70	39+68	198'	36'						67	32	158					
39+68	40+20	52'	Var.				194	194	16	8	39					
40+20	40+85	65'	Var.				289	289	25	12	58					
40+85	41+68	83'	Intersect.				300	300	26	12	60					Caldonia Ave.
41+68	46+74	506'	Var.		843			843					116	1.04	2.78	S. to W. Turn. Rdwy.
46+74	47+70.30	96.30'	Intersect.		84			84					12	0.11	0.29	S.Bd. I-75 Serv. Rd.
47+70.30	48+97.63	(S10 of 82252L)											10	0.09	0.24	
48+97.63	49+80	82.37'	Intersect.		76			76					41	0.37	0.98	N.Bd. I-75 Serv. Rd.
49+80	50+66	86'	Intersect.		283			283					50	0.45	1.20	W. to N. Turn. Rdwy.
50+66	52+62	196'	17'		370			370								
52+62	53+50	88'	Intersect.		240			240								Russell St.
53+50	60+44	694'	17'						111	52	262					
60+44	60+97	57'	Intersect.						12	6	28					Hughes Ave.
				EASTBOUND 8 MILE ROAD												
26+95	27+10	15'	Var.				10	10	1	1	2					
27+10	30+43	333'	29'-0'		537			537					77	0.69	1.85	
				WESTBOUND 8 MILE ROAD												
26+86	29+44	258'	60'				327	327	146	69	344					
29+44	32+18	274'	Var.			12	457	457	163	77	384					
32+18	34+94	276'	36'		1104			1104					147	1.32	3.53	
34+94	37+03	209'	36'-0'		418			418								
37+03	61+08	(OMIT - this project)														
61+08	71+09	1001'	17'						161	76	378					
71+09	71+70	56'	Intersect.						15	7	35					Merrill Ave.
				TEMPORARY PAVEMENT ON 8 MILE ROAD												
Stage 1				1985								290		1.31	3.48	
POB	POE								10		31					
				TEMPORARY PAVEMENT ON OAKLAND AVE.												
Stage 2				1025								224		1.01	2.69	
				WATER MAIN @ DEQUINDRE												
Falker Ave.						26										
TOTALS				3,499	15,538	38	1,577	17,591	899	420	2,122	514	1965	20	53	

AS CONSTRUCTED

STA.	STA.	LENGTH	WIDTH	CONCRETE PAVEMENT 8" UNIF. (SQ. YDS.)	9" UNIF. (SQ. YDS.)	Patch 8" Unif. (SQ. YDS.)	CONC. BASE CSE. 8" UNIF. (SQ. YDS.)	PAV'T. REINF. (SQ. YDS.)	BIT. CONC. LEVEL. CSE. (TONS)	BIT. CONC. WEAR. CSE. 31AA (TONS)	BIT. BOND COAT (GALS.)	CLASS A SHOULDERS (TONS)	SEL. SUBBASE C.I.P. (Cu. Yds.)	CALCIUM CHLORIDE (TONS)	WATER-1000 GAL. UNITS (UNITS)	BIT. AGG. SHLD. (Conc. Pav't)	REMARKS
				NORTHBOUND I-75 SERVICE ROAD													
472+96	473+07	(Omit Intersection)															W. Bd. 8 Mile Serv. Rd.
473+07	475+85	278'	Var.		1203			1203					152	1.41	—		
475+85	476+45	60'	Intersect.		362			362					40	0.34	—		Muir Ave.
476+45	478+60	215'	36'		867			867					115	1.03	—		
478+60	479+20	60'	Intersect.		298			298					35	0.34	—		George Ave.
479+20	481+35	215'	36'		860			860					112	1.03	—		
481+35	481+95	60'	Intersect.		310			310					38	0.34	—		Hayes Ave.
481+95	484+10	215'	36'		861			861					114	1.03	—		
484+10	484+70	60'	Intersect.		294			294					38	0.34	—		Milton Ave.
484+70	486+28.5	158.5'	36'		629			629					84	0.76	—		
474+30	475+85	(15' Alley)		280				280									
				SOUTHBOUND I-75 SERVICE ROAD													
373+00	373+08	(Omit Intersection)															W. Bd. 8 Mile Serv. Rd.
373+08	373+82	74'	Var.		402			402					50	0.44	—		S. to W. Turn. Rdwy.
373+82	375+89	207'	48'		1097			1097					140	1.27	—		
375+89	376+49	60'	Intersect.		349			349					47	0.41	—		Muir Ave.
376+49	378+65	216'	36'		826			826					114	1.04	—		
378+65	379+25	60'	Intersect.		309			309					38	0.35	—		George Ave.
379+25	381+38	213'	36'		852			852					113	1.02	—		
381+38	381+98	60'	Intersect.		315			315					39	0.35	—		Hayes Ave.
381+98	384+13	215'	36'		860			860					114	1.03	—		
384+13	384+73	60'	Intersect.		307			307					39	0.35	—		Milton Ave.
384+73	386+28.5	155.5'	36'		615			615					82	0.75	—		
374+86	375+91	(15' Alley)		—				—									
				WEST BOUND 8 MILE SERVICE ROAD													
32+18	34+56	238'	24'						42	33	80						
34+56	35+20	64'	Intersect.						16	13	31						Highland Ave.
35+20	37+70	250'	24'-36'						55	43	105						
37+70	39+68	198'	36'			15			52	42	100						
39+68	40+20	52'	Var.						12	11	25						
40+20	40+85	65'	Var.		193			193	—	—	—		24	0.22	—		
40+85	41+68	83'	Intersect.		300			300	—	—	—		36	0.32	—		Caldonia Ave.
41+68	46+74	506'	Var.		837			837					118	1.04	—		S. to W. Turn. Rdwy.
46+74	47+70.30	96.3'	Intersect.		95			95					10	0.11	—		S.Bd. I-75 Serv. Rd.
47+70.30	48+97.63	(S10 of 82252L)											—	—	—		
48+97.63	49+80	82.37'	Intersect.		79			79					10	0.37	—		N.Bd. I-75 Serv. Rd.
49+80	50+66	86'	Intersect.		280			280					52	0.45	—		W. to N. Turn. Rdwy.
50+66	52+62	196'	17'		363			363					49	0.44	—		
52+62	53+50	88'	Intersect.		243			243					29	0.26	—		Russell St.
53+50	60+44	694'	17'			16			86	73	165						
60+44	60+97	57'	Intersect.						9	8	18						Hughes Ave.
				EAST BOUND 8 MILE ROAD													
26+95	27+10	15'	Var.				—	—	1.34	1.29	1						
27+10	30+43	333'	29'-0'		539			539					77	0.69	—		
				WEST BOUND 8 MILE ROAD													
26+86	29+44	258'	60'				386	386	114	90	217						
29+44	32+18	274'	Var.			—	436	436	127	100	242						
32+18	34+94	276'	36'		1105			1105					141	0.33	—		
34+94	37+03	209'	36'-0'		402			402					55				
37+03	61+08	(OMIT - this project)															
61+08	71+09	1001'	17'			6			125	99	238						
71+09	71+70	56'	Intersect.						12	9	22						Merrill Ave.
				TEMPORARY PAVEMENT ON 8 MILE ROAD													
Stage 1				2351								309.6		—			
POB	POE								8		18						
				TEMPORARY PAVEMENT ON OAKLAND													
Stage 2				946								230		—			
				WATER MAIN @ DEQUINDRE													
Felker Ave.						22			EXTRAS								
TOTALS				3577	16,052	59	822	17,154	659.34	522.29	1262	539.6	2105	17.86	—	Rec 84F 30.21 —	

All Totals shown are to the nearest Whole Unit.

CHECKED CONTRACT SECTION DATE 4/8/68

PLAN ESTIMATE BY Lounsbury DATE 3-65 CHECKED BY Malthaner DATE 3-65 Kaufman DATE 3-65 DATA COMPLETED Wm A. Anderson PROJ. ENG. DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C63, 63174 A, C 64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO
63174A	I-75-2 98 59	192

QUANTITY SHEET

DRIVES, SIDEWALKS, CURB AND GUTTER

F.A.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Hazel Park	193	

AS PER PLANS

STA.	STA.	Temp. Conc. Sidewalk Sq. Ft.	4" Conc. Sidewalk Sq. Ft.	Conc. Curb Det.#2 Lin. Ft.	Conc. Curb & Gutter Det.#8 Lin. Ft.	Conc. Curb & Gutter Det.#8A Lin. Ft.	Conc. Curb & Gutter Det.#10 Lin. Ft.	Conc. Curb & Gutter Det.#6A Lin. Ft.	Conc. Walk 7" Uniform Sqds.				REMARKS
NORTHBOUND I-75 SERVICE ROAD													
475+96	476+18							614					
Sheet # 37			875										
476+15	478+90							538					
478+90	481+65							538					
481+65	484+40							538					
Sheet # 38			4505										
484+40	486+285							373					
Sheet # 39			1480										
SOUTHBOUND I-75 SERVICE ROAD													
373+04	376+19			150				632					
Sheet # 42			1498										
376+19	378+95							552					
378+95	381+68							534					
381+68	384+43							538					
Sheet # 43			775						35				
384+43	386+285							366					
Sheet # 44			510										
EASTBOUND 8 MILE ROAD													
26+95	30+43							369					
WESTBOUND 8 MILE ROAD													
26+86	32+18					10		558					
32+18	37+03							761					
Sheet # 45			378										
WESTBOUND 8 MILE SERVICE ROAD													
32+18	34+88							270					
34+88	41+26						89	450					
41+26	43+58							214					
Sheet # 60			894						40				
43+58	46+97							563					
46+97	49+55							96					
49+55	52+92							451					
52+92	53+60						60						
Sheet # 61			1844						79				
R.O.B. to R.O.E.							1250						
8 MILE ROAD TEMPORARY													
Sheet # 24		1140											
TOTALS		1,140	12,759	150		10	1,399	6911	2,073	154			

AS CONSTRUCTED

STA.	STA.	Temp. Conc. Sidewalk Sq. Ft.	4" Conc. Sidewalk Sq. Ft.	Conc. Curb Det.#2 Lin. Ft.	Conc. Curb & Gutter Det.#8 Lin. Ft.	Conc. Curb & Gutter Det.#8A Lin. Ft.	Conc. Curb & Gutter Det.#10 Lin. Ft.	Conc. Curb & Gutter Det.#6A Lin. Ft.	Conc. Walk 7" Uniform Sqds.				REMARKS
NORTHBOUND I-75 SERVICE ROAD													
472+96	476+15												
Sht. # 37			1224					618					
476+15	478+90												
478+90	481+65							313					
481+65	484+40							545					
Sht # 38			4323					532					
484+40	486+285												
Sht. # 39			768					310					
SOUTHBOUND I-75 SERVICE ROAD													
373+04	376+19			—				637		31			
Sht # 42			1414										
376+19	378+95							554		37			
378+95	381+68							543					
381+68	384+43							544		18			
Sht. # 43			765										
384+43	386+285							345					
Sht. # 44			—										
EASTBOUND 8 MILE ROAD													
26+95	30+43							376					
WESTBOUND 8 MILE ROAD													
26+86	32+18				—	118	526	25					
32+18	37+03		285				682						
Sht # 45													
WESTBOUND 8 MILE SERVICE ROAD													
32+18	34+88							238					
34+88	41+26			93		8		428					
41+26	43+58			25			214	—					
Sht # 60			1846							22			
43+58	46+97						337						
46+97	49+55						59	—					
49+55	52+92			25			545	—					
52+92	53+60			21			22	—					
Sht. # 61			2274							46			
R.O.B. to R.O.E.						101							
8 MILE ROAD TEMPORARY													
Sht # 24			—										
TOTALS		Rec. 8.05 12,119	Rec. 8.05 1104		Rec. 8.05 —	Rec. 8.05 227	Rec. 8.05 9974	Rec. 8.05 036	—	154			

— EXTRAS —

Auth. # 2013 & Rec # 30F Decrease Cost - Increase to Hot Poured Rubber 1448 Lin. Ft. @ $4.034/lft = $5845.13 (minus) ✓

Auth. # 2012 & # 2012 Calcium Chloride (add to pavt. and curb concrete) - Force Account Cost. — $221.80

All Totals shown are to the nearest whole unit.

CHECKED

I 63174A, C64

PLAN ESTIMATE BY Lounsbury DATE 3-65 CHECKED BY Malkhaner DATE 3-65 Lautman DATE 8-65 DATA COMPLETED Mc Lauchlan PROJ. ENG DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY

82252 L, C63, 63174 A, C-64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75 2 98 99	193

QUANTITY SHEET

REMOVALS & MISC. DRAINAGE ITEMS

F.A.P. or S.P. Div. No.	STATE & MICH.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
ROUTE	STATE HIGHWAY	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	Wagg/Park	194	

AS PER PLAN

Sheet No.	Rem. Old Pavt. Sq. Yds.	Rem. Sidewalk Sq. Yds.	Rem. Curb & Gutter Lin. Ft.	Rem. Trees 8"-12" Ea.	13"-24" Ea.	25"-36" Ea.	Gate Wells Aban. Ea.	Adj. Ea.	Reset Ea.	Rem. Bit. Surface Sq. Yds.	Rem. Old Pavt. (Patches) Sq. Yds.	Removing Underground Gasoline Storage Tanks, Including Backfill Ea.	Abandoning Manholes Ea.	Abandoning Catch Basins Ea.	Reconst. M.H. Ea.	Reconst. C.B. Ea.	Adj. Const. Manhole 1. M.H. Ea.	Adj. Const. Manhole 1. C.B. Ea.	Sewer Taps 6" Ea.	12" Ea.	18" Ea.	Tile Traps 12" Ea.	18" Ea.	18" Ea.
#28	2555	332		1	1								3	5										
#29	4600	1215	26	16	35	2	4	1	1					3										
#30	1312	50	1250		6					833	12		1	2										
#31	1196	74			3						24			2										
#32	528	36																						
#33											18			3										
TEMPORARY PAVEMENT REMOVAL																								
#22 8 Mile Rd.	1945																							
#23 Oakland Ave.	1036																							
Entire Project												3												
WATER MAIN @ DEQUINDRE																								
Felker Ave.											26													
#38																	1					2	1	
#42															1		1					2		
#43															6	2	1		1	2	2	2		
#45																				1		1		
#59																		1						
#60																		1				1		
TOTALS	13,171	1,707	1,276	17	45	2	4	1	1	833	80	3	4	15	7	2	3	2	1	3	2	8	1	

AS CONSTRUCTED

Sheet No.	Rem. Old Pavt. Sq. Yds.	Rem. Sidewalk Sq. Yds.	Rem. Curb & Gutter Lin. Ft.	Rem. Misc. Conc. Cu. Yds.	Rem. Trees 8"-12" Ea.	13"-24" Ea.	25"-36" Ea.	Gate Wells Aban. Ea.	Adj. Ea.	Reset Ea.	Rem. Bit. Surface Sq. Yds.	Rem. Old Pavt. (Patches) Sq. Yds.	Removing Underground Gasoline Storage Tanks, Including Backfill Ea.	Abandoning Manholes Ea.	Abandoning Catch Basins Ea.	Reconst. M.H. Ea.	Reconst. C.B. Ea.	Adj. Const. Manhole #1 M.H. Ea.	Adj. Const. Manhole #1 C.B. Ea.	Sewer Taps 6" Ea.	12" Ea.	18" Ea.	Tile Traps 12" Ea.	18" Ea.	18" Ea.
#28	2310	314 (Auth. 1000)			1	1			1					4	5										
#29	4418	775	48		20	39	3	4	1	1				2 (Auth. 1000)	4			1							
#30	1187	50	121			7	1		4		193	25		1	3			1							
#31	2148	127	8			3						15			2				1						
#32	502	32	59																						
#33			42									22			3										
TEMPORARY PAVEMENT REMOVAL																									
#22 8 Mile Rd.	2109																								
#23 Oakland Ave.	946																								
#24 8 Mile Rd.	201																								
#25 8 Mile Rd.	31																								
Entire Project													3												
WATER MAIN @ DEQUINDRE																									
Felker Ave.												22													
#37																								1	
#38																		—				3		—	
#42																1		—				2			
#43								2								2	1	3	2	1	2	4	2		
#45																				—		1			
#59																			1						
#60																			—			1			
#61																			1						
#28 Auth. #2008				978																					
#43 Auth. #2012 & 2019 – Force Acct. Cost 24" Sewer Tap – (1 ea.) – Total Cost $1305.77																									
TOTALS	13,853	1298	278	—	21	50	4	4	8	1	193	84	3	7	17	3	1	5	4	3	2	4	9	1	

MISCELLANEOUS

AS PER PLAN

STA. To STA.	Maint. Traffic Lump Sum	Barricades S-40 Ea.	Fur. & Install Lin. Ft.	Relocate Lin. Ft.	Remove Lin. Ft.	Patch. Pavt. with Bit. Matl. Tons	Agg. Base (L.M.) Cuds	Fine Grading & Cleanup Sta.	Topsoil Surface Cu. Yds.	Chemical Fertilizer Lbs.	Class "A" Seeding Acres	Protective Fence Lin. Rods
Entire Project	Lump Sum	15				25	83	27	400	1000	1.5	30
STAGE CONSTRUCTION – 8 MILE ROAD												
Sheet #17 Stage 2			337.5	50								
Sheet #18 Stage 3			350	162.5								
Sheet #20 Stage 5					687.5							
TOTALS	Lump Sum	15	687.5	212.5	687.5	25	83	27	400	1000	1.5	30

AS CONSTRUCTED

STA. To STA.	Maint. Traffic Lump Sum	Barricades S-40 Installed Ea.	Fur. & Install Lin. Ft.	Relocate Lin. Ft.	Remove Lin. Ft.	Patch. Pavt. with Bit. Matl. Tons	Agg. Base (L.M.) Cuds	Barricade Removed Ea.	Fine Grading & Cleanup Sta.	Topsoil Surface Cu. Yds.	Chemical Fertilizer Lbs.	Class "A" Seeding Acres	Protective Fence Lin. Rods
Entire Project	Lump Sum	15				—	—	15	26.61	494	1150	1.84	15.2
STAGE CONSTRUCTION – 8 MILE ROAD													
Sheet #17 Stage 2			162.5	—	75								
Sheet #18 Stage 3			312.5	112.5	300								
Sheet #20 Stage 5			212.5	100	312.5								
TOTALS	Lump Sum	15	687.5	212.5	687.5	—	—	15	26.61	494	1150	1.84	15.2

All Totals shown are to the nearest whole unit.

PLAN ESTIMATE BY L.W. Lakey DATE 3-65 CHECKED BY DATE 3-65 DATA COMPLETED R.D. Anderson PROJ. ENG. DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-7(98)59	194

82252 L, C63; 63174 A, C64

I 63174A, C64

QUANTITY SHEET – E

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(91)59			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	Oakland	HAZELPARK		195

AS PER PLANS

	Earth Excavation Cu. Yds.	Porous Material Grade A C.I.P. Cu. Yds.	Concrete Grade A Cu. Yds.	6" Cast Iron Water-main Lin. Ft.	8" Cast Iron Water-main Lin. Ft.	Cast Iron Water-main 12" Lin. Ft.	Cast Iron Water-main 16" Lin. Ft.	6" Gate Wells Each	8" Gate Wells Each	Gate Wells 12" Ea.	Gate Wells 16" Ea.	6" Gate Valves Each	8" Gate Valves Each	Gate Valves 12" Ea.	Gate Valves 16" Ea.	6" Fire Hydrants Each	6" Gate Valves and Boxes Each	Cut and Plug 6" Water-main Each	Cut and Plug 8" Water-main Each	Sand Lime Mixture Cu. Yds.	16" Tapping Valves Ea.	Steel Reinforcement Lbs.
Sheet #116	251	215	3	100	819	62		2	1	2		2	1	2		2	2	1	1	36		
Sheet #117	140	126	1		522			3	1			3	1			1	1	2		14		
Sheet #118	60	60	9		18		81				2				1						1	420
Sub. Total	451	401																				
Totals			13	100	1359	62	81	5	2	2	2	5	2	2	1	3	3	3	1	50	1	420

FOR TOTAL SEE SHEET # 191

FOR TOTAL SEE SHEET # 191

AS CONSTRUCTED

	Earth Excavation Cyds.	Porous Material Grade A C.I.P. Cu. Yds.	Concrete Grade A Cu. Yds.	6" Cast Iron Water main Lin. Ft.	8" Cast Iron Water main Lin. Ft.	Cast Iron Water main 12" Lin. Ft.	Cast Iron Water main 16" Lin. Ft.	6" Gate Wells Each	8" Gate Wells Each	Gate Wells 12" Ea.	Gate Wells 16" Ea.	6" Gate Valves Each	8" Gate Valves Each	Gate Valves 12" Ea.	Gate Valves 16" Ea.	6" Fire Hydrants Each	6" Gate Valves and Boxes Each	Cut and Plug 6" Water main Each	Cut and Plug 8" Water main Each	Sand-Lime Mixture Cu. Yds.	16" Tapping Valves Ea.	Steel Reinforce Lbs.
Sht. #116	431	409	2.5	161	819	70		2	2 (Mutt's 101°)	2		2	1	2		2	2	1	1	0		
Sht. #117	284	269	1.1		531			3	1			3	1			1	1	2		0		
Sht. #118	62	57	9.4		11		82.5				2				1						1	458
Sub-total	777	735																				
MAINS			13	Rec. 83F 161	Rec. 83F 1361	Rec. 83F 70	Rec. 83F 82.5	5	3	2	2	5	2	2	1	3	3	3	1	0	1	458

For total See Sht. # 191

For total See Sht. # 191

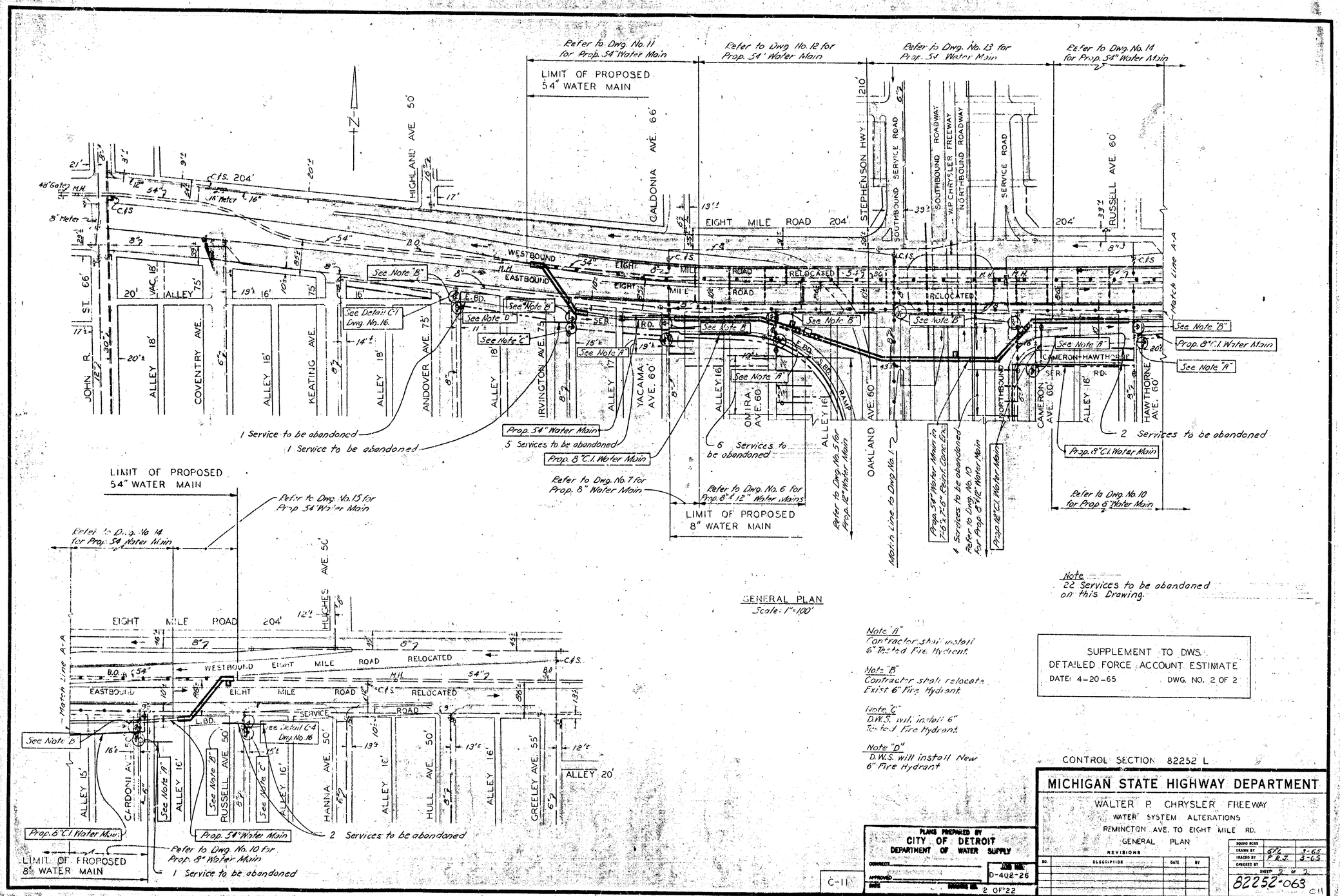
CHECKED
CONSTRUCTION
DATE 4/68

PLAN ESTIMATE BY J. Knight DATE 2-23-65 CHECKED BY J. Easley DATE 2-24-65 DATE DATA COMPLETED Wm. A. Anderson PROJ. ENG. DATE 11-14-67 HISTORY CHECKED ENTERED ON PLANS BY DATE

82252 L, C63, 63174 A, C64

STATE PROJECT	MICHIGAN PROJECT	SHEET NO.
63174A	I-75-2(91)59	195

I 63174A, C64 WATER



GENERAL PLAN
Scale: 1" = 100'

Note
22 services to be abandoned on this Drawing.

Note "A"
Contractor shall install 6" Tested Fire Hydrant.

Note "B"
Contractor shall relocate Exist. 6" Fire Hydrant.

Note "C"
D.W.S. will install 6" Tested Fire Hydrant.

Note "D"
D.W.S. will install New 6" Fire Hydrant

SUPPLEMENT TO DWS
DETAILED FORCE ACCOUNT ESTIMATE
DATE: 4-20-65 DWG. NO. 2 OF 2

CONTROL SECTION 82252 L

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
CONTRACT
APPROVED
DATE
JOB NO. D-402-26
DRAWING NO. 2 OF 22

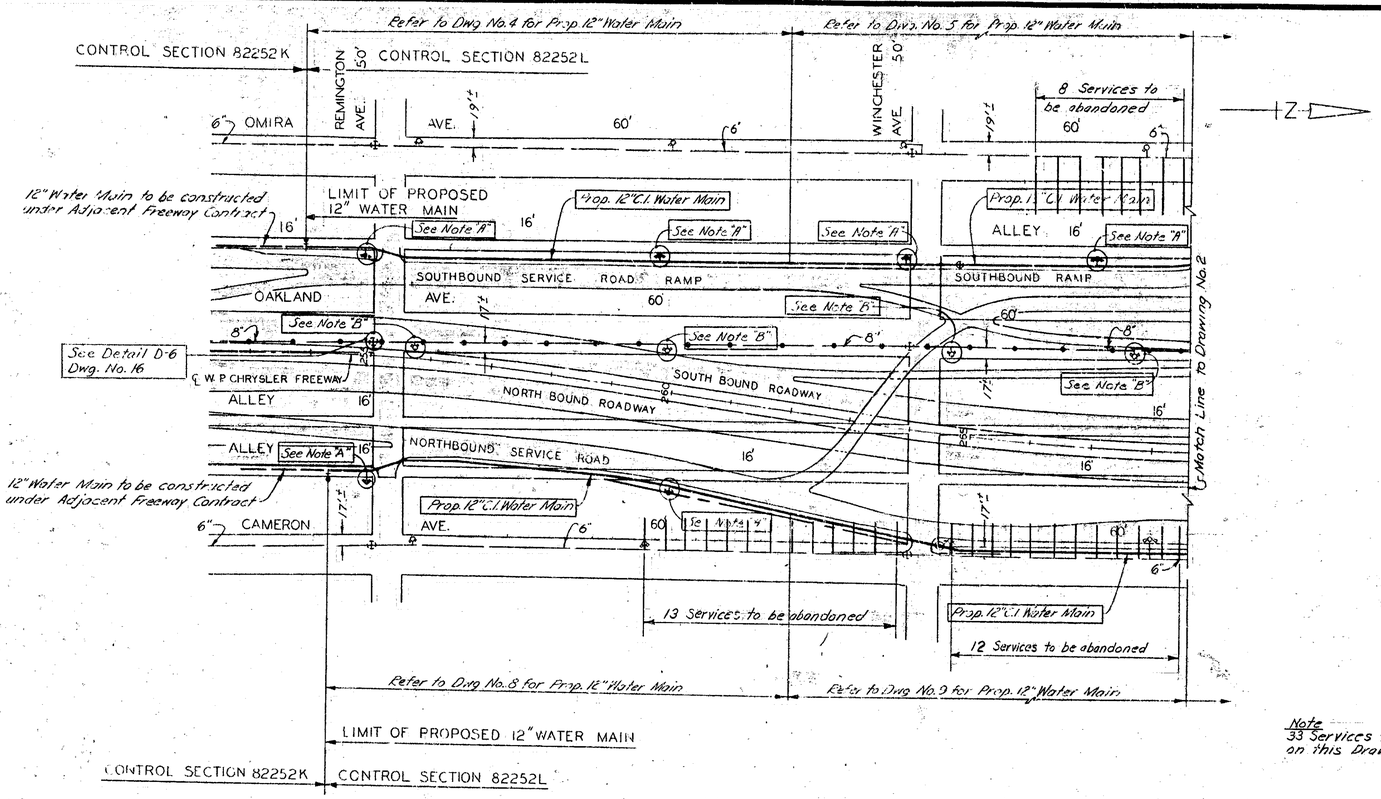
C-11

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER FREEWAY
WATER SYSTEM ALTERATIONS
REMINGTON AVE. TO EIGHT MILE RD.
GENERAL PLAN

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUARED BY		
DRAWN BY	G.F.C.	3-65
TRACED BY	F.R.J.	3-65
CHECKED BY		
SHEET 2 OF 2		

82252-063 C11



GENERAL PLAN
Scale: 1" = 100'

Note
33 Services to be abandoned on this Drawing.

Note "A"
Contractor shall install 6" Tested Fire Hydrant.

Note "B"
Contractor shall relocate Exist. 6" Fire Hydrant.

SUPPLEMENT TO DWS.
DETAILED FORCE ACCOUNT ESTIMATE
DATE: 4-20-65 DWG. NO. 1 OF 2

CONTROL SECTION 82252L

MICHIGAN STATE HIGHWAY DEPARTMENT

WALTER P. CHRYSLER FREEWAY
WATER SYSTEM ALTERATIONS
REMINGTON AVE. TO EIGHT MILE RD.
GENERAL PLAN

REVISIONS

NO.	DESCRIPTION	DATE	BY

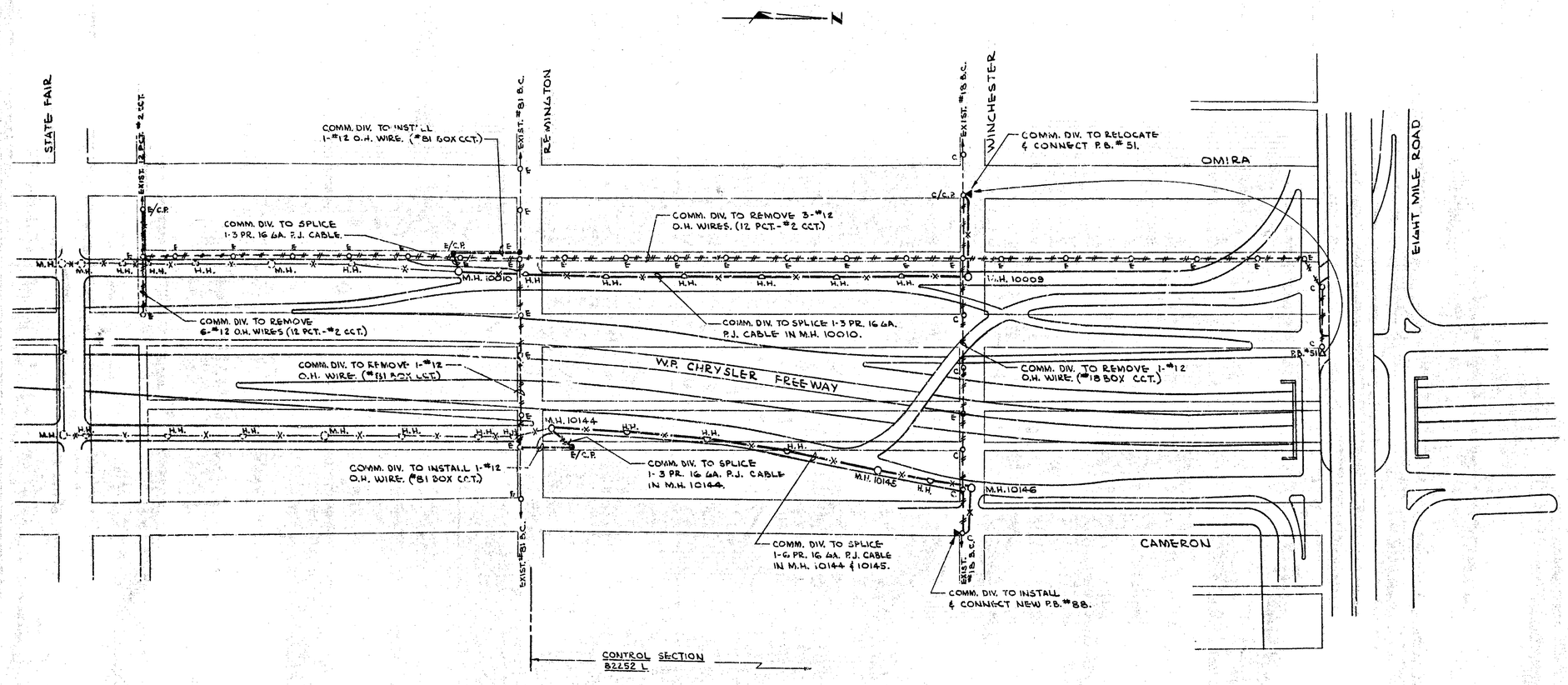
SOURCE BOOK		
DRAWN BY	J.F.L.	3-65
TRACED BY	F.R.T.	3-65
CHECKED BY		

SHEET 1 OF 2

82252-063 C11

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
DRAWN BY
APPROVED
DATE
JOB NO. D-402-26
DRAWING NO. 1 OF 22

C-11



SCALE: 1"=100'-0"

CITY OF DETROIT PUBLIC LIGHTING COMMISSION	DRAWN BY	DRWG. NO.
	E.W.	D-1232
GENERAL PLANS COMMUNICATIONS DIVISION O.H. & U.G. REROUTE CONTROL SECTION 82252 L FOR REFERENCE ONLY	CHECKED T.M.Jr. 2/16/65	SHEET NO. 1 OF 1
	APPROVED JBF	DATE 2-16-65

MICHIGAN STATE HIGHWAY DEPARTMENT

I-75 CHRYSLER FREEWAY
REMINGTON TO EIGHT MILE RD.

REVISIONS

NO	DESCRIPTION	DATE	BY

SQUAD BOSS		4-16-65
DRAWN BY		
TRACED BY		
CHECKED BY	H.L.P.	4-16-65
SHEET 1 OF 1		

F.A. 82252L C63

63174.066

CS: 63174

ID: 066

ROUTE	STATE PROJECT	FEDERAL NO	SHEET NO	TOTAL SHEETS
I-75	63174A,C66	I75-2(99)60	1	33

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT 1965 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS

DESIGN SPEED - 60 MPH

MICHIGAN
STATE HIGHWAY DEPARTMENT

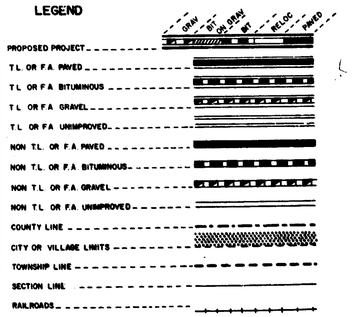
PLANS OF PROPOSED
MICHIGAN PROJECT I 75-2(99) 60
STATE PROJECT I 63174A, C66 PARTS 1&2
DETROIT - BAY CITY ROAD
OAKLAND COUNTY
CITY OF HAZEL PARK

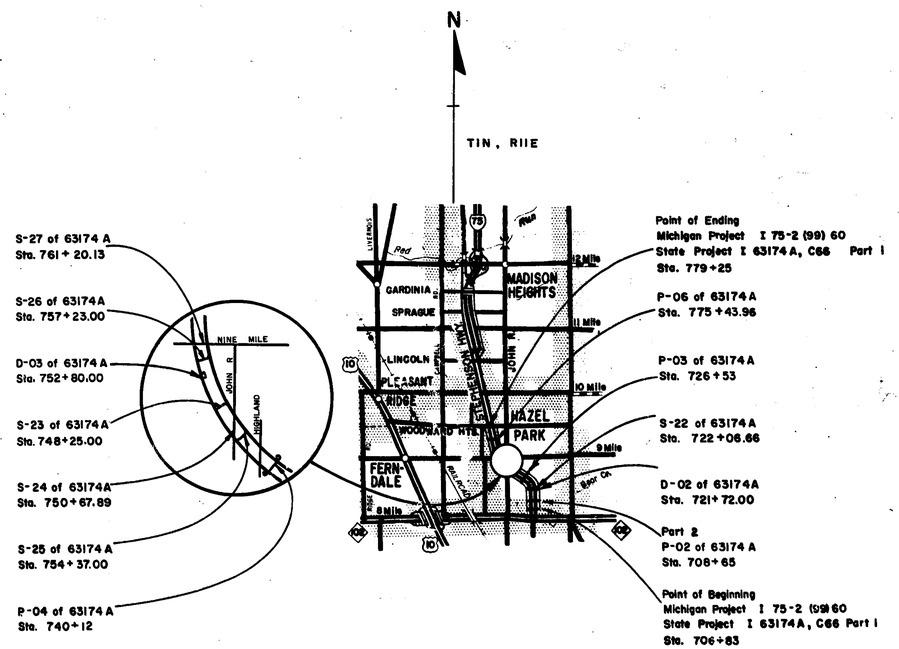
BORROW REQUIREMENTS

WHERE REQUIRED STA. TO STA.	AMT REQUIRED CYDS.	AMT AVAILABLE CYDS.	SOILS SERIES	BORROW AREA LOCATION
SUBBASE				
706+83 to 779+25	66,026			Contractor Furnished
POR. MAT'L. GR. A				
ENTIRE PROJECT	10,937			Contractor Furnished
SUBGRADE UNDERCUTTING BACKFILL (SAND-GRAVEL MATERIAL)				
ENTIRE PROJECT	10,400			Contractor Furnished
SAND GRAVEL MATERIAL				
P02	250			Contractor Furnished

ROAD PLANS	SHEET NO'S.
TITLE	-- 1
TYPICAL CROSS SECTIONS	-- 2 - 3
NOTES & SPECIAL PROVISIONS	-- 4
BENCH MARKS & WITNESSES	-- 5
FREEWAY-PLAN & PROFILE	-- 6 - 12
RAMP PROFILES	-- 13
SERVICE ROADS AT P02	-- 14
UTILITIES - (LIGHTING)	-- 15 - 19
UTILITIES - (WATER MAINS)	-- 20 - 21
SPECIAL DETAILS	-- 22 - 29
MASS DIAGRAM	-- 30
BORROW PLAN	-- 30
QUANTITIES	-- 31 - 33
BRIDGE TITLE SHEET	-- 101
ADDITIONAL SHEETS	
PERMANENT SUMP - D02	-- 21A
PERMANENT SUMP - D03	-- 22A

LEGEND





AS CONSTRUCTED
ACCORDING TO REVISED PLANS
PREPARED BY PROJECT ENGINEER

ITEM: 827

CONTRACT FOR G & D S & Surf. for Freeway & Ramps; Ped. Bridge

DIVISION APPROVAL

CHECKED	ENGINEER OF DESIGN	7-3-65 DATE
RECOMMENDED FOR APPROVAL	TRAFFIC ENGINEER	7-26-65 DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF BRIDGE & ROAD DESIGN	7/19/65 DATE

OFFICES OF DESIGN & CONSTRUCTION

APPROVED	CONSTRUCTION ENGINEER	7-21-65 DATE
APPROVED	CHIEF OF DESIGN	7/23/65 DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED BY HOWARD E. HILL, Director

DIRECTOR OF ENGINEERING - CHIEF ENGINEER — 7-26-65 DATE

PLANS PREPARED BY MICHIGAN STATE HIGHWAY DEPARTMENT REIGHARD SQUAD

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED [redacted]
DIVISION ENGINEER — DATE

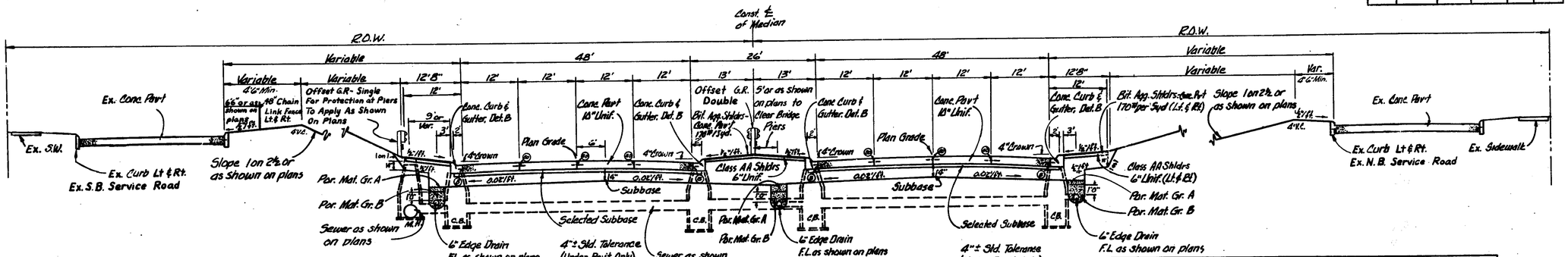
63174A,C66	STATE PROJECT	FEDERAL PROJECT	SHEET NO
	63174A,C66	I75-2(99)60	1

STATE PROJECT I 63174A, C66 PARTS 1&2

D.P.S. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(201)66			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	2	33

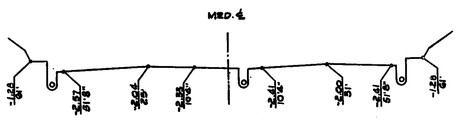
D.P.S. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

TYPICAL CROSS-SECTIONS

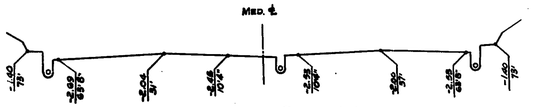


NORMAL FINISHED SECTION

To Apply: 743+54.23 to 747+08.00
762+07.64 to 769+26.08
777+93.64 to P.O.E.



GRADING SECTION
36' Pavt



GRADING SECTION
48' Pavt

INCLUDED IN SERVICE ROAD CONTRACT

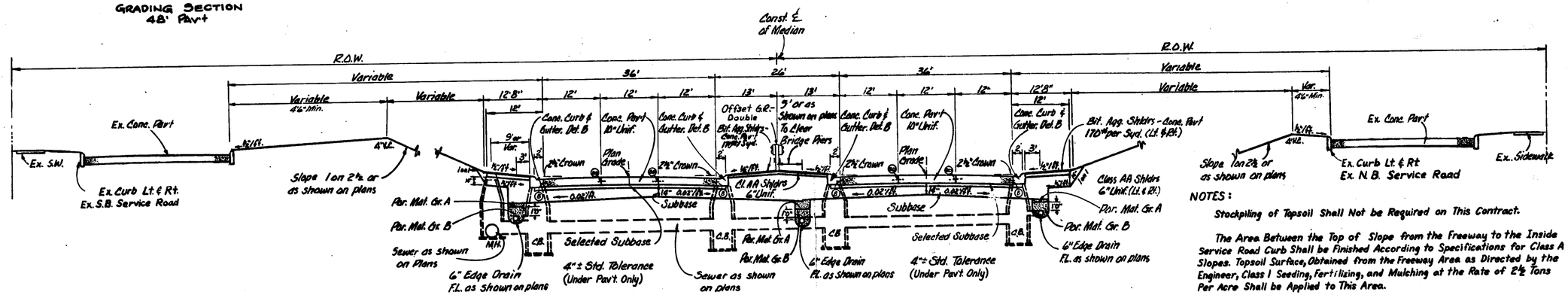
SUPPLEMENTAL GRADING INSTRUCTIONS

Sta. 755+00 to 757+00 - Extend Shldr Slope 5' Rt. for Horizontal Stopping Sight Distance.

Service Rd. Contract includes Freeway Excavation above a rough grade line at the following locations:

~~Sta. 708+40 to 708+90~~ Deleted
Sta. 720+75 to 723+50
Sta. 726+10 to 726+95
Sta. 739+72 to 740+53
Sta. 747+00 to 763+00
Sta. 774+92 to 776+08

Longitudinal Grading Limits as shown on E'way Plans.



NORMAL FINISHED SECTION

To Apply: P.O.B. to 716+67.50

NOTES:

Stockpiling of Topsoil Shall Not be Required on This Contract.

The Area Between the Top of Slope from the Freeway to the Inside Service Road Curb Shall be Finished According to Specifications for Class A Slopes. Topsoil Surface, Obtained from the Freeway Area as Directed by the Engineer, Class I Seeding, Fertilizing, and Mulching at the Rate of 2½ Tons Per Acre Shall be Applied to This Area.

The Area Between the Freeway Shoulder and Top of Slope Shall be Finished According to Specifications for Class A Slopes. Class B Sodding Shall be Applied to This Area.

All Crowns are Modified Parabolic.

Joint Legend
D - Longitudinal Lane Tie Joint With Tie Bars According to Special Details.
B - Longitudinal Bulkhead Construction Joint According to Special Details.
BD - Optional B or D.

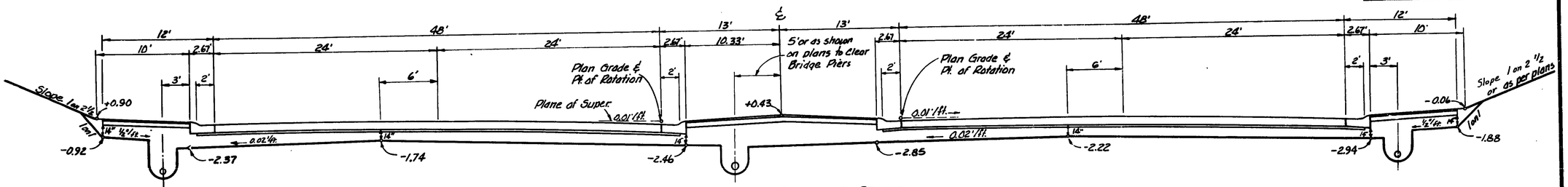
Plotted: RJM 12-4
Cad: DWH
REVISED SHEET

PLANS DIV.	63174A.C66	STATE PROJECT 63174A	FEDERAL PROJECT I 75-2(201)66	SHEET NO. 2

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	S-57-2(59)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	Royal Oak	3	33

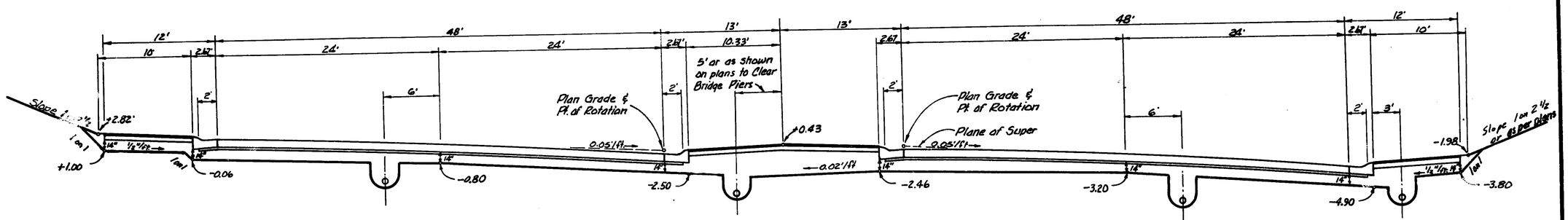
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

TYPICAL CROSS-SECTIONS



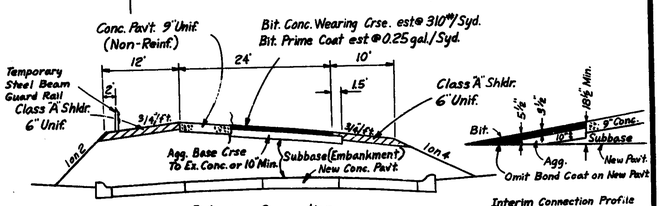
SUPERELEVATED GRADING SECTION
DUAL 48' CONC. PAV'T
(0.01'/ft. S.E.)

To Apply: 769 + 26.08 to 777+93.64

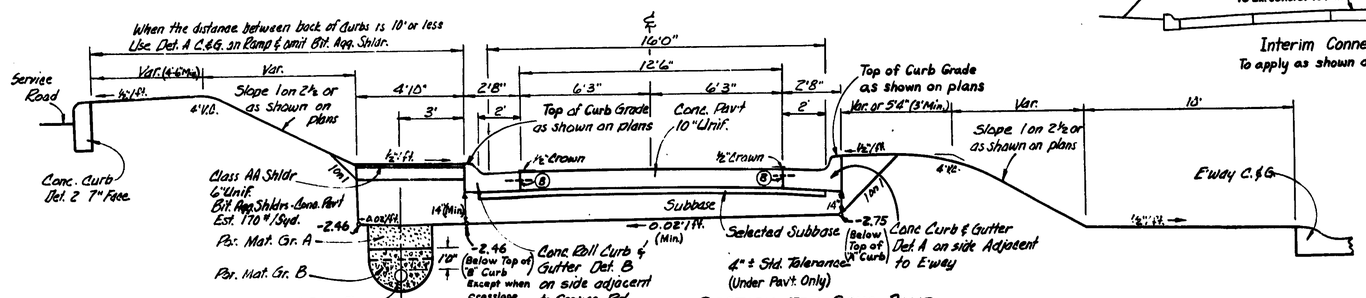


SUPERELEVATED GRADING SECTION
DUAL 48' CONC. PAV'T
(0.05'/ft. S.E.)

To Apply: 716 + 67.50 to 743 + 54.23
747 + 08.00 to 762 + 07.64



Interim Connection
To apply as shown on plans



SECTION FOR CONC. RAMP
To Apply: As shown on Plans

Plotted: R.J.M.
Ckd:

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C66	63174A	I-75 S-57-2(59)60	3

SPECIAL PROVISIONS

GRADES FOR INTERSECTIONS

ALL INTERSECTIONS ARE TO BE CONSIDERED AS COMPLETE UNITS AND THEIR GRADES DETERMINED BEFORE CONSTRUCTION IS STARTED.

TRANSVERSE JOINTS IN CONCRETE PAVEMENT

TRANSVERSE JOINTS IN CONCRETE PAVEMENT SHALL BE PLACED ACCORDING TO DETAILS ON STANDARD PLAN E-4-A-135C AND E-4-A-127B.

HAND FINISHING

HAND FINISHING, ACCORDING TO 4.14.03-q-1 OF THE STANDARD SPECIFICATIONS WILL BE PERMITTED ON INTERSECTIONS OUTSIDE OF THE NORMAL TRAFFIC LANES.

RESISTIVITY INVESTIGATION

A RESISTIVITY SURVEY WILL GENERALLY BE MADE IN ALL CUT SECTIONS IN EXCESS OF 12 FEET IN DEPTH AND IN LARGER BORROW PITS. A MINIMUM NUMBER OF BORINGS WILL BE MADE TO SATISFACTORILY ESTABLISH A CO ELATION WITH THE RESISTIVITY FACTORS. THESE SURVEYS ARE AVAILABLE FOR REVIEW BY THE CONTRACTOR IN THE DISTRICT OFFICE OF THE DISTRICT IN WHICH THE PROJECT OCCURS, IN THE OFFICE OF THE ENGINEER OF SOILS IN LANSING, AND IN THE OFFICE OF TESTING AND RESEARCH IN LANSING.

OPEN HEARTH SLAG

OPEN HEARTH SLAG WILL NOT BE PERMITTED AS AN ALTERNATE FOR POROUS MATERIAL GRADE A DESIGNATED AS BACKFILL FOR SEWER TRENCHES WHERE OPEN JOINT SEWER HAS BEEN INSTALLED.

MANHOLES, CATCHBASINS, AND INLETS WITHIN THE LIMITS OF ROADBED

THE MAXIMUM PAY LIMITS FOR BACKFILLING WITH SAND GRAVEL MATERIALS SHALL BE THE SPACE FOR A DISTANCE OF 18" (INCHES) FROM THE OUTSIDE SURFACE OF THE STRUCTURE AT ITS MAXIMUM DIAMETER AND FROM THE BOTTOM OF THE FOOTING TO THE ELEVATION OF THE EARTH GRADE. THE VOLUME OF THE STRUCTURE TO BE DEDUCTED.

POSTS IN THE VICINITY OF LIGHT STANDARDS

FENCE POSTS AND GUARD RAIL POSTS SHALL NOT BE LOCATED WITHIN 2 FEET OF STREET LIGHTING STANDARDS, TO AVOID THE POSSIBILITY OF DAMAGING THE UNDERGROUND LIGHTING CABLE. THE EXACT LOCATION OF ALL CABLES SHALL BE DETERMINED BEFORE POSTS ARE LOCATED.

CLASS B SODDING

CLASS B SODDING FOR THIS PROJECT SHALL BE OBTAINED FROM UPLAND PASTURE LAND.

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS.

FINE GRADING AND CLEANUP	170 STAS.
TOPSOIL SURFACE (ON UNSODDED SLOPES AND DITCHES)L.M.	1600 CU.YDS.
COMPLETING UNDER TRAFFIC	3.21 MILES
MULCHING (SLOPES ,AS DIRECTED BY THE ENGINEER)	9 TONS
CLASS 1 SEEDING	6 ACRES
CHEMICAL FERTILIZER	3720 LBS.
UREA NITROGEN FERTILIZER	528 LBS
SINGLE CRYSTAL DELINEATOR AND POST	148 EACH
DOUBLE YELLOW DELINEATOR AND POST	55 EACH
TRIPLE YELLOW DELINEATOR AND POST	2 EACH
** FIELD OFFICE-CONCRETE PROPORTIONING	1 EACH
** FIELD OFFICE-BITUMINOUS	1 EACH
CONTRACTION JOINTS	7900 LIN.FT.
EXPANSION JOINTS	2400 LIN FT.
END OF POUR CONSTRUCTION JOINTS	384 LIN.FT.

** NON FEDERAL PARTICIPATION

MISCELLANEOUS ESTIMATES (CONT.)

THE FOLLOWING ITEMS ARE ESTIMATED FOR THE ENTIRE PROJECT TO BE USED WHERE DESIGNATED BY THE ENGINEER

SUBGRADE UNDERCUTTING	8300 CU.YDS.
SAND GRAVEL MATERIAL	10,400 CU.YDS.
6" BANK DRAINS	6200 LIN.FT.
GRANULAR BLANKET	2500 CU.YDS.
EXCAVAT ION (WASTE FROM BANK DRAIN)	2800 CU.YDS.
POROUS MATERIAL-GRADE B(COMP. IN PLACE)	6500 CU.YDS
POROUS MATERIAL-GRADE A	5200 CU.YDS.

PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED ON OUR SURVEYS DATED SEPTEMBER 1961. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY HIMSELF AS TO ITS ACCURACY OR OF HIS RESPONSIBILITY IN CASE UTILITIES HAVE BEEN CONSTRUCTED OR REMOVED SINCE THE ABOVE SURVEY DATE.

NAME AND ADDRESS OF OWNER	KIND OF UTILITY	SIZE OR CAPACITY	LOCATION STA. TO STA.
CITY OF HAZEL PARK	WATER	12"	P.O.B. TO MADGE
		6"	BERNHARD
		6"	ELZA
		6"	MAXLOW
		6"	EVELYN
		6"	MADGE
		6"	MEYERS
		6"	MADGE TO 734+60
		4"	GRANET
		4"	HARRY
		4"	VASSAR
		6"	JARVIS
		6"	CALEDONIA
		4"	734+60 TO HIGHLAN D
		16"	HIGHLAND
		6"	ROBERT
		6"	BURNS
		6"	RHODES
		8"	JOHN R.
		8"	JOHN R. TO P.O.E.
		6"	WOODRUFF
		8"	NINE MILE
		6"	YUMA
		6"	SHASTA
		6"	CHERRY
		6"	LANDER
		6"	ORCHARD
		6"	SONONA
		6"	MANATEE
		8"	CHESTNUT
		6"	HAMATA
		8"	WOODWARD HEIGHTS
CONSUMERS POWER CO.	GAS	2"	BERNHARD
		2"	ELZA
		2"	MAXLOW
		2"	EVELYN
		4"	MADGE
		2"	MEYERS
		2"	GRANET
		2"	HARRY
		2"	JARVIS
		2"	PEARL
		2"	ROBERT
		2"	HIGHLAND
		2"	BURNS
		2"	OTIS
		UNKNOWN	749+30 RT.(ALLEY)
		6"	JOHN R.
		2"	GOULSON
		2"	WOODRUFF
		6"	NINE MILE
		2"	YUMA
		2"	SHASTA
		2"	CHERRY
		2"	LANDER
		2"	ORCHARD
		2"	SONONA
		2"	MANATEE
		2"	CHESTNUT
		2"	HAMATA
		8"	WOODWARD HGTS. (2 LINES N. SIDE)

PUBLIC UTILITIES (CONT.)

DETROIT EDISON CO.	ELECTRICITY	UNKNOWN	POB TO POE (OUTSIDE BOTH ROADWAYS)
			709+50 EAST SIDE
			712+30 " "
			715+05 " "
			717+85 " "
	(UNLESS OTHERWISE INDICATED LINES ARE SERVICE CONNECTIONS)	3 WIRE TRANS.	720+40
		3 WIRE TRANS.	720+00 TO 730+50 W. SIDE
		3 WIRE TRANS.	727+00 W. SIDE
		3 " "	JARVIS ST.
		5 " "	CALEDONIA
		3 " "	735+50 (W. SIDE)
		5 " "	HIGHLAND
		3 " "	OTIS
		3 " "	749 N. SIDE
			753 N. SIDE
		3 " "	GOULSON
			756 +50 N. SIDE
		5 " "	WOODRUFF
		LIGHTING CIRCUITS	NINE MI. RD. N&S SIDE
		8 WIRE	762+80
			767+85 E. SIDE
			770+60 E. SIDE
			773+50 E. SIDE
			776+40 E. SIDE
			779+15 E. SIDE
			781+90 E. SIDE
			784+70 E. SIDE
			HAMATA
			787+40 E. SIDE
MICH. BELL TELE. CO.	TELEPHONE	CABLE	712+30 E.SIDE
		CABLE	715+05 E.SIDE
		CABLE	717+85 E.SIDE
		CABLE	MADGE
		4 WIRE	727+00 W.SIDE
		4 WIRE	730+50 W.SIDE
		2 WIRE	732+50 W.SIDE
		3 CABLE	HIGHLAND
		1 CABLE	OTIS
		1 CABLE	749 N. SIDE
		1 CABLE	753 N. SIDE
		2 CABLE	NINE MI. S. SIDE
		1 CABLE (BURIED 4 1/2 FT.)	NINE MI. N. SIDE
		1 CABLE	762+80 E. SIDE
		1 CABLE	767+85 E. SIDE
		1 CABLE	770+60 E. SIDE
		1 CABLE	773+50 E. SIDE
		2 WIRE	776+40 E. SIDE
		3 WIRE	779+15 E. SIDE
		1 CABLE	781+90 E. SIDE
		1 CABLE	784+70 E. SIDE
		1 CABLE (BURIED S. SIDE)	WOODWARD HGTS.
MICH. STATE HWY. DEPT.	SEWERS	12"	POB TO MAXLOW W. SIDE
		15"	MAXLOW TO NINE MI. W. SIDE
		12"	HIGHLAND TO GOULSON E.SIDE
		12"	SHASTA TO 779+20 E. SIDE
		15"	779+20 TO 784+70 E. SIDE
		15"	784+70 TO HAMATA E. SIDE
		24"	HAMATA TO P.O.E. E. SIDE
OAKLAND CO. DRAIN COMM.	SEWERS	48" STEEL CYL.	OTIS ST.
CITY OF HAZEL PARK	SEWERS	12"	BERNHARD
		12"	ELZA
		12"	MAXLOW
		12"	EVELYN
		27"	MADGE
		12"	721+60
		18"	MEYERS
		15"	HARRY
		24"	736+00
		54"	PEARL
		48"	HIGHLAND
		10"	BURNS
		12"	748+85
		12"	GOULSON(FROM WEST)
		8"	GOULSON(FROM EAST)
		8"	756+70
		12"	758+00
		8"	759+75
		33"	NINE MI. RD.
		12"	767+90
		12"	770+65
		10"	773+50
		10"	776+40
		10"	779+20
		10"	748+70
		20"	HAMATA

THE OWNERS OF EXISTING POLES AND OTHER SERVICE STRUCTURES THAT ARE WITHIN THE LIMITED ACCESS RIGHT OF WAY WILL MOVE THEM TO LOCATIONS DESIGNATED BY THE ENGINEER ON FREE ACCESS RIGHT OF WAY, OR WILL REMOVE THEM ENTIRELY FROM THE HIGHWAY RIGHT OF WAY.
OWNERS OF PUBLIC UTILITIES WILL NOT BE REQUIRED BY THE DEPARTMENT TO MOVE ADDITIONAL POLES AND STRUCTURES THAT ARE NOT WITHIN GRADING OR STRUCTURE LIMITS IN ORDER TO FACILITATE THE OPERATION OF CONSTRUCTION EQUIPMENT, UNLESS IT IS DETERMINED BY THE ENGINEER THAT SUCH POLE LINE OR STRUCTURES CONSTITUTE A HAZARD TO THE PUBLIC OR ARE EXTRAORDINARILY DANGEROUS TO THE CONTRACTOR'S OPERATIONS.

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	4	33
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

PUBLIC UTILITIES (CONT.)

NOTE:
THE UTILITY RELOCATIONS MAY BE IN PROGRESS OR COMPLETED. THE CONTRACTOR SHALL DETERMINE DETERMINE THE EXACT LOCATION OF UTILITIES PRIOR TO STARTING WORK IN ANY AREA.

NOTES APPLYING TO STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

EDGE DRAINS	E-4-A-9F, DETAIL 5
BANK DRAINS	E-4-A-9F, DETAIL 4
SODDING	E-4-A-10D
GRANULAR BLANKET	E-4-A-10D, DETAIL 11
PAVEMENT REINFORCEMENT	E-4-A-21F
GRADING CROSS SECTIONS	E-4-A-26D
MANHOLES, CATCH BASINS & INLETS	E-4-A-27R-4
COVER A	E-4-A-27A-3
COVER H	E-4-A-27H
COVER J	E-4-A-27J
MONUMENT BOX(MONUMENT BOXES FURNISHED BY STATE)	E-4-A-27F-3
CONCRETE CURB, ROLL CURB AND CURB AND GUTTER	E-4-a-29F
CURB AND GUTTER HEADERS	E-4-A-29F, DETAIL 9
CONCRETE END HEADER	E-4-A-29F, DETAIL 20
PAVEMENT JOINTS	ACCORDING TO SPECIAL DETAILS
SUPERELEVATION OF CURVES	E-4-A-49B-7 (EXCEPT THAT RATE OF SUPER-ELEVATION IS TO BE AS CALLED FOR ON PLANS)
PAVEMENT CROWNS	E-4-A-49B-7
TYPICAL JOINT LAYOUT	E-4-A-127B- (EXCEPT THAT THE JOINT SPACING SHALL BE AS CALLED FOR IN THE SUPPLEMENTAL SPECIFICATIONS)
TILE TRAP	E-4-A-129
DOWEL BAR INSTALLATION FOR LOAD TRANSFER AT TRANSVERSE CONTRACTION AND EXPANSION JOINTS	E-4-A-130E
BASE PLATES FOR TRANSVERSE PAVEMENT JOINTS	E-4-A-138 (EXCEPT THAT SPOT WELDS MAY BE SUBSTITUTED FOR RIVETS TO ATTACH THE 1" ANGLE)
LOCATION OF TRANSVERSE EXPANSION & CONTRACTION JOINTS IN CONCRETE PAVEMENT	E-4-A-135C
OFFSET GUARD RAIL-SINGLE	ACCORDING TO SPECIAL DETAILS
OFFSET GUARD RAIL-DOUBLE	ACCORDING TO SPECIAL DETAILS
LOCATION OF GUARD RAIL AT STRUCTURES(DUAL HIGHWAY)	ACCORDING TO SPECIAL DETAILS
CONCRETE NOSE	E-4-A-145
CONCRETE STREET LIGHT STANDARDS	E-18-A-1
ALUMINUM STREET LIGHT STANDARDS	E-18-A-2
STEEL STREET LIGHT STANDARDS	E-18-A-3
ELECTRICAL CONDUIT DETAILS	E-18-A-4
CANTILEVER FOUNDATION-TYPE A,B,C,D & E	ACCORDING TO SPECIAL DETAILS
TRUSS FOUNDATION-TYPE B &C	ACCORDING TO SPECIAL DETAILS
LOCATION OF GUARD RAIL AT TRAFFIC SIGNS	ACCORDING TO SPECIAL DETAILS
POST AND DELINEATOR	ACCORDING TO SPECIAL DETAILS

WITNESSES TO TRANSIT POINTS		COORDINATES
Sta. 693+99.36;H.C.P. #1	N	5,000.00
Sec. Line (8 Mi. Rd.)	E	20,000.00
N 56° W 37.74' N&C Light Pole		
N 09° E 90.37' N&C Light Pole		
N 62° E 71.64' S.W. Cor. Bldg. #941		
Sta. 698+00;H.C.P. #2	N	5,400.26
Rt. Edge N.B. Stephenson St.	E	19,982.47
S 68° W 62.1' Tree		
S 30° W 65.0' End Guard Post		
S 25° E 48.2' Light Pole		
Sta. 702+00;H.C.P. #3	N	5,799.87
Rt. Edge 22' Pav't. N.B. Stephenson St.	E	19,964.96
N. 75° W 163.6' Light Pole		
N 19° W 93.9' End Guard Post		
N 11° E 109.4' Light Pole		
Sta. 706+00;H.C.P. #4	N	6,199.49
Rt. Edge N.B. Stephenson	E	19,947.46
S 61° W 182.8' Light Pole		
N 32° W 94.2' Power Pole		
S 40° E 30.6' Light Pole		
Sta. 710+00;H.C.P. #5	N	6,599.11
N 69° W 170.5' Light Pole	E	19,929.96
N 09° E 129.3' Light Pole		
S 63° E 98.22' Power Pole		
Sta. 714.00;H.C.P. #6	N	6,998.72
S 78° W 32.9' End Guard Post	E	19,912.45
S 30° W 64.9' End Guard Post		
S 46° E 90.5' Intersect. Sidewalks		
P.C. Sta. 716+29.64;H.C.P. #7	N	7,228.14
Rt. Edge Stephenson	E	19,902.40
S 81° W 161.4' Light Pole		
N 23° E 51.7' Light Pole		
S 71° E 66.6' Intersect. Sidewalks		
P.I. Sta. 719+33.18;H.C.P. #8	N	7,531.39
P. K. - Rt. Edge Stephenson	E	19,889.12
N 49° E 26.56' N&C Light Pole		
S 88° E 36.33' N&C T.P.		
S 11° E 82.65' N&C 12" Elm		
P.C.C. Sta. 722+31.68;H.C.P. #9	N	7,815.56
N 37° W 110.6' P. Pole	E	19,782.41
N 80° E 85.6' Light Pole		
S 51° W 86.7' Light Pole		
Sta. 725+00; H.C.P. #10 (on Tang.)	N	8,066.73
N 18° W 95.4' P. Pole	E	19,688.07
N 74° E 110.0' Light Pole		
S 57° E 36.4' Light Pole		
P.I. Sta. 727+37.97; H.C.P. #11	N	8,289.53
P.K. Nail	E	19,604.41
N 69° W 77.63' N&C 8" Elm		
N 85° W 63.06' N&C 12" Ash		
S 25° W 19.20' N&C Light Pole		
P.C.C. Sta. 732+25.01; H.C.P. #12	N	8,628.96
S 11° E 55.0' P. Pole	E	19,228.76
N 22° W 35.3' P. Pole		
S 60° E 112.2' Light Pole		
Sta. 735+63.50;H.C.P. #13 (on Tan.)	N	8,855.89
S 27° W 60.9' P. Pole	E	18,977.61
N 20° W 98.2' P. Pole		
N 70° E 105.5' Light Pole		
P.I. Sta. 737+97.55; H.C.P. #14	N	9,012.81
Boat Spike	E	18,803.95
N 33° W 41.74' N.W. Cor. House #604		
N 19° E 63.09' N.E. Cor. Church		
S 63° E 21.76' N.W. Cor. Church		
H.C.P. #15	N	9,108.85
(P.I. + 395.70on Foreward Tan.)	E	18,420.08
S 60° W 43.0' Light Pole		
S 52° E 27.6' P. Pole		
N 06° E 137.7' P. Pole		
P.T. Sta. 743+47.12; H.C.P. #16	N	9,151.78
N 85° W 150.0' Light Pole	E	18,248.53
S 19° W 30.7' Light Pole		
S 62° E 151.7' Light Pole		
P.C. Sta. 747+54.34; H.C.P. #17	N	9,250.62
S 74° W 50.7' Light Pole	E	17,853.49
S 59° E 123.4' Light Pole		
N 10° W 102.2' P. Pole		
P.I. 751+35.58; H.C.P. #18	N	9,343.16
P.K. Nail	E	17,483.65
N 35° W 80.69' N&C P. Pole		
N 56° E 75.43' N&C G. Pole		
N 02° E 37.23' N&C Light Pole		

WITNESSES TO TRANSIT POINTS		COORDINATES
P.C.C. 754+95.18; H.C.P #19	N	9,623.72
N 51° W 111.2' Light Pole	E	17,225.53
N 69° E 37.5' Light Pole		
S 13° E 50.7' Light Pole		
P.I. Sta. 758+24.58; H.C.P. #20	N	9,866.13
P.K. Nail	E	17,002.50
N 07° E 35.91' N&C P. Pole		
S 78° E 41.91' N.W. Cor. Bldg. #22846		
S 60° E 58.58' S.W. Cor. Bldg. #22846		
P.T. Sta. 761+41.33; H.C.P. #21	N	10,184.08
N 53° W 62.5' Light Pole	E	16,916.39
S 09° E 50.7' P. Pole		
S 71° E 126.0' Light Pole		
Sta. 764+00; H.C.P. #22	N	10,433.75
S 12° W 89.0' G. Pole	E	16,848.78
S 62° W 166.3' Light Pole		
N 47° W 54.1' Light Pole		
Sta. 768+00; H.C.P. #23	N	10,819.85
N 24° W 163.9' Light Pole	E	16,744.21
N 67° W 199.8' Light Pole		
S 03° W 106.8' Light Pole		
P.O.T. Sta. 772+28.04; H.C.P. #24	N	11,233.00
Drill hole in chis. square	E	16,632.32
N 09° E 26.81' Cor. Bldg. #160		
N 44° E 36.18' Cor. Bldg. #160		
S 68° E 12.94' N&C 12" B.E.		
Sta. 776+00; H.C.P. #25	N	11,592.03
S 18° W 58.9' Light Post	E	16,535.09
S 02° E 71.5' Intersect. Sidewalks		
S 48° E 108.6' Intersect. Drive & Walk		
P.C. Sta. 780+42.72; H.C.P. #26	N	12,019.35
N 44° W 64.4' Light Pole	E	16,419.36
S 81° W 161.6' Light Pole		
N 56° E 53.4' Intersect. Drive & Walk		
P.I. Sta. 781+53.21; H.C.P. #27	N	12,126.00
Boat spike	E	16,390.47
N 24° W 48.98' N&C 12" Elm		
N 49° E 52.77' N&C P. Pole		
S 17° W 61.99' N&C Light Pole		
P.T. Sta. 782+63.58; H.C.P. #28	N	12,230.11
N 66° W 174.8' Light Pole	E	16,353.46
N 15° W 110.9' Light Pole		
Sta. 786+00; H.C.P. #29	N	12,547.09
N 05° E 139.9' P. Pole	E	16,240.77
N 24° E 66.9' Light Pole		
S 72° E 36.8' P. Pole		
Sta. 790+00; H.C.P. #30	N	12,923.99
S 11° E 66.6' P. Pole	E	16,106.78
N 40° W 63.8' G. Pole		
S 54° E 113.5' Light Pole		
P.C. Sta. 793+26.15; H.C.P. #31	N	13,231.29
N 67° E 34.4' - 2.5' x 4' Conc.	E	15,997.53
S 48° E 185.4' Light Pole		
S 15° W 160.2' Light Pole		
P.I. Sta. 795+12.06; H.C.P. #32	N	13,406.46
Boat Spike	E	15,935.26
N 76° W 55.25' Cor. Bldg. 24207		
S 53° W 56.58' N&C Light Pole		
S 18° W 113.25' N&C Twin 12" Elm		
Sta. 796+97.46; H.C.P. #33	N	13,588.21
N 61° W 70.5' Light Pole	E	15,896.14
N 70° E 127.7' Light Pole		
N 87° E 80.2' Cor. Sidewalk		
Sta. 801+00; H.C.P. #34	N	13,981.74
N 30° W 195.3' Light Pole	E	15,811.46
N 22° E 216.4' Light Pole		
S 27° W 109.5' Light Pole		
Sta. 805+00; H.C.P. # 35	N	14,372.79
N 51° W 117.9' Light Pole	E	15,727.30
N 71° E 106.2' Light Pole		
N 06° E 93.3' - 2.5' x 4' Conc.		
Sta. 809+00; H.C.P. #36	N	14,763.84
S 57° W 93.3' Light Pole	E	15,643.15
S 04° W 52.9' P. Pole		
S 63° E 120.8' Light Pole		
Sta. 813+00; H.C.P. #37	N	15,154.89
N 38° E 113.1' Light Pole	E	15,559.00
S 19° W 189.3' Light Pole		
S 15° E 106.8' - 2.5' x 4' Conc.		

WITNESSES TO TRANSIT POINTS		COORDINATES
P.O.T. Sta. 816+41.50	N	15,488.74
P.K. Nail	E	15,487.15
N 02° W. 62.08' N&C G. Pole		
N 34° E. 87.57' N&C G. Pole		
S 63° E. 89.22' N&C G. Pole		
Sta. 817+00; H.C.P. #38	N	15,545.93
S 43° W 121.3' G. Pole	E	15,474.85
N 86° E 73.6' G. Pole		
S 49° E 128.6' G. Pole		
Sta. 821+00; H.C.P. #39	N	15,936.98
N 27° E 95.5' L. Pole	E	15,390.69
S 33° E 161.4' P. Pole		
S 02° W 134.1' P. Pole		
Sta. 825+00; H.C.P. #40	N	16,328.03
S 84° W 145.6' L. Pole	E	15,306.54
N 52° E 56.5' Intersect. Walks.		
S 78° E 55.2' Intersect. Walks.		
P.I. Sta. 828+48.07; H.C.P. #41	N	16,668.31
P.K. Nail	E	15,233.31
N 55° E 74.78' N.W. Cor. Bldg. #1409		
N 77° E 63.10' S.W. Cor. Bldg. #1409		
S 60° E 85.04' S.W. Cor. Bldg. #1415		
Sta. 832+00; H.C.P. #42	N	17,009.08
N 15° E 72.3' Light Pole	E	15,145.38
S 77° E 42.4' Intersect. Walks.		
S 25° E 170.5' Intersect. Walks.		
Sta. 836+00; H.C.P. #43	N	17,396.39
S 84° W 156.6' Light Pole	E	15,045.44
N 14° E 89.7' Intersect. Walks.		
S 17° E 39.5' Intersect. Walks.		
Sta. 840+00; H.C.P. #44	N	17,783.71
N 27° W 145.4' P. Pole	E	14,945.50
N 09° E 123.7' P. Pole		
S 57° E 52.8' Intersect. Walks.		
P.I. Sta. 843+89.33(No Curve); H.C.P. #45	N	18,160.69
℄ Lincoln St. P.K. Nail	E	18,848.23
N 33° 37' 21" E 43.09' N&C P. Pole		
S 54° 52' 39" E 71.85' N.W. Cor. Bldg.		
S 33° 37' 21" W 44.00' N&C T. Pole		
Sta. 848+00; H.C.P. #46	N	18,558.50
N 62° W 59.2' 2.5' x 4' Conc.	E	14,746.26
N 41° E 50.3' Intersect. Walks.		
S 37° E 93.8' Intersect. Walks.		
Sta. 852+00; H.C.P. #47	N	18,945.97
N 37° W 109.0' P. Pole	E	14,646.93
N 11° E 87.5' Light Pole		
S 80° E 35.7' G. Pole		
Sta. 856+00; H.C.P. #48	N	19,333.44
N 32° W 142.4' 2.5' x 4' Conc.	E	14,547.61
N 03° E 132.8' P. Pole		
S 33° E 93.0' P. Pole		
Sta. 860+00; H.C.P. #49	N	19,720.91
S 59° W 43.1' Light Pole	E	14,448.29
N 09° E 93.7' Light Pole		
S 33° E 92.8' P. Pole		
P.O.T. Sta. 862+00	N	19,914.65
P.K. Nail	E	14,398.62
N 16° E 71.59' N&C P. Pole		
N 34° E 78.93' N.W. Cor. Brick Box.		
S 70° E 77.85' S.W. Cor. Church		
Sta. 864+00; H.C.P. #50	N	20,108.38
N 83° W 172.0' Light Pole	E	14,348.96
N 22° E 57.4' P. Pole		
S 26° E 140.4' P. Pole		
Sta. 868+00; H.C.P. #51	N	20,495.86
N 33° W 169.4' P. Pole	E	14,249.64
N 02° E 138.3' Light Pole		
S 48° E 55.7' P. Pole		
Sta. 871+00; H.C.P. #52	N	20,786.46
S 77° W 63.1' Light Pole	E	14,175.14
S 75° W 106.2' G. Pole		
S 11° W 154.1' P. Pole		
P.C.T. Sta. 871+27.50	N	20,813.10
P.K. Nail & Cap.	E	14,168.31
S 30° E 70.99' Drill hole in curb		
S 56° W 67.81' Light Pole		
N 23° E 56.80' Power Pole		
P.I. Sta. 879+83.76	N	21,642.54
Boat Spike	E	13,955.70
N 41° W 58.17' N&C G. Pole		
N 47° E 78.56' N&C Fence Post		
S 58° E 104.84' S.W. Cor. House #318		

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(186)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	WEEL PARK	5	33
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

BENCH MARKS

ELEVATIONS SHOWN ARE TO TOP OF ARROW ON FIRE HYDRANT, UNLESS OTHERWISE NOTED.

92 Elev. 635.36
191' Lt. Sta. 702 + 46
S. W. Cor. Hayes & Stephenson

91 Elev. 636.88
172' Lt. Sta. 713 + 48
S. W. Cor. Maxlow & Stephenson

90 Elev. 635.84
47' Lt. Sta. 725 + 46
N. W. Cor. Granet & Stephenson

89 Elev. 634.87
123' Rt. Sta. 734 + 65
N. E. Cor. Stephenson & Pearl

88 Elev. 635.94
6.5' Rt. Sta. 750 + 13
S. E. Cor. Otis & John R.

87 Elev. 636.66
6' Rt. Sta. 761 + 48
9 Mile & Stephenson, N.E. Cor.

86 Elev. 636.11
1' Rt. Sta. 777 + 95
Sonoma & Stephenson, N.E. Cor.

85 Elev. 637.15
137' Rt. Sta. 793 + 92
Morehouse & Stephenson, S.E. Cor.

84 Elev. 636.93
118' Rt. Sta. 807 + 80
Coy & Stephenson, S. E. Cor.

83 Elev. 636.80
86' Rt. Sta. 819 + 09
S. E. Cor. Stephenson & Kenneth

82 Elev. 636.64
52' Rt. Sta. 838 + 09
Kalama and Stephenson, S. E. Cor.

81 Elev. 638.12
177' Lt. Sta. 852 + 81
S. W. Cor. Sixth & Stephenson

80 Elev. 637.94
153' Lt. Sta. 864 + 94
N. W. Cor. Middlesex & Stephenson

79 Elev. 638.54
165' Lt. Sta. 872 + 24
Chisled Square on Concrete Sign Base
N. W. Cor. 11 Mile & Stephenson (Shell Service Station)

78 Elev. 635.52
202' Rt. Sta. 880+28
M.S.H.D. Tag.;
S.W. Root 23" Box Elder

77 Elev. 636.96
143' Lt. Sta. 885+57
R.R. Spike in
Street Light Pole

83A Elev. 638.10
N. E. Cor. Kenneth & Helene

BENCH MARKS & WITNESSES

FILE NO. 63174 A.C66 | STATE PROJECT 63174 A | PROGRAM PROJECT I 75-2(186) | SHEET NO. 5

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	WALLED LAKE	6	33
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

OPERATION	BY	DATE
PRELIMINARY T.O.W. (PLANTS)		
FINAL T.O.W.		
PILAT DESIGN CHECKED		
TRACED		
FINAL T.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
BASIS OF PAYMENT		1962

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
SURVEYS		
PLAN PLOTTED		
PLAN REVIEWED		
PROFILE PLOTTED		
PROFILE CHECKED		
GRADE REVIEWED		
GRADE INSPECTION		
FINAL INSPECTION		
Earthwork by Cross Section Survey		

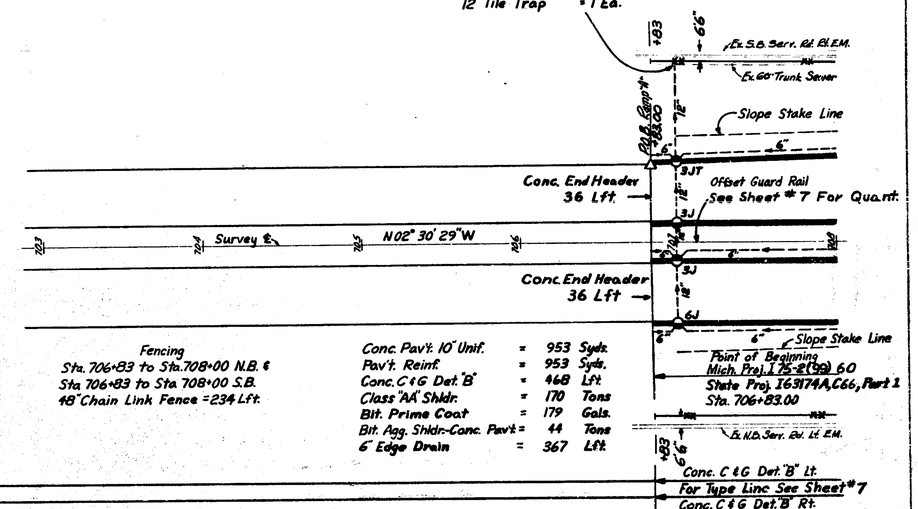
N

SEC. 36
T1N, R11E

Steel Beam Guard Rail for Street Endings (Lin. Ft.)		
STREET	NORTH BOUND	SOUTH BOUND
BERNHARD	41	41
ELZA	41	41
MAXLOW	41	41
EVELYN	41	41
HARRY	41	41
VASSAR	41	—
JARVIS	41	41
CALEDONIA	—	41
PEARL	41	41
ROBERT	41	—
HIGHLAND	41	41
BURNS	—	41
SHASTA	41	—
CHERRY	41	41
LANDER	41	41
ORCHARD	41	41
SONOMA	41	41
SUB-TOTAL	615	574
TOTAL		1189 Lin. Ft.

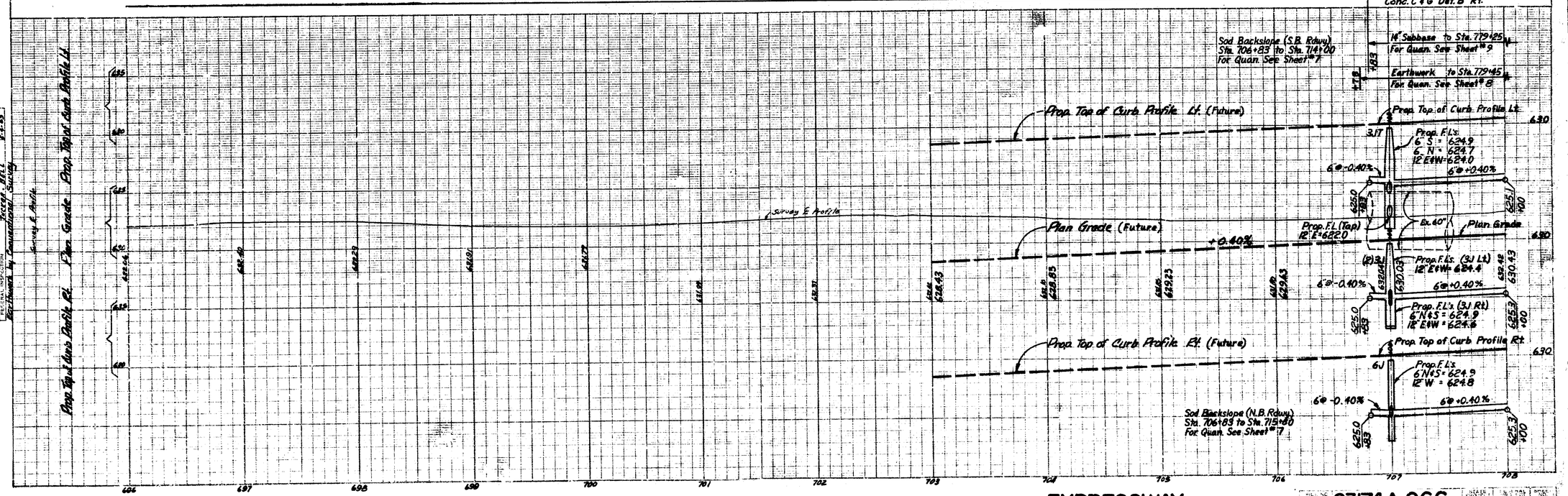
Est For Sewers
(Under All Pavt. & Shoulders)
Earth Exc. & Waste = 91 Cyds.
Por. Mat'l. Gr. "A" = 114 Cyds.

CB 6J (6.1-14) = 1 Ea.
CB 3J (6.1-14) = 3 Ea.
12" Cl. "A" Sew. (C76-II) = 101 Lf.
12" Cl. "B" Sew. (C76-III) = 62 Lf.
12" Sewer Tap = 1 Ea.
12" Tile Trap = 1 Ea.



Fencing
Sta. 706+83 to Sta. 708+00 N.B. ℄
Sta. 706+83 to Sta. 708+00 S.B.
48" Chain Link Fence = 234 Lft.

Conc. Pav't. 10" Unif.	=	953	Syds.
Pav't. Reinf.	=	953	Syds.
Conc. C & G Det. "B"	=	468	Lft.
Class "AA" Shldr.	=	170	Tons
Bit. Prime Coat	=	179	Gals.
Bit. Agg. Shldr-Conc. Pav't =		44	Tons
6" Edge Drain	=	367	Lft.



EXPRESSWAY

63174A.C66

AUTH.	DATE	REVISION
		FINAL R. O. W.

Fencing
Sta 708+00 to 720+00 N.B.℄
Sta 708+00 to 720+00 S.B.
48" Chain Link Fence = 2,444 Lft.

Conc. Pav't. 10" Unif.	= 11,427	Syds.
Conc. Ramp Pav't. 10" Unif.	= 2,078	Syds.
Pav't. Reinf.	= 13,505	Syds.
Conc. C&G Det. "A"	= 934	Lft.
Conc. C&G Det. "B"	= 5,442	Lft.

Conc. Nose Type I	= 1	Ea.
Conc. Nose Type II	= 1	Ea.
Class "AA" Shldr.	= 1,715	Tons
Bit. Prime Coat	= 1,863	Gals.
Bit. Agg. Shldr.-Conc. Pav't.	= 453	Tons
6" Edge Drain	= 4,885	Lft.

Sec. 36
T1N, R11E
N

For Ramp "A" & "B" Grades
See Sheet #13

For Const. Curve Data
See Sheet 8

Ramp "A" Curve Data
Δ = 15° 01' 28" Lt.
D = 04° 19' 51" (Arc.)
R = 1322.97'
T = 174.46'
L = 348.73'
E = 11.45'
P.C. = 716+31.75
P.I. = 718+06.21
P.C.C. = 719+80.48 =
(61' Lt. of Const. ℄
Sta. 719+80.48)

Surv Curve Data
Δ = 18° 04' 30" Lt.
D = 03° 00' 08" (Arc.)
R = 1908.39'
T = 303.54'
L = 602.04'
E = 24.01'
P.C. = 716+29.64
P.I. = 719+33.18
P.C.C. = 722+31.68

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	HIGH	X78-2(28)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-238	63174A	OAKLAND	HAYWARD	7	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	HIGH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

Inlet 5H(0-6)	= 1	Ea.
12" Cl. "A" Sew.	= 7	Lft.
12" Sew. Tap	= 1	Ea.

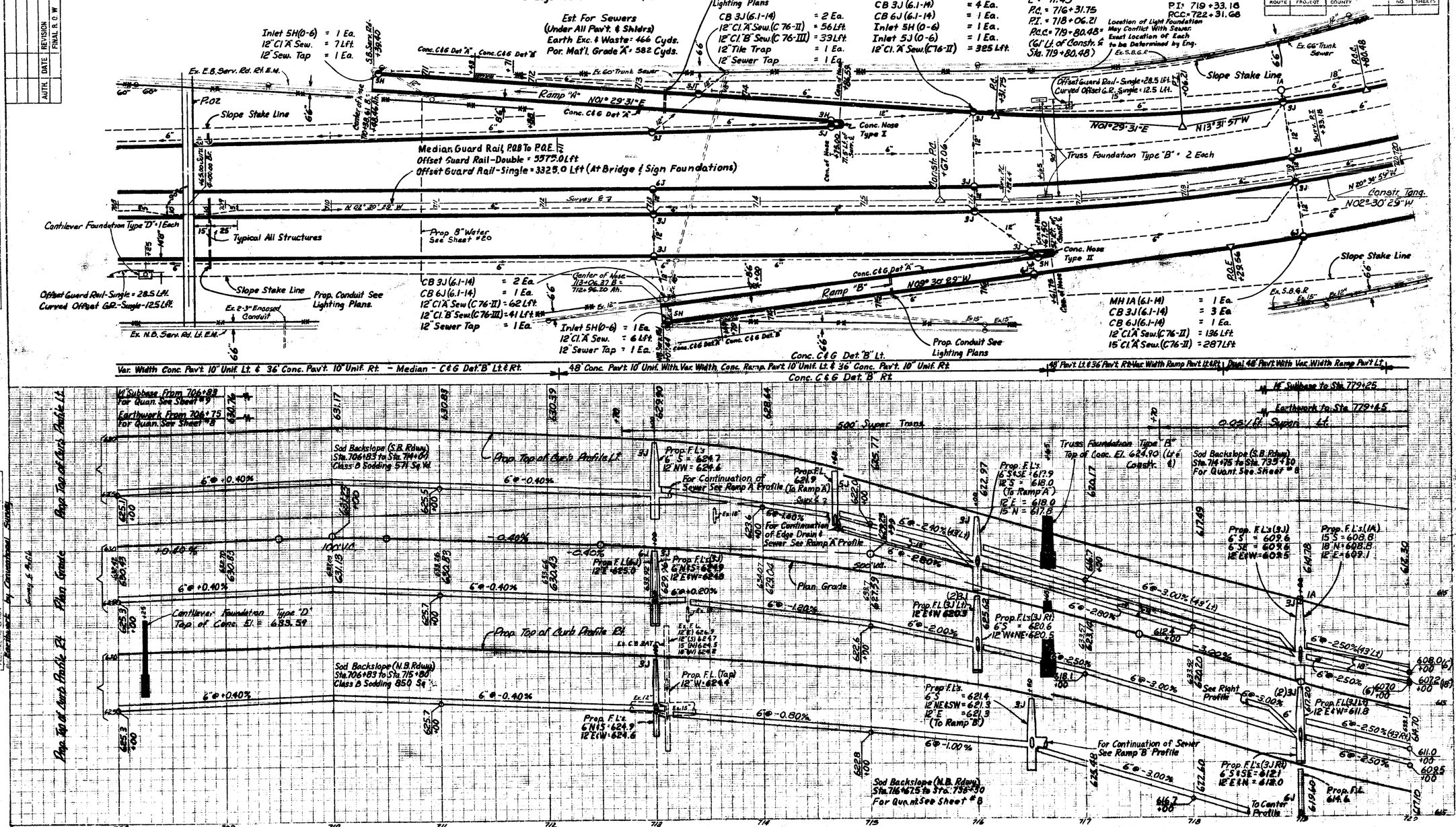
Est. For Sewers
(Under All Pav't. & Shldrs)
Earth Exc. & Waste = 466 Cyds.
Por. Mat'l. Grade "A" = 582 Cyds.

Prop. Conduit See Lighting Plans

CB 3J (6.1-14)	= 2	Ea.
12" Cl. "A" Sew. (C76-II)	= 56	Lft.
12" Cl. "B" Sew. (C76-III)	= 33	Lft.
12" Tile Trap	= 1	Ea.
12" Sewer Tap	= 1	Ea.

CB 3H (6.1-14)	= 1	Ea.
CB 3J (6.1-14)	= 4	Ea.
CB 6J (6.1-14)	= 1	Ea.
Inlet 5H (0-6)	= 1	Ea.
Inlet 5J (0-6)	= 1	Ea.
12" Cl. "A" Sew. (C76-II)	= 325	Lft.

Location of Light Foundation May Conflict With Sewer. Exact Location of Each to be Determined by Eng.



EXPRESSWAY

63174A C66

63174A X78-2(28)60 7

Fencing
Sta. 720+00 to 732+00 N.B.&
Sta. 720+00 to 732+00 S.B.
48" Chain Link Fence = 2337 Lft.
4' Walk Gate for 48" Chain
Link Fence = 1 Ea.

See Sheet #21A For Details

Permanent Sump - 1 Ea - Auth. Extra 10-21-65
~~CB 3J (6.1-14) = 1 Ea. Auth 10-21-65~~
CB 3J (6.1-14) = 4 Ea.
CB 6J (6.1-14) = 2 Ea.
12" Cl. A Sew. (C76-II) = 243 Lft.
18" Cl. A Sew. (C76-II) = 282 Lft.
18" Cl. B Sew. (C76-III) = 197 Lft.
30" Cl. B Sew. (C76-III) = 30 Lft.

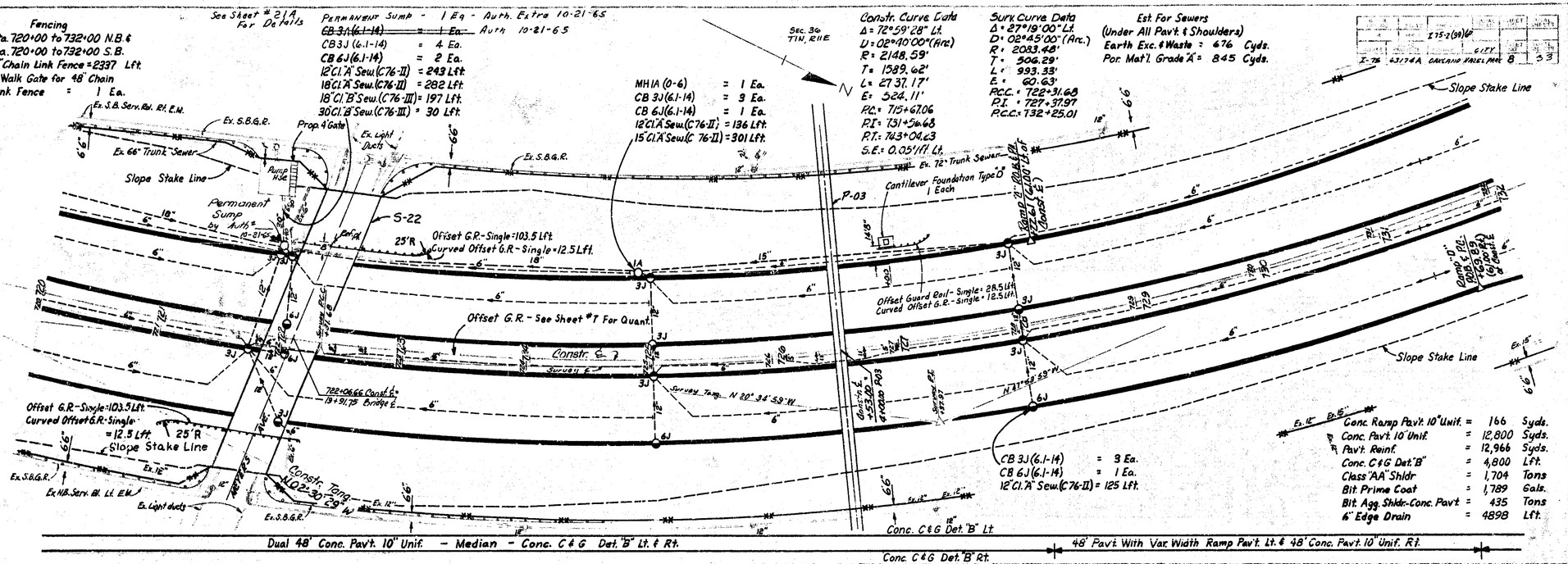
MH 1A (0-6) = 1 Ea.
CB 3J (6.1-14) = 3 Ea.
CB 6J (6.1-14) = 1 Ea.
12" Cl. A Sew. (C76-II) = 136 Lft.
15" Cl. A Sew. (C 76-II) = 301 Lft.

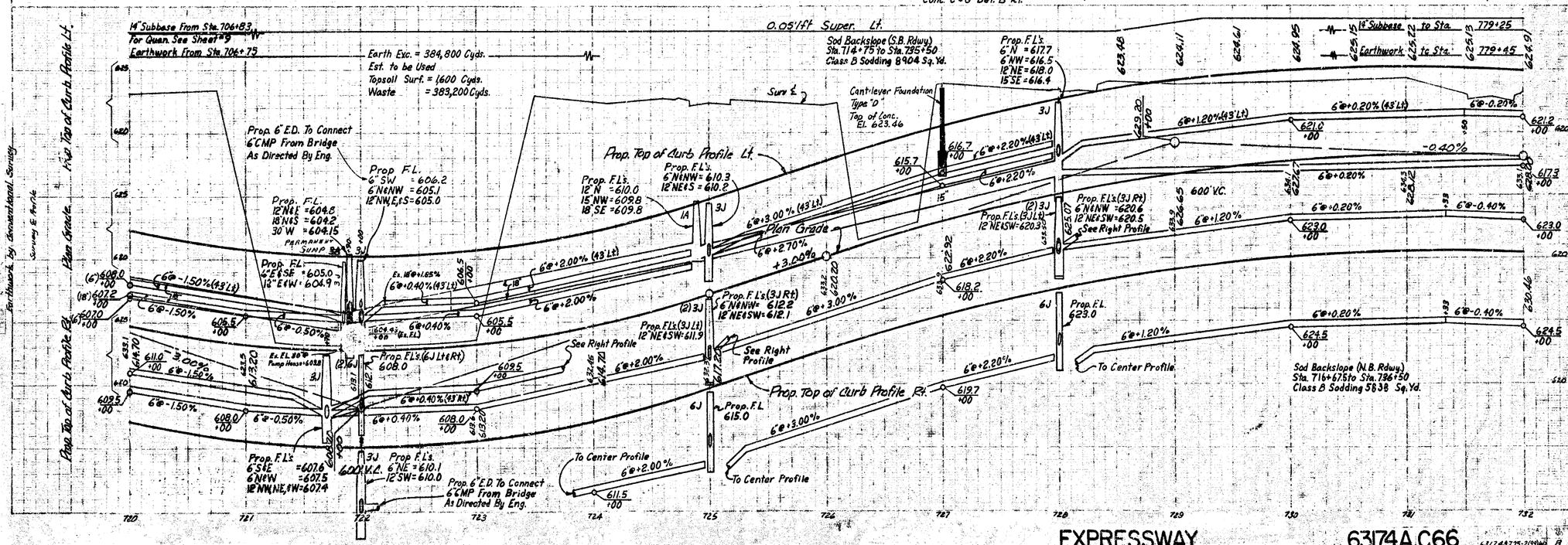
Constr. Curve Data
Δ = 72°59'28" Lt.
D = 02°40'00" (Arc.)
R = 2148.59'
T = 1589.62'
L = 2737.17'
E = 524.11'
P.C. = 715+67.06
P.I. = 731+56.68
P.T. = 743+04.23
S.E. = 0.05'/ft. Lt.

Surv. Curve Data
Δ = 27°19'00" Lt.
D = 02°45'00" (Arc.)
R = 2083.48'
T = 506.29'
L = 993.33'
E = 60.63'
P.C.C. = 722+31.68
P.I. = 727+37.97
P.C.C. = 732+25.01

Est. For Sewers
(Under All Pav't. & Shoulders)
Earth Exc. & Waste = 676 Cyds.
Por. Mat'l. Grade "A" = 845 Cyds.

Sec. 36 T1N, R11E





EXPRESSWAY

63174A, C66

AUTH.	DATE	REVISION
		FINAL R.O.W.

CB 3J (6.1-14)	=	4	Ea.
12" Cl. 'A' Sew. (C76-II)	=	88	Lft.
12" Cl. 'B' Sew. (C76-III)	=	64	Lft.
15" Cl. 'B' Sew. (C76-III)	=	45	Lft.
15" Tile Trap	=	1	Ea.
15" Sewer Tap	=	1	Ea.

CB 3H (6.1-14)	=	1	Ea.
CB 3J (6.1-14)	=	4	Ea.
CB 6H (6.1-14)	=	1	Ea.
CB 6J (6.1-14)	=	1	Ea.
12" Cl. 'A' Sew. (C76-II)	=	111	Lft.
12" Cl. 'C' Sew. (C76-II)	=	103	Lft.
15" Cl. 'C' Sew. (C76-III)	=	134	Lft.
15" Tile Trap	=	1	Ea.
15" Sewer Tap	=	1	Ea.

Conc. Pav't 10" Unif.	=	12,800	Syds.
Conc. Ramp Pav't 10" Unif.	=	2,605	Syds.
Pav't Reinf.	=	15,405	Syds.
Conc. C&G Det. 'A'	=	890	Lft.
Conc. C&G Det. 'B'	=	5,514	Lft.
Conc. Nose Type I	=	1	Ea.
Conc. Nose Type II	=	1	Ea.
Class 'AA' Shldr.	=	1,719	Tons
Bit. Prime Coat	=	1,805	Gals
Bit. Agg. Shldr.-Conc. Pav't	=	438	Tons
6" Edge Drain	=	5451	Lft.

Ramp "C" Curve Data
Δ = 19°18'20" Lt.
D = 02°44'41" (Approx.)
R = 2087.59'
T = 355.07'
L = 703.40'
E = 29.98
P.C. = 728+22.61 (61' Lt. of Const. ℄ Sta. 728+22.61)
P.I. = 731+77.68
P.C.C. = 735+26.01 (Ramp)

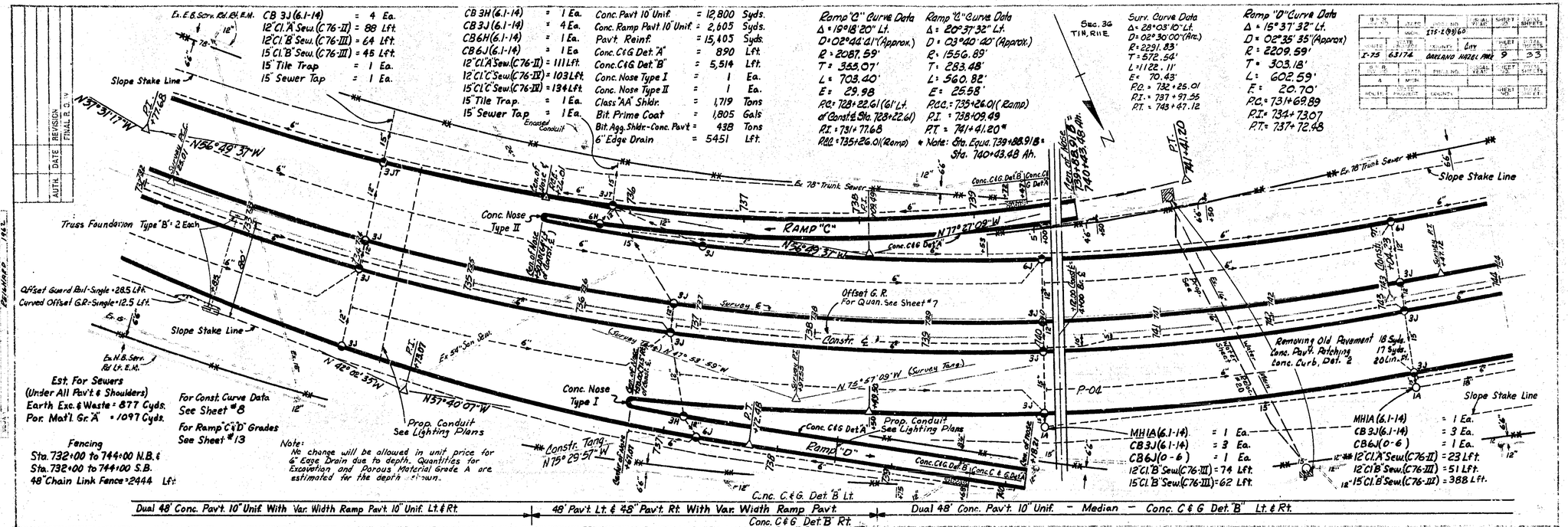
Ramp "D" Curve Data
Δ = 20°37'32" Lt.
D = 03°40'40" (Approx.)
R = 1556.89'
T = 283.48'
L = 560.82'
E = 25.58'
P.C.C. = 735+26.01 (Ramp)
P.I. = 738+09.49
P.T. = 741+41.20 *
* Note: Sta. Equa. 739+88.91B = Sta. 740+43.48 Ah.

Sec. 36
T1N, R11E

Surv. Curve Data
Δ = 28°03'10" Lt.
D = 02°30'00" (Arc.)
R = 2291.83'
T = 572.54'
L = 1122.11'
E = 70.43'
P.C. = 732+25.01
P.I. = 737+97.55
P.T. = 743+47.12

Ramp "D" Curve Data
Δ = 15°37'32" Lt.
D = 02°35'35" (Approx)
R = 2209.59'
T = 303.18'
L = 602.59'
E = 20.70'
P.C. = 731+69.89
P.I. = 734+73.07
P.T. = 737+72.48

75-2(9)60					
I-75	63174	OAKLAND HAZEL PARK		9	33



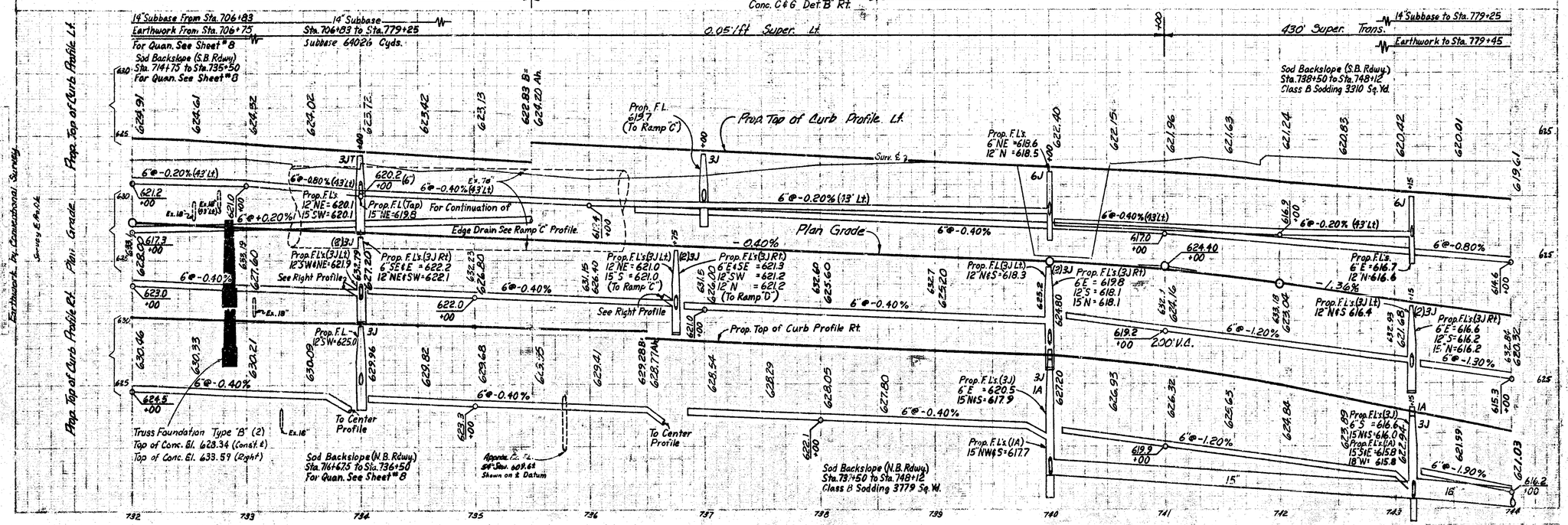
Est. For Sewers
(Under All Pav't & Shoulders)
Earth Exc. & Waste = 877 Cyds.
Por. Mat'l. Gr. 'A' = 1097 Cyds.

Fencing
Sta. 732+00 to 744+00 N.B. &
Sta. 732+00 to 744+00 S.B.
48" Chain Link Fence = 2444 Lft.

For Const. Curve Data See Sheet #8
For Ramp "C" & "D" Grades See Sheet #13

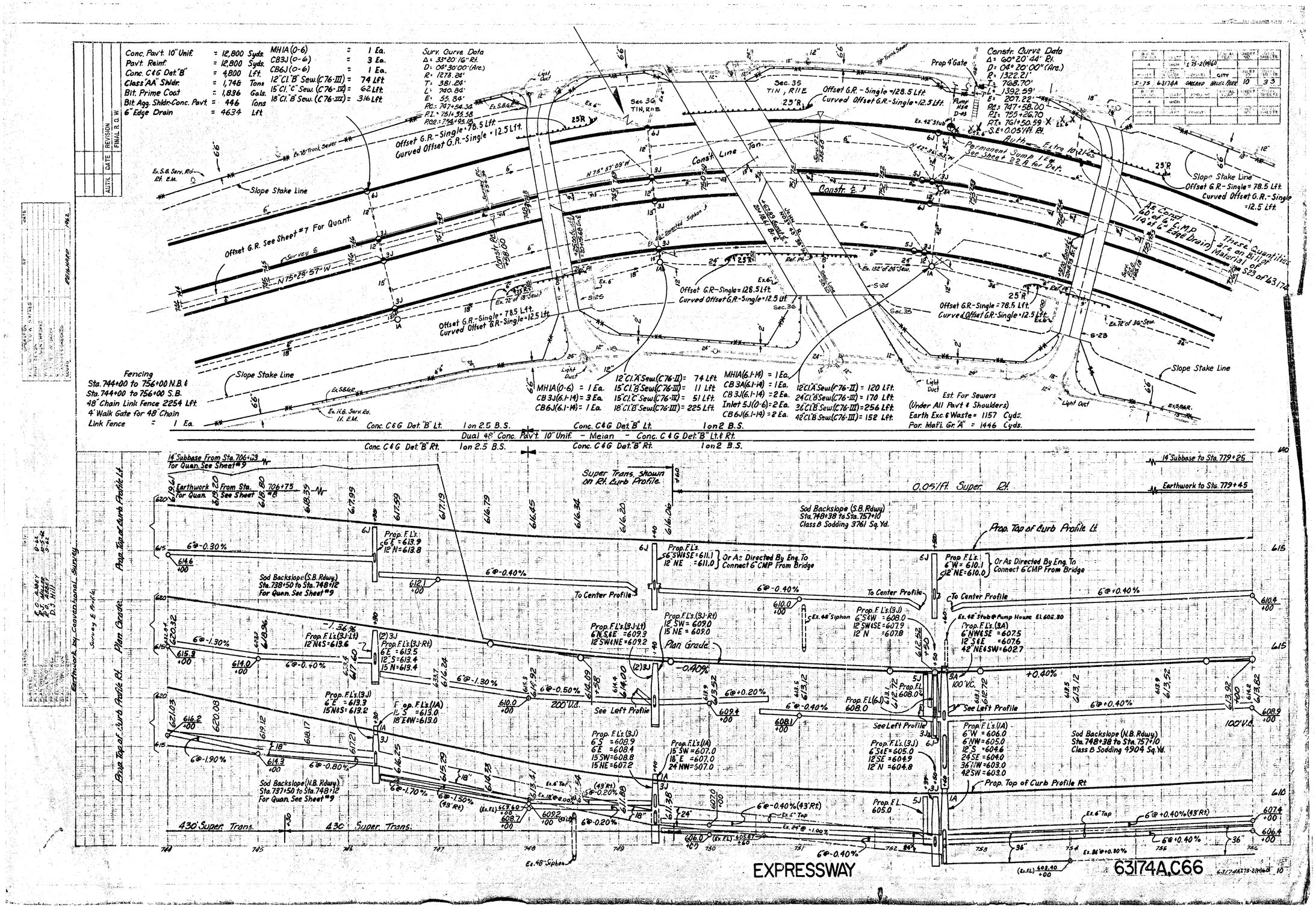
Note:
No change will be allowed in unit price for 6" Edge Drain due to depth. Quantities for Excavation and Porous Material Grade A are estimated for the depth shown.

Dual 48' Conc. Pav't. 10" Unif. With Var. Width Ramp Pav't. 10" Unif. Lt. & Rt. | 48' Pav't. Lt. & 48" Pav't. Rt. With Var. Width Ramp Pav't. Conc. C&G Det. 'B' Rt. | Dual 48' Conc. Pav't. 10" Unif. – Median – Conc. C & G Det. 'B' Lt. & Rt.



EXPRESSWAY

63174A.C66



Conc. Pav't. 10" Unif. = 12,800 Syds.
Pav't. Reinf. = 12,800 Syds.
Conc. C&G Det. "B" = 4,800 Lft.
Class "AA" Shldr. = 1,748 Tons
Bit. Prime Coat = 1,836 Gals.
Bit. Agg. Shldr.-Conc. Pav't. = 446 Tons
6" Edge Drain = 4634 Lft.
MH1A (0-6) = 1 Ea.
CB3J (0-6) = 3 Ea.
CB6J (0-6) = 1 Ea.
12" Cl. "B" Sew. (C76-III) = 74 Lft.
15" Cl. "C" Sew. (C76-IV) = 62 Lft.
18" Cl. "B" Sew. (C76-III) = 316 Lft.
Surv. Curve Data
Δ = 33°20'16" Rt.
D = 04°30'00" (Arc.)
R = 1273.24'
T = 381.24'
L = 740.84'
E = 55.84'
P.C. = 747+54.34
P.I. = 751+35.58
P.C.R. = 754+95.18
Constr. Curve Data
Δ = 60°20'44" Rt.
D = 04°20'00" (Arc.)
R = 1322.21'
T = 768.70'
L = 1392.59'
E = 207.22'
P.C. = 747+58.00
P.I. = 755+26.70
P.T. = 761+50.59
S.E. = 0.05'/Ft. Rt.
Offset G.R.-Single = 78.5 Lft.
Curved Offset G.R.-Single = 12.5 Lft.
Offset G.R.-Single = 128.5 Lft.
Curved Offset G.R.-Single = 12.5 Lft.
Slope Stake Line
Offset G.R. See Sheet #7 For Quant.
Const. Line
Permanent Sump 1 Ea. See Sheet 22A for Det.
As Const. 60' of 6" C.M.P. 114' of 6" Edge Drain
These Quantities are on Bill of Material of S23 of 63174
Fencing
Sta. 744+00 to 756+00 N.B. &
Sta. 744+00 to 756+00 S.B.
48" Chain Link Fence 2254 Lft.
4' Walk Gate for 48" Chain Link Fence = 1 Ea.
MH1A (0-6) = 1 Ea.
CB3J (6.1-14) = 3 Ea.
CB6J (6.1-14) = 1 Ea.
12" Cl. "A" Sew. (C76-II) = 74 Lft.
15" Cl. "B" Sew. (C76-III) = 11 Lft.
15" Cl. "C" Sew. (C76-IV) = 51 Lft.
18" Cl. "B" Sew. (C76-III) = 225 Lft.
MH1A (6.1-14) = 1 Ea.
CB3A (6.1-14) = 1 Ea.
CB3J (6.1-14) = 2 Ea.
Inlet 5J (0-6) = 2 Ea.
CB6J (6.1-14) = 2 Ea.
12" Cl. "A" Sew. (C76-II) = 120 Lft.
24" Cl. "B" Sew. (C76-III) = 170 Lft.
36" Cl. "B" Sew. (C76-III) = 256 Lft.
42" Cl. "B" Sew. (C76-III) = 152 Lft.
Est. For Sewers
(Under All Pav't & Shoulders)
Earth Exc. & Waste = 1157 Cyds.
Por. Mat'l. Gr. "A" = 1446 Cyds.
Conc. C&G Det. "B" Lt. 1 on 2.5 B.S.
Conc. C&G Det. "B" Lt. 1 on 2 B.S.
Dual 48" Conc. Pav't. 10" Unif. - Median - Conc. C&G Det. "B" Lt. & Rt.
Conc. C&G Det. "B" Rt. 1 on 2.5 B.S.
Conc. C&G Det. "B" Rt. 1 on 2 B.S.
14" Subbase From Sta. 706+03 For Quan. See Sheet #9
Earthwork From Sta. 706+75 For Quan. See Sheet #8
Super Trans. shown on Rt. Curb Profile
0.05'/Ft. Super. Rt.
14" Subbase to Sta. 779+25
Earthwork to Sta. 779+45
Sod Backslope (S.B. Rdwy.) Sta. 748+38 to Sta. 757+10 Class B Sodding 3761 Sq. Yd.
Prop. Top of Curb Profile Lt.
Sod Backslope (S.B. Rdwy.) Sta. 738+50 to Sta. 748+12 For Quan. See Sheet #9
Sod Backslope (N.B. Rdwy.) Sta. 748+38 to Sta. 757+10 Class B Sodding 4904 Sq. Yd.
Sod Backslope (N.B. Rdwy.) Sta. 737+50 to Sta. 748+12 For Quan. See Sheet #9
Prop. Top of Curb Profile Rt.
Plan Grade
To Center Profile
See Left Profile
430' Super. Trans.
Earthwork by Conventional Survey
EXPRESSWAY
63174A.C66

Surv. Curve Data
Δ = 27°27'40" Rt.
D = 04°15'00" (Arc.)
R = 1348.14'
T = 323.40'
L = 646.15'
E = 39.60'
P.C. = 756+95.18
P.I. = 758+24.58
P.T. = 761+41.33

For Const. Curve Data
See Sheet #10

Est. For Sewers
(Under All Pavt. & Shoulders)
Earth Exc. & Waste = 547 Cyds.
Por. Mat'l. Gr. "A" = 684 Cyds.

Fencing
Sta. 756+00 to 768+00 N.B. &
Sta. 756+00 to 768+00 S.B.
48" Chain Link Fence = 2229 Lft.

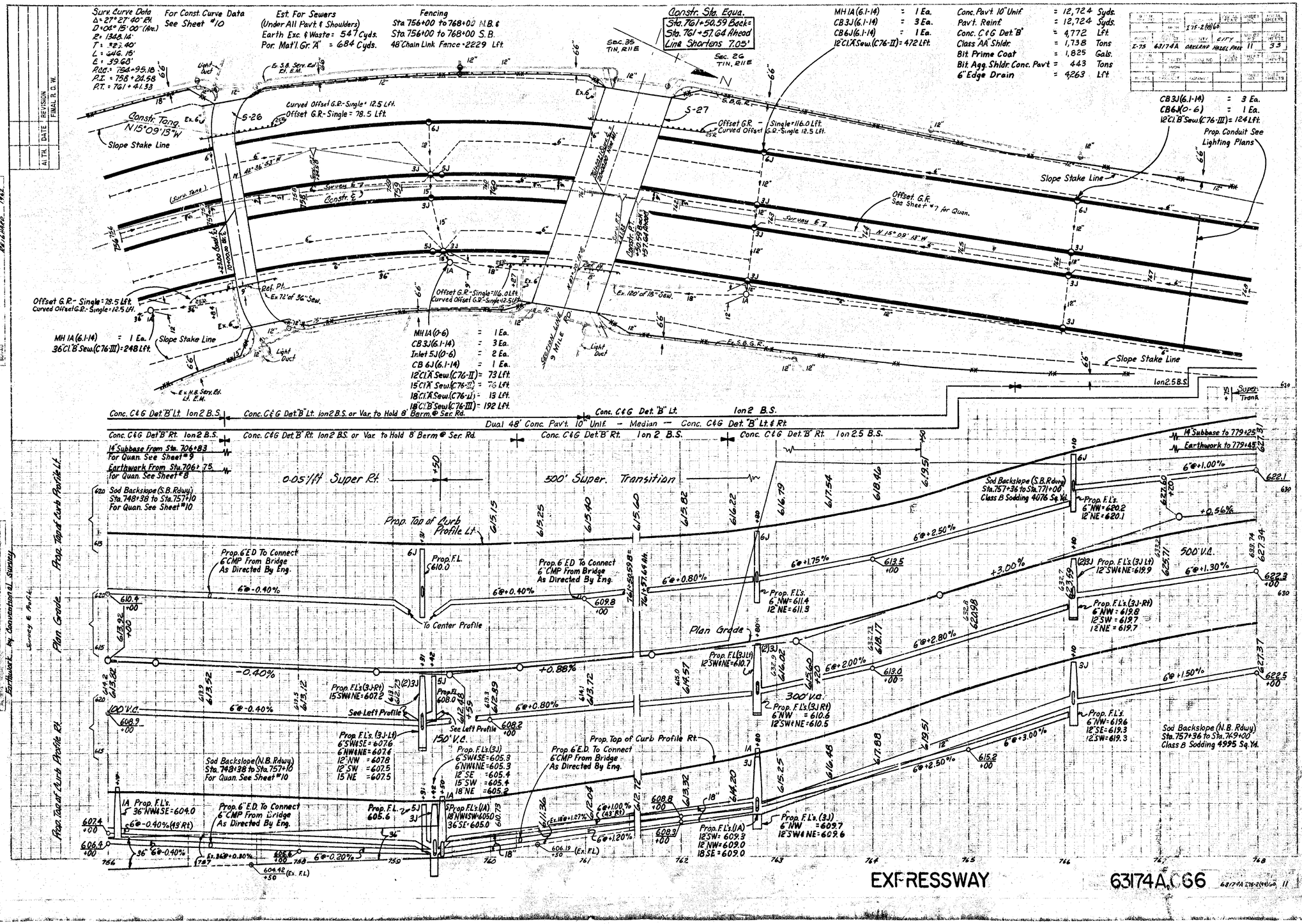
Constr. Sta. Equa.
Sta. 761+50.59 Back =
Sta. 761+57.64 Ahead
Line Shortens 7.05'

MH 1A (6.1-14) = 1 Ea.
CB 3J (6.1-14) = 3 Ea.
CB 6J (6.1-14) = 1 Ea.
12" Cl. A Sew. (C76-II) = 472 Lft.

Conc. Pavt. 10" Unif.	= 12,724	Syds.
Pavt. Reinf.	= 12,724	Syds.
Conc. C&G Det. "B"	= 4,772	Lft.
Class "AA" Shldr.	= 1,738	Tons
Bit. Prime Coat	= 1,825	Gals.
Bit. Agg. Shldr. Conc. Pavt.	= 443	Tons
6" Edge Drain	= 4,263	Lft.

I-75-2(69)60				
I-75 63174A	OAKLAND HAZEL PARK	CITY	11	33

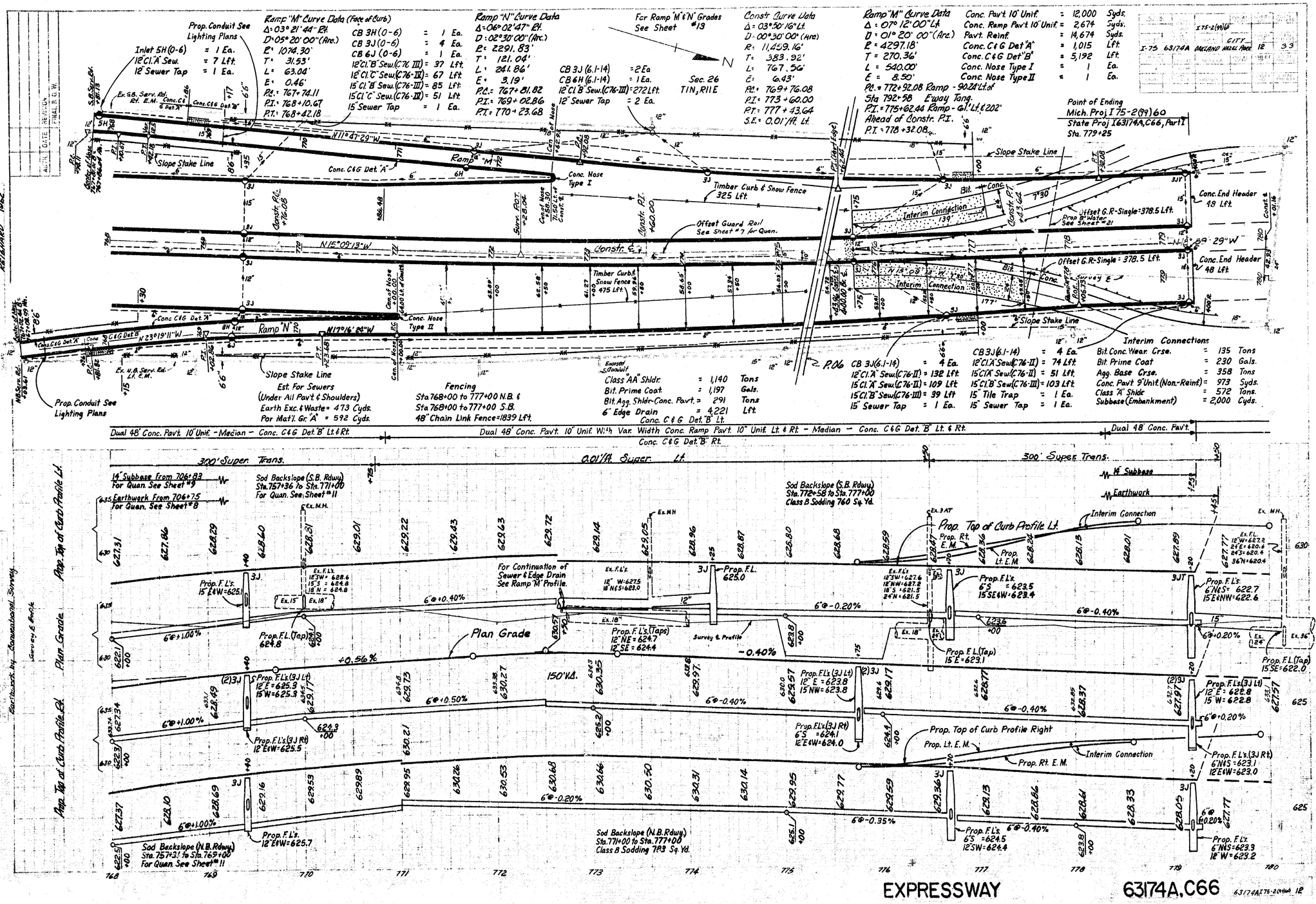
CB 3J (6.1-14) = 3 Ea.
CB 6J (0-6) = 1 Ea.
12" Cl. B Sew. (C76-III) = 124 Lft.
Prop. Conduit See Lighting Plans

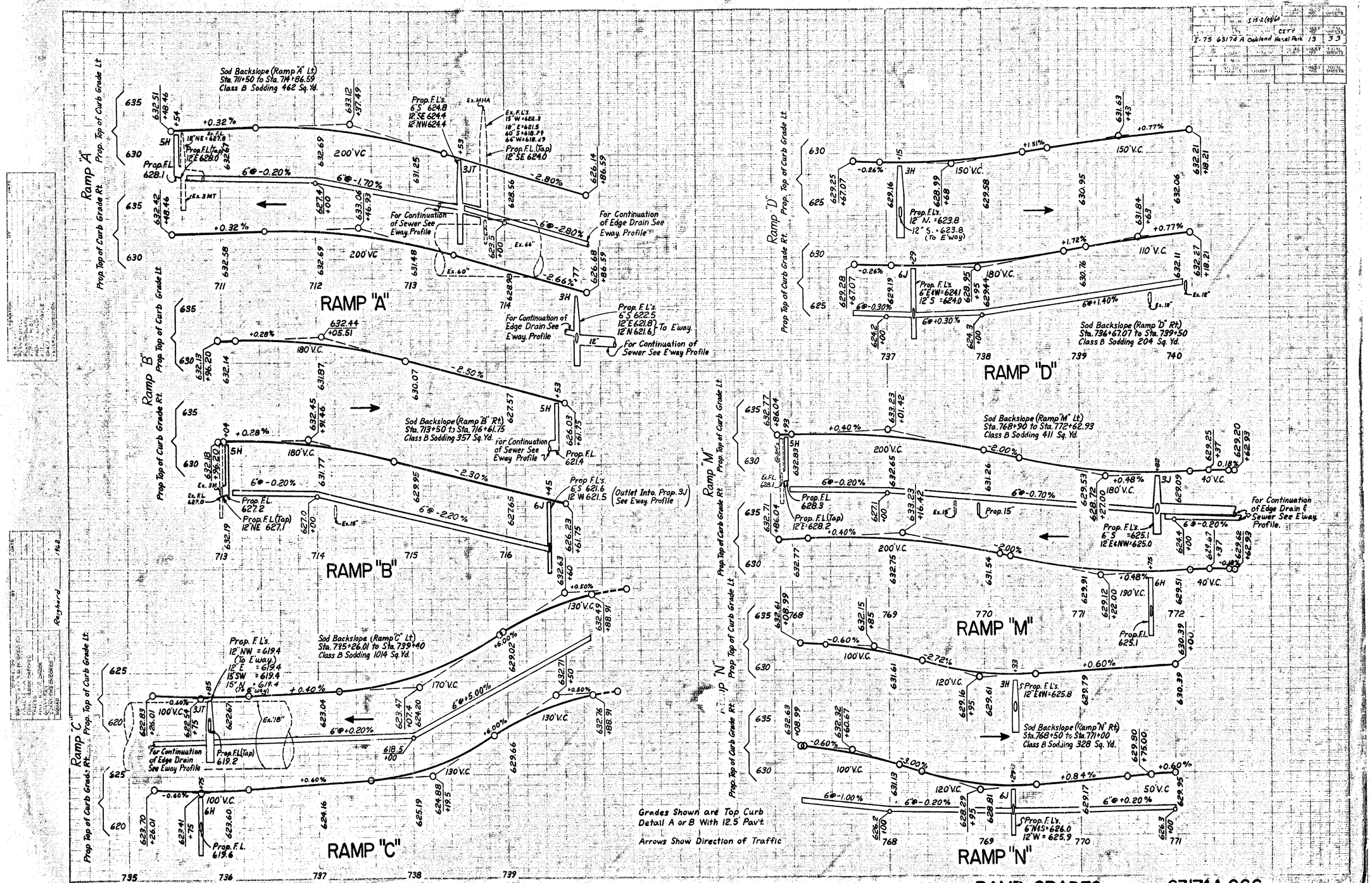


EXPRESSWAY

63174A C66

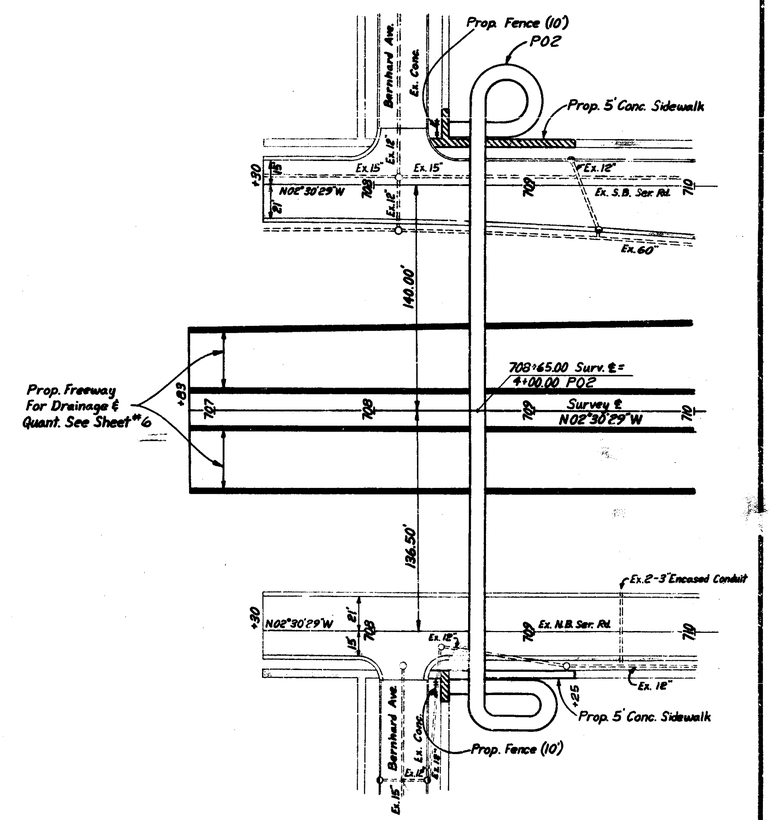
63174A I-75-2(69)60 11


Ramp "M" Curve Data (Face of Curb)
Δ: 03° 21' 44" Rt.
D: 05° 20' 00" (Arc.)
R: 1074.30'
T: 31.53'
L: 63.04'
E: 0.46'
P.C.: 767+74.11
P.I.: 768+10.67
P.T.: 768+42.18
Ramp "N" Curve Data
Δ: 06° 02' 47" Rt.
D: 02° 30' 00" (Arc.)
R: 2291.83'
T: 121.04'
L: 241.86'
E: 3.19'
P.C.: 767+81.82
P.I.: 769+02.86
P.T.: 770+23.68
For Ramp "M" & "N" Grades See Sheet #13
N
Sec. 26
T1N, R11E
Constr. Curve Data
Δ: 03° 50' 16" Lt.
D: 00° 30' 00" (Arc.)
R: 11,459.16'
T: 383.92'
L: 767.56'
E: 6.43'
P.C.: 769+76.08
P.I.: 773+60.00
P.T.: 777+43.64
S.E.: 0.01'/ft. Lt.
Ramp "M" Curve Data
Δ: 07° 12' 00" Lt.
D: 01° 20' 00" (Arc.)
R: 4297.18'
T: 270.36'
L: 540.00'
E: 8.50'
P.C.: 772+92.08 Ramp - 90.24' Lt. of Sta 792+58 Eway Tang.
P.I.: 775+62.44 Ramp - 6.1' Lt. & 202' Ahead of Constr. P.I.
P.T.: 778+32.08
Conc. Pav't 10" Unif. = 12,000 Syds.
Conc. Ramp Pav't 10" Unif. = 2,674 Syds.
Pav't. Reinf. = 14,674 Syds.
Conc. C&G Det "A" = 1,015 Lft.
Conc. C&G Det "B" = 5,192 Lft.
Conc. Nose Type I = 1 Ea.
Conc. Nose Type II = 1 Ea.
I-75 63174A OAKLAND MACOMB FRWY. 12 33
Point of Ending
Mich. Proj. I 75-2(99)60
State Proj 163174A, C66, Part I
Sta. 779+25
Inlet 5H(0-6) = 1 Ea.
12" Cl. "A" Sew. = 7 Lft.
12" Sewer Tap = 1 Ea.
Prop. Conduit See Lighting Plans
CB 3H(0-6) = 1 Ea.
CB 3J(0-6) = 4 Ea.
CB 6J(0-6) = 1 Ea.
12" Cl. "B" Sew. (C76-III) = 37 Lft.
12" Cl. "C" Sew. (C76-III) = 67 Lft.
15" Cl. "B" Sew. (C76-III) = 85 Lft.
15" Cl. "C" Sew. (C76-III) = 51 Lft.
15" Sewer Tap = 1 Ea.
CB 3J(6.1-14) = 2 Ea.
CB 6H(6.1-14) = 1 Ea.
12" Cl. "B" Sew. (C76-III) = 272 Lft.
12" Sewer Tap = 2 Ea.
Timber Curb & Snow Fence 325 Lft.
Offset Guard Rail See Sheet #7 for Quan.
Interim Connection 139
Offset G.R.-Single = 378.5 Lft.
Prop. 8" Water See Sheet #21
Conc. End Header 48 Lft.
Timber Curb & Snow Fence 475 Lft.
Interim Connection 177
Slope Stake Line
Conc. C&G Det. "A"
Conc. C&G Det. "B"
Conc. Nose Type I
Conc. Nose Type II
Ramp "M"
Ramp "N"
N 11° 47' 29" W
N 15° 09' 13" W
N 17° 16' 24" W
N 23° 19' 11" W
N 89° 29" W
Constr. ℄
Prop. Conduit See Lighting Plans
Slope Stake Line
Est. for Sewers (Under All Pav't & Shoulders)
Earth Exc. & Waste = 473 Cyds.
Por Mat'l. Gr. "A" = 592 Cyds.
Fencing
Sta 768+00 to 777+00 N.B. &
Sta 768+00 to 777+00 S.B.
48" Chain Link Fence = 1839 Lft.
Class "AA" Shldr. = 1,140 Tons
Bit. Prime Coat = 1,197 Gals.
Bit. Agg. Shldr-Conc. Pav't. = 291 Tons
6" Edge Drain = 4,221 Lft.
Conc. C&G Det. "B" Lt.
Excavat. Conduit
P.06
CB 3J(6.1-14) = 4 Ea.
12" Cl. "A" Sew. (C76-II) = 132 Lft.
15" Cl. "A" Sew. (C76-II) = 109 Lft.
15" Cl. "B" Sew. (C76-III) = 39 Lft.
15" Sewer Tap = 1 Ea.
CB 3J(6.1-14) = 4 Ea.
12" Cl. "A" Sew. (C76-II) = 74 Lft.
15" Cl. "A" Sew. (C76-II) = 51 Lft.
15" Cl. "B" Sew. (C76-III) = 103 Lft.
15" Tile Trap = 1 Ea.
15" Sewer Tap = 1 Ea.
Interim Connections
Bit. Conc. Wear. Crse. = 135 Tons
Bit. Prime Coat = 230 Gals.
Agg. Base Crse. = 358 Tons
Conc. Pav't 9" Unif. (Non-Reint) = 973 Syds.
Class "A" Shldr = 572 Tons.
Subbase (Embankment) = 2,000 Cyds.
Dual 48' Conc. Pav't. 10" Unif. - Median - Conc. C&G Det. "B" Lt. & Rt.
Dual 48' Conc. Pav't. 10" Unif. With Var. Width Conc. Ramp Pav't. 10" Unif. Lt. & Rt. - Median - Conc. C&G Det. "B" Lt. & Rt.
Dual 48' Conc. Pav't.
Conc. C&G Det. "B" Rt.
300' Super. Trans.
0.01'/ft. Super. Lt.
300' Super. Trans.
14" Subbase From 706+83 For Quan. See Sheet #9
Earthwork From 706+75 For Quan. See Sheet #8
Sod Backslope (S.B. Rdwy.) Sta. 757+36 to Sta. 771+00 For Quan. See Sheet #11
Sod Backslope (S.B. Rdwy.) Sta. 772+58 to Sta. 777+00 Class B Sodding 760 Sq. Yd.
14" Subbase
Earthwork
Interim Connection
Prop. Top of Curb Profile Lt.
Prop. Rt. E.M.
Prop. Lt. E.M.
For Continuation of Sewer & Edge Drain See Ramp "M" Profile.
Plan Grade
150' V.A.
Survey & Profile
Prop. Top of Curb Profile Right
Sod Backslope (N.B. Rdwy.) Sta. 757+31 to Sta. 769+00 For Quan. See Sheet #11
Sod Backslope (N.B. Rdwy.) Sta. 771+00 to Sta. 777+00 Class B Sodding 783 Sq. Yd.
Prop. Top of Curb Profile Rt.
Plan Grade
Prop. Top of Curb Profile Lt.
Earthwork by Topographical Survey
Survey & Profile
EXPRESSWAY
63174A.C66


RAMP "A"
RAMP "B"
RAMP "C"
RAMP "D"
RAMP "M"
RAMP "N"
Ramp "A" Prop. Top of Curb Grade Rt.
Ramp "B" Prop. Top of Curb Grade Rt.
Ramp "C" Prop. Top of Curb Grade Rt.
Ramp "D" Prop. Top of Curb Grade Rt.
Ramp "M" Prop. Top of Curb Grade Rt.
Ramp "N" Prop. Top of Curb Grade Rt.
Sod Backslope (Ramp "A" Lt) Sta. 711+50 to Sta. 714+86.59 Class B Sodding 462 Sq. Yd.
Sod Backslope (Ramp "B" Rt) Sta. 713+50 to Sta. 716+61.75 Class B Sodding 357 Sq. Yd.
Sod Backslope (Ramp "C" Lt) Sta. 735+26.01 to Sta. 739+40 Class B Sodding 1014 Sq. Yd.
Sod Backslope (Ramp "D" Rt) Sta. 736+67.07 to Sta. 739+50 Class B Sodding 204 Sq. Yd.
Sod Backslope (Ramp "M" Lt) Sta. 768+90 to Sta. 772+62.93 Class B Sodding 411 Sq. Yd.
Sod Backslope (Ramp "N" Rt) Sta. 768+50 to Sta. 771+00 Class B Sodding 328 Sq. Yd.
For Continuation of Sewer See Eway. Profile
For Continuation of Edge Drain See Eway. Profile
For Continuation of Edge Drain See Eway Profile
For Continuation of Edge Drain & Sewer See Eway Profile.
(Outlet Into Prop. 3J See Eway Profile)
Grades Shown are Top Curb Detail A or B With 12.5' Pav't
Arrows Show Direction of Traffic
RAMP GRADES
63174A,C66
I-75 63174 A Oakland Hazel Park 13 33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	City	SHEET NO.	TOTAL SHEETS
I-75	69174A	Oakland	Hazel Park	14	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



Rem. Sidewalk Shown = 72 Syds.
4" Conc. Sidewalk = 1045 Sft.
48" Chain Link Fence = 20 Lft.

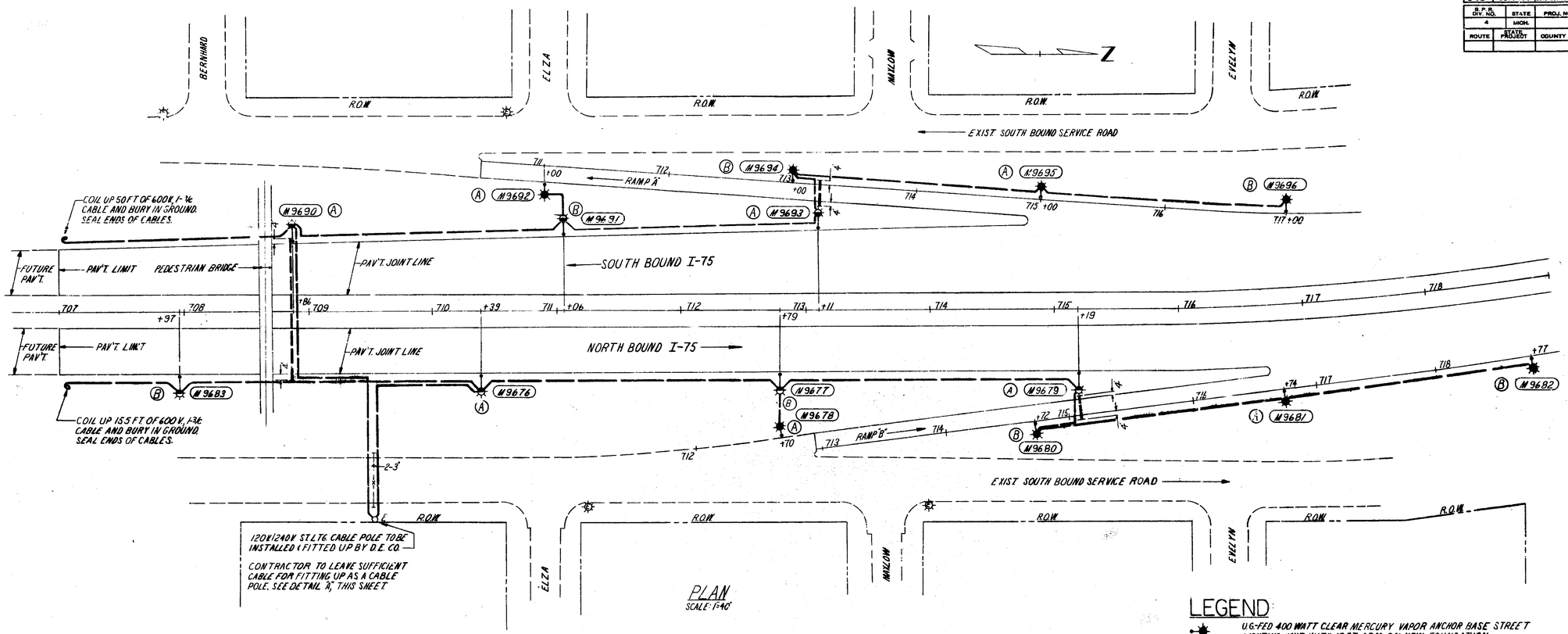
Sand - Gravel Material = 250 Cyds.
(For Limits See Bridge Plans)

SERVICE ROADS AT P02

FILE NO. USE NO. 350 STENCIL	63174A,C66	STATE PROJECT 63174A	FEDERAL PROJECT I75-2(99)60	14

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	276(09)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	15	33

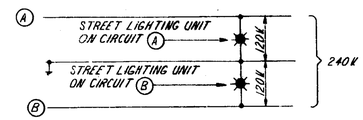
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



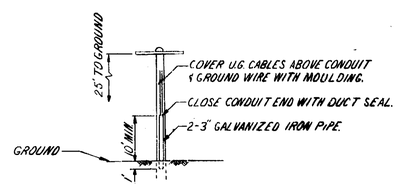
PLAN
SCALE: 1"=40'

MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
1-3 ENCASED CONDUIT	152 LIN. FT.		
600V, 1-3/4 CABLE CONSISTING OF 3-1/4" CABLES.	2464 LIN. FT.		
600V, 2-3/4 CABLES CONSISTING OF 3-1/4" CABLES EACH.	310 LIN. FT.		
LIGHTING STANDARD WITH 10' ARM ON NEW FOUNDATION	8 EACH		
LIGHTING STANDARD WITH 15' ARM ON NEW FOUNDATION	7 EACH		
400 WATT CLEAR MERCURY VAPOR LUMINAIRE	15 EACH		
* 2-3" G.I.P. UP CABLE POLE	12 LIN. FT.		

1-3" DUCT
NOT TO SCALE



TYPICAL MULTIPLE ST. LTG. WIRING DIAGRAM



* DETAIL "A"
WORK TO BE DONE BY CONTRACTOR

LEGEND

- U.G.-FED 400 WATT CLEAR MERCURY VAPOR ANCHOR BASE STREET LIGHTING UNIT WITH 10 FT. ARM ON NEW FOUNDATION.
- U.G.-FED 400 WATT CLEAR MERCURY VAPOR ANCHOR BASE STREET LIGHTING UNIT WITH 15 FT. ARM ON NEW FOUNDATION.
- EXISTING D.E.CO. STREET LIGHTING UNIT.
- 1-3" ENCASED CONDUIT
- 2-3" — EXISTING ENCASED CONDUIT (2-3" SHOWN)
- 600V, 1-3/4 CABLE CONSISTING OF 3-1/4" CABLES.
- 600V, 2-3/4 CABLES CONSISTING OF 3-1/4" CABLES EACH.
- (M9676) INDICATES STREET LIGHTING STANDARD NUMBER.

GENERAL NOTE

PROPOSED U.G.-FED ST. LTG. STANDARDS SHALL BE IN ACCORDANCE WITH M.S.H.D. STANDARD PLANS E-18-A-2 & E-18-A-3. MOUNTING HEIGHT SHALL BE 30' ABOVE PAVEMENT.

I-75 FREEWAY
LIGHTING PLAN RAMP "A" & "B" IN CITY OF HAZEL PARK

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE 4-15-65
DRAWN BY J.F.
CHECKED BY
APPROVED BY

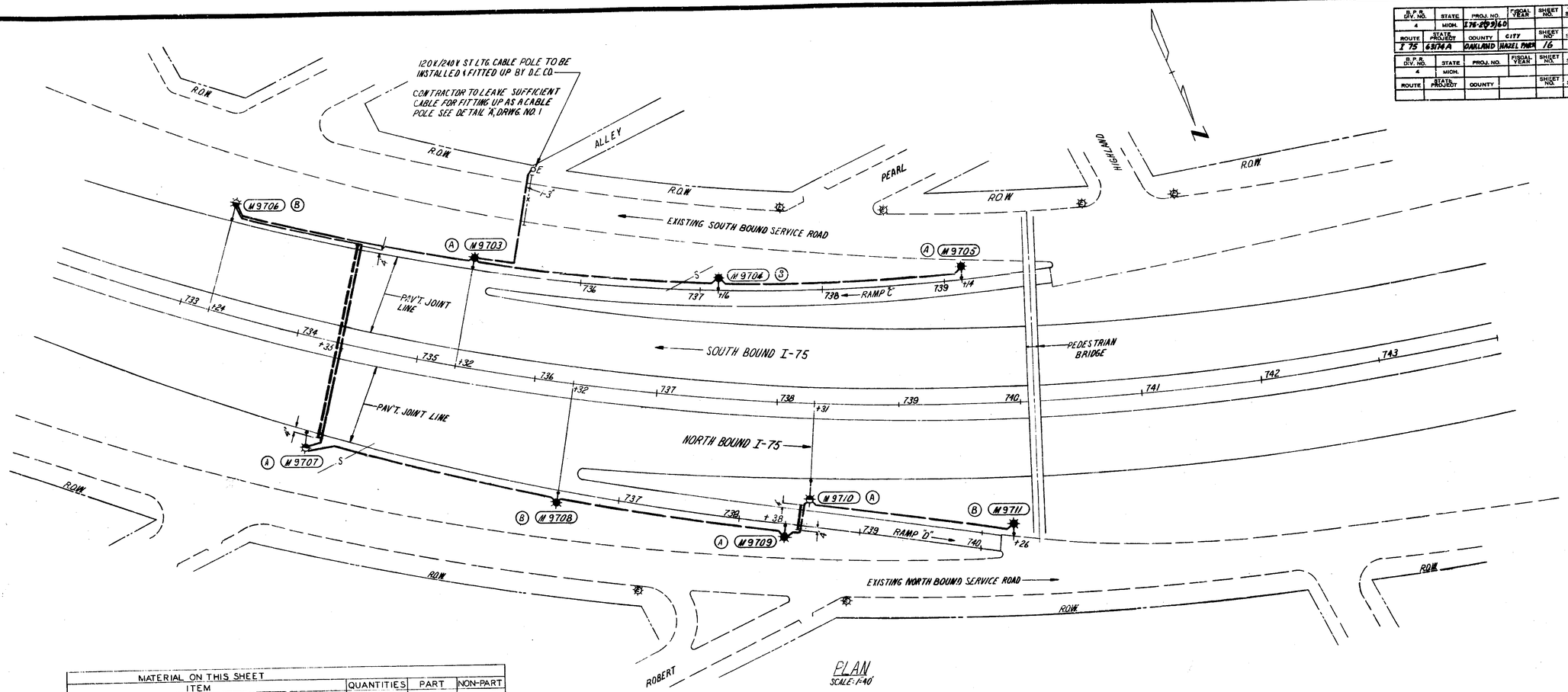
FILE NO.	DRWG. NO.	DATE
CEA C 74A-1	1 OF 4	4-15-65

LIGHTING

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A.C66	63174 A	276(09)60	15

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	16	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



PLAN
SCALE: 1"=40'

FOR TYPICAL MULTIPLE STREET LIGHTING WIRING DIAGRAM SEE DRWG. NO. 1

MATERIAL ON THIS SHEET

ITEM	QUANTITIES	PART	NON-PART
1-3" ENCASED CONDUIT	180 LIN. FT.		
600V, 1-3/C CABLE CONSISTING OF 3-1/C #6 CABLES.	1245 LIN. FT.		
600V, 2-3/C CABLES CONSISTING OF 3-1/C #6 CABLES EACH	138 LIN. FT.		
LIGHTING STANDARD WITH 10' ARM ON NEW FOUNDATION	6 EACH		
LIGHTING STANDARD WITH 15' ARM ON NEW FOUNDATION	3 EACH		
400 WATT CLEAR MERCURY VAPOR LUMINAIRE	9 EACH		
2-3" G.I.P. UP CABLE POLE	12 LIN. FT.		

I-75 FREEWAY
LIGHTING PLAN
RAMP "C" & "D"
IN CITY OF HAZEL PARK

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

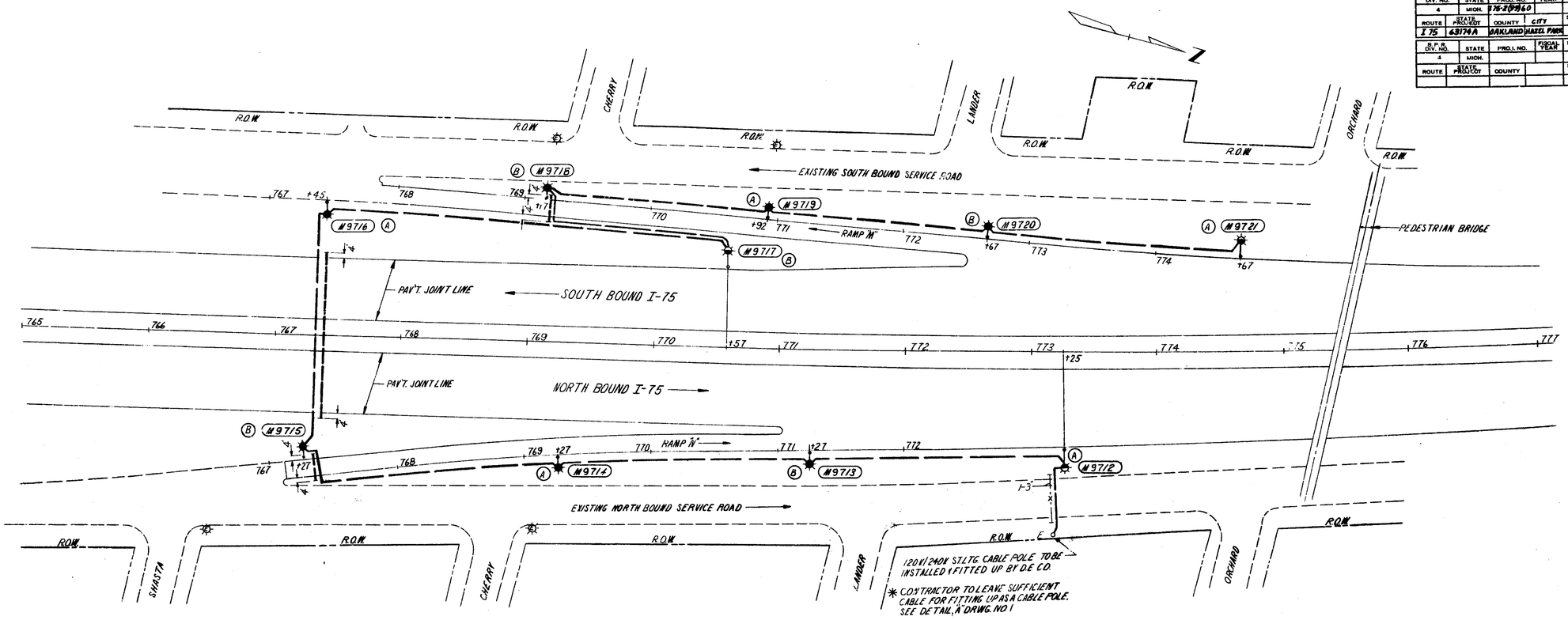
DATE 4-15-65
DRAWN BY J.F.
CHECKED BY
APPROVED BY

FILE NO.	DRWG. NO.	DATE
CEA C 74A-1	2 OF 4	4-15-65

LIGHTING

FILE NO. USE NO. 3 TO STENCIL 63174 A,C66 | STATE PROJECT 63174 A | FEDERAL PROJECT I 75-2(99)60 | SHEET NO. 16

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174A	OAKLAND	HAZEL PARK	17	33
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



MATERIAL ON THIS SHEET			
ITEM	QUANTITIES	PART	NON-PART
1-3" ENCASED CONDUIT	150 LIN.FT.		
600V, 1-3/4" CABLE CONSISTING OF 3-1/4" #6 CABLES	1613 LIN.FT.		
600V, 2-3/4" CABLES CONSISTING OF 3-1/4" #6 CABLES	145 LIN.FT.		
LIGHTING STANDARD WITH 10' ARM ON NEW FOUNDATION	7 EACH		
LIGHTING STANDARD WITH 15' ARM ON NEW FOUNDATION	3 EACH		
400 WATT CLEAR MERCURY VAPOR LUMINAIRE	10 EACH		
* 2-3" G.I.P. UP CABLE POLE	12 LIN. FT.		

PLAN
SCALE: 1"=40'
FOR TYPICAL MULTIPLE STREET LIGHTING WIRING DIAGRAM SEE DRWG. NO. 1

I-75 FREEWAY
LIGHTING PLAN
RAMP "M" & "N"
IN CITY OF HAZEL PARK

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE 4-15-65
DRAWN BY J.F.
CHECKED BY
APPROVED BY

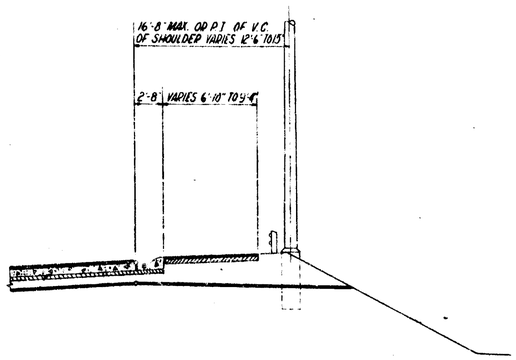
FILE NO.	DRWG. NO.	DATE
CEA C 74A-1	3 OF 4	4-15-65

LIGHTING

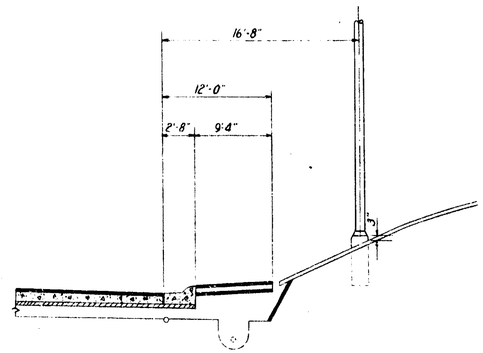
FILE NO. DIV. NO. 350 STENCIL	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174 A,C66	63174A	175-2(99)60	17

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174A	OAKLAND	HAZEL PARK	18	33

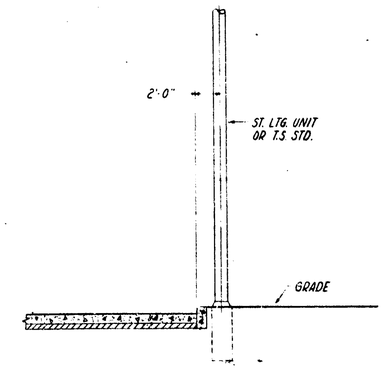
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



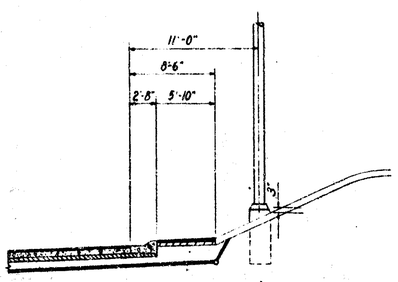
TYPICAL MAIN ROADWAY IN FILL



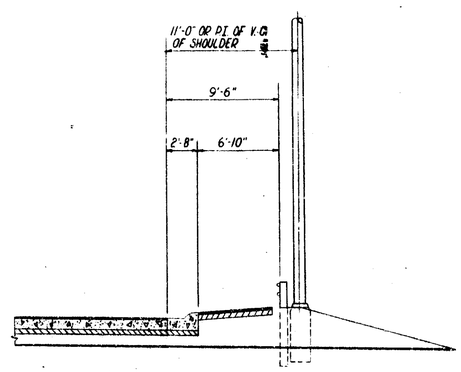
TYPICAL MAIN ROADWAY IN CUT



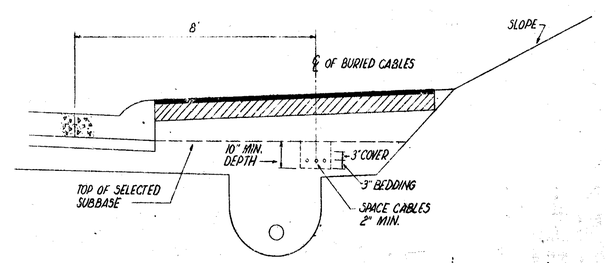
TYPICAL SERVICE ROADWAY



TYPICAL RAMP IN CUT



TYPICAL RAMP IN FILL



LOCATION OF DIRECT BURIAL CABLES

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE 4-15-65
DRAWN BY J.F.
CHECKED BY
APPROVED BY

I-75 FREEWAY
LOCATION OF LIGHTING STANDARDS ON FREEWAY, RAMPS & SERVICE ROADS IN CITY OF HAZEL PARK

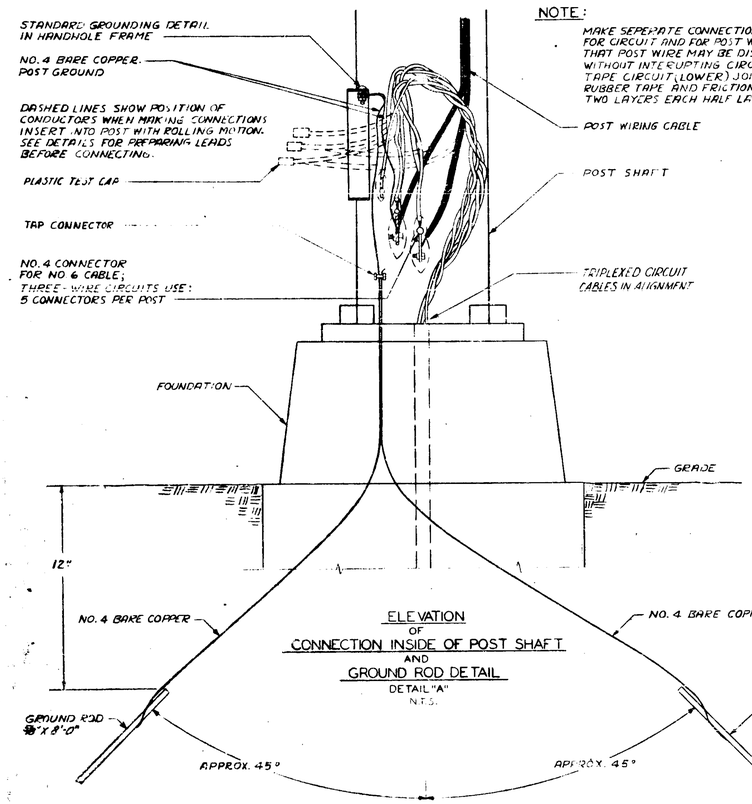
FILE NO.	DRWG. NO.	DATE
CEA C 74 A-1	4 OF 4	4-15-65

LIGHTING

63174 A C66

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	175-2(99) 60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	19	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



NOTE:

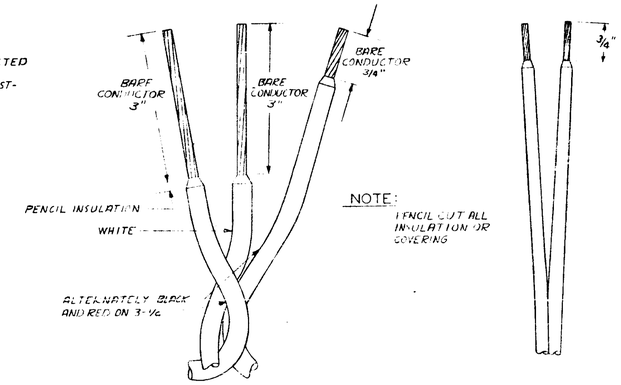
MAKE SEPERATE CONNECTIONS FOR CIRCUIT AND FOR POST WIRE SO THAT POST WIRE MAY BE DISCONNECTED WITHOUT INTERRUPTING CIRCUIT TAPE CIRCUIT (LOWER) JOINT FIRST-RUBBER TAPE AND FRICTION TAPE, TWO LAYERS EACH HALF LAPPED.

POST WIRING CABLE

POST SHAFT

TRIPLEXED CIRCUIT CABLES IN ALIGNMENT

ELEVATION
OF
CONNECTION INSIDE OF POST SHAFT
AND
GROUND ROD DETAIL
DETAIL "A"
N.T.S.



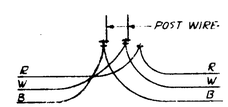
NOTE:

PENCIL CUT ALL INSULATION OR COVERING

CIRCUIT CABLE - RUBBER AND NEOPRENE 3-1/2 WITH 2 NO. 6 CODED RED AND BLACK AND 1 NO. 6 CODED WHITE, TRIPLEXED

POST WIRING CABLE: NO. 8 DUPLEX

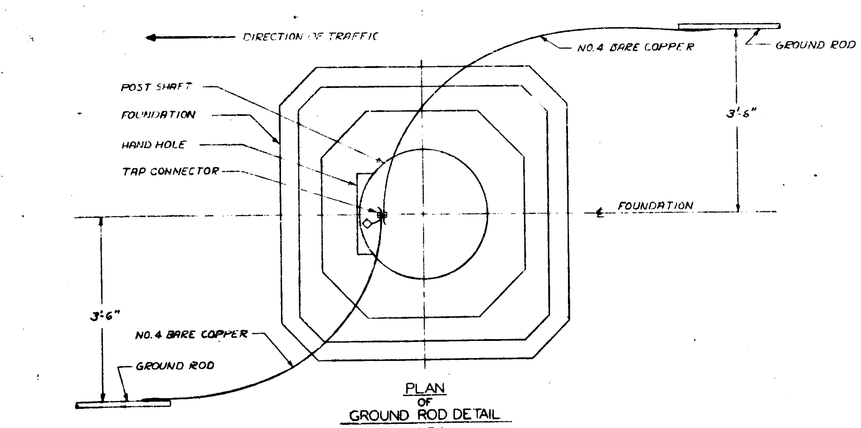
CABLE PREPARATION



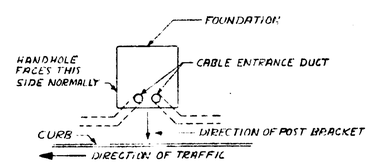
CIRCUIT CABLE

ON 3-WIRE CIRCUIT, ONE POST WIRE CONDUCTOR CONNECTED ALTERNATELY TO THE BLACK CONDUCTOR AND THE RED CONDUCTOR TO BALANCE THE LOAD.

WIRING DIAGRAM



PLAN
OF
GROUND ROD DETAIL
N.T.S.



ORIENTATION PLAN

NOTE:

THIS ORIENTATION PERMIT THE OPENING AND THE VERTICAL CABLE PLAN TO BE ALWAYS PARALLEL.

NOTES:

WHERE ST. LTG. UNITS ARE LOCATED ON RETAINING WALLS ADJUST LOCATION OF GROUND RODS TO SUIT CONDITIONS.

CONSULTING ENGINEERING ASSOCIATES INC.
ENGINEERING CONSULTANTS
16580 WYOMING DETROIT 21, MICH.

DATE 4-15-65
DRAWN BY J.F.
CHECKED BY
APPROVED BY

I-75 FREEWAY
RAMP LIGHTING PLANS
POST WIRING & GROUNDING IN CITY OF HAZEL PARK

FILE NO.	DRWG. NO.	DATE
CEA C74A-1	CEA 14	4-15-65

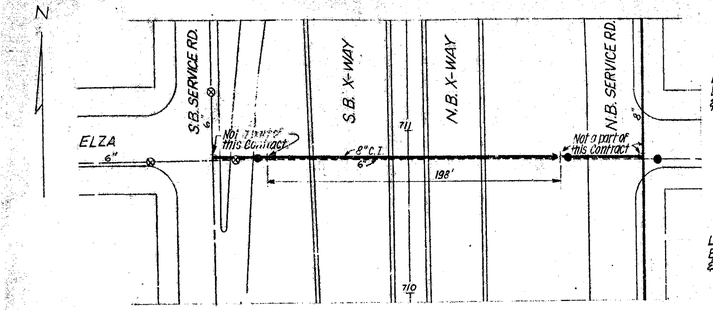
LIGHTING

FILE NO. 63174 A.C66

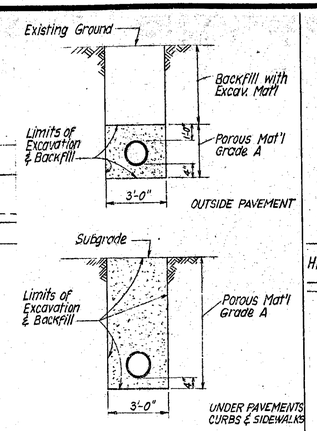
STATE PROJECT 63174 A

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(39)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	20	33
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

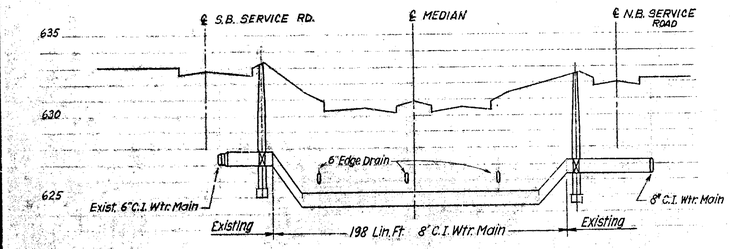
ELZA AVE WATER MAIN ALTERATIONS



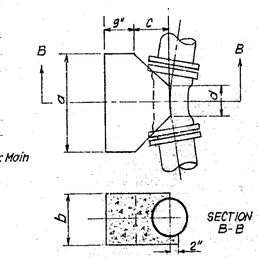
PLAN
SCALE: 1"=40'



WATER MAIN TRENCH SECTIONS
NO SCALE



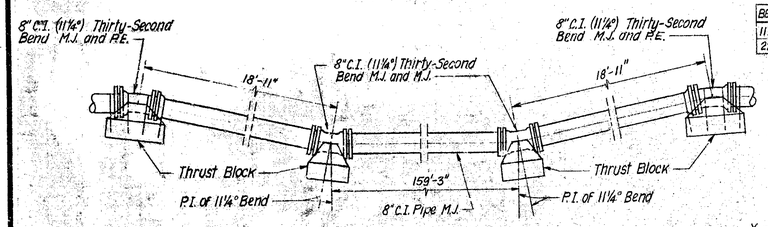
PROFILE
SCALE: HOR. 1"=40'
VERT. 1"=4'



SECTION B-B

BEND	PIPE SIZE	a	b	c	d	KWH. PER BEND
11¼°	8"	2'-0"	1'-3"	0'-9"	1'-2"	0.12
22½°	8"	2'-2"	1'-6"	0'-9"	1'-2"	0.16

DETAIL OF THRUST BLOCK FOR C.I. BENDS
NO SCALE

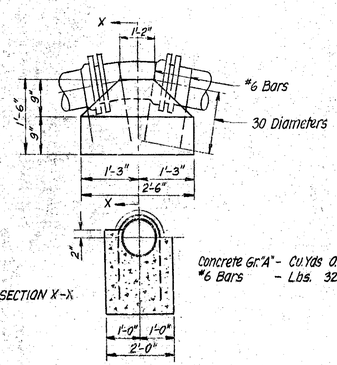


GENERAL NOTE:
ALL THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.

CONNECTION DETAIL

QUANTITIES

ITEM	UNIT	AMOUNT
EARTH EXCAVATION AND WASTE	CU. YDS	60
8" CAST IRON WATER MAIN (FURN. & PLACED)	LIN. FT.	198
CONCRETE GR. "A" (THRUST BLOCKS)	CU. YDS	1
POROUS MATERIAL GR. A	CU. YDS	75

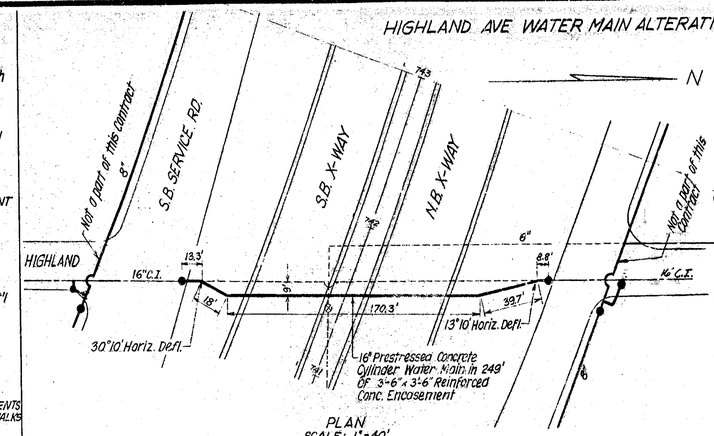


SECTION X-X

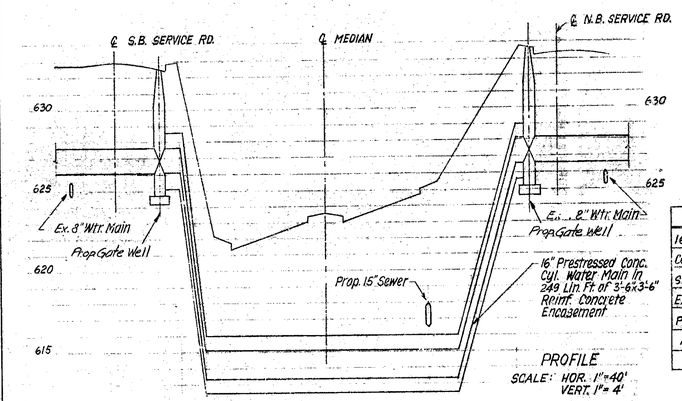
Concrete Gr. "A" - Cu. Yds 0.23
#6 Bars - Lbs. 32

DETAIL OF TYING DOWN 11¼° BENDS
NO SCALE

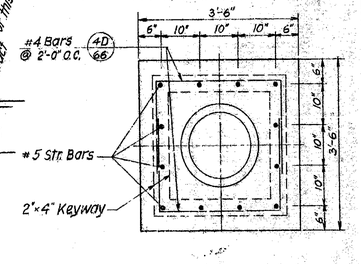
HIGHLAND AVE WATER MAIN ALTERATIONS



PLAN
SCALE: 1"=40'



PROFILE
SCALE: HOR. 1"=40'
VERT. 1"=4'



SECTION OF ENCASEMENT
NO SCALE

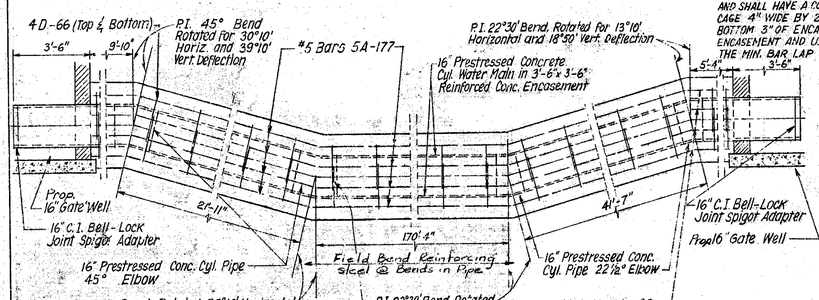
BILL OF REINFORCING BARS

MARK	No	SIZE	LENGTH	REMARKS	WEIGHT-LBS
4D-66	252	4	6'-6"	BENT	1,094
5A-177	180	5	17'-7"	FIELD BENT	3,301
5A-99	12	5	9'-11"	"	124
TOTAL WEIGHT OF REINFORCING STEEL					4519

QUANTITIES

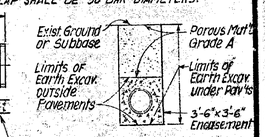
ITEM	UNIT	AMOUNT
16" PRESTRESSED CONC. CYL. WATER MAIN	LIN. FT.	256
CONCRETE, GRADE "A", (FOR WTR. MAIN ENCASEMENT)	CU. YDS	94
STEEL REINFORCEMENT (FOR WTR. MAIN ENCASEMENT)	LBS	4519
EARTH EXCAVATION AND WASTE	CU. YDS	148
POROUS MATERIAL, GRADE "A"	CU. YDS	157
16" GATE WELL	EACH	2
16" GATE VALVE	EACH	2

NOTES:
CONSTRUCTION JOINTS IN THE ENCASEMENT SHALL HAVE A MAX. SPACING OF 20'-0" & SHALL COINCIDE WITH THE COND. PIPE BELLS AND SHALL HAVE A CONTINUOUS KEYWAY AROUND THE REINFORC. CAGE 4" WIDE BY 2" DEEP.
BOTTOM 3" OF ENCASEMENT MAY BE POURED SEPARATE FROM ENCASEMENT AND USED AS A SUBFOOTING.
THE MIN. BAR LAP SHALL BE 30 BAR DIAMETERS.

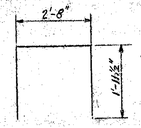


CONNECTION DETAIL

NOTE:
The existing 16" watermain in Highland Ave. can not be shut down until the proposed 16" connection to the Ex. 54" watermain in Dequindre Ave. at Felker is in service.



TRENCH SECTION FOR ENCASEMENT
NO SCALE



BENT BAR DETAIL
NO SCALE

SEQUENCE OF OPERATIONS

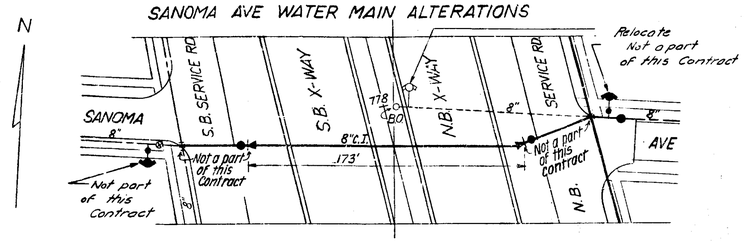
1) Construct 16" Prestressed Conc. Cyl. watermain under I-75
2) Make Hydrostatic test on this section of main
3) Flush and chlorinate this section of main
4) Shut down existing 16" watermain in Highland Ave.
5) Construct 16" Gate Wells and install 16" Gate Valves
6) Make connection between proposed 16" gate valves and the proposed 16" watermain.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C66	63174A		20

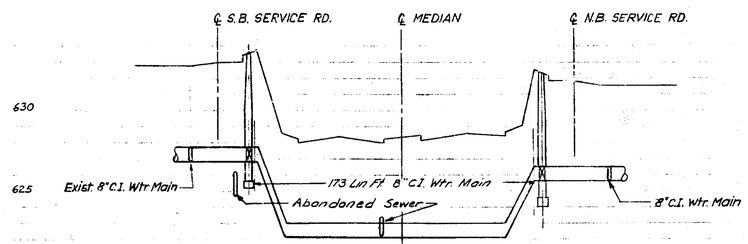
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	I 75-2(39)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	21	33

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

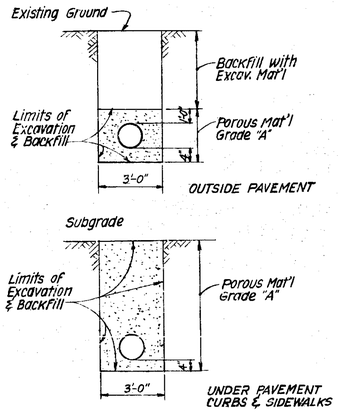
SANOMA AVE WATER MAIN ALTERATIONS



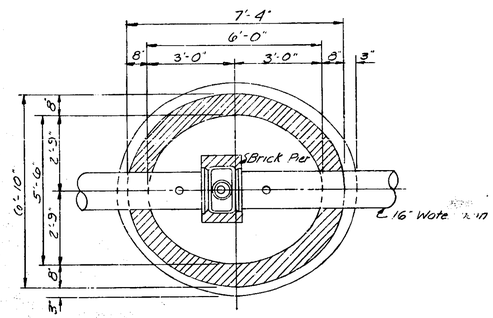
PLAN
SCALE: 1"=40'



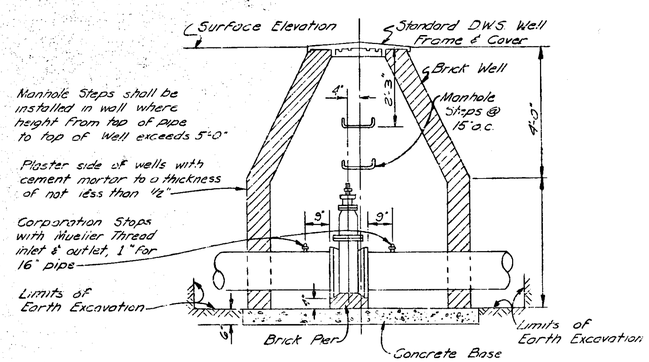
PROFILE
SCALE: HOR. 1"=40'
VERT. 1"=4'



WATER MAIN TRENCH SECTION
NO SCALE

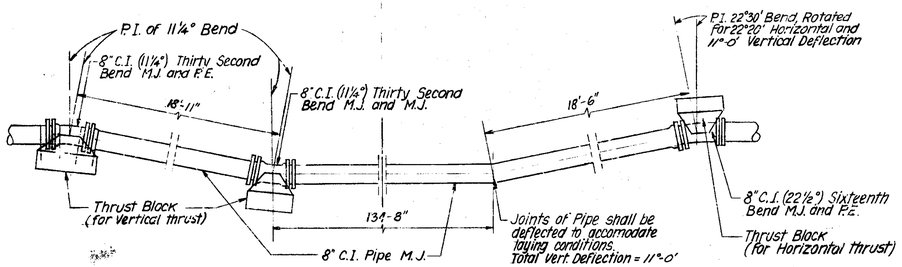


PLAN

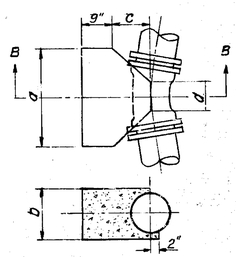


SECTION THROUGH GATE WELL

DETAIL OF STANDARD "S" GATE WELL
No Scale



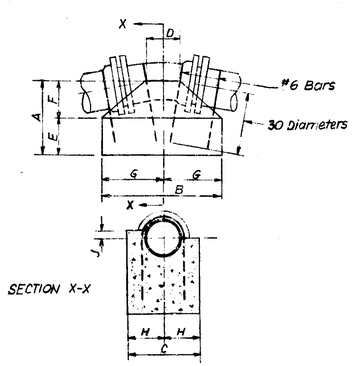
CONNECTION DETAIL



SECTION B-B

BEND	PIPE SIZE	a	b	c	d	CONC. CU.YDS
11¼°	8"	2'-0"	1'-3"	0'-9"	1'-2"	0.12
22½°	8"	2'-2"	1'-6"	0'-9"	1'-2"	0.16

DETAIL OF THRUST BLOCK FOR C.I. BENDS
NO SCALE



SECTION X-X

DETAIL OF TYING DOWN BENDS
NO SCALE

SCHEDULE OF THRUST BLOCK DIMENSIONS

BEND	PIPE SIZE	A	B	C	D	E	F	G	H	J	CONC. CU.YDS	#6 BARS LBS
11¼°	8"	1'-6"	2'-6"	2'-0"	1'-2"	0'-9"	0'-9"	1'-3"	1'-0"	0'-2	0.23	32
22½°	8"	1'-6"	2'-6"	2'-0"	1'-2"	0'-9"	0'-9"	1'-3"	1'-0"	0'-3	0.23	32

QUANTITIES

ITEM	UNIT	AMOUNT
EARTH EXCAVATION AND WASTE	CU.YDS.	92
8" CAST IRON WATER MAIN (FURN. & PLACED)	LIN.FT.	173
GRADE A CONCRETE (THRUST BLOCKS)	CU.YDS.	1
POROUS MATERIAL GRADE "A"	CU.YDS	115

NOTES

Location of existing watermains is approximate.
Elevations of existing watermains are not known.
Proposed watermains shall be laid at a depth which provides a min. of 5 feet of cover at all points except where connections to existing mains are made.
Removal of existing watermain as required for clearance to construct new main is incidental to pipe laying.
Proposed Cast Iron watermains shall be Pipe Class 250 A.S.A. Thickness Class No. 25 for 8" watermains.

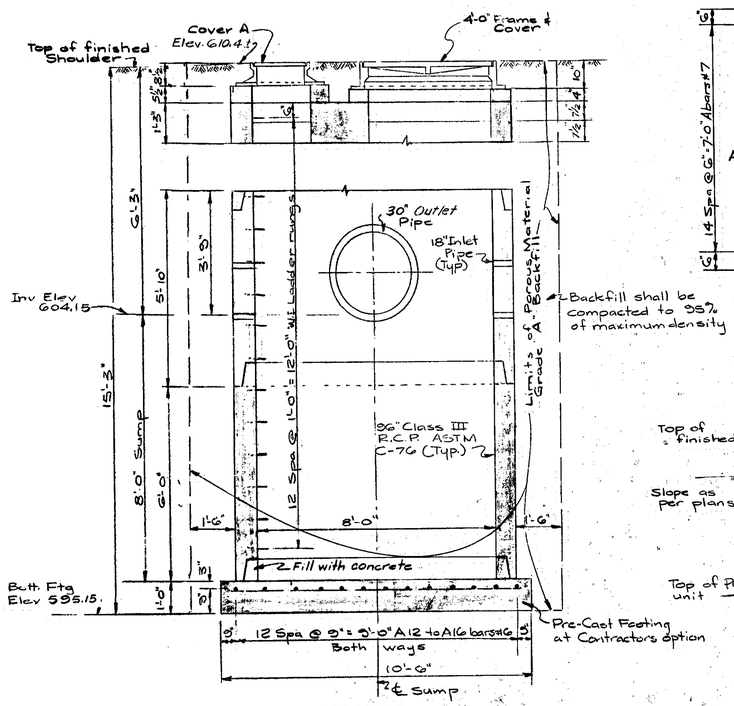
LEGEND

- Existing Watermain to be Abandoned
- Existing Watermain to Remain
- Proposed Water main
- Proposed Valve

J.U.M.

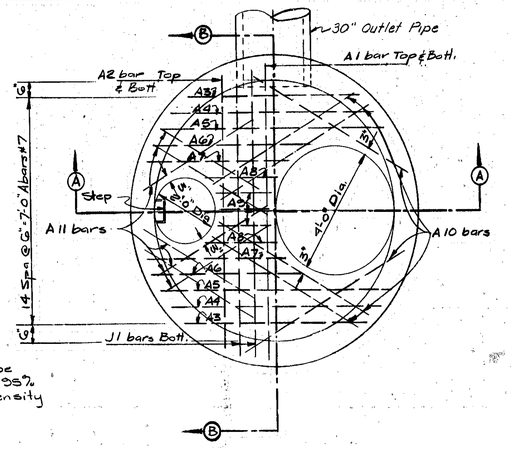
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C66	63174A	I 75-2(39)60	21

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	F 75-2(199)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174 A	OAKLAND	HAZEL PARK	21A	

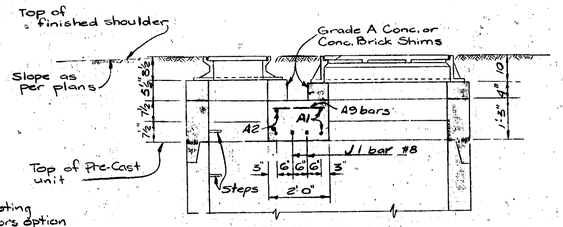


SECTION

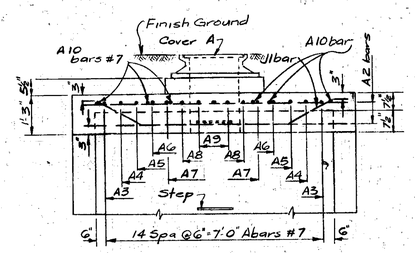
See Detail A for location of all Inlet Pipes



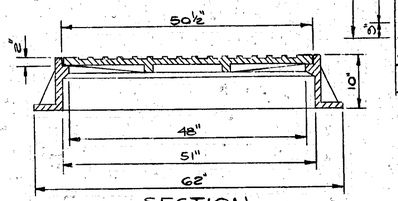
PLAN VIEW



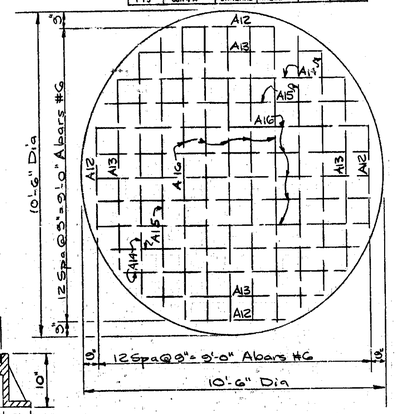
SECTION A-A



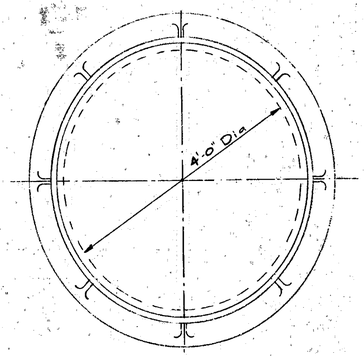
SECTION B-B



SECTION



BASE SLAB DETAILS



PLAN

4'-0" COVER & FRAME DETAILS

Note: This sheet added to plans by Auth. Extra # dated Oct. 21, 1965

NOTES:

Material and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications.

All concrete shall be Grade A.

Manhole frames and lids shall meet the requirements for HS20-44 loading.

Payment will be based on the complete structure, including covers, steps, reinforcement, etc. as shown.

Excavation & back-fill shall be considered incidental.

Shims may be made of Grade A Concrete or Concrete Brick.

Closure section shall meet strength requirement of Class III R.C.P. ASTM C-76. Top edge of closure section shall be finished square.

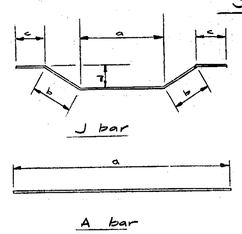
Joints shall be sealed with mortar in accordance with the requirements specified for precast units, 6.08.03.

℄ of Sump to be located 80' Left of Construction ℄ Sta 721 + 90

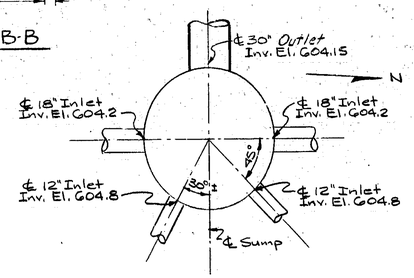
Backfill shall be completed to within 1'-6" of the top of each pipe section before the next section may be placed.

BAR	Dimensions a	b	c	d	Size	Length	Number	Weight
A1	9'-0"				#8	9'-0"	2	48
A2	8'-5"				#8	8'-5"	2	45
A3	5'-5"				#7	5'-5"	2	24
A4	6'-9"				#7	6'-9"	2	28
A5	7'-6"				#7	7'-6"	2	31
A6	5'-3"				#7	5'-3"	2	21
A7	4'-8"				#7	4'-8"	2	19
A8	2'-6"				#7	2'-6"	2	10
A9	1'-8"				#7	1'-8"	3	10
A10	5'-8"				#7	5'-8"	6	63
A11	4'-2"				#7	4'-2"	6	51
A12	3'-0"				#6	3'-0"	4	18
A13	6'-0"				#6	6'-0"	4	36
A14	7'-6"				#6	7'-6"	4	45
A15	8'-6"				#6	8'-6"	4	51
A16	9'-0"				#6	9'-0"	10	135
J1	4'-4"	1'-6"	0'-10"	0'-9"	#8	9'-0"	2	48
Total Steel Reinforcement							Pounds	689

Grade A(GA) Concrete	CuYds	6.5



BAR BENDING DETAILS



DETAIL A

No Scale

MICHIGAN STATE HIGHWAY DEPARTMENT

PERMANENT SUMP

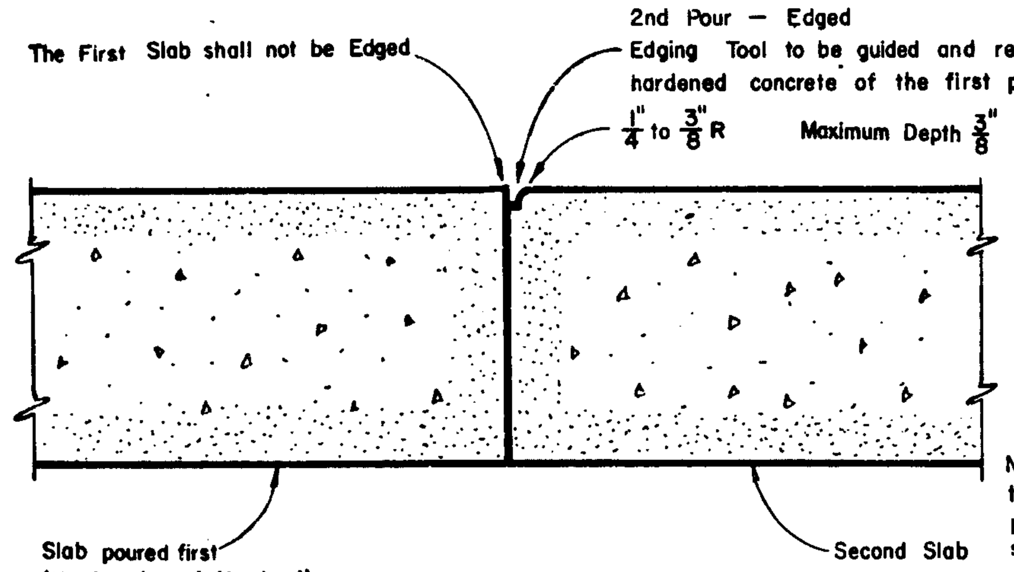
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	Cortz	9-29-65
DRAWN BY	McCleary	9-2-65
TRACED BY		
CHECKED BY	LAB	9/27/65
SHEET 1 OF 1		

D02 of 63174 A

FILE NO. 63174A.C66	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	63174 A	I-75-2(199)60	21A

JOINT EDGING



NOTE: When widening to an existing slab previously edged, the second slab shall be edged with a Long Lip Edger with 3/8" to 1/2" R.

METHOD OF EDGING

Where one Slab is poured against another in place.

Symbol (L)

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT

FOR FUTURE PAVEMENT WIDENING

This Joint shall be constructed according to Detail No. 2 except that the "Second Pour" and the "Second Half" of the Joint Dowel Hook Bolt shall be omitted. The threaded hole in the Hook Bolt Coupling shall be filled with S. A. E. 40 Viscosity Petroleum-based Oil and plugged with a Plastic or Neoprene Plug. The Plug shall be of proper dimension to completely seal the hole and shall not project more than $\frac{3}{8}$" after inserting.

DETAIL No. 3

Symbol (L1)

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT

FOR WIDENING EXISTING CONCRETE PAVEMENT WHERE JOINT DOWEL HOOK BOLTS HAVE PREVIOUSLY BEEN PROVIDED

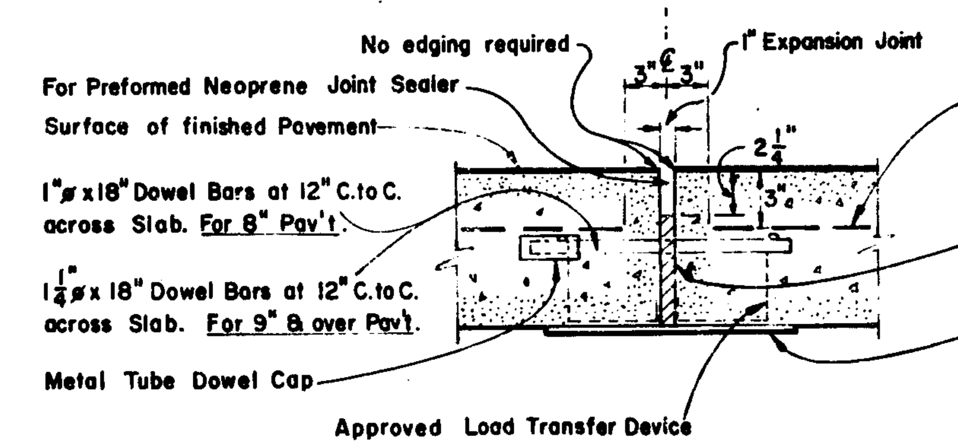
This Joint shall be constructed according to Detail No. 2, except that the "First Pour" and the "First Half" of the Joint Dowel Hook Bolt has previously been provided. The Plastic or Neoprene Plug shall be removed, the threads of the coupling shall be retapped and the "Second Half" of the Joint Dowel Hook Bolt shall be provided and installed

DETAIL No. 4

Symbol (E)

TRANSVERSE EXPANSION JOINT WITH LOAD TRANSFER

The filler strip shall be left in place and the Joint formed while the Concrete is still fresh and shall be true to position and line.



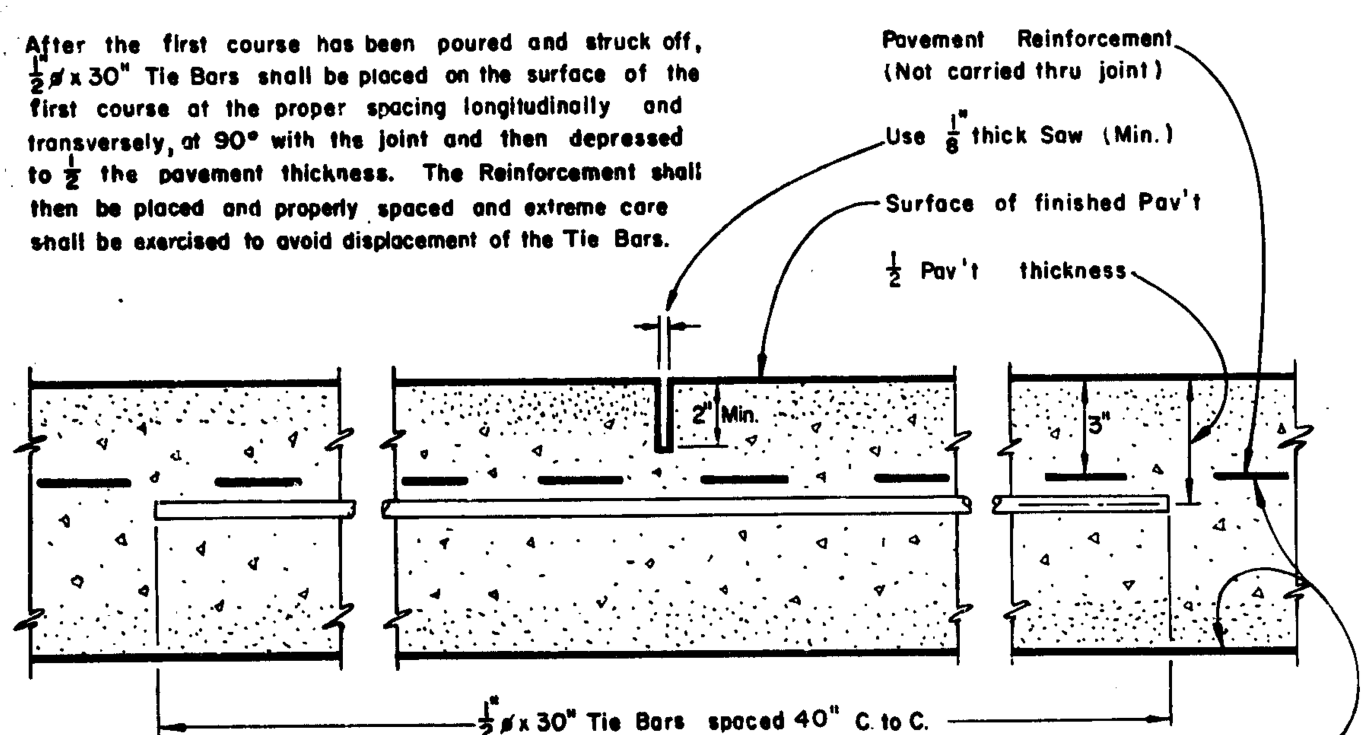
DETAIL No. 7

Symbol (D)

LONGITUDINAL LANE TIE JOINT

The Joint shall be filled with Hot poured or Cold applied Joint Sealer

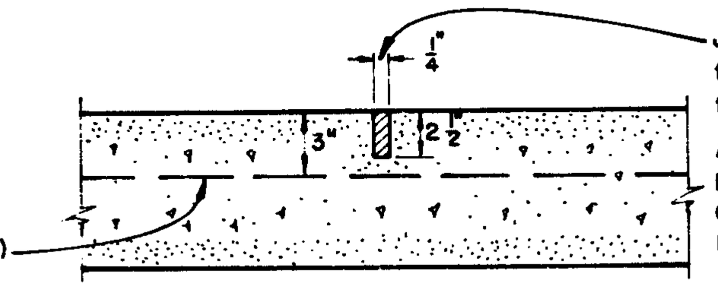
After the first course has been poured and struck off, $\frac{1}{2}$"ø x 30" Tie Bars shall be placed on the surface of the first course at the proper spacing longitudinally and transversely, at 90° with the joint and then depressed to $\frac{1}{2}$ the pavement thickness. The Reinforcement shall then be placed and properly spaced and extreme care shall be exercised to avoid displacement of the Tie Bars.



DETAIL No. 1

Symbol (U)

TRANSVERSE PLANE OF WEAKNESS JOINT FOR BASE COURSE



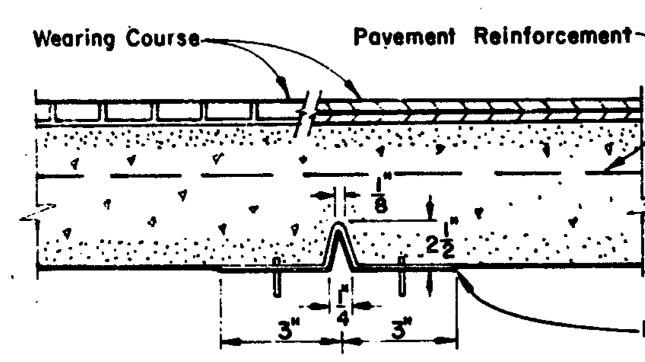
Joint to be filled with one of the following and placed flush with the surface of the pavement:

A = $\frac{1}{4}$" Preformed Fiber Joint Filler
B = $\frac{1}{4}$" Masonite
C = 16 Gauge Galvanized Steel
D = $\frac{3}{8}$" Expanded Polystyrene Filler

ALTERNATE No. 1

The Joint in ALTERNATE No. 1 shall be formed while the Concrete is fresh and shall be true to position and line.

NOTE: A bulkhead joint shall be constructed at the end of the day's pour or when there is an unavoidable interruption of the work for more than one-half hour. The steel reinforcement shall extend at least 18 inches beyond the bulkhead joint into the succeeding pour



ALTERNATE No. 2

The metal Form shall be firmly fastened to the Subgrade in a vertical position and held in true alignment by iron pins or other approved methods. 'The Base Course Concrete' shall be poured on both sides simultaneously so as to insure true position and line.

DETAIL No. 5

TRANSVERSE END OF POUR CONSTRUCTION JOINT

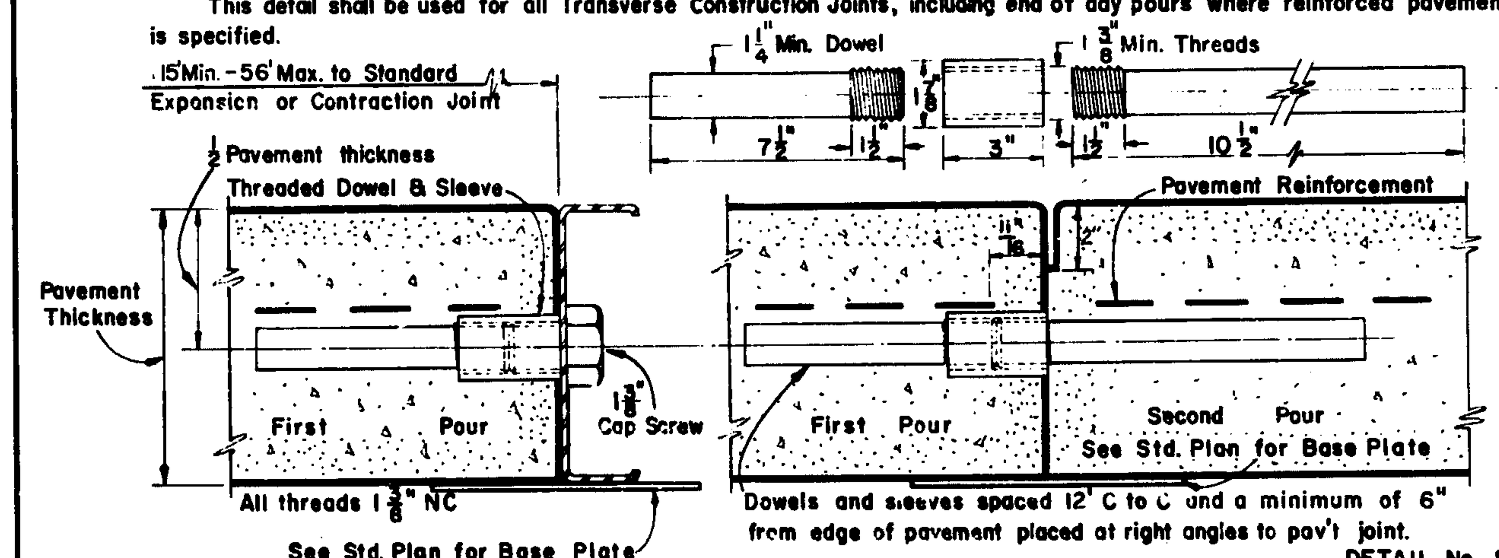
Prior to placing concrete in first pour, the sleeved dowels and bulkhead shall be securely assembled and firmly secured to the subgrade, true to position and line.

The bulkhead shall be metal sufficiently rigid to prevent deformation when concrete is placed and shall conform to the crown of the finished pavement.

Prior to placing concrete in second pour, the cap-screws and bulkhead shall be carefully removed to avoid rupturing the fresh concrete. The dowels to the second pour shall be screwed into the sleeves and coated.

After the second pour, the joint shall be finished according to current Standard Specifications for contraction joints.

This detail shall be used for all Transverse Construction Joints, including end of day pours where reinforced pavement is specified.



DETAIL No. 8

GENERAL NOTES:

The materials and workmanship called for on this plan shall be in accordance with current Standard Specifications.

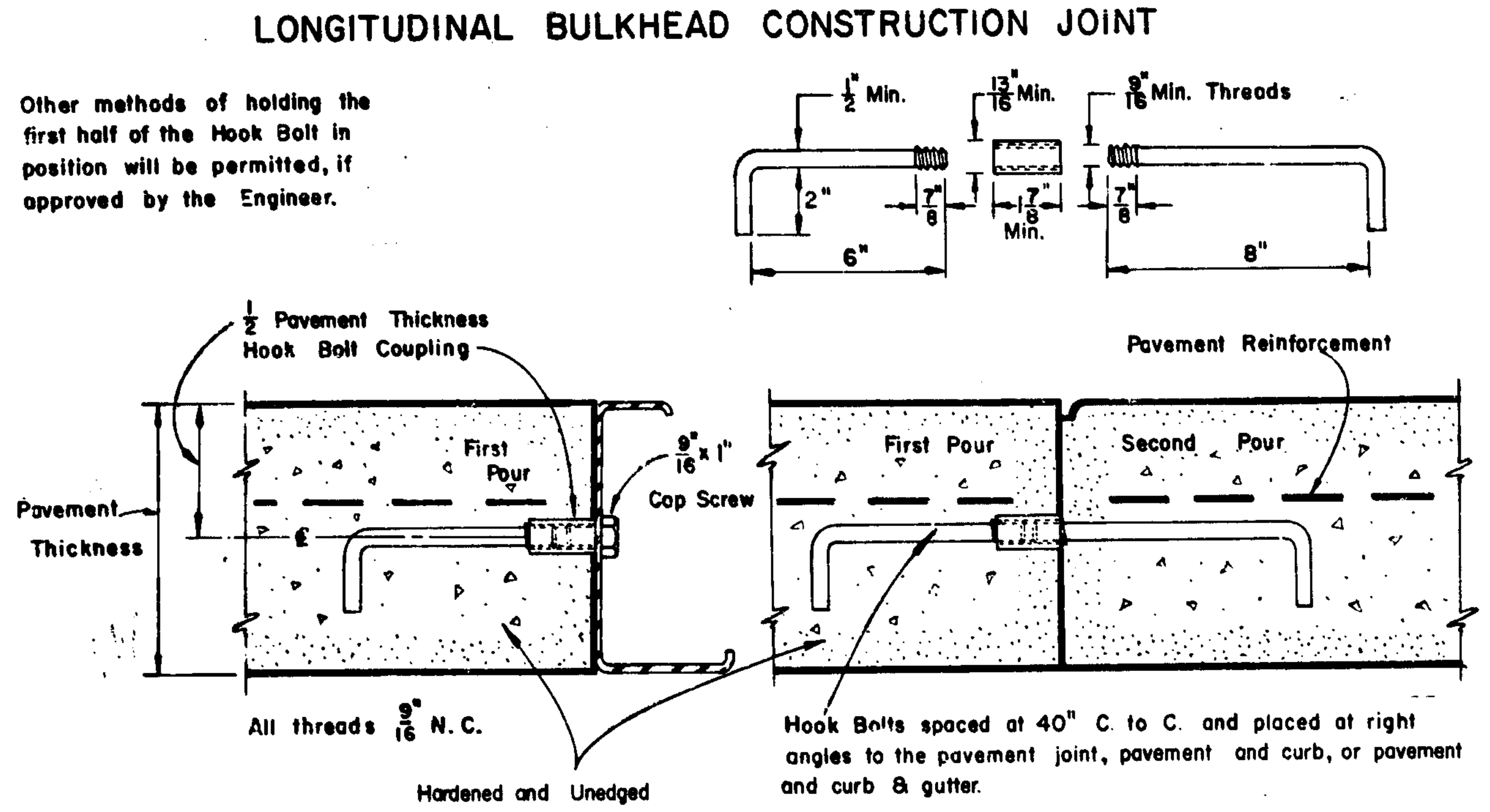
All Steel Bars, Bolts, Plates and Filler used in Pavement Joints will be considered incidental to the construction of Pavement or Base Course. Tie Bars shall be deformed.

Drawings on this sheet are not to scale.

Symbol (B)

LONGITUDINAL BULKHEAD CONSTRUCTION JOINT

Other methods of holding the first half of the Hook Bolt in position will be permitted, if approved by the Engineer.



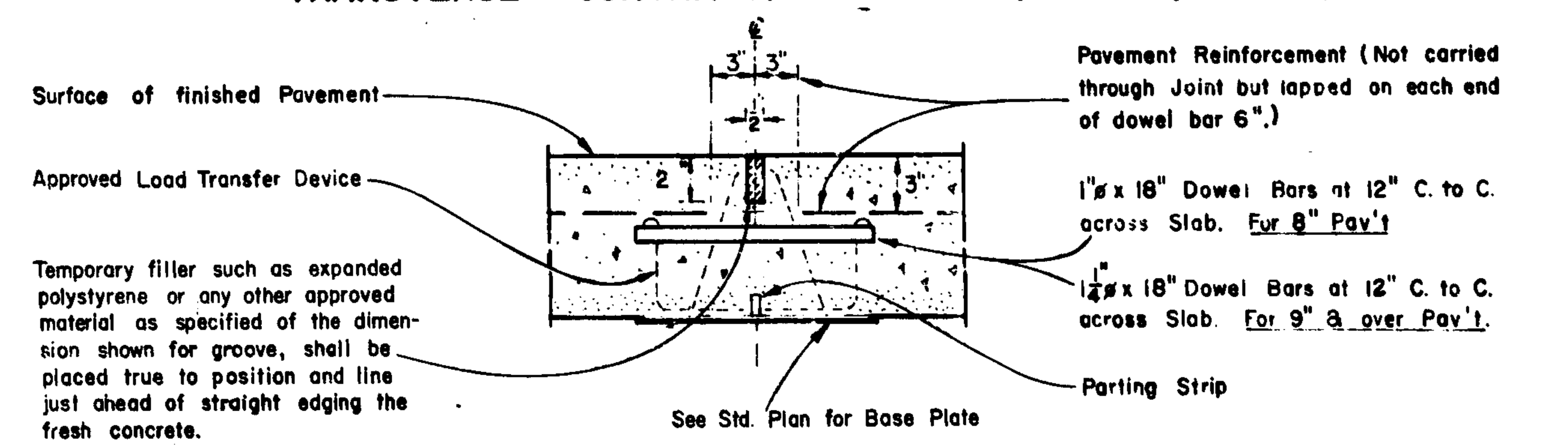
Hook Bolts spaced at 40" C. to C. and placed at right angles to the pavement joint, pavement and curb, or pavement and curb & gutter.

JOINT DOWEL HOOK BOLT

DETAIL No. 2

Symbol (C)

TRANSVERSE CONTRACTION JOINT (FORMED)



The temporary filler shall be removed and the joints cleaned prior to sealing as provided by current Standard Specifications.

TRANSVERSE CONTRACTION JOINT (SAWED)

Details similar to that shown in sketch above except the Joint Groove shall be formed by either of the following two methods.

1. The contraction joints shall be sawed to a depth of 2 inches and a width of ½ inch, unless otherwise specified. The sawing shall be done before any transverse cracks develop and in all cases, the transverse joints shall be sawed within 24 hours after the concrete is placed.
2. Joint Grooves formed by temporary fillers and sawing. A plane of weakness shall be formed at all contraction joints by a premolded fiber filler. The fiber filler shall be ½ inch by 2 inch and furnished in length of not less than 6 feet. A ½ inch by 2 inch joint groove shall be sawed symmetrically over the filler after the concrete has cured and before any traffic is permitted on the pavement.

DETAIL No. 6

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLAN FOR CONCRETE PAVEMENT JOINTS

DIVISION APPROVAL

CHECKED	W. Hollein — ENGINEER OF DESIGN	2-10-65 DATE
RECOMMENDED FOR APPROVAL	H. H. Cooper — TRAFFIC ENGINEER	DATE
RECOMMENDED FOR APPROVAL	N. Jones — ENGINEER OF BRIDGE AND ROAD DESIGN	2-10-65 DATE

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED	Chas. L. Lundberg — CONSTRUCTION ENGINEER	2-15-65 DATE
APPROVED	J. McCarthy — CHIEF DESIGN ENGINEER	2/12/65 DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED BY	J. C. Meyer — DIRECTOR OF ENGINEERING - CHIEF ENGINEER	5-18-65 DATE

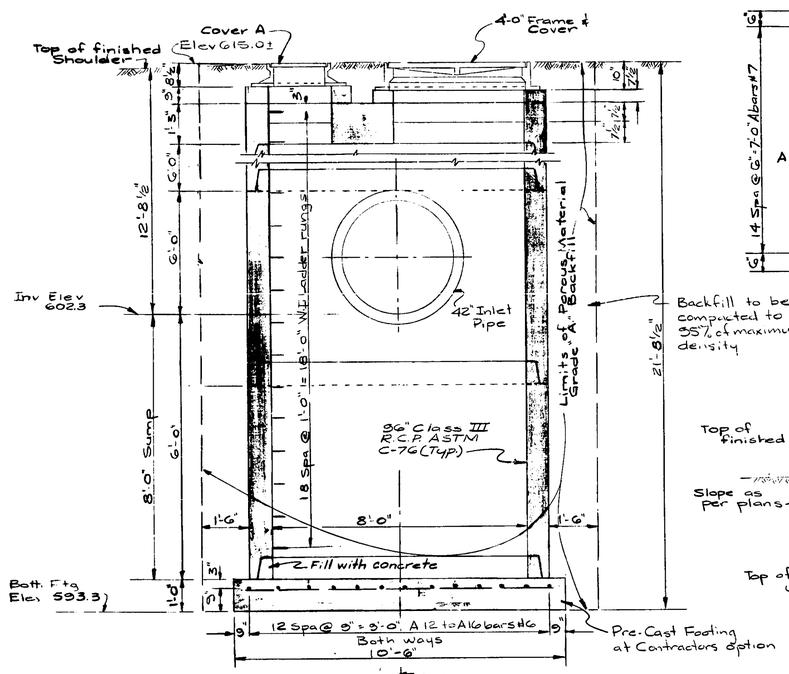
DRAWN BY ——— CHECKED BY MHR TRACED BY JEE APPROVED B.P.R. ———

FILE NO. 63174A,C66

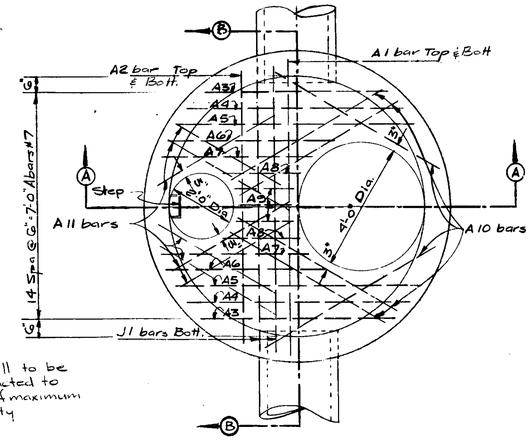
STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I75-2(99)60	22

R.P.W. DIV. NO.	STATE	FEDERAL PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	MICH.	F75-2991 60		

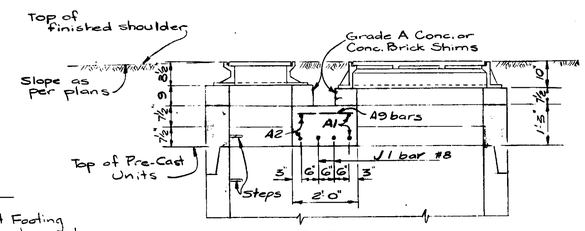
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	22A	



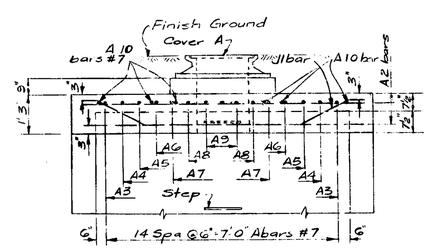
SECTION



PLAN VIEW



SECTION A-A



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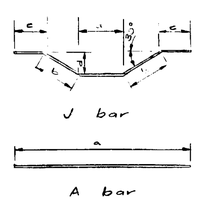
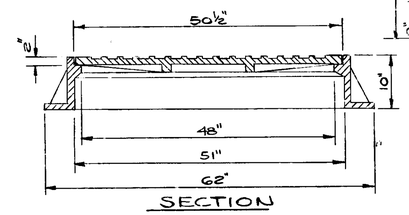


BAR BENDING DETAILS

BAR	Dimensions a	b	c	d	Size	Length	Number	Weight
A1	9'-0"				#8	9'-0"	2	48
A2	8'-5"				#8	8'-5"	2	45
A3	5'-9"				#7	5'-9"	2	24
A4	6'-9				#7	6'-9"	2	28
A5	7'-6				#7	7'-6"	2	31
A6	5'-3"				#7	5'-3"	2	21
A7	4'-8"				#7	4'-8"	2	19
A8	2'-6"				#7	2'-6"	2	10
A9	1'-8"				#7	1'-8"	3	10
A10	5'-8"				#7	5'-8"	6	69
A11	4'-2"				#7	4'-2"	6	51
A12	3'-0"				#6	3'-0"	4	18
A13	6'-0"				#6	6'-0"	4	36
A14	7'-6"				#6	7'-6"	4	45
A15	8'-6"				#6	8'-6"	4	51
A16	9'-0"				#6	9'-0"	10	135
J1	4'-4"	1'-6"	0'-10"	0'-9"	#8	9'-0"	2	48
Total Steel Reinforcement							Pounds	689

Grade A (6A) Concrete	Cu Yds.	5.5



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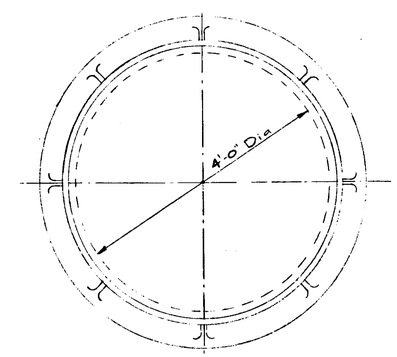
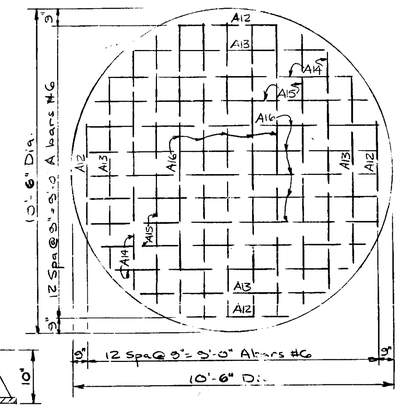


PLAN

4'-0" COVER & FRAME DETAILS



BASE SLAB DETAILS

Note: This sheet added to plans by Auth. Extra ___, dated 10-21-65

NOTES:

Material and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications.

All concrete shall be Grade A

Manhole frames and lids shall meet the requirements for H 520-44 loading

Payment will be based on the complete structure, including covers, steps, reinforcement, etc. as shown.

Excavation & backfill shall be considered incidental.

Shims may be made of Grade A Concrete or Concrete Brick

Closure section shall meet strength requirement of Class III R.C.P. A.S.T.M. C-76. Top of closure section shall be finished square

Joints shall be sealed with mortar in accordance with the requirements specified for precast units, 6.08.03.

The ℄ of Sump shall be located at 71'-0" Left of Construction ℄ Sta 752+62.0

Backfill shall be completed to within 1'-6" of the top of each pipe section before the next section may be placed.

MICHIGAN STATE HIGHWAY DEPARTMENT
PERMANENT SUMP

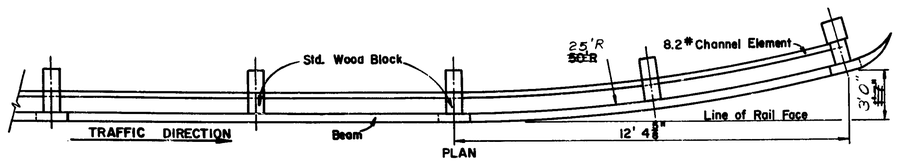
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	[illegible]	10-21-65
DRAWN BY	[illegible]	9-2-65
TRACED BY		
CHECKED BY	L.P.G.	7-7-65
SHEET	OF	

D03 of 63174A

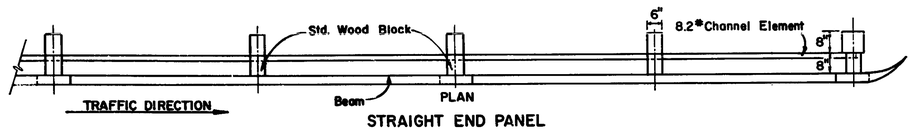
FILE NO	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C66	63174 A	I-75-2(99)60	22A

B.P.R. DIV. NO.	STATE	PROJ. NO.	FEDERAL AID	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(141)40			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	23	33



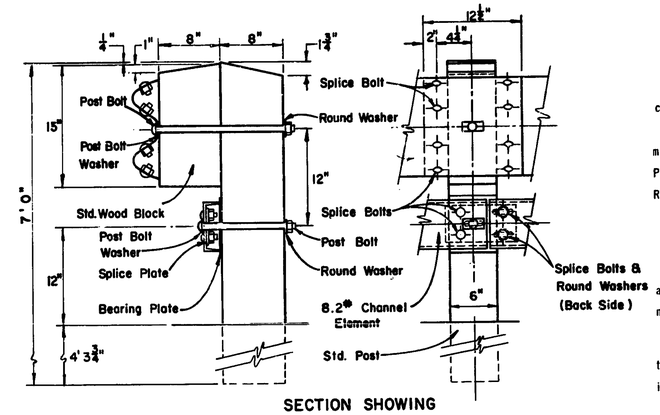
CURVED END PANEL

To Apply: Both Ends of All Sections in Two-Way Traffic
Approach End of One-Way Traffic Only

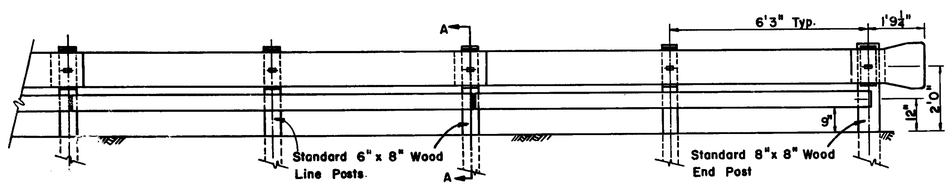


STRAIGHT END PANEL

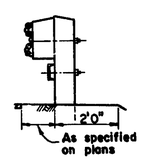
To Apply: To either side of Roadway on Departing end in One-Way Traffic



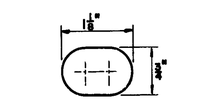
SECTION SHOWING
SPLICES & ATTACHMENT TO POSTS



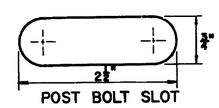
ELEVATION



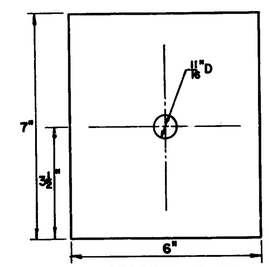
SECT. A - A



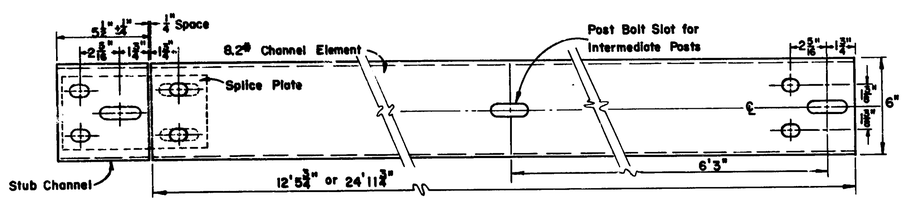
SPLICE BOLT SLOT



POST BOLT SLOT

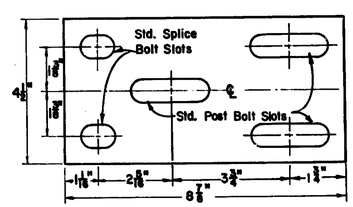


BEARING PLATE
1/8" Thick
1 Req'd per Post

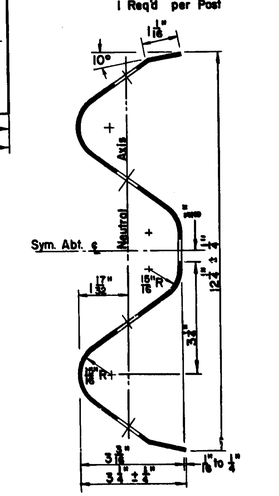


Stub Channel is necessary on One End Post only

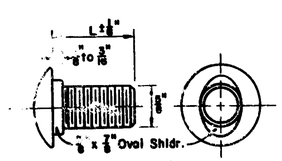
DETAIL SHOWING 8.2# CHANNEL, STUB CHANNEL
AND SPLICE PLATE LOCATION



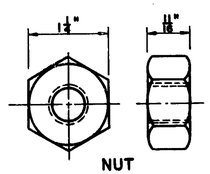
SPLICE PLATE 3/8" Thick
1 Req'd per Channel Splice



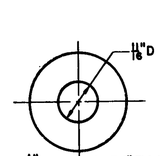
SECTION THRU BEAM ELEMENT



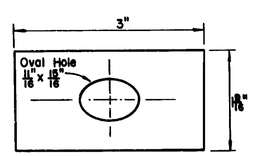
BOLT



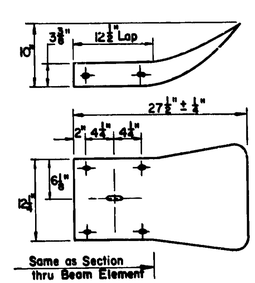
NUT



1 1/2" Dia. x 0.134" Thick
ROUND WASHER



POST BOLT WASHER (1/8" Thick)
1 Req'd per Post Bolt



SINGLE END SHOE

SPLICE BOLT	(Beam)	L = 1 1/2"	- 8 Req'd per Splice
SPLICE BOLT	(Beam END SHOE)	L = 1 1/2"	- 4 Req'd per End Shoe
SPLICE BOLT	(Channel)	L = 1 1/2"	- 4 Req'd per Splice
POST BOLT	(Channel)	L = 11"	- 1 Req'd per Post
POST BOLT	(Beam)	L = 17 1/2"	- 1 Req'd per Post

NOTES:

Materials and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications.

All posts and blocks shall conform to dimensions shown and shall be made from Douglas Fir, Norway Pine, Northern White Pine, Southern Yellow Pine, West Coast Hemlock, Red Oak, White Oak, White Ash, Sugar Maple, Red Maple, Soft Elm, Yellow Birch, Hickory, Beech or other approved wood.

Beam elements shall be lapped in the direction of traffic.

All brackets, fittings, plates, washers and bolts shall be in accordance with the Standard Specifications. Bolts shall be cut off not to exceed 1/2" from the nut on the back side of the post.

The bolting pattern for beam element splice joints may be optional to conform to tensile strength requirements for assembled beam elements in accordance with the Standard Specifications.

Beam elements and channel elements shall be pre-formed to plan radius for curves less than 150 feet.

The beam element and end shoe shall be 12 gage. The channel element shall conform to current specifications for structural steel ASTM Designation: A36, and galvanized in accordance with ASTM: A123.

At bridges, the end of the end shoe shall be one foot from the bridge railing or pier.

In the case at overpasses with no railing on the median side, the median guard rail shall be continued along a straight line to a point one foot from the end of the bridge, and an end shoe placed. Omit guard rail over the structure.

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

OFFSET GUARD RAIL - SINGLE

DIVISION APPROVAL

CHECKED	A. R. Drummond, ENGINEER OF DESIGN	3-9-65 DATE
RECOMMENDED FOR APPROVAL	H. H. Cooper, TRAFFIC ENGINEER	4-12-65 DATE
RECOMMENDED FOR APPROVAL	M. G. Jones, ENGINEER OF BRIDGE AND ROAD DESIGN	4/5/65 DATE

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED	Clay C. Cummins, CONSTRUCTION ENGINEER	4-19-65 DATE
APPROVED	Jim Cady, CHIEF OF DESIGN	4/20/65 DATE

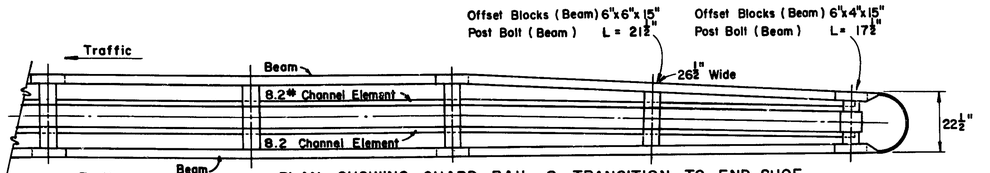
STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED J. B. Mayer, DIRECTOR OF ENGINEERING-CHIEF ENGINEER 4/20/65 DATE

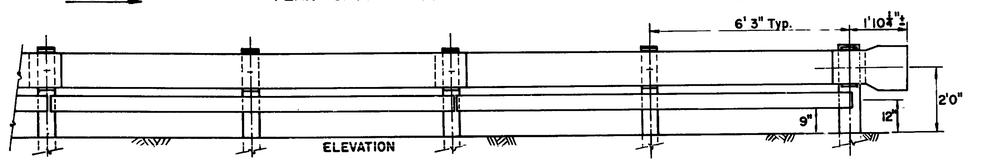
DRAWN BY RJM CHECKED BY RHR TRACED BY RJM APPROVED B.P.R.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C66	63174 A	I75-2(141)40	23

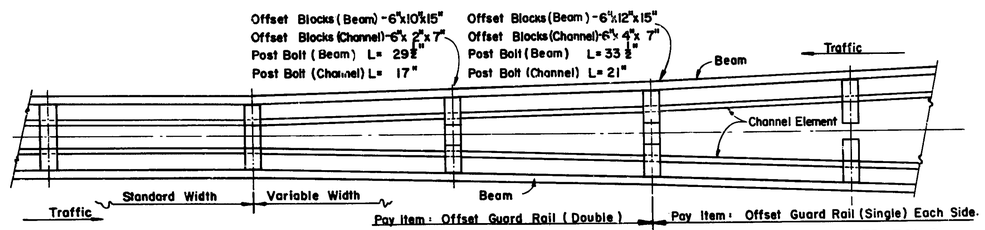
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(19)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	24	33



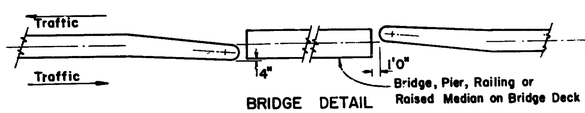
PLAN SHOWING GUARD RAIL & TRANSITION TO END SHOE



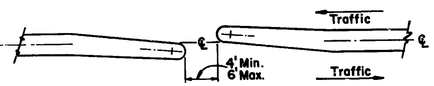
ELEVATION



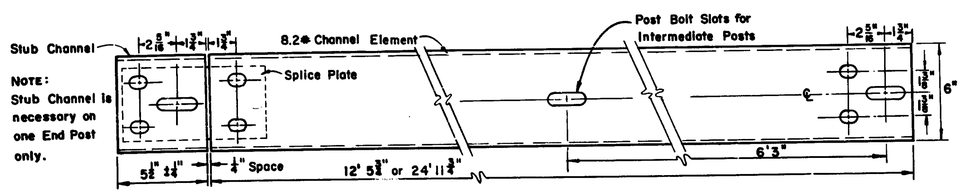
PLAN SHOWING TRANSITION FROM DOUBLE FACED TO TWO SINGLE FACED RAILS



BRIDGE DETAIL

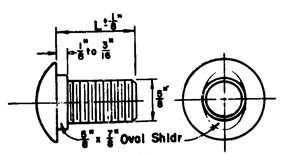


MOTORCYCLE TURNAROUND

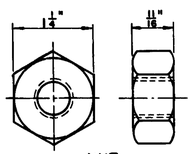


NOTE:
Stub Channel is necessary on one End Post only.

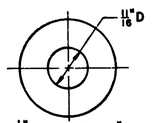
DETAIL SHOWING 8.2# CHANNEL, STUB CHANNEL & SPLICE PLATE LOCATION



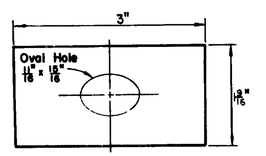
BOLT



NUT



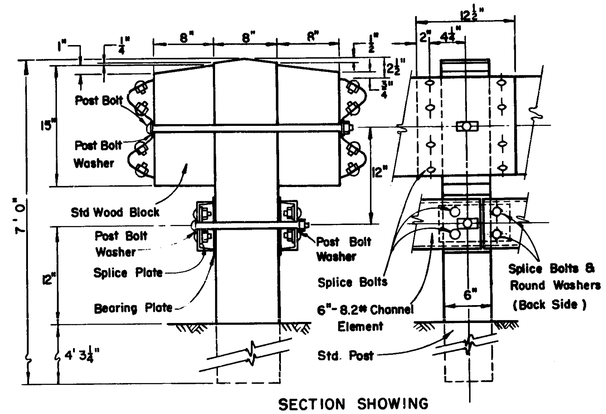
1½" Dia. x 0.134" Thick
ROUND WASHER
(10 Gauge)



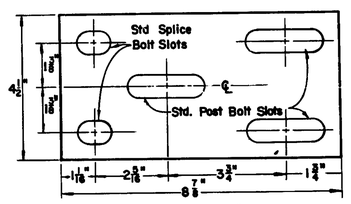
POST BOLT WASHER (⅛" Thick)
2 Req'd per Post Bolt

SPLICE BOLT (Beam)	L =	1½"	8 Req'd per Splice
SPLICE BOLT (Beam End Shoe)	L =	1½"	8 Req'd per End Shoe
SPLICE BOLT (Channel)	L =	1½"	4 Req'd per Splice
POST BOLT (Beam)	*L =	25½"	1 Req'd per Post
POST BOLT (Channel)	*L =	13"	1 Req'd per Post

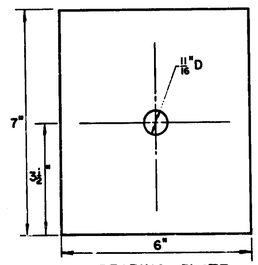
*Except as shown on Plan Views



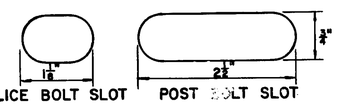
SECTION SHOWING
SPLICES & ATTACHMENT TO POSTS



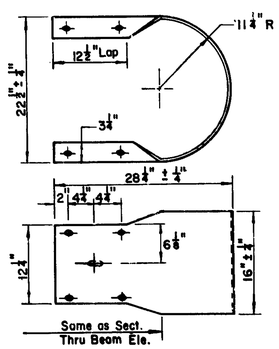
SPLICE PLATE ⅜" Thick
1 Req'd per Channel Splice



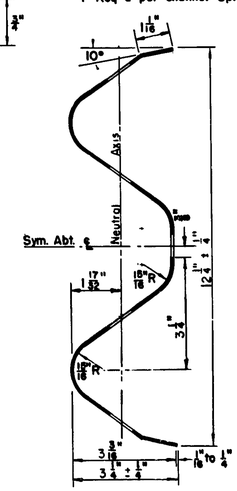
BEARING PLATE
1/16" Thick
1 Req'd per Channel Splice



SPLICE BOLT SLOT POST BOLT SLOT



DOUBLE END SHOE



SECTION THRU BEAM ELEMENT

NOTES:

Materials and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications.

All posts and blocks shall conform to dimensions shown and shall be made from Douglas Fir, Norway Pine, Northern White Pine, Southern Yellow Pine, West Coast Hemlock, Red Oak, White Oak, White Ash, Sugar Maple, Red Maple, Soft Elm, Yellow Birch, Hickory, Beech or other approved wood.

Beam elements shall be lapped in the direction of traffic.

All brackets, fittings, plates, washers, and bolts shall be in accordance with the Standard Specifications. Bolts shall be cut off not to exceed 1 2" from the nut on the back side of the post.

The bolting pattern for beam element splice joints may be optional to conform to tensile strength requirements for assembled beam elements in accordance with the Standard Specifications.

Beam elements and channel elements shall be pre-formed to plan radius for curves less than 150 feet.

The beam element and end shoe shall be 12 gage. The channel element shall conform to current specifications for structural steel ASTM Designation: A36 and galvanized in accordance with ASTM: A123

At bridges, the end of the end shoe shall be one foot from the bridge railing or pier.

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

OFFSET GUARD RAIL-DOUBLE

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 3-9-65
RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE 4-12-65
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE

OFFICES OF DESIGN AND CONSTRUCTION

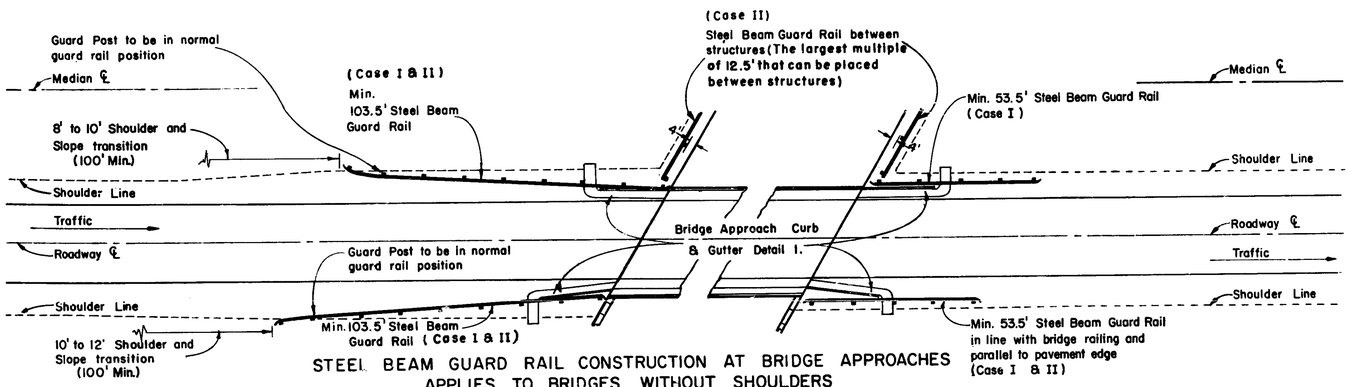
APPROVED — CONSTRUCTION ENGINEER — DATE 4-17-65
APPROVED — CHIEF OF DESIGN — DATE 4/20/65

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED — DIRECTOR OF ENGINEERING-CHIEF ENGINEER — 4/20/65

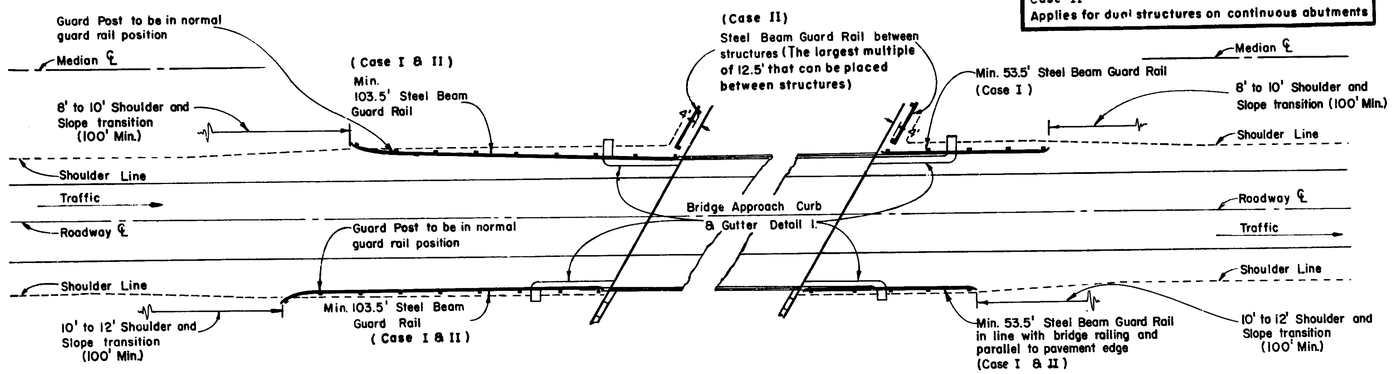
DRAWN BY RJM CHECKED BY RHR TRACED BY RJM APPROVED B.P.R.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C66	63174A	I 75-2(19)60	24



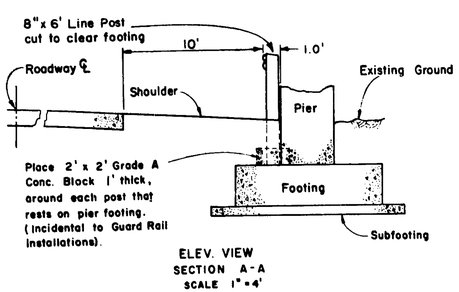
STEEL BEAM GUARD RAIL CONSTRUCTION AT BRIDGE APPROACHES
APPLIES TO BRIDGES WITHOUT SHOULDERS
SCALE 1" = 20'

Case I
Applies for dual structures on separate abutments
Case II
Applies for dual structures on continuous abutments

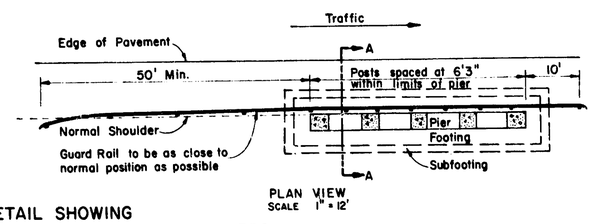


STEEL BEAM GUARD RAIL CONSTRUCTION AT BRIDGE APPROACHES
APPLIES TO BRIDGES WITH SHOULDERS
SCALE 1" = 20'

For Guard Rail adjacent to overpasses on crossroads use 53.5 lin. ft. (Min.) at each corner of structure.

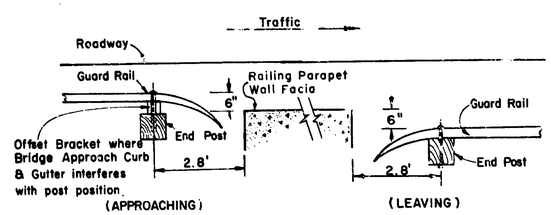


ELEV. VIEW
SECTION A-A
SCALE 1" = 4'



PLAN VIEW
SCALE 1" = 12'

DETAIL SHOWING
STEEL BEAM GUARD RAIL PROTECTION AT PIERS
FOR ROADWAY UNDER BRIDGES



DETAIL SHOWING END POST
FOR ROADWAY OVER BRIDGES
SCALE 1/2" = 1'0"

			I752(9)160			TOTAL SHEETS	
			CITY				
I-75	63174A	OAKLAND	HAZEL PARK		25		33

PLAN NOTES:

The length of Bridge Approach Curb and Gutter shall be varied to locate the spillway clear of guard rail posts. The spillway shall extend two feet beyond the shoulder.

Where Steel Beam Guard Rail is to be used in the proximity of Bridge Approach Curb and Gutter, the shoulder shall be sloped down from the curb.

The vertical alignment shall be modified to lower the rail element nearest the bridge 0.5' and a straight line transition used to the fifth post from the bridge, at which point the rail element shall be normal height above ground.

All materials and workmanship shall be in accordance with current Michigan State Highway Department Standard Specifications.

Construction shall be in accordance with Standard Plan for Steel Beam Guard Rail.

Offset Brackets for wood posts are to be 4" x 4" x 14" long made of the same kind of wood and with the same kind of preservative treatment as specified for wood guard rail posts. They shall be drilled in the center with an 11/16" hole, 7" from either end.

Offset Brackets for steel posts are to be 4" steel channel, weighing 7.25 lbs. per lin. ft. They shall be 14" long, drilled through both flanges in the center of the flange, with an 11/16" hole, 7" from either end. Painting shall be as specified for steel guard rail posts.

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

LOCATION OF GUARD RAIL AT STRUCTURES (DUAL HIGHWAYS)

CHECKED	A. T. Dunnam, ENGINEER OF DESIGN	3-23-64 DATE
RECOMMENDED FOR APPROVAL	D. L. Cooper, TRAFFIC ENGINEER	4-6-64 DATE
RECOMMENDED FOR APPROVAL	M. G. Nunn, ENGINEER OF BRIDGE AND ROAD DESIGN	3/26/64 DATE
APPROVED	Chas. J. Lundy, CONSTRUCTION ENGINEER	DATE
APPROVED	John P. Nilsen, CHIEF ENGINEER OF DESIGN	4/6/64 DATE

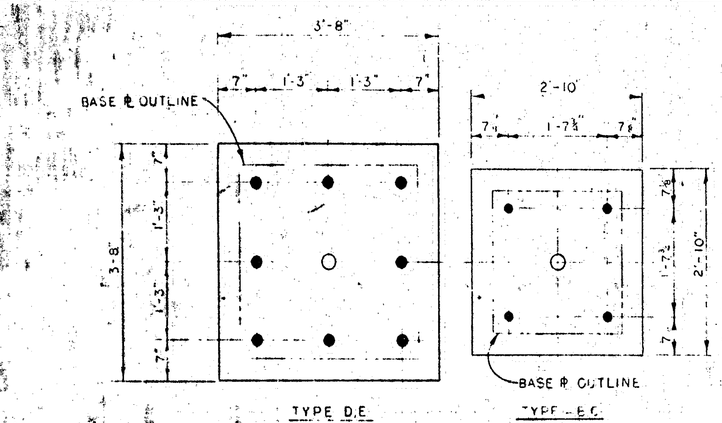
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY John P. Nilsen, DIRECTOR OF ENGINEERING-CHIEF ENGINEER — 4/6/64 DATE

DRAWN BY: R.J.M. CHECKED BY: R.H.R. TRACED BY: R.J.M. APPVD BPR.

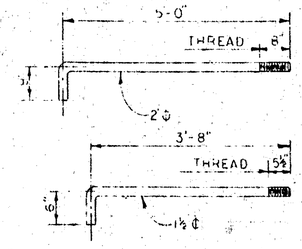
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A,C66	63174A	I-75-11.-	25

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	ENGN.	I-75-2(19)40			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	26	33



TYPE D,E

TYPE E,C

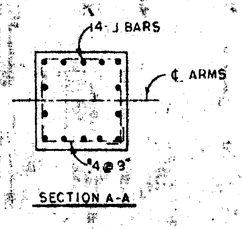


ANCHOR BOLTS SHALL BE FURNISHED W/2 HEX HEAD NUTS & 2 FLAT WASHERS. GALVANIZE NUTS, WASHERS & TOP 2" OF BOLT.

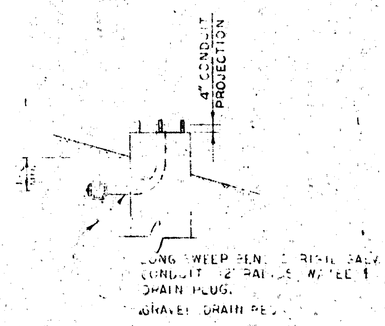
ANCHOR BOLT

ANCHOR BOLT PLANS

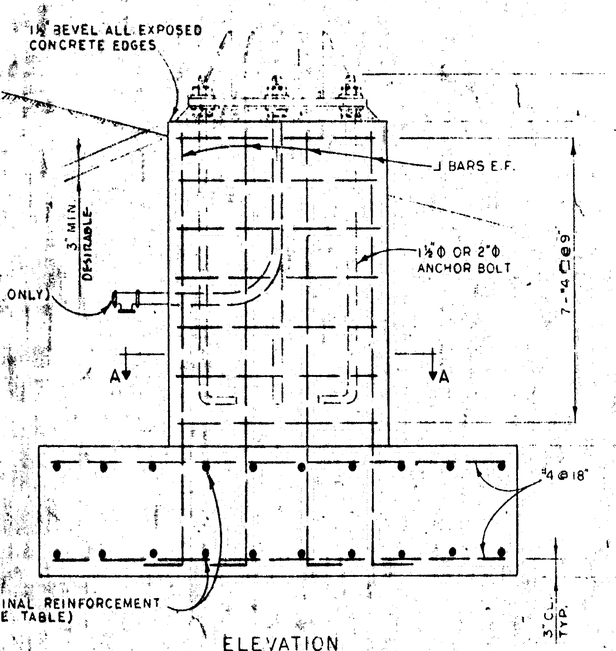
TYPE	FOOTING SIZE	PEDESTAL SIZE	ANCHOR BOLT	LONGITUDINAL FOOTING REINFORCEMENT TOP	LONGITUDINAL FOOTING REINFORCEMENT BOTTOM	J BARS	CONC CU YD	REINF STEEL WT
A	5'-0"x5'-0"	2'-10"x2'-10"	4-1½"℄	6-#4	6-#4	#5	3.3	225
B	5'-0"x9'-0"	2'-10"x2'-10"	4-1½"Φ	6-#4	6-#4	#5	4.8	270
C	6'-0"x11'-0"	2'-10"x2'-10"	4-2"Φ	7-#5	7-#5	#6	6.4	420
D	7'-0"x12'-0"	3'-8"x3'-8"	8-2"Φ	8-#5	8-#5	#6	8.7	490
E	8'-0"x13'-0"	3'-8"x3'-8"	8-2"Φ	9-#5	9-#5	#6	10.2	545



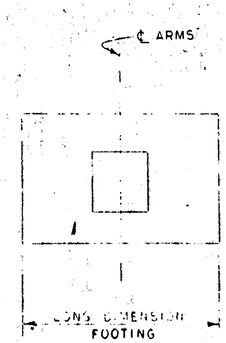
SECTION A-A



CONDUIT DETAIL



ELEVATION



PLAN

NOTES:

1 CONDUIT SHALL BE INSTALLED ON ROADWAY SIDE OF FOUNDATION.

MICHIGAN STATE HIGHWAY DEPARTMENT

CANTILEVER FOUNDATION

TYPE A,B,C,D,E

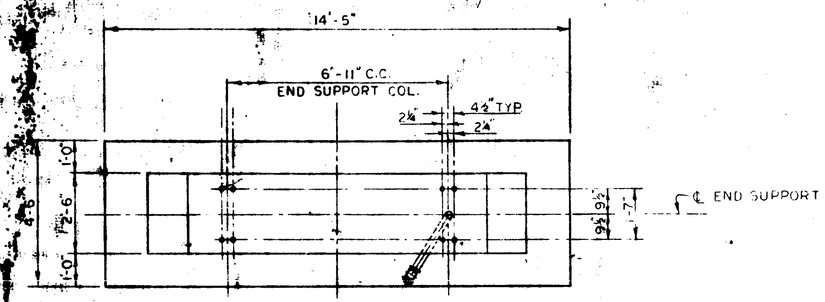
REVISIONS			
NO.	DESCRIPTION	DATE	BY

ROAD USED
DRAWN BY
TRACED BY
CHECKED BY
SHEET 2 OF 2

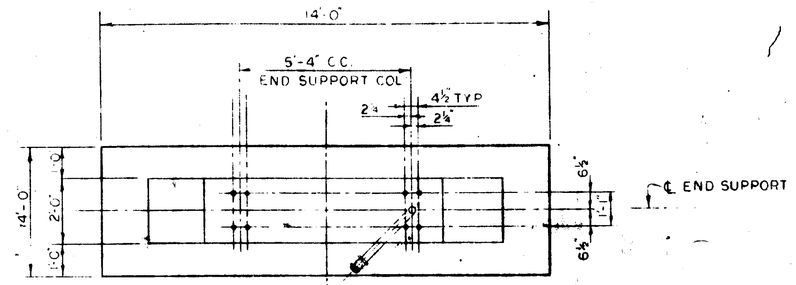
S5.30

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A.C66	63174A	I-75-2(19)40	26

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I 75-2(49)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	27	33

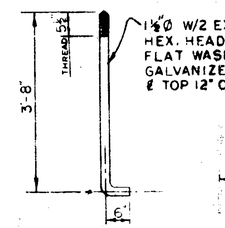


PLAN

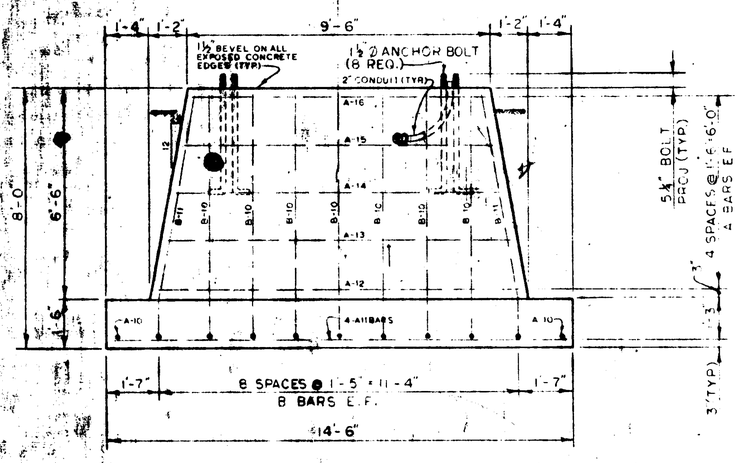


PLAN

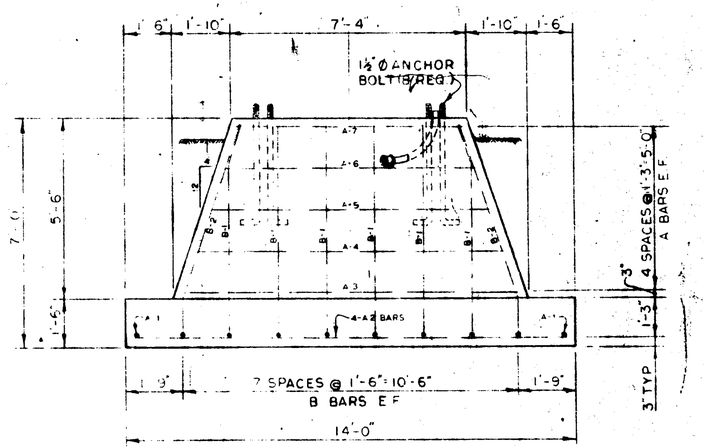
DIRECTION OF TRAFFIC



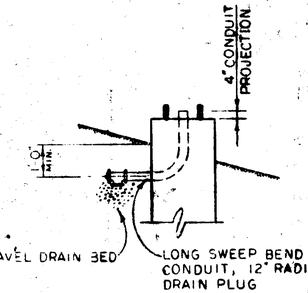
ANCHOR BOLT DETAIL



ELEVATION



ELEVATION



CONDUIT DETAIL

NOTES:

1. CONDUIT SHALL BE INSTALLED ON ROADWAY SIDE OF RIGHT FOUNDATION OR AS DIRECTED BY ENGINEER.
2. TOP OF CONC. SHALL BE 3" MIN. ABOVE GROUND (DESIRABLE).

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ.
A-16	#4	3'-6"	2
A-15	#4	13'-11"	2
A-14	#4	11'-3"	2
A-13	#4	10'-8"	2
A-12	#4	10'-2"	2
A-10	#4	9'-7"	4
A-11	#4	9'-1"	2
B-10	#4	7'-6" / 2'-9"	14
B-11	#4	7'-7" / 2'-9"	4

10.0 CU. YDS CONC
228# REINF. STEEL

TYPE C
SCALE ½" = 1'-0"

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ.
A-1	#4	3'-6"	2
A-2	#4	13'-6"	4
A-3	#4	10'-4"	2
A-4	#4	9'-6"	2
A-5	#4	8'-8"	2
A-6	#4	7'-10"	2
A-7	#4	7'-0"	2
B-1	#4	6'-6" / 2'-3"	12
B-2	#4	6'-9" / 2'-3"	4

6.82 CU. YDS. CONC.
196# REINF STEEL

TYPE B
SCALE ½" = 1'-0"

MICHIGAN STATE HIGHWAY DEPARTMENT

TRUSS FOUNDATION
TYPE B, C

REVISIONS

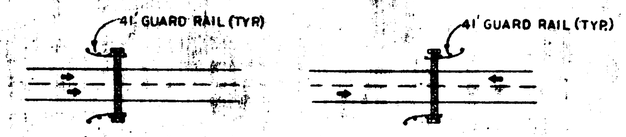
NO.	DESCRIPTION	DATE	BY

S8.10

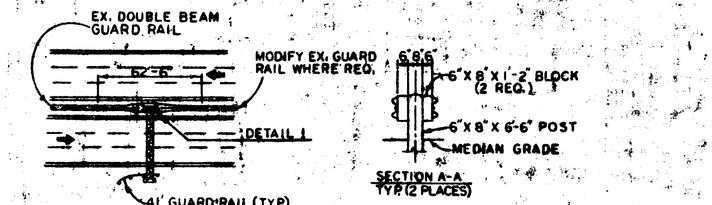
FILE NO. 63174A.C66

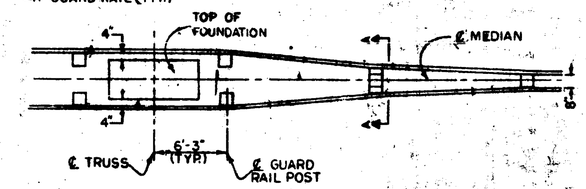
STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I 75-2(49)60	27

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	HAZEL PARK	28	33

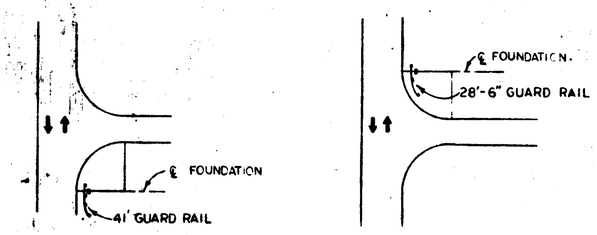


TRUSS SIGN SUPPORT

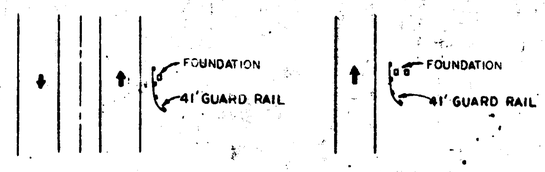




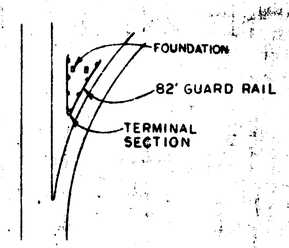
DETAIL 1



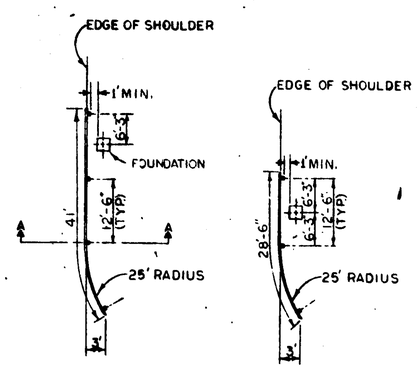
CANTILEVER SIGN SUPPORT



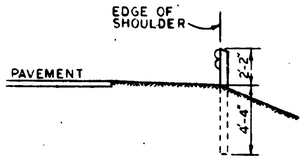
COLUMN SIGN SUPPORT



GORE LOCATION



PLAN



SECTION A-A

NOTE:
Details Shown are for "Steel Beam Guard Rail," Std. Plan E-4-A-137-E. Plans Call for "Offset Guard Rail-Single," Shown in Special Details. The 25' Radius Shown for Beam Element Shall Apply also to Channel Element.

NOTES:

1. FOR GUARD RAIL DETAILS SEE *SPECIAL DETAIL SHEET #23*
2. WHERE STRAIGHT CURB EXISTS NO GUARD RAIL SHALL BE INSTALLED.

REV. 4-13-64

MICHIGAN STATE HIGHWAY DEPARTMENT
JOHN C. MACKIE, COMMISSIONER
TRAFFIC DIVISION

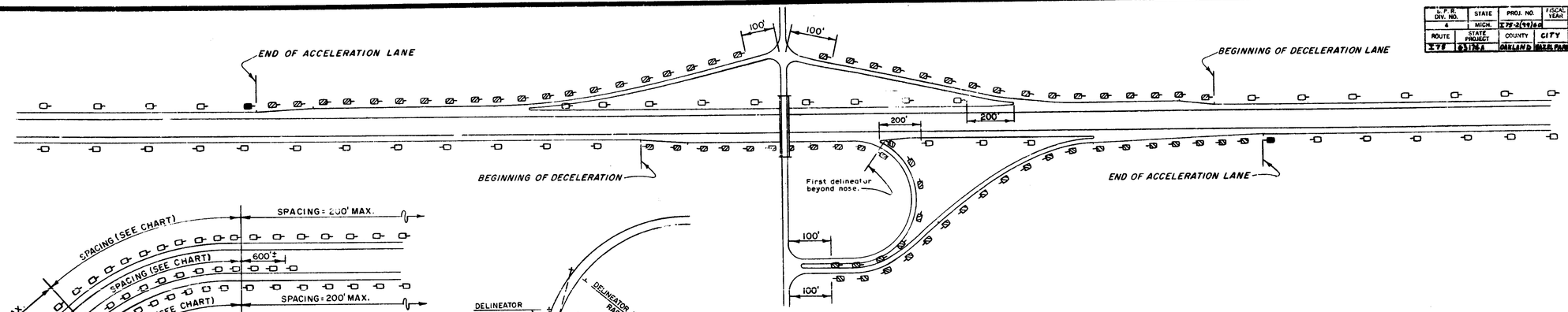
LOCATION OF GUARD RAIL AT TRAFFIC SIGNS

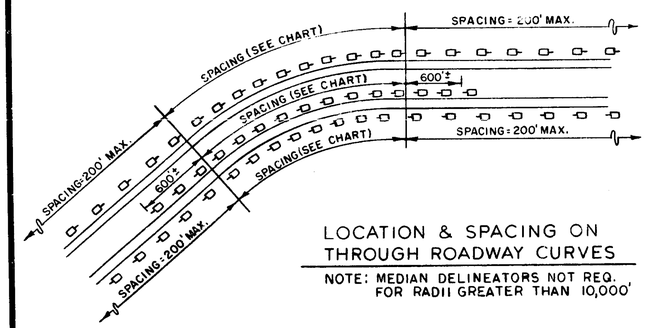
R.D.S.
Oct 62

FILE NO. 63174A,C66

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I-75-2(99)60	28

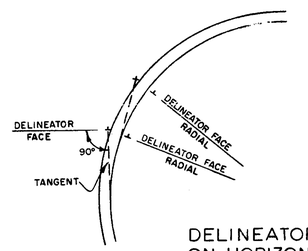
L. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	X75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
X75	63174A	OAKLAND	HAZEL PARK	24	33



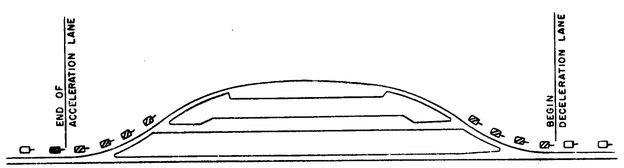


LOCATION & SPACING ON THROUGH ROADWAY CURVES

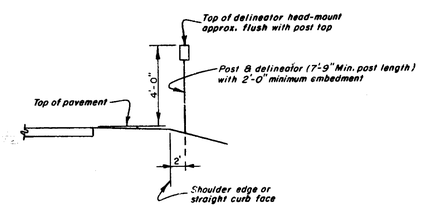
NOTE: MEDIAN DELINEATORS NOT REQ. FOR RADII GREATER THAN 10,000'

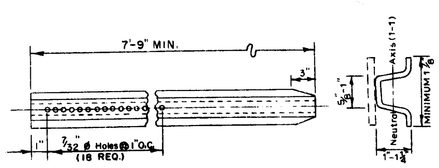


DELINEATOR ORIENTATION ON HORIZONTAL CURVES



REST AREA & WEIGH STATION





NOTE: *Minimum weight - 1.33 lbs. per ft.*
Minimum thickness - 3/32 in.
Minimum moment of inertia about 1-1 axis - 0.040 in.⁴

Dimensions shown are minimum and maximum permissable.

POST DETAIL

NOTES:

1. *Single crystal delineators @ 200' max. spacing*
   Double yellow delineators @ 100' max. spacing
   Triple yellow delineators @ end of acceleration lane only
2. *Delineators shall be placed along the right or left of the through roadways, two feet beyond the outer edge of the roadway shoulder or the face of an unmountable curb, or in the line of the guard rail at interchanges. Delineators shall be located along the outside of the curve of turning roadways, I.E., on the left side for right curving ramps and on the right for others. On speed-change lanes, the delineators shall be installed on the right for right hand connections, and on the left for left hand connections.*
3. *Single crystal delineators shall be omitted where fixed source lighting exists along the through roadway. Yellow delineators shall be installed on all ramps.*

SPACING FOR HIGHWAY DELINEATORS ON HORIZONTAL CURVES

DEGREE OF CURVE	RADIUS IN FEET	SPACING ON CURVE	SPACING IN ADVANCE AND BEYOND CURVE		
			1 ST SPACE	2 ND SPACE	3 RD SPACE
	10,000	200	200	200	200
1		152	200	200	200
	5,000	141	200	200	200
	3,000	109	196	200	200
2		106	191	200	200
	2,500	99	178	200	200
	2,000	88	158	200	200
3		86	155	200	200
	1,800	84	151	200	200
	1,600	78	140	200	200
4		74	133	200	200
	1,400	74	133	200	200
	1,200	68	122	200	200
5		66	119	198	200
	1,000	62	112	186	200
	900	58	104	174	200
7		55	99	165	200
	800	55	99	165	200
	700	51	92	153	200
9		48	86	144	200
	600	47	85	141	200
	500	42	76	126	200
12		41	74	123	200
	400	37	67	111	200
15		36	65	108	200
	350	35	63	105	200
18		33	59	99	198
	300	32	58	96	192
21		30	54	90	180
	250	28	50	84	168
25		28	50	84	168
	200	24	43	72	144
30		24	43	72	144
	150	20	36	60	120
40		19	34	57	114
	100	14	25	42	84

THE SPACING S ON THE CURVE IS FOUND FROM THE FORMULA $S = 2\sqrt{R - 50}$, WHERE R IS THE RADIUS OF THE CURVE IN FEET. THE SPACING TO THE FIRST DELINEATOR IN ADVANCE OF AND BEYOND THE CURVE IS 1.8 S, TO THE NEXT DELINEATOR 3S, AND TO THE NEXT 6S, BUT NOT TO EXCEED 200 FEET.

MINIMUM SPACING = 10 FEET

MICHIGAN STATE HIGHWAY DEPARTMENT

POST & DELINEATOR

REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD CHIEF		
DRAWN BY	RDS	11-12-63
TRACED BY		
CHIEF ENG'R BY		

SHEET 1 OF 2

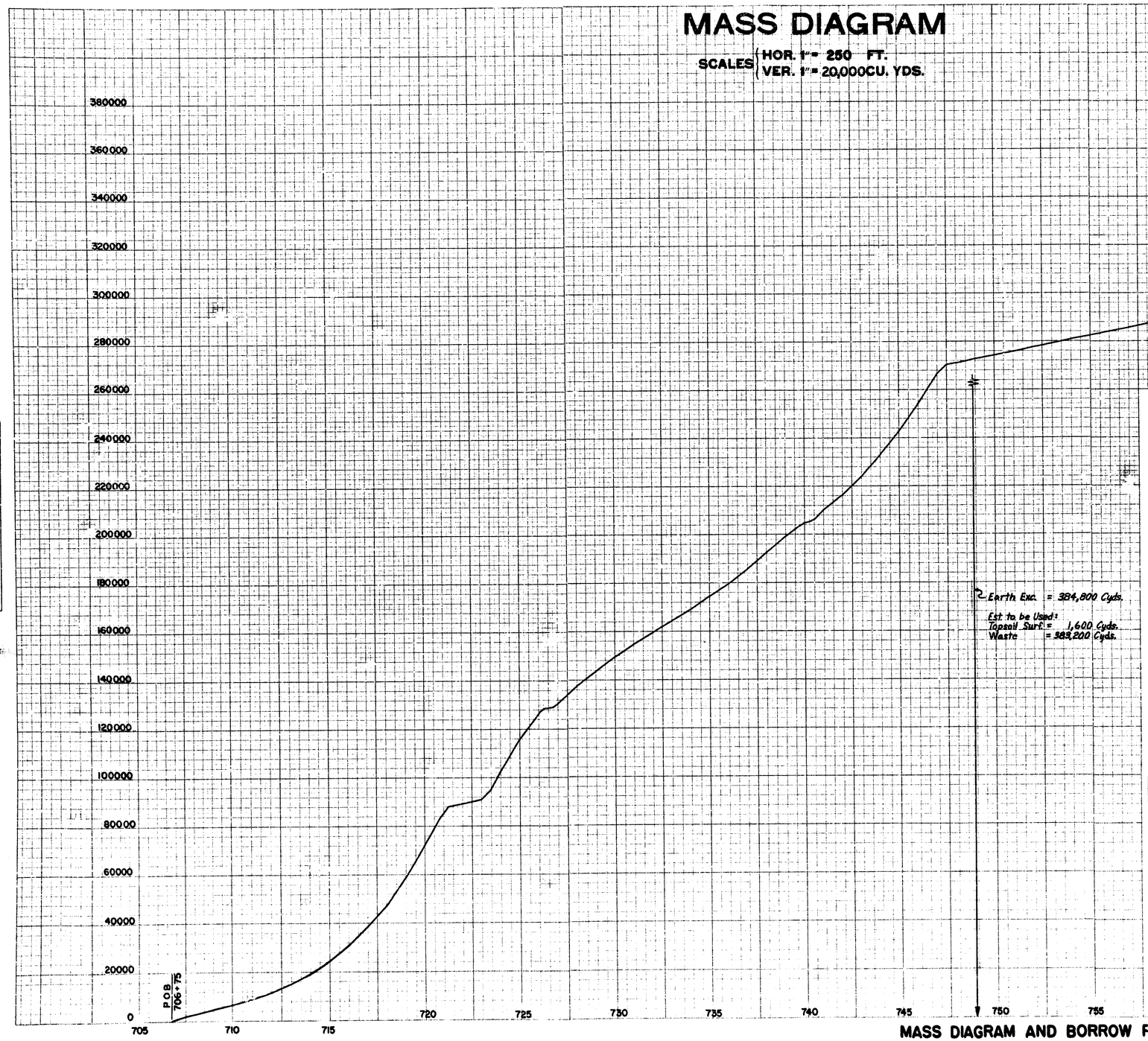
SF-51

FILE NO.	STATE PROJECT	FISCAL YEAR	SHEET NO.
63174A.C66	63174A	X75-2(99)60	24

	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.	I75-2(99)60			
			CITY	SHEET NO.	TOTAL SHEETS
I-75	63174A	OAKLAND	Hazel Park	30	33

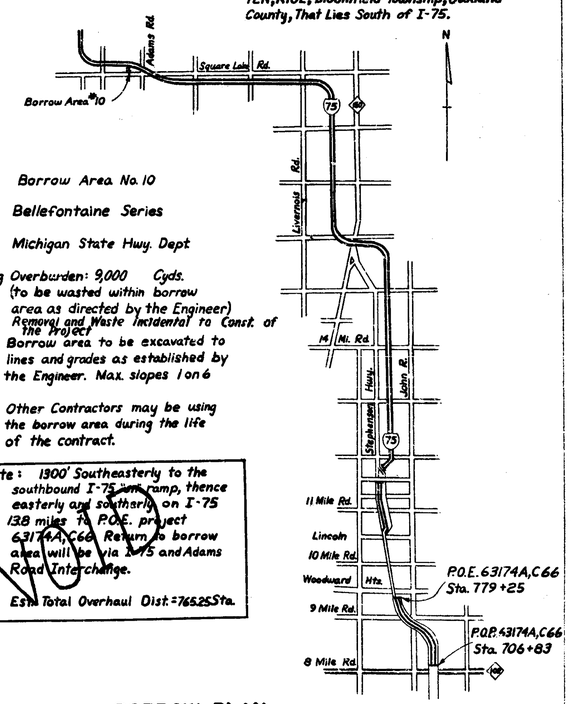
MASS DIAGRAM

SCALES { HOR. 1" = 250 FT.
VER. 1" = 20,000 CU. YDS.



PLOTTED	BY	DATE
COMPUTED	M.E.S.	3-65
CHECKED		

Borrow Area No. 10
That Part of the S½ of the SE¼ of Sec. 1, T2N, R10E, Bloomfield Township, Oakland County, That Lies South of I-75.



Borrow Area No. 10

Soil: Bellefontaine Series

Owner: Michigan State Hwy. Dept

Removing Overburden: 9,000 Cyds. (to be wasted within borrow area as directed by the Engineer) Removal and Waste Incidental to Const. of the Project

Note: Borrow area to be excavated to lines and grades as established by the Engineer. Max. slopes 1 on 6

Other Contractors may be using the borrow area during the life of the contract.

Haul Route: 1300' Southeasterly to the southbound I-75 ~~on~~ ramp, thence easterly and southerly on I-75 13.8 miles to P.O.E. project 63174A, C66. Return to borrow area will be via I-75 and Adams Road Interchange.

Est. Total Overhaul Dist. = 765.25 Sta.

BORROW PLAN

FOR INFORMATION ONLY

To Be Used For Subbase, Porous Material Grade A, Sand Gravel Material, And Subgrade Undercutting Backfill.

MASS DIAGRAM AND BORROW PLAN

63174A, C66

63174A I75-2(99)60 30

QUANTITY SHEET–D

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I752(97)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174 A	OAKLAND	HAZEL PARK	31	33

SURFACING (SQ. YD.) – CURB AND GUTTER (LIN. FT.)

AS PER PLANS

STA. TO STA.		LENGTH	WIDTH	Conc. Pav't 9" Unif.	Conc. Pav't 10" Unif.	Conc. Ramp Pav't 10" Unif.	Pav't Reinf. Syds.	Conc. C & G Det. A	Conc. C & G Det. B	Conc. Nose Ea. Type I	Conc. Nose Ea. Type II	4" Conc. S.W. Sq. Ft.	Class A Shldrs. Tons	Class AA Shldrs. Tons	Selected Subbase Tons	Agg. Base Course Tons	Bit. Agg. Shldr.–Conc. Pav't Tons	Bit. Prime Coat Gals.	Bit. Conc. Wear. Crse. Tons	Water 1000 Gal. Units	Calcium Chloride Tons	Conc. Curb Det. 2 Lin. Ft.	Conc. Pav't Patch. Syds.	Rem. Old Pav't Syds.	REMARKS
706+83	708+00	127'	Variable		953		953		468					170			44	179							
708+00	720+00	1200'	Variable		11,427	2078	13,505	934	5442	1	1			1775			453	1863							
720+00	732+00	1200'	Variable		12,800	166	12,966		4800					1704			435	1789							
732+00	744+00	1200'	Variable		12,800	2605	15,405	890	5514	1	1			1719			438	1805				20	17	18	
744+00	756+00	1200'	Dual 48'		12,800		12,800		4800					1748			446	1836							
756+00	768+00	1192.95'	Dual 48'		12,724		12,724		4772					1738			443	1825							Sta. Equation
768+00	779+25	1125	Variable	973	12,000	2674	14,674	1015	5192	1	1		572	1140		358	291	1427	135						
Entire	Project														20,696					380	127				
Ser. Rds.	@ P02											1045													
Entire	Project																								
TOTALS				973	75,504	7523	83,027	2839	30,988	3	3	1045	572	9,994	20,696	358	2550	10,724	135	380	127	20	17	18	

AS CONSTRUCTED

STA. TO STA.		LENGTH	WIDTH	Conc. Pav't 9" Unif.	Conc. Pav't 10" Unif.	Conc. Ramp Pav't 10" Unif.	Pav't Reinf. Syds.	Conc. C & G Det. A	Conc. C & G Det. B	Conc. Nose Ea. Type I	Conc. Nose Ea. Type II	4" Conc. S.W. Sq. Ft.	Class A Shldrs. Cyds.	Class AA Shldrs. Cyds.	Selected Subbase Cyds.	Agg. Base Crse. Tons	Bit. Agg. Shldrs.–Conc. Pav't Tons	Bit. Prime Coat Gals.	Bit. Conc. Wear. Crse. Tons	Water 1000 Gal. Units	Calcium Chloride Tons	Conc. Curb Det. 2 Lin. Ft.	Conc. Pav't Patch. Syds.	Rem. Old Pav't Syds.	EXPLANATION OF CHANGES
706+83	708+00	127'	Var.		953		953		470					90			50								
708+00	720+00	1200'	Var.		11,206.7	2018.8	13,226	929	5464	1	1			935			511								
720+00	732+00	1200'	Var.		12,800	166.0	12,966		4820					897			491								
732+00	744+00	1200'	Var.		12,800	2502.8	15,303	885	5536	1	1			905			495					20	0	0	
744+00	756+00	1200'	Dual 48		12,800		12,800		4820					920			504								
756+00	768+00	1192.95	Dual 48		12,784		12,724		4791					915			500								
768+00	779+25	1125	Var.	914.0	12,000	2603.8	14,603	1010	5213	1	1		238.4	600		177.6	438		111						
Entire	Project											1453			10,036					249	10.633		Auth. # 1007	Auth. # 1007	
Ser. Rds.	@ P02																								
Entire	Project																								
				Auth. # 26F	Auth. # 26F	Auth. # 26F	Auth. # 26F	Auth. # 25F	Auth. # 25F			Auth. # 26F	Auth. # 30F	Auth. # 30F	Auth. # 27F	Auth. # 30F	Auth. # 29F	Auth. # 29F	Auth. # 29F	Auth. # 30F	Auth. # 30F				
TOTALS				914.0	75,283.7	7291.4	82,575	2824	31,114	3	3	1453	238.4	5262	10,036	177.6	2989	0	111	249	10.633	20	0	0	

GUARD RAIL (LIN. FT.)

AS PER PLANS

STA. TO STA.		Steel Beam	Offset Single	Offset Double	Curved Offset Single	REMARKS
POB-POE	Median		3325.0	5575.0		
708+25	Rt.		28.5		12.5	
716+65	Lt.		28.5		12.5	
721+70	Rt.		103.5		12.5	
722+70	Lt.		103.5		12.5	
727+00	Lt.		28.5		12.5	
732+85	Rt.		28.5		12.5	
748+25	Rt.		78.5		12.5	
748+25	Lt.		78.5		12.5	
750+50	Rt.		128.5		12.5	
751+00	Lt.		128.5		12.5	
754+37	Rt.		78.5		12.5	
754+37	Lt.		78.5		12.5	
757+23	Rt.		78.5		12.5	
757+23	Lt.		78.5		12.5	
760+90	Rt.		116.0		12.5	
761+70	Lt.		116.0		12.5	
775+75	Rt. 779+60		378.5			
775+75	Lt. 779+60		378.5			
Entire	Project	1189.0				
TOTALS		1189	5363	5575	200	

AS CONSTRUCTED

STA. TO STA.		Steel Beam	Offset Single	Offset Double	Curved Offset Single	EXPLANATION OF CHANGES
POB-POE	Median		2100.0	6150.0		
708+25	Rt.		28.5		12.5	
716+65	Lt.		28.5		12.5	
721+70	Rt.		91.0		12.5	
722+70	Lt.		91.0		12.5	
727+00	Lt.		28.5		12.5	
732+85	Rt.		28.5		12.5	
748+25	Rt.		78.5		12.5	
748+25	Lt.		78.5		12.5	
750+50	Rt.		128.5		12.5	
751+00	Lt.		128.5		12.5	
754+37	Rt.		78.5		12.5	
754+37	Lt.		78.5		12.5	
757+23	Rt.		78.5		12.5	
757+23	Lt.		78.5		12.5	
760+90	Rt.		128.5		12.5	
761+70	Lt.		128.5		12.5	
775+75	Rt. 779+60		389.2			
775+75	Lt. 779+60		389.3			
Entire	Project	1387.5				
TOTALS		1387.5	4,159.5	6,150.0	200.0	Auth.# 31F

FENCING (LIN. FT.) – WALK GATE (EA.)

AS PER PLANS

STA. TO STA.			48" Chain Link Fence	4' Walk Gate For 48" Chain Link Fence	REMARKS
706+83	708+00	NB & SB	234		
708+00	720+00	NB & SB	2444		
720+00	732+00	NB & SB	2337	1	
732+00	744+00	NB & SB	2444		
744+00	756+00	NB & SB	2254	1	
756+00	768+00	NB & SB	2229		
768+00	777+00	NB & SB	1839		
Ser. Rds.	@ P02		20		
TOTALS			13801	2	

AS CONSTRUCTED

STA. TO STA.		48" Chain Link Fence	4' Walk Gate For 48" Chain Link Fence	EXPLANATION OF CHANGES
706+83	708+00	246.0		
708+00	720+00	2,422.9		
720+00	732+00	2,324.5	1	
732+00	744+00	2,395.6		
744+00	756+00	2,222.0	1	
756+00	768+00	2,174.2		
768+00	777+00	2,018.3		
Ser. Rds.	@ P02	20.0		
		31F Auth.#		
TOTALS		13,821.5	2	

WATER MAIN (LIN. FT.)

AS PER PLANS

STA. TO STA.	16" Gate Valve Each	16" Gate Well Each	8" C.I. Watermain	16" Prestressed Conc. Cyl. Watermain	Steel Reinf. Lbs.	Conc. Gr. A Cyds.	Earth Exc. & Waste Cyds.	Por. Mat'l Gr. A Cyds.	REMARKS
Elza			198			1	60	75	
Highland	2	2		256	4519	94	148	187	
Sanoma			173			1	92	115	
			Furn. & Placed					Classed as Earth Exc. From Borrow Area #10	
TOTALS	2	2	371	256	4519	96	FOR TOTALS SEE SHEET 32		

AS CONSTRUCTED

STA. TO STA.	16" Gate Valve Each	16" Gate Well Each	8" C.I. Watermain	16" Prestressed Conc. Cyl. Watermain	Steel Reinf. Lbs.	Conc. Gr. A Cyds.	Earth Exc. & Waste Cyds.	Por. Mat'l Gr. A Cyds.	EXPLANATION OF CHANGES
Elza									
Highland	2	2		251.5	4451	87.0			
Sanoma			13.0 *		9,086	51.6			
Madge			*		12,542	70.7			
Pearl - Jarvis			*		10,584	59.5			
Woodruff			*		12,247	69.0			
			Auth.# 1012	Auth.# 1012	Auth.# 1012	Auth.# 1012			*see extras for 12" watermain crossings at these locations
TOTALS	2	2	13.0	251.5	48,880	337.8	FOR TOTALS SEE SHEET 32		

AS PER PLANS

TOTALS									

AS CONSTRUCTED

TOTALS									

SODDING (SQ. YD.)

AS PER PLANS STA. TO STA.		CLASS B	AS CONSTRUCTED STA. TO STA.		CLASS B	EXPLANATION OF CHANGES
706+83	715+80 NB	850	706+83	715+80 NB	873	
706+83	714+00 SB	571	706+83	714+00 SB	654	
716+67.5	736+50 NB	5,838	716+67.5	736+50 NB	6,216	
714+75	735+50 SB	8,904	714+75	735+50 SB	8,394	
737+50	748+12 NB	3779	737+50	748+12 NB	3,661	
738+50	748+12 SB	3310	738+50	748+12 SB	3,118	
748+38	757+10 SB	3761	748+38	757+10 SB	3,973	
748+38	757+10 NB	4904	748+38	757+10 NB	4,594	
757+36	771+00 SB	4076	757+36	771+00 SB	4,432	
757+36	769+00 NB	4995	757+36	769+00 NB	4,681	
772+58	777+00 SB	760	772+58	777+00 SB	765	
771+00	777+00 NB	783	771+00	777+00 NB	394	
Ramp "A"		462	Ramp	"A"	448	
Ramp "B"		357	Ramp	"B"	392	
Ramp "C"		1014	Ramp	"C"	911	
Ramp "D"		204	Ramp	"D"	340	
Ramp "M"		411	Ramp	"M"	427	
Ramp "N"		328	Ramp	"N"	765	
TOTALS		45,307	TOTALS		45,038	Auth.# 1016

CHECKED
CONTRACT SECTION
DATE

MISCELLANEOUS

AS PER PLANS	AS CONSTRUCTED	
Cantilever Foundation Type "D" - 2 Ea.	Cantilever Foundation Type "D" - 2 ea.	
Truss Foundation Type "B" - 4 Ea.	Truss Foundation Type "B" - 4 ea.	
Timber Curb and Snow Fence - 800 Lft.	Timber Curb and Snow Fence - 0 lft.	Auth.# 1010
Removing Sidewalk - 72 Syds.	Removing Sidewalk - 172 syds.	Auth.# 27F
Contraction Joints - 7500 Lft.	Contraction Joints - 10,062.6 lft.	Auth.# 26F
Expansion Joints - 2400 Lft.	Expansion Joints - 801.8 lft.	Auth.# 26F
End of Pour Const. Joints - 384 Lft.	End of Pour Const. Joints - 168 lft.	Auth.# 1005
Fine Grading and Cleanup - 170 Sta.	Fine Grading and Cleanup - 170 sta.	
Topsoil Surface (L.M.) - 1600 Cyds.	Topsoil Surface (L.M.) - 1,683.8 cyds.	Auth.# 30F
Completing Under Traffic - 3.21 Miles	Completing Under Traffic - 0.196 Miles	Auth.# 30F
Mulching - 9 Tons	Mulching - 22.27 tons	Auth.# 1016
Class I Seeding - 6 Acres	Class I Seeding - 9.58 acres	Auth.# 1016
Chemical Fertilizer - 3720 Lbs.	Chemical Fertilizer - 6050 lbs.	Auth.# 1016
Urea Nitrogen Fertilizer - 528 Lbs.	Urea Nitrogen Fertilizer - 0 lbs.	Auth.# 1016
Single Crystal Delin. & Post - 148 Ea.	Single Crystal Delin. & Post - 154 ea.	Auth.# 1016
Double Yellow Delin. & Post - 55 Ea.	Double Yellow Delin. & Post - 59 ea.	Auth.# 1016
Triple Yellow Delin. & Post - 2 Ea.	Triple Yellow Delin. & Post - 2 ea.	
Field Office - Conc. Proportioning - 1 Ea.	Field Office Conc. Proportioning - 1 ea.	
Field Office - Bituminous - 1 Ea.	Field Office - Bituminous - 1 ea.	
Concrete End Header - 168 Lft.	Concrete End Header - 168 lft.	
Granular Blanket - 2500 Cyds.	Granular Blanket - 10,685 Cyds.	Auth.# 27F

ALL TOTALS, EXCEPT COMPLETING, UNDER TRAFFIC, ARE SHOWN TO THE NEAREST WHOLE UNIT.

PLAN ESTIMATE BY Lee - Scarlata DATE 7-2-65 CHECKED BY Felter - Hall DATE 7-7-65 DATE DATA COMPLETED John R. Bramer PROJ. ENG. DATE 4-4-68 HISTORY CHECKED Donald R. Moore ENTERED ON PLANS BY Andrew Turner DATE 4-3-68

63174A,C66

QUANTITY SHEET – E

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(99)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I 75	63174A	OAKLAND	HAZEL PARK	32	33

MANHOLES CATCH BASINS (EACH) SEWERS (LIN. FT.)

AS PER PLANS

STA. TO STA.		0 – 6.0' MH1A	0 – 6.0' CB3H	0 – 6.0' CB3J	0 – 6.0' CB6J	0 – 6.0' INLET 5H	0 – 6.0' INLET 6J	6.1 – 14.0' MH1A	6.1 – 14.0' CB3A	6.1 – 14.0' CB3H	6.1 – 14.0' CB3J	6.1 – 14.0' CB6H	6.1 – 14.0' CB6J
707+00											3		1
710+54	Ramp "A"					1							
713+00						1					2		1
713+80	Ramp "A"										2		
716+00						1	1			1	4		1
719+00								1			3		1
722+00									1		4		2
725+00		1									3		1
728+00											3		1
734+00											4		
735+85	Ramp "C"									1	4	1	1
740+00					1			1			3		
743+15					1			1			3		
746+30		1		3	1								
749+40		1									3		1
752+60							2	1	1		2		2
756+10								1					
759+50		1					2				3		1
762+80								1			3		1
766+10					1						3		
767+93	Ramp "M"					1							
769+40			1	4	1								
773+60											2	1	
776+70											4		
779+20											4		
Entire Project													
TOTALS		4	1	7	5	4	5	6	2	2	62	2	14

STA. TO STA.	CLASS A 12"	CLASS A 12" C76II	CLASS A 15" C76II	CLASS A 18" C76II		CLASS B 12" C76III	CLASS B 15" C76III	CLASS B 18" C76III	CLASS B 24" C76III	CLASS B 30" C76III	CLASS B 54" C76III	CLASS B 42" C76III	CLASS C 12" C76IV	CLASS C 15" C76IV	Sewer Taps 12" Ea.	Sewer Taps 15 Ea.	Tile Traps 12 Ea.	Tile Traps 15 Ea.	6" Bank Drain Lft.	6" Edge Drain Lft.	Porous Material Gr. A Cyds.	Porous Material Gr B Cyds.			REMARKS
707+00		101				62									1		1			367	114				
710+54	7														1					4885	582				
713+00	6	62				41									2										
713+80		56				33									1		1								
716+00		325																							
719+00		136	287																						
722+00		243		282				197		30										4898	845				
725+00		136	301																						
728+00		125																							
734+00		88				64	45									1		1		5451	1097				
735+85		111											103	134		1		1							
740+00						74	62																		
743+15		23				51	388																		
746+30						74		316						62						4634	1446				
749+40		74					11	225						51											
752+60		120							170		256	152													
756+10											248									4263	684				
759+50		73	76	13				192																	
762+80		472																							
766+10						124																			
767+93	7														1										
769+40						37	85						67	51		1				4221	592	Compacted in Place			
773+60						272									2										
776+70		132	109				39									1									
779+20		74	51				103									1		1							
Entire Project																			6200			6500			
																					For Total See Below				
TOTALS	20	2351	824	295		832	733	930	170	30	504	152	170	298	8	5	2	3	6200	28719	—	6500			

AS CONSTRUCTED

STA. TO STA.		0 – 6.0' MH1A	0 – 6.0' CB3H	0 – 6.0' CB3J	0 – 6.0' CB6J	0 – 6.0' INLET 5H	0 – 6.0' INLET 6J	6.1 – 14.0 MH1A	6.1 – 14.0 CB3A	6.1 – 14.0 CB3H	6.1 – 14.0 CB3J	6.1 – 14.0 CB6H	6.1 – 14.0 CB6J
707+00											3		1
710+54	Ramp "A"					1							
713+00						1					2		1
713+80	Ramp "A"										2		
716+00						1	1			1	4		1
719+00		1									3		1
722+00											4		2
725+00		1									3		1
728+00											3		1
734+00											4		
735+85	Ramp "C"		1	2						1	2		1
740+00		1			1						3		
743+15		1			1						3		
746+30		1		3	1								
749+40		1									3		1
752+60							2	1	1		2		2
756+10								1					
759+50		1					2				3		1
762+80								1			3		1
766+10				2	1						1		
767+93	Ramp "M"					1							
769+40			1	4	1								
773+60				2									
776+70											4		
779+20											4		
Entire Project													
		28F	28F	28F				28F			28F	28F	
		Auth. #	Auth. #	Auth. #				Auth. #	Auth. # 1002		Auth. #	Auth. #	
TOTALS		7	2	13	5	4	5	3	1	2	56	0	14

STA. TO STA.	CLASS A 12"	CLASS A 12" C76II	CLASS A 15" C76II	CLASS A 18" C76II		CLASS B 12" C76III	CLASS B 15" C76III	CLASS B 18" C76III	CLASS B 24" C76III	CLASS B 30" C76III	CLASS B 36" C76III	CLASS B 42" C76III	CLASS C 12" C76IV	CLASS C 15" C76IV	Sewer Taps 12 Ea.	Sewer Taps 15 Ea.	Tile Traps 12 Ea.	Tile Traps 15 Ea.	6" Bank Drain Lft.	6 Edge Drain Lft.	Porous Material Gr A Cyds.	Porous Material Gr B Cyds.			EXPLANATION OF CHANGES
707+00		100.6				60.5									1		1			336					
710+54	7.0														1					4814					
713+00	7.0	65.6				38.0									2										
713+80		56.0				17.0									1		1								
716+00		327.8																							
719+00		136.2	285.0																						
722+00		243.2		277.0				202.6		30.0										4734					
725+00		137.3	301.0																						
728+00		125.2																							
734+00		87.2				64.5	42.0									1		1		5511					
735+85		109.6											69.5	130.3		1		1							
740+00						74.3	63.5																		
743+15		23.3				50.5	325.6																		
746+30						73.8		314.8						59.3						4799					
749+40		74.2					11.6	228.0						51.0											
752+60		80.3							170.6		253.0	153.0													
756+10											243.7									3917					
759+50		72.0	75.9	8.6				203.0																	
762+80		466.3																							
766+10						124.3																			
767+93	6.0														1										
769+40						34.4	84.7						65.6	50.0		1				4215		Compacted in Place			
773+60						270.3									2										
776+70		133.7	110.8				41.0									1									
779+20		73.8	50.5				103.0									1		1							
Entire Project																						3050			
		28F	28F	28F		28F	28F	28F	28F		28F	28F	28F	28F						28F		27F			
		Auth. #	Auth. #	Auth. #		Auth. #	Auth. #	Auth. #	Auth. #		Auth. #	Auth. #	Auth. #	Auth. #					Auth. #1006	Auth. #	For Total See Below	Auth. #			
TOTALS	20.0	2312.2	825.2	285.6		807.6	671.4	948.4	170.6	30.0	496.7	153.0	135.1	290.6	8	5	2	3	0	28,326		3050			

GRADING

AS PER PLANS

STA. TO STA.		Sand-Gravel Mat'l Cyds.	Earth Exc. Cyds.	Subgrade Undercutting Cyds.	Subbase Cyds.	Emb+Shr. + Loss Cyds.	Waste Cyds.	Por. Mat'l Grade A Cyds.		REMARKS
706+75	779+25		384,800			1600*	383200			*Est. to be used Topsoil Surf.
Exc. & Waste From Sewer Trenches										
706+83	708+00		91				91			
708+00	720+00		466				466			
720+00	732+00		676				676			
732+00	744+00		877				877			
744+00	756+00		1157				1157			
756+00	768+00		547				547			
768+00	779+25		473				473			
Exc. & Waste From Watermain Trenches										
Entire Project			300				300			
Exc. & Waste From Bank Drain Trenches										
Entire Project			2800				2800			
Estimate to Correct Unstable Subbgrade (Sand-Gravel Material)										
Entire Project		10,400		8,300			8300			
Porous Material Grade A										
Entire Project								5200		Edge Drains & Bank Drains
Entire Project								5360		Sewers
Entire Project								377		Water Mains
Subbase										
706+83	779+25				64,026					
Interim Connections					2000					
Sand Gravel Material										
P02		250								
TOTALS		10,650	392,187	8,300	66,026	1600	398887	10,937		

AS CONSTRUCTED

STA. TO STA.		Sand-Gravel Material Cyds.	Earth Exc. Cyds.	Subgrade Undercutting Cyds.	Subbase Cyds.	Emb+Shr. + Loss Cyds.	Waste Cyds.	Por. Mat'l Grade A Cyds.		EXPLANATION OF CHANGES
706+75	779+45		385,593			1,484*	384,109			*Est. to be used Topsoil Surf
Exc. & Waste From Sewer Trenches										
706+83	708+00		107				107			
708+00	720+00		1,450				1,450			
720+00	732+00		1,268				1,268			
732+00	744+00		1,621				1,621			
744+00	756+00		1,307				1,307			
756+00	768+00		1,244				1,244			
768+00	779+25		1,138				1,138			
Exc. & Waste From Watermain Trenches										
Entire	Project		409				409			
Exc. & Waste From Bank Drain Trenches										
Entire	Project		0							
Estimate to Correct Unstable Subgrade										
Entire	Project	17,736		17,123			17,123			
Porous Material Grade A										
Entire	Project		Edge Drains & Bank Drains					3947		
Entire	Project		Sewers					3489		
Entire	Project		Watermains					625		
Subbase										
706+83	779+25				61,611					
Interim Connections					1,387					
Sand Gravel Material										
P02		250								
										27F except as shown
TOTALS		17,986	394,137	17,123	62,998	1,484	409,776	8,061		Auth. #

Post Final 9/23/68 + 509 394,646 Auth 1028 → − 509

PLAN ESTIMATE BY Lee-Scarlata DATE 7-2-65 CHECKED BY Felter-Hall DATE 7-7-65 DATE

DATA COMPLETED John R. Bramer PROJ ENG DATE 4-4-68

HISTORY CHECKED ENTERED ON PLANS BY Moore & Turner DATE 4-3-68

CHECKED ... DATE 8/26/68

FILE NO. USE NO. 350 STENCIL 63174A.C66

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174A	I75-2(99)60	32

63174A.C66

QUANTITY SHEET – E

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I75-2(59)60			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I75	63174A	OAKLAND	HAZEL PARK	33	33

AS PER PLANS

DESCRIPTION	TOTAL	UNIT	FED. PART.	NON-FED. PART.
1-3" ENCASED CONDUIT	482	L.F.	482	–
2-3" GALVANIZED IRON PIPE UP CABLE POLE	36	L.F.	36	–
600 V., 1-3/c CABLE, CONSISTING OF 3-1/c #6 CABLES	5322	L.F.	5322	–
600 V., 2-3/c CABLE, CONSISTING OF 3-1/c #6 CABLES EACH	593	L.F.	593	–
LIGHTING STANDARD WITH 10 FT. ARM ON NEW FOUNDATION	21	EACH	21	–
LIGHTING STANDARD WITH 15 FT. ARM ON NEW FOUNDATION	13	EACH	13	–
400 WATT, CLEAR MERCURY VAPOR LUMINAIRE	34	EACH	34	–

AS CONSTRUCTED

	TOTAL	UNIT	FED. PART	NON-FED. PART		
	503	lft.	503	–	Auth #	,32F
	0	lft.	0	–	Auth #	,15F
	5391	lft	5391	–	Auth #	,32F
	700	lft.	700	–	Auth #	,32F
	21	ea.	21	–		
	13	ea.	13	–		
Post Final 4/10/69 Auth 1029	34	ea.	34	–	Auth	

63174A,C66

EXTRAS

Item	Unit	Quantity	Auth.	Numbers
Porous Material Grade A- Loose Measure Delivered	cyd.	1,159	2009, 20F	
Pavement Cleanup (Storm Damage)	Lane Mi.	3.92	2009, 20F	
Bituminous Sawing	lft.	120	2009, 20F	
Completing Under Traffic (Storm Repair - Special)	Mile	1.67	2009, 20F	
Aggregate 22A Loose Measure Delivered	cyd.	217.7	2009, 20F	
Bituminous Aggregate Shoulders (Patching - Special)	ton	22.9	2009, 20F	
24" Sewer Bulkhead	ea.	1	2009,	
12" Sewer Bulkhead	ea.	2	2009, 20F	
Class B Sodding (Storm Repair - Special)	syd.	4,936	2009, 20F	
Force Account (Storm Damage Repair)	Lump Sum	$12,411.98	2009, 23F	
Monies Due State for Purchase of Porous Material BA #10	cyd.	99,944	27F	
S-40 Barricades (Furnished and Installed)	lft.	400	2005	
Slope Protection - Special	syd.	191	2006	
Corrugated Concrete Divider (Special)	syd.	70.62	2007	
Abandon Manhole	ea.	1	28F	
Mulching	ton	9.11	2004	
Class A Seeding	acre	3.86	2004	
Manhole 1A (Special) 6.1' to 14.0' Deep	ea.	1	2003	
12" Gate Well (4'-6" x 5'-6" Oval)	ea.	1	2002	
12" Gate Valve	ea.	1	2002	
12" Cast Iron Watermain Class 26	lft.	912.6	2002, 2008	
Permanent Sump	ea.	2	2001	
Catch Basin 6H 6' Deep or Less	ea.	1	28F	
1-1½" Galvanized Iron Pipe - Up Cable Pole	lft	39.4	15F	
Woven Wire Fence - Steel Posts w/single strand Barbed Wire	lrd.	64.9	22F	
600 v, 1-3/c Cable, Consisting of 3-1/c #6 Cables (Reduced)	lft.	412	24F	

CHECKED CONTRACT SECTION DATE 8/21/68

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED John R. Bramer PROJ. ENG. DATE 4-4-68 HISTORY CHECKED ENTERED ON PLANS BY Donald Moore & Andrew Turner DATE 4-5-68

LIGHTING

FILE NO. USE NO. 380 STEEL	63174 A,C66	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174A	I75-2(59)60	33

63174 - 070 &
82252 - 116 &
82252, H thru L, C142
See: 82252, C142

This Pack + Sheets 1-8

There are four packs of aperature cards identified as 82252 - C142
two packs as 63174 - 070

CS: 63174

ID: 070

ROUTE	STATE PROJECT NO.	FEDERAL NO.	SHEET NO.	TOTAL SHEETS
I-75	82252-142 63174-70 82252-116	I-75-1(112)56 I-75-2(100)59	I	

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED

MICHIGAN PROJECTS I-75-1(112)56, I-75-2(100)59
STATE PROJECTS: BI 82252-142, I 63174-70, BM 82252-116
WALTER P. CHRYSLER FREEWAY

WAYNE COUNTY
CITY OF DETROIT
OAKLAND COUNTY
CITY OF HAZEL PARK

Project: BI 82252-142
Part 1: Road-82252G,H,I,J,K,&L
Part 2: S22 of 82252 H
S23 of 82252I
X08 of 82252G
Part 3: P03 of 82252I
Part 4: D02 of 82252L
D07 of 82252I
Project: I 63174-70 (63174A)
Project: BM 82252-116 (S21 of 82252G)

HIGHWAY CLASSIFICATION

ADT-1975	3700	SERVICE ROADS-EACH
	59400	FREEWAY-EACH ROADWAY
DHV-1975	370	SERVICE ROADS-EACH
	5950	FREEWAY-EACH ROADWAY
DESIGN SPEED	35 MPH	SERVICE ROADS
	60 MPH	FREEWAY

INDEX OF ROAD PLANS

Description	Sheet No. 82252-142	63174-70	82252G,H File No. 822526	82252I File No. 822521	63174-A 82252J,K,L File No. 82252J
Master Title Sheet	I	I			
* Summary of Quant.	II-VIII	II-VIII			
(1) Set of Plans			1-153	1-67	1-63
			137A	II-VI	39A,46A-F

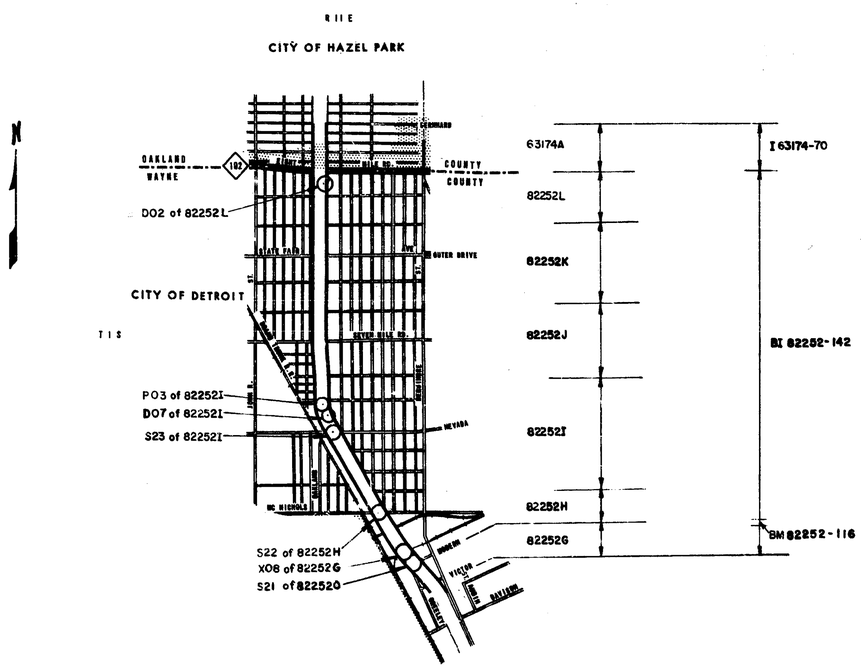
* Summary of Quantities II-VI are filed with 82252 I

TITLE SHEET LEGEND

EXISTING CONDITION

GRAVEL | BITUMINOUS ON GRAVEL | BITUMINOUS | PAVED | RECONSTRUCTION

PROPOSED PROJECT
PAVED
BITUMINOUS
GRAVEL
UNIMPROVED OR CITY STREET
COUNTY LINE
CITY OR VILLAGE LIMITS
TOWNSHIP LINE
SECTION LINE
RAILROADS



AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

BI 82252-142 Item 908
ITEM NO. I 63174-70 Item 907

CONTRACT FOR

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 5-10-61
RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE

OFFICES OF DESIGN & CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE
APPROVED — CHIEF OF DESIGN AND TRAFFIC — DATE

DEPARTMENT OF STATE HIGHWAYS
HOWARD E. HILL – STATE HIGHWAY DIRECTOR

APPROVED BY — DEPUTY DIRECTOR OF ENGINEERING — DATE

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS
SQUIRE, SANDERS & DEMPSEY
HAMEL, REDDY & KOLKMAN

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED
FOR THE DIVISION ENGINEER — DATE

82252G-L
63174 A

STATE PROJECT NO.	FEDERAL PROJECT	SHEET NO.
82252-142 63174-70	I-75-(112)56 I-75-2(100)59	I

STATE PROJECT NO. BI 82252-142, I 63174-70, BM 82252-116

ITEM	UNITS	As per plans BI82252-142: 82252G	82252H	82252H 100% CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A	As constructed BI82252-142: 82252G	82252H	82252H 100% CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A
Removing Trees 8"-12" Diameter	Each	13	13		76				102		30	15		70				115	
Removing Trees 13"-24" Diameter	Each	10	23		98				121		28	22		86				136	
Removing Trees 25"-36" Diameter	Each	1	2		16				19		2	6		21				29	
Removing Trees 37" Diameter or Larger	Each				1				1		0	0		4				4	
Removing Stumps 13"-24" Diameter	Each				1				1			1		1				2	
Removing Old Pavement (Patching)	Sq.Yds.				293				293					12				12	
Removing Old Pavement	Sq.Yds.	898	11,306	780	19,634	8,246	8,438	4,737	54,039	4,344	2274	12988	702	18972	8407	8382	4566	56291	4177
Removing Bituminous Surface	Sq.Yds.		49		28				77			16		46				62	
Removing Masonry and Concrete Structures	Cu.Yds.	1644	2950		441	76	67	3	5,181	4	116	138		61	8	12	51	386	4
Removing Sidewalks	Sq.Yds.	623	1807		4,842	184	451	166	8,073	321	678	3970		4279	43	388	215	9573	0
Removing Curb	Lin.Ft.		1391	5	1,606				3,002		0	1036		1745				2781	
Removing Curb and Gutter	Lin.Ft.				68			199	267					418			0	418	
Removing Manholes	Each		1						1			1		2				3	
Removing Catch Basins	Each		15						15		1	14		1				16	
Removing D.S.R. Track Strip	Sq.Yds.				25				25					0				0	
Abandoning Manholes	Each	4	3		1	8	5		21		4	2		3	1	0		10	
Abandoning Catch Basins	Each	12	5					2	19		12	2		5			2	21	
Earth Excavation	Cu.Yds.	*9,037	22,620		349,028	196,966	220,287	147,150	*945,088	68,232	*9001	16230		346332	201180	203890	166577	943200	58965
Subgrade Undercutting	Cu.Yds.		1000		2,000	6500	4,000	4,000	17,500	4,000	2428	1429		307	65	301	0	4530	1502
Testing Earthgrade with Compactor	Hours	30	40						70		5	11		2				18	
Subbase (Compacted in Place)	Cu.Yds.	10407	20,342		34,168	18,182	20,095	12,743	115,937	8,120	9317	19,749		34273	18574	19743	12547	114203	8098
Granular Blanket	Cu.Yds.		100		1,100	5,500	1,000	2,000	9,700	1,000		0		333	0	0	769	1102	545
4" Selected Subbase	Sq.Yds.	11,540	25,365		52,372	28,609	34,201	18,945	171,032	11,398	12348	25649		52653	28634	34265	18671	172220	11396
Porous Material Grade A (Comp. in Place)	Cu.Yds.	13,344	16,790		8,530	6,592	4,032	4,000	53,288	4000	14,365	13,902		1595	65	301	0	30232	1502
Concrete Grade A	Cu.Yds.		6						6			0						0	
Steel Reinforcement	Lbs.	10,440	19,579		11,300				41,319		0	18979		11849				30828	
6" Edge Drains (Trench Detail 3)	Lin.Ft.	938	1881		2,797	1,675	1,822	933	10,046	584	660	912		2679	1678	1575	940	8444	584
6" Edge Drains (Trench Detail 6)	Lin.Ft.		330						330			0						0	
6" Edge Drains	Lin.Ft.				10,337	5,884	6,880	4,816	27,917	3,212	196	1416		10223	6062	7150	5013	30060	3672
6" Bank Drains	Lin.Ft.				3,000	2,400	3,500	2,100	11,000	2,600				2563	548	2658	2657	8426	576
12" Class A Sewer (Trench Detail 1)	Lin.Ft.		73						73		10	49						59	
12" Class A Sewer (Trench Detail 4)	Lin.Ft.		130						130			125						125	
12" Class A Sewer (Trench Detail 5)	Lin.Ft.		32		122				154			28		135				163	
18" Class A Sewer (Trench Detail 1)	Lin.Ft.	310							310		290							290	
21" Class A Sewer (Trench Detail 1)	Lin.Ft.		69						69			67						67	
12" Class B Sewer (Trench Detail 5)	Lin.Ft.				10				10		38.2			11				49.2	
18" Class B Sewer (Trench Detail 1)	Lin.Ft.	535							535		555							555	
21" Class B Sewer (Trench Detail 1)	Lin.Ft.									4								0	5
30" Class B Sewer (Trench Detail 1)	Lin.Ft.							6	6								6	6	
36" Class B Sewer (Trench Detail 1)	Lin.Ft.						10		10							10		10	
15" Class C Sewer (Trench Detail 5)	Lin.Ft.				10				10					9.5				9.5	
30" Class C Sewer (Trench Detail 1)	Lin.Ft.							26	26								0	0	
36" Class C Sewer (Trench Detail 1)	Lin.Ft.					8			8						7.5			7.5	
42" Class C Sewer (Trench Detail 2)	Lin.Ft.				22				22					22.5				22.5	
6" Sewer C-14-X (Trench Detail 2)	Lin.Ft.				287	761	252	244	1,544	120								0	0
54" Sewer (In Tunnel)	Lin.Ft.				600				600		—			601				601	
66" Sewer (In Tunnel)	Lin.Ft.				1,058				1,058					1066				1066	
72" Sewer (In Tunnel)	Lin.Ft.		556		942				1,498			556		931				1487	0
12" Class A Sewer C-76 II (Trench Detail 2)	Lin.Ft.		1460		95	342	163	454	2,514	417	707	1456		201	353	168	451	3336	410
12" Class A Sewer C-76 II (Trench Detail 3)	Lin.Ft.	1031	941						1,972		301	936						1237	
12" Class A Sewer C-76 II (Trench Detail 4)	Lin.Ft.		12						12			18						18	
12" Class A Sewer C-76 II (Trench Detail 5)	Lin.Ft.		221		506				727			195		559				754	
15" Class A Sewer C-76 II (Trench Detail 2)	Lin.Ft.	163	541				28		732		153	711				30		894	
15" Class A Sewer C-76 II (Trench Detail 3)	Lin.Ft.	230							230		230							230	
15" Class A Sewer C-76 II (Trench Detail 6)	Lin.Ft.		184						184									0	
18" Class A Sewer C-76 II (Trench Detail 2)	Lin.Ft.		44						44		18	201						219	
18" Class A Sewer C-76 II (Trench Detail 3)	Lin.Ft.	164							164		139							139	
18" Class A Sewer C-76 II (Trench Detail 6)	Lin.Ft.		165						165			0						0	
21" Class A Sewer C-76 II (Trench Detail 2)	Lin.Ft.		73						73			76						76	

*Includes 4,620 Cu. Yds. from Structure X 08 of 82252G

*Includes 7,187 Cu. Yds from Structure X 08 of 82252G

ITEM	UNITS	As per plans BI82252-142: 82252G	82252H	82252H 100% CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A	As constructed BI82252-142: 82252G	82252H	82252H 100% CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A
12" Class B Sewer C-76 III (Trench Detail 2)	Lin.Ft.		4		2,232	832	1,445	399	4,912	32		3		2217	819	1427	408	4874	32
12" Class B Sewer C-76 III (Trench Detail 3)	Lin.Ft.				220	640		535	1,295	320				219	541		535	1295	320
12" Class B Sewer C-76 III (Trench Detail 5)	Lin.Ft.				368				368					317.3				317.3	
15" Class B Sewer C-76 III (Trench Detail 2)	Lin.Ft.					19			19	124					19			19	126.6
15" Class B Sewer C-76 III (Trench Detail 3)	Lin.Ft.				522		510		1,032					519		510		1029	
18" Class B Sewer C-76 III (Trench Detail 2)	Lin.Ft.				148				148					138				138	
18" Class B Sewer C-76 III (Trench Detail 3)	Lin.Ft.				634	634	569		1,837	270				630	634	570.3		1834.3	270
21" Class B Sewer C-76 III (Trench Detail 2)	Lin.Ft.							187	187	59							180	180	58
21" Class B Sewer C-76 III (Trench Detail 3)	Lin.Ft.				681		370	70	1121					691		369	75	1135	
24" Class B Sewer C-76 III (Trench Detail 2)	Lin.Ft.					64	89		153						64	88		152	
24" Class B Sewer C-76 III (Trench Detail 3)	Lin.Ft.				539	552	150	340	1561					549.3	537.6	153.6	340.2	1580.6	
27" Class B Sewer C-76 III (Trench Detail 2)	Lin.Ft.				232		418	70	720					233.4		418	69	720.4	
27" Class B Sewer C-76 III (Trench Detail 3)	Lin.Ft.				141				141					140				140	
12" Class C Sewer C-76 IV (Trench Detail 2)	Lin.Ft.		211						211			186						186	
15" Class C Sewer C-76 IV (Trench Detail 2)	Lin.Ft.		4						4									0	
18" Class C Sewer C-76 IV (Trench Detail 2)	Lin.Ft.		50						50			50						50	
18" Class C Sewer C-76 IV (Trench Detail 5)	Lin.Ft.				19				19					15				15	
21" Class C Sewer C-76 IV (Trench Detail 5)	Lin.Ft.				8				8					8				8	
24" Class C Sewer C-76 IV (Trench Detail 2)	Lin.Ft.		72						72			69						69	
24" Class C Sewer C-76 IV (Trench Detail 5)	Lin.Ft.		66		8				74			62		8				70	
27" Class C Sewer C-76 IV (Trench Detail 2)	Lin.Ft.					117			117						115			115	
36" Class C Sewer C-76 IV (Trench Detail 2)	Lin.Ft.		124						124			116						116	
36" Class C Sewer C-76 IV (Trench Detail 5)	Lin.Ft.				25				25					19				19	
15" Class B Sewer C-200-64T (Trench Detail 4)	Lin.Ft.	492							492		344							344	
6" Sewer Taps	Each					3			3	3		7		2	3	10	4	26	8
12" Sewer Taps	Each	2	5	4	4				15	3	2	6	4	4				16	3
18" Sewer Taps	Each		3						3			3						3	
30" Sewer Taps	Each							1	1								1	1	
36" Sewer Taps	Each		1		1				2			1		1				2	
72" Sewer Taps	Each		1						1			1						1	
12" Tile Traps	Each			1	10				11	3	1	2	1	10				14	3
15" Tile Traps	Each				1				1					1				1	
18" Tile Traps	Each				1				1					1				1	
Manholes, 1A 6.0 Feet Deep or Less	Each		10						10			4						4	
Manholes, 1A 6.1 Feet to 14.0 Feet Deep	Each	4	9		17	11	13	8	62	3	4	14		17	11	13	8	67	3
Manholes, 1E 6.0 Feet Deep or Less	Each	2	2						4		2	2						4	
Manholes, 1E 6.1 Feet to 14.0 Feet Deep	Each	1							1		1							1	
Manholes, 20AD 6.1 Feet to 14.0 Feet Deep	Each	3							3		1			1				2	
Manholes, 22AD 6.1 Feet to 14.0 Feet Deep	Each		2		5				7			2		5				7	
Manholes, 20AD (5' Dia.) 14.1 Feet to 25.0 Feet Deep	Each				1				1					1				1	
Drop Manholes, 24AD 6.1 Feet to 14.0 Feet Deep	Each		3						3			1						1	
Manhole, 20AD 14.1 Feet to 25.0 Feet Deep	Each		2						2			2						2	
Drop Manholes, 24AD 14.1 Feet to 25.0 Feet Deep	Each				4				4			2		2				4	
Drop Manholes, 23A (5' Dia.) 6.1 Feet to 14.0 Feet Deep	Each				1				1					1				1	
Catch Basins 3D, 6.0 Feet Deep or Less	Each		5						5			4						4	
Catch Basins 3D, 6.1 Feet to 14.0 Feet Deep	Each		3						3			2						2	
Catch Basins 3AQ 14.1 Feet to 25.0 Feet Deep	Each				5				5					5				5	
Catch Basins 3A, 6.1 Feet to 14.0 Feet Deep	Each							1	1	1							1	1	1
Catch Basins 3A, 14.1 Feet to 25.0 Feet Deep	Each					1			1						1			1	
Catch Basins 3K, 6.1 Feet to 14.0 Feet Deep	Each				2				2					2				2	
Catch Basins 3M, 6.1 Feet to 14.0 Feet Deep	Each		7		11				18			4		11				15	
Catch Basins 3M, 14.1 Feet to 25.0 Feet Deep	Each				1				1					0				0	
Catch Basins 3E, 6.1 Feet to 14.0 Feet Deep	Each	2							2		2							2	
Catch Basins 3H, 6.0 Feet Deep or Less	Each		5		1				6			3		1				4	
Catch Basins 3H, 6.1 Feet to 14.0 Feet Deep	Each		11		3	2	4	3	23			10		3	4	5	1	23	
Catch Basins 3J, 6.0 Feet Deep or Less	Each						2		2							2	1	3	
Catch Basins 3J, 6.1 Feet to 14.0 Feet Deep	Each	16	31		37	18	23	13	138	11	16	31		36	18	23	12	136	11
Catch Basins 6M, 6.0 Feet Deep or Less	Each				8				8					5				5	
Catch Basins 6H, 6.0 Feet Deep or Less	Each				1				1			3						3	

82252-142 AND 63174-70

CHECKED CONTRACT SECTION DATE 11/13/69

82252-142 & 63174-70 | FEDERAL PROJECT I75-1(112)56 & I75-2(100)59 | SHEET NO. II

82252-142 AND 63174-70

ITEM	UNITS	As Per Plans BI82252-142: 82252G	82252H	82252H 100% City	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A	As Constructed BI82252-142: 82252G	82252H	82252H 100% City	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A
Catch Basins 6H, 6.1 Feet to 14.0 Feet Deep	Each					1	1		2			1		1		1		3	
Catch Basins 6J, 6.1 Feet to 14.0 Feet Deep	Each				21	13	12	10	56	5				22	13	12	9	56	5
Inlet 5H, 6.0 Feet Deep or Less	Each		2						2			1						1	
Inlet 5J, 6.0 Feet Deep or Less	Each		11		4	4	4	4	27	4		13		4	4	4	4	29	4
Catch Basins 3A, (5' Dia.) 6.1 Feet to 14.0 Feet Deep	Each						1		1							1		1	
Catch Basins 6D, 6.0 Feet Deep or Less	Each				1				1					1				1	
Covers A	Each		1						1			1						1	
Covers D	Each		1						1			3						3	
Covers H	Each		8						8			6						6	
Covers M	Each				1				1			0						0	
Adjusting Manhole Covers Method #1	Each				1	9	3	6	19		0	2		19	8	2	9	40	
Adjusting Catch Basin Covers Method #1	Each	1							1			1		12				13	
Adjusting Water Shut-Offs	Each		8						8			3		6				9	
Reconstructing Manholes	Each		5		1	2	1	1	10	3	0	4		3	0	0	1	8	6
Reconstructing Catch Basins	Each		1		1	1	1		4			0			1			1	
Concrete Curb, Detail 2	Lin. Ft.	660	2293		5,767		80		8,800		669	2194		5862			65	8790	
Concrete Curb, Detail 2A	Lin. Ft.			5	729				734		30		0	572				602	
Concrete Curb and Gutter, Detail 8A	Lin. Ft.				25				25					7				7	
Concrete Curb and Gutter, Detail 10	Lin. Ft.				154			290	444					144			305	449	
Concrete Curb and Gutter, Detail 12	Lin. Ft.	300	300						600		60	54						114	
Concrete Curb and Gutter, Detail A	Lin. Ft.		4390		1,745	1653	1234	750	9,772			4412		1696	1652	1235	816	9811	
Concrete Roll Curb and Gutter, Detail B	Lin. Ft.	2956	8025		17,748	10,453	10,838	6,246	56,266	5,132	3261	8337		17778	10451	10834	8152	58813	5128
Concrete Curb and Gutter, Detail X	Lin. Ft.				599				599					702				702	
Concrete Curb Special	Lin. Ft.		160						160			91						91	
Concrete Noses Type I	Each		1		2		2		5			1		2		2		5	
Concrete Noses Type II	Each		1		2		2	1	6			1		2		2	1	6	
Concrete Pavement Patching [illegible]"Uniform	Sq. Yds.				263				263					240				240	
Concrete Pavement Patching 9" Uniform	Sq. Yds.	54							54		20			16				36	
Concrete Pavement, 7" Uniform	Sq. Yds.		127		369				496		34	299		397				730	
Concrete Pavement, 8" Uniform	Sq. Yds.				697				697					792				792	
Concrete Pavement, 9" Uniform	Sq. Yds.	1034	2541		10,789			253	14,617		1066	2609		10907	26	8	17	14633	
Concrete Pavement, 10" Uniform	Sq. Yds.	8678	17,109		43,770	23,472	23,913	15,121	132,063	10,258	8712	17183		43772	23467	23896	15153	132,183	10258
Concrete Base Course, 9" Uniform	Sq. Yds.	2249	6171		4,363	2,447	7,683	1,573	24,486		2204	6189		4353	2420	7657	1557	24380	
Pavement Reinforcement	Sq. Yds.	11,961	32,851		58,922	25,919	31,596	16,947	178,196	10,258	11982	33215		59022	25913	31561	16727	178420	10258
Concrete Pavement 9" Uniform High Early Strength	Sq. Yds.		4371						4,371			4359						4359	
Concrete Pavement 10" Uniform High Early Strength	Sq. Yds.		5102						5,102			5154						5154	
Expansion Joints	Lin. Ft.	864	1152		2,083	624	588	432	5,743	360	888	1117		528	576	684	408	4201	252
Contraction Joints	Lin. Ft.	960	1728		5,300	2,352	2,508	1,452	14,300	1,008	816	1920		4944	2400	2412	1560	14052	1044
End of Pour Construction Joints	Lin. Ft.	96	96		163	76	96	72	599	72	96	0		96	0	0	0	192	72
Bituminous Bond Coat	Gals.	450	1240		917	481	1,542	316	4,946		187	516		699	200	641	131	2374	
Bituminous Prime Coat	Gals.	1304	2993		7,866	4,509	4,210	3,416	24,298	1,962	882	2024		5295	3049	2847	2311	16408	1848
Aggregate Base Course (Loose Measure)	Cu. Yds.		160		15				175			151		27				178	
Calcium Chloride	Tons	15	33		71	40	46	27	232	13	0				2	4	10	16	1
Fine Grading and Cleanup	Stas.	28	66		132	62	61	44	393	26	28	66		132	62	61	44	393	26
4" Concrete Sidewalk	Sq. Ft.	3515	12,880		17,608		930		34,933		5333	13893		17694	90	1166	237	88413	
Water (1,000 Gallon Units)	Units	45	100		214	167	190	117	833	74	37	84		69	15	15	15	235	
6" Class A Approaches	Sq. Yds.				106				106					144				144	0
6" Class AA Shoulders	Sq. Yds.	3546	8142		18,099	10,802	10,100	8,259	58,948	5,618	3563	8249		18437	11006	10220	8876	60351	5655
Guard Rail Anchorage Detail 1	Each	2							2									0	
Guard Rail Anchorage Detail 2	Each	6	6		2			2	16	1								0	
Guard Rail Anchorage Detail 3	Each		2		14	12	8	4	40	1								0	
Guard Rail Anchorage Detail 4	Each	3	3					1	7									0	
Beam Guard Rail - Type CD	Lin. Ft.	1100	1800		3,550	1,850	2,038	1,425	11,763	1,225								0	
Beam Guard Rail - Type A	Lin. Ft.	32	16		883	392	221	284	1828	328	28	12		989	479	214	257	1979	328
Beam Guard Rail - Type B	Lin. Ft.		1066						1066										
Beam Guard Rail - Type C	Lin. Ft.	1550	3088		2525	1325	1088	1050	10626	175		1025					152	1177	
Temporary Steel Beam Guard Rail	Lin. Ft.				200				200					0				0	0
Curved Beam Guard Rail - Type A	Lin. Ft.				54	302	50	157	563	145				166	364	125	144	799	145
1½" Pipe Railing	Lin. Ft.		33						33			0						0	
Urea Nitrogen Fertilizer	Lbs.	88	440						528									0	0
Chemical Fertilizer	Lbs.	620	3100		880				4,600		643	2173		992			300	4108	
Mulching	Tons	3	15						18		2.8	4.5						7.3	

ITEM	UNITS	As Per Plans BI82252-142: 82252G	82252H	82252H 100% City	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A	As Constructed BI82252-142: 82252G	82252H	82252H 100% City	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A
Class A Sodding	Sq. Yds.		793		3,919				4,712		106	888		2817				3811	
Class B Sodding	Sq. Yds.	13,243	24,826		42,790	21,714	25,589	21,492	151,694	15,280	17,244	30,838		42523	21425	26095	21084	159209	15289
Class I Seeding	Acres	1	5						6		.99	3.01						4.00	
Class A Seeding	Acres				1.42				1.42		.06	.52		1.58			.38	2.54	
Rye Seeding	Acres	1	5						6									0.00	0.00
Topsoil Surface	Cu. Yds.	315	1320		389				2024		230	962		284				1476	0
Maintaining Traffic (Sta. 26+04 to 34+79 McNichols)	Lump Sum			Lump Sum					Lump Sum				Lump Sum					Lump Sum	
Maintaining Traffic	Lump Sum	Lump Sum							Lump Sum		Lump Sum							Lump Sum	
Barricades Install	Each	8	14	1	45	20	4	6	98	16	5	6	1	49	15	4	8	88	8
Barricades Remove	Each	8	14	1	45	20	4	6	98	16	5	6	1	49	15	4	8	88	8
S-40 Barricades - Furnish and Install	Lin. Ft.		1100	400	288				1,788		75	887	400	188				1550	
S-40 Barricades - Relocate	Lin. Ft.		1325	540					1,865		75	375	487.5					937.5	
S-40 Barricades - Remove	Lin. Ft.		1100	400	288			600	2388		75	887	400	188			575	2125	
48" Chain Link Fence	Lin. Ft.	2785	3725		8,264	4,559	5,027	3,364	27,724	2,551	2168	3497		8425	4537	4949	3374	26950	2535
6' Drive Gates for 48" Chain Link Fence	Each						2		2							2		2	
4' Walk Gates for 48" Chain Link Fence	Each		1						1									0	
6' Walk Gates for 48" Chain Link Fence	Each	4			13	7	3	3	30	3								0	3
12' Drive Gates for 48" Chain Link Fence	Each				1	1	1	2	5	1				1	1	1	2	5	1
Truss Foundation - Type B	Each		2		4		2	3	11	1							3	3	1
Truss Foundation - Type C	Each	2						3	5	1							3	3	1
Cantilever Foundation - Type C	Each	1							1									0	
Cantilever Foundation - Type D	Each	1			2		2		5									0	
Abandoning Porthole Connection	Lump Sum								1						1			1	
Abandoning Existing Oakland Avenue Sewer	Lump Sum								1						1			1	
Timber Curb	Lin. Ft.				370				370					370				370	
Timber Curb and Splash Board	Lin. Ft.		250		30				280			237		30				267	
25"x14" Reinf. Ellipt. Conc. Culv. Pipe HE IV	Lin. Ft.		54						54			43						43	
WATER MAINS																			
Concrete Grade A (For Water Main Structures)	Cu. Yds.	68	367	5	72				512		2	365	4	73				444	
Pavement Replacement	Sq. Yds.	88		780					868		0		742					742	
Relocating Fire Hydrants	Each	2	4		4				10		2	2		5				9	
6" Cast Iron Watermain Furnished	Lin. Ft.	6			193				199		9	37		156				202	
6" Cast Iron Watermain	Lin. Ft.	38	38		24				100		42	17		32				91	
8" Cast Iron Watermain Furnished	Lin. Ft.		36		26				64			48.7		28.4				77	
8" Cast Iron Watermain	Lin. Ft.	1192	452						1,644		1176	431						1607	
12" Cast Iron Watermain Furnished	Lin. Ft.		7		18				25			7		23.5				30.5	0
12" Cast Iron Watermain	Lin. Ft.		579		2451				3,030			578		2454				3032	
48" Cast Iron Watermain	Lin. Ft.		10						10			10.5						10.5	
48" Prestressed Concrete Watermain	Lin. Ft.		306	816					1,122			304.26	816.64					1120.9	
24" Watermain Special	Lin. Ft.		406						406			410.1						410.1	
6" Gate Wells	Each	1			2				3		1	1		1				3	
8" Gate Wells	Each	2	4		2				8		2	4		2				8	
12" Gate Wells	Each		1		4				5			1		4				5	
6" Gate Valves Furnished	Each				2				2					2				2	
6" Gate Valves	Each	1							1		1							1	
8" Gate Valves Furnished	Each				2				2					2				2	
8" Gate Valves	Each	2	3						5		2	3						5	
8" Flanged Gate Valves	Each		1						1			1						1	
12" Gate Valves	Each				4				4			1		4				5	
12" Flanged Gate Valves	Each		1						1			0						0	
6" Fire Hydrants Furnished	Each				4				4					4				4	
6" Gate Valves and Boxes	Each	2	3		3				8		2	3		3				8	
6" Tapping Valves Furnished	Each				6				6					6				6	
4" Permanent Blow-Offs	Each	1							1		1							1	
Entrance Manhole Wells	Each		1						1			1	1					2	

CHECKED CONTRACT SECTION 11/13/69

82252-142 & 63174-70 | FEDERAL PROJECT I75-1(112)56 & I75-2(100)59 | SHEET NO. III

ITEM	UNITS	AS PER PLANS BI82252-142 82252G	82252H	82252H 100%CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A	AS CONSTRUCTED BI82252-142 82252G	82252H	82252H 100%CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A
Flushing and Chlorinating	Lump Sum		Lump Sum						Lump Sum			Lump Sum						Lump Sum	
12" Class B Sewer (M65ES)	Lin. Ft.			47					47				71					71	
Timber Curb and Snow Fence - Furnish and Install	Lin. Ft.																		
Timber Curb and Snow Fence - Relocate	Lin. Ft.																		
Timber Curb and Snow Fence - Remove	Lin. Ft.																		
Abandoning Gate Wells	Each	1	3						4			3						4	
Field Office - Concrete Proportioning	Each	1							1		1							1	
Field Office - Bituminous	Each	1							1		1							1	
Temp. Conc. Sidewalk	Sq. Ft.		4250						4250			4133		362				4495	
ALTERNATE A																			
Bituminous Concrete Leveling Course	Tons	135	371		261	145	464	96	1,472		100	294		222	141	435	100	1292	
Bituminous Concrete Wearing Course 31AA	Tons	89	253		210	98	312	66	1,028		106	330		549	189	450	88	1712	
Bituminous Aggregate Shoulders - Concrete Pavement	Tons	314	725		1,899	1,122	1,029	833	5,922	498	302	527		2181	1083	1103	854	6050	493
ALTERNATE B																			
Bituminous Concrete Leveling Course (Slag)	Tons	128	352		249	139	445	94	1407										
Bituminous Concrete Wearing Course 31AA (Slag)	Tons	85	240		202	93	300	65	985										
Bituminous Aggregate Shoulders - Concrete Pavement (Slag)	Tons	298	689		1,808	1,051	983	795	5,624	434									
Non-Federal Participation (The following quantities have been included in the combined estimates.)																			
Removing Old Pavement	Sq. Yds.	609							609		626							626	
Removing Masonry and Concrete Structures	Cu. Yds.	40	50		41				131									0	
Removing Sidewalks	Sq. Yds.	216	70		631				917		166	101						267	
Earth Excavation	Cu. Yds.				3,080				3,080									759	
Concrete Curb, Detail 2	Lin. Ft.	620							620		669							669	
Concrete Pavement, 8" Uniform	Sq. Yds.	1,034							1,034		1066							1066	
Pavement Reinforcement	Sq. Yds.	1,034							1,034		1066							1066	
Bituminous Aggregate Shoulders (Concrete Pavement)	Tons	16							14		15							15	
Bituminous Prime Coat	Gals.	60							60		0							0	
Urea Nitrogen Fertilizer	Lbs.		264						264									0	
Chemical Fertilizer	Lbs.		1,860		880				2,740			1550		992				2542	
Mulching	Tons		9						9			4.5						4.5	
Class I Seeding	Acres		3						3			2.52						2.52	
Class A Seeding	Acres				1.42				1.42		.06			1.58				1.64	
Rye Seeding	Acres		3						3									0	
Topsoil Surface	Cu. Yds.		820		389				1,209		15							15	
Field Office - Concrete Proportioning	Each	1							1		1							1	
Field Office - Bituminous	Each	1							1		1							1	
Flushing and Chlorinating			Lump Sum						Lump Sum			Lump Sum						Lump Sum	
Concrete, Grade A	Cu. Yds.	68							68		2							2	
8" C. I. Watermain	Lin. Ft.	304							304		299							299	
8" Gate Wells	Each	2							2		2							2	
8" Gate Valve	Each	2							2		2							2	
8" Reducer, Slag - 2BE	Each	1							1		1							1	
Steel Reinforcement - Pavement & Sheet Piling	Lbs.	10,440							10,440		0							0	

ITEM	UNITS	AS PER PLANS BI82252-142 82252G	82252H	82252H 100%CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A	AS CONSTRUCTED BI82252-142 82252G	82252H	82252H 100%CITY	82252I	82252J	82252K	82252L	TOTALS	TOTALS FOR 63174A

Auth. 1084

CHECKED
CONTRACT SECTION
DATE 11/13/69

82252-142 AND 63174-70

82252-142 & 63174-70 | FEDERAL PROJECT 175-1(112)56 & 175-2(100)59 | SHEET NO. IV

B.P.R. DIV. NO.	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(112)56 & I-75-2(120)59		
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	82252-142 & 63174-70	WAYNE	DETROIT		

ELECTRICAL

AS PER PLANS

ITEM	Units	BT 82252-142 82252G Non-Fed.	82252G Fed. Part.	82252H Non-Fed.	82252H Fed. Part.	82252I Non-Fed.	82252I Fed. Part.	82252J Non-Fed.	82252J Fed. Part.	82252K Non-Fed.	82252K Fed. Part.	82252L Non-Fed.	82252L Fed. Part.	Totals	I 63174-70 63174A Non-Fed.	63174A Fed. Part.	Totals
6" Class B Sewer	Lin. Ft.				303		760							1,063			
Remove Wood Poles	Each		13		43		51						2	109			
Remove 3-Barricade Lights & Equipment	Each												1	1			
Remove O.H. St. Ltg. Unit	Each		8		28		25						1	62			
Remove 3-#2 O.H. Lines	Lin. Ft.						1,644							1,644			
Remove 1-#6 O.H. Lines	Lin. Ft.		900		147									1,047			
Remove 2-#6 O.H. Lines	Lin. Ft.		1,545		2,821		5,491						45	9,902			
Remove 3-#6 O.H. Lines	Lin. Ft.				750		430							1,180			
Remove 3-#4/0 O.H. Lines	Lin. Ft.				170		750							920			
Remove #8 Twin Sec.	Lin. Ft.				950								4,011	4,961			
Remove #8 Twin Sec. O.H. Line	Lin. Ft.						932							932			
Remove #8 Twin & 1-#6 Neoprene Sec. O.H. Lines	Lin. Ft.				200									200			
Remove U.G. Fed St. Ltg. Unit	Each				12									12			
#1 Two-Way Manhole	Each				3		6							9			
#1 Three-Way Manhole	Each				3		4							7			
#1 Corner Manhole	Each				1									1			
Reconstruct Special #1 Three-Way Manhole	Each				1									1			
Abandon Manholes	Each				3									3			
Abandon Handholes	Each				1									1			
Street Type "D" Handhole	Each	1		4	4	26	3							38			
1-3" Encased Conduit	Lin. Ft.	80		175	761	887	107	56	20	72	46	20		2,224			
2-3" Encased Conduit	Lin. Ft.			265	391	2,045	350							3,011			
3-3" Encased Conduit	Lin. Ft.				166	15	157			130				468			
4-3" Encased Conduit	Lin. Ft.				77	562	1,124							1,763			
5-3" Encased Conduit	Lin. Ft.				27									27			
6-3" Encased Conduit	Lin. Ft.			100	460	181	659							1,400			
7-3" Encased Conduit	Lin. Ft.				101	21	33							155			
12-3" Encased Conduit	Lin. Ft.			11	159									170			
14-3" Encased Conduit	Lin. Ft.				250									250			
15-3" Encased Conduit	Lin. Ft.				22									22			
1-4" Encased Conduit	Lin. Ft.	110			133		97							340			
2-4" Encased Conduit	Lin. Ft.				110		17							127			
2-3" & 1-4" Encased Conduit	Lin. Ft.					20	10							30			
3-4" Encased Conduit	Lin. Ft.				80		10							90			
4-4" Encased Conduit	Lin. Ft.				20									20			
6-4" Encased Conduit	Lin. Ft.					20	40							60			
3-#2 O.H. Line	Lin. Ft.						515							515			
1-#6 O.H. Lines	Lin. Ft.		970		147									1,117			
2-#6 O.H. Lines	Lin. Ft.		1,370		4,853		1,783							5,006			
3-#6 O.H. Lines	Lin. Ft.				751		430							1,181			
#8 Twin Sec.	Lin. Ft.				939									939			
#8 Twin Sec. O.H. Line	Lin. Ft.						932							932			
#8 Twin & 1-#6 Neoprene Sec. O.H. Lines	Lin. Ft.				185									185			
Fit-Up Wood Pole as a Comm. Div. Cable Pole	Each	1			1		2							4			
Fit-Up Wood Pole as a Primary Distribution Cable Pole	Each						2							2			
Fit-Up Wood Pole as a Primary Dist. Loop Cable Pole	Each				1		1							2			
Fit-Up Wood Pole as a Transformer Pole	Each				1									1			
Fit-Up Wood Pole as a Comb. Series St. Ltg. C.R. & Mult. St. Ltg. Transformer Pole	Each				1									1			
Fit-Up Wood Pole as a Pole Top Switch Pole	Each						1							1			
Fit-Up Wood Pole as a Comb. T.S. & Secondary Cable Pole	Each				1									1			
Fit-Up Wood Pole as a Reclosing Fuse Pole	Each						1							1			
Fit-Up Wood Pole as a Comb. B/c St. Ltg. & Chronoplan Cable Pole	Each				1									1			
Fit-Up Wood Pole as a T.S. Cable Pole	Each				1									1			
Dismantle Transformer Pole	Each				1									1			
Dismantle Pole Top Switch Pole	Each						1							1			
Dismantle Comb. T.S. & Secondary Cable Pole	Each				1									1			
Dismantle Reclosing Fuse Pole	Each						1							1			
Dismantle Prim. Distribution Cable Pole	Each				1									1			
Dismantle Comb. Series St. Ltg. Cable Pole & Mult. St. Ltg. Transformer Pole	Each				1									1			
Dismantle Primary Distribution Loop Cable Pole	Each				1									1			
Dismantle Comm. Div. Cable Pole	Each				1									1			
Dismantle B/c Cable Pole	Each				1									1			
Dismantle T.S. Cable Pole	Each				1		1							2			
25 Ft. Class 1 Wood Pole	Each				3									3			
25 Ft. Class 2 Wood Pole	Each						1							1			
25 Ft. Class 3 Wood Pole	Each						3							3			
35 Ft. Class 4 Wood Pole	Each		6		7		8							21			
35 Ft. Class 1 Wood Pole	Each				4									4			
40 Ft. Class 2 Wood Pole	Each				5		2							7			
40 Ft. Class 1 Wood Pole	Each				4									4			
40 Ft. Class 3 Wood Pole	Each						1							1			
45 Ft. Class 2 Wood Pole	Each	1			3		7							11			
50 Ft. Class 2 Wood Pole	Each				2		4							6			
25 Ft. Class 4 Wood Pole	Each				1									1			
Install Salvaged O.H. St. Ltg. Unit	Each		1		12		7							20			
Install Salvaged U.G.-Fed St. Ltg. Unit on New Fdn.	Each				8									8			
Install Salvaged 400 Watt Luminaire	Each												1	1			
Install Salvaged 250 Watt Clear Mercury Vapor Luminaire	Each			1		1								2			
Install Salvaged 400 Watt Clear Mercury Vapor Luminaire	Each				10		5							15			
250 Watt M.V. O.H. St. Ltg. Unit	Each				1									1			
400 Watt M.V. O.H. St. Ltg. Unit	Each				12		5							17			
250 Watt Clear Mercury Vapor Luminaire	Each	1		7		32						5	8	53			

AS CONSTRUCTED

ITEM	Units	BT 82252-142 82252G Non-Fed.	82252G Fed. Part	82252H Non-Fed.	82252H Fed. Part.	82252I Non-Fed.	82252I Fed. Part.	82252J Non-Fed.	82252J Fed. Part.	82252K Non-Fed.	82252K Fed. Part.	82252L Non-Fed.	82252L Fed. Part.	Totals	I 63174-70 63174A Non-Fed.	63174A Fed. Part.	Totals
6" Class B Sewer	Lin. Ft.			0	165	0	718							883			
Remove Wood Poles	Each	0	8	0	42	0	51					0	2	103			
Remove 3-Barricade Lights & Equipment	Each											0	0	0			
Remove O.H. St. Ltg. Unit	Each	0	4	0	27	0	24					0	1	56			
Remove 3-#2 O.H. Lines	Lin. Ft.					0	1668							1668			
Remove 1-#6 O.H. Lines	Lin. Ft.	0	1042	0	0									1042			
Remove 2-#6 O.H. Lines	Lin. Ft.	0	112	0	2601	0	5935					0	45	8693			
Remove 3-#6 O.H. Lines	Lin. Ft.			0	605	0	430							1035			
Remove 3-#4/0 O.H. Lines	Lin. Ft.			0	180	0	718							898			
Remove #8 Twin Sec.	Lin. Ft.			0	905							0	930	1835			
Remove #8 Twin Sec. O.H. Line	Lin. Ft.					0	942							942			
Remove #8 Twin & 1-#6 Neoprene Sec. O.H. Lines	Lin. Ft.			0	104									104			
Remove U.G. Fed St. Ltg. Unit	Each			0	12									12			
#1 Two-Way Manhole	Each			0	3	0	6							9			
#1 Three-Way Manhole	Each			0	3	0	4							7			
#1 Corner Manhole	Each			0	1									1			
Reconstruct Special #1 Three-Way Manhole	Each			0	1									1			
Abandon Manholes	Each			0	3									3			
Abandon Handholes	Each			0	1									1			
Street Type "D" Handhole	Each	1	0	4	4	26	3							38			
1-3" Encased Conduit	Lin. Ft.	80	0	226	629	882	181	58	20	0	72	47	20	2215			
2-3" Encased Conduit	Lin. Ft.			359	325	2036	341							3061			
3-3" Encased Conduit	Lin. Ft.			0	172	0	152			0	131			455			
4-3" Encased Conduit	Lin. Ft.			0	80	561	1122							1763			
5-3" Encased Conduit	Lin. Ft.			0	30	0	0							30			
6-3" Encased Conduit	Lin. Ft.			98	504	182	666							1450			
7-3" Encased Conduit	Lin. Ft.			0	103	21	33							157			
12-3" Encased Conduit	Lin. Ft.			11	164									175			
14-3" Encased Conduit	Lin. Ft.			0	244									244			
15-3" Encased Conduit	Lin. Ft.			0	20									20			
1-4" Encased Conduit	Lin. Ft.	90	0	0	147	0	97							334			
2-4" Encased Conduit	Lin. Ft.			0	45	0	24							69			
2-3" & 1-4" Encased Conduit	Lin. Ft.					22	11							33			
3-4" Encased Conduit	Lin. Ft.			0	66	0	19							85			
4-4" Encased Conduit	Lin. Ft.			0	55									55			
6-4" Encased Conduit	Lin. Ft.					18	36							54			
3-#2 O.H. Line	Lin. Ft.					0	428							428			
1-#6 O.H. Lines	Lin. Ft.	0	8/8	0	0									818			
2-#6 O.H. Lines	Lin. Ft.	0	83	0	2057	0	1929							4069			
3-#6 O.H. Lines	Lin. Ft.			0	604	0	425							1029			
#8 Twin Sec.	Lin. Ft.			0	905									905			
#8 Twin Sec. O.H. Line	Lin. Ft.					0	942							942			
#8 Twin & 1-#6 Neoprene Sec. O.H. Lines	Lin. Ft.			0	104									104			
Fit-Up Wood Pole as a Comm. Div. Cable Pole	Each	1	0	0	1	0	2							4			
Fit-Up Wood Pole as a Primary Distribution Cable Pole	Each					0	2							2			
Fit-Up Wood Pole as a Primary Dist. Loop Cable Pole	Each			0	1	0	1							2			
Fit-Up Wood Pole as a Transformer Pole	Each			0	1									1			
Fit-Up Wood Pole as a Comb. Series St. Ltg. C.R. & Mult. St. Ltg. Transformer Pole	Each			0	1									1			
Fit-Up Wood Pole as a Pole Top Switch Pole	Each					0	1							1			
Fit-Up Wood Pole as a Comb. T.S. & Secondary Cable Pole	Each			0	1									1			
Fit-Up Wood Pole as a Reclosing Fuse Pole	Each					0	1							1			
Fit-Up Wood Pole as a Comb. B/c St. Ltg. & Chronoplan Cable Pole	Each			0	1									1			
Fit-Up Wood Pole as a T.S. Cable Pole	Each			0	1									1			
Dismantle Transformer Pole	Each			0	1									1			
Dismantle Pole Top Switch Pole	Each					0	1							1			
Dismantle Comb. T.S. & Secondary Cable Pole	Each			0	1									1			
Dismantle Reclosing Fuse Pole	Each					0	1							1			
Dismantle Prim. Distribution Cable Pole	Each			0	1									1			
Dismantle Comb. Series St. Ltg. Cable Pole & Mult. St. Ltg. Transformer Pole	Each			0	1									1			
Dismantle Primary Distribution Loop Cable Pole	Each			0	1									1			
Dismantle Comm. Div. Cable Pole	Each			0	1									1			
Dismantle B/c Cable Pole	Each			0	1									1			
Dismantle T.S. Cable Pole	Each			0	1	0	1							2			
25 Ft. Class 1 Wood Pole	Each			0	3									3			
25 Ft. Class 2 Wood Pole	Each					0	1							1			
25 Ft. Class 3 Wood Pole	Each					0	3							3			
35 Ft. Class 4 Wood Pole	Each	0	1	0	6	0	8							15			
35 Ft. Class 1 Wood Pole	Each			0	4									4			
40 Ft. Class 2 Wood Pole	Each			0	5	0	2							7			
40 Ft. Class 1 Wood Pole	Each			0	4									4			
40 Ft. Class 3 Wood Pole	Each					0	1							1			
45 Ft. Class 2 Wood Pole	Each	1	0	0	3	0	8							12			
50 Ft. Class 2 Wood Pole	Each			0	2	0	3							5			
25 Ft. Class 4 Wood Pole	Each			0	1									1			
Install Salvaged O.H. St. Ltg. Unit	Each	0	1	0	11	0	7							19			
Install Salvaged U.G.-Fed St. Ltg. Unit on New Fdn.	Each			0	8									8			
Install Salvaged 400 Watt Luminaire	Each											0	1	1			
Install Salvaged 250 Watt Clear Mercury Vapor Luminaire	Each			1	0	1	0							2			
Install Salvaged 400 Watt Clear Mercury Vapor Luminaire	Each			0	6	0	5							11			
250 Watt M.V. O.H. St. Ltg. Unit	Each			0	1									1			
400 Watt M.V. O.H. St. Ltg. Unit	Each			0	12	0	5							17			
250 Watt Clear Mercury Vapor Luminaire	Each	1	0	7	0	32	0					5	8	53			

LIGHTING 82252-142 AND 63174-70

CHECKED COMPUTATION SECTION DATE 11/12/69

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED D.J. Treder (PROJ. ENG) DATE 7-2-69 HISTORY CHECKED ENTERED ON PLANS BY W. Eiach 7-2-69

82252-142 & 63174-70

STATE PROJECT 82252-142 63174-70 FEDERAL PROJECT I 75-1(112)56 I 75-2(120)59 SHEET NO. V

QUANTITY SHEET – E

ELECTRICAL

B.P.R. DIV. NO.	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-1(112)56 & I-75-2(100)59		
ROUTE	STATE PROJECT	COUNTY	CITY	
I-75	82252-142 63174-70	WAYNE	DETROIT	

AS PER PLANS

ITEM	UNITS	BI 82252-142: 82252G Non-Fed.	82252G Fed. Part	82252H Non-Fed.	82252H Fed. Part	82252I Non-Fed.	82252I Fed. Part	82252J Non-Fed.	82252J Fed. Part	82252K Non-Fed.	82252K Fed. Part	82252L Non-Fed.	82252L Fed. Part	Totals	I 63174-70: 63174A Non-Fed.	63174A Fed. Part	Totals
400 Watt Clear Mercury Vapor Luminaire	Each		13		20	3	42		34		26	1	22	161		12	12
700 Watt Clear Mercury Vapor Luminaire	Each		1		2		6		1		6		1	17			
400 Watt Clear Merc. Vapor O.H. St.Ltg.Unit @Series Coil	Each		4											4			
5,000 V., 1-3/c #2/0 L.C. Primary Distribution Cable	Lin. Ft.						1,596							1,596			
5,000 V., 1-3/c #350 M.C.M. L.C. Primary Dist. Cable	Lin. Ft.				993		922							1,915			
7,500 V., 8/c #8 L.C. St. Ltg. Cable	Lin. Ft.				902									902			
7,500 V., 1-1/c #8 L.C. St. Ltg. Parkway Cable	Lin. Ft.				110									110			
7,500 V., 1-1/c #8 L.C. St. Ltg. Cable	Lin. Ft.				1,320									1,320			
7,500 V., 2-1/c #8 L.C. St. Ltg. Cable	Lin. Ft.				525									525			
Comm. Cable 16 Ga. Plastic Jacketed, 3 Pr.	Lin. Ft.	125					724							849			
Comm. Cable 16 Ga. Plastic Jacketed, 6 Pr.	Lin. Ft.				950		3,033							3,983			
Comm. Cable 16 Ga. Plastic Jacketed, 16 Pr.	Lin. Ft.				380									380			
Comm. Cable 16 Ga. Parkway 3 Pr.	Lin. Ft.	535		905		515		291		589		334		3,169			
20/c #19 L.C. Supervisory Cable	Lin. Ft.				307									307			
Remove 1-3/c #12 P.J. Cable	Lin. Ft.				320									320			
Remove 1-1/c #6 D.B. Cable in Conduit	Lin. Ft.					206								206			
#8 Twin & 1-#6 Neoprene Sec. in Conduit	Lin. Ft.				162									162			
Install Salvaged Wood Poles	Each				3									3			
600 V., 2-1/c #6 L.C. Cables	Lin. Ft.				225		20							245			
600 V., 1-1/c #6 D.B. Cables in Conduit	Lin. Ft.				147	206								353			
600 V., 1-1/c #6 D.B. Cables in Earth	Lin. Ft.		612											612			
600 V., 1-1/c #6 D.B. Cables & 1-#6 Neoprene in Conduit	Lin. Ft.				157	165	145							467			
600 V., 3-1/c #6 D.B. Cables & 1-#6 Neoprene in Conduit	Lin. Ft.					180								180			
600 V., 1-3/c Cable Consisting of 3-1/c #6 Cables	Lin. Ft.															2,275	2,275
Outdoor St. Ltg. Load Center	Lump Sum			23% of L.S.	77% of L.S.									Lump Sum			
Remove 15 Pr. Communication Cable	Lin. Ft.				100									100			
2-3" Galvanized Iron Pipe Conduit (Jacked in Place)	Lin. Ft.					22								22			
600 V., 2-1/c #6 D.B. Cables & 1-#6 Neoprene in Conduit	Lin. Ft.		470	885	2,272	4,992	365				260			9,244			
600 V., 1-1/c #6 D.B. Cable & 1-#6 Neoprene in Earth	Lin. Ft.	145			395		480		703		471		518	2,712			
600 V., 2-1/c #6 D.B. Cable & 1-#6 Neoprene in Earth	Lin. Ft.		2,216		4,305		7,827		4,459		4,716		2,986	26,509			
600 V., 3-1/c #6 D.B. Cable & 1-#6 Neoprene in Earth	Lin. Ft.				387		787		253		714		213	2,354			
600 V., 4-1/c #6 D.B. Cables & 1-#6 Neoprene in Earth	Lin. Ft.						95							95			
600 V., 1-3/c #12 P.J. Cable	Lin. Ft.				320									320			
600 V., T.S. 1-7/c #14 L.C. Cable for Chronoplan	Lin. Ft.				894		2,747							3,641			
600 V., 1-7/c #14 L.C. Cable for Photocell Control	Lin. Ft.				105									105			
Lighting Standard with 6' Arm on New Fdn.	Each	1		8		33	2							44			
Lighting Standard with 6' Arm on Bridge	Each					2								2			
Lighting Standard with 10' Arm on New Fdn.	Each				11		6		11		6		5	39			
Lighting Standard with 10' Arm on Bridge	Each		2		5									7			
Lighting Standard with 15' Arm on New Fdn.	Each															12	12
Lighting Standard with 17' Arm on New Fdn.	Each		12		16		45		24		26		19	142			
Comb. St. Ltg. & T.S. Std. with 6' Arm on New Fdn.	Each					1								1			
Underbridge Ltg. Units Mounted on Bridge Piers	Each				28									28			
Underbridge Wiring System McNichols Bridge	Lump Sum				Lump Sum									Lump Sum			
Furnishing Police Call Boxes	Each	1		2		3		1		2		1		10			
Call Box Pedestal on New Fdn.	Each	1				1		1				1		4			
Remove 2-Pedestal Type Dbl. Flasher Signal & Equip.	Each												1	1			
Remove 2-Span Wire Type Dbl. Flasher Signals & Equip.	Each						2							2			
Remove 3-Span Wire Type Dbl. Flasher Signals & Equip.	Each				2									2			
Install 2-Span Wire Type Dbl. Flasher Signals & Equip.	Each						2							2			
Install Salv. 3-Span Wire Ty. Dbl. Flasher Sig. & Equip.	Each				1									1			
3-Span Wire Type Dbl. Flasher Signal & Equipment	Each				1									1			
Removing T.S. Controller & Cabinet	Each				1		1							2			
Removing (1) Span Wire T.S.	Each				5									5			
Removing (4) Span Wire T.S.	Each				1									1			
Removing (1) Span Wire T.S. & Span Wire	Each				2									2			
Removing (2) Span Wire T.S. & Span Wire	Each				1									1			
Removing (3) Span Wire T.S. & Span Wire	Each				1									1			
Removing (5) Span Wire T.S. & Span Wire	Each				1									1			
1-Way Bracket Arm T.S.	Each				4									4			
1-Way Pedestrian Bracket Arm T.S.	Each				2	1	2							5			
2-Way Pedestrian Bracket Arm T.S.	Each				2	2	4							8			
Remove 2-Way Bracket Arm T.S.	Each						2							2			
1-Way Pedestrian T.S. on 8 Ft. Pedestal on New Fdn.	Each				2	1	2							5			
2-Way Pedestrian T.S. on 8 Ft. Pedestal on New Fdn.	Each				2									2			
1-Way Mast Arm T.S., Mast Arm & Std. on New Fdn.	Each				2									2			
2-Way Mast Arm T.S. & Mast Arm	Each						1							1			
2-Way Mast Arm T.S., Mast Arm & Std. on New Fdn.	Each				2		1							3			
2-Way Mast Arm T.S. (@ Salv. Heads) Mast Arm & Std. on New Fdn.	Each				4									4			
3-Way Mast Arm T.S., Mast Arm & Std. on New Fdn.	Each					2	1							3			
3-Way Mast Arm T.S. & Mast Arm	Each						1							1			
Four 1-Way T.S. on New Span Wire	Each				1									1			
One 2-Way T.S. on New Span Wire	Each				2									2			
One 2-Way T.S. (@ Salv. Heads) on New Span Wire	Each				1									1			
Four 1-Way T.S. & one 2-Way T.S. (@ Salvaged Heads) on New Span Wire	Each				1									1			
One 1-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each				1									1			
Two 1-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each				1									1			
Four 1-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each				1									1			
One 2-Way T.S. on Existing Span Wire	Each				1									1			
One 2-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each				1									1			
1-Way Turn Signal	Each				4									4			
T.S. Controller & Cabinet - Special	Each				1									1			
T.S. Cont. with Base Mounted Cabinet on New Fdn.	Each				1									1			
T.S. Cont. with Dbl. Base Mounted Cabinet on New Fdn.	Each					1/4	3/4							1			
Electrical Inspection	Lump Sum														Lump Sum		Lump Sum

AS CONSTRUCTED

ITEM	UNITS	BI 82252-142: 82252G Non-Fed.	82252G Fed. Part	82252H Non-Fed.	82252H Fed. Part	82252I Non-Fed.	82252I Fed. Part	82252J Non-Fed.	82252J Fed. Part	82252K Non-Fed.	82252K Fed. Part	82252L Non-Fed.	82252L Fed. Part	Totals	I 63174-70: 63174A Non-Fed.	63174A Fed. Part	Totals
400 Watt Clear Mercury Vapor Luminaire	Each	0	12	0	24	3	42	0	34	0	26	1	22	164		12	12
700 Watt Clear Mercury Vapor Luminaire	Each	0	0	0	2	0	6	0	1	0	6	0	1	16			
400 Watt Clear Merc. Vapor O.H. St.Ltg.Unit @Series Coil	Each	0	0											0			
5,000 V., 1-3/c #2/0 L.C. Primary Distribution Cable	Lin. Ft.					0	1607							1607			
5,000 V., 1-3/c #350 M.C.M. L.C. Primary Dist. Cable	Lin. Ft.			0	978	0	909							1887			
7,500 V., 8/c #8 L.C. St. Ltg. Cable	Lin. Ft.			0	8785									8785			
7,500 V., 1-1/c #8 L.C. St. Ltg. Parkway Cable	Lin. Ft.			0	229									229			
7,500 V., 1-1/c #8 L.C. St. Ltg. Cable	Lin. Ft.			0	1313									1313			
7,500 V., 2-1/c #8 L.C. St. Ltg. Cable	Lin. Ft.			0	466									466			
Comm. Cable 16 Ga. Plastic Jacketed, 3 Pr.	Lin. Ft.	0	0				725							725			
Comm. Cable 16 Ga. Plastic Jacketed, 6 Pr.	Lin. Ft.			0	926	0	3062							3988			
Comm. Cable 16 Ga. Plastic Jacketed, 16 Pr.	Lin. Ft.			0	369									369			
Comm. Cable 16 Ga. Parkway 3 Pr.	Lin. Ft.	631	0	898	0	524	0	291	0	621	0	327	0	3292			
20/c #19 L.C. Supervisory Cable	Lin. Ft.			0	305									305			
Remove 1-3/c #12 P.J. Cable	Lin. Ft.			0	239									239			
Remove 1-1/c #6 D.B. Cable in Conduit	Lin. Ft.					206	0							206			
#8 Twin & 1-#6 Neoprene Sec. in Conduit	Lin. Ft.			0	178									178			
Install Salvaged Wood Poles	Each			0	3									3			
600 V., 2-1/c #6 L.C. Cables	Lin. Ft.			0	210		25							235			
600 V., 1-1/c #6 D.B. Cables in Conduit	Lin. Ft.			0	164	206	0							370			
600 V., 1-1/c #6 D.B. Cables in Earth	Lin. Ft.	0	810											810			
600 V., 1-1/c #6 D.B. Cables & 1-#6 Neoprene in Conduit	Lin. Ft.			0	164	396	332							892			
600 V., 3-1/c #6 D.B. Cables & 1-#6 Neoprene in Conduit	Lin. Ft.					193	0							193			
600 V., 1-3/c Cable Consisting of 3-1/c #6 Cables	Lin. Ft.															2391	2391
Outdoor St. Ltg. Load Center	Lump Sum			23%	77%									Lump Sum			
Remove 15 Pr. Communication Cable	Lin. Ft.				97									97			
2-3" Galvanized Iron Pipe Conduit (Jacked in Place)	Lin. Ft.					0	0							0			
600 V., 2-1/c #6 D.B. Cables & 1-#6 Neoprene in Conduit	Lin. Ft.	0	476	818	2340	4654	366			0	378			9032			
600 V., 1-1/c #6 D.B. Cable & 1-#6 Neoprene in Earth	Lin. Ft.	100	0	0	430	0	519	0	742	0	517	0	574	2882			
600 V., 2-1/c #6 D.B. Cable & 1-#6 Neoprene in Earth	Lin. Ft.	0	1679	0	4479	0	8205	0	4572	0	4884	0	3133	26952			
600 V., 3-1/c #6 D.B. Cable & 1-#6 Neoprene in Earth	Lin. Ft.			0	411	0	856	0	272	0	776	0	241	2556			
600 V., 4-1/c #6 D.B. Cables & 1-#6 Neoprene in Earth	Lin. Ft.					0	84							84			
600 V., 1-3/c #12 P.J. Cable	Lin. Ft.			0	239									239			
600 V., T.S. 1-7/c #14 L.C. Cable for Chronoplan	Lin. Ft.			0	878	0	2760							3638			
600 V., 1-7/c #14 L.C. Cable for Photocell Control	Lin. Ft.			0	97									97			
Lighting Standard with 6' Arm on New Fdn.	Each	1	0	8	0	33	2							44			
Lighting Standard with 6' Arm on Bridge	Each					2	0							2			
Lighting Standard with 10' Arm on New Fdn.	Each			0	11	0	6	0	11	0	6	0	5	39			
Lighting Standard with 10' Arm on Bridge	Each	0	2	0	5									7			
Lighting Standard with 15' Arm on New Fdn.	Each															12	12
Lighting Standard with 17' Arm on New Fdn.	Each	0	10	0	16	0	45	0	24	0	26	0	19	140			
Comb. St. Ltg. & T.S. Std. with 6' Arm on New Fdn.	Each					1	0							1			
Underbridge Ltg. Units Mounted on Bridge Piers	Each			0	28									28			
Underbridge Wiring System McNichols Bridge	Lump Sum				Lump Sum									Lump Sum			
Furnishing Police Call Boxes	Each	1	0	2	0	3	0	1	0	2	0	1	0	10			
Call Box Pedestal on New Fdn.	Each	1	0			1	0	1	0			1	0	4			
Remove 2-Pedestal Type Dbl. Flasher Signal & Equip.	Each											0	1	1			
Remove 2-Span Wire Type Dbl. Flasher Signals & Equip.	Each					0	2							2			
Remove 3-Span Wire Type Dbl. Flasher Signals & Equip.	Each			0	2									2			
Install 2-Span Wire Type Dbl. Flasher Signals & Equip.	Each					0	2							2			
Install Salv. 3-Span Wire Ty. Dbl. Flasher Sig. & Equip.	Each			0	1									1			
3-Span Wire Type Dbl. Flasher Signal & Equipment	Each			0	1									1			
Removing T.S. Controller & Cabinet	Each			0	1	0	1							2			
Removing (1) Span Wire T.S.	Each			0	0									0			
Removing (4) Span Wire T.S.	Each			0	1									1			
Removing (1) Span Wire T.S. & Span Wire	Each			0	1									1			
Removing (2) Span Wire T.S. & Span Wire	Each			0	0									0			
Removing (3) Span Wire T.S. & Span Wire	Each			0	0									0			
Removing (5) Span Wire T.S. & Span Wire	Each			0	1									1			
1-Way Bracket Arm T.S.	Each			0	4									4			
1-Way Pedestrian Bracket Arm T.S.	Each			0	2	1	2							5			
2-Way Pedestrian Bracket Arm T.S.	Each			0	2	2	4							8			
Remove 2-Way Bracket Arm T.S.	Each					0	2							2			
1-Way Pedestrian T.S. on 8 Ft. Pedestal on New Fdn.	Each			0	[illegible]	1	2							5			
2-Way Pedestrian T.S. on 8 Ft. Pedestal on New Fdn.	Each			0	[illegible]									2			
1-Way Mast Arm T.S., Mast Arm & Std. on New Fdn.	Each			0	[illegible]									2			
2-Way Mast Arm T.S. & Mast Arm	Each					0	1							1			
2-Way Mast Arm T.S., Mast Arm & Std. on New Fdn.	Each			0	2	0	1							3			
2-Way Mast Arm T.S. (@ Salv. Heads) Mast Arm & Std. on New Fdn.	Each			0	4									4			
3-Way Mast Arm T.S., Mast Arm & Std. on New Fdn.	Each					2	1							3			
3-Way Mast Arm T.S. & Mast Arm	Each					0	1							1			
Four 1-Way T.S. on New Span Wire	Each			0	1									1			
One 2-Way T.S. on New Span Wire	Each			[illegible]	1									1			
One 2-Way T.S. (@ Salv. Heads) on New Span Wire	Each			0	0									0			
Four 1-Way T.S. & one 2-Way T.S. (@ Salvaged Heads) on New Span Wire	Each			0	0									0			
One 1-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each			0	0									0			
Two 1-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each			0	0									0			
Four 1-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each			0	1									1			
One 2-Way T.S. on Existing Span Wire	Each			0	1									1			
One 2-Way T.S. (@ Salv. Heads) on Existing Span Wire	Each			0	0									0			
1-Way Turn Signal	Each			0	4									4			
T.S. Controller & Cabinet - Special	Each			0	1									1			
T.S. Cont. with Base Mounted Cabinet on New Fdn.	Each			0	1									1			
T.S. Cont. with Dbl. Base Mounted Cabinet on New Fdn.	Each					1/4	3/4							1			
Electrical Inspection	Lump Sum														20%		20%

LIGHTING 82252-142 AND 63174-70

PLAN ESTIMATE BY ______ DATE ______ CHECKED BY ______ DATE ______ DATE ______ DATA COMPLETED D. J. Treder (PROJ. ENG.) DATE 7-2-69 HISTORY CHECKED ENTERED ON PLANS BY W. Finch 7-2-69

82252-142 & 63174-70

STATE PROJECT 82252-142 63174-70 FEDERAL PROJECT I-75-1(112)56 I-75-2(100)59 SHEET NO. VI

QUANTITY SHEET – E

EXTRA ITEMS

AS CONSTRUCTED BI 82252-142

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75	82252	Wayne	Detroit		

ITEMS OF WORK	Quantities		Authorization	No.	
Anchor Bolts, Washers & Nuts	48	Each	Rec.# 14-F; Auth. 2006		✓
Relocate 1-#6 O. H. Line	Lump	Sum	Rec.# 73-F; Auth. 2041		✓
Removing Stumps 8" to 12"	5	Each	Rec.# 94-F; Auth. 2046		✓
Assessment of Thin Pavt. Cores	Lump	Sum	Rec.# 87-F; Auth. 2043		✓
12" C.I. Watermain, Special	262.7	L.F.	Rec.# 16F 94-F; Auth. 2007, 2046		✓
Water Main Trench	10	L.F.	Rec.# 12-F, 94-F; Auth. 2003, 2046		✓
D.W.S. Force Account Assistance	Force	Account	Rec.# 11-F, 79-F Auth. 2002, 2042		✓
Traffic Signals, Nevada & Oakland	Lump	Sum	Rec.# 29-F, 34-F Auth. 2017, 2020		✓
6" Sewer 17-65-6.5 Trench Detail 2	586	L.F.	Rec.# 15-F, 94F Auth. 2004		✓
15" Sewer Taps	1	Each	Rec.# 70-F Auth. 2038		✓
Catch Basins 3E 0' to 6' Deep	1	Each	Rec.# 94-F Auth. 2046		✓
Catch Basins 6M 6.1' to 14' Deep	7	Each	Rec.# 94-F Auth. 2046		✓
Catch Basins 6J 0' to 6' Deep	1	Each	Rec.# 94-F Auth. 2046		✓
Beam Guard Rail Type C Special	10,574.26	L.F.	Rec.# 22-F, 59-F, 65-F 75-F Auth.	2016, 2033, 2036, 2039	✓
Beam Guard Rail Type CD Special	11,516.5	L.F.	Rec.# 22-F, 59-F, 75-F 94-F Auth.	2016, 2033, 2039, 2046	✓
Buried Guard Rail Anchorage Detail A	15	Each	Rec.# 59-F, 75-F Auth.	2033, 2039	✓
Structure Guard Rail Anchorage Type A	12	Each	Rec.# 59-F Auth.	2033	✓
Guard Rail Anchorage Detail 3 With End Shoes	4	Each	Rec.# 59-F Auth.	2033	✓
Guard Rail Anchorage Detail 2 With End Shoes	3	Each	Rec.# 59-F, 65-F Auth.	2033, 2036	✓
Structure Guard Rail Anchorage Detail YD	2	Each	Rec.# 59-F Auth.	2033	✓
Structure Guard Rail Anchorage Detail Y	8	Each	Rec.# 59-F Auth.	2033	✓
Lowering Concrete Light Foundation & Placing 20' Flangible Trans. Base	135	Each	Rec.# 42-F, 75-F Auth.	2024, 2039	✓
Labor Charge Installation of Light Units Mounted on Piers	Lump	Sum	Rec.# 30-F Auth.	2018	✓
Expansion Joints (Not Pour Rubber)	1497	L.F.	Rec.# 6-F, 94-F, Auth.	2001, 2046	✓
Contraction Joints (Not Pour Rubber)	1623.0	L.F.	Rec.# 6-F, 94-F Auth.	2001, 2046	
End of Pour Construction Joints (Not Pour Rubber)	86.0	L.F.	Rec.# 19-F, 94-F Auth.	2013,	✓
Force Account Slope Failures	Force	Account	Rec.# 82-F, 95-F Auth.	——, ——	✓
4" Selected Subbase Adjustment	Lump	Sum	Rec.# 41-F Auth.	2023	
8' Walk Gate for 48" Chain Link Fence	19	Each	Rec. 57-F Auth.	2031	✓

CHECKED
CONTRACT SECTION
DATE 11/13/69

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED D.J. Treder (PROJ. ENG.) DATE 7-2-69 HISTORY CHECKED ENTERED ON PLANS BY W. Finch DATE 7-2-69

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
BI-82252-142			XII

QUANTITY SHEET – E

EXTRA ITEMS AS CONSTRUCTED

I 63174A-70

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
1-75		Oakland	Hazel Park		

ITEM OF WORK	Quantities	Units	Authorization	
Anchor Bolts, Washers and Nuts	16	Each	Rec. 16-F 2005	✓
Adjusting Manhole Covers (Method #1)	5	Each	Rec. 56-F 2030	✓
12" C.I. Watermain, Trench Detail #11	110.3	L.F.	Rec. 11-L & 50-F 2019, 2028	✓
12" C.I. Watermain, Trench Detail #12	106	L.F.	Rec. 11-L 2019	✓
Concrete - Grade A	60.2	C.Y.	Rec. 11-L & 50-F 2019, 2058	✓
Steel Reinforcement	10,567	Lbs.	Rec. 11-L & 50-F 2019, 2058	✓
Beam Guard Rail, Type C, Special	175	L.F.	Rec. 22-F & 58-F, 67-F 2012, 2032, 2037	✓
Beam Guard Rail Type C D Special	1238	L.F.	Rec. 22-F & 67-F 2012, 2038	✓
Buried Guard Rail Anchorage, Detail A	1	Each	Rec. 58-F 2038	✓
Structure Guard Rail Anchorage Detail Y	1	Each	Rec. 58-F 2038	✓
Lowering Concrete Light Foundations & Placing 20" Flangible Trans. Base	11	Each	Rec. 42-F, 67-F 2025, 2037	✓
Lamp post Wire Credit	Lump Sum		Rec. 96-F, 2[illegible]	

CHECKED
CONTRACT SECTION
DATE 11/13/69

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED D.J. Treder (PROJ. ENG.) DATE 7-2-69 HISTORY CHECKED ENTERED ON PLANS BY W. Finch DATE 7-2-69

FILE NO. USE NO. SEQ. STENCIL	I63174 A-70	STATE PROJECT	FEDERAL PROJECT	SHEET NO. VIII

63174-073

CS: 63174

ID: 073

ROUTE	STATE PROJECT NO.	FEDERAL NO.	SHEET NO.	TOTAL SHEETS
I-75	I 63174,073		1	14

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED
MICHIGAN PROJECT I-75-2 (III) 67
STATE PROJECT I 63174,073
DETROIT – BAY CITY ROAD
CITY OF TROY
BLOOMFIELD AND ROAL OAK TOWNSHIPS

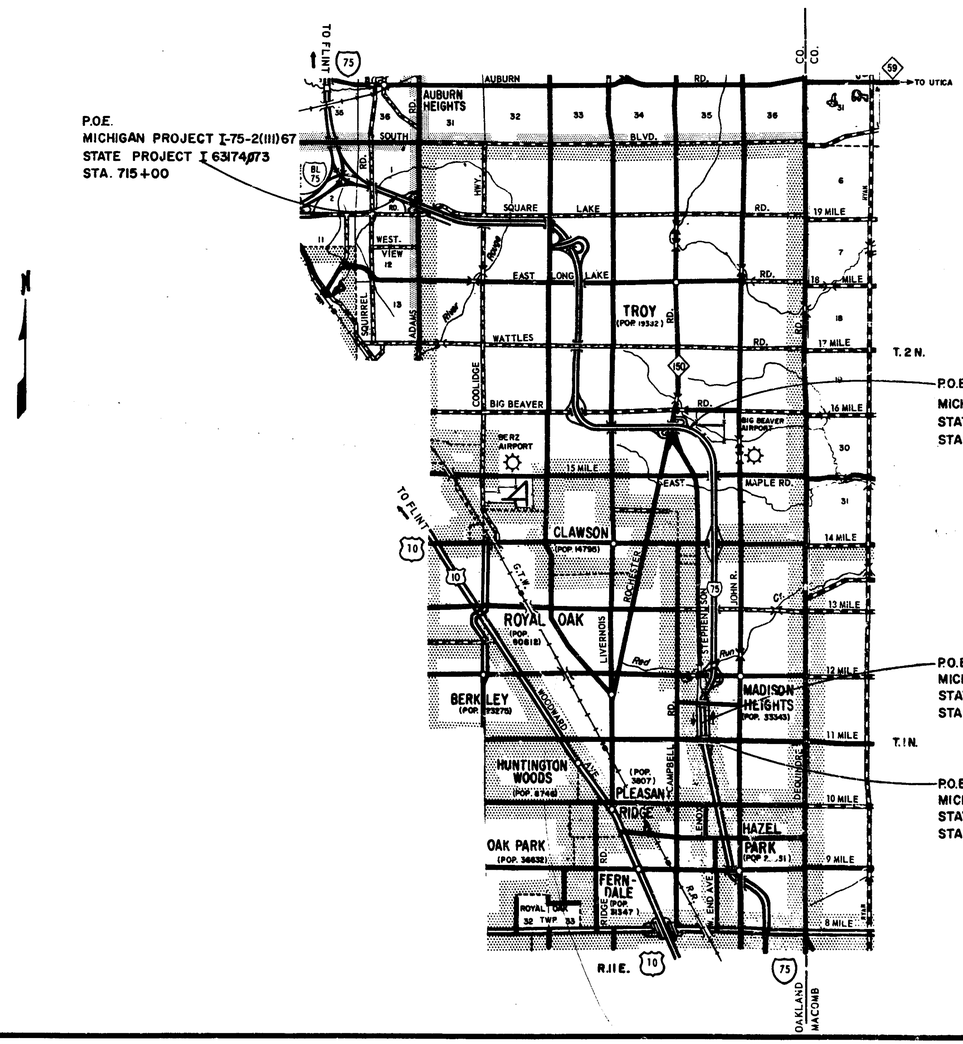
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

LEGEND

A.D.T. .....
D.H.V. .....
COMM.% .....
DESIGN SPEED .....

INDEX OF SHEETS

1 TITLE SHEET
2-13 PLAN SHEETS
14 SUMMARY OF QUANTITIES



Note:

Trees and Shrubs shall not be planted within 50 feet and 30 feet respectively from nearest edge of metal, except near Guard Rail and Structures and where inaccessable to vehicles.

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

ITEM NO. 975

CONTRACT FOR LANDSCAPE DEVELOPMENT

DIVISION APPROVAL

CHECKED — ENGINEER OF DESIGN — DATE 6-19-67
RECOMMENDED FOR APPROVAL — LANDSCAPE DEVELOPMENT EXECUTIVE — DATE 6-19-67
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE 6-20-67

OFFICES OF DESIGN & CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE 6-20-67
APPROVED — CHIEF OF DESIGN AND TRAFFIC — DATE 6-22-67

DEPARTMENT OF STATE HIGHWAYS
HOWARD E. HILL – STATE HIGHWAY DIRECTOR
APPROVED BY — DEPUTY DIRECTOR OF ENGINEERING — DATE 6/22/67

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS
SQUAD MULLER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
FOR THE DIVISION ENGINEER

I 63174,073	STATE PROJECT NO.	FEDERAL PROJECT	SHEET NO.
	I 63174,073		1

STATE PROJECT NO. I 63174,073

(TITLE SHEET TYPE)

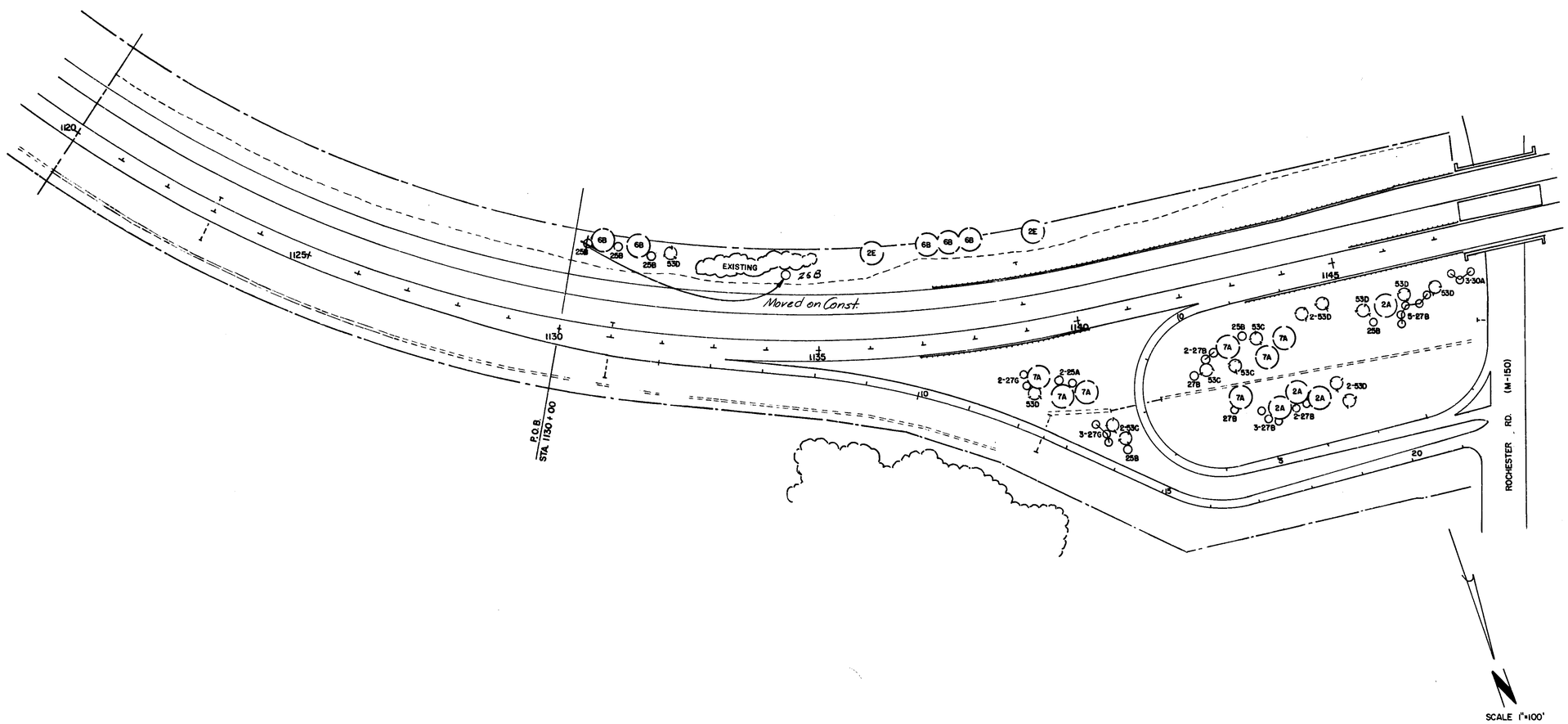
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	2	14

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
4	2A	ACER PLATANOIDES	NORWAY MAPLE
2	2E	ACER SACCHARINUM	SILVER MAPLE
5	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
7	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST
2	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
6	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
14	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
5	27G	MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE
3	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
5	53C	PINUS NIGRA	AUSTRIAN PINE
9	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50 FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

* See Note, Sheet Nº 1.



FILE NO. USE NO. 380 STENCIL	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	2

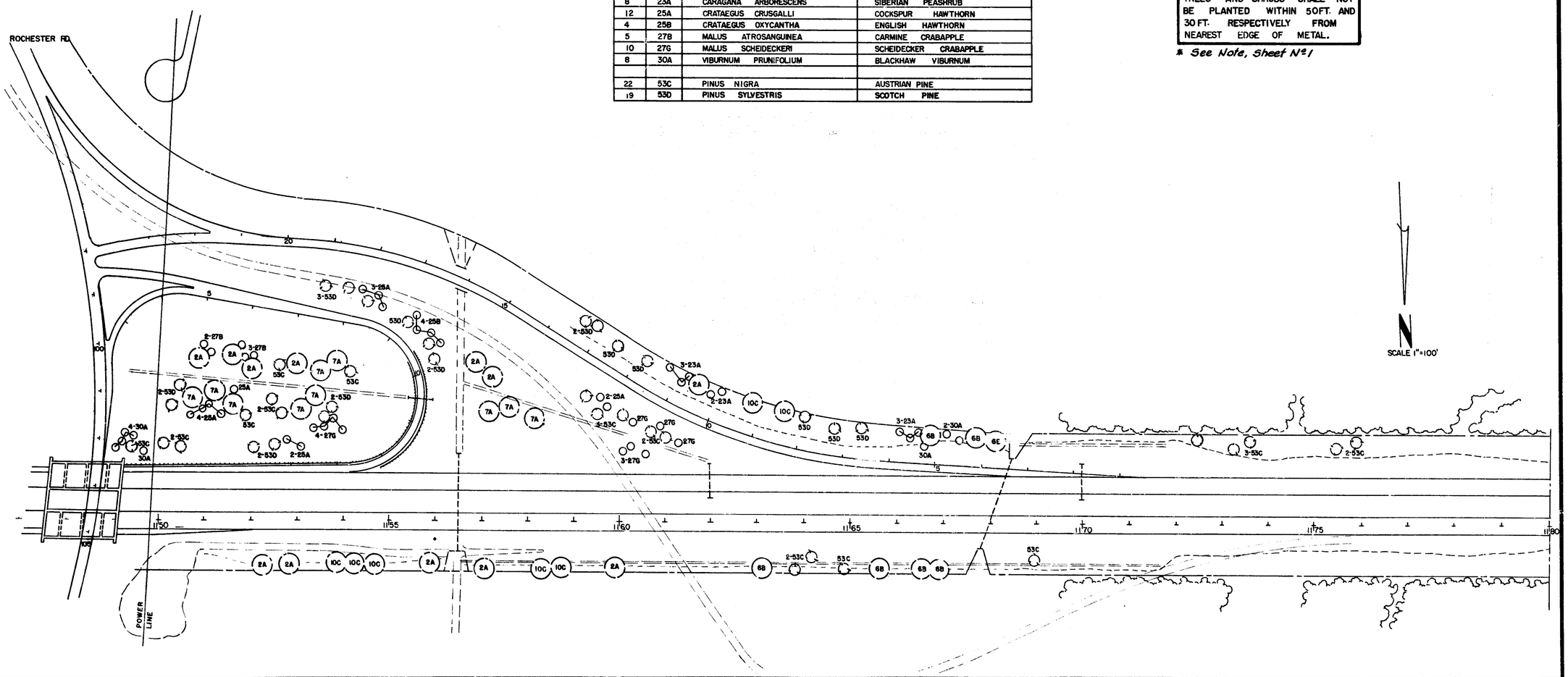
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	3	14

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
12	2A	ACER PLATANOIDES	NORWAY MAPLE
7	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
10	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST
7	10C	QUERCUS PALUSTRIS	PIN OAK
8	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB
12	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
4	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
5	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
10	27G	MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE
8	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
22	53C	PINUS NIGRA	AUSTRIAN PINE
19	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 5 OFT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

* See Note, Sheet Nº 1



FILE NO. TRB NO. 750 STENCIL	1-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	3

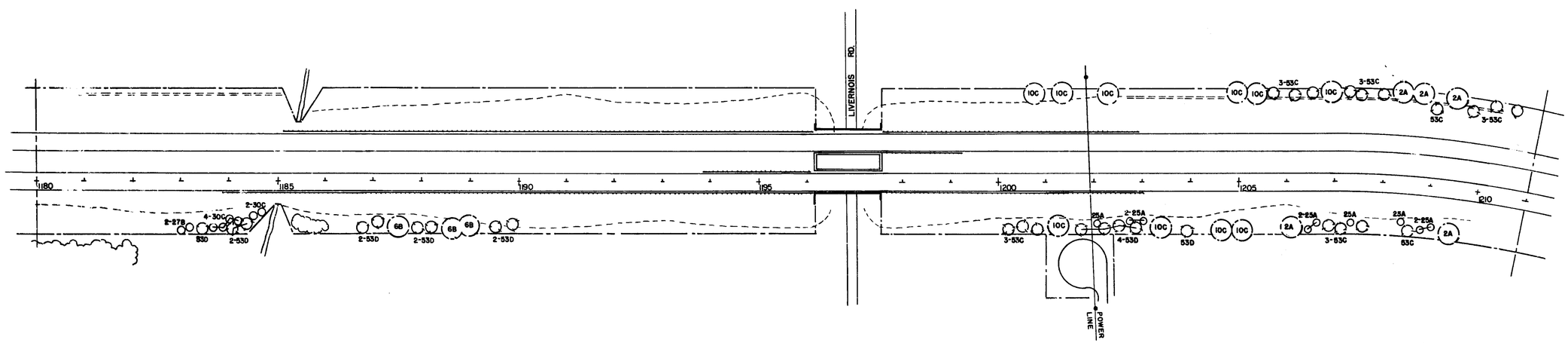
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	4	14

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
5	2A	ACER PLATANOIDES	NORWAY MAPLE
3	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
10	10C	QUERCUS PALUSTRIS	PIN OAK
9	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
2	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
6	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM
17	53C	PINUS NIGRA	AUSTRIAN PINE
14	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50 FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

* See Note, Sheet No. 1



SCALE 1"=100'

FILE NO. USE NO. 320 STENCIL	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	4

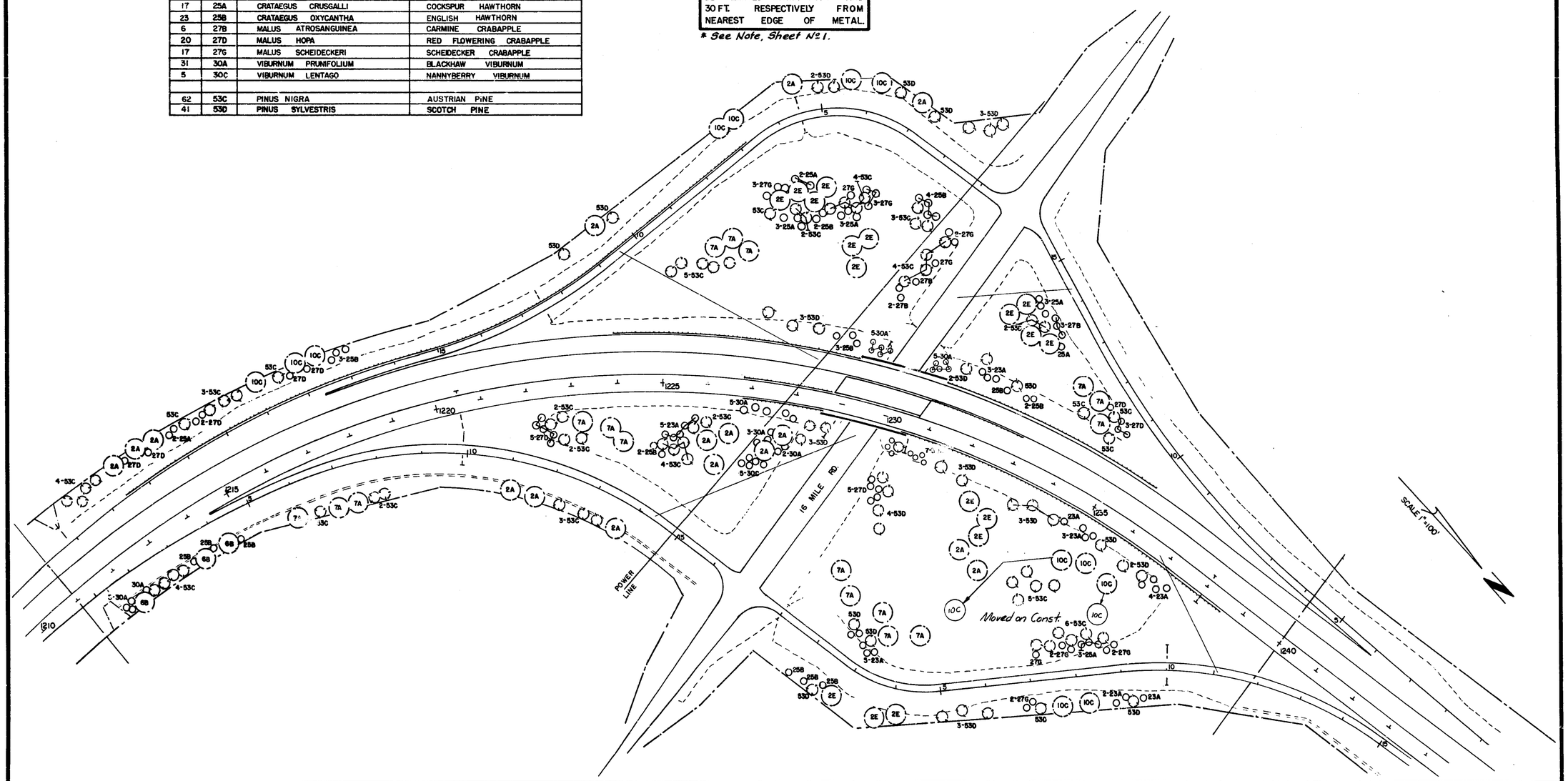
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	5	14

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
16	2A	ACER PLATANOIDES	NORWAY MAPLE
17	2E	ACER SACCHARINUM	SILVER MAPLE
3	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
17	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST
12	10C	QUERCUS PALUSTRIS	PIN OAK
24	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB
17	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
23	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
6	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
20	27D	MALUS HOPA	RED FLOWERING CRABAPPLE
17	27G	MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE
31	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
5	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM
62	53C	PINUS NIGRA	AUSTRIAN PINE
41	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

*See Note, Sheet No. 1.



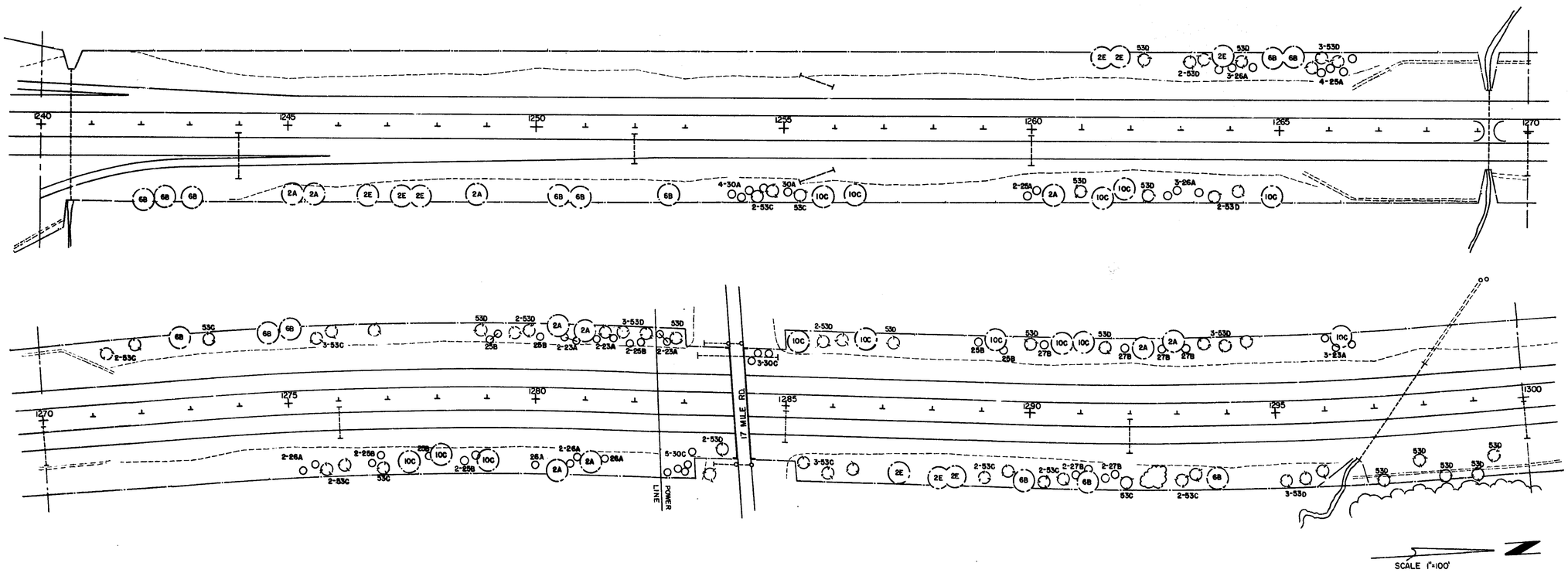
FILE NO. 1-75 NO. 320 STA-NOC	1-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	5

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	6	14
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
10	2A	ACER PLATANOIDES	NORWAY MAPLE
9	2E	ACER SACCHARINUM	SILVER MAPLE
14	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
14	10C	QUERCUS PALUSTRIS	PIN OAK
9	23A	CARAGANA ARBORESCENS	SIBERIAN CRABAPPLE
6	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
12	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
12	26A	ELAEGNUS ANGUSTIFOLIA	RUSSIAN OLIVE
8	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
5	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
8	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM
22	53C	PINUS NIGRA	AUSTRIAN PINE
36	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

** See Note, Sheet No 1*



FILE NO. 1.D.A. NO. 330 STR. NO.	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-5317473	I-75-2( )	6

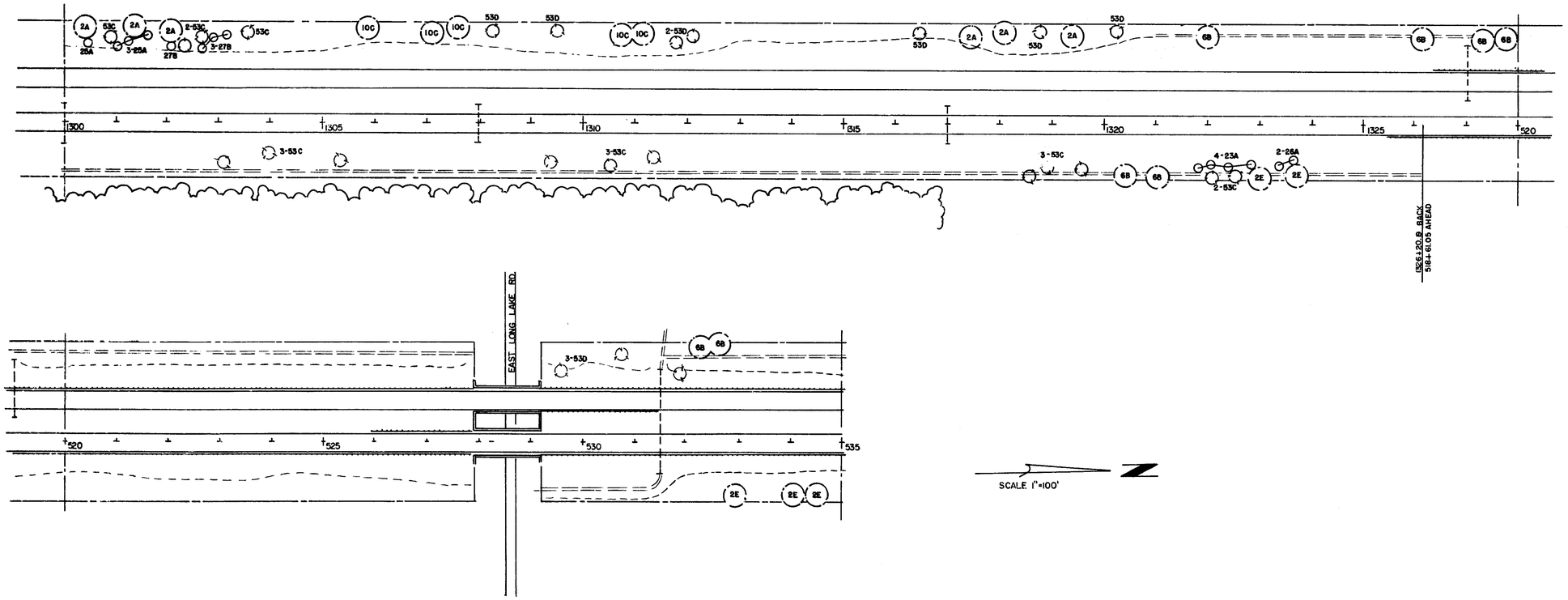
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	7	14

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
6	2A	ACER PLATANOIDES	NORWAY MAPLE
5	2E	ACER SACCHARINUM	SILVER MAPLE
8	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
5	10C	QUERCUS PALUSTRIS	PIN OAK
4	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB
4	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
2	26A	ELAEGNUS ANGUSTIFOLIA	RUSSIAN OLIVE
4	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
15	53C	PINUS NIGRA	AUSTRIAN PINE
10	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

x See Note, Sheet No 1



FIL.& NO. STRUC. 1-580 & EXCL.	1-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	7

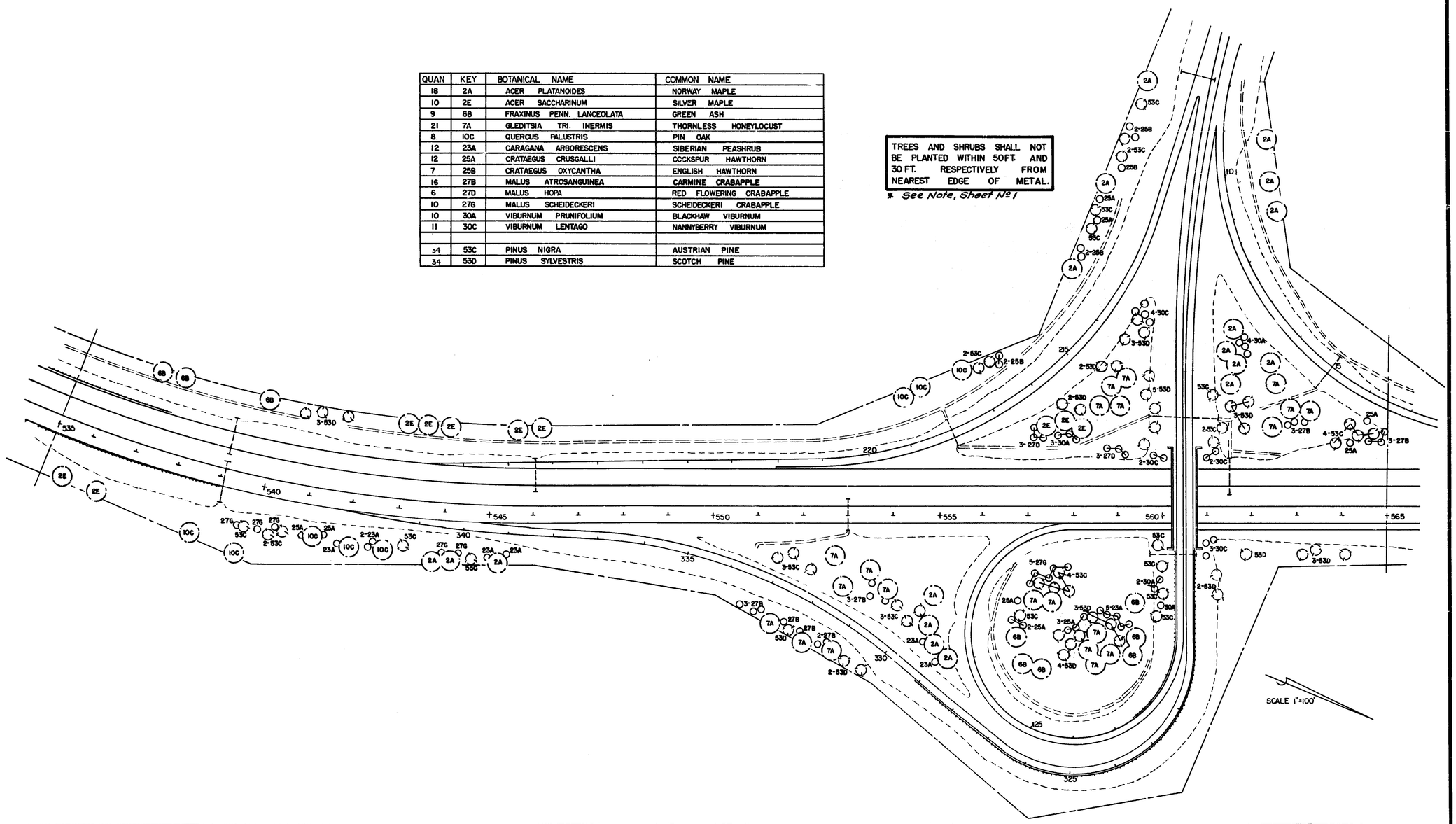
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	8	14

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
18	2A	ACER PLATANOIDES	NORWAY MAPLE
10	2E	ACER SACCHARINUM	SILVER MAPLE
9	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
21	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST
8	10C	QUERCUS PALUSTRIS	PIN OAK
12	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB
12	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
7	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
16	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
6	27D	MALUS HOPA	RED FLOWERING CRABAPPLE
10	27G	MALUS SCHEIDECKERI	SCHEIDECKERI CRABAPPLE
10	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
11	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM
34	53C	PINUS NIGRA	AUSTRIAN PINE
34	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

* See Note, Sheet No 1



FILE NO.	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	8

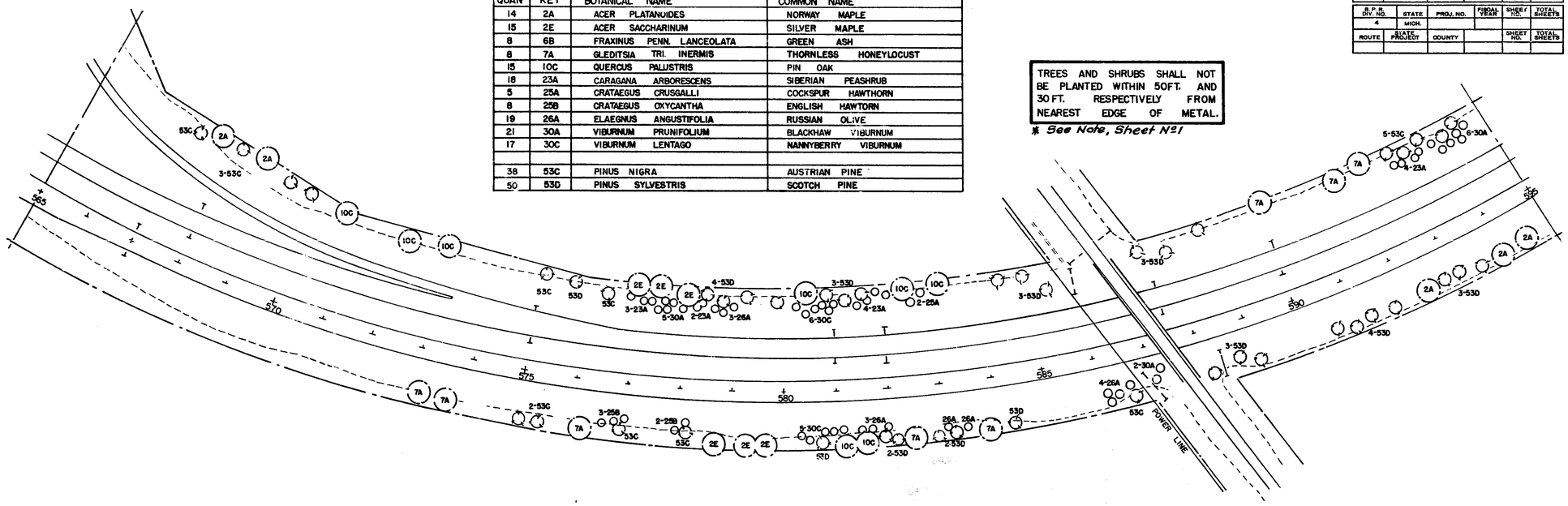
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	9	14

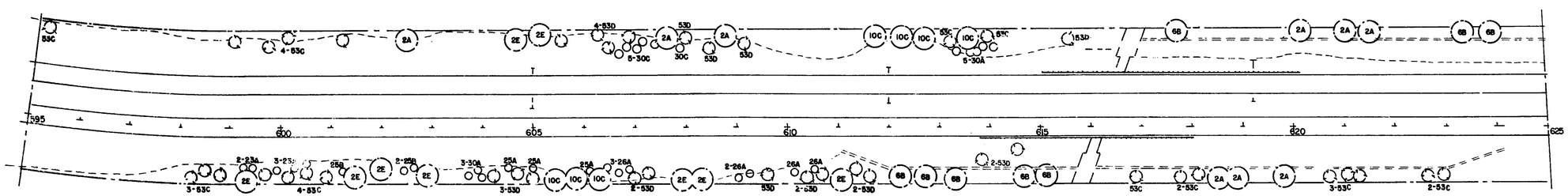
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
14	2A	ACER PLATANOIDES	NORWAY MAPLE
15	2E	ACER SACCHARINUM	SILVER MAPLE
8	6B	FRAXINUS PENN. LANCEOLATA	GREEN ASH
8	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST
15	10C	QUERCUS PALUSTRIS	PIN OAK
18	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB
5	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
8	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTORN
19	26A	ELAEGNUS ANGUSTIFOLIA	RUSSIAN OLIVE
21	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
17	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM
38	53C	PINUS NIGRA	AUSTRIAN PINE
50	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

See Note, Sheet No. 1





N

SCALE 1" = 100'

FILE NO. LINE NO. 350 STENCIL	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	9

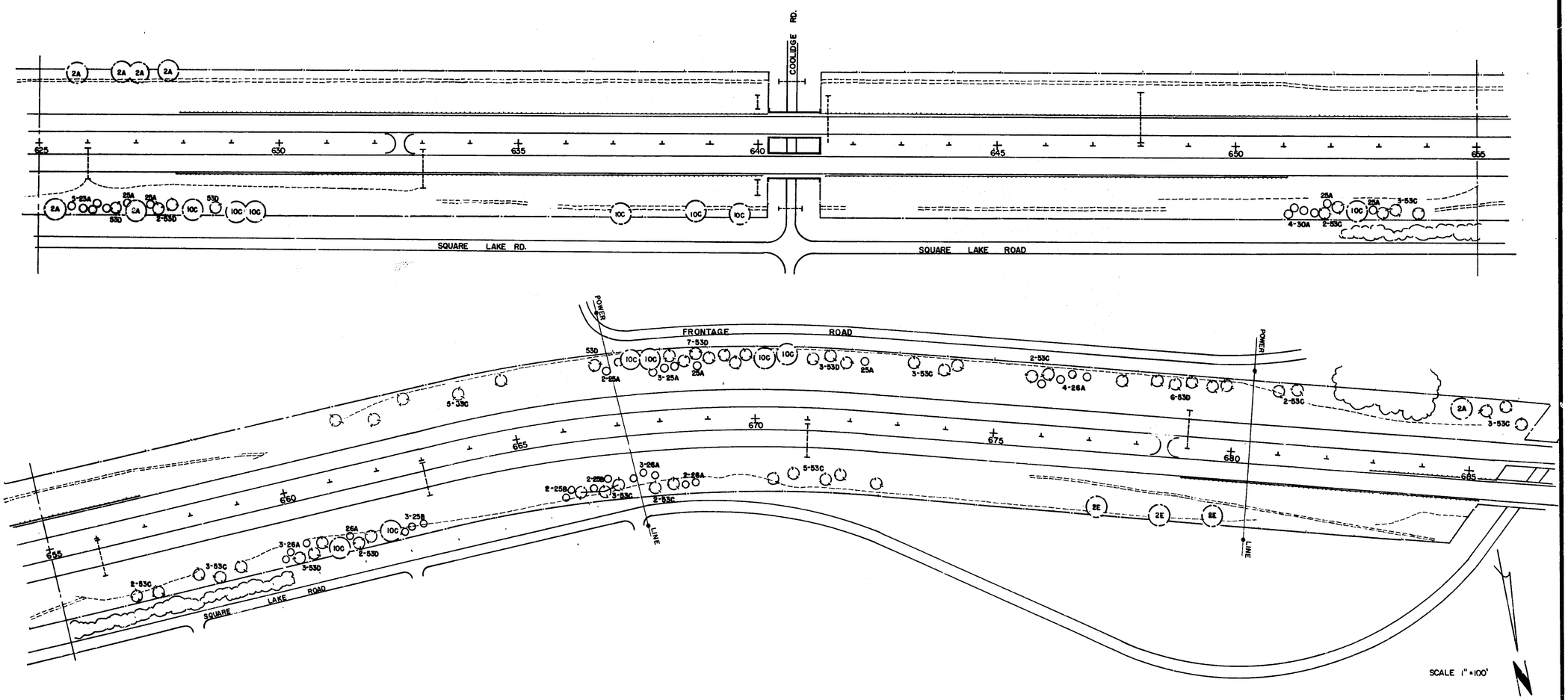
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY	TWP	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	10	14

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
7	2A	ACER PLATANOIDES	NORWAY MAPLE
3	2E	ACER SACCHAR[illegible]	SILVER MAPLE
13	10C	QUERCUS PALUSTRIS	PIN OAK
5	23A	CARAGANA ARBORESCENS	SIBERIAN CRABAPPLE
11	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
7	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
13	26A	ELAEGNUS ANGUSTIFOLIA	RUSSIAN OLIVE
4	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM
35	53C	PINUS NIGRA	AUSTRIAN PINE
26	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30 FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

* See Note, Sheet No 1



FILE NO. USE NO. 350 STENCIL	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	10

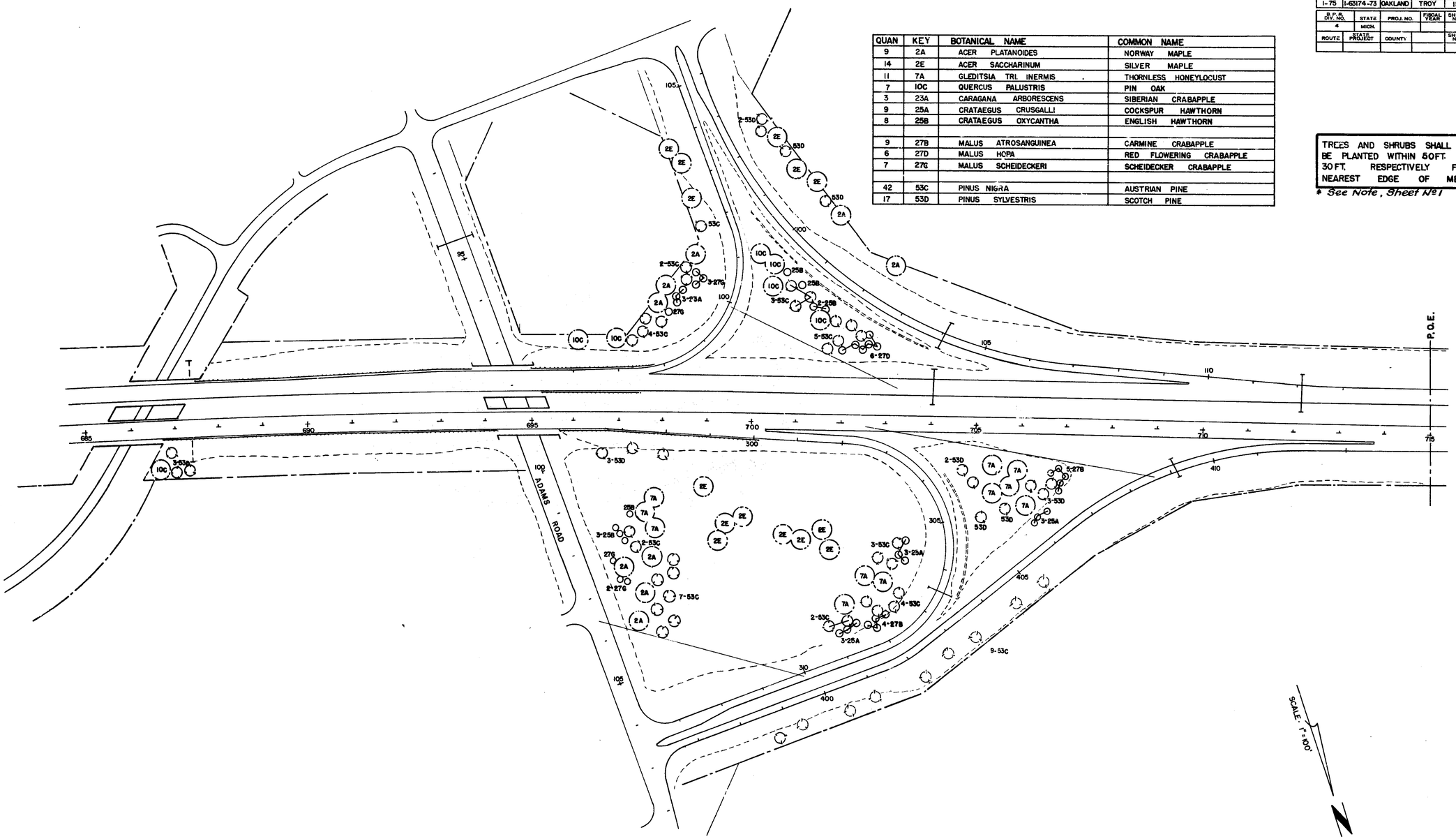
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	11	14

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

QUAN	KEY	BOTANICAL NAME	COMMON NAME
9	2A	ACER PLATANOIDES	NORWAY MAPLE
14	2E	ACER SACCHARINUM	SILVER MAPLE
11	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST
7	10C	QUERCUS PALUSTRIS	PIN OAK
3	23A	CARAGANA ARBORESCENS	SIBERIAN CRABAPPLE
9	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
8	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN
9	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
6	27D	MALUS HOPA	RED FLOWERING CRABAPPLE
7	27G	MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE
42	53C	PINUS NIGRA	AUSTRIAN PINE
17	53D	PINUS SYLVESTRIS	SCOTCH PINE

TREES AND SHRUBS SHALL NOT BE PLANTED WITHIN 50FT. AND 30FT. RESPECTIVELY FROM NEAREST EDGE OF METAL.

* See Note, Sheet №1



FILE NO. USE NO. 320 STENCIL	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2( )	11

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

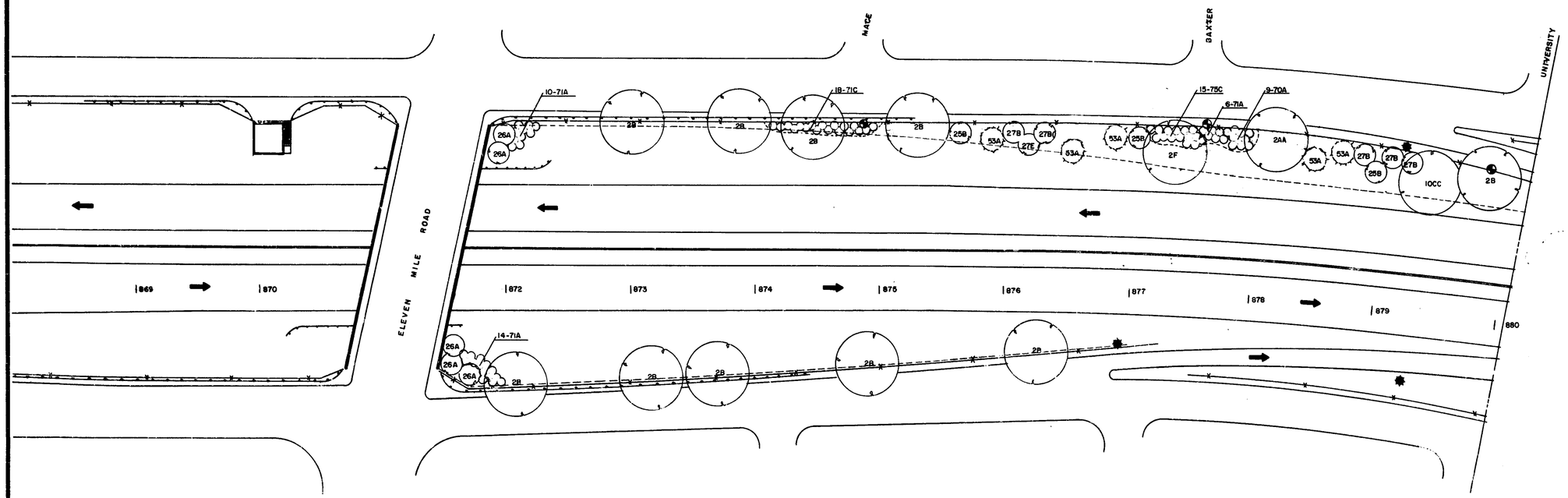
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174,073	Oakland	Royal Oak	12	14

QUAN	KEY	BOTANICAL NAME	COMMON NAME
1	2AA	ACER PLATANOIDES 3-3½"	NORWAY MAPLE
10	2B	ACER PLATANOIDES COLUMNAR	COLUMNAR NORWAY MAPLE
1	2F	ACER PLATANOIDES SCHWEDLERI	SCHWEDLER NORWAY MAPLE
5	53A	PINUS NIGRA 10-12'	AUSTRIAN PINE
1	10CC	QUERCUS PALUSTRIS 3-3½"	PIN OAK
3	25B	CRATAEGUS OXYACANTHA	ENGLISH HAWTHORN
5	26A	ELAEAGNUS ANGUSTIFOLIA	RUSSIAN OLIVE
5	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
1	27E	MALUS PURPUREA ELEYI	ELEY CRABAPPLE
9	70A	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM
30	71A	EUONYMUS ALATUS	WINGED BURNING BUSH
18	71C	EUONYMUS EUROPAEUS	EUROPEAN EUONYMUS
15	75C	LONICERA TATARICA	TATARIAN HONEYSUCKLE

NOTE: PLANT LOCATIONS SHOULD BE DETERMINED BY MEASURING FROM THE R.O.W FENCE RATHER THAN FROM THE SERVICE ROAD CURB.

N

SCALE: 1" = 40'



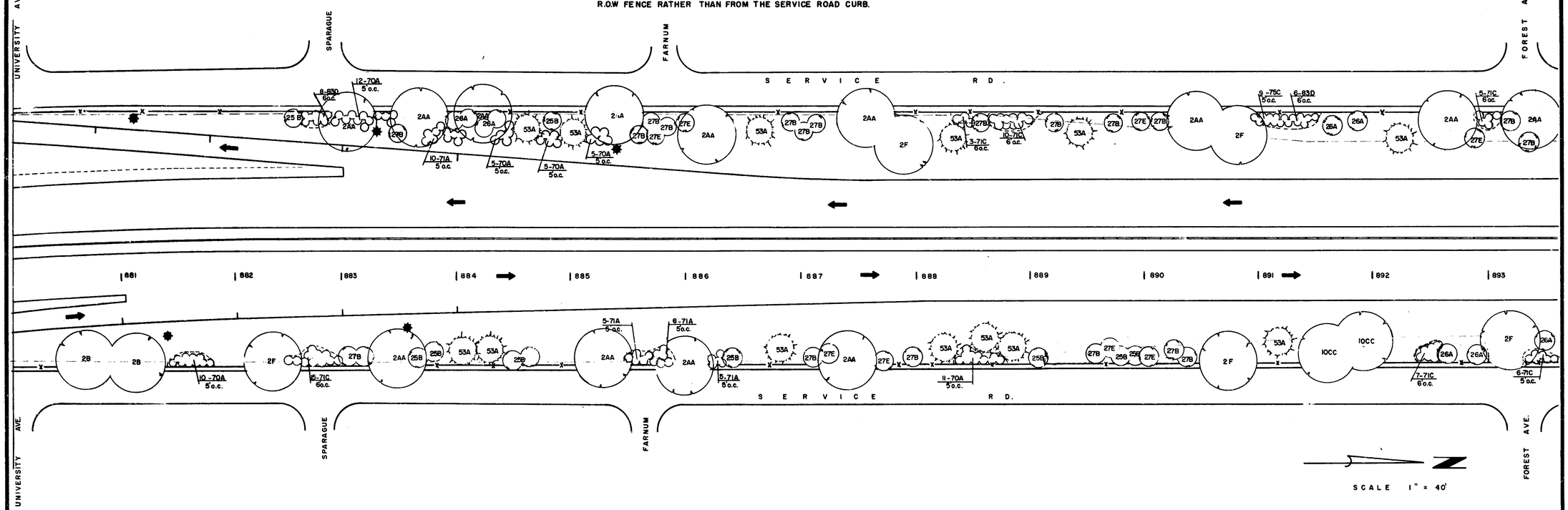
FILE NO. JOB NO. CONTRACT	63174,073	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174,073	I-75-2	12

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2			
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174,073	Oakland	Royal Oak	13	14

QUAN	KEY	BOTANICAL NAME	COMMON NAME
13	2AA	ACER PLATANOIDES 3-3½"	NORWAY MAPLE
2	2B	ACER PLATANOIDES COLUMNAR	COLUMNAR NORWAY MAPLE
5	2F	ACER PLATANOIDES SCHWEDLERI	SCHWEDLER NORWAY MAPLE
13	53A	PINUS NIGRA 10-12'	AUSTRIAN PINE
2	10CC	QUERCUS PALUSTRIS 3-3½"	PIN OAK
10	25B	CRATAEAGUS OXYACANTHA	ENGLISH HAWTHORN
9	26A	ELAEAGNUS ANGUSTIFOLIA	RUSSIAN OLIVE
20	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE
8	27E	MALUS PURPUREA ELEYI	ELEY CRABAPPLE
48	70A	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM
26	71A	EUONYMUS ALATUS	WINGED BURNING BUSH
46	71C	EUONYMUS EUROPAEUS	EUROPEAN EUONYMUS
9	75C	LONICERA TATARICA	TATARIAN HONEYSUCKLE
14	83D	VIBURNUM TOMENTOSUM	DOUBLEFILE VIBURNUM

NOTE: PLANT LOCATIONS SHOULD BE DETERMINED BY MEASURING FROM THE R.O.W FENCE RATHER THAN FROM THE SERVICE ROAD CURB.



FILE NO. USN NO. 250 STENCIL	63174.073	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174,073	I-75-2	13

QUANTITY SHEET – E

U.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				

ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75	I-63174-73	OAKLAND	TROY	14	14

AS PER PLANS

2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOTS	REMARKS
4	12	5	16	10	6	18	14	7	9			101	2A	ACER PLATANOIDES	NORWAY MAPLE	1½-2"	B B	
										1	13	14	2AA	ACER PLATANOIDES	NORWAY MAPLE	3 -3½"	B B	
										10	2	12	2B	ACER PLATANOIDES COLUMNAR	COLUMNAR NORWAY MAPLE	3 -3½	B B	
2			17	9	5	10	15	3	14			75	2E	ACER SACCHARINUM	SILVER MAPLE	1½-2"	B B	
										1	5	6	2F	ACER PLATANOIDES SCHWEDLERI	SCHWEDLER NORWAY MAPLE	3 -3½"	B B	
5	7	3	3	14	8	9	8					57	6B	FRAXINUS P. LANCEOLATA	GREEN ASH	1½-2"	B B	
7	10		17			21	8		11			74	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST	1½-2"	B B	
	7	10	12	14	5	8	15	13	7			91	10C	QUERCUS PALUSTRIS	PIN OAK	1½-2"	B B	
										1	2	3	10CC	QUERCUS PALUSTRIS	PIN OAK	3 -3½"	B B	
	8		24	9	4	12	18	5	3			83	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB	3 -4'	B B	
2	12	9	17	6	4	12	5	11	9			87	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN	5 -6'	B B	
6	4		23	12		7	8	7	8	3	10	88	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN	5 -6'	B B	
				12	2		19	13		5	9	60	26A	ELAEAGNUS ANGUSTIFOLIA	RUSSIAN OLIVE	5 -6'	B B	
14	5	2	6	8	4	16			9	5	20	89	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE	5 -6'	B B	
			20			6			6			32	27D	MALUS HOPA	RED FLOWERING CRABAPPLE	5 -6'	B B	
										1	8	9	27E	MALUS PURPUREA ELEYI	ELEY FLOWERING CRAB	5 -6'	B B	
5	10		17			10			7			49	27G	MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE	5 -6'	B B	
3	8		31	5		10	21	4				82	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM	3 -4'	B B	
		6	5	8		11	17					47	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM	3 -4'	B B	
										5	13	18	53A	PINUS NIGRA	AUSTRIAN PINE	10-12'	B B	
5	22	17	62	22	15	34	38	35	42			292	53C	PINUS NIGRA	AUSTRIAN PINE	5 -6'	B B	
9	19	14	41	36	10	34	50	26	17			256	53D	PINUS SYLVESTRIS	SCOTCH PINE	5 -6'	B B	
										9	48	57	70A	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	4 -5'	B B	
										30	26	56	71A	EUONYMUS ALATUS	WINGED EUONYMUS	4 -5'	B B	
										18	46	64	71C	EUONYMUS EUROPAEUS	EUROPEAN EUONYMUS	4 -5'	B B	
										15	9	24	75C	LONICERA TATARICA	TATARIAN HONEYSUCKLE	4 -5'	B B	
											14	14	83D	VIBURNUM TOMENTOSUM	DOUBLEFILE VIBURNUM	4 -5'	B B	

AS CONSTRUCTED

2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOTS	REMARKS
4	12	5	16	10	6	18	14	7	9			101	2A	ACER PLATANOIDES	NORWAY MAPLE	1½-2"	B-B	
										1	13	14	2AA	ACER PLATANOIDES	NORWAY MAPLE	3 -3½"	B-B	
										10	2	12	2B	ACER PLATANOIDES COLUMNAR	COLUMNAR NORWAY MAPLE	3 -3½"	B-B	
2			17	9	5	10	15	3	14			75	2E	ACER SACCHARINUM	SILVER MAPLE	1½-2"	B-B	
										1	5	6	2F	ACER PLATANOIDES SCHWEDLERI	SCHWEDLER NORWAY MAPLE	3 -3½"	B-B	
5	7	3	3	14	8	9	8					57	6B	FRAXINUS P. LANCEOLATA	GREEN ASH	1½-2"	B-B	
7	10		17			21	8		11			74	7A	GLEDITSIA TRI. INERMIS	THORNLESS HONEYLOCUST	1½-2"	B-B	
	7	10	12	14	5	8	15	13	7			91	10C	QUERCUS PALUSTRIS	PIN OAK	1½-2"	B-B	
										1	2	3	10CC	QUERCUS PALUSTRIS	PIN OAK	3 -3½"	B-B	
	8		24	9	4	12	18	5	3			83	23A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB	3-4'	B-B	
2	12	9	17	6	4	12	5	11	9			87	25A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN	5-6'	B-B	
6	4		23	12		7	8	7	8	3	10	88	25B	CRATAEGUS OXYCANTHA	ENGLISH HAWTHORN	5-6'	B-B	
				12	2		19	13		5	9	60	26A	ELAEAGNUS ANGUSTIFOLIA	RUSSIAN OLIVE	5-6'	B-B	
14	5	2	6	8	4	16			9	5	20	89	27B	MALUS ATROSANGUINEA	CARMINE CRABAPPLE	5-6'	B-B	
			20			6			6			32	27D	MALUS HOPA	RED FLOWERING CRABAPPLE	5-6'	B-B	
										1	8	9	27E	MALUS PURPUREA ELEYI	ELEY FLOWERING CRABAPPLE	5-6'	B-B	
5	10		17			10			7			49	27G	MALUS SCHEIDECKERI	SCHEIDECKER CRABAPPLE	5-6'	B-B	
3	8		31	5		10	21	4				82	30A	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM	3-4'	B-B	
		6	5	8		11	17					47	30C	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM	3-4'	B-B	
										5	13	18	53A	PINUS NIGRA	AUSTRIAN PINE	10-12'	B-B	
5	22	17	62	22	15	34	38	35	42			292	53C	PINUS NIGRA	AUSTRIAN PINE	5-6'	B-B	
9	19	14	41	36	10	34	50	26	17			256	53D	PINUS SYLVESTRIS	SCOTCH PINE	5-6'	B-B	
										9	48	57	70A	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	4-5'	B-B	
										30	26	56	71A	EUONYMUS ALATUS	WINGED EUONYMUS	4-5'	B-B	
										18	46	64	71C	EUONYMUS EUROPAEUS	EUROPEAN EUONYMUS	4-5'	B-B	
										15	9	24	75C	LONICERA TATARICA	TATARIAN HONEYSUCKLE	4-5'	B-B	
											14	14	83D	VIBURNUM TOMENTOSUM	DOUBLEFILE VIBURNUM	4-5'	B-B	

TOTAL 1840 PLANTINGS

2/17/69

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED John R. Bremer PROJ. ENG. DATE 1-29-69 HISTORY CHECKED ENTERED ON PLANS BY Richard J. Heinz DATE 1-29-69

FILE NO. USE NO. 380 STENCIL	I-63174-73	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		I-63174-73	I-75-2	14

63174-075 076
82194-041

CS: 63174

ID: 075 076

INDEX OF SHEETS

SHEET NO 1 & 2	TITLE SHEET & INDEX SHEET
SHEET NO 3-11	SIGN LOCATION PLANS
SHEET NO 12-17	QUANTITY SHEETS
SHEET NO 18 & 19	INFORMATION SHEETS
SHEET NO. 20-82	SIGN & SUPPORT STANDARDS

ROUTE	STATE PROJECT	FEDERAL NO	SHEET NO
I-75	63174 82194	I75-2(116)59 I75-1(127)49	1

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

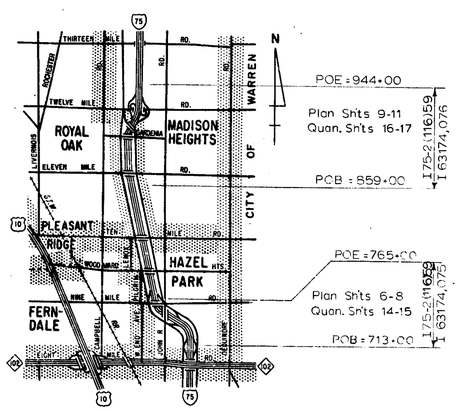
STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

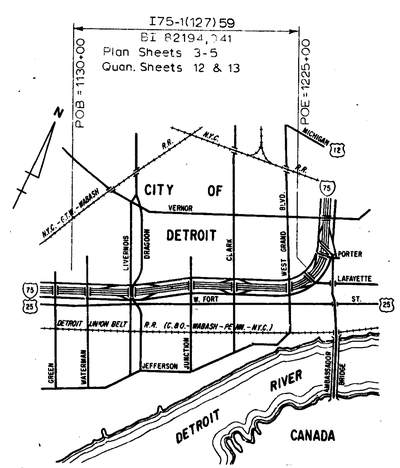
PLAN OF PROPOSED SIGNING

I-75 FREEWAY WAYNE & OAKLAND COUNTIES

I75-1(127)49
BI 82194,041

I75-2(116)59
I 63174,075
I 63174,076





BI82194 ITEM NO. 994
I63174 ITEM NO. 993

CONTRACT FOR TRAFFIC SIGNING

DIVISION APPROVAL

CHECKED — ENGINEER OF TRAFFIC OPERATIONS — DATE 1/5/67

RECOMMENDED FOR APPROVAL — TRAFFIC ENGINEER — DATE 1-6-67

RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE 1/10/67

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED — CONSTRUCTION ENGINEER — DATE 1-16-67

APPROVED — CHIEF OF DESIGN — DATE 1-16-67

DEPARTMENT OF STATE HIGHWAYS APPROVAL

APPROVED

BY — DIRECTOR OF ENGINEERING / CHIEF ENGINEER — DATE 1-16-67

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER — DATE

CONTROL SECTION: I 63174,075 BI 82194,041 I 63174,076

I 63174, 075 — FEDERAL PROJECT — SHEET NO. 1

INDEX

STD.PLAN NO.	SIGN NO.	TITLE
S1.10		STD. SIGN INSTALLATIONS
S1.20		STD. RTE. MARKER INSTALL.
S2.10		TYPICAL LOCATIONS SIGNS & SUPPORTS
S3.10		STEEL POST (2#,3# & 4#)
S3.20		STEEL POST (6# & 8#)
S4.30		STEEL COLUMN (I)
S4.40		STEEL COLUMN (B,WF)
S4.50		COLUMN FOUNDATION
S5.10		STEEL CANTILEVER TYPE A,B,C,D,E
S5.20		STEEL CANTILEVER DETAILS TYPE A,B,C,D,E
S5.30		CANTILEVER FOUNDATION TYPE A,B,C,D,E
S6.10		ALUMINUM TRUSS TYPE B
S6.20		ALUMINUM TRUSS TYPE C
S6.30		ALUMINUM TRUSS DETAILS TYPE B,C
S6.40		ALUMINUM END SUPPORT DETAILS TYPE B,C
S7.10		STEEL TRUSS TYPE B
S7.20		STEEL TRUSS TYPE C
S7.30		STEEL TRUSS DETAILS TYPE B,C
S7.40		STEEL END SUPPORT DETAILS TYPE B,C
S8.10		TRUSS FOUNDATION TYPE B,C
S8.20		SPECIAL TRUSS FOUNDATION TYPE B
S9.10		SIGN CONNECTION DETAILS TRUSS-CANT.-COLUMN
S9.20		MISCELLANEOUS SIGN CONNECTION DETAILS
S9.30		MISCELLANEOUS SIGN CONNECTION DETAILS
S10.10		BRIDGE CONNECTION TYPE A & B
S10.20		BRIDGE CONNECTION TYPE C
S11.10		GUARD RAIL
S12.10		POST & DELINEATOR
S12.20		POST & DELINEATOR

STD.PLAN NO.	SIGN NO.	TITLE
S20.10	R1-1-36	STOP
	R1-2-36	YIELD
	R2-1-48	SPEED LIMIT
	R2-3-48	FREEWAY SPEED LIMIT
S20.11	R2-5-48	MINIMUM SPEED
	R3-4-36	NO U TURN
	R3-21-24	KEEP RIGHT
	R3-21-36	KEEP RIGHT
S20.12	R3-23-36	ONE-WAY ARROW
	R3-23-72	ONE-WAY ARROW
	R3-27-24	DO NOT ENTER
	R3-27-36	DO NOT ENTER
S20.13	R3-31-24	MOTOR VEHICLES ONLY
	R3-32-24	VEHICLE PROHIBITION
	R3-32-24D	" " (Detroit)
	R3-34-48	CROSSOVER PROHIBITION
S20.14	R3-35-24	WRONG WAY
	R3-35-36	WRONG WAY
	R4-14-48	EMERGENCY STOPPING ONLY
	R4-15-48	REST AREA PARKING
S20.15	R6-10-48	KEEP OFF MEDIAN
	R6-12-120	WEIGH STATION RIGHT LANE
S30.10	W1-1-36	TURN
	W1-2-36	CURVE
	W1-6-48	TARGET ARROW
	W1-7-48	BI-DIR. TARGET ARROW
S30.11	W3-1-36	STOP AHEAD
	W3-2-36	YIELD AHEAD
	W3-3-36	SIGNAL AHEAD
	W4-1-30	MERGING TRAFFIC
S30.12	W4-1-48	MERGING TRAFFIC
	W4-5-36	TWO WAY TRAFFIC
	W6-4-48	FREEWAY ENDS
	W12-1-21	CURVE SPEED PANEL
S30.13	W12-2-48	EXIT OR RAMP SPEED
S40.10	G1-1-24	INT. ROUTE MARKER - 2 DIGIT
	G1-1-36	INT. ROUTE MARKER - 2 DIGIT
	G1-2-30	INT. ROUTE MARKER - 3 DIGIT
	G1-2-42	INT. ROUTE MARKER - 3 DIGIT
S40.11	G1-3-24	BS,BL RTE. MARKER - 2 DIGIT
	G1-3-36	BS,BL RTE. MARKER - 2 DIGIT
	G1-4-30	BS,BL RTE. MARKER - 3 DIGIT
	G1-4-42	BS,BL RTE. MARKER - 3 DIGIT
S40.12	G1-5-24	US ROUTE MARKER - 2 DIGIT
	"	" "
	G1-5-36	US ROUTE MARKER - 2 DIGIT
	"	" "
S40.13	G1-6-24	US ROUTE MARKER - 2 DIGIT
	G1-6-36	US ROUTE MARKER - 2 DIGIT
	G1-7-28	US ROUTE MARKER - 3 DIGIT
	G1-7-42	US ROUTE MARKER - 3 DIGIT
S40.14	G1-8-28	US ROUTE MARKER - 3 DIGIT
	G1-8-42	US ROUTE MARKER - 3 DIGIT
	G1-9-18	MICH ROUTE MARKER
	"	" "
S40.15	G1-9-27	MICH ROUTE MARKER
	"	" "
	G1-10-21	INT. RTE. MARKER ARROW
	G1-10-30	INT. RTE. MARKER ARROW
S40.16	G1-11-21	INT. RTE. MARKER ARROW
	G1-11-30	INT. RTE. MARKER ARROW
	G1-17-21	BS,BL RTE. MARKER ARROW
	G1-18-21	BS,BL RTE. MARKER ARROW

STD.PLAN NO.	SIGN NO.	TITLE
S40.17	G1-30-21	M,US RTE. MARKER ARROW
	G1-30-30	M,US RTE. MARKER ARROW
	G1-31-21	M,US RTE. MARKER ARROW
	G1-31-30	M,US RTE. MARKER ARROW
S40.18	G1-39-21	BS,BL ENDS PANEL
	G1-40-21	MICH,US ENDS PANEL
	G1-41-24	INT. CARDINAL DIRECTION
	G1-41-30	INT. CARDINAL DIRECTION
S40.19	G1-42-24	BS,BL CARDINAL DIRECTION
	G1-42-30	BS,BL CARDINAL DIRECTION
	G1-43-24	MICH,US CARDINAL DIR.
	G1-43-30	MICH,US CARDINAL DIR.
S40.20	G1-44-24	MICH,US BUSINESS PANEL
	G1-45-24	TO PANEL
	G1-49-30	INT. JUNCTION PANEL
	G1-50-30	MICH,US,BS,BL JCT. PANEL
S50.10	G4-1	ADVANCE EXIT 16"-12"
	"	" "
	"	" "
S50.11	"	ADV. EXIT & EXIT DIR. 16"-12"
	"	ADVANCE EXIT 20"-15"
	"	" " 24"-18"
	G4-2	NEXT EXIT 00 MILES
S50.12	G4-3	SUPP. ADVANCE EXIT
	"	" "
	G4-4	REGION IDENTIFICATION
	"	" "
S50.13	G4-5	INTERCHANGE SEQUENCE
	"	" "
	G4-6	EXIT DIRECTION
	"	" "
S50.14	"	" "
	G4-7	FREEWAY DISTANCE
	G4-8	THRU TRAFFIC
	"	" "
S50.15	"	" "
	G4-9	THROUGH DESTINATION
	"	" "
	G4-10	RAMP DIRECTION
S50.16	"	" "
	"	" "
	G4-11	FWY. CROSSROAD DISTANCE
	G5-1	EXIT GORE
S50.17	G5-2	REST AREA ADVANCE
	G5-3	REST AREA EXIT DIRECTION
	G5-4-72	REST AREA GORE
	G5-5	ADVANCE SERVICES
S50.18	"	" "
	G5-6	ADV. STATE POLICE - SHERIFF
	G5-7	RAMP SERVICES
	"	" "
S50.19	G5-8	CORPORATE LIMIT
	G5-9	STREET (ROAD) NAME
	G5-10	COUNTY LINE
	G5-11	RIVER NAME
S50.20	G5-12	LAKE NAME
	G5-13	ADVANCE WEIGH STATION
	G5-14	WEIGH STATION GORE
	G5-15	MILE POST
	G5-16-72	EXIT NUMBER
S50.21		
S50.22	SB-36	ROUTE MARKER OVERLAYS
S50.23	SB-36	ROUTE MARKER OVERLAYS
S50.24	SB-63&64	ARROWS AND FRACTIONAL NO.

GENERAL NOTES

1.) TRAFFIC CONTROL DEVICES AS REQUIRED BY THE PROJECT ENGINEER TO PROTECT AND MAINTAIN TRAFFIC SHALL BE INCIDENTAL TO THE PROJECT.

2.) MINIMUM VERTICAL CLEARANCE FOR OVERHEAD SIGNS ON I 63174,075 AND BI 82194,041 SHALL BE 16'-9". MINIMUM VERTICAL CLEARANCE ON I 63174,076 SHALL BE 18'-6".

3.) POST LENGTH QUANTITIES ARE APPROXIMATE AND BASED ON TYPICAL SIGN LOCATIONS.

4.) RECONSTRUCT EXISTING GUARD RAIL (STA. 864+78 SB) INCIDENTAL TO FOUNDATION.

NOTES TO CONTRACTOR

1.) REFER TO STANDARD PLAN S2.10 (SHEET # 20) FOR ADDITION OF 5' BOTTOM HEIGHT FOR ONE WAY ARROW ALONG THRU ROAD WAY.

2.) REFER TO STANDARD PLAN S9.10 (SHEET #39) FOR ADDITION OF STEEL SIGN PANELS AND OTHER REVISIONS.

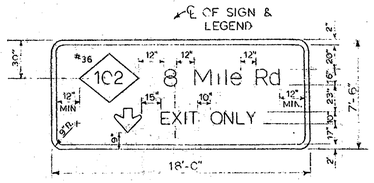
3.) REFER TO STANDARD PLAN S11.10 (SHEET # 44) FOR NEW [illegible] RAIL AND ADDITION OF REFLECTORIZED WASHERS.

4.) REFER TO STANDARD PLAN S20.10 (SHEET #47) FOR REVISION TO "YIELD" SIGN (R1-2-36).

5.) REFER TO STANDARD PLAN S9.30 (SHEET # 41) FOR NEW STRAPPING CONNECTION, SIGN TO POLE.

6.) REFER TO STANDARD PLANS S10.10 (SHEET # 42) AND S10.20 (SHEET # 43) FOR REVISION OF BRIDGE CONNECTIONS.

7.) REFER TO STANDARD PLANS S4.30 (SHEET # 23), S4.40 (SHEET # 24) & S4.50 (SHEET # 25) FOR REVISION OF THE BREAK-AWAY SUPPORTS.



Specifications

SAME AS SPECS. FOR G4-1 (SEE SHEET # 67)

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLAN INDEX

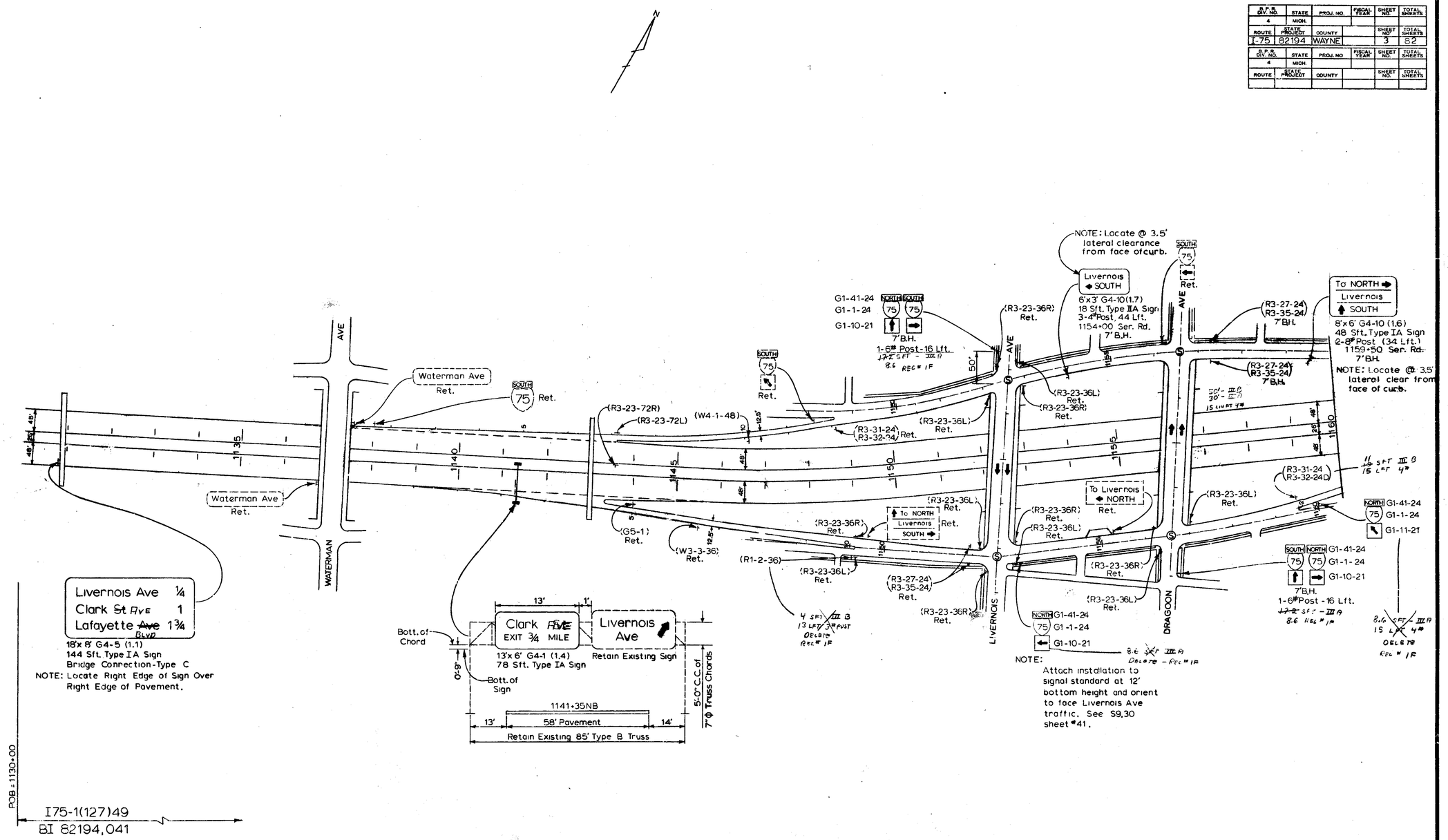
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUARED BOARD		
DRAWN BY	G.R.H.	2-66
TRACED BY		
CHECKED BY		
SHEET 2 OF		

I 63174,075

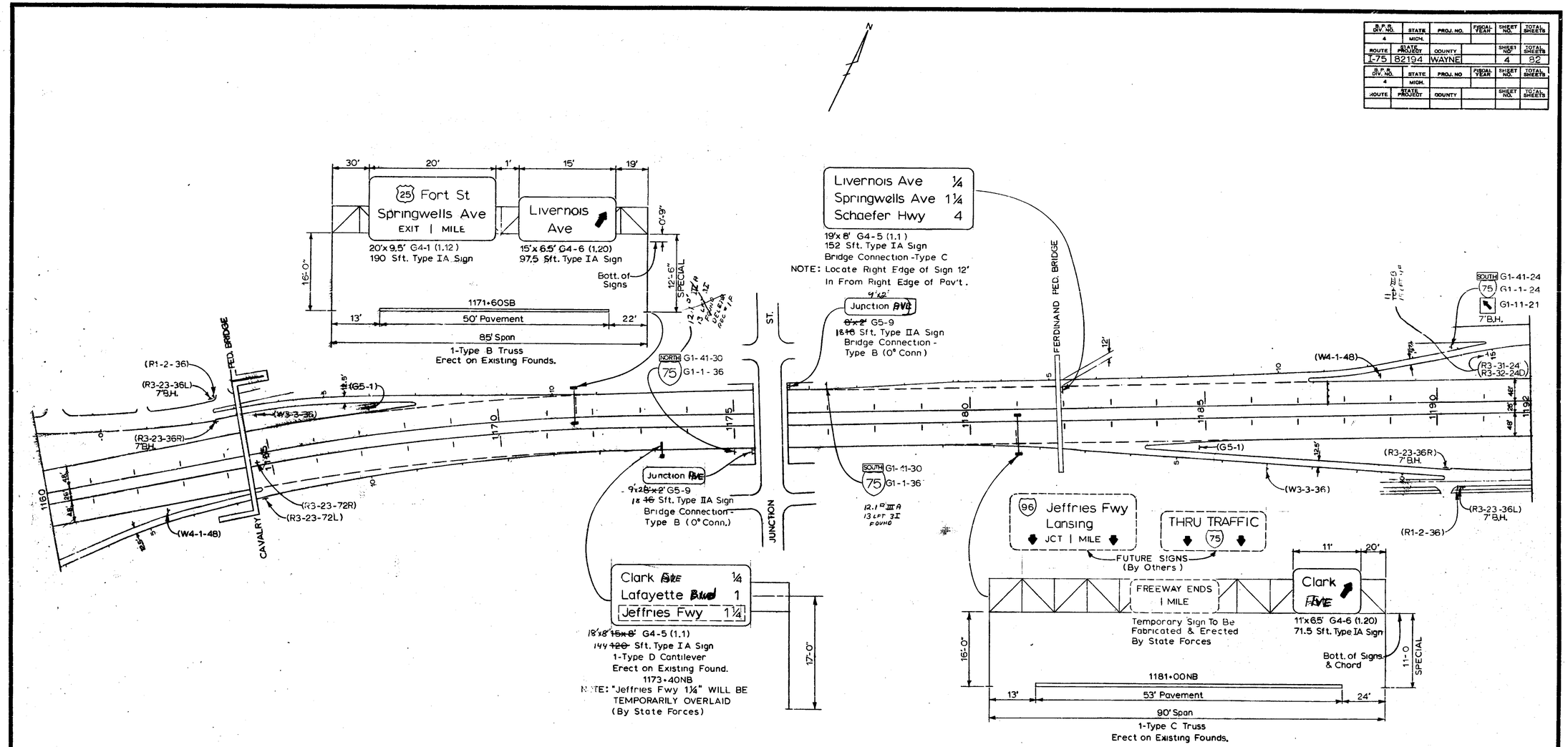
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82194	WAYNE		3	82

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



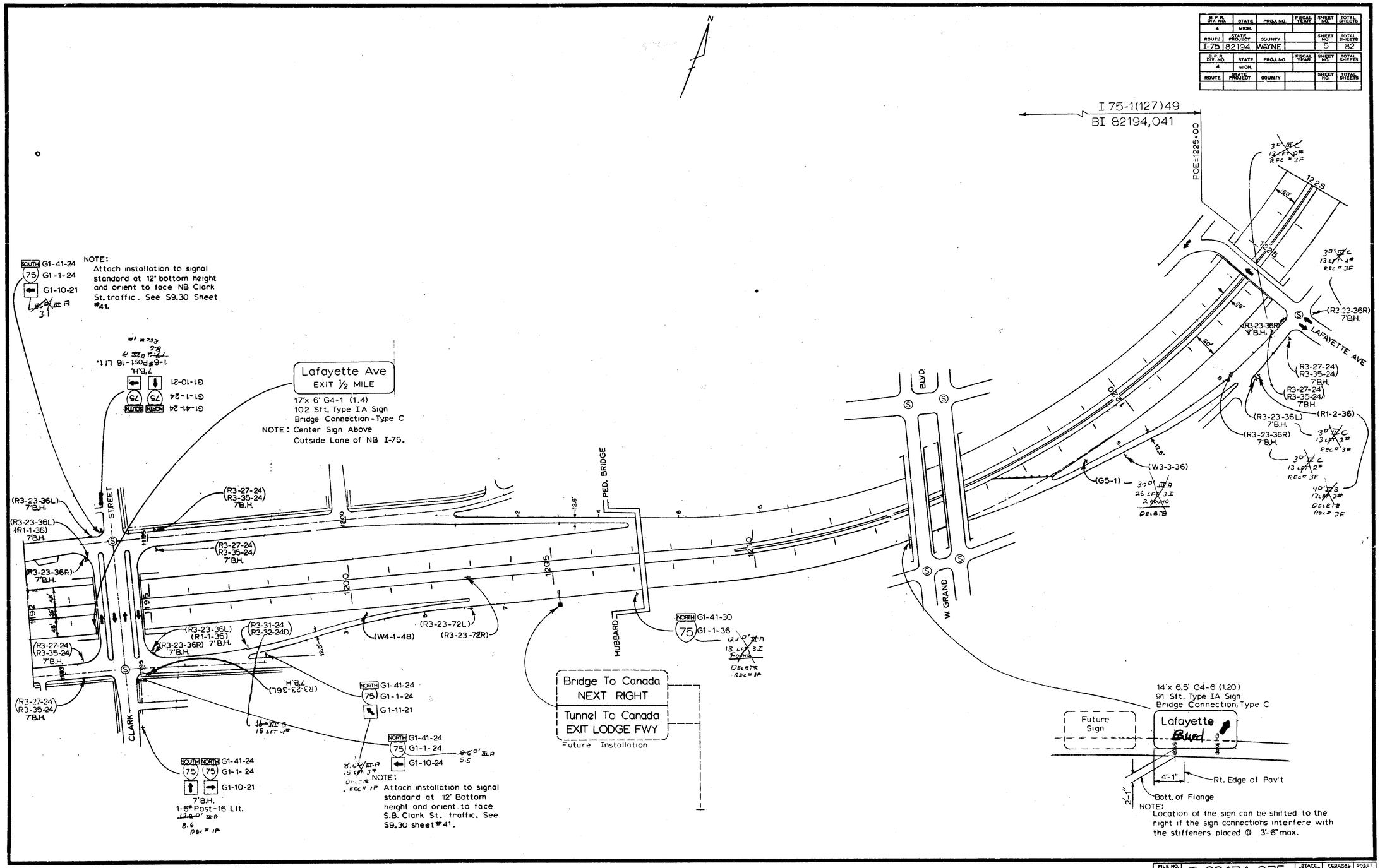
FILE NO. USE NO. SEQ. STENCIL	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		82194		3

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82194	WAYNE		4	82
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO. USE NO. 350 STENCIL	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		82194		4

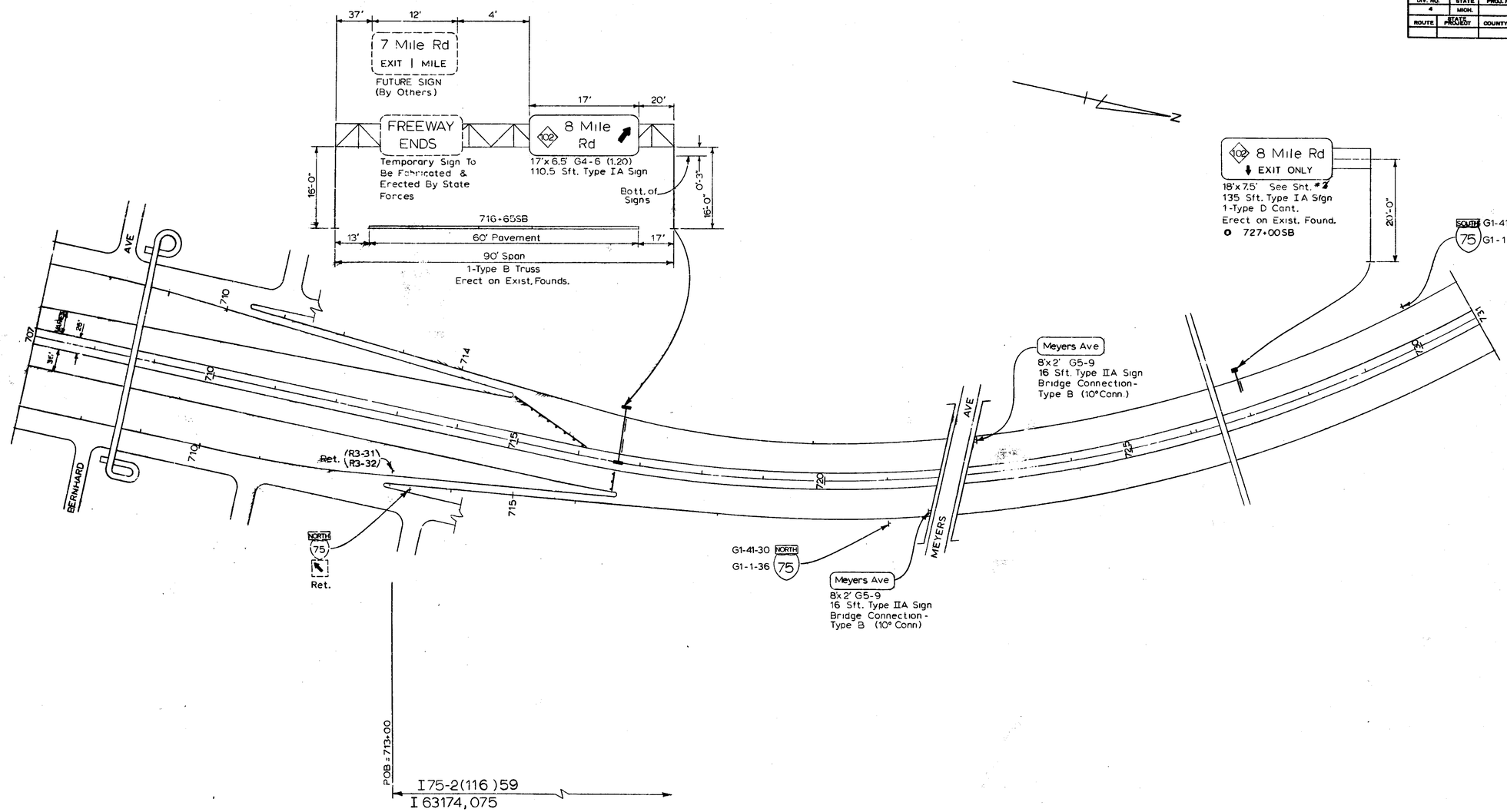
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82194	WAYNE		5	82
B.P.R. DIV. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075	82194		5

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		6	82

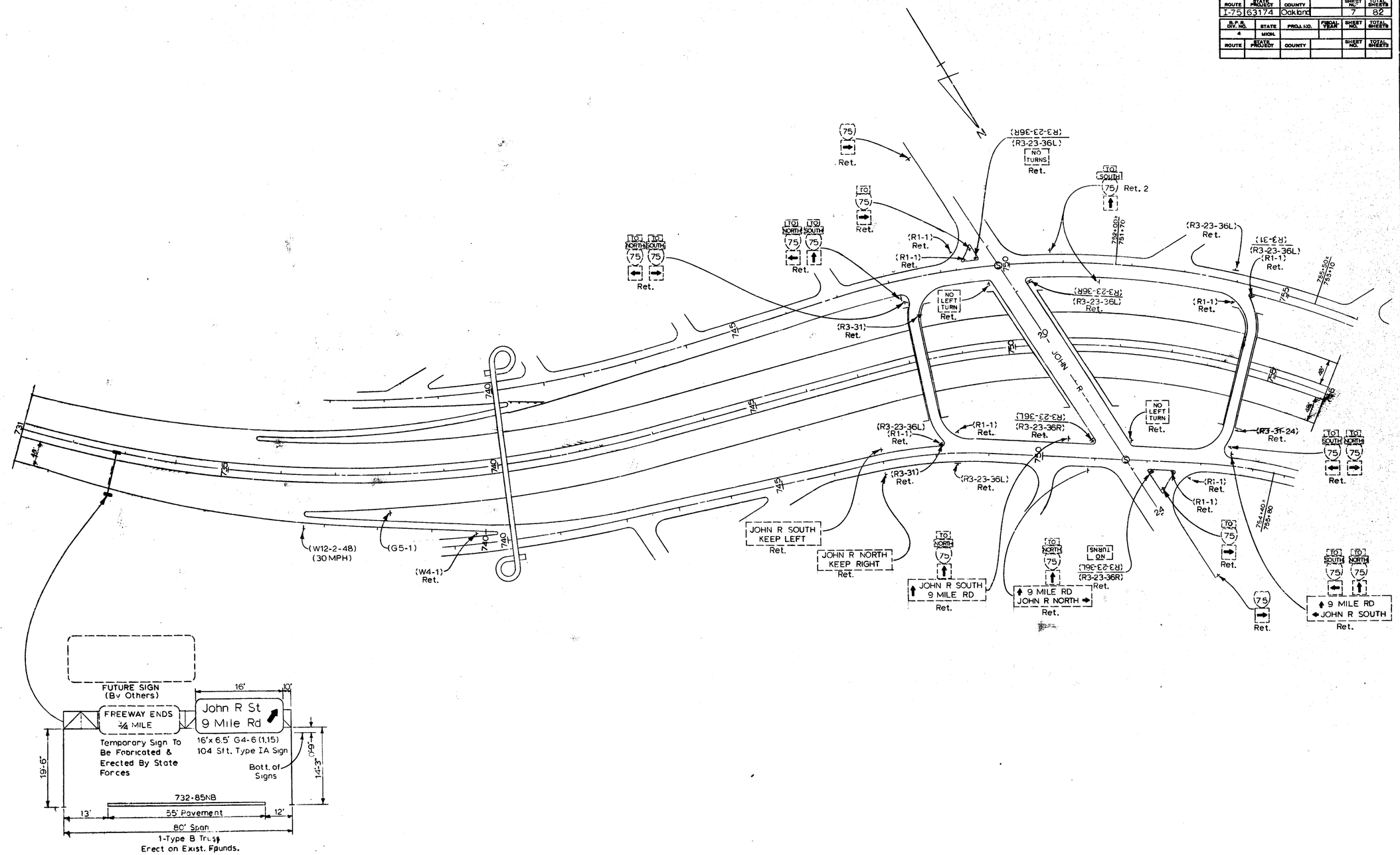
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO. USE NO. 380 STENCIL	I 63174,075	STATE PROJECT 63174	FEDERAL PROJECT	SHEET NO. 6

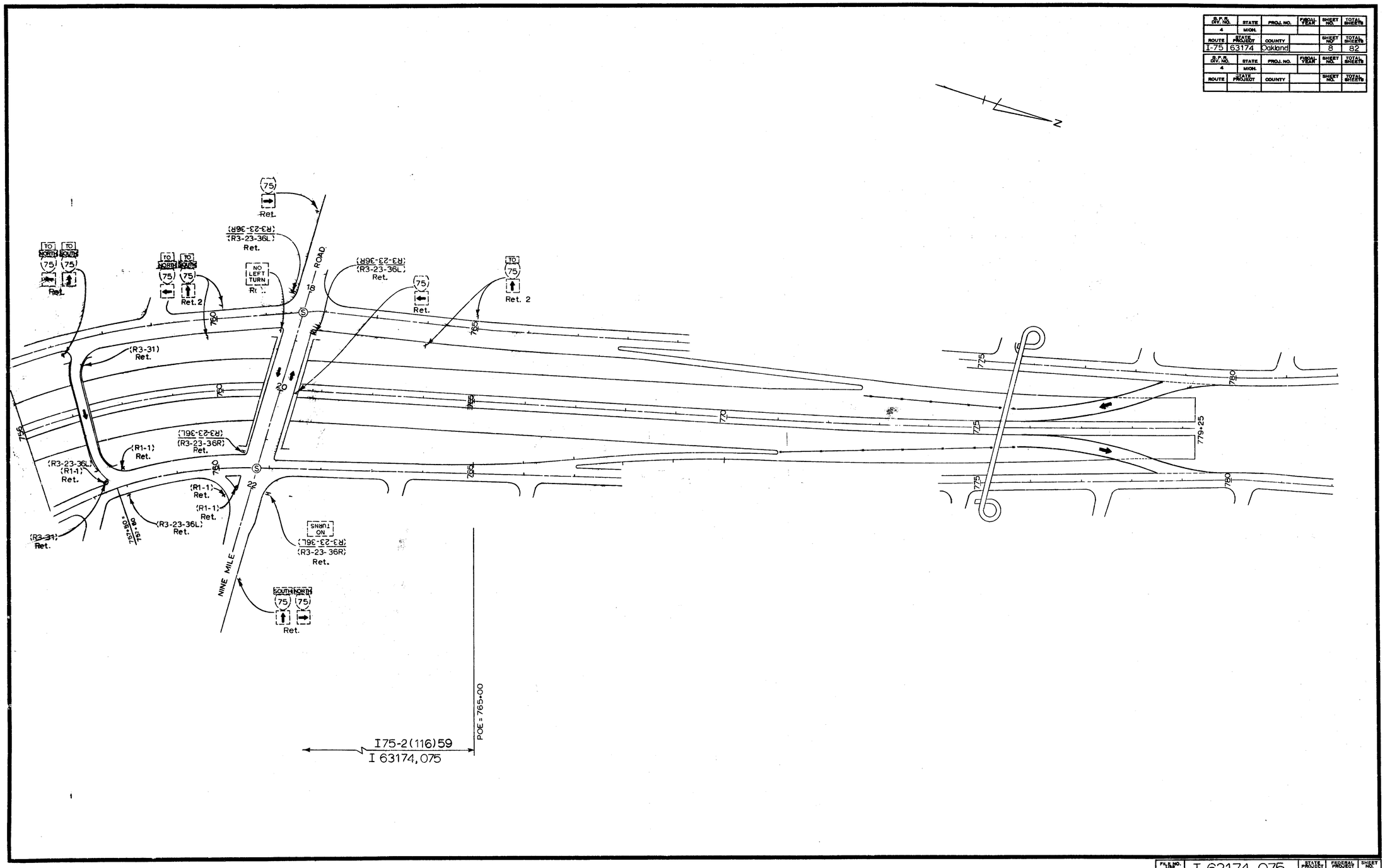
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		7	82

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO. USE NO. 350 STENCIL	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174		7

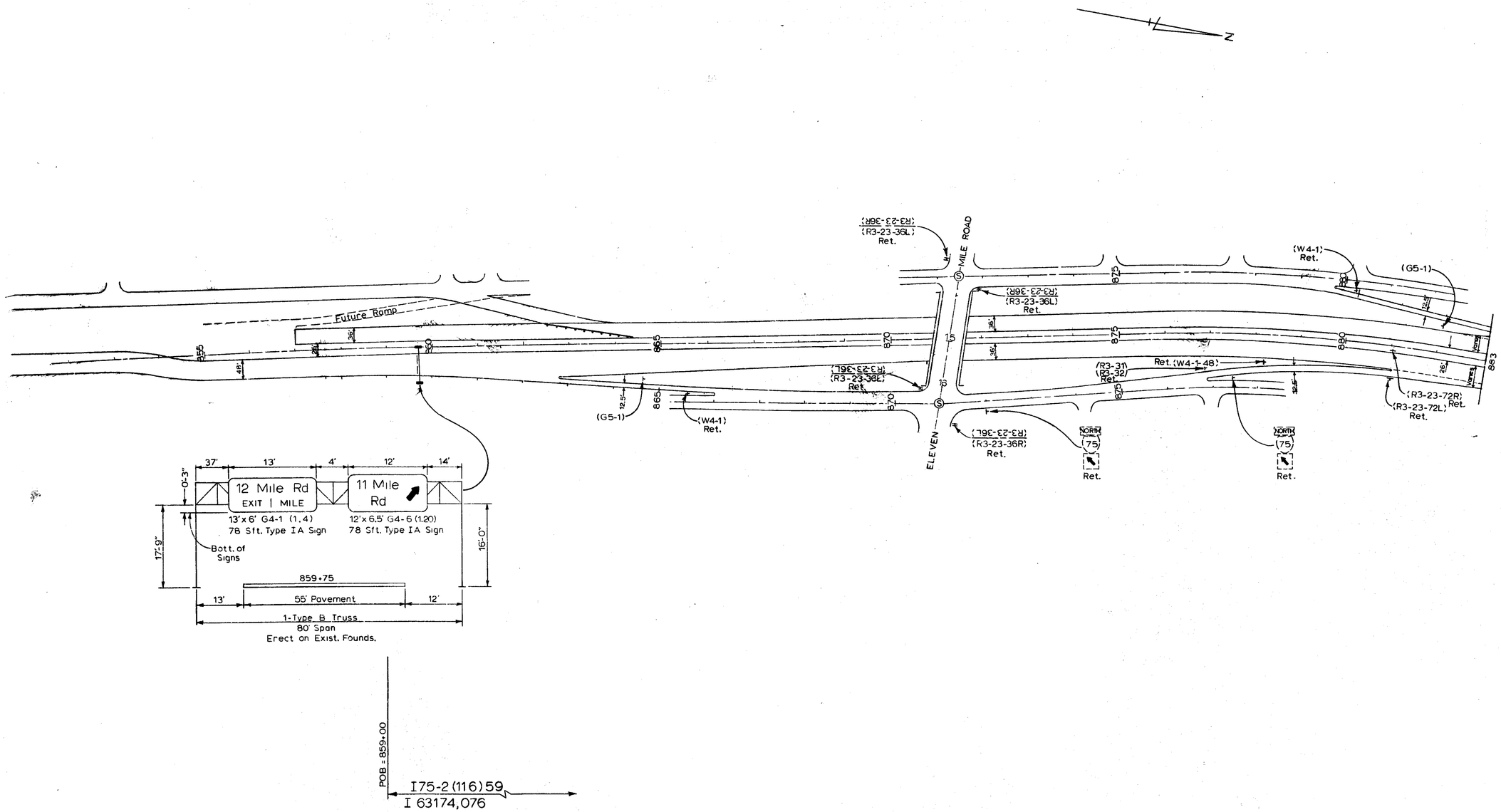
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		8	82
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO.	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174		8

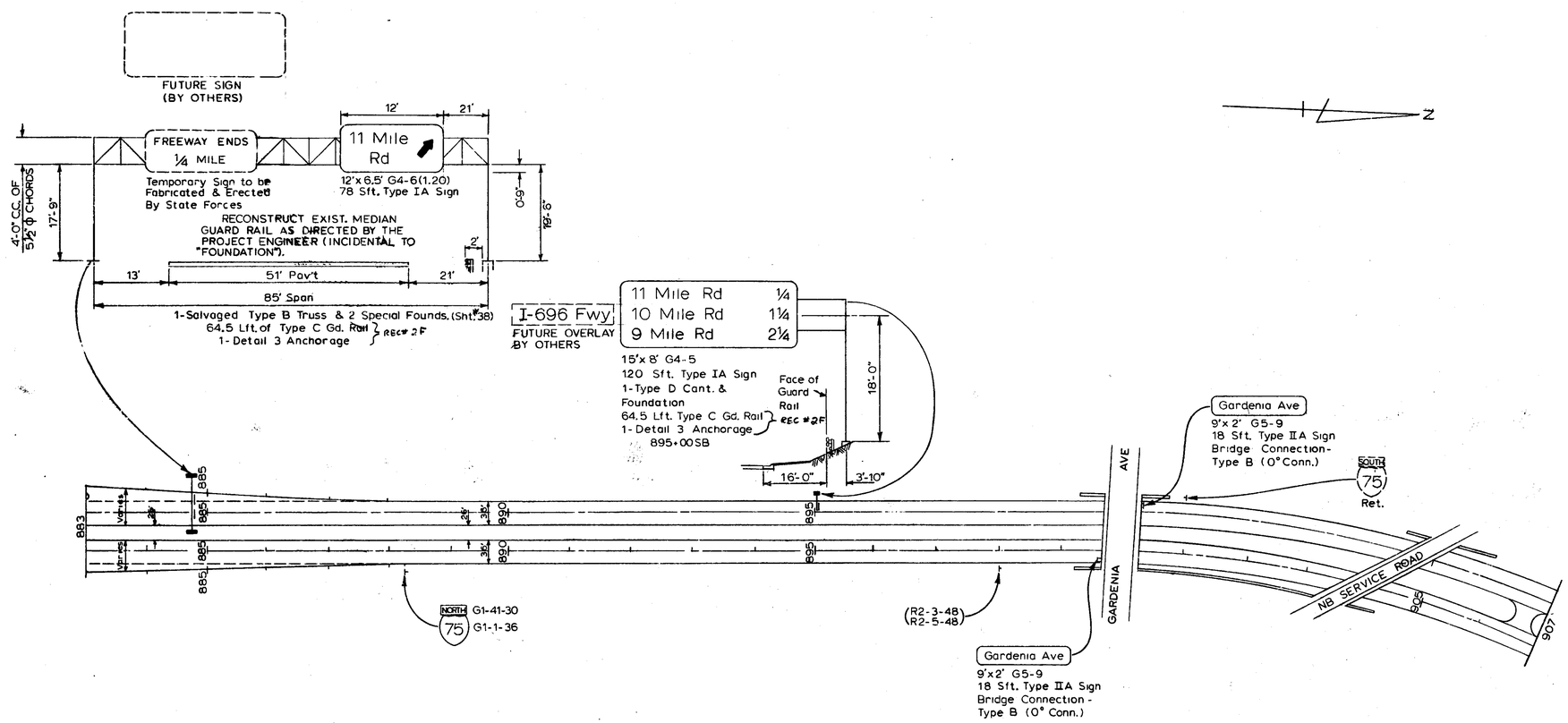
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		9	82

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



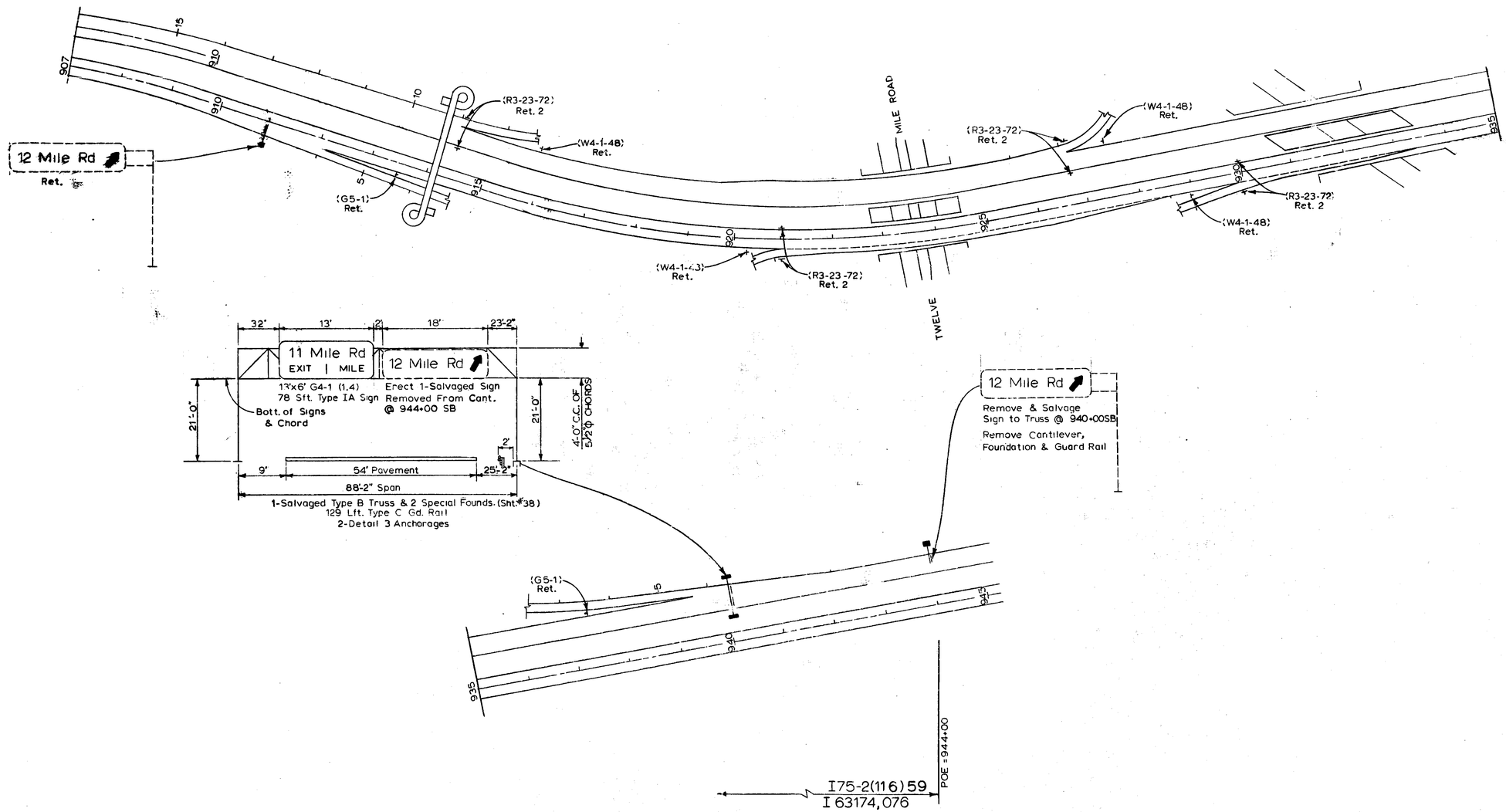
FILE NO.	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174		9

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		10	82
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO. USE NO. 330 STENCIL	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174		10

D.P.S. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		11	82
D.P.S. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FILE NO.	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174		11

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I 75	82194	WAYNE		12	12

QUANTITY

AS PER PLANS

SHEET NO.	BEAM GUARD RAIL (LFT.) — GUARD RAIL ANCHORAGE (EA.)							TRUSS (EA.) — FOUNDATION (EA.)												CANTILEVER (EA.) — FOUNDATION (EA.)										BREAK-AWAY COLUMN (EA.) — FOUNDATION (EA.)											
								TYPE B SPAN (FT.)						TYPE B FOUNDATION	TYPE C SPAN (FT.)						TYPE C FOUNDATION																				
	TYPE A	TYPE B	TYPE C	TYPE BD	TYPE CD	DETAIL 1 ANCHORAGE	DETAIL 3 ANCHORAGE	85							90							TYPE A	TYPE A FOUNDATION	TYPE B	TYPE B FOUNDATION	TYPE C	TYPE C FOUNDATION	TYPE D	TYPE D FOUNDATION	TYPE E	TYPE E FOUNDATION	3 I 5.7	3 I 5.7 FOUNDATION	4 I 7.7	4 I 7.7 FOUNDATION	6 B 8.5	6 B 8.5 FOUNDATION	8 B 13	8 B 13 FOUNDATION	8 WF 17	8 WF 17 FOUNDATION	10 WF 21	10 WF 21 FOUNDATION
	3221	3222	3223	3224	3225	3226	3228	5027						5031	5048						5051	5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126
3																																												
4								1							1													1				6	6											
5																																3	3											
TOTAL								1							1													1				9	9											

AS CONSTRUCTED

SHEET NO.	BEAM GUARD RAIL (LFT.) — GUARD RAIL ANCHORAGE (EA.)							TRUSS (EA.) — FOUNDATION (EA.)												CANTILEVER (EA.) — FOUNDATION (EA.)										BREAK-AWAY COLUMN (EA.) — FOUNDATION (EA.)											
								TYPE B SPAN (FT.)						TYPE B FOUNDATION	TYPE C SPAN (FT.)						TYPE C FOUNDATION																				
	TYPE A	TYPE B	TYPE C	TYPE BD	TYPE CD	DETAIL 1 ANCHORAGE	DETAIL 3 ANCHORAGE	85							90							TYPE A	TYPE A FOUNDATION	TYPE B	TYPE B FOUNDATION	TYPE C	TYPE C FOUNDATION	TYPE D	TYPE D FOUNDATION	TYPE E	TYPE E FOUNDATION	3 I 5.7	3 I 5.7 FOUNDATION	4 I 7.7	4 I 7.7 FOUNDATION	6 B 8.5	6 B 8.5 FOUNDATION	8 B 13	8 B 13 FOUNDATION	8 WF 17	8 WF 17 FOUNDATION	10 WF 21	10 WF 21 FOUNDATION
	3221	3222	3223	3224	3225	3226	3228	5027						5031	5048						5051	5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126
3																																5	5											
4								1							1													1				0	0											
5																																Rec. 4 WF	Rec. 4 WF											
																																Auth.	Auth.											
TOTAL								1							1													1				5	5											

CONTRACT NO: BI 82194,041

F.A.P. NO.	PROJECT	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	I 63174 075	82194		12

2133

B.P.R. DIV. NO.	STATE	PROJ. NO.	FEDERAL PROJ.	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	82194	WAYNE		13	82

QUANTITY

AS PER PLANS

SHEET NO.	POST LENGTH (LIN. FT.) POST 2# STEEL	POST 3# STEEL	POST 4# STEEL	POST 6# STEEL	POST 8# STEEL	POST AND DELINEATOR (LIN. FT.) SINGLE CRYSTAL	DOUBLE YELLOW	SIGN AREA (SQ. FT.) TYPE IA	TYPE IIA	TYPE IIIA	TYPE IB	TYPE IIB	TYPE IIIB	TYPE IIC	TYPE IIIC	BRIDGE CONNECTION (EA.) TYPE A	TYPE B	TYPE C
	5142	5143	5144	5145	5146	5200	5201	5210	5215	5220	5225	5230	5235	5240	5245	5275	5276	5277
3		57	134	32	34			270	18	57.6		16	25	24				1
4	52	120	89					631	32	92.8		32	37	24	12		2	1
5	104	82	208	32				193		138.3		16	54	24	30			2
TOTAL	156	259	431	64	34			1094	50	288.7		64	116	72	42		2	4

AS CONSTRUCTED

SHEET NO.	POST LENGTH (LIN. FT.) POST 2# STEEL	POST 3# STEEL	POST 4# STEEL	POST 6# STEEL	POST 8# STEEL	POST AND DELINEATOR (LIN. FT.) SINGLE CRYSTAL	DOUBLE YELLOW	SIGN AREA (SQ. FT.) TYPE IA	TYPE IIA	TYPE IIIA	TYPE IB	TYPE IIB	TYPE IIIB	TYPE IIC	TYPE IIIC	BRIDGE CONNECTION (EA.) TYPE A	TYPE B	TYPE C
	5142	5143	5144	5145	5146	5200	5201	5210	5215	5220	5225	5230	5235	5240	5245	5275	5276	5277
3		44	118	32	34			270	18	23.2		16	21	24				1
4	52	120	88					655	36	80.7		32	37	24	12		2	1
5	39	69	188	32				199		61.8		16	50	24	18			2
	Rec. 8F	Rec. 8F	Rec. 8F							Rec. 8F			Rec. 8F		Rec. 8F			
	Auth.	Auth.	Auth.							Auth.			Auth.		Auth.			
TOTAL	91	233	394	64	34			1124	54	165.7		64	108	72	30		2	4

CHECKED
CONSTRUCTION
DATE 4/19/68

CONTRACT NO: BI 82194, 041

FILE NO. I 63174 075 | STATE PROJECT 82194 | FEDERAL PROJECT | SHEET NO. 13

B.P.R. CIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		14	82

QUANTITY

AS PER PLANS

SHEET NO.	BEAM GUARD RAIL (LFT.) — GUARD RAIL ANCHORAGE (EA.)							TRUSS (EA.) — FOUNDATION (EA.)														CANTILEVER (EA.) — FOUNDATION (EA.)										BREAK-AWAY COLUMN (EA.) — FOUNDATION (EA.)											
								TYPE B SPAN (FT.)							TYPE C SPAN (FT.)																												
	TYPE A	TYPE B	TYPE C	TYPE BD	TYPE CD	DETAIL 1 ANCHORAGE	DETAIL 3 ANCHORAGE	80	90					TYPE B FOUNDATION							TYPE C FOUNDATION	TYPE A	TYPE A FOUNDATION	TYPE B	TYPE B FOUNDATION	TYPE C	TYPE C FOUNDATION	TYPE D	TYPE D FOUNDATION	TYPE E	TYPE E FOUNDATION	3 I 5.7	3 I 5.7 FOUNDATION	4 I 7.7	4 I 7.7 FOUNDATION	6 B 8.5	6 B 8.5 FOUNDATION	8 B 13	8 B 13 FOUNDATION	8 WF 17	8 WF 17 FOUNDATION	10 WF 21	10 WF 21 FOUNDATION
	3221	3222	3223	3224	3225	3226	3228	5026	5028					5031							5051	5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126
6									1																			1				2	2											
7								1																								2	2											
8																																											
TOTAL								1	1																			1				4	4											

AS CONSTRUCTED

SHEET NO.	BEAM GUARD RAIL (LFT.) — GUARD RAIL ANCHORAGE (EA.)							TRUSS (EA.) — FOUNDATION (EA.)														CANTILEVER (EA.) — FOUNDATION (EA.)										BREAK-AWAY COLUMN (EA.) — FOUNDATION (EA.)											
								TYPE B SPAN (FT.)							TYPE C SPAN (FT.)																												
	TYPE A	TYPE B	TYPE C	TYPE BD	TYPE CD	DETAIL 1 ANCHORAGE	DETAIL 3 ANCHORAGE	80	90					TYPE B FOUNDATION							TYPE C FOUNDATION	TYPE A	TYPE A FOUNDATION	TYPE B	TYPE B FOUNDATION	TYPE C	TYPE C FOUNDATION	TYPE D	TYPE D FOUNDATION	TYPE E	TYPE E FOUNDATION	3 I 5.7	3 I 5.7 FOUNDATION	4 I 7.7	4 I 7.7 FOUNDATION	6 B 8.5	6 B 8.5 FOUNDATION	8 B 13	8 B 13 FOUNDATION	8 WF 17	8 WF 17 FOUNDATION	10 WF 21	10 WF 21 FOUNDATION
	3221	3222	3223	3224	3225	3226	3228	5026	5028					5031							5051	5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126
6									1																			1				2	2											
7								1																								4	4											
8																																											
																																Auth. 1 acc	Auth. 1 acc											
TOTAL								1	1																			1				4	4											

CHECKED

CONTRACT NO: I 63174, 075

P.B.R. NO. OR PROJ. NO.	I 63174, 075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174	075-2/1	14

2133

QUANTITY

B.P.S. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				

ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		15	82

AS PER PLANS

SHEET NO.	POST LENGTH (LIN. FT.) POST 2# STEEL	POST 3# STEEL	POST 4# STEEL	POST AND DELINEATOR (LIN. FT.) SINGLE CRYSTAL	DOUBLE YELLOW	SIGN AREA (SQ. FT.) TYPE IA	TYPE IIA	TYPE IIIA	TYPE IB	TYPE IIB	TYPE IIIB	TYPE IIC	TYPE IIIC	BRIDGE CONNECTION (EA.) TYPE A	TYPE B	TYPE C
	5142	5143	5144	5200	5201	5210	5215	5220	5225	5230	5235	5240	5245	5275	5276	5277
6						245.5	32	24.2							2	
7						104				20						
8									-							
TOTAL						349.5	32	24.2		20					2	

AS CONSTRUCTED

SHEET NO.	POST LENGTH (LIN. FT.) POST 2# STEEL	POST 3# STEEL	POST 4# STEEL	POST AND DELINEATOR (LIN. FT.) SINGLE CRYSTAL	DOUBLE YELLOW	SIGN AREA (SQ. FT.) TYPE IA	TYPE IIA	TYPE IIIA	TYPE IB	TYPE IIB	TYPE IIIB	TYPE IIC	TYPE IIIC	BRIDGE CONNECTION (EA.) TYPE A	TYPE B	TYPE C
	5142	5143	5144	5200	5201	5210	5215	5220	5225	5230	5235	5240	5245	5275	5276	5277
6						245.5	32	24.2							2	
7						104.0		30.0		20						
8																
								Auth. # 1002								
TOTAL						349.5	32	54.2		20					2	

CHECKED
CONTRACT SECTION
DATE 4/25/69

CONTRACT NO: I 63174, 075

FILE NO.	I 63174, 075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174	I-75-2(116)	15

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		16	82

QUANTITY

AS PER PLANS

SHEET NO.	BEAM GUARD RAIL (LFT.) — GUARD RAIL ANCHORAGE (EA.)							TRUSS (EA.) — FOUNDATION (EA.)														CANTILEVER (EA.) — FOUNDATION (EA.)										BREAK-AWAY COLUMN (EA.) — FOUNDATION (EA.)											
			TYPE B											TYPE C																													
			SPAN (FT.)											SPAN (FT.)																													
	TYPE A	TYPE B	TYPE C	TYPE BD	TYPE CD	DETAIL 1 ANCHORAGE	DETAIL 3 ANCHORAGE	80						TYPE B FOUNDATION	SPECIAL TYPE B FOUNDATION							TYPE C FOUNDATION		TYPE A	TYPE A FOUNDATION	TYPE B	TYPE B FOUNDATION	TYPE C	TYPE C FOUNDATION	TYPE D	TYPE D FOUNDATION	TYPE E	TYPE E FOUNDATION	3 I 5.7	3 I 5.7 FOUNDATION	4 I 7.7	4 I 7.7 FOUNDATION	6 B 8.5	6 B 8.5 FOUNDATION	8 B 13	8 B 13 FOUNDATION	8 WF 17	8 WF 17 FOUNDATION	10 WF 21	10 WF 21 FOUNDATION
	3221	3222	3223	3224	3225	3226	3228	5026						5031	5032							5051		5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126
9								1																										2	2										
10			129				2								2															1	1			3	3										
11			129				2								2																														
TOTAL			258				4	1							4															1	1			5	5										

AS CONSTRUCTED

SHEET NO.	BEAM GUARD RAIL (LFT.) — GUARD RAIL ANCHORAGE (EA.)							TRUSS (EA.) — FOUNDATION (EA.)														CANTILEVER (EA.) — FOUNDATION (EA.)										BREAK-AWAY COLUMN (EA.) — FOUNDATION (EA.)											
			TYPE B											TYPE C																													
			SPAN (FT.)											SPAN (FT.)																													
	TYPE A	TYPE B	TYPE C	TYPE BD	TYPE CD	DETAIL 1 ANCHORAGE	DETAIL 3 ANCHORAGE	80						TYPE B FOUNDATION	SPECIAL TYPE B FOUNDATION							TYPE C FOUNDATION		TYPE A	TYPE A FOUNDATION	TYPE B	TYPE B FOUNDATION	TYPE C	TYPE C FOUNDATION	TYPE D	TYPE D FOUNDATION	TYPE E	TYPE E FOUNDATION	3 I 5.7	3 I 5.7 FOUNDATION	4 I 7.7	4 I 7.7 FOUNDATION	6 B 8.5	6 B 8.5 FOUNDATION	8 B 13	8 B 13 FOUNDATION	8 WF 17	8 WF 17 FOUNDATION	10 WF 21	10 WF 21 FOUNDATION
	3221	3222	3223	3224	3225	3226	3228	5026						5031	5032							5051		5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126
9								1																										4	4										
10			154.5				1								2															1	1			3	3										
11			153.5				2								2																														
			Nails 4 ea				Nails 4 ea																											Nails 4 ea	Nails 4 ea										
			Nails 4 ea				Nails 4 ea																											Nails 4 ea	Nails 4 ea										
TOTAL			308.0				3	1							4															1	1			7	7										

CHECKED
[illegible]
DATE 4/25/86

CONTRACT NO: I 63174, 076

P.R.S. NO. AND SUB-DIVISION	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174 075	63174	I-75-2(111)	16

S.P.R. DIV. NO.	STATE	PROJ. NO.	FEDERAL TEAM	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
I-75	63174	Oakland		17	82

QUANTITY

AS PER PLANS

SHEET NO.	POST LENGTH (LIN. FT.) POST 2# STEEL	POST 3# STEEL	POST 4# STEEL	POST AND DELINEATOR (EA.) SINGLE CRYSTAL	DOUBLE YELLOW	SIGN AREA (SQ. FT.) TYPE IA	TYPE IIA	TYPE IIIA	TYPE IB	TYPE IIB	TYPE IIIB	TYPE IIC	TYPE IIIC	BRIDGE CONNECTION (EA.) TYPE A	TYPE B	TYPE C	SALVAGED TRUSS (EA.) TYPE B SPAN 85'	88'-2"	SALVAGED SIGN (EA.)	REMOVAL OF SIGNS (LUMP SUM)
	5142	5143	5144	5200	5201	5210	5215	5220	5225	5230	5235	5240	5245	5275	5276	5277	5077	5081	5265	5350
9						156		60												
10						198	36	12.1		36					2		1			
11						78												1	1	
																				LUMP SUM
TOTAL						432	36	72.1		36					2		1	1	1	

AS CONSTRUCTED

SHEET NO.	POST LENGTH (LIN. FT.) POST 2# STEEL	POST 3# STEEL	POST 4# STEEL	POST AND DELINEATOR (EA.) SINGLE CRYSTAL	DOUBLE YELLOW	SIGN AREA (SQ. FT.) TYPE IA	TYPE IIA	TYPE IIIA	TYPE IB	TYPE IIB	TYPE IIIB	TYPE IIC	TYPE IIIC	BRIDGE CONNECTION (EA.) TYPE A	TYPE B	TYPE C	SALVAGED TRUSS (EA.) TYPE B SPAN 85'	88'-2"	SALVAGED SIGN (EA.)	REMOVAL OF SIGNS (LUMP SUM)
	5142	5143	5144	5200	5201	5210	5215	5220	5225	5230	5235	5240	5245	5275	5276	5277	5077	5081	5265	5350
9						156		60.												
10						198	36	12.1		36					2		1			
11						78												1	1	1
TOTAL						432	36	72.1		36					2		1	1	1	1

CHECKED CONTRACT SECTION DATE 4/25/6

CONTRACT NO: I 63174, 076

FILE NO.	I 63174, 075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		63174	I-25-2(116)	17

SIGN NO.	SIGN	SIZE	SIGN AREA (SQ. FT.)	SIGN TYPE	SUPPORT NO.	SUPPORT SIZE	SUPPORT TOTAL LENGTH (LIN. FT.)	SUPPORT BOT. HT.	FOUNDATION
R1-1-36	STOP	3X3	9	IIIA	2	4#	25 27	5 7	
R1-2-36	YIELD	3X3X3	4	IIIB	1	3#	12 13	5 7	
R2-1-48	SPEED LIMIT 55	4X5	20	IIB	2	3I5.7	29		2
R2-3-48	SPEED LIMIT 70	4X5	20	IIB	2	3I5.7	29		2
R2-5-48	MINIMUM 45	4X4	16	IIB	SUPPLEMENTARY			4	
R3-4-36	NO U TURN	3X4	12	IIB	2	4#	31	7	
R3-21-36	KEEP RIGHT	3X4	12	IIB	2	4#	25	5	
R3-23-36L R3-23-36R	ONE WAY ONE WAY	3X1 3X1	3 3	IIIC	1	2#	13	7	
R3-27-36	DO NOT ENTER	3X4	12	IIB	2	4#	31 33		
R3-31-24 R3-32-24	MOTOR VEHICLES ONLY [illegible]	2X2.5 2X2.5	5 5	IIIB	1	4#	15	5	
R4-14-48	EMERGENCY STOPPING ONLY	4X3	12	IIB	2	4#	30	7	
R6-10-48	KEEP OFF MEDIAN	4X5	20	IIB	2	3I5.7	27	7	2
G5-1	EXIT	6X5	30	IIIA	2	3I5.7	25	7	
R3-21-24	KEEP RIGHT	2X2.5	5	IIIB	1	4#	11	5	
R3-27-24	DO NOT ENTER	2X2.5	5	IIIB	1	4#	14 15		
R3-23-72L R3-23-72R	ONE WAY ONE WAY	6X2 6X2	12 12	IIC	2	3#	22	5	
R3-35-24	WRONG WAY	2X1.5	3	IIIA	SUPPLEMENTARY			5 7	
R3-35-36	WRONG WAY	3X2	6	IIIA	SUPPLEMENTARY			5 7	

SIGN NO.	SIGN	SIZE	SIGN AREA (SQ. FT.)	SIGN TYPE	SUPPORT NO.	SUPPORT SIZE	SUPPORT TOTAL LENGTH (LIN. FT.)	SUPPORT BOT. HT.	FOUNDATION
W1-1-36R		3X3	9	IIIB	2	3#	25	5	
W1-1-36L		3X3	9	IIIB	2	3#	25	5	
W1-2-36R		3X3	9	IIIB	2	3#	25	5	
W1-2-36L		3X3	9	IIIB	2	3#	25	5	
W12-1-21 W1-1-36R	50 	1.75X1.75 3X3	12	IIIB	2	3#	25	5	
W12-1-21 W1-1-36L	50 	1.75X1.75 3X3	12	IIIB	2	3#	25	5	
W12-1-21 W1-2-36R	50 	1.75X1.75 3X3	12	IIIB	2	3#	25	5	
W12-1-21 W1-2-36L	50 	1.75X1.75 3X3	12	IIIB	2	3#	25	5	
W1-6-48		4X2	8	IIB	2	3#	24	5	
W1-7-48		4X2	8	IIB	2	3#	23	5	
W3-1-36	STOP AHEAD	3X3	9	IIIB	2	3#	25	5	
W3-2-36	YIELD AHEAD	3X3	9	IIIB	2	3#	25	5	
W4-1-30	PLUNGE TRAFFIC	2.5X2.5	6.3	IIIB	1	3#	13 14	5 7	
W4-1-48	MERGING TRAFFIC	4X4	16	IIB	2	4#	29	7	
W4-5-36	TWO WAY TRAFFIC	3X3	9	IIIB	2	3#	25	5	
W6-4-48	FREEWAY ENDS	4X4	16	IIB	2	4#	29	7	
W12-2-48	EXIT 00 M.P.H	4X5	20	IIB	2	3I5.7	27	7	2
G5-15	[illegible]	1X2 1X3	2 3	IIIA	1	2#	10 11	5	

SIGN NO.	SIGN	SIZE	SIGN AREA (SQ. FT.)	SIGN TYPE	SUPPORT NO.	SUPPORT SIZE	SUPPORT TOTAL LENGTH (LIN. FT.)	SUPPORT BOT. HT.	FOUNDATION
W3-3-36	SIGNAL AHEAD	3X3	9	IIIB	2	3#	25	5	
R3-34-48	EMERGENCY AND AUTHORIZED VEHICLES ONLY	4X5	20	IIB	2	3I5.7	27	7	2

GENERAL NOTES

1. TOTAL SUPPORT LENGTHS ARE BASED ON TYPICAL SIGN LOCATIONS & SLOPES AND ARE FOR ESTIMATING PURPOSES ONLY.
2. ROUTE MARKER CLUSTERS SHALL BE ERECTED ON POST, COLUMN, OR CANTILEVER POLE AS SHOWN ON SIGN LOCATION PLANS. SEE STD. PLAN S1.20 & S9.20 FOR ERECTION DETAILS.
3. THE SUPPORT(S) LISTED FOR STANDARD SIGNS SHALL BE USED, UNLESS SHOWN OTHERWISE ON SIGN LOCATION PLAN SHEETS.

FOR INFORMATION ONLY

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD
SIGN INSTALLATIONS

REVISIONS

NO.	DESCRIPTION	DATE	BY

ROAD DIVS
DRAWN BY RDS
TRACED BY
CHECKED BY
SHEET 1 OF 2

7-64

S1.10

I 63174;075

INTERSTATE

SIGN NO.	SIGN	SIZE	SIGN AREA (SQ.FT.)	SIGN TYPE	TOTAL NO. REQ.
GI-1-24		2X2	4	IIIA	
GI-1-36		3X3	9	IIIA	
GI-2-30		2.5X2.1	5.3	IIIA	
GI-2-42		3.5X3	10.5	IIIA	
GI-10-21		1.75X1.75	3.1	IIIA	
GI-11-21		1.75X1.75	3.1	IIIA	
GI-41-24	EAST	2 X .75	1.5	IIIA	
GI-41-24	WEST	2 X .75	1.5	IIIA	
GI-41-24	NORTH	2 X .75	1.5	IIIA	
GI-41-24	SOUTH	2 X .75	1.5	IIIA	
GI-41-30	EAST	2.5X1.25	3.1	IIIA	
GI-41-30	WEST	2.5X1.25	3.1	IIIA	
GI-41-30	NORTH	2.5X1.25	3.1	IIIA	
GI-41-30	SOUTH	2.5X1.25	3.1	IIIA	
GI-49-30	JUNCTION	2.5 X 1	2.5	IIIA	
GI-10-30		2.5X2.5	6.3	IIIA	
GI-11-30		2.5X2.5	6.3	IIIA	

BUSINESS LOOP OR SPUR

SIGN NO.	SIGN	SIZE	SIGN AREA (SQ.FT.)	SIGN TYPE	TOTAL NO. REQ.
GI-3-24		2X2	4	IIIA	
GI-3-36		3X3	9	IIIA	
GI-4-30		2.5X2.1	5.3	IIIA	
GI-4-42		3.5X3	10.5	IIIA	
GI-17-21		1.75X1.75	3.1	IIIA	
GI-8-21		1.75X1.75	3.1	IIIA	
GI-39-21	ENDS	1.75X1.75	3.1	IIIA	
GI-42-24	EAST	2 X .75	1.5	IIIA	
GI-42-24	WEST	2 X .75	1.5	IIIA	
GI-42-24	NORTH	2 X .75	1.5	IIIA	
GI-42-24	SOUTH	2 X .75	1.5	IIIA	
GI-42-30	EAST	2.5X1.25	3.1	IIIA	
GI-42-30	WEST	2.5X1.25	3.1	IIIA	
GI-42-30	NORTH	2.5X1.25	3.1	IIIA	
GI-42-30	SOUTH	2.5X1.25	3.1	IIIA	

U.S. & MICHIGAN

SIGN NO.	SIGN	SIZE	SIGN AREA (SQ.FT.)	SIGN TYPE	TOTAL NO. REQ.
GI-5-24		2.1X2	4.2	IIIB	
GI-5-36		3.1X3	9.3	IIIB	
GI-6-24		2.1X2	4.2	IIIB	
GI-6-36		3.1X3	9.3	IIIB	
GI-7-28		2.3X2	4.6	IIIB	
GI-7-42		3.5X3	10.5	IIIB	
GI-8-28		2.3X2	4.6	IIIB	
GI-8-42		3.5X3	10.5	IIIB	
GI-9-18		1.5X1.5	2.3	IIIB	
GI-9-27		2.25X2.25	5.1	IIIB	
GI-30-21		1.75X1.75	3.1	IIIB	
GI-31-21		1.75X1.75	3.1	IIIB	
GI-40-21	ENDS	1.75X1.75	3.1	IIIB	
GI-43-24	EAST	2 X .75	1.5	IIIB	
GI-43-24	WEST	2 X .75	1.5	IIIB	
GI-43-24	NORTH	2 X .75	1.5	IIIB	
GI-43-24	SOUTH	2 X .75	1.5	IIIB	
GI-43-30	EAST	2.5X1.25	3.1	IIIB	
GI-43-30	WEST	2.5X1.25	3.1	IIIB	
GI-43-30	NORTH	2.5X1.25	3.1	IIIB	
GI-43-30	SOUTH	2.5X1.25	3.1	IIIB	
GI-44-24	BUSINESS	2 X .75	1.5	IIIB	
GI-50-30	JUNCTION	2.5 X 1	2.5	IIIB	
GI-31-30		2.5 X 2.5	6.3	IIIB	

SUPPORT

SIGN	NO. OF POSTS	POST SIZE	LENGTH REQ. (LIN. FT.)	BOT. HT.	FOUNDATION
JUNCTION	1	4"	13	5	
			14	7	
JUNCTION	1	4"	13	5	
			14	7	
2 x .75, 2 x 2	1	4"	13	5	
			14	7	
	1	4"	14	5	
			15	7	
	1	3 I 5.7	10	5	1
			10	7	
	1	4 I 7.7	15	5	1
			15	7	
	1	4"	15	5	
			15	7	
	1	3 I 5.7	10	5	
			10	7	
	1	4 I 7.7	16	5	1
			16	7	
	1	6 B 8.5	14	5	1
			15	7	
	2	4 I 7.7	32	5	2
			32	7	
2.5x1.25, 3x3	1	3 I 5.7	13	7	1
2.5 x 1.25, 3 x 3, 2 x 2	1	3 I 5.7	13	5	1
2.5 x 1.25, 3 x 3, 2 x 0.75, 2 x 2	1	3 I 5.7	14	5	1
	1	4"	13	5	
			14	7	
2.5 x 1.25, 3 x 3, 2.5 x 2.5	1	4 I 7.7	15	7	1

FOR INFORMATION ONLY

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD

ROUTE MARKER INSTALLATIONS

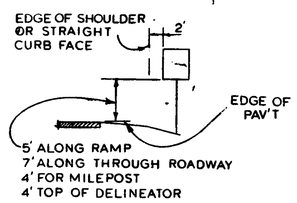
REVISIONS

NO.	DESCRIPTION	DATE	BY

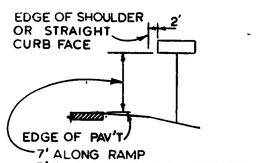
ROAD DESS		
DRAWN BY	RDS	7-64
TRACED BY		
CHECKED BY		
SHEET 2 OF 2		

S 1.20

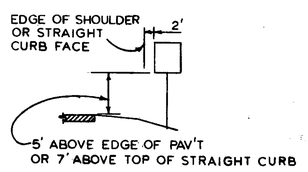
I 63174, 075



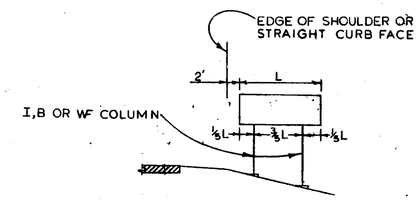
TYPICAL



ONE WAY ARROW

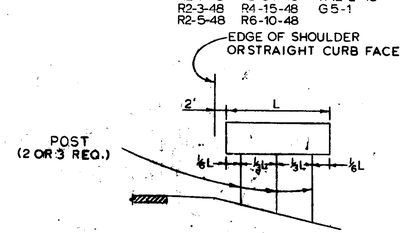


TYPICAL

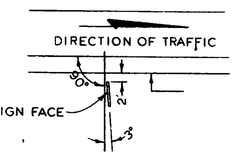


NOTE: SEE SIGN STANDARD PLANS TO DETERMINE COLUMN SUPPORT LOCATIONS FOR THE FOLLOWING SIGNS:

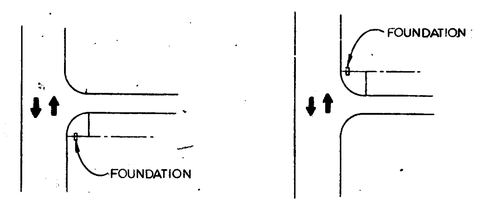
R2-1-48	R3-34-48	W12-2-48
R2-3-48	R4-15-48	G5-1
R2-5-48	R6-10-48	



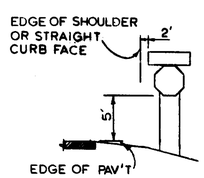
SUPPORT LOCATIONS



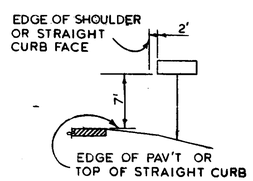
LOCATION SKETCH
(ROADSIDE SIGNS ONLY)



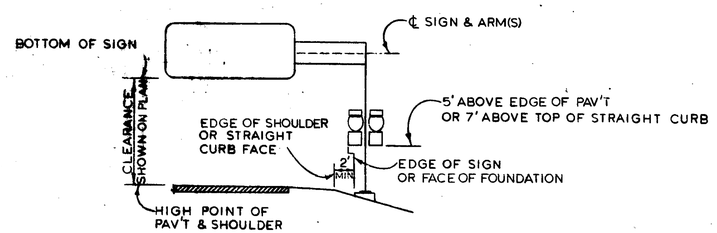
PLAN - CANTILEVER SUPPORT
CROSSROAD LOCATION

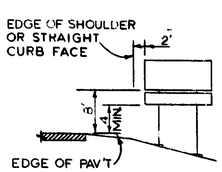


SUPPLEMENTAL SIGN
OVER MAJOR SIGN



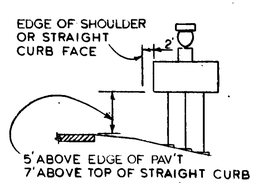
ONE WAY ARROW





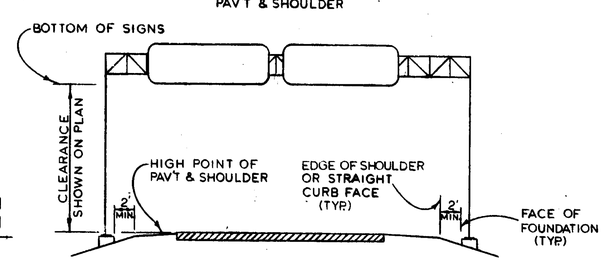
SUPPLEMENTAL SIGN
UNDER MAJOR SIGN

THROUGH ROADWAY AND RAMP



SUPPLEMENTAL SIGN
OVER MAJOR SIGN

CROSSROAD



OVERHEAD

NOTES:

1. ALL SIGN SUPPORTS EXCEPT OVERHEAD SHALL BE CONSTRUCTED TO ORIENT THE SIGN AS SHOWN IN THE LOCATION SKETCH.
2. EXCEPT FOR LOCATIONS WHERE STRAIGHT CURB EXISTS, ALL SIGNS SHALL HAVE A MIN. 10' LATERAL CLEARANCE TO THE RIGHT AND 6' MIN. TO THE LEFT OF THE EDGE OF PAVEMENT.

MICHIGAN STATE HIGHWAY DEPARTMENT

TYPICAL LOCATIONS
SIGNS & SUPPORTS

REVISIONS

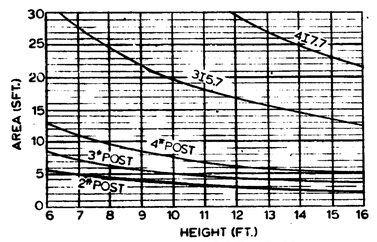
NO.	DESCRIPTION	DATE	BY
1	CHANGE TO BREAK-AWAY COLUMN	4-66	

DRAWN BY	RDS
SHEET	1 OF 1

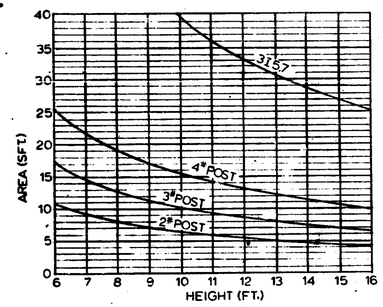
S2.10

I 63174,075

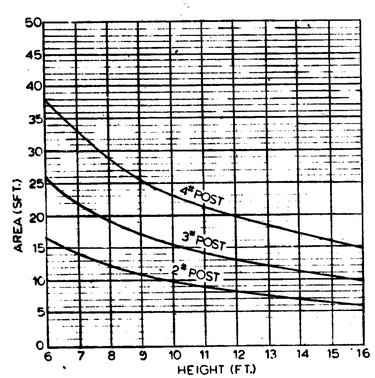
20



1-POST ASSEMBLY

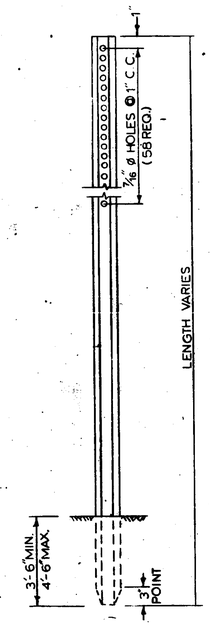


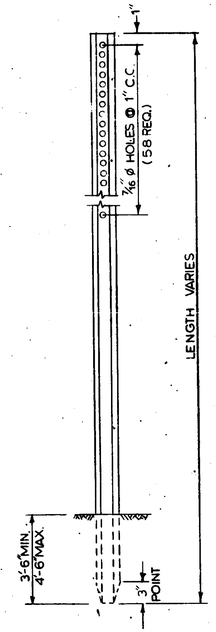
2-POST ASSEMBLY

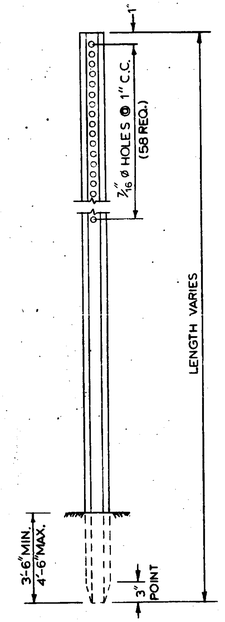


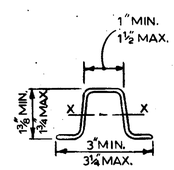
3-POST ASSEMBLY

HEIGHT = DISTANCE FROM GROUND TO CENTER OF SIGN OR SIGN CLUSTER.





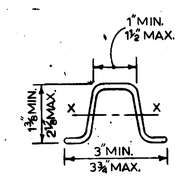




WEIGHT = 2 LB/FT. MIN.

SECTION MODULUS X-X = 0.19 IN³ MIN.

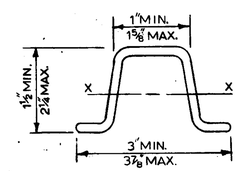
2# STEEL POST



WEIGHT = 3 LB/FT. MIN.

SECTION MODULUS X-X = 0.31 IN³ MIN.

3# STEEL POST



WEIGHT = 4 LB/FT. MIN.

SECTION MODULUS X-X = 0.44 IN³ MIN.

4# STEEL POST

NOTES:
1.) POST SHALL BE GALVANIZED.
2.) SEE STANDARD PLAN S9.20 FOR SIGN CONNECTION.

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL POST

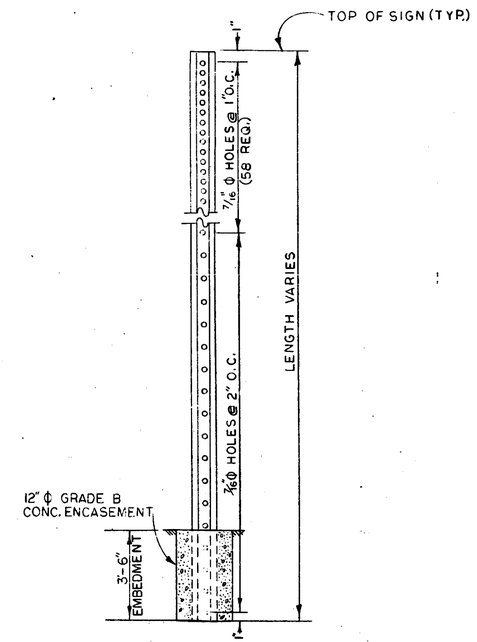
REVISIONS

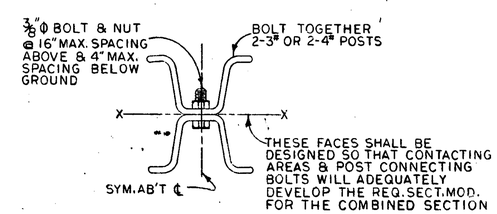
NO.	DESCRIPTION	DATE	BY
1		1-1-64	
2		8-64	
3	MAX. DIMENSIONS	3-12-65	
4	DELETION OF 6# & 8# POST, ADDED GRAPH	4-6-66	

ROAD BOSS		
DRAWN BY	RLD	4-4-66
TRACED BY		
CHECKED BY		
SHEET 1 OF 1		

S3.10

I 63174 075





WEIGHT - 6#/FT. MIN. WEIGHT - 8#/FT. MIN.

SECT. MOD. X-X - 1.02 in³ MIN. SECT. MOD. X-X - 1.75 in³ MIN.

NOTES:

1. POST, BOLTS & NUTS SHALL BE GALVANIZED.
2. SEE STD. PLAN S9.20 FOR SIGN CONNECTION.

6# OR 8# STEEL POST

REVISIONS

NO.	DESCRIPTION	DATE
1		1-1-64
2		5-64
3	MAX. DIMENSIONS	3-12-65

MICHIGAN
STATE HIGHWAY DEPARTMENT
JOHN C. MACKIE, COMMISSIONER
TRAFFIC DIVISION

STEEL POST

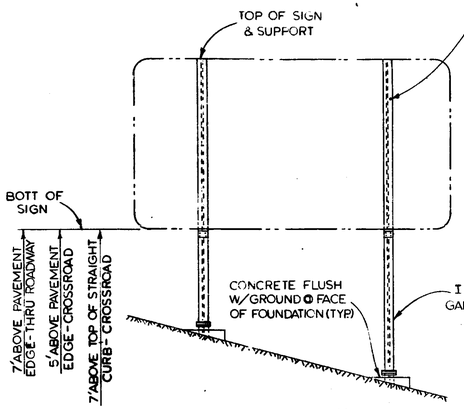
AUTH. NO.
CONT. SEC.
REF.
SHEET 1 OF 1 PLAN S3.20

DRAWN R.D.S.
DATE Oct. 62
SCALE

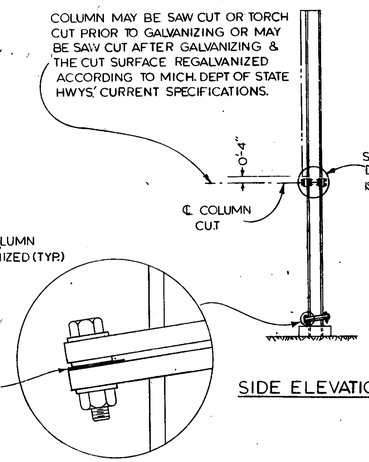
I 63174.075

22

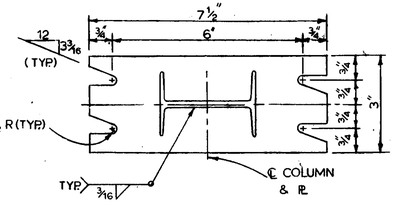
HOLES REQUIRED FOR THE MOUNTING OF SIGNS SHALL BE 7/16"Φ, HAVE CENTERS LOCATED 7/16" FROM THE RIGHT EDGE OF COLUMN, & SHALL MATCH EXISTING SIGN OR SIGN BRACKET HOLES. IF HOLES ARE DRILLED AFTER GALVANIZING, THE EXPOSED SURFACE SHALL BE REGALVANIZED ACCORDING TO MICH. DEPT. OF STATE HWYS. CURRENT SPECS.



ELEVATION
FACING TRAFFIC

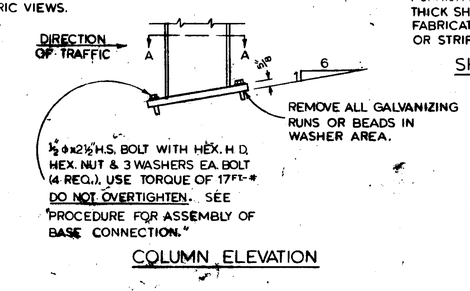


SIDE ELEVATION

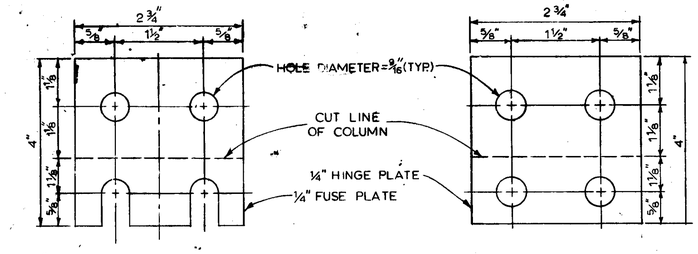


SECTION A-A

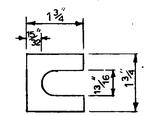
THE SECTION SHOWN IS FOR INSTALLATIONS ON RIGHT SHOULDER OR IN THE GORE. PLATE SLOT BEVELS ARE OPPOSITE HAND FROM THAT SHOWN FOR INSTALLATIONS ON LEFT SHOULDER.



COLUMN ELEVATION

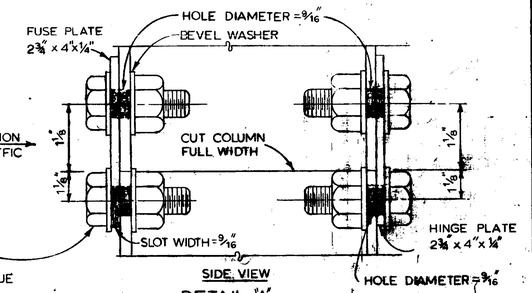


STEEL FUSE PLATE DETAIL

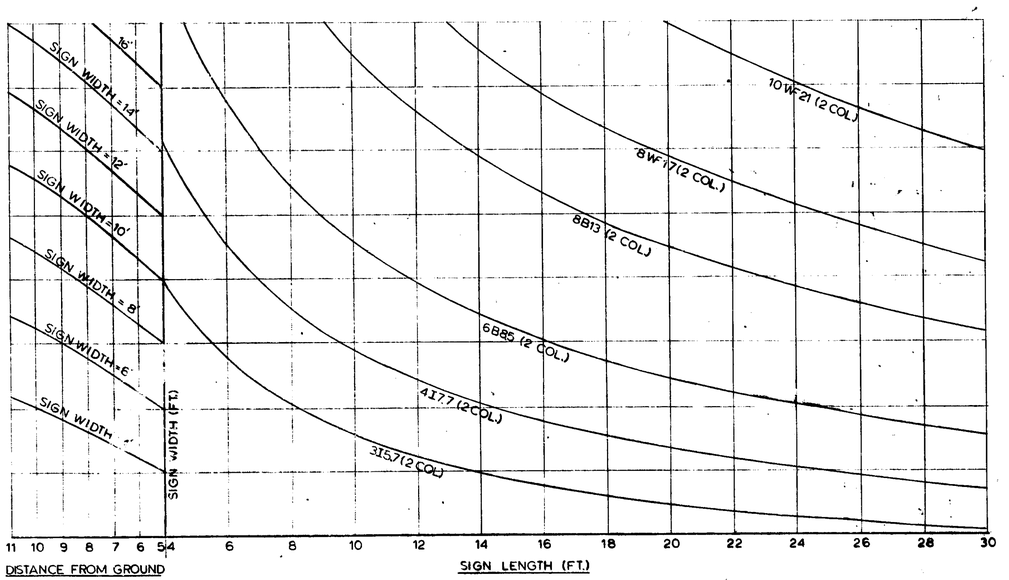


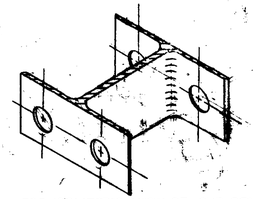
FURNISH 2 ea 0.012± THICK & 2 ea 0.032± THICK SHIMS PER COL. SHIM SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP.

SHIM DETAIL

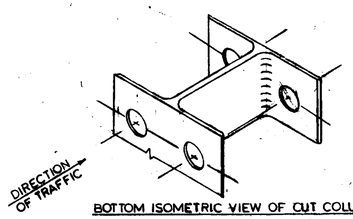


DETAIL "A"





TOP ISOMETRIC VIEW OF CUT COLUMN



BOTTOM ISOMETRIC VIEW OF CUT COLUMN

NOTES:

1.) PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:
   A. ASSEMBLE COLUMN TO STUB WITH BOLTS AND WITH ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES.
   B. SHIM AS REQUIRED TO PLUMB COLUMN.
   C. TIGHTEN BOLTS IN SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE.
   D. LOOSEN EACH BOLT AND RETIGHTEN TO PRESCRIBED TORQUE IN THE SAME ORDER AS INITIAL TIGHTENING.
   E. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH.
2.) DESIGN CONFORMS WITH AASHO SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS.
3.) MATERIALS AND FABRICATION SHALL CONFORM TO THE REQUIREMENTS OF MICHIGAN DEPARTMENT OF STATE HIGHWAYS' STANDARD & SUPPLEMENTAL SPECIFICATIONS.
4.) ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM-A441.
5.) ALL HIGH STRENGTH BOLTS AND WASHERS SHALL CONFORM TO ASTM-A325. ALL HIGH STRENGTH NUTS SHALL BE OF SUCH CAPACITY AS TO DEVELOP THE BOLT STRENGTH. SEE SUPPLEMENTAL SPECIFICATIONS FOR GALVANIZING AND BEESWAX LUBRICANT.
6.) NO COLUMN CUT OR PLATES ARE REQUIRED FOR 3I5.7 COLUMNS. NO COLUMN CUT OR PLATES ARE REQUIRED FOR 4I7.7 COLUMNS WHEN USED FOR ROUTE MARKER INSTALLATIONS.
7.) ALL STRUCTURAL STEEL SHALL BE GALVANIZED AFTER FABRICATION EXCEPT WHERE NOTED.
8.) ALL CONTACT AREAS OF PLATES AND COLUMN FLANGES SHALL BE FREE OF GALVANIZING BEADS OR RUNS.
9.) PROCEDURE FOR ASSEMBLY OF FUSE CONNECTION:
   A. FUSE PLATES AND HINGE PLATES SHALL BE INSTALLED IN THE SHOP AND THE BOLTS TORQUED TO THE VALUES SHOWN ON THE STANDARD PLANS. USE ONE WASHER UNDER THE BOLT HEAD AND ONE BEVEL OR FLAT WASHER UNDER THE NUT.
   B. ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUT OR FLAME CUT, PROVIDED ALL EDGES ARE GROUND.

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL COLUMN BREAK-AWAY (I)

REVISIONS

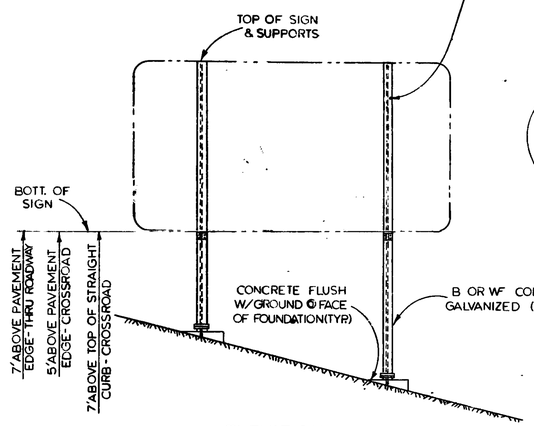
NO.	DESCRIPTION	DATE	BY
1	FUSE CONNECTION DETAIL	2-19-67	GRH

ROAD DESIGN		
DRAWN BY	RLD	3-1-66
TRACED BY		
CHECKED BY		
SHEET 1 OF 2		

S4.30

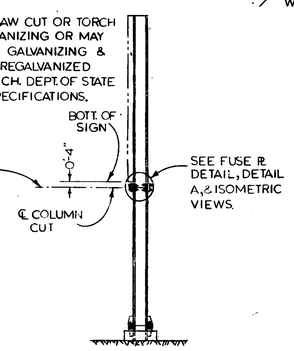
I63174,075

HOLES REQUIRED FOR THE MOUNTING OF SIGNS SHALL BE 7/16"φ, HAVE CENTERS LOCATED 7/8" FROM THE RIGHT EDGE OF COLUMN, & SHALL MATCH EXISTING SIGN OR SIGN BRACKET HOLES. IF HOLES ARE DRILLED AFTER GALVANIZING, THE EXPOSED SURFACE SHALL BE REGALVANIZED ACCORDING TO MICH. DEPT. OF STATE HWYS. CURRENT SPECS.

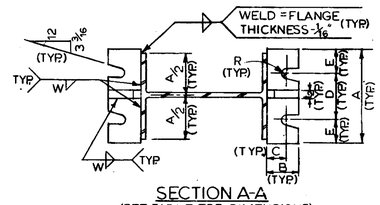


ELEVATION
FACING TRAFFIC

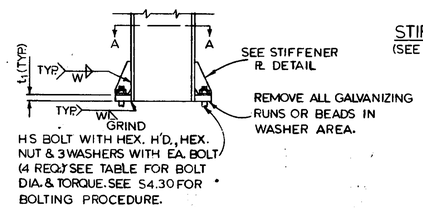
COLUMN MAY BE SAW CUT OR TORCH CUT PRIOR TO GALVANIZING OR MAY BE SAW CUT AFTER GALVANIZING & THE CUT SURFACE REGALVANIZED ACCORDING TO MICH. DEPT. OF STATE HWYS. CURRENT SPECIFICATIONS.



SIDE ELEVATION

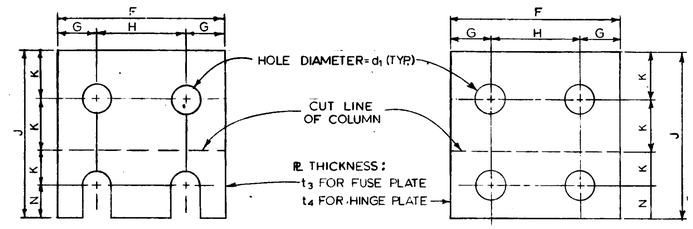


SECTION A-A
(SEE TABLE FOR DIMENSIONS)
SECTION SHOWN IS FOR INSTALLATION ON RIGHT SHOULDER & IN GORE. PLATE SLOT BEVELS ARE OPPOSITE HAND FROM THAT SHOWN FOR INSTALLATIONS ON LEFT SHOULDER.

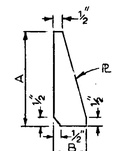


HS BOLT WITH HEX. H'D., HEX. NUT & 3 WASHERS WITH EA. BOLT (4 REQ.) SEE TABLE FOR BOLT DIA. & TORQUE. SEE S4.30 FOR BOLTING PROCEDURE.

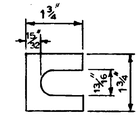
COLUMN ELEVATION



STEEL FUSE PLATE DETAIL
(SEE TABLE FOR DIMENSIONS)



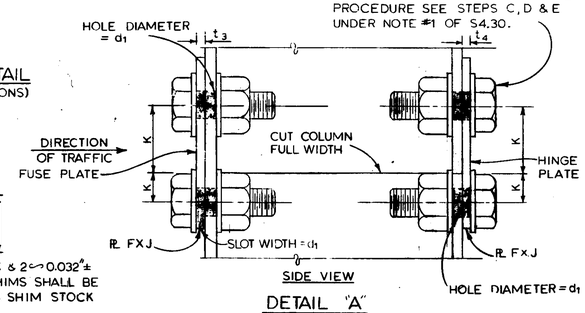
STIFFENER PL DETAIL
(SEE TABLE FOR DIMENSIONS)



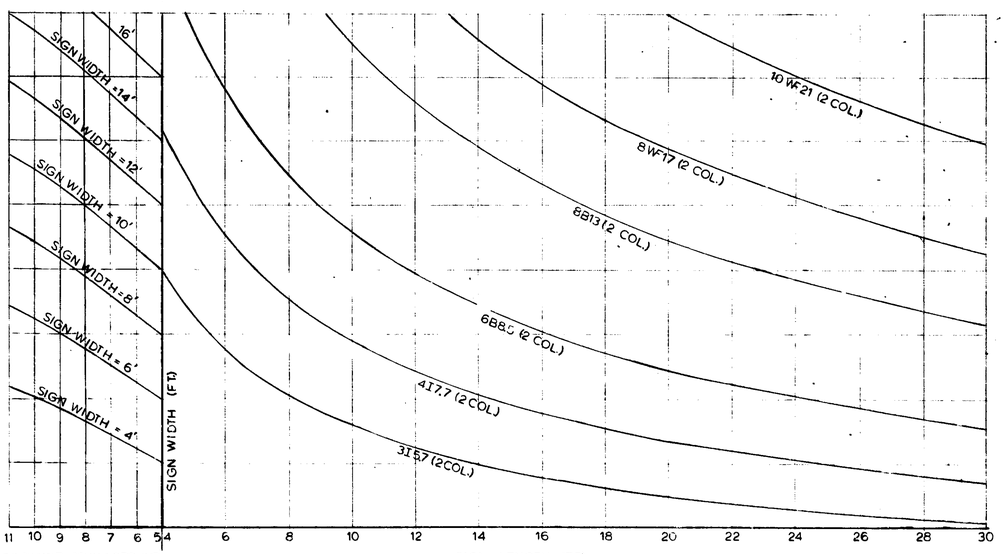
FURNISH 2 ea. 0.012 ± THICK & 2 ea. 0.032" ± THICK SHIMS PER COL. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP.

SHIM DETAIL

H.S. BOLT, GALV A-325, WITH HEX HEAD, HEX. NUT, AND WASHERS - TYP. (USE BEVELED WASHERS WHERE NEC.), FOR TIGHTENING PROCEDURE SEE STEPS C, D & E UNDER NOTE #1 OF S4.30.



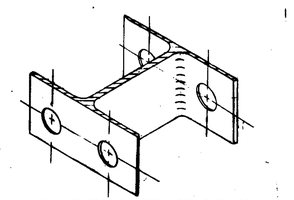
DETAIL "A"



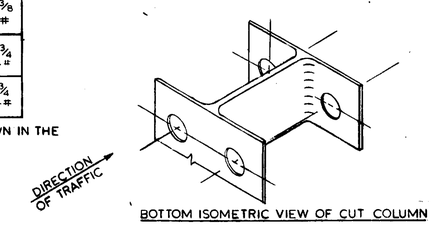
COLUMN SIZE	BASE CONNECTION DIMENSIONS (")										FUSE & HINGE PLATE DIMENSIONS (")							
	BOLT SIZE & TORQUE	A	B	C	D	E	t_1	t_2	W	R	F	G	H	J	K	N	t_3	t_4	BOLT SIZE & TORQUE
6B8.5	5/8"φ x 3 TORQUE = 38 FT.-#	5	2	1 1/4	2 3/4	1 1/8	3/4	1/2	1/4	11/32	4	7/8	2 1/4	4 1/2	1 1/4	3/4	3/8	1/4	3/4"φ x 2 1/4 200 FT.-#
8B13																			3/4"φ x 2 3/8 200 FT.-#
8WF17											5 1/4	1 1/4	2 3/4	5 3/8	1 1/2	7/8	1/2	3/8	7/8"φ x 2 3/4 300 FT.-#
10WF21	3/4"φ x 3 1/2 TORQUE = 63 FT.-#	6	2 1/4	1 3/8	3 1/2	1 1/4	1	3/4	5/16	13/32									7/8"φ x 2 3/4 300 FT.-#

TIGHTEN HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN IN THE TABLE. DO NOT OVERTIGHTEN.

NOTES:
SEE STANDARD S4.30.



TOP ISOMETRIC VIEW OF CUT COLUMN



BOTTOM ISOMETRIC VIEW OF CUT COLUMN

MICHIGAN STATE HIGHWAY DEPARTMENT

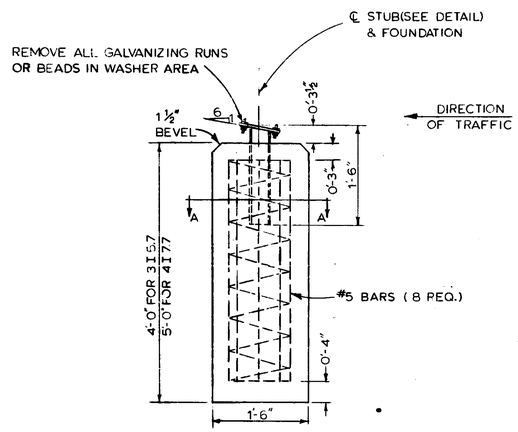
STEEL COLUMN BREAK-AWAY (B, WF)

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	FUSE CONNECTION DETAIL	2-15-67	GRH

ROAD DESS		
DRAWN BY	RLD	2-25-66
TRACED BY		
CHECKED BY		
SHEET 2 OF 2		

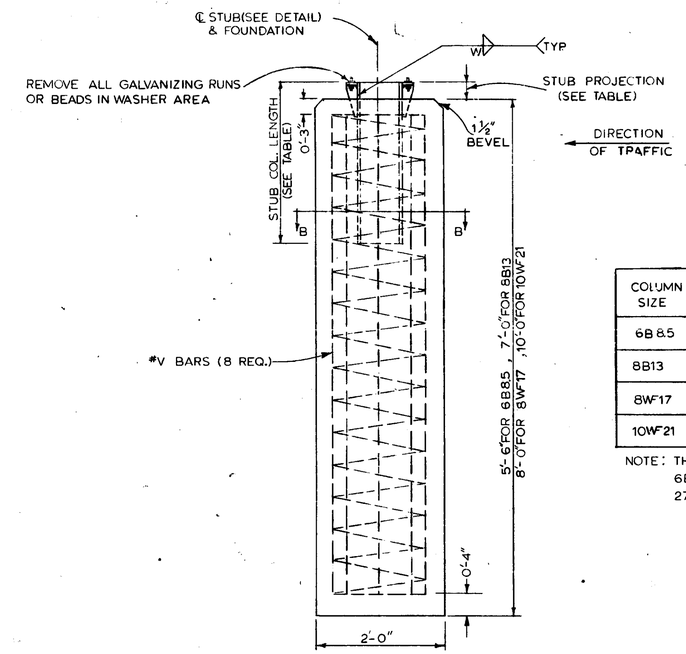
S4.40

I63174,075



PLAN
(3I5.7 & 4I7.7)

NOTE: THE WEIGHT OF REINFORCING STEEL & YARDS OF CONCRETE IN THE FOUNDATIONS ARE: 3I5.7 - 34.2# & 0.26 YD³ & 4I7.7 - 43.5# & 0.33 YD³.

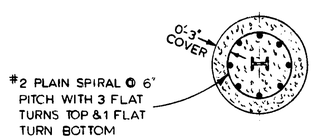


PLAN
(6B8.5, 8B13, 8WF17, 10WF21)

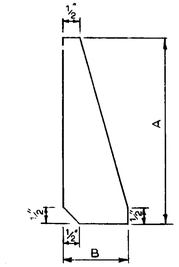
FOUNDATION TABLE

COLUMN SIZE	STUB LENGTH	STUB PROJECTION	BAR SIZES (#V)	STUB WT. (#)	STUB DIMENSIONS (")								
					A	B	C	D	E	R	t_1	t_2	W
6B8.5	2'-0"	0'-3"	5	23.3	5	2	1¼	2¾	1⅛	11/32	¾	½	¼
8B13	2'-6"	0'-3"	6	38.8									
8WF17	2'-6"	0'-3"	7	48.8									
10WF21	3'-0"	0'-2½"	9	75.3	6	2¼	1⅜	3½	1¼	13/32	1	¾	5/16

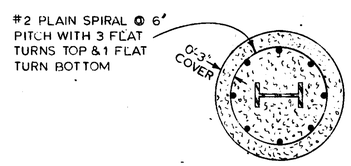
NOTE: THE WEIGHT OF REINFORCING STEEL & YARDS OF CONCRETE IN THE FOUNDATIONS ARE: 6B8.5 - 51.8# & 0.64 YD³; 8B13 - 90.2# & 0.81 YD³; 8WF17 - 136.0# & 0.93 YD³; 10WF21 - 273.8# & 1.16 YD³.



SECTION A-A



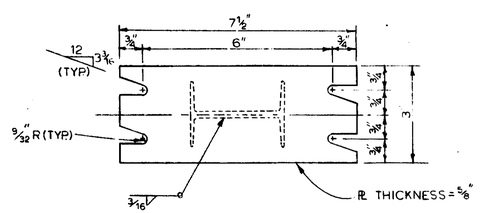
STIFFENER PLATE DETAIL



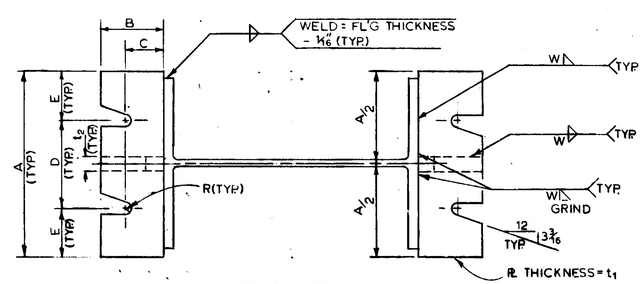
SECTION B-B

NOTES:

1) TOP OF FOUNDATION SHALL BE FLUSH WITH GROUND @ FACE OF FOUNDATION ON FILL SLOPE & BACK OF FOUNDATION ON CUT SLOPE.
2) BOLTS FOR CONNECTION OF COLUMN TO STUB ARE TO BE FURNISHED WITH COLUMN (SEE STANDARDS S4.30 & S4.40).
3) PLATES SHOWN IN STUB DETAILS ARE FOR INSTALLATIONS ON RIGHT SHOULDER & IN GORE. PLATE SLOT BEVELS ARE OPPOSITE HAND FROM THAT SHOWN FOR INSTALLATIONS ON LEFT SHOULDER.
4) GRADE A (6A) CONCRETE SHALL BE USED & IT SHALL BE PLACED AGAINST UNDISTURBED SOIL IN AN AUGERED HOLE. THE STEEL STUB SHALL BE HELD IN CORRECT POSITION WITH A TEMPLATE UNTIL THE CONCRETE HAS PROPERLY SET.



STUB DETAIL



STUB DETAIL

MICHIGAN STATE HIGHWAY DEPARTMENT

FOUNDATION (BREAK-AWAY)

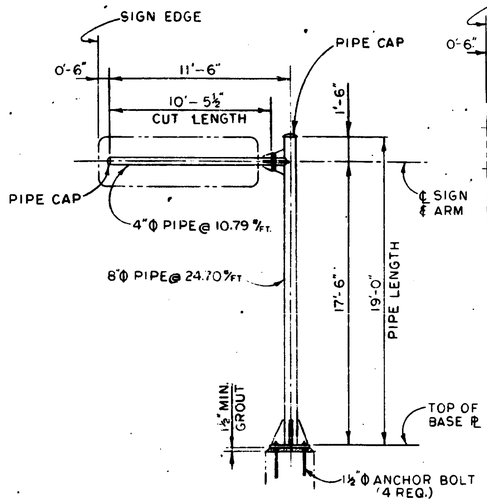
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	DELETION OF DIMENSION "G"	2-15-67	GRH

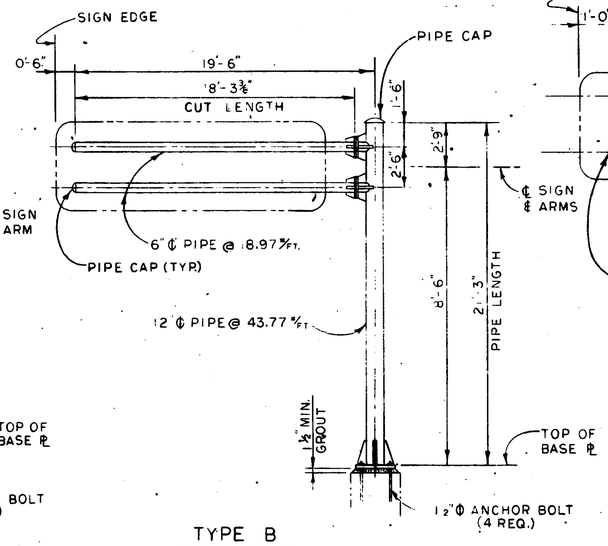
SQUAD DRAW		
DRAWN BY	RLD	2-23-66
TRACED BY		
CHECKED BY	TRK	4-14-66
SHEET 1 OF 1		

S4.50

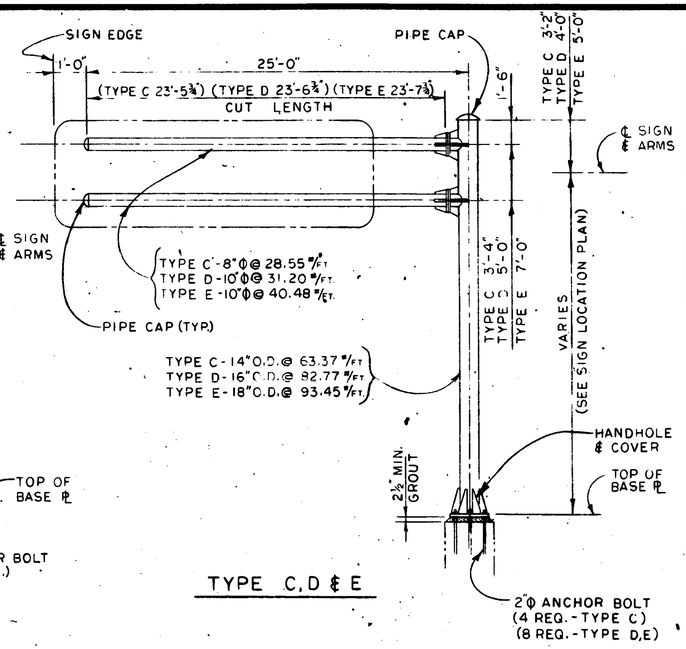
I63174,075



TYPE A



TYPE B

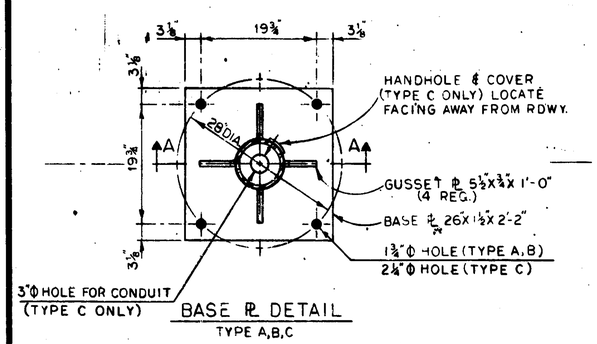


TYPE C,D & E

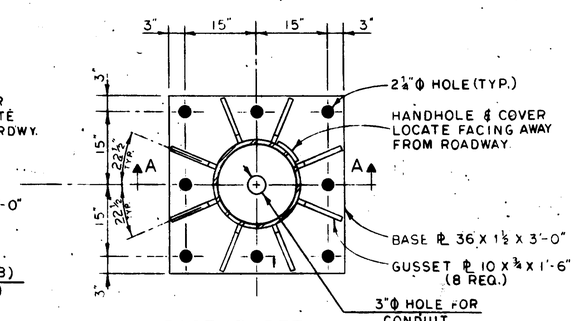
SIGN WIDTH	CANTILEVER TYPE — SIGN LENGTH									
	6	8	10	12	14	16	18	20	22	24
2	A	A	A	A	A					
2.5	A	A	A	A	A					
3	A	A	A	A	B	B	B	B		
3.5	A	B	B	B	B	B	B	B		
4	A	B	B	B	B	B	B	B	B	
4.5	B	B	B	B	B	B	B	B	B	C
5	B	B	B	B	B	B	B	B	C	C
5.5	B	B	B	B	B	B	B	B	C	C
6				B or C	B or C	B or C	C	C	C	D
6.5				B or C	C	C	C	C	C	D
7				C	C	D	D	D	D	D
7.5				C	D	D	D	D	D	D
8				D	D	D	D	D	D	D
8.5				D	D	D	D	D	D	E
9				D	D	D	D	D	D	E
9.5				D	D	D	E	E	E	
10				D	D	E	E	E	E	
10.5				D	E	E	E	E	E	
11					E	E	E	E	E	
11.5					E	E	E	E	E	
12					E	E				

NOTES:

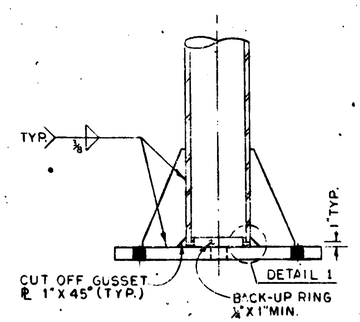
1. USE TYPE A,B CANTILEVERS FOR CROSSROAD INSTALLATIONS.
2. USE TYPE C,D,E CANTILEVERS FOR THRU ROADWAY INSTALLATIONS.



BASE PL DETAIL
TYPE A,B,C



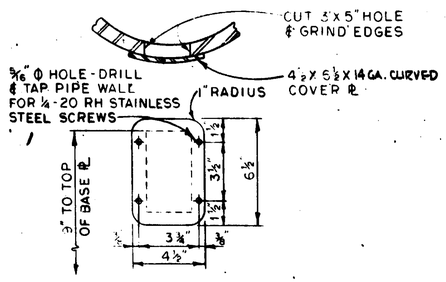
BASE PL DETAIL
TYPE D & E



SECTION A-A

DETAIL 1

NOTE: PROVIDE 2-½"Φ GALV. DRAIN HOLES THRU PIPE & BACK-UP RING AS REQUIRED



HANDHOLE & COVER DETAIL

NOTES:

1. SEE STD. PLAN S9.10 FOR SIGN CONNECTION.

MICHIGAN STATE HIGHWAY DEPARTMENT

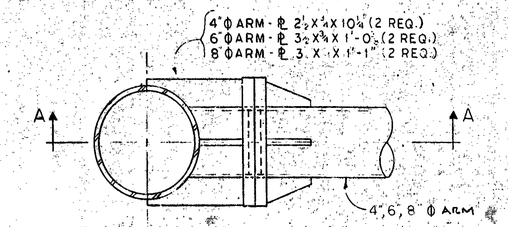
STEEL CANTILEVER
TYPE A,B,C,D,E

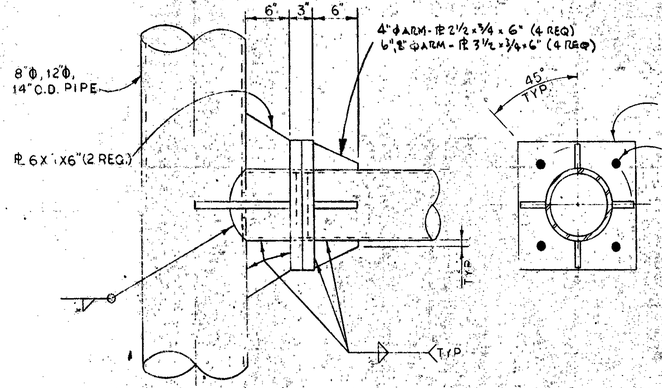
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ANCHOR BOLT DELETED	1-2-66	RLD

ROAD DESIGN		
DRAWN BY	R.D.S.	7-64
TRACED BY		
CHECKED BY		
SHEET 1 OF 2		

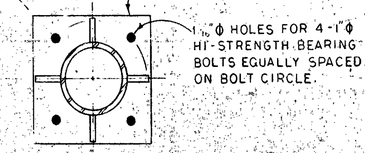
S5.10

63174,075

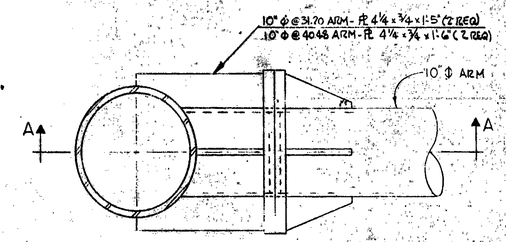


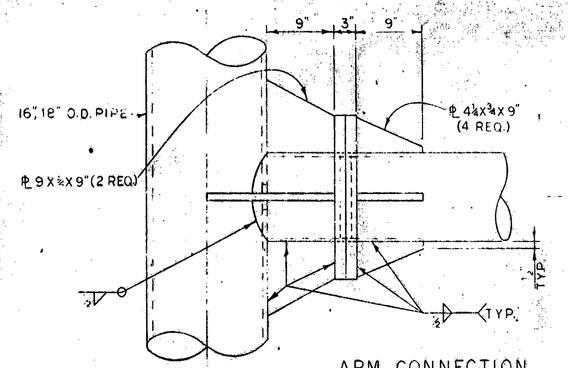


ARM CONNECTION
TYPE A,B,C

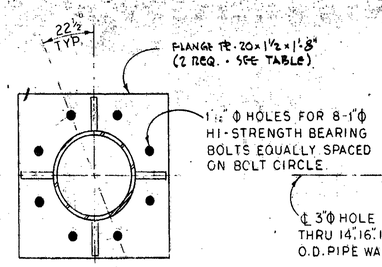


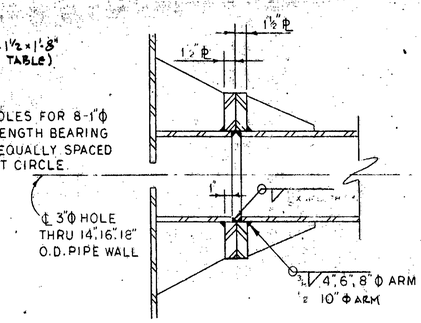
FLANGE PL SIZE		
ARM SIZE	PL SIZE	DIA.
4"Φ	10 X 1½ X 0'-10"	9"
6"Φ	14 X 1½ X 1'-2"	11"
8"Φ	16 X 1½ X 1'-4"	14"
10"Φ @ 31.20	20 X 1½ X 1'-8"	16"
10"Φ @ 40.48	20 X 1½ X 1'-8"	17"



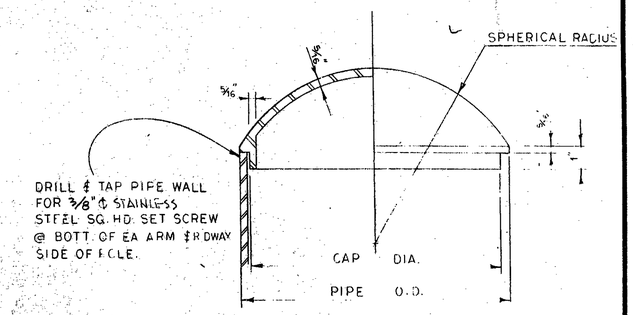


ARM CONNECTION
TYPE D,E





SECTION A-A



PIPE CAP DETAILS
(CAST IRON)

CAP DIMENSIONS		
PIPE O.D.	CAP DIA.	SPHERICAL RADIUS
4½	3 5/16	2¾
6⅝	6	4
8⅝	7 7/32	5½
10¾	9 1/32	6½
12¾	12	7½
14	13	8½
16	14½	9½
18	16½	10¾

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL CANTILEVER DETAILS

TYPES A,B,C,D,E

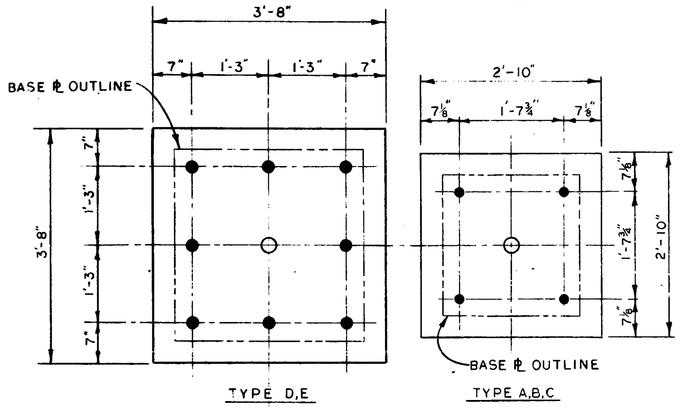
REVISIONS

NO	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET OF

S5.20

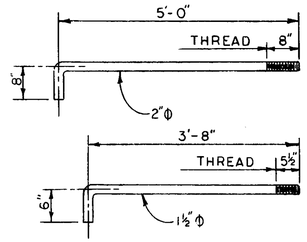
I 63174, 075



TYPE D,E

TYPE A,B,C

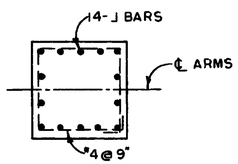
ANCHOR BOLT PLANS



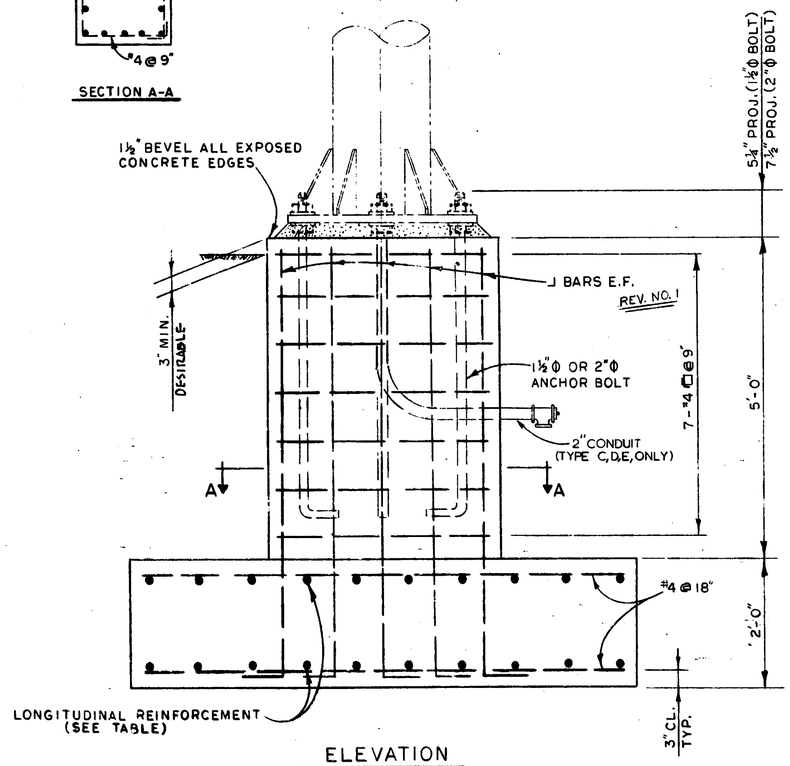
ANCHOR BOLTS SHALL BE FURNISHED W/ 2 HEX. HEAD NUTS & 2 FLAT WASHERS. GALVANIZE NUTS, WASHERS & TOP 12" OF BOLT.

ANCHOR BOLT

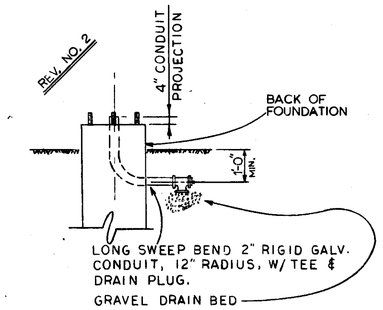
TYPE	FOOTING SIZE	PEDESTAL SIZE	ANCHOR BOLT	LONGITUDINAL FOOTING REINFORCEMENT TOP	LONGITUDINAL FOOTING REINFORCEMENT BOTTOM	J BARS	CONC CU. YD.	REINF STEEL WT.
A	5'-0"X5'-0"	2'-10"X2'-10"	4-1½"Φ	6-#4	6-#4	#5	3.3	225
B	5'-0"X9'-0"	2'-10"X2'-10"	4-1½"Φ	6-#4	6-#4	#5	4.8	270
C	6'-0"X11'-0"	2'-10"X2'-10"	4-2"Φ	7-#5	7-#5	#6	6.4	420
D	7'-0"X12'-0"	3'-8"X3'-8"	8-2"Φ	8-#5	8-#5	#6	8.7	490
E	8'-0"X13'-0"	3'-8"X3'-8"	8-2"Φ	9-#5	9-#5	#6	10.2	545



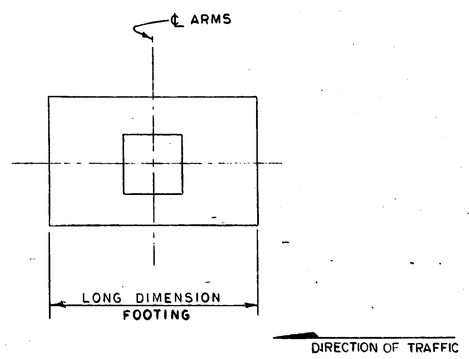
SECTION A-A



ELEVATION



CONDUIT DETAIL



PLAN

MICHIGAN STATE HIGHWAY DEPARTMENT

CANTILEVER FOUNDATION

TYPE A,B,C,D,E

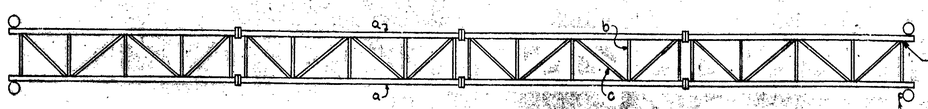
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	J BAR POSITIONING	8/63	KLD
2	WIRE ENTRANCE	11/66	TMW

ROAD DESIG		
DRAWN BY	R.D.S	7-64
TRACED BY		
CHECKED BY		
SHEET	OF	

S5.30

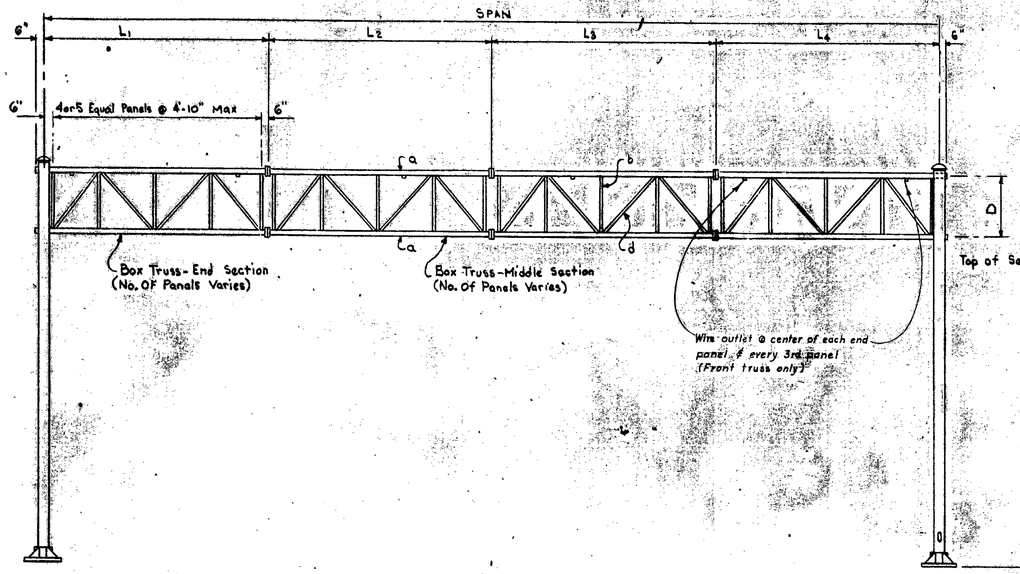
I 63174, 075



End internal diagonal "c" shall connect to the chord where the top horizontal diagonal connects to this chord as shown in plan and end elevation.

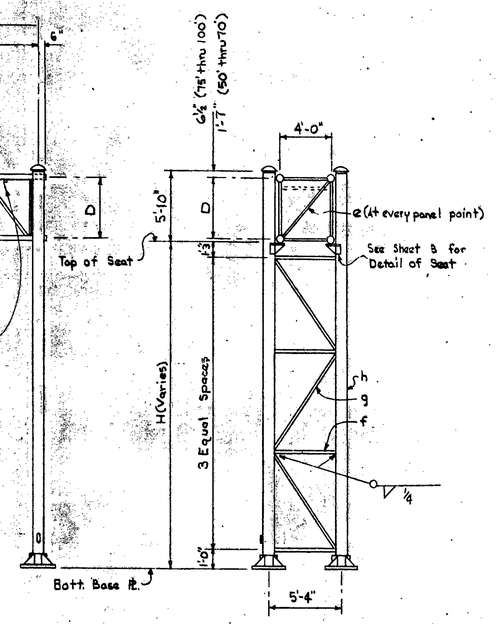
Wire outlet at column (See detail sheet #3)

PLAN



ELEVATION

FACING TRAFFIC



END VIEW

END SUPPORT SCHEDULE				
	H ***	f	g	h
50'-55'-60'-65'-70' SPAN	19'-6"	3"φ x .1875 Wall Thick	4½"φ x .1875 Wall Thick	8"φ x .375 Wall Thick
	17'-9"	do	do	do
	16'-0"	do	do	do
	14'-3"	do	do	do
75'-80'-85'-90'-95'-100' SPAN	19'-6"	do	do	do
	17'-9"	3"φ x .1875 Wall Thick	4½"φ x .1875 Wall Thick	8"φ x .375 Wall Thick
	16'-0"	do	do	do
	14'-3"	3" φ x .1875" Wall Thick	4½"φ x .1875" Wall Thick	8" φ x .375" Wall Thick

*** Max 22'-0" permitted for special case.

Notes:

1. All columns and chord members shall be aluminum alloy 6061-T6.
2. All web members shall be aluminum alloy 6063-T6.
3. Connections shall be welded with filler alloy 5356
4. The design of this structure is based on the American Association of State Highway Officials' Specifications for the Design and Construction of Structural Supports for Highway Signs. (1961 Edition)
   Sign Area = 300 sq. ft. max. (Type B)
   Max. projection of sign beyond chord is 5 ft.

   REV #4 Design based on a wind load of 35 psf. on sign area. All U-bolts and accompanying washers shall be ASTM Type 304 Stainless Steel.

   All other connecting bolts shall be aluminum alloy 2024-T4.
5. See std. plan S9.10 for sign connection.

TRUSS SCHEDULE												
SPAN	L_1	L_2	L_3	L_4	D	a	b	c	d	e *	Estimated Weight (Lbs/Ft)	Camber **
50'-0"	25'-0"			25'-0"	4'-0"	6"φ x .1875 Wall Thick.	2"φ x .125 Wall Thick.	3"φ x .1875 Wall Thick.	2"φ x .125 Wall Thick.	2"φ x .125 Wall Thick.	30	⅞"
55'-0"	20'-0"	15'-0"		20'-0"	do	do	do	do	do	do	do	1"
60'-0"	20'-0"	20'-0"		20'-0"	do	do	do	do	do	do	do	1⅛"
65'-0"	20'-0"	25'-0"		20'-0"	do	do	do	do	do	do	do	1¼"
70'-0"	25'-0"	20'-0"		25'-0"	4'-0"	6"φ x .1875 Wall Thick.	do	3"φ x .1875 Wall Thick.	do	2"φ x .125 Wall Thick.	30	1½"
75'-0"	25'-0"	25'-0"		25'-0"	5'-0"	7"φ x .1875 Wall Thick.	do	3½"φ x .1875 Wall Thick.	do	2"φ x .125 Wall Thick.	31	1½"
80'-0"	20'-0"	20'-0"	20'-0"	20'-0"	do	do	do	do	do	do	do	1¾"
85'-0"	20'-0"	25'-0"	20'-0"	20'-0"	do	do	do	do	do	do	do	1⅞"
90'-0"	20'-0"	25'-0"	25'-0"	20'-0"	do	do	do	do	do	do	do	2⅛"
95'-0"	25'-0"	20'-0"	25'-0"	25'-0"	do	do	do	do	do	do	do	2½"
100'-0"	25'-0"	25'-0"	25'-0"	25'-0"	5'-0"	7"φ x .1875 Wall Thick.	2"φ x .125 Wall Thick.	3½"φ x .1875 Wall Thick.	2"φ x .125 Wall Thick.	2"φ x .125 Wall Thick	31	2¾"

* For transverse diagonals at panels adjacent to columns use 3½"φ x .1875

** Ordinate at center of assembled truss prior to dead load deflection. Allowable camber tolerance for truss is ± 25%

Work this sheet with Sheets 3 & 4

MICHIGAN STATE HIGHWAY DEPARTMENT

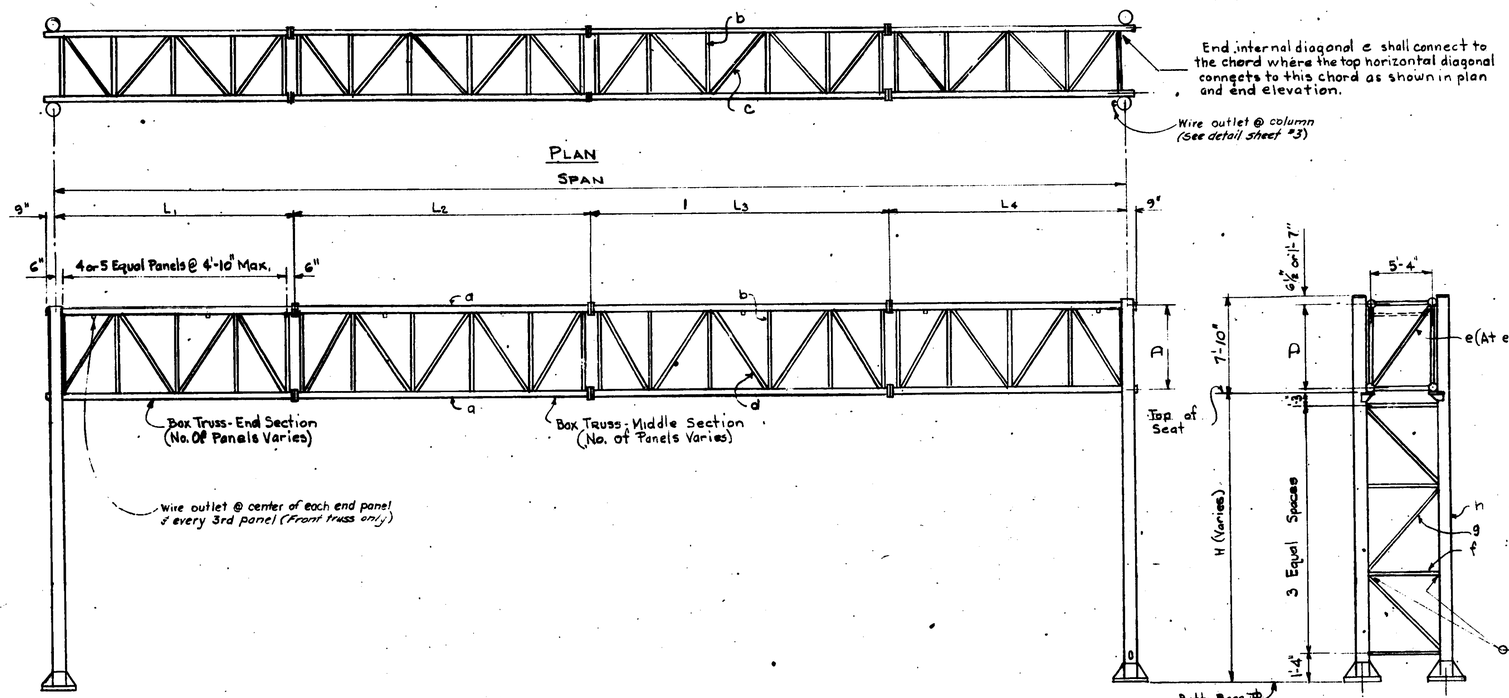
ALUMINUM TRUSS
TYPE B

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	Dimensional Changes	11-20	
2	Relocate wire outlet	5-1-64	
3	Alloy Change	3-21-65	
4	Ubolt Change to SS/304 SS/2	5-25-65	

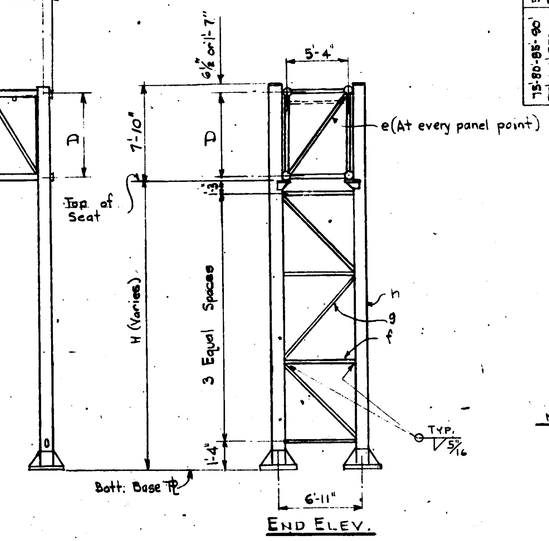
SQUAD BOSS	WDB	2-12-63
DRAWN BY	JDB	2-12-63
TRACED BY		
CHECKED BY		
SHEET 1 OF 4		

S6.10

I 63174, 075



ELEVATION
Facing Traffic.



END ELEV.

END SUPPORT SCHEDULE				
	H***	f	g	h
50'-55'-60'-65' SPAN	19'-6"	3" ϕ x .1875" Wall Th.	4½" ϕ x .250" Wall Thick.	11" ϕ x .312" Wall Thick.
	17'-9"	do.	do.	do.
	[illegible]	do	do	do
	14'-3"	do	do	do
75'-80'-85'-90' 95'-100' SPAN	19'-6"	do.	do.	do.
	17'-9"	3" ϕ x .250" Wall Thick.	4½" ϕ x .250" Wall Thick.	11" ϕ x .312" Wall Thick
	16'-0"	do	do	do
	14'-3"	3" ϕ x .1875" Wall Thick	4½" ϕ x .250" Wall Thick	11" ϕ x .312" Wall Thick

*** Max. 22'-0" permitted for special case.

NOTES
Sign Area: 450 sq. ft. max. (Type C)
Max projection of sign beyond chord is 8 ft.
See sheet 1 for additional notes.

TRUSS SCHEDULE

SPAN	L_1	L_2	L_3	L_4	D	a	b	c	d	e*	Estimated Weight (Lbs/ft.)	Camber **
50'-0"	25'-0"			25'-0"	6'-0"	6" ϕ x .1875" Wall Thick.	2" ϕ x .125" Wall Thick.	4½" ϕ x .1875" Wall Thick.	2½" ϕ x .125" Wall Thick.	2½" ϕ x .125" Wall Thick.	38	¾"
55'-0"	20'-0"	15'-0"		20'-0"	do.	do.	do.	do.	do.	do.	do.	⅞"
60'-0"	20'-0"	20'-0"		20'-0"	do.	do.	do.	do.	do.	do.	do.	1"
65'-0"	20'-0"	25'-0"		20'-0"	do.	do.	do.	do.	do.	do.	do.	1⅛"
70'-0"	25'-0"	20'-0"		25'-0"	6'-0"	6" ϕ x .1875" Wall Thick.	2" ϕ x .125" Wall Thick.	4½" ϕ x .1875" Wall Thick.	2½" ϕ x .125" Wall Thick.	2½" ϕ x .125" Wall Thick.	38	1⅜"
75'-0"	25'-0"	25'-0"		25'-0"	7'-0"	7" ϕ x .250" Wall Thick.	2" ϕ x .125" Wall Thick.	4½" ϕ x .250" Wall Thick.	2½" ϕ x .125" Wall Thick.	2½" ϕ x .125" Wall Thick.	52	1⅛"
80'-0"	20'-0"	20'-0"	20'-0"	20'-0"	do.	do.	do.	do.	do.	do.	do.	1¼"
85'-0"	20'-0"	25'-0"	20'-0"	20'-0"	do.	do.	do.	do.	do.	do.	do.	1½"
90'-0"	20'-0"	25'-0"	25'-0"	20'-0"	do.	do.	do.	do.	do.	do.	do.	1⅝"
95'-0"	25'-0"	20'-0"	25'-0"	25'-0"	do.	do.	do.	do.	do.	do.	do.	1¾"
100'-0"	25'-0"	25'-0"	25'-0"	25'-0"	7'-0"	7" ϕ x .250 Wall Thick	2" ϕ x .125" Wall Thick	4½" ϕ x .250" Wall Thick	2½" ϕ x .125" Wall Thick.	2½" ϕ x .125" Wall Thick	52	2"

*Use 4½" ϕ x .250" Wall thick. at panels adjacent to Columns

**Ordinate at center of assembled truss prior to dead load deflection. Allowable camber tolerance for truss is ± 25%

Work this sheet with sheets 3 & 4

MICHIGAN STATE HIGHWAY DEPARTMENT

ALUMINUM TRUSS
TYPE C

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	[illegible]	11-[illegible]	
6	Relocate drip outlet	5-[illegible]-64	

ROAD DESIGN	WDB	2-12-63
DRAWN BY	[illegible]	[illegible]
TRACED BY		
CHECKED BY	JDB	2-12-63
SHEET 2 OF [illegible]		

S6.20

I63174,075

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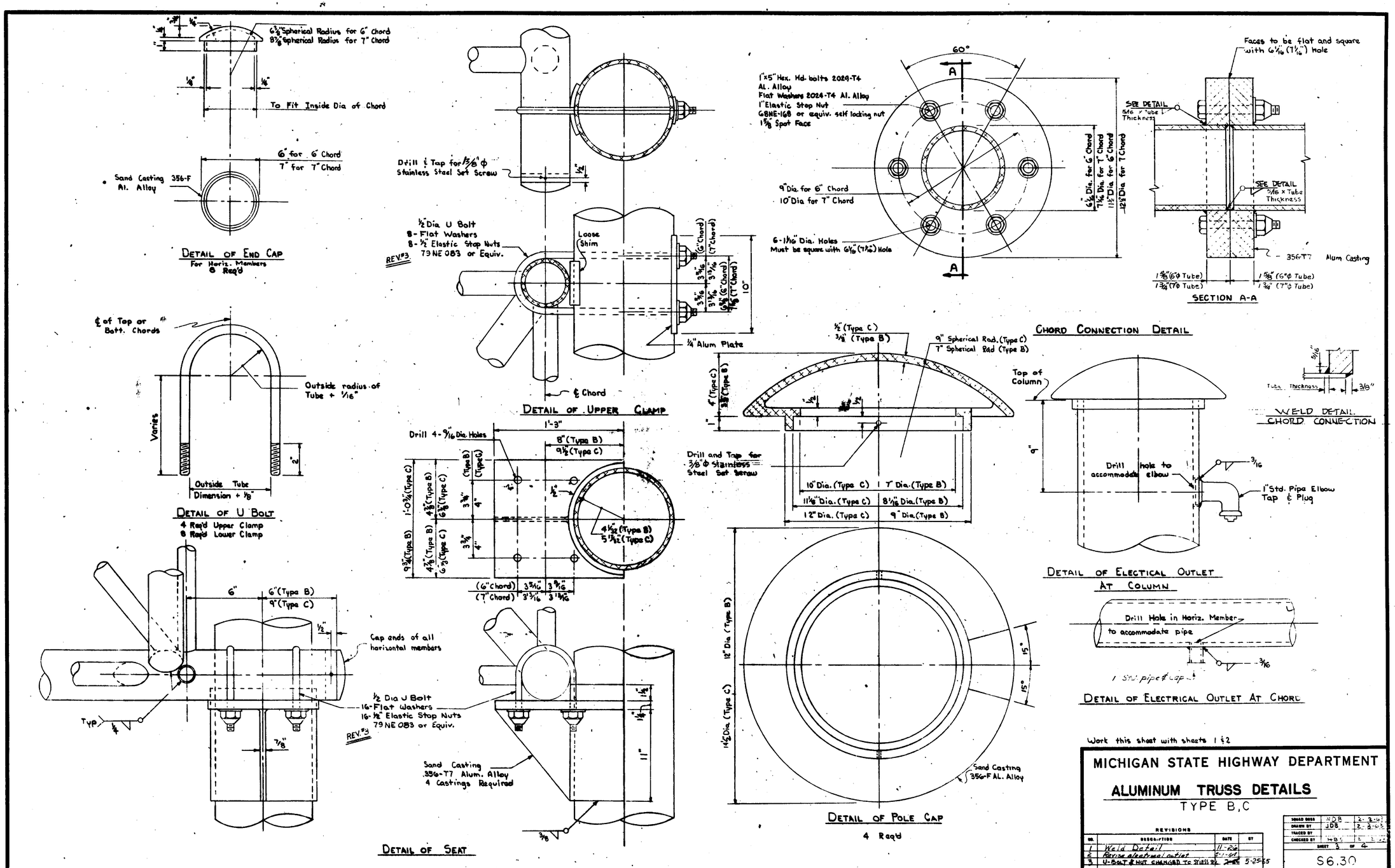


Work this sheet with sheets 1 & 2

MICHIGAN STATE HIGHWAY DEPARTMENT

ALUMINUM TRUSS DETAILS

TYPE B,C

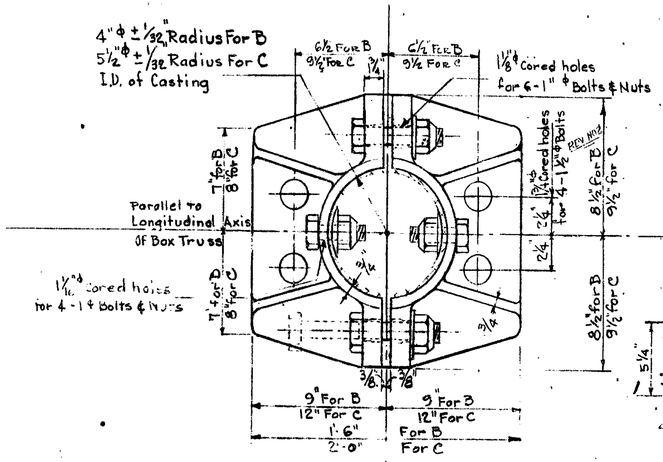
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	Weld Detail	11-26	
2	Revise electrical outlet	5-1-64	
3	U-BOLT & NUT CHANGED TO STRESS SEL	5-25-65	

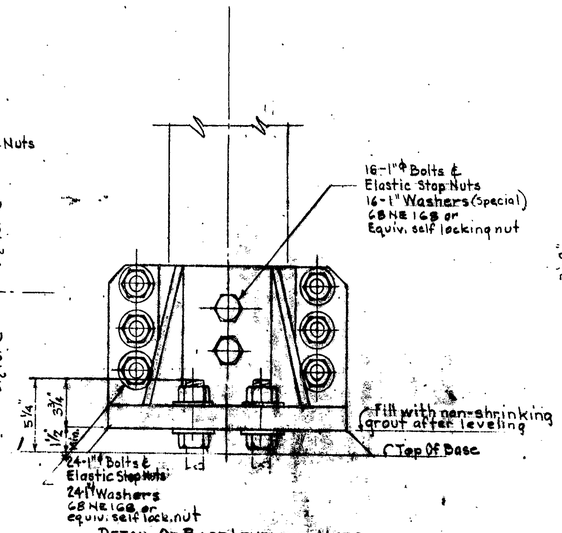
SQUAD BOSS	NDB	2-3-63
DRAWN BY	JDB	2-3-63
TRACED BY		
CHECKED BY	HBS	2-3-63
SHEET 3 OF 4		

S6.30

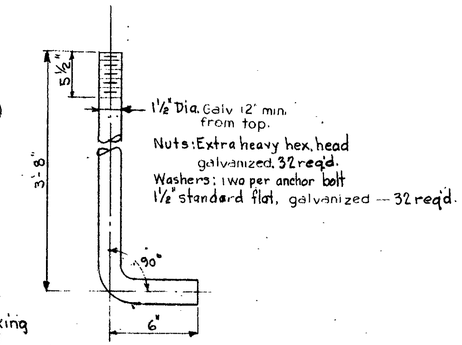
I 63174,075



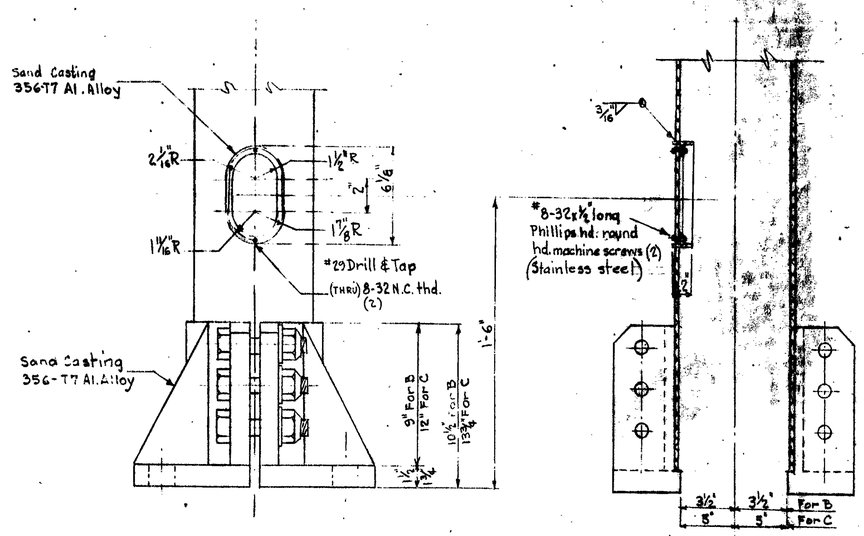
SECTION ABOVE BASE CASTING



DETAIL OF BASE LEVELING NUTS



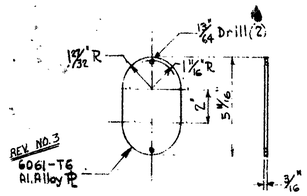
DETAIL OF ANCHOR BOLT
16 Req'd.



ELEV.

SECTION

DETAIL OF BASE AND HAND HOLE UNITS
Req'd.- 2 Hand hole units-One each tower
" - 4 Bases,- Complete



HAND HOLE UNIT COVER
2-Req'd.

Work this sheet with sheets 1, 2 & 3

MICHIGAN STATE HIGHWAY DEPARTMENT

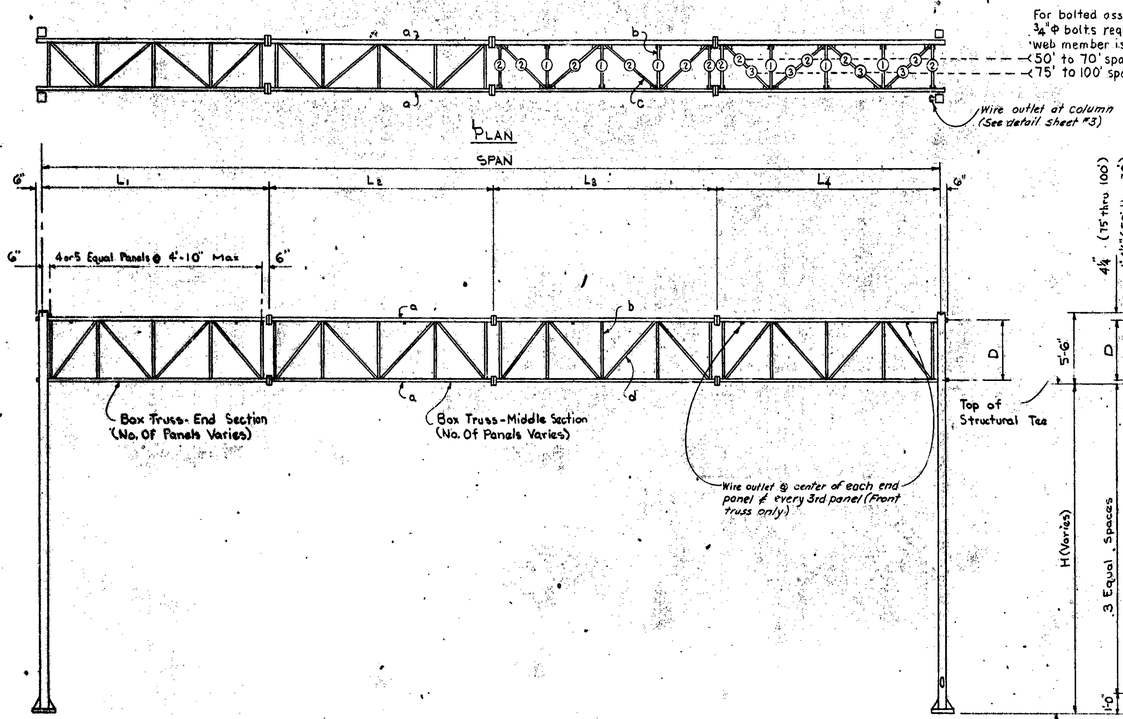
ALUMINUM END SUPPORT DETAILS
TYPE B,C

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	Galvanize	1/64	RDS
2	DIMENSION OF BASE CASTING		
3	ALLOY CHANGE		

SQUAD BOSS	WDS	2-12-63
DRAWN BY	HBS	2-6-63
TRACED BY		
CHECKED BY	JDB	2-12-63
SHEET 4 OF 4		

S6.40

I 63174,075



END SUPPORT SCHEDULE					
	H***		f	g	h
50'-55'-60'-65' TO SPAN	19'-6"		2"Φ pipe	2½"Φ pipe	□8"x.250 Wall Thick.
	17'-9"		do.	do.	□8"x.250 Wall Thick.
	16'-0"		do	do	do
	14'-3"		do	do	do
75'-80'-85'-90' 95'-100' SPAN	19'-6"		do.	do.	□8"x.250 Wall Thick.
	17'-9"		2"Φ pipe	2½"Φ pipe	□8"x.250 Wall Thick.
	16'-0"		do	do	do
	14'-3"		2"Φ pipe	2½"Φ pipe	□8"x.250 Wall Thick.

*** Max. 22'-0" permitted for special case.

TRUSS SCHEDULE												
SPAN	L_1	L_2	L_3	L_4	D	a	b	c	d	e*	Estimated Weight (Lbs / Ft)	Camber**
50'-0"	25'-0"			25'-0"	4'-0"	□3"x.1875 Wall Thick.	1½"Φ Std. Pipe	1½"Φ Std. Pipe	1½"Φ Std. Pipe	1"x.250 Flat Bar	60	⅞"
55'-0"	20'-0"	15'-0"		20'-0"	do	do	do	do	do	do	do	1"
60'-0"	20'-0"	20'-0"		20'-0"	do	do	do	do	do	do	do	1⅛"
65'-0"	20'-0"	25'-0"		20'-0"	do	do	do	do	do	do	do	1¼"
70'-0"	25'-0"	20'-0"		25'-0"	4'-0"	□3"x.1875 Wall Thick.	do	1½"Φ Std. Pipe	do	do	60	1½"
75'-0"	25'-0"	25'-0"		25'-0"	5'-0"	□3½"x.250 Wall Thick.	do	2"Φ Std. Pipe	do	do	79	1⅜"
80'-0"	20'-0"	20'-0"	20'-0"	20'-0"	do	do	do	do	do	do	do	1½"
85'-0"	20'-0"	25'-0"	20'-0"	20'-0"	do	do	do	do	do	do	do	1⅝"
90'-0"	20'-0"	25'-0"	25'-0"	20'-0"	do	do	do	do	do	do	do	1⅞"
95'-0"	25'-0"	20'-0"	25'-0"	25'-0"	do	do	do	do	do	do	do	2"
100'-0"	25'-0"	25'-0"	25'-0"	25'-0"	5'-0"	□3½"x.250 Wall Thick.	1½"Φ Std. Pipe	2"Φ Std Pipe	1½"Φ Std Pipe	1"x.250 Flat Bar	79	2⅛"

* Use 2" x ⅜" Flat bar at Panels Adjacent to Column.

** Ordinate at center of assembled truss prior to dead load deflection. Allowable camber tolerance for truss is ± 25 %.

Notes

1. All square tubes, plates and bars shall be ASTM A-36 Structural Steel. All web members shall be ASTM A-53, Grade-B, Schedule 40 Standard Pipe.
2. The design of this structure is based on the American Association of State Highway Officials' Specifications for the Design and Construction of Structural Supports for Highway Signs. (1961 Edition)
   Sign Area = 300 sq ft. max. (Type B)
   Max. projection of sign beyond chord is 5 ft.

   Design based on a wind load of 35 psf. on sign area.
3. Welding shall be in accordance with the current American Welding Society Specifications for Welded Highway and Railway Bridges.
4. All members shall be hot dip galvanized in accordance with current ASTM Specification A123 after welding is complete. Fabrication and Galvanizing shall follow ASTM A384 and A385 Recommended Practice for galvanizing assembled products.
   If box truss sections cannot be galvanized after complete welded assembly the top and bottom web system and interior diagonals may be assembled by bolting after galvanizing. All connecting bolts except U bolts and anchor bolts shall be cadmium plated ASTM A-325 High Strength bolts. U bolts and anchor bolts shall be cadmium plated ASTM A-307 low carbon steel bolts.
5. SEE STD. PLAN S9.10 FOR SIGN CONNECTION.

Work this sheet with Sheets 3 & 4.

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL TRUSS

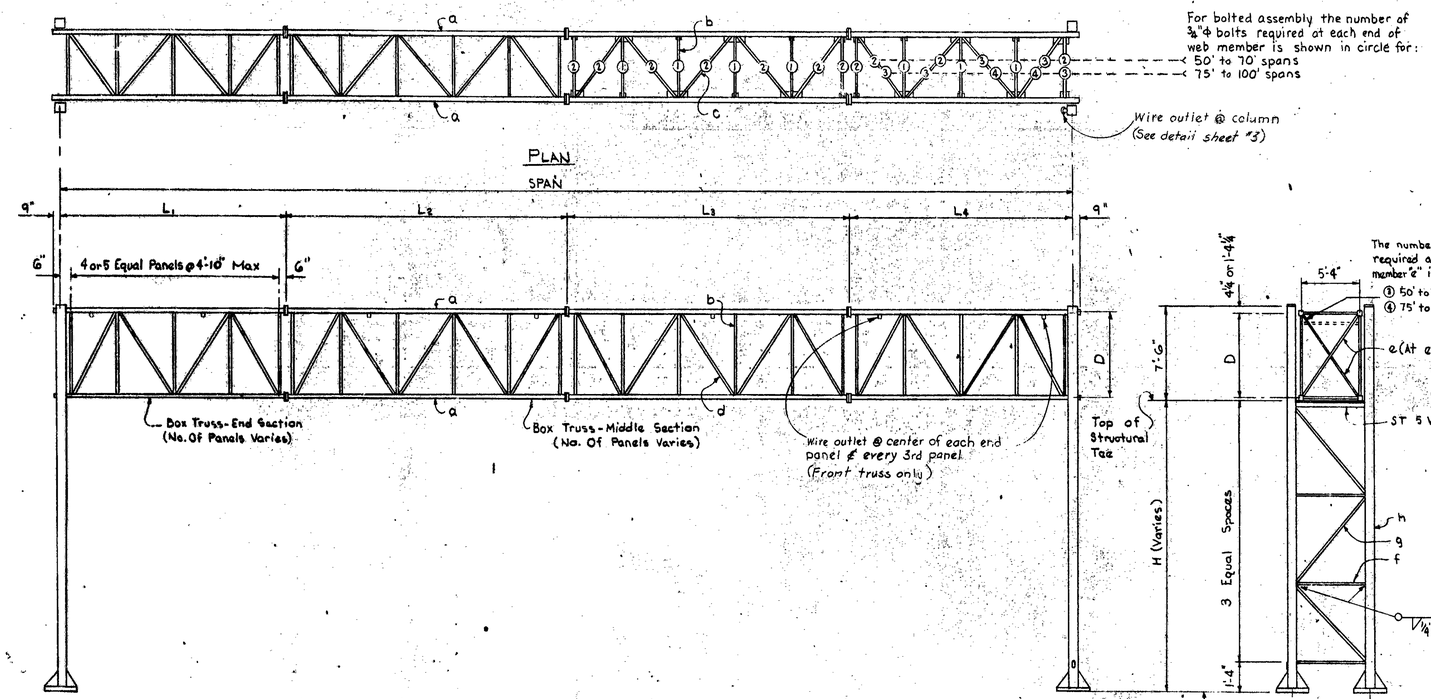
TYPE B

REVISIONS			
NO	DESCRIPTION	DATE	BY
	Relocate wire outlet	2/1/68	

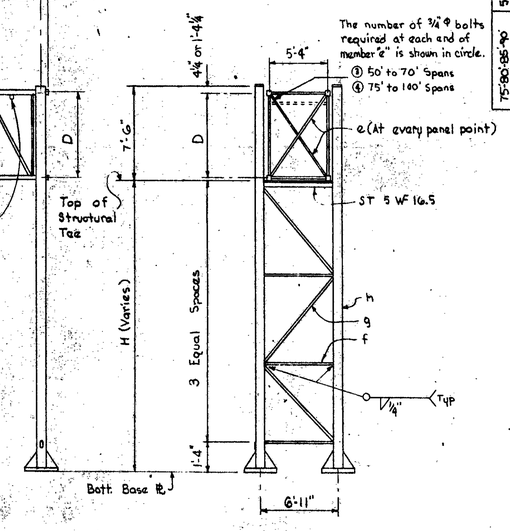
DESIGN BOSS	WDB	2-6-63
DRAWN BY	JDB	1-12-63
TRACED BY		
CHECKED BY	HBS	2-6-63
SHEET 1 OF 4		

S7.10

I 63174,075



ELEVATION
FACING TRAFFIC



		END SUPPORT SCHEDULE		
	H***	f	g	h
50'-55'-60'-65' 70' SPAN	19'-6"	2"Φ Std. Pipe	2½"Φ Std. Pipe	□10"x.375 Wall Thick
	17'-9"	do.	do.	□10"x.375 Wall Thick.
	16'-0"	do	do	do
	14'-3"	do	do	do
75'-80'-85'-90' 95'-100' SPAN	19'-6"	do.	do.	□10"x.375 Wall Thick
	17'-9	2" Φ Std. Pipe	2½" Φ Std. Pipe	□10"x.375 Wall Thick
	16'-0"	do	do	do
	14'-3"	2" Φ Std. Pipe	2½" Φ Std. Pipe	□10"x.375 Wall Thick.

*** Max 22'-0" permitted for special case.

NOTES
Sign Area = 480 sq. ft. max. (Type C)
Max. projection of sign beyond chord is 8 ft.

See sheet 1 for additional notes.

TRUSS SCHEDULE												
SPAN	L_1	L_2	L_3	L_4	D	a	b	c	d	e*	Estimated Weight (Lbs / Ft.)	Camber**
50'-0"	25'-0"			25'-0"	6'-0"	□ 3½"x.1875 Wall Thick	1½"Φ Std. Pipe	2"Φ Std. Pipe	2"Φ Std. Pipe	1"x.250" Flat Bar	78	¾"
55'-0"	20'-0"	15'-0"		20'-0"	do	do	do	do	do	do	do	¾"
60'-0"	20'-0"	20'-0"		20'-0"	do	do	do	do	do	do	do	⅞"
65'-0"	20'-0"	25'-0"		20'-0"	do	do	do	do	do	do	do	1"
70'-0"	25'-0"	20'-0"		25'-0"	6'-0"	□3½"x.1875 Wall Thick	1¼"Φ Std. Pipe	2"Φ Std. Pipe	do.	do	78	1⅛"
75'-0"	25'-0"	25'-0"		25'-0"	7'-0"	□3½"x.3125 Wall Thick	2"Φ Std. Pipe	2½"Φ Std. Pipe	do	do	111	1⅛"
80'-0"	20'-0"	20'-0"	20'-0"	20'-0"	do	do	do	do	do	do	do	1¼"
85'-0"	20'-0"	25'-0"	20'-0"	20'-0"	do	do	do	do	do	do	do	1⅜"
90'-0"	20'-0"	25'-0"	25'-0"	20'-0"	do	do	do	do	do	do	do	1½"
95'-0"	25'-0"	20'-0"	25'-0"	25'-0"	do	do	do	do	do	do	do	1⅝"
100'-0"	25'-0"	25'-0"	25'-0"	25'-0"	7'-0"	□3½"x.3125 Wall Thick	2"Φ Std. Pipe	2½"Φ Std. Pipe	2"Φ Std. Pipe	1"x.250" Flat Bar	111	1¾"

* Use 2½"x½" Flat Bar at Panels Adjacent to Column.

** Ordinate at center of assembled truss prior to dead load deflection. Allowable camber tolerance for truss is ± 25%

Work this sheet with sheets 3 & 4.

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL TRUSS
TYPE C

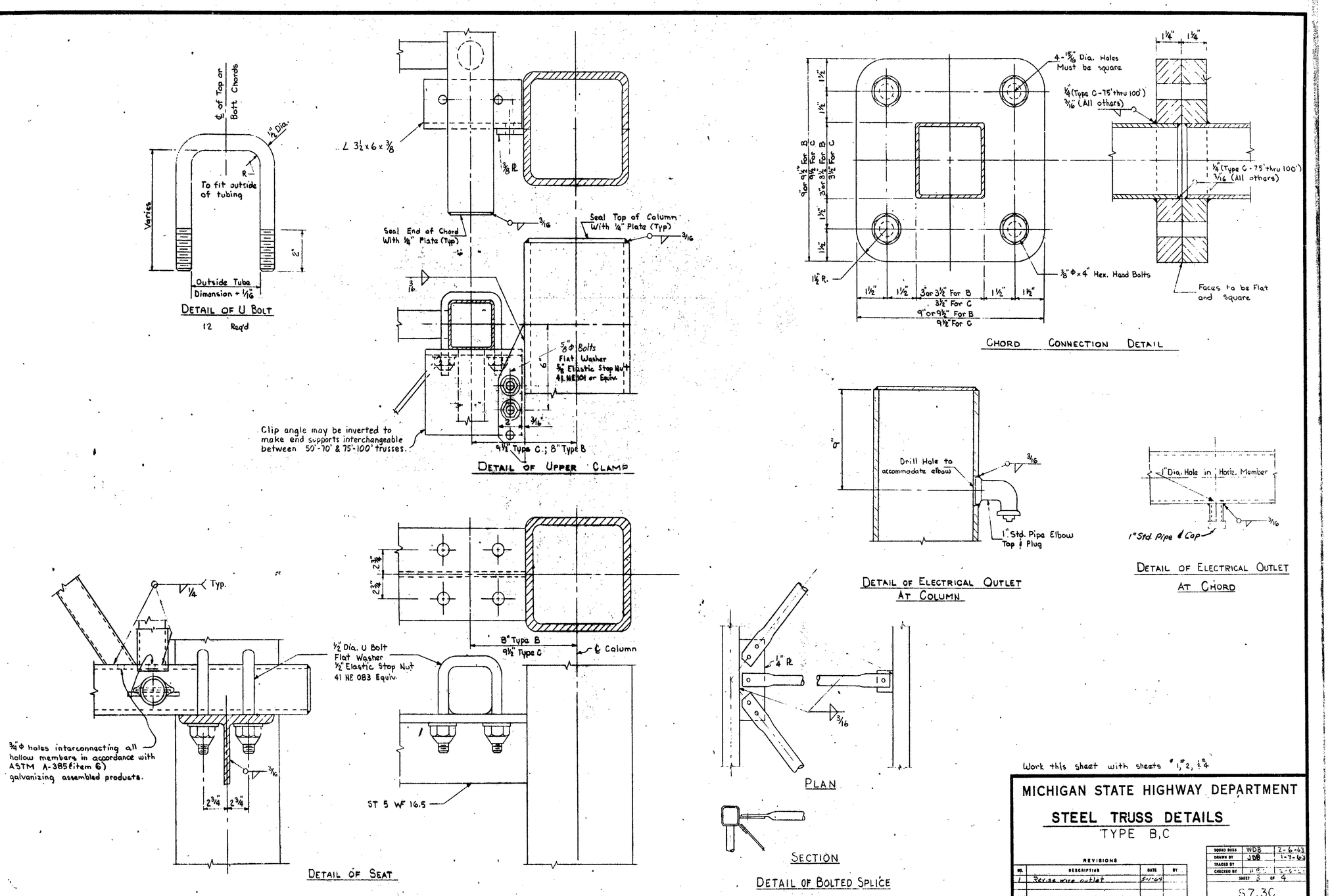
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	Relocate wire outlet.	5-1-64	

SQUAD BOSS	WDB	2-6-63
DRAWN BY	JDB	1-7-63
TRACED BY		
CHECKED BY	HBS	2-6-64
SHEET 2 OF 4		

$7.20

I 63174, 075



Work this sheet with sheets #1, #2, & #4

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL TRUSS DETAILS

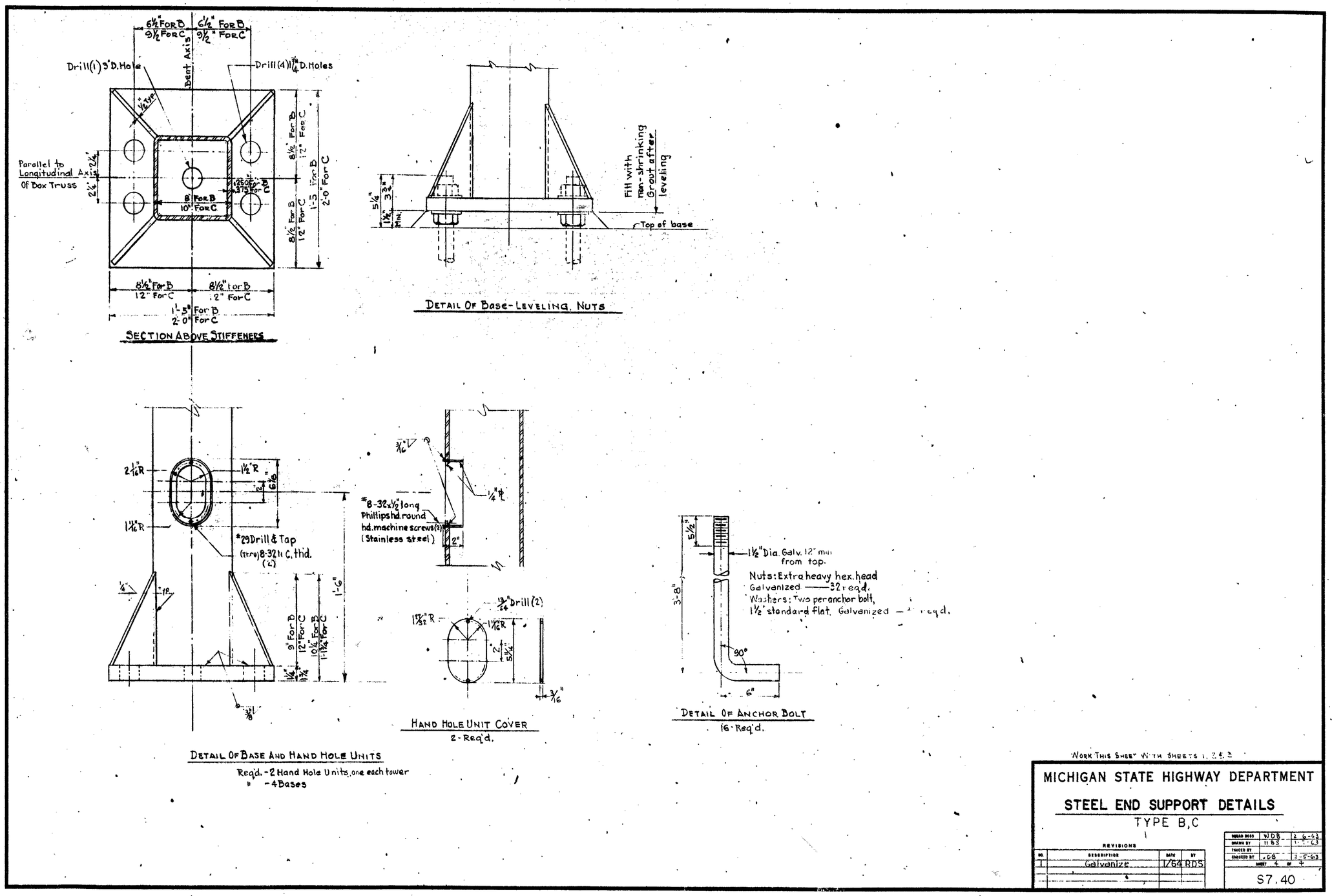
TYPE B,C

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	Revise wire outlet	8-1-64	

SQUAD BOSS	WDB	2-6-63
DRAWN BY	JDB	1-7-63
TRACED BY		
CHECKED BY		
SHEET 3 OF 4		

S7.3C

I 63174,075



SECTION ABOVE STIFFENERS

DETAIL OF BASE-LEVELING NUTS

DETAIL OF BASE AND HAND HOLE UNITS

Req'd. - 2 Hand Hole Units, one each tower
" - 4 Bases

HAND HOLE UNIT COVER
2-Req'd.

DETAIL OF ANCHOR BOLT
16-Req'd.

WORK THIS SHEET WITH SHEETS 1, 2 & 3

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL END SUPPORT DETAILS

TYPE B,C

REVISIONS

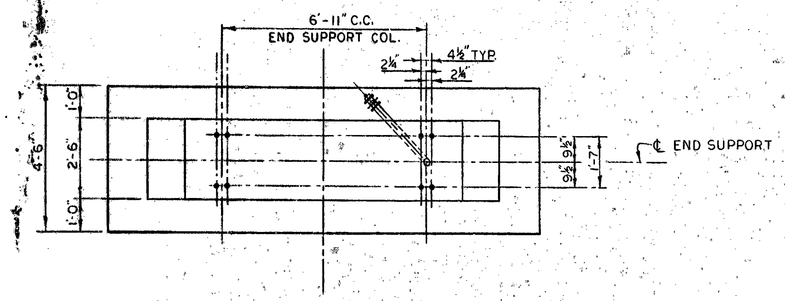
NO.	DESCRIPTION	DATE	BY
1	Galvanize	1/64	RDS

SQUAD BOSS	WDB	2-6-63
DRAWN BY	HBS	1-7-63
TRACED BY		
CHECKED BY	JGB	2-5-63
SHEET 4 OF 4		

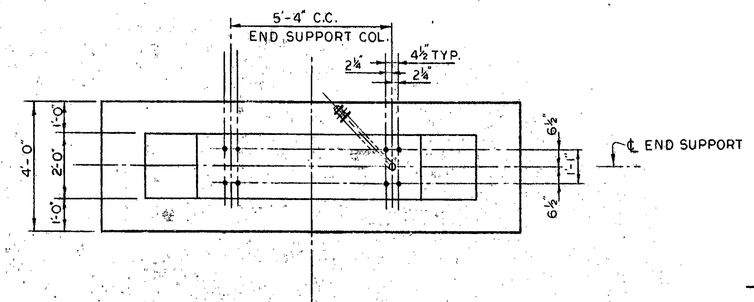
S7.40

I 63174,075

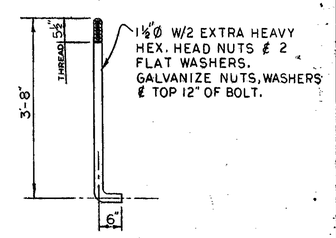
36



PLAN

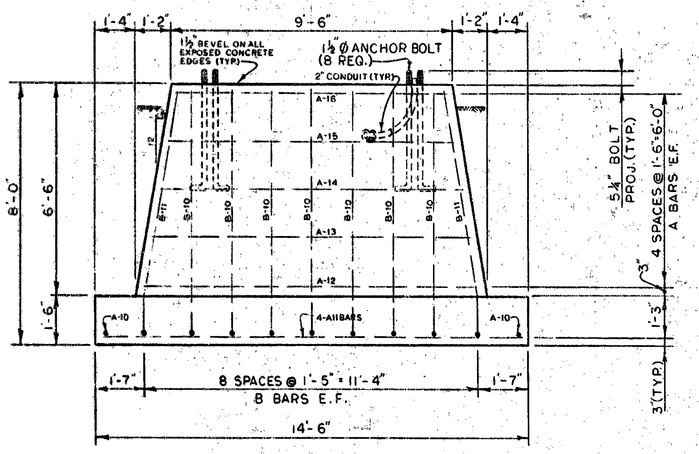


PLAN

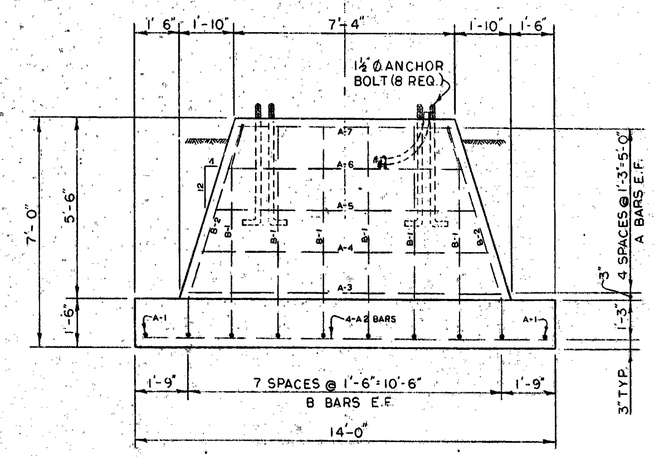


ANCHOR BOLT DETAIL

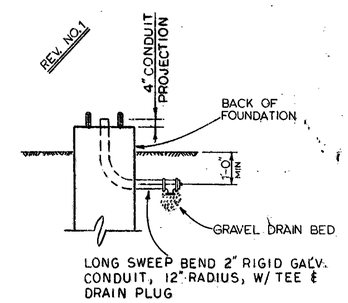
DIRECTION OF TRAFFIC



ELEVATION



ELEVATION



CONDUIT DETAIL

NOTES:

1) CONDUIT SHALL BE INSTALLED IN RIGHT FOUNDATION OR AS OTHERWISE SPECIFIED BY THE ENGINEER.

2) TOP OF CONC. SHALL BE 3" MIN. ABOVE GROUND (DESIRABLE)

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ.
A-10	#4	3'-6"	2
A-16	#4	13'-11"	4
A-12	#4	11'-3"	2
A-13	#4	10'-8"	2
A-14	#4	10'-2"	2
A-15	#4	9'-7"	2
A-16	#4	9'-1"	2
B-10	#4	7'-6" / 2'-9"	14
B-11	#4	7'-7" / 2'-9"	4

100 CU. YDS. CONC.
233 # REINF. STEEL

TYPE C
SCALE ½" = 1'-0"

STEEL REINFORCEMENT			
BAR	SIZE	DIMENSIONS	NO. REQ.
A-1	#4	3'-6"	2
A-2	#4	13'-6"	4
A-3	#4	10'-4"	2
A-4	#4	9'-6"	2
A-5	#4	8'-8"	2
A-6	#4	7'-10"	2
A-7	#4	7'-0"	2
B-1	#4	6'-6" / 2'-3"	12
B-2	#4	6'-9" / 2'-3"	4

6.82 CU. YDS. CONC.
196 # REINF. STEEL

TYPE B
SCALE ½" = 1'-0"

MICHIGAN STATE HIGHWAY DEPARTMENT

TRUSS FOUNDATION

TYPE B, C

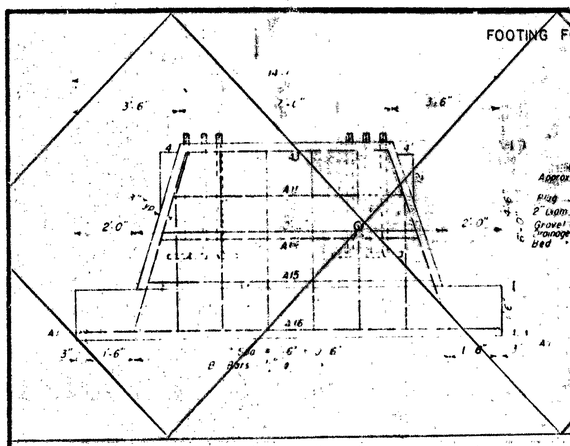
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	WIRE ENTRANCE	11/66	TMW

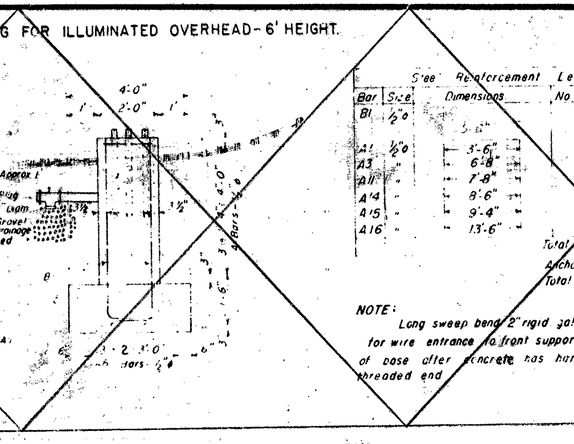
ROAD DESIGN		
DRAWN BY	R.D.S.	7-64
TRACED BY		
CHECKED BY	D.Mc	
SHEET 1 OF 1		

S8.10

I 63174, 075

FOOTING FOR ILLUMINATED OVERHEAD - 6' HEIGHT.





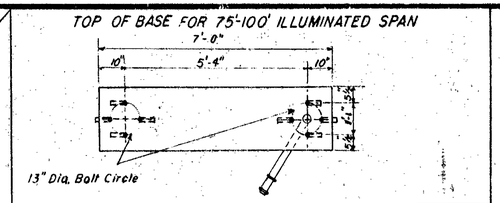
Steel Reinforcement Details

Bar	Size	Dimensions	No of Bars	Weight
B1	½"ø	16'	16	86
A1	½"ø	3'-6"	2	5
A3	"	6'-8"	2	9
A11	"	7'-8"	2	10
A14	"	8'-6"	2	11
A15	"	9'-4"	2	13
A16	"	13'-6"	4	36

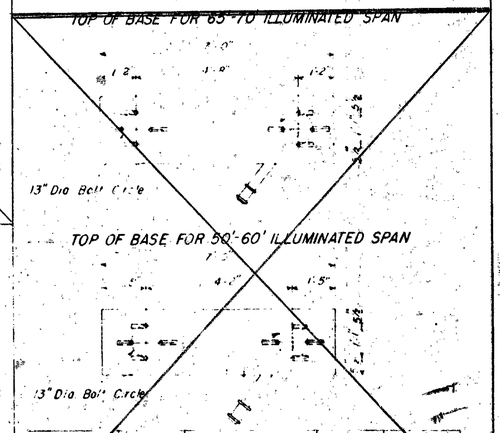
Total Weight = 170#
Anchor Bolts not Included
Total Concrete = 6.3 cu yds

NOTE:
Long sweep bend 2" rigid galv conduit, 12" radius, 5'-6" long for wire entrance to front support. Cut conduit flush with top of base after concrete has hardened. Begin bend 1'-1" from threaded end.

TOP OF BASE FOR 75'-100' ILLUMINATED SPAN



TOP OF BASE FOR 65'-70' ILLUMINATED SPAN

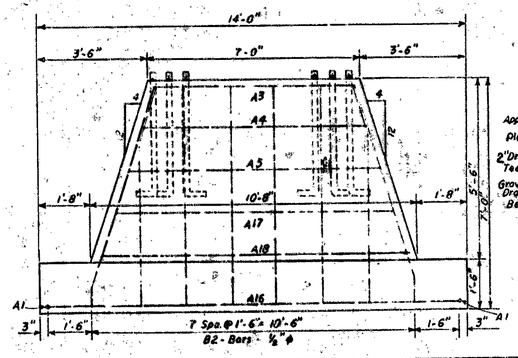


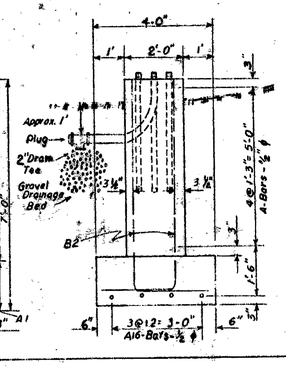
TOP OF BASE FOR 50'-60' ILLUMINATED SPAN

Work Order	Item No	Foundation Left	Foundation Right	Bolt Circle	Dish-Bel. Poles

FOOTING FOR ILLUMINATED OVERHEAD - 7' HEIGHT.

NOTE:
Top of Concrete shall be 3" min. above ground.





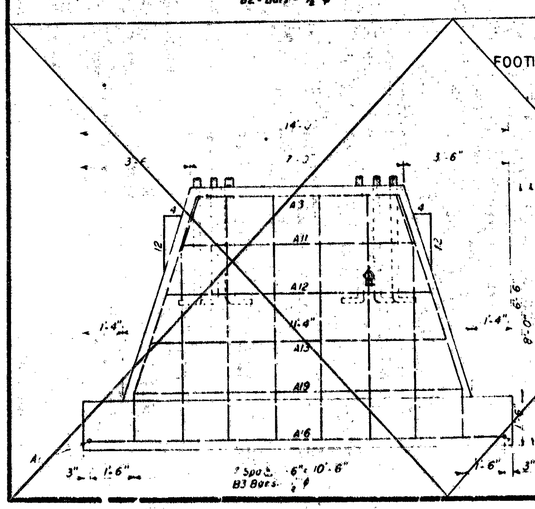
Steel Reinforcement Details

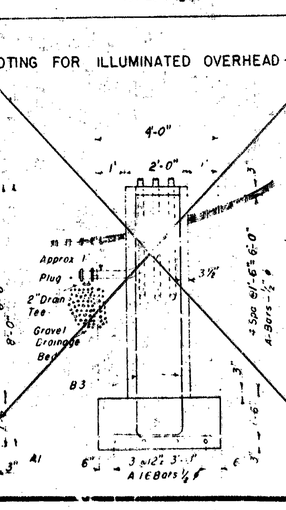
Bar	Size	Dimensions	No of Bars	Weight
B2	½"ø	6'-6"	16	96
A1	½"ø	3'-6"	2	5
A3	"	6'-8"	2	9
A4	"	7'-6"	2	10
A5	"	8'-4"	2	11
A17	"	9'-2"	2	12
A18	"	10'-0"	2	13
A16	"	13'-6"	4	36

Total Weight = 192#
Anchor Bolts not included
Total Concrete = 6.7 cu. yds.

NOTE:
Long sweep bend 2" rigid galv conduit, 12" radius, 5'-6" long for wire entrance to front support. Cut conduit flush with top of base after concrete has hardened. Begin bend 1'-1" from threaded end.

FOOTING FOR ILLUMINATED OVERHEAD - 8' HEIGHT.





Steel Reinforcement Details

Bar	Size	Dimensions	No of Bars	Weight
B3	½"ø	7'-6"	16	107
A1	½"ø	3'-6"	2	5
A3	"	6'-8"	2	9
A11	"	7'-8"	2	10
A12	"	8'-8"	2	12
A13	"	9'-8"	2	13
A19	"	10'-8"	2	14
A16	"	13'-6"	4	36

Total Weight = 206#
Anchor Bolts not included
Total Concrete = 7.6 cu yds

NOTE:
Long sweep bend 2" rigid galv conduit, 12" radius, 5'-6" long for wire entrance to front support. Cut conduit flush with top of base after concrete has hardened. Begin bend 1'-1" from threaded end.

CONCRETE BASE DETAIL
FOR ALUMINUM OVERHEAD
STRUCTURE—TYPE B

AUTH NO Rev 4-15-58	DRAWN BY F.H. Sut
REVISIONS	DATE 10-21-58
	SCALE NONE
SHEET NO 1 OF 1	FILE NO 5F-25

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE
APPROVED — DATE 8-31-59
APPROVED — DATE 10-1-59
APPROVED — DATE 10-1-59

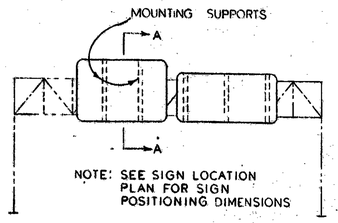
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER — DATE 10-1-59
BY — DIRECTOR OF ENGINEERING — DATE
APPROVED BY BUREAU OF PUBLIC ROADS — DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

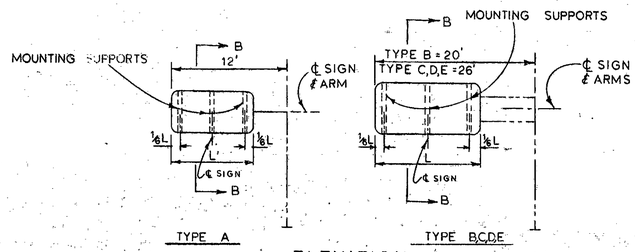
DESIGN AND TRAFFIC DIVISIONS
CHECKED — ENGINEER OF TRAFFIC OPERATIONS — DATE 7-8-5
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE 7-24-5
RECOMMENDED FOR APPROVAL — DIRECTOR OF TRAFFIC DIVISION — DATE

MICROFILMED

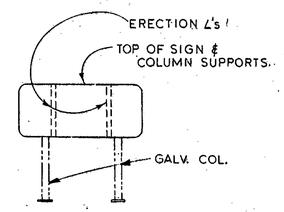
S8.20 | FILE NO. 63174 | I. 63174, 075 | REVISION PROJECT | REVISION PROJECT | SHEET NO. 38



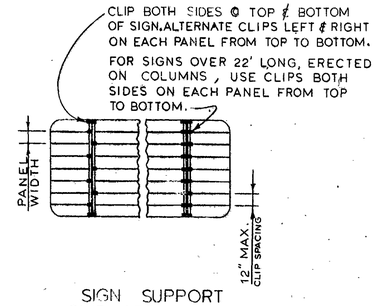
ELEVATION
TRUSS



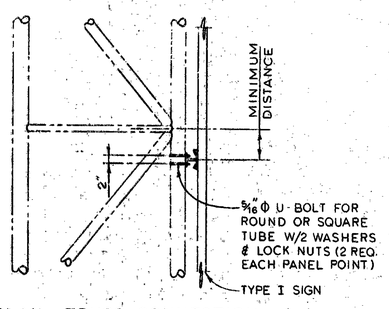
ELEVATION
CANTILEVER



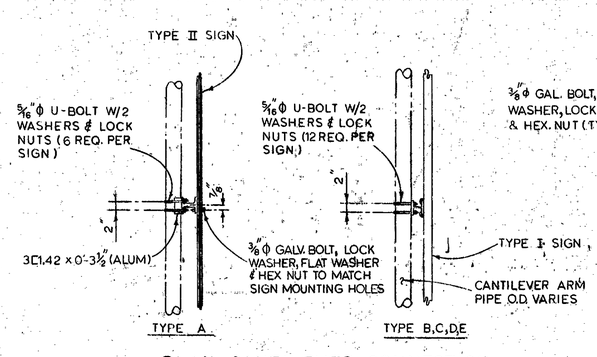
ELEVATION
COLUMN



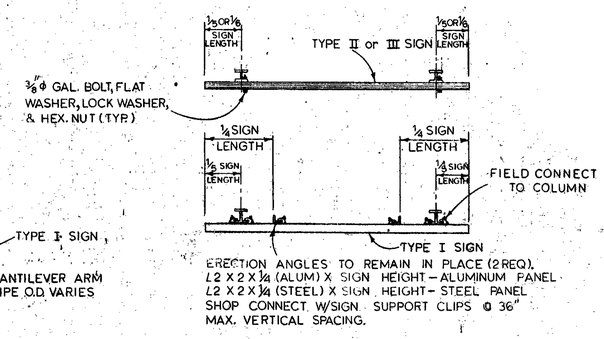
SIGN SUPPORT
CLIP ARRANGEMENT



PLAN - TRUSS CONNECTION
TYP. - EACH PANEL PT.

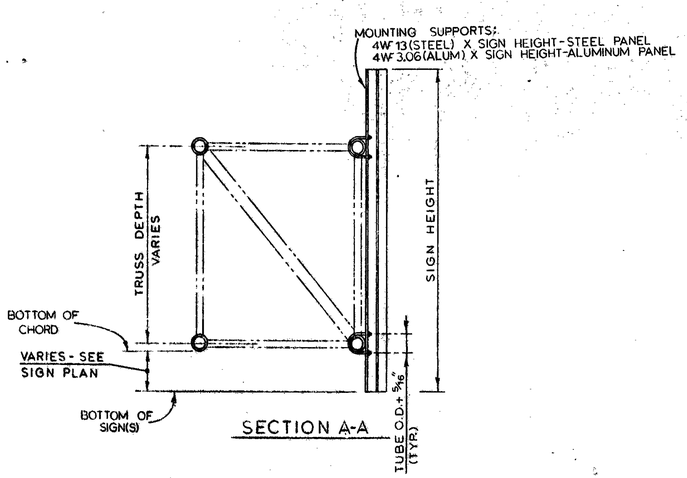


PLAN-CANTILEVER CONNECTION
TYP. - 3 PLACES



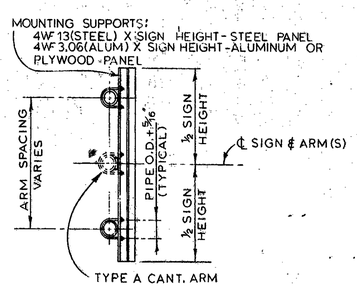
PLAN

COLUMN



SECTION A-A

TRUSS



SECTION B-B

CANTILEVER

U-BOLT DIMENSIONS			
ALUM TRUSS TYPE	CANTILEVER TYPE	INSIDE BEND-DIA.	U-BOLT LENGTH
B		6"	1'-5½"
C		7"	1'-8"
	A	4½"	1'-3½"
	B	6⅝"	1'-7½"
	C	8⅝"	2'-1"
	D	10¾"	2'-5½"
	E	10¾"	2'-5½"

NOTE: ALL U-BOLTS SHALL HAVE 1¼" THREAD LENGTH (MIN.)

NOTE:
1. ERECTION ANGLES & WF MOUNTING SUPPORTS SHALL BE SHOP CONNECTED BEFORE HANDLING FINISHED SIGN.
2. ALL CONNECTIONS ARE INCIDENTAL TO "SIGN."
3. SIGN PANEL CONNECTIONS -
   BOLTS - 3/8" Φ BOLT & HEX. NUT @ 24" O.C. FOR ALUMINUM & STEEL PANELS.
   RIVETS - ¼" Φ @ 24" O.C. FOR ALUMINUM PANELS ONLY.
4. TORQUE ALUMINUM CLIP BOLTS TO 225 INCH-POUNDS.

MICHIGAN STATE HIGHWAY DEPARTMENT

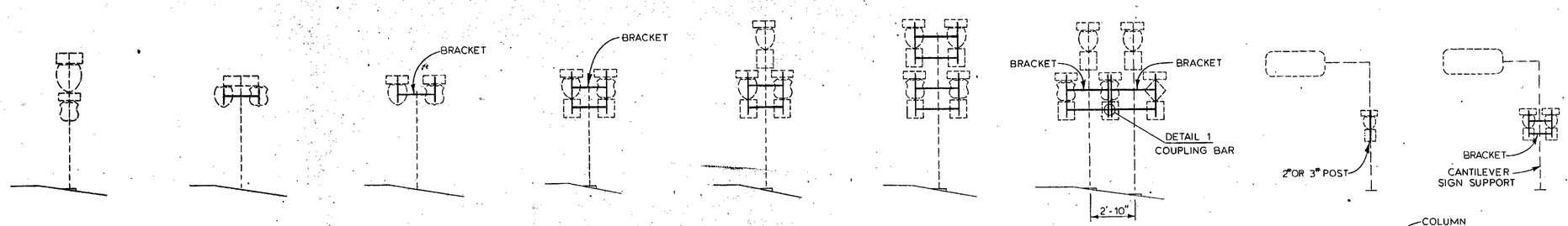
SIGN CONNECTION DETAILS
TRUSS — CANTILEVER — COLUMN

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1.	DIMENSION CHANGE	7-15-65	G.R.H.
2.	CONNECTION PLAN ADDED	4-66	R.L.D.
3.	ADD. OF STEEL SIGN PANEL	10-66	T.M.W.

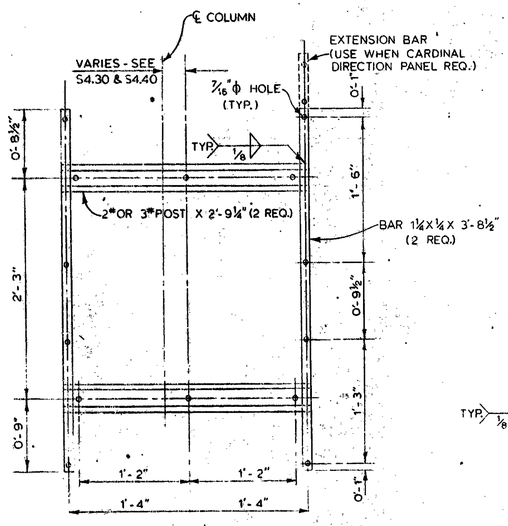
APPROVED BOSS		
DRAWN BY	R.D.S.	MAY 64
TRACED BY		
CHECKED BY		
SHEET 1 OF 2		

S9.10

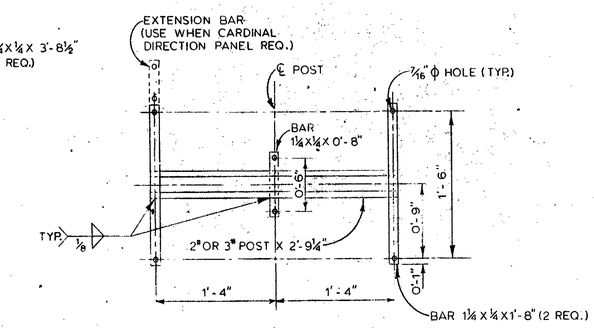
I 63174,075



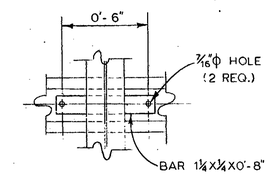
ROUTE MARKER ASSEMBLY
TYPICAL INSTALLATIONS



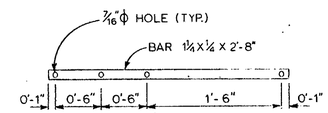
BRACKET



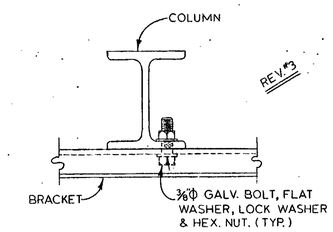
BRACKET



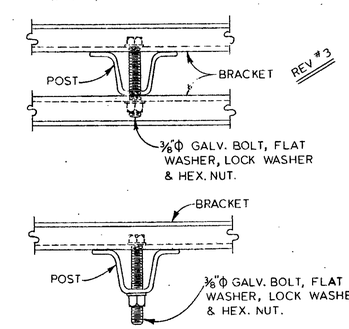
DETAIL 1 (TYP. - 2 PLACES)
COUPLING BAR



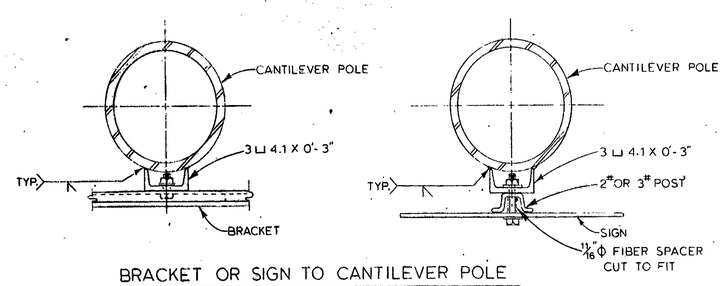
EXTENSION BAR



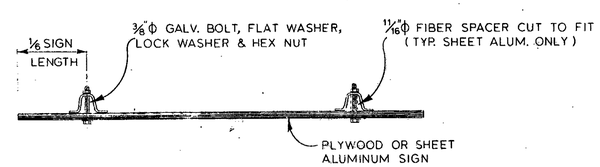
BRACKET TO COLUMN



BRACKET TO POST



BRACKET OR SIGN TO CANTILEVER POLE



SIGN TO POST

NOTE:
1. ALL CONNECTIONS ARE INCIDENTAL TO "SIGN".
2 ALL STEEL PARTS SHALL BE GALVANIZED.

TYPICAL CONNECTIONS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

MISCELLANEOUS
SIGN CONNECTION DETAILS

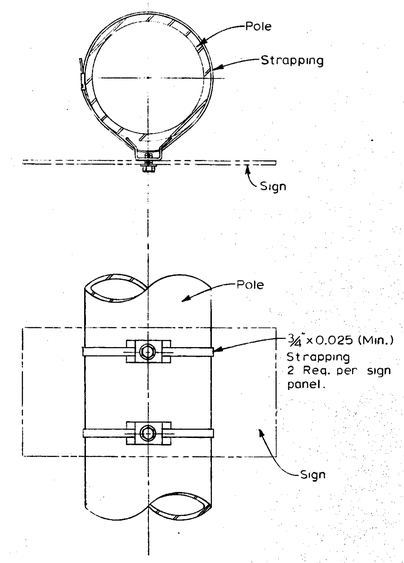
REVISIONS

NO	DESCRIPTION	DATE	BY
1		1-64	
2		6-64	
3	PIGGYBACK CONN. DELETED, VIEWS ADD	4-14-66	G.R.H.

SQUAD BOSS		
DRAWN BY	G.R.H.	4-14-66
TRACED BY		
CHECKED BY	T.R.K.	4-16-66
SHEET 2 OF 2		

S9.20

I 63174, 075



NOTES:

1.) All connections are incidental to the sign.
2.) Strapping, brackets, seals, nuts, bolts, and washers shall be stainless steel.
3.) Strapping materials may be obtained from the following suppliers.

Fisher Eaipment Co.
Independent Metal Strap Co.
Interlake Steel Corp.

Strapping materials may also be obtained from a supplier approved by the Engineer.

STRAPPING CONNECTIONS
FOR SIGN TO POLE

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MISCELLANEOUS
SIGN CONNECTION DETAILS

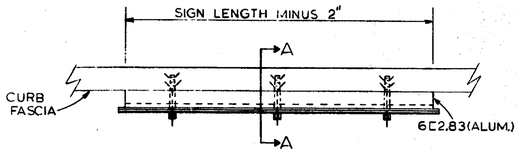
REVISIONS

NO.	DESCRIPTION	DATE	BY

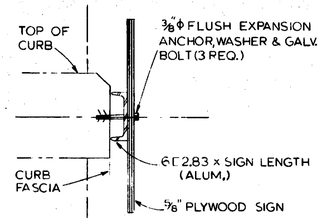
ROAD DOES		
DRAWN BY	GRH	12-16-66
TRACED BY		
CHECKED BY		
SHEET 3 OF 3		

S9.30

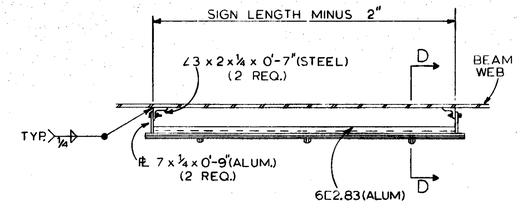
I 63174, 075



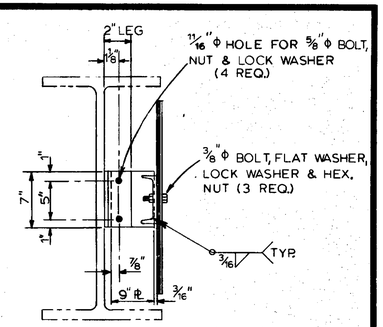
PLAN (TYPE A)
0° CONNECTION



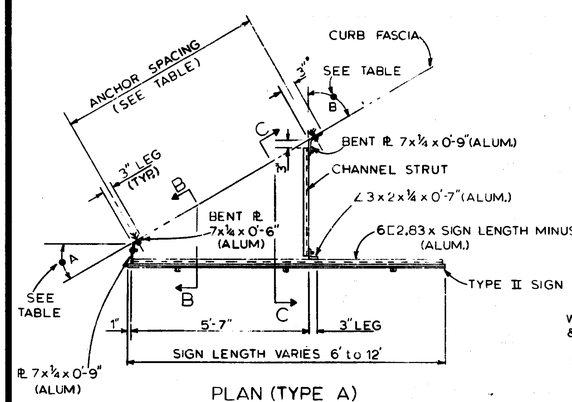
SECTION A-A



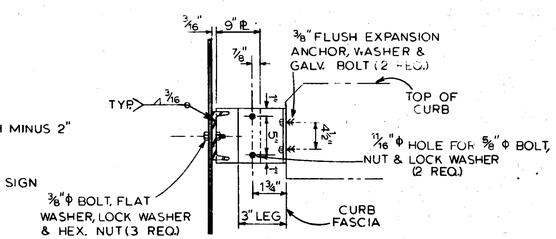
PLAN (TYPE B)
0° CONNECTION



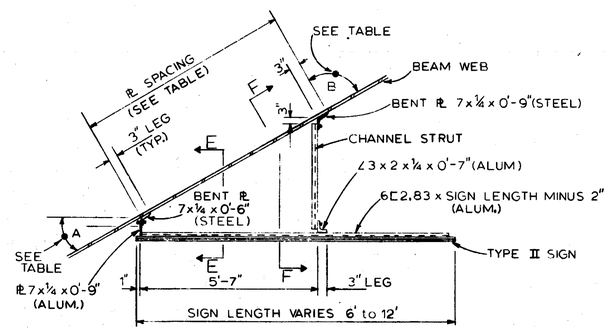
SECTION D-D
(TYP. 2 PLACES)



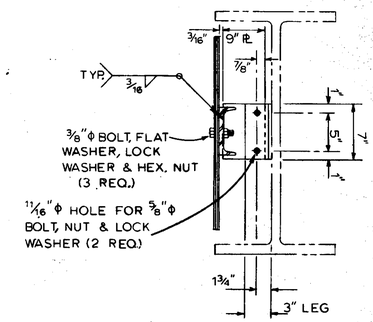
PLAN (TYPE A)
10°, 20°, 30° & 40° CONNECTION



SECTION B-B

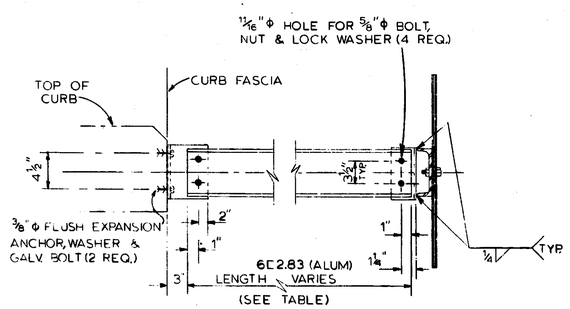


PLAN (TYPE B)
10°, 20°, 30° & 40° CONNECTION



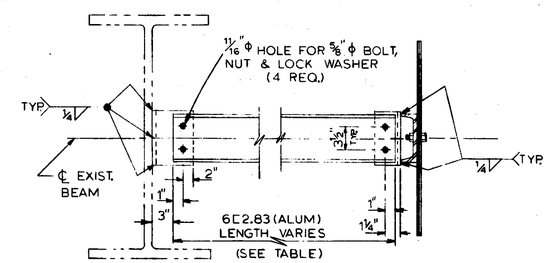
SECTION E-E

SKEW	CONNECTION (ANGLE A)	ANGLE B	CHANNEL STRUT LENGTH	ANCHOR SPACING
0°-10°	0°	——	——	MATCH SIGN HOLES
10°-20°	10°	80°	6C2.83 x 1'-4 3/4"	5'-8"
20°-30°	20°	70°	do x 2'-5 1/4"	5'-11 1/2"
30°-40°	30°	60°	do x 3'-7 1/2"	6'-5 1/2"
40°-50°	40°	50°	6C2.83 x 5'-1 1/4"	7'-3 1/4"



SECTION C-C

BRIDGE CONNECTION
TYPE A



SECTION F-F

SKEW	CONNECTION (ANGLE A)	ANGLE B	CHANNEL STRUT LENGTH	PL SPACING
0°-10°	0°	——	——	——
10°-20°	10°	80°	6C2.83 x 1'-4 3/4"	5'-11"
20°-30°	20°	70°	do x 2'-5 1/4"	6'-2 1/2"
30°-40°	30°	60°	do x 3'-7 1/2"	6'-8 1/2"
40°-50°	40°	50°	6C2.83 x 5'-1 1/4"	7'-6 1/2"

BRIDGE CONNECTION
TYPE B

NOTES:

1) ALL BOLTS, NUTS & WASHERS SHALL BE GALV. STEEL. NUTS SHALL BE TAPPED 0.015 OVERSIZE.
2) ALL SHAPES & PL's SHALL BE EITHER 6061-T6 ALUM OR A-36 STEEL.
3) THE LEFT EDGE OF SIGN SHALL COINCIDE WITH THE RIGHT EDGE OF ROADWAY. IF NECESSARY TO CLEAR EXPANSION JOINT OR ANY OBSTRUCTION, LOCATE SIGN A MINIMUM DISTANCE TO THE RIGHT.
4) BOTTOM EDGE OF SIGN SHALL BE HORIZONTAL WHEN ERECTED & SHALL NOT PROJECT BELOW BRIDGE SOFFIT.
5) NO WELDING WILL BE PERMITTED ON BRIDGE BEAM TENSION FLANGE.
6) ALL PAINT DAMAGE AREAS DUE TO WELDING AND ERECTION ON EXISTING OR NEW STEEL SHALL BE CLEANED AND REPAINTED WITH RED LEAD PRIMER PLUS TWO COATS OF PAINT TO MATCH THE COLOR OF THE BRIDGE BEAM. PAINT ON STEEL CLIP ∠S SHALL BE DRY PRIOR TO ATTACHING ALUMINUM CONNECTIONS.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

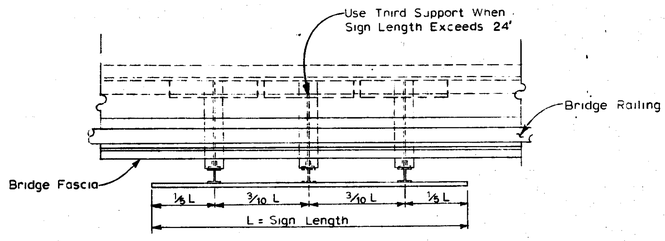
BRIDGE CONNECTION
TYPE A & B

REVISIONS			
NO.	DESCRIPTION	DATE	BY
	REDRAWN	2-16-67	TMW

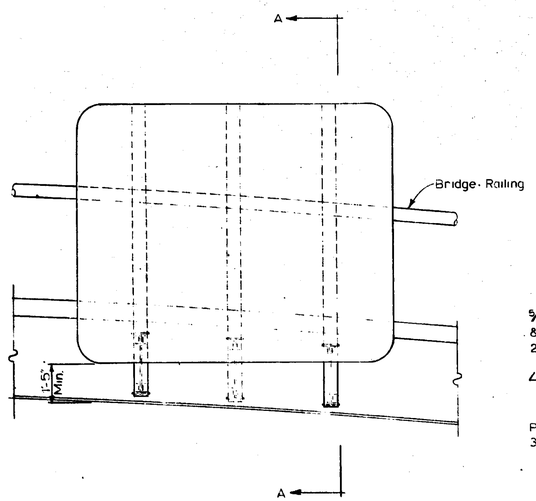
SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET	OF

S10.10

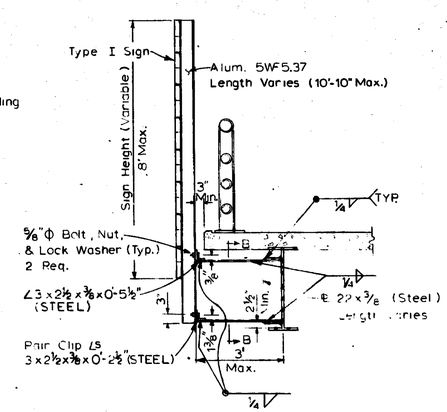
I63174,075



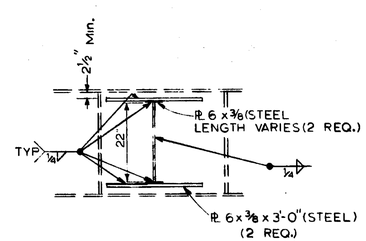
PLAN



ELEVATION



SECTION A-A



FIT HORIZONTAL STIFFENERS BETWEEN EXIST. STIFFENERS, IF ANY, ON BEAM WEB; OTHERWISE, CENTER PLATE ON BRACKET.

SECTION B-B

NOTES:

1) ALL BOLTS SHALL BE GALVANIZED HIGH STRENGTH BOLT (ASTM A325). ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A123 OR A386. NUTS SHALL BE TAPPED 0.015 OVERSIZE.
2) ALL SHAPES & PL'S SHALL BE EITHER 6061 T6 ALUM ALLOY OR A-36 STEEL.
3) BOTTOM EDGE OF SIGN SHALL BE HORIZONTAL WHEN ERECTED & SHALL BE A MINIMUM OF 1-5 ABOVE LOWER BRIDGE BEAM FLANGE.
4) DIMENSIONS OF STEEL WEB PLATE SHALL BE DETERMINED IN THE FIELD.
5) SIGN LOCATION MAY BE SHIFTED TO THE RIGHT TO AVOID EXPANSION JOINTS OR STIFFENERS.
6) ALL PAINT DAMAGE AREAS DUE TO WELDING AND ERECTION ON EXISTING OR NEW STEEL SHALL BE CLEANED AND REPAINTED WITH RED LEAD PRIMER PLUS TWO COATS OF PAINT TO MATCH THE COLOR OF THE BRIDGE BEAM. PAINT ON STEEL CLIP ∠S SHALL BE DRY PRIOR TO ATTACHING ALUMINUM CONNECTIONS.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

BRIDGE CONNECTION
TYPE C

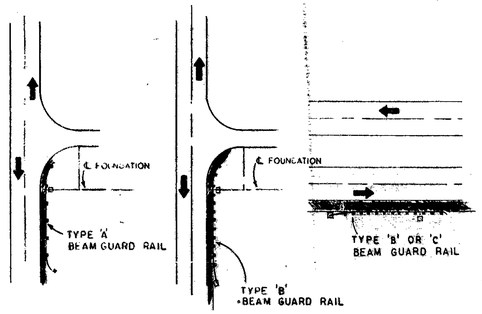
REVISIONS

NO.	DESCRIPTION	DATE	BY
	REDRAWN	2-20-67	TMW

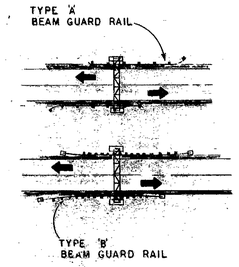
DESIGN BASIS		
DRAWN BY	G. HOLBEN	2-10-67
TRACED BY		
CHECKED BY		
SHEET	OF	

S10.20

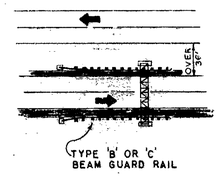
I63174075

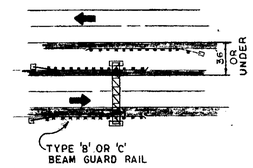


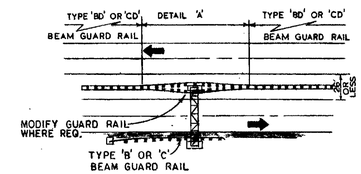
CANTILEVER SIGN SUPPORT



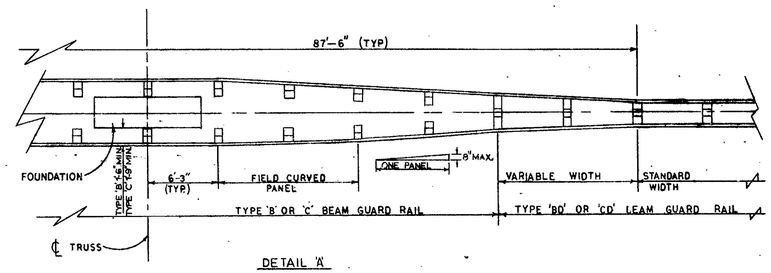
NOTE: DETAIL 1 ANCHORAGE WILL BE REQUIRED AT BOTH ENDS OF THE ABOVE TYPE 'B' BEAM GUARD RAIL



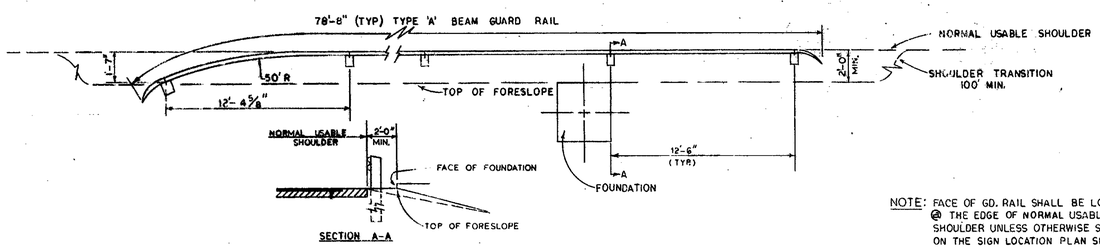




TRUSS SIGN SUPPORT

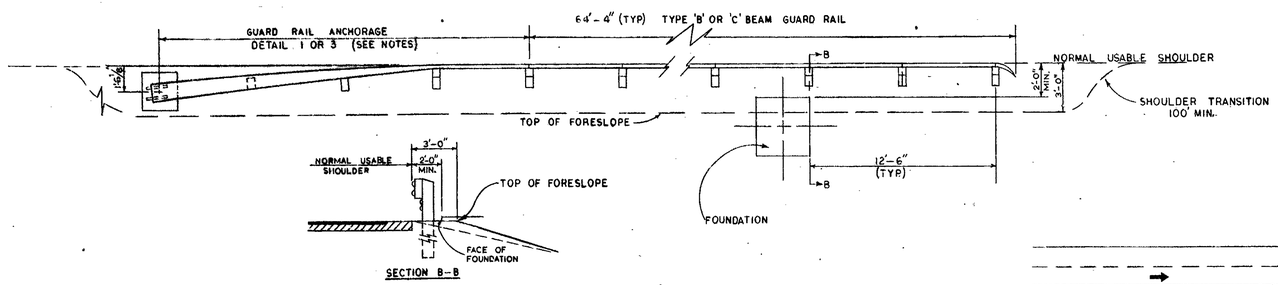


DETAIL 'A'

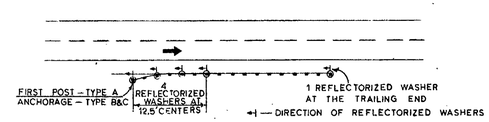


NOTE: FACE OF GD. RAIL SHALL BE LOCATED @ THE EDGE OF NORMAL USABLE SHOULDER UNLESS OTHERWISE SPECIFIED ON THE SIGN LOCATION PLAN SHEETS.

PLAN — TYPE 'A'



PLAN — TYPE 'B' & 'C'



LOCATION OF REFLECTORIZED WASHERS FOR BEAM GUARD RAIL

NOTES:

1) FOR BEAM GUARD RAIL DETAILS SEE STANDARD PLANS LISTED BELOW:
   BEAM GUARD RAIL – TYPE A, E-4-A-137F
   BEAM GUARD RAIL – TYPE B, E-4-A-139A
   BEAM GUARD RAIL – TYPE BD, E-4-A-140C
   LOCATION OF BEAM GUARD RAIL AT STRUCTURES, E-4-A-142D
   BEAM GUARD RAIL – TYPE C, E-4-A-148B
   BEAM GUARD RAIL – TYPE CD, E-4-A-149B
   GUARD RAIL ANCHORAGE, E-4-A-152A
2) FOR TYPE B GUARD RAIL ANCHORAGE SEE DETAIL 1 OF E-4-A-152A
   FOR TYPE C GUARD RAIL ANCHORAGE SEE DETAIL 3 OF E-4-A-152A
3) WHERE CALLED FOR ON PLANS, BEAM GUARD RAIL USED TO PROTECT A SIGN SUPPORT FOUNDATION ON AN EXISTING ROADWAY SECTION SHALL BE MODIFIED BY OMITTING THE CONSTRUCTION OF ADDITIONAL SHOULDER WIDTH. WHERE DETAIL 1 OR 3 GUARD RAIL ANCHORAGE IS REQUIRED, THE ELEVATION OF THE CONCRETE ANCHOR SHALL BE ADJUSTED TO MEET THE EXISTING GRADE. THE HEIGHT OF THE ANCHORAGE POSTS MAY ALSO BE VARIED TO ALLOW FOR CHANGE IN THE CONCRETE ANCHOR ELEVATION.
4) FOR ESTIMATING PURPOSES THE GUARD RAIL LENGTHS ARE ROUNDED OFF TO THE NEAREST HALF OF A FOOT.
5) REFLECTORIZED WASHERS ARE INCIDENTAL TO BEAM GUARD RAIL.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
SIGN FOUNDATION
BEAM GUARD RAIL

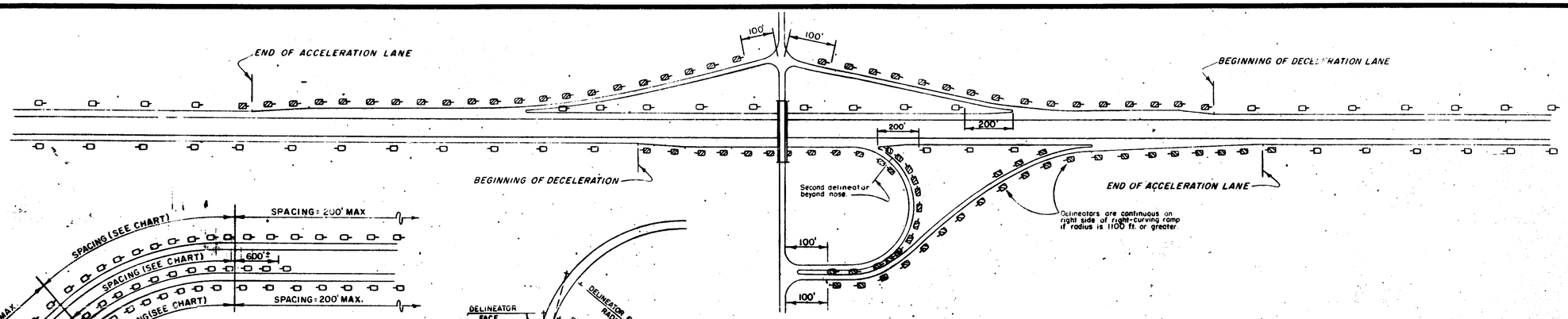
REVISIONS

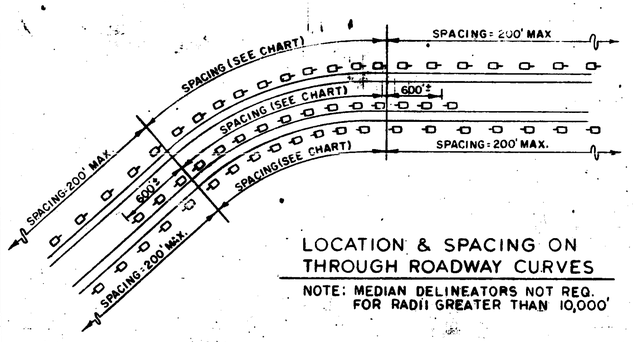
NO.	DESCRIPTION	DATE	BY
1	ADDED REFL. WASHERS & CHANGED NOTES	8-26-68	GNG

ROAD BOSS		
DRAWN BY	TMW	6-16-66
TRACED BY		
CHECKED BY		

SHEET S11.10 OF

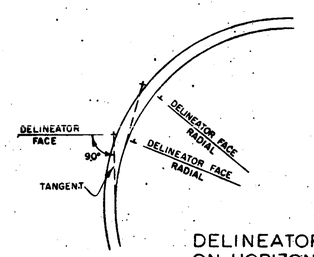
I 63174, 075



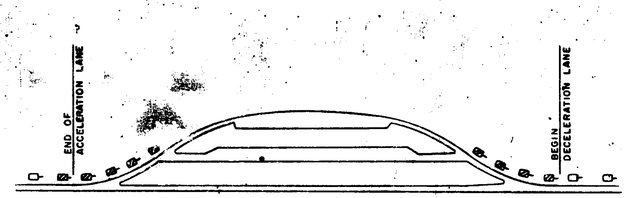


LOCATION & SPACING ON THROUGH ROADWAY CURVES

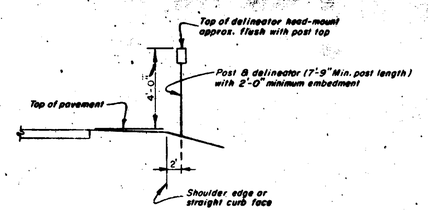
NOTE: MEDIAN DELINEATORS NOT REQ. FOR RADII GREATER THAN 10,000'

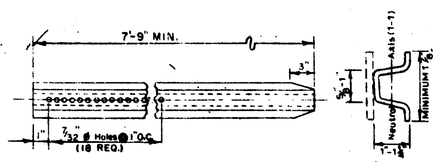


DELINEATOR ORIENTATION ON HORIZONTAL CURVES



REST AREA & WEIGH STATION





NOTE: *Minimum weight - 1.33 lbs. per ft.*
Minimum thickness - 3/32 in.
Minimum moment of inertia about 1-1 axis - 0.040 in.⁴

Dimensions shown are minimum and maximum permissable.

GALVANIZED POST DETAIL

NOTES:

1. *Single crystal delineators @ 200' max. spacing*
   Double yellow delineators @ 100' max. spacing
2. *Delineators shall be placed two feet beyond the outer edge of the roadway shoulder, two feet beyond the face of a barrier curb, or in the line of the guard rail.*
3. *Delineators shall be located along the outside of the ramps, i.e., on the left side for right-curving ramps and on the right for others. Delineators shall also be located on the right for right-curving ramps which have radii of 1100 ft. or greater.*
4. *Where delineation on one side of the roadway or ramp ends and delineation on the other side appears, the delineators should be overlapped for a distance required to place a minimum of two units.*
5. *On speed change lanes, delineators shall be located on right for right-hand connections and on the left for left-hand connections.*
6. *Delineators shall be omitted along the through roadway between interchanges where fixed source lighting exists but shall be placed on all roadways at all interchanges, whether or not the interchanges are lighted.*
7. *Single crystal delineators at 100' max. spacing shall be used in lieu of double yellow delineators at interchanges where [illegible]*

SPACING FOR HIGHWAY DELINEATORS ON HORIZONTAL CURVES

DEGREE OF CURVE	RADIUS IN FEET	SPACING ON CURVE	SPACING IN ADVANCE AND BEYOND CURVE		
			1 ST SPACE	2 ND SPACE	3RD SPACE
	10,000	200	200	200	200
1		152	200	200	200
	5,000	141	200	200	200
	3,000	109	196	200	200
2		106	191	200	200
	2,500	99	178	200	200
	2,000	88	158	200	200
3		86	155	200	200
	1,800	84	151	200	200
	1,600	78	140	200	200
4		74	133	200	200
	1,400	74	133	200	200
	1,200	68	122	200	200
5		66	119	198	200
	1,000	62	112	186	200
	900	58	104	174	200
7		55	99	165	200
	800	55	99	165	200
	700	51	92	153	200
9		48	86	144	200
	600	47	85	141	200
	500	42	76	126	200
12		41	74	123	200
	400	37	67	111	200
15		36	65	108	200
	350	35	63	105	200
18		33	59	99	198
	300	32	58	96	192
21		30	54	90	180
	250	28	50	84	168
25		28	50	84	168
	200	24	43	72	144
30		24	43	72	144
	150	20	36	60	120
40		19	34	57	114
	100	14	25	42	84

THE SPACING S ON THE CURVE IS FOUND FROM THE FORMULA $S = 2\sqrt{R - 50}$, WHERE R IS THE RADIUS OF THE CURVE IN FEET. THE SPACING TO THE FIRST DELINEATOR IN ADVANCE OF AND BEYOND THE CURVE IS 1.8 S, TO THE NEXT DELINEATOR 3 S, AND TO THE NEXT 6 S, BUT NOT TO EXCEED 200 FEET.

MINIMUM SPACING = 10 FEET

MICHIGAN STATE HIGHWAY DEPARTMENT

POST & DELINEATOR

REVISIONS

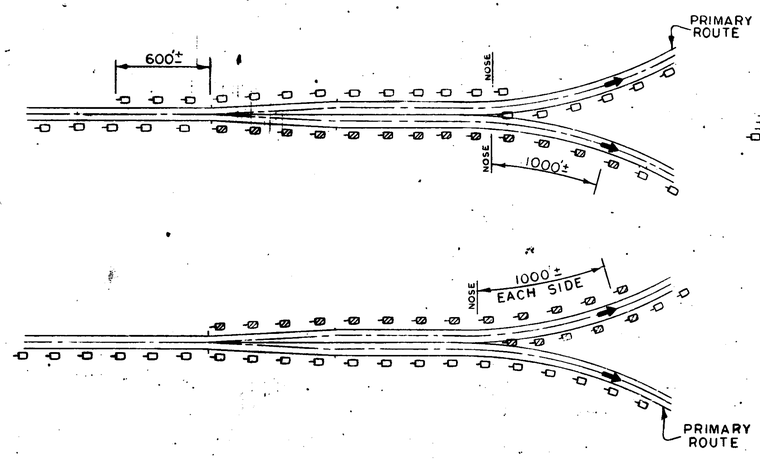
NO.	DESCRIPTION	DATE	BY
1	[illegible] ELIMINATION OF TRIPLE YELLOW UNIT	[illegible]	
2	NOTE 7 ADDED		

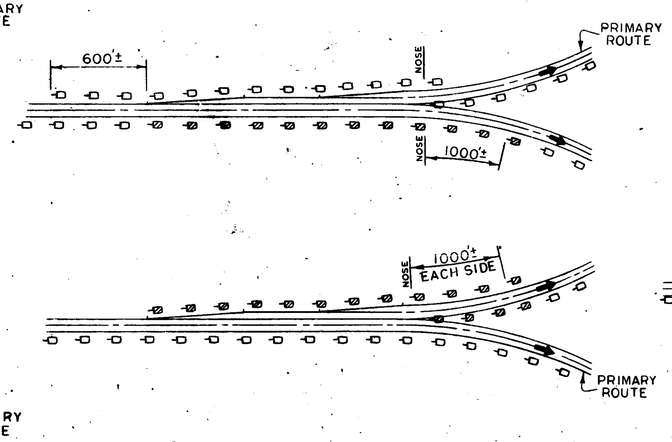
SQUARE BASIS		
DRAWN BY	R D S	11 12 63
TRACED BY		
CHECKED BY		
SHEET 1 OF 2		

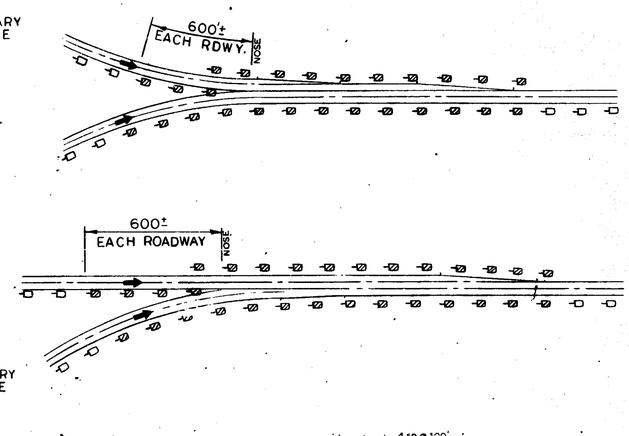
S12.10

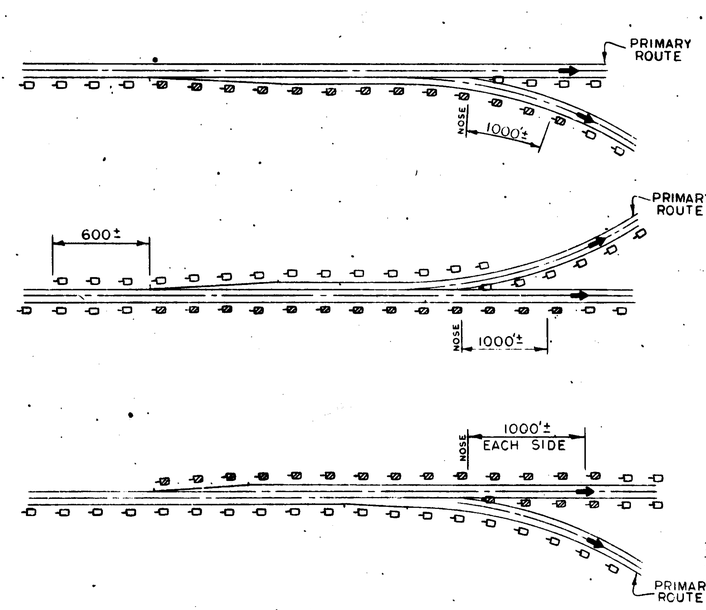
I 63174, 075 45

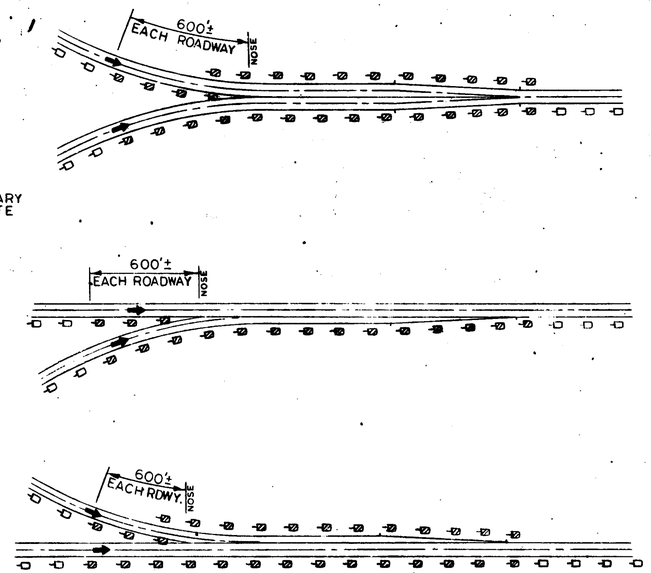
JUNCTION OF MAJOR ROADWAYS

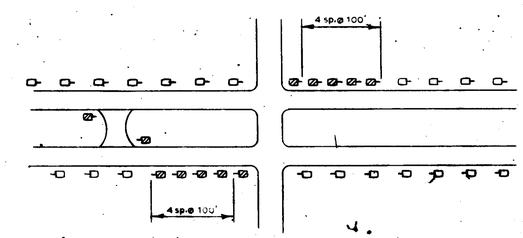




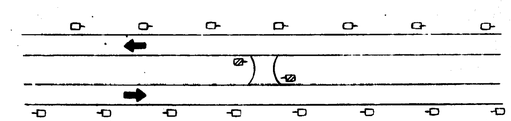








DIVIDED HIGHWAY



MEDIAN CROSSOVER
FREEWAY

NOTE:

Single crystal delineators at 100' max. spacing shall be used in lieu of double yellow delineators at interchanges where both roadways are interstate.

MICHIGAN STATE HIGHWAY DEPARTMENT

POST & DELINEATOR

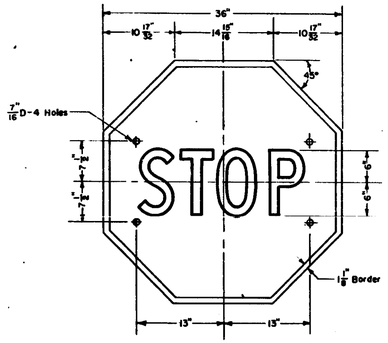
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	NOTE ADDED	7-66	

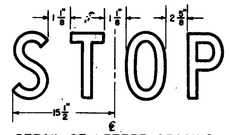
ROAD DESS		
DRAWN BY	RDS	11-11-63
TRACED BY		
CHECKED BY		
SHEET	2 OF 2	

S12.20

I. 63174,075



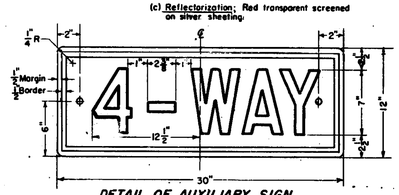
DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type A
   (a) Legend: 12" Series "C" Letters, M.S.H.D. standard alphabet.
   (b) Color: Silver legend and border on a red background.
   (c) Reflectorization: Red transparent screened on silver sheeting.



DETAIL OF AUXILIARY SIGN
Scale: None

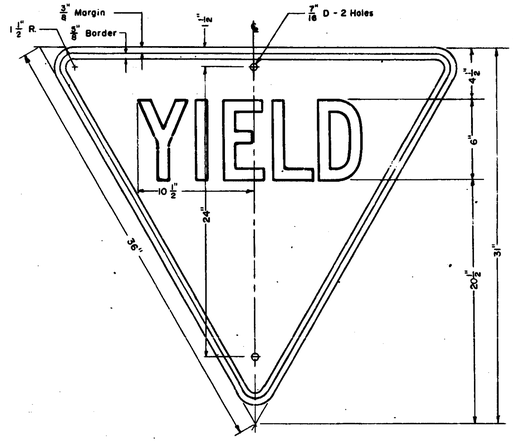
Note:
Specifications for Auxiliary Sign shall be the same as for R2-1-24 except legend which shall be 7" Series "C".

REVISIONS

NO.	DESCRIPTION	DATE
1.	Spec. change (letter size)	4-6

TYPE III A SIGN

R1-1-36 STOP SIGN	AUTH. NO.	DRAWN W.P.B
	CONT. SEC.	DATE 11-27-6
	REF.	SCALE None
	SHEET 1 OF 1	PLAN R1-1-36



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

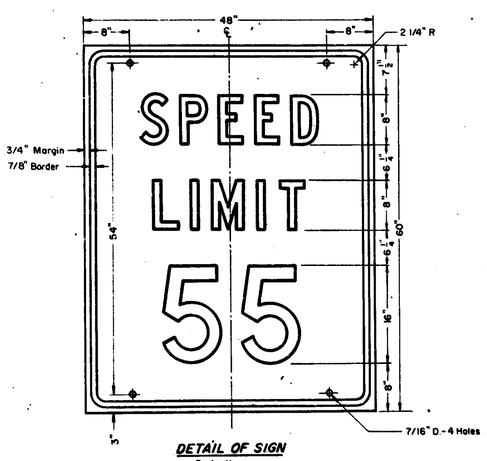
1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   Legend: 6" Series "D" letters. M.S.H.D. standard alphabet.
   Color: Black legend and border on a yellow background.
   Reflectorization: Yellow sheeting.

REVISIONS

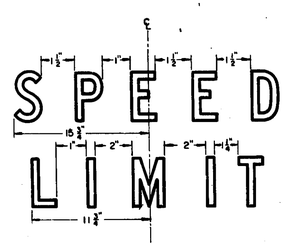
NO.	DESCRIPTION	DATE
1.	DIMENSION CHANGE & REMOVAL OF "RIGHT OF WAY"	12-66

TYPE III B SIGN

R1-2-36 YIELD SIGN	AUTH. NO.	DRAWN
	CONT. SEC.	DATE 12-66
	REF.	SCALE None
	SHEET 1 OF 1	PLAN R1-2-36



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

NOTE:
Spacing between numerals shall be in accordance with spacing charts prepared by the Traffic Division.

SPECIFICATIONS

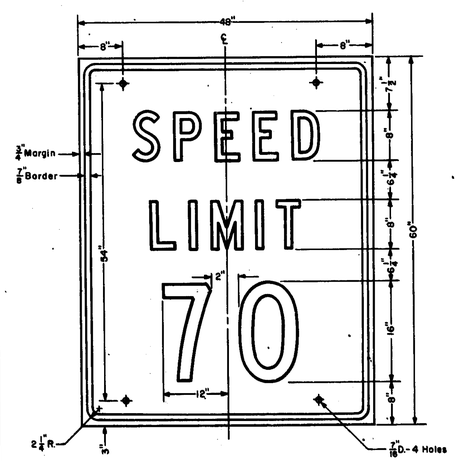
1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type B.
   (a) Legend: 8" Series "D" (Modified) letters and 16" Series "D" (Modified) numerals, M.S.H.D. alphabet.
   (b) Color: Black legend and border on a silver background.
   (c) Reflectorization: Silver sheeting.

REVISIONS

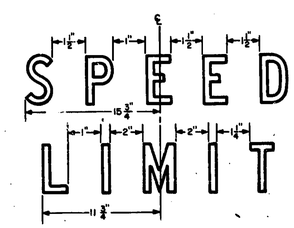
NO.	DESCRIPTION	DATE

Type II B Sign

R2-1-48 SPEED LIMIT SIGN	AUTH. NO.	DRAWN S.L.M.
	CONT. SEC.	DATE 4/1/63
	REF.	SCALE As Shown
	SHEET 1 OF 1	PLAN R-2-1-48



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type B
   (a) Legend: 8" Series "D" (Modified) letters and 16" Series "D" (Modified) numerals, M.S.H.D. alphabet.
   (b) Color: Black legend and border on a silver background.
   (c) Reflectorization: Silver sheeting.

REVISIONS

NO.	DESCRIPTION	DATE

TYPE II B SIGN

R2-3-48 STATE-WIDE FREEWAY SPEED SIGN	AUTH. NO.	DRAWN E.B.A.
	CONT. SEC.	DATE 9-26-63
	REF.	SCALE None
	SHEET 1 OF 1	PLAN R2-3-48

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____
APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____
APPROVED _____ CHIEF OF DESIGN _____ DATE _____

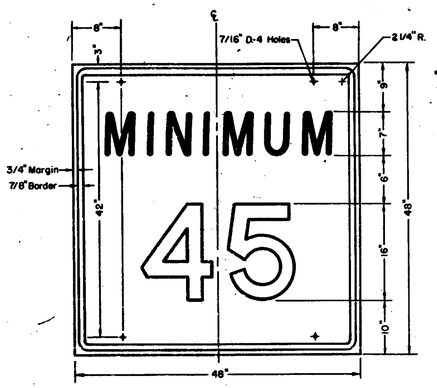
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____
APPROVED _____ BY BUREAU OF PUBLIC ROADS _____ DATE _____

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

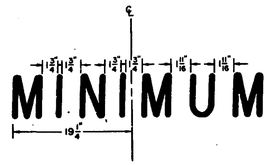
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S20.10 FILE NO. I 63174, 075 STATE PROJECT FEDERAL PROJECT SHEET NO. 47



DETAIL OF SIGN
Scale: None

NOTE:
Spacing between numerals shall be in accordance with spacing charts prepared by the Traffic Division.



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type B.
   (a) Legend: 7" Series "D" (modified) letters with 16" Series "D" (modified) numerals, M.S.H.D. alphabet.
   (b) Color: Black legend and border on a silver background.
   (c) Reflectorization: Silver sheeting.

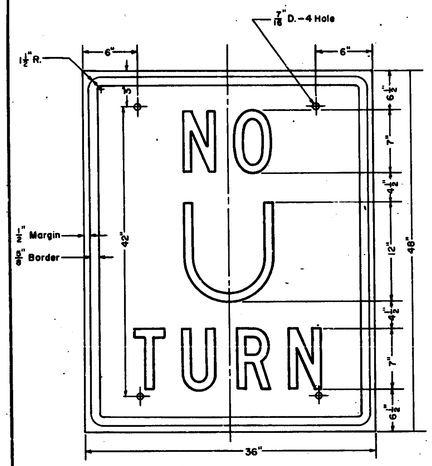
REVISIONS

NO.	DESCRIPTION	DATE

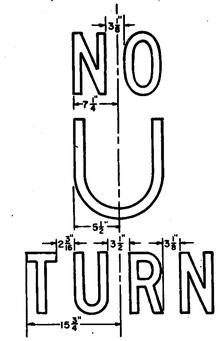
Type II B Sign

R2-5-48
MINIMUM
SPEED SIGN

AUTH. NO.	DRAWN L.T.B.
CONT. SEC.	DATE 3-29-63
REF.	SCALE AS SHOWN
SHEET 1 OF 1	PLAN R2-5-48



DETAIL OF SIGN
SCALE: NONE



DETAIL OF LETTER SPACING
SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal
2. Sign Face: Type B
   (a) Legend: First and Third Line — 7" Series "E" letters
   Second Line — 12" Series "F" letter — B.P.R. Standard Alphabet
   (b) Color: Black legend and border on a silver background
   (c) Reflectorization: Silver sheeting

REVISIONS

NO.	DESCRIPTION	DATE

TYPE II B SIGN

R3-4-36
NO U TURN
SIGN

AUTH. NO.	DRAWN M.N.B.
CONT. SEC.	DATE 6-19-63
REF.	SCALE None
SHEET 1 OF 1	PLAN R3-4-36

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

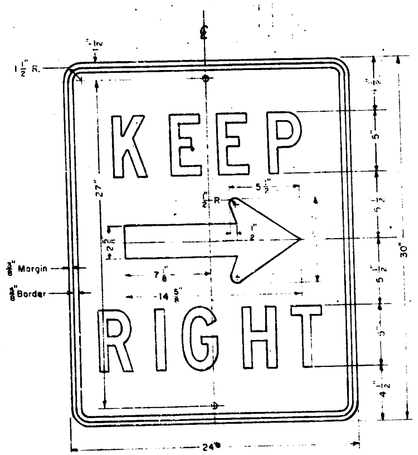
APPROVED _____ CONSTRUCTION ENGINEER — DATE _____
APPROVED _____ MAINTENANCE ENGINEER — DATE _____
APPROVED _____ CHIEF OF DESIGN — DATE _____

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER — DATE _____

APPROVED BY BUREAU OF PUBLIC ROADS — DATE _____



DETAIL OF SIGN
Scale: None

DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend: 5" Series "D" (modified) letters, M.S.H.D. alphabet with arrow as shown
   (b) Color: Black letters, arrow and border on a silver background
   (c) Reflectorization: Silver sheeting.

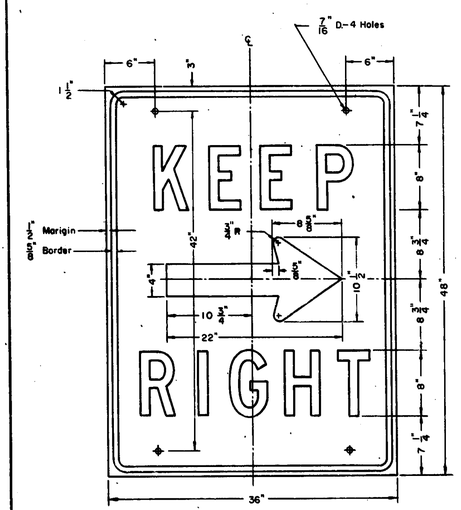
REVISIONS

NO.	DESCRIPTION	DATE

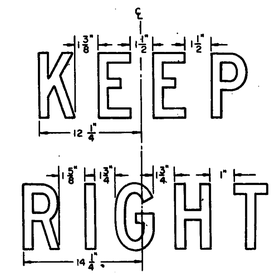
Type III B Sign

R3-21-24
"KEEP RIGHT"

AUTH. NO.	DRAWN P.E.H.
CONT. SEC.	DATE 3-12-63
REF.	SCALE As Shown
SHEET 1 OF 1	PLAN R3-21-24



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type B.
   (a) Legend: 8" Series "D" (modified) letters, M.S.H.D. alphabet with arrow as shown.
   (b) Color: Black letters, arrow and border on a silver background.
   (c) Reflectorization: Silver sheeting.

REVISIONS

NO.	DESCRIPTION	DATE

Type II B Sign

R3-21-36
KEEP RIGHT

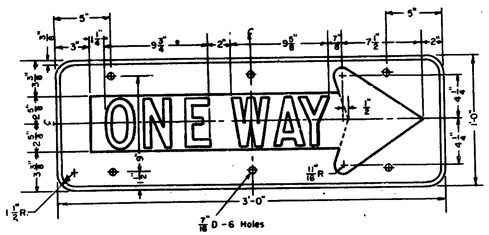
AUTH. NO.	DRAWN S.L.M.
CONT. SEC.	DATE 3/13/63
REF.	SCALE As Shown
SHEET 1 OF 1	PLAN R3-21-36

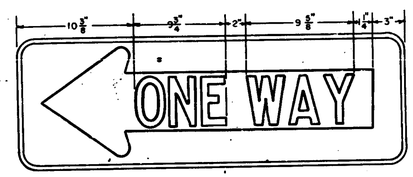
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS — DATE _____
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN — DATE _____
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION — DATE _____

S20.11 | FILE NO. | I 63174, 075 | STATE PROJECT | PROGRAM PROJECT | SHEET NO. 40





DETAIL OF SIGNS
SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type C
   - (a) Legend: 4" Series "D" on a $5\frac{1}{4}$" stroke width silver arrow M.S.H.D. standard alphabet.
   - (b) Color: Black legend and background with silver arrow and border.
   - (c) Reflectorization: Silver Sheeting.

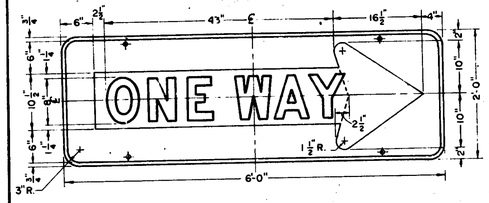
REVISIONS

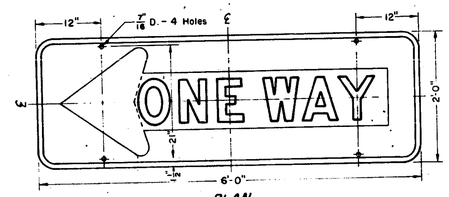
NO.	DESCRIPTION	DATE
1	Arrow shape and border.	2-2-65
2	Arrow dim. added.	2-66

TYPE IIIC SIGN

R3-23-36
ONE - WAY
ARROW

AUTH. NO.		DRAWN	P.E.H.
CONT. SEC.		DATE	2-4-6
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN R3-23-36		

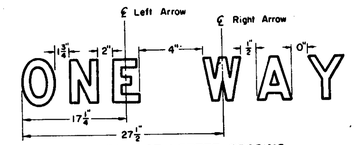




PLAN
Scale: None

REVISIONS

NO.	DESCRIPTION	DATE



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

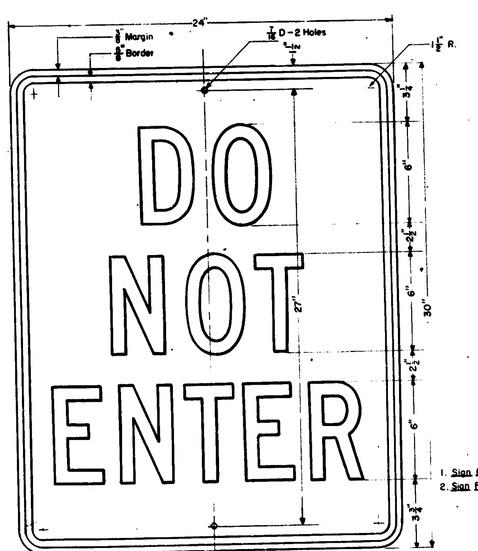
Sign Panel: $\frac{5}{8}$" plywood or approved equal.
Legend: 8" Series "D" (modified) letters – M.S.H.D. standard alphabet.
Color: Black letters and sign background with silver arrow and border.
Reflectorization: Silver sheeting.

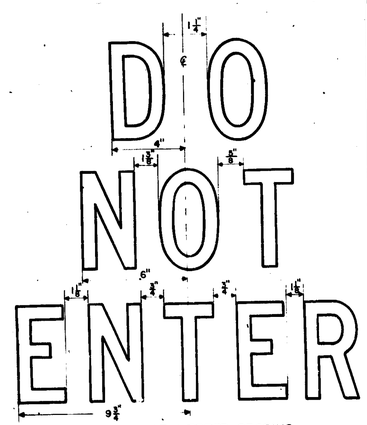
Note: Install at 5' bottom height.

TYPE IIC SIGN

R3-23-72
ONE WAY
ARROW

AUTH. NO.		DRAWN	L.T.B.
CONT. SEC.		DATE	11-25-64
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN R3-23-72		





DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   - (a) Legend: 6" Series "C" (modified) letters – M.S.H.D. standard alphabet.
   - (b) Color: Black legend and border on a silver background.
   - (c) Reflectorization: Silver Sheeting

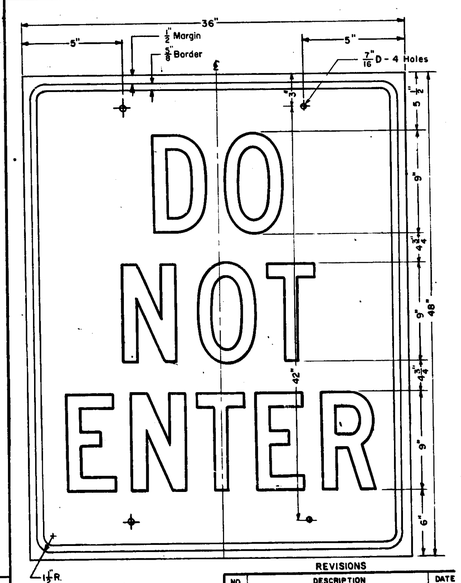
REVISIONS

NO.	DESCRIPTION	DATE

TYPE IIIB SIGN

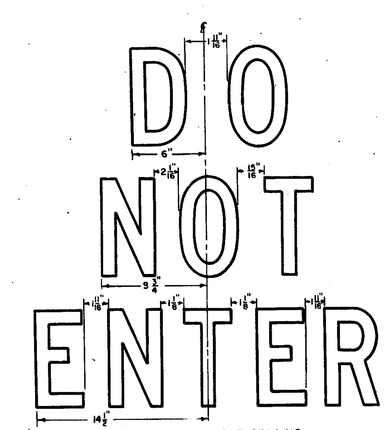
R3-27-24
DO NOT ENTER
SIGN

AUTH. NO.		DRAWN	H.J.B.
CONT. SEC.		DAT	7/5/63
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN R3-27-24		



REVISIONS

NO.	DESCRIPTION	DATE
1	Change in hole location	4-65



DETAIL OF LETTER SPACING

SPECIFICATIONS

1. Sign Panel: Type II, $\frac{5}{8}$" plywood or approved equal.
2. Sign Face: Type B.
   - (a) Legend: 9" series "C" (modified) letters – M.S.H.D. standard alphabet.
   - (b) Color: Black legend and border on silver background.
   - (c) Reflectorization: Silver sheeting.

Type II B sign

R3-27-36
DO NOT ENTER
SIGN

AUTH. NO.		DRAWN	P.E.H.
CONT. SEC.		DATE	6-27-62
REF.		SCALE	None
SHEET 1 OF 1	PLAN R3-27-36		

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER _____ DATE
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT

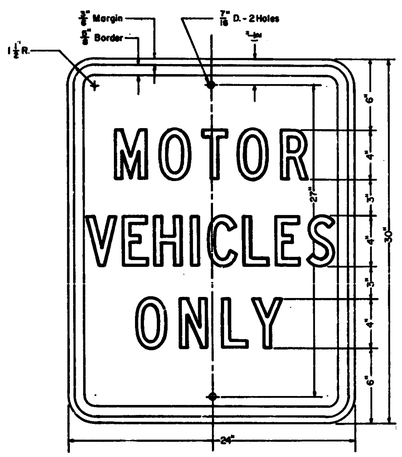
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S20.12

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174.075			49



DETAIL OF SIGN

REVISIONS

NO.	DESCRIPTION	DATE

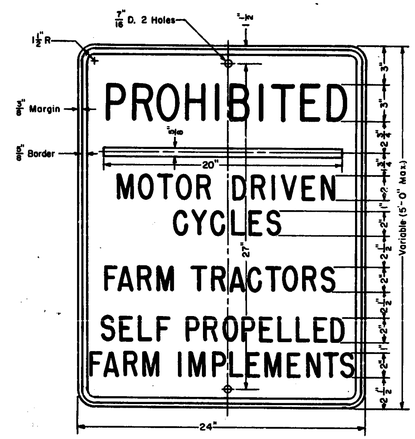
SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal
2. Sign Face: Type B
   (a) Legend: 4" Series "C" (modified) letters – M.S.H.D. Standard alphabet
   (b) Color: Black legend and border on a silver background
   (c) Reflectorization: Silver sheeting

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

TYPE III B SIGN

R3-31-24 MOTOR VEHICLES ONLY SIGN	AUTH. NO.	DRAWN M.N.B.
	CONT. SEC.	DATE 7-19-62
	REF.	SCALE NONE
	SHEET 1 OF 1	PLAN R.3-31-24



DETAIL OF SIGN
SCALE : NONE

SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal
2. Sign Face Type B
   (a) Legend; 2" and 3" Series "C" (modified) letters – M.S.H.D. standard alphabet.
   (b) Color; Black letters divider bar and border on silver background
   (c) Reflectorized; Silver sheeting

NOTES:

1. Type of vehicles shown as prohibited are merely typical examples. Types displayed on sign must be in conformance with STATE LAW and / or local ordinances.
2. Note that each type is grouped in such a fashion that vertical spacing between lines (where more than one line is required) is 1" and between different types of vehicles prohibited is 2 1/2"
3. Where sign is used in conjunction with an R3-31-24 (Motor Vehicles Only) maximum vertical dimension shall be 36". Where used independently, maximum vertical dimension shall be 60"
4. Signs over 30" in heigh will require an additional mounting hole located centrally.
5. Letter spacing shall be in accordance with letter spacing charts prepared by the Traffic Division.

REVISIONS

No.	DESCRIPTION	DATE
1	Replaces R3-32-24 dated 7/5/63	
2	Added sheet 2 of 2	22566

TYPE III B SIGN

R3-32-24 VEHICLE PROHIBITION FREEWAY SIGN	AUTH. NO.	DRAWN M.N.B.
	CONT. SEC.	DATE 4-27-6
	REF.	SCALE NONE
	SHEET 1 OF 2	PLAN R3-32-24

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

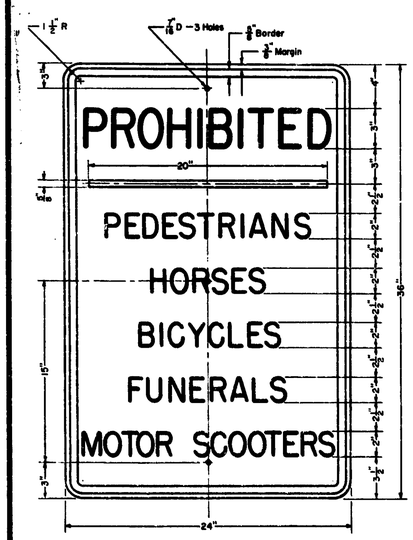
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN
Scale: none

REVISIONS

NO.	DESCRIPTIONS	DATE

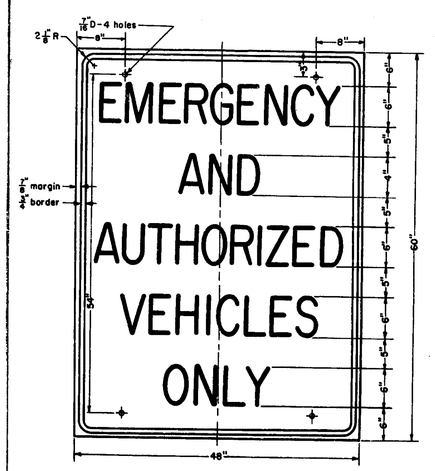
SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend: 2" and 3" Series "C" modified letters – M.S.H.D. standard alphabet.
   (b) Color: Black letters, divider bar and border on a silver background.
   (c) Reflectorization: Silver sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by Traffic Division

Type III B Sign

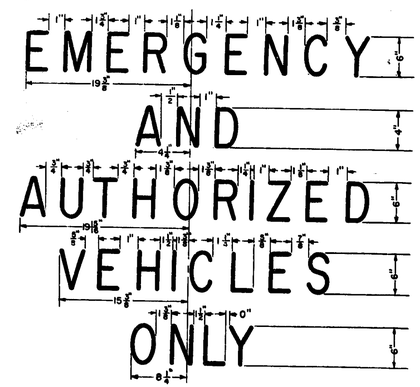
R3-32-24D VEHICLE PROHIBITION FREEWAY SIGN	AUTH. NO.	DRAWN M.St.G.
	CONT. SEC.	DATE 2/28/66
	REF.	SCALE None
	SHEET 2 OF 2	PLAN R3-32-24D



DETAIL OF SIGN
Scale: None

REVISIONS

NO.	DESCRIPTION	DATE



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type II, 3/8 Plywood or approved equal
2. Sign Face: Type B
   (a) Legend: 6" Series "C" letters, lines 1, 3, 4 and 5; 4" Series "C" letters, line 2; M.S.H.D. standard alphabet
   (b) Color: Black legend and border on a silver background
   (c) Reflectorization: Silver sheeting

TYPE II B SIGN

R3-34-48 CROSSOVER PROHIBITION SIGN	AUTH. NO.	DRAWN M.St.G.
	CONT. SEC.	DATE 1-13-66
	REF.	SCALE None

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

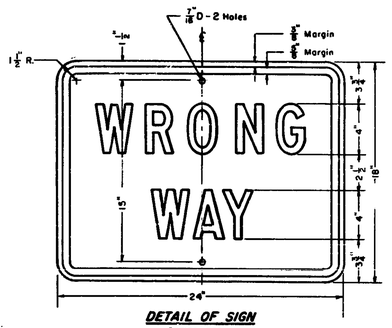
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

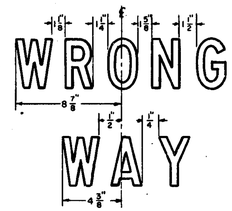
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S20.13 | FILE NO. | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 50



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

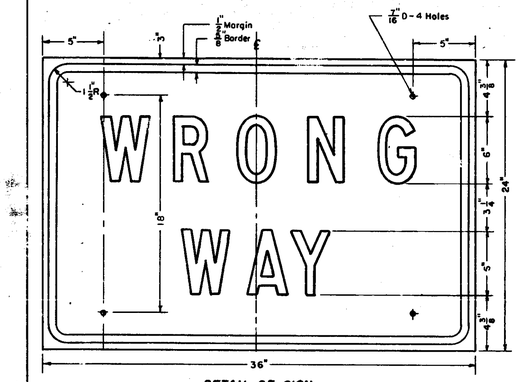
1. Sign Panel: Type III Sheet Aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend; 4" Series "C" letters – M.S.H.D. standard alphabet.
   (b) Color: Silver letters and border on a red background.
   (c) Reflectorization; Silver and red.

REVISIONS		
NO	DESCRIPTION	DATE
1	PLAN NO. CHANGE	2-6

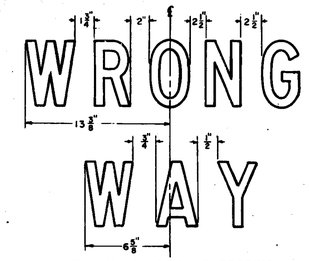
Type III A Sign

R3-35-24
WRONG WAY
SIGN

AUTH. NO.		DRAWN	R.E.H.
CONT. SEC.		DATE	4-9-65
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN	R3-35-24	



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

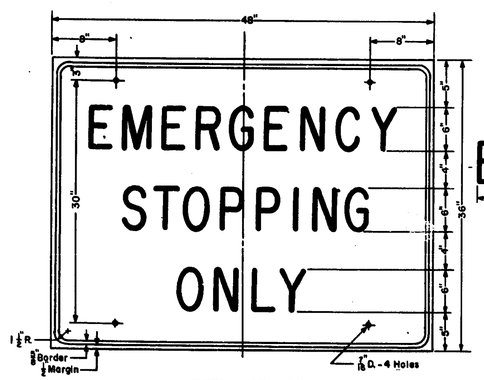
1. Sign Panel: Type II 3/8" Plywood or approved equal.
2. Sign Face: Type A
   (a) Legend; 6" Series "C" letters – M.S.H.D. standard alphabet.
   (b) Color; Silver letters and border on a red background.
   (c) Reflectorization: Silver and red.

REVISIONS		
NO.	DESCRIPTION	DATE
1	PLAN NO. CHANGE	2-66

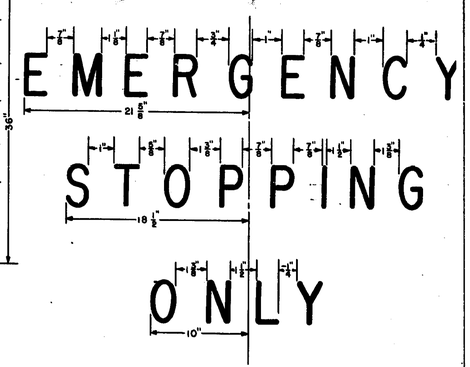
Type II A Sign

R3-35-36
WRONG WAY
SIGN

AUTH. NO.		DRAWN	R.E.H
CONT. SEC.		DATE	4-9-6
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN	R3-35-36	



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

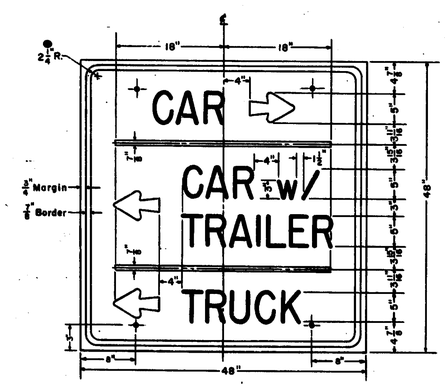
1. Sign Panel: Type II, 3/8" plywood or approved equal.
2. Sign Face: Type B
   (a) LEGEND; 6" Series "D" (modified) letters – M.S.H.D. Standard alphabet.
   (b) COLOR; Black legend and border on a silver background.
   (c) REFLECTORIZATION; Silver sheeting.

REVISIONS		
NO.	DESCRIPTION	DAT

TYPE II B SIGN

R4-14-48
EMERGENCY
STOPPING ONLY
SIGN

AUTH. NO.		DRAWN	E.B.A.
CONT. SEC.		DATE	7-1-63
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN	R4-14-48	



DETAIL OF SIGN
SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type II, 3/8" plywood or approved equal.
2. Sign Face: Type B
   (a) Legend; 8" Series "D" (modified) letters M.S.H.D. Standard alphabet with No. 5A Directional Arrow (Standard Plan 58-64) and 3" Series "D" (modified) W.
   (b) Color; Black legend, border and divider bars on a silver background.
   (c) Reflectorization; Silver Sheeting.

Note: Diagonal shall be of the same stroke width as the 5" series "D" (modified) letter and shall be placed 30° to the right of vertical.

REVISIONS		
NO.	DESCRIPTION	DAT

TYPE II B SIGN

R 4-15-48
REST AREA PARKING
SIGN

AUTH. NO.		DRAWN	K.C.
CONT. SEC.		DATE	7-9-6
REF.		SCALE	NONE
SHEET 1 OF 1	PLAN	R4-15-48	

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

ENGINEER OF TRAFFIC OPERATIONS _____ DATE

ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

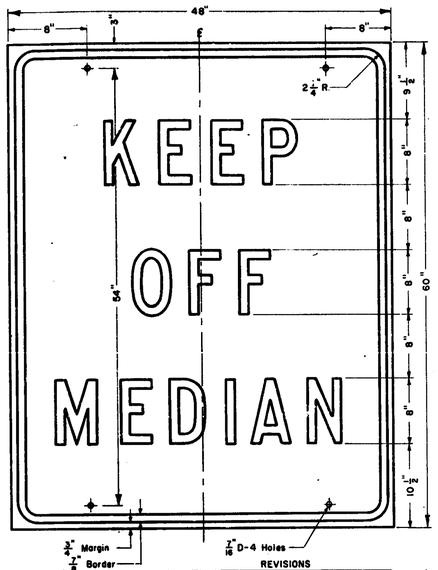
DIRECTOR OF TRAFFIC DIVISION _____ DATE

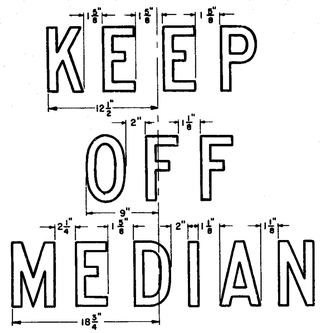
CHECKED

RECOMMENDED FOR APPROVAL

RECOMMENDED FOR APPROVAL

S20.14 | PLAN NO. DRAWING NUMBER | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 51





DETAIL OF LETTER SPACING

Scale: None

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" Plywood or approved equal.
2. Sign Face: Type B
   (a) Legend; 8" Series "D" (modified) letters — M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a silver background.
   (c) Reflectorization; Silver sheeting.

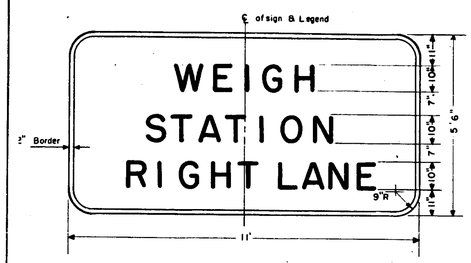
REVISIONS

NO.	DESCRIPTION	DAT

Type II B Sign

R6-10-48
KEEP OFF MEDIAN
SIGN

AUTH. NO.	DRAWN D.E.I
CONT. SEC.	DATE 7-3-6
REF.	SCALE None
SHEET 1 OF 1	PLAN R6-10-48



DETAIL OF SIGN

Scale: None

Note:

Each line of legend shall be centered horizontally about centerline of sign. Spacing between letters shall be in accordance with letter spacing charts prepared by Traffic Division.

SPECIFICATION

1. Sign Panel: Type I, Aluminum extrusions, or approved equal.
2. Sign Face: Type A.
   (a) Legend; 10" Series "E" letters — M.S.H.D. Standard alphabet.
   (b) Color; Silver letters and border on a green background.
   (c) Reflectorization; Letters and border — Silver sheeting or demountable. Background - green sheeting.

REVISIONS

NO.	DESCRIPTION	DATE
1	NEW LEGEND & SPECS.	7-65

TYPE IA SIGN

R6-12-120
WEIGH STATION
RIGHT LANE
SIGN

AUTH. NO.	DRAWN G.M.
CONT. SEC.	DATE 8-3-6
REF.	SCALE None
SHEET 1 OF 1	PLAN R6-12-120

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

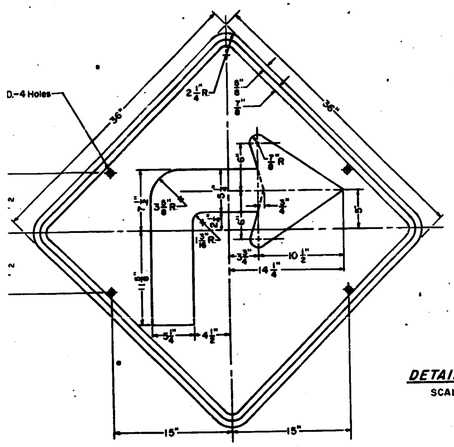
DESIGN AND TRAFFIC DIVISIONS

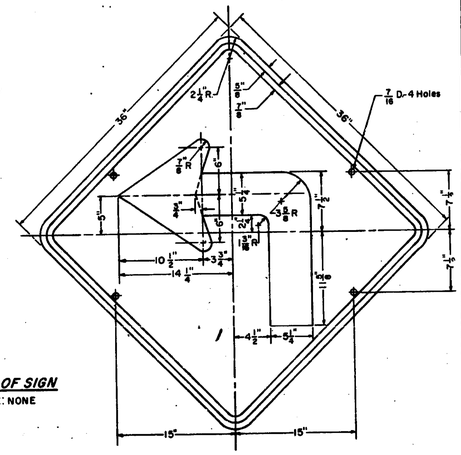
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S20.15 FILE NO. I 63174, 075 STATE PROJECT FEDERAL PROJECT SHEET NO. 52





DETAIL OF SIGN
SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal
2. Sign Face Type B.
   (a) Legend; Arrow as shown.
   (b) Color; Black arrow and border on yellow background
   (c) Reflectorization; Yellow sheeting

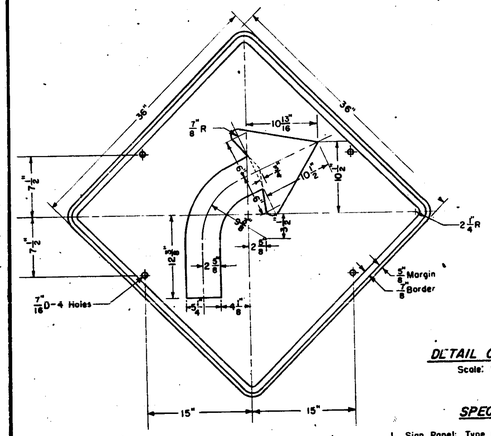
REVISIONS

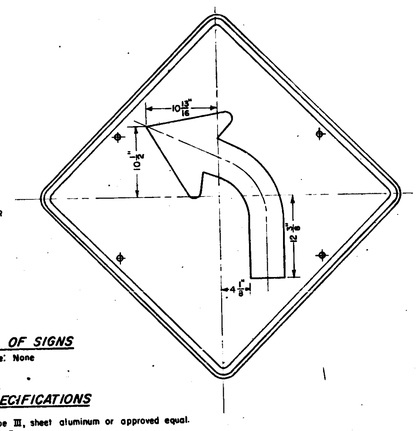
NO.	DESCRIPTION	DATE

TYPE III B SIGN

WI-1-36
TURN SIGN

AUTH. NO.	DRAWN M.N.B.
CONT. SEC.	DATE 4-30-62
REF.	SCALE NONE
SHEET 1 OF 1	PLAN WI-1-36





DETAIL OF SIGNS
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; Arrows as shown.
   (b) Color; Black arrows and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

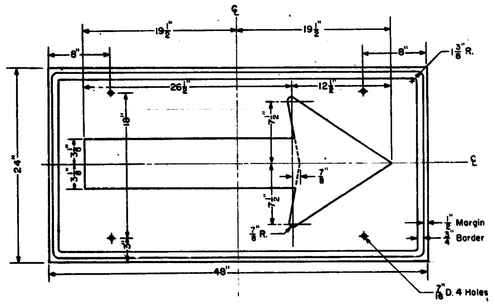
REVISIONS

NO.	DESCRIPTION	DATE

Type III B

WI-2-36
CURVE SIGN

AUTH. NO.	DRAWN W.P.B.
CONT. SEC.	DATE 6-28-62
REF.	SCALE NONE
SHEET 1 OF 1	PLAN WI-2-36



DETAIL OF SIGN
SCALE: None

SPECIFICATIONS

1. Sign Panel: Type II, 3/8" plywood or approved equal
2. Sign Face: Type B
   (a) Legend; Arrow as shown
   (b) Color; Black arrow and border on yellow background
   (c) Reflectorization; Yellow sheeting

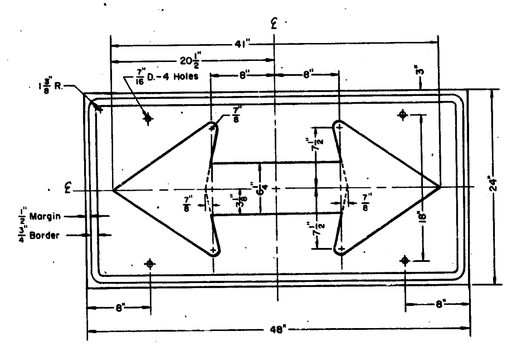
REVISIONS

NO.	DESCRIPTION	DATE

TYPE II B SIGN

WI-6-48
TARGET ARROW
SIGN

AUTH. NO.	DRAWN EBA
CONT. SEC.	DATE 6-26-63
REF.	SCALE NONE
SHEET 1 OF 1	PLAN WI-6-48



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type B
   (a) Legend; Arrow as shown.
   (b) Color; Black arrow and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

REVISIONS

NO.	DESCRIPTION	DATE

TYPE II B SIGN

WI-7-48
BI-DIRECTIONAL
TARGET ARROW
SIGN

AUTH. NO.	DRAWN L.T.B.
CONT. SEC.	DATE 7-2-6
REF.	SCALE NONE
SHEET 1 OF 1	PLAN WI-7-48

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

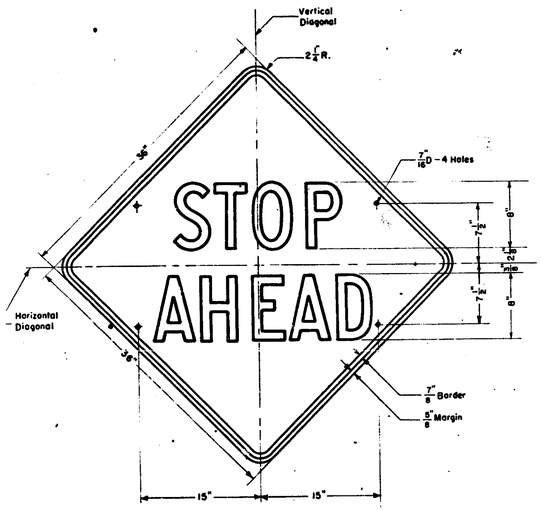
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

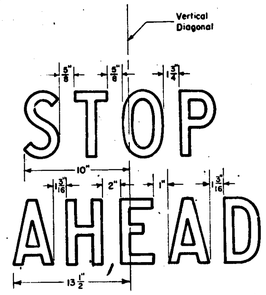
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S30.10 FILE NO. 24 BRB 380 I 63174, 075

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		53



DETAIL OF SIGN



DETAIL OF LETTER SPACING

Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; 8" Series "C" letters – M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting

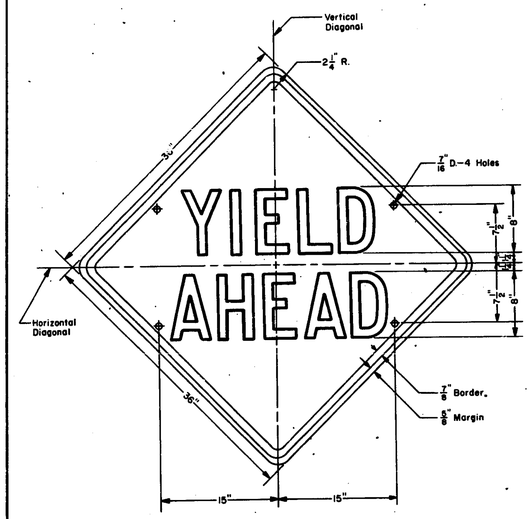
REVISIONS

NO.	DESCRIPTION	DATE

TYPE III B SIGN

W3-1-36
STOP AHEAD
SIGN

AUTH. NO.	DRAWN W.P.B.
CONT. SEC.	DATE 7-3-63
REF.	SCALE None
SHEET 1 OF 1	PLAN W3-1-36



DETAIL OF SIGN

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; 8" Series "C" letters M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

NOTE:

Spacing between letters shall be in accordance with spacing charts prepared by Traffic Division.

REVISIONS

NO.	DESCRIPTION	DATE

TYPE III B SIGN

W3-2-36
YIELD AHEAD
SIGN

AUTH. NO.	DRAWN J.E.G.
CONT. SEC.	DATE 7-26-63
REF.	SCALE NONE
SHEET 1 OF 1	PLAN W3-2-36

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

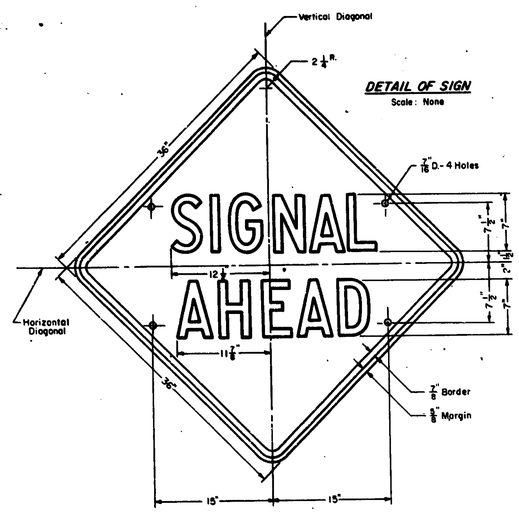
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN

Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; 7" series "C" letters – M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

Note: Spacing between letters shall be in accordance with spacing charts prepared by Traffic Division.

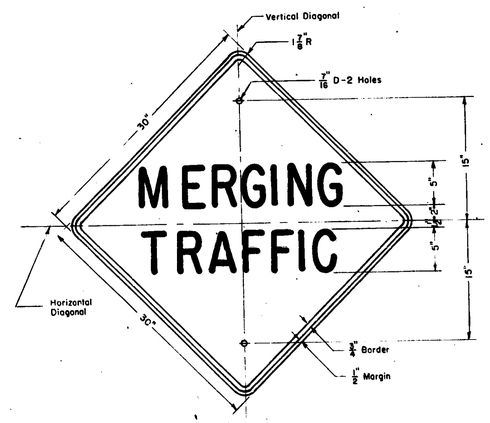
REVISIONS

NO.	DESCRIPTION	DATE

Type III B Sign

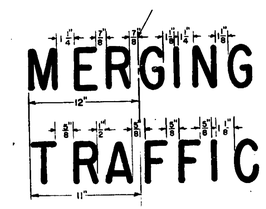
W3-3-36
SIGNAL AHEAD
SIGN

AUTH. NO.	DRAWN R.G.M.
CONT. SEC.	DATE 8-6-63
REF.	SCALE NONE
SHEET 1 OF 1	PLAN W3-3-36



DETAIL OF SIGN

Scale: none



DETAIL OF LETTER SPACING

Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B,
   (a) Legend; 5" Series "C" letters – M.S.H.D. standard alphabet.
   (b) Color: Black legend and border on a yellow background.
   (c) Reflectorization: Yellow sheeting.

REVISIONS

NO.	DESCRIPTION	DATE

TYPE III B SIGN

W4-1-30
MERGING TRAFFIC
SIGN

AUTH. NO.	DRAWN P.H.
CONT. SEC.	DATE 6-20-63
REF.	SCALE None
SHEET 1 OF 1	PLAN W4-1-30

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

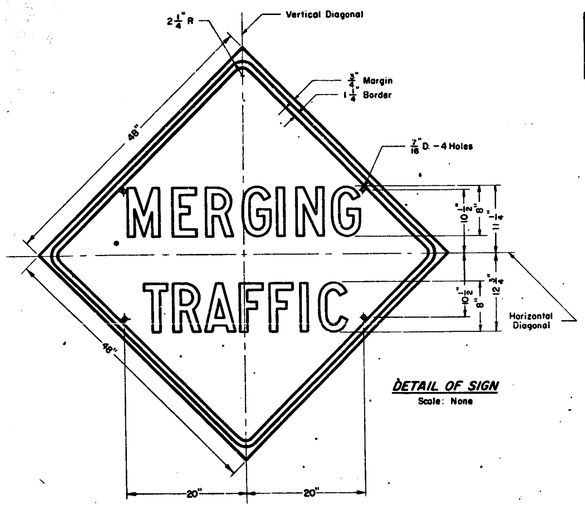
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

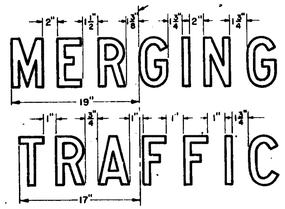
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S30.11 | FILE NO. | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 54



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: none

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type B.
   (a) Legend; 8" Series "C" letters — M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

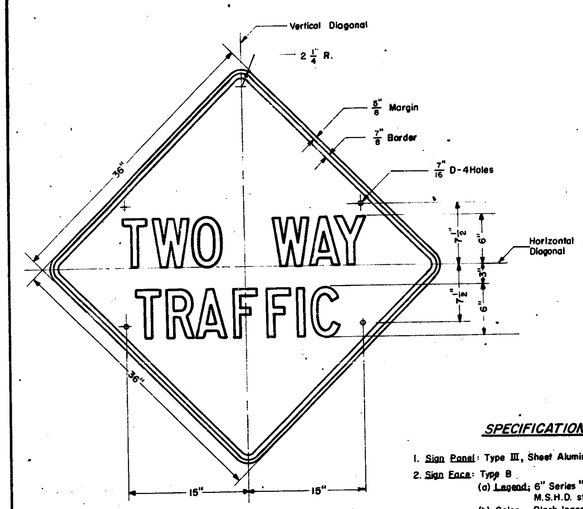
REVISIONS

NO.	DESCRIPTION	DATE

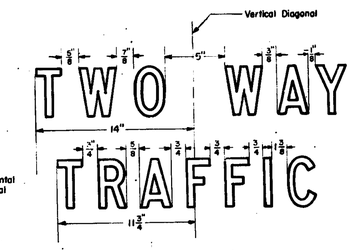
TYPE II B SIGN

W4 - 1 - 48
MERGING TRAFFIC SIGN

AUTH. NO.	DRAWN
CONT. SEC.	DATE 7-8-63
REF.	SCALE None
SHEET 1 OF 1	PLAN W4-1-48



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; 6" Series "C" Letters — M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on yellow background.
   (c) Reflectorization; Yellow Sheeting.

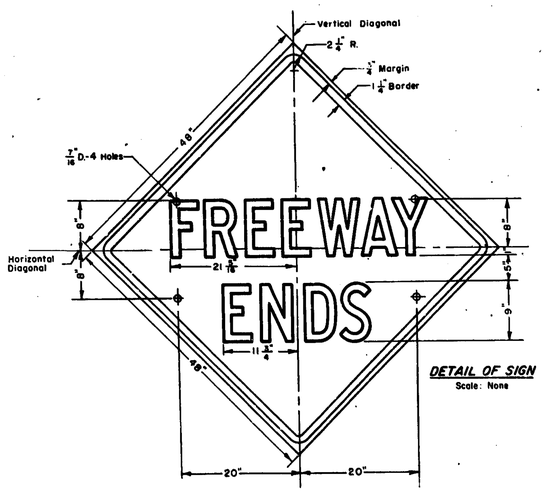
REVISIONS

NO.	DESCRIPTION	DATE

TYPE III B SIGN

W4-5-36
TWO WAY TRAFFIC SIGN

AUTH. NO.	DRAWN HJB
CONT. SEC.	DATE 7/2/63
REF.	SCALE None
SHEET 1 OF 1	PLAN W4-5-36



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, 5/8" Plywood or approved equal.
2. Sign Face: Type B
   (a) Legend; 9" Series "D" letters - M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

Note: Spacing between letters shall be in accordance with spacing charts prepared by Traffic Division.

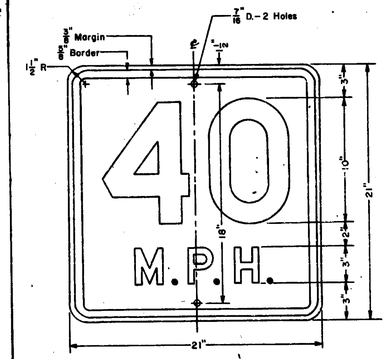
REVISIONS

NO.	DESCRIPTION	DATE

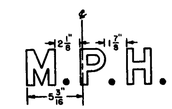
Type II B Sign

W6 - 4 - 48
FREEWAY ENDS SIGN

AUTH. NO.	DRAWN R.E.H.
CONT. SEC.	DATE 9-12-63
REF.	SCALE None
SHEET 1 OF 1	PLAN W6-4-48



DETAIL OF SIGN
SCALE: NONE



DETAIL OF LETTER SPACING
SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; 3" Series "D" (modified) letters and 10" Series "D" (modified) numerals, M.S.H.D. alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting.

NOTE: Spacing between numerals shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO.	DESCRIPTION	DATE

Type III B Sign

W12 - 1 - 21
CURVE SPEED PANEL

AUTH. NO.	DRAWN J.E.G.
CONT. SEC.	DATE 4-26-63
REF.	SCALE NONE
SHEET 1 OF 1	PLAN W12-1-21

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINT. ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER _____ DATE
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

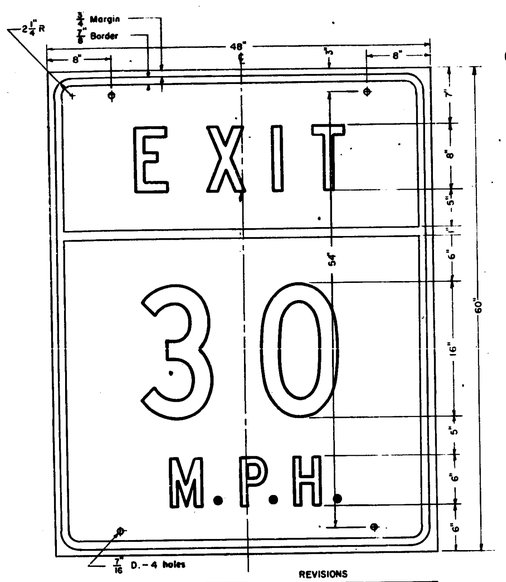
MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S30.12 FILE NO. I 63174, 075 STATE PROJECT FEDERAL PROJECT SHEET NO. 55



DETAIL OF SIGN
Scale: None

REVISIONS

NO.	DESCRIPTION	DATE
1	ALTERNATE FIRST LINE	7-65

Note:
Numerical speed designation shall be as specified on the plans.
Periods for "Miles per hour" abbreviation shall be one inch diameter.
Each line of legend shall be centered horizontally on sign panel with spacing between letters and numerals in accordance with spacing charts prepared by the Traffic Division.
"Ramp" may be used as an alternate for the first line of legend when specified on plans.

SPECIFICATIONS

1. Sign Panel; Type II, plywood or approved equal.
2. Sign Face; Type B
   (a) Legend; First line – 8" Series "E" letters.
   Second line – 16" Series "E" numerals.
   Third line – 6" Series "E" letters.
   B.P.R. Standard alphabet.
   (b) Color; Black legend and border on a yellow background.
   (c) Reflectorization; Yellow sheeting

TYPE II B SIGN

W 12-2-48
EXIT__MILES PER HOUR
SIGN

AUTH. NO.	DRAWN PEH
CONT. SEC.	DATE 6-24-63
REF.	SCALE None
W12 - 2-48	

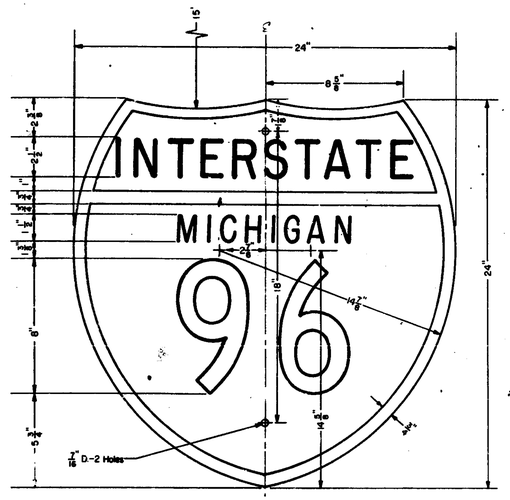
OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE
APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S30.13 | FILE NO. I.M. NO. 3.3 SYLVAN | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 58



DETAIL OF SIGN

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal
2. Sign Face: Type A
   (a) Legend; First line, 2 1/2" Series "C" Letters
   Second line, 1 1/2" Series "D" Letters
   Third line 8" Series "D" Numerals
   M.S.H.D. Standard Alphabet
   (b) Color; Silver letters, numerals and border on a Interstate Red and interstate Blue background
   (c) Reflectorization; Interstate red transparent and Interstate blue transparent screened on silver background.

Note:
Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

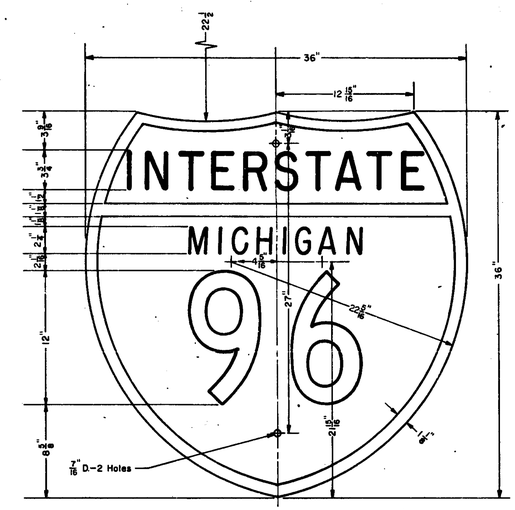
REVISIONS

NO.	DESCRIPTION	D

TYPE III A SIGN

GI-1-24
INTERSTATE
ROUTE MARKER
SIGN

AUTH. NO. | DRAWN MNB
CONT. SEC. | DATE 7-17-6
REF. | SCALE NONE
SHEET 1 OF 1 PLAN GI-1-24



DETAIL OF SIGN

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal
2. Sign Face: Type A
   (a) Legend; First line, 3 3/4" Series "C" Letters
   Second line, 2 1/4" Series "D" Letters
   Third line 12" Series "D" Numerals
   M.S.H.D. Standard Alphabet
   (b) Color; Silver letters, numerals and border on a interstate Red and interstate Blue background
   (c) Reflectorization; Interstate red transparent and Interstate blue transparent screened on silver background.

Note:
Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

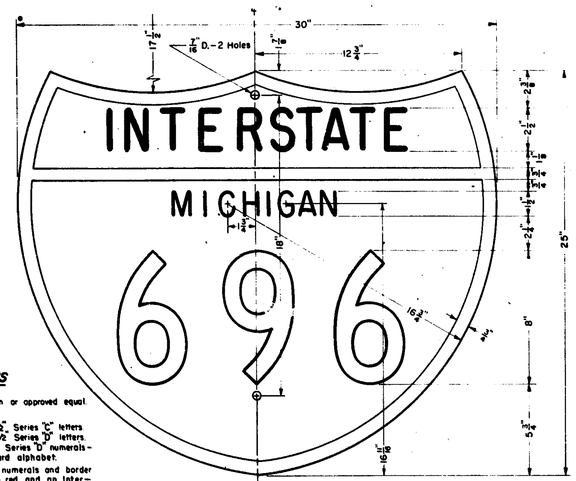
REVISIONS

NO.	DESCRIPTION	DA

TYPE III A SIGN

GI-1-36
INTERSTATE
ROUTE MARKER
SIGN

AUTH. NO. | DRAWN MNB
CONT. SEC. | DATE 7-17-6
REF. | SCALE NONE



DETAIL OF SIGN

Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal
2. Sign Face: Type A
   (a) Legend; First line - 2 1/2" Series "C" letters
   Second line - 1 1/2 Series "D" letters
   Third line - 8" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Silver letters, numerals and border on an interstate red and an interstate blue background.
   (c) Reflectorization; Interstate red transparent and interstate blue transparent screened on a silver background.

Note:
Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

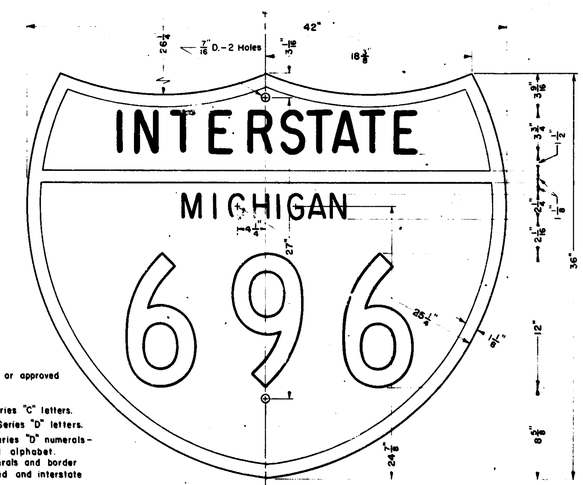
REVISIONS

NO.	DESCRIPTION	DA

TYPE III A SIGN

GI-2-30
WIDE INTERSTATE
ROUTE MARKER SIGN

AUTH. NO. | DRAWN R.A.R.
CONT. SEC. | DATE 7-8-63
REF. | SCALE NONE
SHEET 1 OF 1 PLAN GI-2-30



DETAIL OF SIGN

Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type A
   (a) Legend; First line - 3 3/4" Series "C" letters.
   Second line - 2 1/4" Series "D" letters.
   Third line - 12" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Silver letters, numerals and border on an interstate red and interstate blue background.
   (c) Reflectorization; Interstate red transparent and interstate blue transparent screened on a silver background.

Note:
Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

REVISIONS

NO.	DESCRIPTION	D.

TYPE III A SIGN

GI-2-42
WIDE INTERSTATE
ROUTE MARKER SIGN

AUTH. NO. | DRAWN R.A.R.
CONT. SEC. | DATE 7-8-63
REF. | SCALE NONE
SHEET 1 OF 1 PLAN GI-2-42

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____
APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____
APPROVED _____ CHIEF OF DESIGN _____ DATE _____

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____

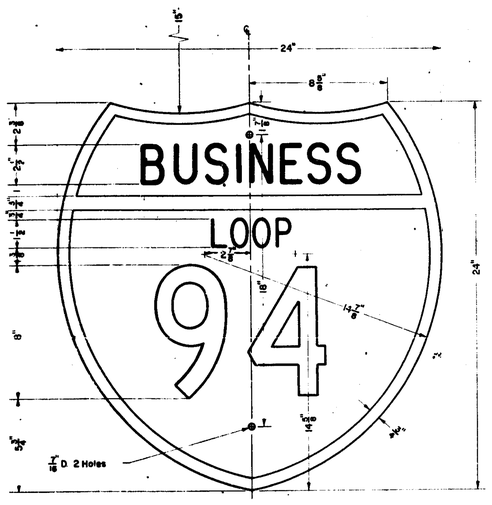
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE _____

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S40.10 | FILE NO. 2.40 SIGNS | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT C | SHEET NO. 57



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend; First line - 2 1/2" Series "C" letters. Second line - 1 1/2" Series "D" letters. Third line - 8" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Silver letters, numerals and border on a green background.
   (c) Reflectorization; Silver and green

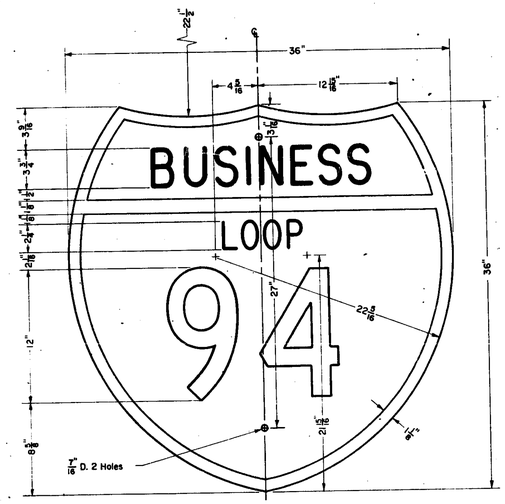
Note: Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division. Alternate second line "SPUR."

REVISIONS

NO.	DESCRIPTION	D
1	Change in specs.	KV

TYPE III A SIGN
G1-3-24
INTERSTATE BUSINESS CONNECTOR ROUTE MARKER SIGN

AUTH. NO.	DRAWN R.A.R
CONT. SEC.	DATE 9-19-6
REF.	SCALE NONE
SHEET 1 OF 1	PLAN G1-3-24



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend; First line - 3 3/4" Series "C" letters. Second line - 2 1/2" Series "D" letters. Third line - 12" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Silver letters, numerals and border on a green background.
   (c) Reflectorization; Silver and green

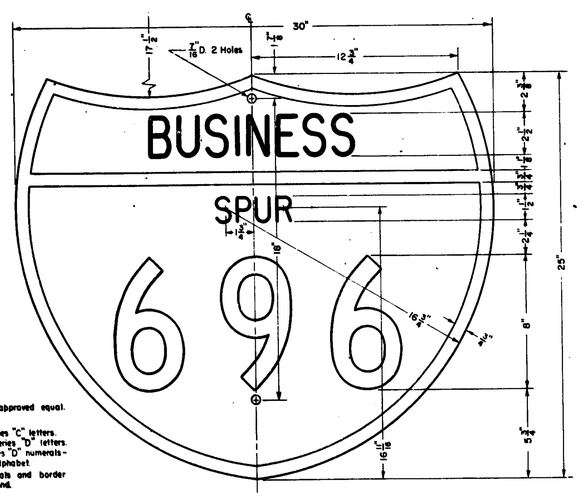
Note: Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division. Alternate second line "SPUR."

REVISIONS

NO.	DESCRIPTION	D
1	Change in specs.	KV

TYPE III A SIGN
G1-3-36
INTERSTATE BUSINESS CONNECTOR ROUTE MARKER SIGN

AUTH. NO.	DRAWN R.A.R.
CONT. SEC.	DATE 9-19-6
REF.	SCALE NONE
SHEET 1 OF 1	PLAN G1-3-36



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend; First line - 2 1/2" Series "C" letters. Second line - 1 1/2" Series "D" letters. Third line - 8" Series "D" numerals - M.S.H.D standard alphabet.
   (b) Color; Silver letters, numerals and border on a green background.
   (c) Reflectorization; Silver and green

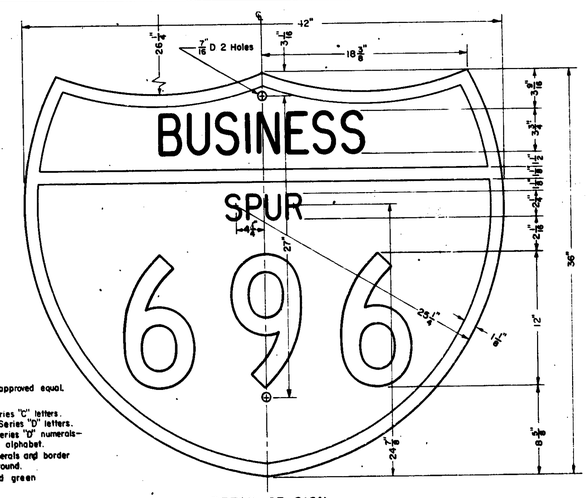
Note: Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division. Alternate second line "LOOP."

REVISIONS

NO.	DESCRIPTION	D
1	Change in specs	KV

TYPE III A SIGN
G1-4-30
WIDE INTERSTATE BUSINESS CONNECTOR ROUTE MARKER SIGN

AUTH. NO.	DRAWN R.A.R
CONT. SEC.	DATE 9-18-6
REF.	SCALE NONE



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend; First line - 3 3/4" Series "C" letters. Second line - 2 1/2" Series "D" letters. Third line - 12" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Silver letters, numerals and border on a green background.
   (c) Reflectorization; Silver and green

Note: Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division. Alternate second line "LOOP."

REVISIONS

NO	DESCRIPTION	D
1	Change in specs.	KV

TYPE III A SIGN
G1-4-42
WIDE INTERSTATE BUSINESS CONNECTOR ROUTE MARKER SIGN

AUTH. NO.	DRAWN R.A.R
CONT. SEC.	DATE 9-18-1
REF.	SCALE NONE
SHEET 1 OF 1	PLAN G1-4-42

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____

APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____

APPROVED _____ CHIEF OF DESIGN _____ DATE _____

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED BY JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE _____

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

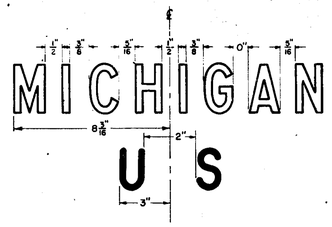
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S40.11 | FILE NO. 1A 1A 1B 1C 1D 1E 1F 1G | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 58

DETAIL OF SIGN
Scale: none

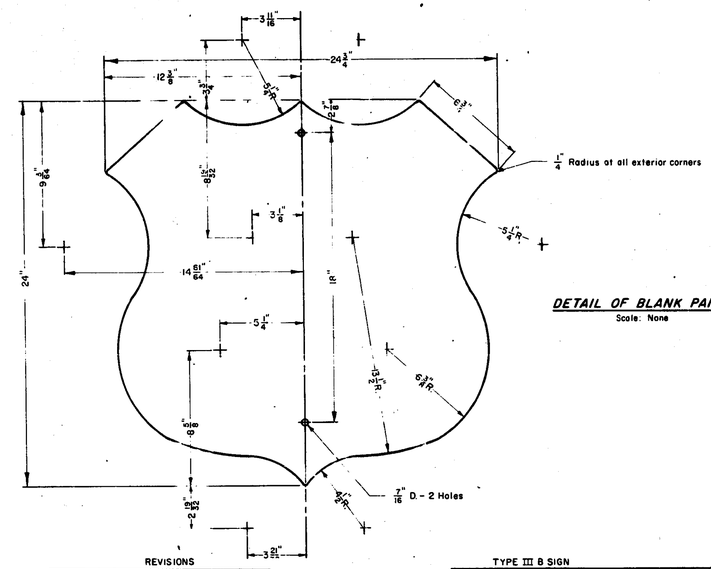


DETAIL OF LETTER SPACING
Scale: none

Note: Route numbers shall be optically centered on sign panel. Where necessary, spacing between numerals may be somewhat less than that indicated by Traffic Division spacing charts.

SPECIFICATIONS

1. Sign Panel : Type III, Sheet Aluminum or approved equal.
2. Sign Face : Type B
   (a) Legend; First line - 3" Series "D" letters. Second line - 2½" Series "E" letters. Third line - 8" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Black letters, numerals, border and divider bar on a silver background.
) Reflectorization; Silver sheeting.



DETAIL OF BLANK PANEL
Scale: None

REVISIONS		
NO.	DESCRIPTION	DA

TYPE III B SIGN

GI-5-24
US ROUTE MARKER
SIGN

AUTH. NO. | DRAWN M.N.B.
CONT. SEC. | DATE 7-18-62
REF. | SCALE NONE
SHEET 2 OF 2 | PLAN GI-5-24

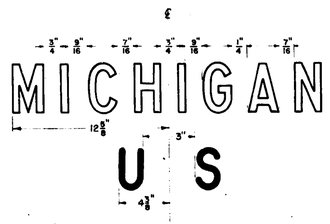
OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED BY JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER _____ DATE
DIRECTOR OF ENGINEERING & CHIEF ENGINEER

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

DETAIL OF SIGN
Scale: none



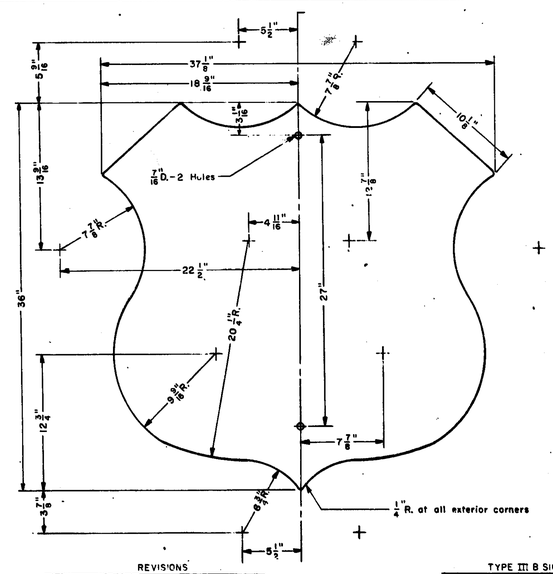
DETAIL OF LETTER SPACING
Scale: none

Note: Route numbers shall be optically centered on sign panel. Where necessary, spacing between numerals may be somewhat less than that indicated by Traffic Division spacing charts.

SPECIFICATIONS

1. Sign Panel : Type III, Sheet Aluminum or approved equal.
2. Sign Face : Type B
   (a) Legend; First line - 4½" Series "D" letters. Second line - 3¾" Series "E" letters. Third line - 12" Series "D" numerals - M.S.H.D. standard alphabet.
   (b) Color; Black letters, numerals, border and divider bar on a silver background.

Reflectorization; Silver sheeting.



REVISIONS		
NO	DESCRIPTION	DA

TYPE III B SIGN

GI-5-36
US ROUTE MARKER
SIGN

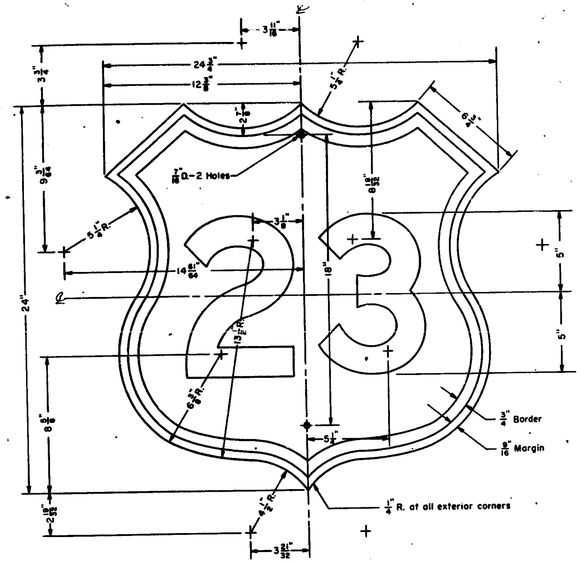
AUTH. NO. | DRAWN M.N.B.
CONT. SEC. | DATE 7-18-62
REF. | SCALE NONE
SHEET 2 OF 2 | PLAN GI-5-36

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S40.12 | FILE NO. | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 50



DETAIL OF SIGN
Scale: None

REVISIONS

NO.	DESCRIPTION	DA

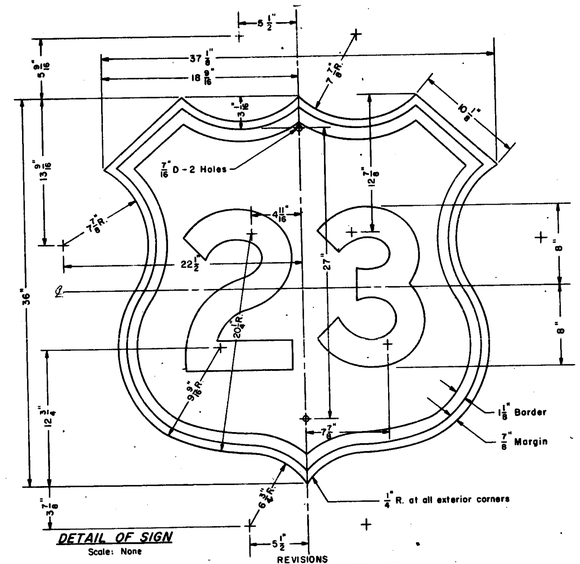
SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; 10" Series "D" numbers– M.S.H.D. standard alphabe
   (b) Color; Black legend and border on a silver background.
   (c) Reflectorization; Silver sheeting.

TYPE III B SIGN

GI-6-24
US ROUTE MARKER SIGN

AUTH. NO.	DRAWN J.E.G.
CONT. SEC.	DATE 9-5-63
REF.	SCALE NONE
SHEET 1 OF 1	PLAN GI-6-24



DETAIL OF SIGN
Scale: None

REVISIONS

NO.	DESCRIPTION	DA

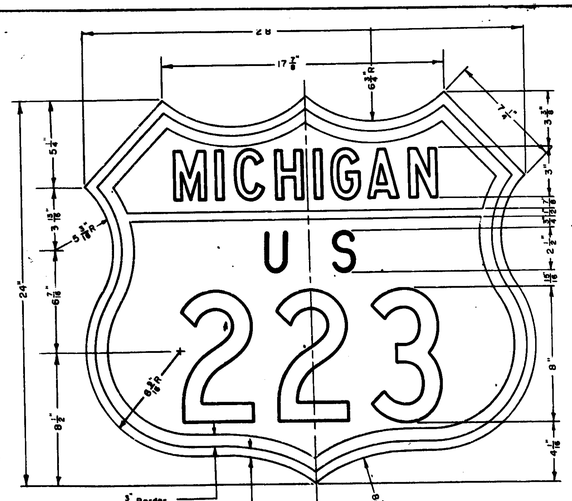
SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; 16" Series "D" numbers–M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a silver background.
   (c) Reflectorization; Silver sheeting.

TYPE III B SIGN

GI-6-36
US ROUTE MARKER SIGN

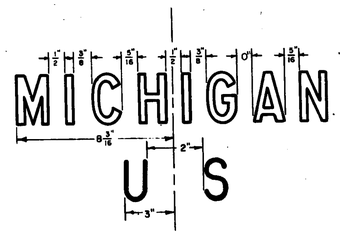
AUTH. NO.	DRAWN J.E.G.
CONT. SEC.	DATE 9-5-63
REF.	SCALE NONE
SHEET 1 OF 1	PLAN GI-6-36



DETAIL OF SIGN
Scale: none

REVISIONS

NO.	DESCRIPTION	DA



DETAIL OF LETTER SPACING
Scale: none

Note: Route numbers shall be optically centered on sign panel.
Where necessary, spacing between numerals may be somewhat less than that indicated by Traffic Division spacing charts.

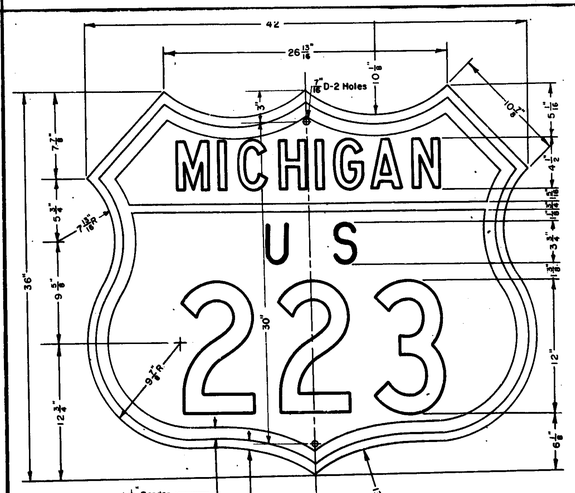
SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; First line - 3" Series "D" letters.
   Second line - 2 1/2" Series "E" letters.
   Third line - 8" Series "D" numerals - M S H D standard alphabet.
   (b) Color; Black letters, numerals, border and divider bar on a silver background.
   (c) Reflectorization; Sliver sheeting.

TYPE III B SIGN

GI-7-28
WIDE US ROUTE MARKER SIGN

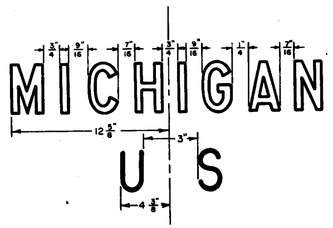
AUTH. NO.	DRAWN R.E.H.
CONT. SEC.	DATE 8-30-63
REF.	SCALE None



DETAIL OF SIGN
Scale: none

REVISIONS

NO.	DESCRIPTION	DA



DETAIL OF LETTER SPACING
Scale: none

Note: Route numbers shall be optically centered on sign panel. Where necessary, spacing between numerals may be somewhat less than that indicated by Traffic Division spacing charts.

SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; First line 4 1/8" Series "D" letters.
   Second line - 3 3/8" Series "E" letters.
   Third line - 12" Series "D" numerals - M S H D standard alphabet.
   (b) Color; Black letters, numerals, border and divider bar on a silver background.
   (c) Reflectorization; Silver sheeting.

TYPE III B SIGN

GI-7-42
WIDE US ROUTE MARKER SIGN

AUTH. NO.	DRAWN REH
CONT. SEC.	DATE 8-23-6
REF.	SCALE None

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____
APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____
APPROVED _____ CHIEF OF DESIGN _____ DATE _____

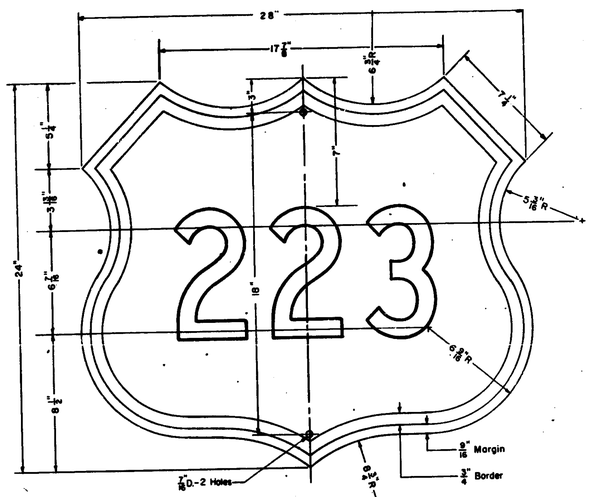
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE _____

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S40.13 | FILE NO. | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 60



DETAIL OF SIGN

SCALE: NONE

SPECIFICATIONS

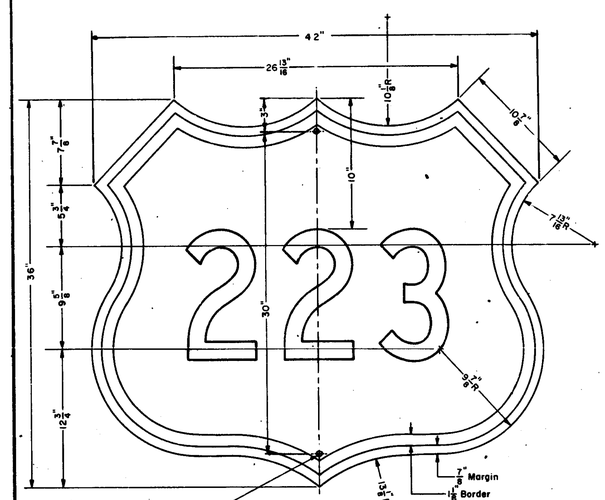
1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; 10" Series "D" numerals. M.S.H.D. standard alphabet.
   (b) Color; Black numerals and border on a silver background.
   (c) Reflectorization; Silver sheeting.

REVISIONS		
NO.	DESCRIPTION	DA

TYPE III B SIGN

G1-8-28
WIDE U.S. ROUTE
MARKER OUTLINE
SIGN

AUTH NO. | DRAWN MLE
CONT SEC. | DATE 5-6-
REF. | SCALE NONE
SHEET 1 OF 1 | PLAN G1-8-28



DETAIL OF SIGN

SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; 16" Series "D" Numerals M.S.H.D. standard alphabet.
   (b) Color; Black numerals and border on a silver background.
   (c) Reflectorization; Silver sheeting.

REVISIONS		
NO.	DESCRIPTION	DA

TYPE III B SIGN

G1-8-42
WIDE U.S. ROUTE
MARKER OUTLINE
SIGN.

AUTH NO. | DRAWN J.E.G.
CONT SEC. | DATE 4-30-6
REF. | SCALE NONE
SHEET 1 OF 1 | PLAN G1-8-42

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

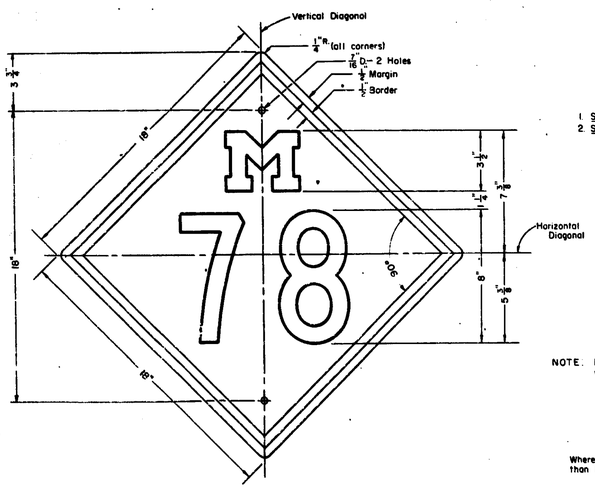
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN

Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; First line - 3 1/2" Spur Block Series "M". Second line - 8" Series "Variable" Numerals - M.S.H.D. standard alphabet.
   (b) Color; Black "M", numerals and border on a silver background.
   (c) Reflectorization; Silver sheeting.

NOTE. Numerals shall be Series "D" except the following combinations which shall be Series "C".

22	120	135	146	179
100	124	137	153	186
102	128	139	157	216
104	134	140	169	218

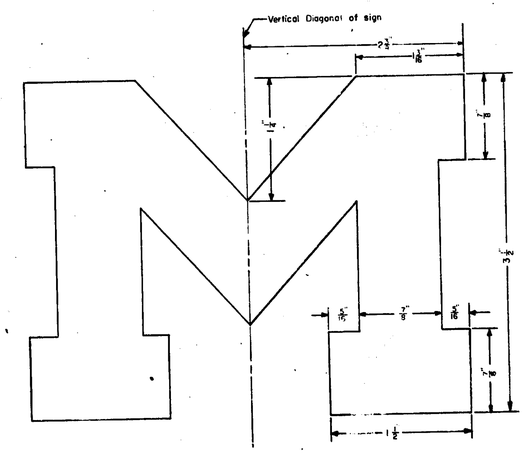
Route number shall be optically centered on sign panel.
Where necessary, spacing between numerals may be somewhat less than that indicated by Traffic Division Spacing Charts.

REVISIONS		
NO.	DESCRIPTION	DA

TYPE III B SIGN

G1-9-18
MICHIGAN ROUTE
MARKER SIGN

AUTH NO. | DRAWN LTB
CONT SEC. | DATE 7-17-6
REF. | SCALE NONE
SHEET 1 OF 2 | PLAN G1-9-18



DETAIL OF BLOCK LETTER "M"

SCALE: NONE

REVISIONS		
NO.	DESCRIPTION	DA

TYPE III B SIGN

G1-9-18
MICHIGAN ROUTE MARKER
SIGN

AUTH NO. | DRAWN KMR
CONT SEC. | DATE 3-4-64
REF. | SCALE NONE
SHEET 2 OF 2 | PLAN G1-9-18

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

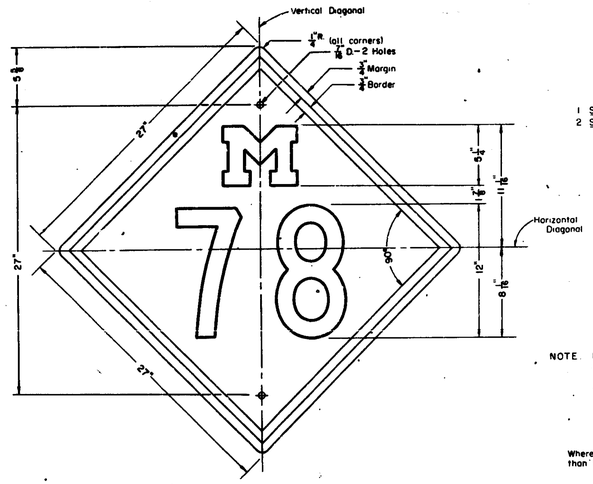
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S40.14 | FILE NO. I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 61



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   - (a) Legend: First line - 5 1/4" Spur Block Series "M". Second line - 12" Series "Variable" Numerals - M S H D standard alphabet
   - (b) Color: Black "M", numerals and border on a silver background
   - (c) Reflectorization: Silver sheeting

NOTE: Numerals shall be Series "D" except the following combinations which shall be Series "C".

22	120	135	146	179
100	124	137	153	186
102	128	139	157	216
104	134	140	169	218

Route number shall be optically centered on sign panel.
Where necessary, spacing between numerals may be somewhat less than that indicated by Traffic Division Spacing Charts.

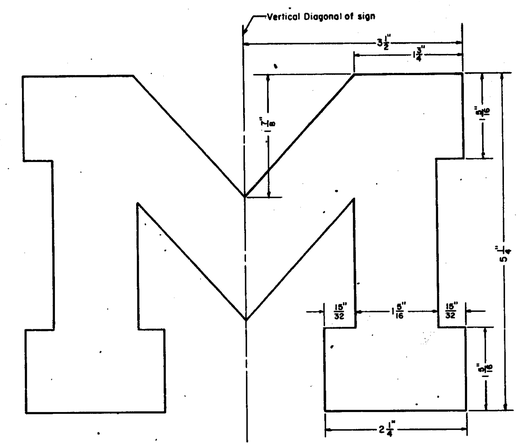
REVISIONS

NO.	DESCRIPTION	D

TYPE III B SIGN

GI-9-27
MICHIGAN ROUTE MARKER SIGN

AUTH. NO.	DRAWN L.T.B
CONT. SEC.	DATE 7-17-6
REF.	SCALE NONE
SHEET 1 OF 2	PLAN GI-9-27



DETAIL OF BLOCK LETTER "M"
SCALE : NONE

REVISIONS

NO.	DESCRIPTION	DA

TYPE III B SIGN

G 1-9-27
MICHIGAN ROUTE MARKER SIGN

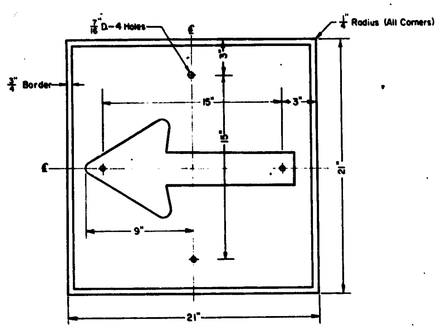
AUTH. NO.	DRAWN M.N.B
CONT. SEC.	DATE 7-17-6
REF.	SCALE NONE
SHEET 2 OF 2	PLAN GI-9-27

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

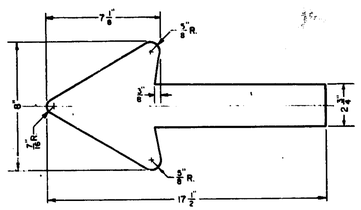
APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN
Scale: none



DETAIL OF ARROW
Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A.
   - (a) Legend: Arrow as shown.
   - (b) Color: Silver arrow and border on a blue background.
   - (c) Reflectorization: Silver and blue

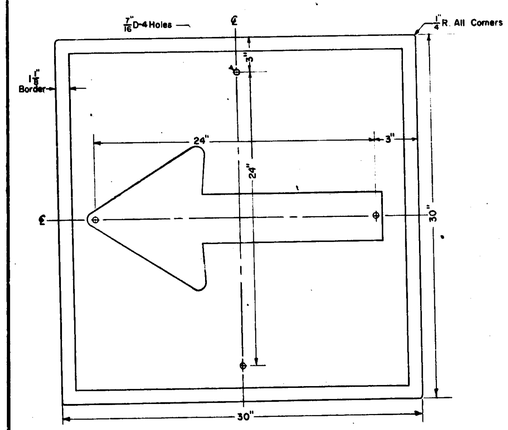
REVISIONS

NO.	DESCRIPTION	DA
1	Reflectorization change	3-26

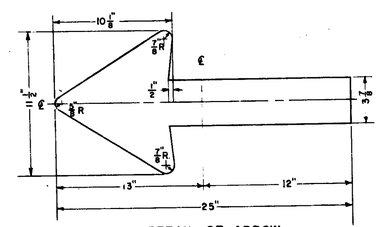
Type III A Sign

GI-10-21
INTERSTATE ROUTE MARKER ARROW PANEL

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 10-30-63
REF.	SCALE None
SHEET 1 OF 1	PLAN GI-10-21



DETAIL OF SIGN
Scale: None



DETAIL OF ARROW
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III Sheet aluminum or approved equal
2. Sign Face: Type A
   - (a) Legend: Arrow as shown
   - (b) Color: Silver arrow and border on a blue background
   - (c) Reflectorization: Silver and blue

REVISIONS

NO.	DESCRIPTION	I
1	Reflectorization change	2

TYPE III A SIGN

GI-10-30
INTERSTATE ROUTE MARKER ARROW PANEL

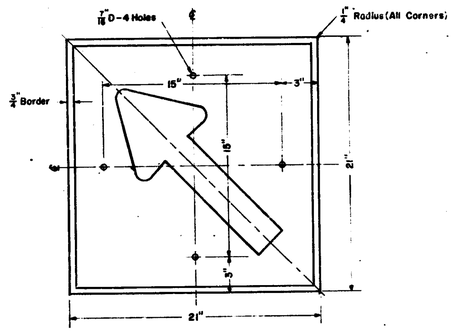
AUTH. NO.	DRAWN W.P.
CONT. SEC.	DATE 9-20
REF.	SCALE None
SHEET 1 OF 1	PLAN GI-10-30

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

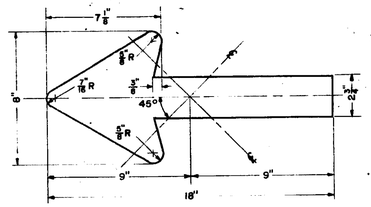
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S40.15 | FILE NO. I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 62



DETAIL OF SIGN
Scale : None



DETAIL OF ARROW
Scale : None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend: Arrow as shown.
   (b) Color: Silver arrow and border on a blue background.
   (c) Reflectorization: Silver and blue

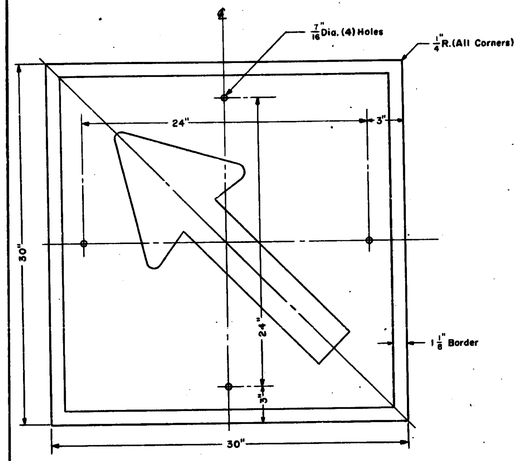
REVISIONS

NO.	DESCRIPTION	DATE
1	Reflectorization change	3-26-65

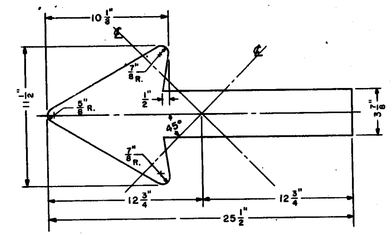
TYPE III A SIGN

GI-11-21
INTERSTATE ROUTE
MARKER ARROW
PANEL

AUTH. NO. — CONT. SEC. — REF. — DRAWN H.J.B. DATE 9/26/63 SCALE NONE SHEET 1 OF 1 PLAN GI-11-21



DETAIL OF SIGN
Scale: None



DETAIL OF ARROW
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A
   (a) Legend: Arrow as shown.
   (b) Color: Silver Arrow and border on a blue background.
   (c) Reflectorization: Silver and blue

REVISIONS

NO.	DESCRIPTION	DATE
1	Reflectorization change	3-26-65

TYPE III A SIGN

GI-11-30
INTERSTATE ROUTE
MARKER ARROW
PANEL

AUTH. NO. — CONT. SEC. — REF. — DRAWN K.C. DATE 9-4 SCALE NONE SHEET 1 OF 1 PLAN GI-11-30

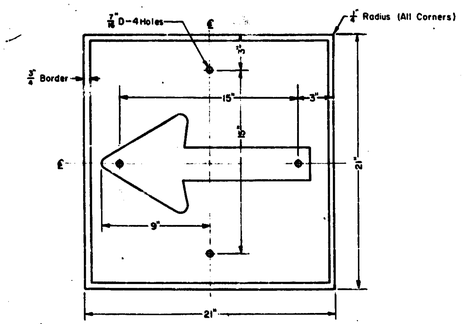
OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER — DATE
APPROVED _____ MAINTENANCE ENGINEER — DATE
APPROVED _____ CHIEF OF DESIGN — DATE

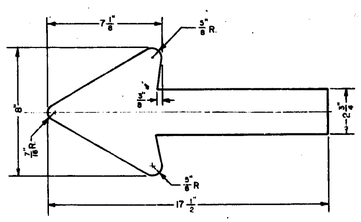
STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER — DATE

APPROVED BY BUREAU OF PUBLIC ROADS — DATE



DETAIL OF SIGN
Scale: none



DETAIL OF ARROW
Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal
2. Sign Face: Type A
   (a) Legend: Arrow as shown
   (b) Color: Silver arrows and border on a green background
   (c) Reflectorization: Silver and green

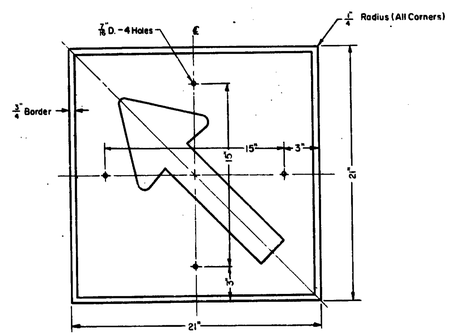
REVISIONS

NO	DESCRIPTION	DATE
1	Reflectorization change	3-65

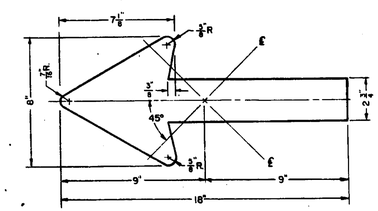
Type III A Sign

GI-17-21
ROUTE MARKER
ARROW PANEL
(INTERSTATE BUSINESS
CONNECTOR ROUTE)

AUTH. NO. — CONT. SEC. — REF. — DRAWN M.St.G DATE 10-10- SCALE None SHEET 1 OF 1 PLAN GI-17-21



DETAIL OF SIGN
Scale: none



DETAIL OF ARROW
Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend: Arrow as shown.
   (b) Color: Silver arrow and border on a green background.
   (c) Reflectorization: Silver and green

REVISIONS

NO.	DESCRIPTION	DATE
1	Reflectorization change	3-65

Type III A Sign

GI-18-21
ROUTE MARKER
ARROW PANEL
(INTERSTATE BUSINESS
CONNECTOR ROUTE)

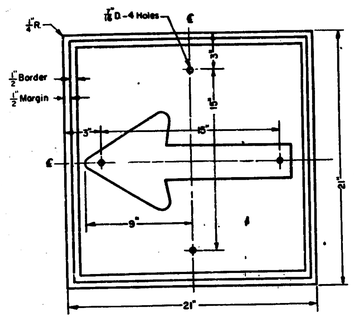
AUTH. NO. — CONT. SEC. — REF. — DRAWN M.St.G DATE 11-7-63 SCALE None SHEET 1 OF 1 PLAN GI-18-21

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS — DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN — DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION — DATE

S40.16 | FILE NO. 63-332 | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 63



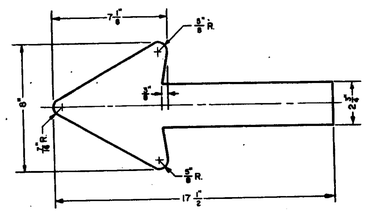
DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend: Arrow as shown.
   (b) Color: Black arrow and border on a silver background.
   (c) Reflectorization: Silver sheeting.

REVISIONS

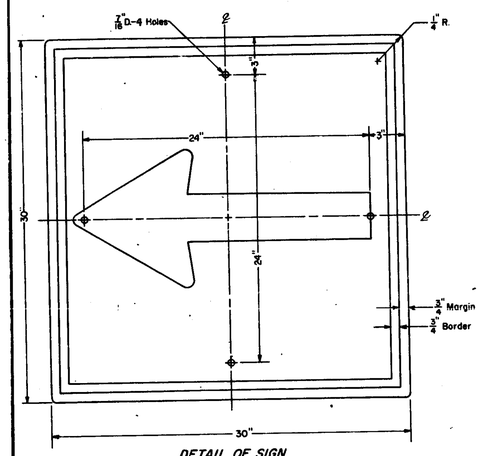
NO.	DESCRIPTION	DATE



DETAIL OF ARROW
Scale: none

Type III B Sign

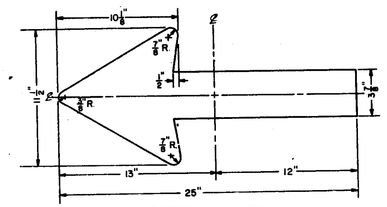
GI-30-21 ROUTE MARKER ARROW PANEL	AUTH. NO.	DRAWN	M.S
	CONT. SEC.	DATE	10-11
	REF.	SCALE	Non
	SHEET 1 OF 1	PLAN	GI-30-21



DETAIL OF SIGN
SCALE: NONE

REVISIONS

NO.	DESCRIPTION	DATE



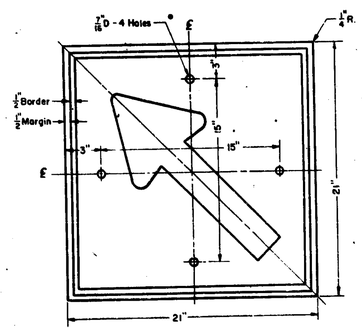
DETAIL OF ARROW
SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend: Arrow as shown.
   (b) Color: Black arrow and border on a silver background.
   (c) Reflectorization: Silver sheeting.

TYPE III B SIGN

GI-30-30 ROUTE MARKER ARROW SIGN	AUTH. NO.	DRAWN	J.E.G.
	CONT. SEC.	DATE	9-3-63
	REF.	SCALE	NONE
	SHEET 1 OF 1	PLAN	GI-30-30



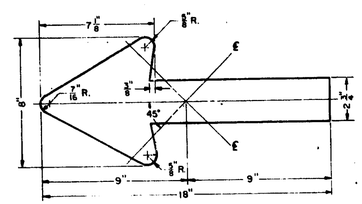
DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend: Arrow as shown.
   (b) Color: Black arrow and border on a silver background.
   (c) Reflectorization: Silver sheeting.

REVISIONS

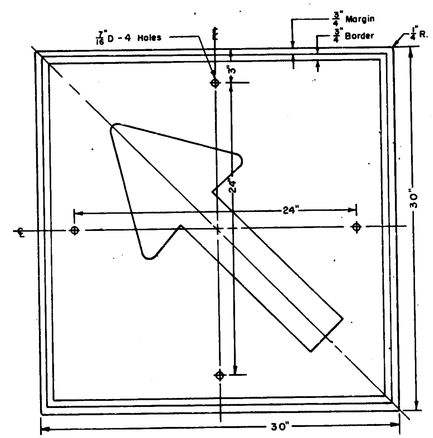
NO.	DESCRIPTION	DATE



DETAIL OF ARROW
Scale: none

Type IIIB Sign

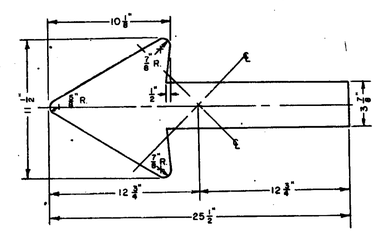
GI-31-21 ROUTE MARKER ARROW PANEL	AUTH. NO.	DRAWN	H.L.R
	CONT. SEC.	DATE	11-7-63
	REF.	SCALE	None
	SHEET 1 OF 1	PLAN	GI-31-21



DETAIL OF SIGN
Scale: None

REVISIONS

NO.	DESCRIPTION	DATE



DETAIL OF ARROW
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend: Arrow as shown
   (b) Color: Black arrow and border on a silver background.
   (c) Reflectorization: Silver sheeting.

Type III B Sign

GI-31-30 ROUTE MARKER ARROW PANEL	AUTH. NO.	DRAWN	R.E.H
	CONT. SEC.	DATE	10-21-6
	REF.	SCALE	None
	SHEET 1 OF 1	PLAN	GI-31-30

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

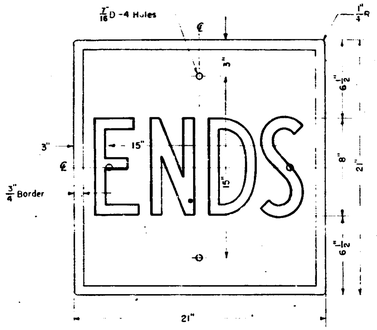
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

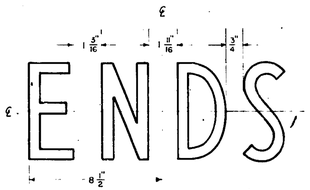
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S40.17

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075			64



DETAIL OF SIGN
Scale : None



DETAIL OF LETTER SPACING
Scale. None

SPECIFICATIONS

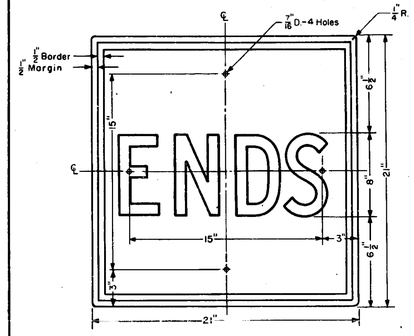
1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type A
   - (a) Legend; 8" Series "B" letters M.S.H.D standard alphabet
   - (b) Color; Silver letters and border on a green background.
   - (c) Reflectorization; Silver and green

REVISIONS

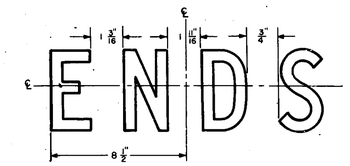
NO.	DESCRIPTION	DAT
1	Reflectorization change	2-6

TYPE III A Sign

GI-39-21 ENDS PANEL (INTERSTATE BUSINESS CONNECTOR ROUTE)	AUTH. NO. / CONT. SEC. / REF.	DRAWN W.P.B / DATE 11-20-6 / SCALE NONE
	SHEET 1 OF 1	PLAN GI-39-21



DETAIL OF SIGN
Scale : None



DETAIL OF LETTER SPACING
Scale : None

SPECIFICATIONS

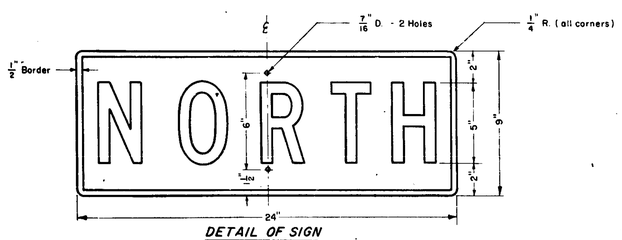
1. Sign Panel: Type III, Sheet aluminum or approved equal
2. Sign Face: Type B
   - (a) Legend; 8" Series "B" letters - M.S.H.D. standard alphabet.
   - (b) Color; Black legend and border on a silver background.
   - (c) Reflectorization; Silver sheeting.

REVISIONS

NO.	DESCRIPTION	DAT

TYPE III B SIGN

GI-40-21 ENDS PANEL	AUTH. NO. / CONT. SEC. / REF.	DRAWN E.B.A / DATE 9-20-6 / SCALE None
	SHEET 1 OF 1	PLAN GI-40-21



DETAIL OF SIGN
Scale : none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A,
   - (a) Legend, 5" Series "C" letters - M.S.H.D. standard alphabet.
   - (b) Color; Silver legend and border on a blue background.
   - (c) Reflectorization; Silver and blue

Note:

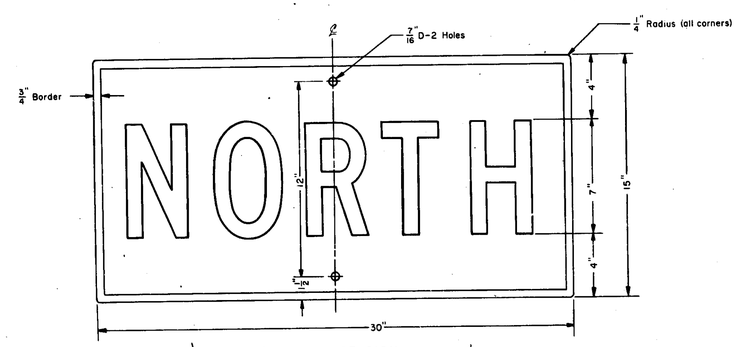
Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO	DESCRIPTION	DATE
1	Reflectorization change	3-6-5

TYPE III A SIGN

GI-41-24 CARDINAL DIRECTION SIGN	AUTH. NO. / CONT. SEC. / REF.	DRAWN / DATE 7-9-63 / SCALE None
	SHEET 1 OF 1	PLAN GI-41-24



DETAIL OF SIGN
SCALE NONE

NOTE.

Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A
   - (a) Legend; 7" Series "C" letters - M.S.H.D. standard alphabet.
   - (b) Color: Silver legend and border on a blue background
   - (c) Reflectorization; Silver and blue

REVISIONS

NO	DESCRIPTION	DATE
1	Reflectorization change	3-6-5

TYPE III A SIGN

GI-41-30 CARDINAL DIRECTION SIGN	AUTH. NO. / CONT. SEC. / REF.	DRAWN J.E.G. / DATE 7-9-63 / SCALE NONE
	SHEET 1 OF 1	PLAN GI-41-30

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____

APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____

APPROVED _____ CHIEF OF DESIGN _____ DATE _____

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE _____

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

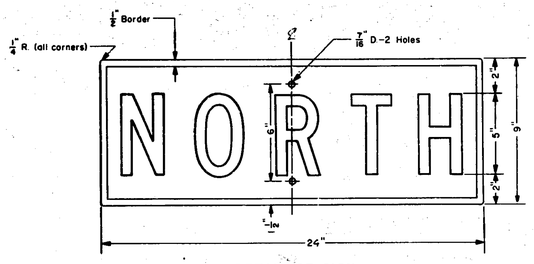
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S40.18 | FILE NO. 1-63-30 SYLVAN | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 65



DETAIL OF SIGN
SCALE NONE

NOTE:
Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend; 5" Series "C" letters - M.S.H.D. standard alphabet.
   (b) Color; Silver legend and border on a green background.
   (c) Reflectorization; Silver and green

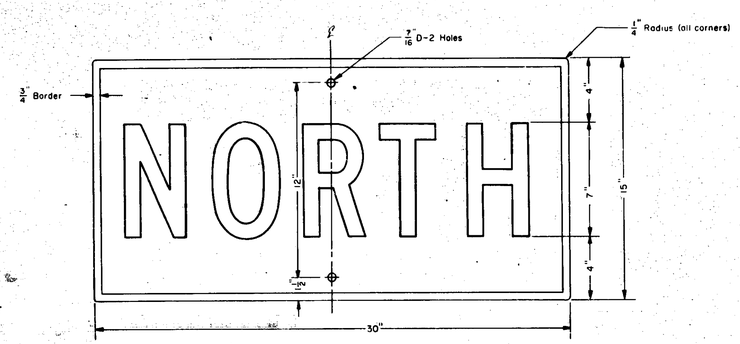
REVISIONS

NO.	DESCRIPTION	DATE
1	Reflectorization change	3-65

TYPE III A SIGN

GI-42-24
CARDINAL DIRECTION SIGN

AUTH NO. | DRAWN J.E.G.
CONT SEC | DATE 7-10-63
REF. | SCALE NONE
SHEET 1 OF 1 | PLAN GI-42-24



DETAIL OF SIGN
SCALE NONE

NOTE:
Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type A
   (a) Legend; 7" Series "C" letters - M.S.H.D. standard alphabet.
   (b) Color; Silver legend and border on a green background.
   (c) Reflectorization; Silver and green

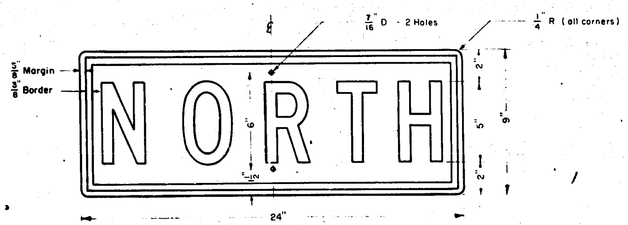
REVISIONS

NO.	DESCRIPTION	DATE
1	Reflectorization change	3-6
2	Sign face change, from III B to III A	12-6

TYPE III A SIGN

GI-42-30
CARDINAL DIRECTION SIGN

AUTH NO. | DRAWN J.E.G.
CONT SEC | DATE 7-9-63
REF. | SCALE NONE
SHEET 1 OF 1 | PLAN GI-42-30



DETAIL OF SIGN
Scale none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal
2. Sign Face: Type B,
   (a) Legend, 5" Series "C" (modified) letters - M.S.H.D. standard alphabet.
   (b) Color; Black legend and border on a silver background
   (c) Reflectorization; Silver sheeting

Note:
Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

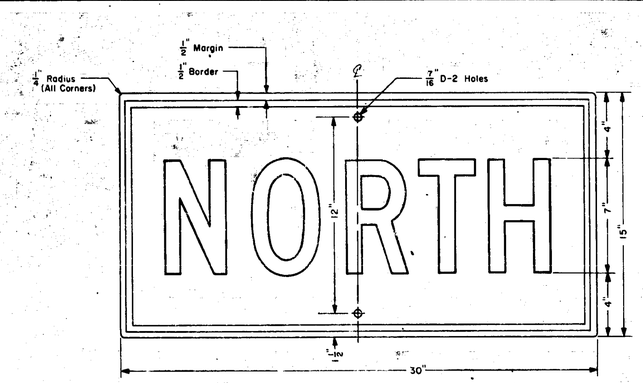
REVISIONS

NO.	DESCRIPTION	DATE

TYPE III B SIGN

GI-43-24
CARDINAL DIRECTION SIGN

AUTH NO. | DRAWN
CONT SEC | DATE 7-9-63
REF. | SCALE None
SHEET 1 OF 1 | PLAN GI-43-24



DETAIL OF SIGN
SCALE NONE

NOTE:
Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B.
   (a) Legend; 7" Series "C" (modified) letters - M.S.H.D. Standard alphabet.
   (b) Color; Black legend and border on a silver background.
   (c) Reflectorization; Silver sheeting.

REVISIONS

NO.	DESCRIPTION	DATE

TYPE III B SIGN

GI-43-30
CARDINAL DIRECTION SIGN

AUTH NO. | DRAWN J.E.G.
CONT SEC | DATE 7-8-63
REF. | SCALE NONE
SHEET 1 OF 1 | PLAN GI-43-30

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED — CONSTRUCTION ENGINEER — DATE
APPROVED — MAINTENANCE ENGINEER — DATE
APPROVED — CHIEF OF DESIGN — DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY — DIRECTOR OF ENGINEERING & CHIEF ENGINEER — DATE
APPROVED BY BUREAU OF PUBLIC ROADS — DATE

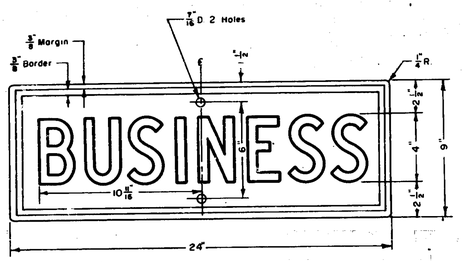
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED — ENGINEER OF TRAFFIC OPERATIONS — DATE
RECOMMENDED FOR APPROVAL — ENGINEER OF BRIDGE AND ROAD DESIGN — DATE
RECOMMENDED FOR APPROVAL — DIRECTOR OF TRAFFIC DIVISION — DATE

S40.19

FILE NO. USE NO. 380 STENCIL	I 63174, 075	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
				66



DETAIL OF SIGN

Scale none

SPECIFICATIONS

Scale none

1. Sign Panel: Type III, Sheet aluminum or approved equal
2. Sign Face: Type B
   (a) Legend, 4" Series "C" letters – M.S.H.D. Standard alphabet
   (b) Color; Black legend and border on a silver background
   (c) Reflectorization, Silver sheeting

Note

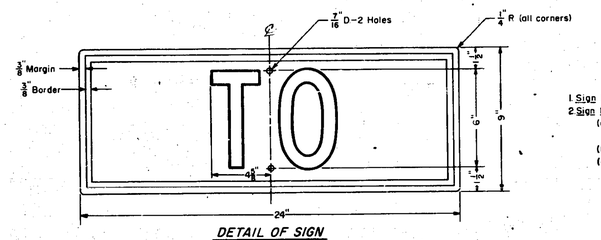
Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS		
NO.	DESCRIPTION	DATE

Type III B Sign

G1 - 44 - 24
BUSINESS
PANEL

AUTH. NO. — CONT. SEC. — REF. — DRAWN R.E.H. DATE 9-5-63 SCALE NONE SHEET 1 OF 1 PLAN G1-44-24



DETAIL OF SIGN

SCALE NONE

SPECIFICATIONS

1. Sign Panel: Type III, Sheet Aluminum or approved equal.
2. Sign Face: Type B
   (a) Legend; 6" Series "D" (modified) letters – M.S.H.D. standard alphabet
   (b) Color; Black legend and border on a silver background.
   (c) Reflectorization; Silver sheeting

Note

Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS		
NO.	DESCRIPTION	DATE

TYPE III B PANEL

G1-45-24
TO
PANEL

AUTH. NO. — CONT. SEC. — REF. — DRAWN J.E.G. DATE 9-4-63 SCALE NONE SHEET 1 OF 1 PLAN G1-45-24

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

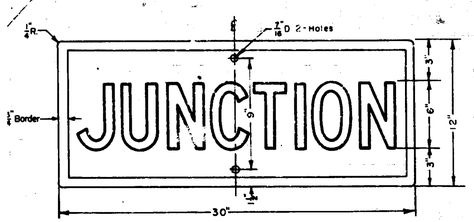
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

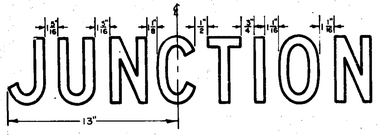
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN

Scale: none



DETAIL OF LETTER SPACING

Scale: none

SPECIFICATIONS

1 Sign Panel, Type III, Sheet aluminum or approved equal.

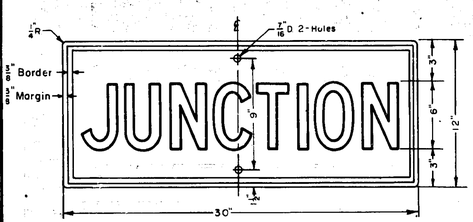
2 Sign Face; Type A
   (a) Legend; 6" Series "B" letters – M.S.H.D. standard alphabet.
   (b) Color; Silver legend and border on a blue background.
   (c) Reflectorization; Silver and blue

REVISIONS		
NO.	DESCRIPTION	DAT
1	Reflectorization change	3-6

Type III A Sign

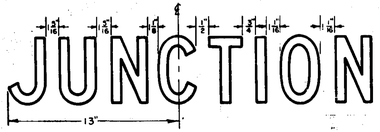
G1 - 49 - 30
JUNCTION
PANEL

AUTH. NO. — CONT. SEC. — REF. — DRAWN R.E. DATE 9-5-63 SCALE none SHEET 1 OF 1 PLAN G1-49-30



DETAIL OF SIGN

Scale: none



DETAIL OF LETTER SPACING

Scale none

SPECIFICATIONS

1 Sign Panel, Type III, Sheet aluminum or approved equal

2 Sign Face; Type B
   (a) Legend, 6" Series "B" letters - M.S.H.D. standard alphabet
   (b) Color, Black legend and border on a silver background
   (c) Reflectorization, Silver sheeting.

REVISIONS		
NO	DESCRIPTION	DAT

Type III B Sign

G1 - 50 - 30
JUNCTION
PANEL

AUTH. NO. — CONT. SEC. — REF. — DRAWN R.E. DATE 9-5-6 SCALE none SHEET 1 OF 1 PLAN G1-50-30

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

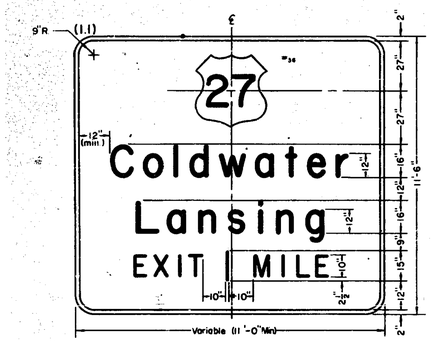
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

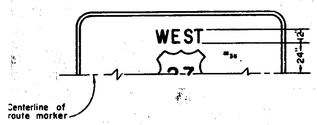
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

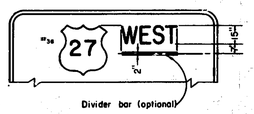
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S40.20 | FILE NO. 1.4 NO. 330 SPECIFIC | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 67



DETAIL OF SIGN
Scale: None





SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal.
2. Sign Face: Type A
   (a) Legend: Route markers according to the number designation indicated (Std Plan SB-36)
   Down Arrows (Std Plan SB-64) Fractional Numerals (Std Plan SB -63) All letters and numerals shall be Series 'E' of the height indicated – B.P.R. standard alphabet.
   (b) Color: Silver letters, numerals, arrows, divider bars and border on a green background.
   (c) Reflectorization: Letters, numerals, arrows, divider bars and border – silver sheeting or demountable. Background – green sheeting.

Notes: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

Where cardinal direction is placed above route marker, it shall be positioned as shown with sign height increased 18". The height of any sign may be increased where specified on plans. Such increase shall be equally divided above and below legend vertical limits.

Where more than one route marker is used horizontally, there shall be 12" of space between them.

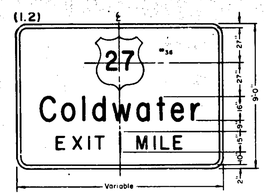
REVISIONS

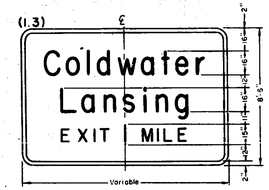
NO.	DESCRIPTION	DATE
1	12' min. to 11' min. length	4-15-6
2	Route marker spacing	8-6

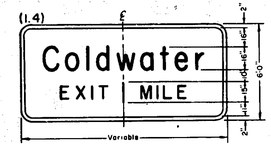
TYPE IA SIGN

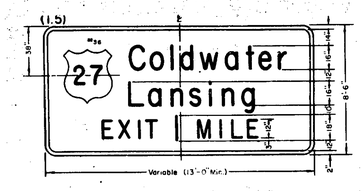
G4-1
(16" CAPS AND 12" LOWER CASE)
ADVANCE EXIT SIGN

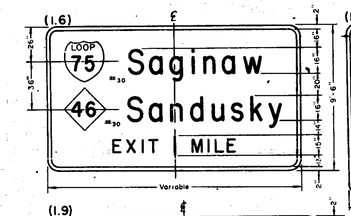
AUTH. NO.		DRAWN	L.T.B
CONT. SEC.		DATE	2-13-64
REF.		SCALE	NONE
SHEET 1 OF 6	PLAN G4-1		

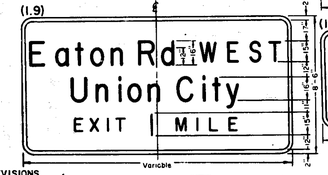


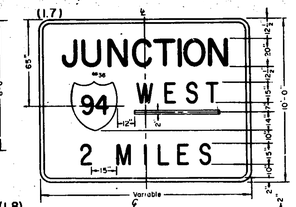


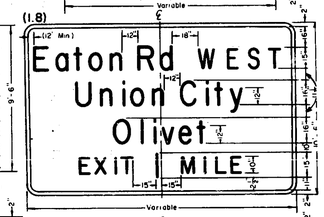


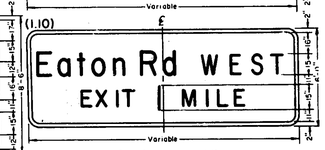












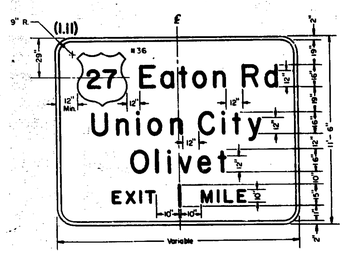
REVISIONS

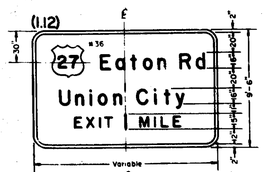
NO.	DESCRIPTION	DATE

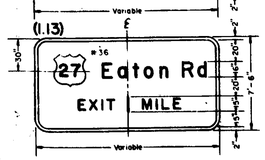
TYPE IA SIGN

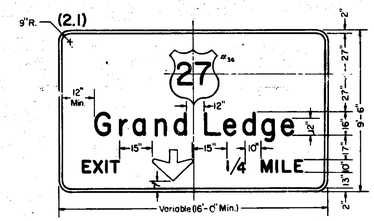
G4-1
(16" CAPS AND 12" LOWER CASE)
ADVANCE EXIT SIGN

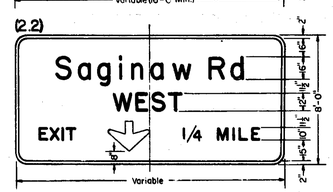
AUTH. NO.		DRAWN	L.T.B
CONT. SEC.		DATE	2-7-64
REF.		SCALE	NONE
SHEET 2 OF 6	PLAN G4-1		

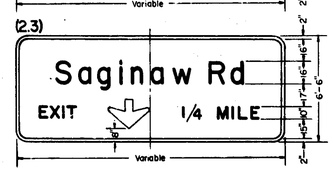


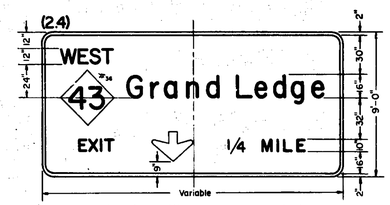


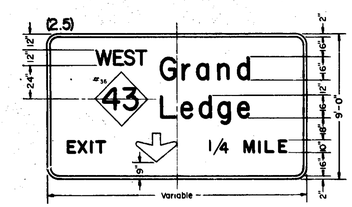












REVISIONS

NO.	DESCRIPTION	DATE

TYPE IA SIGN

G4-1
(16" CAPS AND 12" LOWER CASE)
ADVANCE EXIT SIGN

AUTH. NO.		DRAWN	H.L.R
CONT. SEC.		DATE	2-14-6
REF.		SCALE	None
SHEET 3 OF 6	PLAN G4-1		

REVISIONS

NO.	DESCRIPTION	DATE
1	Add dimension	10/5/

IA Sign.

G4-1
(16" CAPS AND 12" LOWER CASE)
ADVANCE EXIT SIGN

AUTH. NO.		DRAWN	H.L.R
CONT. SEC.		DATE	2-12-64
REF.		SCALE	None
SHEET 4 OF 6	PLAN G4-1		

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

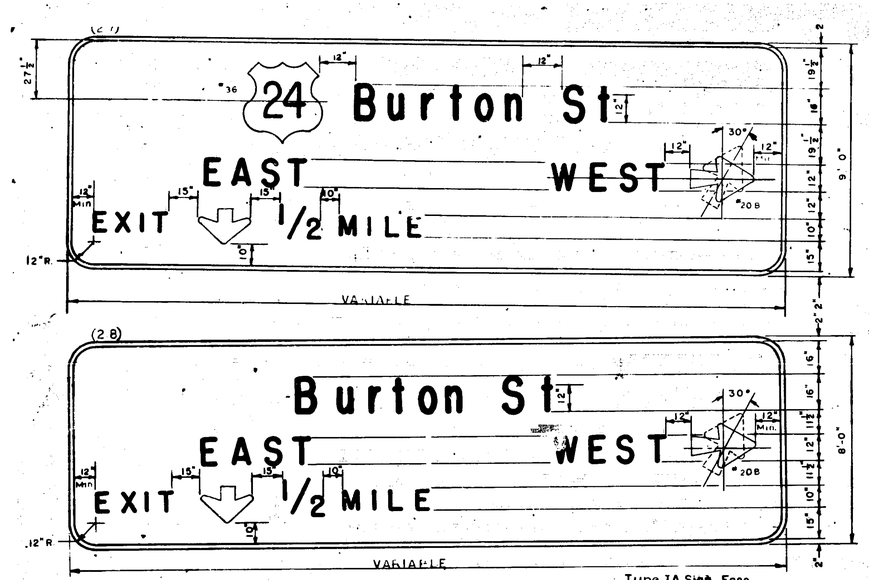
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.10

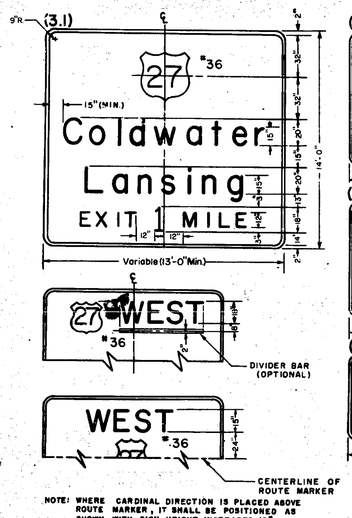
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174, 075			68



Type IA Sign Face

G4-1
(16" CAP AND 12" LOWER CASE)
ADVANCE EXIT & EXIT DIRECTION SIGN

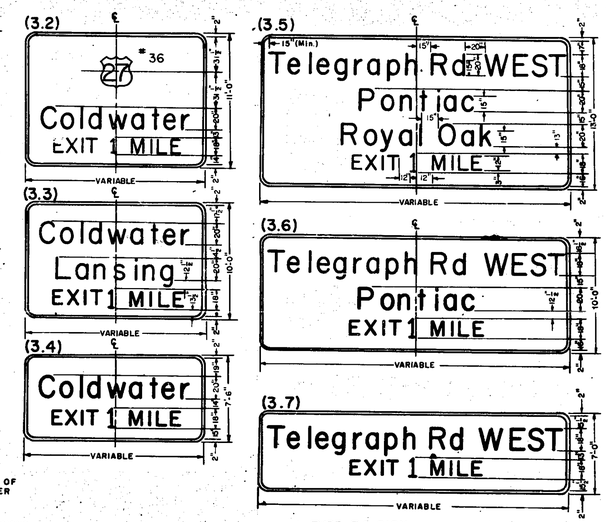
AUTH. NO.	DRAWN G.R.M.
CONT. SEC.	DATE 5-1-61
REF.	SCALE None
SHEET 6 OF 7	PLAN G4-1



NOTE: WHERE CARDINAL DIRECTION IS PLACED ABOVE ROUTE MARKER, IT SHALL BE POSITIONED AS SHOWN WITH SIGN HEIGHT INCREASED 18"

REVISIONS

NO.	DESCRIPTION	DATE



TYPE IA SIGN

G4-1
(20" CAP AND 15" LOWER CASE)
ADVANCE EXIT SIGN

AUTH. NO.	DRAWN E.B.A.
CONT. SEC.	DATE 2-26-64
REF.	SCALE NONE
SHEET 6 OF 7	PLAN G4-1

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

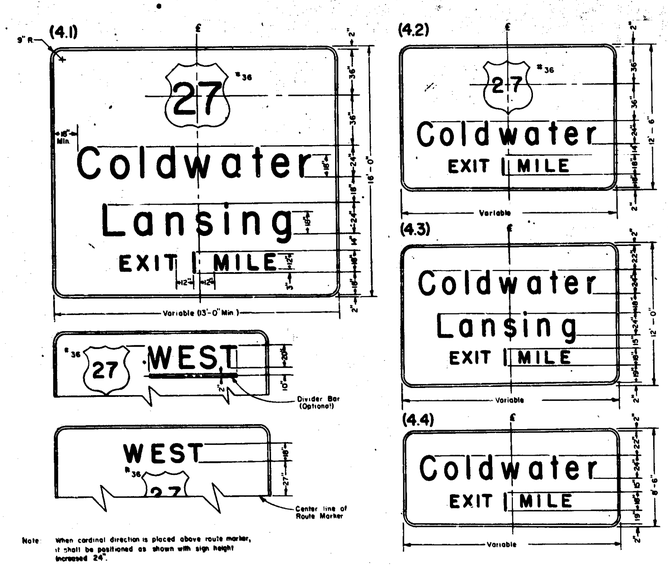
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED, BY BUREAU OF PUBLIC ROADS _____ DATE



Note: When cardinal direction is placed above route marker, it shall be positioned as shown with sign height increased 24".

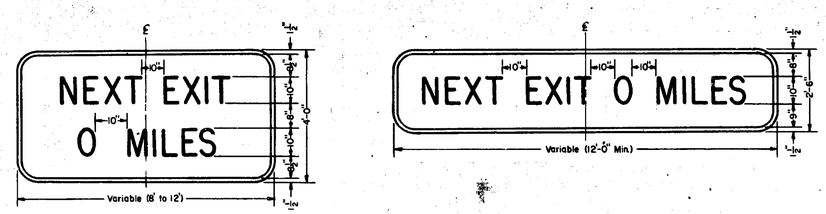
REVISIONS

NO.	DESCRIPTION	DATE

Type I A Sign

G4-1
(24" CAPS AND 18" LOWER CASE)
ADVANCE EXIT SIGN

AUTH. NO.	DRAWN M.S.T.G.
CONT. SEC.	DATE 1-13-64
REF.	SCALE None
SHEET 7 OF 7	PLAN G4-1



DETAIL OF SIGNS
Scale: none

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal.
   Type II, 3/8" plywood or approved equal.
2. Sign Face: Type A
   (a) Legend; 10" Series "D" letters and numerals - M.S.H.D. standard alphabet.
   (b) Color; Silver letters, numerals and border on a green background.
   (c) Reflectorization; Letters, numerals and border - silver sheeting or demountable.
   Background - green sheeting.

NOTE:
Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO.	DESCRIPTION	DATE

Type IA or IIA Sign

G4-2
NEXT EXIT 0 MILES SIGN

AUTH. NO.	DRAWN H.L.R.
CONT. SEC.	DATE 1-14-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G4-2

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

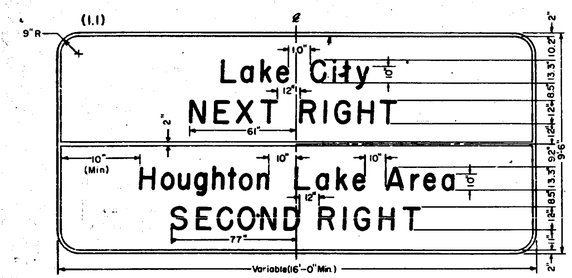
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.11 | FILE NO. | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 69



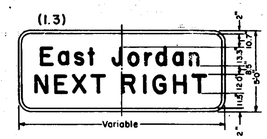
DETAIL OF SIGN

SCALE: NONE

SPECIFICATIONS

1. Sign Panel: Type I, Aluminum extrusions or approved equal
2. Sign Face: Type A
   (a) Legend: 13.3" Series "E" upper case and 10" loop height lower case letters and 12" Series "E" upper case letters — B.P.R. standard alphabet.
   (b) Color: Silver legend and border on a green background
   (c) Reflectorization: Letters and border — silver sheeting or demountable
   Background — green sheeting

Note: Letter spacing shall be in accordance with spacing charts prepared by Traffic Division.



REVISIONS		
NO.	DESCRIPTION	DATE

TYPE I A SIGN

G 4-3 SUPPLEMENTAL ADVANCE EXIT SIGN

AUTH. NO.	DRAWN M.N.B
CONT. SEC.	DATE 1-31-62
REF.	SCALE NONE
SHEET 1 OF 2	PLAN G 4-3

REVISIONS		
NO.	DESCRIPTION	DATE

TYPE I A SIGN

G 4-3 SUPPLEMENTAL ADVANCE EXIT SIGN

AUTH. NO.	DRAWN M.N.B
CONT. SEC.	DATE 3-2-64
REF.	SCALE NONE
SHEET 2 OF 2	PLAN G 4-3

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

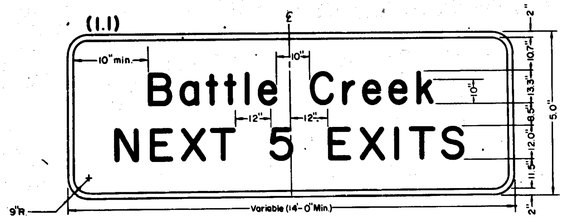
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

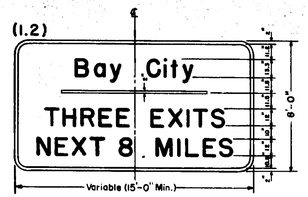
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN

Scale None



SPECIFICATIONS

1. Sign Panel: Type I, Aluminum extrusions or approved equal.
2. Sign Face: Type A.
   (a) Legend: 13.3" Series "E" upper case and 10" loop height lower case letters and 12" series "E" upper case letters — B.P.R. standard alphabet.
   (b) Color: Silver legend and border on a green background
   (c) Reflectorization: Letters and border — silver sheeting or demountable
   Background — green sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division. Length of divider bar shall be equal to the sum of 1/2 the length of the first line plus 1/2 the length of the second line.

REVISIONS		
NO.	DESCRIPTION	DATE

TYPE IA SIGN

G 4-4 REGION IDENTIFICATION SIGN

AUTH. NO.	DRAWN L.T.B.
CONT. SEC.	DATE 1-29-64
REF.	SCALE NONE
SHEET 1 OF 2	PLAN G4-4

REVISIONS		
NO.	DESCRIPTION	DATE

TYPE IA SIGN

G 4-4 REGION IDENTIFICATION SIGN

AUTH. NO.	DRAWN K.C.S.
CONT. SEC.	DATE 2-14-64
REF.	SCALE NONE
SHEET 2 OF 2	PLAN G4-4

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

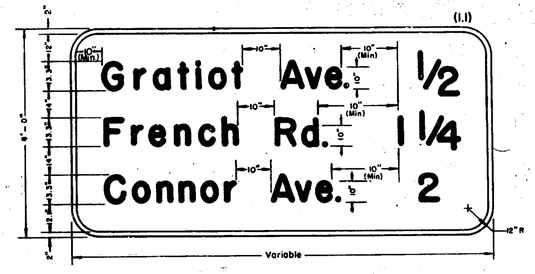
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.12

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174, 075			70

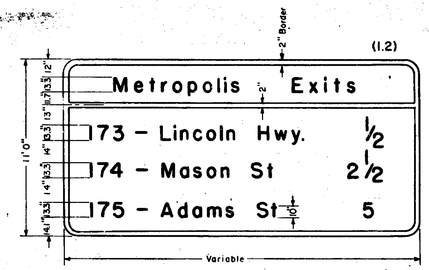


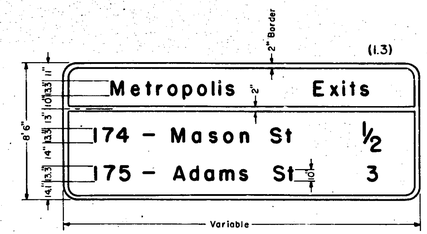
DETAIL OF SIGN
Scale: None

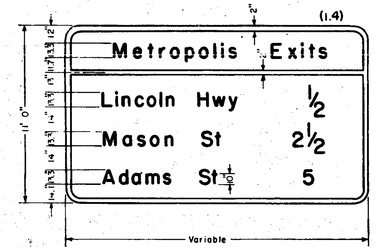
NOTE:
Spacing between letters shall be in accordance with letter spacing charts prepared by the Traffic Division.

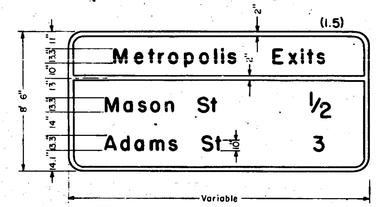
SPECIFICATIONS

1. Sign Panel: Type I, Aluminum extrusions or approved equal.
2. Sign Face: Type A.
   (a) Legend; 13.3" Series "E" upper case and 10" loop height lower case letters, 13.3" Series "E" whole numerals and 10" Series "E" fractional numerals (All letters and numerals – B.P.R. alphabet). See plan SB – 63 for detail of fractional designation placement.
   (b) Color; Silver letters, numerals and border on a green background.
   (c) Reflectorization; Letters, numerals and border – silver sheeting or demountable
   Background – Green sheeting.









REVISIONS

NO.	DESCRIPTION	DATE
1.	NEW SIGNS. SHEET 2 OF 2	11-6

Type IA Sign

G4–5 INTERCHANGE SEQUENCE SIGN

AUTH. NO.	DRAWN S.T.
CONT. SEC.	DATE 3/18/
REF.	SCALE None
SHEET 1 OF 2	PLAN G4-5

REVISIONS

NO.	DESCRIPTION	DATE
1	NEW SIGNS. SHEET 2 OF 2	11-6

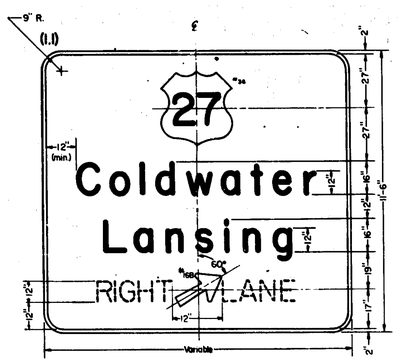
G4-5 INTERCHANGE SEQUENCE SIGN

AUTH. NO.	DRAWN M.S.E.G.
CONT. SEC.	DATE 12-3-6
REF.	SCALE NONE
SHEET 2 OF 2	PLAN

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

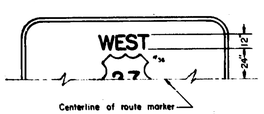
1. Sign Panel: Type I, aluminum extrusions or approved equal.
2. Sign Face: Type A
   (a) Legend; Route markers according to the number designation indicated (Std. Plan SB-36). Directional arrows according to the number designation indicated (Std. Plan SB-64). Fractional numerals (Std Plan SB —63). All letters and numerals shall be Series "E" of the height indicated-B.P.R. standard alphabet.
   (b) Color; Silver letters, numerals, arrows, divider bars and border on a green background.
   (c) Reflectorization; Letters, numerals, arrows, divider bars and border silver sheeting or demountable.
   Background – green sheeting

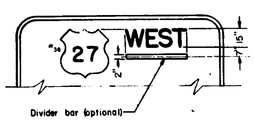
Notes: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

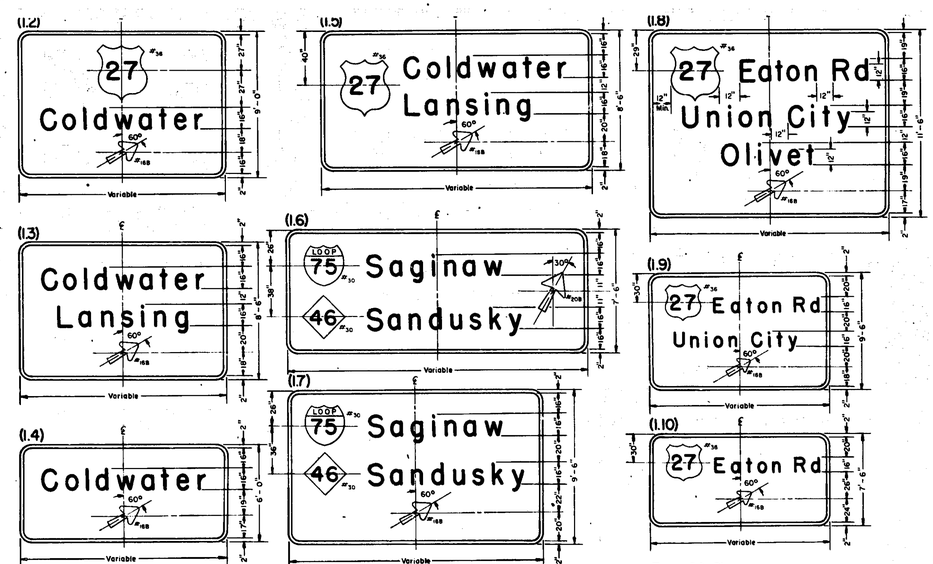
Where cardinal direction is placed above route marker, it shall be positioned as shown with sign height increased 18".

The height of any sign may be increased where specified on plans. Such increase shall be equally divided above and below legend vertical limits. Alternate bottom line "RIGHT (LEFT) LANE" may be used in place of arrow where specified on plans. Minimum sign length shall be 13'-0" when this alternate is used.

Where more than one route maker is used horizontally, there shall be 12" of spacing between them.







REVISIONS

NO	DESCRIPTION	DATE
1	Route marker spacing	8-65

Type IA Sign

G4-6 (16" CAPS AND 12" LOWER CASE) EXIT DIRECTION SIGN

AUTH. NO.	DRAWN H.L.R.
CONT. SEC.	DATE 1-30-6
REF.	SCALE None
SHEET 1 OF 3	PLAN G4-6

REVISIONS.

NO	DESCRIPTION	DATE

Type IA Sign

G4-6 (16" CAPS AND 12" LOWER CASE) EXIT DIRECTION SIGN

AUTH. NO.	DRAWN HL R
CONT. SEC.	DATE 2-11-64
REF.	SCALE None
SHEET 2 OF 3	PLAN G4-6

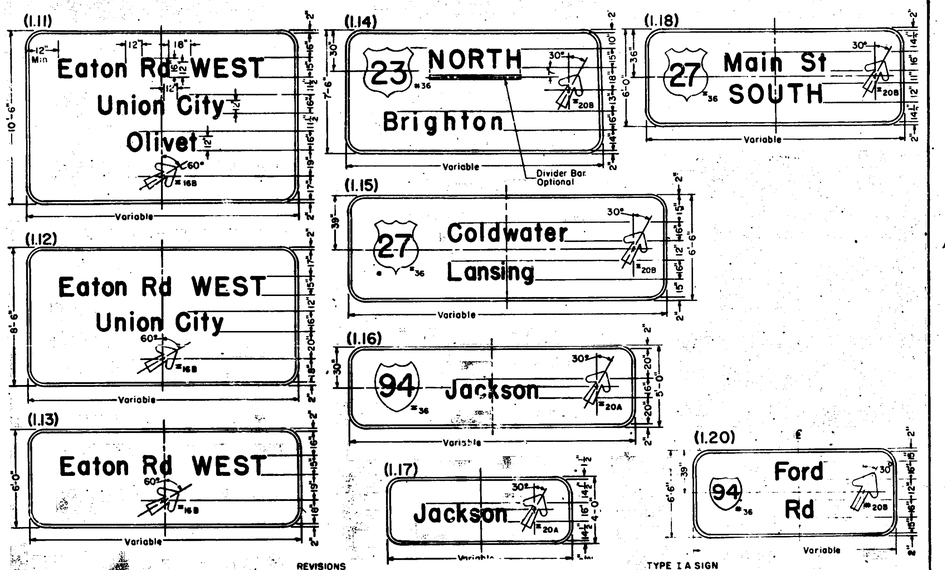
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.13

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075			71



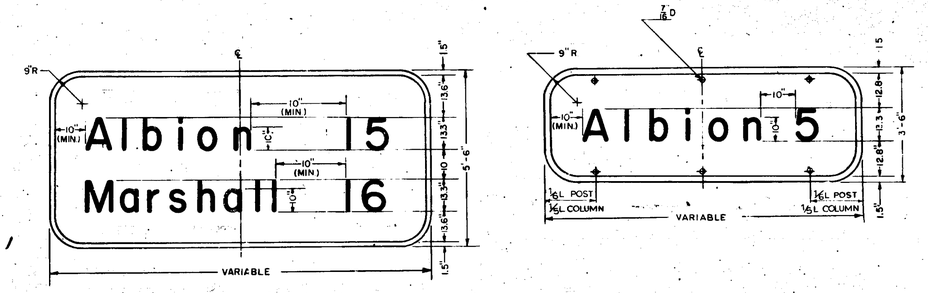
REVISIONS

NO.	DESCRIPTION	DATE
1	Correct dimensions	10/5/6-
2	Destinations reposition, signs L14-L15	4-14-
3	Added (1.20) drawing	2-6-6

TYPE I A SIGN

G4-6
16" CAPITAL AND 12" LOWER CASE LETTERS EXIT DIRECTION SIGN

AUTH. NO.	DRAWN M.N.B
CONT. SEC.	DATE 2-11-64
REF.	SCALE NONE
SHEET 2 OF 2	PLAN G4-6



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal. Type II, 3/8" plywood or approved equal.
2. Sign Face: Type A
   (a) Legend; 13.3" "Series "E" upper case and 10" loop height lower case letters - B.P.R. standard alphabet.
   (b) Color, Silver legend and border on a green background.
   (c) Reflectorization; Letters, numerals and border- silver sheeting or demountable. Background - green sheeting.

NOTES: Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO.	DESCRIPTION	DAT
1	MOUNTING HOLES	4-56

TYPE IA OR IIA SIGN

G4-7
FREEWAY DISTANCE SIGN

AUTH. NO.	DRAWN E.B.A.
CONT. SEC.	DATE 1-9-64
REF.	SCALE NONE
SHEET 1 OF 1	PLAN G4-7

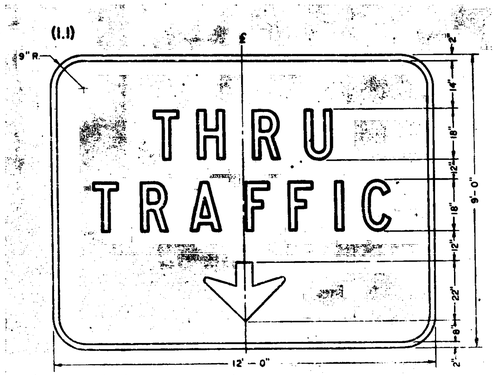
OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



DETAIL OF SIGN
Scale none

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal.
2. Sign Face: Type A.
   (a) Legend; 18" Series "D" letters - M.S.H.D. standard alphabet with Down arrows and Directional arrows of the number designation indicated (Std. Plan SB-64) Route markers shall be of the number designation indicated (Std. Plan SB-36)
   (b) Color; Silver letters, arrows and borders on green backgrounds.
   (c) Reflectorization; Letters, arrows and borders - Silver sheeting or demountable. Backgrounds - Green sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.
The height of any sign may be increased where specified on plans. Such increase shall be equally divided above and below legend vertical limits.

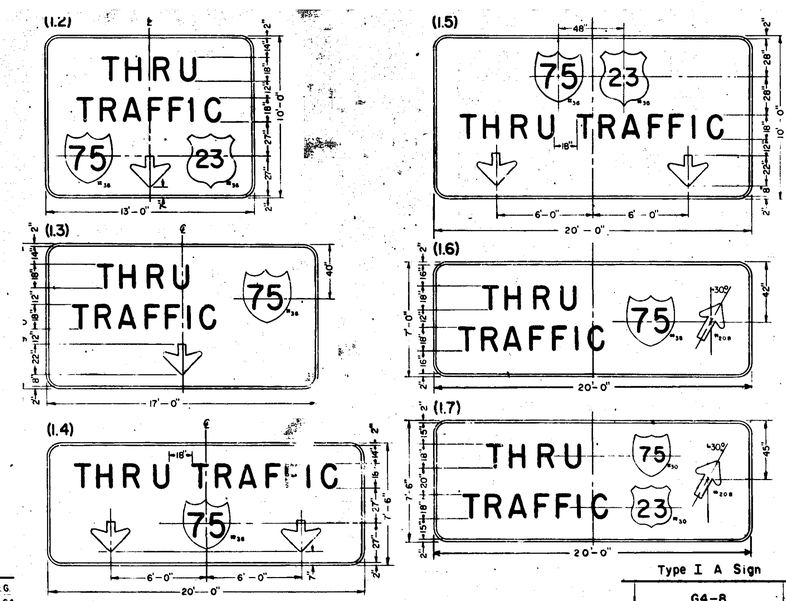
REVISIONS

NO.	DESCRIPTION	DATE

Type I A Sign

G4-8
THRU TRAFFIC SIGN

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-30-64
REF.	SCALE None
SHEET 1 OF 3	PLAN G4-8



Type I A Sign

G4-8
THRU TRAFFIC SIGN

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-29-64
REF.	SCALE None
SHEET 2 OF 3	PLAN G4-8

REVISIONS

NO.	DESCRIPTION	DATE

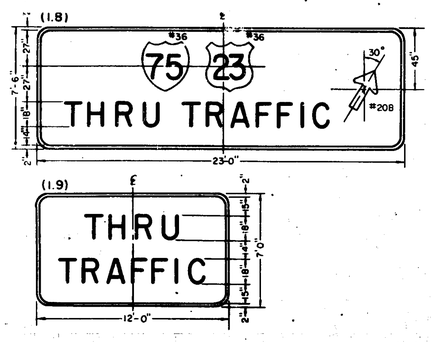
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.14

FILE NO. USE NO. 330 BY BRIDGE	I 63174,075	STATE PROJECT	FEDERAL PROJECT	SHEET NO. 72

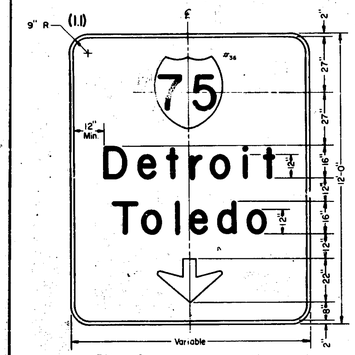


REVISIONS		
NO.	DESCRIPTION	DATE

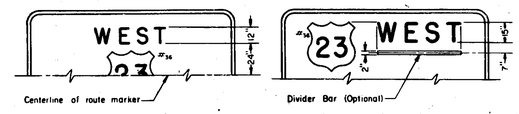
TYPE IA SIGN

G4-8
THRU TRAFFIC
SIGN

AUTH. NO.		DRAWN	L.T.B.
CONT. SEC.		DATE	2-7-6
REF.		SCALE	NONE
SHEET 3 OF 3	PLAN G4-8		



DETAIL OF SIGN
Scale: none



SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal.
2. Sign Face: Type A
   (a) Legend; All letters and numerals shall be Series "E" of the heigth indicated-B.P.R. standard alphabet. Down arrows and Directional Arrows of the number designation indicated (Std. Plan SB-64). Route markers according to the number designation indicated (SB-36).
   (b) Color; Silver letters, numerals, arrows, divider bars and borders on green backgrounds.
   (c) Reflectorization; Letters, numerals, arrows, divider bars and borders-silver sheeting or demountable
   Backgrounds - green sheeting.

Notes: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

Where cardinal direction is placed above route marker, it shall be positioned as shown with sign height increased 18"

The height of any sign may be increased where specified on plans. Such increase shall be equally divided above and below legend vertical limits.

REVISIONS		
NO.	DESCRIPTION	DATE

Type IA Sign

G4-9
THROUGH DESTINATION
SIGN

AUTH. NO.		DRAWN	H.L.R.
CONT. SEC.		DATE	2-7-64
REF.		SCALE	None
SHEET 1 OF 2	PLAN G4-9		

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____

APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____

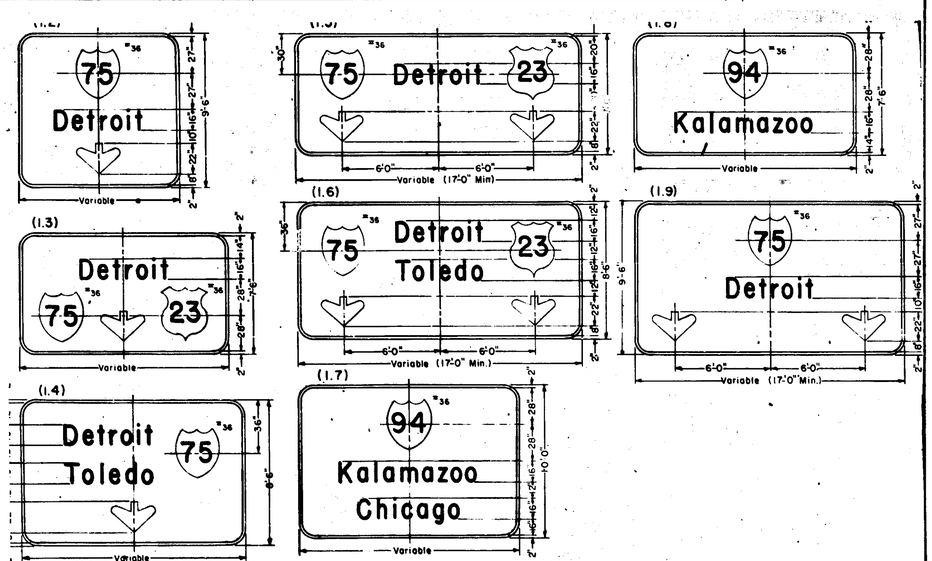
APPROVED _____ CHIEF OF DESIGN _____ DATE _____

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE _____

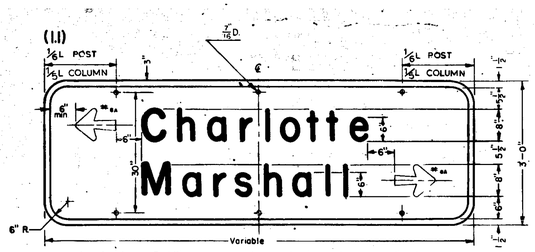


REVISIONS		
NO	DESCRIPTION	DATE
1	Correct dimension	10/5/64

TYPE I A SIGN

G4-9
THROUGH
DESTINATION
SIGN

AUTH. NO.		DRAWN	M.N.B.
CONT. SEC.		DATE	1-30-64
REF.		SCALE	NONE
SHEET 2 OF 2	PLAN G4-9		



DETAIL OF SIGN
Scale none

SPECIFICATIONS

1. Sign Panel: Type I, Aluminum extruded planks or approved equal.
   Type II, 3/8" Plywood or approved equal.
2. Sign Face: Type A
   (a) Legend, Series "E" letters of the height indicated-B.P.R. standard alphabet with Directional arrows according to the number designation indicated (Std. Plan SB-64)
   (b) Color; Silver letters, arrows, divider bars and borders on green backgrounds.
   (c) Reflectorization; Letters, arrows, divider bars and borders-Silver sheeting or demountable.
   Background—Green sheeting.

Note Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division

Where divider bar is used, legend in each portion of the sign (including arrow and names as a single unit) shall be centered horizontally

REVISIONS		
NO	DESCRIPTION	DATE
1	Change title block	10/5/64
2	Correct legend	2-6
3	MOUNTING HOLES	4-66

Type I or II A Sign

G4-10
(8" CAPITAL AND 6" LOWER CASE LETTERS)
RAMP DIRECTION SIGN

AUTH. NO.		DRAWN	M.S.I.G.
CONT. SEC.		DATE	1-27-64
REF.		SCALE	None
SHEET 1 OF 3	PLAN G 4-10		

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

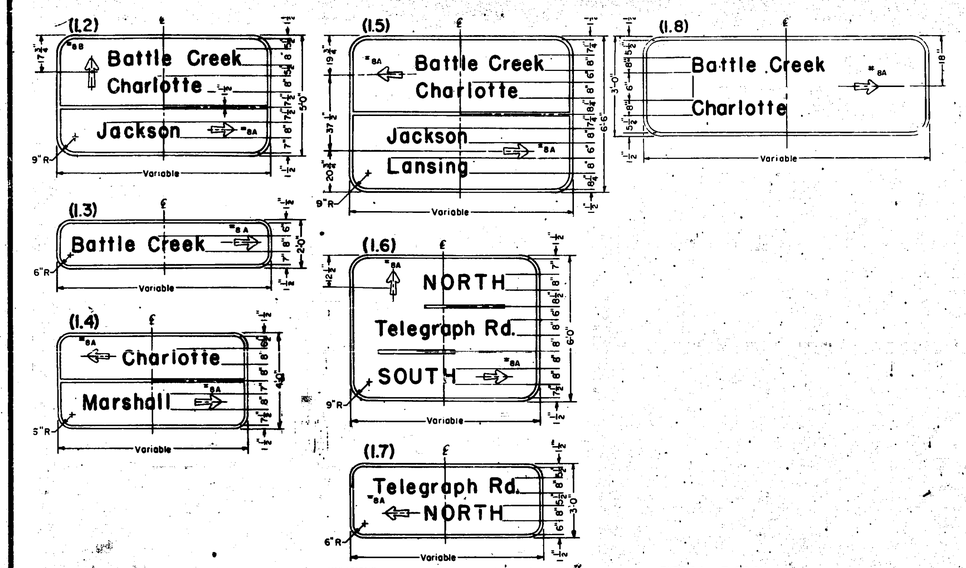
CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S50.15

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075			73

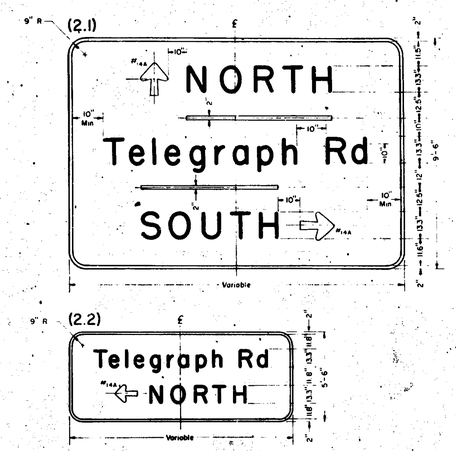


REVISIONS		
NO.	DESCRIPTION	DATE
1	Change title block	10/5/6
2	Dim. change, added (1.8)	2-6

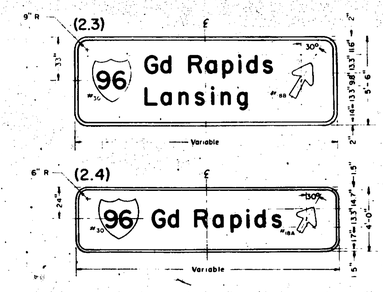
TYPE I A or II A SIGN

G4-10
(8" CAPITAL AND 6" LOWER CASE LETTERS)
RAMP DIRECTION SIGN

AUTH. NO. — DRAWN M.N.B.
CONT. SEC. — DATE 1-28-6
REF. — SCALE NONE
SHEET 2 OF 3 — PLAN G4-10



REVISIONS		
NO.	DESCRIPTION	DATE
1	Change title block	10-5-6
2	Legend: c-nterec	2-6-6



Type I or II A Sign

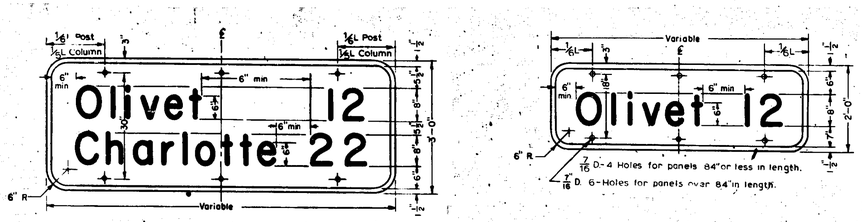
G4-10
(13.3" CAPITAL AND 10" LOWER CASE LETTERS)
RAMP DIRECTION SIGN

AUTH. NO. — DRAWN H.L.R
CONT. NO. — DATE 2-5-64
REF. — SCALE None
SHEET 3 OF 3 — PLAN G4-10

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER — DATE
APPROVED _____ MAINTENANCE ENGINEER — DATE
APPROVED _____ CHIEF OF DESIGN — DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER — DATE
APPROVED BY BUREAU OF PUBLIC ROADS — DATE



DETAIL OF SIGNS
Scale none

SPECIFICATIONS

1. Sign Panel: Type II, 3/8" plywood or approved equal.
2. Sign Face: Type A.
   (a) Legend: 8" Series "E" upper case and 6" loop height lower case letters — B.P.R. standard alphabet.
   (b) Color: Silver legend and border on a green background.
   (c) Reflectorization: Letters, numerals and border - Silver sheeting or demountable. Background - Green sheeting.

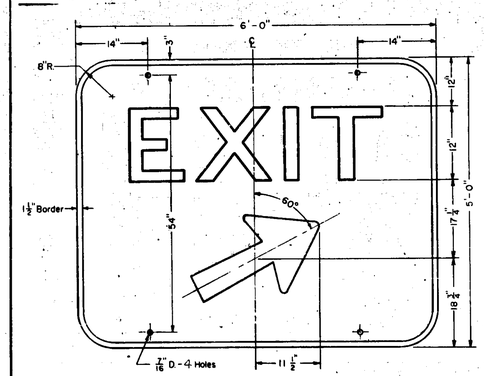
Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

REVISION		
NO	DESCRIPTION	DATE
1	MOUNTING HOLES	4-66

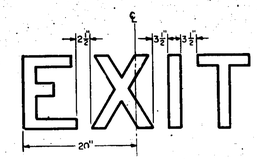
Type II A Sign

G4-11
FREEWAY CROSSROAD DISTANCE SIGN

AUTH. NO. — DRAWN M.S.G
CONT. SEC. — DATE 1-21-64
REF. — SCALE None
SHEET 1 OF 1 — PLAN G4-11



DETAIL OF SIGN
Scale: None



DETAIL OF LETTER SPACING
Scale: None

SPECIFICATIONS

1. Sign Panel: Type III, sheet aluminum or approved equal.
2. Sign Face: Type A.
   (a) Legend: 12" Series "F" letters - B.P.R. standard alphabet with No. 16B Directional Arrow (Std. Plan SB-64).
   (b) Color: Silver letters, arrow and border on a green background.
   (c) Reflectorization: Silver and green sheeting.

Note: Arrow shall be placed in corresponding position pointing left for off-ramps leading to the left.

REVISIONS		
NO	DESCRIPTION	DA
1	MOUNTING HOLES	4-66

Type III A Sign

G5-1
EXIT GORE SIGN

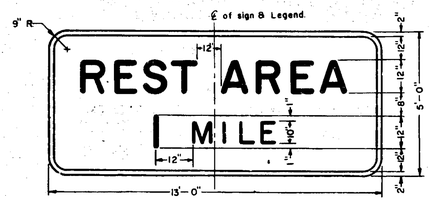
AUTH. NO. — DRAWN R.M.
CONT. SEC. — DATE 7-5-63
REF. — SCALE NONE
SHEET 1 OF 1 — PLAN G5-1

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS — DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN — DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION — DATE

S50.16 | FILE NO. 33 DR 280 SHEET | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 74



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal.
2. Sign Face: Type A.
   - (a) Legend; First line and numeral on second line - 12" Series "E" - M.S.H.D. standard alphabet
     Second line - (MILE) 10" Series "E" letters - B.P.R. standard alphabet.
     Fractional Numerals (standard plan SB-63)
     Space between whole number and fractional number shall be 8"
   - (b) Color; Silver legend and border on a blue background
   - (c) Reflectorization; Letters, numerals and border- Silver sheeting or demountable.
     Background- Blue sheeting.

Note Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

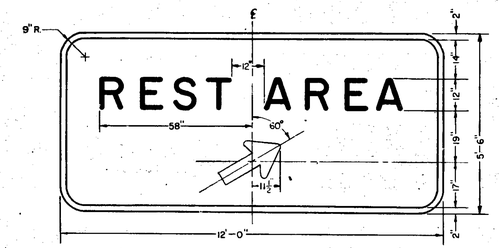
REVISIONS

NO.	DESCRIPTION	DATE
1	SIGN SIZE & SPECS	7-65
2	ADD LEGEND NOTE	6-66

Type I A Sign

G5-2
REST AREA ADVANCE SIGN

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-9-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G5-2



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type I, Aluminum extrusions or approved equal.
2. Sign Face: Type A.
   - (a) Legend, 12" Series "E" upper case letters - B.P.R. standard alphabet with No. 16B Directional arrow (Std. plan SB-64)
   - (b) Color: Silver letters, arrow and border on a blue background.
   - (c) Reflectorization; Letters, arrow and border - Silver sheeting or demountable.
     Background - Blue sheeting.

Note: Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO	DESCRIPTION	DATE

Type I A Sign

G5-3
REST AREA EXIT DIRECTION SIGN

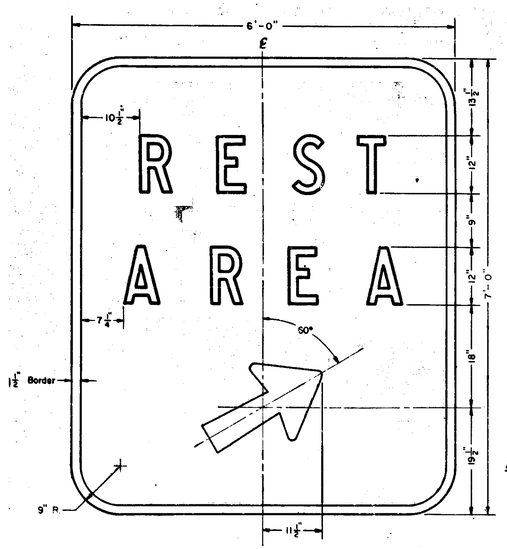
AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-8-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G5-3

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE



SPECIFICATIONS

1. Sign Panel: Type I, Aluminum Ext. or approved equal.
2. Sign Face: Type A
   - (a) Legend; 12" Series "E" letters - B.P.R. standard alphabet with No. 16B Directional Arrow (Std. Plan SB-64).
   - (b) Color; Silver letters, arrow and border on a blue background.
   - (c) Reflectorization; Letters, arrow and border - silver sheeting or demountable:
     Background - blue sheeting

Note: Spacing between letters shall be in accordance with letter spacing charts prepared by the Traffic Division.

DETAIL OF SIGN
Scale: None

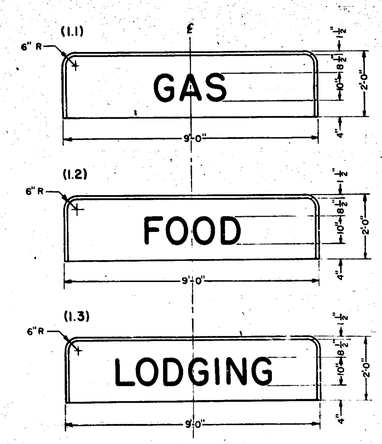
REVISIONS

NO.	DESCRIPTION	DATE
1	Mounting hole removal	8-16-66

Type I A Sign

G5-4-72
REST AREA GORE SIGN

AUTH. NO.	DRAWN H.L.R.
CONT. SEC.	DATE 2-3-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G5-4-72



DETAIL OF SIGNS
Scale: none

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal
2. Sign Face: Type A
   - (a) Legend: Series "D" letters of height indicated M.S.H.D. standard alphabet
   - (b) Color: Silver letters and border on a blue background
   - (c) Reflectorization: Letters and border - silver sheeting or demountable
     Background - blue sheeting

Note Each line of legend shall be centered horizontally on sign panel with spacing between letters in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO.	DESCRIPTION	DATE
1	Interchangable panels & size	3-66

Type I A Sign

G5-5
INTERCHANGABLE PANELS ADVANCE SERVICES SIGN

AUTH. NO.	DRAWN M. St. G.
CONT. SEC.	DATE 12-1-64
REF.	SCALE None
SHEET 1 OF 2	PLAN G5-5

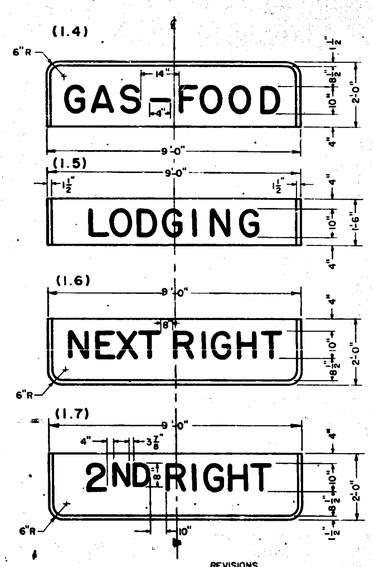
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

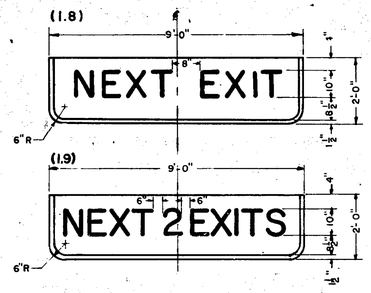
DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.17

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075			75





REVISIONS		
NO.	DESCRIPTIONS	DAT
1	Interchangable panels & size	3-6

TYPE IA SIGN

G5-5 INTERCHANGABLE PANELS ADVANCE SERVICES SIGN	AUTH. NO.	DRAWN	
	CONT. SEC.	DATE	12-64
	REF.	SCALE	NONE
	SHEET 2 OF 2	PLAN	G5-5

DETAIL OF SIGN

REVISIONS		
NO.	DESCRIPTION	DATE

SPECIFICATIONS

1 Sign Panel: Type II, $\frac{5}{8}$" plywood or approved equal.
2 Sign Face: Type A.
(a) Legend: Lines 1 and 2 – 8" series "E" upper case and 6" loop height lower case letters – B.P.R. standard alphabet.
Line 3 – 7" series "E" upper case letters – B.P.R. standard alphabet.
(b) Color: Gold letters and border on blue background.
(c) Reflectorization: Letters and border – gold sheeting or demountable
Background – blue sheeting.

Note: Spacing between letters shall be in accordance with spacing charts prepared by Traffic Division.

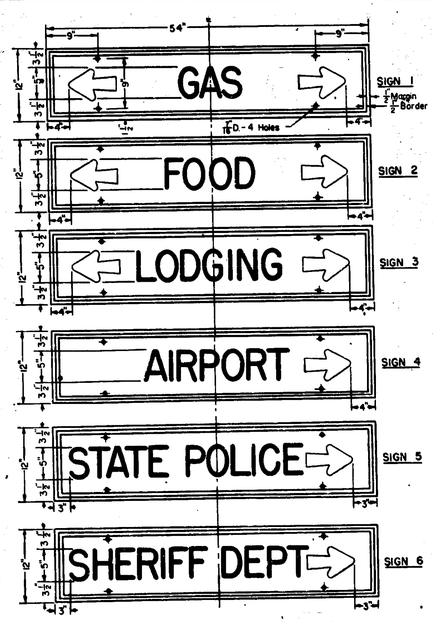
Type II A Sign

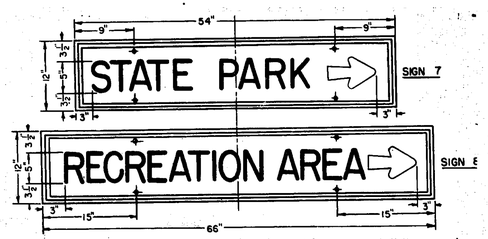
G5-6 ADVANCE STATE POLICE—SHERIFF SIGN	AUTH. NO.	DRAWN	R.G.M.
	CONT. SEC.	DATE	8-5-63
	REF.	SCALE	NONE
	SHEET 1 OF 1	PLAN	G5-6

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE





SPECIFICATIONS

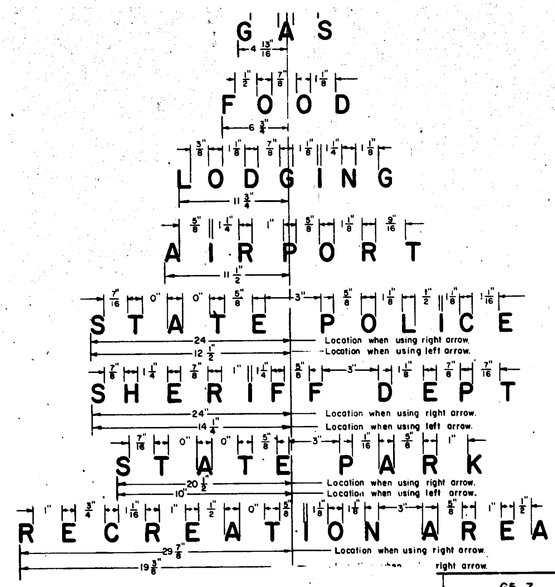
1. Sign Panel: Type II, $\frac{5}{8}$" plywood or approved equal.
2. Sign Face: Type A.
(a) Legend, 5" Series "C" letters – M.S.H.D. standard alphabet with No. 5A Directional Arrow (Std. Plan SB-64)
(b) Color, Signs 1, 2 and 3 – Silver letters, arrows and borders on blue backgrounds.
Signs 4, 7 and 8 – Silver letters, arrows and borders on green backgrounds.
Signs 5 and 6 – Gold letters, arrows and borders on blue backgrounds.
(c) Reflectorization: Letters, arrows and borders – Silver and gold sheeting.
Backgrounds – Blue and green sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS			
NO.	DESCRIPTION	DATE	
1	Change in specs.	10/1966	

Type II A Sign

G5-7 RAMP SERVICES SIGN	AUTH. NO.	DRAWN	M.St.G.
	CONT. SEC.	DATE	1-6-64
	REF.	SCALE	None
	SHEET 1 OF 2	PLAN	G5-7



DETAIL OF LETTER SPACING
Scale: none

REVISIONS		
NO.	DESCRIPTION	DATE

G5-7 RAMP SERVICES SIGN	AUTH. NO.	DRAWN	E B A
	CONT. SEC.	DATE	1-6-64
	REF.	SCALE	NONE
	SHEET 2 OF 2	PLAN	G5-7

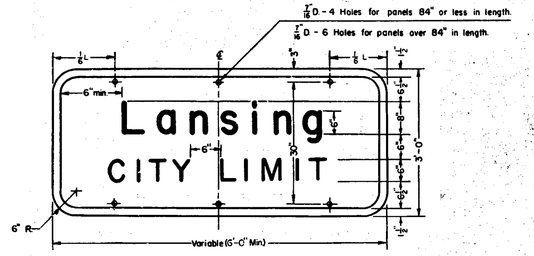
MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.18

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075			76



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal.
2. Sign Face: Type A.
   (a) Legend: Line one - 8" Series "E" upper case and 6" loop height lower case letters.
   Line two - 6" Series "E" upper case letters - B.P.R. standard alphabet.
   (b) Color: Silver legend and border on a green background.
   (c) Reflectorization: Legend and border - Silver sheeting or demountable.
   Background - Green sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

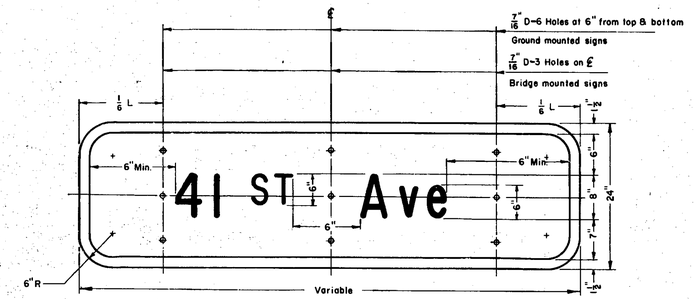
REVISIONS

NO.	DESCRIPTION	DAT

Type II A Sign

G5-8
CORPORATE LIMIT SIGN

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-7-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G5-8



DETAIL OF SIGN
Scale : none

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" plywood or approved equal
2. Sign Panel: Type A
   (a) Legend; 8" Series "E" upper case and 6" loop height lower case letters B.P.R. standard alphabet.
   (b) Colors; Silver legend and border on a green background.
   (c) Reflectorization; Letters and border Silver sheeting or demountable.
   Background - Green sheeting

NOTE:
Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

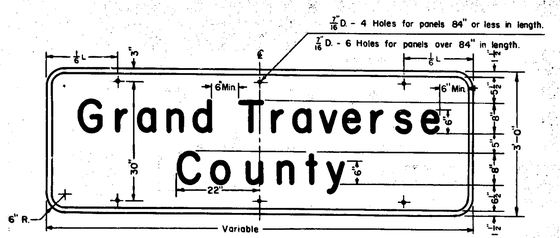
REVISIONS

NO.	DESCRIPTION	DATE
1	Change sign format	10-12-64

TYPE II A SIGN

G5-9
STREET (ROAD) NAME SIGN

AUTH. NO.	DRAWN
CONT. SEC.	DATE 10-4-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G5-9



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" Plywood or approved equal.
2. Sign Face: Type A.
   (a) Legend, 8" Series "E" upper case and 6" loop height lower case letters - B.P.R. standard alphabet.
   (b) Color, Silver letters and border on a green background.
   (c) Reflectorization, Letters and border - Silver sheeting or demountable. Background - Green sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

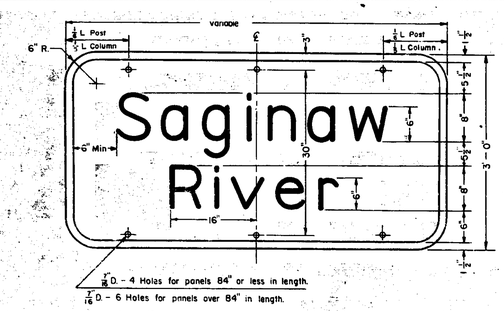
REVISIONS

NO.	DESCRIPTION	DATE

Type II A Sign

G5-10
COUNTY LINE SIGN

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-13-64
REF.	SCALE None
SHEET 1 OF 1	PLAN G5-10



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type II, 5/8" Plywood or approved equal.
2. Sign Face: Type A.
   (a) Legend; 8" Series "E" upper case and 6" loop height lower case letters - B.P.R. standard alphabet.
   (b) Color, Silver legend and border on a green background.
   (c) Reflectorization; Legend and border - Silver sheeting or demountable. Background - Green sheeting.

Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO.	DESCRIPTION	DATE

Type II A Sign

G5-11
RIVER NAME SIGN

AUTH. NO.	DRAWN M.St.G.
CONT. SEC.	DATE 1-14-64
REF.	SCALE None

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

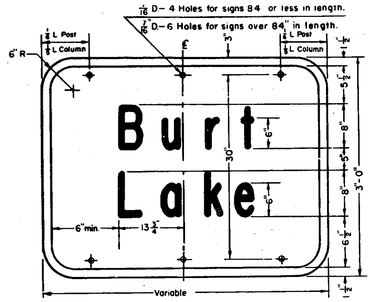
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.19 | FILE & NO. | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 77



DETAIL OF SIGN
Scale: none

Notes: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

SPECIFICATIONS

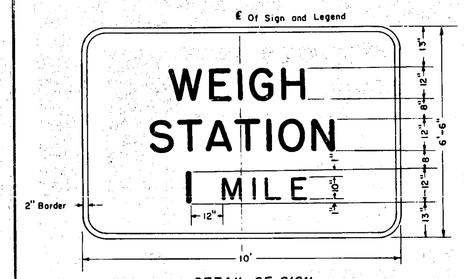
1. Sign Panel: Type II, 3/8" plywood or approved equal.
2. Sign Face: Type A.
   (a) Legend; 8" Series "E" upper case and 6" loop height lower case letters—B.P.R. standard alphabet.
   (b) Color; Silver legend and border on a green background.
   (c) Reflectorization; Letters and border-Silver sheeting or demountable. Background-Green sheeting.

REVISIONS

NO	DESCRIPTION	DATE

Type II A Sign

G5—12 LAKE NAME SIGN	AUTH. NO.	DRAWN M.S.L.
	CONT. SEC.	DATE 1-7-63
	REF.	SCALE None
	SHEET 1 OF 1	PLAN G5—12



DETAIL OF SIGN
Scale: none

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extruded planks or approved equal.
2. Sign Face: Type A
   (a) Legend; First and second line and numeral "1" on third line shall be 12" Series "E" letters. Third line- "Mile" 10" Series "E" letters M.S.H.D. standard alphabet.
   (b) Color; Legend, numeral & border – silver on white. Background- green
   (c) Reflectorization; Letters, numerals and border-silver sheeting or demountable. Background – green sheeting.

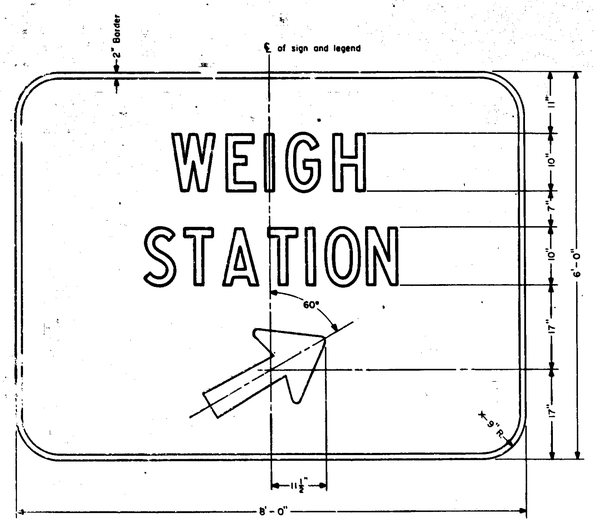
Notes: Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.
Each line of legend shall be centered horizotally from centerline of sign.

REVISIONS

NO.	DESCRIPTION	DATE
1	Height change from 6' to 6'-6"	4-15-65
2	New legend and sign size	7-65

Type IA Sign

G5-13 WEIGH STATION-1 MILE SIGN	AUTH. NO.	DRAWN W.P.B.
	CONT. SEC.	DATE 8-2-6
	REF.	SCALE None
	SHEET 1 OF 1	PLAN G5-13



DETAIL OF SIGN
Scale: None

SPECIFICATIONS

1. Sign Panel: Type I, aluminum extrusions or approved equal.
2. Sign Face: Type A
   (a) Legend; 10" Series "E" letters M.S.H.D. Standard Alphabet with No. 16B Directional Arrow (Standard Plan SB-64).
   (b) Color; Silver letters, arrow and border on a green background.
   (c) Reflectorization; Letters, arrow and border silver sheeting or demountable. Background – Green Sheeting.

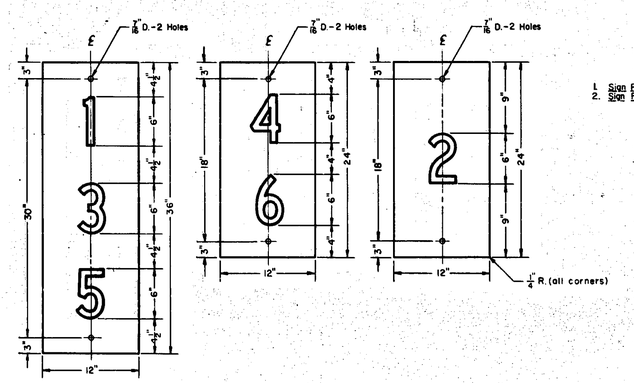
Note: Letter spacing shall be in accordance with spacing charts prepared by the Traffic Division.

REVISIONS

NO.	DESCRIPTION	DATE
1	New legend and specifications	7-6

TYPE IA SIGN

G5-14 WEIGH STATION GORE SIGN	AUTH. NO.	DRAWN H.L.R.
	CONT. SEC.	DATE 8-2-65
	REF.	SCALE None
	SHEET 1 OF 1	PLAN G5-14



DETAIL OF SIGNS
Scale: none

SPECIFICATIONS

1. Sign Panel: Type III, Sheet aluminum or approved equal.
2. Sign Face: Type A
   (a) Legend; 6" series "D" numerals-M.S.H.D. standard alphabet.
   (b) Color; Silver legend on a green background.
   (c) Reflectorization; Legend-Silver sheeting or demountable Background-Green sheeting

REVISIONS

NO.	DESCRIPTION	DATE

Type IIIA Sign

G5-15 MILE POST SIGN	AUTH. NO.	DRAWN H.L.R.
	CONT. SEC.	DATE 12-23-63
	REF.	SCALE None
	SHEET 1 OF 1	PLAN G5-15

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

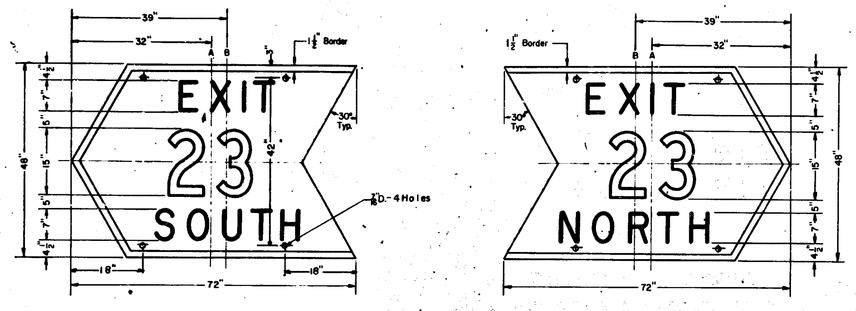
STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

S50.20 | FILE NO. | I 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 78



DETAIL OF SIGNS
Scale: none

SPECIFICATIONS

1. Sign Panel: Type II ¾" plywood or approved equal.
2. Sign Face: Type A.
   (a) Legend: Lines 1 and 3 - 7" series "E" letters. Line 2 - 15" series "E" numerals - BPR standard alphabet.
   (b) Color: Silver letters, numerals and border on a blue background.
   (c) Reflectorization: Letters, numerals and border silver sheeting or demountable. Background - Blue Sheeting

Notes: Spacing between letters shall be in accordance with spacing charts prepared by the Traffic Division.
Second line shall be centered from reference line "A".
First and third lines shall be centered from reference line "B".

REVISIONS

NO.	DESCRIPTION	DATE

Type IIA Sign

G5-16-72 / INTERCHANGE EXIT NUMBER SIGN	AUTH. NO.	DRAWN H.L.R.
	CONT. SEC.	DATE 11-26-63
	REF.	SCALE None
	SHEET 1 OF 1	PLAN G5-16-72

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE
APPROVED _____ MAINTENANCE ENGINEER _____ DATE
APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE
APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE
RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE
RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE

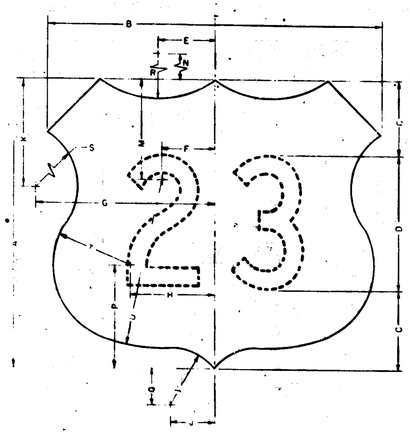
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
I 63174,075			79

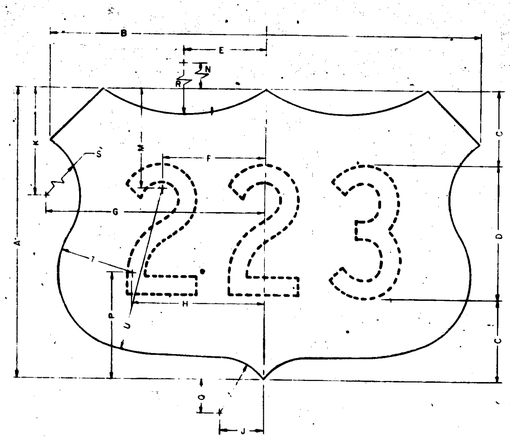
	#24		#30		#36		#42	
	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS
A	24	24	30	30	36	36	42	42
B	28	36	35	45	42	54	49	63
C	7	7	9	9	10 1/2	10 1/2	12	12
D	10	10	12	12	15	15	18	18
E	4 3/4	6 13/16	5 15/16	8 9/16	7 1/8	10 1/4	8 5/16	11 15/16
F	4 3/8	8 3/8	5 1/2	10 1/2	6 9/16	12 9/16	7 5/8	14 5/8
G	16 5/8	20 5/8	20 13/16	25 13/16	24 15/16	30 15/16	29 1/8	36 1/8
H	7	11	8 3/4	13 3/4	10 1/2	16 1/2	12 1/4	19 1/4
J	3 5/8	3 5/8	4 9/16	4 9/16	5 1/2	5 1/2	6 3/8	6 3/8
K	8 13/16	8 13/16	11	11	13 3/16	13 3/16	15 3/8	15 3/8
M	8 1/4	8 1/4	10 5/16	10 5/16	12 3/8	12 3/8	14 1/2	14 1/2
N	6 1/2	9 7/8	8 3/16	12 5/16	9 13/16	14 13/16	11 7/16	17 1/4
P	8 11/16	8 11/16	10 13/16	10 13/16	13	13	15 3/16	15 3/16
Q	2 11/16	2 11/16	3 5/16	3 5/16	4	4	4 11/16	4 11/16
R	8 1/8	12	10 3/16	15	12 3/16	18	14 1/4	21
S	5 5/16	5 5/16	6 5/8	6 5/8	7 15/16	7 15/16	9 5/16	9 5/16
T	6 3/8	6 3/8	7 15/16	7 15/16	9 9/16	9 9/16	11 1/8	11 1/8
U	13 15/16	13 15/16	17 3/8	17 3/8	20 7/8	20 7/8	24 3/8	24 3/8
V	4 1/2	4 1/2	5 5/8	5 5/8	6 3/4	6 3/4	7 7/8	7 7/8

U.S. ROUTE MARKER OVERLAY

AUTH. NO. — CONT. SEC. — REF. — SHEET 3 OF 7 PLAN SB-36

DRAWN H.L.R. DATE 2-25-64 SCALE None





SPECIFICATIONS

Legend. Series "D" (modified) numerals of the height indicated - M.S.H.D. standard alphabet

Color. Black numerals on a silver background.

Reflectorization. Silver sheeting

Note Numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

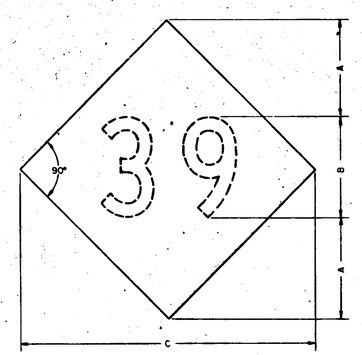
REVISIONS

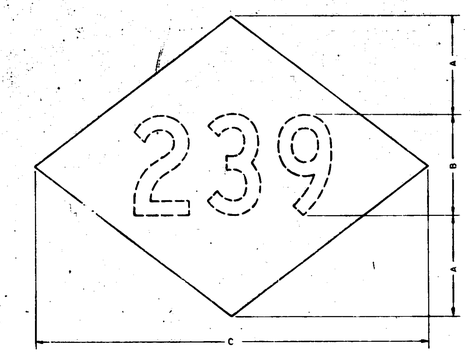
NO.	DESCRIPTION	DATE
1	CORRECT DIMENSION	6-4

U.S. ROUTE MARKER OVERLAY

AUTH. NO. — CONT. SEC. — REF. — SHEET 2 OF 7 PLAN SB-36

DRAWN M.S.G. DATE 2-20-64 SCALE None





	#16		#20		#24		#30		#36		#42		#48	
	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS
A	6.20	6.20	6.60	6.60	8.44	8.44	10.98	10.98	13.00	13.00	14.38	14.38	16.00	16.00
B	6.00	6.00	8.00	8.00	10.00	10.00	12.00	12.00	15.00	15.00	18.00	18.00	21.00	21.00
C	18.40	24.53	21.20	28.27	26.88	35.84	33.96	45.28	41.00	54.67	46.76	62.35	53.00	70.67

SPECIFICATIONS

Legend. Series "D" (modified) numerals of the height indicated - M.S.H.D. standard alphabet

Color. Black numerals on a silver background

Reflectorization. Silver sheeting.

Note Numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

MICHIGAN ROUTE MARKER OVERLAY

AUTH. NO. — CONT. SEC. — REF. — SHEET 1 OF 7 PLAN SB-36

DRAWN H.L.R. DATE 2-20-64 SCALE None

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE

APPROVED _____ MAINTENANCE ENGINEER _____ DATE

APPROVED _____ CHIEF OF DESIGN _____ DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE

APPROVED BY BUREAU OF PUBLIC ROADS _____ DATE

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

ENGINEER OF TRAFFIC OPERATIONS _____ DATE

ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE

DIRECTOR OF TRAFFIC DIVISION _____ DATE

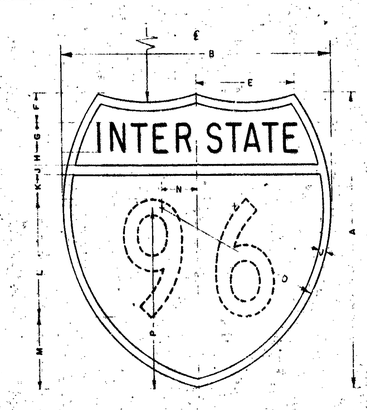
CHECKED

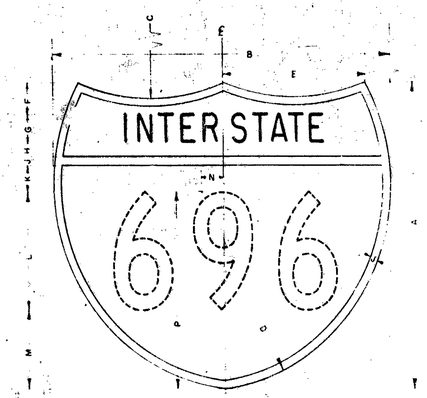
RECOMMENDED FOR APPROVAL

RECOMMENDED FOR APPROVAL

S50.22 | FILE NO. | I 63174,075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 80

	#24		#30		#36		#48	
	2 Digits	3 Digits	2 Digits	3 Digits	2 Digits	3 Digits	2 Digits	3 Digits
A	24	25	30	31 1/2	36	38	48	51
B	24	30	30	37 1/2	36	45	48	58
C	15	17 1/2	18 3/4	21 7/8	22 1/2	26 1/4	30	34
D	14 7/8	16 3/4	18 19/32	21	22 9/16	25 1/4	29 3/4	33
E	8 3/4	12 3/4	10 29/32	15 1/8	12 13/16	19	17 1/4	23 3/8
F	2	2 1/4	2 5/16	3 1/4	3 7/16	3 13/16	4 3/4	5 1/4
G	2	2	2 1/2	2 1/2	3	3	5	5
H	1 3/16	1 3/16	1 1/4	1 1/4	1 5/16	1 5/16	2	1 3/4
J	3/4	3/4	15/16	15/16	1 1/8	1 1/8	1 1/2	1 1/2
K	2 9/8	2 9/16	3 1/8	3 1/8	3 1/8	3 1/8	4	4
L	10	10	12	12	15	15	18	18
M	5 1/4	6 1/4	7 1/4	8 7/16	9	10 3/8	12 3/4	15 1/2
N	2 7/8	1 3/4	3 19/32	2 1/4	4 1/2	2 3/4	5 3/4	4
P	14 1/4	16 11/16	18 9/32	20 25/32	21 15/16	25 1/8	29 1/4	32 3/4





SPECIFICATIONS

Legend: Series "D" letters and numerals of the height indicated. M.S.H.D. standard alphabet

Color: Silver letters, numerals and border on a Interstate Red and Interstate Blue background.

Reflectorization: Letters, numerals and border - silver sheeting or demountable.

Background - Interstate Red transparent and Interstate Blue transparent screened on Silver sheeting.

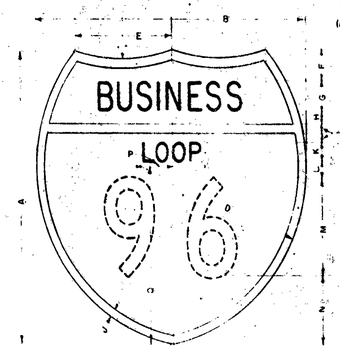
Note:

Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

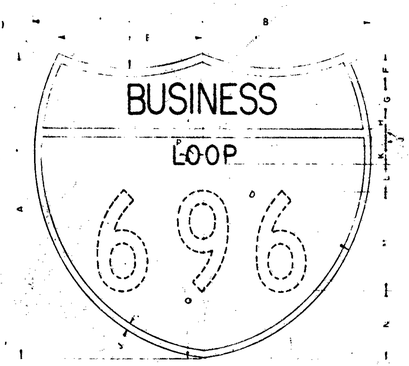
INTERSTATE ROUTE MARKER OVERLAY — AUTH. NO. — CONT. SEC. — REF. — DRAWN R E H — DATE 2-25-64 — SCALE NONE — SHEET 7 OF 7 — PLAN SB - 36

INTERSTATE ROUTE MARKER OVERLAY — DRAWN NPB — DATE 2-20-64 — SHEET 6 OF 7 — PLAN SP 36

	#24		#30		#36	
	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS	2 DIGITS	3 DIGITS
A	24	25	30	30 1/2	36	36
B	24	30	30	36	36	42
C	15	17 1/2	18 3/4	21 7/8	22 1/2	26 1/4
D	14 7/8	16 3/4	18 19/32	21	22 5/16	25 1/4
E	8 5/8	12 3/4	10 29/32	15 9/16	12 15/16	18 3/8
F	2 3/8	2 3/8	2 25/32	2 25/32	3 9/16	3 9/16
G	2 1/2	2 1/2	3 1/8	3 1/8	3 3/4	3 3/4
H	1	1 1/8	1 1/4	1 5/16	1 1/2	1 1/2
J	3/4	3/4	15/16	15/16	1 1/8	1 1/8
K	1 1/2	1 1/2	1 7/8	1 7/8	2 1/4	2 1/4
L	1 3/8	2 1/4	1 23/32	2 5/32	2 1/16	2 1/16
M	8	8	10	10	12	12
N	5 3/4	5 3/4	7 3/16	7 3/16	8 5/8	8 5/8
P	2 7/8	1 3/4	3 19/32	3	4 5/16	4 1/4
Q	14 5/8	16 11/16	18 9/32	20 25/32	21 15/16	24 7/8



(Alternate second line)
SPUR



SPECIFICATIONS

Legend: First line - Series "C" letters of the height indicated
Second line - Series "D" letters of the height indicated
Third line - Series "D" numerals of the height indicated

Color: Silver letters, numerals and border on a green background

Reflectorization: Letters, numerals and border - Silver sheeting or demountable.

Background - Green

Note:

Letter and numeral spacing shall be in accordance with spacing charts prepared by the Traffic Division

INTERSTATE BUSINESS CONNECTOR ROUTE MARKER OVERLAY — AUTH. NO. — CONT. SEC. — REF. — DRAWN M S I G — DATE 1-25-64 — SCALE None — SHEET 5 OF 7 — PLAN SB - 36

REVISIONS

NO.	DESCRIPTION	DATE
1	CHANGE IN SPECS	9/21/64

INTERSTATE BUSINESS CONNECTOR ROUTE MARKER OVERLAY — AUTH. NO. — CONT. SEC. — REF. — DRAWN W F B — DATE 2-21-64 — SCALE None — SHEET 4 OF 7 — PLAN SB - 36

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED — ENGINEER OF CONSTRUCTION — DATE
APPROVED — MAINTENANCE ENGINEER — DATE
APPROVED — CHIEF ENGINEER — DATE

STATE HIGHWAY DEPARTMENT APPROVAL
APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER
BY — CHIEF ENGINEER — DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLANS FOR
HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

ENGINEER OF TRAFFIC OPERATIONS — DATE
ENGINEER OF DGT AND ROAD DESIGN — DATE
ENGINEER OF TRAFFIC DESIGN — DATE

CHECKED
RECOMMENDED FOR APPROVAL
RECOMMENDED FOR APPROVAL

S50.23 — PLAN NO. OR SPEC. — I 63174,075 — STATE PROJECT — FEDERAL PROJECT — SHEET NO. 81

DOWN ARROW

AUTH. NO.		DRAWN	L T B
CONT. SEC.		DATE	2-4-64
REF.		SCALE	NONE
SHEET 2 OF 2	PLAN	SB-64	

ARROW "A"

ARROW NUMBER	a	b	c	d	e	f	r
4	4.00	2.75	0.95	1.26	.037	5.75	0.25
5	5.00	3.44	1.19	1.58	.046	6.88	0.25
6	6.00	4.13	1.42	1.89	.055	8.00	.031
7	7.00	4.82	1.66	2.21	.065	9.13	.038
8	8.00	5.51	1.90	2.53	.074	10.25	.044
9	9.00	6.20	2.13	2.84	.083	11.38	0.50
10	10.00	6.89	2.37	3.16	.092	12.50	0.56
11	11.00	7.57	2.61	3.47	.101	13.63	0.63
12	12.00	8.26	2.85	3.79	.111	14.75	0.69
13	13.00	8.95	3.08	4.10	.120	15.88	0.69
14	14.00	9.64	3.32	4.42	.129	17.00	0.75
15	15.00	10.33	3.56	4.74	.138	18.13	0.88
16	16.00	11.02	3.79	5.05	.147	19.25	0.88
18	18.00	12.39	4.27	5.68	.166	21.50	1.00
20	20.00	13.77	4.74	6.31	.184	22.63	1.06
22	22.00	15.15	5.22	6.95	.203	25.00	1.25
24	24.00	16.53	5.69	7.58	.221	26.13	1.3

ARROW "B"

ARROW NUMBER	a	b	c	d	e	f	r
4	4.00	3.06	0.99	1.32	0.35	8.00	0.25
5	5.00	3.82	1.24	1.65	0.43	9.50	0.25
6	6.00	4.59	1.49	1.98	0.52	11.00	0.31
7	7.00	5.35	1.74	2.31	0.61	12.50	0.38
8	8.00	6.12	1.99	2.65	0.69	14.00	0.44
9	9.00	6.88	2.23	2.98	0.78	15.50	0.50
10	10.00	7.65	2.48	3.31	0.87	17.00	0.56
11	11.00	8.41	2.73	3.64	0.95	18.50	0.63
12	12.00	9.18	2.98	3.97	1.04	20.00	0.63
13	13.00	9.94	3.22	4.30	1.13	21.50	0.69
14	14.00	10.71	3.47	4.63	1.21	23.00	0.75
15	15.00	11.47	3.72	4.96	1.30	24.50	0.81
16	16.00	12.24	3.97	5.29	1.39	26.00	0.81
18	18.00	13.78	4.46	5.92	1.48	29.00	0.93
20	20.00	15.29	4.96	6.61	1.73	32.00	1.00
22	22.00	16.81	5.31	7.04	1.91	35.00	1.06
24	24.00	18.35	5.95	7.94	2.08	38.00	1.13

DIRECTIONAL ARROWS

AUTH. NO.		DRAWN	M S T G
CONT. SEC.		DATE	12-26-63
REF.		SCALE	None
SHEET 1 OF 2	PLAN	SB-64	

Legend & Numeral Ht.	A	B	C	D	E	F
8"	14¾	12	8	6⅜	5⅛	2
10"	18¾	15	10	8	6¾	2½
12"	22¾	18	12	9½	8¼	3

NOTE:
Numerals in fractional designation shall be Series "E" with diagonal width equal to numeral stroke width

FRACTIONAL NUMERALS

AUTH. NO.		DRAWN	M S T G
CONT. SEC.		DATE	2-6-64
REF.		SCALE	None
SHEET 1 OF 1	PLAN	SB-65	

OFFICES OF ENGINEERING, CONSTRUCTION, MAINTENANCE

APPROVED _____ CONSTRUCTION ENGINEER _____ DATE _____

APPROVED _____ MAINTENANCE ENGINEER _____ DATE _____

APPROVED _____ CHIEF OF DESIGN _____ DATE _____

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C. MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING & CHIEF ENGINEER _____ DATE _____

APPROVED _____ BY BUREAU OF PUBLIC ROADS _____ DATE _____

MICHIGAN STATE HIGHWAY DEPARTMENT

STANDARD PLANS FOR

HIGHWAY SIGNS AND SUPPORTS

DESIGN AND TRAFFIC DIVISIONS

CHECKED _____ ENGINEER OF TRAFFIC OPERATIONS _____ DATE _____

RECOMMENDED FOR APPROVAL _____ ENGINEER OF BRIDGE AND ROAD DESIGN _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DIRECTOR OF TRAFFIC DIVISION _____ DATE _____

S50.24 | PLANS NO. 1 63174, 075 | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 82

63174-079

CS: 63174

ID: 079

6-5-68

M 63174 - 079
1.03 mi of Conc. Pavt. Wdng. on I-75 (Temporary) fr a pt. S of Woodward Heights, thence NW'ly to Dallas Avenue, also Work at a number of other locations along I-75 in Cities of Hazel Park and Royal Oak, Oakland County. Item # 19.

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED

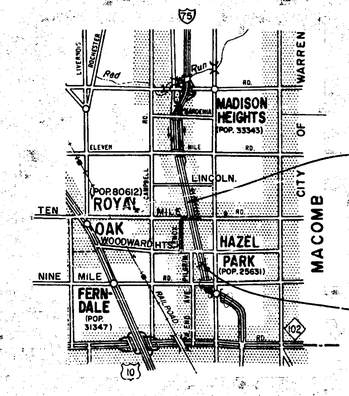
ROUTE	STATE PROJECT NO.	FEDERAL NO.	SHEET NO.	TOTAL SHEETS
I-75	M 63174-079		1.	23

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE STATE OF MICHIGAN DEPARTMENT OF STATE HIGHWAYS CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

LEGEND	1967	1970 Restraint Est.
A.D.T.	44500 (Total)	66000 (Total)
D.H.V.	3900 (Total)	5700 (Total)
COMM. %	5	5
DESIGN SPEED	45	45

STATE PROJECT M 63174-079
DETROIT-BAY CITY ROAD
CITIES OF ROYAL OAK AND HAZEL PARK
OAKLAND COUNTY

ROAD PLANS	SHEET NO.
TITLE SHEET	1
TYPICAL CROSS-SECTIONS	2
NOTE SHEET	3
BENCH MARKS & WITNESSESS	4
PLAN & PROFILE	5-17
SPECIAL DETAILS	18
QUANTITY SHEETS	19-23



STATE PROJECT M 63174-079 ENDS STA. 829+90.

STATE PROJECT M 63174-079 BEGINS STA. 775+75.

AS CONSTRUCTED
ACCORDING TO MARKED PLANS PREPARED BY PROJECT ENGINEER

ITEM NO.

CONTRACT FOR G. & D.S. and CONCRETE WIDENING.

APPROVALS

CHECKED	H. N. Brunvand — ENGINEER OF DESIGN	12-6-67 DATE
RECOMMENDED FOR APPROVAL	[signature] — DESIGN DIVISION	12-29-67 DATE
RECOMMENDED FOR APPROVAL	[signature] — TRAFFIC DIVISION	DATE
RECOMMENDED FOR APPROVAL	[signature] — CONSTRUCTION DIVISION	DATE
RECOMMENDED FOR APPROVAL	[signature] — CHIEF - BUREAU OF ENGINEERING	DATE

DEPARTMENT OF STATE HIGHWAYS
APPROVED HENRIK E. STAFSETH - ACTING STATE HIGHWAY DIRECTOR
BY [signature] — DEPUTY STATE HIGHWAY DIRECTOR — DATE

PLANS PREPARED BY
STATE OF MICHIGAN
DEPARTMENT OF
STATE HIGHWAYS
SQUAD E.E. MORRISON

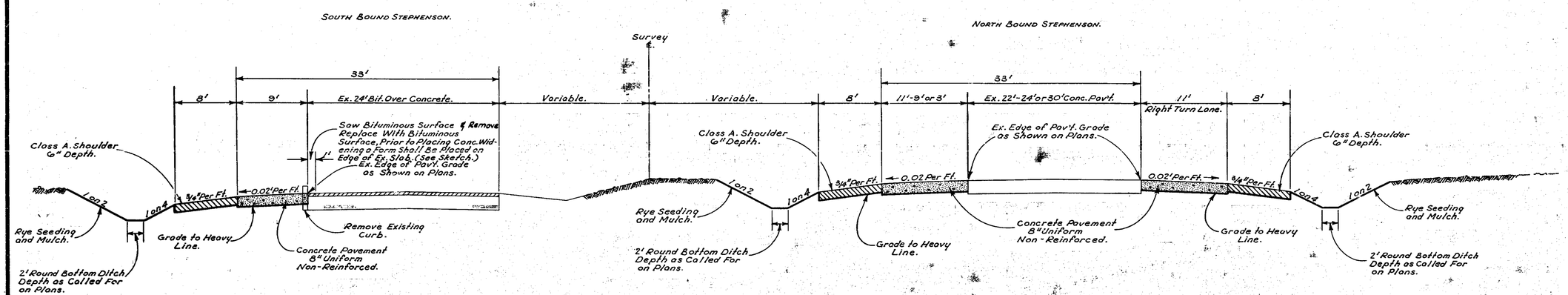
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED BUREAU OF PUBLIC ROADS
[redacted]
FOR THE DIVISION ENGINEER — DATE

M 63174-079	STATE PROJECT NO.	FEDERAL PROJECT	SHEET NO.
	M 63174-079		1.

STATE PROJECT NO. M 63174-079

TYPICAL CROSS-SECTIONS

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			2	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK		
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



FINISHED SECTION SHOWING EXISTING CONCRETE PAVEMENT AND PAVEMENT WIDENING

TO APPLY P.O.B. TO WOODWARD HEIGHTS.

Application Rate for Bituminous Surface
Bit. Binder Course - Est. @ 230 Lbs. Per Sq. Yd.
Bit. Conc. Wearing Course - Est. @ 80 Lbs. Per Sq. Yd.
Bit. Bond Coat - Est. @ 0.20 Gal. Per Sq. Yd.
(0.05 Gal. Per Sq. Yd. For Tack Coat.)

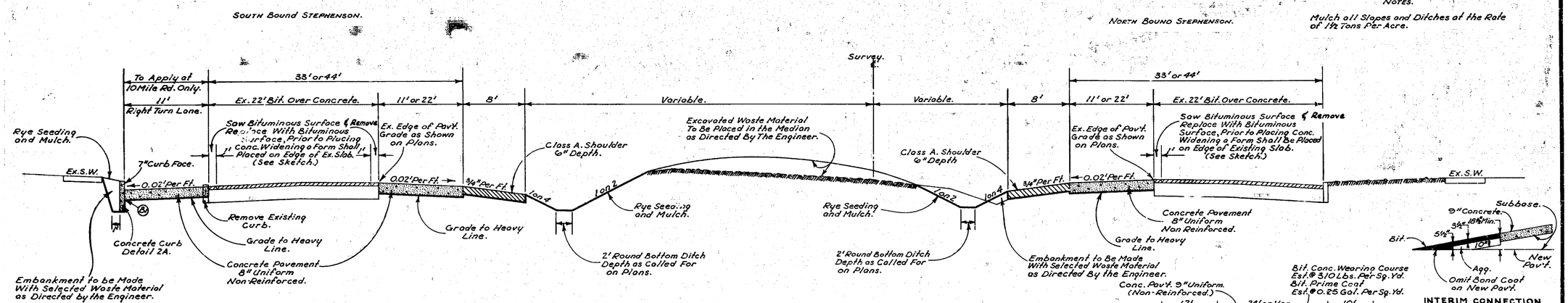
Joint Legend.

Temporary Concrete Pavemet:
Omit Transverse Expansion and Contraction Joints and Place at 30'-Foot Intervals.
Transverse Plane of Weakness Joints According to Detail 5. of the Special Detail Sheet. Omit Longitudinal Lane Tie Bars at "D" Joints.

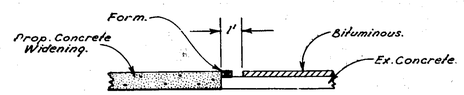
B1 - Longitudinal Bulkhead Construction Joint Without Hook Bolts.

Notes.

Mulch all Slopes and Ditches at the Rate of 1½ Tons Per Acre.



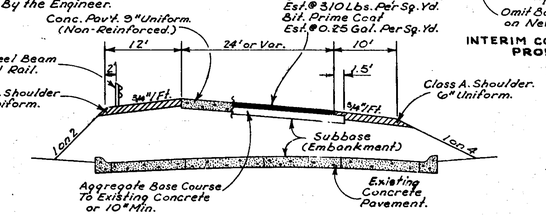
INTERIM CONNECTION PROFILE



SKETCH SHOWING FORM PLACED ON EDGE OF EXISTING SLAB.

FINISHED SECTION SHOWING EXISTING CONCRETE PAVEMENT AND PAVEMENT WIDENING

TO APPLY WOODWARD HEIGHTS TO R.O.E.



EXISTING INTERIM CONNECTION WIDENING AS DIRECTED BY THE ENGINEER

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		2

NOTE SHEET

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK	3	

SPECIAL PROVISIONS

HAND FINISHING

Hand finishing, according to Article 4.14.19-a-2 of the Standard Specifications will be permitted on all pavement to be placed on this project.

MISCELLANEOUS ESTIMATES

The following items of work shall be done as they apply throughout the project. These items are not detailed or included on the plan and profile sheets.

	HAZEL PK	ROYAL OAK			
As Const. Final Trim and Cleanup-POB to POE or Sta. to Sta. Sta. to Sta.	~~21~~ 21.5	~~21~~ 27			Total Stas
Testing Earth Grade With Compactor					Hours
Compacting Cut Sections					Stas.
Class B, C, or D Shoulders(Estimate to be obtained from and from)					Cyds.
Overhaul (Shoulder Borrow)					C.C.Y.U.
Topsoil Surface (On Unsodded slopes and Ditches)					Cyds.
Barricades					Each
Maintaining Traffic	1.510 ~~15~~	0.5023 ~~05~~			Miles
Completing Under Traffic					Miles
Mulching (Slopes, as directed by the Engineer)	12.2 ~~8~~	4.1 ~~5~~			Tons
Rye Seeding	2 ~~2~~	2 ~~2~~			Acres
Class 1 Seeding (Extra Auth. 2.03)	7.02	2.39			Acres
* Seeding					Acres
Urea Nitrogen Fertilizer	4676 ~~3100~~	1600 ~~1240~~			Lbs.
Chemical Fertilizer					Lbs.
Shoulder Joint					Lin.Ft.
Contraction Joints					Lin.Ft.
Expansion Joints					Lin.Ft.
End of Pour Construction Joints					Lin.Ft.
Field Office-Concrete Proportioning					Each
Field Office-Bridge					Each
Field Office-Bituminous					Each
Temporary Fence					Lin.Rods
Protective Fence					Lin. Rods
Patching Pavement with Bituminous Material					Tons
Temporary Steel Beam Guard Rail					Lin.Ft.
Post and Delineator-Single Crystal					Each
Post and Delineator-Double Yellow					Each
Guard Posts(Mail Boxes) (Non-Federal Participation)					Each

The following items are estimated for the entire project to correct possible unstable Subgrade conditions where designated by the Engineer.

Subgrade Undercutting	0 ~~1500~~	447 ~~500~~			Cyds.
Granular Material, Class II (C.I.P.)	0 ~~1000~~	447 ~~500~~			Cyds.
Overhaul(On above Borrow)					C.C.Y.U.
6" Edgedrains					Lin.Ft.
6" Bank Drains					Lin.Ft.
Granular Blanket					Cyds.
Excavation (Waste from Sewer Trenches)					Cyds.
Porous Material-Grade B (Compacted in Place)					Cyds.
**Porous Material-Grade A					Cyds.
Overhaul (Porous Material-Grade A)					C.C.Y.U.
Grade "A" Concrete)					Cyds.
Reinforcing Steel) Outlet Headwalls					Lbs.
Guard Posts)					Each

* To be done by the Maintenance Division
**Classed as Earth Excavation From Area No. .....

PUBLIC UTILITIES

The existing utilities listed below and shown on these plans represent the best information available as obtained on our surveys dated 8-8-60.... This information does not relieve the contractor of the responsibility to satisfy himself as to its accuracy or of his responsibility in case utilities have been constructed or removed since the above survey date.

NAME AND ADDRESS OF OWNER	KIND OF UTILITY	SIZE OR CAPACITY	LOCATION STA. TO STA.
City of Ferndale			
" " Hazel Park	Water		
" "Royal Oak	Sewer		
" " Madison Hts.			
Detroit Edison Co.	Electric		
Mich. Bell Tel. Co.	Telephone		
Consumers Power Co.	Gas		
Oakland County Drain Commission	County Drain		

If existing poles and other service structures are within Limited Access R.O.W., or are within grading limits such that they interfere with construction operations, the owners will move them to locations designated by the Engineer on free access R.O.W., or will remove them entirely from the highway R.O.W.
Owners of public utilities will not be required by the Department to move additional poles and structures that are not within the grading or structure limits in order to facilitate the operation of construction equipment, unless it is determined by the Engineer that such pole line or structure constitute a hazard to the public or are extraordinarily dangerous to the contractors operations.

GENERAL PLAN NOTES

BEDDING AND FILLING

Bedding and filling around pipe culverts shall be done as specified on Standard Plan E-4-A-36C. An estimate of granular material, Class II included on the plans.

POLES

The exact location of poles will be determined by the Engineer.

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the Standard Plan given below opposite each item unless otherwise indicated.

Special Headwalls, Concrete Rings,
Edge Drains And Bank Drains — E-4-A-9F
Tree Well, Granular Blanket, Sodding
And Ditch Turnout — E-4-A-10D
Pavement Reinforcement — E-4-A-21G
Track Crossings — E-4-A-22D — Except that the depth of the header shall be 18" instead of 15"
Grading Cross Sections (Rural) — E-4-A-26E
Cover A — E-4-A-27A-3
Cover C — E-4-A-27C-5
Cover D — E-4-A-27D-4
Cover E — E-4-A-27E-3
Cover F And Monument Box (Monument
Boxes Furnished By The State) — E-4-A-27F-3
Cover G — E-4-A-27G-4
Cover H — E-4-A-27H
Cover J — E-4-A-27J
Cover K — E-4-A-27K
Cover L — E-4-A-27L
Cover M — E-4-A-27M
Cover P — E-4-A-27P
Manholes, Catchbasins And Inlets — E-4-A-27R-4
Treatment of Peat Marshes — E-4-A-28F Rev. 8-8-66
Concrete Curb-Curb And Gutter-Gutter-
Driveway Return And Header — E-4-A-29F
Concrete Pavement Joints — Acc. to Spec. Details 8-11-67
Bedding And Filling Around Pipe Culverts — E-4-A-36C
Utility Trenches — E-4-A-37
Superelevation And Pavement Crowns — E-4-A-49C — Except that rate of superelevation is to be as called for on plans
Two Cable Guard Rail — E-4-A-75C-2
Right of Way Markers — E-4-A-76A
Mail Box Turnouts, 4" & 7" Concrete Sidewalk
Concrete Pavement 7" Uniform, Cobble Gutters
and Reverse Curves — E-4-A-110B
Concrete Curve Header — E-4-A-125
Typical Joint Layout — E-4-A-127C
Concrete Shoulder Gutter and Spillway — E-4-A-128
Sewer Trap — E-4-A-129A
Dowel Bar Assemblies for Load Transfer at
Transverse Joints — E-4-A-130F
Concrete Steps — E-4-A-132A
Bridge Approach Curb and Gutter(Rural Highways) E-4-A-134D
Location of Transverse Expansion & Contraction
Joints in Concrete Pavement — E-4-A-135C
Beam Guard Rail - Type A — E-4-A-137F
Beam Guard Rail - Type B — E-4-A-139A
Beam Guard Rail - Type BD — E-4-A-140C
Corrugated Concrete Divider — E-4-A-141
Location of Beam Guard Rail at Structure(Rural Highways) : E-4-A-142D
Wooden Bumper Rail & Rest Area Guard Posts — E-4-A-143A
Concrete Spillway Header — E-4-A-144
Concrete Nose Detail for Urban Freeways — E-4-A-145
Manhole for Use With 48" to 120" Sewers — E-4-A-147A
Beam Guard Rail - Type C — E-4-A-148B
Beam Guard Rail - Type CD — E-4-A-149B
Guard Rail Anchorage — E-4-A-152A
Highway Signs and Supports — E-6-A-55G
Headwalls for 12" to 36" Diameter Circular
Culverts — E-13-A-1E
Headwalls for Reinforced Elliptical Conc. Culverts — E-13-A-2C
Precast Concrete End Section for Pipe Culverts — E-13-A-3C
Metal End Sections for Circular CMP — E-13-A-4B
Headwalls for 42" to 48" Corrugated Metal
& Rein. Circular Pipe Culvert — E-13-A-42-48B
Headwalls for 54" to 60" Corrugated Metal
& Rein. Circular Pipe Culvert — E-13-A-54-60B
Headwalls for 72" to 84" Corrugated Metal
& Reinf. Circular Pipe Culvert — According To Special Detail
Concrete Slab Culverts — E-14-A Series
Concrete Box Culverts — E-14-B Series
Concrete Street Lighting Standards — E-18-A-1
Aluminum Street Lighting Standards — E-18-A-2
Steel Street Lighting Standards — E-18-A-3
Electrical Conduit Details — E-18-A-4
Structure Guard Rail Anchorage — According to Special Detail
*As per Std. Plan E-4-A-28F and as modified by sketch on sheet #2
Barricades — E-6-A-55F

WITNESSES TO TRANSIT POINTS — COORDINATES

Sta. 693+99.36;H.C.P. #1 — N 5,000.00, E 20,000.00
Sec. Line (8 ft. Pd.)
N 56° W 37.74' N&C Light Pole
N 09° E 90.37' N&C Light Pole
N 62° E 71.64' S.W. Cor. Bldg. #941

Sta. 698+00;H.C.P. #2 — N 5,400.26, E 19,982.47
Rt. Edge N.B. Stephenson St.
S 68° W 62.1' Tree
S 30° W 65.0' End Guard Post
S 25° E 48.2' Light Pole

Sta. 702+00;H.C.P. #3 — N 5,799.87, E 19,964.96
Rt. Edge 22' Pav't. N.B. Stephenson St.
N 75° W 163.6' Light Pole
N 79° W 93.9' End Guard Post
N 11° E 109.4' Light Pole

Sta. 706+00;H.C.P. #4 — N 6,1[illegible].19, E 19,947.16
Rt. Edge N.B. Stephenson
S 61° W 182.8' Light Pole
N 32° W 94.2' Power Pole
S 40° E 30.6' Light Pole

Sta. 710+00;H.C.P. #5 — N 6,599.11, E 19,929.96
N 69° W 170.5' Light Pole
N 09° E 129.3' Light Pole
S 63° E 98.22' Power Pole

Sta. 714.00;H.C.P. #6 — N 6,998.72, E 19,912.45
S 78° W 32.9' End Guard Post
S 30° W 64.9' End Guard Post
S 46° E 90.5' Intersect. Sidewalks

P.C. Sta. 716+29.64;H.C.P. #7 — N 7,228.14, E 19,902.40
Rt. Edge Stephenson
S 81° W 161.4' Light Pole
N 23° E 51.7' Light Pole
S 71° E 66.6' Intersect. Sidewalks

P.I. Sta. 719+33.18;H.C.P. #8 — N 7,531.39, E 19,889.12
P. K. - Rt. Edge Stephenson
N 49° E 26.56' N&C Light Pole
S 88° E 36.33' N&C T.P.
S 11° E 82.65' N&C 12" Elm

P.C.C. Sta. 722+31.68;H.C.P. #9 — N 7,815.56, E 19,782.41
N 37° W 110.6' P. Pole
N 80° E 85.6' Light Pole
S 51° W 86.7' Light Pole

Sta. 725+00; H.C.P. #10 (on Tang.) — N 8,066.75, E 19,688.07
N 18° W 95.4' P. Pole
N 74° E 110.0' Light Pole
S 57° E 36.4' Light Pole

P.I. Sta. 727+37.97; H.C.P. #11 — N 8,289.53, E 19,604.41
P.K. Nail
N 69° W 77.63' N&C 8" Elm
N 85° W 63.06' N&C 12" Ash
S 25° W 19.20' N&C Light Pole

P.C.C. Sta. 7[illegible]+25.01; H.C.P. #12 — N 8,628.96, E 19,228.76
S 11° [illegible] 35.0' P. Pole
N 22° W 35.3' P. Pole
S 60° E 112.2' Light Pole

Sta. 735+63.30;H.C.P. #13 (on Tan.) — N 8,855.89, E 18,977.61
S 27° W 60.9' P. Pole
N 20° W 98.2' P. Pole
N 70° E 105.5' Light Pole

P.I. Sta. 737+97.55; H.C.P. #14 — N 9,012.81, E 18,803.95
Boat Spike
N 33° W 41.74' N.W. Cor. House #604
N 19° E 63.09' N.E. Cor. Church
S 63° E 21.76' N.W. Cor. Church

H.C.P. #15 — N 9,108.85, E 18,420.08
(P.I. + 395.70on Foreward Tan.)
S 60° W 43.0' Light Pole
S 52° E 27.6' P. Pole
N 06° E 137.7' P. Pole

P.T. Sta. 743+47.12; H.C.P. #16 — N 9,151.78, E 18,248.53
N 85° W 150.0' Light Pole
S 19° W 30.7' Light Pole
S 62° E 151.7' Light Pole

P.C. Sta. 747+51.34; H.C.P. #17 — N 9,250.62, E 17,853.49
S 74° W 50.7' Light Pole
S 59° E 123.4' Light Pole
N 10° W 102.2' P. Pole

P.I. 751+35.58; H.C.P. #18 — N 9,343.16, E 17,483.65
P.K. Nail
N 35° W 80.69' N&C P. Pole
N 56° E 75.43' N&C G. Pole
N 82° E 37.23' N&C Light Pole

WITNESSES TO TRANSIT POINTS — COORDINATES

P.C.C. 754+95.18; H.C.P. #19 — N 9,623.72, E 17,225.53
N 51° W 111.2' Light Pole
N 69° E 37.5' Light Pole
S 13° E 50.7' Light Pole

P.I. Sta. 758+24.58; H.C.P. #20 — N 9,866.13, E 17,002.50
P.K. Nail
N 07° E 35.91' N&C P. Pole
S 78° E 41.91' N.W. Cor. Bldg. #22846
S 60° E 58.58' S.W. Cor. Bldg. #22846

P.T. Sta. 761+41.33; H.C.P. #21 — N 10,184.08, E 16,916.39
N 53° W 62.5' Light Pole
S 09° E 50.7' P. Pole
S 71° E 126.0' Light Pole

Sta. 764+00; H.C.P. #22 — N 10,433.75, E 16,848.78
S 12° W 89.0' G. Pole
S 62° W 166.3' Light Pole
N 47° W 54.1' Light Pole

Sta. 768+00; H.C.P. #23 — N 10,819.85, E 16,744.21
N 24° W 163.9' Light Pole
N 67° W 199.8' Light Pole
S 03° W 106.8' Light Pole

P.O.T. Sta. 772+22.04; H.C.P. #24 — N 11,233.00, E 16,632.32
Drill hole in chis. square
N 09° E 26.81' Cor. Bldg. #160
N 44° E 36.18' Cor. Bldg. #160
S 68° E 12.94' N&C 12" B.E.

Sta. 776+00; H.C.P. #25 — N 11,592.03, E 16,535.09
S 18° W 58.9' Light Post
S 02° E 71.5' Intersect. Sidewalks
S 48° E 108.6' Intersect. Drive & Walk

P.C. Sta. 780+42.72; H.C.P. #26 — N 12,019.35, E 16,419.36
N 44° W 64.4' Light Pole
S 81° W 161.5' Light Pole
N 56° E 53.4' Intersect. Drive & Walk

P.I. Sta. 781+53.21; H.C.P. #27 — N 12,126.00, E 16,390.47
Bent spike
N 24° W 48.98' N&C 12" Elm
N 49° E 52.77' N&C P. Pole
S 17° W 61.99' N&C Light Pole

P.T. Sta. 782+63.58; H.C.P. #28 — N 12,230.11, E 16,353.46
N 66° W 174.8' Light Pole
N 15° W 110.9' Light Pole

Sta. 786+00; H.C.P. #29 — N 12,547.09, E 16,240.77
N 05° E 139.9' P. Pole
N 24° E 66.9' Light Pole
S 72° E 36.8' P. Pole

Sta. 790+00; H.C.P. #30 — N 12,923.99, E 16,106.78
S 11° E 66.6' P. Pole
N 40° W 63.8' G. Pole
S 54° E 115.5' Light Pole

P.C. Sta. 793+26.15; H.C.P. #31 — N 13,231.29, E 15,997.53
N 67° E 34.4' - 2.5' x 4' Conc.
S 48° E 185.4' Light Pole
S 15° W 160.2' Light Pole

As Const.
P.I. Sta. 795+12.06; H.C.P. #32 — N 13,406.46, E 15,935.26
Boat Spike
N 76° W 55.25' Cor. Bldg. 24207 S 70° W. 49.00' Boatspike in SW.
S 53° W 56.58' N&C Light Pole
S 18° W 113.25' N&C Twin 12" Elm
N. 70° E. 124.15', Chisled X in Sq.
S. 70° W. 54.45' PK & Ref Tag in S.B. Stephenson
Sta. 796+97.46; H.C.P. #33 — N 13,588.21, E 15,896.14
N 61° W 70.5' Light Pole
N 70° E 127.7' Light Pole
N 87° E 80.2' Cor. Sidewalk

Sta. 801+00; H.C.P. #34 — N 13,981.74, E 15,811.46
N 30° W 195.3' Light Pole
N 22° E 216.4' Light Pole
S 27° W 109.5' Light Pole

Sta. 805+00; H.C.P. # 35 — N 14,372.79, E 15,727.30
N 51° W 117.9' Light Pole
N 71° E 106.2' Light Pole
N 06° E 93.3' - 2.5' x 4' Conc.

Sta. 809+00; H.C.P. #36 — N 14,765.84, E 15,643.15
S 57° W 93.3' Light Pole
S 04° W 52.9' P. Pole
S 63° E 120.8' Light Pole

Sta. 813+00; H.C.P. #37 — N 15,154.89, E 15,559.00
N 38° E 113.1' Light Pole
S 19° W 189.3' Light Pole
S 15° E 106.8' - 2.5' x 4' Conc.

WITNESSES TO TRANSIT POINTS — COORDINATES

P.O.T. Sta. 816+11.50 — N 15,488.74, E 15,487.15
P.K. Nail
N 02° W 62.08' N&C G. Pole
N 54° E 87.57' N&C T. Pole
S 63° E 89.22' N&C G. Pole

Sta. 817+00; H.C.P. #38 — N 15,545.93, E 15,474.85
S 43° W 121.3' G. Pole
N 86° E 73.6' G. Pole
S 49° E 128.6' G. Pole

Sta. 821+00; H.C.P. #39 — N 15,936.98, E 15,390.69
N 27° E 95.5' L. Pole
S 33° E 161.4' P. Pole
S 02° W 134.1' P. Pole

Sta. 825+00; H.C.P. #40 — N 16,328.03, E 15,306.54
S 84° W 145.6' L. Pole
N 52° E 56.5' Intersect. Walks.
S 78° E 55.2' Intersect. Walks.

P.I. Sta. 828+48.07; H.C.P. #41 — N 16,668.31, E 15,233.31
P.K. Nail
N 55° E 74.78' N.W. Cor. Bldg. #1409
N 77° E 63.10' S.W. Cor. Bldg. #1409
S 60° E 85.04' S.W. Cor. Bldg. #1415

Sta. 832+00; H.C.P. #42 — N 17,009.08, E 15,145.38
N 15° E 72.3' Light Pole
S 77° E 12.4' Intersect. Walks.
S 25° E 170.5' Intersect. Walks.

Sta. 836+00; H.C.P. #43 — N 17,396.39, E 15,045.44
S 84° W 156.6' Light Pole
N 14° E 89.7' Intersect. Walks.
S 17° E 39.5' Intersect. Walks.

Sta. 840+00; H.C.P. #44 — N 17,783.71, E 14,945.50
N 27° W 145.4' P. Pole
N 09° E 123.7' P. Pole
S 57° E 52.8' Intersect. Walks.

P.I. Sta. 843+89.33(No Curve); H.C.P. #45 — N 18,160.69, E 18,848.23
℄ Lincoln St. P.K. Nail
N 35° 37' 21" E 43.09' N&C P. Pole
S 54° 52' 39" E 71.85' N.W. Cor. Bldg.
S 33° 37' 21" W 44.00' N&C T. Pole

Sta. 848+00; H.C.P. #46 — N 18,558.50, E 14,746.26
N 62° W 59.2' 2.5' x 4' Conc.
N 41° E 50.3' Intersect. Walks.
S 37° E 93.8' Intersect. Walks.

Sta. 852+00; H.C.P. #47 — N 18,945.97, E 14,646.93
N 37° W 109.0' P. Pole
N 11° E 87.5' Light Pole
S 80° E 35.7' G. Pole

Sta. 856+00; H.C.P. #48 — N 19,333.44, E 14,547.61
N 32° W 142.4' 2.5' x 4' Conc.
N 03° E 132.8' P. Pole
S 33° E 93.0' P. Pole

Sta. 860+00; H.C.P. #49 — N 19,720.91, E 14,448.29
S 59° W 43.1' Light Pole
W 09° E 93.7' Light Pole
S 33° E 92.8' P. Pole

P.O.T. Sta. 862+00 — N 19,914.65, E 14,398.62
P.K. Nail
N 16° E 71.59' N&C P. Pole
N 34° E 78.93' N.W. Cor. Brick Box.
S 70° E 77.85' S.W. Cor. Church

Sta. 864+00; H.C.P. #50 — N 20,108.38, E 14,348.96
N 83° W 172.0' Light Pole
N 22° E 57.4' P. Pole
S 26° E 140.4' P. Pole

Sta. 868+00; H.C.P. #51 — N 20,495.86, E 14,249.64
N 33° W 169.4' P. Pole
N 02° E 138.3' Light Pole
S 48° E 53.7' P. Pole

Sta. 871+00; H.C.P. #52 — N 20,786.46, E 14,175.14
S 77° W 63.1' Light Pole
S 73° W 106.2' G. Pole
S 11° W 154.1' P. Pole

P.C.T. Sta. 871+27.50 — N 20,813.10, E 14,168.51
P.K. Nail & Cap.
S 70° E 70.99' Drill hole in curb
S 56° W 67.81' Light Pole
N 23° E 56.80' Power Pole

P.I. Sta. 879+83.76 — N 21,642.54, E 13,955.70
Boat Spike
N 41° W 58.17' N&C G. Pole
N 47° E 78.36' N&C Fence Post
S 58° E 104.84' S.W. Cor. House #318

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			4	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	OAKLAND, ROYAL OAK		

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

BENCH MARKS

ELEVATIONS SHOWN ARE TO TOP OF ARROW ON FIRE HYDRANT, UNLESS OTHERWISE NOTED.

91 Elev. 635.36
191' Lt. Sta. 702 + 46
S. W. Cor. Hayes & Stephenson

91 Elev. 636.88
172' Lt. Sta. 713 + 48
S. W. Cor. Maxlow & Stephenson

90 Elev. 635.84
47' Lt. Sta. 725 + 46
N. W. Cor. Granet & Stephenson

89 Elev. 634.87
123' Rt. Sta. 734 + 65
N. E. Cor. Stephenson & Pearl

88 Elev. 635.94
6.5' Rt. Sta. 750 + 13
S. E. Cor. Otis & John R.

87 Elev. 636.66
6' Rt. Sta. 761 + 48
9 Mile & Stephenson, N.E. Cor.

As Const.
86 Elev. ~~636.11~~ 634.91
120' Rt. Sta. 777 + 95
Sonoma & Stephenson, N.E. Cor.

85 Elev. 637.15
137' Rt. Sta. 793 + 92
Morehouse & Stephenson, S.E. Cor.

84 Elev. 636.93
118' Rt. Sta. 807 + 80
Coy & Stephenson, S. E. Cor.

As Const.
83 Elev. ~~636.80~~ 636.35
86' Rt. Sta. 819 + 09
S. E. Cor. Stephenson & Kenneth

82 Elev. 636.64
52' Rt. Sta. 838 + 09
Kalama and Stephenson, S. E. Cor.

81 Elev. 638.12
177' Lt. Sta. 852 + 81
S. W. Cor. Sixth & Stephenson

80 Elev. 637.94
157' Lt. Sta. 864 + 94
N. W. Cor. Middlesex & Stephenson

79 Elev. 638.54
165' Lt. Sta. 872 + 24
Chisled Square on Concrete Sign Base
N. W. Cor. 11 Mile & Stephenson (Shell Service Station)

78 Elev. 635.32
202' Rt. Sta. 880+28
H.S.M.D. Tag.
S.W. Root 23" Box Elder

77 Elev. 636.96
157' Lt. Sta. 885.57
R.R. Spike in
Street Light Pole

As Const.
83A Elev. ~~638.10~~ 638.05
N. E. Cor. Kenneth & Helene

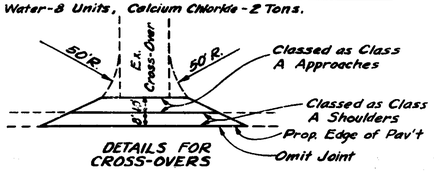
BENCH MARKS & WITNESSES

FILE NO. 63174-079 — STATE PROJECT 63174 — FEDERAL PROJECT — SHEET NO. 4

Grade and Surface the following Cross-Overs

	Earth Exc.	Class A Appr. (L.M) 6" Depth
Morehouse	24	30
Browning	24	30
Garfield	26	33
Mapledale	24	30
Shevlin	26	33
Coy	24	30
Brickley	24	30
Total	172 Cu. Yds.	* 216 Cu. Yds.

* Water-8 Units, Calcium Chloride - 2 Tons.

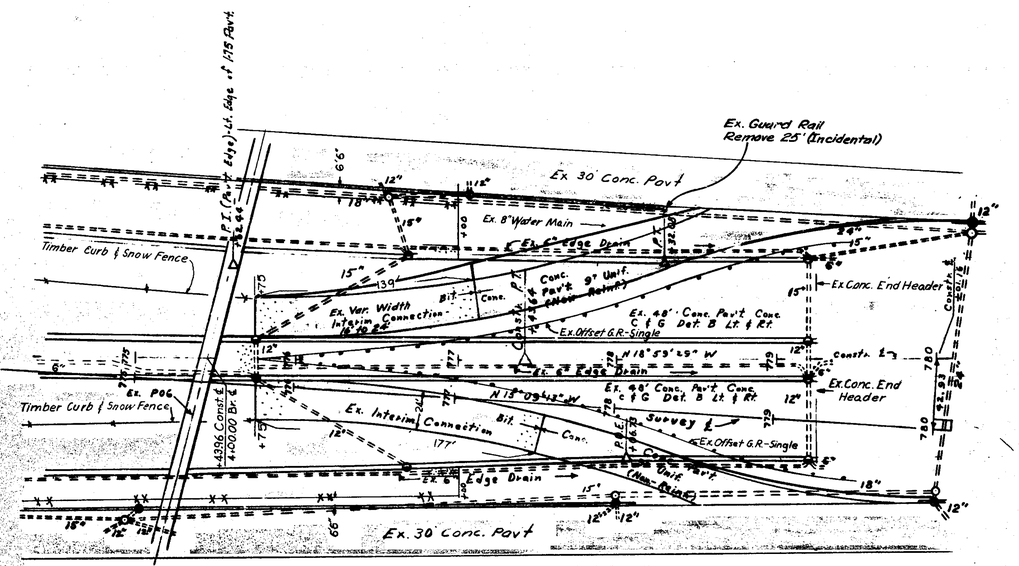


DETAILS FOR CROSS-OVERS

The following items are estimated for widening the Variable Width Interim Connection and to improve the alignment of both Connections for better traffic flow. As directed by the Engineer.

Subbase (Embankment) C.I.P.	280 Cyds.
Bit Prime Coat	20 Gals.
Aggregate Base Course	27 Cyds. (L.M)
Bit. Concrete Wearing Course	12 Tons.
Concrete Pavement, 9" Unif. (Non-Reinf.)	200 Syds
Class A Shoulders	100 Cyds (L.M)
Water (1000 Gal. Units)	3 Units
Calcium Chloride	1 Tons

NOTE:
Street and information signs that interfere with the construction of this project shall be removed and stockpiled as directed by the Engineer. The removal and stockpiling will be considered incidental to the construction of this project.



Point of Beginning
State Project M 63174, 079
Sta. 775+75

All quantities this sheet Hazel Park

STA. 775+75 TO STA. 780

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		5

Remove Old Pavement
Shown Thus
Removing Old Pavement 44 Sq. Yds.

Remove Curb Shown Thus
Removing Curb ____ 982 Lin. Ft.

Remove Sidewalk
Shown Thus
Removing Sidewalk ___ 140 Sq. Yds.

Abandoning Catch Basins 2 Each

As Const.
Remove Covery, Break Structure
Down 3' Below Pavt. Surfces
1' Below Finished Grade On Others

Removing Trees 8" to 12" Dia. _ 2 Each
Adjusting M.H. Covers ____ 5 Each
Reconstructing M.H.'s ____ 4 Each
Reconstructing C.B.'s ____ 2 Each
Covers A _____ 4 Each

4" Conc. Sidewalk ___ 110 Sq. Ft.

AS CONST.
PAGE 479
6" OR MORE IN HEIGHT
COVERS WILL BE PAID FOR

For Alignment Ties and
Bench Marks See Sheet 4

CURVE DATA (SURV. ℄)
Δ = 04°-25'-02"
D = 2°00'
R = 2864.79'
T = 110.49'
L = 220.86'
E = 2.13'
P.C. = 780+42.72
P.I. = 781+53.21
PT = 782+63.58

NOTE:
The cross-overs at Annabelle, & Mahan are to be closed.

Barricades ____ 4 Each

Sec. 26
T1N, R11E

Sta. 783+40 to Sta. 784+40 Lt.
Resurface ex. pav't with Bit.
Agg. (Est. @ 160#/Sq. Yd.)
Bit. Agg Surface Course - 4.11 __ 20 Tons
Bit. Bond Coat _____ 51 Gals.

As Const.
18 of 12" Class F Culv.
(1) 12" Sewer Tap

Deleted on Const.
~~Remove Ex. Cover~~
~~Place Cover A~~

Remove Ex. Cover
Place Cover A
20' of 12" Class F Culv.
12" Sewer Tap - 1 Each

As Const.
Place Cover A

As Const.
Reconst. Water Gate

Ex. 30' Conc. Pav't Det. 2 Curb Lt. & Rt.

As Const.
Void
S.S. Line
Prop. Ditch
Adj. M.H. Cover
Abd. C.B's
Bit. over Conc.

Var. Width
Conc. Pav't (Non-Reinf.)

Deleted on Const.
~~Remove Ex. Cover~~
~~Place Cover A~~

Recons't M.H.

Recons't M.H.

Remove Ex. Cover
Place Cover A

12' of 12" Cl. F Culv.
(1) 12" Sewer Tap

As Const.
Rem. Old
Structure

As Const.
Reconst.

Adj. M.H. Covers

Adj. M.H. Cover
Ex. 22' Bit. over Conc.

Survey ℄
N19°34'15"W

S.S. Line
Prop. Ditch

Ex. 30' Conc. Pav't Det. 2 Curb Lt. & Rt.

Curb Ends

24' Conc. Pav't (Non-Reinf.)

Reconst. C.B.
Deleted on Const.
Ex. 22' Bit. over Conc.

Adj. M.H. Cover
Reconst. M.H.

As Const.
6' of 12" Cl. F Culv.
(1) 12" Sewer Tap
Place Cover A

Adj. M.H.
As Const.

Conc. Slab

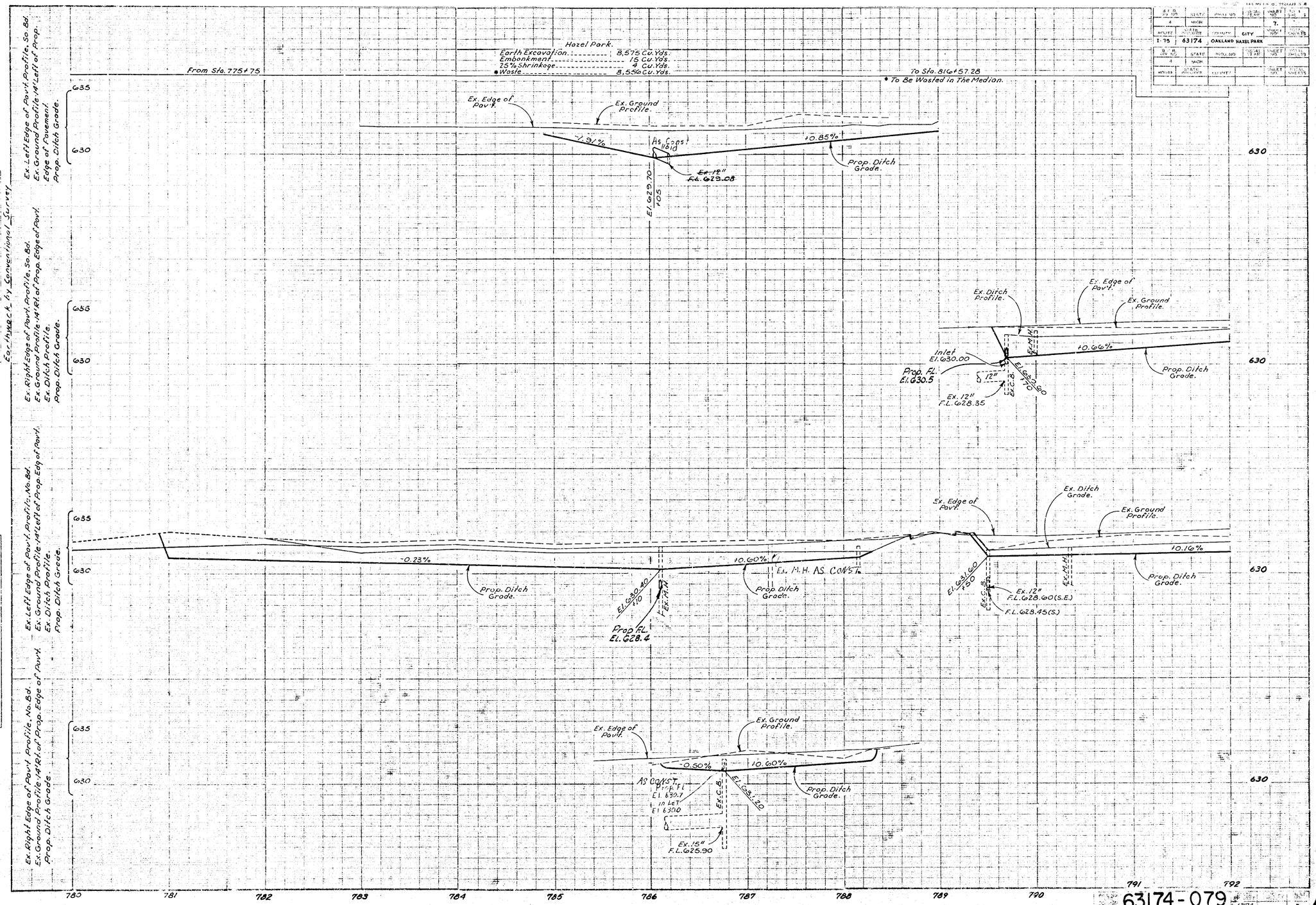
This Sheet (780 to 792)

8" Conc. Pav't Uniform ____	2572 Sq. Yds.
Sawing Bituminous Surface ___	1091 Lin. Ft.
Bituminous Binder Course __	14 Tons
Bituminous Conc. Wearing Course	5 Tons
Bituminous Bond Coat _____	24 Gals.
Class A Shoulders (L.M.) ____	405 Cu. Yds
Calcium Chloride _____	4 Tons
Water (1000 Gallon Units) ____	14 Units
12" Class F Culvert _____	65 Lin. Ft.
12" Sewer Taps _____	3 Each

All quantities this sheet Hazel Park

STA. 780 TO STA. 792

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		6



Hazel Park.
Earth Excavation 8,575 Cu.Yds.
Embankment 15 Cu.Yds.
25% Shrinkage 4 Cu.Yds.
Waste 8,556 Cu.Yds.
From Sta. 775+75
To Sta. 816+57.28
To Be Wasted in The Median.
Earthwork by Conventional Survey
Ex. Left Edge of Pav't. Profile, So. Bd.
Ex. Ground Profile 14' Left of Prop. Edge of Pavement.
Prop. Ditch Grade.
Ex. Right Edge of Pav't. Profile, So. Bd.
Ex. Ground Profile 14' Rt. of Prop. Edge of Pav't.
Ex. Ditch Profile.
Prop. Ditch Grade.
Ex. Left Edge of Pav't. Profile, No. Bd.
Ex. Ground Profile 14' Left of Prop. Edge of Pav't.
Ex. Ditch Profile.
Prop. Ditch Grade.
Ex. Right Edge of Pav't. Profile, No. Bd.
Ex. Ground Profile 14' Rt. of Prop. Edge of Pav't.
Prop. Ditch Grade.
Ex. Edge of Pav't.
Ex. Ground Profile.
-1.91%
+0.85%
As Const.
Ex. 12" F.L. 629.08
El. 629.70 +05
Prop. Ditch Grade.
Ex. Ditch Profile.
Ex. Edge of Pav't.
Ex. Ground Profile.
Inlet El. 630.00
Prop. F.L. El. 630.5
12"
Ex. 12" F.L. 628.35
+0.66%
Prop. Ditch Grade.
Ex. Edge of Pav't.
Ex. Ditch Grade.
Ex. Ground Profile.
-0.23%
+0.60%
Ex. M.H. AS CONST.
Prop. Ditch Grade.
El. 630.40 +10
Prop. F.L. El. 628.4
El. 631.60 +50
Ex. 12" F.L. 628.60 (S.E.)
F.L. 628.45 (S.)
+0.16%
Prop. Ditch Grade.
Ex. Edge of Pav't.
Ex. Ground Profile.
-0.50%
+0.60%
AS CONST.
Prop. F.L. El. 630.7
Ex. 15" F.L. 625.90
El. 631.20
Prop. Ditch Grade.
635
630
780
781
782
783
784
785
786
787
788
789
790
791
792

63174-079

Removing Masonry and Concrete Structures (Sta. 793+35 Rt) 6.5 Cu. Yds.

Remove Sidewalk Shown Thus ▨
Removing Sidewalk ___ 27 Sq. Yds.

Adjusting M.H. Covers _ _ 8 Each

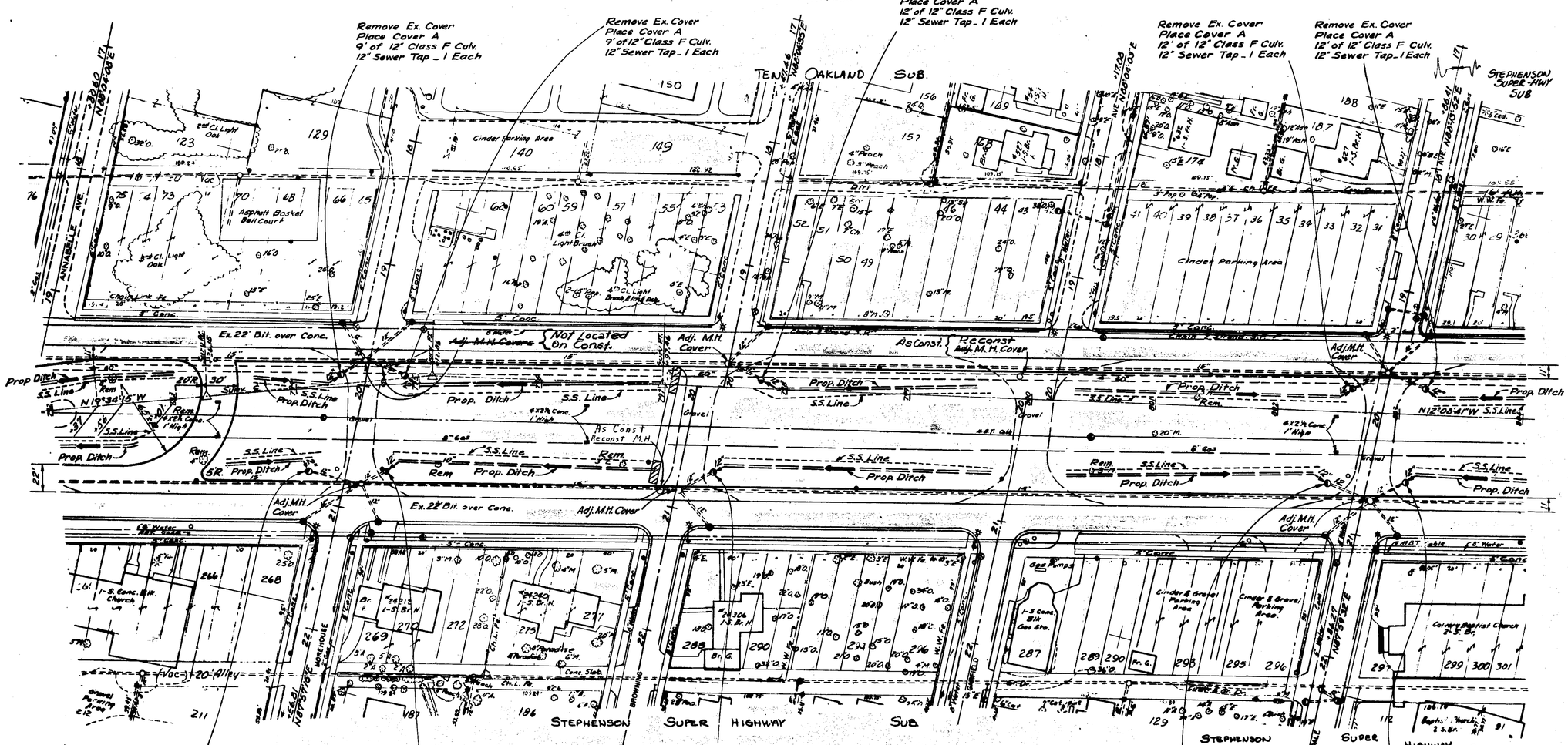
Covers A _____ 10 Each

NOTE: For Cross Over treatment & quantities see sheet #5

Removing Trees 8" to 12" Dia. _ 2 Each

CURVE DATA (SURV. ℄)
Δ = 7°-25'34"
D = 2°00'
R = 2864.79'
T = 185.91'
L = 371.31'
E = 6.02'
P.C. = 793+26.15
P.I. = 795+12.06
P.T. = 796+97.46

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			8	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PARK		
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



This Sheet (792 to 804)

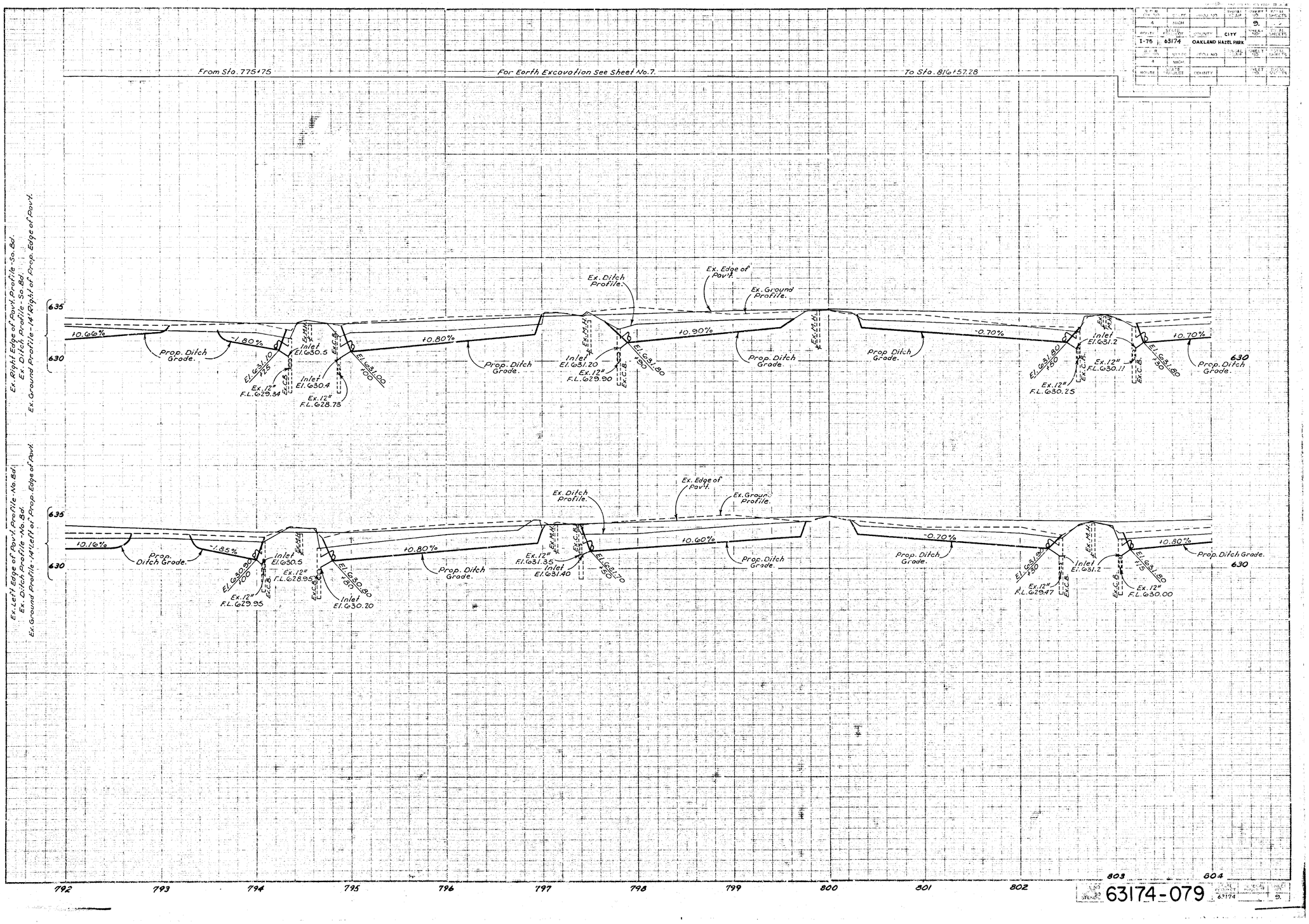
8" Conc. Pavement Unif.	3408	Sq. Yds.
Sawing Bituminous Surface	2393	Lin. Ft.
Bitu. Binder Course	31	Tons
Bitu. Concrete Wearing Course	11	Tons
Bitu. Bond Coat	54	Gal.
12" Class F Culvert	99	Lin. Ft.
12" Sewer Taps	10	Each
Class A Shoulder (L.M.)	459	Cu. Yds.
Calcium Chloride	4	Tons
Water (1000 Gallon Units)	15	Units

All quantities this sheet Hazel Park

STA. 792 TO STA. 804.

PRELIM. R.O.W. R.H.R. 1-12-62

63174-079 | 63174 | 8



4	MICH			9.	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND HAZEL PARK			
4	MICH				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

63174-079

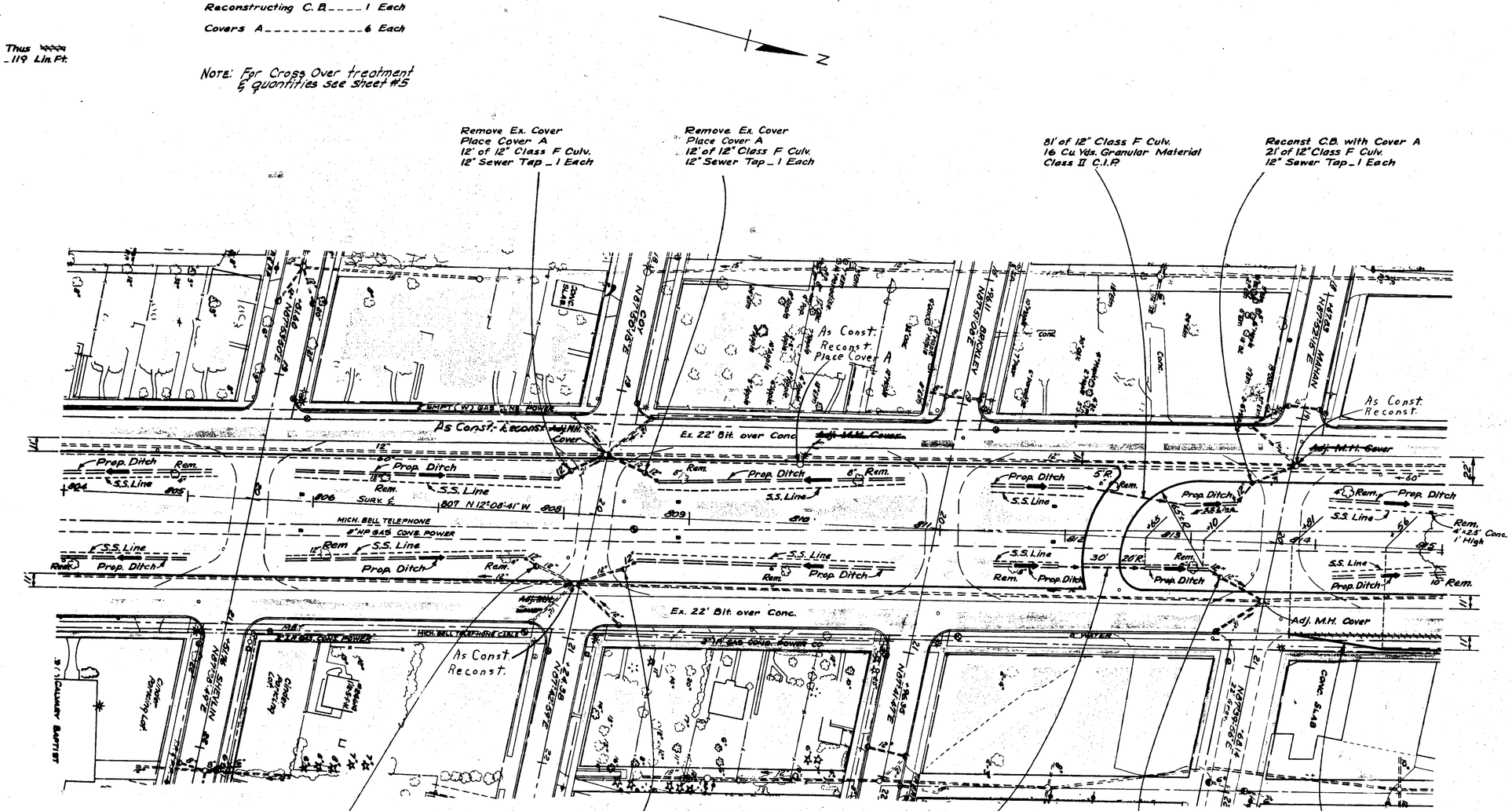
Removing Masonry and Concrete Structures (Sta. 814+90 Lt.) 6.5 Cu. Yds.

Remove Curb Shown Thus ~~~~
Removing Curb _ _ _ _ _ 119 Lin. Ft.

Adjusting M.H. Covers _ _ 5 Each
Reconstructing C.B. _ _ _ _ 1 Each
Covers A _ _ _ _ _ _ _ _ _ _ _ 6 Each

Removing Trees 8" to 12" Dia. _ 6 Each

NOTE: For Cross Over treatment & quantities see sheet #5



This Sheet (804 to 815)

8" Conc. Pavement Uniform	3310	Sq. Yds.
Conc. Curb Detail-2A	120	Lin. Ft.
Sawing Bituminous Surface	2206	Lin. Ft.
Bitu. Binder Course	28	Tons
Bitu. Concrete Wearing Course	10	Tons
Bitu. Bond Coat	49	Gals.
Granular Material Class II C.I.P.	33	Cu. Yds.
Class A Shoulders (L.M.)	423	Cu. Yds.
Calcium Chloride	4	Tons
Water (1000 Gallon Units)	14	Units
12" Class F Culvert	234	Lin. Ft.
12" Sewer Taps	6	Each

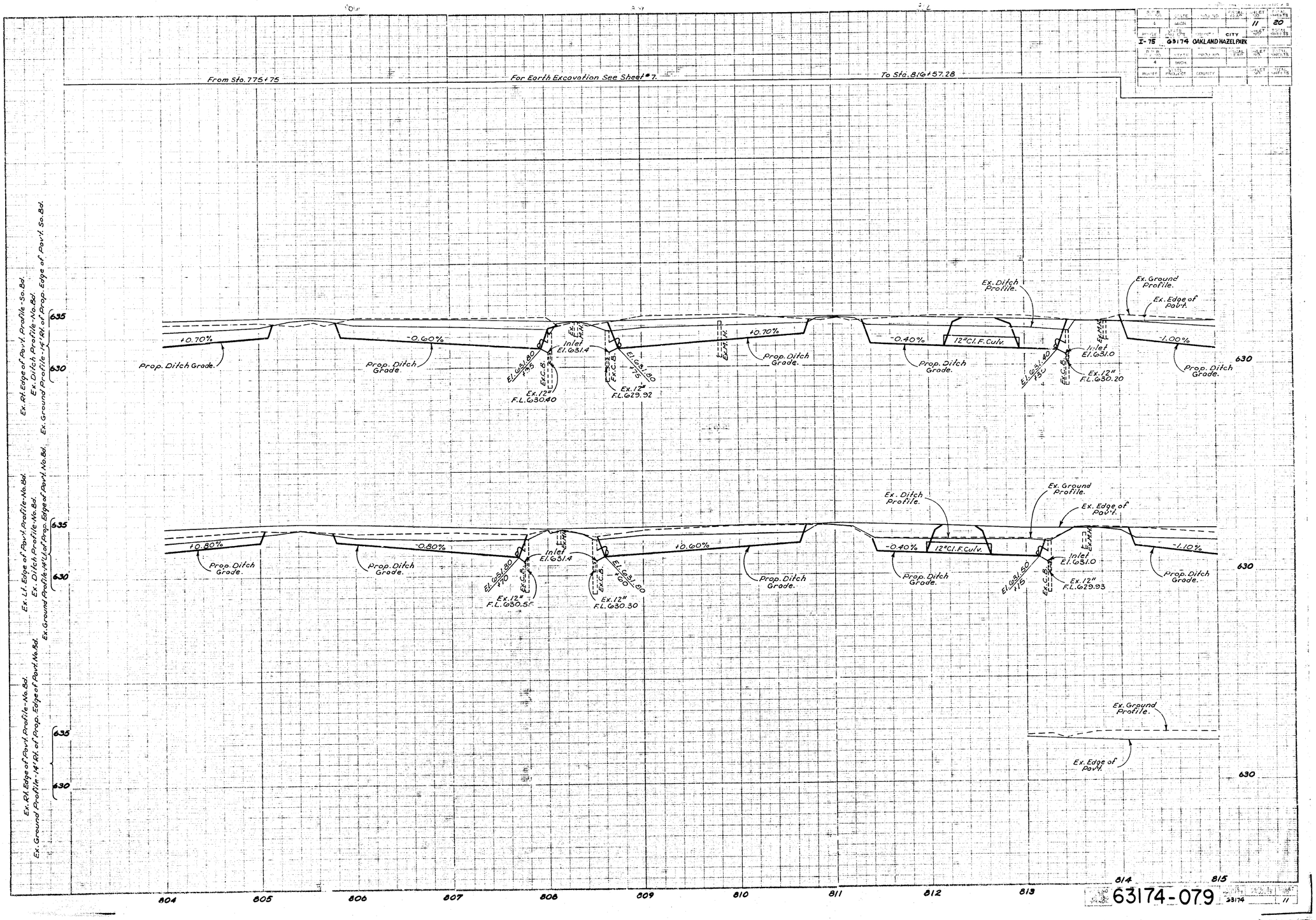
* Conc. Pav't. 8" Unif. High early strength 122 Sq. Yds.

* (2) 50'x11' strips for Xovers as directed by the Engineer.

All quantities this sheet Hazel Park

STA. 804 TO STA. 815

FILE NO.	SEC.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079		63174		10



I-75
63174
OAKLAND HAZEL PARK
CITY
11
20
From Sta. 775+75
For Earth Excavation See Sheet #7.
To Sta. 816+57.28
Ex. Rt. Edge of Pav't. Profile-So. Bd.
Ex. Ditch Profile-No. Bd.
Ex. Ground Profile-14' Rt. of Prop. Edge of Pav't. So. Bd.
Ex. Lt. Edge of Pav't. Profile-No. Bd.
Ex. Ditch Profile-No. Bd.
Ex. Ground Profile-14' Lt. of Prop. Edge of Pav't. No. Bd.
Ex. Rt. Edge of Pav't. Profile-No. Bd.
Ex. Ground Profile-14' Rt. of Prop. Edge of Pav't. No. Bd.
635
630
+0.70%
-0.60%
+0.70%
-0.40%
-1.00%
+0.80%
-0.80%
+0.60%
-0.40%
-1.10%
Prop. Ditch Grade.
Ex. Ditch Profile.
Ex. Ground Profile.
Ex. Edge of Pav't.
12" Cl. F. Culv.
Inlet El. 631.4
Inlet El. 631.0
Ex. 12" F.L. 630.40
Ex. 12" F.L. 629.92
Ex. 12" F.L. 630.20
Ex. 12" F.L. 630.55
Ex. 12" F.L. 630.30
Ex. 12" F.L. 629.93
El. 631.80 +95
El. 631.80 +75
El. 631.80 +70
El. 631.80 +60
El. 631.40 +30
El. 631.50 +15
Ex. C.B.
Ex. M.H.
804
805
806
807
808
809
810
811
812
813
814
815

63174-079

	Hazel Park	Royal Oak
Remove old pavement shown thus XXX Removing Old Pavement	19	36 Sq. Yds.
Remove Curb Shown thus ~~~~ Removing Curb	154	268 Lin. Ft.
Remove Sidewalk Shown Thus ▨ Removing Sidewalk	4	16 Sq. Yds.
4" Concrete Sidewalk	36	144 Sq. Ft.

	Hazel Park	Royal Oak
Adjusting M.H. Covers	4	5 Each
Reconstructing M.H.'s	0	2 Each
Abandoning Catch Basins	0	2 Each
Removing Trees-8" to 12" Dia.	0	2 Each
Removing Trees-13" to 24" Dia.	1	0 Each
Removing Stumps-13" to 24" Dia.	0	3 Each

	Hazel Park	Royal Oak
Recons't Catch Basins	1	2 Each
Covers A	3	7 Each

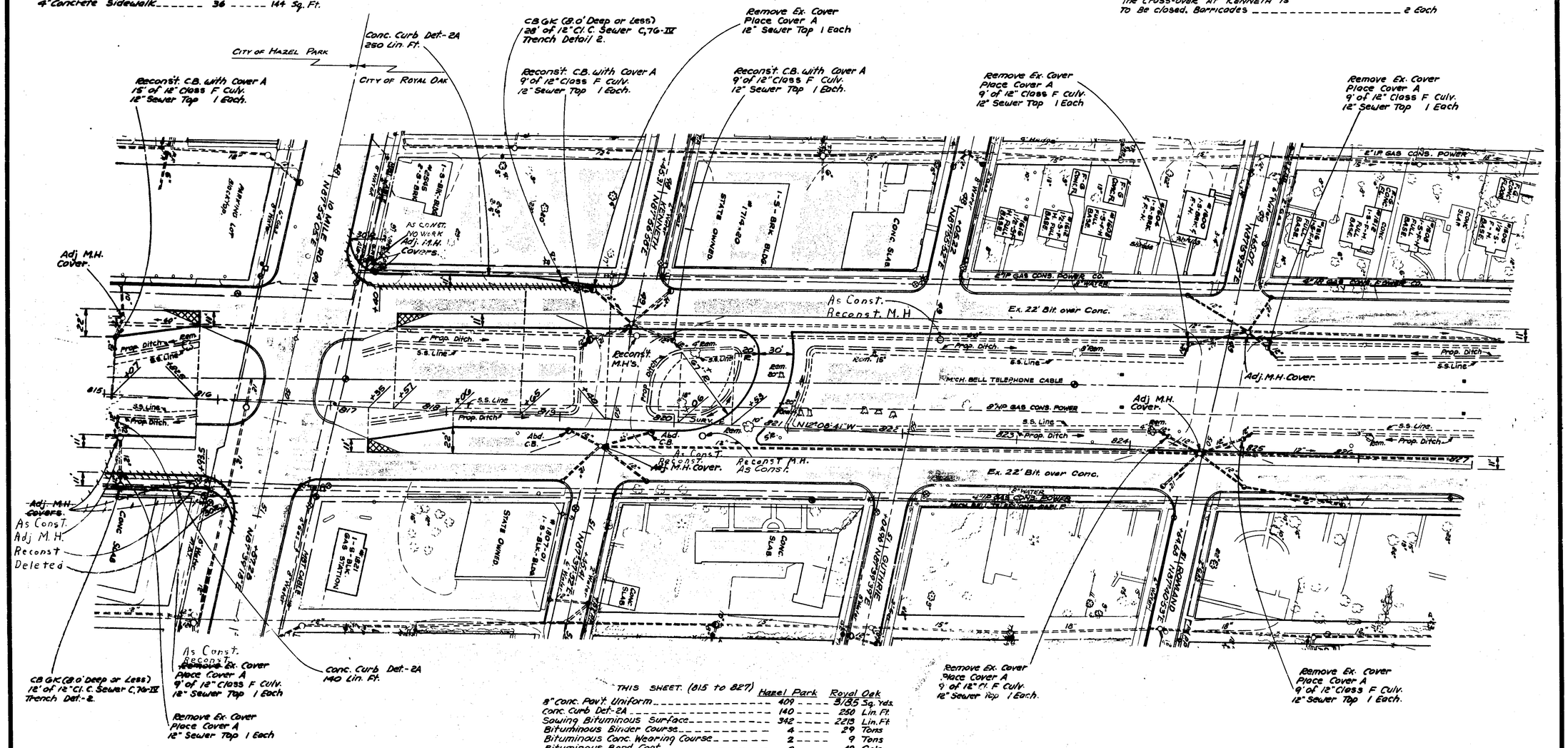
Grade and Surface the following Cross-Overs (City of Royal Oak)

	Earth Exc.	Class A Appr. (L.M.) 6" Depth	Bit. Appr. Mixture Est. 255#/Sq. Yd.
Rowland	26 Cu. Yds.	24 Cu. Yds.	48 Tons

For Cross-Over Details See Sheet 5

Note! — Royal Oak

The Cross-over at Kenneth is To Be closed. Barricades ____ 2 Each



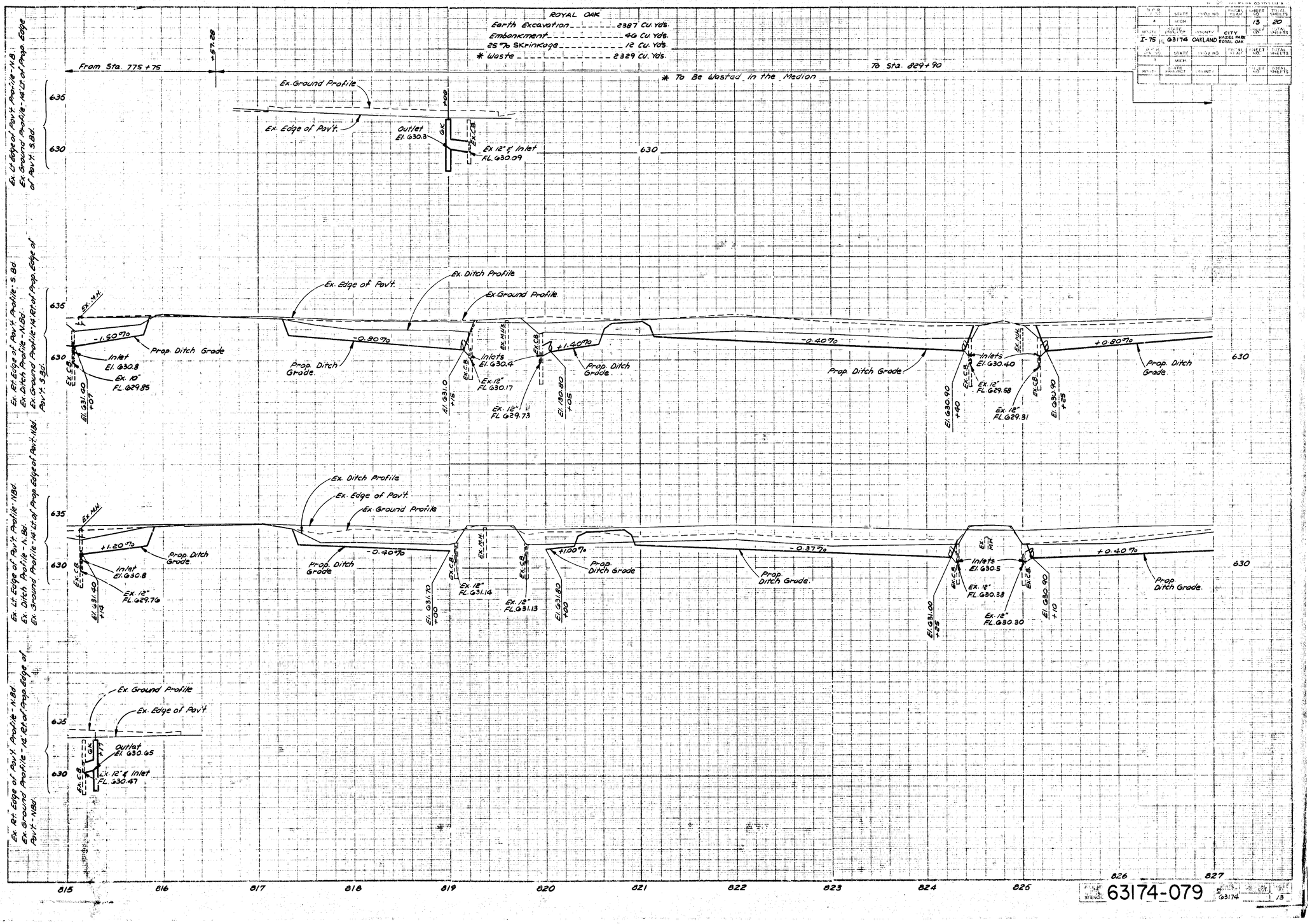
THIS SHEET. (815 to 827)

	Hazel Park	Royal Oak
8" Conc. Pav't. Uniform	409	3185 Sq. Yds.
Conc. Curb Det.-2A	140	250 Lin. Ft.
Sawing Bituminous Surface	342	2213 Lin. Ft.
Bituminous Binder Course	4	29 Tons
Bituminous Conc. Wearing Course	2	9 Tons
Bituminous Bond Coat	8	49 Gals.
Class A Shoulder (L.M.)	25	373 Cu. Yds.
Calcium Chloride	1	3 Tons
Water (1000 Gals. Units)	1	12 Units
12" Cl. F Culvert	24	54 Lin. Ft.
12" Cl. C Sewer C,76-IV Trench Det.-2	12	28 Lin. Ft.
Catch Basin GK (8.0' Deep or Less)	1	1 Each
12" Sewer Taps	3	7 Each
* Conc. Pav't. 8" Unif. Highearly Strength	0	122 Sq. Yds.

* (2) 50'x11' strips for X-overs as directed by the Engineer.

STA. 815 TO STA. 827.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		12



I-75	63174	OAKLAND	CITY HAZEL PARK ROYAL OAK	13	20

63174-079

Adjusting Manhole Covers _____ 2 Each
Reconstructing Manholes _____ 1 Each

Note!
The existing 22' Bit. cross-over between Barrett and Dallas is to be closed by the placing of excavated waste material to cover it as directed by the Engineer.

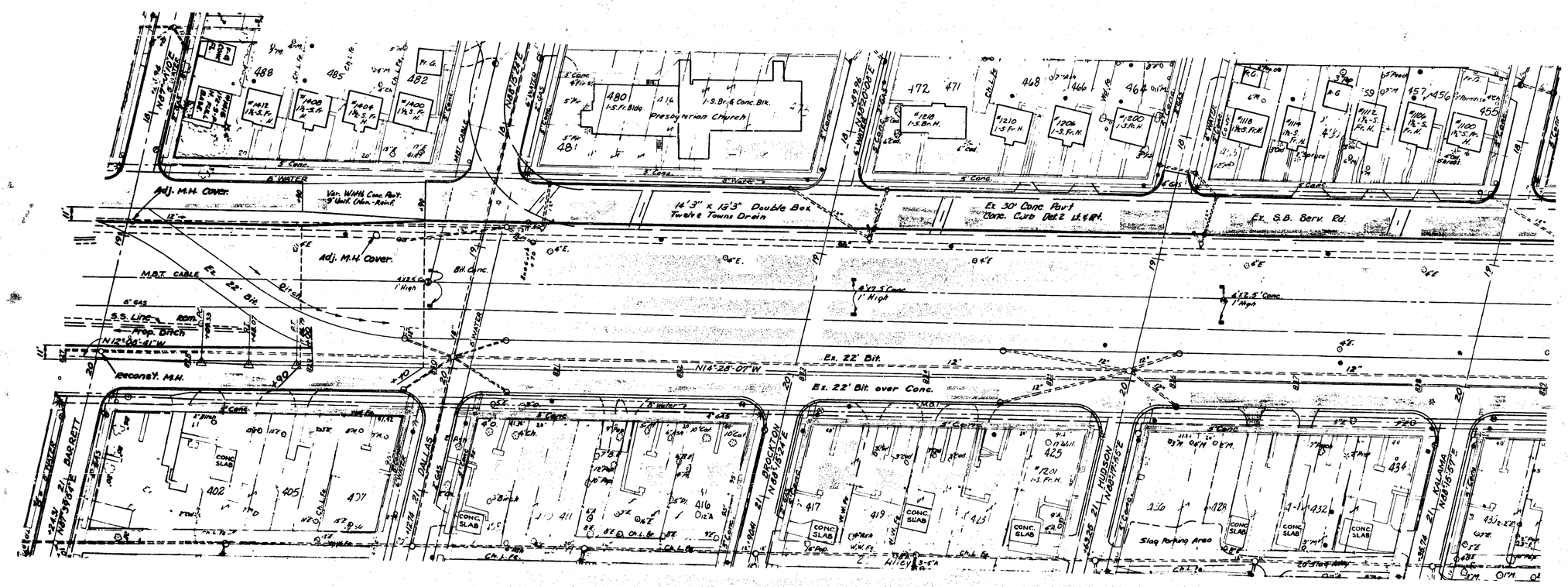
CURVE DATA (SURV. ℄)

Δ = 02°-19'-26" Lt
D = 3°-00'
R = 1909.86'
T = 38.74'
L = 77.46'
E = 0.39'
P.C. = 828+09.33
P.I. = 828+48.07
P.T. = 828+86.79

N

THIS SHEET. (827 to 829+90)

8" Concrete Pav't. Uniform _____ 538 Sq. Yds.
Sawing Bituminous Surface _____ 490 Lin. Ft.
Bituminous Binder Course _____ 6 Tons
Bituminous Conc. Wearing Course _____ 2 Tons
Bituminous Bond Coat _____ 11 Gals.
Class A Shoulders (L.M.) _____ 63 Cu. Yds.
Calcium Chloride _____ 1 Ton
Water (1000 Gallon Unit) _____ 2 Units



Point of Ending
State Project M 63174,079
Sta. 829+90

All quantities this sheet Royal Oak.

STA. 827 TO STA. 839

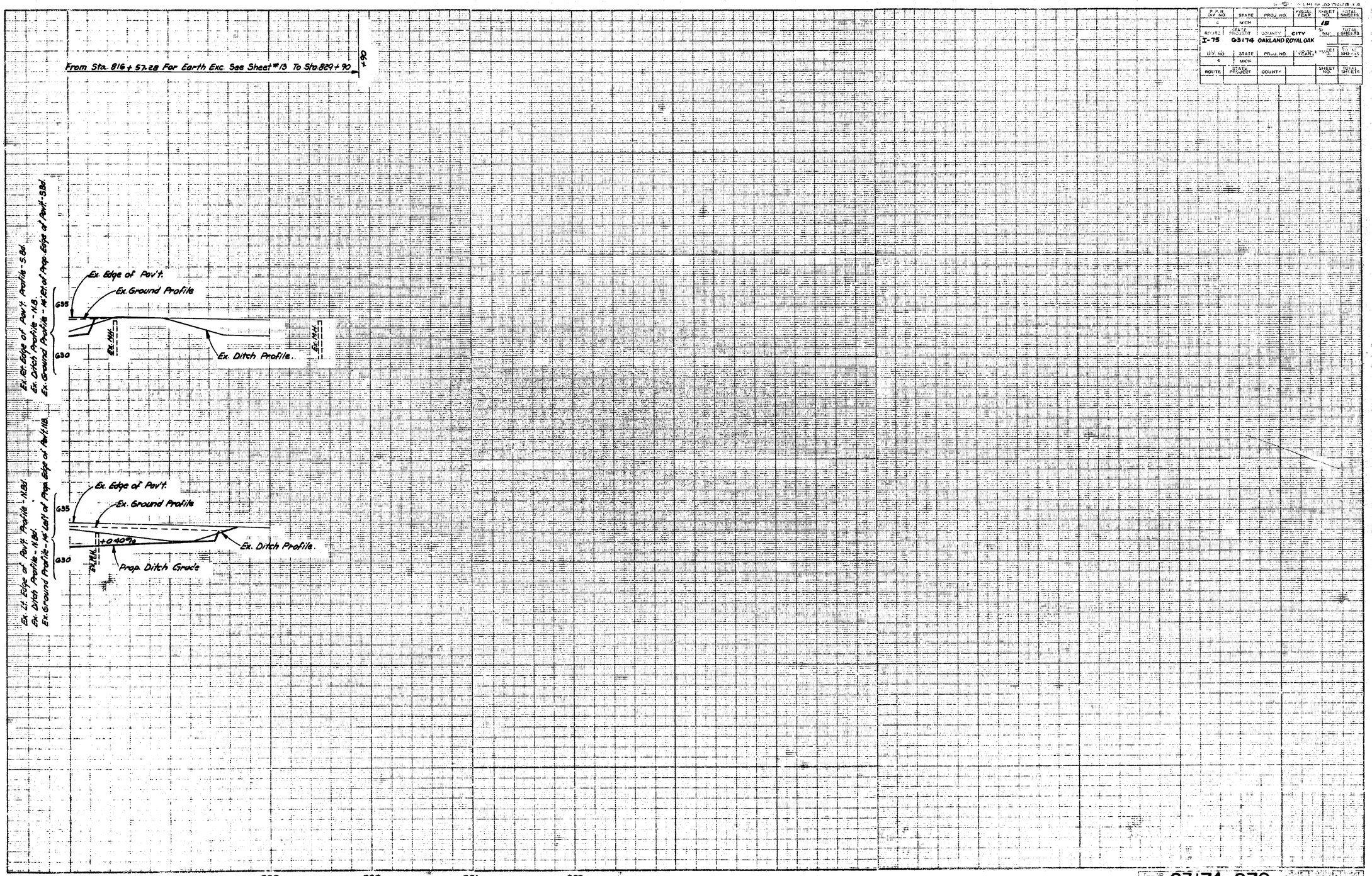
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		14

P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	MICH			15	

ROUTE	STATE PROJECT	COUNTY	CITY	SH. NO.	TOTAL SHEETS
I-75	63174	OAKLAND	ROYAL OAK		

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				

ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED		
PLAN CHECKED		
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE		
GRADE INSPECTION		
FEDERAL INSPECTION		

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD		

63174-079

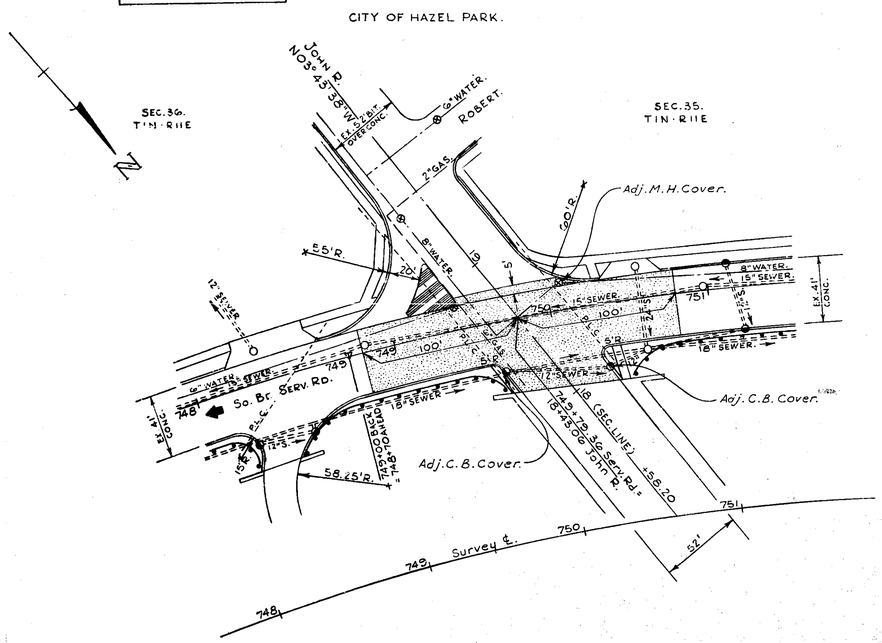
PROJECT	PROJECT	SHEET NO.
63174		15

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			16	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PARK		

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

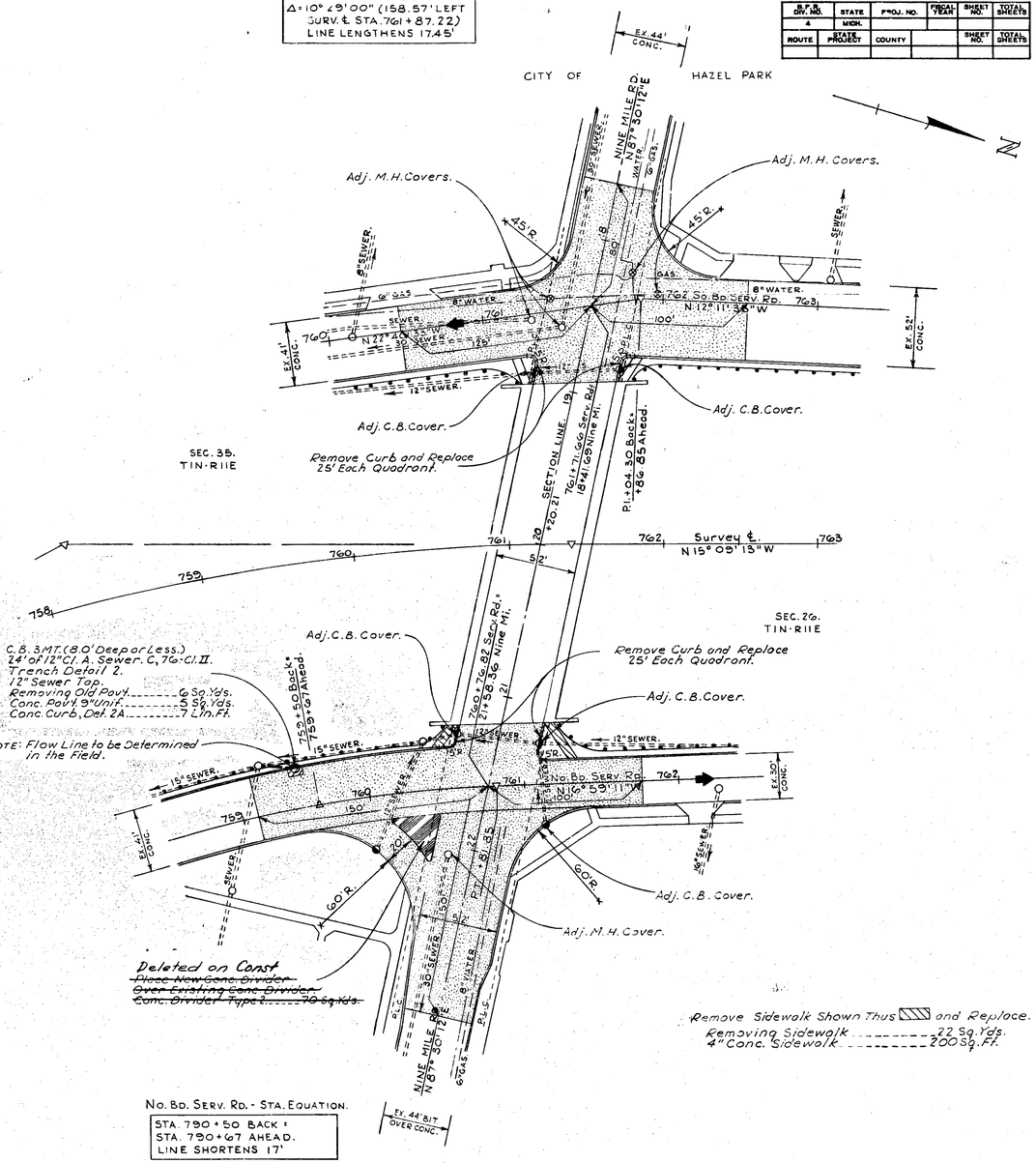
So. Bd. Serv. Rd. - Sta. Equation

STA. 749+00 BACK =
STA. 748+70 AHEAD.
LINE LENGTHENS 30'



So. Bd. Serv. Rd. - Sta. Equation.

P.I. STA. 762+04.30 BACK =
STA. 761+86.85 AHEAD.
Δ = 10° 29' 00" (158.57' LEFT
SURV. ℄ STA. 761+87.22)
LINE LENGTHENS 17.45'



SEC. 35. T1N-R11E

SEC. 26. T1N-R11E

C.B. 3 MT. (8.0' Deep or Less.)
24" of (12" Cl. A. Sewer. C. 76-Cl. II.
Trench Detail 2.
12" Sewer Tap.
Removing Old Pavt. ..... 6 Sq. Yds.
Conc. Pavt. 9" Unif. ..... 5 Sq. Yds.
Conc. Curb, Det. 2A ..... 7 Lin. Ft.

759 + 50 Back = 759 + 67 Ahead.

NOTE: Flow Line to be Determined in the Field.

The Following Items Are Estimated For Resurfacing The Three Intersections Shown On This Sheet And Within The Limits Called For To Correct Grades.

Removing Old Pavement	6	Sq. Yds.
Removing Curb	100	Lin. Ft.
Removing Sidewalk	22	Sq. Yds.
C.B. 3 MT. (8.0' Deep or Less.)	1	Each.
12" Class A. Sewer. C. 76-Cl. II. Trench Detail 2.	24	Lin. Ft.
12" Sewer Trap.	1	Each.
12" Sewer Tap.	1	Each.
Adjusting Catch Basin Covers	7	Each.
Adjusting Manhole Covers	7	Each.
Concrete Pavement, 9" Uniform	5	Sq. Yds.
Concrete Curb, Detail 2A	107	Lin. Ft.
Chipping Pavement For Joints	550	Lin. Ft.
Concrete Divider - Type II	70	Sq. Yds.
4" Concrete Sidewalk	200	Sq. Ft.
Bituminous Bond Coat - Est. @ 0.20 Gal/Sq. Yd. (0.05 Gal. Tack Coat)	987	Gals.
Bituminous Concrete Binder Course - Est. @ 300#/Sq. Yd.	370	Tons.
Bituminous Concrete Wearing Course - Est. @ 130#/Sq. Yd.	321	Tons.
Maintaining Traffic - Per Intersection	3	Each.

Remove Sidewalk Shown Thus ▨ and Replace.
Removing Sidewalk ..... 22 Sq. Yds.
4" Conc. Sidewalk ..... 200 Sq. Ft.

No. Bd. Serv. Rd. - Sta. Equation.

STA. 750 + 50 BACK =
STA. 750 + 67 AHEAD.
LINE SHORTENS 17'

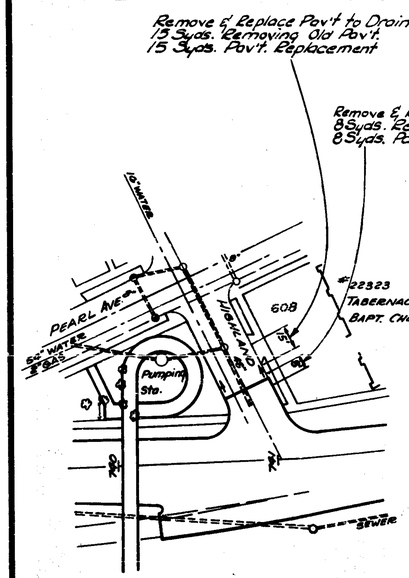
All Items This Sheet Hazel Park.

FILE NO.		STATE PROJECT	FEDERAL PROJECT	SHEET NO.
NO. 330 STENCIL	63174-079	63174		16

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			17	
ROUTE	STATE PROJECT	COUNTY	CITY PROJECT	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	OAKLAND		

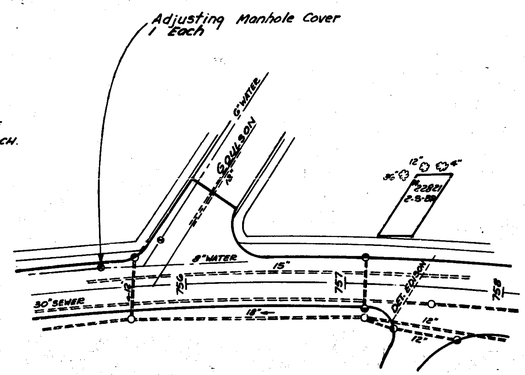
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

NOTE:
Flow line elevations for all drainage work call for on this sheet are to be determined in the field.



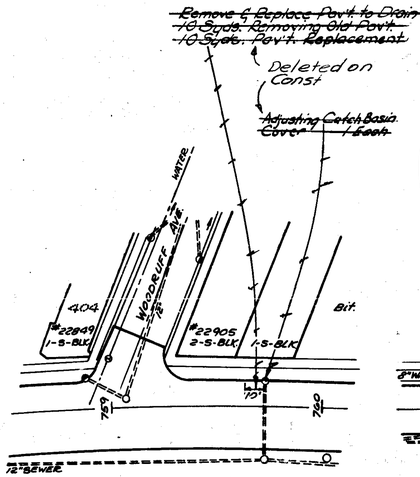
I-75 SOUTHBOUND SERVICE ROAD

AT HIGHLAND



I-75 SOUTHBOUND SERVICE ROAD

AT GOULSON

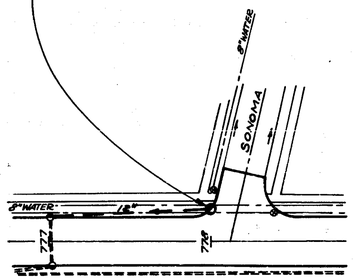


I-75 SOUTHBOUND SERVICE ROAD

AT WOODRUFF

Removing old Pavement_____5 Sq.Yds.
Catch Basin GM (8.0' Deep or Less)
100' of 12" Class A Sewer C7G-II
Trench Detail 2
12" Sewer Tap_____1 Each
Pavement Replacement_____4 Sq.Yds.

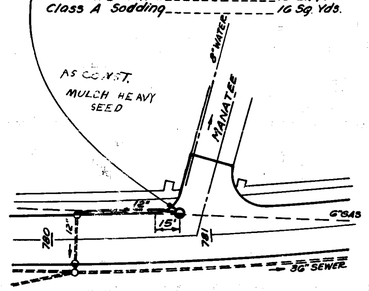
Conc. Curb Det. 2_____5 L.Ft.
Class A Sodding_____32 Sq.Yds.



I-75 SOUTHBOUND SERVICE ROAD

AT SONOMA

Removing old Pavement_____8 Sq.Yds.
Catch Basin GD-4 (8.0' Deep or Less)
55' of 12" Class A Sewer, C7G-II
Trench Detail 2
12" Sewer Tap_____1 Each
Pavement Replacement_____7 Sq.Yds.
Conc. Curb Det. 2_____10 L.Ft.
Class A Sodding_____16 Sq.Yds.

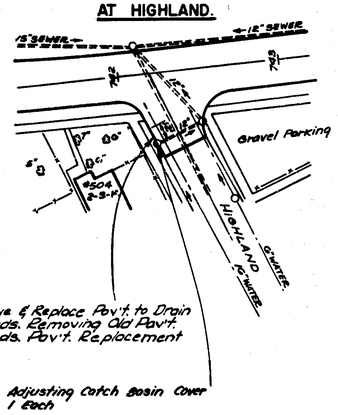


I-75 SOUTHBOUND SERVICE ROAD

AT MANATEE

I-75 NORTHBOUND SERVICE ROAD

AT HIGHLAND.



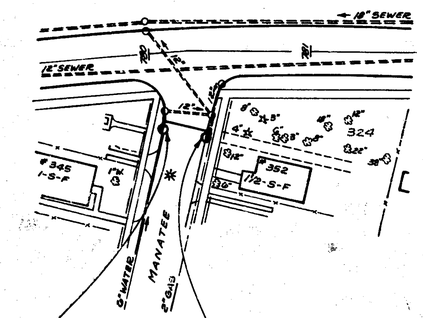
TOTAL QUANTITIES - THIS SHEET.

Removing Old Pavement_____73 Sq. Yds.
Adjusting Manhole Covers_____1 Each
Adjusting Catch Basin Covers_____2 Each
Catch Basins GM (8.0' Deep or Less)_____2 Each
Catch Basins GD-4 (8.0' Deep or Less)_____1 Each
Catch Basins GC-4 (8.0' Deep or Less)_____1 Each
12" Class A Sewer, C7G-II Trench Det. 2_____180 L.Ft.
12" Sewer Taps_____4 Each
Pavement Replacement_____68 Sq. Yds.
Conc. Curb Det. 2_____40 L.Ft.

Class A Sodding_____48 Sq. Yds

I-75 NORTHBOUND SERVICE ROAD

AT MANATEE



As Const
Removing Old Pavement_____6 Sq. Yds.
~~Catch Basin GM (8.0' Deep or Less)~~
~~15' of 12" Class A Sewer, C7G-II~~
~~Trench Detail 2~~
~~12" Sewer Tap_____1 Each~~
Pavement Replacement_____5 Sq. Yds.
~~Conc. Curb Det. 2_____10 L.Ft.~~

Removing Old Pavement_____9 Sq. Yds.
Catch Basin GC-4 (8.0' Deep or Less)
15' of 12" Class A Sewer, C7G-II
Trench Detail 2
12" Sewer Tap_____1 Each
Pavement Replacement_____7 Sq. Yds.
Conc. Curb Det. 2_____15 L.Ft.

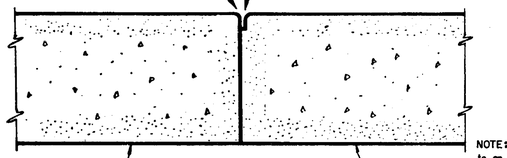
All Quantities this Sheet Hazel Park.

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		17

JOINT EDGING

The First Slab shall be edged with an Edger having a 1/2" lip and a radius of 1/8" to 1/4".

Edging Tool shall be 6" x 12" and shall have a 3/4" lip with a radius of 1/8" to 1/4". It is to be guided and rested on the hardened concrete of the first pour.



NOTE: When widening to an existing slab previously edged, the second slab shall be edged with a Long Lip Edger with 3/8" to 1/2"R.

METHOD OF EDGING

Where one Slab is poured against another in place.

LONGITUDINAL BULKHEAD JOINT

Symbol (L)

FOR FUTURE PAVEMENT WIDENING

This Joint shall be constructed according to Detail No. 2 except that the "Second Pour" and the "Second Half" of the Joint Dowel Hook Bolt shall be omitted. The threaded hole in the Hook Bolt Coupling shall be treated with a rust preventive oil and plugged with a neoprene or plastic plug. The Plug shall be of proper dimension to completely seal the hole and shall not project more than 3/8" after inserting.

DETAIL No. 3

LONGITUDINAL BULKHEAD JOINT

Symbol (Lr)

FOR WIDENING EXISTING CONCRETE PAVEMENT WHERE JOINT DOWEL HOOK BOLTS HAVE PREVIOUSLY BEEN PROVIDED

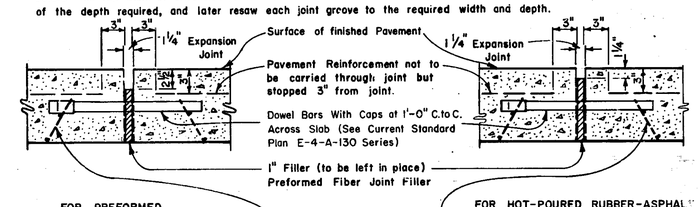
This Joint shall be constructed according to Detail No. 2, except that the "First Pour" and the "First Half" of the Joint Dowel Hook Bolt has previously been provided. The Plug shall be removed, the threads of the coupling shall be retapped and the "Second Half" of the Joint Dowel Hook Bolt shall be provided and installed.

DETAIL No. 4

TRANSVERSE EXPANSION JOINT (SAWED) WITH LOAD TRANSFER

Symbol (E)

The Transverse Expansion joint shall be sawed to a depth of as shown and a width of 1 1/4 inches, unless otherwise specified. The sawing shall be done before any transverse cracks develop. To prevent uncontrolled cracking of the pavement before the full width of expansion joints are sawed, the Contractor may be required to make a single 1/8 inch saw cut, of the depth required, and later resaw each joint groove to the required width and depth.



FOR PREFORMED NEOPRENE JOINT SEALER

DETAIL NO. 7

FOR HOT-POURED RUBBER-ASPHALT TYPE JOINT SEALING COMPOUND

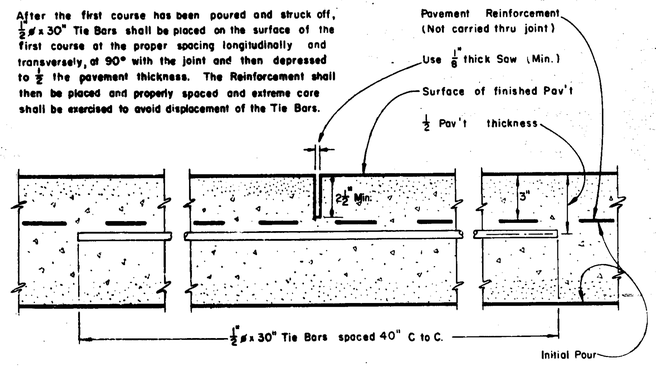
DETAIL No. 8

LONGITUDINAL LANE TIE JOINT

Symbol (D)

The Joint shall be filled with an approved Joint Sealing Material.

After the first course has been poured and struck off, 1/2"ø x 30" Tie Bars shall be placed on the surface of the first course at the proper spacing longitudinally and transversely, at 90° with the joint and then depressed to 1/2 the pavement thickness. The Reinforcement shall then be placed and properly spaced and extreme care shall be exercised to avoid displacement of the Tie Bars.

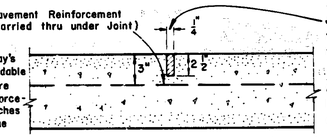


DETAIL No. 1

TRANSVERSE PLANE OF WEAKNESS JOINT FOR BASE COURSE

Symbol (U)

NOTE:
A bulkhead joint shall be constructed at the end of the day's pour or when there is an unavoidable interruption of the work for more one-half hour. The steel reinforcement shall extend at least 18 inches beyond the bulkhead joint into the succeeding pour.



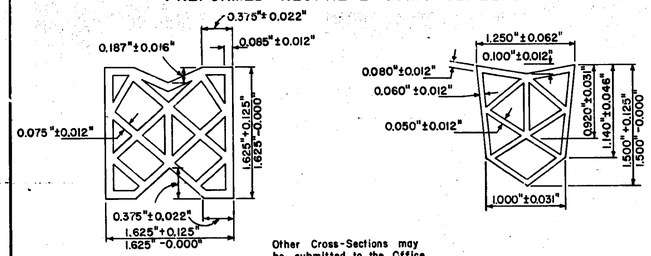
Joint to be filled with one of the following and placed flush with the surface of the pavement:

A = 1/4" Masonite
B = 3/8" Expanded Polystyrene Filler
C = Other Approved Material

The joint shall be formed while the Concrete is fresh and shall be true to position and line.

DETAIL No. 5

PREFORMED NEOPRENE JOINT SEALERS



FOR EXPANSION JOINT

Other Cross-Sections may be submitted to the Office of Testing & Research for Approval

FOR CONTRACTION JOINT

TRANSVERSE END OF POUR JOINT

Prior to placing concrete in first pour, the sleeved dowels and contraction or expansion basket assembly with bulkhead shall be firmly secured to the subgrade, true to line and position.

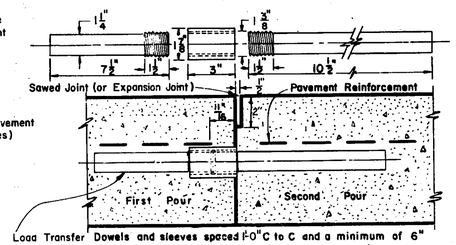
The bulkhead shall be sufficiently rigid to prevent deformation when concrete is placed and shall conform to the crown of the finished pavement. The day after placing the first pour, the half of basket and dowels outside the first pour shall be carefully removed to avoid rupturing the fresh concrete. The open end of the sleeve shall be plugged in the same manner as required for Joint Dowel Hook Bolts.

Prior to placing concrete in second pour, the dowels to the second pour shall be screwed into the sleeves and coated. The contractor placing the second pour shall be responsible for cleaning out of the sleeves and tapping if necessary, supplying the dowels and sealer for the second pour, and supplying preformed fiber filler and dowel caps for all dowel bars if the location requires an expansion joint. After the second pour the joint shall be finished according to current specifications for Contraction or Expansion Joints.

This detail shall be used for all transverse joints when it is anticipated that the second pour will be placed more than seven (7) days after the first pour.

When the construction (second pour) of the pavement will continue within seven (7) days, the 2-piece dowels will not be required and the joint will be treated as a Standard Contraction or Expansion Joint.

NOTE:
Dowel Bar may be reduced to 1" on 8" pavement (See Current Standard Plan E-4-A-130 Series)



Load Transfer Dowels and sleeves spaced 1'-0" C to C and a minimum of 6" from edge of pavement placed at right angles to pav't. joint.

DETAIL No. 9

GENERAL NOTES:

The materials and workmanship called for on this plan shall be in accordance with current Standard Specifications.

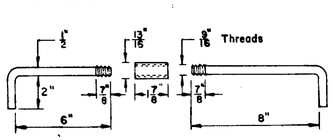
All Steel Bars, Bolts, and Filler used in Pavement Joints will be considered incidental to the construction of The Joint. Tie Bars shall be deformed.

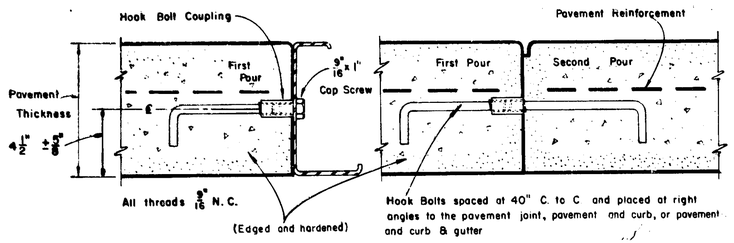
Drawings on this sheet are not to scale.

LONGITUDINAL BULKHEAD JOINT

Symbol (B)

Other methods of holding the first half of the Hook Bolt in position will be permitted, if approved by the Engineer.



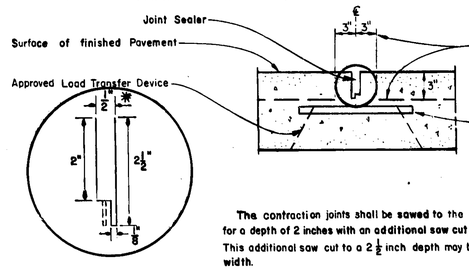


JOINT DOWEL HOOK BOLT

DETAIL No. 2

TRANSVERSE CONTRACTION JOINT (SAWED)

Symbol (C)



The contraction joints shall be sawed to the depth indicated. The width shall be 1/8 inch for a depth of 2 inches with an additional saw cut 1/8 inch wide extending to the 2 1/2 inch depth. This additional saw cut to a 2 1/2 inch depth may be at either side or the center of the 1/8 inch width.

*To prevent uncontrolled cracking of the pavement before the full width of contraction joints are sawed, the Contractor may be required to make a single 1/8 inch saw cut, of the depth required, and later resaw each joint groove to the required width and depth. When this method is used, the final width of the groove shall be 1/8 inch plus the width of any crack which may have developed between the time of the two sawing operations, as directed by the Engineer.

DETAIL No. 6

MICHIGAN STATE HIGHWAY DEPARTMENT
STANDARD PLAN FOR

CONCRETE PAVEMENT JOINTS

DIVISION APPROVAL

CHECKED	ENGINEER OF DESIGN	8-27-65 DATE
RECOMMENDED FOR APPROVAL	TRAFFIC ENGINEER	DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF BRIDGE AND ROAD DESIGN	8-27-65 DATE

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED	CONSTRUCTION ENGINEER	8-27-65 DATE
APPROVED	CHIEF DESIGN ENGINEER	8/27/65 DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED BY	DIRECTOR OF ENGINEERING - CHIEF ENGINEER	8/27/65 DATE

DRAWN BY ____ CHECKED BY MKP TRACED BY D.F.M. APPROVED B.F.R.

63174-079 E-4-A-33K Sht #1 of 1

BPR DIV NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK	19	

GRADING

AS PER PLANS

STATION	TO STATION	EARTH EXC CU YDS	ROCK EXC CU YDS	BORROW CU YDS	SUBBASE (EMBANKMENT) CU YDS	GRANULAR MAT CLASS II C.I.P. CU YDS	END SHR & LOSS CU YDS	WASTE CU YDS	OVERHAUL COMP CU YD UNITS	SUBGRADE UNDERCUTTING CU YDS	DEWATERING BORROW MATERIAL LESS THAN 15' CU YDS	DEWATERING BORROW MATERIAL 15' DEEP OR MORE CU YDS	TOPSOIL SURF CU YDS	EXPLAIN CHANGES
CODE		0100	0120	0135					0159	0112			3276	
Hazel Park From		Sheet # 20				33								
715+75	816+57.28	8575					19	8556						
Sheet #5		172			280			172						
Note Sheet						1500				1500				
Sub Total		8747			280	1533	19	8728		1500				
Royal Oak														
816+57.28	829+90	2387					58	2329						
Sheet #12		26						26						
Note Sheet						500				500				
Sub Total		2413				500	58	2355		500				
TOTALS		16,100			280	2033	77	11083		2000				

AS CONSTRUCTED

STATION	TO STATION	EARTH EXC CU YDS	ROCK EXC CU YDS	BORROW CU YDS	SUBBASE (EMBANKMENT) CU YDS	GRANULAR MAT CLASS II C.I.P. CU YDS	END SHR & LOSS CU YDS	WASTE CU YDS	OVERHAUL COMP CU YD UNITS	SUBGRADE UNDERCUTTING CU YDS	DEWATERING BORROW MATERIAL LESS THAN 15' CU YDS	DEWATERING BORROW MATERIAL 15' DEEP OR MORE CU YDS	TOPSOIL SURF CU YDS	EXPLAIN CHANGES
CODE		0100	0120	0135					0159	0112			3276	
Hazel Park														
715+75	816+57.28	7343				21		7337						
Sheet #5					0									
Note Sheet										0				
Sub Total		7343			0	21		7337		0				
Royal Oak														
816+57.28	829+90	2494												
Note Sheet						44.7		2941		44.7				
Sub Total		2494				44.7		2941		44.7				
TOTALS		9837			0	468		10278		447				

AUTH. 1021

AUTH. 1015

AUTH. 1021

Approved?

AUTH. 1019

CLEARING & GRUBBING

AS PER PLANS

STATION	TO STATION	CLEARING ACRES	CLEARING STAS	GRUBBING SQ YDS	GRUBBING STAS	ELM SPRAY APPL. GALS	EXPLAIN CHANGES
CODE		0000	0001	0004	0005	3263	
TOTALS							

AS CONSTRUCTED

STATION	TO STATION	CLEARING ACRES	CLEARING STAS	GRUBBING SQ YDS	GRUBBING STAS	ELM SPRAY APPL. GALS	EXPLAIN CHANGES
CODE		0000	0001	0004	0005	3263	
TOTALS							

REMOVING TREES

AS PER PLANS

STATION	TO STATION	8"-12" DIA EACH	13"-24" DIA EACH	25"-36" DIA EACH	37" & MORE DIA EACH	
CODE		0010	0011	0012	0013	
Hazel Park						
Sheet #6		2				
Sheet #8		2				
Sheet #10		6				
Sheet #12			1			
Sub Total		10	1			
Royal Oak						
Sheet 12		2				
Sub Total		2				
TOTALS		12	1			

AS CONSTRUCTED

STATION	TO STATION	8"-12" DIA EACH	13"-24" DIA EACH	25"-36" DIA EACH	37" & MORE DIA EACH	REMARKS
CODE		0010	0011	0012	0013	
Hazel Park						
Sheet #6		1				
Sheet #8		2				
Sheet #10		3	1			
Sub Total		6	1			
Royal Oak						
Sheet 12		1				
Sub Total		1				
TOTALS		7	1			

AUTH. 1006

REMOVING STUMPS

AS PER PLANS

STATION	TO STATION	8"-12" DIA EACH	13"-24" DIA EACH	25"-36" DIA EACH	37" & MORE DIA EACH	
CODE		0015	0016	0017	0018	
Royal Oak						
Sheet #12			3			
Sub Total			3			
TOTALS			3			

AS CONSTRUCTED

STATION	TO STATION	8"-12" DIA EACH	13"-24" DIA EACH	25"-36" DIA EACH	37" & MORE DIA EACH	REMARKS
CODE		0015	0016	0017	0018	
Sheet #12			3			
Sub Total			3			
TOTALS			3			

3/21/69

PLAN ESTIMATE BY Morrison-Tedbrams DATE 12-5-67 CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED JOHN R. BRAMER PROJ. ENG DATE 3-14-69 HISTORY CHECKED ENTERED ON PLAN BY ROBERT B. DAHM DATE 3-14-69

SHEET H

GRADING - CLEARING & GRUBBING

FILE NO.	STATE PROJECT	PROJECT	SHEET NO.
63174-079	63174		19

Rev 7-28-68

63174, 079

CULVERTS - HEADWALLS - RETAINING WALLS

BPR DIV NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH				

ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK	20	

AS PER PLANS

STATION	STANDARD PLAN	HEADWALLS 18" CLASS V CULVERT L.F.	FT OF CLASS	PRECAST CONC END SECTIONS EACH	GRANULAR MATERIAL GRADE A CL. A, M. CU. YDS.	GRADE B CIP CU. YDS.	CONC. GRADE A CU. YDS.	CONC. GRADE CU. YDS.	STEEL REINF LBS.	PLAIN RIPRAP CU. YDS.	GUARD POSTS EACH
CODE		0241				0176	0231		0237	3161	3210
Hazel Park											
Sheet #6		65									
Sheet #8		99									
Sheet #10		234				33					
Sheet #12		24									
Sub-Total		422				33					
Royal Oak											
Sheet #12		54									
Sub-Total		54									
TOTALS		476									

SEE SHEET 19 SEE

AS CONSTRUCTED

STATION	STANDARD PLAN	HEADWALLS 18" CLASS V CULVERT L.F.	FT OF CLASS	PRECAST CONC END SECTIONS EACH	GRANULAR MATERIAL GRADE A CL. A, M. CU. YDS.	GRADE B CIP CU. YDS.	CONC. GRADE A CU. YDS.	CONC. GRADE CU. YDS.	STEEL REINF LBS.	PLAIN RIPRAP CU. YDS.	GUARD POSTS EACH	EXPLANATION OF CHANGES
CODE		0241				0176	0231		0237	3161	3210	
Hazel Park												
Sheet #6		56			6							
Sheet #8		99										
Sheet #10		284			15							
Sheet #12		29										
Sub-Total		413			21							
Royal Oak												
Sheet #12		54										
Sub-Total		54										
TOTALS		467										

MOTH. BLG.

SEE SHEET 19 SEE

3/26/69

63174,079

PLAN ESTIMATE BY Morrison-Tedrams DATE 12-5-67 CHECKED BY _____ DATE _____ DATA COMPLETED John R. Bramer DATE 3-14-69 HISTORY CHECKED ENTERED ON PLANS ROBERT B. DAHM DATE 3-14-69

SHEET J

B.P.R. DIV. NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK	21	

MANHOLES - CATCH BASINS - LEACHING BASINS - INLETS & SEWERS

AS PER PLANS

STATION TO STATION	2340 1A 6' OR LESS	2341 1A 6'-14'	2342 1A 14'-25'	2405 1AM 14'-25'	2406 3M 6'-14'	2445 2K 6'-14'	2455 6K 6' OR LESS	5904 6M 6' OR LESS	5905 6K 6' OR LESS	2575 5K 6' OR LESS	1470 24' 14'-25'	2051 12" PCS Tee Cl. B 6'-14'	5900 12" PCS Tee Cl. B 6' OR LESS	1453 12" C76 Cl. II 6'-14'	1800 12" C76 Cl. II 6' OR LESS	1456 15" C76 Cl. II 6'-14'	1457 15" C76 Cl. II 6' OR LESS	1805 15" C76 Cl. II 14'-25'	1806 18" C76 Cl. II 6'-14'	1809 18" C76 Cl. II 6' OR LESS	1813 21" C76 Cl. II 6'-14'	1469 24" C76 Cl. II 6'-14'	1817 24" C76 Cl. II 14'-25'	1473 27" C76 Cl. II 6'-14'	1477 30" C76 Cl. II 6'-14'	1485 36" C76 Cl. II 6'-14'	1486 36" C76 Cl. II 14'-25'	1489 42" C76 Cl. II 6'-14'	1490 42" C76 Cl. II 14'-25'	1494 48" C76 Cl. II 6'-14'	1494 48" C76 Cl. II 14'-25'	0178 GRADE A CONC CU YDS	GRADE A CONC CU YDS	POROUS MAT'L 12"	SEWER TAPS EACH 12"	12" SEWER TRAPS EA	GUARD POSTS EA	EXPLANATION OF CHANGES
Sheet #17							2	1	1				180																					2252	4		2282	3210	
Sheet #6																																			3				
Sheet #8																																			10				
Sheet #10																																			6				
Sheet #12						1									12																				3				
Sheet #16				1									24																						1		1		
Sub-Total				1		1	2	1	1				204		12																				27		1		
ROYAL OAK																																							
Sheet #12						1									28																				7				
Sub-Total						1									28																				7				

AS CONSTRUCTED

STATION TO STATION	2340 1A 6' OR LESS	2341 1A 6'-14'	2342 1A 14'-25'	2405 1AM 14'-25'	2406 3M 6'-14'	2445 2K 6'-14'	2455 6K 6' OR LESS	5904 6M 6' OR LESS	5905 6K 6' OR LESS	2472 5K 6' OR LESS	1470 24' 14'-25'	2051 12" PCS Tee Cl. B 6'-14'	5900 12" PCS Tee Cl. B 6' OR LESS	1453 12" C76 Cl. II 6'-14'	1800 12" C76 Cl. II 6' OR LESS	1456 15" C76 Cl. II 6'-14'	1457 15" C76 Cl. II 6' OR LESS	1805 15" C76 Cl. II 14'-25'	1806 18" C76 Cl. II 6'-14'	1809 18" C76 Cl. II 6' OR LESS	1813 21" C76 Cl. II 6'-14'	1469 24" C76 Cl. II 6'-14'	1817 24" C76 Cl. II 14'-25'	1473 27" C76 Cl. II 6'-14'	1477 30" C76 Cl. II 6'-14'	1485 36" C76 Cl. II 6'-14'	1486 36" C76 Cl. II 14'-25'	1489 42" C76 Cl. II 6'-14'	1490 42" C76 Cl. II 14'-25'	1494 48" C76 Cl. II 6'-14'	1494 48" C76 Cl. II 14'-25'	0178 GRADE A CONC CU YDS	GRADE A CONC CU YDS	POROUS MAT'L 12"	SEWER TAPS EACH 12"	12" SEWER TRAPS EA	GUARD POSTS EA	EXPLANATION OF CHANGES
Sheet #17							2	0	1				176																					2252	3		2282	3210	
Sheet #6																																			4				
Sheet #8																																			10				
Sheet #10																																			6				
Sheet #12							1								12																				3				
Sheet #16				1									25																						1		1		
Sub-Total				1		1	2	0	1				201		12																				27		1		
ROYAL OAK																																							
Sheet #12						1									28																				7				
Sub-Total						1									28																				7				
AUTH. 1004																																							
AUTH. 1016																																							
AUTH. 1004																																							
TOTALS							1	2	2	1	1		204		40																			See Sheet	34		1	See		
							1	2	2	0	1		201		40																			See Sheet	34		1	See		

REMOVING - ABANDONING - RECONSTRUCTING - & ADJUSTING COVERS

AS PER PLANS

STATION TO STATION	REMOVING EACH 0085 MH	0086 CB	0087 INLET	ABANDONING EACH 0091 MH	0092 CB	0093 INLET	RECONSTRUCTING EACH 2670 MH	2671 CB			ADJUSTING COVERS EACH 2650 MH/CB	2651	COVERS EACH 2633 A	2634 L	2636 C-4	2637 D-4	2638 E	2639 K	J	H
CODE																				
Sheet #17											1	2								
Sheet #6					2		4	2			5		4							
Sheet #8											8		10							
Sheet #10								1			5		6							
Sheet #12								1			4		3							
Sheet #16											7	7								
Sub-Total					2		4	4			30	9	23							
ROYAL OAK																				
Sheet #12					2		2	2			5		7							
Sheet #14								1			2									
Sub-Total					2		3	2			7		7							
TOTALS					4		7	6			37	9	30							

AS CONSTRUCTED

STATION TO STATION	REMOVING EACH 0085 MH	0086 CB	0087 INLET	ABANDONING EACH 0091 MH	0092 CB	0093 CB	RECONSTRUCTING EACH 2670 MH	2671 CB			ADJUSTING COVERS EACH 2650 MH/CB	2651	COVERS EACH 2633 A	2634 L	2636 C-4	2637 D-4	2638 E	2639 K	J	H	EXPLANATION OF CHANGES
CODE																					
Sheet #17								3													
Sheet #6					2		7	1			5		4								
Sheet #8							5				6		10								
Sheet #10							7				1		7								
Sheet #12							3	1			1		3								
Sheet #16											6	7									
Sub-Total					2		22	5			19	7	24								
ROYAL OAK																					
Sheet #12					2		7				3		7								
Sheet #14							3	1													
Sub-Total					2		10	1			3		7								
AUTH. 1016																					
AUTH. 1016																					
AUTH. 1003																					
TOTALS					4		32	6			22	7	31								

UNDERDRAINS

AS PER PLANS

STATION TO STATION	TILE DRAIN LIN FT	EDGE DRAIN 6" LIN FT	BANK DRAINS 6'-14' LIN FT	EDGE DRAIN 8" LIN FT	BANK DRAINS 6'-14' LIN FT	EXPLANATION OF CHANGES
CODE		1421		1432		
TOTALS						

AS CONSTRUCTED

STATION TO STATION	TILE DRAIN LIN FT	EDGE DRAIN 6" LIN FT	BANK DRAINS 6'-14' LIN FT	EDGE DRAIN 8" LIN FT	BANK DRAINS 6'-14' LIN FT	EXPLANATION OF CHANGES
CODE		1421		1432		
TOTALS						

MISCELLANEOUS

CODE	ITEM	AS PER PLANS QUANTITY	AS CONST QUANTITY	REMARKS
			3/26/69	

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATA COMPLETED John R. Bramer PROJ ENG DATE 3-14-69 HISTORY CHECKED ENTERED ON PLANS Robert B. Dahm DATE 3-14-69

SHEET K

MANHOLES - CATCH BASINS - INLETS - SEWERS | FILE NO USE ENGINEER STENCIL 63174-079 | STATE PROJECT 63174 | FEDERAL PROJECT | FY 1961 27

Rev 7-23-63

HAZEL PARK

63174-079

B.P.R. DIV. NO	STATE	PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
4	MICH				

ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK	22	

SURFACING — CONCRETE

AS PER PLANS

STATION TO STATION	LENGTH	WIDTH	CONC BASE COURSE SQ YDS 2854	CONC PAV'T 10" UNIFORM SQ YDS	CONC PAV'T 9" UNIFORM SQ YDS 2853	CONC PAV'T 8" UNIFORM SQ YDS 2852	CONC PAV'T 8" UNIF. WITH 6" BASE SQ YDS 5900	SAWING BIT. SURFACE SQ YDS 2921	BIT. AGGREGATE SURFACE COURSE-AI LIN. FT. 2946	BIT. AGGREGATE SURFACE COURSE-AI TONS 3122	BIT. APPROACH MIXTURE TONS 2930	BIT. BINDER COURSE TONS 2940	BIT. CONC. WEARING COURSE TONS 2970	BIT. BOND COAT GALS. 2973	BIT. PRIME COAT GALS. 3142	CLASS A APPROACH CU. YDS. (L.M.) 2999	AGGREGATE BASE COURSE CU. YDS. (L.M.) 3070	WATER 1000 GAL. UNITS 3150	REMARKS
CODE																			
Hazel Park																			
Sheet # 5					200							12		20	216	27	2	8	
Sheet # 6						2572		1091	20		14	5	75						
Sheet # 8						3408		2393			31	11	54						
Sheet #10						3316	122	2205			28	10	49						
Sheet #12						409		342			4	2	8						
Sheet #16					5						370	321	987						
Sub-Total					205	9705	122	6031	20		447	361	1173	20	216	27	2	8	
Royal Oak																			
Sheet #12						3185	122	2213		48	29	9	49		24				
Sheet #14						538		490			6	2	11						
Sub-Total						3723	122	2703		48	35	11	60		24				
TOTALS					205	13,428	244	8734	20	48	482	372	1233	20	240	27	SEE SHOULDERS		

AS CONSTRUCTED

STATION TO STATION	LENGTH	WIDTH	CONC BASE COURSE SQ YDS 2854	CONC PAV'T 10" UNIFORM SQ YDS	CONC PAV'T 9" UNIFORM SQ YDS 2853	CONC PAV'T 8" UNIFORM SQ YDS 2852	CONC PAV'T 8" UNIF. WITH 6" BASE SQ YDS 5900	SAWING BIT. SURFACE SQ YDS 2921	BIT. AGGREGATE SURFACE COURSE-AI LIN. FT. 2946	BIT. AGGREGATE SURFACE COURSE-AI TONS 3122	BIT. APPROACH MIXTURE TONS 2930	BIT. BINDER COURSE TONS	BIT. CONC. WEARING COURSE TONS 2940	BIT. BOND COAT TONS 2970	BIT. PRIME COAT GALS. 2973	CLASS A APPROACH CU. YDS. (L.M.) 3142	AGGREGATE BASE COURSE CU. YDS. (L.M.) 2999	CAL. CHL. TONS 3070	WATER 1000 GAL. UNITS 3150	EXPLANATION OF CHANGES
CODE																				
HAZEL PARK																				
Sheet #5					232.4	55.1		148.1					36.2	49		206.5				
Sheet #6						2493.2		1251.1	12.1	20.0			37.6	68						
Sheet #8						3425.4		2400.6		20.8			46.5	63						
Sheet #10						3294.8	36.6	2330.4					48.6	65						
Sheet #12						631.9		291.5					2.4	3						
Sheet #16												71.2	252.1	260						
SUB-TOTAL					232.4	9,900.4	36.6	4420.7	12.1	40.8		71.2	423.4	508	0	206.5	0	1.37	0	
ROYAL OAK																				
Sheet #12						3398.5		2337.0		48.1			47.1	64		23.1				
Sheet #14						579.9		472.3	7.2				4.2	13						
SUB-TOTAL						3978.4	0	2809.3	7.0	48.1			51.3	77	0	23.1	0	0.15	0	
TOTALS					232.4	13,878.8	36.6	9230.0	19.1	88.9		71.2	474.7	585	0	229.6	0	SEE SHOULDERS		

AUTH. 1009 — AUTH. 1017 — AUTH. 1009 — AUTH. 1020 — AUTH. 1011 — AUTH. 1011 — AUTH. 1011 — AUTH. 1011 — AUTH. 1020 — AUTH. 1020 — AUTH. 1015 — AUTH. 1015 — INCLUDED IN TOTAL BELOW

Application Rate 0.00667 Tons/cu. yd.

63174-079

CURB & GUTTER — SIDEWALKS

AS PER PLANS

STATION TO STATION	DETAIL 2A LIN. FT. 2703	DETAIL 2 LIN. FT. 2702	DETAIL 7 LIN. FT. 2712	DETAIL 8 LIN. FT. 2714	DETAIL 10 LIN. FT. 2716	DETAIL 12A LIN. FT. 2722	CONC SW 4" SQ. FT. 3101	CONC SW 7" SQ. FT. 3103
CODE								
HAZEL PARK								
Sheet #17		40						
Sheet # 6							110	
Sheet #10	120							
Sheet #12	140						36	
Sheet #16	107						200	
Sub-Total	367	40					346	
Royal Oak								
Sheet #12	250						144	
Sheet #14								
Sub-Total	250						144	
TOTALS	617	40					490	

AS CONSTRUCTED

STATION TO STATION	DETAIL 2A LIN. FT. 2703	DETAIL 2 LIN. FT. 2702	DETAIL 7 LIN. FT. 2712	DETAIL 8 LIN. FT. 2714	DETAIL 10 LIN. FT. 2716	DETAIL 12A LIN. FT. 2722	CONC SW 4" SQ. FT. 3101	CONC SW 7" SQ. FT. 3103	REMARKS
CODE									
Sheet #17		54.8							
Sheet # 6							373.2		
Sheet #10	44.0						193.2		*Sheet #8
Sheet #12	13.0						100.0		
Sheet #16	12.[illegible]						181.0		
Sub-Total	29.8.4	54.8					847.4		
Royal Oak									
Sheet #12	24.8						55.8		
Sheet #14									
Sub-Total	24.8						55.8		
TOTALS	547.2	54.8					903.2		

AUTH. 1017 — AUTH. 1017 — AUTH. 1019

SHOULDERS

AS PER PLANS

STATION TO STATION	CLASS A CU. YDS. (L.M.) 3113	CLASS AA CU. YDS. (L.M.) 3120	CLASS B CU. YDS. 3115	CAL. CHL. TONS 3070	WATER 1000 GAL. UNITS 3150	CLASS A CU. YDS. (L.M.) 3113	CLASS AA CU. YDS. (L.M.) 3120	CLASS B CU. YDS. 3115	CAL. CHL. TONS 3070	WATER 1000 GAL. UNITS 3150	REMARKS
CODE											
Hazel Park	(This Sheet)			2	8						
Sheet #5	100			1	3	96					
Sheet #6	405			4	14	386					
Sheet #8	459			4	15	442					
Sheet #10	423			4	14	406					
Sheet #12	25			1	1	24					
Sub-Total	1412			16	55	1354			9.43	0	
Royal Oak											
Sheet #12	373			3	12	358					
Sheet #14	63			1	3	60					
Sub-Total	436			4	14	418			2.71	0	
TOTALS	1848			20	69	1772			13.34	0	

Application Rate 0.00667 Tons/cu. yd.

AUTH. 1015 — AUTH. 1015 — AUTH. 1015 — AUTH. 1015

MISCELLANEOUS

CODE	ITEM	QUANTITY	AS CONST QUANTITY	EXPLANATION
3310	CONC ROW MARKERS	EACH	EACH	
	MONUMENT BOXES (FURNISHED BY DEPT.)	EACH	EACH	
	Hazel Park			
2922	Chipping Pav't for Joints	550 L.FT.	632.6 L.FT.	AUTH. 1018
2751	Conc. Divider-Type II	70 Sq. Yds.	0 Sq. Yds.	AUTH. 1017
2834	Pavement Replacement	68 Sq. Yds.	38.1 Sq. Yds.	AUTH. 1022

TOTAL LENGTH OF 33 FT PAVEMENT DUAL	1.026	MILES
TOTAL LENGTH OF FT PAVEMENT		MILES
TOTAL LENGTH OF FT PAVEMENT		MILES
TOTAL LENGTH OF FT PAVEMENT		MILES
TOTAL LENGTH OF BRIDGES		MILES
TOTAL LENGTH OF R R CROSSINGS		MILES
TOTAL LENGTH OF PROJECT	1.026	MILES

3/26/69

PLAN ESTIMATE BY Morrison-Tedrams DATE 12-5-67 CHECKED BY _____ DATE _____ DATA COMPLETED _____ PROJ. ENG. DATE _____ HISTORY CHECKED _____ DATE _____ ENTERED ON PLAN BY _____

SHEET L

SURFACING - CONCRETE

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
63174-079	63174		22

Rev 7-23-63

R.P.R. DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH				

ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
I-75	63174	OAKLAND	HAZEL PK. ROYAL OAK	23	

MISCELLANEOUS

GUARD RAIL

AS PER PLANS						AS CONSTRUCTED					
STATION	TO STATION	STEEL BEAM LIN FT	DOUBLE STEEL BEAM LIN FT	GUARD POSTS EACH	EXPLANATION OF CHANGES	STEEL BEAM LIN FT	DOUBLE STEEL BEAM LIN FT	GUARD POSTS EACH	EXPLANATION OF CHANGES
CODE		3200	3204	3210		3200	3204	3210	
TOTALS									

REMOVALS

AS PER PLANS											AS CONSTRUCTED									
STATION	TO STATION	OLD PAVT SQ YDS	MASONRY & CONC CU YDS	SIDEWALK SQ YDS	OLD CULVS EACH	CURB & GUTTER LIN FT	CURB LIN FT	REMOVING ASPH SURF SQ YDS	EXPLANATION OF CHANGES		OLD PAVT SQ YDS	MASONRY & CONC CU YDS	SIDEWALK SQ YDS	OLD CULVS EACH	CURB & GUTTER LIN FT	CURB LIN FT	REMOVING ASPH SURF SQ YDS	EXPLANATION OF CHANGES		
CODE		0027	0042	0043	0045	0060	0056	0034			0027	0042	0043	0045	0060	0056	0034			
HAZEL PARK	Sheet #17	73									89									
	Sheet #6	44		140			982				209	155	273			910				
	Sheet #8		6.5	27							4		12							
	Sheet #10		6.5				119					28				272				
	Sheet #12	19		4			154						26							
	Sheet #16	6		22			100				5		20			114				
	Sub-Total	142	13	193			1355				307	18.5	331			1296				
ROYAL OAK	Sheet #12	36		16			268				62	61	17			268				
	Sub-Total	36		16			268				62	61	17			268				
											AUTH 1014		AUTH 1014			AUTH 1014				
TOTALS		178	13	209			1623				309	24.4	348			1564				

SEEDING - MULCHING

AS PER PLANS								AS CONSTRUCTED											
STATION	TO STATION	CLASS 1	CLASS 2	NYS SEEDING ACRES	CHEMICAL FERTILIZER ACRES	MULCHING TONS	FERTILIZER LBS	CLASS 1	CLASS 2	NYS SEEDING ACRES	CHEMICAL FERTILIZER ACRES	MULCHING TONS	FERTILIZER LBS	EXPLANATION OF CHANGES					
CODE		3265	3267	3274	3250	3251	3254	3256	3267	3274	3250	3251	3254						
HAZEL PARK																			
Note Sheet				5		3100	8			0		4676	12.2						
Sub-Total				5		3100	8					4676	12.2						
ROYAL OAK																			
Note Sheet				2		1240	3					1600	4.1						
Sub-Total				2		1240	3					1600	4.1						
TOTALS				7		4340	11			0 (AUTH 1013)		6276 (AUTH 1013)	16.3 (AUTH 1013)						

63174.079

OBLITERATING OLD ROAD

AS PER PLANS				AS CONSTR				AS PER PLANS				AS CONSTR			
STATION	TO STATION	ACRES	STAS	ACRES	STAS	EXPLANATION OF CHANGES		STATION	TO STATION						EXPLANATION OF CHANGES
CODE		3331	3330	3331	3330			CODE							
TOTALS															

SODDING

AS PER PLANS						AS CONSTRUCTED					
STATION	TO STATION	CLASS A SQ YDS	CLASS B SQ YDS	JUTE MATTING SQ YDS	EXPLANATION OF CHANGES	CLASS A SQ YDS	CLASS B SQ YDS	JUTE MATTING SQ YDS	EXPLANATION OF CHANGES
CODE		3260	3261	3255		3260	3261	3255	
HAZEL PARK									
Sheet #17		48				65			
						13			Sheet #16
TOTALS		48				78			

AUTH 1013

STATION ITEMS

AS PER PLANS										AS CONSTRUCTED									
STATION	TO STATION	TRIM & FINISH EARTHGRADE STAS	FINE GRADING & CLEANUP STAS	FINAL TRIM & CLEAN UP STAS	FINE GRADING STAS	MANIPULATION STAS	CLEANING UP ROADSIDES STAS		EXPLANATION OF CHANGES		TRIM & FINISH EARTHGRADE STAS	FINE GRADING & CLEANUP STAS	FINAL TRIM & CLEAN UP STAS	FINE GRADING STAS	MANIPULATION STAS	CLEANING UP ROADSIDES STAS			EXPLANATION OF CHANGES
CODE		0125	3096	3098	3097		0191				0125	3096	3098	3097		0191			
HAZEL PARK																			
Note Sheet				64									81.5						
Sub-Total				64									81.5						
ROYAL OAK																			
Note Sheet				21									27.0						
Sub-Total				21									27.0						
TOTALS				85									108.5						

AUTH. 1019

MAINTAINING TRAFFIC

AS PER PLANS								AS CONSTRUCTED											
STATION	TO STATION	INTER-SECTION EACH	MILES	STAS	BARRICADE EACH	LUMP SUM	BRIDGE OVER PAVT EACH	INTER-SECTION EACH	MILES	STAS	BARRICADE EACH	LUMP SUM	BRIDGE OVER PAVT EACH	EXPLANATION OF CHANGES					
CODE		3284	3283	3282	3293	3281	3296	3284	3283	3282	3293	3281	3296						
HAZEL PARK																			
Sheet #6					4						4								
Note Sheet			1.5						1.5100										
Sheet #16		3						3											
Sub-Total		3	1.5		4			3	1.5100		4								
ROYAL OAK																			
Sheet #12					2						2								
Note Sheet			0.5						0.5023										
Sub-Total			0.5		2				0.5023		2								
TOTALS		3	2		6			3	2.0123		6								

AUTH. 1021

ROW FENCING

AS PER PLANS								AS CONSTRUCTED									
STATION	TO STATION	REMOVING RODS	STEEL BARBED WIRE RODS		WOVEN WIRE WOOD POSTS RODS	WOVEN WIRE STEEL POSTS RODS			EXPLANATION OF CHANGES	REMOVING RODS	STEEL BARBED WIRE RODS		WOVEN WIRE WOOD POSTS RODS	WOVEN WIRE STEEL POSTS RODS			EXPLANATION OF CHANGES
CODE		0075	3423		3420	3421				0075	3423		3420	3421			
TOTALS																	

MISCELLANEOUS

AS PER PLANS			AS CONSTR	
CODE	ITEM	QUANTITY	QUANTITY	EXPLANATION OF CHANGES
0130	COMPACTING ORIGINAL GROUND	STAS	STAS	
0131	COMPACTING CUT SECTIONS	STAS	STAS	
0132	TESTING EARTH GRADE WITH COMPACTOR	HRS	HRS	
3072	CALCIUM CHLORIDE ADMIXED TYPE I	TONS	TONS	
3150	WATER (1000 GAL UNITS)	UNITS	UNITS	
3305	COMPLETING UNDER TRAFFIC	MILES	MILES	
	EXTRAS			
	AUTH 2003 CL. I SEEDING HAZEL PARK 7.02 ACRES			
	" " " " ROYAL OAK 2.39 ACRES			
	" " " " PROJECT TOTAL →		9.41 ACRES	
	AUTH. 2002. 24" SEWER BULKHEAD HAZEL PARK		1 EACH	
	AUTH. 2001 REMOVING STUMPS 8" to 12" ROYAL OAK		1 EACH	

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____

DATA COMPLETED JOHN R. BRAMER (PROJ. ENG.) DATE 3-14-69

HISTORY CHECKED ENTERED ON PLANS ROBERT B. DANCK DATE 3-17-69

SHEET N

MISCELLANEOUS

FILE NO. (U.S.D.O. STENOG.)	STATE PROJECT	FISCAL PROJECT	SHEET NO.
63174.079	63174		23

Rev 7-23-63

63174-04096A
&
63103-04261A

LET 11-17-71

I 63174 - 04096 A
I 75-2 (147) 59 (EMP)
I 63103 - 04261 A
I 696-8 (43) 225(EMP)
2.07 mi of Freeway Lighting on I-75 in Hazel Park and on I-696 from the I-75 Interchange E'ly to the Ten-Mile Road Connector at Dei Avenue in Madison Hgts. all in Oakland County. Item 13

CS: 63174

ID: 04096A

ROUTE	JOB NUMBER	FEDERAL NO.	SHEET NO.	TOTAL SHEETS
I-75, I-696	04096A & 04261A	I75-2(147)59 I696-8(43)225	1	17

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS 1970 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

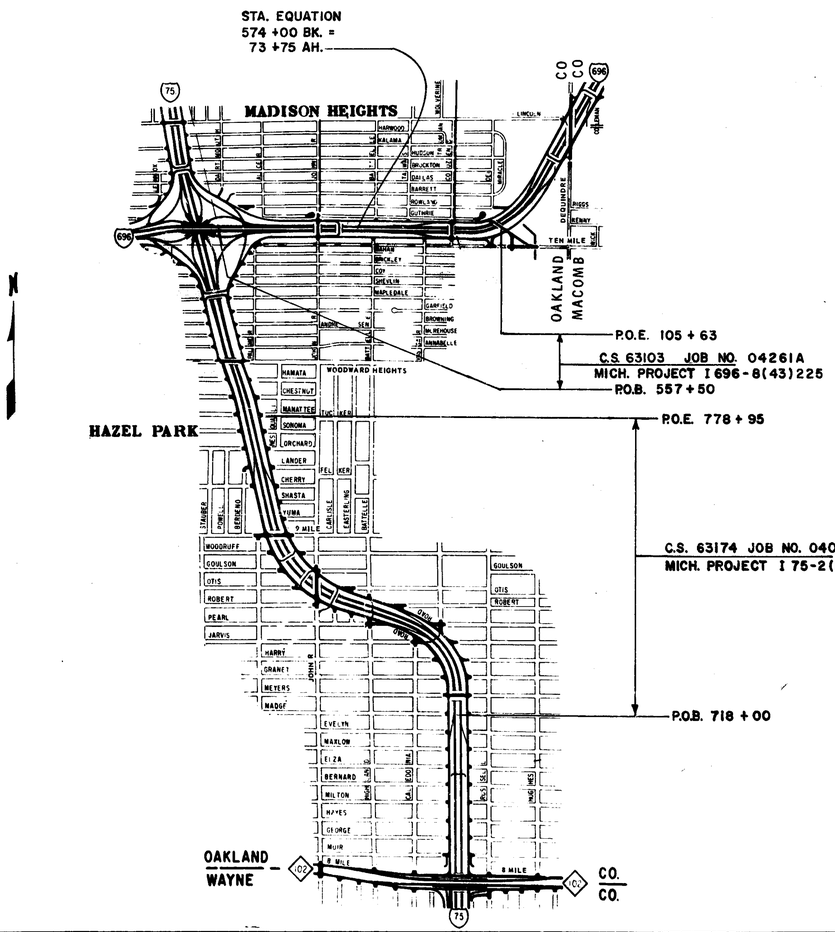
PLANS OF PROPOSED

MICHIGAN PROJECT EMP I 75-2(147)59 & EMP I 696-8(43)225
CONTROL SECTIONS I 63174 & I 63103
JOB NUMBERS 04096A & 04261A

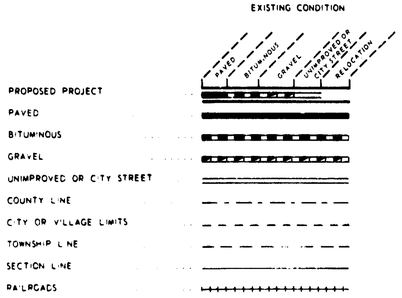
OAKLAND COUNTY
CITIES OF HAZEL PARK & MADISON HEIGHTS

LIGHTING PLANS SHEET NO'S.

TITLE 1
NOTES & LEGEND 2
PLANS 3-10
DETAILS 11-16
QUANTITIES SHEET 17



TITLE SHEET LEGEND



AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER
2-74

ITEM NO. 1475 & 1476

CONTRACT FOR Freeway Lighting

APPROVALS

CHECKED	ENGINEER - DESIGN SECTION III	10-15-71 DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF DESIGN	10-15-71 DATE
RECOMMENDED FOR APPROVAL	TRAFFIC DIVISION	DATE
RECOMMENDED FOR APPROVAL	CONSTRUCTION DIVISION	10/19/71 DATE
RECOMMENDED FOR APPROVAL	CHIEF, BUREAU OF ENGINEERING	10/15/71 DATE

DEPARTMENT OF STATE HIGHWAYS
HENRIK E. STAFSETH - STATE HIGHWAY DIRECTOR

APPROVED BY DEPUTY DIRECTOR - CHIEF ENGINEER 10/15/71 DATE

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED [redacted]

SQUAD JILDEH

	JOB NUMBER	FEDERAL PROJECT	SHEET NO.
63174 & 63103	C4096A 04261A	I 75-2(147)59 I 696-8(43)225	1

CONTROL SECTION - JOB NUMBER
I 63174-04096A & I 63103-04261A

UNDERGROUND

- EXISTING MANHOLE
- MANHOLE (2-WAY)
- MANHOLE (3-WAY)
- MANHOLE (4-WAY)
- MANHOLE (CORNER)
- EXISTING HANDHOLE
- HANDHOLE
- 4-3" — EXISTING CONDUIT (4-3" SHOWN)
- ABANDON EXISTING CONDUIT
- 1-3" — ENCASED CONDUIT (1-3" SHOWN)
- 1-3" — GALVANIZED STEEL CONDUIT (1-3" SHOWN)
- 1-2" — GALVANIZED STEEL CONDUIT, JACKING-BORING (1-2" SHOWN)
- CONDUIT RUN - "NOT A PART OF ELECTRICAL CONTRACT".
- DIRECT BURIAL CABLE (NO. & SIZE AS INDICATED)
- EXISTING DIRECT BURIAL CABLE
- ABANDON CABLE
- BUILD 6" SEWER
- 1-3" — DIRECT BURIAL CONDUIT TYPE II (1-3" SHOWN)
- CONCRETE FOUNDATION FOR PAD MOUNT TRANSFORMER
- CONCRETE FOUNDATION FOR FIRE OR POLICE CALL BOX
- EXISTING UG.-FED ST. LTG. UNIT
- REMOVE UG.-FED ST. LTG. UNIT
- INSTALL SALVAGED UG.-FED ST. LTG. UNIT ON NEW FDN.
- UG.-FED, 400 W. TYPE II, CLEAR, MERCURY VAPOR ST. LTG. UNIT WITH 10 FT. BRACKET ARM ON NEW FOUNDATION WITH 30 FT. MOUNTING HEIGHT. (EXCEPT WHERE OTHERWISE NOTED)
- UG.-FED, 1000 W. TYPE III, CLEAR, MERCURY VAPOR ST. LTG UNIT WITH 15 FT. BRACKET ARM ON NEW FOUNDATION WITH 45 FT. MOUNTING HEIGHT. (EXCEPT WHERE OTHERWISE NOTED)
- UG.-FED, 1,000 W. TYPE III, CLEAR, MERCURY VAPOR ST. LTG. UNIT WITH DBL. BRACKET ARM (12 FT.) ON NEW FOUNDATION WITH 45 FT. MOUNTING HEIGHT. (EXCEPT WHERE OTHERWISE NOTED)
- UG.-FED 400 W. TYPE II, CLEAR, MERCURY VAPOR ST. LTG. WITH 10 FT. BRACKET ARM ON BRIDGE OR RETAINING WALL WITH 30 FT. MOUNTING HEIGHT. (EXCEPT WHERE OTHERWISE NOTED)
- WALL MOUNTED MERCURY VAPOR U.B. LTG. UNIT.
- FB — INDICATES ST. LTG STANDARD WITH FRANGIBLE TRANSFORMER BASE

OVERHEAD

- EXISTING WOOD POLE
- WOOD POLE (HEIGHT & CLASS AS INDICATED)
- O.H.-FED, 400 W. TYPE II, CLEAR, MERCURY VAPOR ST. LTG. UNIT WITH 15 FT. BRACKET ARM ON WOOD POLE AND 30 FT. MOUNTING HEIGHT.
- EXISTING O.H.-FED ST. LTG. UNIT WITH WOOD POLE.
- 3-#6 — EXISTING O.H. LINE (3-#6 SHOWN)
- 2-#6 — OVERHEAD LINE (2-#6 SHOWN)
- REMOVE O.H. LINE.
- 400 W. TYPE I CLEAR, MERCURY VAPOR ST. LTG. UNIT ON SPAN WIRE AND MIN. 25 FT. MOUNTING HEIGHT.

GENERAL

- R.O.W. — RIGHT OF WAY LINE
- L.A.R.O.W. — LIMITED ACCESS RIGHT OF WAY LINE
- PROPOSED PAVEMENT JOINT LINE
- P.L.C. — INDICATES THE PUBLIC LIGHTING COMMISSION.
- D.E.CO. — INDICATES THE DETROIT EDISON COMPANY
- C.P.CO. — INDICATES THE CONSUMERS POWER COMPANY

GENERAL NOTES

1. ALL DIRECT BURIAL ST. LTG. CABLES SHALL BE INSTALLED IN CONTINUOUS UNCUT LENGTH FROM STREET LIGHTING STANDARD TO ST. LTG. STD. AND/OR HANDHOLE.
2. LUMINAIRES SHALL BE MERCURY VAPOR, TYPE AS INDICATED ELSEWHERE, MED. DISTRIBUTION, SEMICUTOFF WITH CLEAR LAMP AND 240 V. INTEGRAL CONSTANT WATTAGE BALLAST.
3. THE ITEM "1-3" DIRECT BURIAL CONDUIT (SPECIAL)" SHALL INCLUDE SAWING THE BITUMINOUS MEDIAN PAVEMENT, REMOVING BITUMINOUS, TRENCHING, FURNISHING AND LAYING CONDUIT, BACKFILLING, SURFACING AND RESTORING THE BLACK TOP SHOULDERS WITH THE SAME MATERIAL AS THE EXISTING CONSTRUCTION.
4. THE ITEM "1-3" GALV. STEEL CONDUIT, JACKING-BORING" SHALL INCLUDE RESTORING SHOULDER AND BITUMINOUS SHOULDER PAVEMENT.
5. THE ITEM "6" EDGE DRAIN" SHALL INCLUDE EXCAVATION AND BACKFILLING AND NECESSARY REPLACEMENT OR RELOCATION OF THE EXISTING EDGE DRAIN IN THE VICINITY OF THE LIGHT STANDARD FOUNDATIONS.
6. THE EXISTING MEDIAN GUARD RAIL IN THE ENTIRE LENGTH OF PROJECT 63174 IS TO REMAIN EXCEPT FOR THE PROPOSED LIGHT STANDARD AREAS.
7. THE ITEM "DOUBLE BEAM GUARD RAIL (SPECIAL)" SHALL INCLUDE REMOVING THE EXISTING SECTIONS OF 6" CHANNEL BEAM, INSTALLING THE REQUIRED SPACING BLOCKS, AND REINSTALLING THE BEAM GUARD RAIL COMPLETE AS SHOWN ON THE PLAN DETAIL. THE 6" CHANNEL BEAMS ARE TO BE DELIVERED TO THE M.D.S.H. SIGN SHOP LOCATED ON FRANKLIN ROAD IN SOUTHFIELD AS DIRECTED BY THE ENGINEER.
8. RESTORATION OF BACKSLOPES ON I-75 AT STA. 736+25 RT. AND STA. 775+05 LT. WHICH INCLUDES BACKFILL, TOP SOIL, SEEDING AND SODDING WILL BE INCIDENTAL TO THE PROJECT.
9. IN THE EVENT THERE IS DAMAGED GUARD RAIL THE M.D.S.H. WILL REPAIR OR REPLACE THE SECTIONS OF GUARD RAIL PRIOR TO THE SETTING OF LIGHT STANDARDS.
10. ALL TOPSOIL, SODDING & SEEDING REQUIRED TO RESTORE BACKSLOPES, SHOULDERS ETC.; DISTURBED BY INSTALLING BURIED CONDUIT SHALL BE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.
11. JACKING PITS SHALL BE LOCATED OUTSIDE OF SHOULDER AREA AS DIRECTED BY THE ENGINEER.

DESIGN CRITERIA

1.0 FOOTCANDLE INITIAL ILLUMINATION
3:1 TO 4:1 UNIFORMITY RATIO

PROJECT 63174 JOB #04096A ONLY:

AN ESTIMATED QUANTITY OF 6" EDGE DRAIN TO REPLACE THAT POSSIBLY DAMAGED DURING PLACEMENT OF LIGHT STANDARD FOUNDATIONS.

6" EDGE DRAIN 200 L.FT.

ILLUMINATED TARGET ARROW SIGN (TYPE A), 2 EACH

MAINTAINING TRAFFIC — LUMP SUM

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

NOTES & LEGEND

I-75 FREEWAY

8 MILE RD TO I-696

REVISIONS

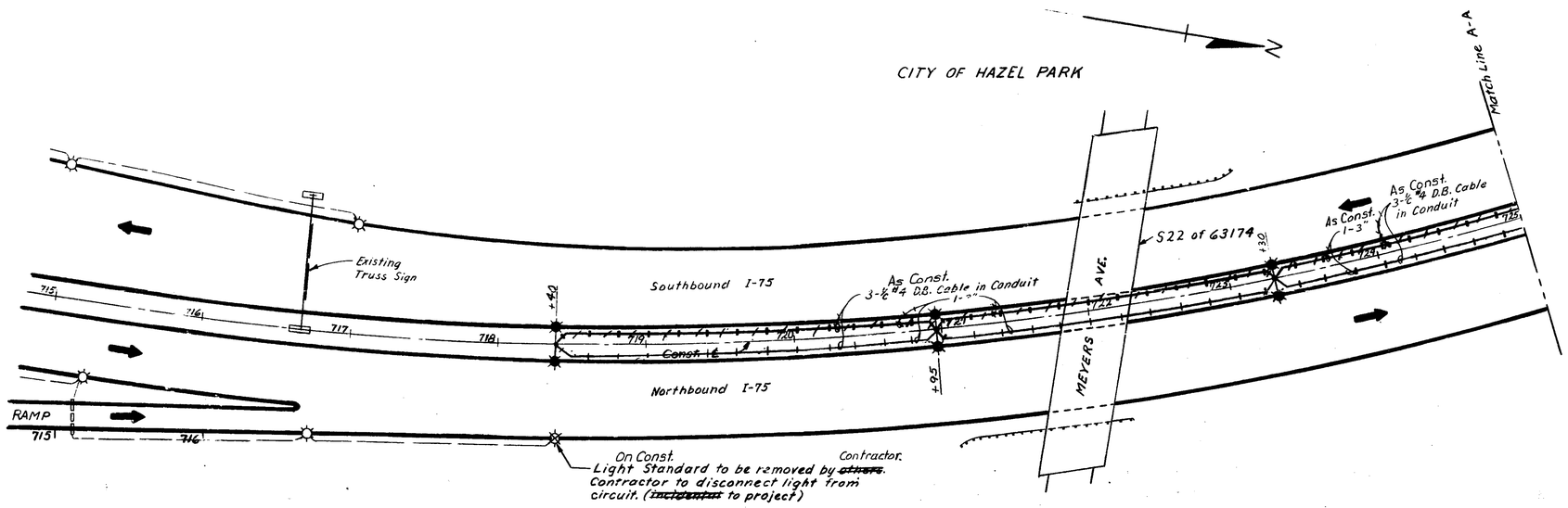
NO	DESCRIPTION	DATE	BY

ROAD DESS	T. Jildeh	1970
DRAWN BY	R.C.	7-9-71
TRACED BY	D.W.	3-23-70
CHECKED BY	R.B.	10-11-71

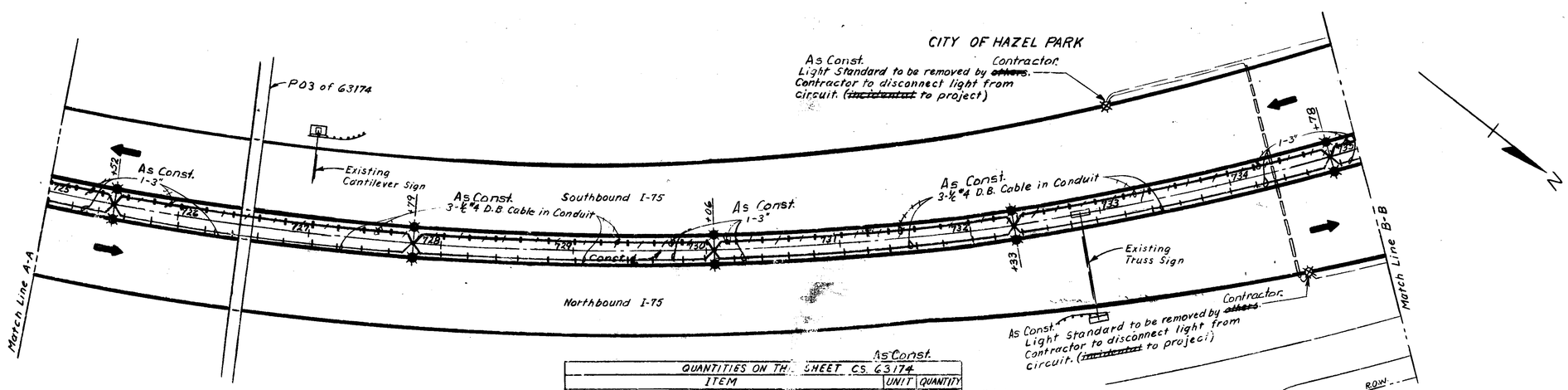
SHEET 2 OF 17

63174 & 63103

JOB NO. 04096A 04261A



SCALE - 1" = 40'



As Const.

QUANTITIES ON THIS SHEET CS. 63174		
ITEM	UNIT	QUANTITY
1-3" Direct Burial Conduit (Special)	L.Ft.	~~1,660~~ 1,694
600 V., 3-½ #4 Direct Burial Cable in Conduit	L.Ft.	~~1,660~~ 1,694
Lt. Std., 45' M.H., 12' Dbl. Arm, on New Foundation.	Each	8
1,000 W. Mercury Vapor Luminaire	Each	16
Double Beam Guard Rail (Special)	L.Ft	500
Inspection Fees (D.E. Co.)	Each	8
Extra— Removed U.S. Fed. Street Light Unit	Each	3

SCALE - 1" = 40'

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-75 FREEWAY
8 MILE RD. TO I-696

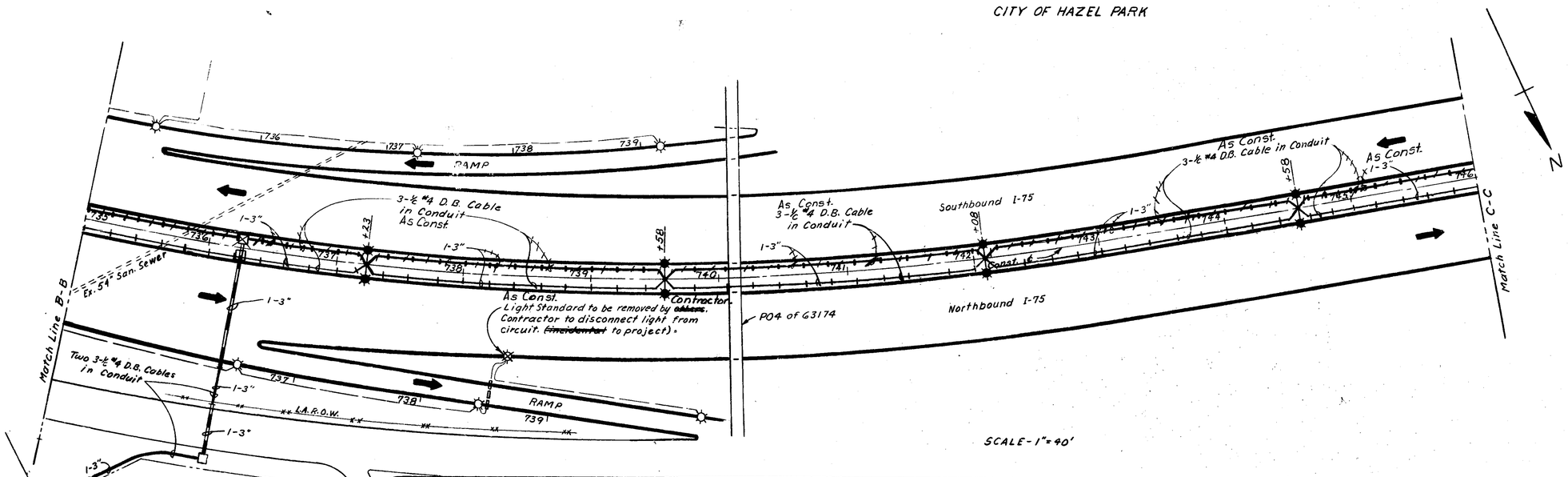
REVISIONS

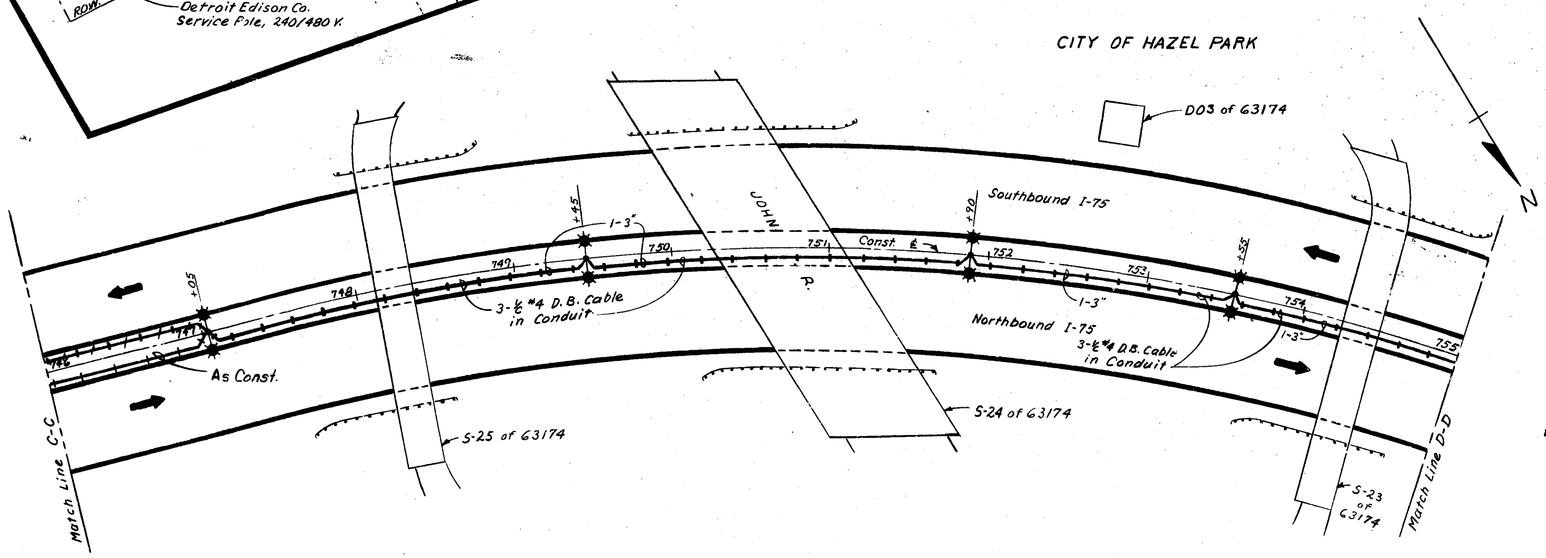
NO.	DESCRIPTION	DATE	BY

ROAD DES	T. Jildeh	1971
DRAWN BY	R.L.	7-6-71
TRACED BY	D.W.	7-7-71
CHECKED BY	H.B.	10-11-71
SHEET 3 OF 17		

63174

JOB NO. 04096 A





SCALE-1"=40'

QUANTITIES ON THIS SHEET C.S. 63174			As Const.
ITEM		UNIT	QUANTITY
Handhole - Heavy Duty Cover		Each	2
1-3" Galv. Steel Conduit	130	L. Ft.	~~115~~
1-3" Galv. Steel Conduit - Jacking Boring	119.8	L. Ft.	~~140~~
600 V, 3-½ #4 Direct Burial Cable in Conduit	2,625	L. Ft.	~~2,530~~
Lt. Std., 45' M.H., 12' Dbl. Arm on New Foundation		Each	8
1000 W. Mercury Vapor Luminaire		Each	16
Double Beam Guard Rail (Special)		L. Ft.	500
Inspection Fees (D.E. Co.)		Each	8
1-3" Direct Burial Conduit (Special)	2,069	L. Ft.	~~2,000~~
1-2" Galv. Steel Conduit - Riser	11	L. Ft.	~~10~~
Extra - Removed U.S. Fed. Street Light Unit		Each	1

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-75 FREEWAY
8 MILE RD. TO I-696

REVISIONS

NO.	DESCRIPTION	DATE	BY

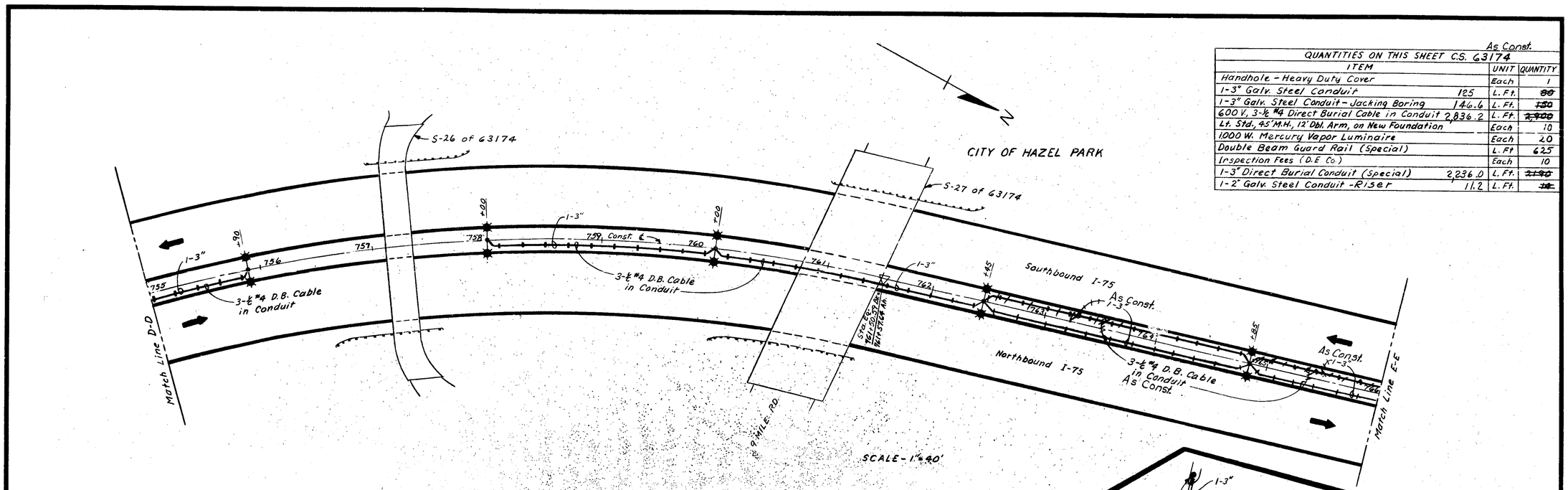
SQUAD BOSS	T. Jildeh	1971
DRAWN BY	R.C.	7-7-71
TRACED BY	D.W.	7-8-71
CHECKED BY	H.P.	10-11-71

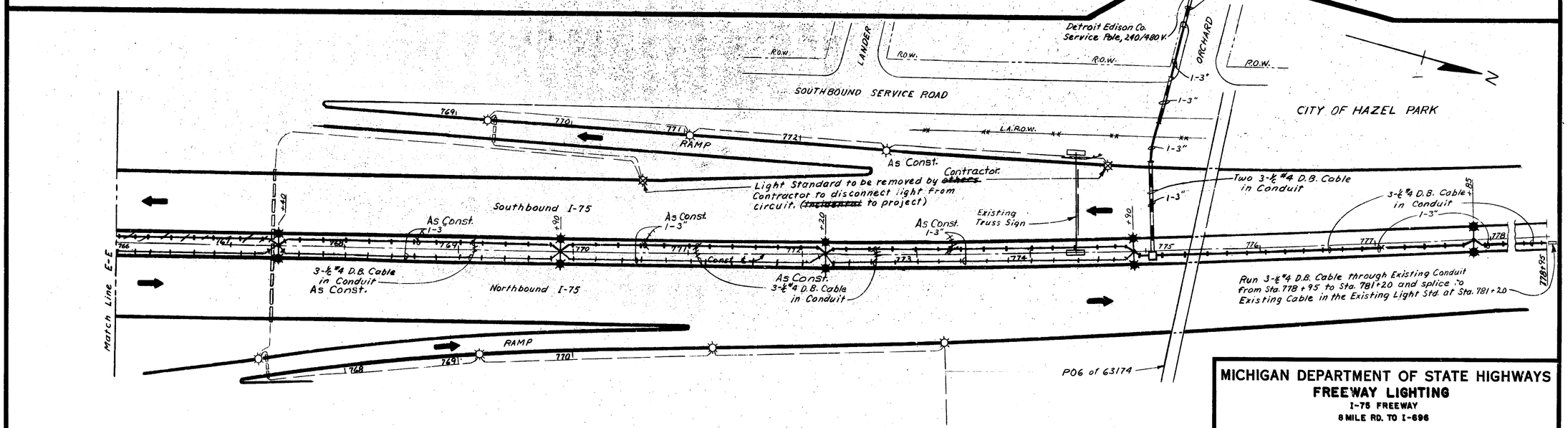
SHEET 4 OF 17

63174

JOB NO. **04096A**

QUANTITIES ON THIS SHEET C.S. 63174			As Const.
ITEM		UNIT	QUANTITY
Handhole - Heavy Duty Cover		Each	1
1-3" Galv. Steel Conduit	125	L.Ft.	~~80~~
1-3" Galv. Steel Conduit - Jacking Boring	146.6	L.Ft.	~~150~~
600 V, 3-½ #4 Direct Burial Cable in Conduit	2,836.2	L.Ft.	~~2,900~~
Lt. Std., 45' M.H., 12' Dbl. Arm, on New Foundation		Each	10
1000 W. Mercury Vapor Luminaire		Each	20
Double Beam Guard Rail (Special)		L.Ft	625
Inspection Fees (D.E Co.)		Each	10
1-3" Direct Burial Conduit (Special)	2,236.0	L.Ft.	~~2,190~~
1-2" Galv. Steel Conduit - Riser	11.2	L.Ft.	~~10~~





MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-75 FREEWAY
8 MILE RD. TO I-696

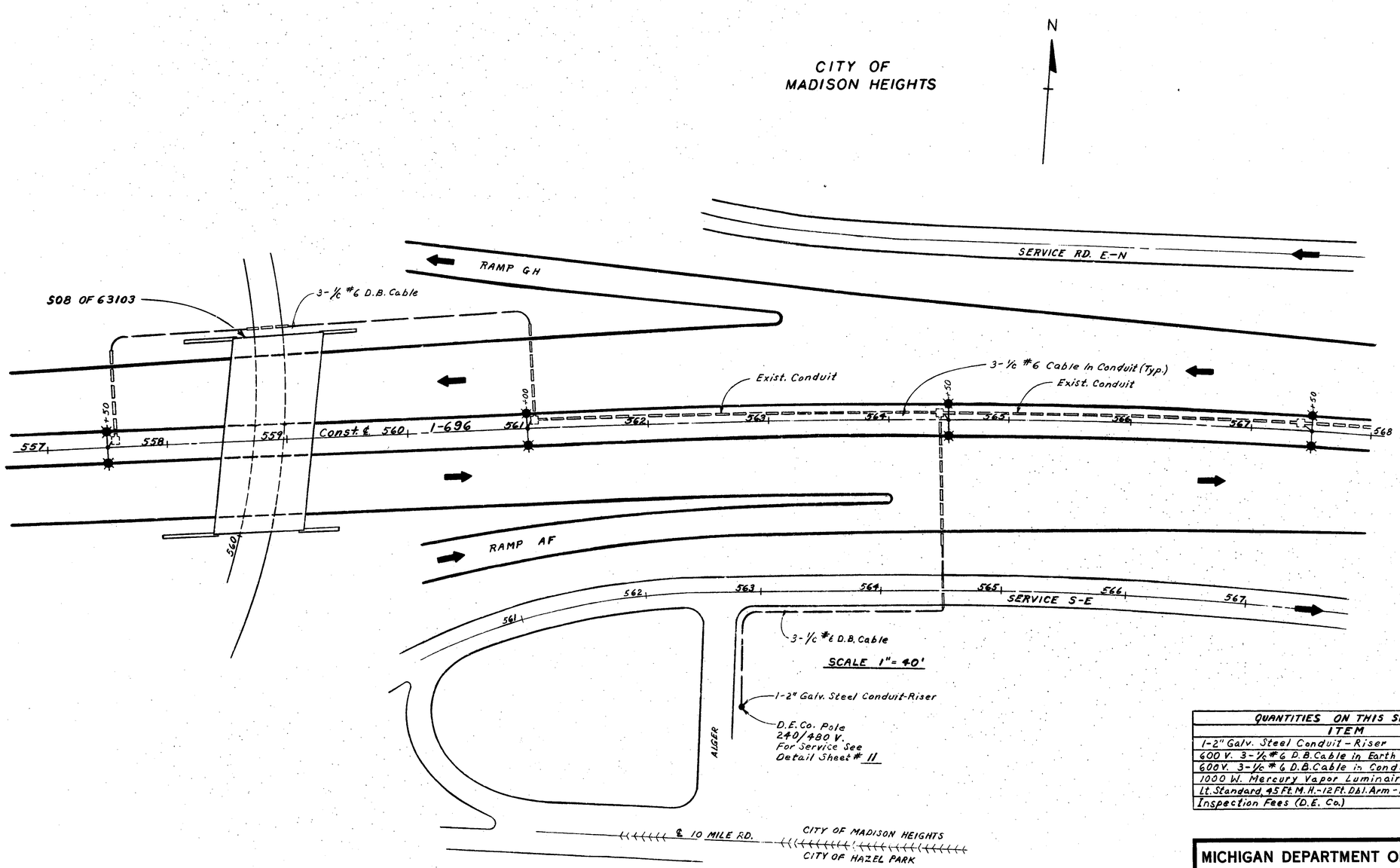
REVISIONS

NO.	DESCRIPTION	DATE	BY

ROAD BOSS	T. Hildeh	1971
DRAWN BY	R.G.	7-7-71
TRACED BY	D.W.	7-8-71
CHECKED BY	H.P.	10-11-71
SHEET 5 OF 17		

63174

JOB NO. **04096A**



As Const.

QUANTITIES ON THIS SHEET C.S. 63103			
ITEM		UNIT	QUANTITY
1-2" Galv. Steel Conduit - Riser	25	Lin.Ft.	~~14~~
600 V. 3-1/c #6 D.B. Cable in Earth	569.5	Lin.Ft.	~~600~~
600 V. 3-1/c #6 D.B. Cable in Conduit	1,052.4	Lin.Ft.	~~1050~~
1000 W. Mercury Vapor Luminaire		Each	8
Lt. Standard, 45 Ft. M.H.-12 Ft. Dbl. Arm - Med. Wall		Each	4
Inspection Fees (D.E. Co.)		Each	4

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FREEWAY LIGHTING

I-696

REVISIONS

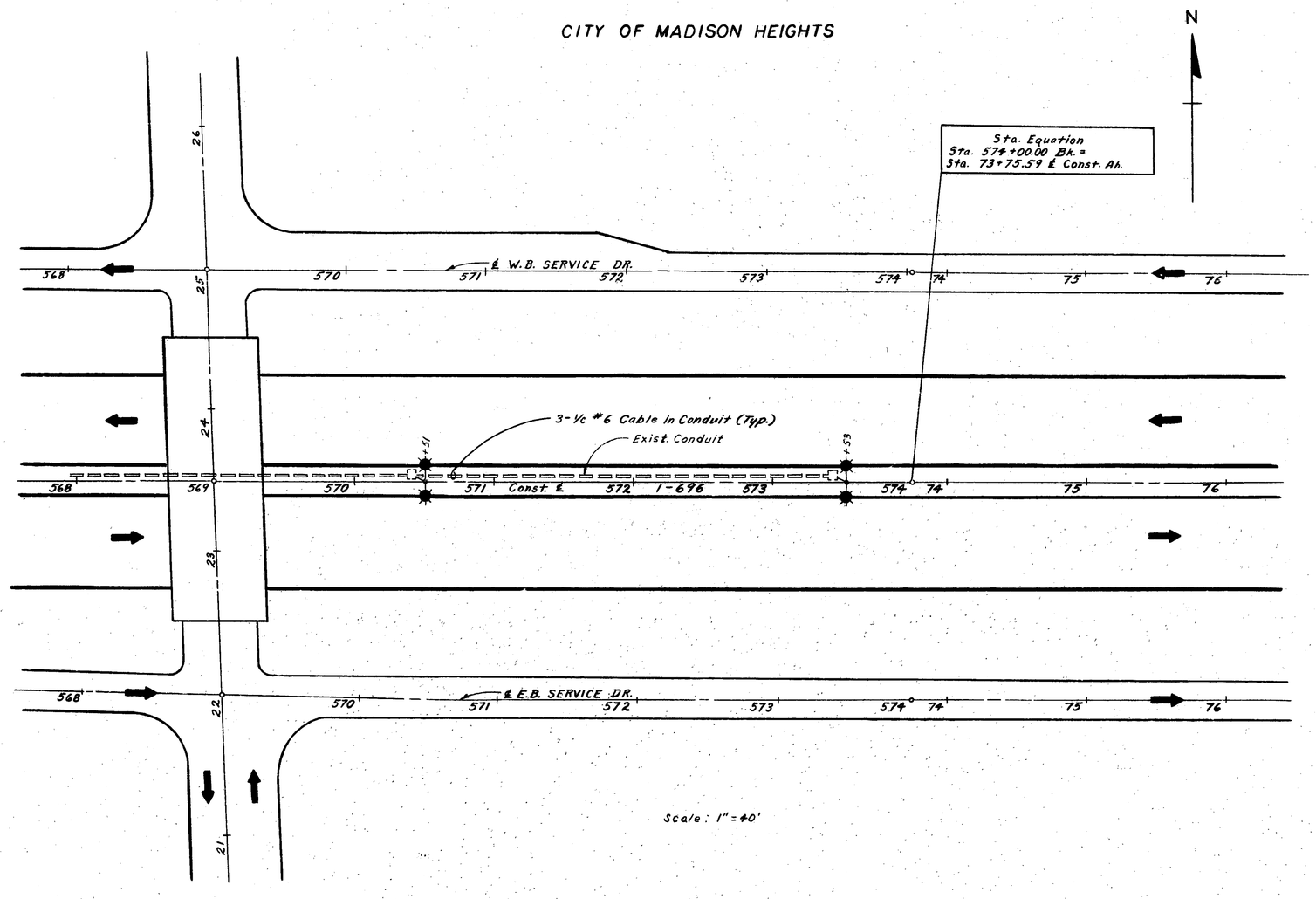
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T. Jildeh	1971
DRAWN BY	R.C.	8-31-71
TRACED BY	F. Fockler	8-31-71
CHECKED BY	H.P.	10-11-71

SHEET 6 OF 17

63103

04261A



As Const.

QUANTITIES ON THIS SHEET C.S. 63103		
ITEM	UNIT	QUANTITY
600V. 3-1/c #6 D.B. Cable In Conduit 575.4	Lin.Ft.	~~600~~
1000 W. Mercury Vapor Luminaire	Each	4
Ltg. Std. 45 Ft. M.H. 12 Ft. Dbl. Arm On Median Wall	Each	2
Inspection Fees (D.E. Co.)	Each	2

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-696

REVISIONS

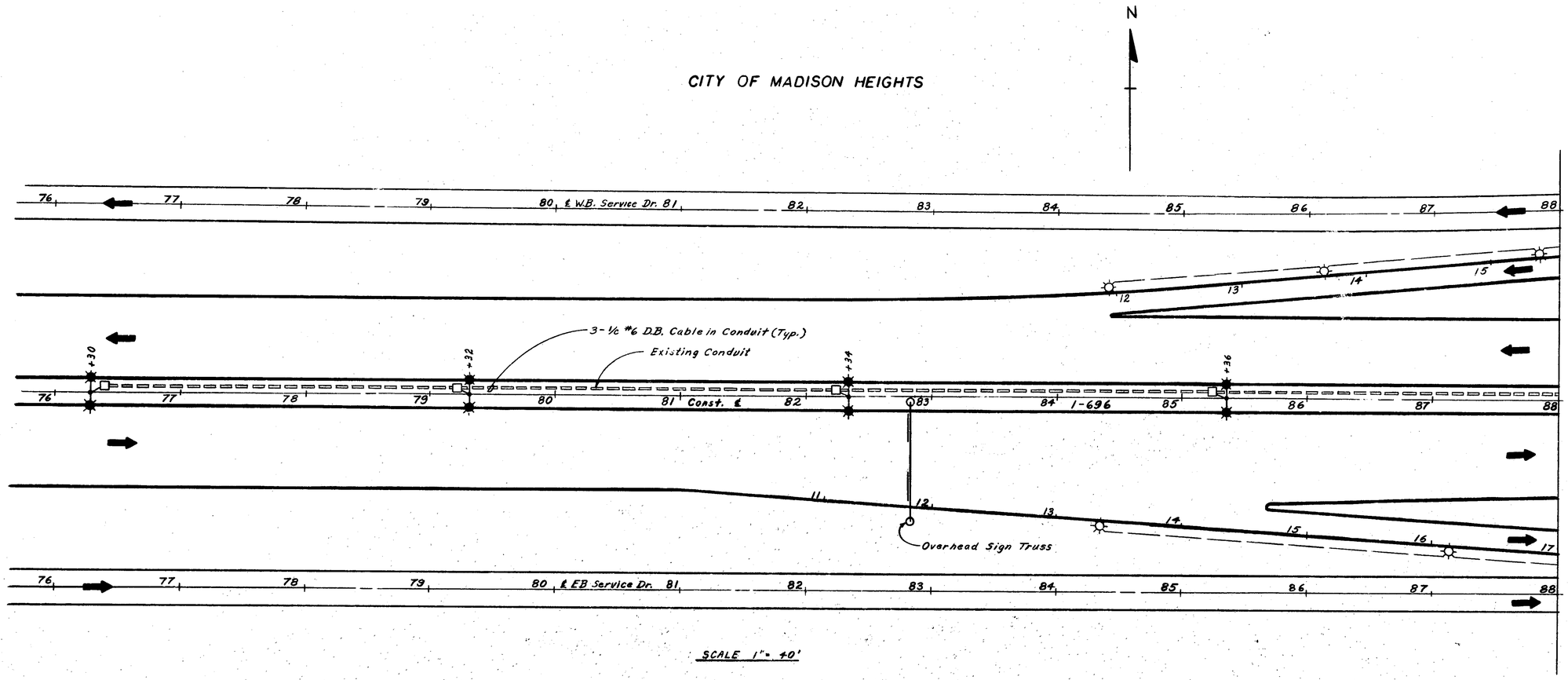
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T. Jildeh	1971
DRAWN BY	R.C.	9-1-71
TRACED BY	F. Fechter	9-1-71
CHECKED BY	H.P.	10-11-71

SHEET 7 OF 17

63103

04261A



As Const.

QUANTITIES ON THIS SHEET C.S. 63103		
ITEM	UNIT	QUANTITY
600V. 3 1/c #6 D.B. Cable In Conduit 1,192.5	L.Ft.	~~1210~~
1000W. Mercury Vapor Luminaire	Each	8
Lt. Std. 45' M.H., 12' Dbl. Arm - Median Wall	Each	4
Inspection Fees (D.E. Co.)	Each	4

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-696

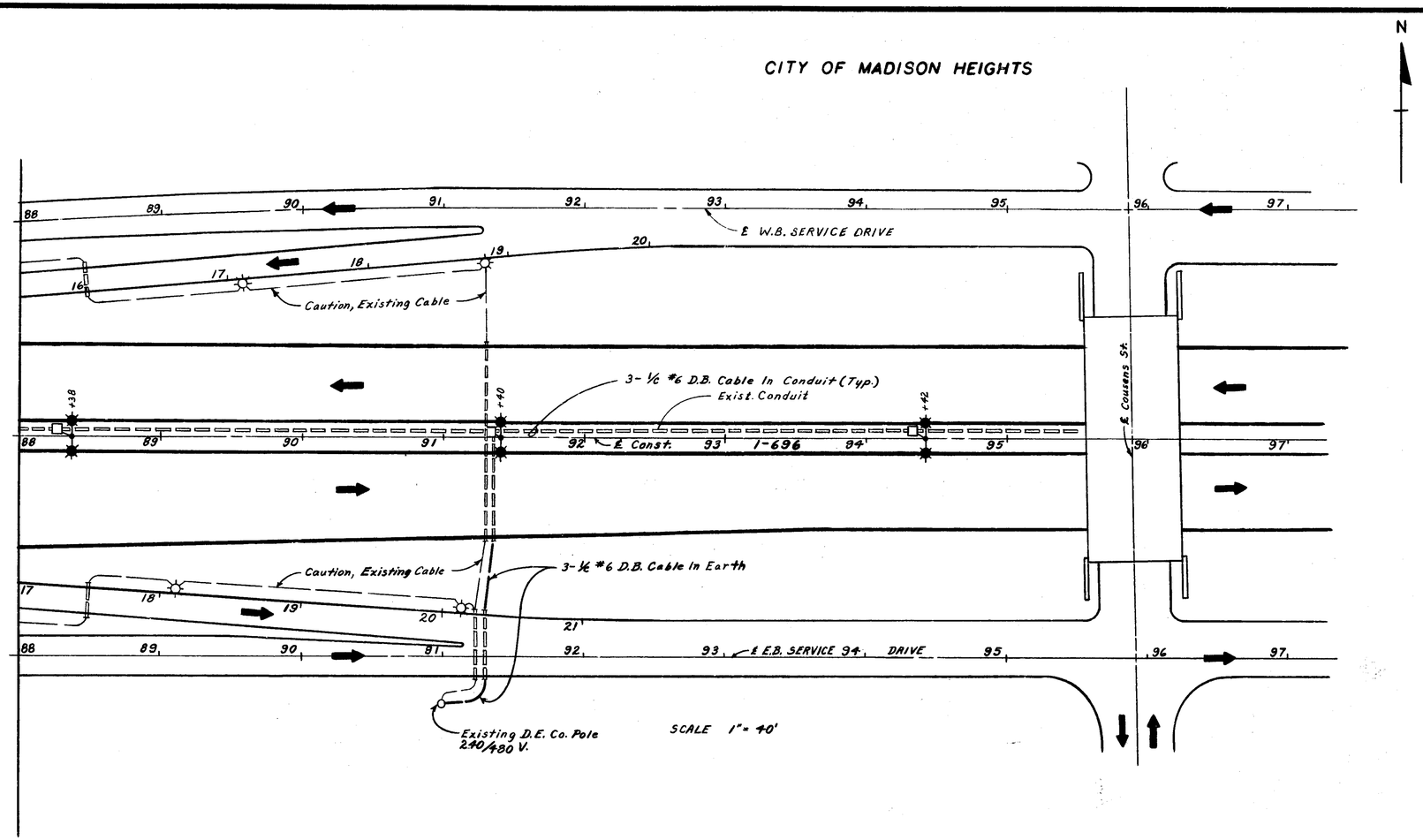
REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T. Jildeh	1971
DRAWN BY	R.C.	9-1-71
TRACED BY	F. Fochler	9-1-71
CHECKED BY	H.P.	10-11-71
SHEET 8 OF 17		

63103

04261A



QUANTITIES ON THIS SHEET		As Const. C.S. 63103	
ITEM		UNIT	QUANTITY
600V. 3-½ #6 D.B. Cable In Conduit	968.5	L.Ft.	~~968~~
600V. 3-½ #6 D.B. Cable In Earth	128.4	L.Ft.	~~128~~
1000 W. Mercury Vapor Luminaire		Each	6
Ltg. Std. 45' M.H 12' Dbl. Arm - Med. Wall		Each	3
Inspection Fees (D.E. Co.)		Each	3
2" Conduit Riser		L.Ft.	11

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-696

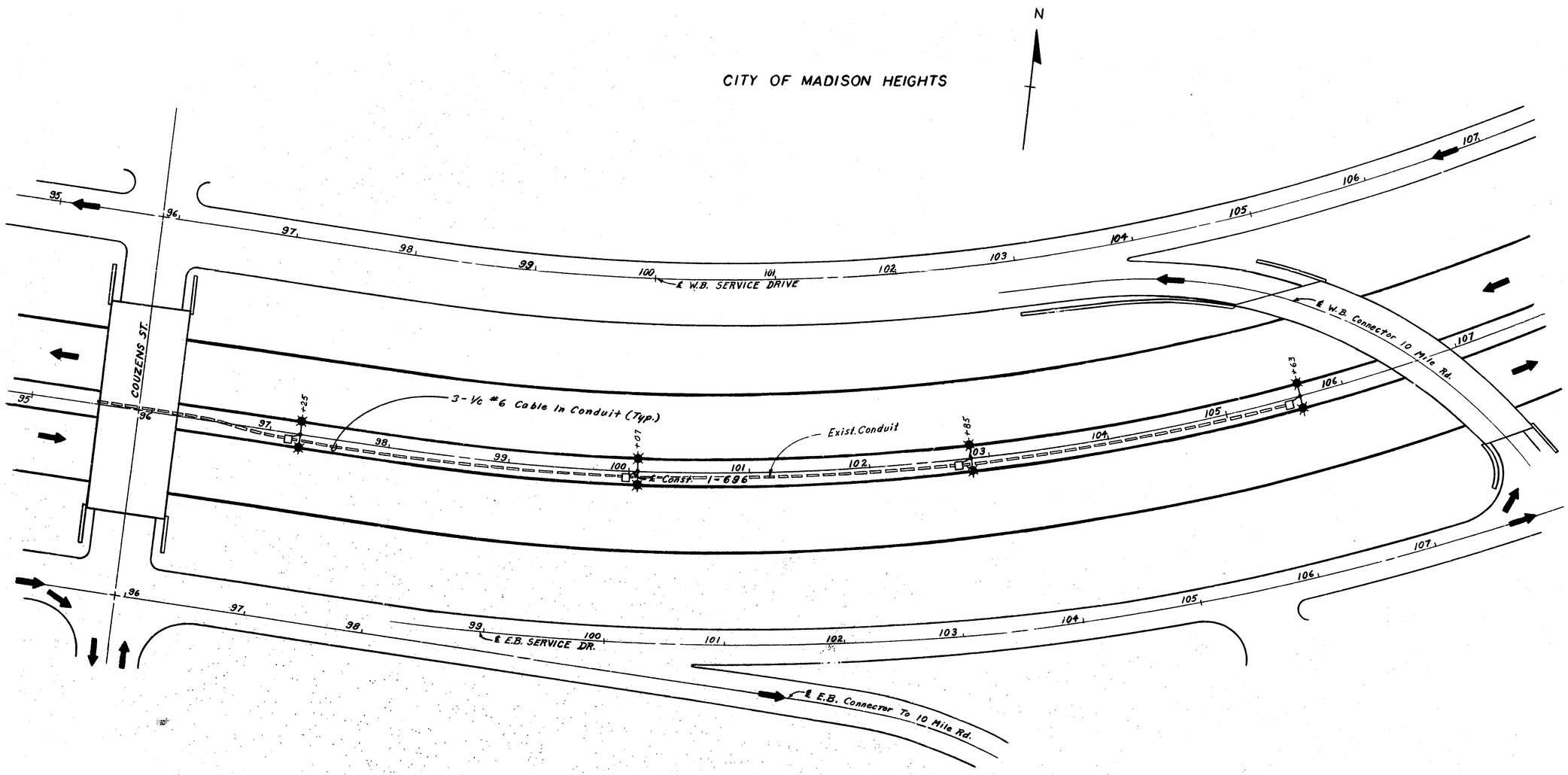
REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T. Tilden	1971
DRAWN BY	B. C.	9-2-71
TRACED BY	F. Foebler	9-8-71
CHECKED BY	H. P.	10-11-71
SHEET 9 OF 17		

63103

04261 A



Scale = 1" = 40'

As Const.

QUANTITIES ON THIS SHEET C.S. 63103		
ITEM	UNIT	QUANTITY
600 V. 3-1/c #6 D.B. Cable In Conduit 1,004.8	LinFt	~~1020~~
1000 W. Mercury Vapor Luminaire	Each	8
Ltg. Std. 45 Ft. M.H. 12 Ft. Dbl. Arm On Median Wall	Each	4
Inspection Fees (D.E. Co.)	Each	4

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING
I-696

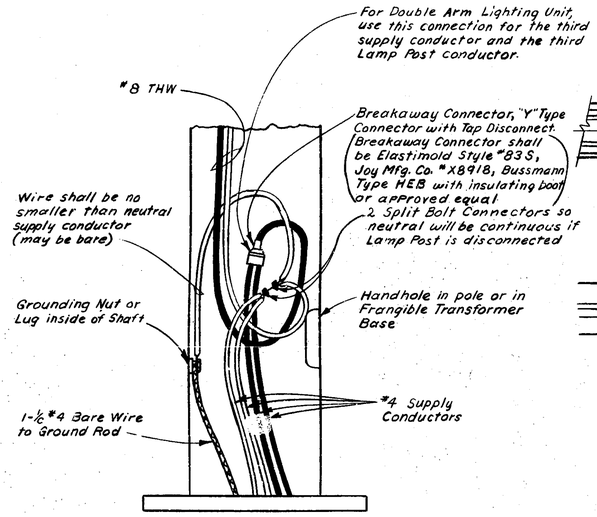
REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T.J. Idach	1971
DRAWN BY	R.C.	9-3-71
TRACED BY	F. Fackler	9-3-71
CHECKED BY	H.P.	10-11-71
SHEET 10 OF 17		

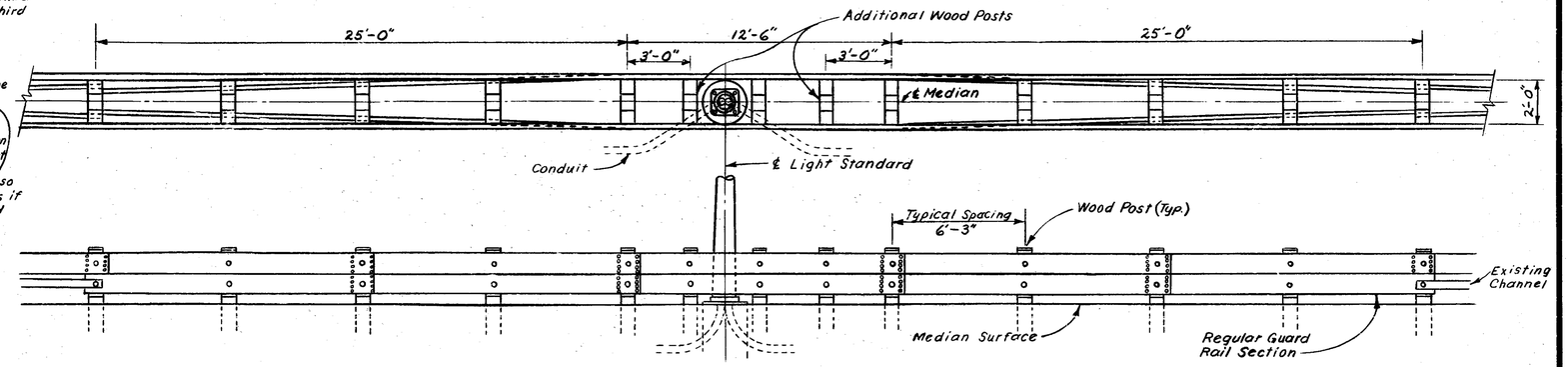
63103

04261A



TYPICAL MULTIPLE STREET LIGHTING CONNECTION FOR 240/480 V., 1Ø, UNDERGROUND SYSTEM

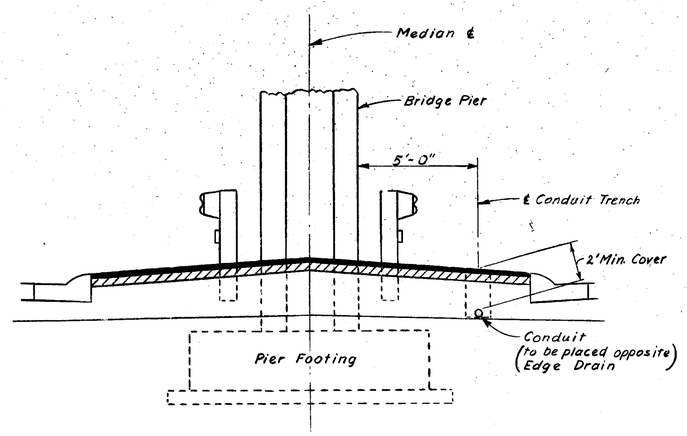
(Not to Scale)



PLAN AND ELEVATION OF BEAM GUARD RAIL AT LIGHTING STANDARD

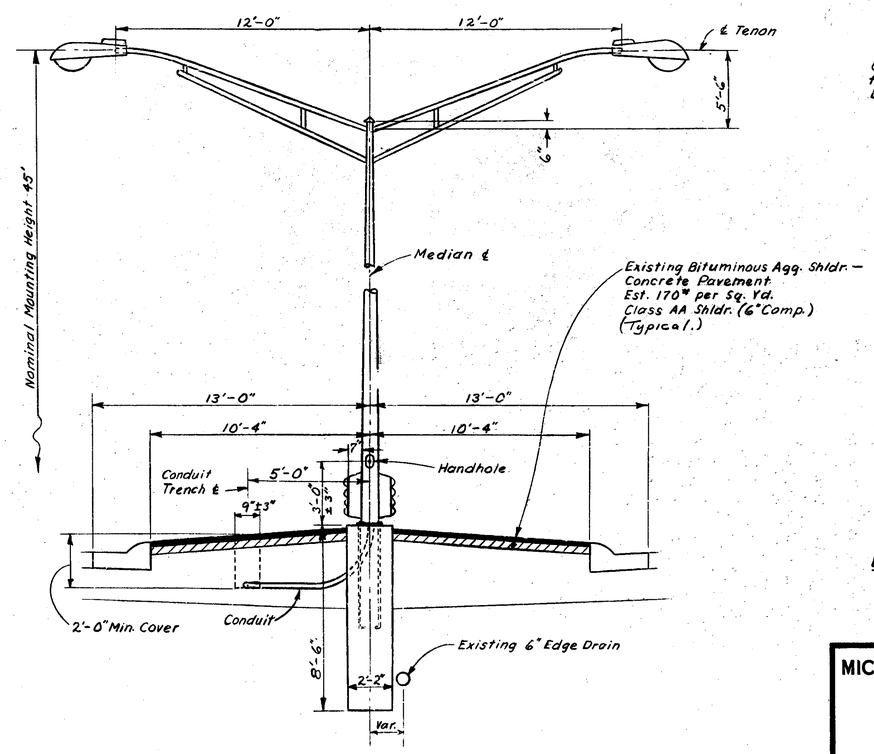
(Not to Scale)

NOTES:
1.- Beam Guard Rail, hardware, wood blocks and related material shall be in accordance to Standard Plan E-4-A-149 D.
2.- This Detail applies from Station 718+00 to Station 778+95.



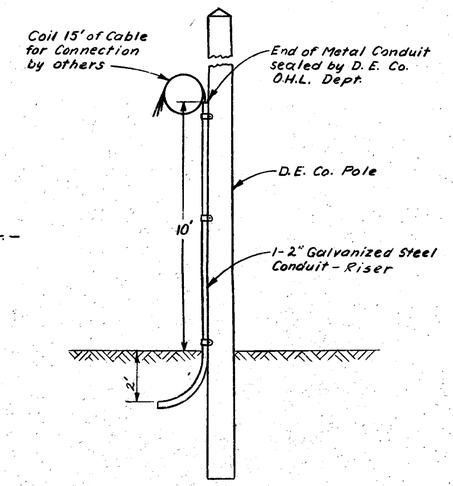
DETAIL OF CONDUIT LOCATION AT BRIDGE PIERS

(Not to Scale)



TYPICAL MEDIAN INSTALLATION

(Not to Scale)



DETAIL OF CONDUIT AND CABLE INSTALLATION ON D.E. CO. SERVICE POLE

(Not to Scale)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FREEWAY LIGHTING DETAILS

REVISIONS

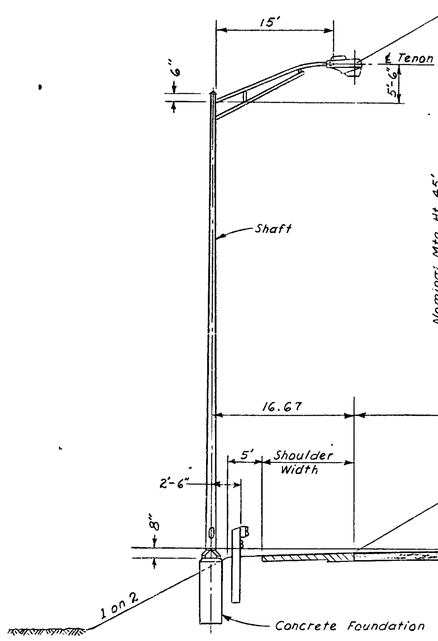
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T. Jildeh	1971
DRAWN BY	R.C.	7-21-71
TRACED BY	D.W.	7-23-71
CHECKED BY	H.P.	10-11-71

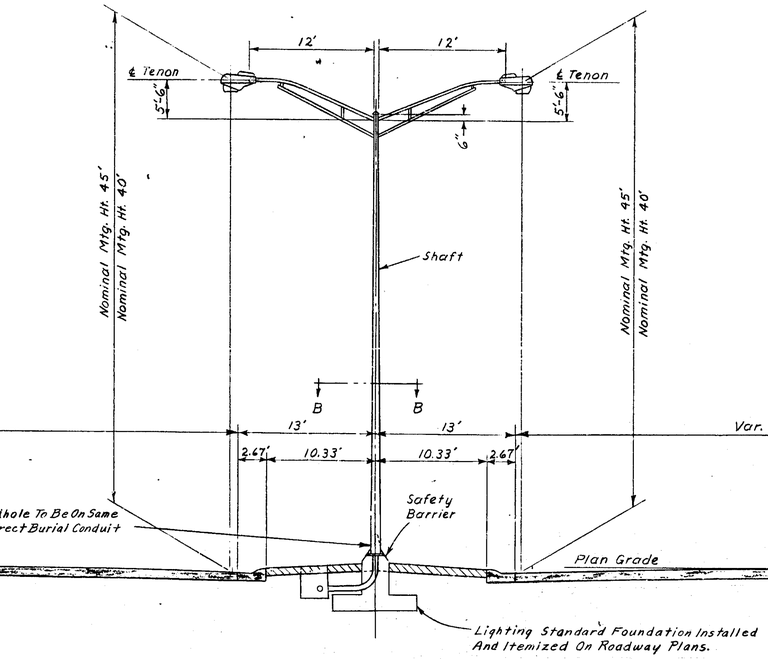
SHEET 11 OF 17

63174

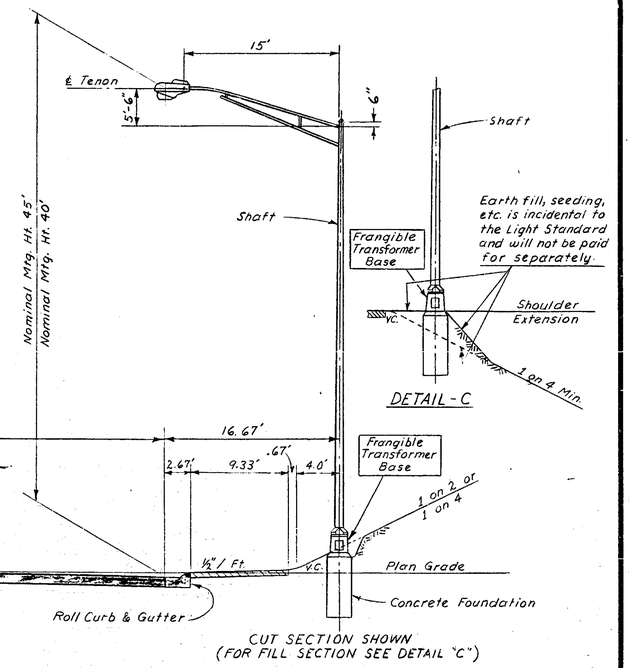
JOB NO. 04096A



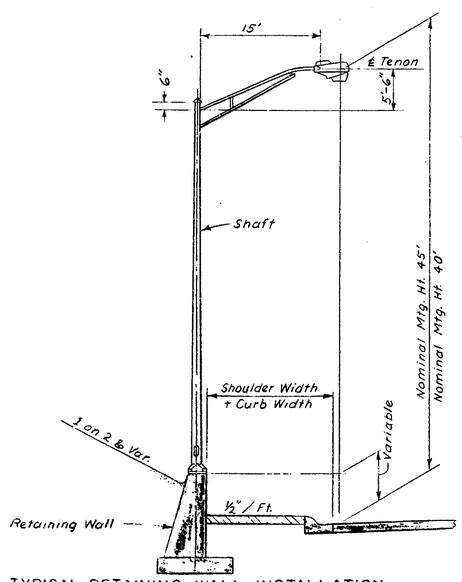
TYPICAL GUARD RAIL SECTION INSTALLATION



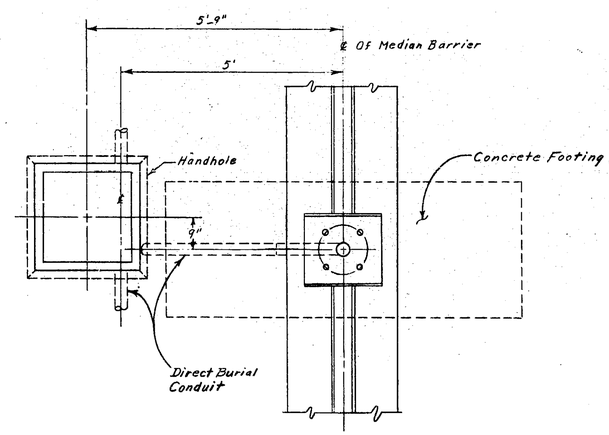
TYPICAL BARRIER SECTION INSTALLATION



TYPICAL NON-GUARD RAIL SECTION INSTALLATION



TYPICAL RETAINING WALL INSTALLATION



SECTION B-B

NOT TO SCALE

NOTE:
For installations on bridges and retaining walls see Detail Plans

FOR INFORMATION ONLY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

TYPICAL FREEWAY LIGHTING STANDARD INSTALLATION
NOMINAL MTG. HT. 40' & 45'

E-1

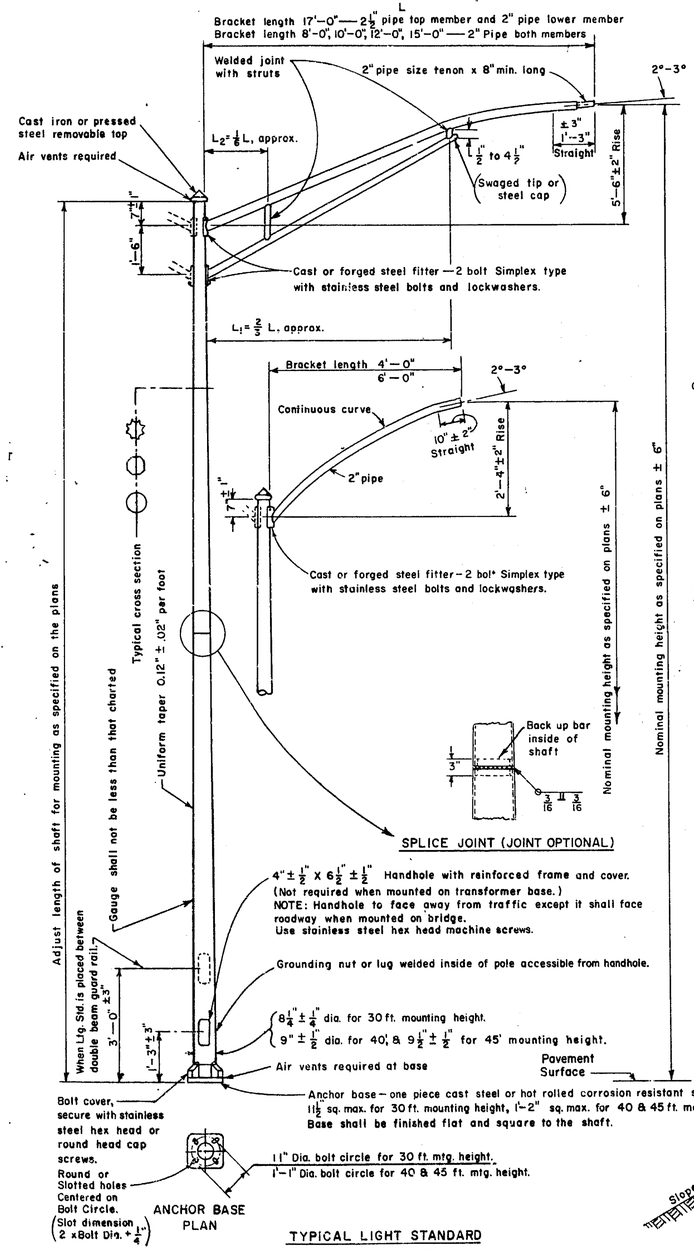
APPR	
DATE	
SQUAD BOSS	T. Jildeh 1968
DRAWN BY	
TRACED BY	D. Winegar 3-5-68
CHECKED BY	
SHEET	12 OF 17

REVISIONS

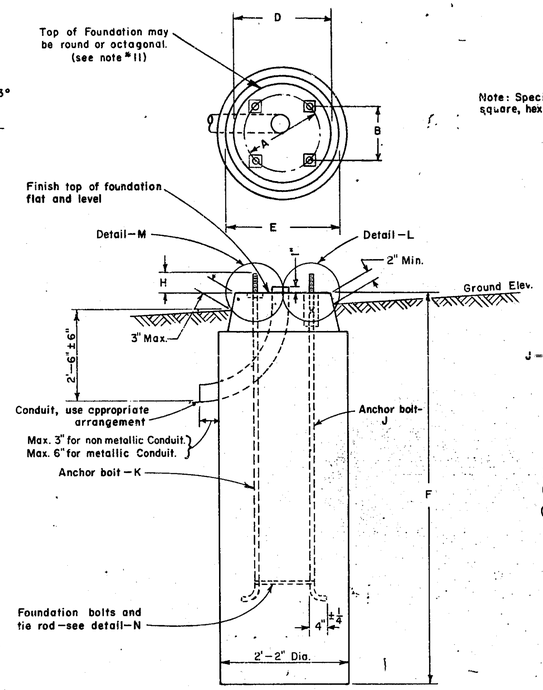
NO.	DESCRIPTION	DATE	BY

63103

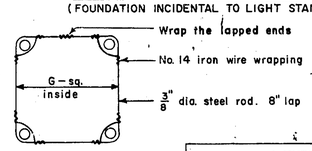
JOB NO. 04261 A



TYPICAL LIGHT STANDARD DESIGN FOR MERCURY AND INCANDESCENT LUMINAIRES

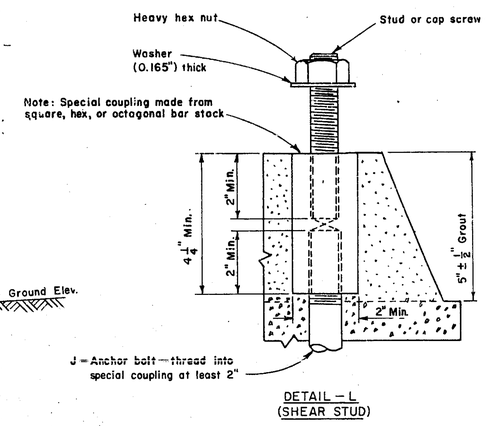


TYPICAL LIGHT STANDARD FOUNDATION WITH OR WITHOUT SHEAR STUDS
(FOUNDATION INCIDENTAL TO LIGHT STANDARD)

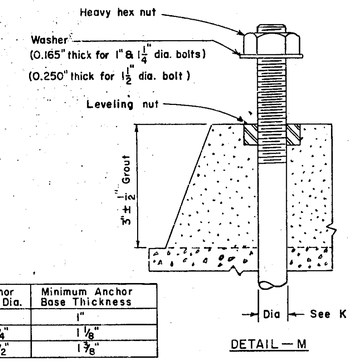


DETAIL — N

ANCHOR BOLTS & TIE ROD



DETAIL — L
(SHEAR STUD)



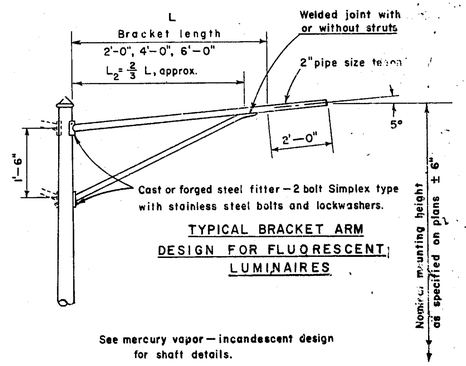
DETAIL — M

Anchor Bolt Dia.	Minimum Anchor Base Thickness
1"	1"
1¼"	1⅛"
1½"	1⅜"

ANCHOR BASE THICKNESS CHART

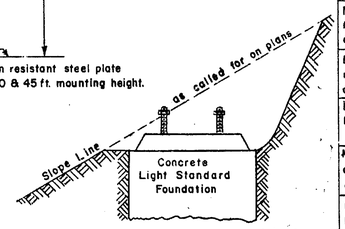
NOTES:

1. All materials and workmanship shall be in accordance with the current Michigan Department of State Highways Supplemental Specifications For Electrical Construction.
2. Use detail "M" anchor bolts unless shear studs are specified in the plans. Anchor bolt length "J" or "K" is length before bending. Final Standard adjustment shall be leveled by use of galvanized sheet steel shims if required.
3. Supply bracket arm fitters for each arm used only.
4. Supply ⅛" elastomeric fabric bound pad for mounting between street light standard base and foundation on bridge mounted units only (incidental).
5. Cast steel or hot rolled plate anchor bases shall have a thickness as shown in Chart below.
6. Standards mounted on transformer bases shall have the same dimensions as anchor base types, except shaft length.
7. Use the same anchor bolts for transformer base as for corresponding anchor base types.
8. For grounding Light Standards see Light Standard Grounding Details sheet.
9. Bolt Circle dimension "A" for Anchor Bolts must be exact. Anchor Bolts are to be set to a template.
10. Non metallic Conduit for Foundation shall be asbestos cement, plastic, or bituminized fiber. Metallic Conduit shall be rigid galvanized steel. In lieu of Conduit, a raceway formed by a Murray Hose is acceptable. Conduit of whatever material, if used, is incidental to the Light Standard.
11. If octagonal Foundation top is used, top of Foundation must extend 1" min. outside of Light Standard Base.



TYPICAL BRACKET ARM DESIGN FOR FLUORESCENT LUMINAIRES

See mercury vapor — incandescent design for shaft details.



FOUNDATION DETAIL
(ON FILL OR CUT SLOPE)

TYPE	A	B	D	E	F	G	H	Ga. (min.)	J	K
Mercury vapor or incandescent transformer base for 30 ft. mounting height.	11"	7¾"	1'-7"	1'-9"	6'-0"	8¾"	2⅝"	see note 6		see note 7
Mercury vapor anchor base for 30 ft. mounting height and 4 or 6 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	5'-0"	8¾"	2⅝"	11	1"ϕ x 3'-4"	1"ϕ x 3'-9"
Mercury vapor anchor base for 30 ft. mounting height and 8, 10, 12 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	8¾"	2⅝"	11	1"ϕ x 5'-0"	1"ϕ x 5'-0"
Mercury vapor anchor base for 30 ft. mounting height and 17 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	9"	3"	7		1¼"ϕ x 5'-0"
Mercury vapor anchor base ft. 30 ft. mounting height and 15 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	8¾"	2⅝"	7	1"ϕ x 5'-0"	1"ϕ x 5'-0"
Mercury vapor or incandescent transformer base for 40 & 45 ft. mounting height.	1'-5¼"	1'-0 3/16"	2'-0"	2'-2"	8'-6"	1'-7 11/16"	3½"	see note 6		see note 7
Mercury vapor anchor base for 40 & 45 ft. and 4, 6, 8, 10, 12, 15, 17 ft. single or double bracket arm.	1'-1"	9¼"	2'-0"	2'-2"	8'-6"	10¾"	3½"	11 Ga. up to 15' Brkt. Arm 7 Ga. for 17' Brkt. Arm		1½"ϕ x 5'-0"
Fluorescent anchor base, 30 ft. mounting height — single bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	9"	2⅝"	11		1¼"ϕ x 4'-0"
Fluorescent anchor base, 30 ft. mounting height — double bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	9"	2⅝"	7		1¼"ϕ x 4'-0"

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
ELECTRICAL DETAILS
STEEL LIGHT STANDARDS
FOR 30, 40, & 45 FT. MOUNTING HEIGHTS

E-3
APPR. JPK
DATE 4-23-68

REVISIONS

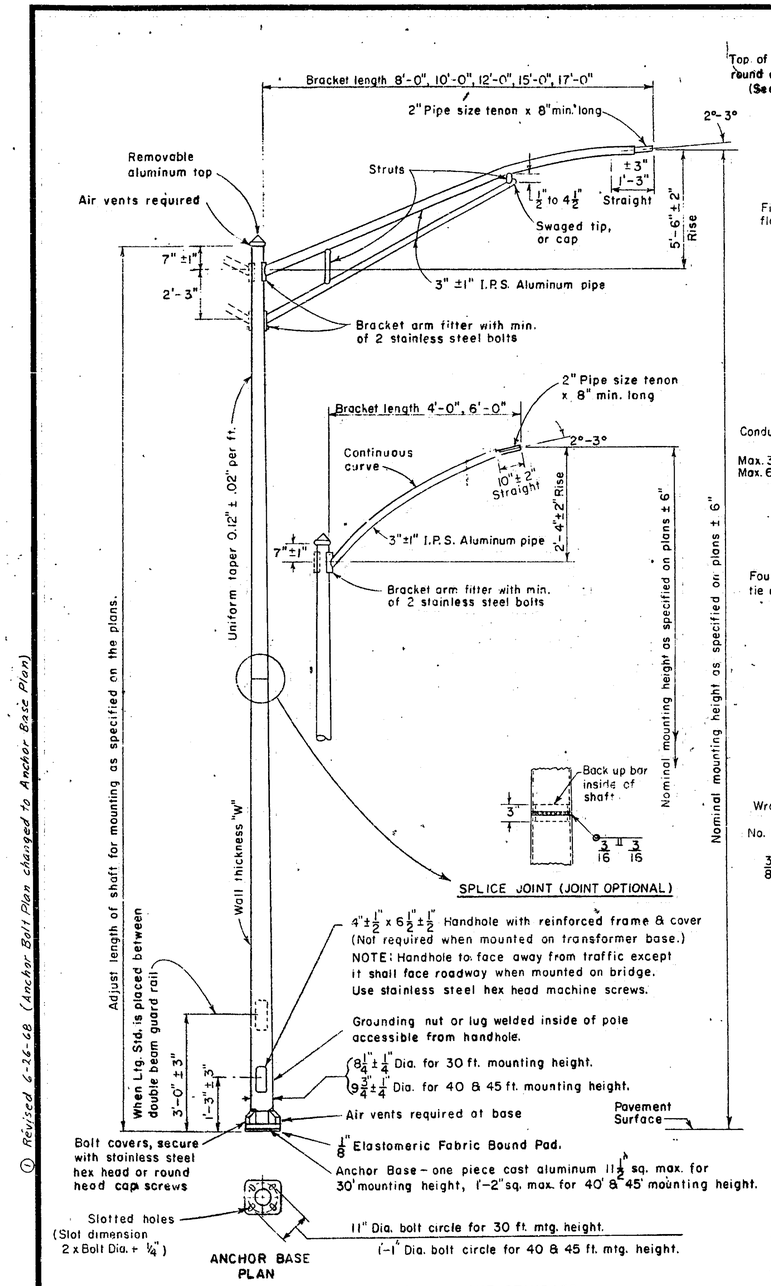
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	T. Jilidi	1967
DRAWN BY		
TRACED BY	D. Willeger	7-11-67
CHECKED BY	H.E.K.	8-4-67

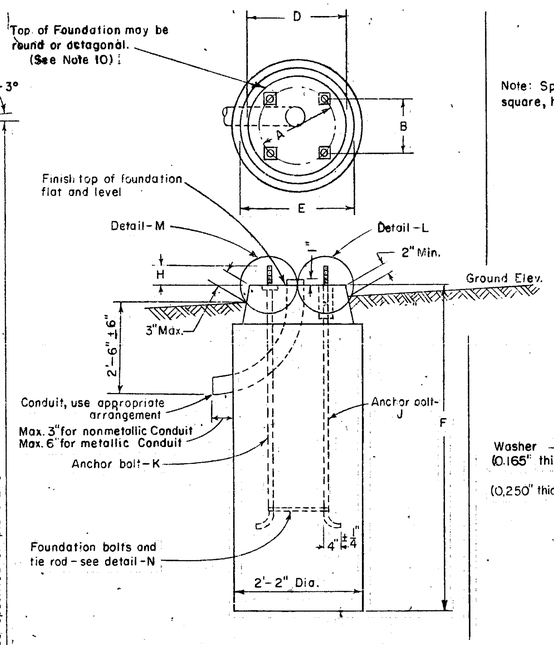
SHEET 13 OF 17

63174
63103
04096 A
04261 A

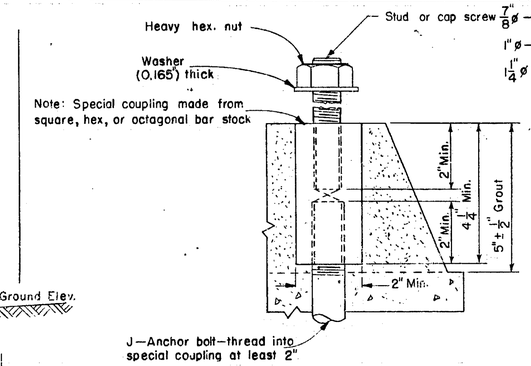
Revised 6-26-68 (Anchor Bolt Plan changed to Anchor Base Plan)
Revised 1-8-68 (B.C. for 40' & 45' M.H. & Adm. T.B. for 30' M.H.)
Revised 12-8-67
Revised 7-25-67 (Added Anchor Base Thickness Chart)
Revised 6-1-66 (Top of Foundation Detail)
Revised 7-17-68 (B.C. & Foundation Details)



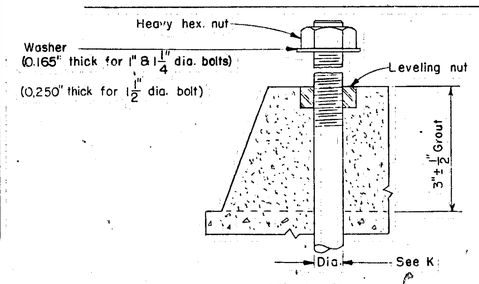
TYPICAL LIGHT STANDARD DESIGN FOR MERCURY AND INCANDESCENT LUMINAIRES



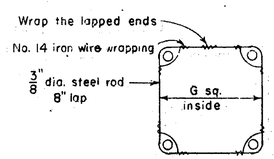
TYPICAL LIGHT STANDARD FOUNDATION WITH OR WITHOUT SHEAR STUDS
(Foundation incidental to light standard)



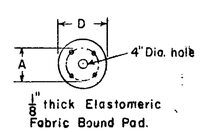
DETAIL - L
(SHEAR STUD)



DETAIL - M



DETAIL - N
ANCHOR BOLTS & TIE RODS



TYPE	A	B	D	E	F	G	H	W min.	J	K
Mercury vapor or incandescent transformer base for 30 ft. mtg. height.	11"	7¾"	1'-7"	1'-9"	6'-0"	8¾"	2⅝"	see note 5		see note 6
Mercury vapor anchor base for 30 ft. mounting height and 4 or 6 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	5'-0"	8¾"	2⅝"	.188"	1"øx3'-4"	1"øx3'-9"
Mercury vapor anchor base for 30 ft. mounting height and 8, 10, 12, 15 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	8¾"	2⅝"	.188" sgl. bkt. arm .219" dbl. bkt. arm	1"øx5'-0"	1"øx5'-0"
Mercury vapor anchor base for 30 ft. mounting height and 17 ft. single or double bracket arm.	11"	7¾"	1'-7"	1'-9"	6'-0"	9"	3"	.188" sgl. bkt. arm .219" dbl. bkt. arm		1¼"øx5'-0"
Mercury vapor or incandescent transformer base for 40 & 45 ft. mounting height.	1'-5¼"	1'-0 3/16"	2'-0"	2'-2"	8'-6"	1'-1 11/16"	3½"	see note 5		see note 6
Mercury vapor anchor base for 40 ft. mounting height and 4, 6, 8, 10, 12, 15, 17 ft. single or double bracket arm.	1'-1"	9¾"	2'-0"	2'-2"	8'-6"	10¾"	3½"	.188 for single bracket arm .219 for double bracket arm		1½"øx5'-0"
Mercury vapor anchor base for 45 ft. mounting height and 4, 6, 8, 10, 12, 15, 17 ft. single or double bracket arm.	1'-1"	9¾"	2'-0"	2'-2"	8'-6"	10¾"	3½"	.219" lower section .188" upper section		1½"øx5'-0"

NOTES:

1. All materials and workmanship shall be in accordance with the current Michigan Department of State Highways Supplemental Specifications For Electrical Construction.
2. Use detail "M" anchor bolts unless shear studs are specified in the plans. Anchor bolt length "J" or "K" is length before bending. Final Standard adjustment shall be leveled by use of galvanized sheet steel shims if required.
3. Supply bracket arm fitters only for each arm used.
4. Place ⅛" Elastomeric Fabric Bound Pad for mounting only between street light standard base and foundation.
5. Standards mounted on transformer bases shall have the same dimensions as anchor base types, except shaft length.
6. Use same anchor bolts for transformer base as for corresponding anchor base types.
7. For grounding Light Standards see Light Standard Grounding Details sheet.
8. Bolt Circle dimension "A" for anchor bolts must be exact. Anchor bolts are to be set to a template.
9. Non metallic Conduit for Foundation shall be asbestos cement, plastic, or bituminized fiber. In lieu of a Conduit, a raceway formed by a Murray Hose is acceptable. Conduit of whatever material, if used, is incidental to the light standard.
10. If octagonal Foundation top is used, top of Foundation must extend 1" min. outside of light standard base

① Revised 6-26-68 (Anchor Bolt Plan changed to Anchor Base Plan)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
ELECTRICAL DETAILS
ALUMINUM LIGHT STANDARDS
FOR 30, 40, & 45 FT. MOUNTING HEIGHTS

E-4

APPR.
DATE

DESIGN BASIS	T. Jilovich	1968
DRAWN BY		
TRACED BY	DW	1-8-68
CHECKED BY		

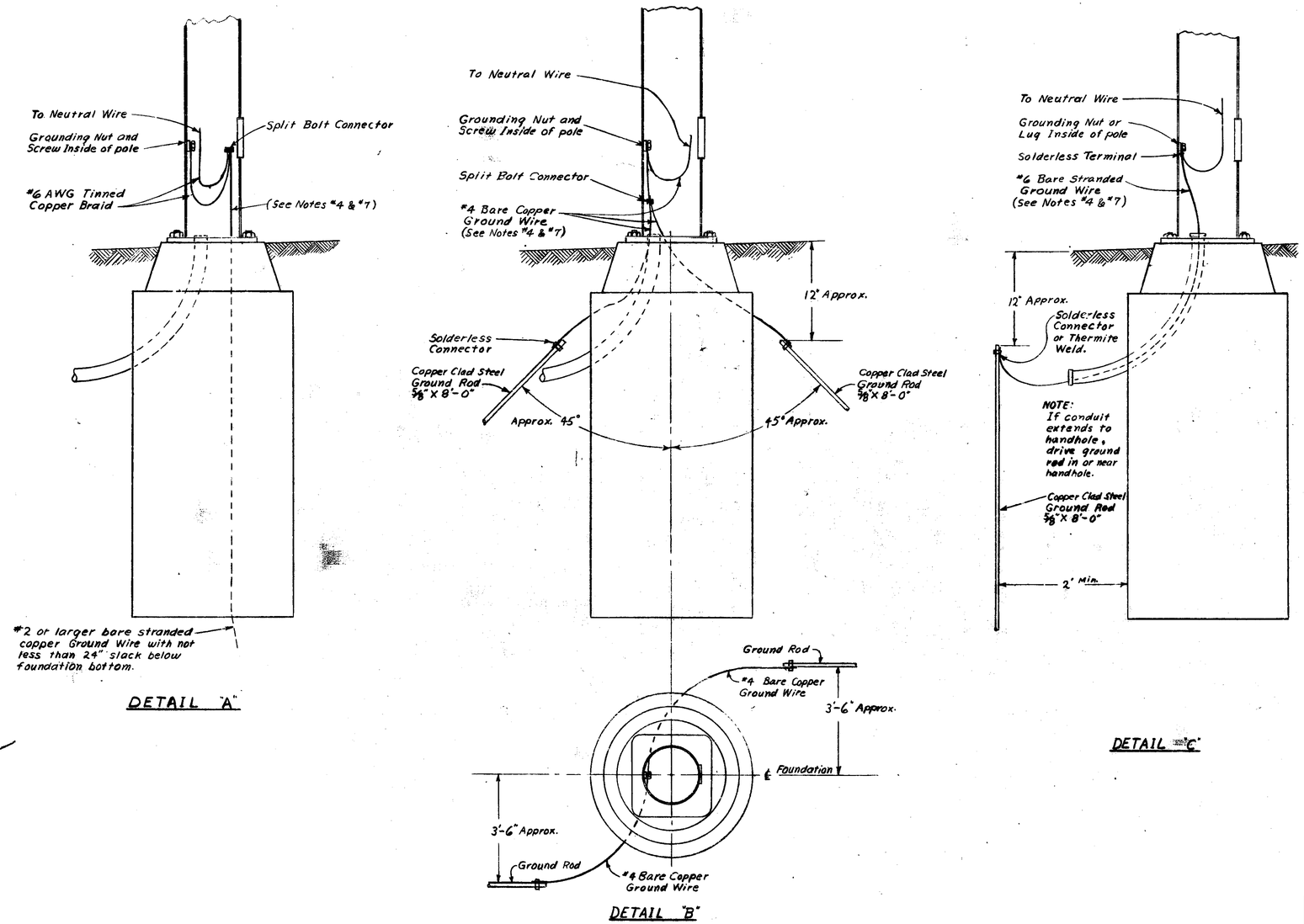
SHEET 14 OF 17

REVISIONS

NO.	DESCRIPTION	DATE	BY

63174
63103

JOB NO
04096A, 04261A



NOTES:

1. Detail "A" is to be used for Lighting Standards maintained by City of Detroit Public Lighting Commission.
2. Detail "B" is to be used for Lighting Standards maintained by Detroit Edison Co.
3. Detail "C" is to be used for Lighting Standards maintained by other than the above.
4. If Frangible Base is used between foundation and pole base, increase length of ground wire above foundation by height of Frangible Base.
5. Ground Lighting Standards on bridges, retaining walls, and other structures by #6 copper bare or green insulated wire. Connect to ground rods driven near structure, to nearest ground of lighting system or to structural steelwork (if steelwork is grounded).
6. Resistance of grounding electrodes shall be in accordance with The National Electrical Code.
7. Ground wire shall be stranded soft drawn copper wire per A.S.T.M. B8.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

LIGHTING STANDARD GROUNDING DETAILS

E-7

APPR.
DATE

REVISIONS			
NO.	DESCRIPTION	DATE	BY

DESIGN DOCS	T. Jilden	1967
DRAWN BY		
TRACED BY	D. Winegar	12-11-67
CHECKED BY		

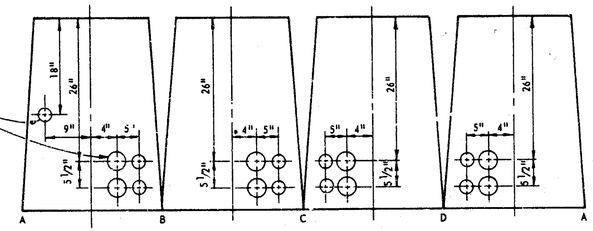
SHEET 15 OF 17

63174

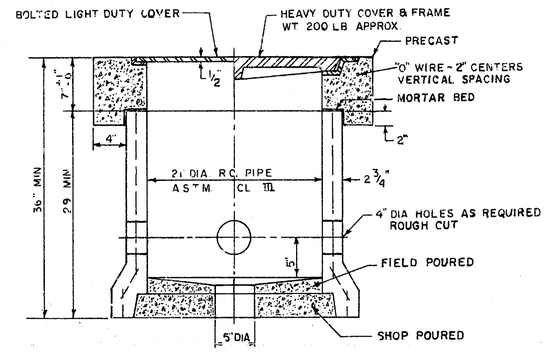
JOB NO. 04096A

ENTRANCE HOLES AS REQUIRED FOR 3" & 4" CONDUIT

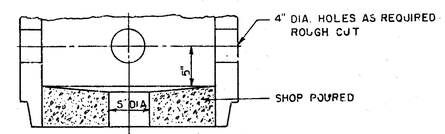
CONDUIT ARRANGEMENT MAY BE MODIFIED. ADDITIONAL OPENINGS SHALL BE PROVIDED AS REQUIRFD. SEE PLANS. PLUG ALL UNUSED ENTRANCE HOLES AND SEAL AROUND HOLES ENTERED.



INTERIOR WALL ELEVATIONS-LIGHT AND HEAVY DUTY COVER TYPES



ALTERNATE PRECAST CONCRETE HANDHOLE USING R.C. PIPE



USE OF OPPOSITE END OF PIPE
(ALL OTHER DIMENSIONS SAME)

NOTES:

THE MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT M.D.S.H. STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY CONSTRUCT THE HANDHOLE STRUCTURE OF BRICK, CEMENT CONCRETE MASONRY, OR OF PRECAST REINFORCED CONCRETE.

ALL CONCRETE MASONRY SHALL BE GRADE C.

THE INNER SURFACE OF THE HANDHOLE SHALL BE SMOOTH.

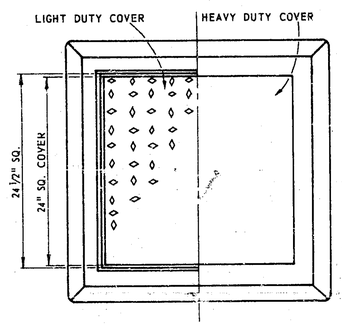
HEAVY DUTY COVERS SHALL BE CASTINGS WHICH MEET THE REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR GRAY IRON CASTINGS ASTM DESIGNATION A48 AND SHALL HAVE A MINIMUM STRENGTH AS PROVIDED FOR CLASS NO. 30 GRAY IRON CASTINGS.

ALL CASTINGS SHALL BE CLEANED BY SAND BLASTING.

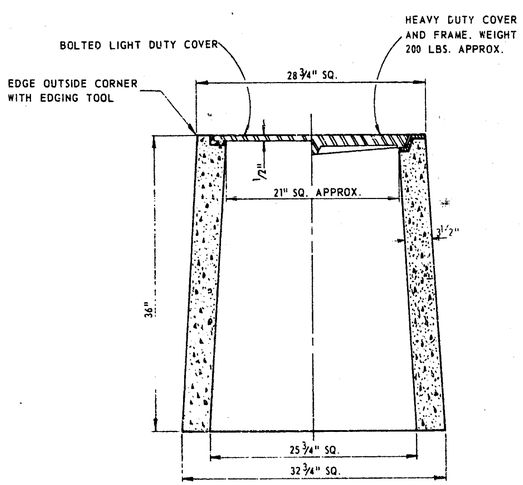
THE SEATING FACE OF THE COVER AND THE SEAT FOR SAME ON THE FRAME IF REQUIRED, SHALL BE GROUND OR MACHINED SO THAT THE COVER SHALL HAVE AN EVEN BEARING ON ITS SEAT TO PREVENT ROCKING OR TILTING.

THE CASTINGS SHALL BE FREE OF POURING FAULTS, BLOW HOLES, CRACKS, AND OTHER IMPERFECTIONS. THEY SHALL BE SOUND, TRUE TO FORM AND THICKNESS, CLEAN AND NEATLY FINISHED, AND SHALL BE COATED WITH COAL TAR PITCH VARNISH.

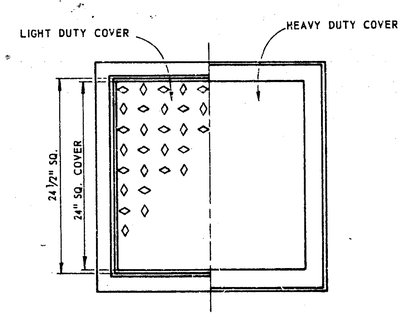
LIGHT DUTY COVER SHALL BE BOLTED TO FRAME WITH NOT LESS THAN 2 COUNTERSUNK HEX HEAD BRONZE BOLTS.



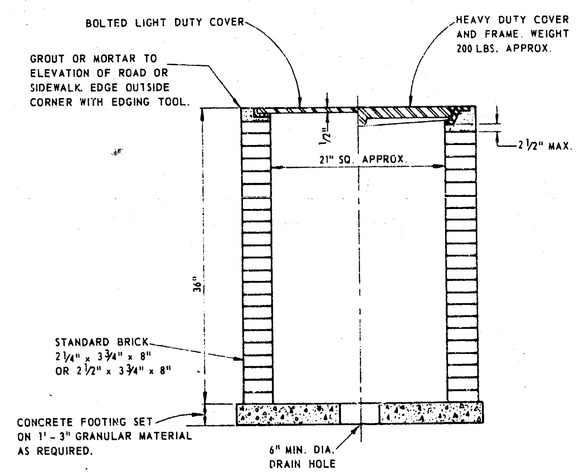
TOP PLAN VIEW OF CONCRETE HANDHOLE



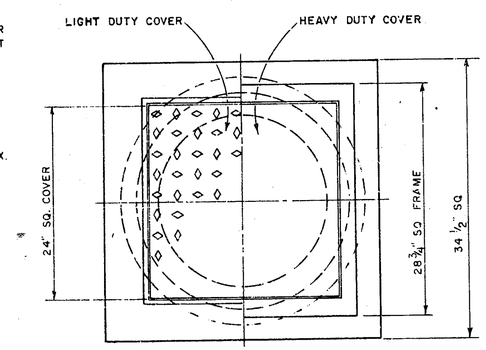
PRECAST CONCRETE HANDHOLE



TOP PLAN VIEW OF BRICK HANDHOLE



BRICK HANDHOLE



TOP PLAN VIEW OF R.C. PIPE HANDHOLE

Rev. 8-13-71 Removed (Minimum) From 36" Dim. (T.L.)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ELECTRICAL HANDHOLE DETAILS

E-8

APPR DATE

SQUARE BLOCK	T. H. DEPT	1968
DRAWN BY		
TRACED BY	D. WINEGAR	11-31-68
CHECKED BY		

SHEET 16 OF 17

63174

04096A

REVISIONS

NO.	DESCRIPTION	DATE	BY

EMP I 696-8 (43)
EMP I 75-2 (147)

ITEM	UNIT	QUANTITY	63174 04096A	63103 04261A	DATE
1-3" DIRECT BURIAL CONDUIT (SPECIAL)	L. FT.	5850	5850	—	
1-2" GALVANIZED STEEL CONDUIT - RISER	L. FT.	42	28	14	
1-3" GALVANIZED STEEL CONDUIT	L. FT.	195	195	—	
1-3" GALVANIZED STEEL CONDUIT, JACKING - BORING	L. FT.	290	290	—	
HANDHOLE - HEAVY DUTY COVER	EACH	3	3	—	
LIGHT STANDARD, 45 FT. MOUNTING HEIGHT WITH 12 FT. DOUBLE ARM ON NEW FOUNDATION	EACH	26	26	—	
LIGHT STANDARD, 45 FT. MOUNTING HEIGHT WITH 12 FT. DOUBLE ARM ON MEDIAN WALL	EACH	17	—	17	
1000 W. MERCURY VAPOR LUMINAIRE	EACH	86	52	34	
600 V., 3-1/c No. 6 DIRECT BURIAL CABLE IN CONDUIT	L. FT.	4810	—	4810	
600 V., 3-1/c No. 6 DIRECT BURIAL CABLE IN EARTH	L. FT.	700	—	700	
600 V., 3-1/c No. 4 DIRECT BURIAL CABLE IN CONDUIT	L. FT.	7090	7090	—	
DOUBLE BEAM GUARD RAIL (SPECIAL)	L. FT.	1625	1625	—	
INSPECTION FEES (D.E. CO.)	EACH	43	26	17	
6" EDGE DRAIN	L. FT.	200	200	—	
ILLUMINATED TARGET ARROW - SIGN (TYPE A)	EACH	2	2	—	
MAINTAINING TRAFFIC	LUMP SUM	LUMP SUM	L.S.	—	

AS CONSTRUCTED

ITEM	UNIT	QUANTITY	63174 04096A	63103 04261A	AUTH
1-3" DIRECT BURIAL CONDUIT (SPECIAL)	L. FT.	5999	5999 ✓	—	1001
1-2" GALVANIZED STEEL CONDUIT - RISER	L. FT.	58	22 ✓	36 ✓	1002 1003
1-3" GALVANIZED STEEL CONDUIT	L. FT.	255	255 ✓	—	1001
1-3" GALVANIZED STEEL CONDUIT, JACKING - BORING	L. FT.	266	266 ✓	—	1001
HANDHOLE - HEAVY DUTY COVER	EACH	3	3 ✓	—	
LIGHT STANDARD, 45 FT. MOUNTING HEIGHT WITH 12 FT. DOUBLE ARM ON NEW FOUNDATION	EACH	26	26 ✓	—	
LIGHT STANDARD, 45 FT. MOUNTING HEIGHT WITH 12 FT. DOUBLE ARM ON MEDIAN WALL	EACH	17	—	17 ✓	
1000 W. MERCURY VAPOR LUMINAIRE	EACH	86	52 ✓	34 ✓	
600 V., 3-1/c No. 6 DIRECT BURIAL CABLE IN CONDUIT	L. FT.	4817	4317	4817 ✓	1003
600 V., 3-1/c No. 6 DIRECT BURIAL CABLE IN EARTH	L. FT.	698	—	698 ✓	1003
600 V., 3-1/c No. 4 DIRECT BURIAL CABLE IN CONDUIT	L. FT.	7381	7381 ✓	—	1001
DOUBLE BEAM GUARD RAIL (SPECIAL)	L. FT.	1625	1625 ✓	—	
INSPECTION FEES (D.E. CO.)	EACH	43	26 ✓	17 ✓	
6" EDGE DRAIN	L. FT.	6	6 ✓	—	1001
ILLUMINATED TARGET ARROW - SIGN (TYPE A)	EACH	2	2 ✓	—	
MAINTAINING TRAFFIC	LUMP SUM	LUMP SUM	L.S. ✓	—	

PLAN EXTRAS

AUTH DATE	DESCRIPTION I 63174-04096A	UNIT	QUANTITY ~~ESTIMATE~~	QUANTITY FINAL
9.001	Remove U.G. Fed Street Light Unit 6	each	@ 592.00 =	3552.00

CHECKED
CONTRACT SECTION
DATE 12/28/73

MICHIGAN STATE HIGHWAY DEPARTMENT

BILL OF MATERIAL

SQUAD BOSS	T. Jildeh	1971
DRAWN BY	R.C.	9-3-71
TRACED BY	D.W.	9-3-71
CHECKED BY	H.P.	10-11-71

SHEET 17 OF 17

63174 & 63103

04096 A
04261 A

63174-07065A

CS: 63174

ID: 07065A

Is 63174 - 07065 A
I 75-2 (171)59
2.01 mi of Longitudinal Pavement Grooving on I-75 fr 8½-Mile Road N'ly to Nine Mile Road in the City of Hazel Park, and from North of East Long Lake Road N'ly to West of Crooks Road in the City of Troy, Oakland County. Item 18

JUL 28 1976

ROUTE	JOB NUMBER	FEDERAL NUMBER	SHEET NO.	TOTAL SHEETS
I-75	07065A	I-75-2 (171) 59	1	6

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS 1973 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

PLANS OF PROPOSED

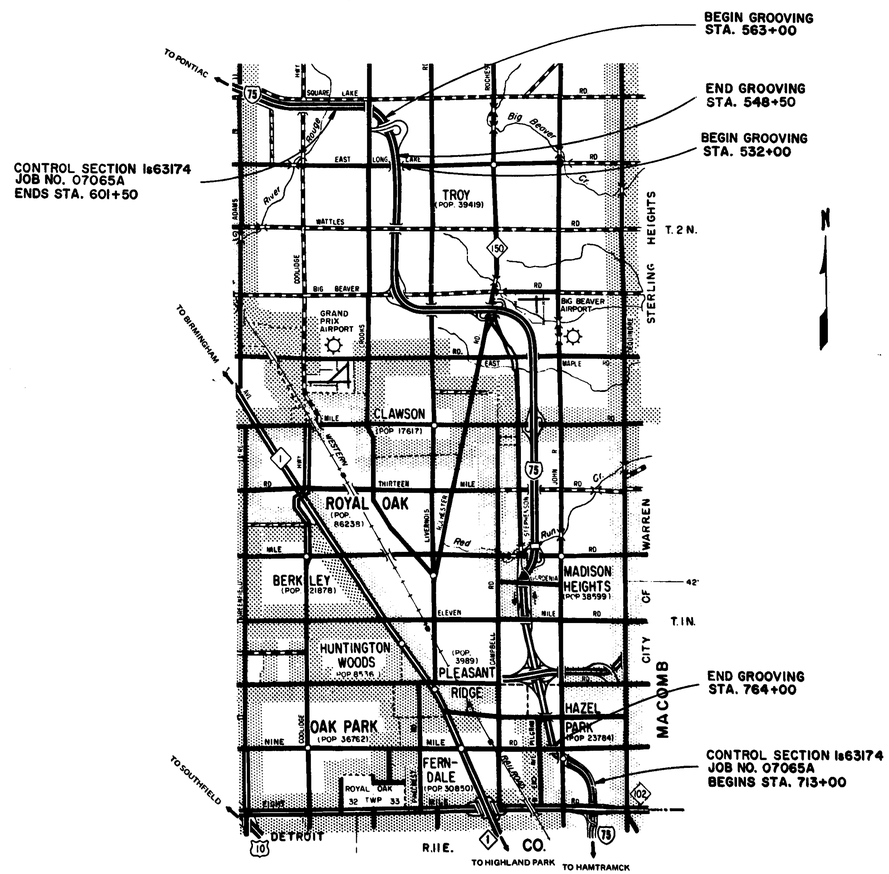
MICHIGAN PROJECT I-75-2(171) 59
CONTROL SECTION Is63174
JOB NUMBER 07065A
CITIES OF HAZEL PARK & TROY
OAKLAND COUNTY

ROAD PLANS — SHEET NO'S.

TITLE 1
TYPICAL CROSS SECTION 2
PLAN SHEETS 3-6
QUANTITIES 6

LEGEND

A.D.T. .....
D.H.V. .....
COMM. % .....
DESIGN SPEED .....



TITLE SHEET LEGEND

EXISTING CONDITION

PAVED — BITUMINUS — GRAVEL — UNIMPROVED OR CITY STREET — RELOCATION

PROPOSED PROJECT .....
PAVED .....
BITUMINOUS .....
GRAVEL .....
UNIMPROVED OR CITY STREET .....
SECTION LINE .....
TOWNSHIP LINE .....
COUNTY LINE .....
CITY OR VILLAGE LIMITS .....
RAILROADS .....

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

ITEM NO. 1716

CONTRACT FOR GROOVING PROJECTS

APPROVALS

CHECKED	C. J. Zajac — ENGINEER - DESIGN SECTION III	7-12-74 DATE
RECOMMENDED FOR APPROVAL	M. Rothstein — ENGINEER OF DESIGN	7-12-74 DATE
RECOMMENDED FOR APPROVAL	Lowell J. Doyle — ENGINEER OF TRAFFIC & SAFETY	7-18-74 DATE
RECOMMENDED FOR APPROVAL	[signature] — ENGINEER OF CONSTRUCTION	7/17/74 DATE

DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
JOHN P. WOODFORD - DIRECTOR

APPROVED BY: [signature] — DEPUTY DIRECTOR - HIGHWAYS — 7/18/74 DATE

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
SQUAD LUTHER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED [redacted]

Is63174	JOB NUMBER	FEDERAL PROJECT	SHEET NO.
	07065A	I-75-2 (171) 59	1

CONTROL SECTION - JOB NUMBER Is63174 07065A

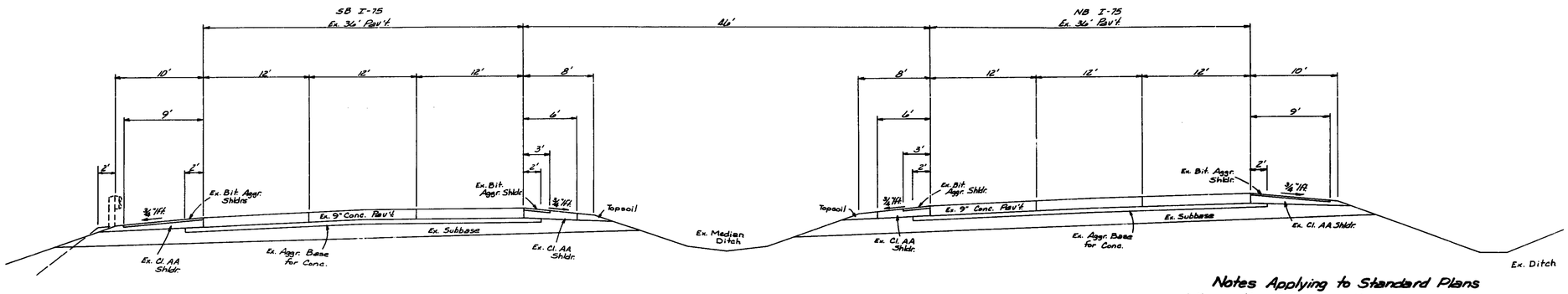
FHWA-3 MI 8-72 51296-

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I75-2(171)59		2	6
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	Oakland	Is 63174		07065A	

FINAL R.O.W.

Squad: Luther 1974

TYPICAL CROSS-SECTIONS

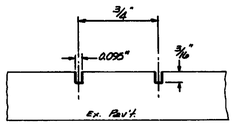


TYPICAL SECTION
To Apply:
Sta. 532+00 to 548+50
Sta. 563+00 to 601+50

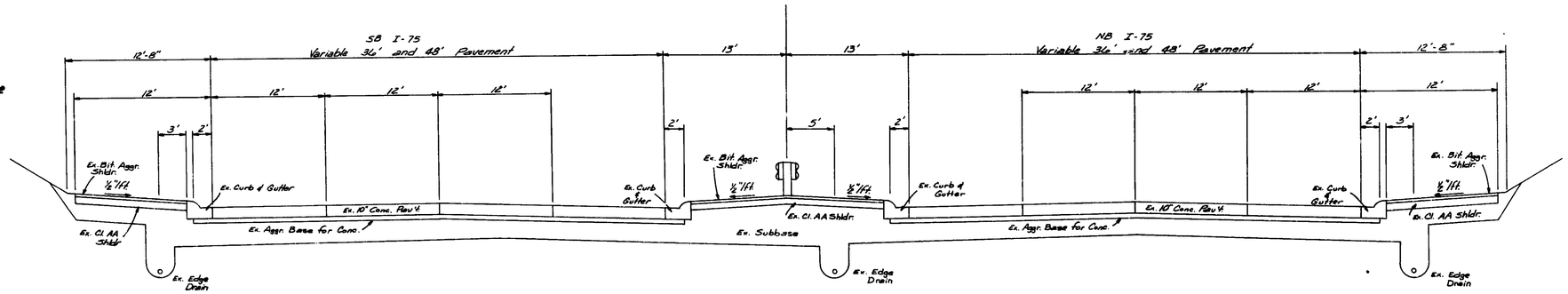
Scale: 1" = 6' Horiz.
1" = 4' Vert.

Notes Applying to Standard Plans
Where the following items are called for on plans, they are to be constructed according to the Standard Plan given below opposite each item.

Drums..... VI - 124 B
Types I & II Barricades and Lighted Arrows..... VI - 125 C



Grooving Dimensions
To Apply:
Center 10' each lane
(Not to scale)



TYPICAL SECTION
To Apply:
Sta. 713+00 to 764+00

Scale: 1" = 6' Horiz.
1" = 4' Vert.

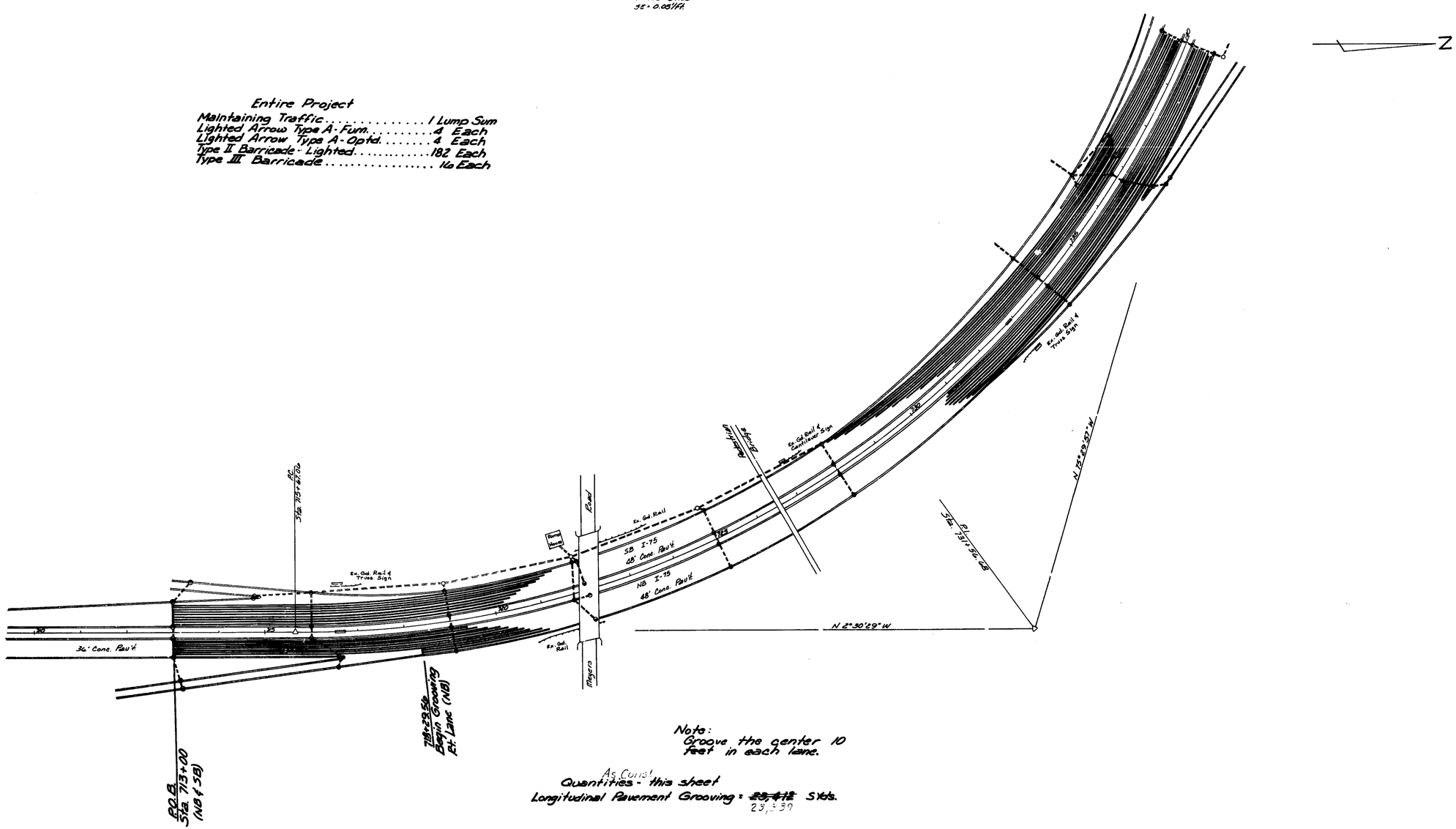
CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
Is 63174	07065A	I75-2(171)59		2

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I 75-2(171)59		3	6

ROUTE	COUNTY	CONTROL SECTION	JOB NO.
I-75	Oakland	Is 63174	07065 A

Curve Data
Δ = 72°59'28" Lt.
D = 2°40'00"
R = 2148.59'
T = 1589.62'
L = 2737.17'
E = 524.11'
PC = 715+67.06
PI = 731+56.68
PT = 743+04.23
SE = 0.05'/ft.

Entire Project
Maintaining Traffic ..... 1 Lump Sum
Lighted Arrow Type A - Furn. ..... 4 Each
Lighted Arrow Type A - Optd. ..... 4 Each
Type II Barricade - Lighted ..... 182 Each
Type III Barricade ..... 16 Each



Note:
Groove the center 10 feet in each lane.

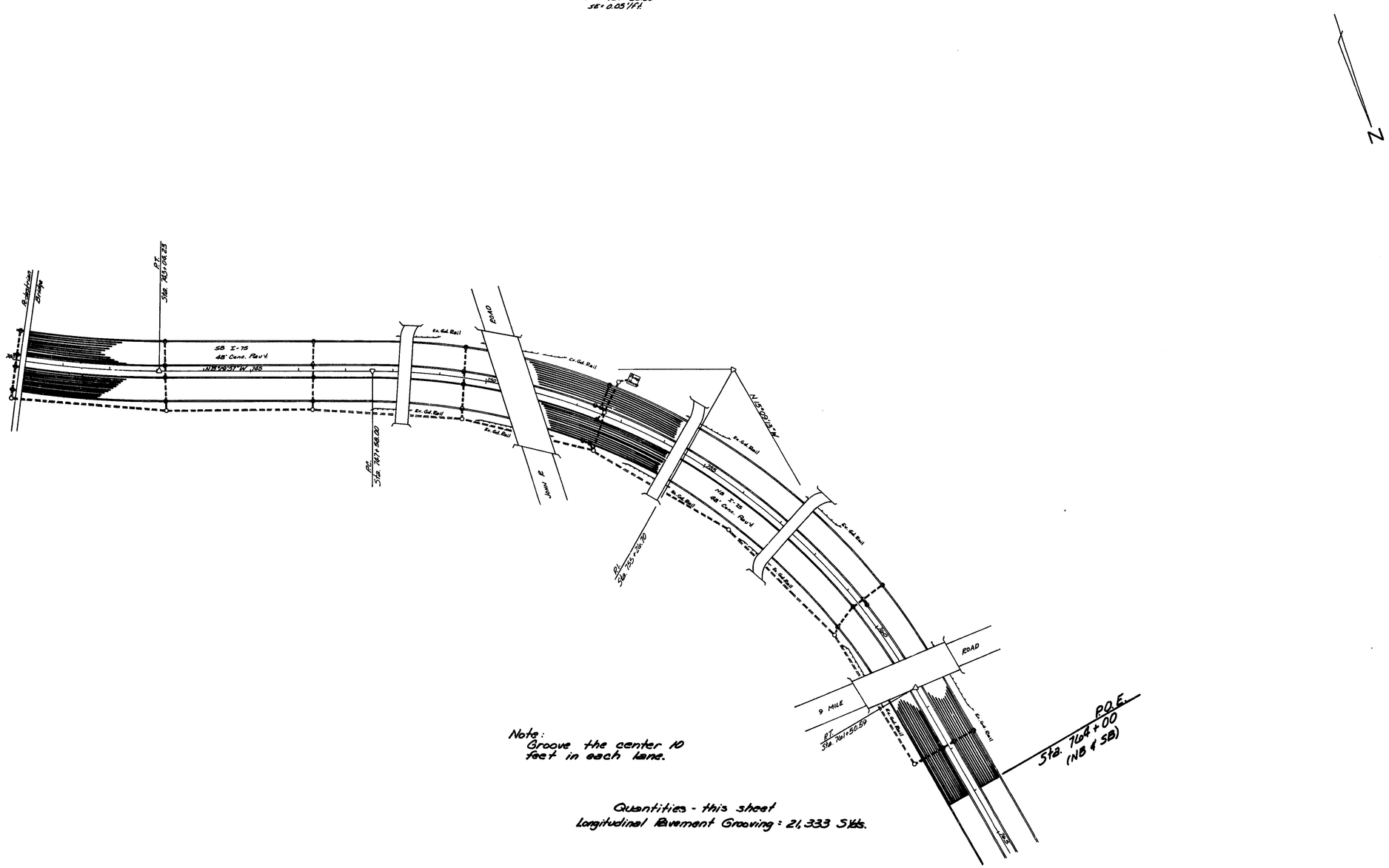
As Const.
Quantities - this sheet
Longitudinal Pavement Grooving = ~~23,412~~ 23,339 Syds.

Squad. Luther 1974

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
Is 63174	07065A	I75-2(171)59		3

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I75-2(171)59		4	6
ROUTE	COUNTY	CONTROL SECTION	JOB NO.		
I-75	Oakland	Is 63174	07065A		

Curve Data
Δ = 60°20'44" Rt.
D = 4°20'00"
R = 1322.21'
T = 768.70'
L = 1392.59'
E = 207.22'
PC = 747+58.00
PI = 755+26.70
PT = 761+50.59
SE = 0.05'/ft.



Note:
Groove the center 10 feet in each lane.

Quantities - this sheet
Longitudinal Pavement Grooving: 21,333 Sq.Yds.

Squad: Luther 1974

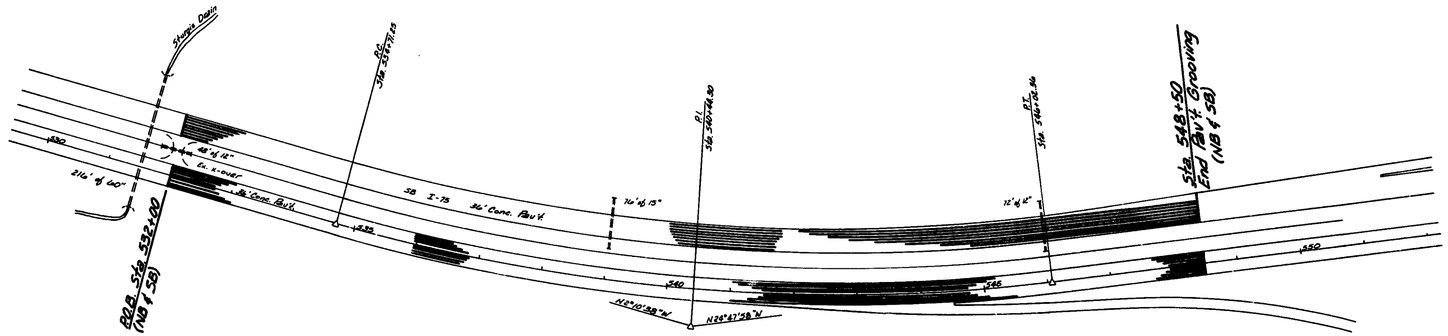
CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
Is 63174	07065A	I75-2(171)59		4

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I75-2(171)59		5	6

ROUTE	COUNTY	CONTROL SECTION	JOB NO.
I-75	Oakland	Is 63174	07065A

Squad: Luther 1974

Curve Data
Δ = 22°37'30"
D = 2°00'
R = 2864.93'
T = 573.05'
L = 1131.11'
E = 56.75'
PC = 534+71.25
PI = 540+44.30
PT = 546+02.36
SE = 0.05'/ft.



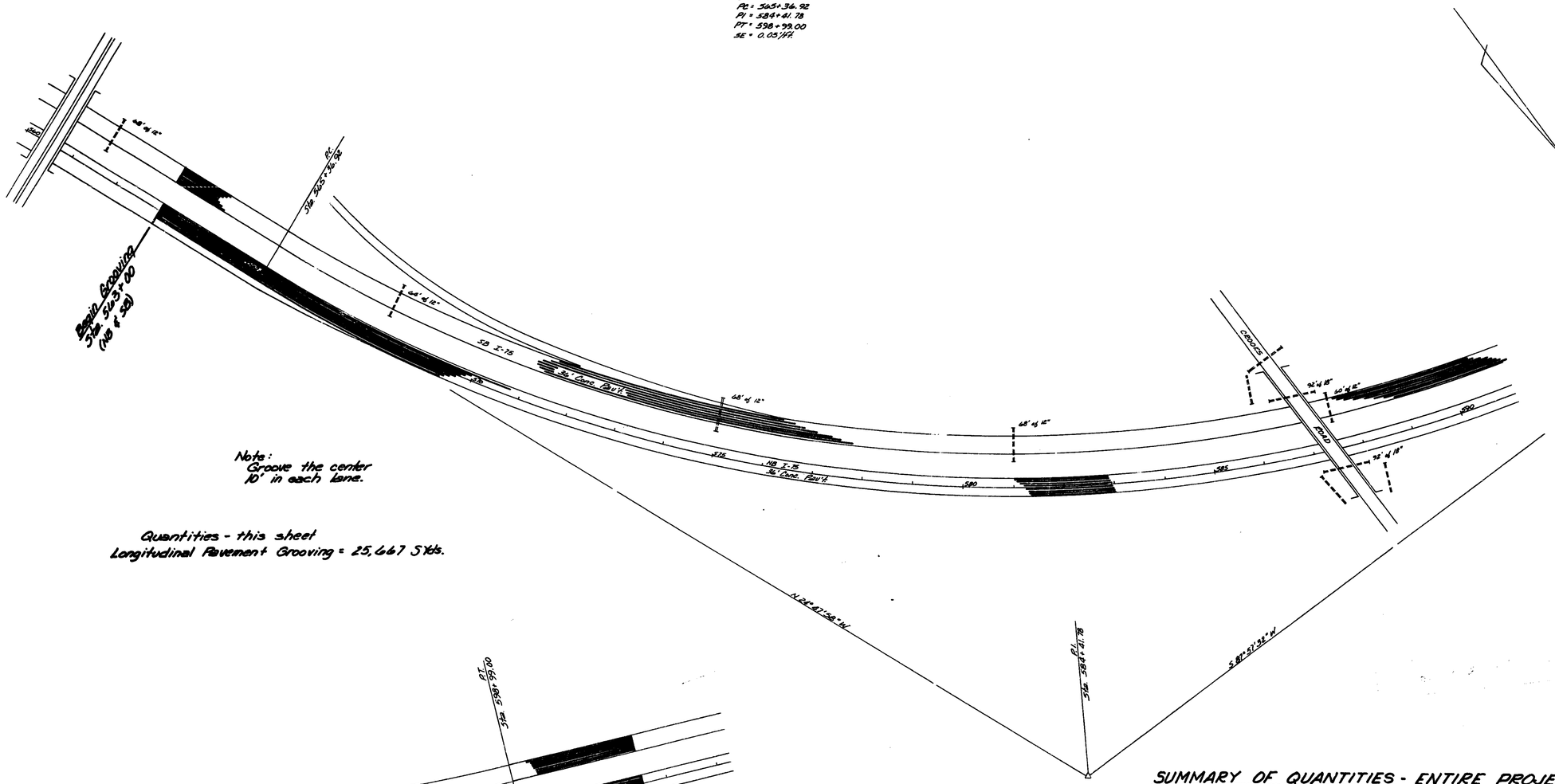
Quantities - this sheet
Longitudinal Pavement Grooving = 11,000 Sq.Yds.

Note:
Groove the center
10 feet in each lane.

CONTROL SECTION	Is 63174	JOB NO.	07065A	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
				I75-2(171)59		5

T.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2(171)59		6	6
ROUTE	COUNTY	CONTROL SECTION	JOB NO.		
I-75	Oakland	Is 63174	07065A		

Curve Data
Δ = 67°14'30" Lt.
D = 2°00'00"
E = 1264.79'
T = 1904.86'
L = 3362.08'
E = 573.49'
PC = 365+36.92
PI = 384+41.78
PT = 398+99.00
SE = 0.03/Ft.



Squad: Luther 1974

SUMMARY OF QUANTITIES - ENTIRE PROJECT

Item	Unit	As Per Plans	As Constructed	
Longitudinal Pavement Grooving	S Yd.	81,412	80,916	100%
Maintaining Traffic	L Sum	1	1	
Lighted Arrow Type A - Furnished	Each	4	5	100%
Lighted Arrow Type A - Operated	Each	4	2	100%
Type II Barricade - Lighted	Each	182	136	100%
Type III Barricade	Each	16	12	100%

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
Is 63174	07065A	I-75-2(171)59		6

63174-07555A

CS: 63174

ID: 07555A

I 63174 - 07555 A
I 75-2 (172) 59
3 mi of Landscape Development on I-75 fr Eight Mile Road N'ly to Eleven Mile Road in the Cities of Hazel Park, Royal Oak, and Madison Heights, Oakland County.
Item 15

ROUTE	JOB NUMBER	FEDERAL NUMBER	SHEET NO.	TOTAL SHEETS
I-75	07555A	I-75-2 (172)59	1	18

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

PLANS OF PROPOSED

MICHIGAN PROJECT I-75-2(172)59
CONTROL SECTION I 63174
JOB NUMBER 07555A
I-75
OAKLAND COUNTY
CITIES OF HAZEL PARK AND ROYAL OAK

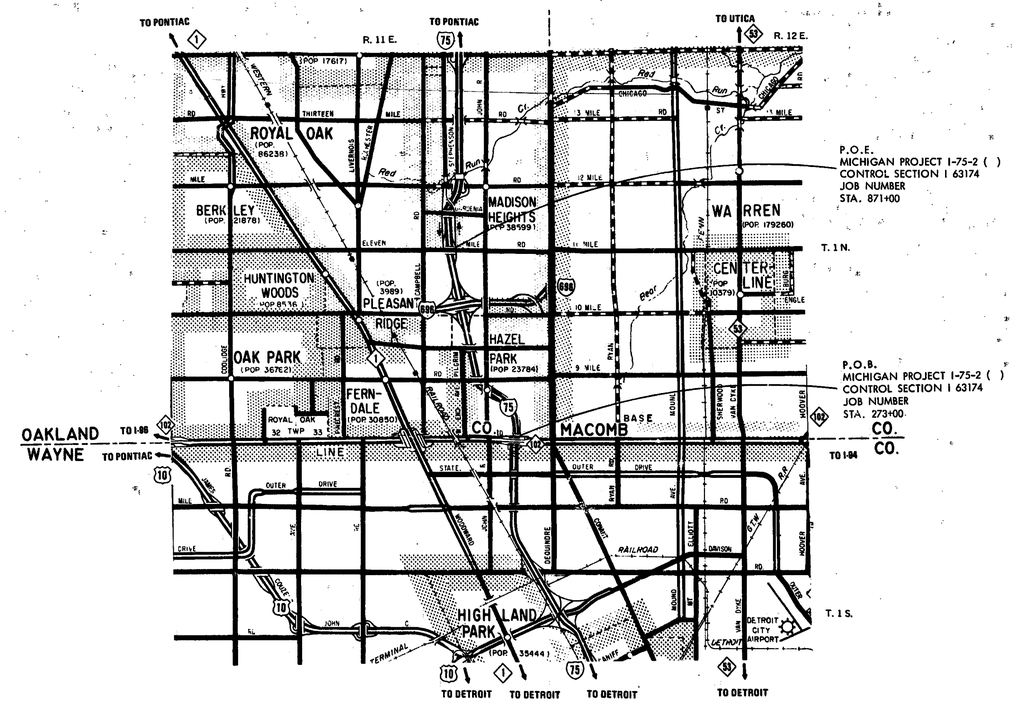
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS 1973 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

INDEX SHEET NO'S.

TITLE SHEET .....
SPECIFICATIONS.....
PLAN SHEETS.....
QUANTITY SHEET .....

LEGEND

A.D.T.....
D.H.V.....
COMM. % .....
DESIGN SPEED.....



TITLE SHEET LEGEND

EXISTING CONDITION

PAVED — BITUMINOUS — GRAVEL — UNIMPROVED OR CITY STREET — RELOCATION

PROPOSED PROJECT .....
PAVED .....
BITUMINOUS .....
GRAVEL .....
UNIMPROVED OR CITY STREET .....
SECTION LINE .....
TOWNSHIP LINE .....
COUNTY LINE .....
CITY OR VILLAGE LIMITS .....
RAILROADS .....

2-78

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

ITEM NO.

CONTRACT FOR LANDSCAPE DEVELOPMENT

APPROVALS

CHECKED — SUPERVISOR OF ROADSIDE DEVELOPMENT — 7-11-74 DATE

RECOMMENDED FOR APPROVAL — ENGINEER OF DESIGN — 7-11-74 DATE

RECOMMENDED FOR APPROVAL — for ENGINEER OF TRAFFIC & SAFETY — 7-17-74 DATE

RECOMMENDED FOR APPROVAL — ENGINEER OF CONSTRUCTION — 7/16/74 DATE

DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
JOHN P. WOODFORD – DIRECTOR

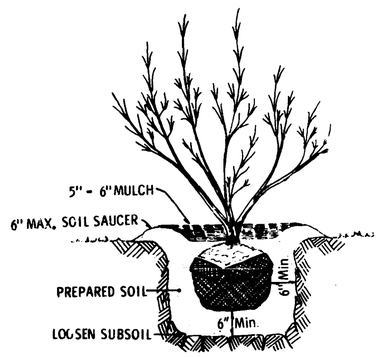
APPROVED BY: — DEPUTY DIRECTOR – HIGHWAYS — 7/12/74 DATE

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
SQUAD MULLER

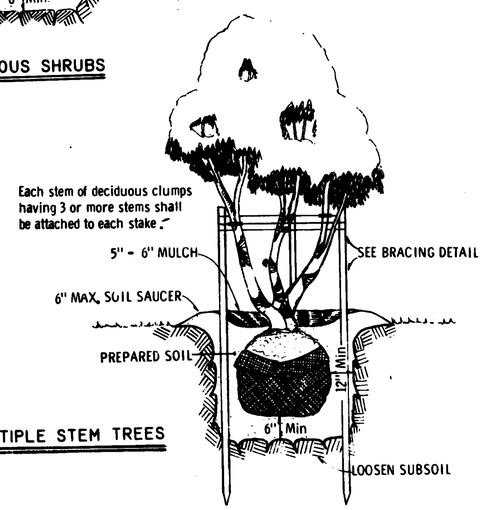
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED [redacted]

CONTROL SECTION	JOB NUMBER	FEDERAL PROJECT	SHEET NO.
I 63174	07555A	I-75-2 (172)59	1

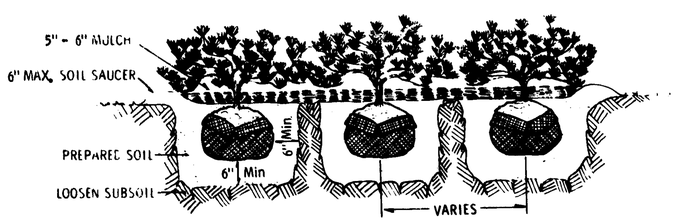
JOB NUMBER I 63174-07555A



DECIDUOUS SHRUBS



MULTIPLE STEM TREES



BEDDED SHRUBS

PLANTING TREES & SHRUBS

1. Dig plant pocket for trees a minimum of 24" wider and 6" deeper than root ball, unless otherwise specified.
2. Dig plant pocket for shrubs a minimum of 12" wider and 6" deeper than root ball, unless otherwise specified.
3. Loosen subsoil to a depth of 4". Loosen earth on sides of pocket to break the glaze caused by digging.
4. Set plants at the same or slightly greater depth than at the nursery.
5. Fill prepared soil to 1/2 the depth of ball, pack firmly, and settle with water.
6. Loosen and remove burlap and all lacing from upper half of ball.
7. Backfill with prepared soil which, after compaction, is flush with ground level.
8. Form a soil saucer 6" high around edge of plant pocket.
9. Cover plant pocket area with 5" - 6" mulch.
10. Prune, wrap, & brace as specified.

NOTES:

Sever plantable containers in several places & remove upper half of container during planting.

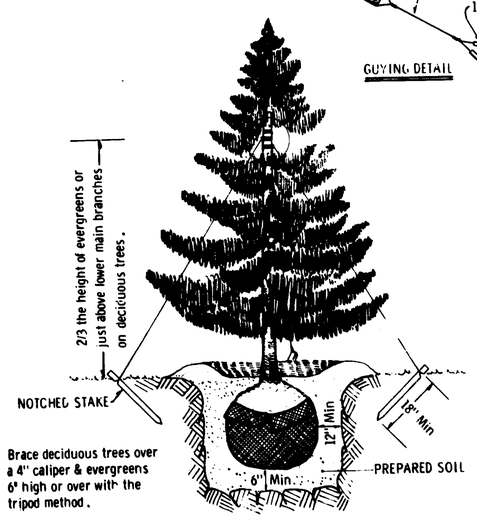
Completely remove metal containers at time of planting.

All unsuitable salvage soil must be removed from the site.

All heights shown are before pruning.

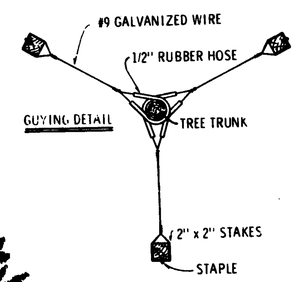
All depths shown are after settling.

Trees and shrubbery shall not be planted within 50' and 30' respectively of the nearest edge of metal-except near structures and guard rails, and where inaccessible to vehicles.

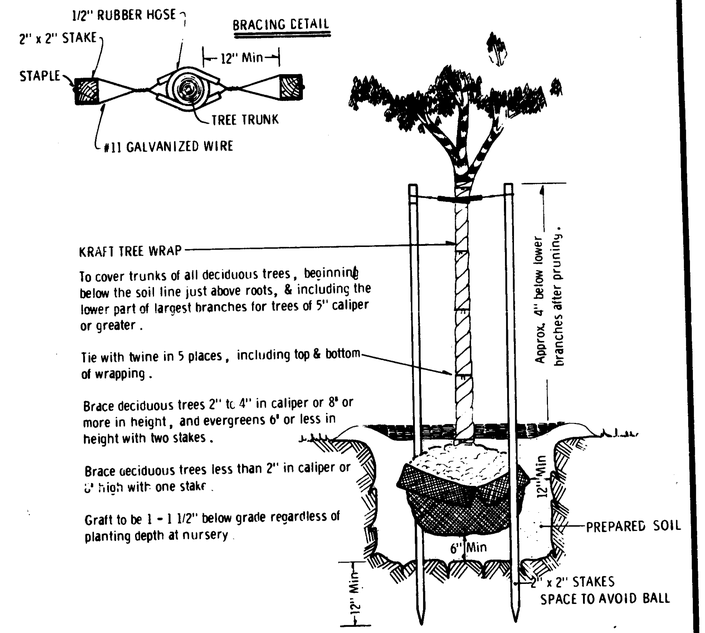


Brace deciduous trees over a 4" caliper & evergreens 6' high or over with the tripod method.

TRIPOD METHOD

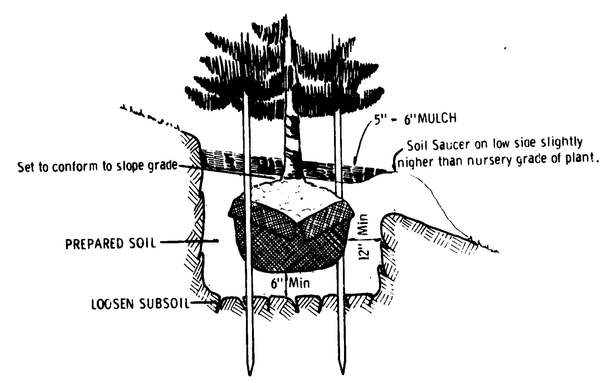


GUYING DETAIL



BRACING DETAIL

BRACING – VERTICAL STAKES



PLANTING ON A SLOPE

Drawn by
Rev. 5-14-74 M. J. Wickens

TYPICAL PLANTING PROCEDURES

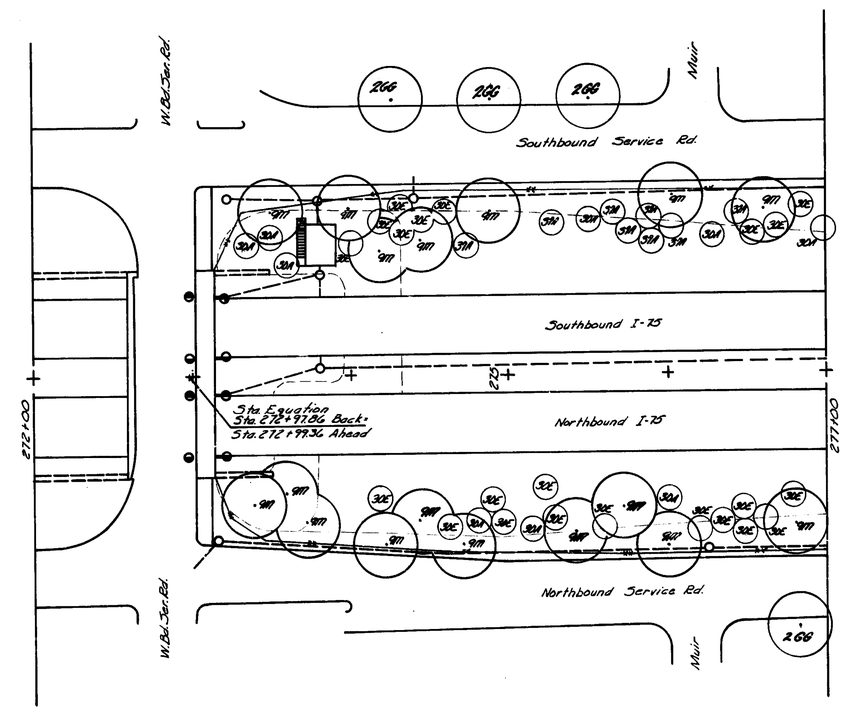
MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

163174	JOB NO 07555A	FEDERAL PROJECT	R.O.W. NO	SHEET NO 2
		I-75-2( )		

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		3	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

1"=40'

17	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
9	30A	ACER CAMPESTRE	HEDGE MAPLE
22	30E	ACER GINNALA	AMUR MAPLE
8	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
4	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 272+00 to 277+00

Squad-Muller 3-74

Traced by S.O. Bandy 3-74

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I-63174	07555A	I-75-2( )		3

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		4	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

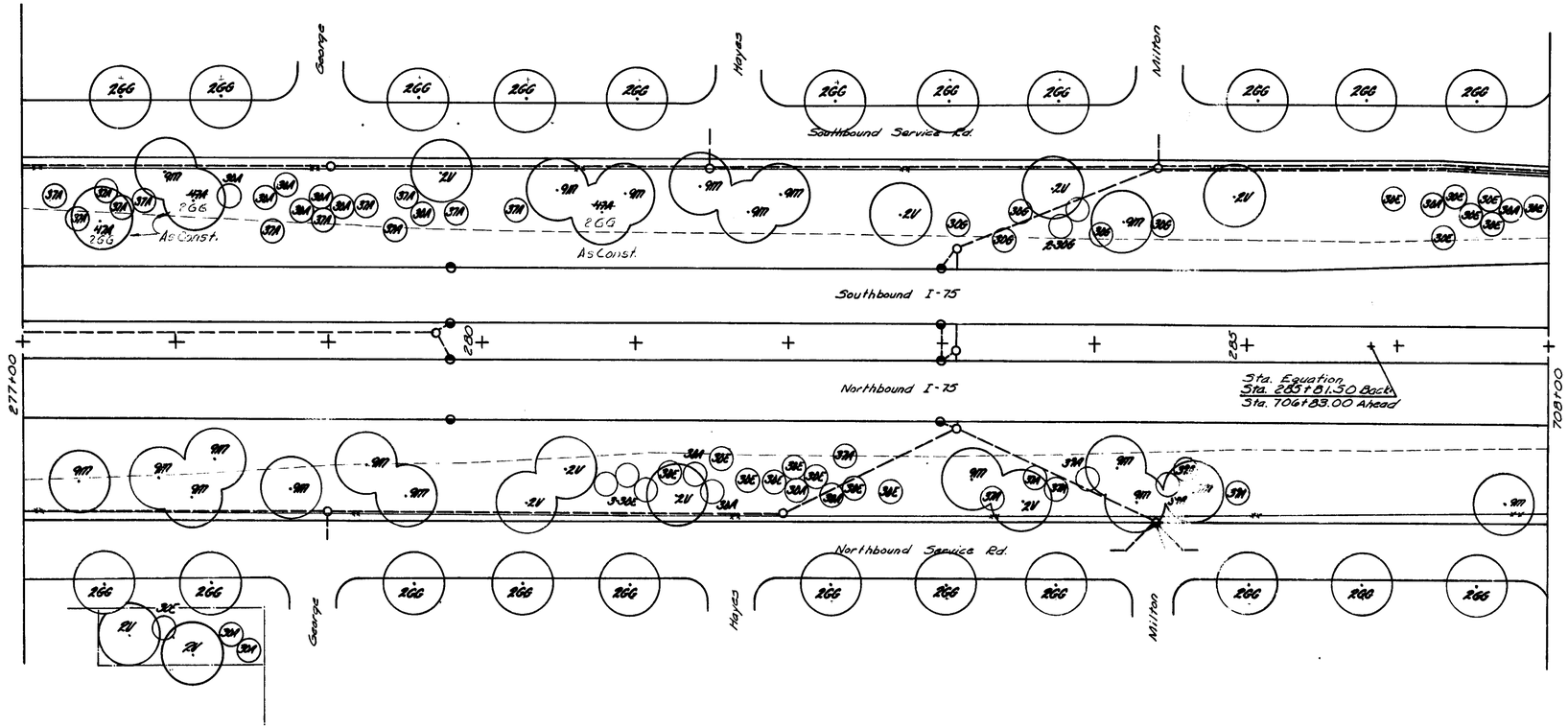
1"=40'

As Const.

10	2V	ACER SACCHARUM	SUGAR MAPLE
19	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
~~7~~ 5	47A	ULMUS PARVIFOLIA	CHINESE ELM
15	30A	ACER CAMPESTRE	HEDGE MAPLE
19	30E	ACER GINNALA	AMUR MAPLE
7	30G	ACER MANDSHURICUM	MANCHURIAN MAPLE
20	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
~~22~~ 25	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE

Squad-Muller 3-74

Traced by S.O. Bondy 3-74



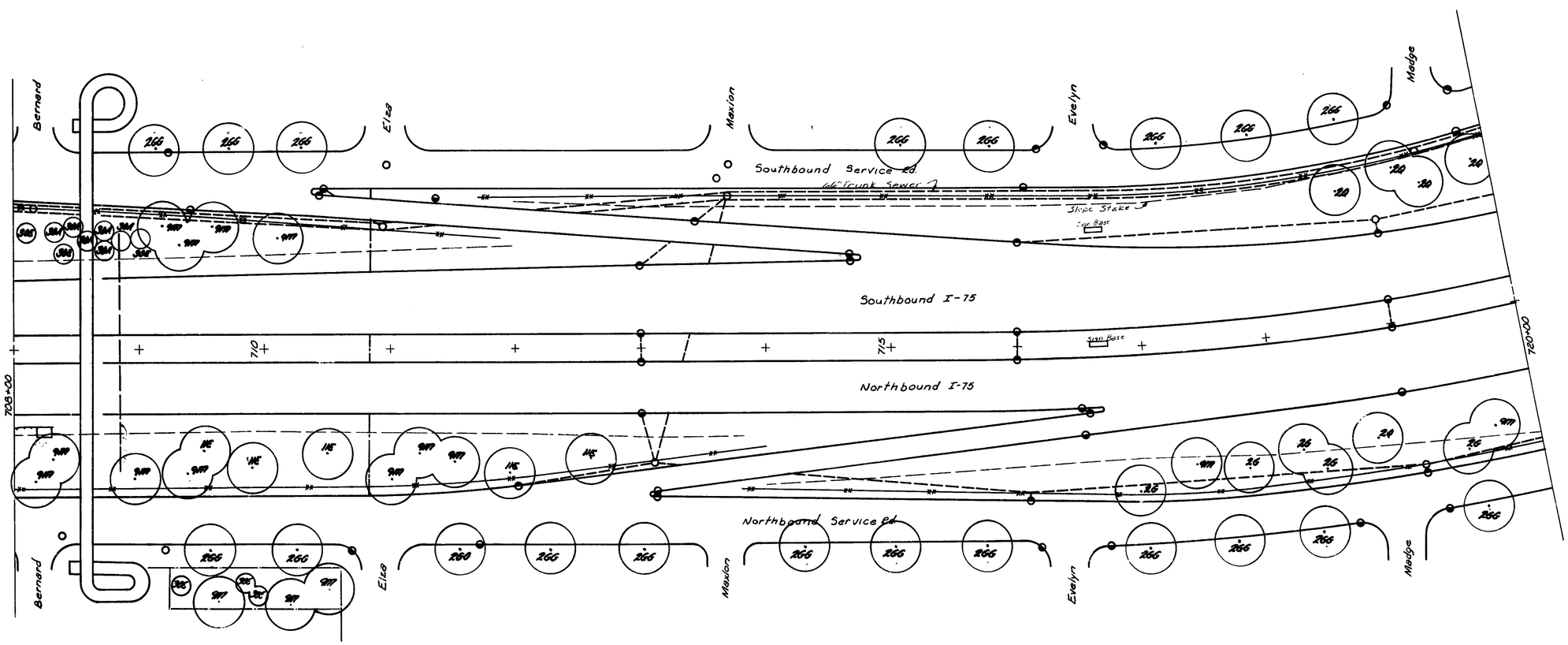
Sta 277+00 to 708+00

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		4

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		5	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	163174		07555A	

1" = 40'

5	26	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE
5	20	ACER RUBRUM 'SCHLESINGER'	SCHLESINGER RED MAPLE
16	91M	FRAXINUS PENN LANCEOLATA 'MARSHALL SEEDLESS	MARSHALL SEEDLESS GREEN ASH
5	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
6	30A	ACER CAMPESTRE	HEDGE MAPLE
6	30E	ACER GINNALA	AMUR MAPLE
20	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 708+00 to 720+00

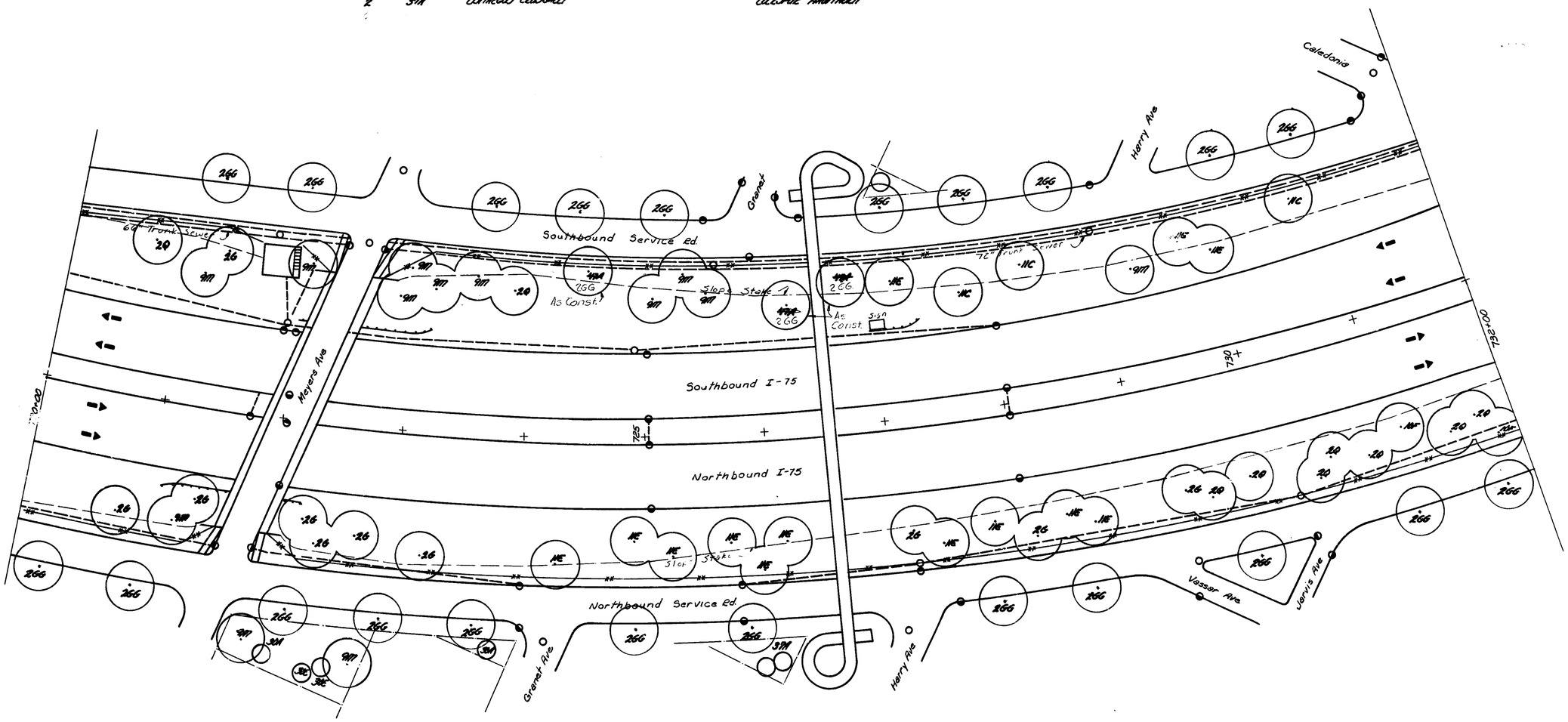
Squad-Muller 1-74

Traced by J.M. Galloway 1-74

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
163174	07555A	I-75-2( )		5

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		6	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

As Const.			
10	26	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
9	20	ACER RUBRUM 'SCHLESINGER'	SCHLESINGER RED MAPLE
13	9M	FRAXINUS PENN LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
2	10F	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKO
3	11C	GLEDITSIA TRI. INERMIS 'MORAINE'	MORAINE HONEYLOCUST
13	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
~~3~~ 0	4M	ULMUS PARVIFOLIA	CHINESE ELM
~~22~~ 25	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
2	3M	ACER CAMPESTRE	HEDGE MAPLE
2	30E	ACER GINNALA	AMUR MAPLE
2	5M	CERTAEGUS CRUSGALLI	COCKSPUR HAWTHORN



Sta. 720+00 to 732+00

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		6

Squad-Muller 1-74

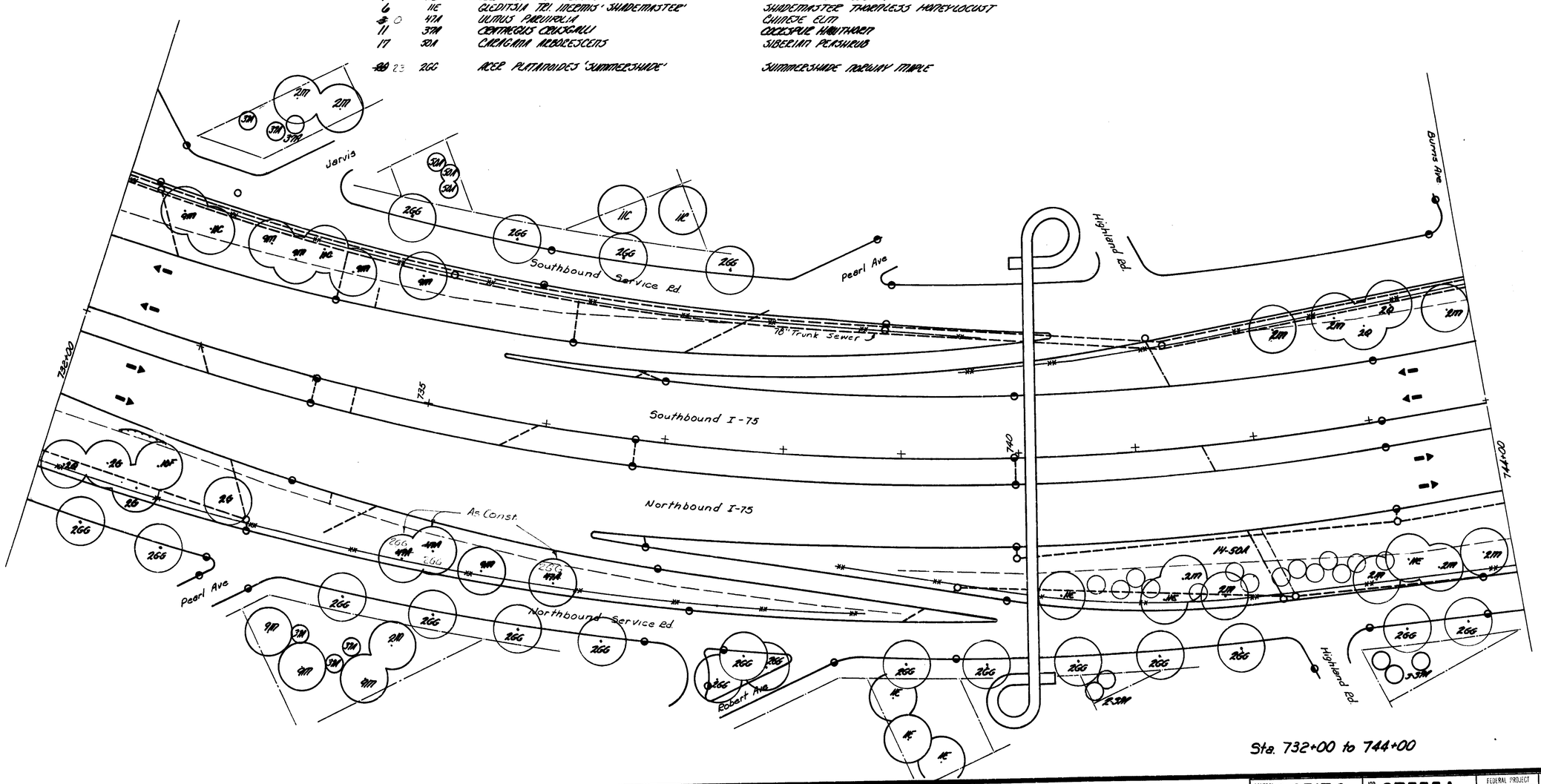
Traced by J.M. Galloway 1-74

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		7	18

ROUTE	COUNTY	CONTROL SECTION	JOB NO.
I-75	OAKLAND	I 63174	07555A

As Const

3	2G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
11	2M	ACER RUBRUM	RED MAPLE
3	2Q	ACER RUBRUM 'SCHLESLINGER'	SCHLESLINGER RED MAPLE
9	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
1	10F	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKO
4	11C	GLEDITSIA TRI. INERMIS 'MORAINE'	MORAINE HONEYLOCUST
6	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
~~3~~ 0	47A	ULMUS PARVIFOLIA	CHINESE ELM
11	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
17	50A	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB
~~20~~ 23	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta. 732+00 to 744+00

Squad-Muller 12-73

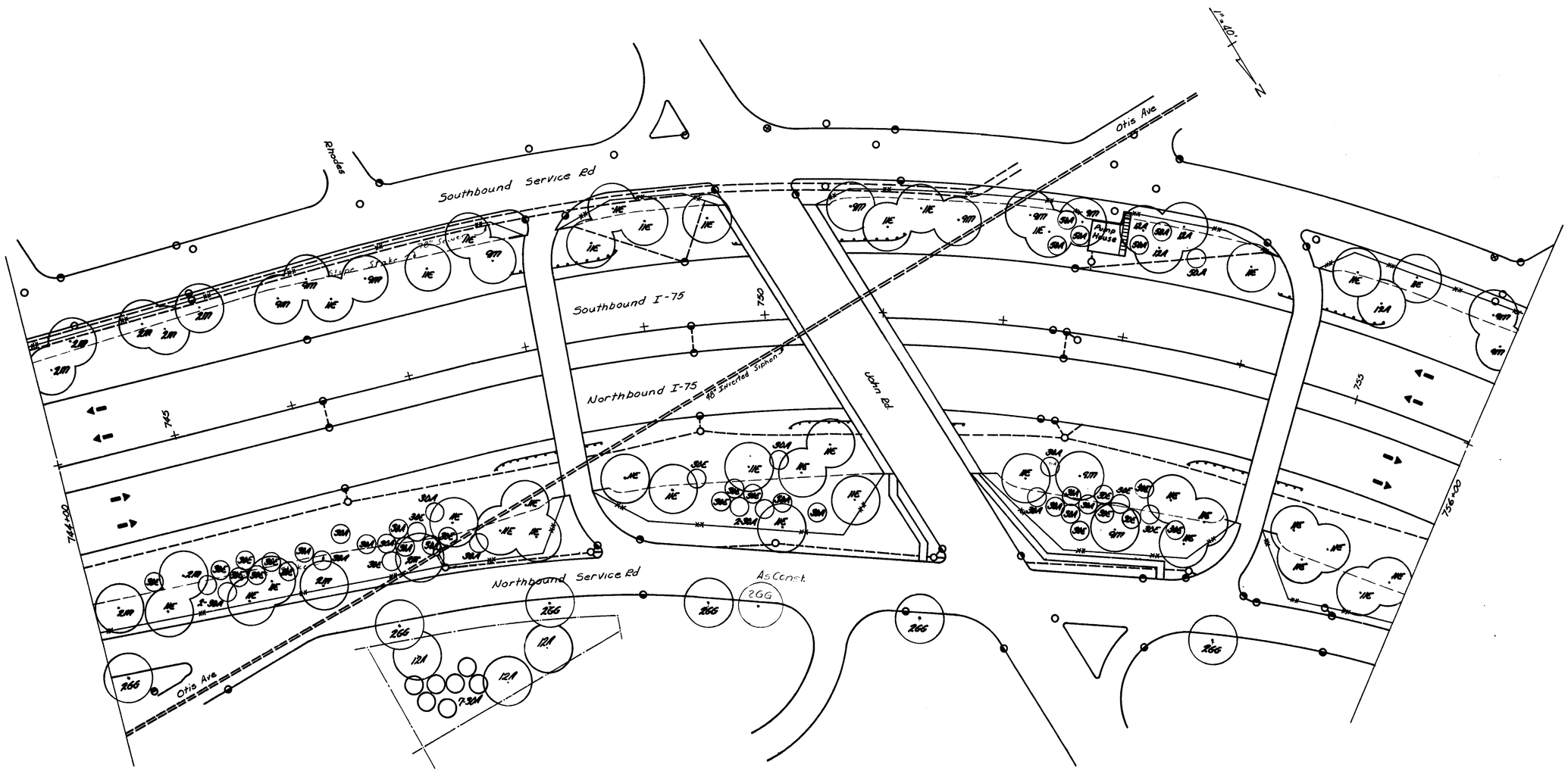
Traced by J.M. Galloway 12-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		7

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		8	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

As Const

9	2M	ACER RUBRUM	RED MAPLE
12	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
36	1E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADE MASTER THORNLESS HONEYLOCUST
7	12A	GYMNOCLADUS DIOICUS	KENTUCKY COFFEE TREE
30	30A	ACER CAMPESTRE	HEDGE MAPLE
6	50A	CRATAEGUS ARBORESCENS	SIBERIAN PEARSHRUB
22	30E	ACER GINNALA	AMUR MAPLE
~~4~~ 7	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta. 744+00 to 756+00

Squad-Muller 12-73

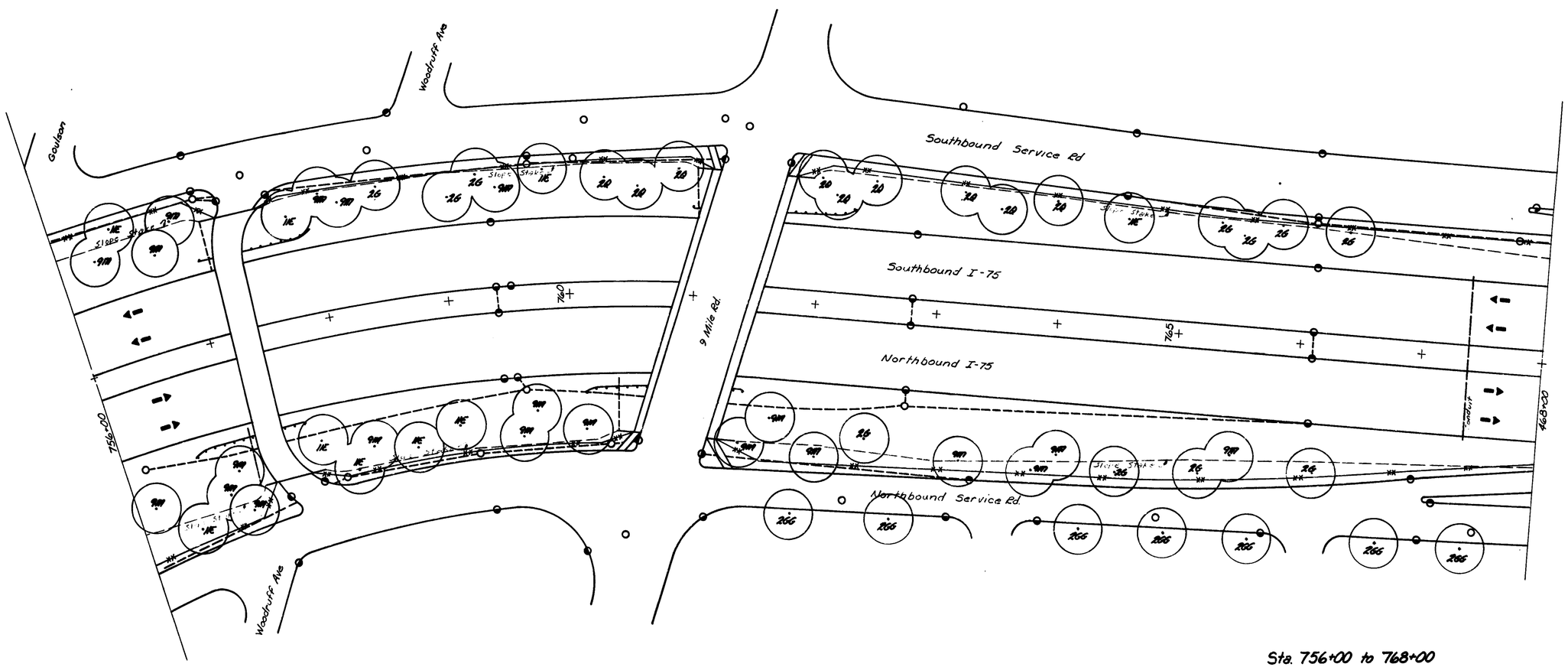
Traced by J.M. Galloway 12-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		8

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		9	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

.11	2G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
.9	2Q	ACER RUBRUM 'SCHLESINGER'	SCHLESINGER RED MAPLE
.21	9M	FRAXINUS PENN LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
.9	1E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
.7	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE

1" = 40'



Sta. 756+00 to 768+00

Squad-Muller 12-73

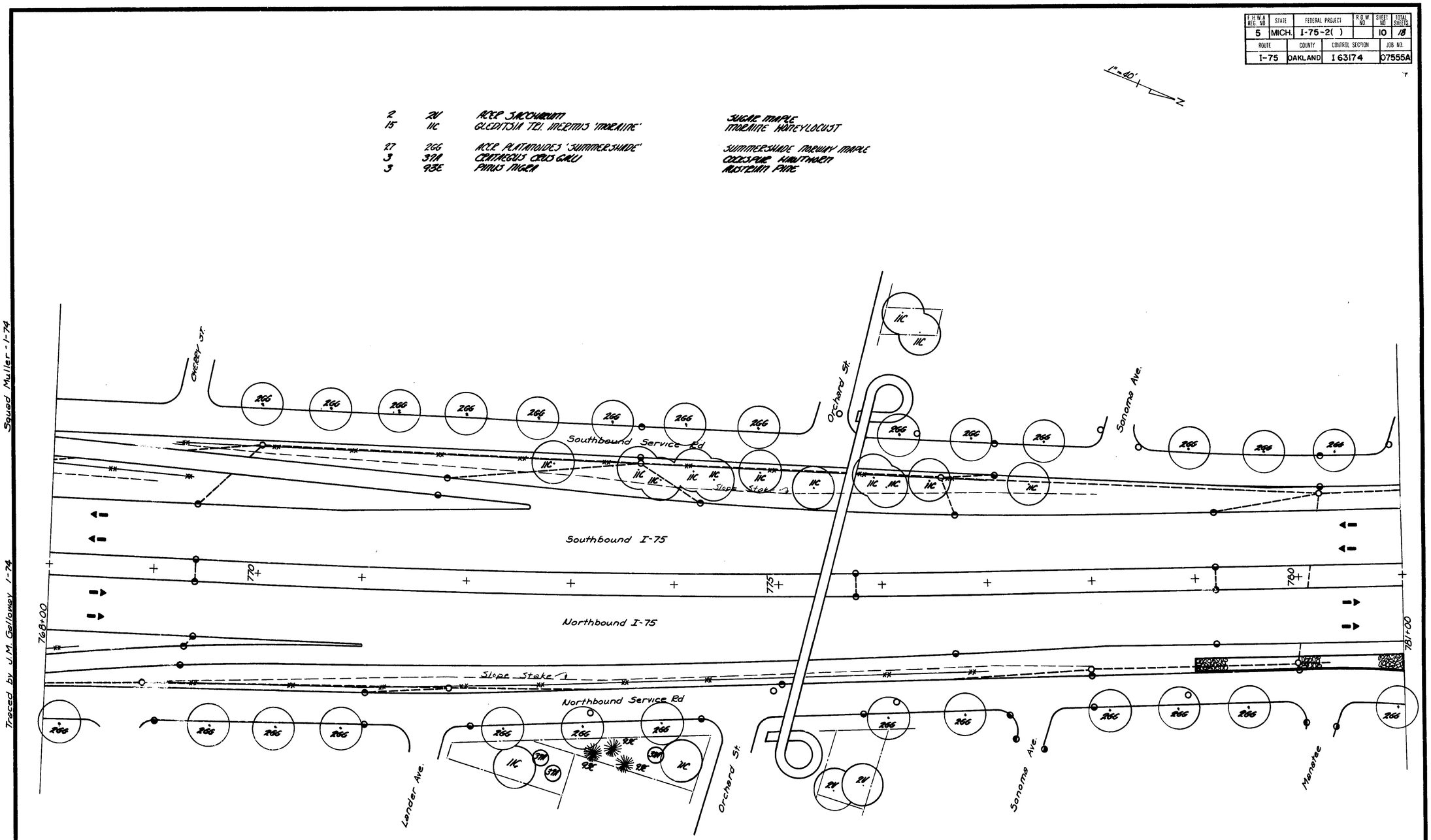
Traced by J.M. Galloway 12-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
163174	07555A	I-75-2( )		9

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		10	18

ROUTE	COUNTY	CONTROL SECTION	JOB NO.
I-75	OAKLAND	I 63174	07555A

2	2V	ACER SACCHARUM	SUGAR MAPLE
15	11C	GLEDITSIA TRI. INERMIS 'MORAINE'	MORAINE HONEYLOCUST
27	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
3	37A	CRATAEGUS CRUS GALLI	COCKSPUR HAWTHORN
3	93E	PINUS NIGRA	AUSTRIAN PINE



Sta. 768+00 to 781+00

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		10

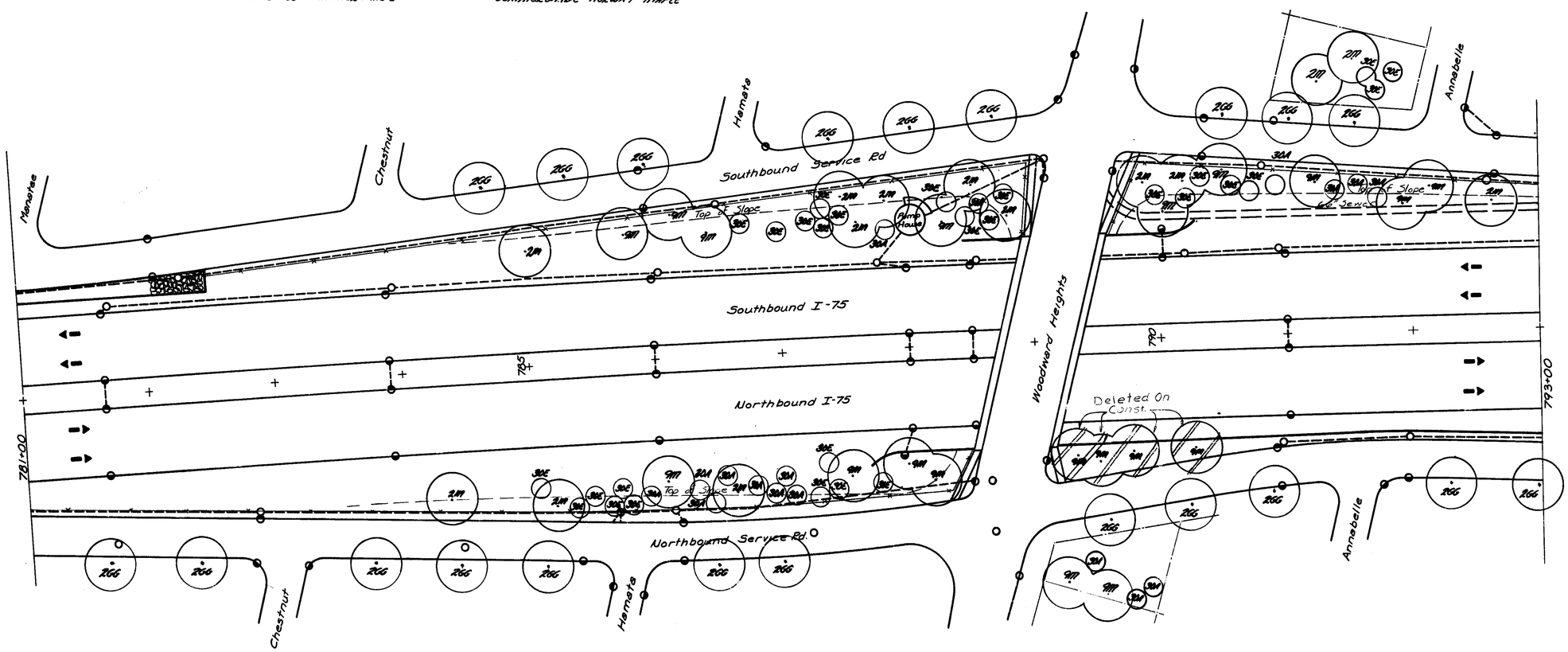
F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		11	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

1" = 40'

City of Hazel Park

As Const.

14	2M	ACER RUBRUM	RED MAPLE
~~19~~ 15	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
17	30A	ACER CAMPESTRE	HEDGE MAPLE
~~20~~	30E	ACER GINNALA	AMUR MAPLE
21	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 781+00 to 793+00

Traced by J.M. Galloway 12-73

Squad-Muller 12-73

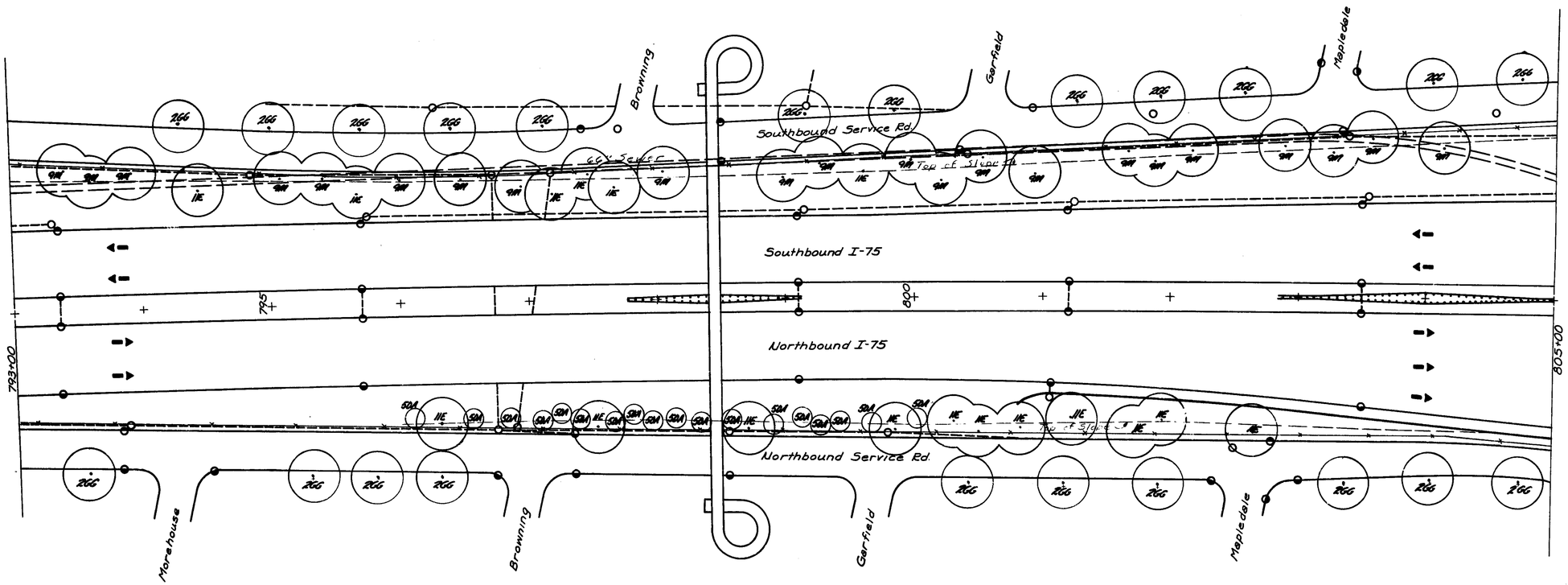
CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		11

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		12	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

1"=40'

N

22	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
17	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
18	5DA	CRATAEGUS ARBORESCENS	SIBERIAN PERSHEUB
22	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 793+00 to 805+00

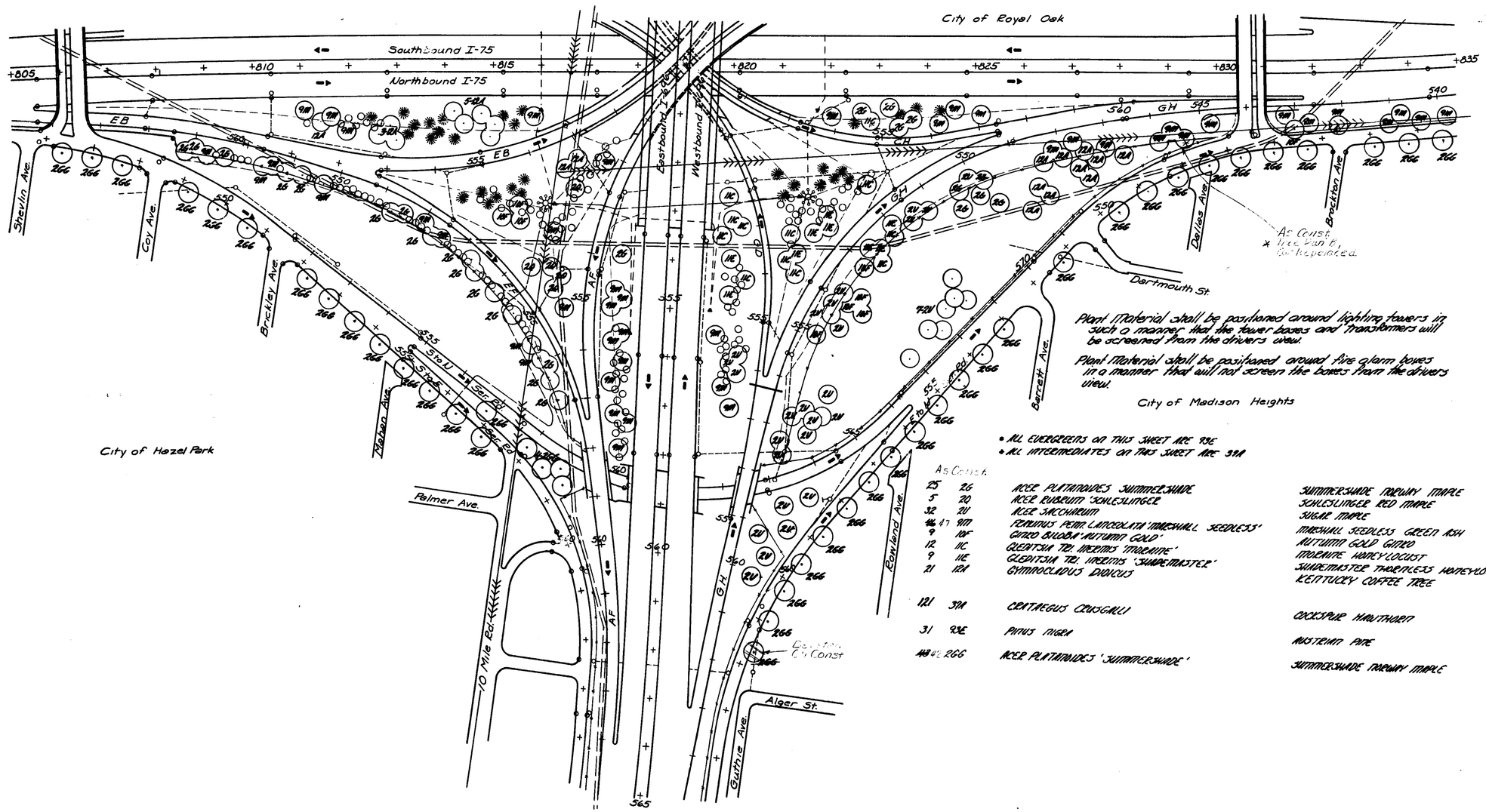
Traced by J.M. Gallaway 12-73

Squad - Muller - 12-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		12

C.H.W.A. R.C.G. NO	STATE	FEDERAL PROJECT	R.O.W. NO	SHEET NO	TOTAL SHEETS
5	MICH.	I-75-2( )		13	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

1"=100'



As Const.			
25	26	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
5	20	ACER RUBRUM 'SCHLESLINGER'	SCHLESLINGER RED MAPLE
32	21	ACER SACCHARUM	SUGAR MAPLE
~~46~~ 47	91M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
9	10F	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKO
12	11C	GLEDITSIA TRI. INERMIS 'MORAINE'	MORAINE HONEYLOCUST
9	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
21	12A	GYMNOCLADUS DIOICUS	KENTUCKY COFFEE TREE
121	91A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
31	93E	PINUS NIGRA	AUSTRIAN PINE
~~49~~ 42	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE

Sta 805+00 to 835+00

Squed - Muller 12-73

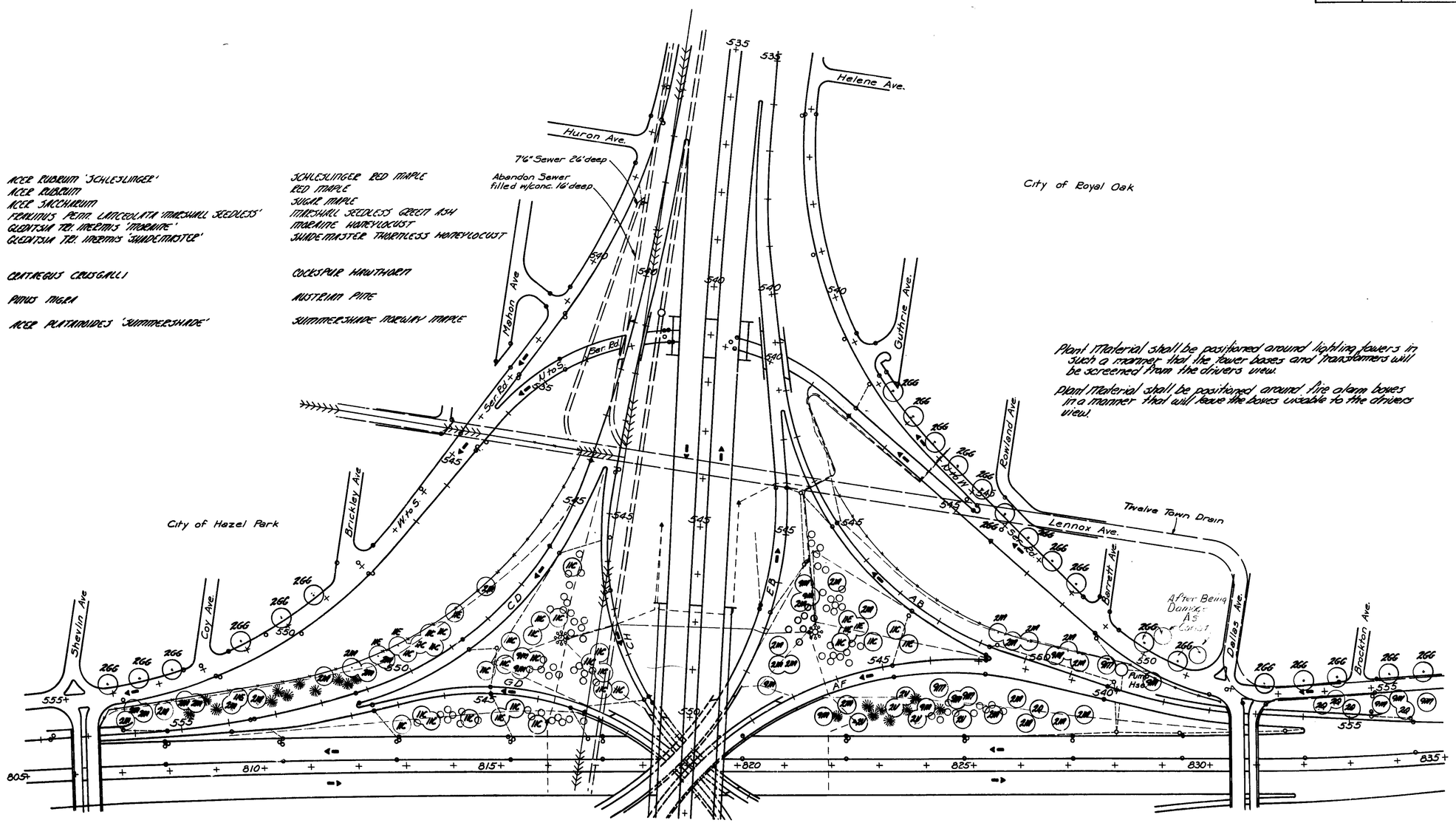
Traced by J.M. Galloway 12-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	S.H. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		13

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		14	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

1"=100'

As Const.			
5	2Q	ACER RUBRUM 'SCHLESLINGER'	SCHLESLINGER RED MAPLE
30	2M	ACER RUBRUM	RED MAPLE
5	2V	ACER SACCHARUM	SUGAR MAPLE
16	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
28	11C	GLEDITSIA TRI. INERMIS 'MORAINE'	MORAINE HONEYLOCUST
8	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
82	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
19	93E	PINUS NIGRA	AUSTRIAN PINE
~~82~~ 24	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Plant Material shall be positioned around lighting towers in such a manner that the tower bases and transformers will be screened from the drivers view.

Plant Material shall be positioned around fire alarm boxes in a manner that will leave the boxes visable to the drivers view.

NOTE - ALL EVERGREENS ON THIS SHEET ARE 93E
ALL INTERMEDIATE TREES ON THIS SHEET ARE 37A

Sta 805+00 to 835+00

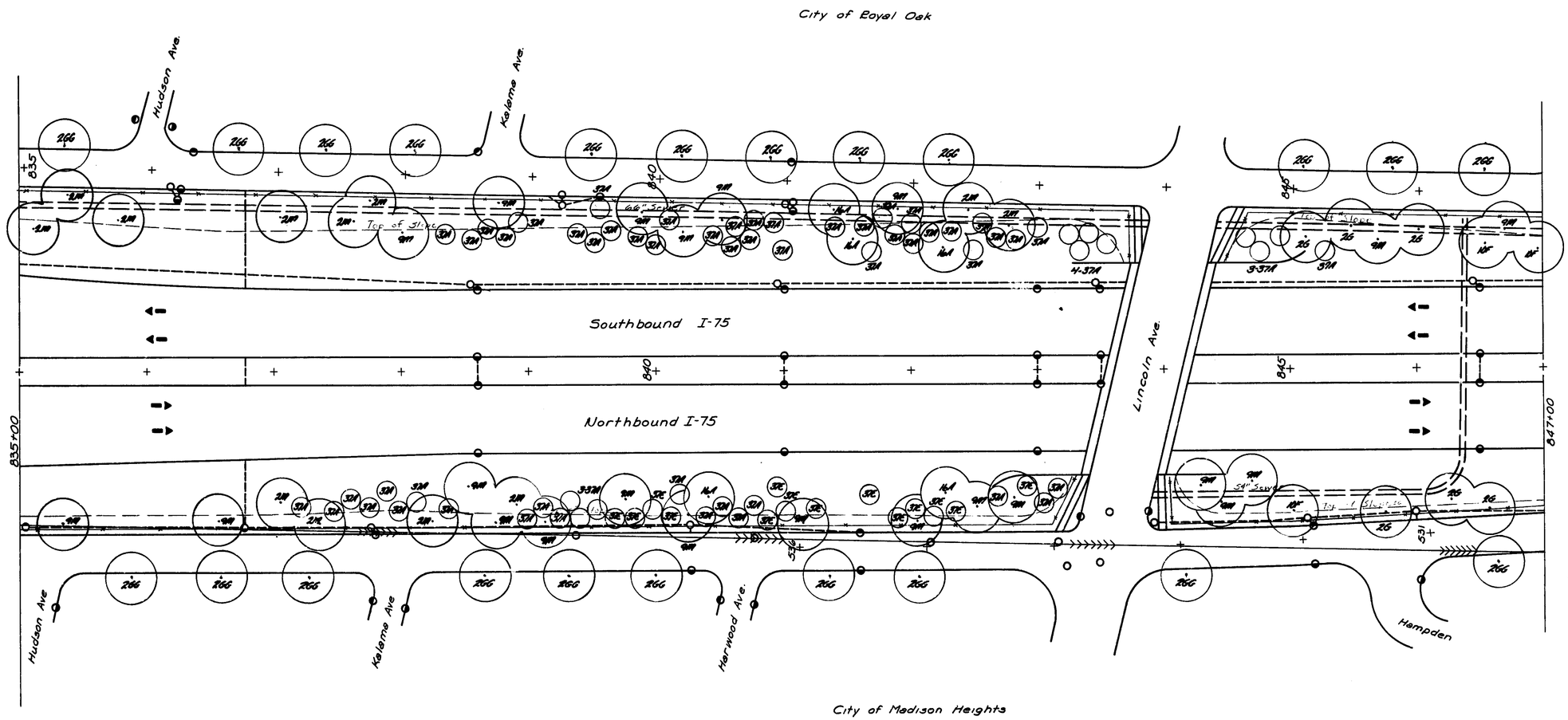
Squad-Muller 11-73

Traced by J.M. Galloway 11-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2( )		14

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		15	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

6	2G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
12	2RM	ACER RUBRUM	RED MAPLE
22	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
3	10F	GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKO
5	16A	PAECLOPENDRON AMURENSE	AMUR CORK TREE
63	3TA	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
14	3TC	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN
22	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 835+00 to 847+00

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	07555A	I-75-2		15

Squad-Miller-12-73

Traced by J.M. Galloway 12-10-73

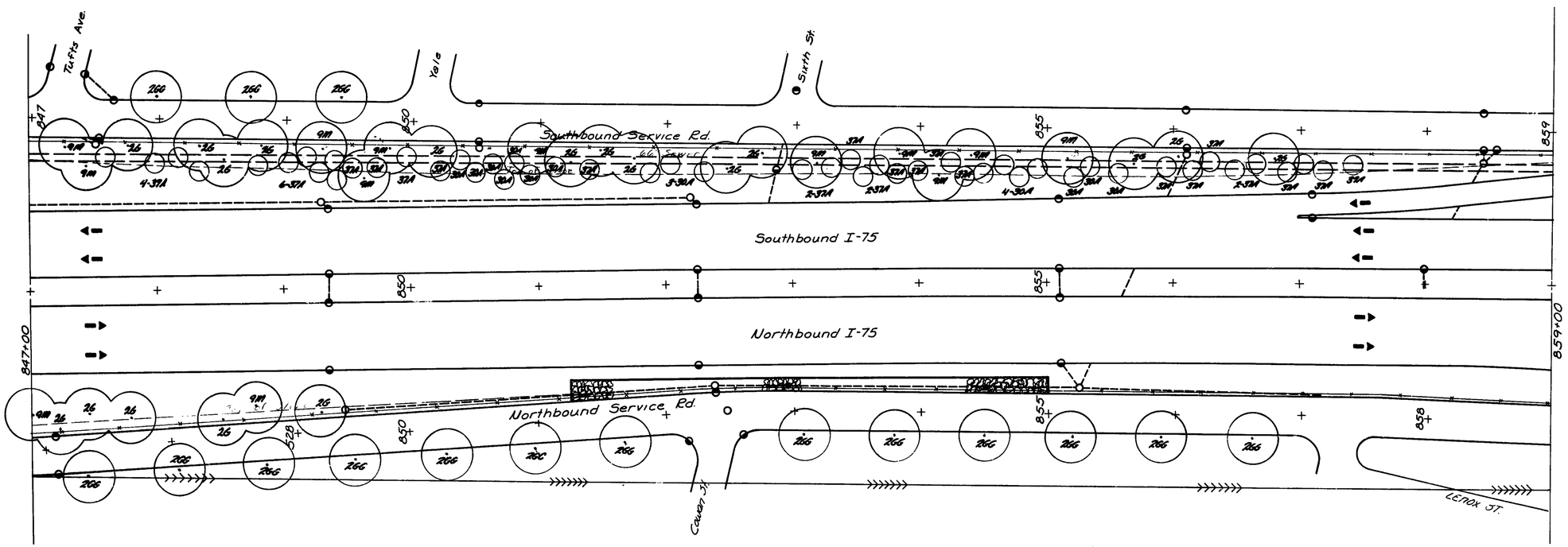
F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )		16	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		07555A	

1"=40'

N

18	26	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
13	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
17	30A	ACER CAMPESTRE	HEDGE MAPLE
33	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
16	26G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE

City of Royal Oak



City of Madison Heights

Sta 847+00 to 859+00

Squad-Muller 12-73

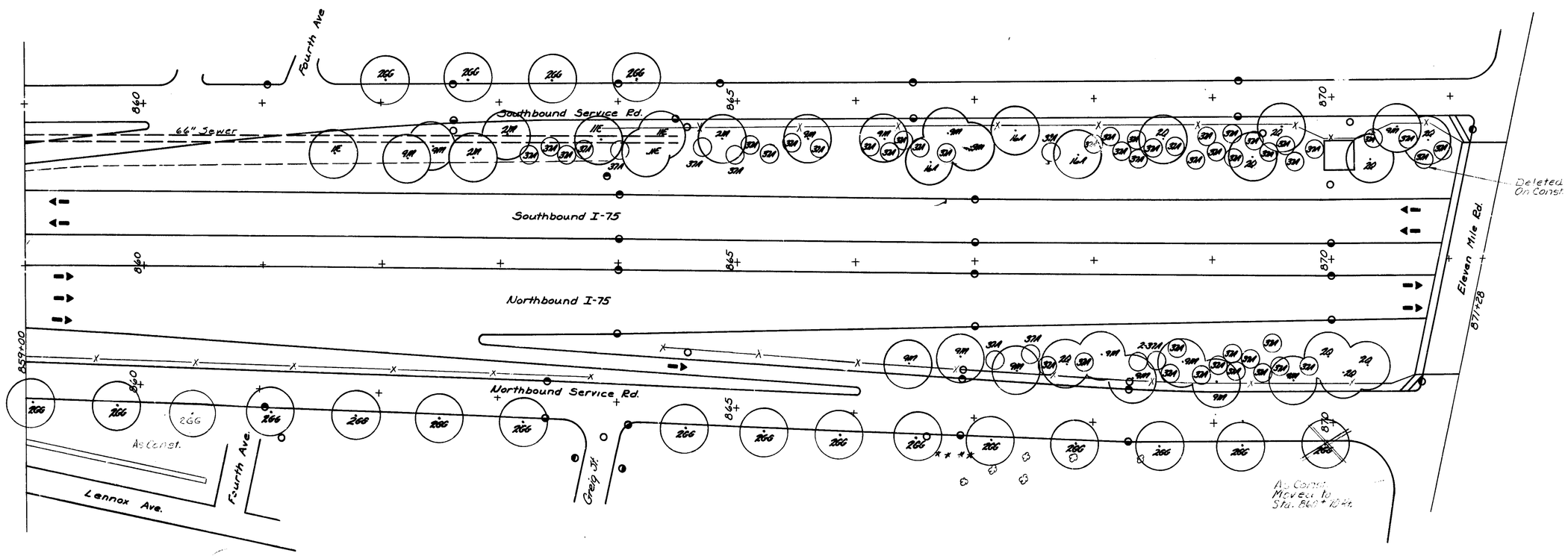
Traced by J.M. Galloway 12-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W.	SHEET NO.
I 63174	07555A	I-75-2( )		16

F.H.W.A. REG. NO	STATE	FEDERAL PROJECT	R.O.W. NO	SHEET NO	TOTAL SHEETS
5	MICH.	I-75-2( )		17	18
ROUTE	COUNTY	CONTROL SECTION		JOB NO	
I-75	OAKLAND	I 63174		07555A	

1"=40'

As Const.			
3	2M	ACER RUBRUM	RED MAPLE
9	2O	ACER RUBRUM 'SCHLESINGER'	SCHLESINGER RED MAPLE
15	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
4	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
3	3UA	PHELLODENDRON AMURENSE	AMUR CORK TREE
~~35~~ 4	3TA	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
19	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 859+00 to 871+28

Squad-Muller 10-73

Traced by J.M. Galloway-10-3-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO	SHEET NO
I 63174	07555A	I-75-2( )		17

EDCO- 1308-2 5-71 45043

QUANTITY SHEET – E

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
4	MICH.			18	18

ROUTE	COUNTY	CONTROL SECTION	JOB NO.
		63174	075[illegible]

AS PER PLANS

SHEET NUMBER 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	BALL SIZE diameter	BALL SIZE depth	REMARKS
		5	10	3		11				25		6	18		78	2G	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE	2½"-3"	BB	28"	19"	
4	22	20	22	20	6	7	27	21	22	13	22	22	16	19	293	2GG	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE	1¾"-2"	BB	22"	15"	100%
				11	9			14			30	12		3	79	2M	ACER RUBRUM	RED MAPLE	2½"-3"	BB	28"	19"	
		5	9	3		9				5	5			9	45	2Q	ACER RUBRUM SCHLESINGER	SCHLESINGER RED MAPLE	2½"-3"	BB	28"	19"	
	10						2			32	5				49	2V	ACER SACCHARUM	SUGAR MAPLE	2½"-3"	BB	28"	19"	
17	19	16	13	9	12	21		19	22	46	16	22	13	15	260	9M	FRAXINUS P. LANCEOLATA MARSHALLS SEEDLESS	MARSHALLS SEEDLESS GREEN ASH	2½"-3"	BB	28"	19"	100%
			2	1						9		3			15	10F	GINKO BILOBA AUTUMN GOLD	AUTUMN GOLD GINKO	2½"-3"	BB	28"	19"	
			3	4			15			12	28				62	1C	GLEDITSIA TRIACANTHOS INERMIS MORAINE	MORAINE THORNLESS HONEYLOCUST	2½"-3"	BB	28"	19"	
		5	13	6	36	9			17	9	8			4	107	1E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST	2½"-3"	BB	28"	19"	
					7					21					28	12A	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE	2½"-3"	BB	28"	19"	
												5		3	8	16A	PHELLODENDRON AMURENSE	AMUR CORKTREE	2½"-3"	BB	28"	19"	
	3		3	3											9	4M	ULMUS PROPINQUA	CHINESE ELM	1¾"-2"	BB	22"	15"	2GG USED AS SUBSTITUTE 100%
9	15	6	2		30			17					17		96	3M	ACER CAMPESTRE	HEDGE MAPLE	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
22	19	6	2		22			28							99	3JG	ACER GINNALA	AMUR MAPLE	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
	7														7	3JG	ACER MANSHURICUM	MANCHURIAN MAPLE	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
8	20		2	11			3			121	82	63	33	55	323	3TA	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN	5'-6'	BB	16"	12"	100% WELL BRANCHED BUSH FORM
												14			14	3TE	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
				17	6				18						41	5DA	CARAGANA ARBORESCENS	SIBERIAN PEASHRUB	4'-5'	BB	16"	12"	WELL BRANCHED BUSH FORM
							3			31	19				53	9JE	PINUS NIGRA	AUSTRIAN PINE	5'-6'	BB	20"	13"	
															1		ON THE JOB TRAINING						

CITY OF ROYAL OAK PARTICIPATION

SHEET NUMBER 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL	KEY	BOTANICAL NAME	COMMON NAME
									4		6	18			28	2G	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE
										16	12	16	19		63	2GG	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE
										19	12		3		32	2M	ACER RUBRUM	RED MAPLE
										5			9		14	2Q	ACER RUBRUM SCHLESINGER	SCHLESINGER RED MAPLE
										5					5	2V	ACER SACCHARUM	SUGAR MAPLE
									12	14	22	13	15		76	9M	FRAXINUS P. LANCEOLATA MARSHALLS SEEDLESS	MARSHALLS SEEDLESS GREEN ASH
											3				3	10F	GINKO BILOBA AUTUMN GOLD	AUTUMN GOLD GINKO
									1	3					4	1C	GLEDITSIA TRIACANTHOS INERMIS MORAINE	MORAINE THORNLESS HONEYLOCUST
										4			4		8	1E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST
									2						2	12A	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
											5		3		8	16A	PHELLODENDRON AMURENSE	AMUR CORKTREE
																17A		
												17			17	3DA	ACER CAMPESTRE	HEDGE MAPLE
									5	40	63	33	54		195	3TA	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
											14				14	3TE	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN
									4	8					12	9JE	PINUS NIGRA	AUSTRIAN PINE

CITY OF MADISON HEIGHTS PARTICIPATION

SHEET NUMBER 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL	KEY	BOTANICAL NAME	COMMON NAME
									9						9	2G	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE
									28		10				38	2GG	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE
									4						4	2Q	ACER RUBRUM SCHLESINGER	SCHLESINGER RED MAPLE
									32						32	2V	ACER SACCHARUM	SUGAR MAPLE
									25						25	9M	FRAXINUS P. LANCEOLATA MARSHALLS SEEDLESS	MARSHALLS SEEDLESS GREEN ASH
									5						5	10F	GINKO BILOBA AUTUMN GOLD	AUTUMN GOLD GINKO
									11						11	1C	GLEDITSIA TRIACANTHOS INERMIS MORAINE	MORAINE THORNLESS HONEYLOCUST
									9						9	1E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST
									10						10	12A	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
									63						63			
																3TA	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
									8						8	9JE	PINUS NIGRA	AUSTRIAN PINE

AS CONSTRUCTED

SHEET NUMBER 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL	KEY
		5	10	3		11				25		6	18		78	2G
4	25	20	25	23	7	7	27	21	22	42	24	22	16	19	304	2GG
				11	9			14			30	12		3	79	2M
		5	9	3		9				5	5			9	45	2Q
	10						2			32	5				49	2V
17	19	16	13	9	12	21		15	22	47	16	22	13	15	257	9M
			2	1						9		3			15	10F
			3	4			15			12	28				62	1C
		5	13	6	36	9			17	9	8			4	107	1E
					7					21					28	12A
												5		3	8	16A
																17A
			0	0											0	2TA
9	15	6	2		30			17					17		96	3M
22	19	6	2		22			28							99	3JG
	7														7	3JG
8	20		2	11			3			121	82	63	33	54	397	3TA
												14			14	3TE
				17	6				18						41	5DA
							3			31	19				53	9JE
															1	

CITY OF ROYAL OAK PARTICIPATION

SHEET NUMBER 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL	KEY
									4		6	18			28	2G
										18	12	16	19		65	2GG
										17	12		3		32	2M
										5			9		14	2Q
										5					5	2V
									11	14	22	13	15		75	9M
											3				3	10F
									1	3					4	1C
										4			4		8	1E
									2						2	12A
											5		3		8	16A
																17A
												17			17	3DA
									5	40	63	33	54		195	3TA
											14				14	3TE
									4	8					12	9JE

CITY OF MADISON HEIGHTS PARTICIPATION

SHEET NUMBER 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL	KEY
									9						9	2G
									27		10				37	2GG
									4						4	2Q
									32						32	2V
									26						26	9M
									6						6	10F
									11						11	1C
									9						9	1E
									10						10	12A
																17A
									64						64	3TA
									8						8	9JE

ADJUSTMENT

4001 Liquidated Damages 13 day @ $-100.00 = -$1300.00

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED _____ PROJ. ENG. _____ DATE _____ HISTORY CHECKED ENTERED ON PLANS BY J. NILSON DATE 01-12-77

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
63174	02355A			

63174-07874A

CS: 63174

ID: 07874A

Mtb 63174 - 07874A
1.35 mi pavement repair
& DS to correct poor
drainage on the SB I-75
service Rd. commencing
N. of the I-75, I-696
interchange, thence
N'ly 1.35 mi to N of
Gardenia St., city of
Royal Oak, Oakland Co.
Item 14

ROUTE	JOB NUMBER	FEDERAL NUMBER	SHEET NO.	TOTAL SHEETS
I-75 Southbound Service Road	07874A		1	

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS 1973 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

PLANS OF PROPOSED

MICHIGAN PROJECT

CONTROL SECTION Mtb 63174

JOB NUMBER 07874A

I-75 SOUTHBOUND SERVICE RD.

OAKLAND COUNTY
CITY OF ROYAL OAK

ROAD PLANS — SHEET NO'S.

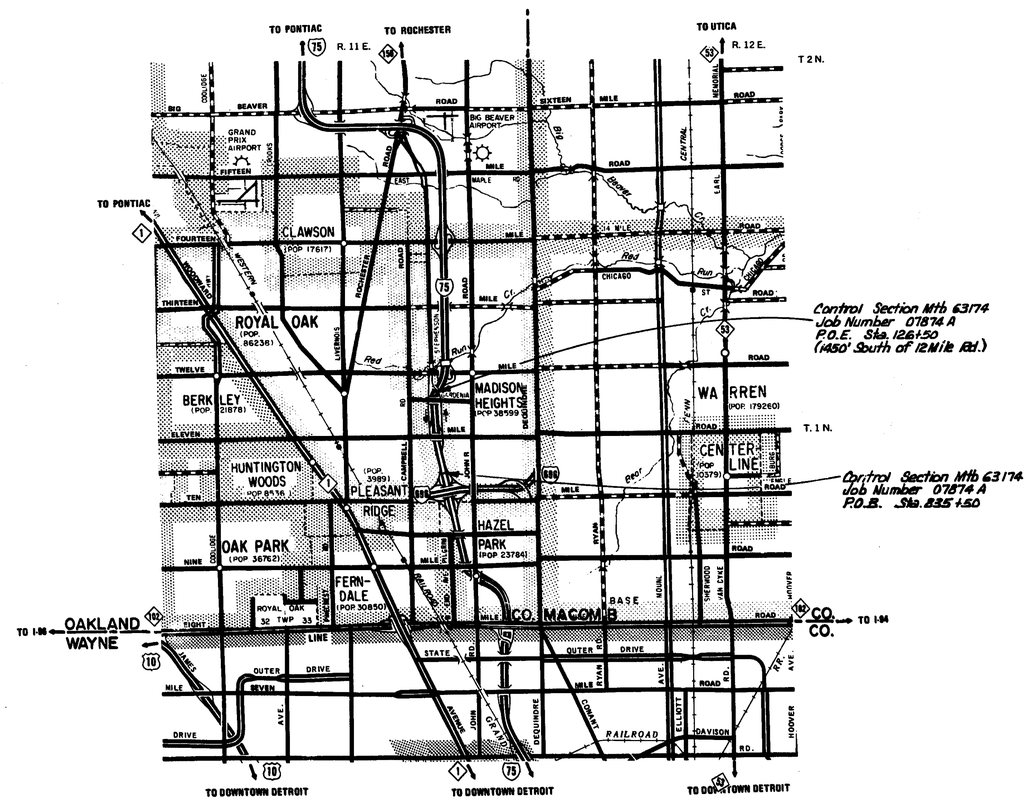
TITLE 1
TYPICAL CROSS SECTION 2
NOTE SHEET 3
PLANS & PROFILES 4-11
SIGN DETAILS 12-14
MASS DIAGRAMS .....
QUANTITY SHEETS 15

BRIDGE PLANS

SIGNING PLANS

LEGEND

A.D.T.....(1974).....12600
D.H.V.....
COMM. % 9%
DESIGN SPEED.....



AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

TITLE SHEET LEGEND

EXISTING CONDITION

PROPOSED PROJECT .....
PAVED .....
BITUMINOUS .....
GRAVEL .....
UNIMPROVED OR CITY STREET .....
SECTION LINE .....
TOWNSHIP LINE .....
COUNTY LINE .....
CITY OR VILLAGE LIMITS .....
RAILROADS .....

ITEM NO.

CONTRACT FOR PAV'T. PATCHING, JOINT REPAIR, & DRAINAGE

APPROVALS

CHECKED — for DESIGN ENGINEER, ROAD — 10-14-75 DATE
RECOMMENDED FOR APPROVAL — ENGINEER OF DESIGN — 10-14-75 DATE
RECOMMENDED FOR APPROVAL — for ENGINEER OF TRAFFIC & SAFETY — 10-27-75 DATE
RECOMMENDED FOR APPROVAL — ENGINEER OF CONSTRUCTION — 10/24/75 DATE

DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
JOHN P. WOODFORD – DIRECTOR

APPROVED BY: DEPUTY DIRECTOR – HIGHWAYS — 11/27/75 DATE

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
SQUAD ROUSH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED [redacted]

Mtb 63174	JOB NUMBER	FEDERAL PROJECT	SHEET NO.
	07874A		1

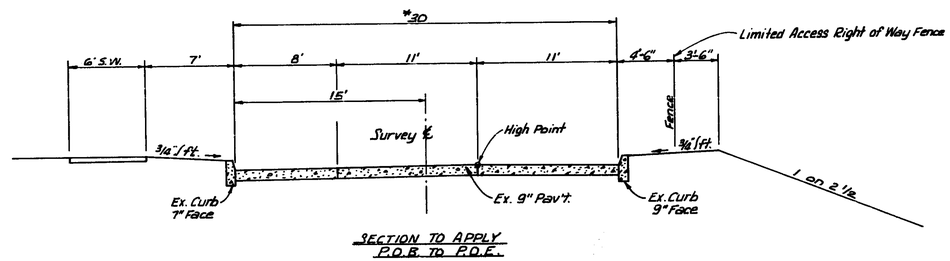
CONTROL SECTION - JOB NUMBER Mtb 63174-07874A

TYPICAL CROSS-SECTIONS

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.			2	

ROUTE	COUNTY	CONTROL SECTION	JOB NO.
S.BD. SERVICE RD. I-75	OAKLAND	Mtb 63174	07874A

FINAL R.O.W.



SECTION TO APPLY P.O.B. TO P.O.E.

* 41' (Eleven Mile Rd. to Baxter St.) 700'±
Var. (41' to 47') (Baxter St. to University) 170'±
Var. (30' to 16') (300' N. of Gardenia to P.O.E. (600'±)

SQUAD + ROUSH 4-75

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
Mtb63174	07874A			2

NOTE SHEET

GENERAL PLAN NOTES

HAND FINISHING

Hand finishing, according to Article 4.14.11-b of the Standard Specifications will be permitted on all pavement to be placed on this project.

CLASS B SODDING

Where Class B Sodding is called for in the plans, the beds shall be trimmed within the tolerances specified for Class A Slopes.

As Const MISCELLANEOUS ESTIMATES

The following items of work shall be done as they apply throughout the project. These items are not detailed or included on the plan and profile sheets.

Final Trim & Cleanup POB to POE	~~71~~ Total Sta. 71.49
Lighted Arrow, Type A - Furnished	~~2~~ Each 3
Lighted Arrow, Type A - Operated	2 Each
Type II Barricades (Drums) Lighted	~~90~~ Each 139
Type III Barricades	6 Each
Roadway Maintenance	Lump Sum
Minor Traffic Devices	Lump Sum
4 Lb. Steel Post Temporary	~~336~~ Lin. Ft. 390
Sign, Type II B Temporary	256 Sq. Ft. 308

PUBLIC UTILITIES

The existing utilities listed below and shown on these plans represent the best information available as obtained on our surveys dated June 10, 1975. This information does not relieve the contractor of the responsibility to satisfy himself as to their accuracy or of his responsibility in case utilities have been constructed or removed since the above survey date.

NAME AND ADDRESS OF OWNER	KIND OF UTILITY
Detroit Edison Company 1970 Orchard Lake Road Pontiac, Michigan 48053	Electric
Consumers Gas Company Box 369 Royal Oak, Michigan 48068	Gas
City of Royal Oak	Sewer & Water
Macomb County Drain Commission	Twelves Towns Drain

The owners of existing poles and other service structures that are within grading limits and that will interfere with construction operations will move them to locations designated by the engineer or will remove them entirely from the highway right of way.

Owners of public utilities will not be required by the Department to move additional poles and structures that are not within grading or structure limits in order to facilitate the operation of construction equipment, unless it is determined by the engineer that such pole line or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

For protection of underground utilities, the contractor shall dial "Miss Dig" a minimum of 48 hours prior to excavating in the vicinity of utility lines.

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated.

Manholes 42" Pipe and Under	I-1B
Catch Basins and Inlets	I-5B
Cover A	I-7A
Cover D	I-9B
Sidewalk Ramp Details	II-28F
Concrete Curb and Concrete Curb & Gutter	II-30B
Joint Repair and Pavement Patching	II-44A
Conventional Pavement Reinforcement	II-45B
Utility Trenches	IV-83B
Types II & III Barricades and Lighted Arrows	VI-125C
Sodding	E-4-A-10E

SQUAD: ROUSH

AUTH.	DATE	REVISION
		FINAL R.O.W.

5	MICH.				4
S.Bd. Service Rd. I-75	OAKLAND	M1663174			07874A

DALLAS

Wit. to P.O.C.T. P.I.+86.97
P.K. nail & tag
S 07°W 30.15' N.W. Cor. C.B. Frame
N 45°W 62.09' Guy Pole
Due N 52.26 S.E. Cor. C.B. Frame

BROCKTON

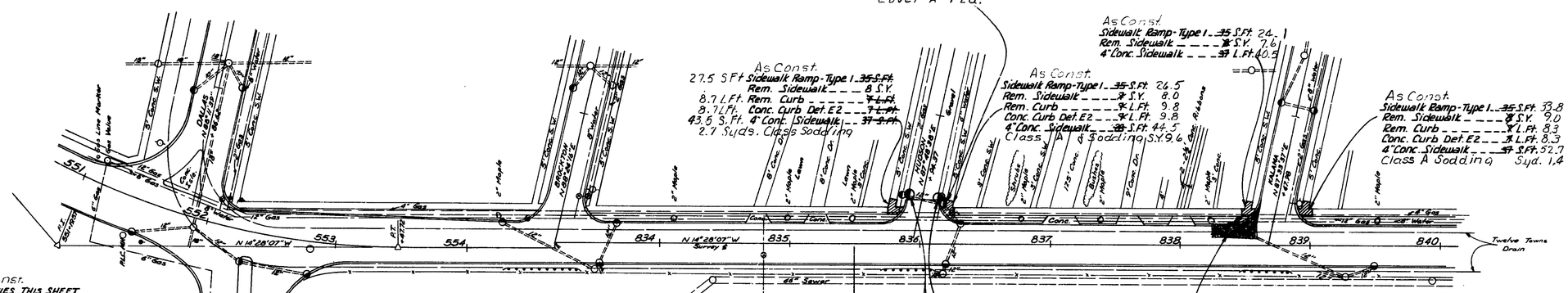
B.M. #4 Elev. 634.82
Chis. X in Wly. Flange bolt
of Fire hydrant on S.W. Cor.
S. Stephenson Hwy. & Dallas
44' Lt. of Sta. 551+40

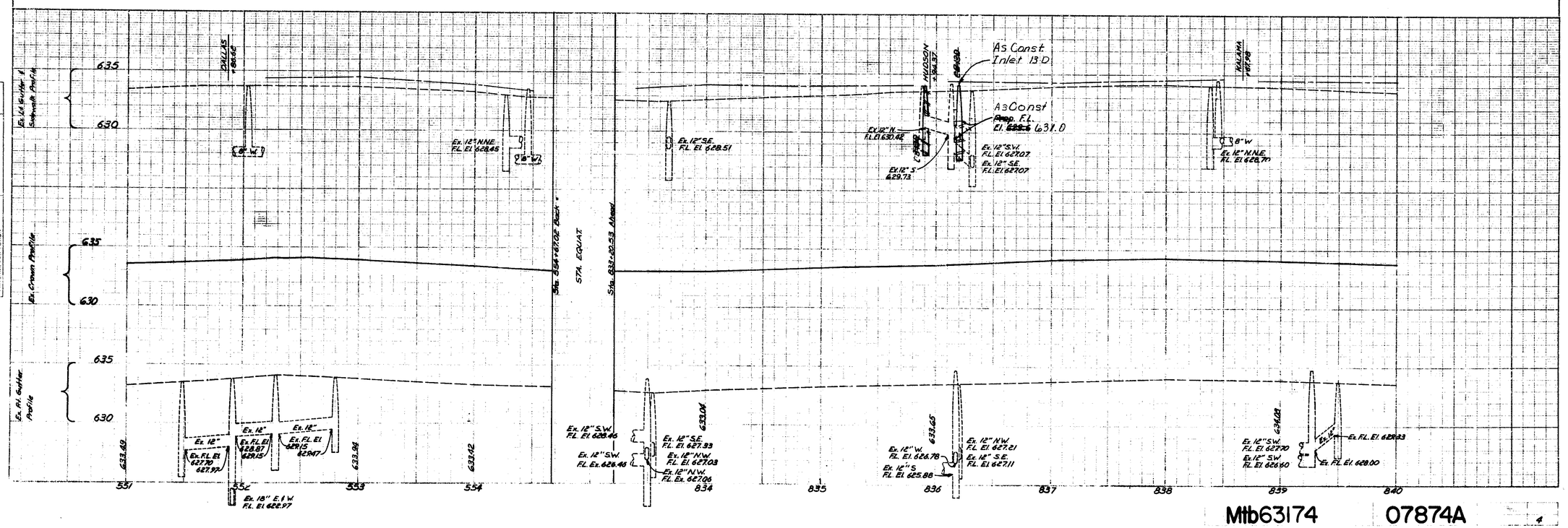
Wit. to P.O.T. Sta. 833+20.53
Drill hole & Chis. □
S 05°W 41.00' N.E. Cor. C.B.
N 25°W 48.09' S.E. Cor. C.B.
N 15°E 35.67' S.W. Cor. C.B.

HUDSON

KALAMA

B.M. #5 Elev. 636.83
Arrow on Fire hydrant N.W.
Cor. Kalama & S. Stephenson
32' Lt. of Sta. 838+91





Mtb63174 07874A

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
FINAL R.O.W.		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SQUAD	ROUSH	7-75

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED		
PLAN REVIEW		
PLAN ACCEPTED		
PROFILE PLOTTED		
PROFILE REVIEW		
PROFILE ACCEPTED		
FIELD INSPECTION	SWANSON R.C.W.	6-75 7-75

LINCOLN — TUFTS

AUTH.	DATE	REVISION
		FINAL R.O.W.

QUANTITIES THIS SHEET

Removing Curb	~~42~~ L.Ft.	61.7
Removing Sidewalk	~~30~~ S.Y.	35.3
Removing Old Pav't.(Patching)	~~244~~ S.Y.	222.4
Conc. Pav't. Patching-9" Reinf.	~~343~~ S.Y.	351.5
12" Class A Sewer (Tr. Det. 2)	~~30~~ L.Ft.	0
12" Sewer Tap	+ Ea.	0
Drainage Str. 2' (0'-8')	+ Ea.	0
Adjust Dr. Structure Covers	~~5~~ Ea.	2
Conc. Curb Det. E1	~~604~~ L.Ft.	526.0
Conc. Curb Det. E2	~~42~~ L.Ft.	61.7
4" Conc. Sidewalk	~~64~~ S.Ft.	95.5
Sidewalk Ramp-Type 1	~~177~~ S.Ft.	188.3
Sidewalk Ramp-Type 3	~~25~~ S.Ft.	32.9
Class A Sodding	~~220~~ S.Y.	221.0
Class B Sodding	~~23~~ S.Y.	1.3
Drainage Str. covers	~~452~~ Lbs	0.85
Bit. Patching	Tons	16.03
Sawing Bit. Surface	Lft.	316

As Const.

B.M. #6 Elev. 635.52
Chis. □ in top of S.W.
Cor. of W. Abut. wall
at Lincoln & I-75
60' Rt. of 843+69

Wit. to P.I. (No curve)
Sta. 843+89.55 back
Sta. 843+89.11 ahead
Δ 00° 05' 28" Rt.
P.K. nail & tag
S 70° W 37.41' L. pole
N 12° E 56.36' S.W. Cor. C.B.
S 85° E 29.55' Chis. ⊠ in S.W. bolt

As Const.
Rem. Old Pav't.(Patching) ~~260~~ S.Y. 189
Conc. Pav't. Patching-9" Reinf. ~~240~~ S.Y. 174.6
Conc. Curb - Det. E1 ~~200~~ L.Ft. 184
Cl. A Sodding (Est. 3' Strip) ~~100~~ S.Y. 121.0

As Const.
Rem. Old Pav't. (Patching) 76.3 Syds.
Conc. Pav't. Patching (9" Reinf.) 71.8 Syds.
Conc. Curb Det. E-1 56.2 Lft.
Bit. Patching 103.5 Tons
Sawing Bit. Surface 69 Lft.

As Const.
Sidewalk Ramp-Type 1 ~~35~~ S.Ft. 56.5
Rem. Sidewalk ~~4~~ Syd. 9.3
Rem. Curb ~~7~~ L.Ft. 17.3
Conc. Curb Det. E2 ~~7~~ L.Ft. 17.3
4" Conc. Sidewalk S.Ft. 25.0
Cl. A Sodding Syds. 2.7

As Const.
Sidewalk Ramp-Type 1 ~~35~~ S.Ft. 43.8
Rem. Sidewalk ~~4~~ S.Y. 4.5
Rem. Curb ~~7~~ L.Ft. 9.3
Conc. Curb Det. E2 ~~7~~ L.Ft. 9.3
Cl. A Sodding Syd. 1.2

Omitting On Const.
Adj. Drainage Struct. Covers ~~1~~ Ea. 0

4" Conc. Sidewalk S.Ft. 49.0
Sidewalk Ramp-Type 3 ~~25~~ S.Ft. 32.9
Rem. Sidewalk ~~3~~ S.Y. 8.8
Rem. Curb 14 L.Ft. 12.7
Conc. Curb Det. E2 14 L.Ft. 12.7
Class A Open Field Sodding S.Y. 1.4

As Const.
Rem. Curb 7.3 Lf.
Conc. Curb Det. E-2 7.3 Lft
Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 35.0
Rem. Sidewalk ~~1~~ S.Y. 3.9
Cl. A Sodding Syds 1.3

As Const.
Cover "K" 1 Ea.
Adj. Drainage Struct. Covers ~~8~~ Ea. 2
As Const.
Rem. Old Pav't. (Patching) ~~381~~ S.Y. 216
Conc. Pav't. Patching-9" Reinf. ~~312~~ S.Y. 203.2
Conc. Curb - Det. E1 ~~225~~ L.Ft. 144.8
Cl. B Sodding (Est. 3' Strip) ~~95~~ S.Y. 0
Bit. Patching 3.25 Tons
Sawing Bit. Surface 181 Lft.

~~C.B. 13D (2.0 Deep) 1 Ea.~~
~~12" Ct. A Sewer (Tr. Det. 2) 30 L.Ft.~~
~~12" Sewer Tap 1 Ea.~~
Cl. B Sodding (Est. 3' Strip) ~~1~~ S.Y. 0.6
As Const

On Const.
12" H.P. Gas
4' E. of Curb
Face El. 631.09

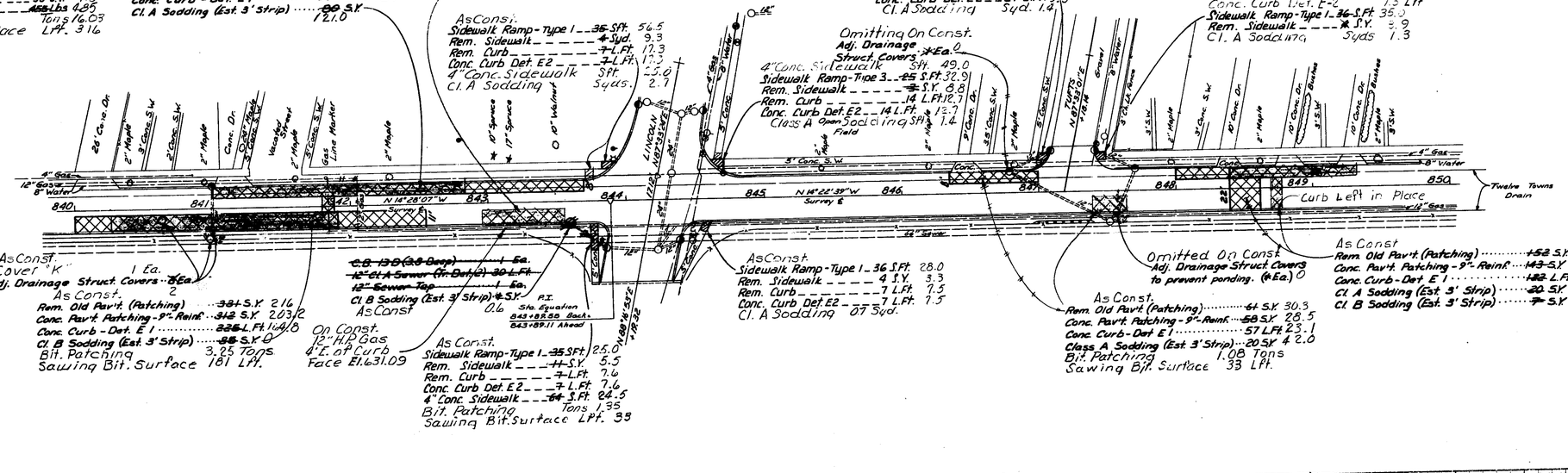
As Const.
Sidewalk Ramp-Type 1 ~~35~~ S.Ft. 25.0
Rem. Sidewalk ~~11~~ S.Y. 5.5
Rem. Curb ~~7~~ L.Ft. 7.6
Conc. Curb Det. E2 ~~7~~ L.Ft. 7.6
4" Conc. Sidewalk ~~64~~ S.Ft. 24.5
Bit. Patching Tons 1.35
Sawing Bit. Surface Lft. 33

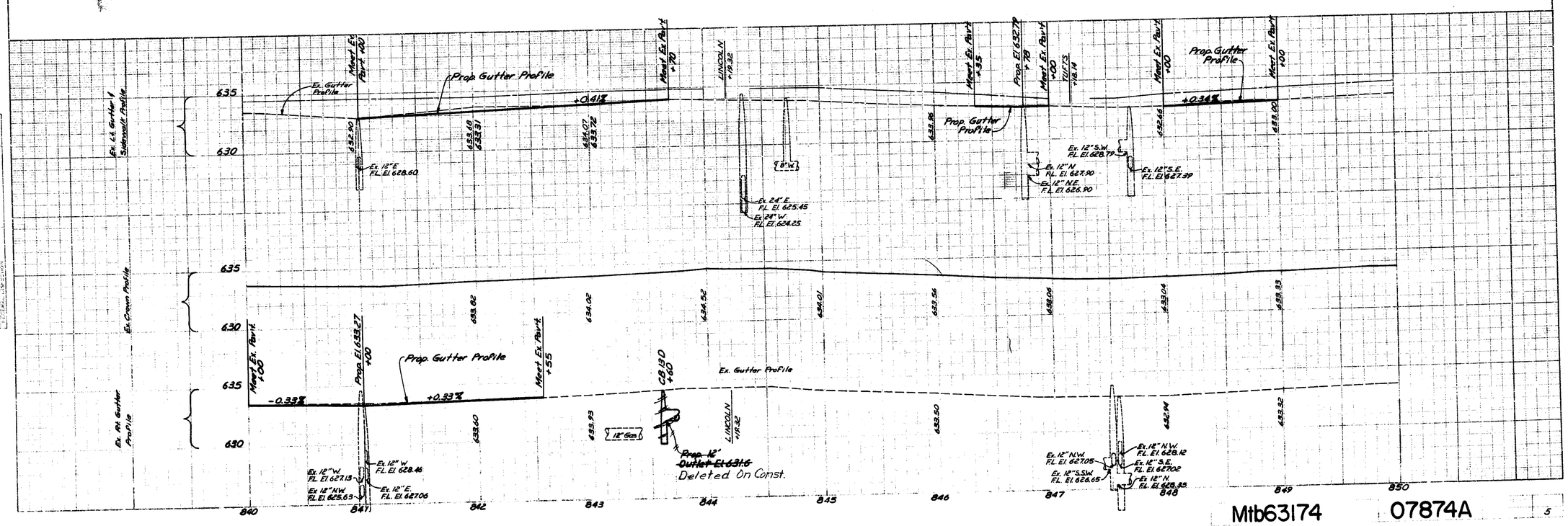
As Const.
Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 28.0
Rem. Sidewalk ~~4~~ S.Y. 3.3
Rem. Curb ~~7~~ L.Ft. 7.5
Conc. Curb Det. E2 ~~7~~ L.Ft. 7.5
Cl. A Sodding 0.7 Syd.

As Const.
Rem. Old Pav't. (Patching) ~~61~~ S.Y. 30.3
Conc. Pav't. Patching-9" Reinf. ~~58~~ S.Y. 28.5
Conc. Curb-Det. E1 ~~57~~ L.Ft. 23.1
Class A Sodding (Est. 3' Strip) ~~20~~ S.Y. 2.0
Bit. Patching 1.08 Tons
Sawing Bit. Surface 33 Lft.

Omitted On Const.
Adj. Drainage Struct. Covers to prevent ponding. (~~1~~ Ea.) 0

As Const.
Rem. Old Pav't. (Patching) ~~152~~ S.Y. 110.8
Conc. Pav't. Patching-9" Reinf. ~~143~~ S.Y. 103.4
Conc. Curb-Det. E1 ~~132~~ L.Ft. 95.9
Cl. A Sodding (Est. 3' Strip) ~~20~~ S.Y. 49.7
Cl. B Sodding (Est. 3' Strip) ~~7~~ S.Y. 0



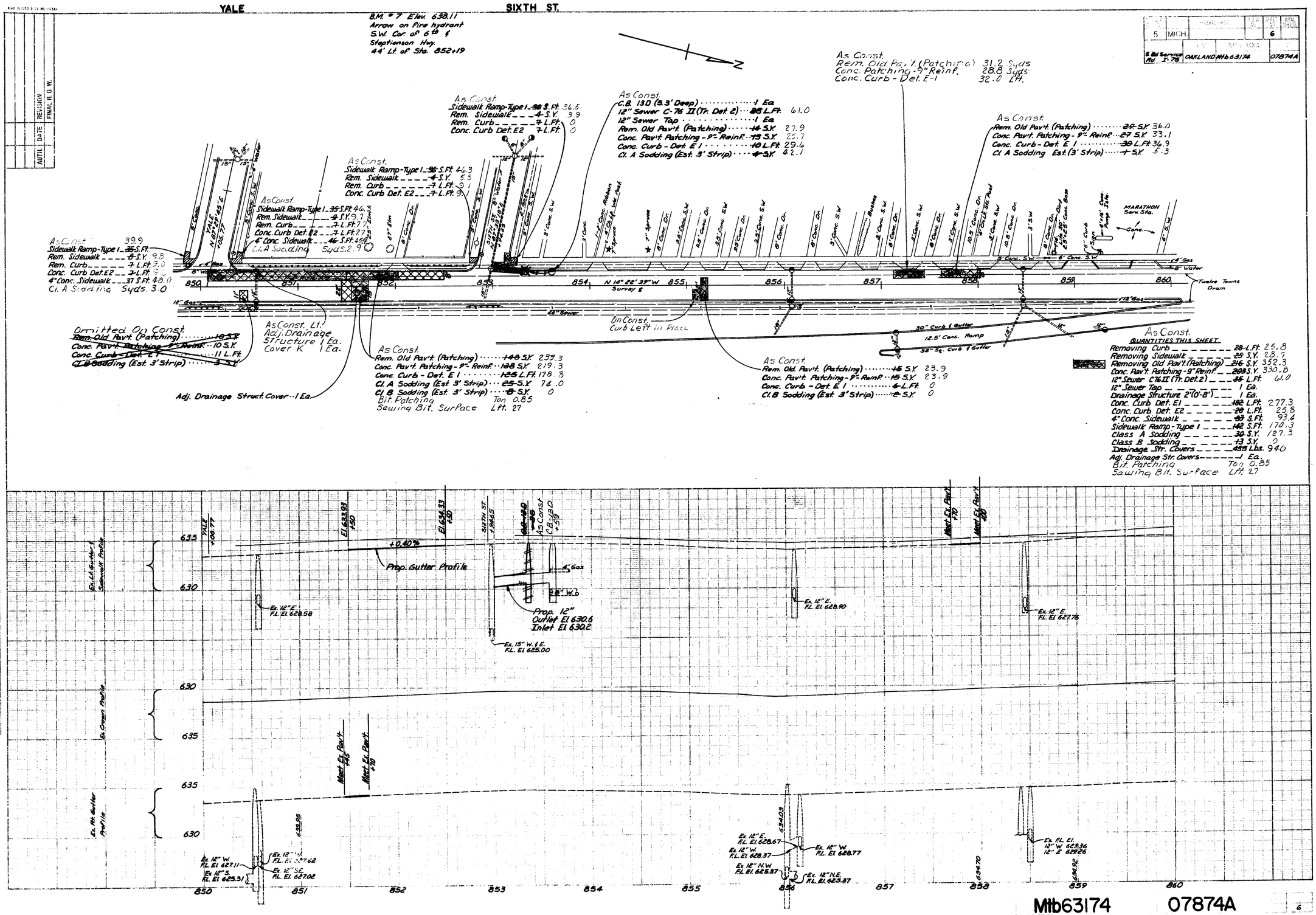


Mtb63174 07874A 5

5	MICH.			6	
S.B. Service Mar. 5-75	OAKLAND	Mtb63174			07874A

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY ENG. TO CONSTRUCTION		
FINAL DESIGN		
FINAL DESIGN CHECKED		
PROJECT REVIEWED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
PLANS READY TO ISSUE		7-25
ISSUED	ROUSH	



FOURTH ST. — MIDDLESEX

B.M. #8 Elev. 637.49
Chis. "x" in n'ly. flange bolt of fire hydrant at intersection of Fourth St. & S. Stephenson Hwy. 51' Lt. of Sta. 860+66

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL R.O.W. CHECKED		
FINAL DESIGN CHECKED		
TRACED O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
SEALED	R. Rowen	7-15

QUANTITIES THIS SHEET

	As Const.
Removing Curb	~~42~~ L.Ft. 29.8
Removing Sidewalk	~~28~~ S.Y. 28.3
Removing Old Pav't. (Patching)	~~160~~ S.Y. 264.8
Conc. Pav't. Patching-9" Reinf.	~~163~~ S.Y. 222.8
12" Sewer C76II (Tr. Det. 2)	~~98~~ L.Ft. 81.0
12" Sewer Tap	~~1~~ Ea. 2
Drainage Structure 4' (0'-8')	+ Ea. 0
Drainage Structure Covers	~~155~~ Lbs. 188.0
Conc. Curb Det. E1	~~86~~ L.Ft. 16.8
Conc. Curb Det. E2	~~42~~ L.Ft. 39.3
4" Conc. Sidewalk	~~40~~ S.Ft. 56.4
Sidewalk Ramp-Type 1	~~245~~ S.Ft. 206.5
Class A Sodding	~~18~~ S.Y. 150.8
Class B Sodding	~~25~~ S.Y. 19.1
12" C1.A Sewer (Tr. Det. 2)	L.Ft. 79.0
Dr. Structure 2' (0'-8')	Ea. 2
Adj. Drain. Struct. Cover	Ea. 2
Bit. Patching	Tons 3.55
Sawing Bit. Surface	L.Ft. 79

SOUTH BOUND SERVICE RD. E-25 — OAKLAND MTB 63174 — 07874A — 7

As Const.
Adj. Dr. Structure Cover 1 Ea.
Cover K 1 Ea.

As Const.
Rem. Old Pav't. (Patching) 72.1 Syds.
Conc. Pav't. Patching (9" Reinf.) 69.0 Syds.
Conc. Curb Det. E-1 39.6 L.Ft.

As Const.
Cl. A Sodding 4.5 Syds.
Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 39.9
Rem. Sidewalk ~~4~~ S.Y. 4.3
Rem. Curb ~~7~~ L.Ft. 0
Conc. Curb Det. E2 ~~7~~ L.Ft. 0
4" Conc. Sidewalk ~~40~~ S.Ft. 0

As Const.
Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 30.7
Rem. Sidewalk ~~4~~ S.Y. 3.3
Rem. Curb ~~7~~ L.Ft. 7.4
Conc. Curb Det. E2 ~~7~~ L.Ft. 7.4

Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 26.0
Rem. Sidewalk ~~4~~ S.Y. 5.3
Rem. Curb ~~7~~ L.Ft. 7.4
Conc. Curb Det. E2 ~~7~~ L.Ft. 7.4
4" Conc. Side 20.0 S.Ft.
Cl. A Sodding 4.5 Syds.

As Const.
Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 38.1
Rem. Sidewalk ~~4~~ S.Y. 4.0
Rem. Curb ~~7~~ L.Ft. 7.9
Conc. Curb Det. E2 ~~7~~ L.Ft. 7.9
Cl. A Sodding Syds. 4.5

4" Conc. Sidewalk 15.6 L.Ft.
Cl. A Sodding 11.4 Syds.
Sidewalk Ramp-Type 1 ~~36~~ S.Ft.
Rem. Sidewalk ~~4~~ S.Y.
Rem. Curb ~~7~~ L.Ft.
Conc. Curb Det. E2 ~~7~~ L.Ft.

As Const.
13 4.2
C.B. ~~13~~ D (~~5.1~~ Deep) ~~1~~ Ea.
12" Sewer C-76 II (Tr. Det. 2) ~~98~~ L.Ft. 81
12" Sewer Tap ~~1~~ Ea.
Rem. Old Pav't. (Patching) ~~36~~ S.Y. 31.5
Conc. Pav't. Patching - 9" Reinf. ~~24~~ S.Y. 29.4
Conc. Curb - Det. E1 ~~48~~ L.Ft. 26.8
Cl. A Sodding (Est. 3' Strip) ~~48~~ S.Y. 34.8

As Const.
Sidewalk Ramp-Type 1 ~~36~~ S.Ft. 35.6
Rem. Sidewalk ~~4~~ S.Y. 5.8
Rem. Curb ~~7~~ L.Ft. 8.9
Conc. Curb Det. E2 ~~7~~ L.Ft. 8.9
4" Conc. Sidewalk 5 Ft 20.8

Rem. Old Pav't. (Patching) ~~15~~ S.Y. 22.8
Conc. Pav't. Patching - 9" Reinf. ~~15~~ S.Y. 22.8

As Const. Lt.
CB - 13 D (5.3' Deep) 1 Ea.
12" Sewer Cl. A (Tr. Det. 2) 95 L.Ft.
12" Sewer Tap 1 Ea.
Rem. Old Pav't. (Patching) 5.2 Syds.
Conc. Pav't. Patching 9" Reinf. 4.6 Syds.
Conc. Curb Det. E-1 8.0 L.Ft.
Cl. A Sodding 90.7 Syds.

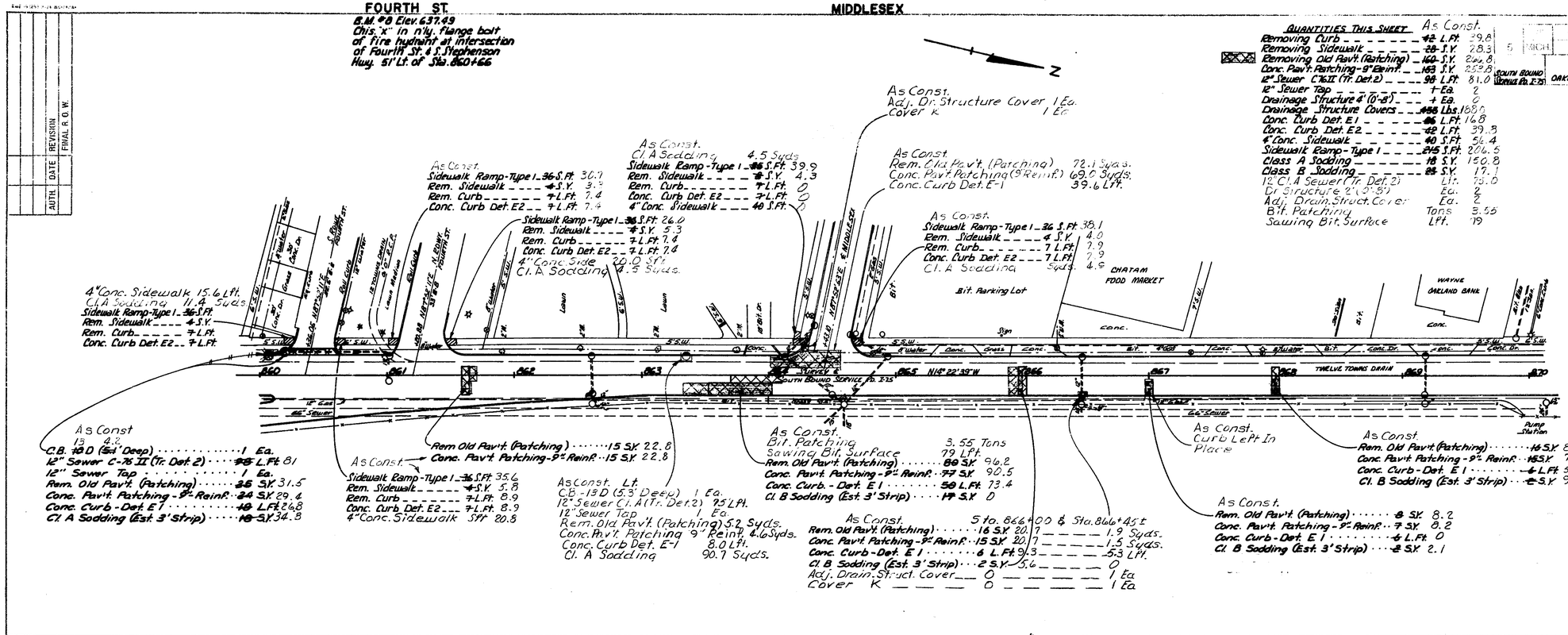
As Const.
Bit. Patching 3.55 Tons
Sawing Bit. Surface 79 L.Ft.
Rem. Old Pav't. (Patching) ~~80~~ S.Y. 96.2
Conc. Pav't. Patching - 9" Reinf. ~~77~~ S.Y. 90.5
Conc. Curb. - Det. E1 ~~50~~ L.Ft. 73.4
Cl. B Sodding (Est. 3' Strip) ~~17~~ S.Y. 0

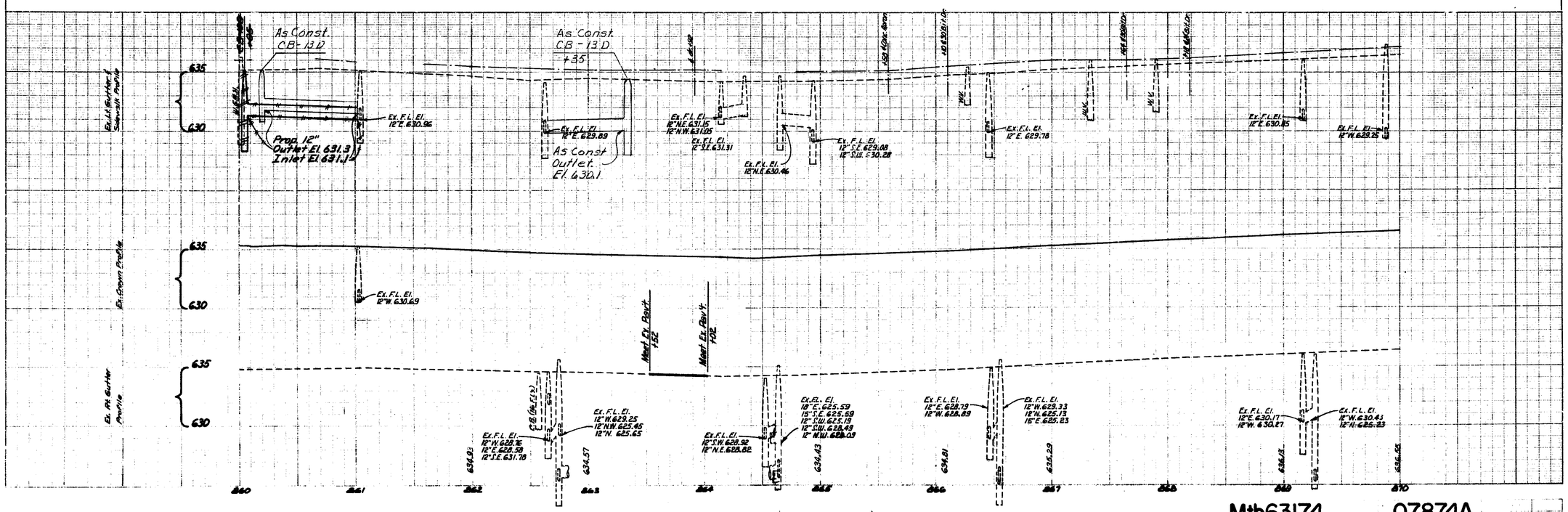
As Const.
Sta. 866+00 & Sta. 866+45 t
Rem. Old Pav't. (Patching) ~~16~~ S.Y. 20.7 — 1.9 Syds.
Conc. Pav't. Patching - 9" Reinf. ~~15~~ S.Y. 20.7 — 1.5 Syds.
Conc. Curb - Det. E1 ~~6~~ L.Ft. 9.3 — 5.3 L.Ft.
Cl. B Sodding (Est. 3' Strip) ~~2~~ S.Y. 5.6 — 0
Adj. Drain. Struct. Cover 0 — 1 Ea.
Cover K 0 — 1 Ea.

As Const.
Curb Left In Place

As Const.
Rem. Old Pav't. (Patching) ~~16~~ S.Y. 8.2
Conc. Pav't. Patching - 9" Reinf. ~~15~~ S.Y. 7.8
Conc. Curb - Det. E1 ~~6~~ L.Ft. 5.6
Cl. B Sodding (Est. 3' Strip) ~~2~~ S.Y. 9.4

As Const.
Rem. Old Pav't. (Patching) ~~8~~ S.Y. 8.2
Conc. Pav't. Patching - 9" Reinf. ~~7~~ S.Y. 8.2
Conc. Curb - Det. E1 ~~6~~ L.Ft. 0
Cl. B Sodding (Est. 3' Strip) ~~2~~ S.Y. 2.1





Mtb63174 07874A 7

AUTH.	DATE	REVISION
		FINAL R. O. W.

QUANTITIES THIS SHEET — As Const.

Item	Qty.	As Const.
Removing Curb	~~84~~ L.Ft.	88.8
Removing Sidewalk	~~52~~ S.Y.	57.0
Removing Old Pav't. (Patching)	~~518~~ S.Y.	426.8
Conc. Pav't. Patching-9" Reinf.	~~501~~ S.Y.	410.5
Adjust Drainage Structure Covers	~~5~~ Ea.	4.
Conc. Curb Det. E1	~~227~~ L.Ft.	209.0
Conc. Curb Det. E2	~~84~~ L.Ft.	88.8
4" Conc. Sidewalk	~~46~~ S.Ft.	161.1
Sidewalk Ramp - Type 1	323 S.Ft.	300.8
Sidewalk Ramp - Type 3	99 S.Ft.	100.7
Class A Sodding	38 S.Y.	132.5
Class B Sodding	27 S.Y.	98.2
12" Class A Sewer (Tr. Det. 2)	Lft.	9.4
Drain. Struct. (2'0"-8')	Ea	1
12" Sewer Tap	Ea	1
Drain. Structure Covers	lbs	1,425
Bituminous Patching	Tons	2.4

11 MILE RD.

B.M.#29 Elev. 638.54
Chis. □ in Conc. base of Shell sign N.W. cor. 11 Mile Rd. and Stephenson Hwy. 30' Lt. of Sta. 872+26

MACE

B.M.#9 Elev. 637.88
Arrow on fire hydrant N.W. cor. N. Stephenson Hwy. and Baxter 46' Lt. of Sta. 877+87

BAXTER

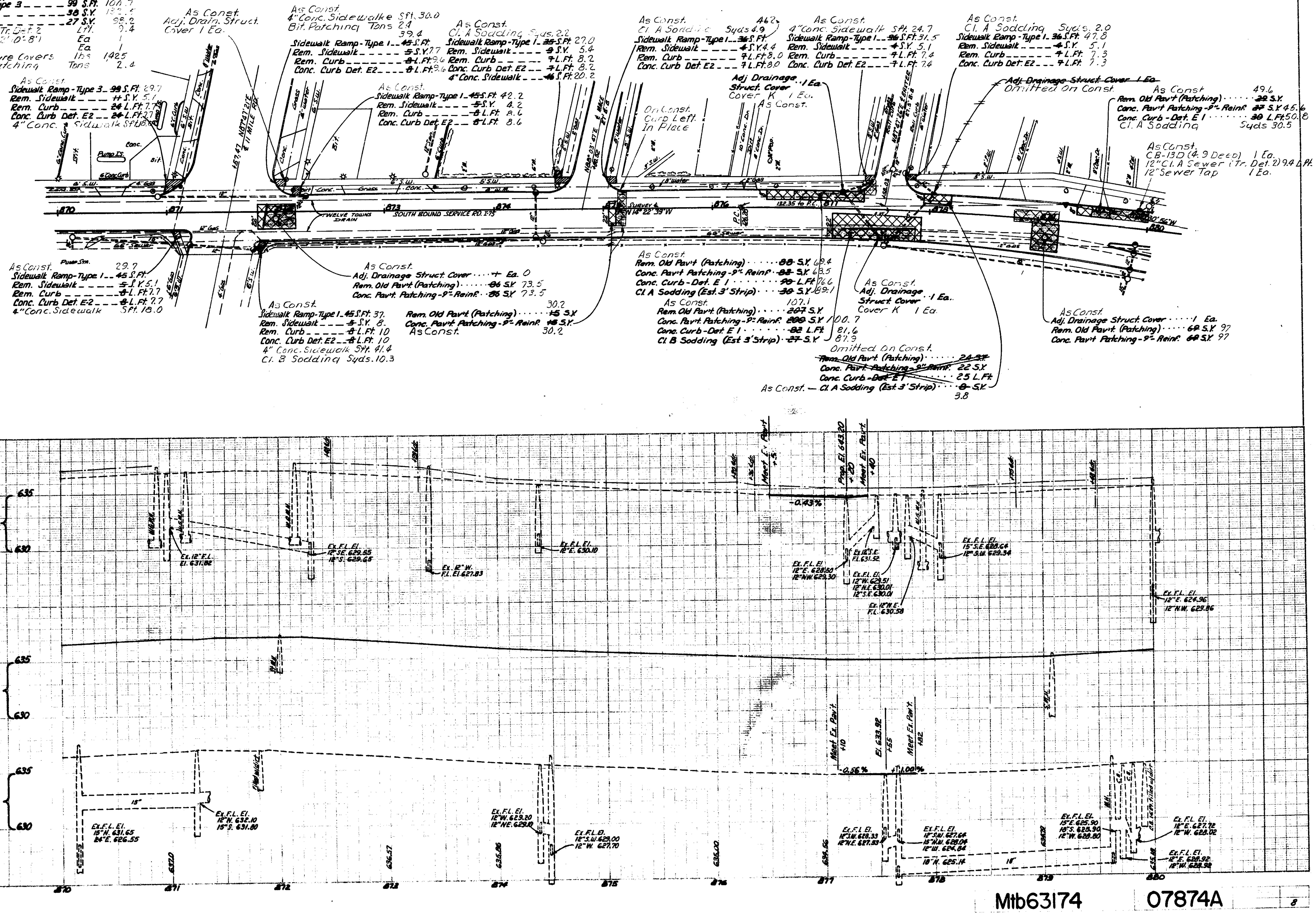
Wit. to P.I. 879+23.90
Δ = 11°51'43" Rt. Drill hole in chis. □ (curb)
S25°W ?.55' 2" cor. fe. post
N12°W 92.73' L. pole
N22°E 72.65' S.W. cor. C.B.

Curve Data
Δ = 11°51'43" Rt.
D = 2°
R = 2864.79
T = 297.61
L = 593.10
E = 15.42
P.C. = 876+26.28
P.I. = 879+23.90
P.T. = 882+19.38

5	MICH.			8	
SOUTH BOUND SERVICE RD. I-75	OAKLAND	Mtb63174			07874A

OPERATION	BY	DATE
PRELIMINARY R.O.W. CHECKED		
FINAL DESIGN		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED	R. Rowe	75
SQUAD		

OPERATION	BY	DATE
SURVEYED	Swiekoda	7-75
PLAN PLOTTED	G.C.J.	7-75
PLAN CHECKED		
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY ESTIMATE		
GRADE INSPECTION		
GENERAL INSPECTION		



5	MICH		9
SOUTH BOUND SERVICE RD. I-75	OAKLAND	Mtb63174	07A74A

UNIVERSITY

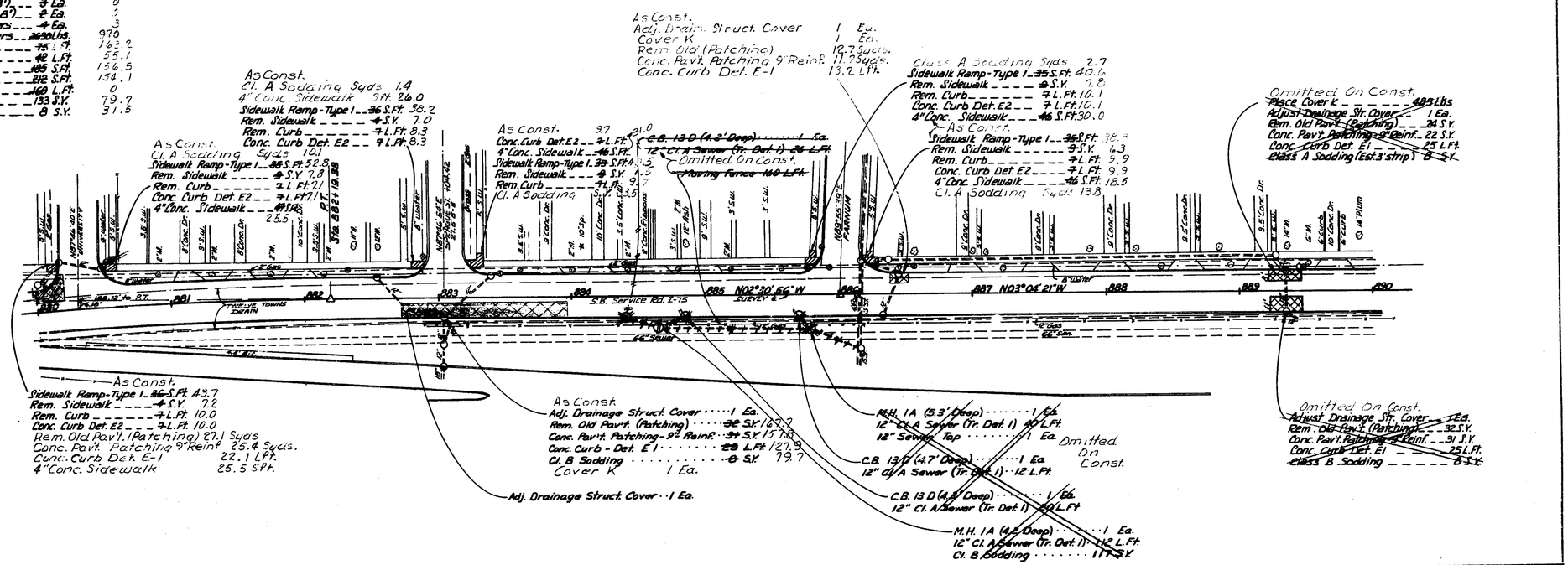
QUANTITIES THIS SHEET		As Const.
Removing Curb	42 L.Ft.	55.1
Removing Sidewalk	44 L.Ft.	43.6
Removing Old Pav't. (Patching)	88 S.Y.	207.5
Conc. Pav't. Patching - 9" Reinf.	84 S.Y.	194.9
12" Class A Sewer (Tr. Det. 1)	240 L.Ft.	
12" Sewer Tap	1 Ea.	0
Drainage Structure 2' (0'-8')	3 Ea.	0
Drainage Structure 4' (0'-8')	2 Ea.	3
Adjust Drainage Str. Covers	4 Ea.	3
Drainage Structure Covers	2630 Lbs.	970
Conc. Curb Det. E1	75 L.Ft.	163.2
Conc. Curb Det. E2	42 L.Ft.	55.1
4" Conc. Sidewalk	185 S.Ft.	156.5
Sidewalk Ramp - Type 1	212 S.Ft.	154.1
Moving Fence	160 L.Ft.	0
Class B Sodding	133 S.Y.	79.7
Class A Sodding	8 S.Y.	31.5

SPRAGUE

W.P. to P.I. Sta. 8+61.00.76
P.K. nail & tag (No Curve)
Δ = 0°33'25" Lt.
N25°E 32.96' S.W. cor. C.B.
S45°W 29.39' L. dale
N15°W 44.14' S.E. cor. C.B.

FARNUM

B.M. #10 Elev. 640.74
Arrow on fire hydrant N.W. cor. Stephenson Hwy. and Baxter 46' Lt. of Sta. 8+77+87



Mtb 63174 | 07874A | 9

FOREST

Wit. to P.I. Sta. 893+48.64
P.K. nail & tag (No curve)
Δ = 0° 23' 46" Lt.
N 30°E 25.63' S.W. cor. C.B.
S 18°W 47.37' N.E. cor. C.B.
N 65°W 32.17' S.E. cor. C.B.

B.M. #11 Elev. 636.90
Chis. D in top step of S. end W. abut. wall Gardenia Bridge over I-75 71' Lt. of Sta. 889+97

5	MICH.			10	
S.E. SERVICE Co. I-75	OAKLAND	M4163174			07874A

AS CONST.
C.B. 10D (5.0')
M.H. 1A (~~2.3~~ Deep) ..... 1 Ea.
12" Cl. A Sewer (Tr. Det. 2) ... ~~165~~ L.Ft. 185.0
12" Sewer Tap ..... 1 Ea.
Cl. A Sodding (Est. 5' Strip) ~~92~~ S.Y. 137.5

AS CONST.
C.B. 13D (~~6.4~~ Deep) 3.8') .... 1 Ea.
12" Cl. A Sewer (Tr. Det. 2) ... ~~43~~ L.Ft. 119.8
Cl. A Sodding (Est. 5' Strip) ~~85~~ S.Y. 137.5
Rem. Old Pav't. (Patching) 4.9 Syds.
Conc. Pav't. Patching 9" Reinf. 4.3 Syds.
Conc. Curb Det. E-1 8.0 Lft.

AS CONST.
Rem. Old Pav't. (Patching) 2.2 S.Y.
Conc. Pav't. Patching 9" Reinf. 1.8 S.Y.
Conc. Curb Det. E-1 4.9 Lft.
41.4 Sidewalk Ramp-Type 1 ... ~~36~~ S.Ft.
43.0 Rem. Sidewalk ..... ~~4~~ S.Y.
14.6 Rem. Curb ..... ~~7~~ L.Ft.
14.6 Conc. Curb Det. E2 ... ~~7~~ L.Ft.

Adj. Drainage Struct. Cover 1 Ea.

Outlet for middle section of Twelve Towns Relief Drain

AS CONST.
Rem. Old Pav't. (Patching 7.9 Syds.
Conc. Pav't. Patching 9" Reinf. 7.3 Syds.
C.B. 10D (~~6.4~~ Deep) 5.3' .... 1 Ea.
12" Cl. A Sewer (Tr. Det. 2) ... ~~147~~ L.Ft. 139
Cl. A Sodding (Est. 5' Strip) ~~93~~ S.Y. 147
Conc. Curb Det. E-1 8.1 Lft.

AS CONST.
Cover 1 Ea.
Adj. Drainage Struct. Cover ... 1 Ea.
Rem. Old Pav't. (Patching) ... ~~24~~ S.Y. 58.9
Conc. Pav't. Patching-9" Reinf. ~~22~~ S.Y. 54.3
Conc. Curb-Det. E1 ..... ~~25~~ L.Ft. 60.2
Cl. A Sodding (Est. 3' Strip) ... ~~4~~ S.Y. 22.2
12" Sewer Tap ..... 1 Ea.

AS CONST.
Adj. Drainage Struct. Cover .... 1 Ea.
Rem. Old Pav't (Patching) ..... ~~19~~ S.Y. 39.7
Conc. Pav't. Patching-9" Reinf. ~~18~~ S.Y. 36.5
Conc. Curb-Det. E1 ..... ~~20~~ L.Ft. 40.4
Cl. A Sodding (Est. 3' Strip) ... ~~7~~ S.Y. 43.4
Cover K 1 Ea.

AS CONST.
Rem. Old Pav't (Patching) .... ~~246~~ S.Y. 180.0
Conc. Pav't Patching-9" Reinf. .. ~~232~~ S.Y. 169.5
Conc. Curb-Det. E1 ..... ~~185~~ L.Ft. 133.8
Cl. B Sodding (Est. 3' Strip) .... 60 S.Y. 77.5
C.B. 13D (~~6.4~~ Deep) 4.6') ..... 1 Ea.
12" Sewer C-76 II (Tr. Det. 2) .. ~~33~~ L.Ft. 23.1
12" H.P. Gas 3.5' E. of Curb Face Top El. 634.37
Rem. Curb 9.8 Lft.
Conc. Curb Det. E-2 9.8 Lft.

AS CONST.
Sidewalk Ramp-Type 1 ... ~~36~~ S.Ft. 49.3
Rem. Sidewalk ..... ~~4~~ S.Y. 4.8
Rem. Curb ..... ~~7~~ L.Ft. 12.6
Conc. Curb Det. E2 ... ~~7~~ L.Ft. 12.6
Cl. A Sodding 5 Syds. 30.6

AS CONST.
Adj. Drainage Struct. Cover 2 Ea.
Cover K 1 Ea.

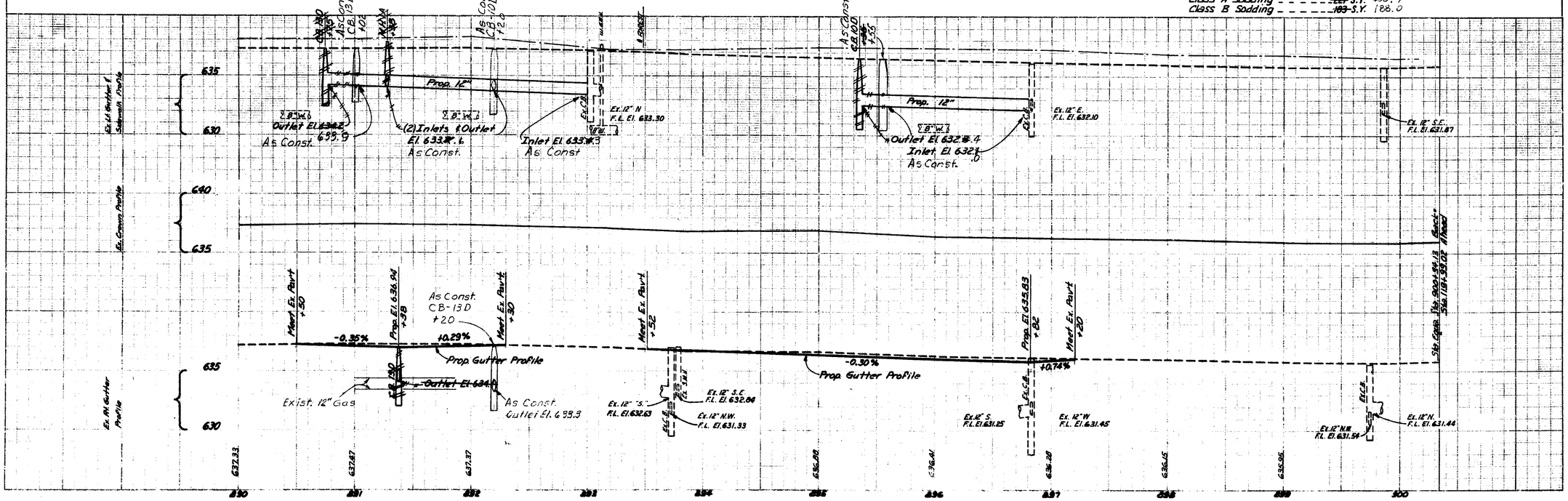
AS CONST.
258.9 Rem. Old Pav't (Patching) ..... ~~530~~ S.Y. 73.4
247.0 Conc. Pav't. Patching-9" Reinf. .. ~~508~~ S.Y. 69.1
151.8 Conc. Curb-Det. E1 ..... ~~368~~ L.Ft. 95.8
75.0 Cl. B Sodding (Est. 3' Strip) ... ~~123~~ S.Y. 81.5

Adj. Drainage Struct. Cover 1 Ea.

AS CONST.
Cl. B Sodding 4 Syds.

AS CONST.
QUANTITIES THIS SHEET

Removing Curb	~~14~~ S.Y. 37.0
Removing Sidewalk	~~2~~ ~~8~~ S.Y. 9.1
Removing Old Pav't. (Patching	~~619~~ S.Y. 628.9
Conc. Pav't. Patching-9" Reinf.	~~575~~ S.Y. 589.8
12" Class A Sewer (Tr. Det. 2)	~~315~~ L.Ft. 336.8
12" Sewer C76II (Tr. Det. 2)	~~32~~ L.Ft. 28.1
12" Sewer Tap	2 Ea.
Drainage Str. 2' (0'-8')	2 Ea.
Drainage Str. 4' (0'-8')	2 Ea.
Adjust Dr. Str. Covers	6 Ea.
Drainage Str. Covers	~~1755~~ Lbs. 3275.
Conc. Curb Det. E1	~~538~~ L.Ft. 463.0
Conc. Curb Det. E2	~~14~~ L.Ft. 27.2
Sidewalk Ramp-Type 1	~~92~~ S.Ft. 90.7
Class A Sodding	~~561~~ S.Y. 430.7
Class B Sodding	~~183~~ S.Y. 188.0



Mtb63174 07874A

10

AUTH.	DATE	REVISION
		FINAL R.O.W.

OPERATION	BY	DATE
PRELIMINARY R.O.W. COLORED		
FINAL R.O.W. COLORED		
FINAL DESIGN CHECKED		
TRACED		
FINAL R.O.W. CHECK		
QUANTITIES		
QUANTITIES CHECKED		
BOARD		

SURVEY ESTIMATION	DATE
PLAN PROFILE	
FIELD CHECK	
PRELIMINARY	
FINAL	
PRE-CONSTRUCTION	
FIELD INSPECTION	

GARDENIA

Wit. to P.I. (No Curve) P.K. nail & tag
Sta. 900+34.13 Back =
Sta. 119+99.02 Ahead
Δ = 00° 28' 05" Rt.
S42°W 41.66' Life pole
N25°W 40.71' P. pole
N45°E 39.40' Chis "x" in S.W. bolt

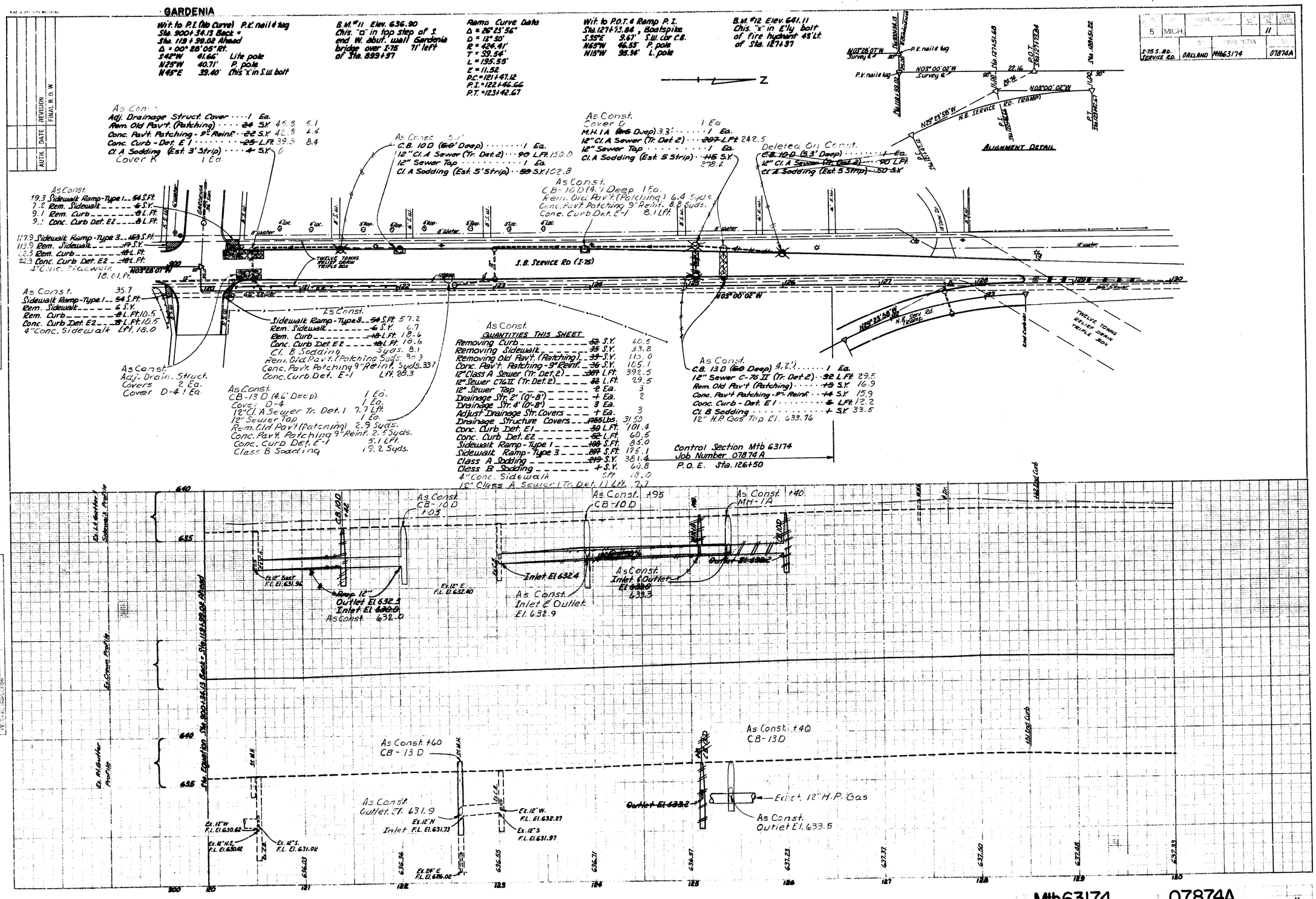
B.M. #11 Elev. 636.90
Chis. "□" in top step of S. end W. abut. wall Gardenia bridge over I-75 11' left of Sta. 899+97

Remo. Curve Data
Δ = 26°25'56"
D = 12°30'
R = 458.41'
T = 59.56'
L = 195.55'
E = 11.52
P.C. = 121+47.12
P.I. = 122+46.66
P.T. = 123+42.67

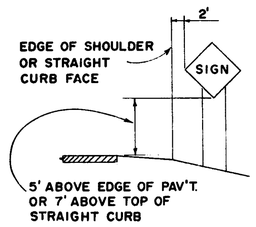
Wit. to P.O.T. & Ramp P.I.
Sta. 127+73.84, Boatspike
S55°E 9.67' S.W. cor C.B.
N65°W 46.53' P. pole
N15°W 95.36' L. pole

B.M. #12 Elev. 641.11
Chis. "x" in E'ly bolt of fire hydrant 43' Lt. of Sta. 127+37

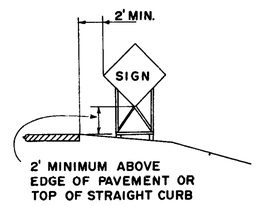
5	MICH.				11
I-75 S. Rd. Service Rd.	OAKLAND	M+63174			07874A



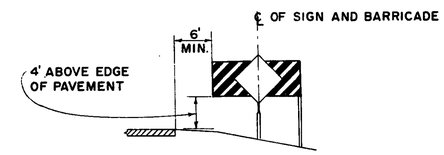
Mtb63174 07874A 11



SIGN LOCATION

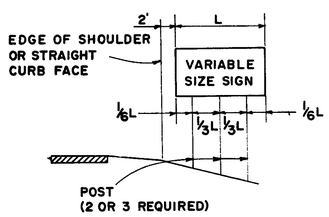


SIGN LOCATION



BARRICADE LOCATION

SEE STANDARD PLAN S60.01 FOR DETAIL OF FABRICATION AND INSTALLATION OF SWINGING BARRICADES.

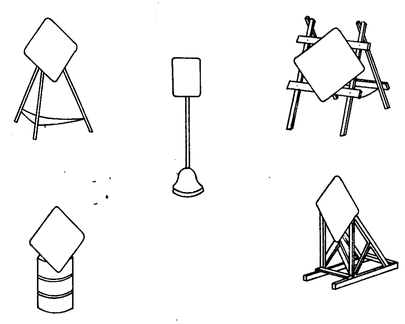


SUPPORT LOCATION FOR VARIABLE SIZE SIGN

NOTES:

1. WHEN CALLED FOR ON SIGN LOCATION PLANS, LATERAL CLEARANCE MAY BE DECREASED TO A MINIMUM OF 6 FEET BETWEEN EDGE OF PAVEMENT AND NEAREST EDGE OF SIGN. (APPLICABLE ONLY WHERE SHOULDERS EXIST)
2. SUPPORT LOCATION FOR SIGNS HAVING FIXED DIMENSIONS SHALL BE CONTROLLED BY HOLE LOCATION INDICATED ON STANDARD SIGN PLAN.

SIGNS ON SEMI-PERMANENT SUPPORTS (2"3"4"6"8"POST)



TYPICAL PORTABLE AND TEMPORARY MOUNTINGS

NOTES:

1. EXACT TYPE OF PORTABLE OR TEMPORARY MOUNTING TO BE USED ON A SPECIFIC PROJECT SHALL BE APPROVED BY THE PROJECT ENGINEER.
2. WHEN CALLED FOR ON SIGN LOCATION PLANS, SIGNS ON PORTABLE OR TEMPORARY MOUNTINGS MAY BE PLACED WITHIN THE TRAVELED PORTION OF THE ROADWAY.

SIGNS ON PORTABLE SUPPORTS

SIGNS ON SWINGING BARRICADES

(FOR USE ON SHOULDERS ONLY)

GENERAL NOTES:

1. SUPPORTS FOR SIGNS SHALL BE SO PLACED THAT SIGN FACES WILL, AS NEARLY AS PRACTICABLE, BE AT RIGHT ANGLES TO APPROACHING TRAFFIC.
2. SEMI-PERMANENT SUPPORTS WILL BE PAID FOR AS "POST" OF THE WEIGHT AND MATERIAL SPECIFIED AT THE CONTRACT UNIT PRICE PER LINEAL FOOT.
   SIGNS WILL BE PAID FOR AS "SIGN" OF THE TYPE OF SIGN PANEL AND TYPE OF SIGN FACE SPECIFIED AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.
   PORTABLE AND TEMPORARY MOUNTINGS FOR SIGNS ARE INCIDENTAL TO "SIGN"
3. SWINGING BARRICADES (EXCLUDING SIGN) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH.
4. SEE STANDARD PLANS S9.20 AND S9.30 FOR MISCELLANEOUS SIGN CONNECTION DETAILS.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

TYPICAL LOCATIONS & SUPPORTS FOR CONSTRUCTION SIGNS

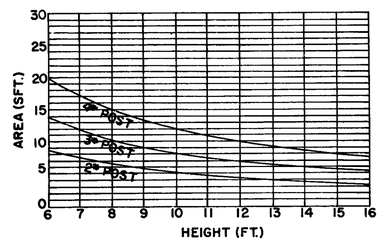
REVISIONS

NO	DESCRIPTION	DATE	BY

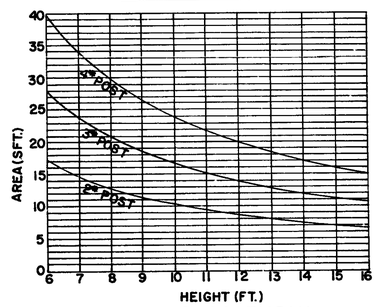
SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET	OF

S2.20

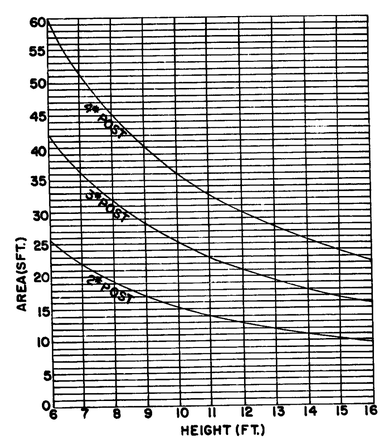
Sheet No. 12



1-POST ASSEMBLY

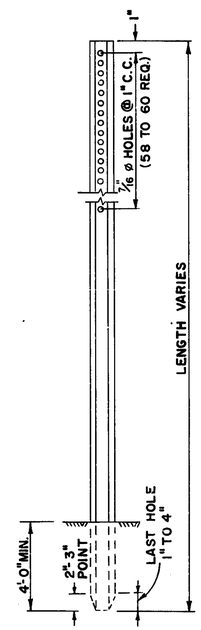


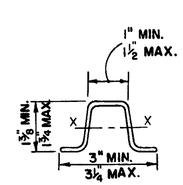
2-POST ASSEMBLY



3-POST ASSEMBLY

HEIGHT = DISTANCE FROM GROUND TO CENTER OF SIGN OR SIGN CLUSTER.

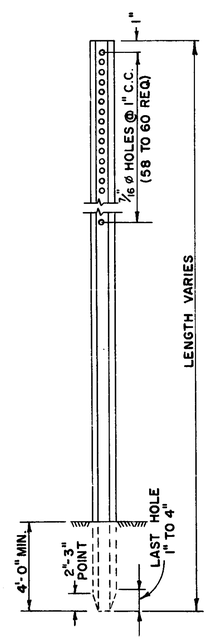


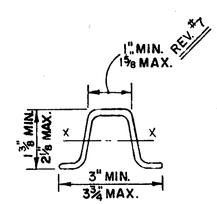


WEIGHT = 2 LB/FT. MIN.

SECTION MODULUS X-X = 0.19 IN.^{3} MIN.

2# STEEL POST

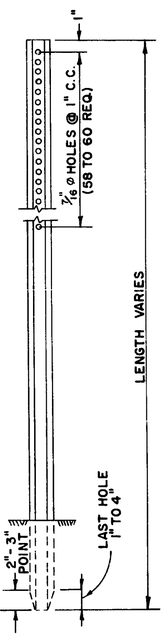


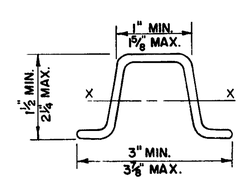


WEIGHT = 3 LB/FT. MIN.

SECTION MODULUS X-X = 0.31 IN.^{3} MIN.

3# STEEL POST





WEIGHT = 4 LB/FT. MIN.

SECTION MODULUS X-X = 0.44 IN.^{3} MIN.

4# STEEL POST

NOTES:

1.) POST SHALL BE GALVANIZED.

2.) SEE STANDARD PLAN S9.20 FOR SIGN CONNECTION.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STEEL POST

REVISIONS

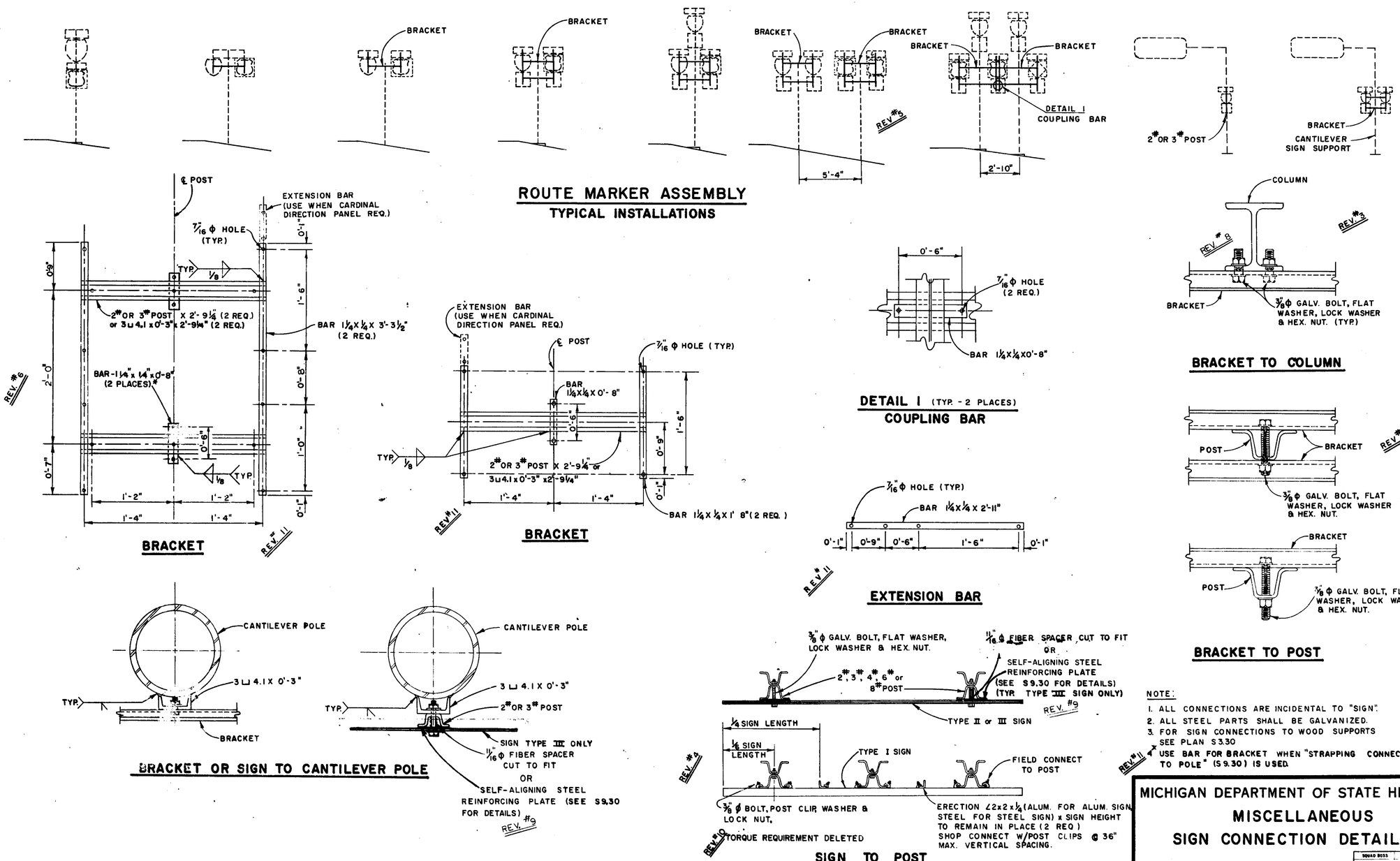
NO	DESCRIPTION	DATE	BY
1		1-1-64	
2		8-5-64	
3	MAX. DIMENSIONS	3-12-65	
4	DELETION OF 6"&8" POST, ADDED GRAPH	4-8-66	
5	NUMBER OF HOLES CHANGED	8-67	
6	REVISED GRAPH FOR 20 PSF WIND	7-30-68	
7	3# POST SIZE CHANGED	6-72	

SQUAD BOSS		
DRAWN BY	RLD	4-4-66
TRACED BY		
CHECKED BY		

SHEET OF

S3.10

Sheet No. 13



NOTE:

1. ALL CONNECTIONS ARE INCIDENTAL TO "SIGN".
2. ALL STEEL PARTS SHALL BE GALVANIZED.
3. FOR SIGN CONNECTIONS TO WOOD SUPPORTS SEE PLAN S3.30
4. * USE BAR FOR BRACKET WHEN "STRAPPING CONNECTION TO POLE" (S9.30) IS USED. REV. #11

TYPICAL CONNECTIONS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

MISCELLANEOUS

SIGN CONNECTION DETAILS

SQUAD BOSS	
DRAWN BY	G.R.H. 4-14-66
TRACED BY	
CHECKED BY	T.R.K. 4-16-66
SHEET	OF

S9.20

Sheet No. 14

REVISIONS

NO.	DESCRIPTION	DATE	BY
1		1-64	
2		6-64	
3	PIGGYBACK CONN. DELETED, VIEWS ADD	4-14-66	G.R.H.
4	6" & 8" POSTS ADD. to 'SIGN TO POST' VIEW	4-11-57	T.M.W.
5	CHANGE 4-SIGN CLUSTER MOUNTING ARRANGEMENT.	11-29-67	K.G.P.
6	BRACKET DIMENSIONS CHANGED	2-13-68	T.M.W.
7	NOTE #3 ADDED	11-68	C.D.
8	SECOND BOLT ADDED	[illegible]	[illegible]
9	STEEL REINFORCING PLATE ADDED	3-71	W.J.H.
10	TORQUE REQUIREMENT DELETED		
11	BRACKET REDESIGNED, NOTE #4 ADDED, EXTENSION BAR CHANGED, ALTERNATE BRACKET MATERIAL PROVIDED	6-72	

QUANTITY SHEET

R.I.S. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75 (US-23)		OAKLAND		15	

AS PER PLANS

Sheet No.	Removing Curb L.Ft.	Removing Sidewalk S.Y.	Removing Drainage Structures Ea.	Removing Old Pavt. S.Y.	Trim and Dispose Tree Ea.	Type B Patching S.Y.	12" Class A Sewer L.Ft.	12" Sewer Pipe L.Ft.	18" Sewer Pipe L.Ft.	Drainage Structure (0-5') Ea.	Drainage Structure (5-10') Ea.	Drainage Structure Ea.	Adjust Drainage Structures Ea.	Concrete Curb L.Ft.	Curb Curb Det. L.Ft.	Concrete Curb Det. L.Ft.	#6 Concrete Sidewalk L.Ft.	Sidewalk Ramps S.Ft.	Type I Sidewalk Ramps S.Ft.	Moving Fence L.Ft.	Class A Sodding S.Y.	Class B Sodding S.Y.	Lighted Arrow Type A Ea.	Lighted Arrow Type B Ea.	Overhead Signs Ea.	Type III Barricades Ea.	Roadway Maintenance Ea.	Minor Traffic Devices Ea.	Flashing Lights Ea.	Temporary Sign Type II S.Ft.	Temporary Pavt. L.Ft.	Temporary S.Ft.
3				71																			2	2	90	6	L.S.	L.S.	336	256			
4	21	31	1	27		25	6			1		2	910	1	35	21	12	139	140			12											
5	42	30		804		753		30		1		1	455	5	604	42		64	177	25		120	93										
6	28	25		216		203			35	1		1	455	1	182	28		83	142			30	13										
7	42	28		160		153			98	1	1		455		86	42		40	215			18	23										
8	84	52		518		501						5	227	84				46	323	99		38	27										
9	42	44		88		84	210			1	2	3	2630	4	75	42		185	212		160	8	133										
10	14	8		819		775		375	32	2	2	2	1755	6	598	14			72			221	183										
11	52	35		39		36		387	32	2	3	1	1755	1	30	52			108	207		219	1										
TOTALS	325	253	1	2671	71	2530	216	792	197	9	8	10	8415	23	1837	325	12	557	1389	331	160	666	473	2	2	90	6	L.S.	L.S.	336	256			

AS CONSTRUCTED

Sheet No.	Removing Curb L.Ft.	Removing Sidewalk S.Y.	Removing Drainage Structures Ea.	Removing Old Pavt. S.Y.	Trim and Dispose Tree Ea.	Type B Patching S.Y.	12" Class A Sewer L.Ft.	12" Sewer Pipe L.Ft.	18" Sewer Pipe L.Ft.	Drainage Structure (0-5') Ea.	Drainage Structure (5-10') Ea.	Drainage Structure Ea.	Adjust Drainage Structures Ea.	Conc. Curb L.Ft.	Conc. Curb Det. L.Ft.	Conc. Curb Det. Ea.	#6 Concrete Sidewalk L.Ft.	Sidewalk Ramps S.Ft.	Sidewalk Ramps S.Ft.	Moving Fence L.Ft.	Class A Sodding S.Y.	Class B Sodding S.Y.	Lighted Arrow Type A Ea.	Lighted Arrow Type B Ea.	Overhead Signs Ea.	Type III Barricades Ea.	Roadway Maintenance Ea.	Minor Traffic Devices Ea.	Flashing Lights Ea.	Temporary Sign Type II S.Ft.	Temporary Pavt. L.Ft.	Temporary S.Ft.
																							3	2	139	6	L.S.	L.S.	390	308			
									10.49																								
	26.8	32.6	0	43.5		39.9	7			1			1	1330	3	47	26.8	0	181.2	111.9		20.5											
	61.7	35.3		622.4		581.5			0			0	485	2	526	61.7		98.5	188.3	32.9		22.1	1.3										
	25.8	28.7		352.3		330.8		61	1			1	940	2	273.3	25.8		93.4	170.3			127.3											
	39.8	28.3		266.8		253.8	75	81	2	0		2	1880	2	168	39.8		56.9	206.5			150.8	17.1										
	88.8	57		466.8		410.5	9.4		1			1	1425	4	209	88.8		161.1	300.9	100.7		132.5	98.2										
	55.1	43.6		207.5		194.9	0		0	0		0	970	3	163.2	55.1		156.5	258.1		0	81.5	79.7										
	37.0	9.1		625.9		589.8		336.8	28.1	2		2	2275	6	463	37			90.7			430.7	188										
	60.5	33.8		113		105.1	7.7	392.5	29.5	3		3	2	3150	3	101.4	60.5		18	85	175.1	381.4	60.8										
TOTALS	376	268	0	2658	70.49	2506	15	814	200	10	5	9	12455	25	1755	376	0	765	1408	301	0	1476	845	3	2	139	6	L.S.	L.S.	390	308			

EXTRAS

2001 SPRING BITUMINOUS SURFACE 422.144 @ 0.35 = 316.80

2001 BITUMINOUS PATCHING 23 TON @ 50.00 = 1150.00

SAUND v ROUSH-75

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATA COMPLETED JAMES NELSON PROJ. ENG. DATE 4-4-77 HISTORY CHECKED ENTERED ON PLANS BY _____ DATE _____

Mtb63174 | 07874A | STATE PROJECT | FEDERAL PROJECT | SHEET NO. 15

63174-07993A

LOG JOB

CS: 63174

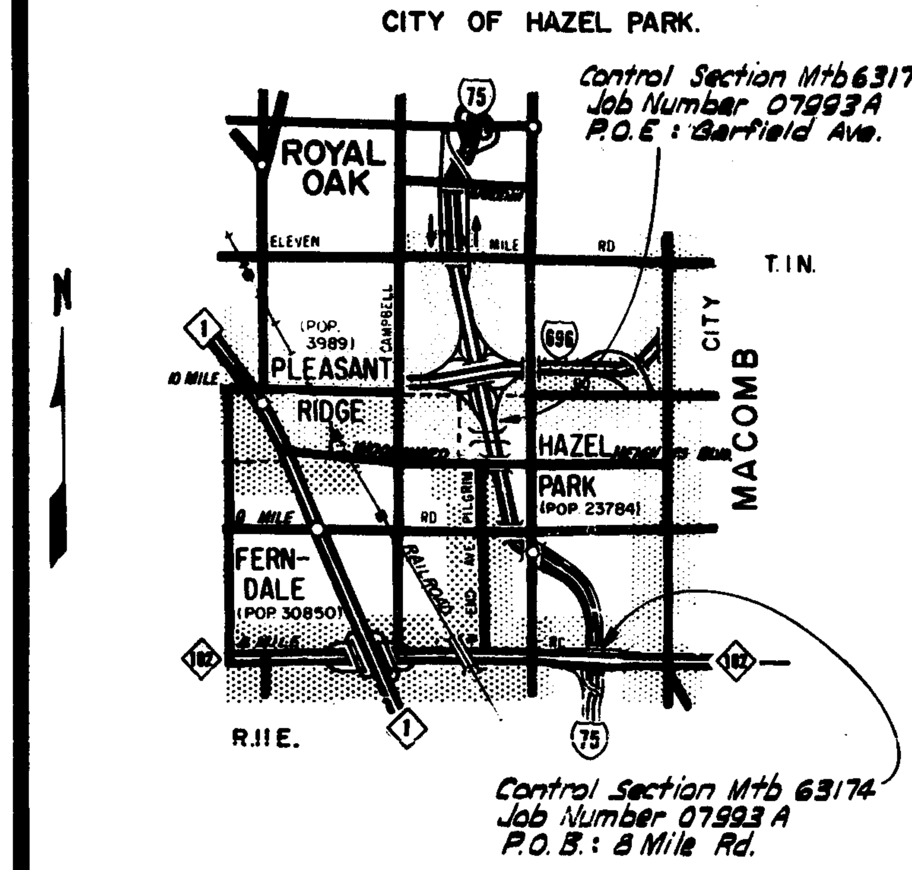
ID: 07993A

Mtb 63174 -07993A
2 mile of ontermittant shoulder reconstruction
and guard rail replacement on I 75 Service Rds.
from M 102 N'ly to N. of Sanoma Rd. in the City
of Hazel Park.

1

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
CONTROL SECTION Mtb 63174
JOB NUMBER 07993A
OAKLAND COUNTY

CITY OF HAZEL PARK.



SQUAD: ROUSH

TITLE	DATE	SIGNATURE
Engr.-Road Design	6-6-75	C.D. [illegible]
Engr. of Design.	6-6-75	[illegible]
Construction Division		

DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

APPROVED ________ DEPUTY DIRECTOR ________ DATE

U.S. DEPARTMENT OF TRANSPORTATION · FEDERAL HIGHWAY ADMINISTRATION

APPROVED

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

2

CON-SEC ID	JOB NO.
Mtb 63174	07993A

LOCATION:

City of Hazel Park in Oakland County.

TYPE OF WORK:

Approximately 2 miles of intermittent shoulder reconstruction and approximately 1000' of Guard Rail Replacement.

DESCRIPTION:

On the I-75 Service Roads commencing at M-102 (8 Mile Road) thence northerly approximately 2 miles to north of Sanoma.

3

SPECIAL PROVISION FOR MAINTAINING TRAFFIC

Traffic shall be maintained throughout the project as specified in Section 6.31 of the current edition of the Standard Specifications, and as specified herein.

General Requirements

The contractor will be allowed to work only during daylight hours.

In no case shall equipment or materials stored within the right-of-way be stored within twenty feet of a traffic lane. Such storage will not be allowed if it presents a hazard or sight restriction to the motorist.

Construction Influence Area

The C.I.A. Limits shall be defined as follows:

On I-75 Service roads from a point 1/2 mile north of the north project limits to a point 1/2 mile south of the south project limits.

On Nine Mile, [redacted] the limits will be 1000 feet east and west of the I-75 right-of-way.

On all other cross streets, the limit will be 500 feet east and west of the I-75 right-of-way.

Traffic Lane Restrictions

Maintain a minimum of one 12 foot lane at all times on the I-75 northbound and southbound Service Roads.

Ramps may be closed anytime during daylight hours except from 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. Monday through Friday. When conducting work activities on a ramp, it shall be closed with a Lighted Arrow-Type B, Type III Barricades, and appropriate signs.

General Traffic Specifications

The Contractor is referred to the Michigan Manual of Uniform Traffic Control Devices (Fig. 6-7 & 6-12) for typical traffic control devices to be utilized when closing a traffic lane. A Lighted Arrow, Type B shall be used when closing a traffic lane. Traffic Cones (28" tall) may be substituted for Type II Barricades as directed by the Engineer. Payment for traffic cones and Type II Barricades shall be in accordance with the Standard Specifications.

4

Signing shall be provided on the right and left side of the road. The contractor will supply the G20-1a and G20-2 signs. All signs shall be mounted on portable supports of a minimum bottom height of seven feet.

Barricades and traffic cones on tapers shall be spaced at a maximum of 25 feet, and on tangent sections shall be spaced at a maximum of 50 feet or as directed by the Engineer.

These traffic restrictions are subject to change by the Engineer in the event of an emergency or unforeseen traffic condition.

5

MICHIGAN
DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

SPECIAL PROVISION FOR SWEEPING

Description. - This work shall consist of sweeping pavements in the construction area, including service roads and cross streets, as directed by the Engineer.

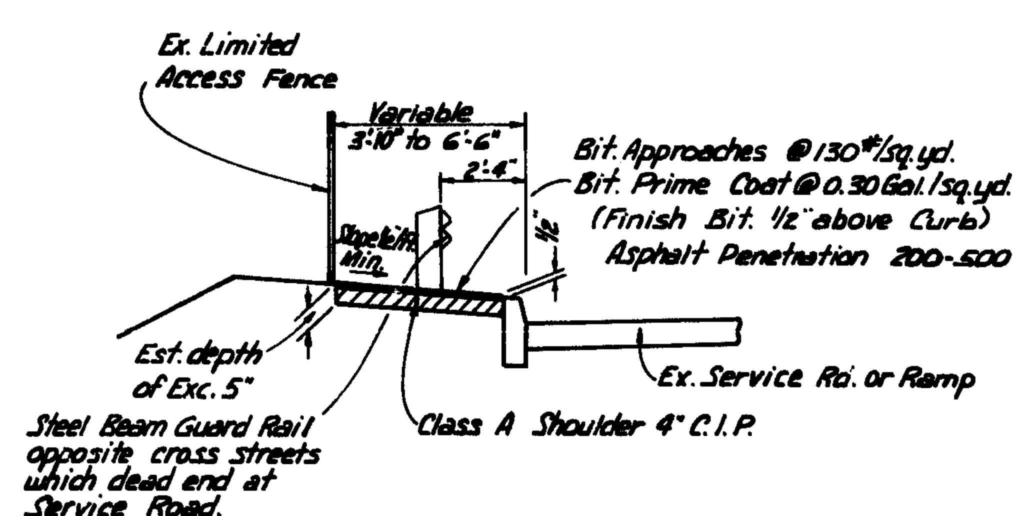
Equipment. - The sweeper shall be a self-propelled street sweeper equipped with pickup attachments and curb brushes.

Sweeping. - Paved surfaces shall be swept at the locations and as often as required by the Engineer.

Paved roadbeds shall be given a final cleaning within 5 working days prior to opening the pavement surface to traffic or notification by the Contractor that the work is completed, whichever occurs first.

Basis of Payment. - The work of sweeping will not be paid for separately but payment will be considered as having been included in the contract unit prices bid for other contract items.

6



TYPICAL SECTION
to apply where limited access fence exists.

Note: Ramp nose areas and other locations where there is no existing fence will be surfaced as directed by the Engineer.

C.S. Mtb 63174
J.N. 07993A
Squad - Roush - 75

7

DESCRIPTION OF JOB NO. 07993A
CONTROL SECTION Mtb 63174

Location

This project is located in the city of Hazel Park in Oakland County at intermittant locations on the I-75 Service Roads between Eight Mile Rd. and Garfield Avenue. The overall length is 2.0 ± miles.

Commencing at 8 Mile Road on the north and south bound service roads and proceeds north to the exit and entrance ramps north of Elza Street. The length of this section is 0.43 miles.

Commencing at 9 Mile Road on the north and south bound Service roads and proceeds north to the existing flagstone slope paving north of Sanoma. The length of this section is 0.34 miles.

Two spot locations. The first is at 9 1/2 Mile Rd. (Woodward Heights), and the second at the pedestrian bridge on the east side of the Northbound Service Road between Browning Avenue and Garfield Avenue.

Description of the Work

8 Mile Rd. to the Ramps North of Elza Street

Excavate the existing shoulder material between the curb and the limited access fence to a depth of 5" ± along the northbound and southbound service roads and remove the existing beam guard rail. Place Class A Shoulders - 4" C.I.P., Bituminous Prime Coat at 0.30 Gals. per Sq. Yd., Bituminous Approaches at 130 Lbs. per Sq. Yd., Galv. Beam Guard Rail, Type A, and Terminal End Shoes (Est. 37.5 Lin. Ft. of guard rail and two end shoes at each street).

On the entrance and exit ramps north of Elza Street, carry the surfacing to the noses of the curb between the ramps and I-75. Surface the area between the curb on the ramp and the curb on the service road from the nose to where the limited access fence begins to the north.

9 Mile Rd. to North of Sanoma

Excavate the existing shoulder material between the curb and the limited access fence to a depth of 5" ± along the northbound and southbound service roads and remove the existing guard rail. Place Class A Shoulders 4" C.I.P., Bituminous Prime Coat at 0.30 Gals. per Sq. Yd., Bituminous Approaches at 130 lbs. per Sq. Yd., Galv. Beam Guard Rail, Type A, and Terminal End Shoes (Est. 37.5 Lin. Ft. of guard rail and two end shoes at each street).

On the entrance and exit ramps near Cherry Street, carry the surfacing to the noses of the curb between the ramps and I-75. Surface the areas between the curb on the ramps and the curb on the service roads from the nose to where the limited access fence begins to the north.

8

9 1/2 Mile Rd. (Woodward Heights

Excavate the existing shoulder material to a depth of 5" ± in the two areas bounded by the curb returns and the existing sidewalk at the east approach to the Woodward Heights bridge over I-75. Place Class A Shoulders - 4" C.I.P., Bituminous Prime Coat at 0.30 Gals. per Sq. Yd., and Bituminous Approaches at 130 Lbs. per Sq. Yd.

Browning Ave. Pedestrian Bridge Area

Excavate the existing material and place 4" Concrete Sidewalk as directed by the Engineer.

Items of Work

8 Mile Rd. to the Ramps North of Elza Street

Remove Beam Guard Rail	533	Lin. Ft.
Earth Excavation	379	Cu. Yd.
Bituminous Prime Coat	819	Gals.
Galv. [illegible]m Guard Rail-Type A	487.5	Lin. Ft.
Termin[illegible] End Shoes	26	Each
Class A Shoulders (4" C.I.P.)	2728	Sq. Yd.
Bituminous Approaches	177.6	Ton

9 Mile Rd. to North of Sanoma

Remove Beam Guard Rail	560	Lin. Ft.
Earth Excavation	382	Cu. Yd.
Bituminous Prime Coat	826	Gal.
Galv. Beam Guard Rail-Type A	525	Lin. Ft.
Terminal End Shoes	22	Each
Class A Shoulders (4" C.I.P.)	2753	Sq. Yd.
Bituminous Approaches	178.9	Ton

9 1/2 Mile Rd. (Woodward Heights)

Earth Excavation	1	Cu. Yd.
Bituminous Prime Coat	2	Gal.
Class A Shoulders (4" C.I.P.)	7	Sq. Yd.
Bituminous Approaches	0.5	Ton

Browning Ave. Pedestrian Bridge Area

Earth Excavation	1	Cu. Yd.
4" Concrete Sidewalk	72	Sq. Ft.

Entire Project

The following items of work will be done as directed by the Engineer and do not appear elsewhere in this log.

	Total	
Drum Guide Rail	1012.5	Lin. Ft.
Lighted Arrow, Type B - Furnished	2	Each
Lighted Arrow, Type B - Operated	2	Each
Maintaining Traffic	1	Lump Sum
Type II Barricades	24	Each
Type III Barricades	4	Each

9

NOTE SHEET

Notes Applying to Standard Plans

Where the following items are called for on the plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated.

Beam Guard Rail - Types A, B, and C	II-60C
Drum Guide Rail, Drum Guide Rail Double, Drums, Timber Curb & Snow Fence, Timber Curb and Splash Boards	VI-124B
Types II & III Barricades and Lighted Arrows	VI-125C

Notes Applying to Log

The improvements covered by these plans shall be done in accordance with the Michigan Department of State Highways 1973 Standard Specifications and Supplemental Specifications.

SQUAD • ROUSH • 75

AS PER PLAN

C.S. Mtb 63174 J.N. 07993 A

LOCATION	Rem. Beam Guard Rail L.Ft.	Earth Excavation Cyd.	Bit. Prime Coat Gal.	Galv. Beam Guard Rail-Type A L.Ft.	Terminal End Shoes Ea.	C.I.A. Shoulders (4" C.I.P.) Syd.	Bit. Approaches Ton	4" Concrete Sidewalk Sft	Maintaining Traffic L.S.	Drum Guide Rail L.Ft.	Lighted Arrow Type B-Furn. Ea.	Lighted Arrow Type B-Oper. Ea.	Type II Barricade Ea.	Type III Barricade Ea.
CITY OF HAZEL PARK														
8½ Mile Rd. - Elza	533	379	819	487.5	26	2728	177.6							
9 Mile Rd. - Sonoma	560	382	826	525.0	22	2753	178.9							
9½ Mile Rd.		1	2			7	0.5							
Browning Ave. Ped. Br.		1						72						
Entire Project									1	1012.5	2	2	24	4
Sub-Total (Hazel Park)	1093	76.3	1647	1012.5	48	5488	357	72	1	1012.5	2	2	24	4
TOTALS	1093	763	1647	1012.5	48	5488	357	72	1	1012.5	2	2	24	4

All as per plan quantity totals except Galv. Beam G.R. Type A and Drum Guide Rail are shown to the nearest whole Unit.

CONTRACTORS CODE

15

ITEM NUMBER

11

MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

BUREAU OF HIGHWAYS

PROPOSAL FOR PROJECT

PROJECT	JOB NO.	FEDERAL NO.
Mtb 63174 Guard Rail Repl.	07993 A	

BIDS WILL BE OPENED AT 10:30 A.M., E.D.T., ON WEDNESDAY, JULY 16, 1975 IN THE CIVIC CENTER, PRUDDEN AUDITORIUM, LANSING, MICHIGAN

THE RIGHT IS RESERVED TO REJECT ANY OR ALL PROPOSALS

NOTE TO BIDDERS

This bid proposal must be signed by the bidder on Page III.

– SEE INSIDE OF COVER PAGE FOR INSTRUCTIONS TO BIDDERS –

12

SQUAD • ROUSH • 75

AS CONSTRUCTED

C.S. Mtb 63174 J.N. 07993A

LOCATION	Rem. Beam Guard Rail L.Ft.	Earth Excavation Cyd.	Bit. Prime Coat Gal.	Galv. Beam Guard Rail-Type A L.Ft.	Terminal End Shoes Ea.	C.I.A. Shoulders (4" C.I.P.) Syd.	Bit. Approaches Ton	4" Concrete Sidewalk Sft	Maintaining Traffic L.S.	Drum Guide Rail L.Ft.	Lighted Arrow Type B-Furn. Ea.	Lighted Arrow Type B-Oper. Ea.	Type II Barricade Ea.	Type III Barricade Ea.
TOTALS														

63174-08481A

CS: 63174

ID: 08481A

I 63174 - 08481 A
I 75-2 (170) 62 Part 2
3 miles of Landscaping on I-75 from 11-Mile Road, thence N'ly to 14-Mile Rd. in the Cities of Royal Oak and Madison Heights, Oakland County. Item 4

ROUTE	JOB NUMBER	FEDERAL NUMBER	SHEET NO.	TOTAL SHEETS
I-75	08481A	I-75-2(170) 62	1	9

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS 1973 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

PLANS OF PROPOSED

MICHIGAN PROJECT I-75-2(170)62 Part 2

CONTROL SECTION I 63174

JOB NUMBER 08481A

I-75

OAKLAND COUNTY

CITIES OF MADISON HEIGHTS AND TROY

INDEX SHEET NO'S.

TITLE SHEET .....

SPECIFICATIONS.....

PLAN SHEETS.....

QUANTITY SHEET.....

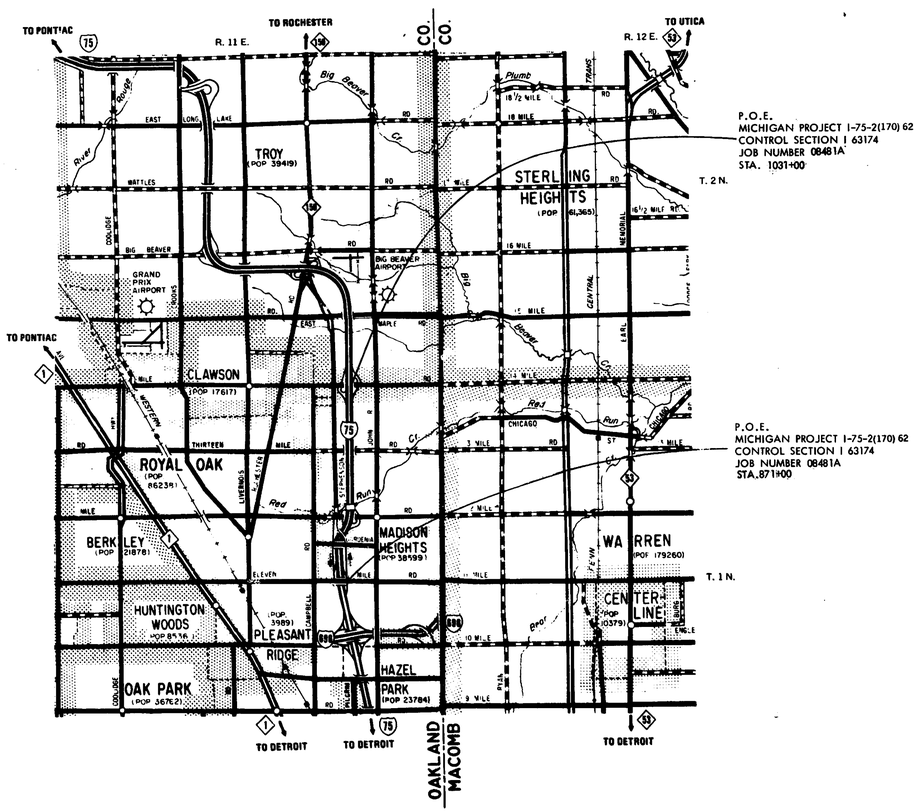
LEGEND

A.D.T.....

D.H.V.....

COMM. % .....

DESIGN SPEED.....



TITLE SHEET LEGEND

EXISTING CONDITION

PAVED | BITUMINOUS | GRAVEL | UNIMPROVED OR CITY STREET | RELOCATION

PROPOSED PROJECT .....

PAVED .....

BITUMINOUS .....

GRAVEL .....

UNIMPROVED OR CITY STREET .....

SECTION LINE .....

TOWNSHIP LINE .....

COUNTY LINE .....

CITY OR VILLAGE LIMITS .....

RAILROADS .....

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

ITEM NO. 1710

CONTRACT FOR LANDSCAPE DEVELOPMENT

APPROVALS

CHECKED J.E. Hunton — SUPERVISOR OF ROADSIDE DEVELOPMENT — 10-10-74 DATE

RECOMMENDED FOR APPROVAL M. Rothstein — ENGINEER OF DESIGN — 10-10-74 DATE

RECOMMENDED FOR APPROVAL J.D. 10-10-74 — ENGINEER OF TRAFFIC & SAFETY — DATE

RECOMMENDED FOR APPROVAL [signature] — ENGINEER OF CONSTRUCTION — 10/14/74 DATE

DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION
JOHN P. WOODFORD – DIRECTOR

APPROVED BY: [signature] — DEPUTY DIRECTOR – HIGHWAYS — 10/10/74 DATE

PLANS PREPARED BY MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

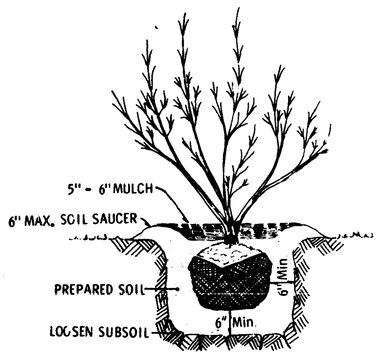
SQUAD MULLER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

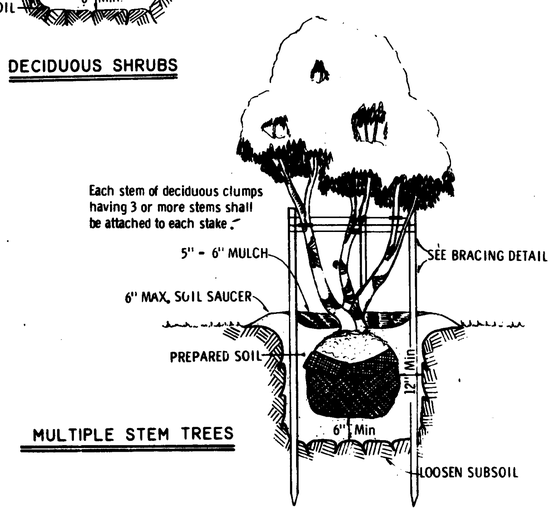
APPROVED [redacted]

I 63174	JOB NUMBER	FEDERAL PROJECT	SHEET NO.
	08481A	I-75-2(170)62	1

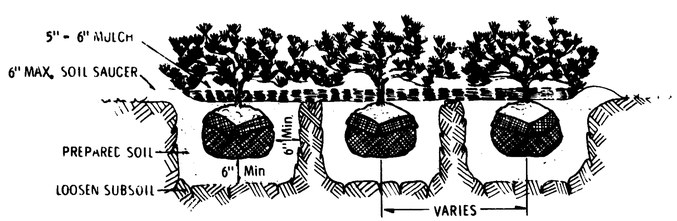
CONTROL SECTION - JOB NUMBER I 63174-08481A



DECIDUOUS SHRUBS



MULTIPLE STEM TREES



BEDDED SHRUBS

PLANTING TREES & SHRUBS

1. Dig plant pocket for trees a minimum of 24" wider and 6" deeper than root ball, unless otherwise specified.
2. Dig plant pocket for shrubs a minimum of 12" wider and 6" deeper than root ball, unless otherwise specified.
3. Loosen subsoil to a depth of 4". Loosen earth on sides of pocket to break the glaze caused by digging.
4. Set plants at the same or slightly greater depth than at the nursery.
5. Fill prepared soil to 1/2 the depth of ball, pack firmly, and settle with water.
6. Loosen and remove burlap and all lacing from upper half of ball.
7. Backfill with prepared soil which, after compaction, is flush with ground level.
8. Form a soil saucer 6" high around edge of plant pocket.
9. Cover plant pocket area with 5" - 6" mulch.
10. Prune, wrap, & brace as specified.

NOTES:

Sever plantable containers in several places & remove upper half of container during planting.

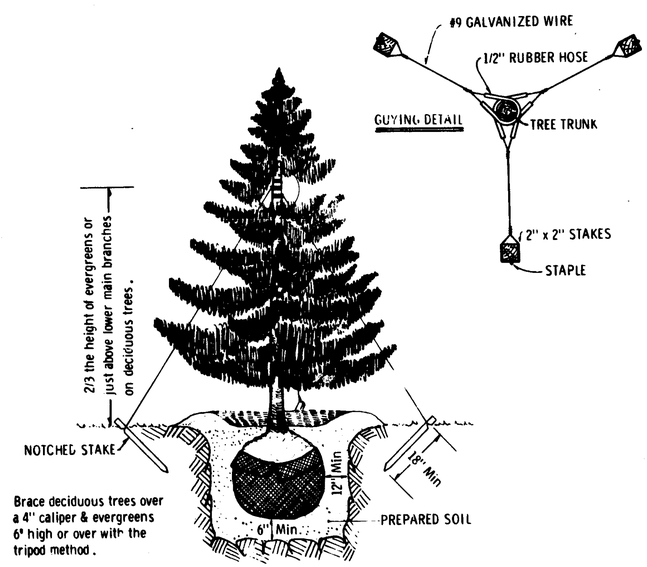
Completely remove metal containers at time of planting.

All unsuitable salvage soil must be removed from the site.

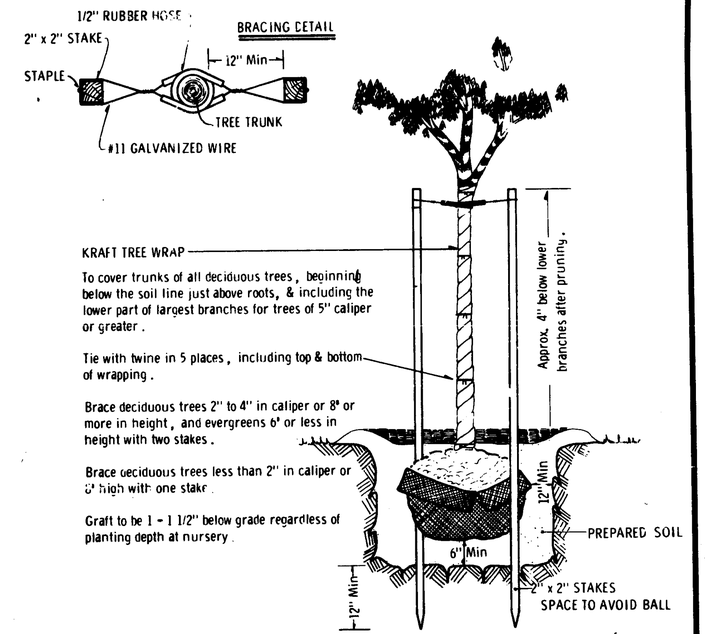
All heights shown are before pruning.

All depths shown are after settling.

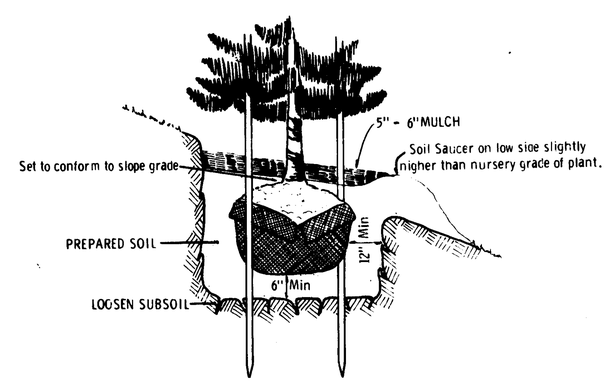
Trees and shrubbery shall not be planted within 50' and 30' respectively of the nearest edge of metal-except near structures and guard rails, and where inaccessible to vehicles.



TRIPOD METHOD



BRACING - VERTICAL STAKES



PLANTING ON A SLOPE

Drawn by M. J. Wickens
Rev. 5-14-74

TYPICAL PLANTING PROCEDURES

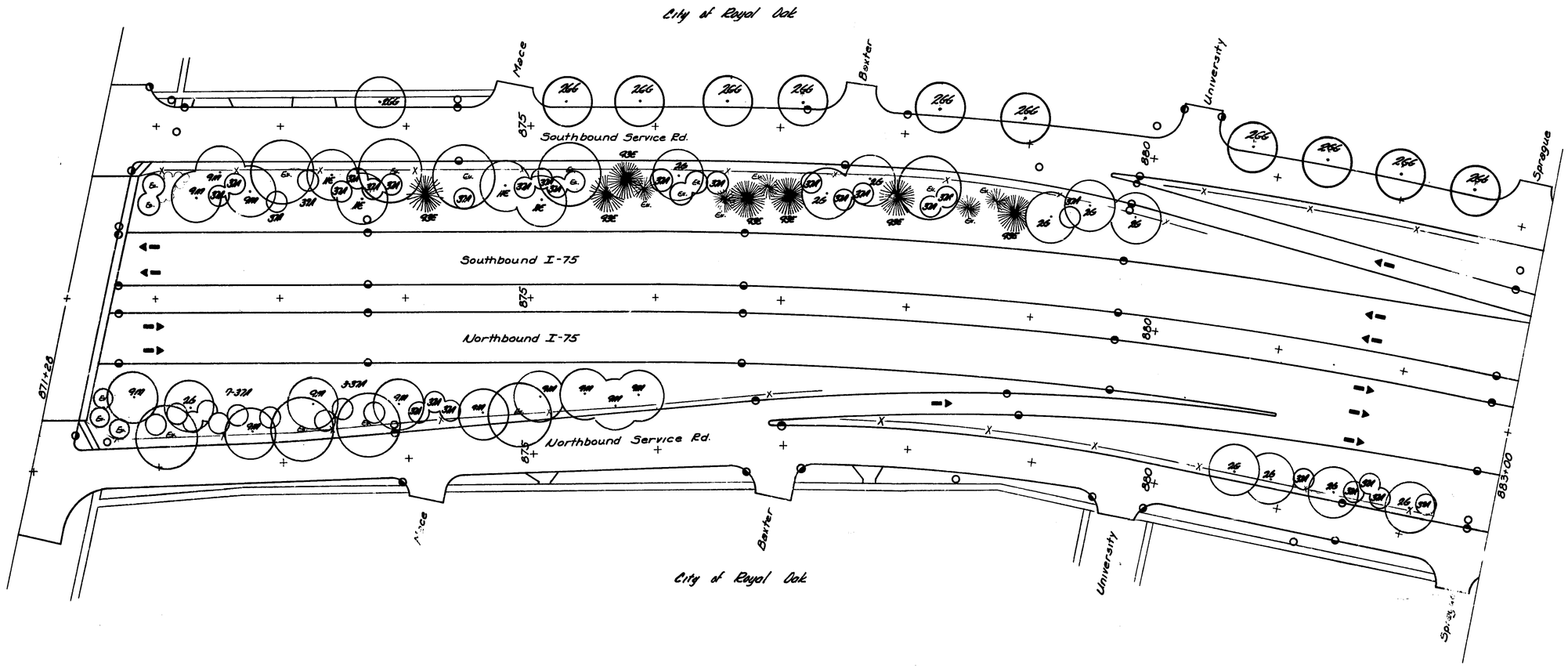
MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

I 63174	JOB NO 08481A	FEDERAL PROJECT I-75-2(	R.S. NO 1	SHEET NO 2

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )			
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		08481A	

1"=40'

11	2G	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
12	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
4	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
38	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
7	93E	PINUS NIGRA	AUSTRIAN PINE
11	2GG	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 871+28 to 883+00

Squad - Muller - 9-73

Traced by J.M. Galloway 9-28-73

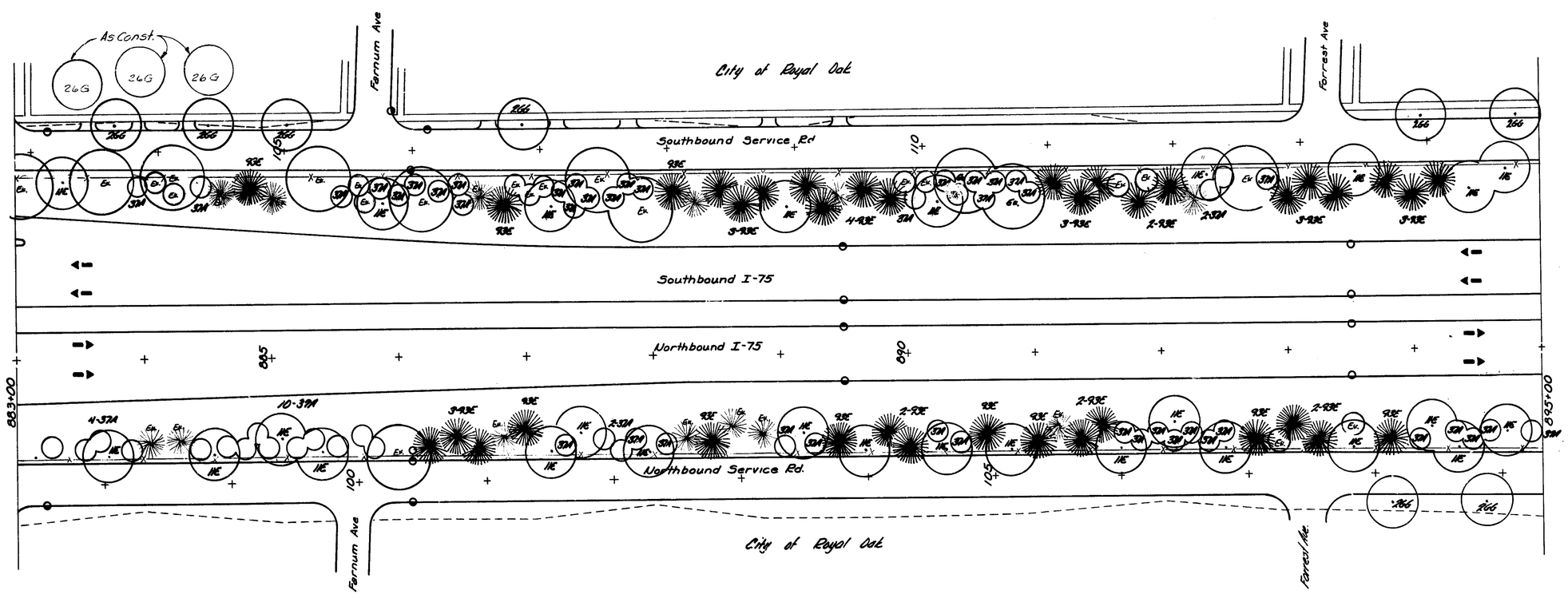
CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	08481A	I-75-2( )		3

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )			
ROUTE	COUNTY	CONTROL SECTION	JOB NO.		
I-75	OAKLAND	I 63174	08481A		

1" = 40'

As Const.

87	1NE	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
62	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
37	93E	PINUS NIGRA	AUSTRIAN PINE
11	266	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Sta 883+00 to 895+00

Traced by J.M. Galloway 8-9-73

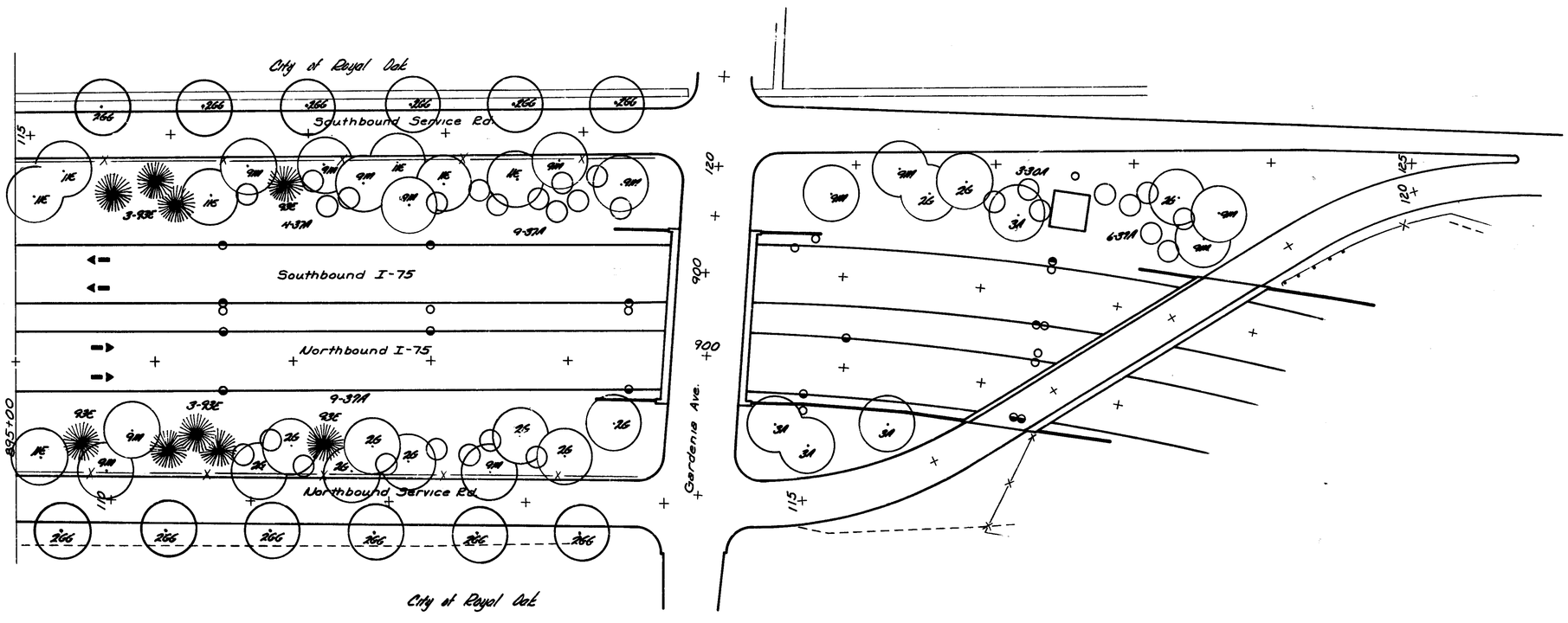
Squad - Muller 8-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	08481A	I-75-2( )		

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )			
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		08481A	

1" = 40'

11	26	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE
4	3A	AILANTHUS ALTISSIMA	TREE OF HEAVEN
13	9M	FRAXINUS PENN LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
7	1E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
3	30A	ACER CAMPESTRE	HEDGE MAPLE
27	5A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN
9	93E	PINUS NIGRA	AUSTRIAN PINE
12	266	ACER PLATANOIDES 'SUMMERSHADE'	SUMMERSHADE NORWAY MAPLE



Traced by J.M. Galloway 8-9-73

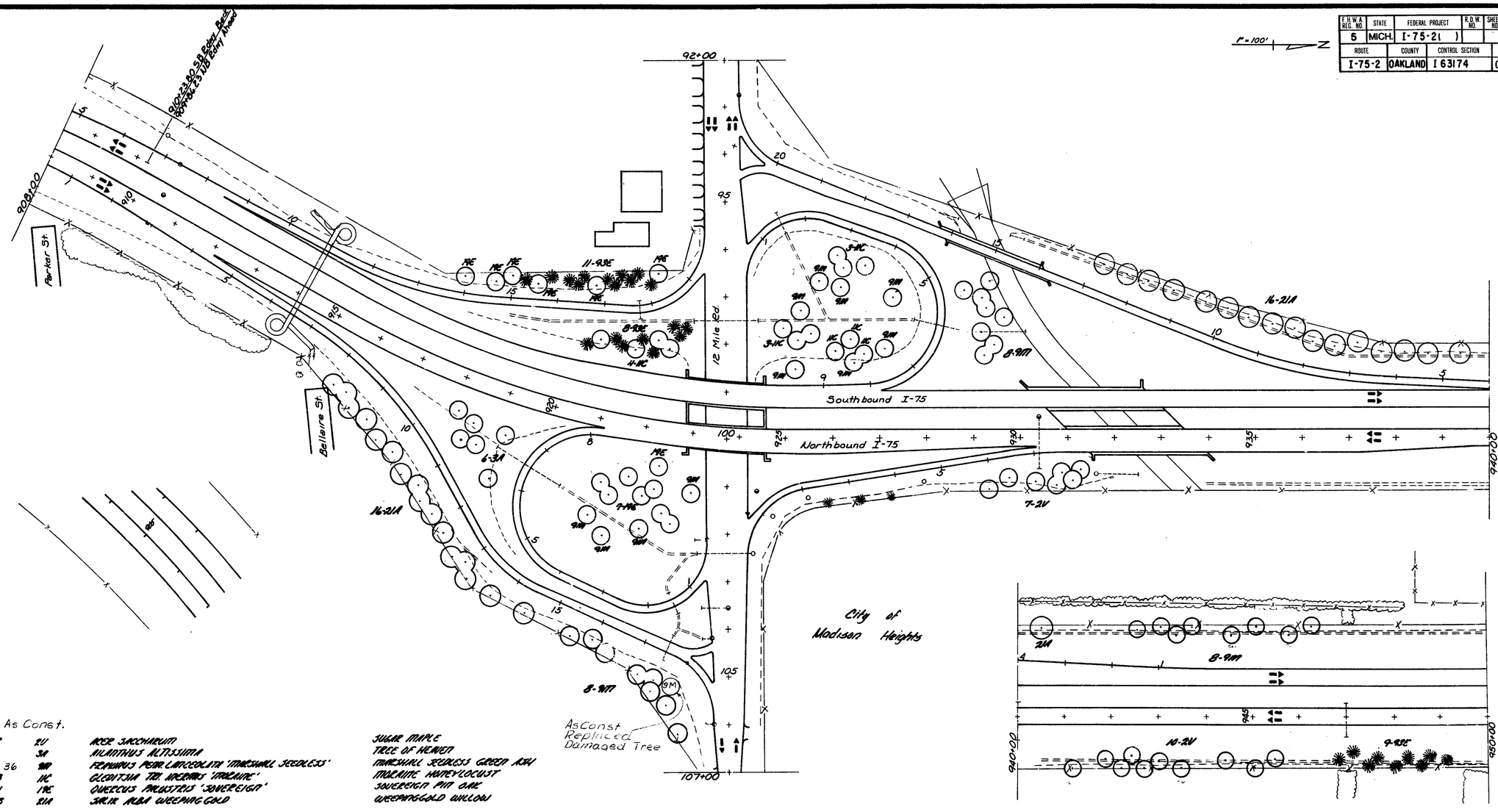
Squad - Muller - 8-73

Sta 895+00 to 904+00

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. SH.	SHEET NO.
I 63174	08481A	I-75-2( )		5

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2( )			
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75-2	OAKLAND	I 63174		08481A	

1" = 100'



As Const.

17	2V	ACER SACCHARUM	SUGAR MAPLE
6	3A	AILANTHUS ALTISSIMA	TREE OF HEAVEN
35 36	9M	FRAXINUS PENN LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
13	1K	GLEDITSIA TRI. INERMIS 'MORAINE'	MORAINE HONEYLOCUST
14	1PE	QUERCUS PALUSTRIS 'SOVEREIGN'	SOVEREIGN PIN OAK
33	2M	SALIX ALBA WEEPING GOLD	WEEPING GOLD WILLOW
28	9SE	PINUS NIGRA	AUSTRIAN PINE

Sta 908+00 to 950+00

Traced by J.M. Galloway 7-26-73

Squeed-Muller 7-73

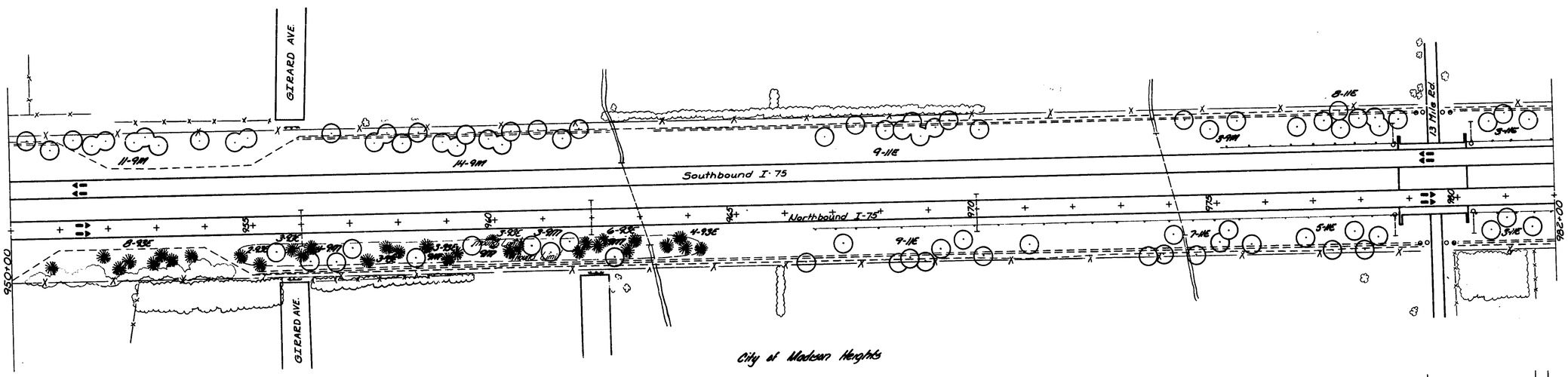
CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	08481A	I-75-2( )		6

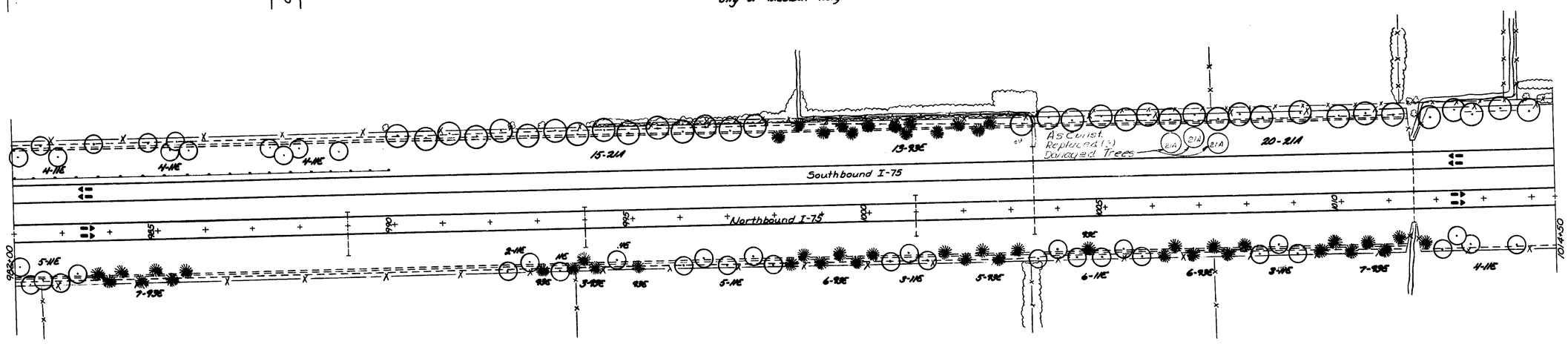
F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.	I-75-2 ( )			
ROUTE	COUNTY	CONTROL SECTION		JOB NO.	
I-75	OAKLAND	I 63174		08481A	

1" = 100'

As Const.

38	9M	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
84	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
~~35~~ 38	21A	SALIX ALBA 'WEEPING GOLD	WEEPING GOLD WILLOW
82	93E	PINUS NIGRA	AUSTRIAN PINE





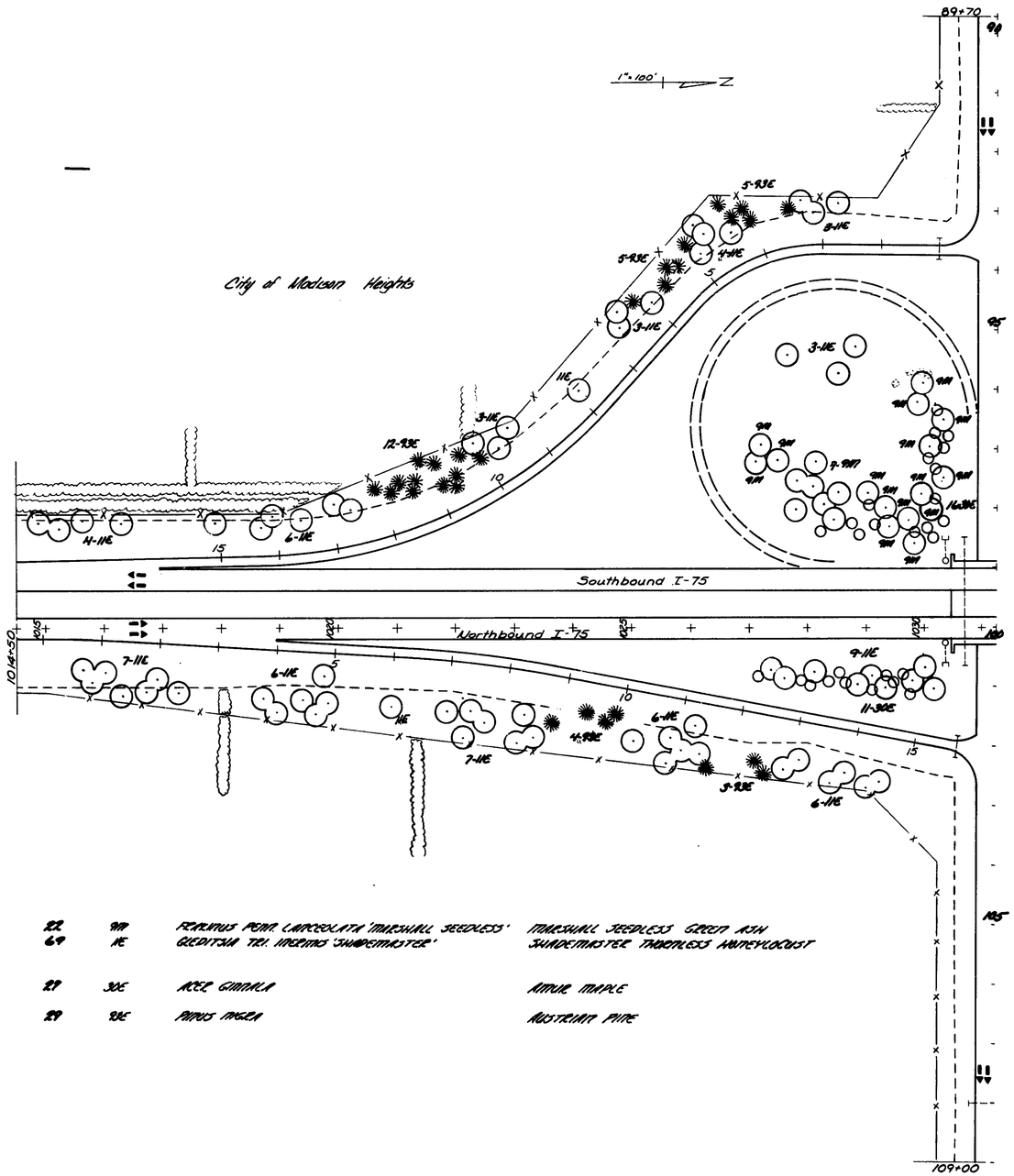
Sta 950+00 to 1014+50

Traced by J.M. Galloway 7-20-73

Squad-Muller 7-73

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.
I 63174	08481A	I-75-2 ( )		7

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
5	MICH.			8	
ROUTE	COUNTY	CONTROL SECTION	JOB NO.		
I-75	OAKLAND	I 63174	08481A		



22	9W	FRAXINUS PENN. LANCEOLATA 'MARSHALL SEEDLESS'	MARSHALL SEEDLESS GREEN ASH
69	11E	GLEDITSIA TRI. INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS HONEYLOCUST
29	30E	ACER GINNALA	AMUR MAPLE
29	93E	PINUS NIGRA	AUSTRIAN PINE

CONTROL SECTION	JOB NO.	FEDERAL PROJECT	R.O.W.	SHEET NO.
163174	08481A	I-75-2 ( )		8

EDCO- 1368-3 5-71 45843

QUANTITY SHEET – E

F.H.W.A. REG. NO.	STATE	FEDERAL PROJECT	R.O.W. NO.	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-2( )		9	9
ROUTE	COUNTY	CONTROL SECTION	JOB NO.		
I-75	OAKLAND	163174	07556A		

AS PER PLANS

SHEET NUMBER 3	4	5	6	7	8	TOTAL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	BALL diameter	BALL depth	REMARKS
11		11				22	26	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE	2½"-3"	BB	28"	19"	
11	8	12				31	26G	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE	1¾"-2"	BB	22"	15"	
			17			17	2V	ACER SACCHARUM	SUGAR MAPLE	2½"-3"	BB	28"	19"	
		4	6			10	3A	AILANTHUS ALTISSIMA	TREE OF HEAVEN	1¾"-2"	BB	22"	15"	STAMINATE TREES ONLY
12		13	35	38	22	120	9M	FRAXINUS P. LANCEOLATA MARSHALL'S SEEDLESS	MARSHALL'S SEEDLESS GREEN ASH	2½"-3"	BB	28"	19"	
			13			13	11C	GLEDITSIA TRIACANTHOS INERMIS MORAINE	MORAINE THORNLESS HONEYLOCUST	2½"-3"	BB	28"	19"	
4	27	7		86	69	193	11E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST	2½"-3"	BB	28"	19"	
			14			14	19E	QUERCUS PALUSTRIS SOVEREIGN	SOVEREIGN PIN OAK	2½"-3"	BB	28"	19"	
			33	35		68	21A	SALIX ALBA WEEPING GOLD (SALIX ALBA TRISTIS)	WEEPING GOLD WILLOW	1¾"-2"	BB	22"	15"	
		3				3	30A	ACER CAMPESTRE	HEDGE MAPLE	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
					27	27	30E	ACER GINNALA	AMUR MAPLE	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
38	62	27				127	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN	5'-6'	BB	16"	12"	WELL BRANCHED BUSH FORM
7	37	9	28	82	29	192	93E	PINUS NIGRA	AUSTRIAN PINE	5'-6'	BB	20"	13"	

CITY OF ROYAL OAK PARTICIPATION

11		11				22	26	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE					
11	8	12				31	26G	ACER PLATANOIDES SUMMERSHADE	SUMMERSHADE NORWAY MAPLE					
		4				4	3A	AILANTHUS ALTISSIMA	TREE OF HEAVEN AILANTHUS					
12		13				25	9M	FRAXINUS P. LANCEOLATA MARSHALL'S SEEDLESS	MARSHALL'S SEEDLESS GREEN ASH					
4	27	7				38	11E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST					
		3				3	30A	ACER CAMPESTRE	HEDGE MAPLE					
38	62	27				127	37A	CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN					
7	37	9				53	93E	PINUS NIGRA	AUSTRIAN PINE					

CITY OF MADISON HEIGHTS PARTICIPATION

			17			17	2V	ACER SACCHARUM						
			6			6	3A	AILANTHUS ALTISSIMA	TREE OF HEAVEN AILANTHUS					
			35	38	22	95	9M	FRAXINUS P. LANCEOLATA MARSHALL'S SEEDLESS	MARSHALL'S SEEDLESS GREEN ASH					
			13			13	11C	GLEDITSIA TRIACANTHOS INERMIS MORAINE	MORAINE THORNLESS HONEYLOCUST					
				86	69	155	11E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST					
			14			14	19E	QUERCUS PALUSTRIS SOVEREIGN	SOVEREIGN PIN OAK					
			33	35		68	21A	SALIX ALBA WEEPING GOLD	WEEPING GOLD WILLOW					
					27	27	30E	ACER GINNALA	AMUR MAPLE					
			28	82	29	139	93E	PINUS NIGRA	AUSTRIAN PINE					

CITY OF TROY PARTICIPATION

			14	102	63	119	300	9M	FRAXINUS P. LANCEOLATA MARSHALL'S SEEDLESS	MARSHALL'S SEEDLESS GREEN ASH				
				14			14	11C	GLEDITSIA TRIACANTHOS INERMIS MORAINE	MORAINE THORNLESS HONEYLOCUST				
			27	68	41	86	242	11E	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER	SHADEMASTER THORNLESS HONEYLOCUST				
							21	30E	ACER GINNALA	AMUR MAPLE				
			28	82	29	29	139	93E	PINUS NIGRA	AUSTRIAN PINE				

ITEM	UNIT	QUAN.
LIGHTED ARROW TYPE A FURNISHED	EA.	1
LIGHTED ARROW TYPE A OPERATED	EA.	1
ON THE JOB TRAINING		

AS CONSTRUCTED

SHEET NUMBER 3	4	5	6	7	8	9	10	11	TOTAL	KEY	
11		11							22	26	
11	11	12							34	26G	1001
		4							4	3A	
12		13							25	9M	
4	27	7							38	11E	
		3							3	30A	
38	62	27							127	37A	
7	37	9	28	82	29				192	93E	

CITY OF ROYAL OAK PARTICIPATION

11		11							22	26
11	11	12							34	26G
		4							4	3A
12		13							25	9M
4	27	7							38	11E
		3							3	30A
38	62	27							127	37A
7	37	9							53	93E

CITY OF MADISON HEIGHTS PARTICIPATION

			17						17	2V
			6						6	3A
			36	38	22				96	9M
			13						13	11C
				86	69				155	11E
			14						14	19E
			33	38					71	21A
					27				27	30E
			28	82	29				139	93E

7-9-76
DZ

ITEM	UNIT	QUAN.	
Lighted Arrow Type A Furnished	Ea	1	
Lighted Arrow Type A Operated	Ea	1	
On The Job Training	Ea	0.201	1001

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATE _____ DATA COMPLETED JAMES S NELSON (PROJ. ENG) DATE 6-14-76 HISTORY CHECKED ENTERED ON PLANS BY _____ DATE _____

CONTROL SECTION | JOB NO. 08481A | FEDERAL PROJECT | SHEET NO. 9 | TOTAL SHEETS