

QUANTITY SHEET-F

B. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		94	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		94	

CULVERTS

AS PER PLANS										AS CONSTRUCTED										EXPLANATION OF CHANGES
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		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 20 FT. SPAN OR UNDER										
TOTAL CULVERTS OVER 20 FT. SPAN										TOTAL CULVERTS OVER 20 FT. SPAN										

GUARD RAIL

AS PER PLANS					AS CONST.					EXPLANATION OF CHANGES
STA. TO STA.	2 CABLE G. RAIL LIN. FT.	STEEL BEAM G. RAIL LIN. FT.	EXPAN. SHOW TAKEUPS EACH	BRACED END PANELS EACH	STA. TO STA.	2 CABLE G. RAIL LIN. FT.	STEEL BEAM G. RAIL LIN. FT.	EXPAN. SHOW TAKEUPS EACH	BRACED END PANELS EACH	
CONTROL SECTION I 82111-30103					CONTROL SECTION I 82111-30103					
Temporary Road	510				Temporary Road	554				Auth. 1047
26+00	33+92		75		26+00	33+92		62		Auth. 1040
TOTALS					TOTALS					

GRADING

AS PER PLANS										AS CONSTRUCTED										EXPLANATION OF CHANGES
STA. TO STA.	BORROW CU. YDS.	Earth Excavat. CU. YDS.	Subbase L.M. CU. YDS.	EMB. + SHR. + LOSS CU. YDS.	WASTE CU. YDS.	Par. Mat. Grade A L.M. Cu. Yds.	Par. Mat. Grade B L.M. Cu. Yds.			BORROW CU. YDS.	Earth Excavat. CU. YDS.	Subbase L.M. CU. YDS.	EMB. + SHR. + LOSS CU. YDS.	WASTE CU. YDS.	Par. Mat. Grade A L.M. Cu. Yds.	Par. Mat. Grade B L.M. Cu. Yds.				
CONTROL SECTION I 82111-30103										CONTROL SECTION I 82111-30103										
West Service Drive																				
20+44.83 - 27+50		343								372*					333	39	550**		Auth. 1040 # 1043	
27+50	33+42.99	174	217							391	30*	247*		391	30*	247*			Auth. 1040 # 1043	
East Service Drive																				
20+65.15	27+50		1391							1391				1290	101	603			Auth. 1043	
27+50	33+67.84		1273							1273				632	641	18			Auth. 1043	
Temporary Road			1518							1518				1518						
Expressway & Ramps																				
20+73	26+00		50,954	3239	489	50,465				57,583**	2138**	489	57,099						Auth. 1040 # 1042	
26+00	33+47		78,213	6100	133	77,906 (174 C.Y. for W. Ser. Dr.)				78,612*	5006**	133	78,305 (174 C.Y. for W. Ser. Dr.)						Auth. 1040 # 1042	
Removing Debris from Basement Areas																				
Sheet # 19			2236							2236	1234			1620					Auth. 1040 # 1043	
Sheet # 20			1246							1246	671			1154*					Auth. 1040 # 1043	
Manholes, Catchbasins & Sewer Trench Excavations (Including Edge Drains) (Entire Project)			4816							4816	3686	1209		5207**					Auth. 1040 # 1043	
Bank Drains (Entire Project)			3260							3260	2686	1496		529**					Auth. 1040 # 1043	
Alterations to City Sewers			587							587	557			606*					Auth. 1040 # 1043	
Alterations to Water Mains			2276							2276	1409			2276					Auth. 1040 # 1043	
Alterations to Public Lighting			1712							1712	1498			1987*					Auth. 1040 # 1043	
CONTROL SECTION I 82111-30102										CONTROL SECTION I 82111-30102										
Alterations to City Sewers			729							729	784			770*					Auth. 1040 # 1043	
Alterations to Water Mains			665							665	591			665					Auth. 1043	
CONTROL SECTION I 82111-30104										CONTROL SECTION I 82111-30104										
Expressway & Ramps																				
33+47	33+92		3763		397	3758				3763	387**	5	3758						Auth. 1040 # 1042	
33+92	42+50		8220							8220	8473**			8220					Auth. 1040 # 1042, # 1044	
42+50	46+39		6248							6248	5954**			6248					Auth. 1040 # 1042, # 1044	
TOTALS										TOTALS										

AS PER PLANS					AS CONSTRUCTED					EXPLANATION OF CHANGES
SHEET NO.	REMOVING OLD PAVT. SQ. YDS.	REMOVING MASONRY CONC. CU. YDS.	REMOVING SIDEWALK SQ. YDS.	REMOVING CURB LIN. FT.	SHEET NO.	REMOVING OLD PAVT. SQ. YDS.	REMOVING MASONRY CONC. CU. YDS.	REMOVING SIDEWALK SQ. YDS.	REMOVING CURB LIN. FT.	
CONTROL SECTION I 82111-30102					CONTROL SECTION I 82111-30102					
Sheet # 19	370	11	86	55	Sheet # 19	374**	7*	126*	55	Auth. 1040
CONTROL SECTION I 82111-30103					CONTROL SECTION I 82111-30103					
Sheet # 19	5776	174	4493	237	Sheet # 19	5887**	151*	4342*	274**	Auth. 1040 # 1042, # 1043
Sheet # 20	5356	96	1940	18	Sheet # 20	5260**	110*	2332*	18	Auth. 1040 # 1042, # 1043
TOTALS					TOTALS					

AS PER PLANS			AS CONSTRUCTED			EXPLANATION OF CHANGES
STA. TO STA.			STA. TO STA.			
CONTROL SECTION I 82111-30103			CONTROL SECTION I 82111-30103			
Removing Trees 8"-12"	34	Each	Removing Trees 8"-12"	34	Each	Auth. 1040
Removing Trees 13"-24"	16	Each	Removing Trees 13"-24"	27	Each	Auth. 1040
Removing Trees 25"-36"	3	Each	Removing Trees 25"-36"	2	Each	Auth. 1040
Removing Underground Tanks	1	Each	Removing Underground Tanks	2	Each	Auth. 1040
Removing D.S.R. Track Strip	1213	Sq. Yds.	Removing D.S.R. Track Strip	1445	Sq. Yds.	Auth. 1040
Fine Grading & Clean Up	29	Sta.	Fine Grading & Clean Up	29	Sta.	
Timber Curb & Snow Fence	Lump Sum		Timber Curb & Snow Fence	Lump Sum		
Class A Seeding	1	Acres	Class A Seeding	1	Acres	
Mulching	2	Tons	Mulching	No Tons		Auth. 1033
Restoring Roadside	1	Acres	Restoring Roadside	1	Acres	
Maintaining Traffic	Lump Sum		Maintaining Traffic	Lump Sum		
Trimming & Finishing Earth Grade	11	Sta.	Trimming & Finishing Earth Grade	11	Sta.	Auth. 1040, 1044
TOTALS			TOTALS			

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATA COMPLETED _____ DATE _____ HISTORY CHECKED ENTERED ON PLANS _____ DATE _____

QUANTITY SHEET - E

DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		96	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111		WAYNE	DETROIT	96	

AS PER PLANS

AS CONSTRUCTED

Sta. to Sta.	M.H. 1 AD		M.H. 1A		Catch Basin 10' deep or less						Catch Basin 10.1'-16.0' deep			Inlet L.B. Each	Tile Trap Each	Adjust M.H. Cover Method #1 Each	Adjust C.B. Covers Method #1 Each	Adjust Inlet Covers Method #1 Each	Removing M.H. Each	Reconstruct M.H. Each	Abandoned C.B. Each	Abandoned Inlet Each	24" Sewer Tap Each
	Each		Each		Each						Each												
	10' deep or less	10.1'-16.0' deep	10' deep or less	10.1'-16.0' deep	3 AD	3 B	3 D	3 H	3 J	6 B	6 D	6 J	3 B										

Sta. to Sta.	M.H. 1 AD		M.H. 1A		Catch Basin 10' deep or less						Catch Basin 10.1'-16.0' deep			Inlet L.B. Each	Tile Trap Each	Adjust M.H. Cover Method #1 Each	Adjust C.B. Covers Method #1 Each	Adjust Inlet Covers Method #1 Each	Removing M.H. Each	Reconstruct M.H. Each	Abandoned C.B. Each	Abandoned Inlet Each	24" Sewer Tap Each
	Each		Each		Each						Each												
	10' deep or less	10.1'-16.0' deep	10' deep or less	10.1'-16.0' deep	3 AD	3 B	3 D	3 H	3 J	6 B	6 D	6 J	3 B										

CONTROL SECTION I 82111 - 30103

CONTROL SECTION I 82111 - 30103

Expressway																							
21+40 L																							
21+40	21+45																						
21+45 R																							
21+45		1																					
22+45		1																					
22+59		1																					
24+00																							
24+04																							
24+10 L																							
24+20																							
24+32 L & R																							
24+38 L & R																							
24+38																							
24+40 R																							
24+44 L & R																							
24+50 R																							
24+60 R																							
25+35																							
27+10																							
30+33 L & R																							
30+40 L & R																							
30+40																							
31+99 L & R																							
31+99																							
32+13																							
33+57																							
"ON" Ramp																							
29+30																							
29+30 Expressway																							
29+32																							
30+70																							
"OFF" Ramp																							
29+20																							
29+20 Expressway																							
30+76																							
30+76 Expressway																							
Service Drives																							
Sheet # 19																							
Sheet # 20																							
Sheet # 29																							
Sheet # 30																							
Sheet # 31																							
Sheet # 32																							
Sewer Alterations																							
Sheet # 46																							
Sheet # 47																							
Sheet # 48																							

Expressway																							
21+40 L	21+45																						
21+40	21+45																						
21+45 R																							
21+45																							
22+45																							
22+59																							
24+00																							
24+04																							
24+10 L																							
24+20																							
24+32 L & R																							
24+38 L & R																							
24+38																							
24+40 R																							
24+44 L & R																							
24+50 R																							
24+60 R																							
25+35																							
27+10																							
30+33 L & R																							
30+40 L & R																							
30+40																							
31+99 L & R																							
31+99																							
32+13																							
33+57																							
"ON" Ramp																							
29+30																							
29+30 Expressway																							
29+32																							
30+70																							
"OFF" Ramp																							
29+20																							
29+20 Expressway																							
30+76																							
30+76 Expressway																							
Service Drives																							
Sheet # 19																							
Sheet # 20																							
Sheet # 29																							
Sheet # 30																							
Sheet # 31																							
Sheet # 32																							
Sewer Alterations																							
Sheet # 46																							
Sheet # 47																							
Sheet # 48																							

CONTROL SECTION I 82111 - 30102

CONTROL SECTION I 82111 - 30102

Sewer Alteration																							
Sheet # 46		2	1																				

Sewer Alteration																							
Sheet # 46		2	1																				

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF WATER MAINS DEPARTMENT

QUANTITY SHEET-D

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

S.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-07-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	MAYNE	DETROIT		97	

STA. TO STA.	LENGTH	CONCRETE PAVEMENT										REMARKS				
		UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8"														
Control Section I 82111-30103																
Sheet #29	705.17	2172	153	22	1087	3259	71	71	214	987	114	211	5704	326	30	11
Sheet #30	592.99	1549	174	33	830	2379	52	52	156	1150			3810	140	60	40
Sheet #31	684.85	2124	245		1093	3217	68	68	203	1137	20	215	4692	230	30	33
Sheet #32	617.84	1632	117		812	2442	49	49	146	1189			3876	148	60	40
Sheet #33					1078		5	21	14				292	220	93	
Sheet #19													16	125	412	
Sheet #20															77	
Control Section I 82111-30102																
Sheet #19													55	513	365	
TOTALS	7477	689	55	1078	3822	11297	245	261	733	4463	497	426	14	18720	220	937

STA. TO STA.	LENGTH	CONCRETE PAVEMENT										REMARKS				
		UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8" UNIFORM 8"														
CONTROL SECTION I 82111-30103																
Sheet #29	705.17	1983	160	28	1038	3024	200	200	224	920	278	211	5023	363	30	11
Sheet #30	592.99	1549	174	23	846	2395	98	52	156	921	133		4308	134	60	40
Sheet #31	684.85	2074	134		1131	3225	128	69	197	1017	142	215	4988	112	14	33
Sheet #32	617.84	1619	77		926	2545	42	47	134	1084	101		3671	0	30	40
Sheet #33					1140		0	0	0	3524			230	30		
Sheet #19													16	120	43	
Sheet #20																
CONTROL SECTION I 82111-30102																
Sheet #19													55	518	125	
TOTALS	7245	825	51	1150	3941	11186	475	248	701	3992	1020	426	14	18428	342	673

SODDING FENCING HEADER (LIN. FT.)

AS PER PLANS		AS CONSTRUCTED		REMARKS	
STA. TO STA.	CLASS A Sodding Sq. Yds.	STA. TO STA.	CLASS A Sodding Sq. Yds.		
Control Section I 82111-30103					
NORTHBOUND EXPRESSWAY (Incl. RAMP)		NORTHBOUND EXPRESSWAY (Incl. RAMP)			
20+73 to 26+00	1564	20+73 to 26+00	1724	Auth 1040	
26+00 to 33+47	2841	26+00 to 33+47	1914	Auth 1040	
Control Section I 82111-30104					
NORTHBOUND EXPRESSWAY		NORTHBOUND EXPRESSWAY			
33+47 to 33+92	250	33+47 to 33+92	250		
Control Section I 82111-30105					
SOUTHBOUND EXPRESSWAY (Incl. RAMP)		SOUTHBOUND EXPRESSWAY (Incl. RAMP)			
20+73 to 26+00	1673	20+73 to 26+00	1624	Auth 1040	
26+00 to 33+47	2765	26+00 to 33+47	2418	Auth 1040	
TOTALS	9348		8077		

AS PER PLANS		AS CONSTRUCTED		EXPLANATION OF CHANGES	
STA. TO STA.	4' CHAIN LINK FENCE LIN. FT.	WOVEN WIRE FENCE LIN. FT.	GATES 8 FT.		
CONTROL SECTION I 82111-30103					
20+73 to 26+00	545	43	4	Auth 1040	
26+00 to 33+92	1124	22	2	Auth 1040	
TOTALS	1672	65	6		

AS PER PLANS		AS CONSTRUCTED		REMARKS
STATION	DETAIL NO.	STATION	DETAIL NO.	
Control Section I 82111-30103				
Sheet #29	44	Sheet #29	44	
Sheet #30	51	Sheet #30	51	
Sheet #31	46	Sheet #31	46	
Sheet #32	43	Sheet #32	43	
TOTALS	184	TOTALS	184	

MISCELLANEOUS			
AS PER PLANS		AS CONSTRUCTED	
MONUMENT BOXES =	EACH	MONUMENT BOXES =	EACH
*CLASS SEEDING =	ACRES	CLASS SEEDING =	ACRES
*To be done by Maintenance Division			
LENGTH OF	FOOT PAVEMENT	=	MILES
TOTAL LENGTH OF MUNICIPAL SHARE	=		
TOTAL LENGTH OF PROJECT	=		

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATA COMPLETED _____ DATE _____ HISTORY CHECKED _____ DATE _____ ENTERED ON PLANS BY _____ DATE _____

QUANTITY SHEET - E

ALTERATIONS TO WATER MAINS

B.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		98	98
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		98	98

AS PER PLANS

AS CONSTRUCTED

CONTROL SECT.

CONTROL SECT.

	Unit	CONTROL SECTION		Total
		182111 30102	182111 30103	
Concrete, Grade "A" (for water main encasement)	C. Yds.	208	763	971
Steel Reinforcement (for water main encasement)	Lbs.	12,242	38,600	50,842
Adjusting Manhole Covers, Method #1	Each	-	14	14
4" Cast Iron Drain Pipe - Furnished and Placed	L. Ft.	55	75	130
Abandoning Gate Wells	Each	6	16	22
Removing Hydrants	Each	6	5	11
4" Cast Iron Water Main - Furnished	L. Ft.	-	12	12
6" Cast Iron Water Main - Furnished	L. Ft.	9	129	138
6" Cast Iron Water Main - Furnished and Placed	L. Ft.	-	22	22
8" Cast Iron Water Main - Furnished	L. Ft.	13	60	73
8" Cast Iron Water Main - Furnished and Placed	L. Ft.	7	1144	1151
10" Cast Iron Water Main - Furnished	L. Ft.	2	-	2
12" Cast Iron Water Main - Furnished	L. Ft.	28	-	28
16" Cast Iron Water Main - Furnished	L. Ft.	33	-	33
24" Cast Iron Water Main - Furnished	L. Ft.	-	37	37
24" Cast Iron Water Main - Furnished and Placed	L. Ft.	-	53	53
30" Cast Iron Water Main - Furnished and Placed	L. Ft.	47	18	65
48" Cast Iron Water Main - Furnished	L. Ft.	11	-	11
48" Cast Iron Water Main - Furnished and Placed	L. Ft.	8	-	8
24" Reinforced Concrete Steel Cylinder Pipe - Furnished and Placed	L. Ft.	-	442	442
48" Reinforced Concrete Steel Cylinder Pipe - Furnished and Placed	L. Ft.	172	402	574
24" Cone Valves - Placed	Each	-	2	2
30" Cone Valves - Placed	Each	1	1	2
6" Tapping Valves and Boxes - Furnished	Each	-	1	1
8" Gate Wells	Each	-	4	4
12" Gate Wells	Each	1	-	1
16" Gate Wells	Each	1	-	1
4" Gate Wells	Each	-	1	1
6" Blow-off Wells	Each	-	1	1
8" Blow-off Wells	Each	2	1	3
6" Blow-offs - Furnished and Placed	Each	-	1	1
8" Blow-offs - Furnished and Placed	Each	2	1	3
24" Cone Valve Wells	Each	-	2	2
30" Cone Valve Wells	Each	1	1	2
12" Tapping Valves - Furnished	Each	1	-	1
4" Gate Valves - Furnished	Each	-	1	1
8" Gate Valves - Furnished	Each	-	4	4
16" Gate Valves - Furnished	Each	1	-	1
Entrance Manhole Wells	Each	3	1	4
6" Gate Valves and Boxes - Furnished	Each	-	6	6
6" Fire Hydrants - Furnished	Each	-	7	7
Water Main Trench (for work done by Department of Water Supply)	L. Ft.	151	380	531
Concrete Thrust Blocks	Lump		Sum	
Sand-Lime Mixture (Loose Measure)	C. Yds.	59	146	205

	UNIT	CONTROL SECT.		TOTAL	
		182111 30102	182111 30103		
C. Yds.	208	762	970		Auth 1020
Lbs.	12,242	38,674	50,916		Auth 1011
Each	-	16	16		Auth 1039
L. Ft.	55	61	116		Auth 1039
Each	1	14	15		Auth 1039
Each	1	10	11		Auth 1021
L. Ft.	-	-	0		Auth 1009
L. Ft.	9	108	117		Auth 1015, 81
L. Ft.	-	22	22		Auth 1015
L. Ft.	11	65	76		Auth 1039
L. Ft.	7	1144	1151		
L. Ft.	4	-	4		Auth 1039
L. Ft.	28	-	28		
L. Ft.	33	-	33		
L. Ft.	-	37	37		
L. Ft.	-	53	53		
L. Ft.	47	18	65		
L. Ft.	11	-	11		
L. Ft.	8	-	8		
L. Ft.	-	442	442		
L. Ft.	172	402	574		
Each	-	2	2		
Each	1	1	2		
Each	-	1	1		
Each	-	4	4		Auth 1031
Each	1	-	1		
Each	1	-	1		
Each	-	1	1		Auth 1009
Each	-	1	1		
Each	2	1	3		
Each	-	1	1		
Each	2	1	3		
Each	-	2	2		
Each	1	1	2		
Each	1	-	1		
Each	-	-	0		Auth 1009
Each	-	4	4		
Each	1	-	1		
Each	3	1	4		
Each	-	7	7		Auth 1015
Each	-	7	7		Auth 1015, 81
L. Ft.	151	380	531		Auth 1009, 15
Lump Sum					
C. Yds.	-	-	0		Auth 1019

PLAN ESTIMATE BY _____ DATE _____ CHECKED BY _____ DATE _____ DATA COMPLETED _____ DATE _____ HISTORY CHECKED _____ DATE _____ ENTERED ON PLANS BY _____ DATE _____

FILE NO. W-57-1 STATE PROJECT 82111 FEDERAL PROJECT 107-1(24) SHEET NO. 98

QUANTITY SHEET - E

CONSTRUCTION AND RELOCATION OF CITY LIGHTING, POWER, COMMUNICATIONS AND SIGNAL FACILITIES
AS PER PLANS

AS CONSTRUCTED

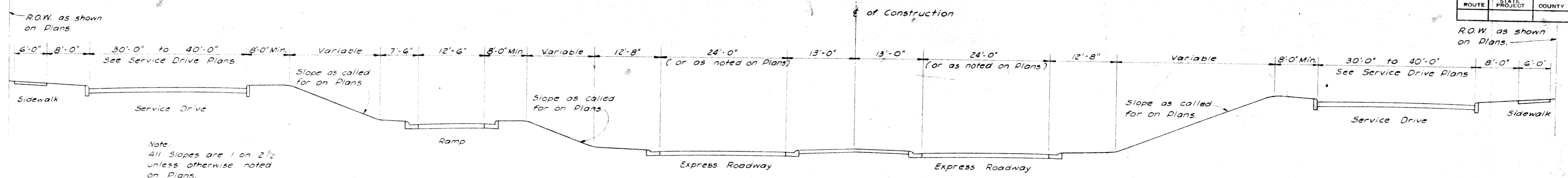
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-124		99	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		99	

Quantity	Unit	Quantity	Unit	EXPLANATION OF CHANGES
		6	Each	Auth 1041
5	Each	336	L. Ft.	Auth 1005, 1014, 1041
231	L. Ft.	1	Each	
1	Each	3	Each	Auth 1007
6	Each	6	Each	Auth 1035, 1041
4	Each	1	Each	
1	Each	3	Each	Auth 1032
2	Each	14	Each	Auth 1041
13	Each	19	Each	Auth 1009, 1041
16	Each	7	Each	
7	Each	1467	L. Ft.	
1467	L. Ft.	280	L. Ft.	Auth 1041
320	L. Ft.	1	Each	
1	Each	4	Each	Auth 1014
3	Each	2	Each	Auth 1019
1	Each	5	Each	Auth 1041
6	Each	3	Each	Auth 1041
2	Each	1	Each	Auth 1014
1	Each	2	Each	Auth 1027
2	Each	257	L. Ft.	
257	L. Ft.	5	Each	
5	Each	3	Each	
3	Each	1	Each	
1	Each	1	Each	
42	L. Ft.	42	L. Ft.	
42	L. Ft.	587	L. Ft.	Auth 1041
587	L. Ft.	374	L. Ft.	Auth 1041
374	L. Ft.	116	L. Ft.	Auth 1041
116	L. Ft.	212	L. Ft.	Auth 1041
212	L. Ft.	574	L. Ft.	Auth 1041
574	L. Ft.	10	L. Ft.	
10	L. Ft.	537	L. Ft.	Auth 1041
537	L. Ft.	325	L. Ft.	
325	L. Ft.	75	L. Ft.	
75	L. Ft.	26	L. Ft.	
26	L. Ft.	10	L. Ft.	
10	L. Ft.	80	L. Ft.	
80	L. Ft.	154	L. Ft.	Auth 1041
154	L. Ft.	146	L. Ft.	Auth 1041
146	L. Ft.	40	L. Ft.	Auth 1041
40	L. Ft.	21	L. Ft.	
21	L. Ft.	22	L. Ft.	Auth 1041
22	L. Ft.	13	L. Ft.	Auth 1041
13	L. Ft.	30	L. Ft.	
30	L. Ft.	164	L. Ft.	Auth 1041
164	L. Ft.	142	L. Ft.	
142	L. Ft.	9	L. Ft.	Auth 1041
9	L. Ft.	26	L. Ft.	
26	L. Ft.	25	L. Ft.	
25	L. Ft.	60	L. Ft.	Auth 1041
60	L. Ft.	43	L. Ft.	Auth 1041
43	L. Ft.	1	Each	
1	Each	4	Each	
4	Each	1370	L. Ft.	Auth 1041
1370	L. Ft.	1324	L. Ft.	Auth 1003, 1041
1324	L. Ft.	Lump	Sum	
Lump	Sum	1466	L. Ft.	Auth 1041
1466	L. Ft.	4	Each	
4	Each	8	Each	Auth 1041
8	Each	16	Each	
16	Each	4	Each	
4	Each	3300	L. Ft.	Auth 1041
3300	L. Ft.	1017	L. Ft.	Auth 1041
1017	L. Ft.	800	L. Ft.	
800	L. Ft.	2445	L. Ft.	Auth 1041
2445	L. Ft.			

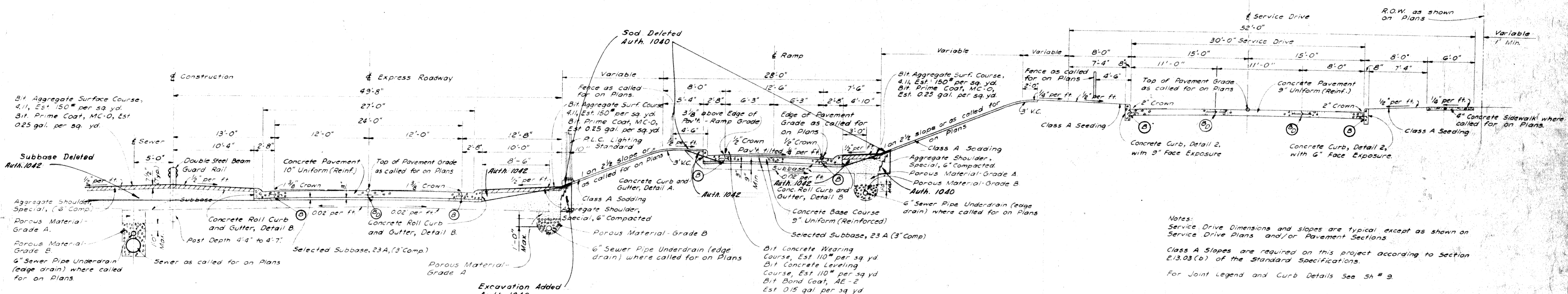
TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
4	82111	WAYNE	DETROIT	2	2

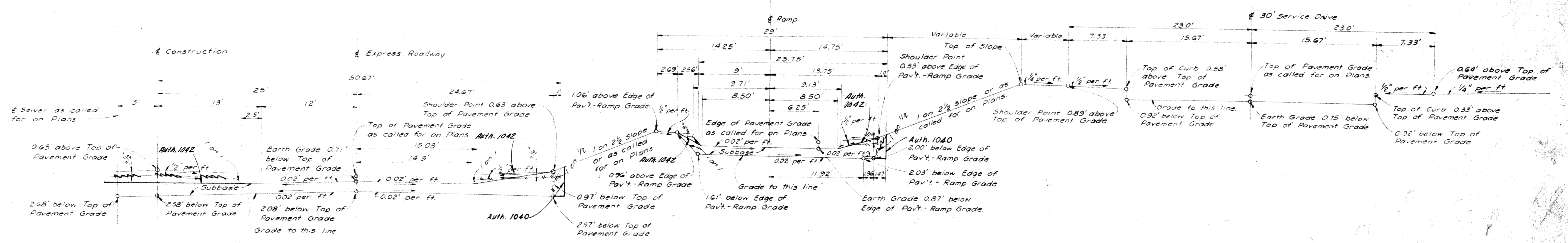
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
4	82111	WAYNE	DETROIT	2	2



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'

24' ROADWAYS

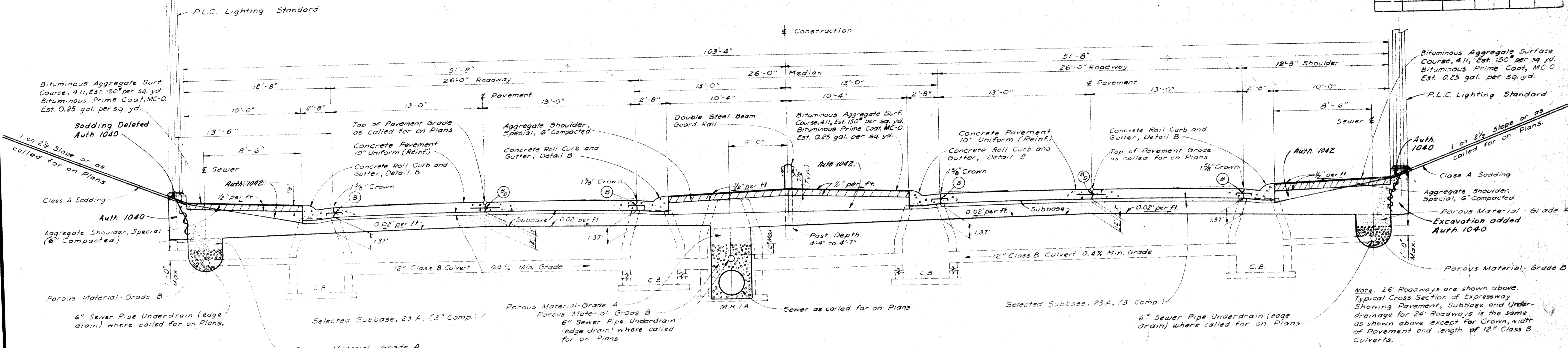
FILE NO. 107-1(24)	STATE PROJECT 82111	FISCAL YEAR 107-1(24)	SHEET NO. 2	TOTAL SHEETS 2
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DATE	BY
	L. C. GAY
	L. C. GAY
	M. C. GAY
	L. C. GAY
	L. C. GAY
	L. C. GAY
	L. C. GAY
	L. C. GAY
	L. C. GAY

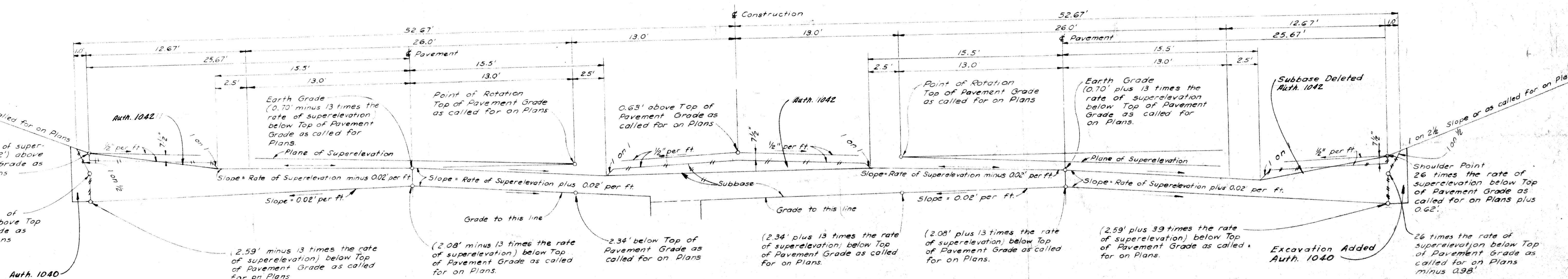
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

TYPICAL CROSS-SECTIONS

S.P. No.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(26)		3	3
ROUTE	STATE	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		3	3
S.P. No.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(26)		3	3
ROUTE	STATE	COUNTY	CITY	SHEET NO.	TOTAL SHEETS



TYPICAL CROSS SECTION OF EXPRESSWAY SHOWING PAVEMENT, SUBBASE AND UNDERDRAINAGE
SCALE 1"=4'



TYPICAL CROSS SECTION FOR GRADING SUPERELEVATED EXPRESSWAY
SCALE 1"=4'

26' ROADWAYS

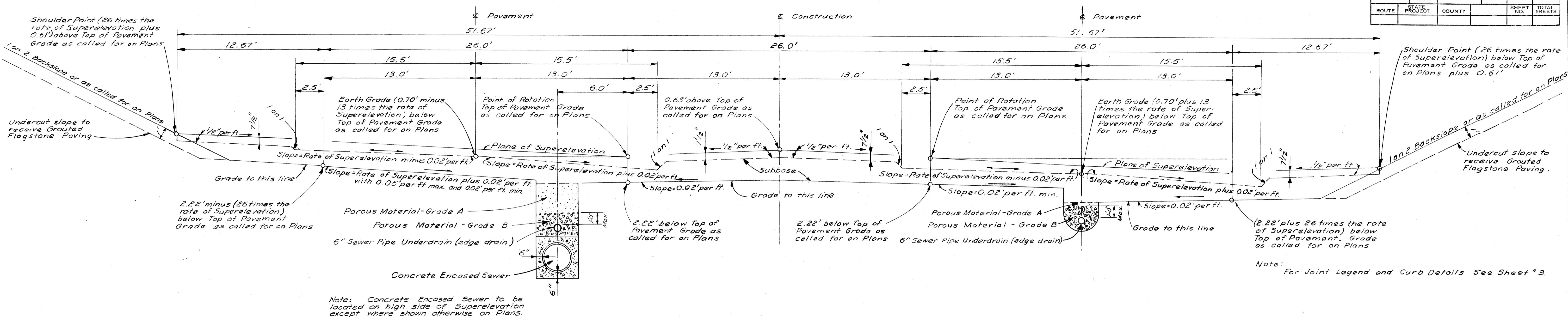
DESIGNED BY	DATE
E. KENNER	
Z. CLOVE	
A. GAY	
R. H. HICKS	

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

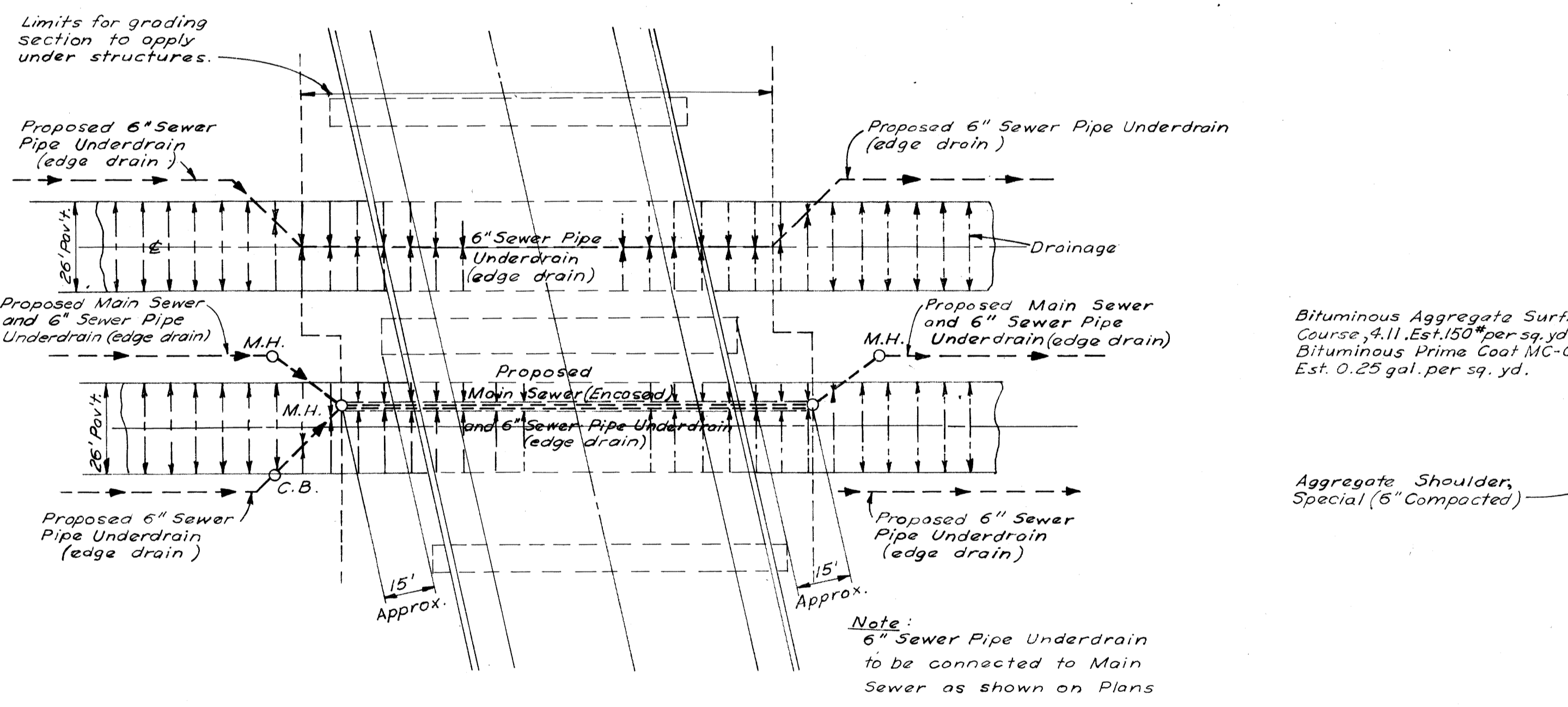
FILE NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
W-57-1	82111	107-1(26)	3

TYPICAL CROSS-SECTIONS

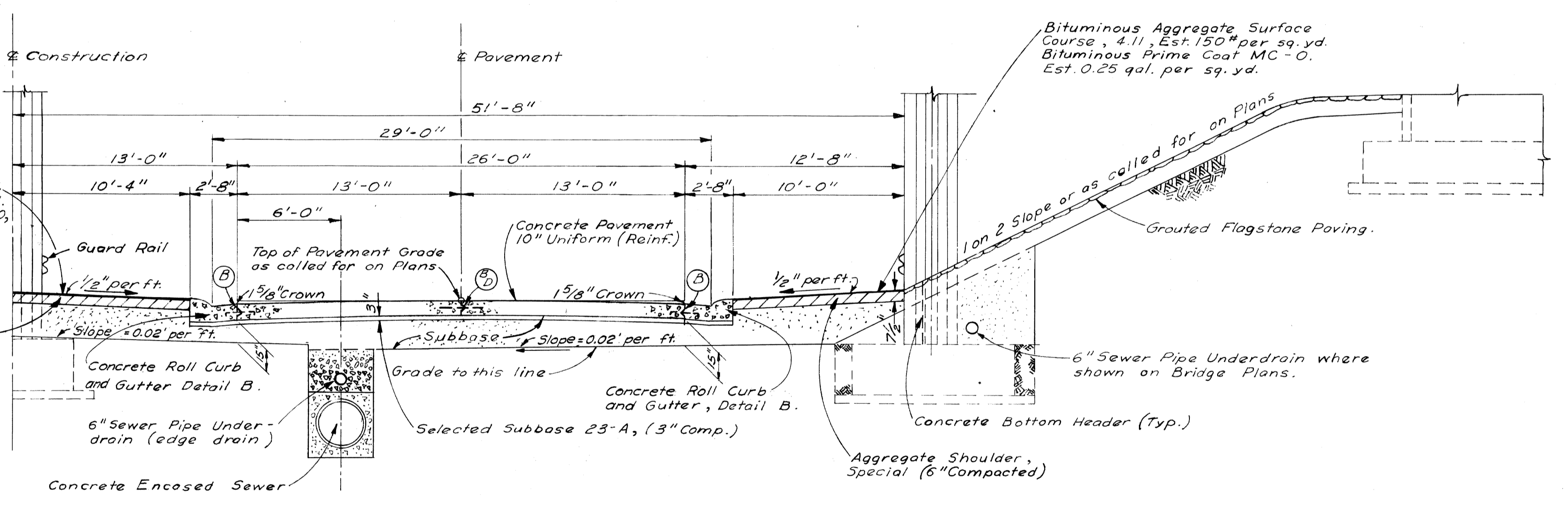
B. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1 (24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		4	



TYPICAL CROSS SECTION FOR GRADING TO APPLY UNDER STRUCTURES ON SUPERELEVATED CURVES
SCALE 1"=4'



PLAN SHOWING SUBBASE DRAINAGE UNDER STRUCTURES



TYPICAL HALF SECTION SHOWING FINISHED EXPRESS ROADWAY TO APPLY UNDER STRUCTURES
SCALE 1"=5'

DESIGNED BY	DATE
M. Chen	
J. Knox	
L. Clout	
Checked	
Approved	
Prepared	

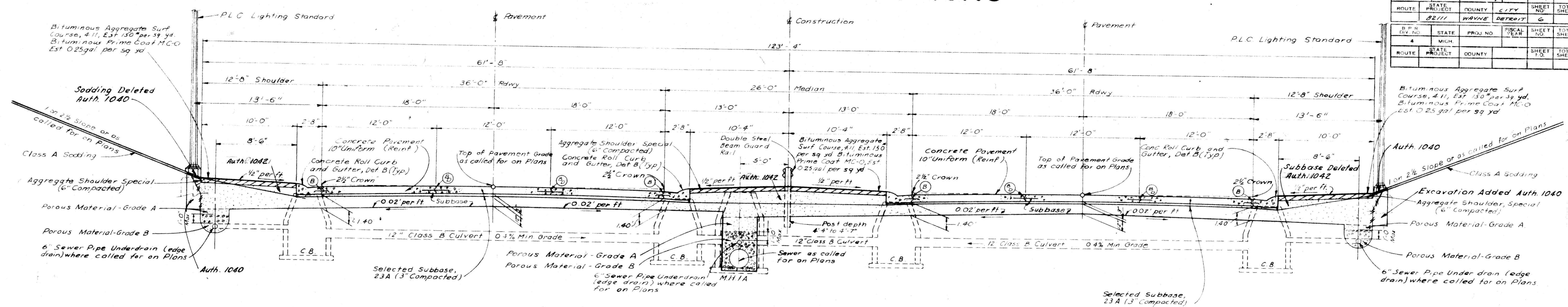
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

26' ROADWAYS

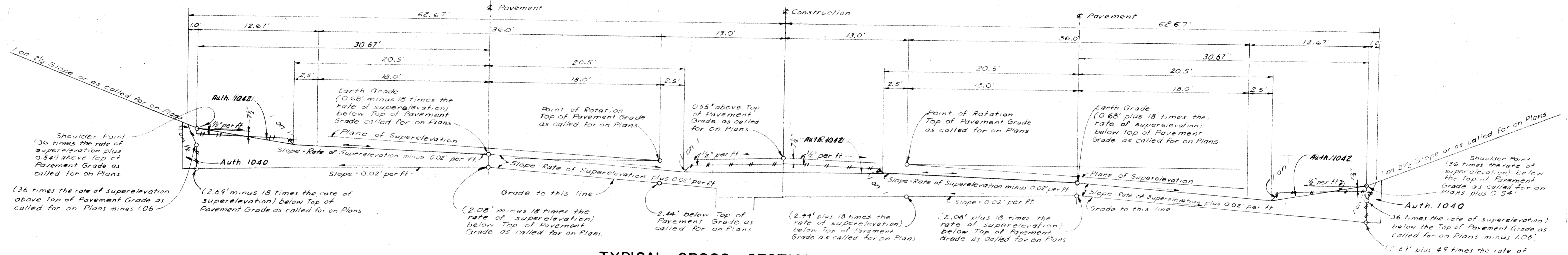
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NO 350 STENGL	W-57-1	82111 107-1 (24)	4

TYPICAL CROSS SECTIONS

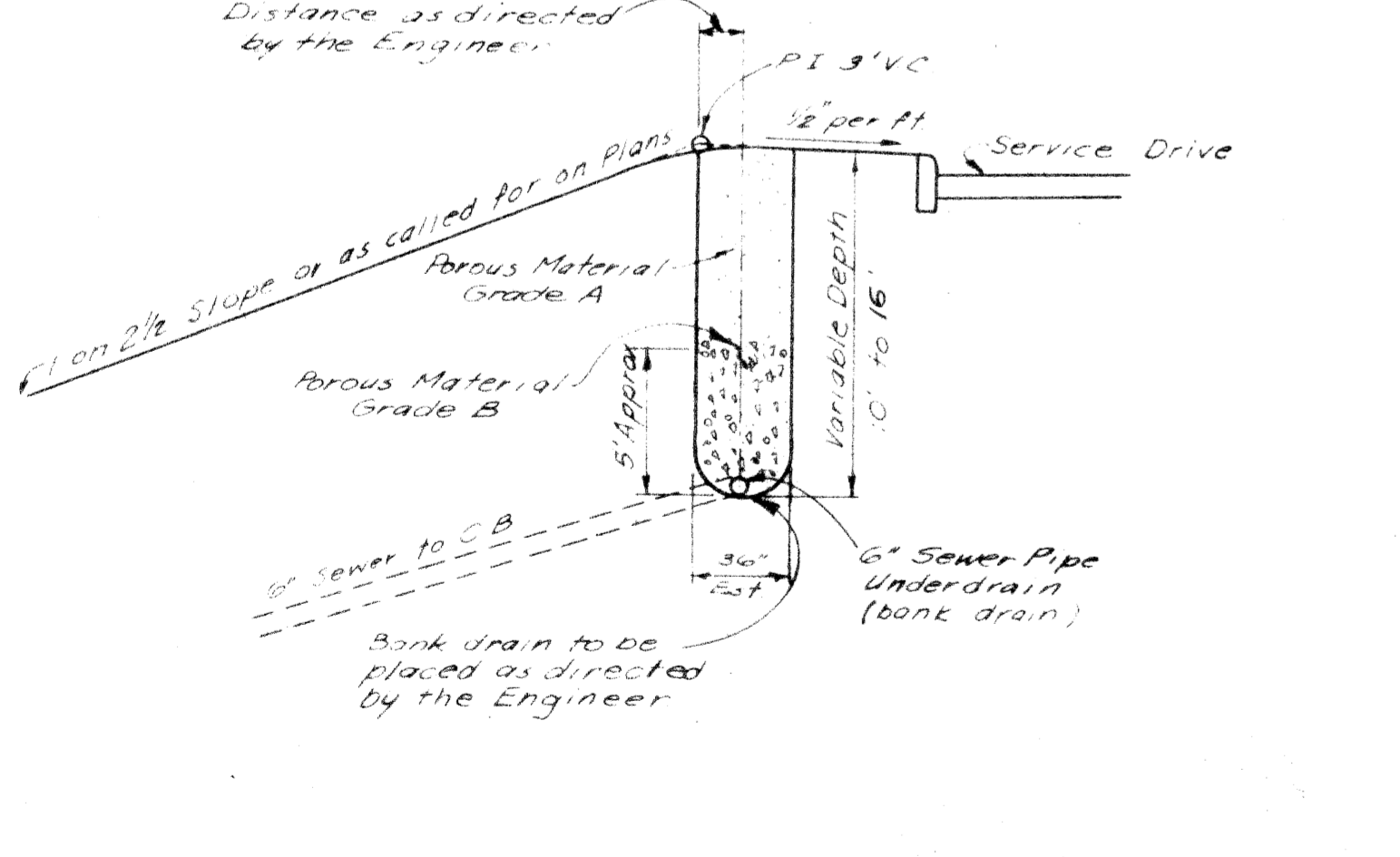
B.P.R. DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82/11	WAYNE	DETROIT		6	



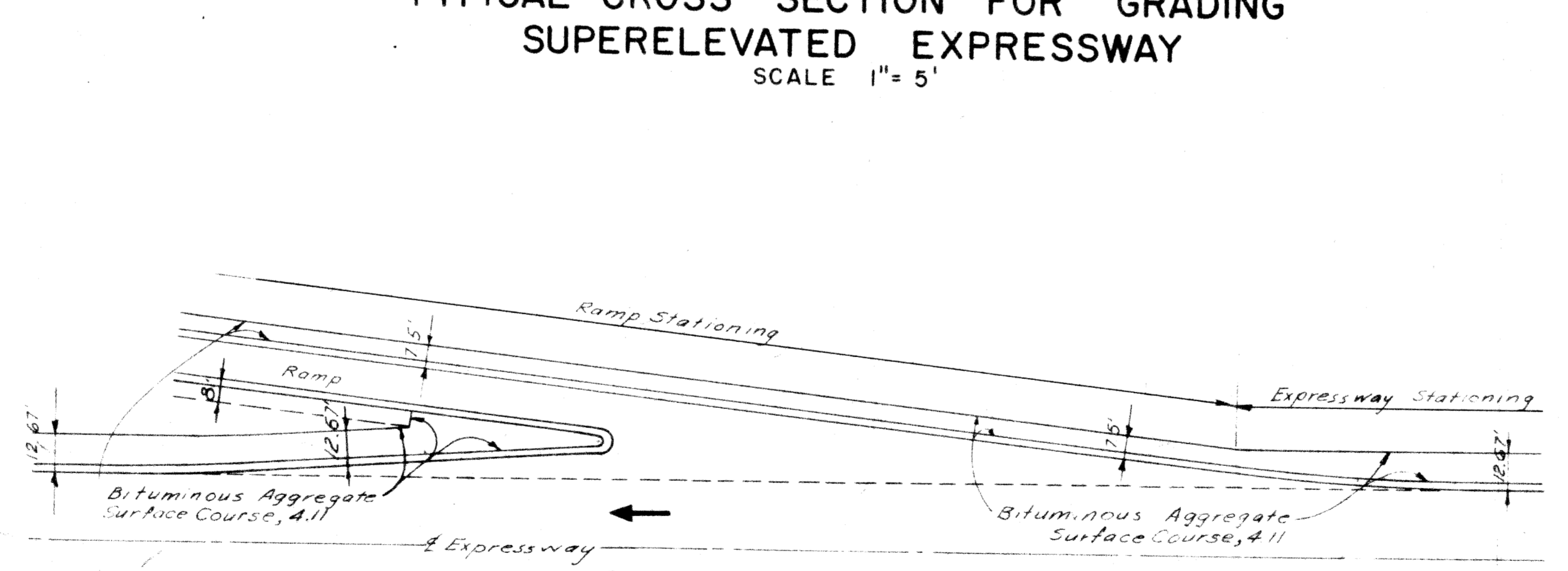
TYPICAL CROSS SECTION OF EXPRESSWAY SHOWING PAVEMENT, SUBBASE AND UNDERDRAINAGE
SCALE 1" = 5'



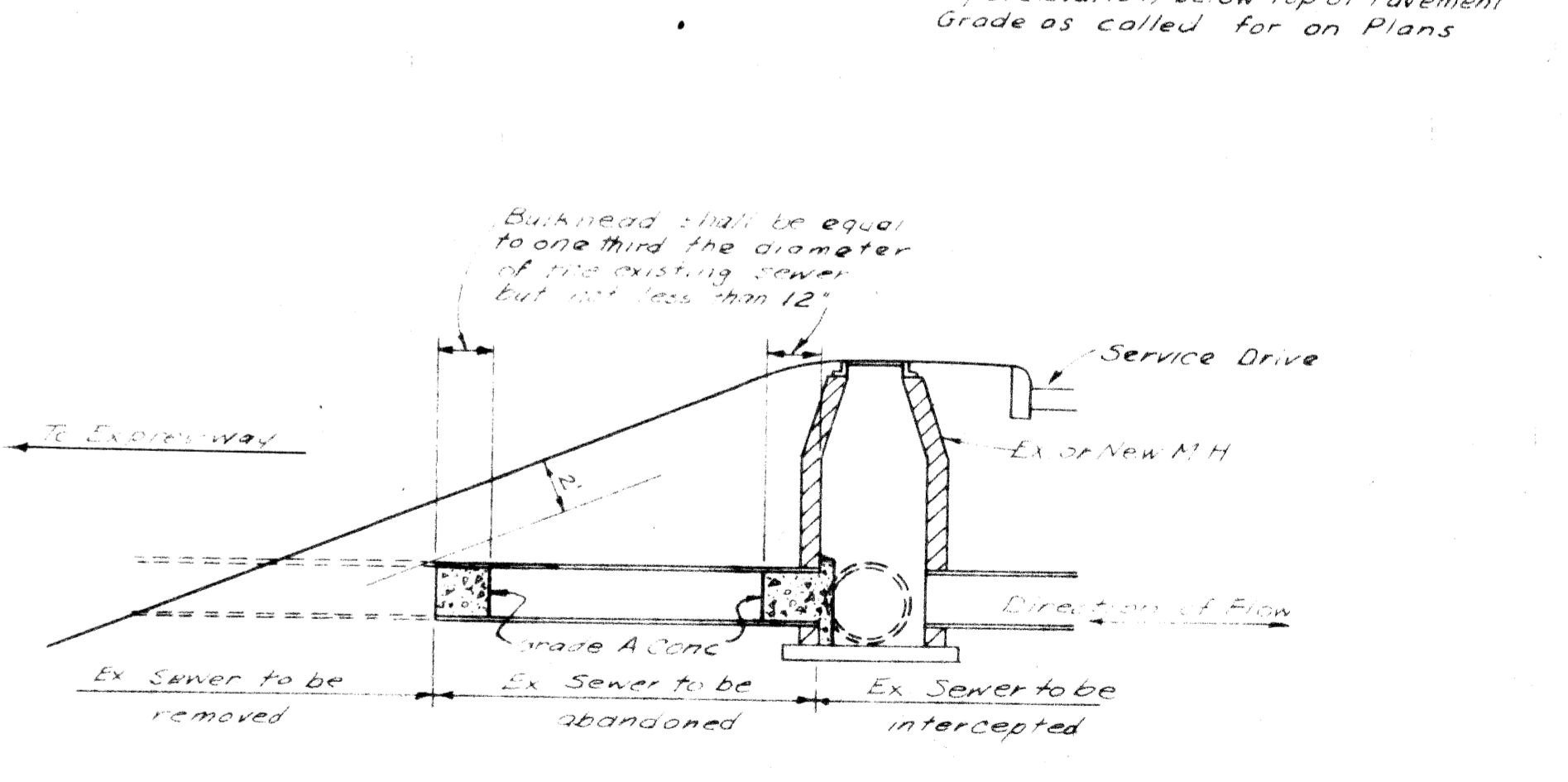
TYPICAL CROSS SECTION FOR GRADING SUPERELEVATED EXPRESSWAY
SCALE 1" = 5'



SKETCH SHOWING BANK DRAIN USED WHERE DIRECTED BY THE ENGINEER
SCALE 1" = 6'



SKETCH SHOWING THE PLACEMENT OF BITUMINOUS AGGREGATE SURFACE COURSE AT RAMP
SCALE 1" = 40'



SKETCH SHOWING METHOD FOR BULKHEADING SEVERED SEWERS

36' ROADWAYS AND DETAIL EXPRESSWAY SECTIONS

FILE NO. 360 STENGL	PROJECT NO. 82/11	FISCAL YEAR 107-1(24)	SHEET NO. 6
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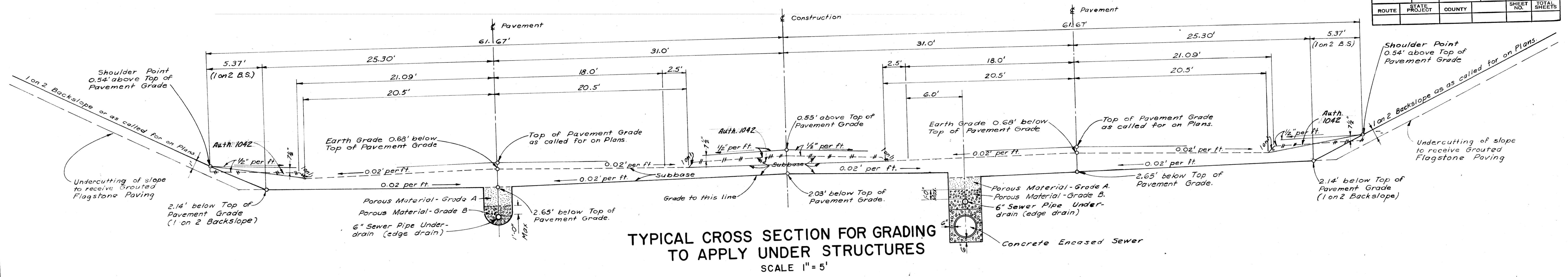
W-57-1

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 DESIGNED BY L. B. JACKSON
 CHECKED BY C. G. STANLEY
 SOILS LEADER L. E. WILSON
 RECOMMENDED FOR APPROVAL BY J. H. BEECHER

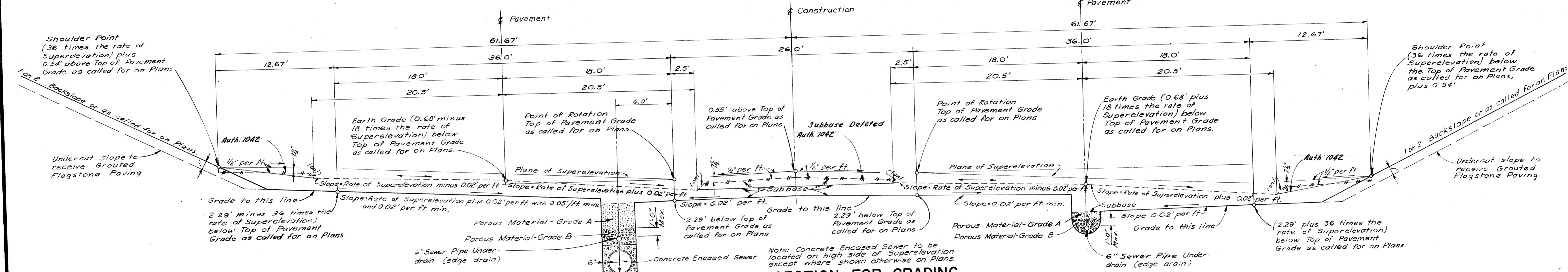
TYPICAL CROSS-SECTIONS

D.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		7	7
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		7	7

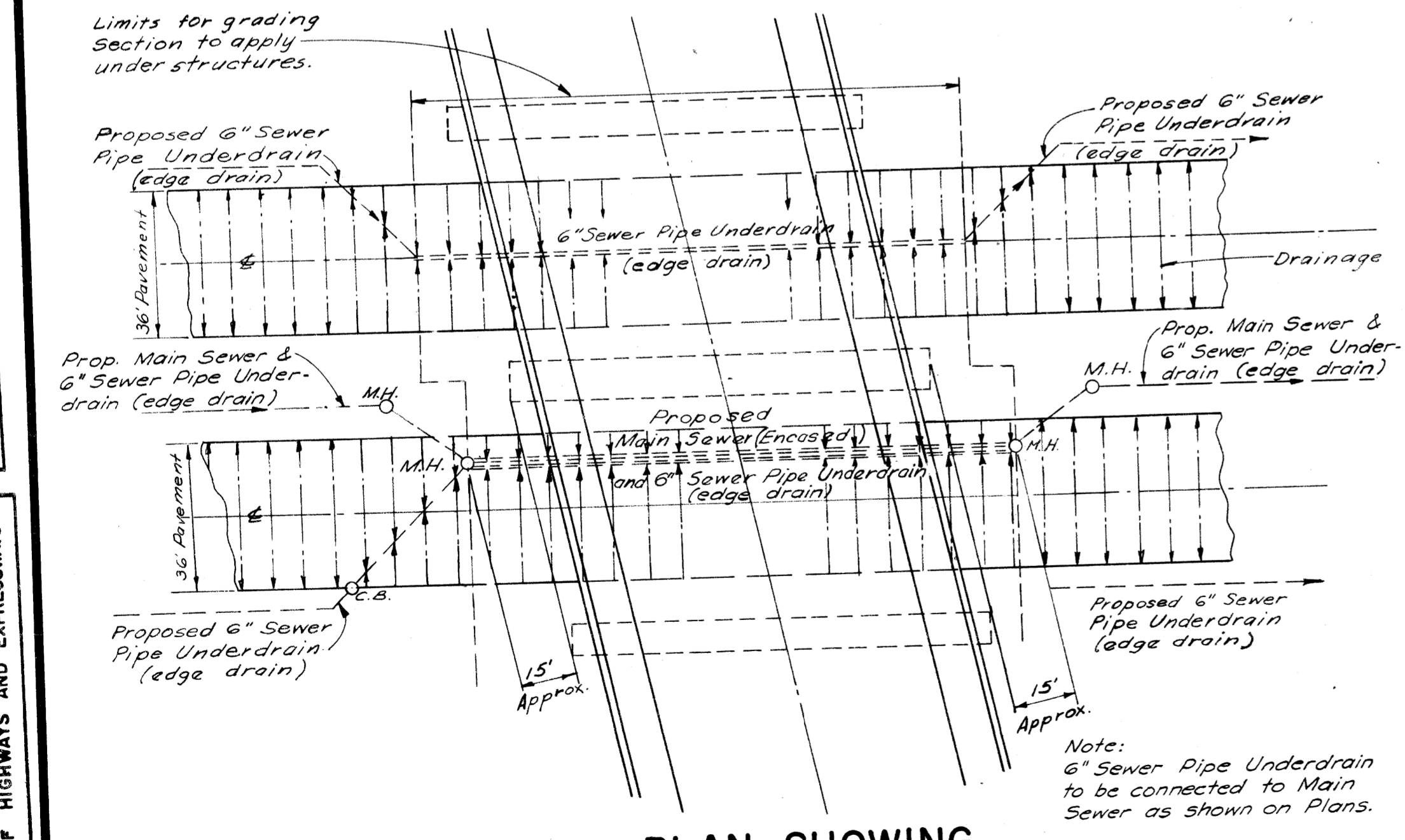
D.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS



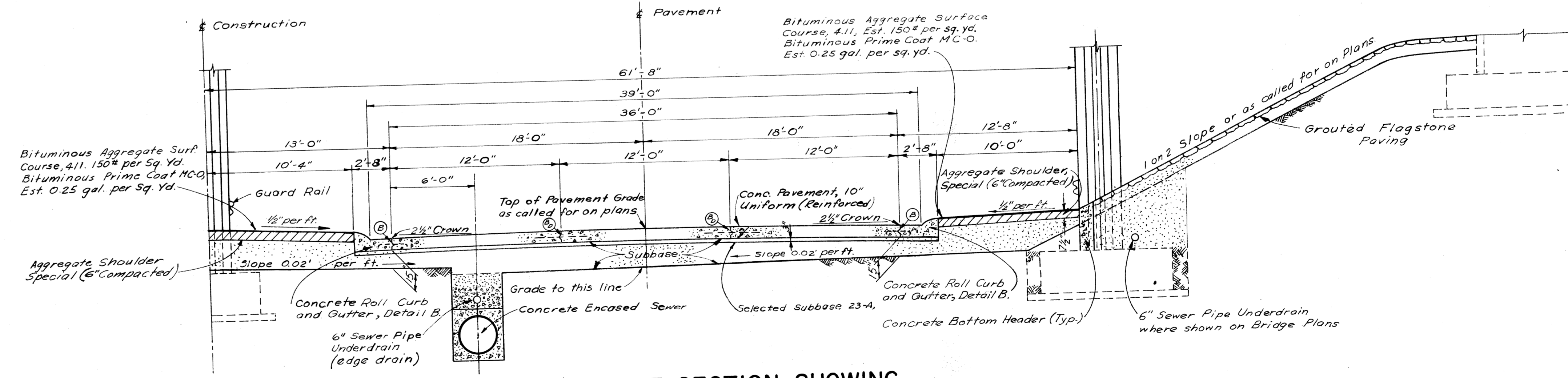
TYPICAL CROSS SECTION FOR GRADING TO APPLY UNDER STRUCTURES
SCALE 1"=5'



TYPICAL CROSS SECTION FOR GRADING TO APPLY UNDER STRUCTURES ON SUPERELEVATED CURVES
SCALE 1"=5'



PLAN SHOWING SUBBASE DRAINAGE UNDER STRUCTURES



TYPICAL HALF SECTION SHOWING FINISHED EXPRESS ROADWAY TO APPLY UNDER STRUCTURES
SCALE 1"=5'

36' ROADWAYS

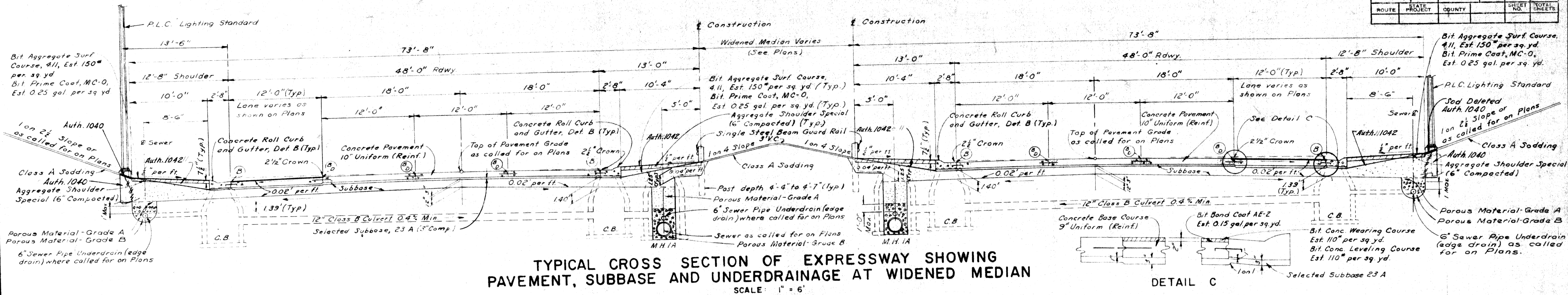
DATE	BY
	S. JACKSON
	Z. GORING
	L. LEWIS
	R. E. J.

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

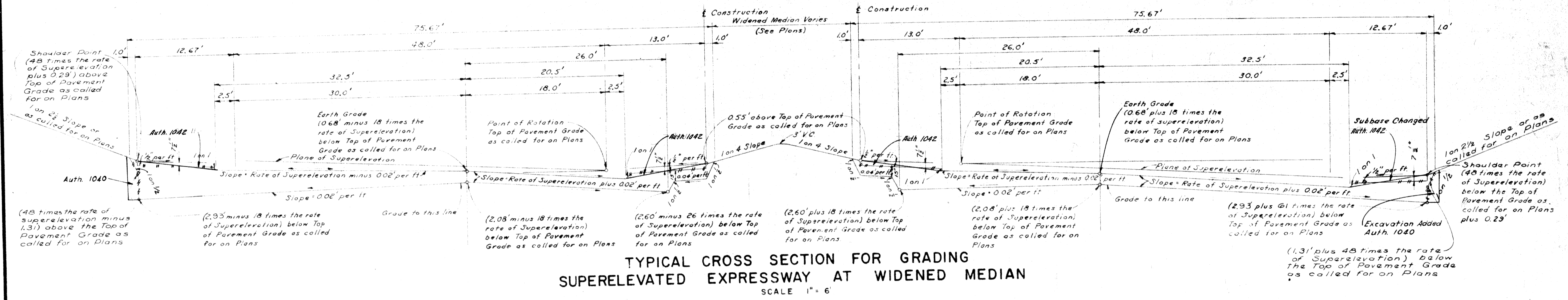
FILE NO.	W-57-1	STATE PROJECT	82111	FEDERAL PROJECT	107-1(24)	SHEET NO.	7
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TYPICAL CROSS - SECTIONS

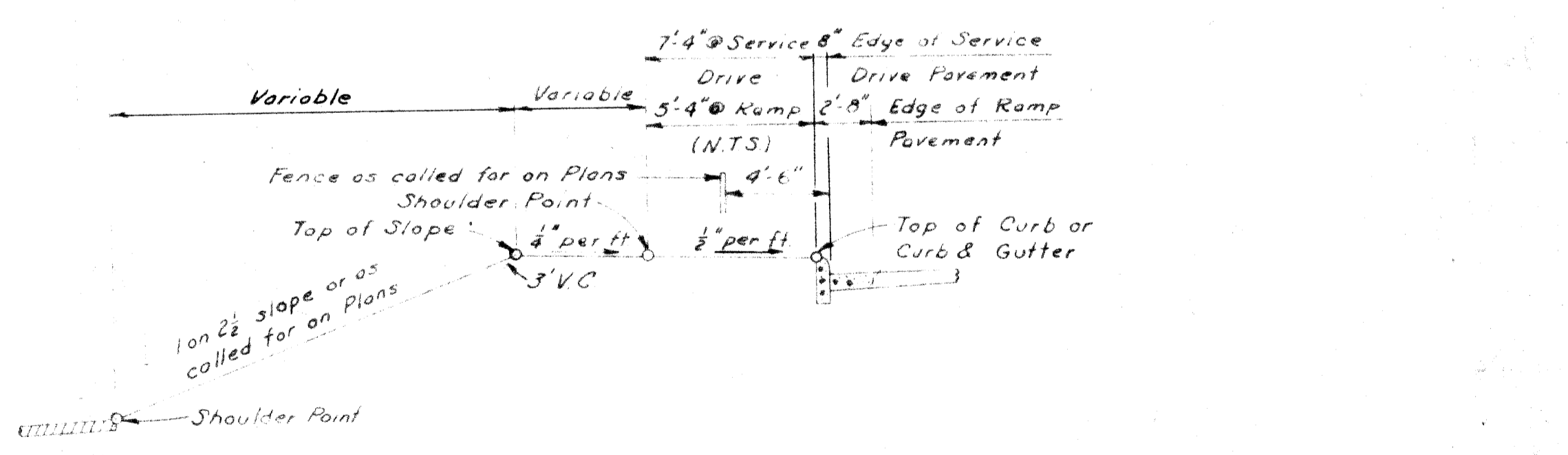
S.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		8	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
4	2211	Wayne	Detroit	8	
S.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		8	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
4	2211	Wayne	Detroit	8	



TYPICAL CROSS SECTION OF EXPRESSWAY SHOWING PAVEMENT, SUBBASE AND UNDERDRAINAGE AT WIDENED MEDIAN
SCALE: 1" = 6'



TYPICAL CROSS SECTION FOR GRADING SUPERELEVATED EXPRESSWAY AT WIDENED MEDIAN
SCALE: 1" = 6'



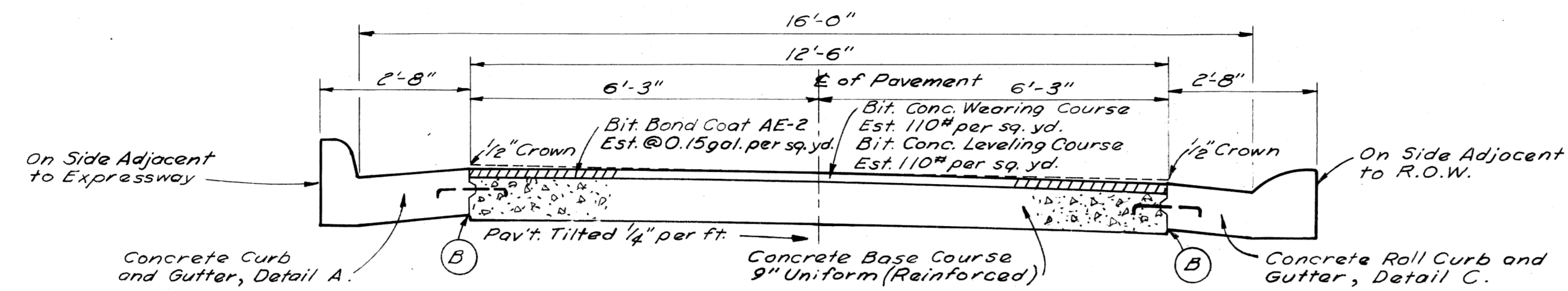
TYPICAL GRADING CROSS SECTION BETWEEN TOP OF CURB AND SHOULDER
SCALE: 1" = 6'

DESIGNED	DATE
DRAWN	
CHECKED	
APPROVED	

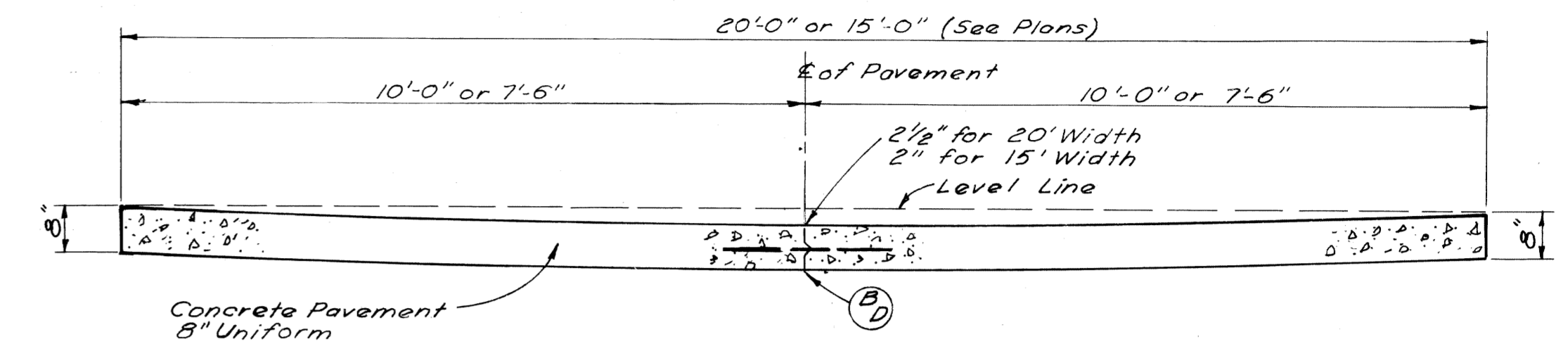
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

TYPICAL CROSS-SECTIONS

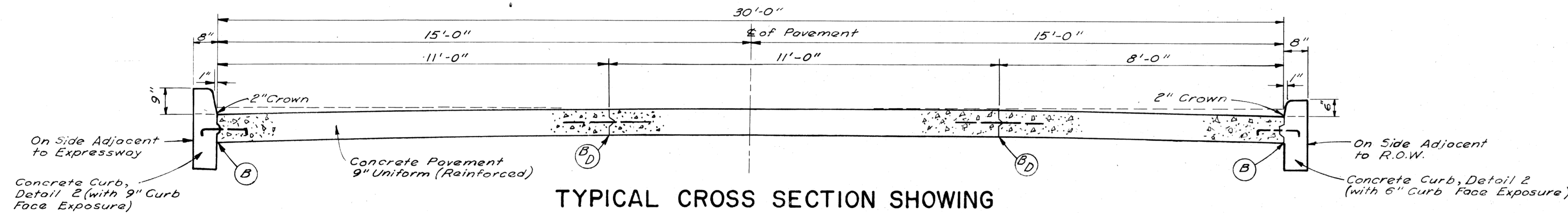
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		9	
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS



TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 9" UNIFORM (REINFORCED)
WITH BITUMINOUS CONCRETE PAVEMENT
TO APPLY ON 12.5' RAMPS—SCALE 1/2"=1'



TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 8" UNIFORM
TO APPLY ON ALLEYS WHERE CALLED FOR ON PLANS—SCALE 1/2"=1'

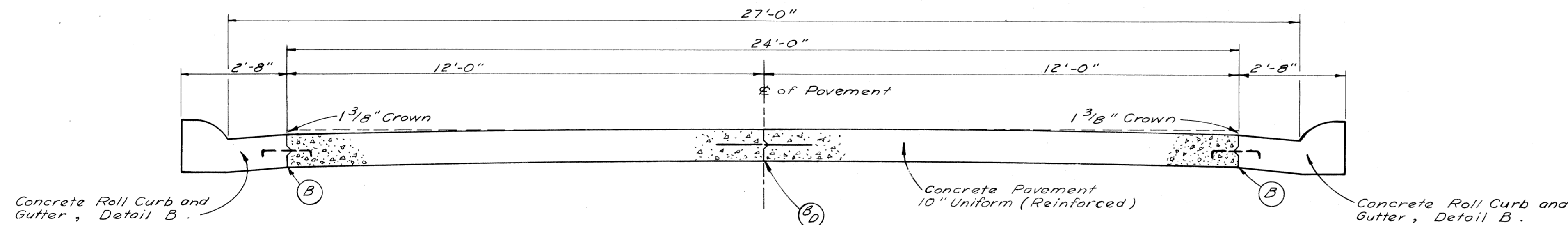


TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 9" UNIFORM (REINFORCED)
TO APPLY ON 30' SERVICE DRIVE—SCALE 1/2"=1'

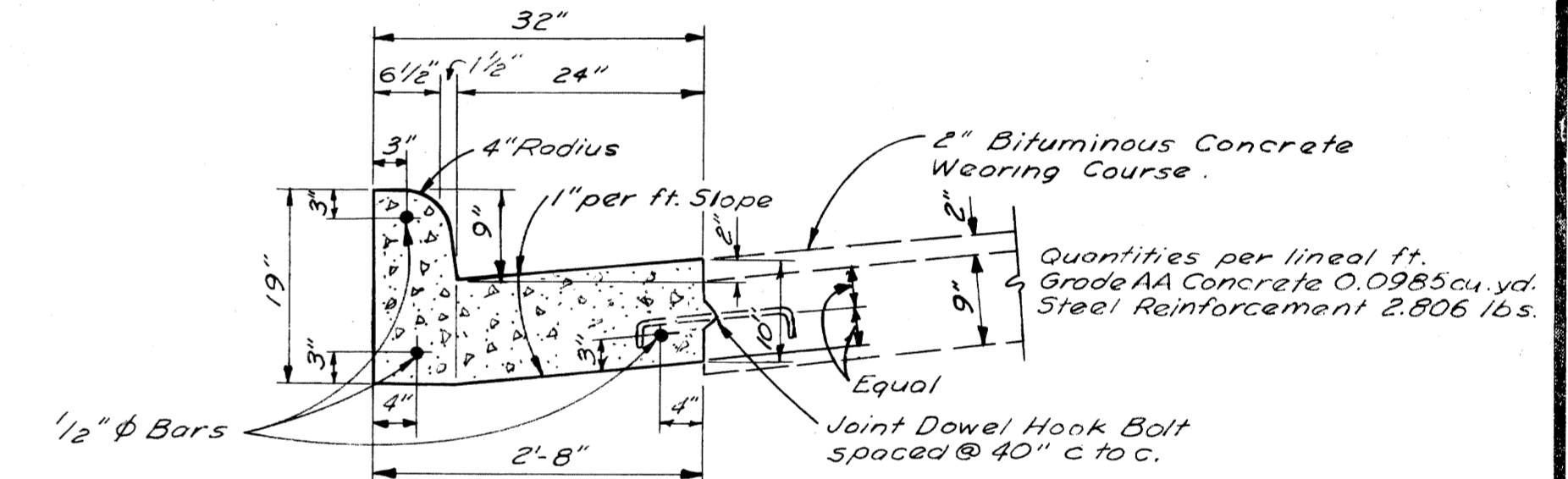
JOINT LEGEND

- B — Longitudinal Bulkhead Construction Joint, according to M.S.H.D. Std. Plan E-4-A-33F, Detail 2.
- D — Longitudinal Lane Tie Joint with Tie Bars, according to M.S.H.D. Std. Plan E-4-A-33F, Detail 1.
- BD — Optional B or D.

Note: The Concrete Base Course and Concrete Pavement shall be reinforced throughout in accordance with M.S.H.D. Std. Plan E-4-A-21F.

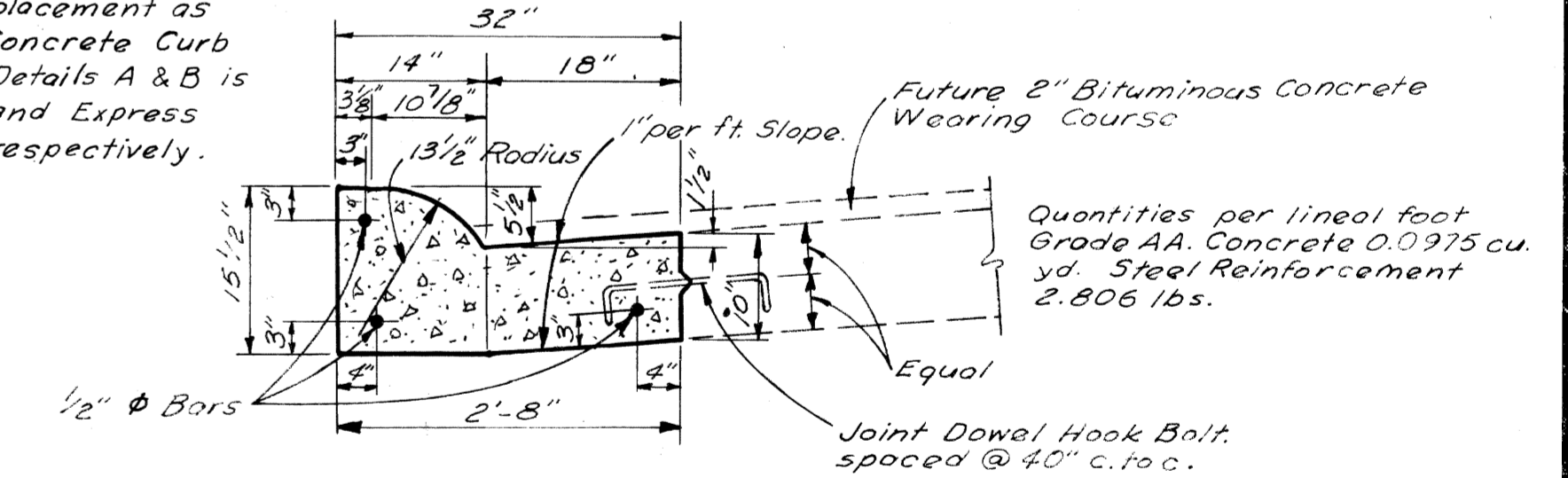


TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 10" UNIFORM (REINFORCED)
TO APPLY ON 24' EXPRESS ROADWAY—SCALE 1/2"=1'

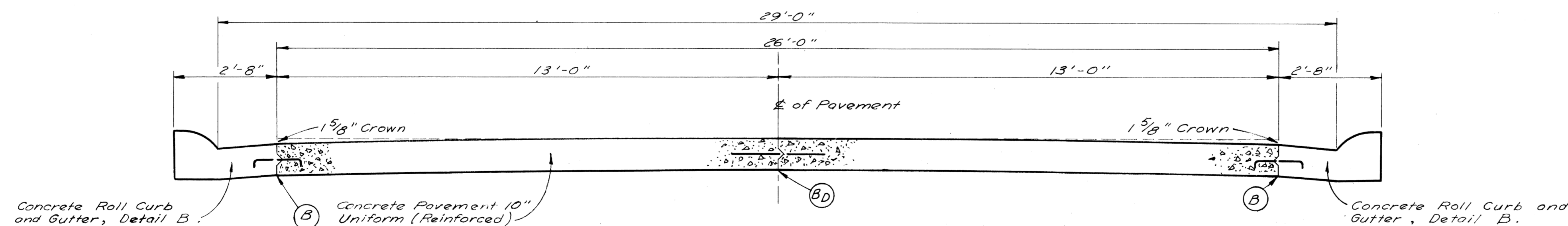


CONCRETE CURB & GUTTER, DETAIL A.
SCALE 3/4"=1'-0"

Note: General Notes on M.S.H.D. Std. Dwg. E-4-A-29E shall apply. Pavement placement as shown on Concrete Curb and Gutter, Details A & B is for Ramps and Express Roadways, respectively.



CONCRETE ROLL CURB & GUTTER, DETAIL B.
SCALE 3/4"=1'-0"



TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 10" UNIFORM (REINFORCED)
TO APPLY ON 26' EXPRESS ROADWAY—SCALE 1/2"=1'

PAVEMENT SECTIONS

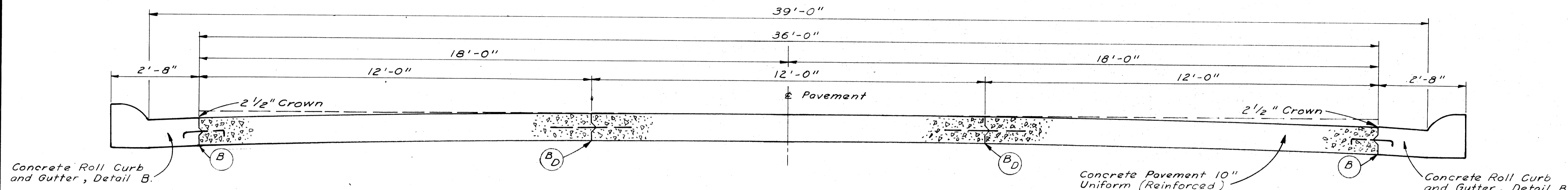
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
W-57-1	82111	107-1(24)	9

DESIGNED	BY	DATE
CHECKED		
APPROVED		
RECOMMENDED FOR APPROVAL		

DEPARTMENT OF HIGHWAYS AND EXPRESSWAYS
ENGINEERS OFFICE

TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit	10		
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

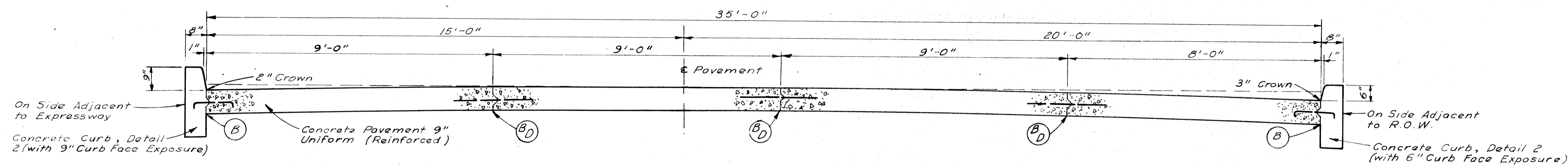


**TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 10" UNIFORM (REINFORCED)**
TO APPLY ON 36' EXPRESS ROADWAY - SCALE 1/2" = 1'

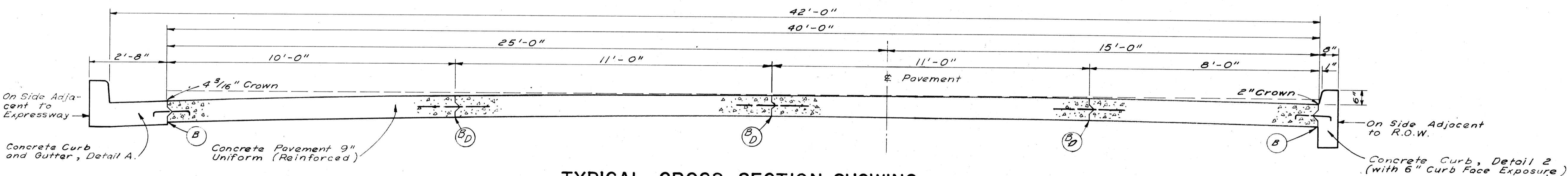
JOINT LEGEND

- B--- Longitudinal Bulkhead Construction Joint, according to M.S.H.D. Std. Plan E-4-A-33F, Detail 2.
- D--- Longitudinal Lane Tie Joint with Tie Bars, according to M.S.H.D. Std. Plan E-4-A-33F, Detail 1.
- BD--- Optional B or D.

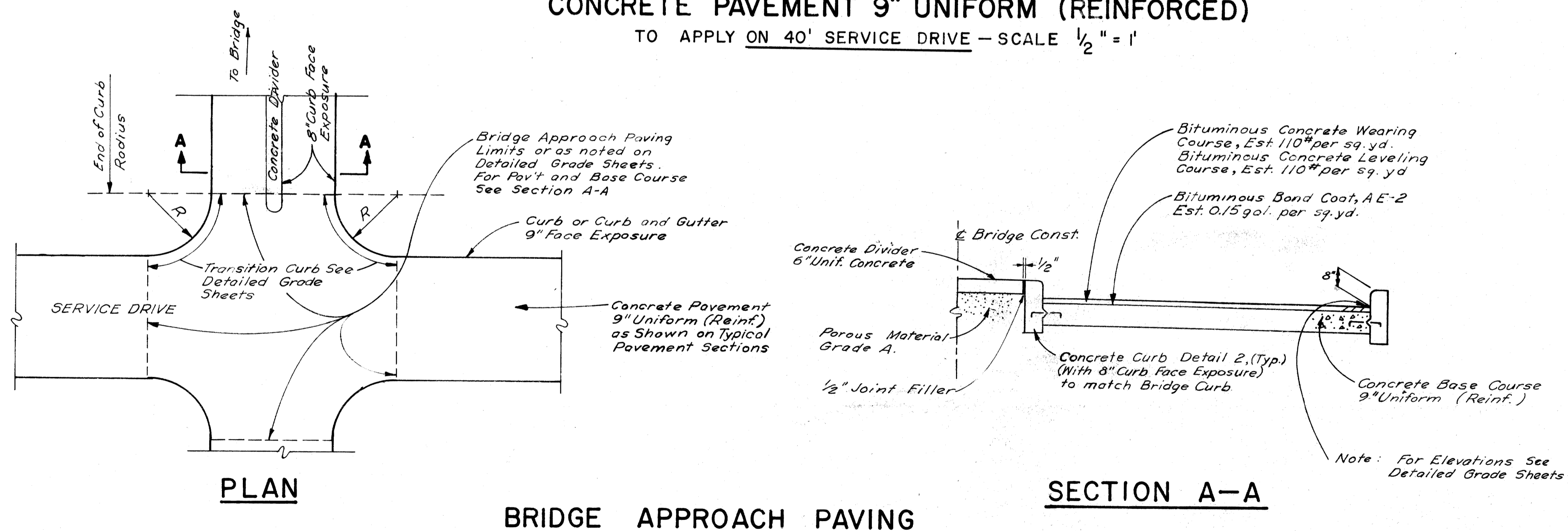
Note:
The Concrete Base Course and Concrete Pavement shall be reinforced throughout in accordance with M.S.H.D. Std. Plan E-4-A-21F.



**TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 9" UNIFORM (REINFORCED)**
TO APPLY ON 35' SERVICE DRIVE - SCALE 1/2" = 1'



**TYPICAL CROSS SECTION SHOWING
CONCRETE PAVEMENT 9" UNIFORM (REINFORCED)**
TO APPLY ON 40' SERVICE DRIVE - SCALE 1/2" = 1'



BRIDGE APPROACH PAVING

SECTION A-A

PAVEMENT SECTIONS

FILE NO.	W-57-1	STATE PROJECT	FEDERAL PROJECT	SHEET NO.	
NO. USED		82111	107-1(24)	10	

DATE	BY	REVISION
		1. ROAD
		2. CROWN
		3. JOINT
		4. CURB
		5. GUTTER
		6. PAVEMENT
		7. SHOULDER
		8. BRIDGE
		9. DIVIDER
		10. CURB
		11. GUTTER
		12. PAVEMENT
		13. SHOULDER
		14. BRIDGE
		15. DIVIDER
		16. CURB
		17. GUTTER
		18. PAVEMENT
		19. SHOULDER
		20. BRIDGE
		21. DIVIDER
		22. CURB
		23. GUTTER
		24. PAVEMENT
		25. SHOULDER
		26. BRIDGE
		27. DIVIDER
		28. CURB
		29. GUTTER
		30. PAVEMENT
		31. SHOULDER
		32. BRIDGE
		33. DIVIDER
		34. CURB
		35. GUTTER
		36. PAVEMENT
		37. SHOULDER
		38. BRIDGE
		39. DIVIDER
		40. CURB
		41. GUTTER
		42. PAVEMENT
		43. SHOULDER
		44. BRIDGE
		45. DIVIDER
		46. CURB
		47. GUTTER
		48. PAVEMENT
		49. SHOULDER
		50. BRIDGE
		51. DIVIDER
		52. CURB
		53. GUTTER
		54. PAVEMENT
		55. SHOULDER
		56. BRIDGE
		57. DIVIDER
		58. CURB
		59. GUTTER
		60. PAVEMENT
		61. SHOULDER
		62. BRIDGE
		63. DIVIDER
		64. CURB
		65. GUTTER
		66. PAVEMENT
		67. SHOULDER
		68. BRIDGE
		69. DIVIDER
		70. CURB
		71. GUTTER
		72. PAVEMENT
		73. SHOULDER
		74. BRIDGE
		75. DIVIDER
		76. CURB
		77. GUTTER
		78. PAVEMENT
		79. SHOULDER
		80. BRIDGE
		81. DIVIDER
		82. CURB
		83. GUTTER
		84. PAVEMENT
		85. SHOULDER
		86. BRIDGE
		87. DIVIDER
		88. CURB
		89. GUTTER
		90. PAVEMENT
		91. SHOULDER
		92. BRIDGE
		93. DIVIDER
		94. CURB
		95. GUTTER
		96. PAVEMENT
		97. SHOULDER
		98. BRIDGE
		99. DIVIDER
		100. CURB

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		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

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.

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.

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 Lanes in Lbs.
Mesh	128.9
Bar Mat	142.2
Expanded Metal	138.0

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	Trimming & Finishing Earth Grade
Stas.	Stas.	
EXPRESSWAY		
46+99 N BOUND } 34+02		12.34 AUTH. 1040
46+99 S " " }		Del. 1072

EXPRESSWAY		
21+37 N. Bound	} -25+40	4.18
21+06 S. Bound		
27+00 - 34+02		7.02

WEST SERVICE DRIVE	
20+44.83 - 33+42.99	12.98

EAST SERVICE DRIVE	
20+65.15 - 33+67.84	13.03

TEMPORARY PAVEMENT	
LARNED DETOUR	
0+28 - 3+19	2.91

Restoring Roadside	28.92	1127 +20-24.14	Auth. 1044
Force Account Subgrade Preparation			Auth. 2031
Mulching			2 Tons Auth. 1033
Seeding			1 Acre

The following items are estimated for the entire project to correct possible unstable subgrade conditions where designated by the engineer.

6" Sewer Pipe Underdrain (10'-16' Depth, Bank Drains)	393	Lin. Ft.	AUTH. 1037
6" Sewer (10'-16' Depth, Bank Drains)	2338	Lin. Ft.	DO
Excavation (Waste from Bank Drain Sewer Trenches)	182	Lin. Ft.	DO
	529	Cu. Yds.	DO
	3250	Cu. Yds.	DO
Porous Material - Grade A, (Loose Measure)	252	310	Auth 1043
Porous Material - Grade B, (Loose Measure)	2686	Cu. Yds.	DO
	274	Cu. Yds.	DO
	496	Cu. Yds.	DO

GENERAL PLAN NOTES

POLES

No poles will be permitted within the right of way along this project except as authorized 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.

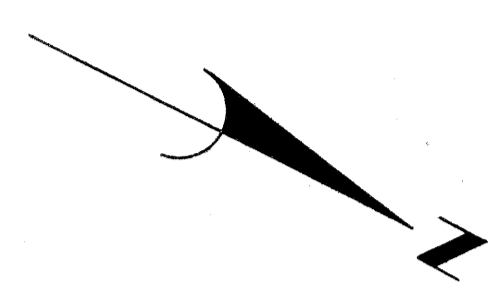
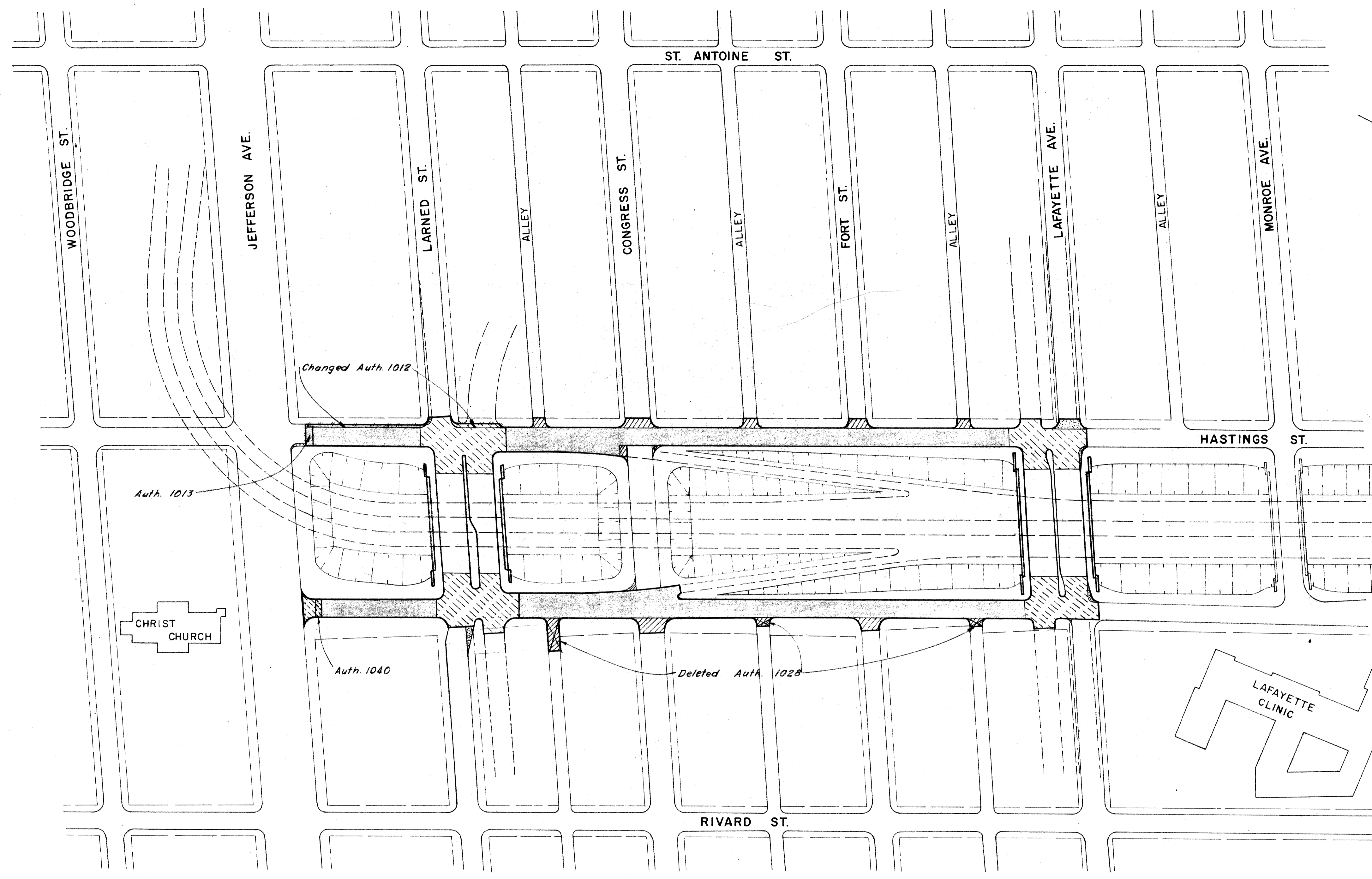
Cross references on Standard Plans shall be understood to refer to the latest approved Standard Plan for the detail in question.

Sewer Pipe Underdrain	E-4-A-9D, Detail 5
Sodding	E-4-A-10B
Pavement Reinforcement	E-4-A-21F
Grading Cross - Sections	E-4-A-26D
Manholes, Catch Basins and Inlets	E-4-A-27R-3
Cover A	E-4-A-27A-3
Cover B	Optional - E-4-A-27B-3 or E-4-A-27B-4
Cover D	E-4-A-27D-3
Concrete Curb, Roll Curb and Curb and Gutter	E-4-A-29E
Curb and Gutter Headers	E-4-A-29E, Detail 9
Curb and Gutter Endings	E-4-A-29E, Detail 14
Driveway Returns and Driveway Openings	E-4-A-29E
Concrete End Header (at pavement ends)	E-4-A-29E, Detail 20
Bridge Header	E-4-A-29E, Detail 21
Pavement Joints	E-4-A-33F (except that plain tie bars will not be permitted.)
Superelevation of Curves	E-4-A-49B-7 (except that the rate of superelevation is to be called for on plans.)
Pavement Crowns	E-4-A-49B-7
Two Cable Guard Rail and Guard Posts	E-4-A-75C-2
4" Concrete Sidewalk	E-4-A-110B, Detail 2
7" Concrete Sidewalk	E-4-A-110B, Detail 3
Concrete Pavement, 7" Uniform	E-4-A-110B, Detail 4
Typical Joint Layout	E-4-A-127A
Tile Trap	E-4-A-129
Dowel Bar Installation for Load Transfer at Transverse Contraction and Expansion Joints	Optional - E-4-A-130 A E-4-A-130B E-4-A-130D, or other approved equal.
Base Plates for Transverse Pavement Joints	E-4-A-138 (except that spot welds may be substituted for rivets to attach the one inch angle.)
Location of Transverse Expansion and Contraction Joints in Concrete Pavement	E-4-A-135A
Barricade and Project Sign	E-6-A-55E
Steel Beam Guard Rail	E-4-A-137C

CHECKED BY: EDWARD L. FAY
 DESIGNED BY: EDWARD L. FAY
 DRAWN BY: EDWARD L. FAY
 DATE: 1/25/55
 AUTHORITY: 1044

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	8211	WAYNE	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



DESIGNED BY	DATE
CALVIN J. JONES	9-56
CHECKED BY	DATE
HELEN J. PUGH	10-56
RECOMMENDED BY	DATE
ALAN H. HARRIS	

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

- 9" Uniform Concrete
- Bituminous Concrete, Class I, on 9" Uniform Concrete Base
- Temporary Pavement (8" Uniform Concrete-No Reinforcement)
- Temporary Pavement (Bituminous Concrete, Class I, on 8" Uniform Concrete Base-No Reinf.)

SURFACING PLAN

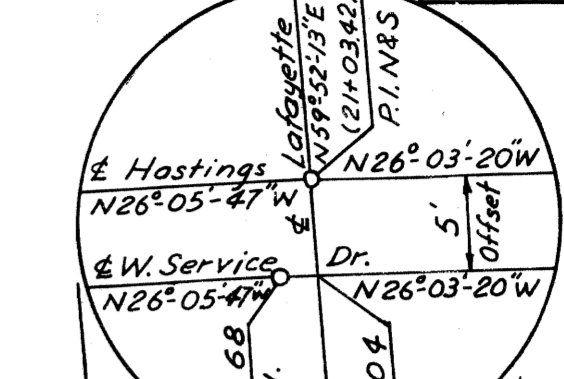
FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
W-57-1	8211	107-1(24)	12

DATE	BY
4/58	BARNES
5/58	CALTBANO/CHAV
7/58	WOLFF/CHAV
8/58	WOLFF/CHAV
10/58	WOLFF/CHAV
11/58	WOLFF/CHAV
12/58	WOLFF/CHAV

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS	
B2111	Wayne	Detroit	14		

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS	
B2111	Wayne	Detroit	14		



C.B.M. #5 Elev. 124.736 Arrow on hydrant
N.E. corner of St. Antoine and Larned.

C.B.M. #15 Elev. 119.115 Arrow on hydrant
N.W. corner of St. Antoine and Congress.

C.B.M. #16 Elev. 119.133 Arrow on hydrant
N.W. corner of St. Antoine and Fort.

C.B.M. #17 Elev. 121.348 Arrow on hydrant
S.W. corner of St. Antoine and Lafayette.
C.B.M. #33 Elev. 121.741 Arrow on hydrant
S.W. corner of Lafayette and Hastings.

CONST. & CURVE DATA
Curve 2N
Δ = 96°-47'-40"
D = 15°-00'-00"
R = 381.97'
T = 430.18'
L = 645.30'
P.C. = 15+86.55
P.T. = 20+16.73
E = 193.32'
Superelevation = 0.05'/ft.

Off Ramp Curve Data
Δ = 6°-41'-59"
D = 4°-00'-00"
R = 1432.39'
T = 83.84'
L = 167.49'
P.C. = 24+60.63
P.T. = 25+44.47
E = 2.45'

Mistake Lane Curve Data
Δ = 5°-14'-46"
D = 2°-00'-00"
R = 2864.79'
T = 131.24'
L = 262.31'
P.C. = 28+18.75
P.T. = 29+49.99
E = 3.00'

Off Ramp Curve Data
Δ = 6°-41'-52"
D = 5°-00'-00"
R = 1145.92'
T = 67.05'
L = 133.96'
P.C. = 31+97.28
P.T. = 32+64.33
E = 1.96'

On Ramp Curve Data
Δ = 9°-50'-48"
D = 7°-30'-00"
R = 763.94'
T = 65.81'
L = 131.29'
P.C. = 25+19.83
P.T. = 26+51.12
E = 2.83'

On Ramp Curve Data
Δ = 5°-30'-00"
D = 4°-00'-00"
R = 1432.39'
T = 106.44'
L = 212.50'
P.C. = 30+26.05
P.T. = 31+32.49
E = 3.95'

C.B.M. #32 Elev. 119.240 Arrow on hydrant
N.E. corner of Rivard and Congress.

C.B.M. #31 Elev. 120.934 Arrow on hydrant
S.E. corner of Rivard and Fort.

C.B.M. #30 Elev. 122.292 Arrow on hydrant
S.E. corner of Rivard and Lafayette.

NOTE
Stations shown in brackets, thus (), refer to Hastings St. Survey Stationing.
Bench Marks are on City of Detroit Datum.
Curbs of Streets and Avenues are 15' R except as noted.
Curbs of Alleys are 5' R except as noted.

DETAILS OF EXPRESSWAY ALIGNMENT

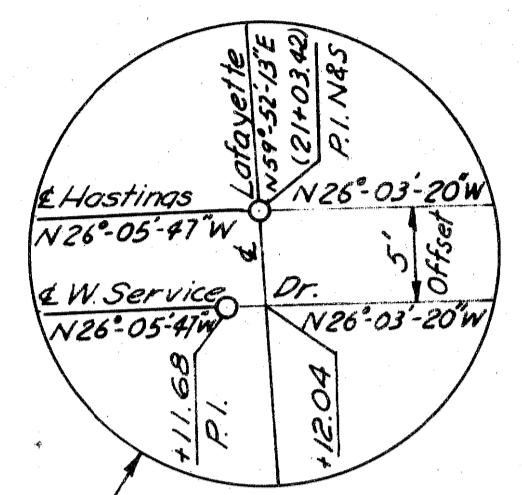
Scale 1" = 40'

FILE NO. W-57-1	STATE PROJECT B2111	FEDERAL PROJECT 107-1(24)	SHEET NO. 14
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B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		15	15
ROUTE	STATE	PROJECT	COUNTY	CITY	SHEET NO.
82111	Wayne	Wayne	Detroit		15

Off Ramp Curve Data
 $\Delta = 6^{\circ}-41'-52''$
 $D = 5^{\circ}-00'-00''$
 $R = 1145.92'$
 $T = 67.05'$
 $L = 133.96'$
 $P.C. = 31+97.28$
 $P.I. = 32+64.33$
 $P.T. = 33+31.24$
 $E = 1.96'$

C.B.M.*17 Elev. 121.348 Arrow on hydrant
 S.W. corner of St. Antoine and Lafayette.
 C.B.M.*18 Elev. 122.386 Arrow on hydrant
 W. side of St. Antoine, 20' N. of Monroe.
 C.B.M.*33 Elev. 121.741 Arrow on hydrant
 S.W. corner of Lafayette and Hastings.



C.B.M.*19 Elev. 123.279 Arrow on hydrant
 N.W. corner of St. Antoine and Macomb.

Off Ramp Curve Data
 $\Delta = 7^{\circ}-43'-44''$
 $D = 3^{\circ}-00'-00''$
 $R = 1909.86'$
 $T = 129.01'$
 $L = 257.63'$
 $P.C. = 38+50.76$
 $P.I. = 39+79.77$
 $P.T. = 41+08.39$
 $E = 4.35'$

C.B.M.*34 Elev. 123.249 Arrow on hydrant
 E. side of Hastings on the S. line of Clinton
 Extended.

C.B.M.*20 Elev. 125.217 Arrow on hydrant
 N.W. corner of St. Antoine and Clinton.
 C.B.M.*21 Elev. 125.686 Arrow on hydrant
 S.E. corner of St. Antoine and Mullett.

CONST. & CURVE DATA

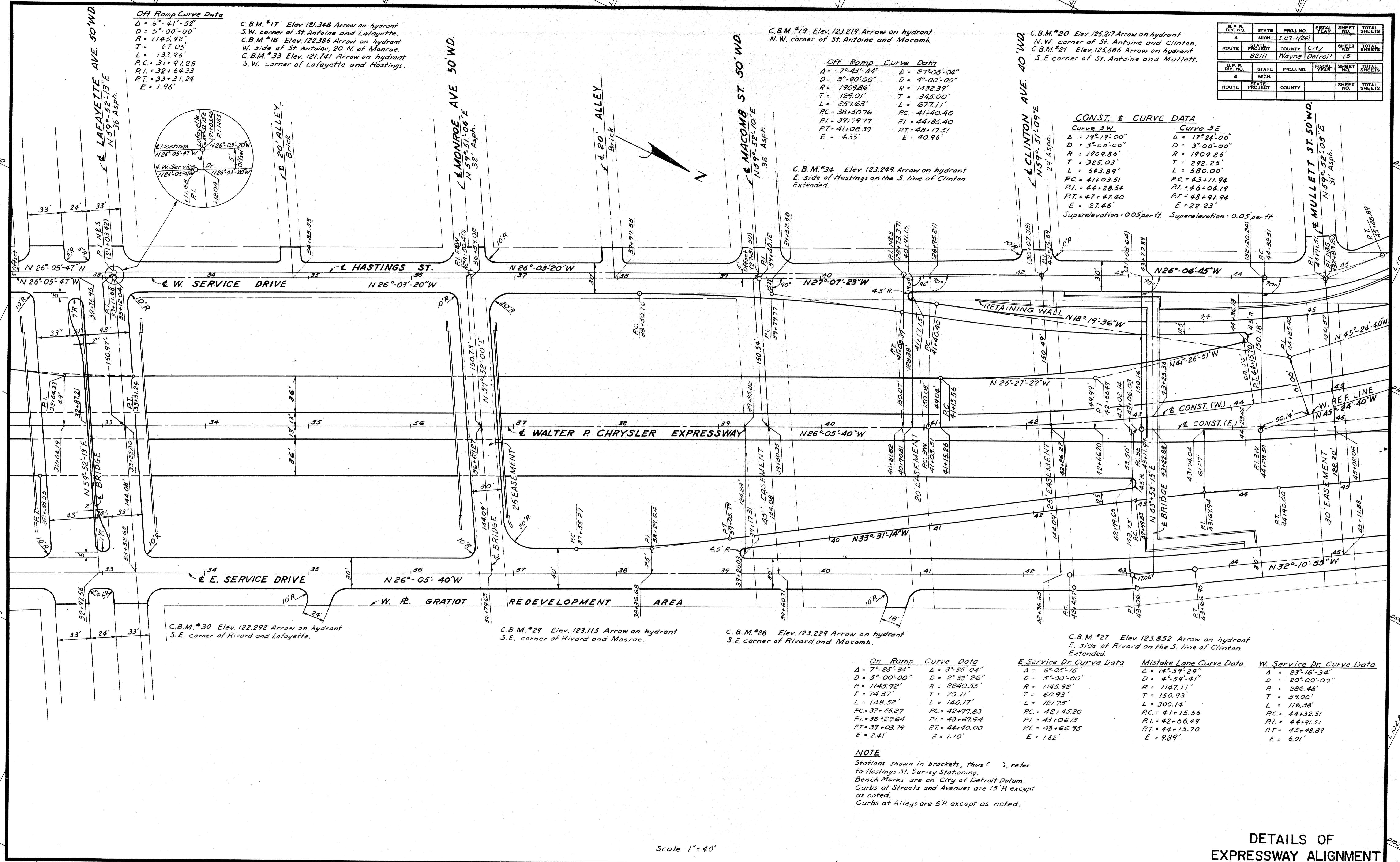
Curve 3W
 $\Delta = 19^{\circ}-19'-00''$
 $D = 3^{\circ}-00'-00''$
 $R = 1909.86'$
 $T = 325.03'$
 $L = 643.89'$
 $P.C. = 41+03.51$
 $P.I. = 44+28.54$
 $P.T. = 47+47.40$
 $E = 27.46'$

Curve 3E
 $\Delta = 17^{\circ}-24'-00''$
 $D = 3^{\circ}-00'-00''$
 $R = 1909.86'$
 $T = 292.25'$
 $L = 580.00'$
 $P.C. = 43+11.94$
 $P.I. = 46+04.19$
 $P.T. = 48+91.94$
 $E = 22.23'$

Superelevation = 0.05 per ft. Superelevation = 0.05 per ft.

DATE	BY
6/15/88	M.C. CHAN
6/15/88	Project Engineer
6/15/88	Project Engineer
6/15/88	Project Engineer
6/15/88	Project Engineer

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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS



C.B.M.*30 Elev. 122.292 Arrow on hydrant
 S.E. corner of Rivard and Lafayette.

C.B.M.*29 Elev. 123.115 Arrow on hydrant
 S.E. corner of Rivard and Monroe.

C.B.M.*28 Elev. 123.229 Arrow on hydrant
 S.E. corner of Rivard and Macomb.

C.B.M.*27 Elev. 123.852 Arrow on hydrant
 E. side of Rivard on the S. line of Clinton
 Extended.

On Ramp Curve Data
 $\Delta = 7^{\circ}-25'-34''$
 $D = 5^{\circ}-00'-00''$
 $R = 1145.92'$
 $T = 74.37'$
 $L = 148.52'$
 $P.C. = 37+55.27$
 $P.I. = 38+29.64$
 $P.T. = 39+03.79$
 $E = 2.41'$

$\Delta = 3^{\circ}-35'-04''$
 $D = 2^{\circ}-33'-26''$
 $R = 2240.55'$
 $T = 70.11'$
 $L = 140.17'$
 $P.C. = 42+99.83$
 $P.I. = 43+69.94$
 $P.T. = 44+40.00$
 $E = 1.10'$

E. Service Dr. Curve Data
 $\Delta = 6^{\circ}-05'-15''$
 $D = 5^{\circ}-00'-00''$
 $R = 1145.92'$
 $T = 60.93'$
 $L = 121.75'$
 $P.C. = 42+45.20$
 $P.I. = 43+06.13$
 $P.T. = 43+66.75$
 $E = 1.62'$

Mistake Lane Curve Data
 $\Delta = 14^{\circ}-59'-29''$
 $D = 4^{\circ}-59'-41''$
 $R = 1147.11'$
 $T = 150.93'$
 $L = 300.14'$
 $P.C. = 41+15.56$
 $P.I. = 42+66.49$
 $P.T. = 44+15.70$
 $E = 9.89'$

W. Service Dr. Curve Data
 $\Delta = 23^{\circ}-16'-34''$
 $D = 20^{\circ}-00'-00''$
 $R = 286.48'$
 $T = 59.00'$
 $L = 116.38'$
 $P.C. = 44+32.51$
 $P.I. = 44+91.51$
 $P.T. = 45+48.89$
 $E = 6.01'$

NOTE
 Stations shown in brackets, thus (), refer to Hastings St. Survey Stationing.
 Bench Marks are on City of Detroit Datum.
 Curbs at Streets and Avenues are 15'R except as noted.
 Curbs at Alleys are 5'R except as noted.

Scale 1" = 40'

DETAILS OF EXPRESSWAY ALIGNMENT

FILE NO.	STATE	FEDERAL PROJECT	SHEET NO.
W-57-1	82111	107-1(24)	15

C.B.M. *21 Elev. 125.686 Arrow on hydrant
S.E. corner of St. Antoine and Mullett

C.B.M. *23 Elev. 125.272 Arrow on hydrant
S.E. corner of Madison and Gratiot
C.B.M. *25 Elev. 125.029 Arrow on hydrant
E. side of Hastings on the S. line of Madison
Extended.

C.B.M. *24 Elev. 127.040 Arrow on hydrant
S.W. corner of Hastings and Gratiot

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	8211	WAYNE	DETROIT	16	

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

West Service Dr. Curve Data

$\Delta = 23^{\circ}16'34''$
 $D = 20^{\circ}00'00''$
 $R = 286.48'$
 $T = 59.00'$
 $L = 116.38'$
 $PC = 44+32.51$
 $PI = 44+91.51$
 $PT = 45+48.89$
 $E = 6.01'$

CONST. & CURVE DATA

<u>Curve 3W</u>	<u>Curve 3E</u>
$\Delta = 19^{\circ}19'00''$	$\Delta = 17^{\circ}24'00''$
$D = 3^{\circ}00'00''$	$D = 3^{\circ}00'00''$
$R = 1909.86'$	$R = 1909.86'$
$T = 325.03'$	$T = 292.25'$
$L = 643.89'$	$L = 580.00'$
$PC = 41+03.51$	$PC = 43+11.94$
$PI = 44+28.54$	$PI = 46+04.19$
$PT = 47+47.40$	$PT = 48+91.94$
$E = 27.46'$	$E = 22.23'$

Superelevation = 0.05 per ft. Superelevation = 0.05 per ft.

Off Ramp Curve Data

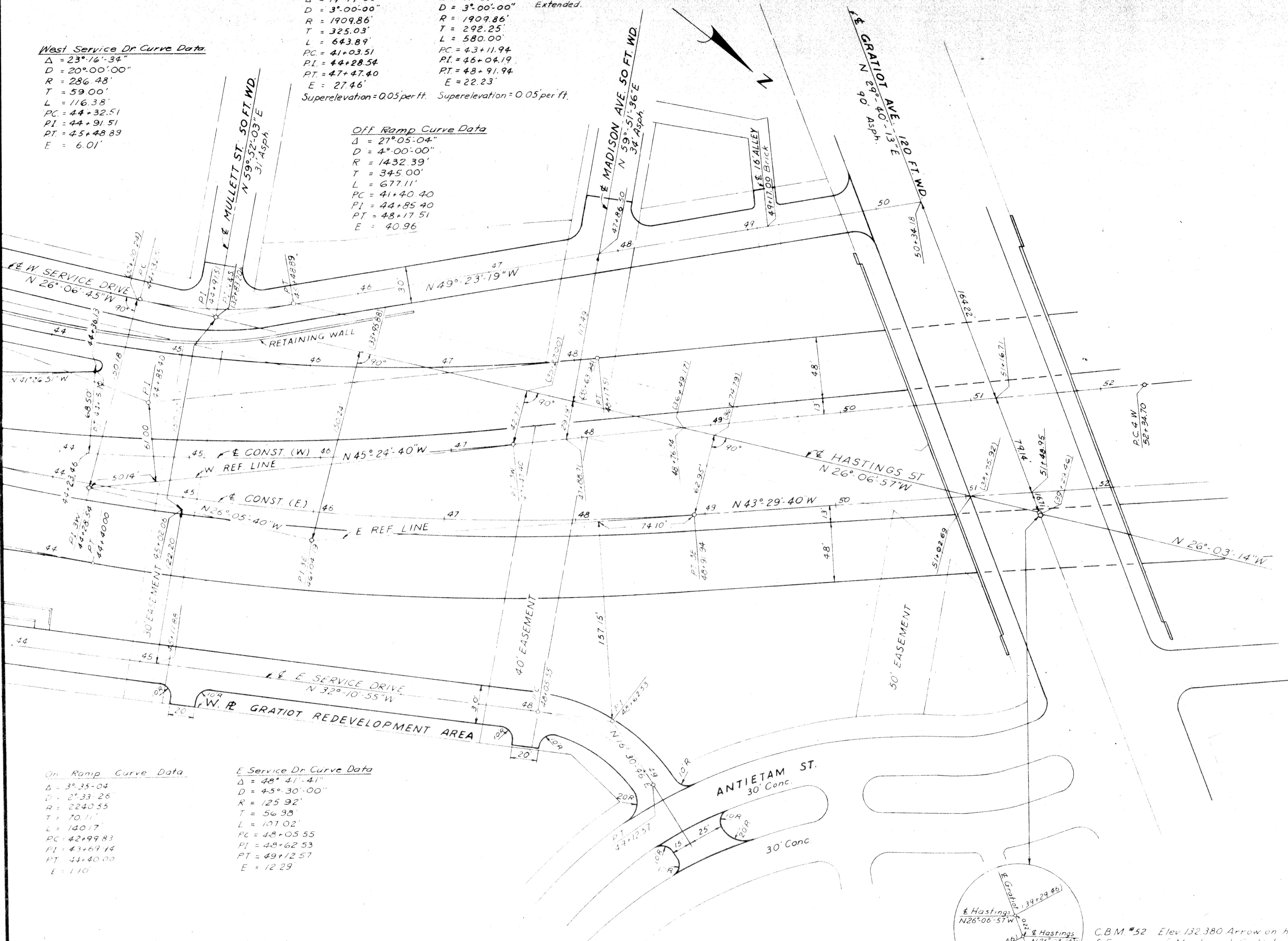
$\Delta = 27^{\circ}05'04''$
 $D = 4^{\circ}00'00''$
 $R = 1432.39'$
 $T = 345.00'$
 $L = 677.11'$
 $PC = 41+40.40$
 $PI = 44+85.40$
 $PT = 48+17.51$
 $E = 40.96'$

Off Ramp Curve Data

$\Delta = 3^{\circ}35'04''$
 $D = 2^{\circ}33'25''$
 $R = 2240.55'$
 $T = 70.11'$
 $L = 140.17'$
 $PC = 42+99.83$
 $PI = 43+69.14$
 $PT = 44+40.00$
 $E = 1.10'$

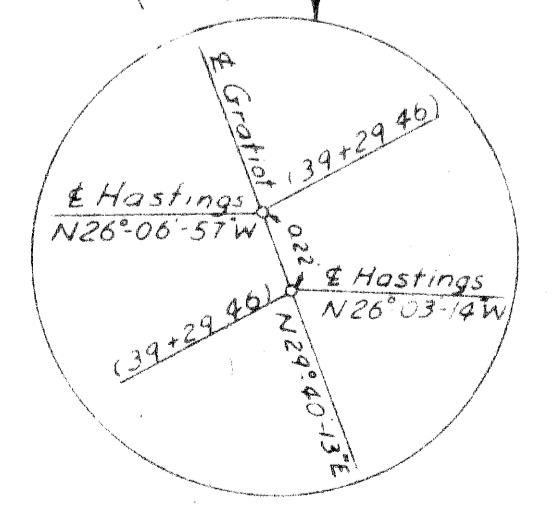
E Service Dr. Curve Data

$\Delta = 48^{\circ}41'41''$
 $D = 45^{\circ}30'00''$
 $R = 125.92'$
 $T = 56.98'$
 $L = 101.02'$
 $PC = 48+05.55$
 $PI = 48+62.53$
 $PT = 49+12.57$
 $E = 12.29'$



NOTE

Stations shown in brackets, thus (), refer to Hastings St Survey Stationing
 Bench Marks are on City of Detroit Datum.
 Curbs at Streets and Avenues are 15 R except as noted
 Curbs at Alleys are 5 R except as noted.



C.B.M. *52 Elev. 132.380 Arrow on hydrant
S.E. corner of Maple and Gratiot

Scale 1" = 40'

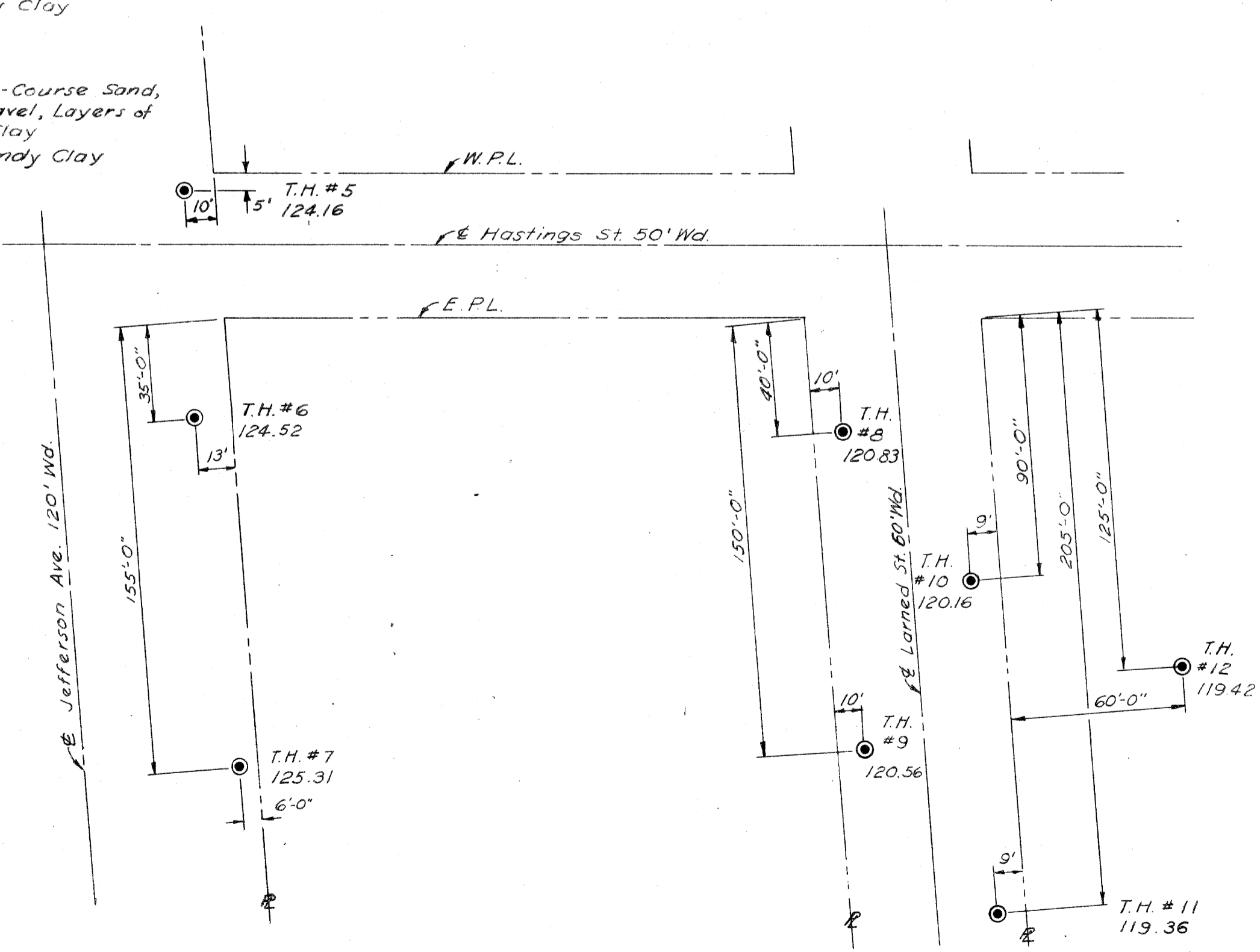
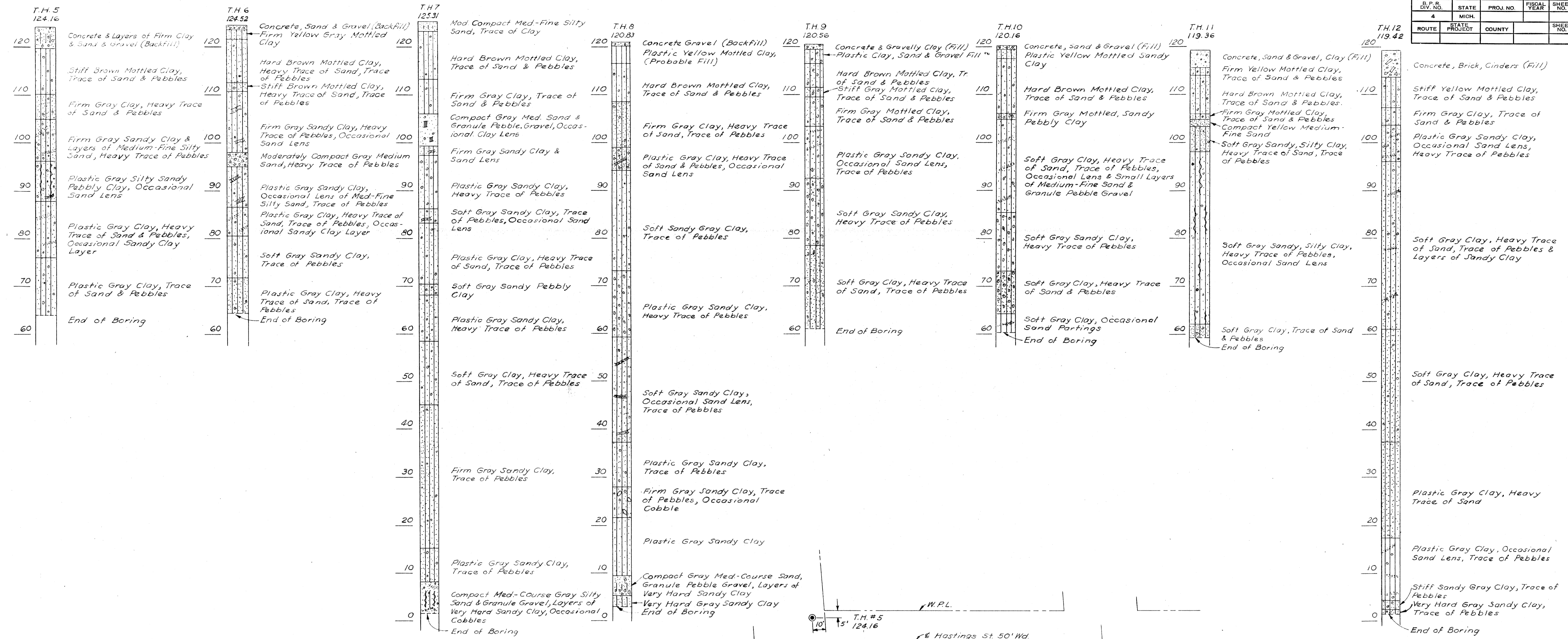
DETAILS OF EXPRESSWAY ALIGNMENT

FILE NO.	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
W-57-1	8211	WAYNE	DETROIT	16	

LOG OF BORINGS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAVE	DETOIT		17	

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



LOG OF BORINGS AT JEFFERSON & LARNED

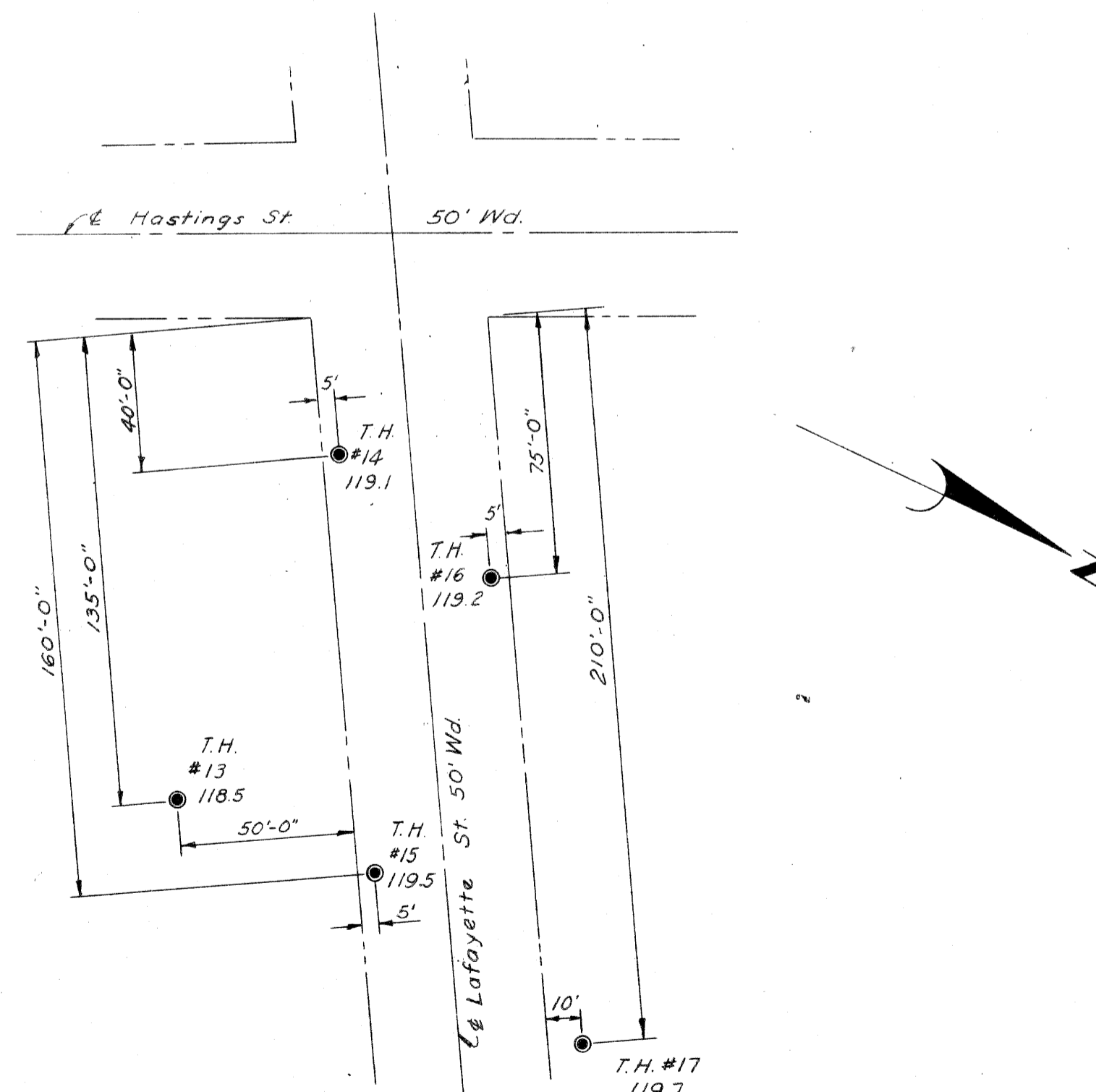
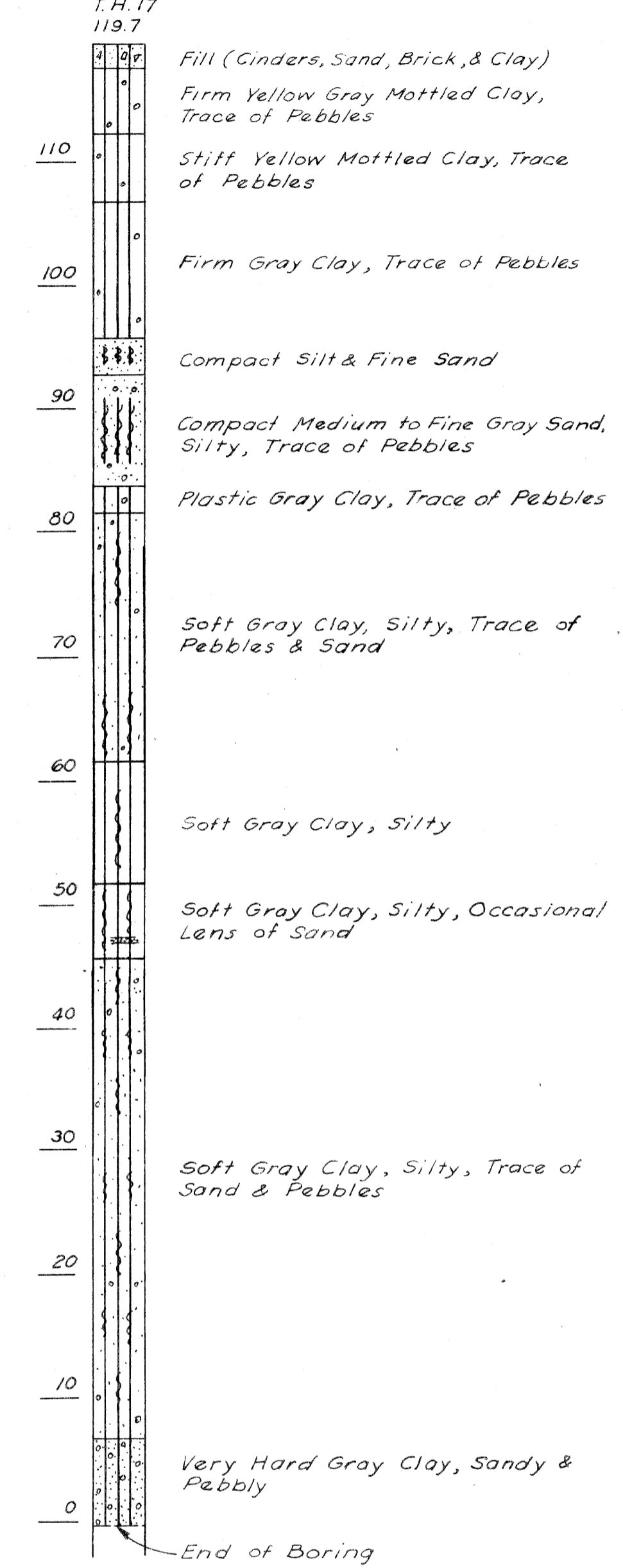
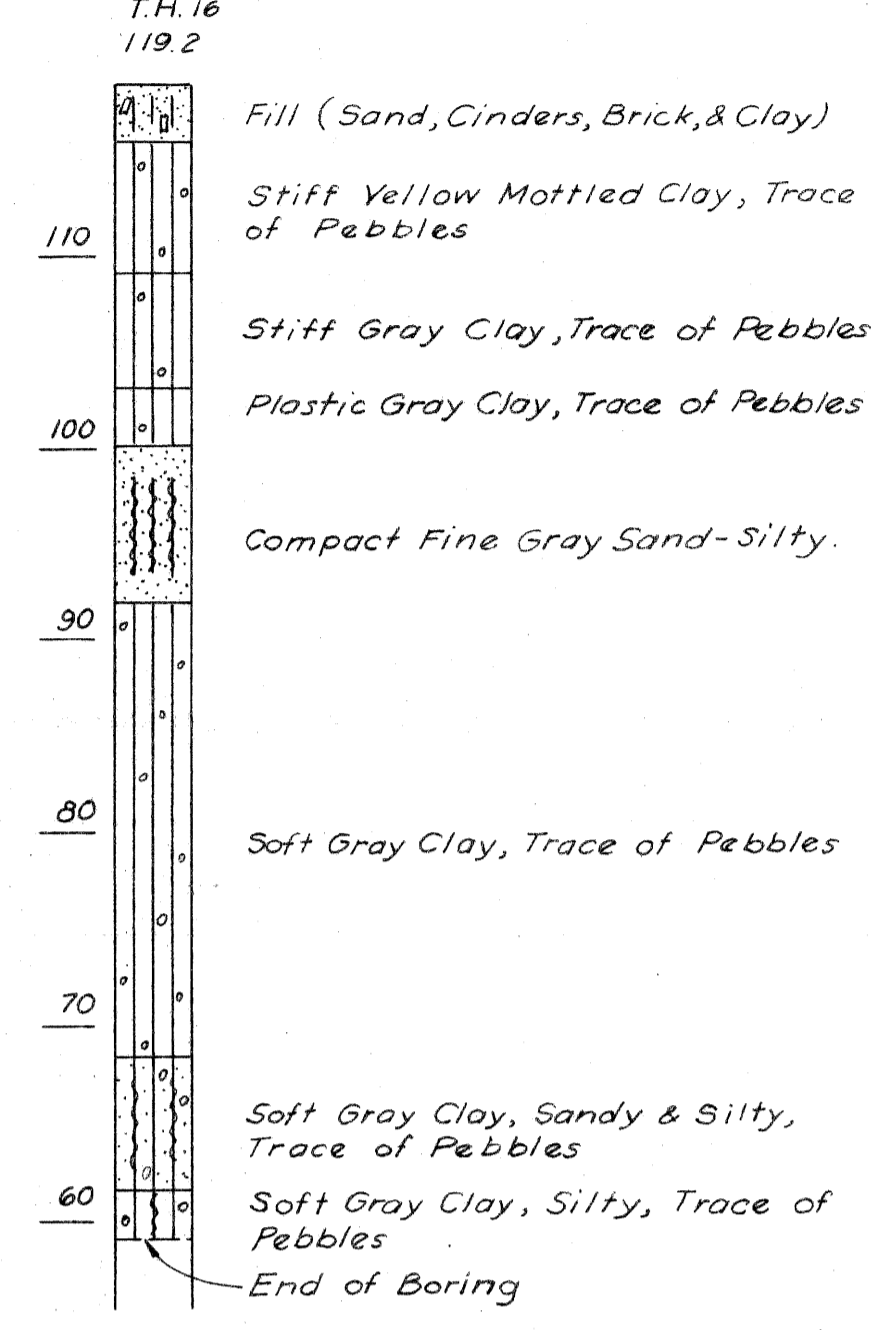
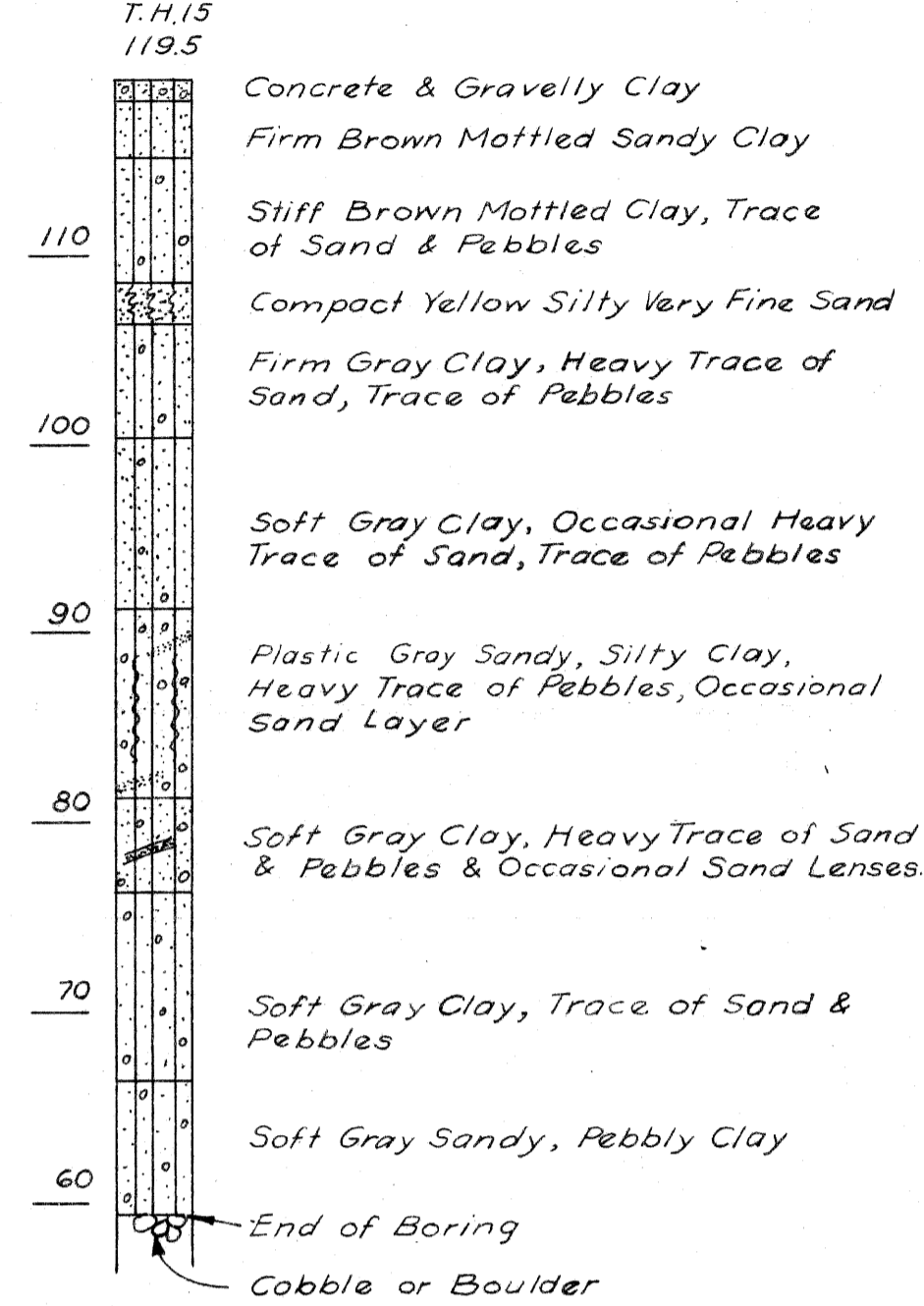
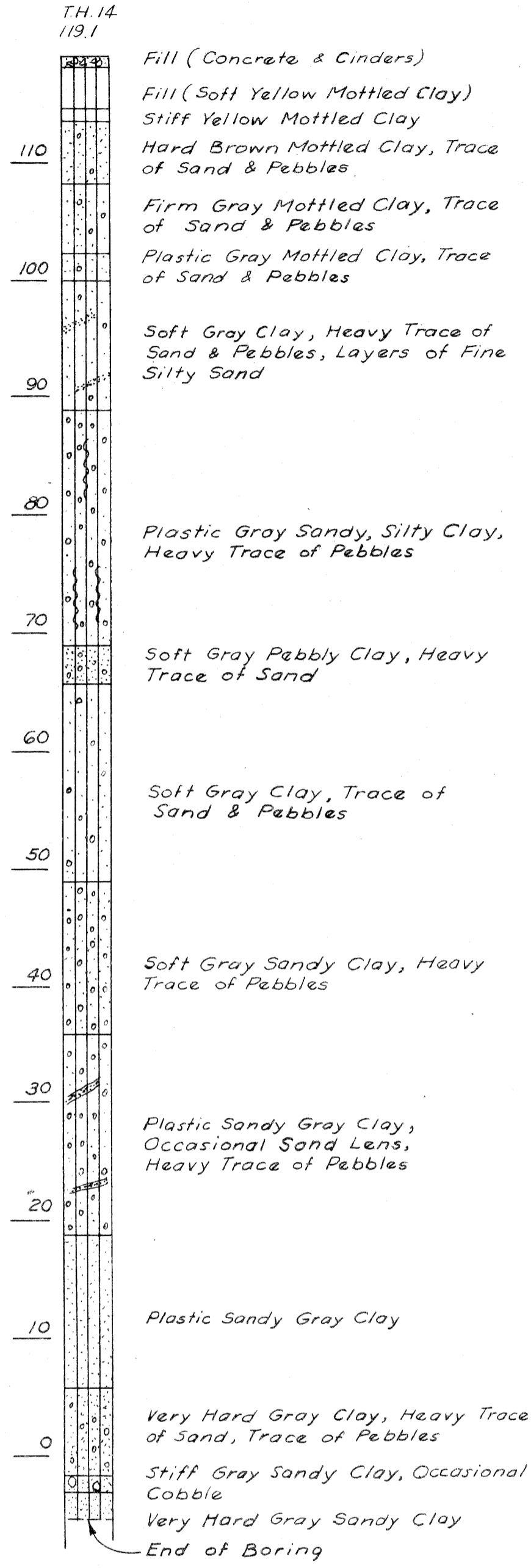
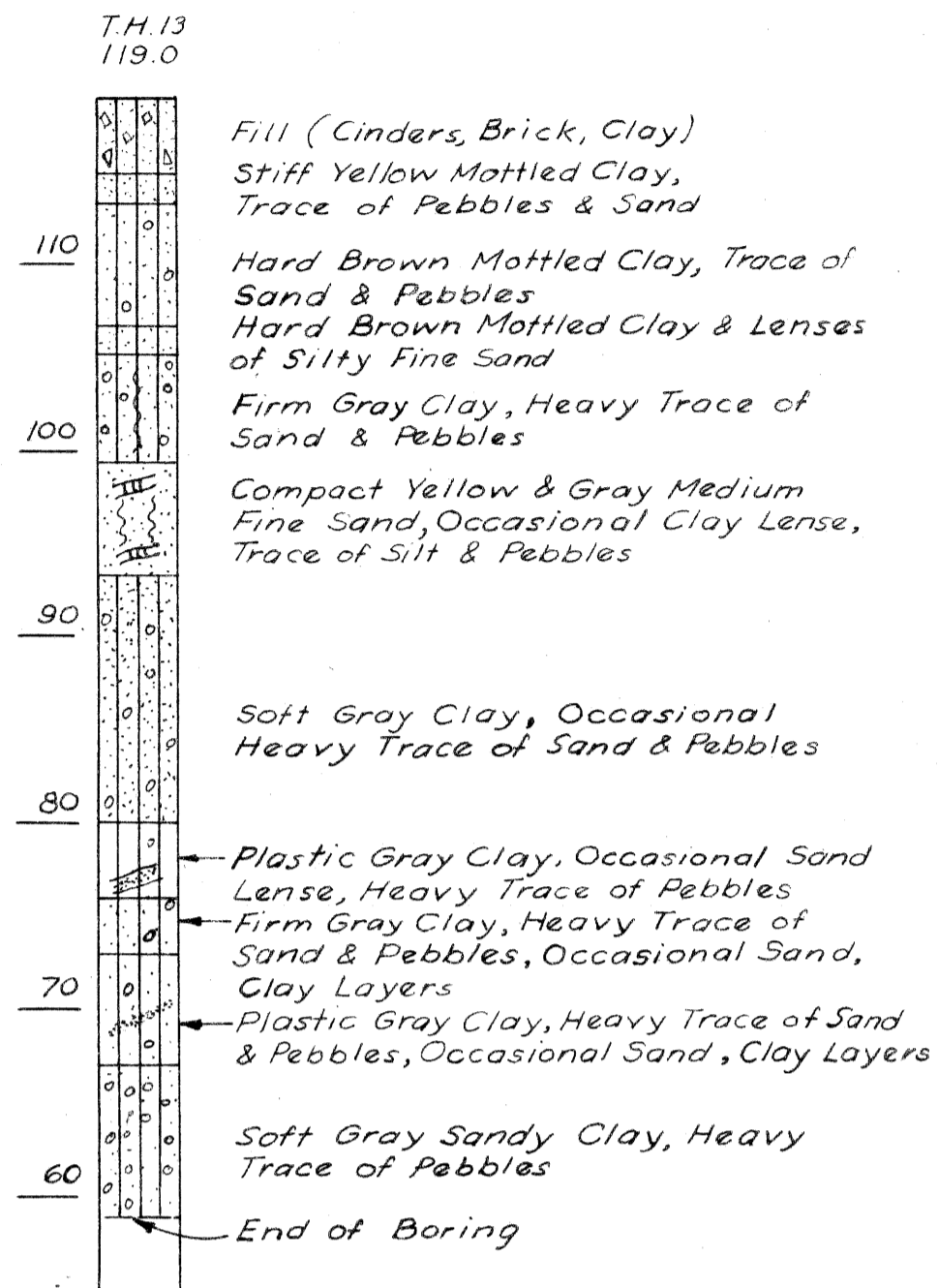
DATE	BY
5-15-52	S. J. S.
5-15-52	C. J. S.
5-15-52	F. S. S.

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

LOG OF BORINGS

R. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
92111	MAVNE	DETROIT	18		

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



DATE	BY
9-58	CALTAGIANO, F.A.
9-58	KILBEE, M. L.
1-59	FRANZ, A. E.

DESIGNED BY: CALTAGIANO, F.A.
CHECKED BY: KILBEE, M. L.
SQUAD LEADER: FRANZ, A. E.
APPROVED FOR APPROVAL: [Signature]

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

LOG OF BORINGS AT LAFAYETTE

FILE NO. USED IN STENCIL	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
W-57-1	82111	107-1(24)	18

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
4	MICH.	107-1(24)				
ROUTE	STATE	PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		19		

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

Removing Trees 8"-12" Dia. 15 76 each
 Removing Trees 13"-24" Dia. 12 2 each
 Removing Trees 25"-36" Dia. 1 2 each

Abandoning Catch Basins 6 5 each
 Abandoning Inlet 2 1 each
 Removing Manholes 1 each

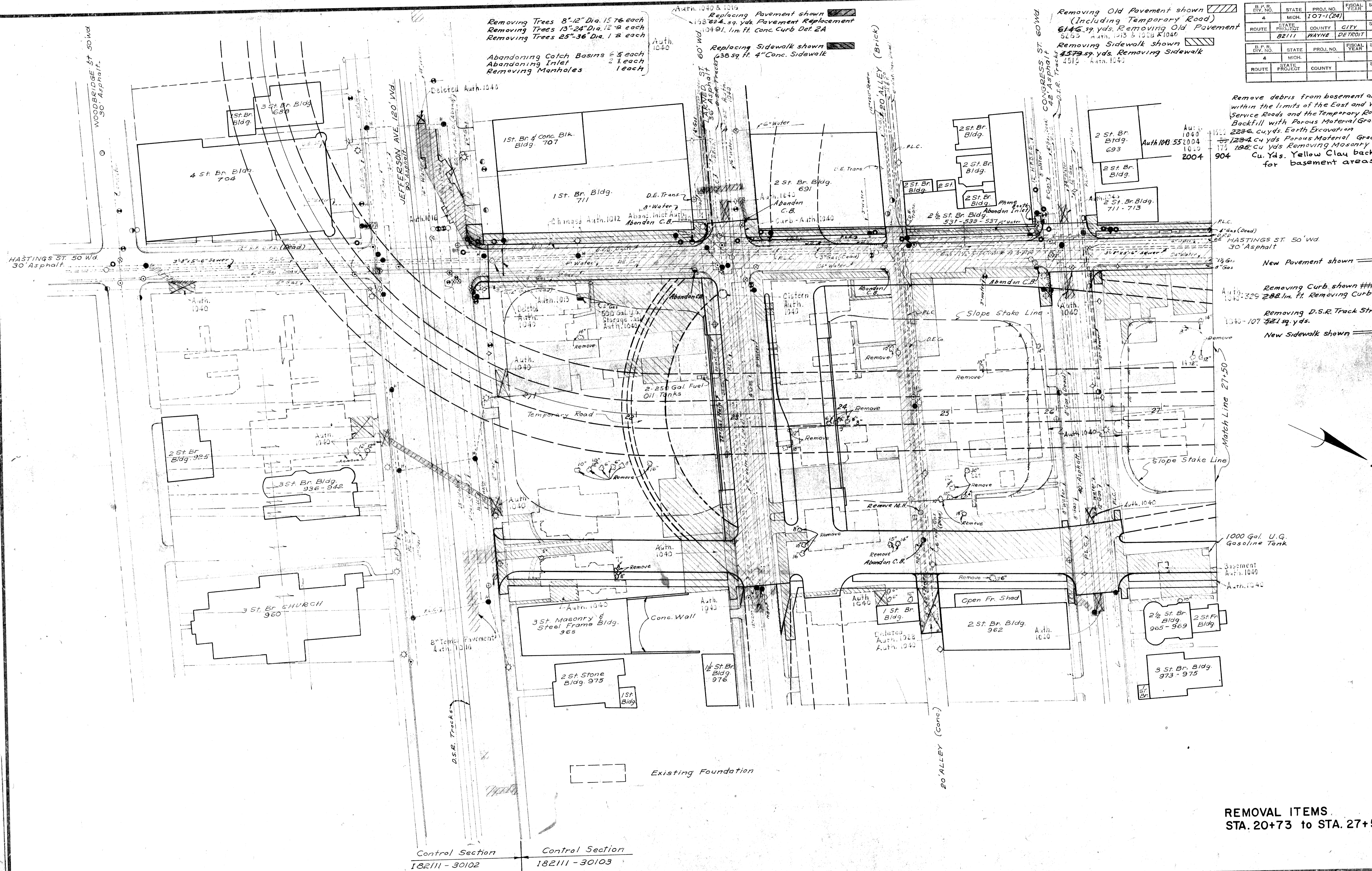
Replacing Pavement shown [hatched]
 153 824 sq. yds. Pavement Replacement
 10491 lin. ft. Conc. Curb Det. 2A

Replacing Sidewalk shown [hatched]
 638 39 ft. 4" Conc. Sidewalk

Removing Old Pavement shown [hatched]
 (Including Temporary Road)
 6145 sq. yds. Removing Old Pavement
 516 sq. yds. Removing Old Pavement
 10491 lin. ft. Conc. Curb Det. 2A

Removing Sidewalk shown [hatched]
 1579 sq. yds. Removing Sidewalk
 10491 lin. ft. Conc. Curb Det. 2A

Remove debris from basement areas within the limits of the East and West Service Roads and the Temporary Road. Backfill with Porous Material Grade A (2004) 233 cu yds. Earth Excavation 123 cu yds. Porous Material Grade A 163 cu yds. Removing Masonry and Concrete 192 cu yds. Removing Masonry and Concrete for basement areas.



New Pavement shown [hatched]
 1040-329 288 lin. ft. Removing Curb
 Removing D.S.R. Track Strip 1040-107 521 sq. yds.
 New Sidewalk shown [hatched]

Control Section 182111 - 30102
 Control Section 182111 - 30103

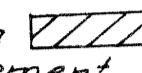
REMOVAL ITEMS.
 STA. 20+73 to STA. 27+50

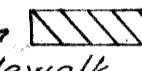
PLANS PREPARED BY
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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

Removing Trees 8"-12" Dia. 25 Each Auth. 1043
 Removing Trees 13"-24" Dia. 19 Each 1043
 Removing Trees 25"-36" Dia. 1 each


Abandoning Catch Basins 5 Each Auth. 1043
 Abandoning Inlets 1 each
 Abandoning C.B. Sump 1 each

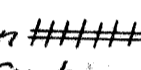
Replacing Pavement shown 
 72.59 yds. Pavement Replacement
 Auth. 1043

Removing Old Pavement shown 
 3356 sq. yds. Removing Old Pavement
 5255 Auth. 1013-1026-1043

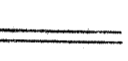
Removing Sidewalk shown 
 1940 sq. yds. Removing Sidewalk
 2354 Auth. 1040

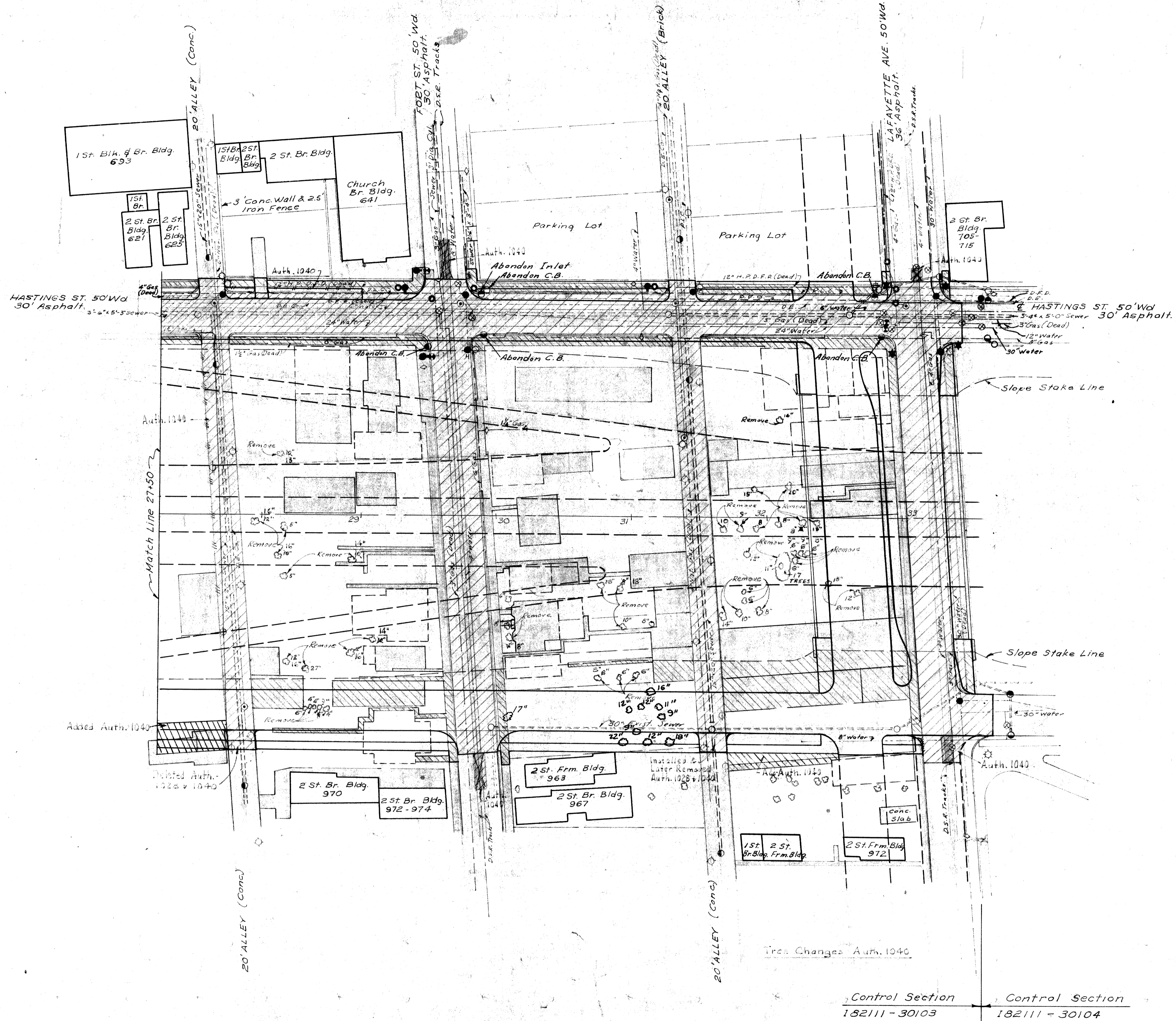
Remove debris from basement areas within the limits of the East and West Service Roads
 Backfill with Porous Material, Grade A - Auth. 2004
 1154 1246 cu. yds. Earth Excavation - Auth. 1040
 Auth. 1043 159 677 cu. yds. Porous Material, Grade A - Auth. 2004
 578 cu. yds. Yellow Clay Backfill - Auth. 2004
 92 96 cu. yds. Removing Masonry and Concrete. Auth. 1043

New Pavement shown 

Removing Curb shown 
 18 lin. ft. Removing Curb

Removing D.S.R. Track Strip
 636 692 Sq. yds. Auth. 1040

New Sidewalk shown 



D.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		20	

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

Control Section 182111 - 30103 Control Section 182111 - 30104

**REMOVAL ITEMS
 STA. 27+50 to 33+60**

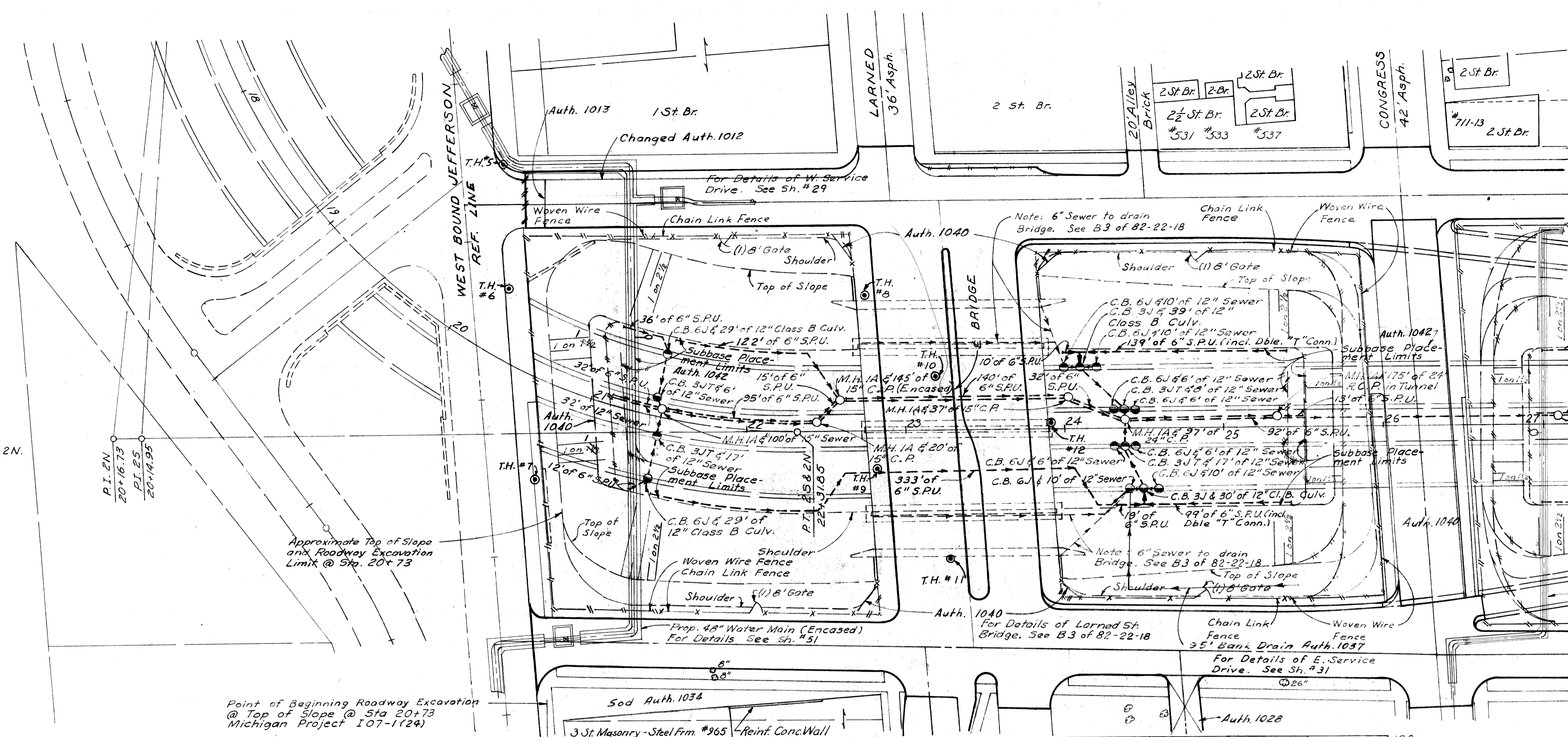
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 CANTARANO, F.
 NIVELA, M.
 PETERSON, J.
 WILSON, R.

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		21	21
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
8211	Wayne	Detroit		21	21
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		21	21
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
8211	Wayne	Detroit		21	21

CONST. & CURVE DATA

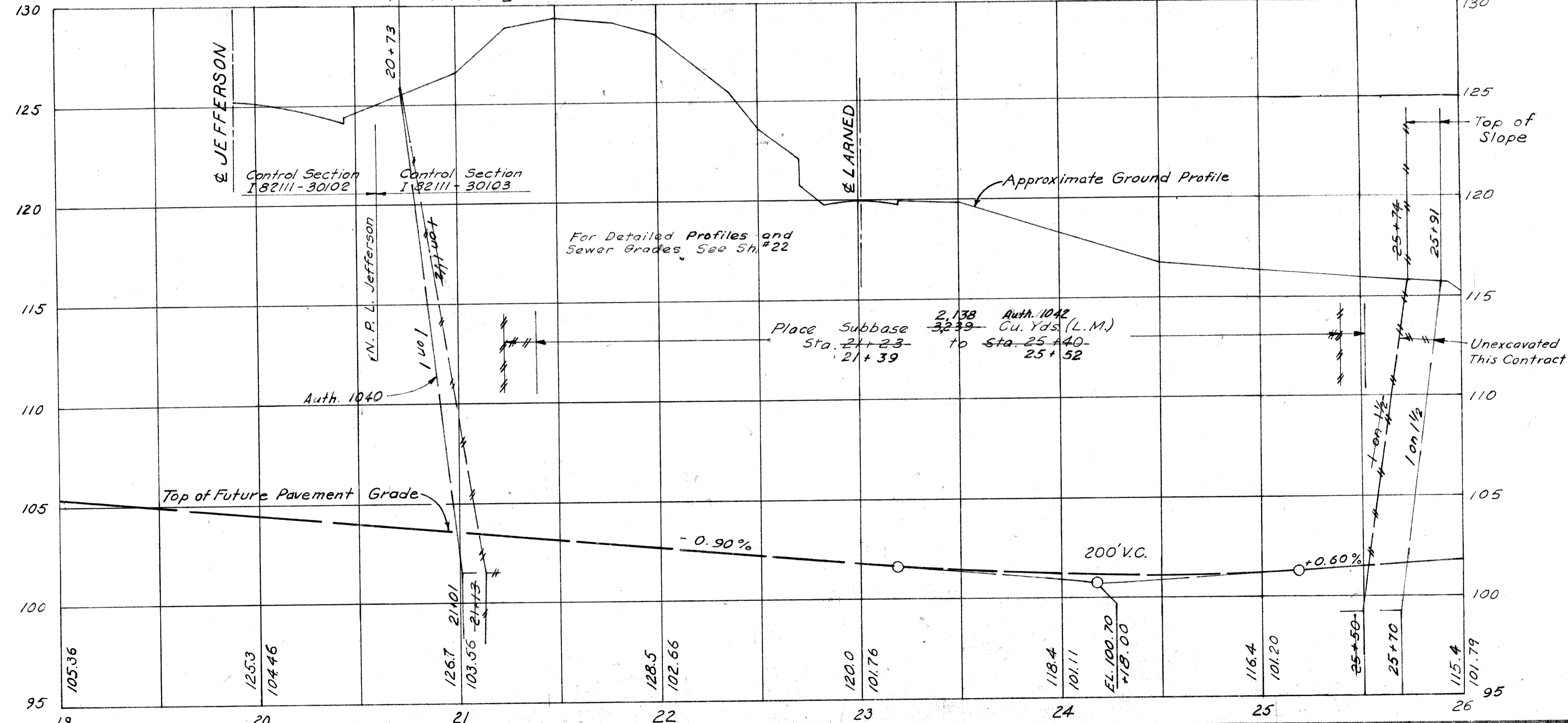
Curve 2N
 $\Delta = 96^{\circ}-47'-40''$
 $D = 15^{\circ}-00'-00''$
 $R = 381.97'$
 $T = 430.18'$
 $L = 645.30'$
 $PC = 15+86.55'$
 $PI = 20+16.73$
 $PT = 22+31.85$
 $E = 193.32'$
 Superelevation = 0.05' per ft.
 *See Station Equation at P.C. 2N.

Curve 2S
 $\Delta = 94^{\circ}-17'-40''$
 $D = 15^{\circ}-00'-00''$
 $R = 381.97'$
 $T = 411.73'$
 $L = 628.63'$
 $PC = 16+03.22$
 $PI = 20+14.95$
 $PT = 22+31.85$
 $E = 179.65'$
 Superelevation = 0.05' per ft.



Point of Beginning Roadway Excavation
 @ Top of Slope @ Sta 20+73
 Michigan Project 107-1(24)

Guard Rail & Fence (This Sheet) 548 Auth. 1040
 Chain Link Fence (4'-0" High) 604 Lin. Ft.
 8' Gates 4 Each
 Woven Wire Fence 42.5 Lin. Rods



EXPRESSWAY ITEMS
 STA. 20+73 TO STA. 26+00

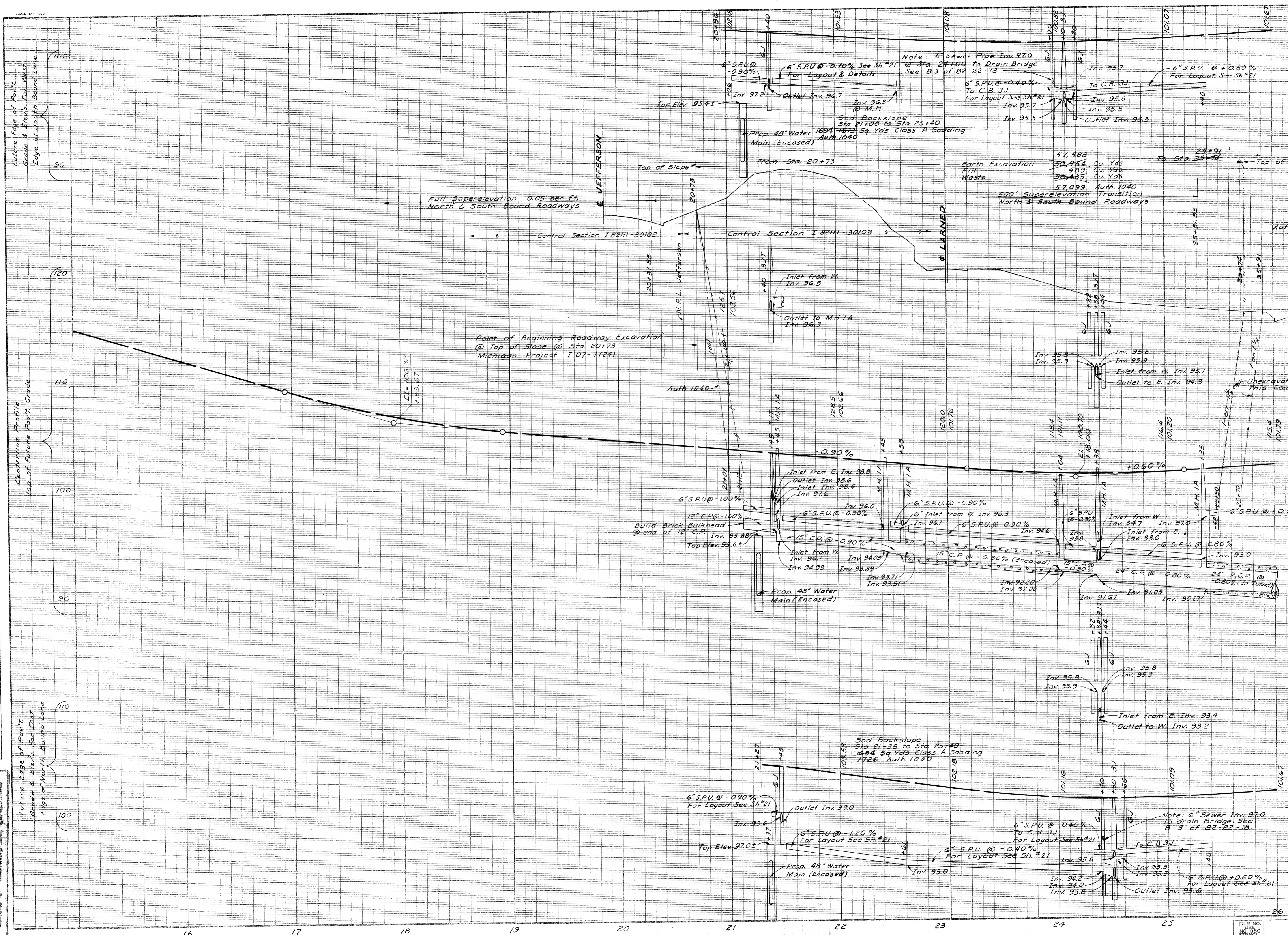
DATE	BY	OPERATION
3/15/54	W.C. BROWN	DESIGNED
3/15/54	W.C. BROWN	PLANNED
3/15/54	W.C. BROWN	PROFILE PLOTTED
3/15/54	W.C. BROWN	PLAN CHECKED
3/15/54	W.C. BROWN	PROFILE CHECKED
3/15/54	W.C. BROWN	GRADE INSPECTION
3/15/54	W.C. BROWN	FEDERAL INSPECTION

DATE	BY	OPERATION

DATE	BY	OPERATION

DESIGNED BY
W.C. BROWN
 CITY ENGINEER
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

B.P. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-124		22	22
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		22	22
E.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

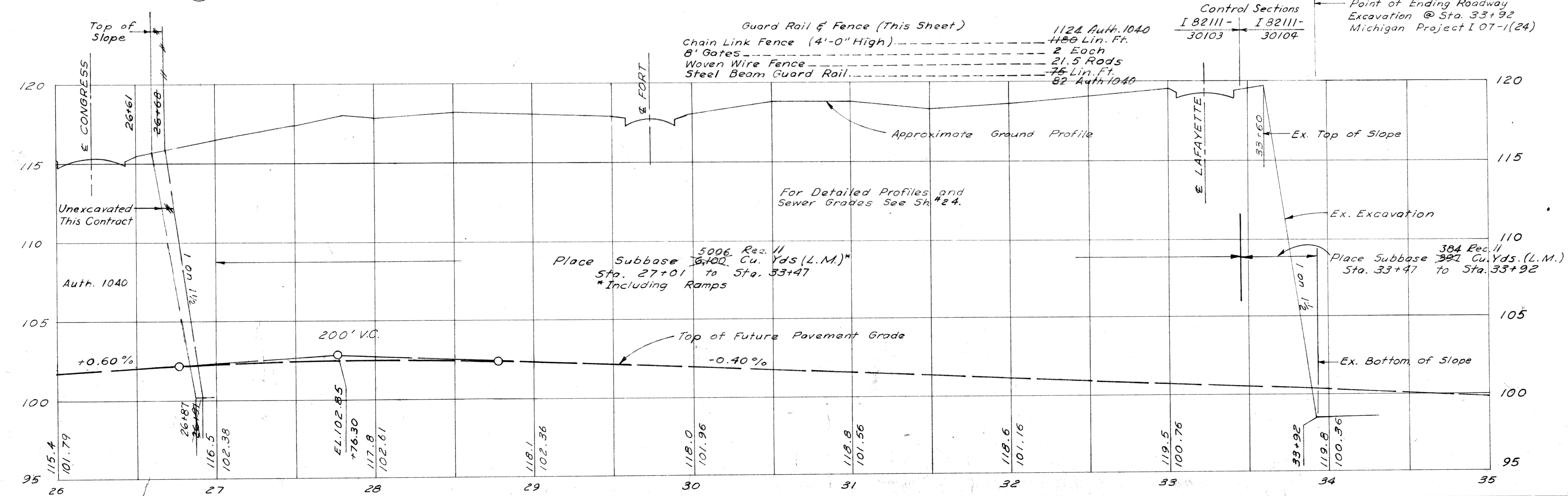
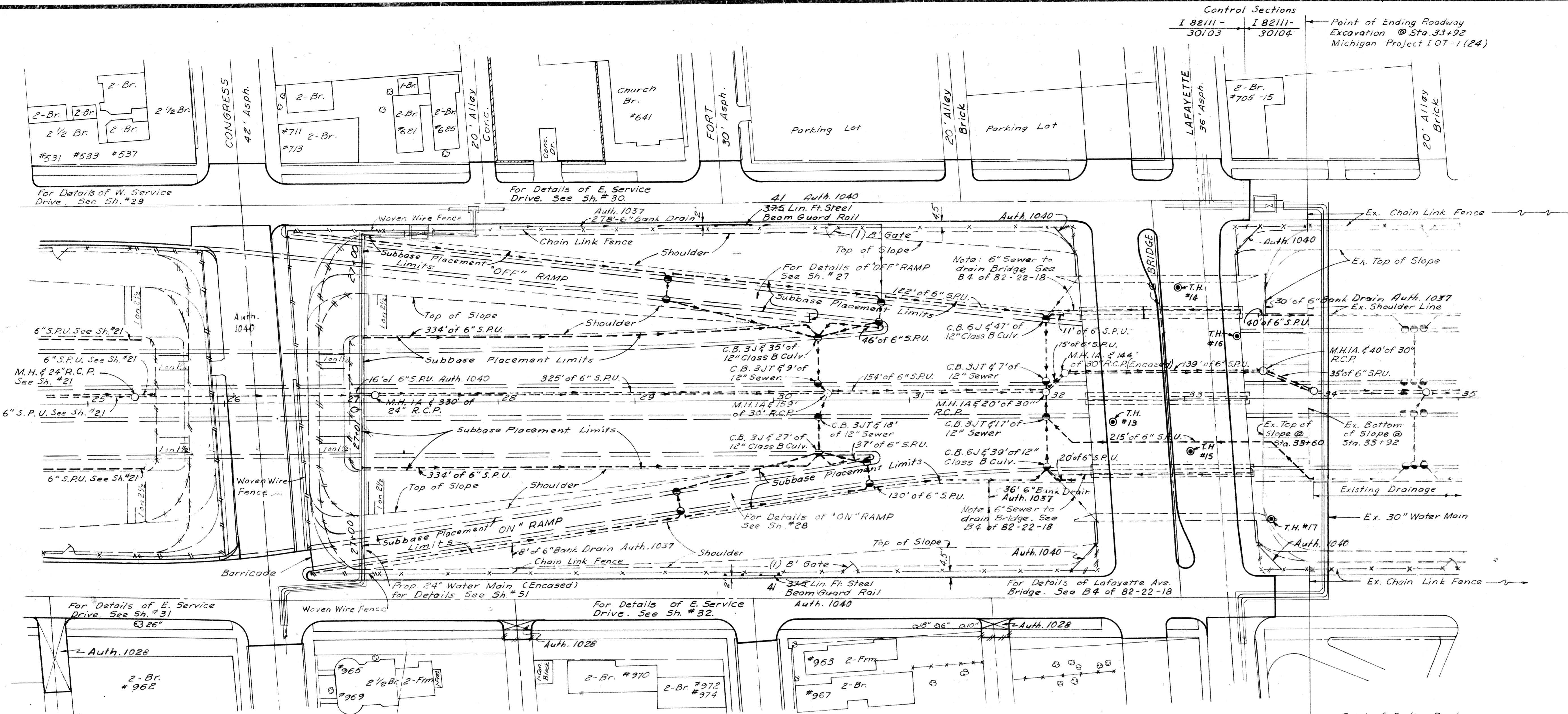


EXPRESSWAY PROFILE
 STA. 20+73 TO STA. 26+00

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
W-57-1	82111	107-124	22

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		23	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		23	

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		23	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		23	



EXPRESSWAY ITEMS
STA. 26+00 TO STA. 33+92

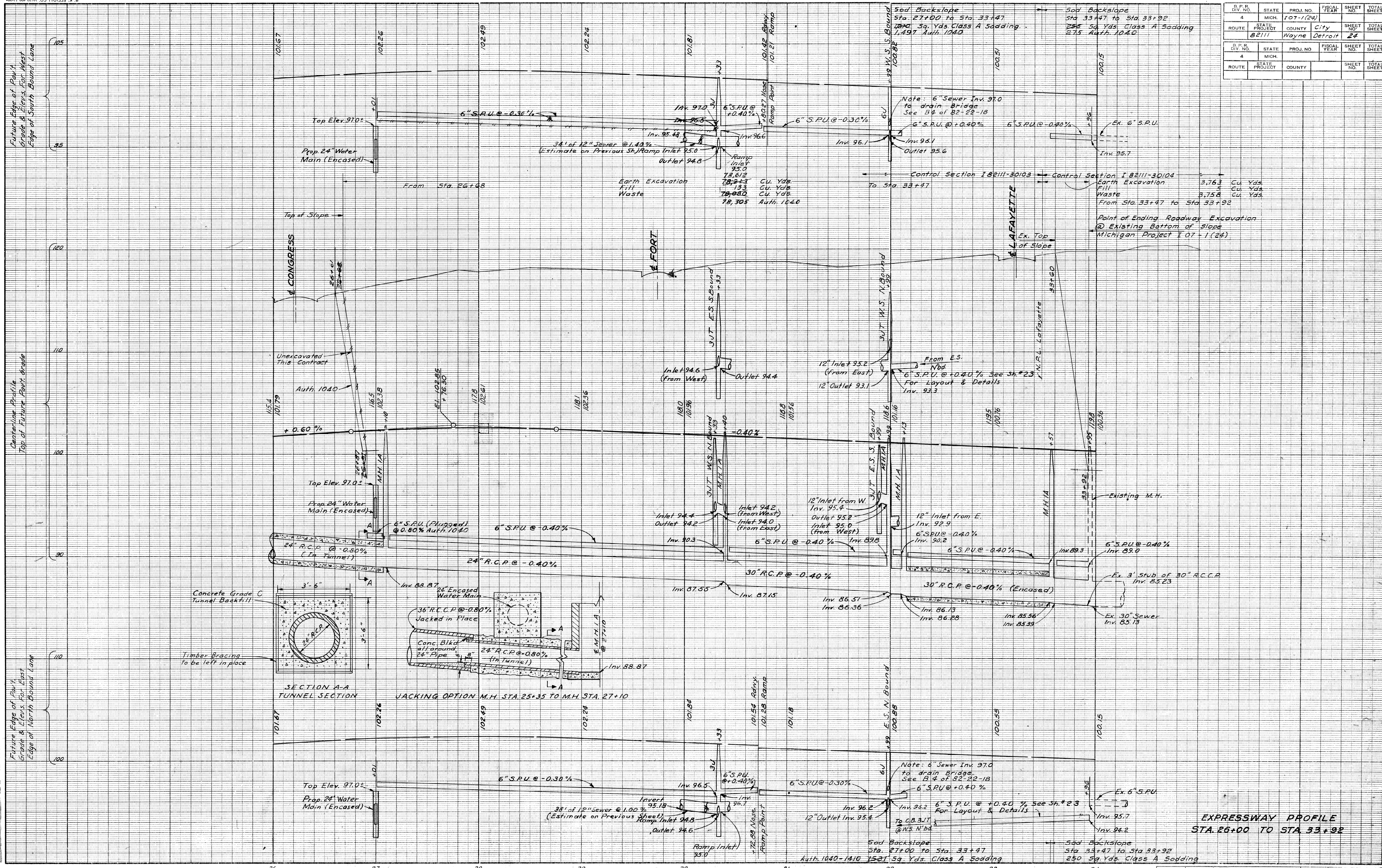
DATE	BY	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION
8/28	W. K. FORT	OPERATION

DATE	BY	OPERATION

DATE	BY	OPERATION

DATE	BY	OPERATION

PLANS REVISION BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS



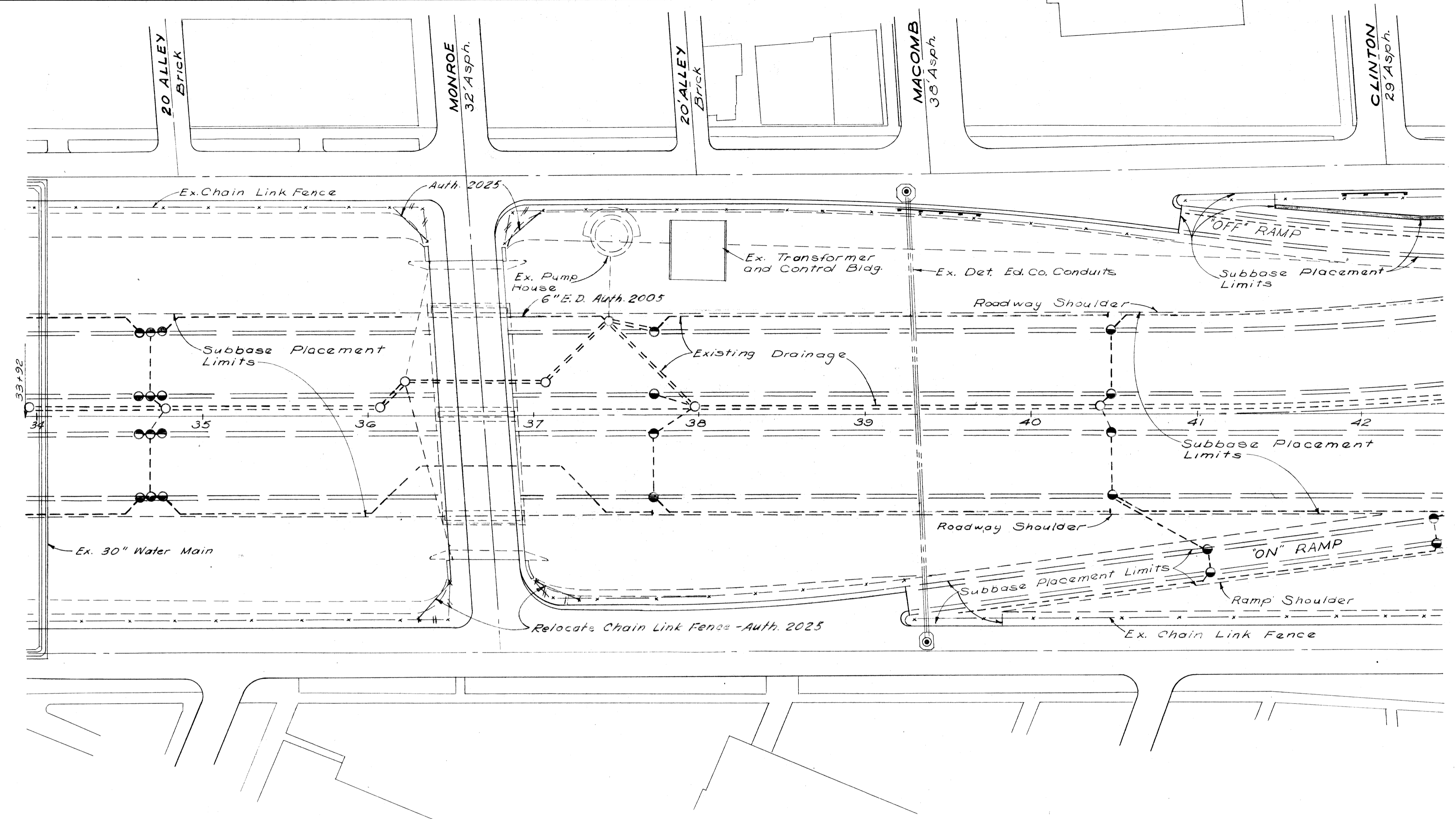
R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		24	24
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
B2111	Wayne	Wayne	Detroit	24	24

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		24	24
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
B2111	Wayne	Wayne	Detroit	24	24

EXPRESSWAY PROFILE
 STA. 26+00 TO STA. 33+92

R.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82111	WAYNE	DETROIT	25	

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



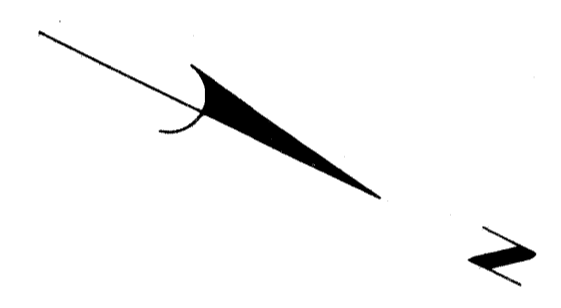
Const. Curve Data

Curve 3 E

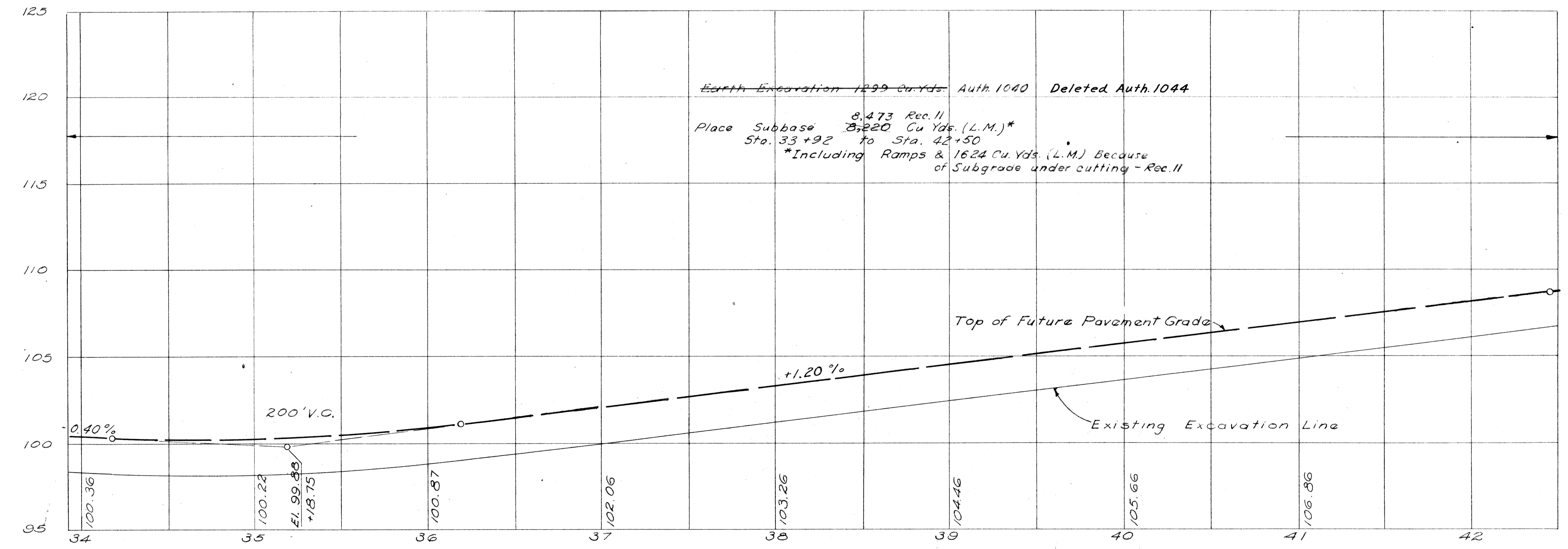
Δ = 17° 24' 00"
 D = 3° 00' 00"
 R = 1909.86'
 T = 292.25'
 L = 580.00'
 E = 22.23'
 P.C. = 43+11.94
 P.T. = 48+91.94
 S = 48+91.94
 Superelevation = 0.05' per ft

Curve 3 W

Δ = 19° 19' 00"
 D = 3° 00' 00"
 R = 1909.86'
 T = 325.03'
 L = 643.89'
 E = 27.46'
 P.C. = 41+03.51
 P.T. = 47+28.54
 P.T. = 47+47.40
 S = 47+47.40
 Superelevation = 0.05' per ft



Relocate Chain Link Fence 80 Lin. Ft.
 Auth. 2025



EXPRESSWAY ITEMS
STA. 33+92 TO STA. 42+50

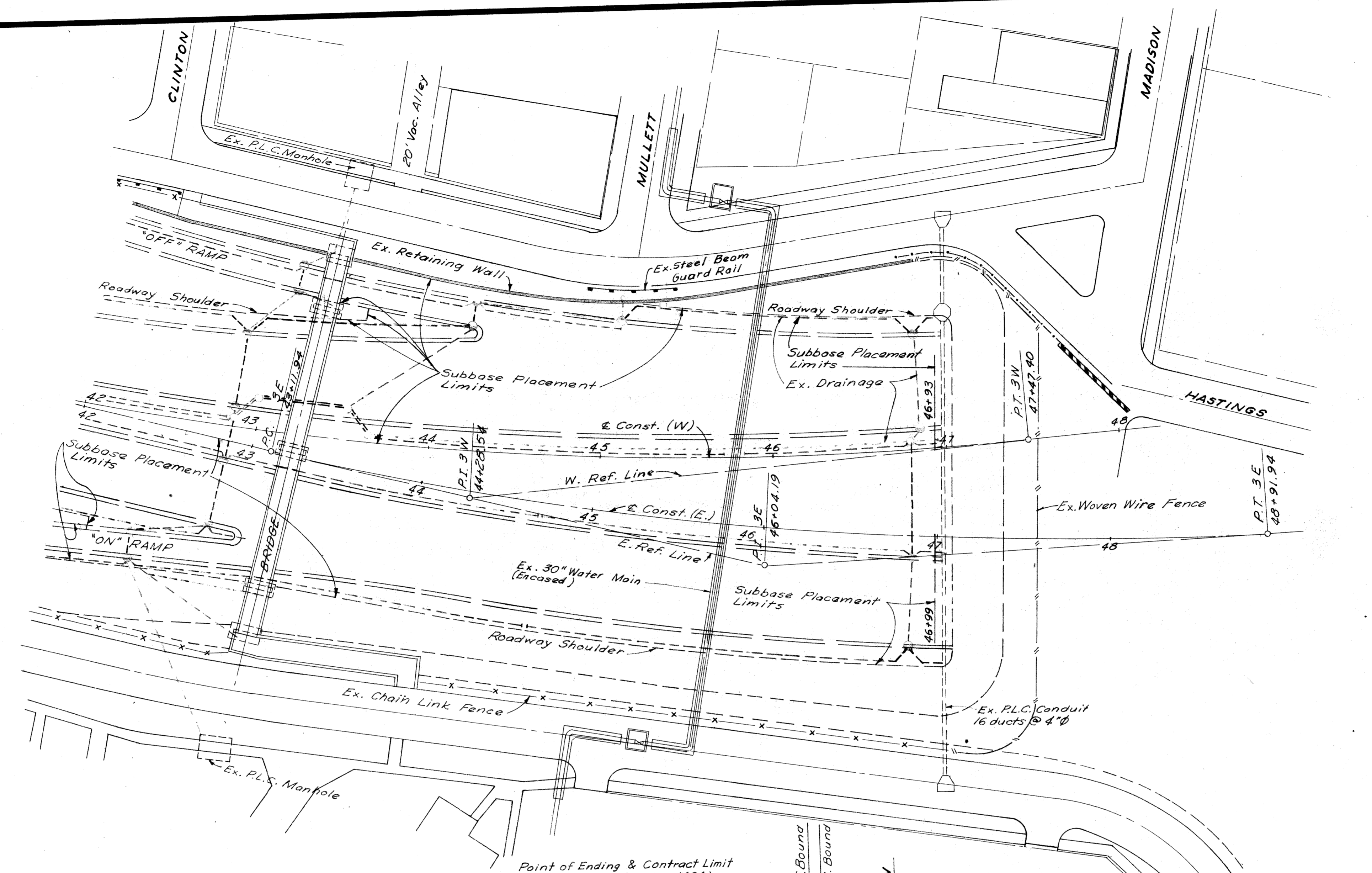
DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
RECOMMENDED FOR APPROVAL	DATE

PLANS PREPARED BY
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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
W-57-1	82111	107-1(24)	25

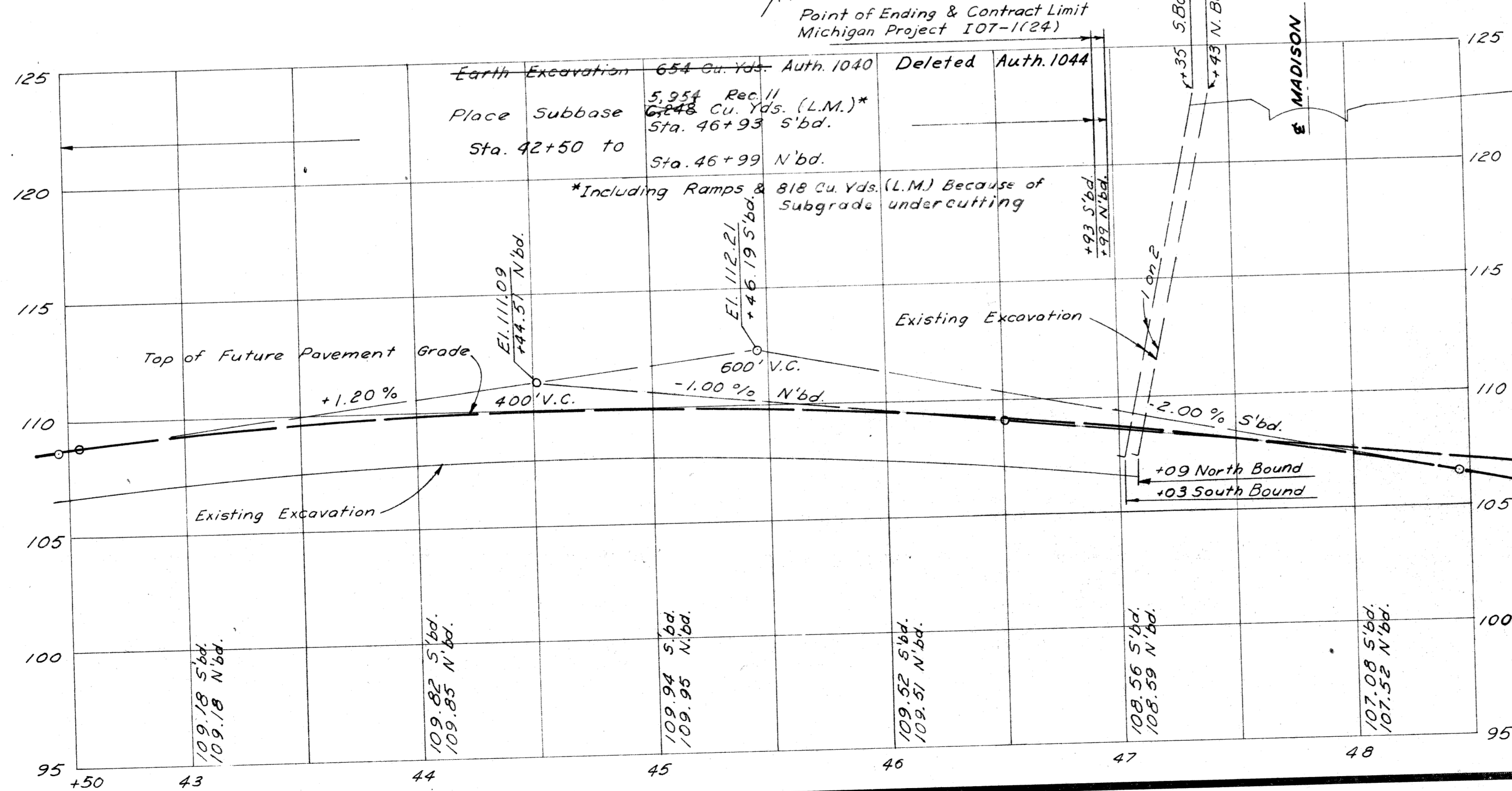
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT	26		

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



CONST. & CURVE DATA

Curve 3E	Curve 3W
$\Delta = 172^{\circ}24'00''$	$\Delta = 190^{\circ}19'00''$
$D = 3^{\circ}00'00''$	$D = 3^{\circ}00'00''$
$R = 1909.86'$	$R = 1909.86'$
$T = 292.25'$	$T = 325.03'$
$L = 580.00'$	$L = 643.89'$
$E = 22.23'$	$E = 27.46'$
$PC = 43+11.94$	$PC = 41+03.51$
$PT = 46+04.19$	$PT = 44+28.54$
$PT = 48+91.94$	$PT = 47+47.40$
Superelevation = 0.05' per ft.	



EXPRESSWAY ITEMS
STA. 42+50 TO STA. 47+03 S'BD.
STA. 42+50 TO STA. 47+09 N'BD.

DESIGNED	CHECKED	DATE
KNOWLTON	KNOWLTON	11-23
SMITH	SMITH	11-23
SMITH	SMITH	11-23

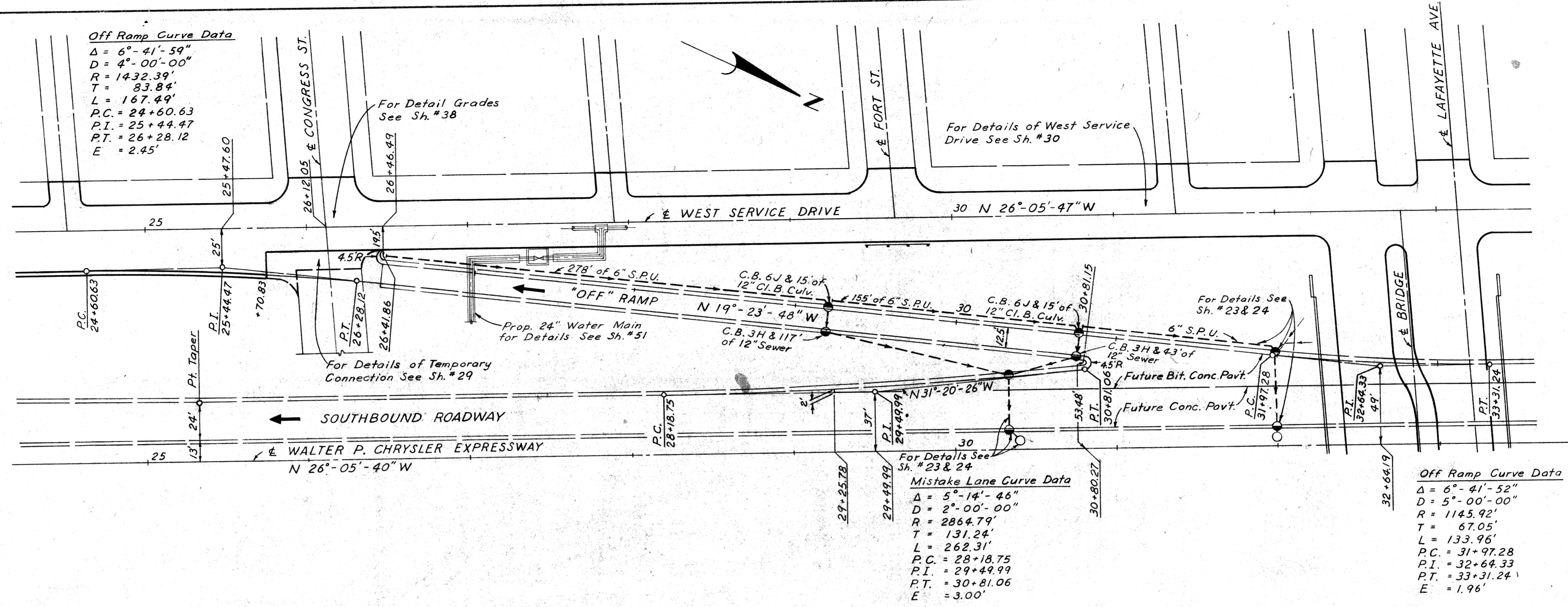
PLANS PREPARED BY
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

OPERATION	DATE
PRELIMINARY R.O.W. CHECKED	9/28
FINAL DESIGN CHECKED	9/28
FINAL R.O.W. CHECKED	9/28
QUANTITIES CHECKED	9/28
ASBUILT	9/28

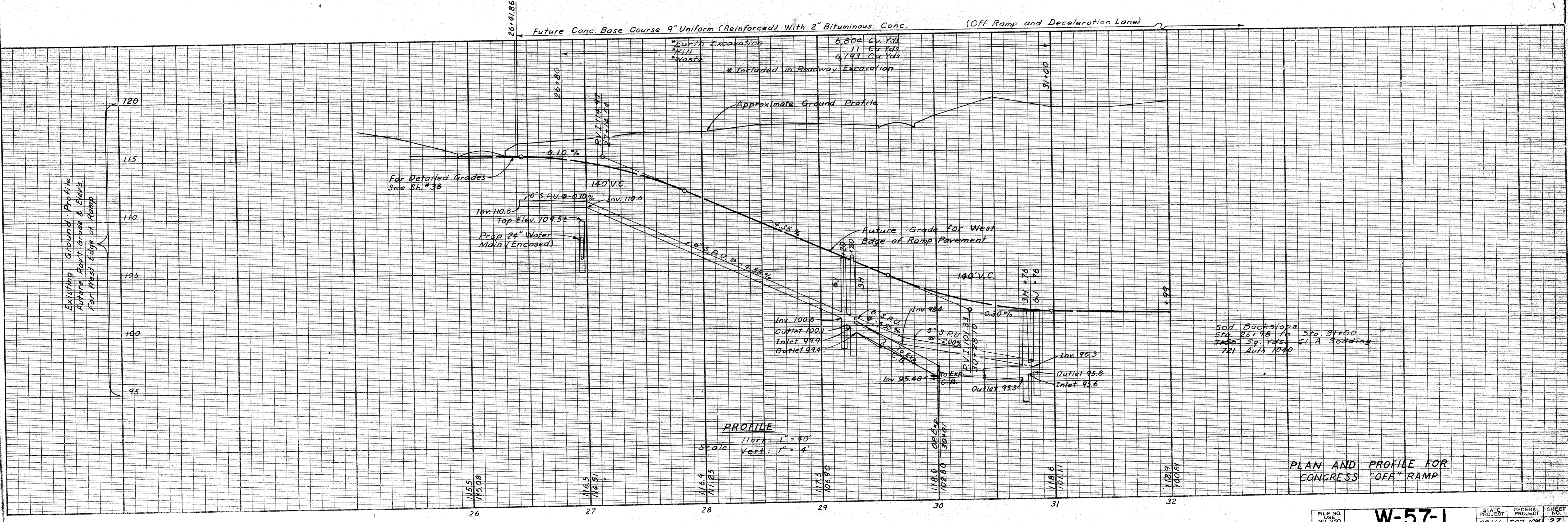
OPERATION	DATE
PLANS PLOTTED	
PROFILE PLOTTED	
PRELIMINARY INSPECTION	
FEDERAL INSPECTION	

PLANS PREPARED BY
CITY OF DETROIT
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

B.F.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-124		27	27
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82111	Wayne	Detroit	27	27



PLAN
Scale: 1" = 40'



PROFILE
 Horiz: 1" = 40'
 Vert: 1" = 4'

PLAN AND PROFILE FOR
CONGRESS "OFF" RAMP

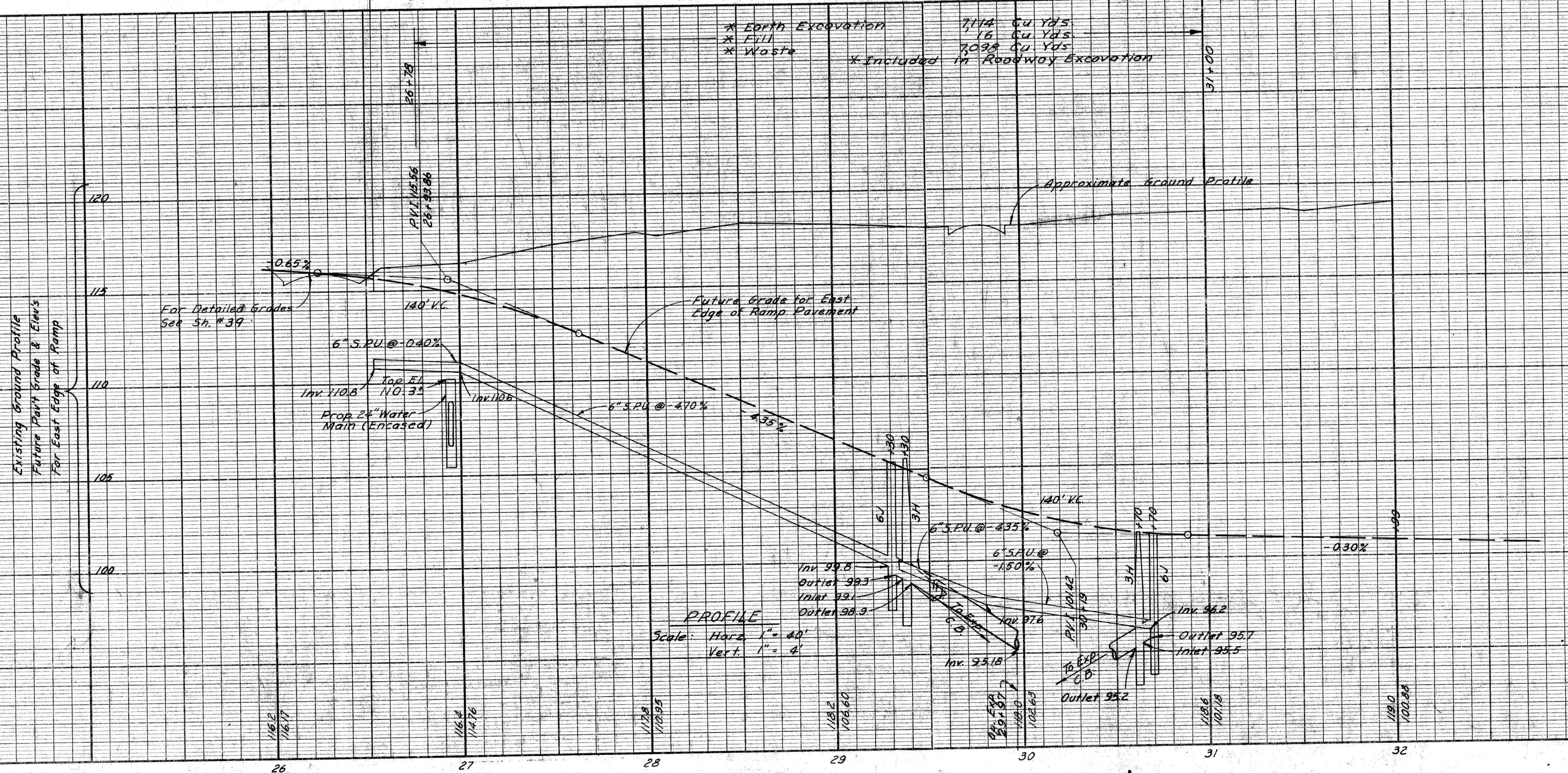
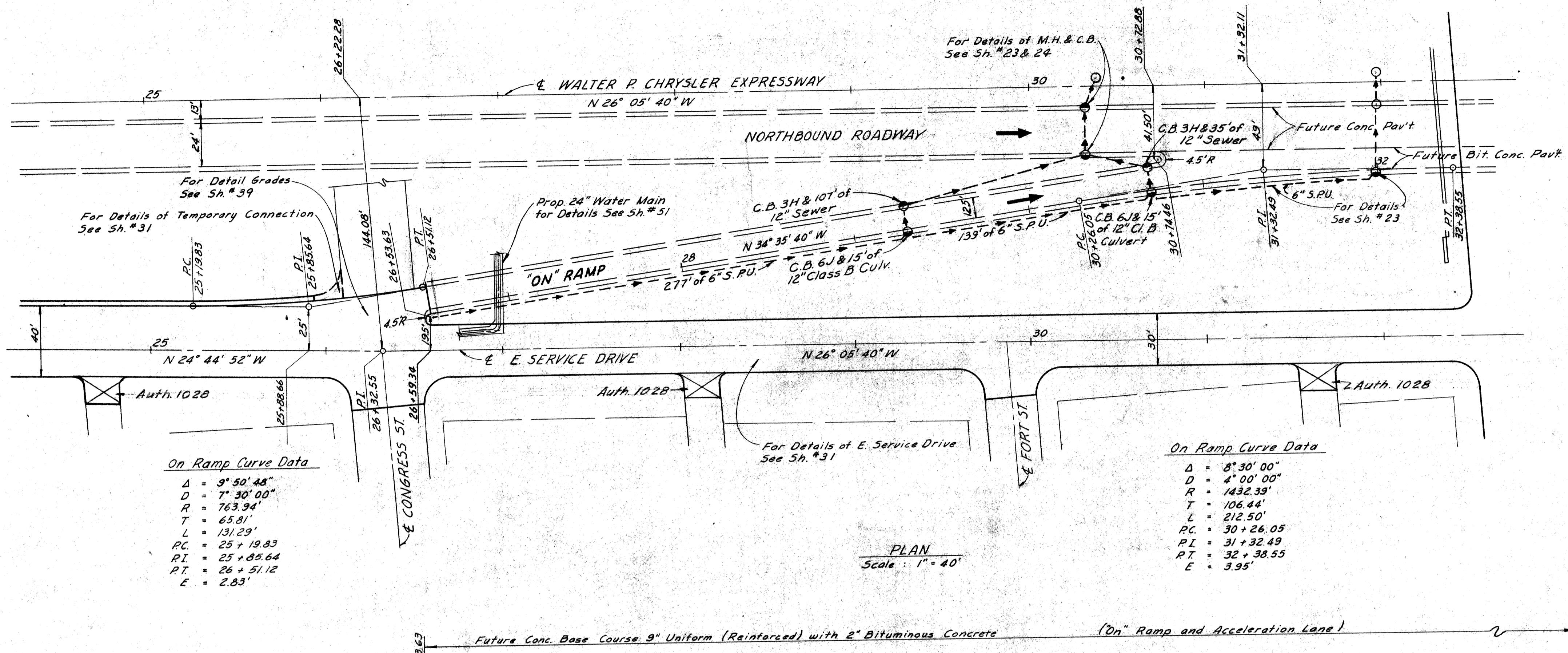
FILE NO.	W-57-1	STATE PROJECT	82111	FISCAL YEAR	107-124	SHEET	27
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S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit	88		

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

OPERATION	DATE	BY
PRELIMINARY DESIGN CHECKED		
FINAL DESIGN CHECKED		
TRACED		
QUANTITIES CHECKED		
SCALED		

OPERATION	DATE	BY
SURVEYED		
PLAN PLOTTED		
PLAN CHECKED		
PROFILE CHECKED		
PRELIMINARY GRADE		
GENERAL INSPECTION		



PLAN AND PROFILE FOR CONGRESS "ON" RAMP

Station	Temp. Pavt. 6" Unif. Conc. Sa. Yds.	2" Bituminous Conc. Sa. Yds.
20+55 Rt.	8 1/6	9 1/6
22+70 Lt.	5	5
24+53 Lt.	22	Auth. 1013
25+85 Rt.	33	
26+12 Lt.	80	
26+40 Rt.	4	
Totals	153 1/60	14 2/3

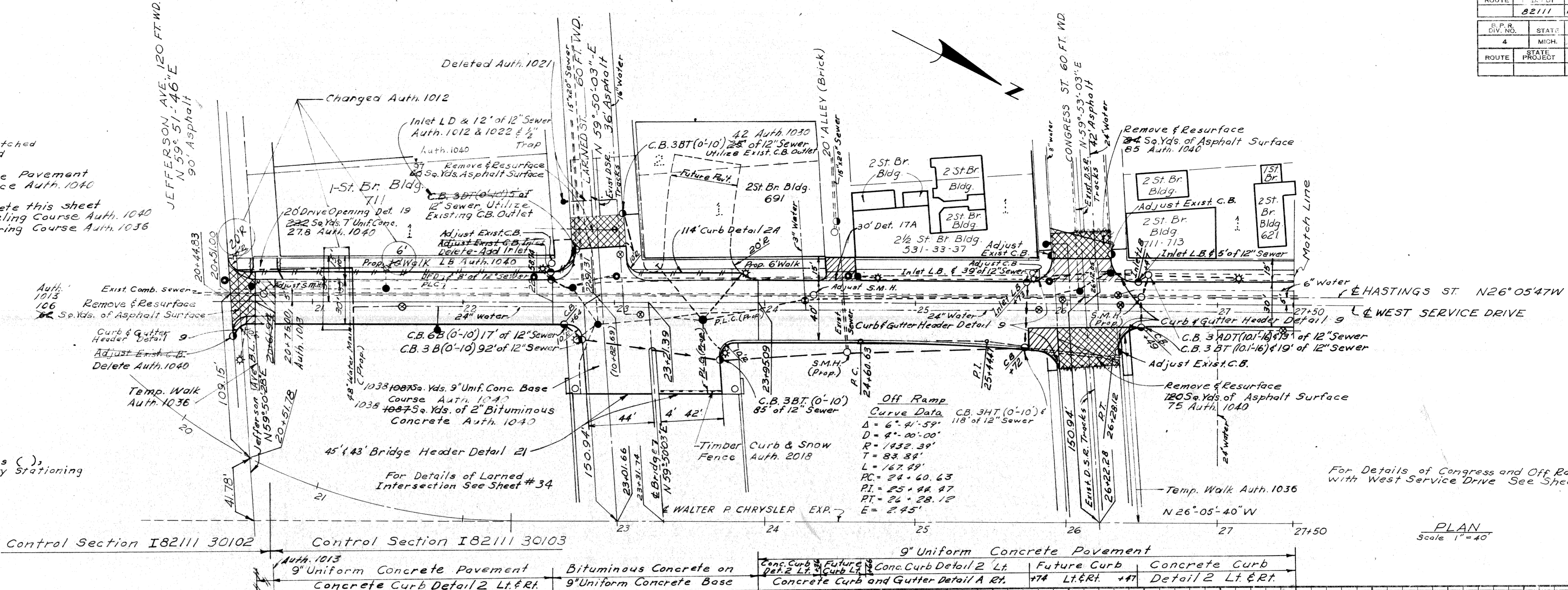
C.B.M. #6 Elev. 123.571 Arrow on hydrant NE corner of Hastings and Larned

C.B.M. #5 Elev. 124.736 Arrow on hydrant NE corner of St. Antoine and Larned.

C.B.M. #15 Elev. 119.115 Arrow on hydrant N.W. corner of St. Antoine and Congress

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE <td>STATE <td>COUNTY <td>CITY <td>SHEET NO. <td>TOTAL SHEETS</td> </td></td></td></td>	STATE <td>COUNTY <td>CITY <td>SHEET NO. <td>TOTAL SHEETS</td> </td></td></td>	COUNTY <td>CITY <td>SHEET NO. <td>TOTAL SHEETS</td> </td></td>	CITY <td>SHEET NO. <td>TOTAL SHEETS</td> </td>	SHEET NO. <td>TOTAL SHEETS</td>	TOTAL SHEETS
82111	WAYNE	DETROIT		29	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE	COUNTY		SHEET NO.	TOTAL SHEETS

Remove Asphalt surface shown cross hatched to provide for a smooth connection and to adjust crown
 Replace with Bituminous Concrete Pavement
 363 326 Sq. Yds. Removing Asphalt Surface Auth. 1040
 1422
 Total 1427 Sq. Yds. Bituminous Concrete this sheet
 2007 1/2 Tons of Bituminous Concrete Leveling Course Auth. 1040
 807 1/2 Tons of Bituminous Concrete Wearing Course Auth. 1036



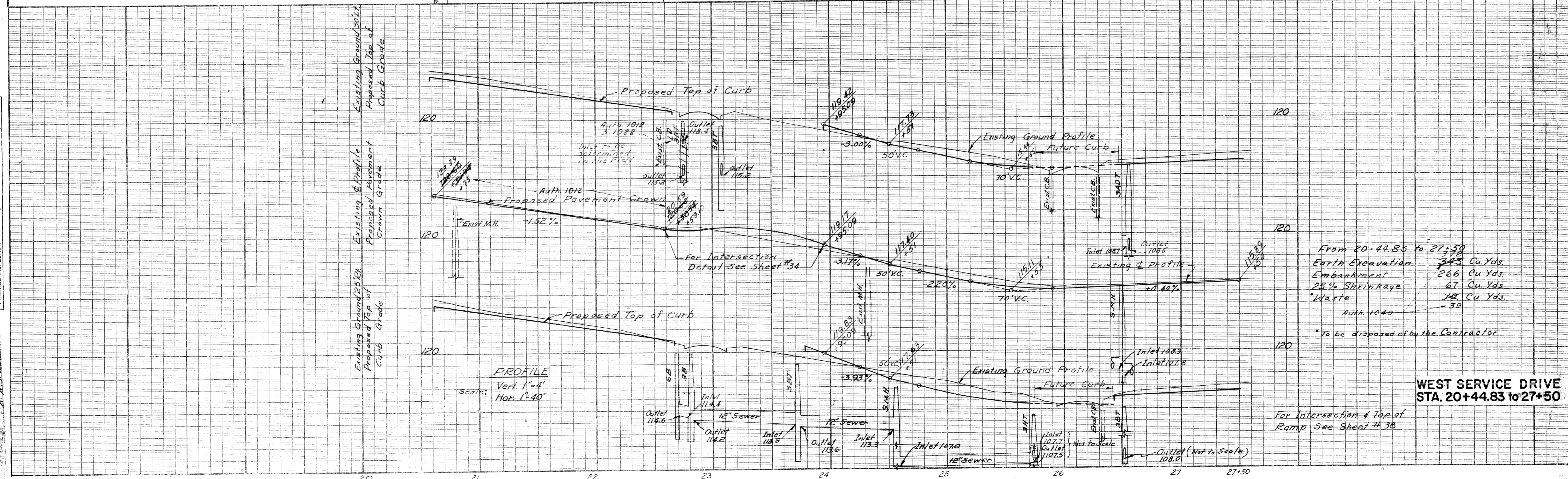
Note: Station shown in brackets thus (), refers to Hastings St. Survey Stationing

For Details of Congress and Off Ramp Intersection with West Service Drive See Sheet # 38

PLAN Scale 1"=40'

OPERATION	DATE	BY
PRELIMINARY P.L.W. CHECKED		
FINAL DESIGN CHECKED		
TRACED		
PAVED P.L.W. CHECK		
QUANTITIES CHECKED		
SQUAD		

OPERATION	DATE	BY
SURVEYED		
PLAN PLOTTED		
PROFILE PLOTTED		
PROFILE CHECKED		
PRELIMINARY GRADE		
FEDERAL INSPECTION		



From 20+44.85 to 27+50
 Earth Excavation 343 Cu. Yds.
 Embankment 266 Cu. Yds.
 25% Shrinkage 67 Cu. Yds.
 Waste 100 Cu. Yds.
 Auth. 1040
 *to be disposed of by the Contractor

WEST SERVICE DRIVE STA. 20+44.85 to 27+50

For Intersection & Top of Ramp See Sheet # 38

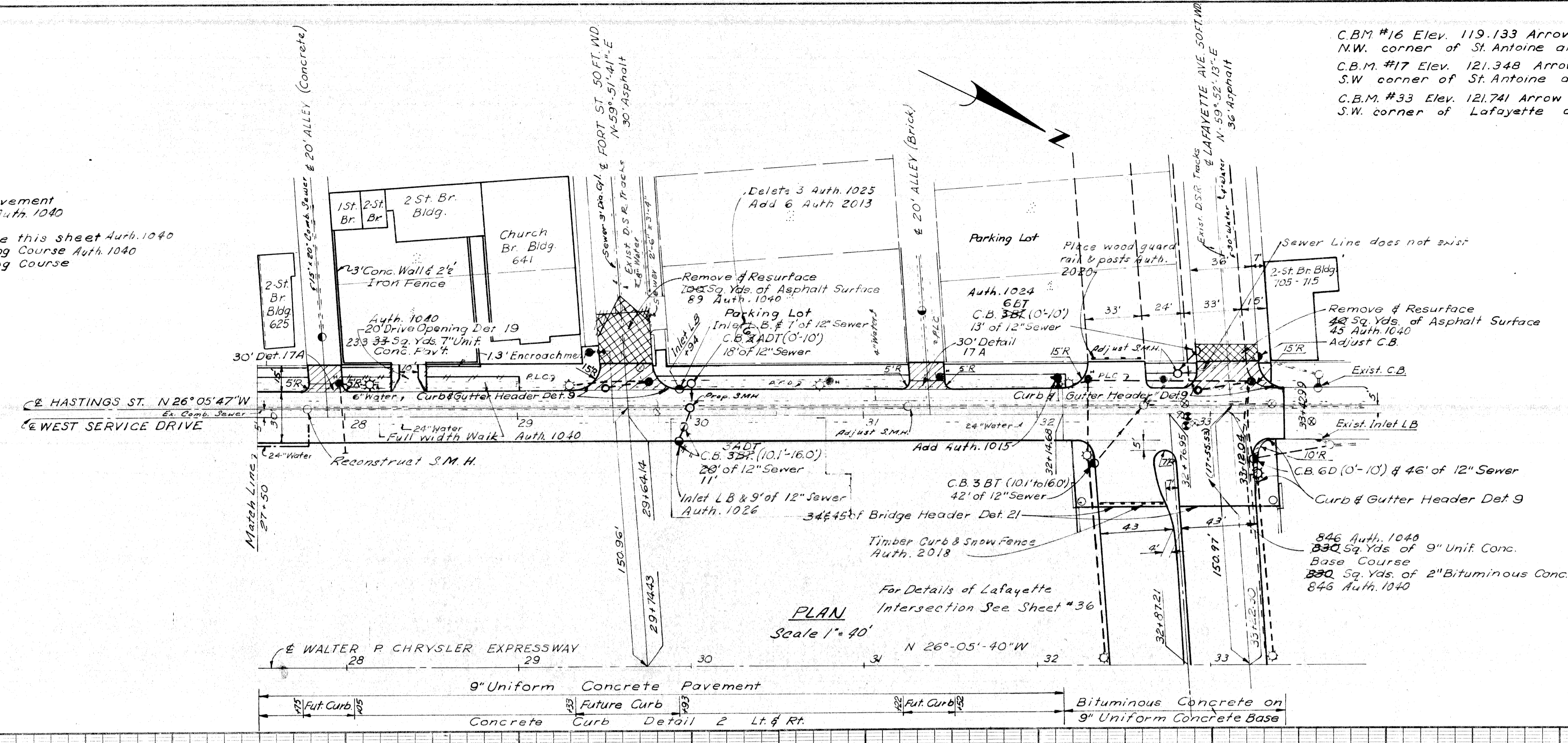
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER OFFICE
BUREAU OF STREETS AND SURVEYING

Station	Temp Pav't	2" Bituminous Conc. Sq. Yds.
27+90 Lt	22	
29+64 Lt	60	
31+38 Lt	22	67
33+12 Lt	66	
33+28 Rt	4	5
Total	174	72

Remove Asphalt surface shown Cross hatched to provide for a smooth connection and to adjust crown. Replace with Bituminous Concrete Pavement 149 Sq. Yds. Removing Asphalt Surface Auth. 1040 1052
Total 1042 Sq. Yds. Bituminous Concrete this sheet Auth. 1040
95 Tons of Bituminous Concrete Leveling Course Auth. 1040
52 Tons of Bituminous Concrete Wearing Course

OPERATION
PRELIMINARY R.O.W. CHECKED
FINAL DESIGN CHECKED
TRACED
FIELD SURVEY CHECKED
QUANTITIES CHECKED
SQUAD

DATE
BY
OPERATION
SURVEYED
PLAN CHECKED
FINAL DESIGN CHECKED
PROFILE PLOTTED
PROFILE CHECKED
GRADE INSPECTION
FEDERAL INSPECTION



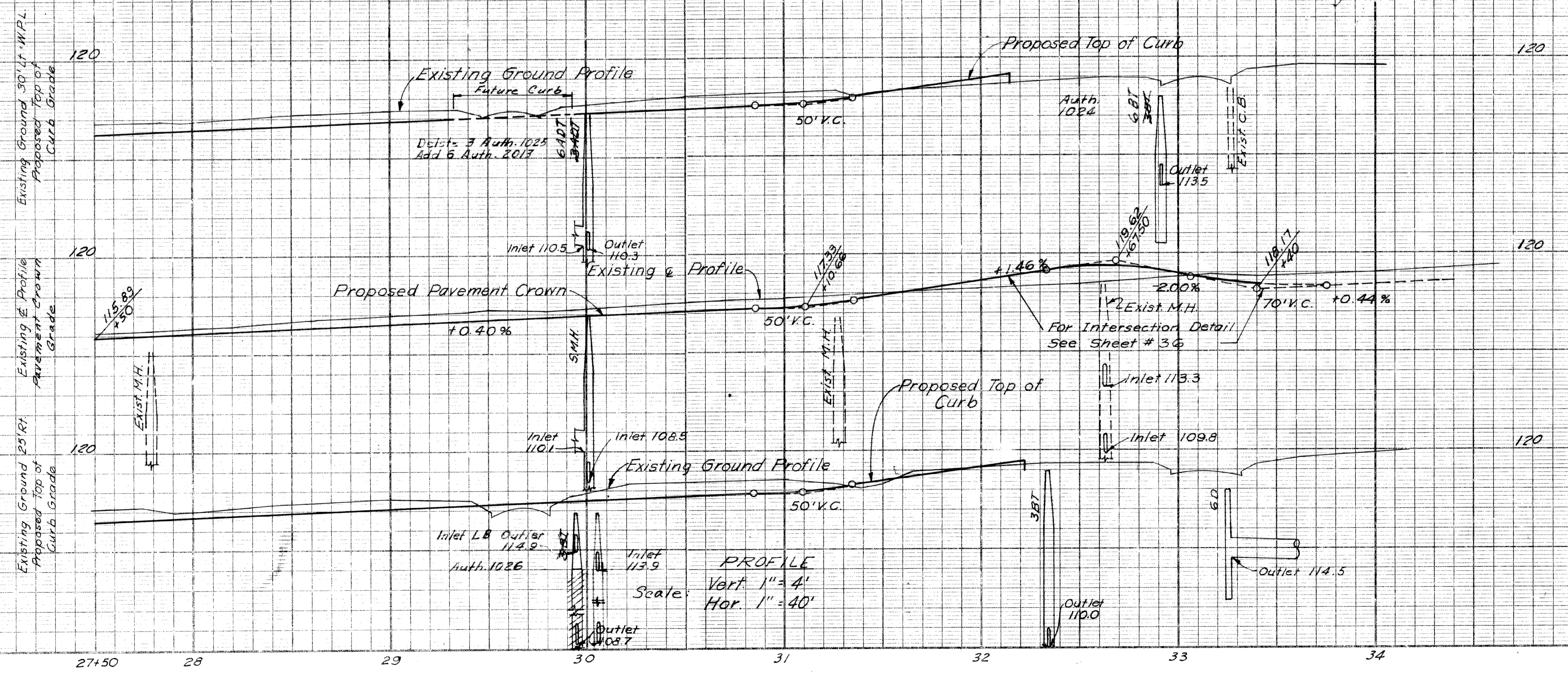
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE PROJECT	COUNTY	CITY		SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		30	

C.B.M. #16 Elev. 119.133 Arrow on hydrant N.W. corner of St. Antoine and Fort.
C.B.M. #17 Elev. 121.348 Arrow on hydrant S.W. corner of St. Antoine and Lafayette.
C.B.M. #33 Elev. 121.741 Arrow on hydrant S.W. corner of Lafayette and Hastings.

Note: Stations shown in brackets thus () refer to Hastings St. Survey Stationing.

PLAN
Scale 1" = 40'

CONTROL SECTION I 82111-30103 CONTROL SECTION I 82111-30104



From 27+50 to 33+42.99

Earth Excavation	247 Cu. Yds.	Auth. 1043
Embankment	313 Cu. Yds.	
25% Shrinkage	18 Cu. Yds.	
Borrow	174 Cu. Yds.	
Waste	30 Cu. Yds.	Auth. 1043

WEST SERVICE DRIVE
STA. 27+50 to 33+42.99

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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND BRIDGES

OPERATION	DATE
PRELIMINARY P.C.W. CHECKED	
FINAL DESIGN CHECKED	
TRACED	
QUANTITIES CHECKED	
SQUAD	

OPERATION	DATE
SURVEYED	
PLAN CHECKED	
PROFILE PLOTTED	
PROFILE CHECKED	
GRADE INSPECTION	
FEDERAL INSPECTION	

Station	Temp Pavement 8 Unit Conc. Sa Yds	2" Bituminous Conc. Sa Yds
23+35 Rt	32	32
24+70 Rt	7	
26+05 Lt	95	1040-1028
26+32 Rt		
Total	245 134	32

CONTROL SECTION I82111-30102 CONTROL SECTION I82111-30103

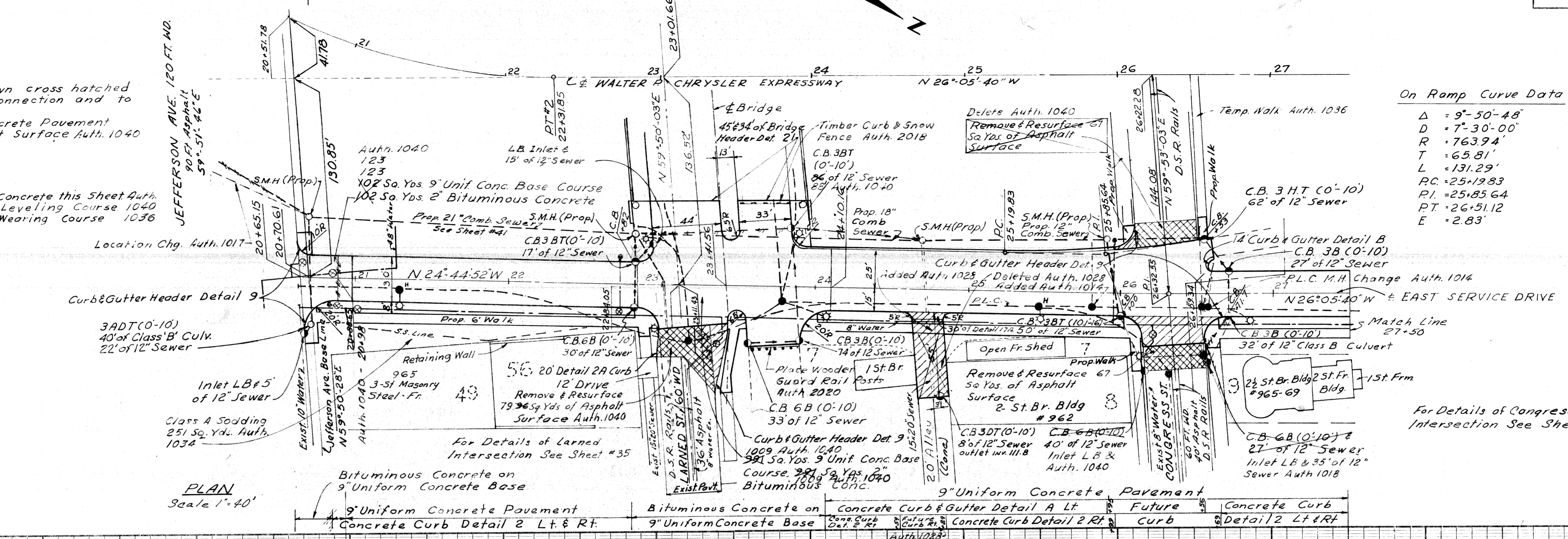
C.B.M.#7 Elev 121.334 Arrow on hydrant
S.E. corner of Rivard and Larned

C.B.M.#32 Elev 119240 Arrow on hydrant
N.E. corner of Rivard and Congress

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		31	
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	HAYNE	DETROIT		31	
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

Remove Asphalt surface shown cross hatched to provide for a smooth connection and to adjust crown.
Replace with Bituminous Concrete Pavement
146 230 Sa Yds Removing Asphalt Surface Auth. 1040

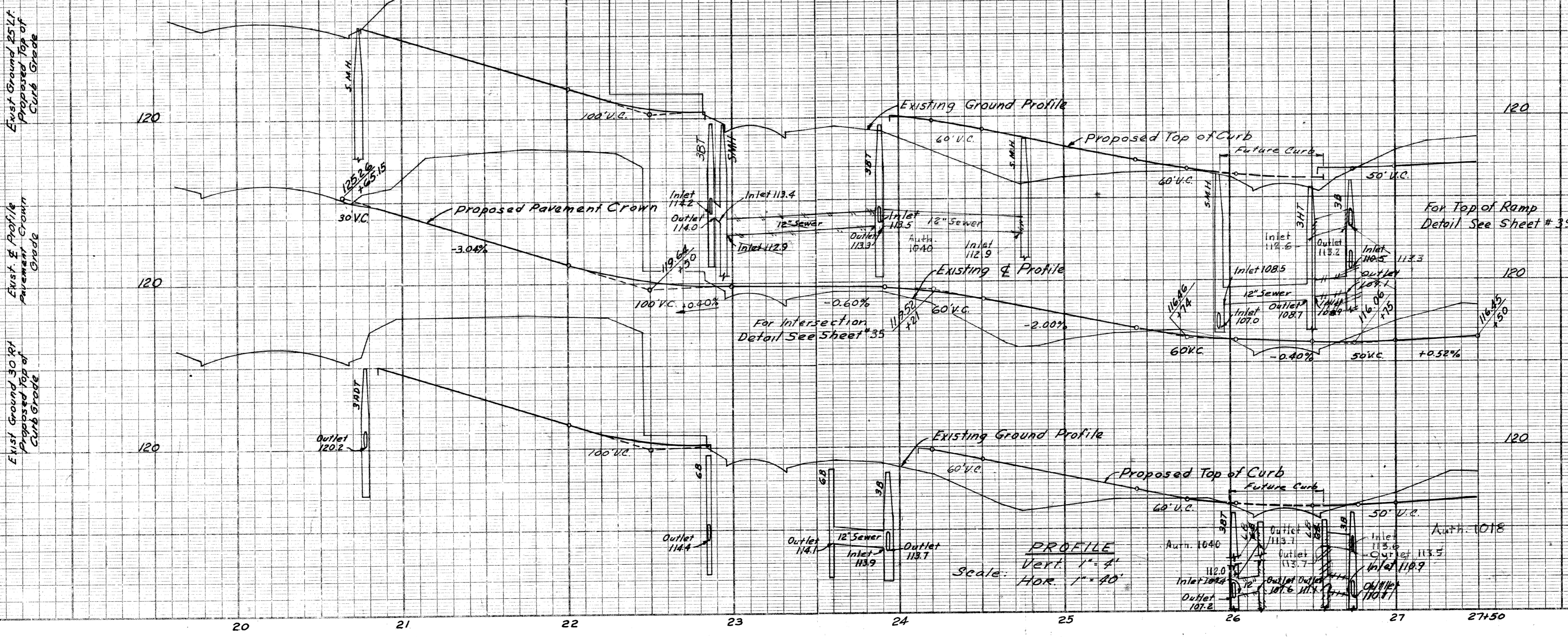
1310 Auth. 1040
Total 1310 Sa Yds Bituminous Concrete this Sheet Auth.
128 68 Tons of Bituminous Concrete Leveling Course 1040
69 68 Tons of Bituminous Concrete Wearing Course 1036



On Ramp Curve Data
 $\Delta = 9^{\circ}50'48''$
 $D = 7^{\circ}30'00''$
 $R = 763.94'$
 $T = 65.81'$
 $L = 131.29'$
 $PC = 25+198.3$
 $PI = 25+85.64$
 $PT = 26+51.12$
 $E = 2.83'$

PLAN
Scale 1"=40'

For Details of Congress Intersection See Sheet #39



From 20+65.15 to 27+50

Earth Excavation	1391 Cu Yds.
Embankment	1032 Cu Yds.
25% Shrinkage	238 Cu Yds.
Waste	101 Cu Yds.

* To be disposed of by the Contractor

EAST SERVICE DRIVE
STA. 20+65.15 to 27+50

PROFILE
Scale: Vert. 1"=4'
Hor. 1"=40'

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
W-57-1	82111	107-1(24)	31

PLANS PREPARED BY
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OPERATION	BY	DATE
DESIGNED		
CHECKED		
FINAL DESIGN CHECKED		
TRAFFIC ENGINEER CHECKED		
QUANTITIES CHECKED		
SOUD		

OPERATION	BY	DATE
SURVEYED		
PLAN PLOTTED		
PROFILE ALIGNED		
PROFILE CHECKED		
PRELIMINARY QUANTITIES		
FEDERAL INSPECTION		

FILED
MILWAUKEE
MAY 19 1943
STENCIL

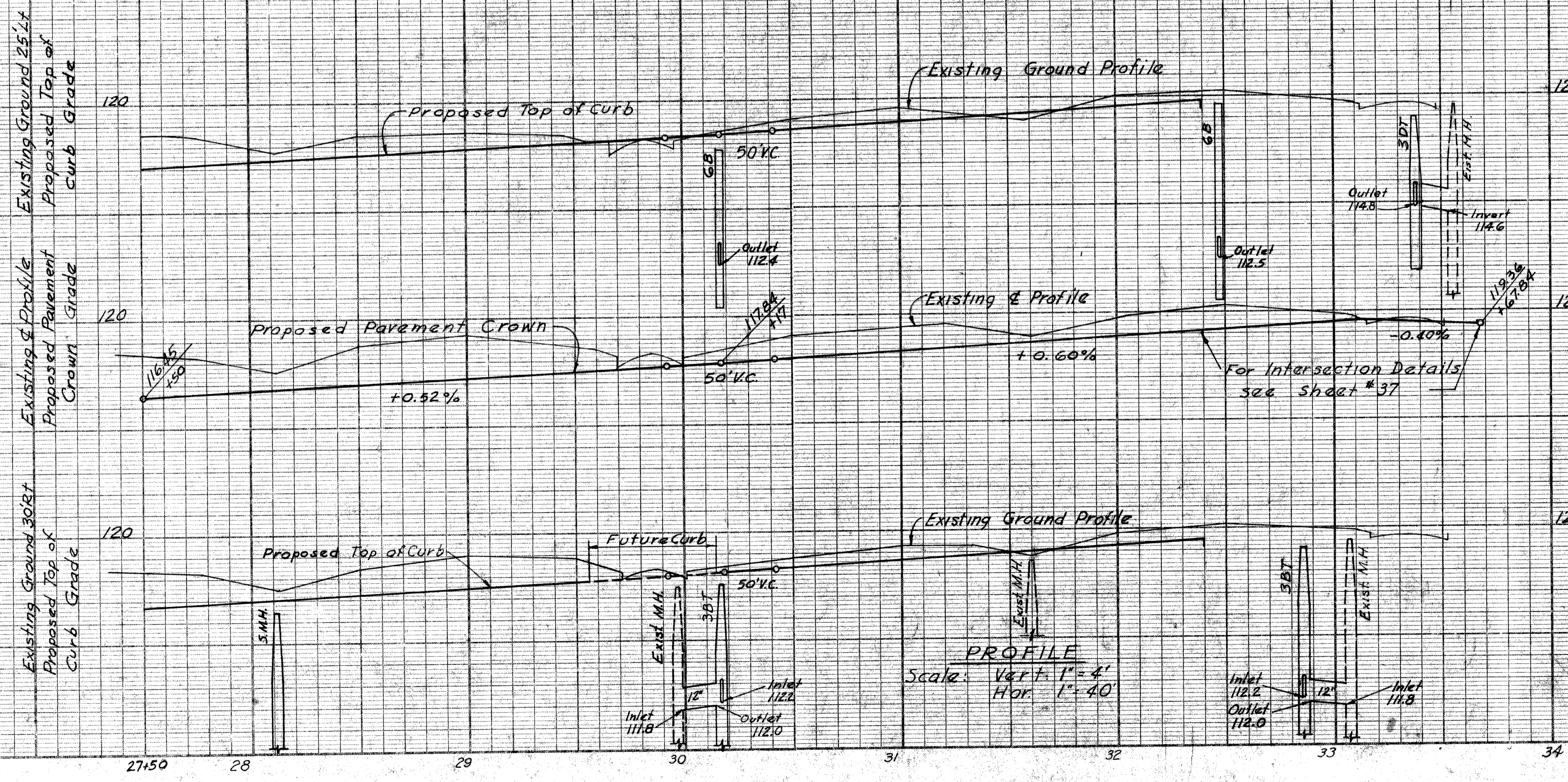
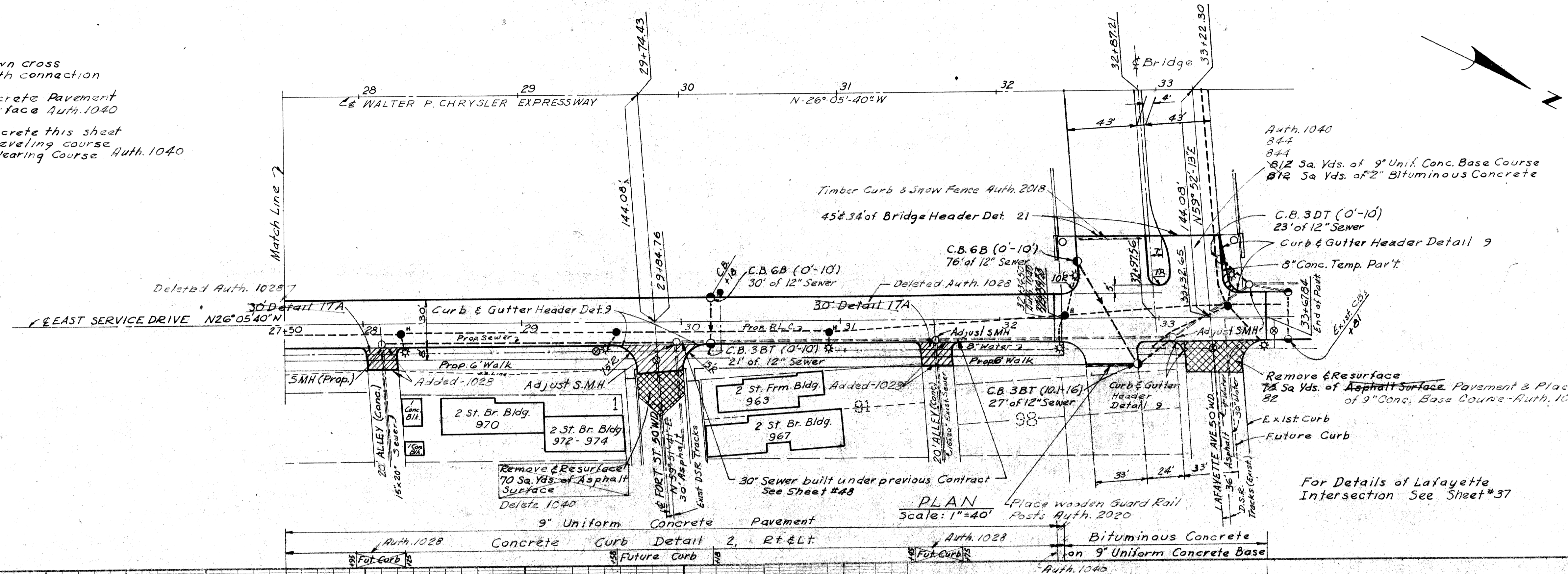
Station	Temp. Pavt. 8" Unif. Conc. Sa. Yds.	2" Bituminous Conc. Sa. Yds.
28+10 Rt.	20 Auth. 1028	
29+85 Rt.	68 63 " 1040	
31+58 Rt.	20 " 1028	
33+15 Rt.	2 " 1040	3
33+45 Lt.	26 6 " 1040	6
Total	177	9

Remove Asphalt surface shown cross hatched to provide for a smooth connection and to adjust crown
Replace with Bituminous Concrete Pavement
0 Sa. Yds. Removing Asphalt Surface Auth. 1040
935 Auth. 1040
Total 975 Sa. Yds Bituminous Concrete this sheet
49 Tons of Bituminous Concrete Leveling course
47 48 Tons of Bituminous Concrete Wearing Course Auth. 1040

C.B.M. #31 Elev. 120.934 Arrow on hydrant
S.E. corner of Rivard and Fort

C.B.M. #30 Elev. 122.292 Arrow on hydrant
S.E. corner of Rivard and Lafayette

S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		32	



From 27+50 to 33+67.84
Earth Excavation 1273 Cu. Yds. 1347 Auth. 1043
Embankment 506 Cu. Yds.
25% Shrinkage 126 Cu. Yds.
*Waste 641 Cu. Yds.
715 Auth. 1043

*To be disposed of by the Contractor.

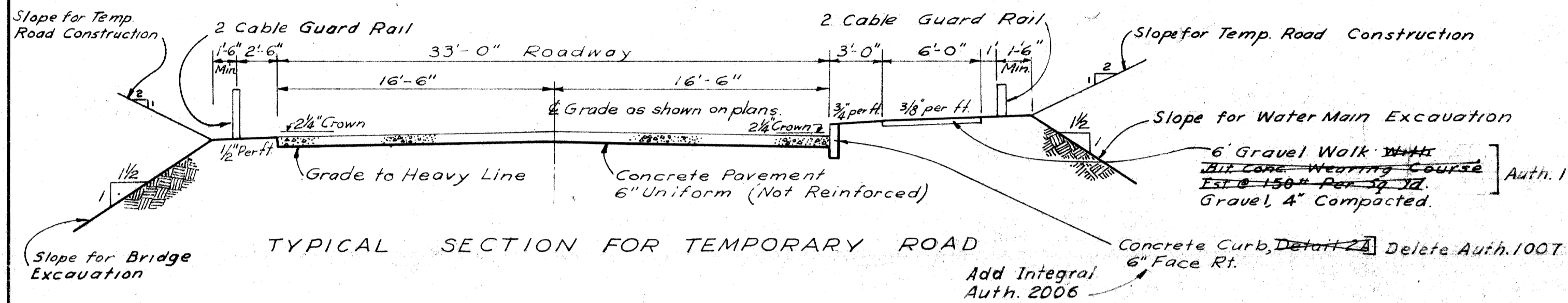
EAST SERVICE DRIVE
STA. 27+50 to 33+67.84

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

OPERATION	DATE
SURVEYED	
PLAN PLOTTED	
PLAN CHECKED	
PROFILE CHECKED	
PRELIMINARY GRADE	
FINAL INSPECTION	

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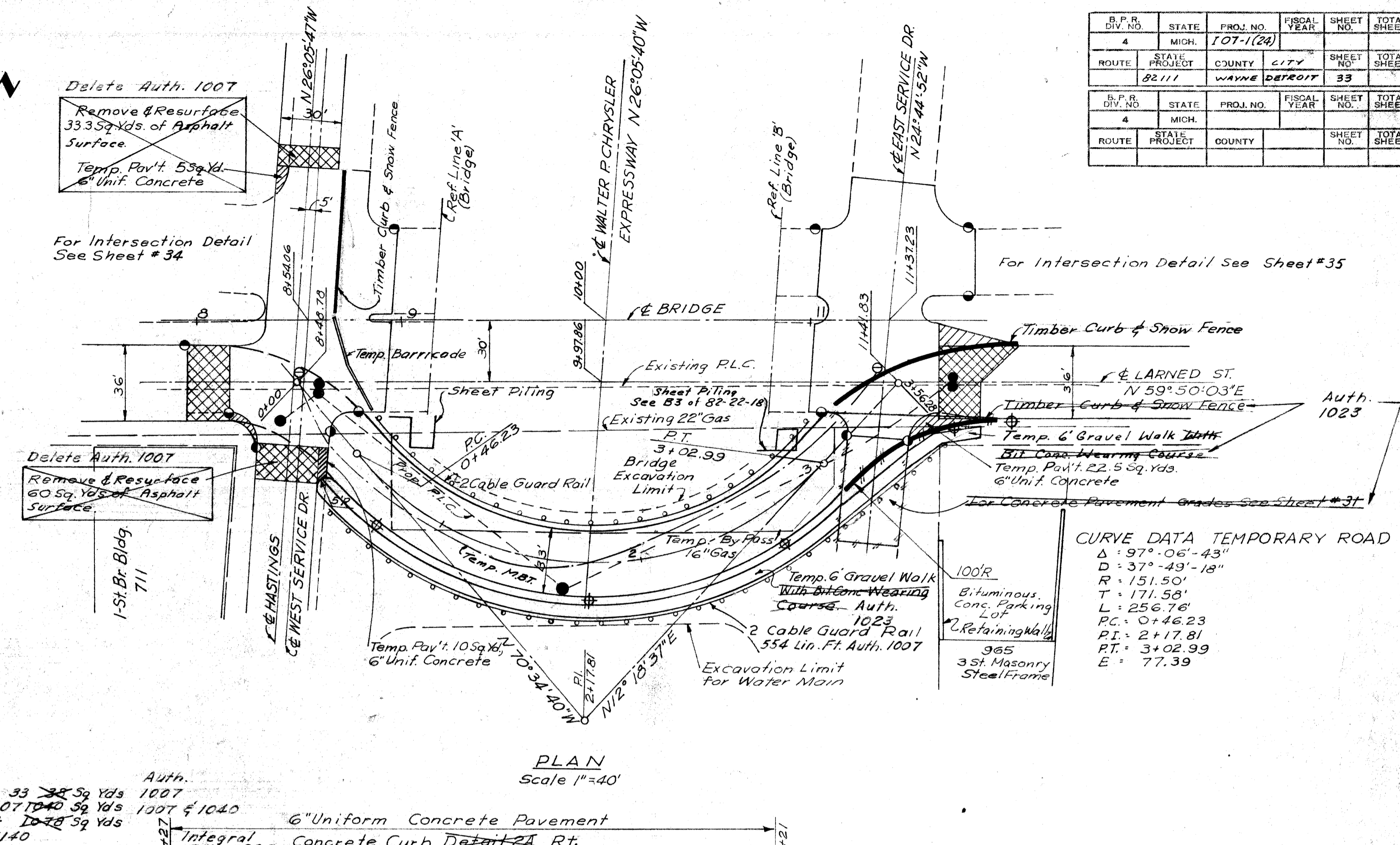
C.B.M.#6 Elev. 123.571 Arrow on hydrant
 N.E. corner of Hastings and Larned
 C.B.M.#5 Elev. 124.736 Arrow on hydrant
 N.E. corner of St. Antoine and Larned
 C.B.M.#7 Elev. 121.334 Arrow on hydrant
 S.E. corner of Rivard and Larned



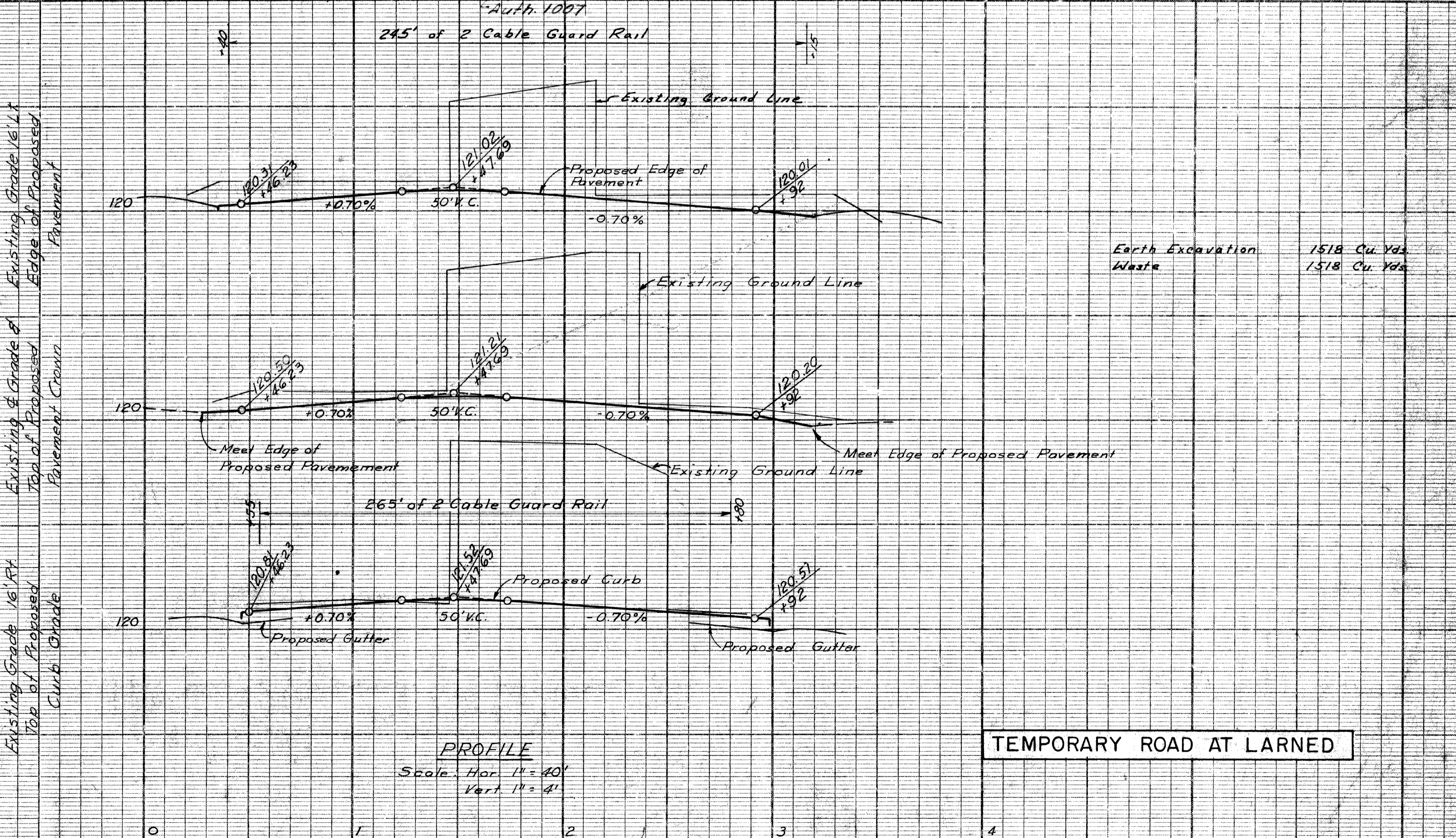
Remove Asphalt Surface Shown Cross-Hatched to Provide for Smooth Connections and to Adjust Crown. Replace With Bit Conc. Pavement.
 0 3 Sq. Yds Removing Asphalt Surface 1007
 0 3 Tons Bit. Conc. Leveling Course 1007
 0 3 Tons Bit. Conc. Wearing Course 1007

Sidewalk
 230 280 Sq. Yds. 6" Gravel Walk 1007
 0 7 Tons Bit. Conc. Wearing Course 1023

Temp. 6" Unif. Conc. Pavement Segments 33 38 Sq. Yds 1007
 Temp. 6" Unif. Conc. Pavement Roadway 1107 1040 Sq. Yds 1007 & 1040
 Total Temp. 6" Unif. Conc. Pavement this Sheet 1140

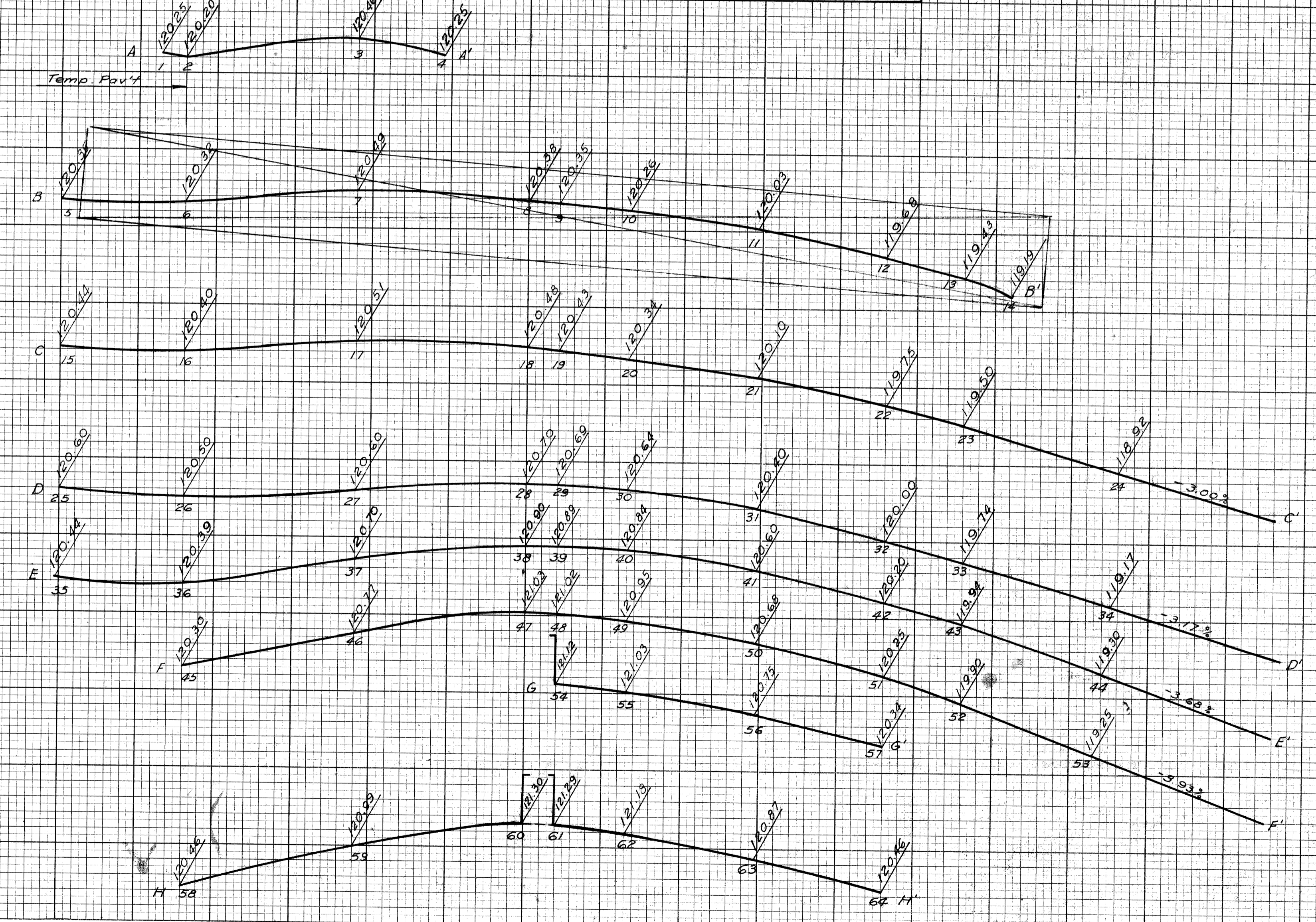
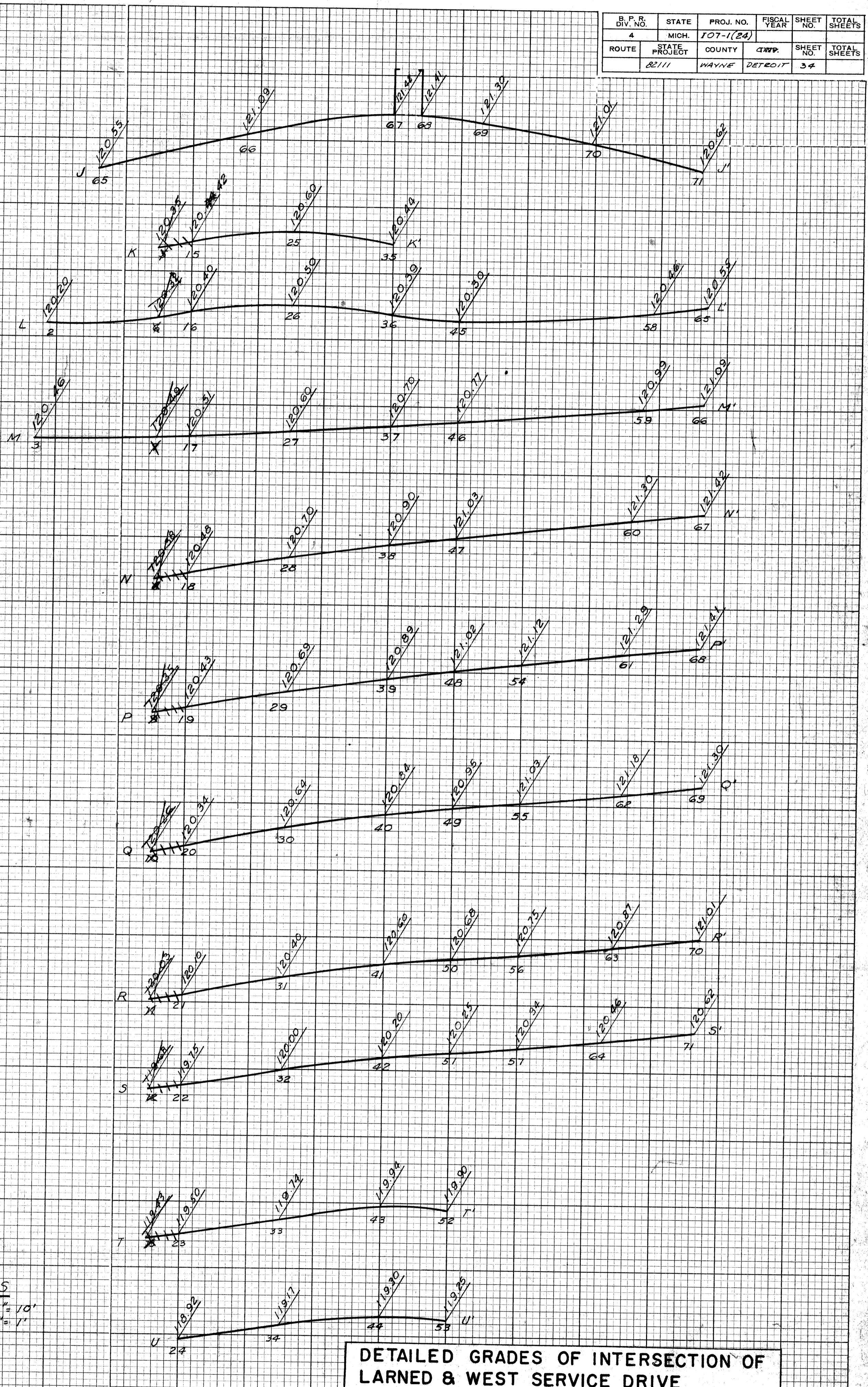
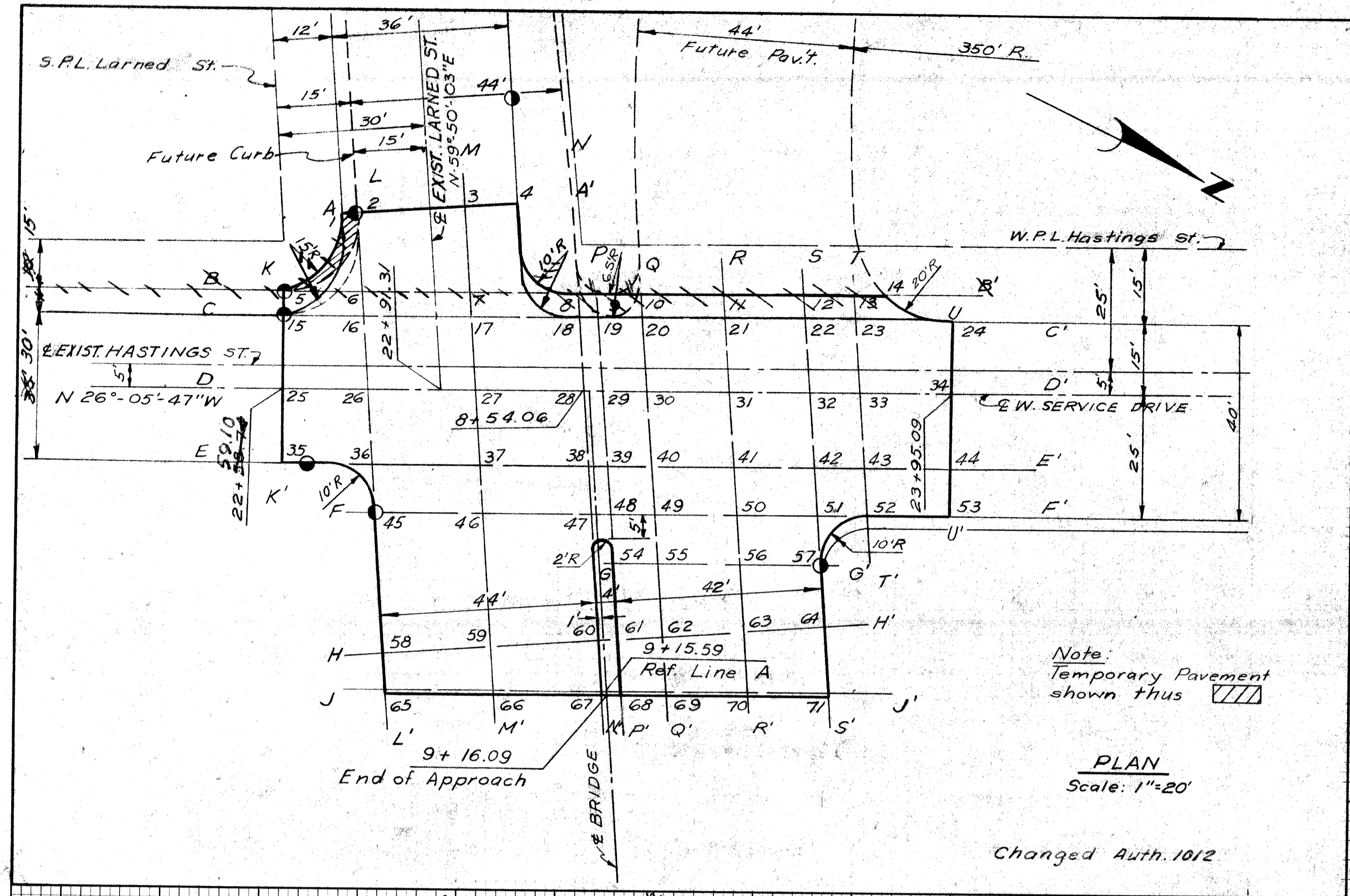


B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(26)			
ROUTE	PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
8211	WAYNE	DETROIT		33	



TEMPORARY ROAD AT LARNED

B.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	WAYNE	DETROIT		34	

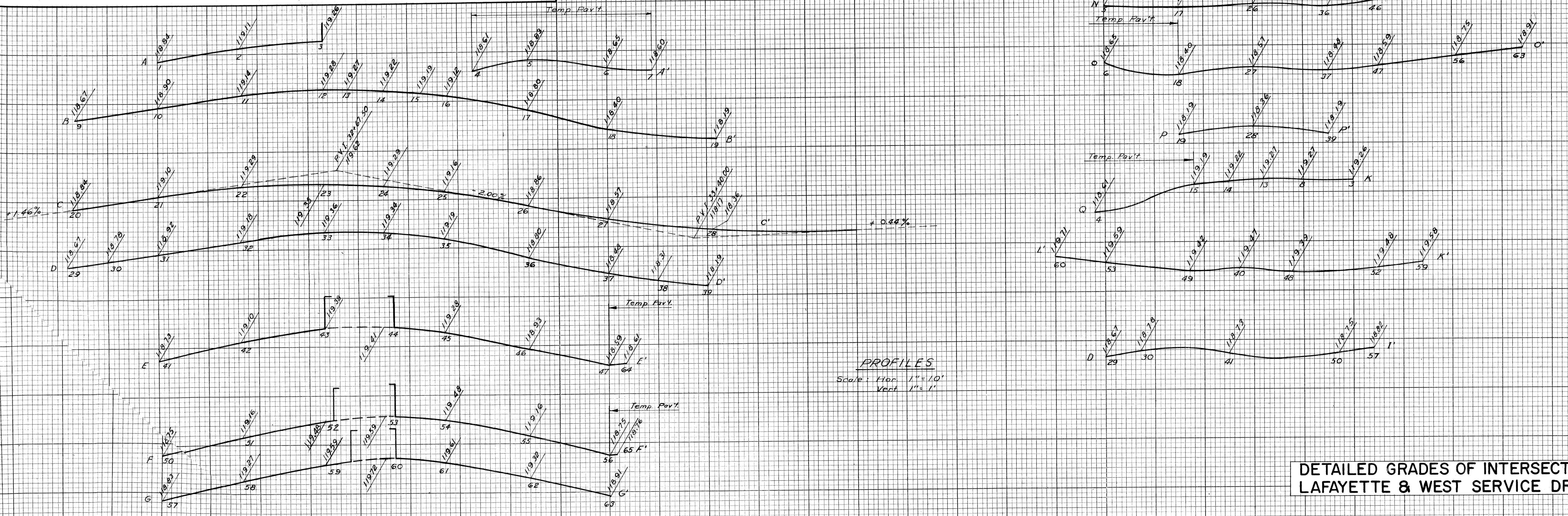
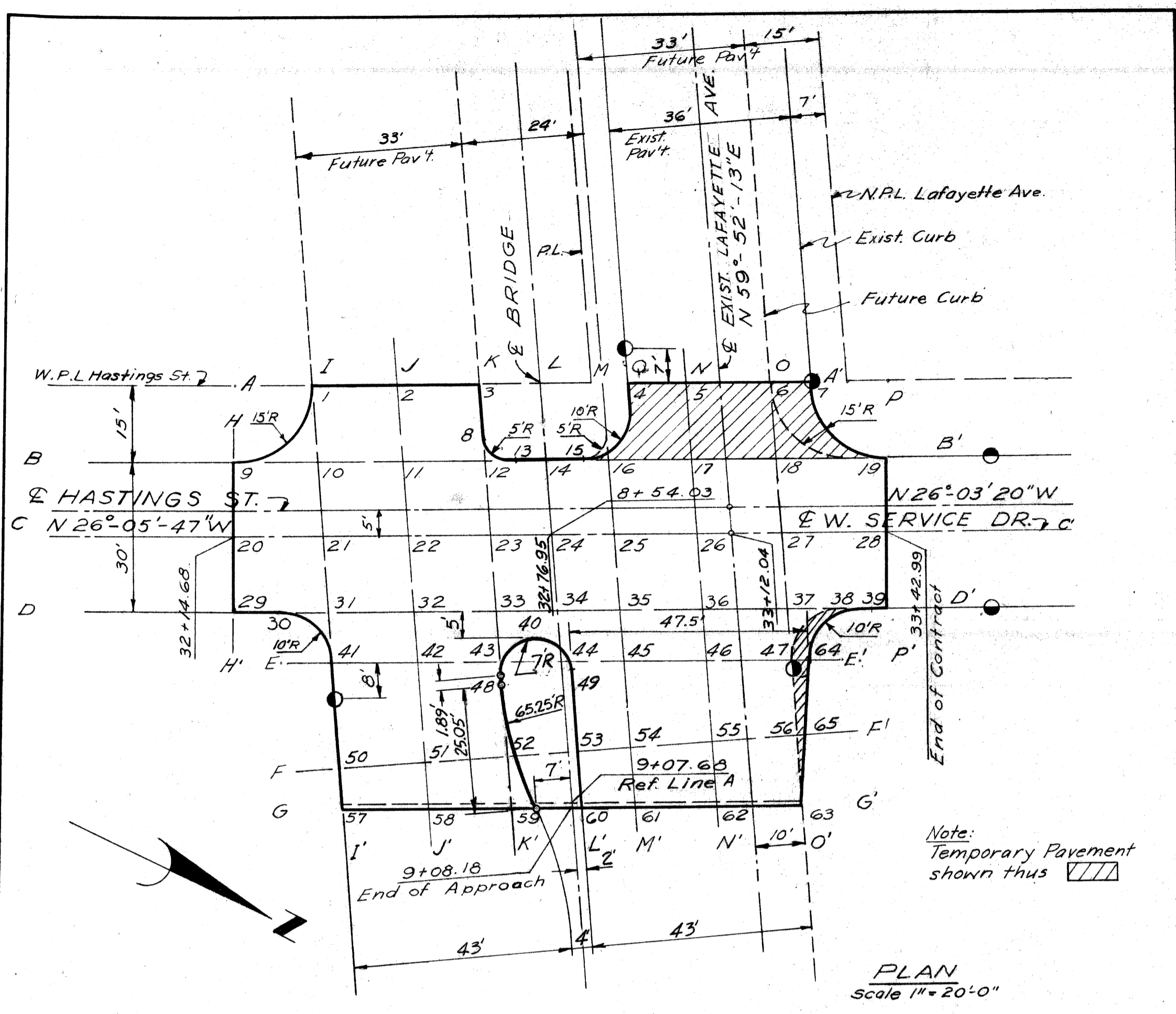


DATE	
BY	
DESIGNED	
CHECKED	
PLOTTED	
COMPILED	
CHECKED	

DESIGNED	CHIEVA, CALABIANO, O'NEIL
CHECKED	KAYWAS, N. PASLEY, S.E.
PLOTTED	RECOMMENDED FOR APPROVAL
COMPILED	
CHECKED	

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BLK. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)		36	36
ROUTE	STATE	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	MICH.	WAYNE	DETROIT	36	36



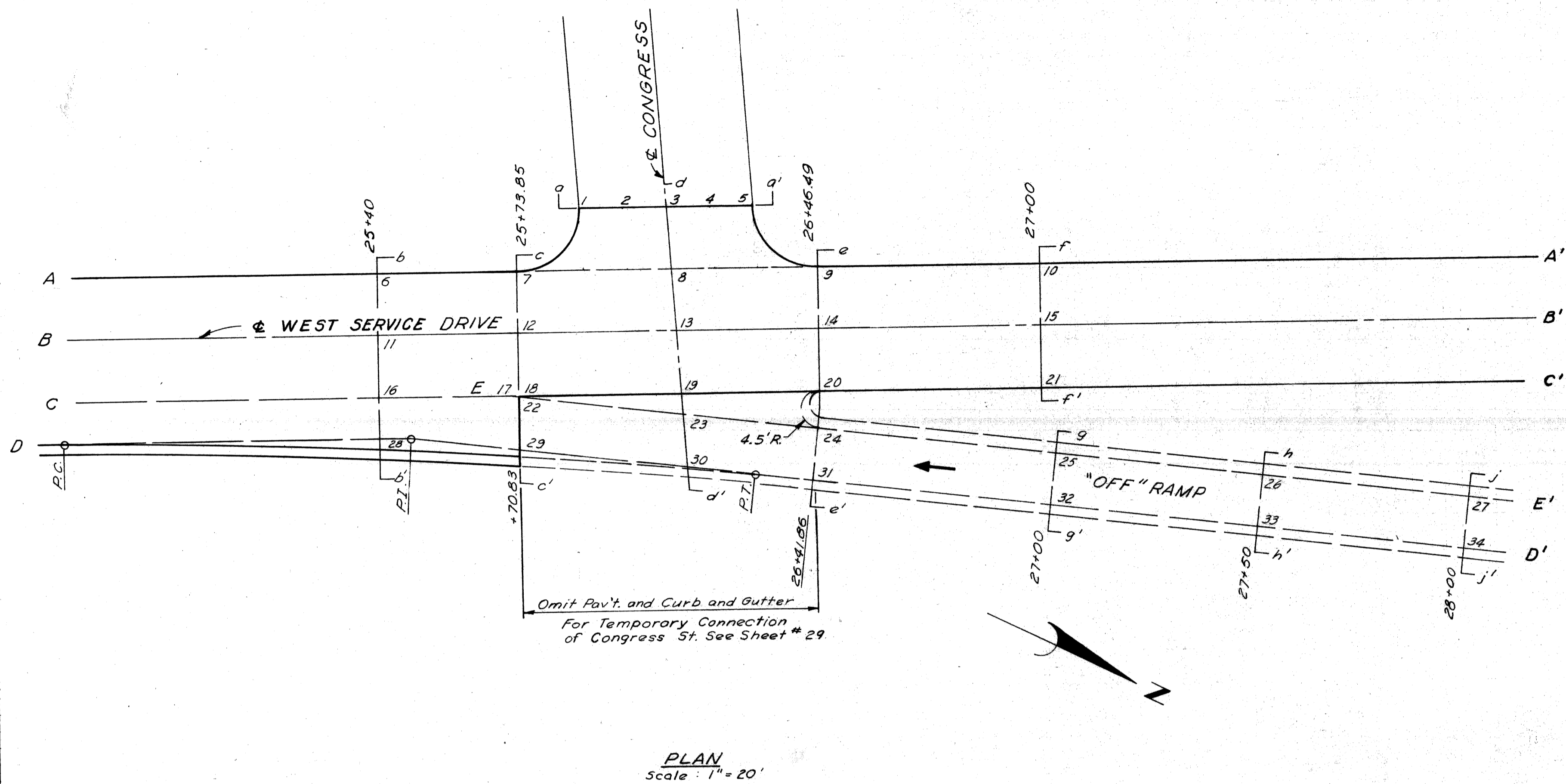
DETAILED GRADES OF INTERSECTION OF LAFAYETTE & WEST SERVICE DRIVE

DATE	BY	PLOTTED	COMPUTED	CHECKED

DATE	BY	APPROVED
10-29-53	C. J. ...	[Signature]
1-23-54	[Name]	[Signature]

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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

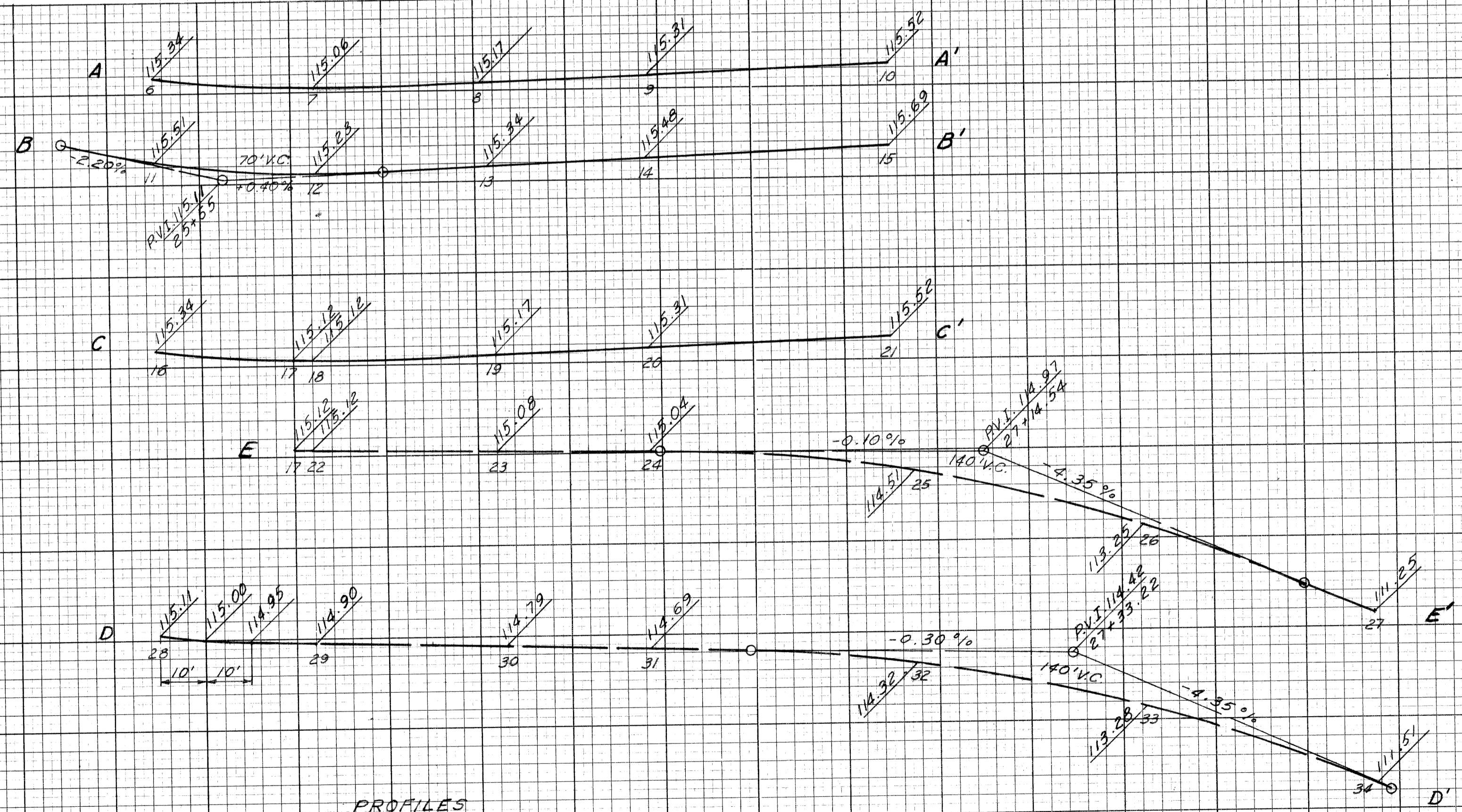
B. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82111	Wayne	Detroit		38	



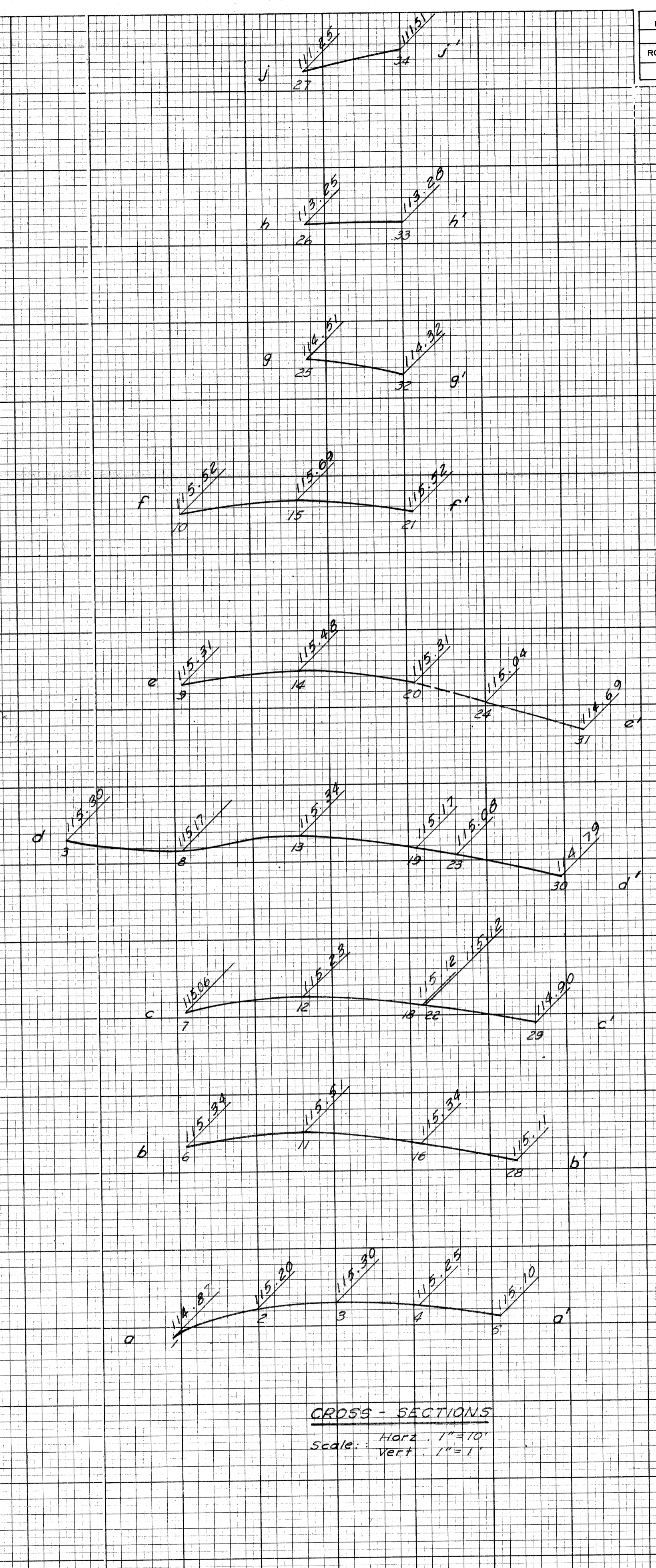
DATE	BY	PLOTTED	COMPUTED	CHECKED

REVISION	DATE	BY	REASON
1	7-18	CMAN	INITIALS
2	7-19	CMAN	INITIALS
3	7-19	CMAN	INITIALS

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PROFILES
 Scale: Horiz. 1" = 20'
 Vert. 1" = 2'

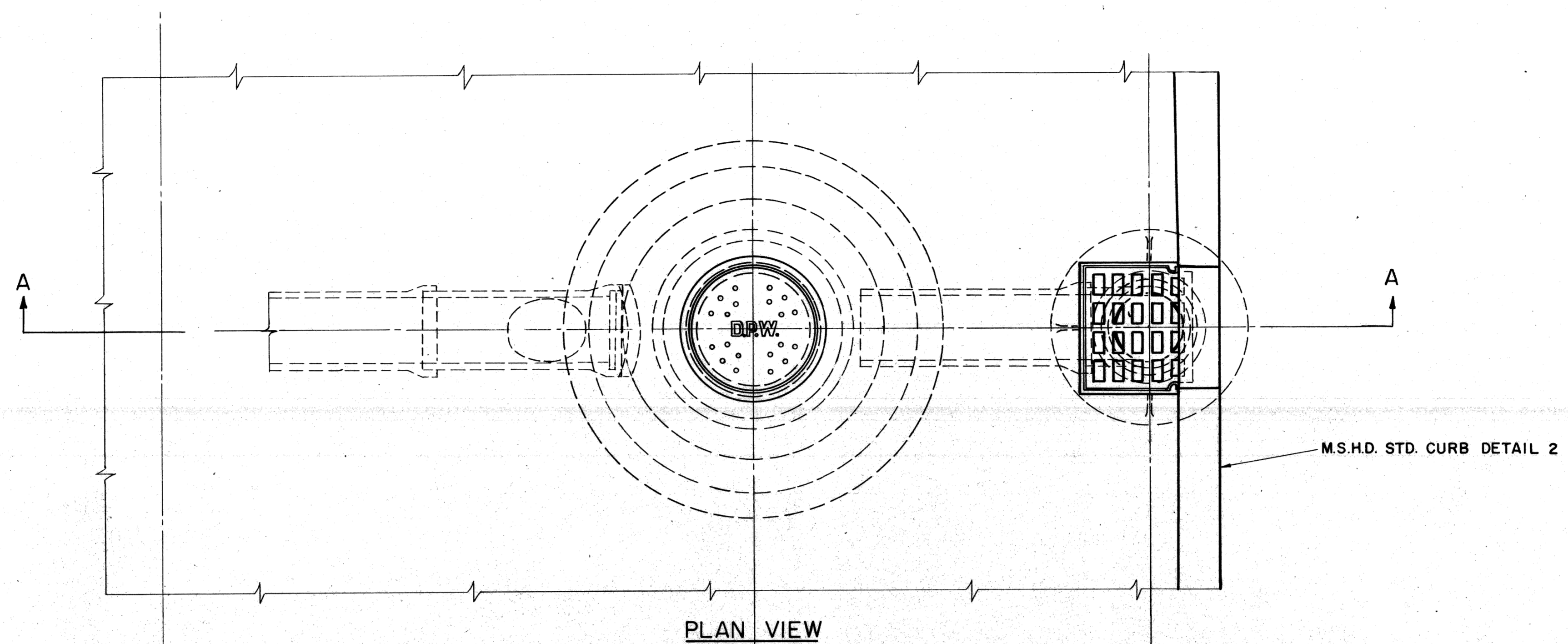


CROSS-SECTIONS
 Scale: Horiz. 1" = 10'
 Vert. 1" = 1'

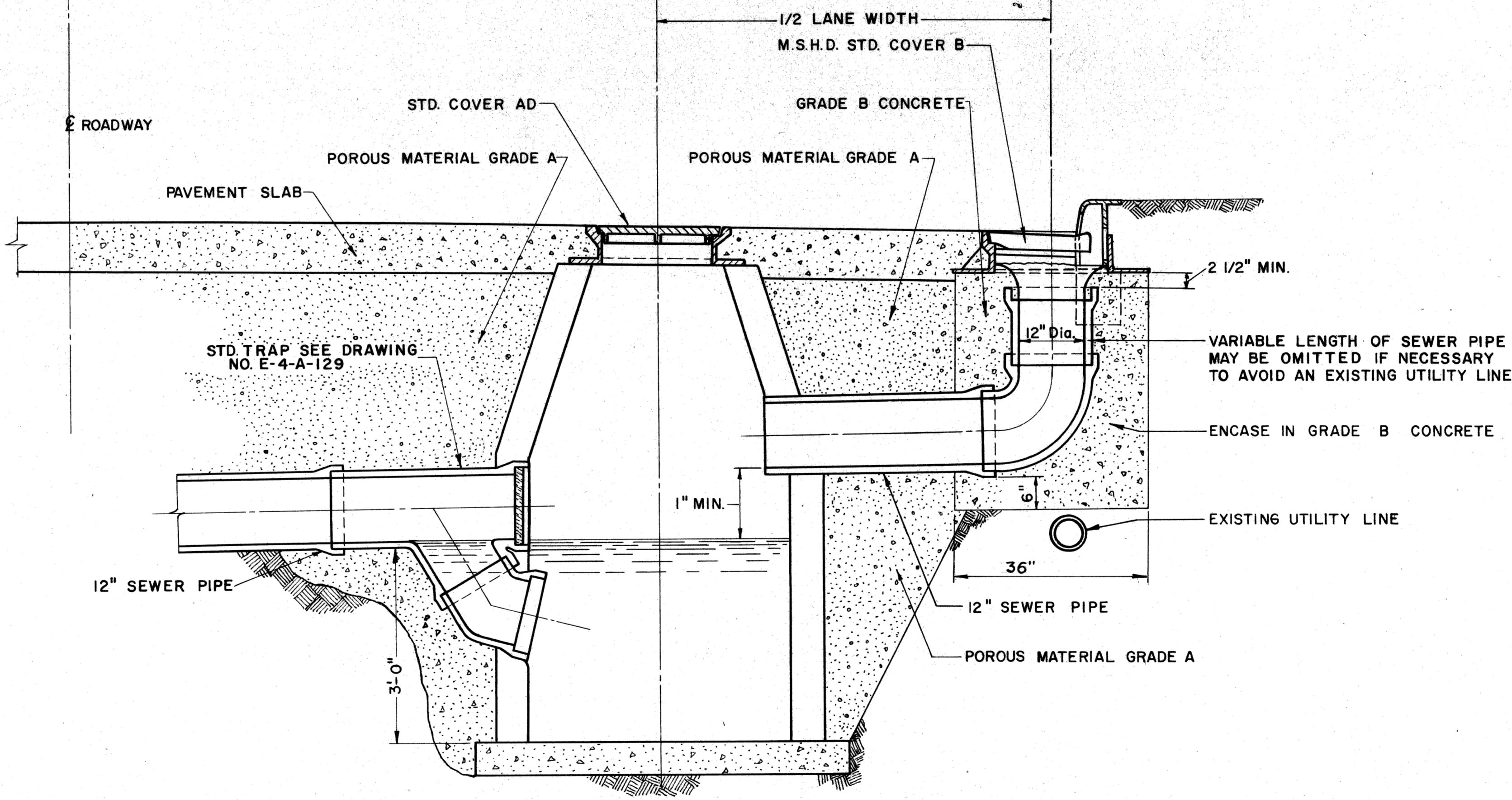
DETAILED GRADES FOR WEST SERVICE DRIVE AT CONGRESS "OFF" RAMP

FILE NO.	STATE	FEDERAL	SHEET
W-57-1	PROJECT	PROJECT	NO.
	82111	107-1(24)	38

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-07-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82111	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



NOTES:
 THE CATCH BASIN CB 3AD MAY BE OMITTED IF INLET LB CAN BE DRAINED TO ANOTHER TRAPPED CATCH BASIN.
 CLASS B CULVERT TO BE USED IF COVER IS LESS THAN 3FT.



SECTION A-A
 SCALE : 3/4" = 1'-0"

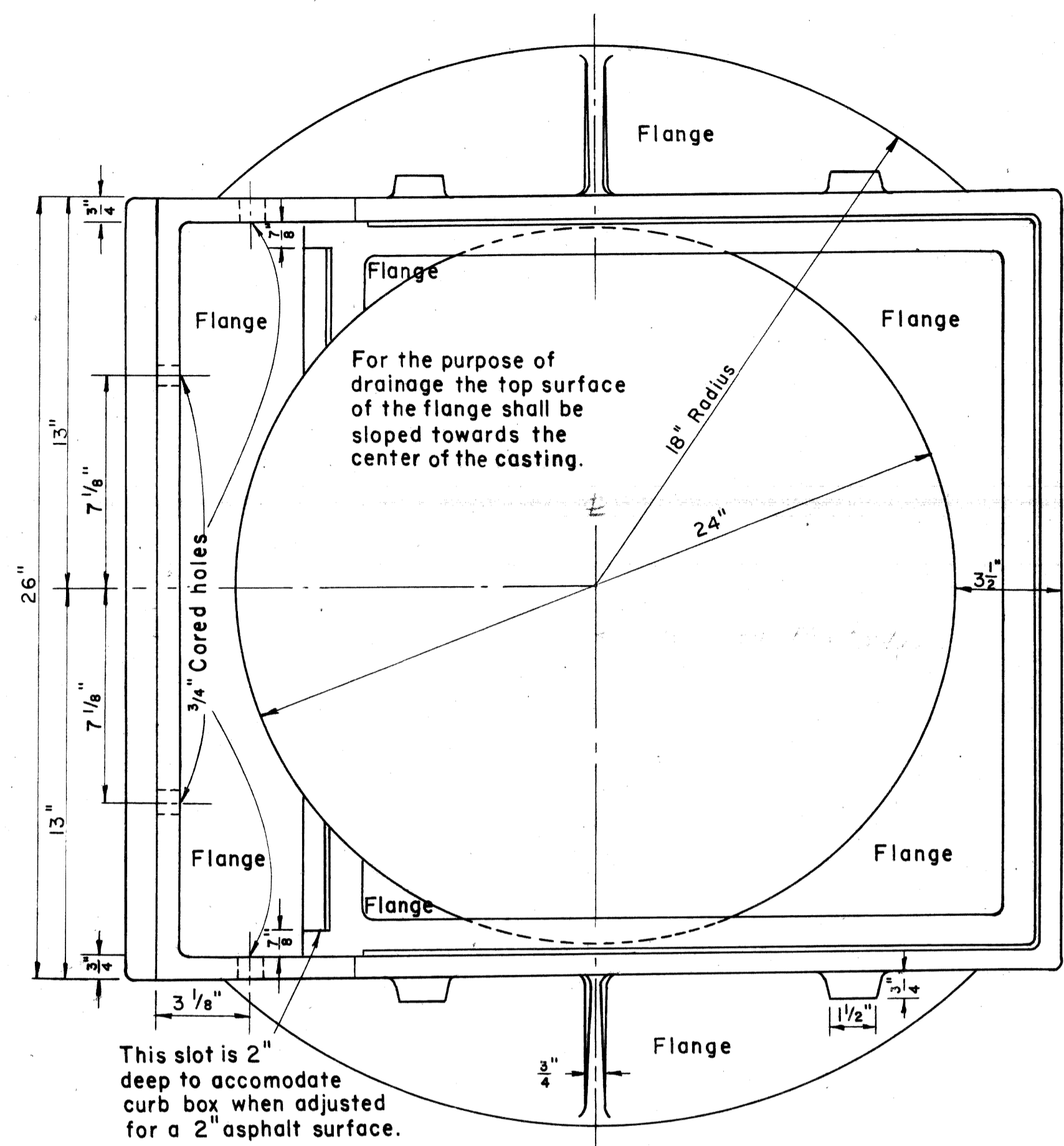
CATCH BASIN 3AD WITH INLET LB

DESIGNED	CHECKED	APPROVED
DATE	DATE	DATE
BY	BY	BY
FOR	FOR	FOR

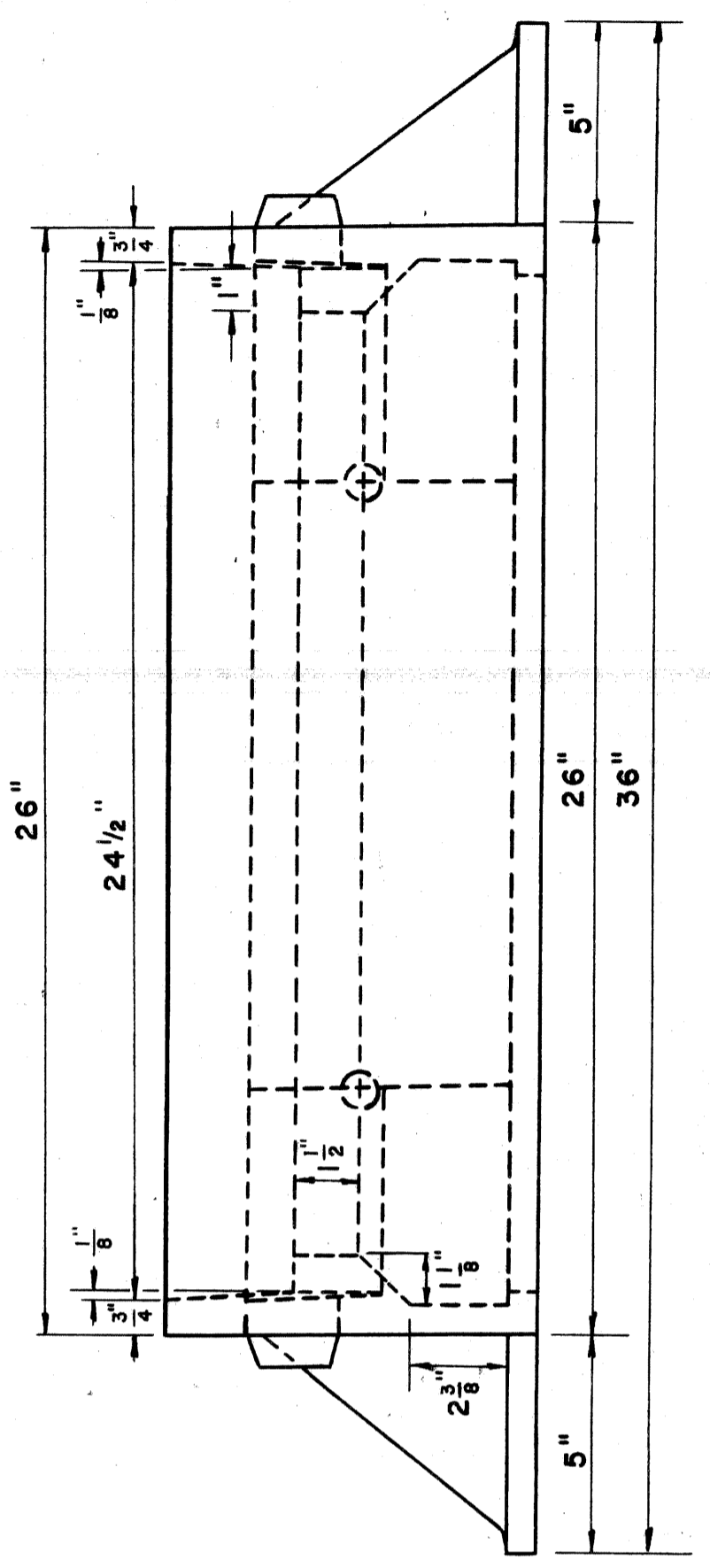
PLANS PREPARED BY
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S. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82111	WAYNE	DETROIT	41	

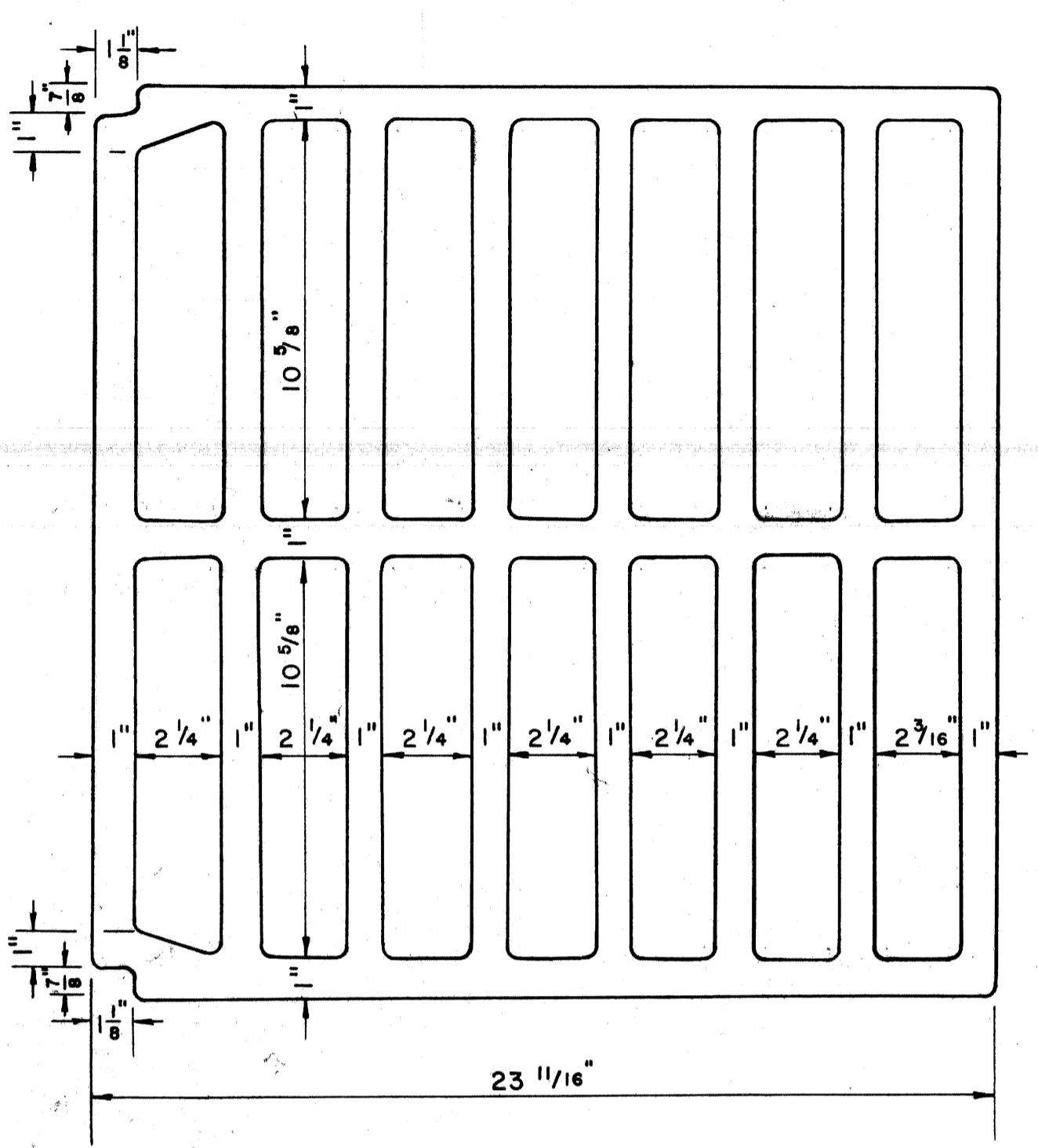
S. P. R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS



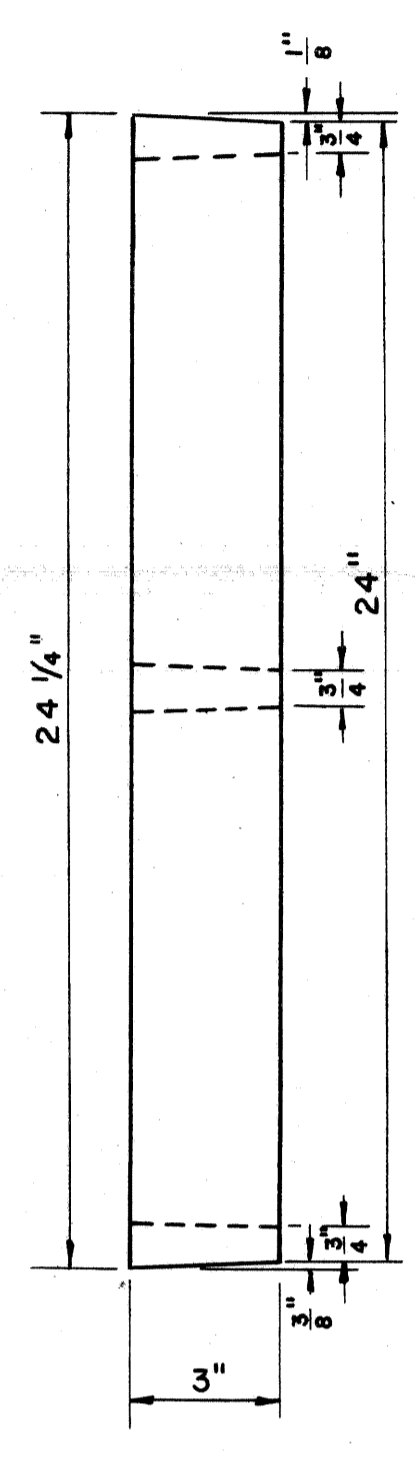
PLAN VIEW



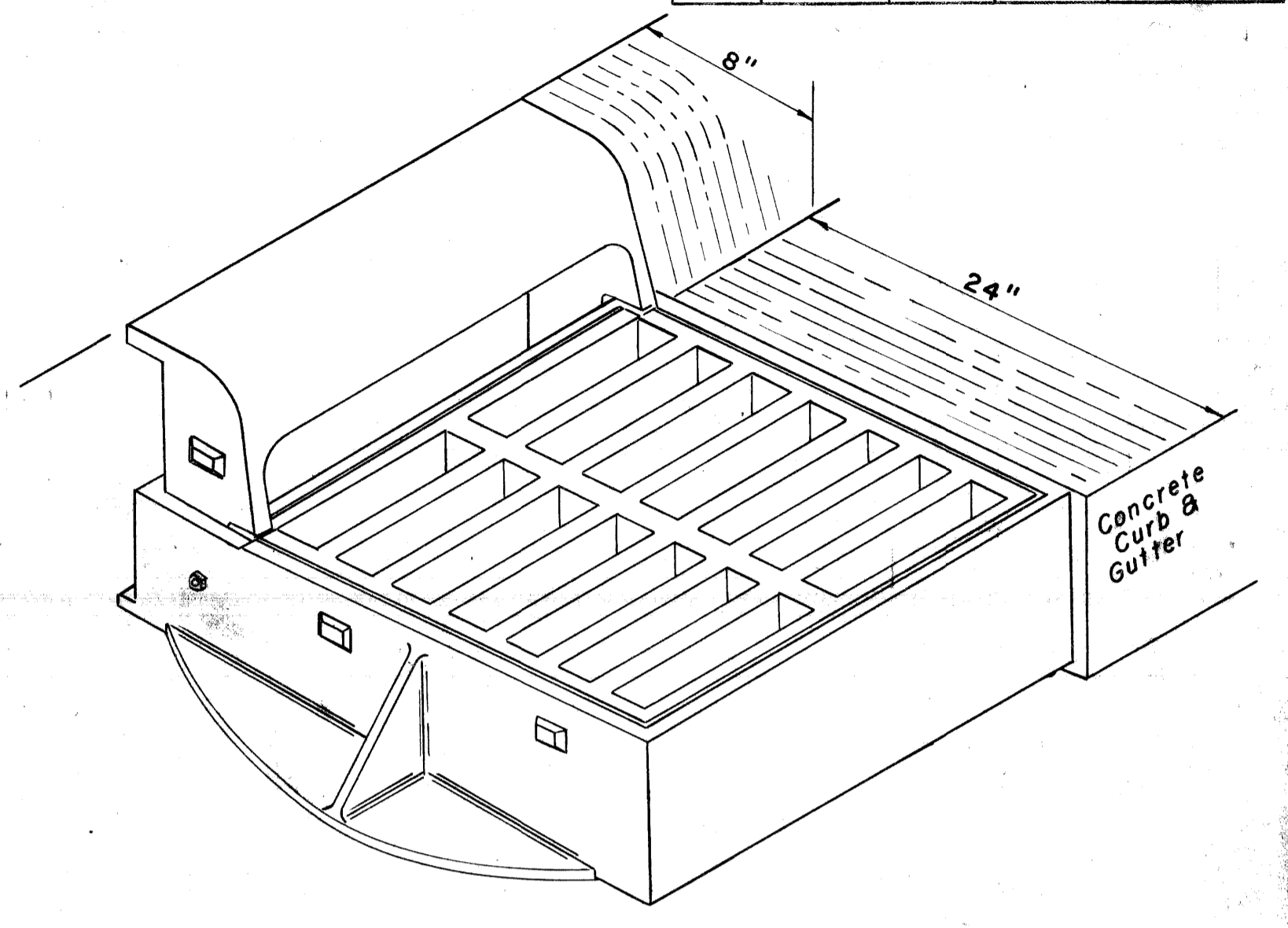
FRONT ELEVATION



PLAN VIEW



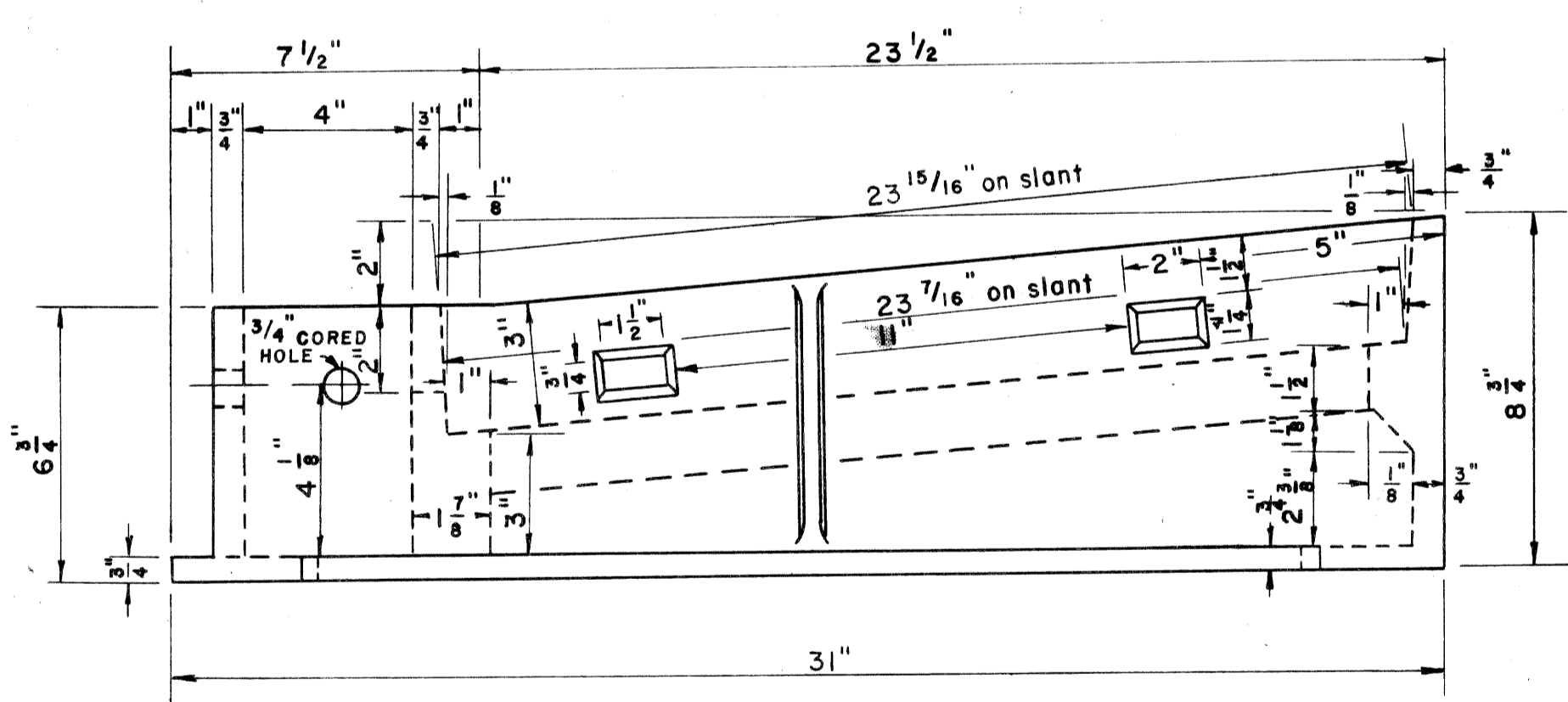
FRONT ELEVATION



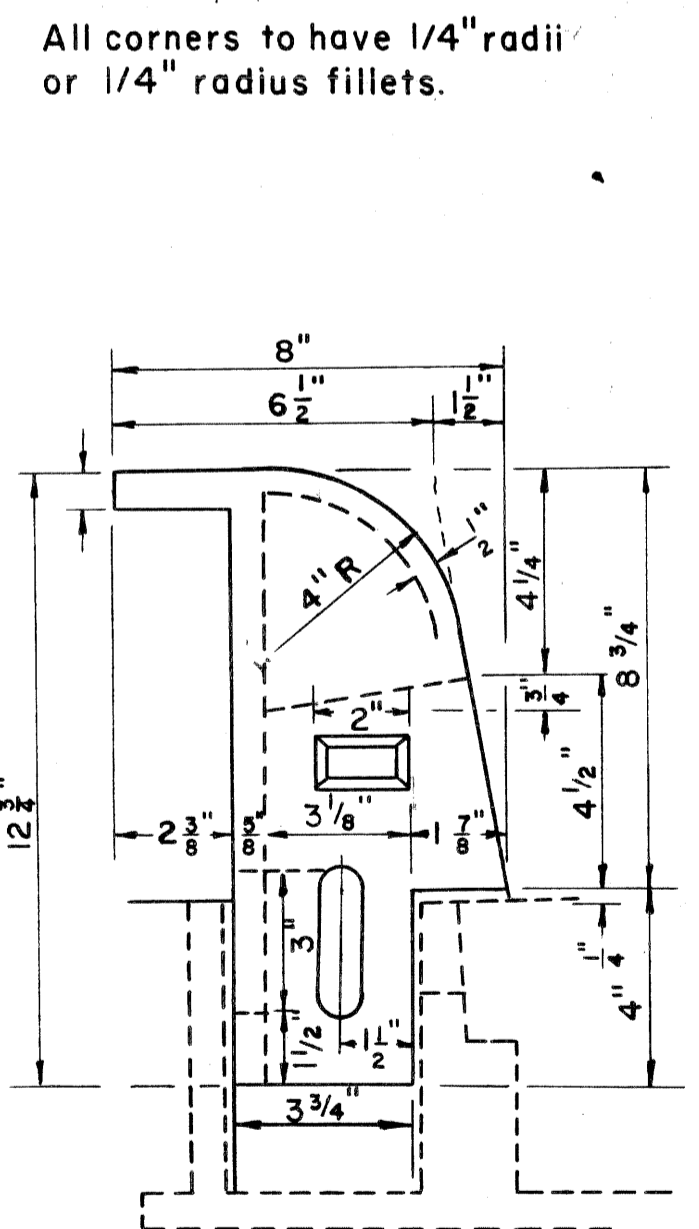
ISOMETRIC VIEW

NOTES:
 All materials and workmanship shall be in accordance with the current Michigan State Highway Department Standard Specifications.
 The castings shall meet the requirement of the Current Specifications for Gray-iron Castings A.S.T.M. Designation A-48 and shall have a minimum strength as provided for class No. 30 Gray-iron castings.
 All Castings shall be cleaned by sand blasting.
 The bearing surfaces between Curb Box and Frame shall be Ground and seated so as to produce an even bearing thru out. The Curb Box shall be firmly bolted in place on the frame before finishing of the Grate Seats is done. Galvanized iron washers and shims shall be placed between frame and ends of Curb Box so as to prevent breaking of Curb Box when these bolts are tightened.
 The producing foundry shall deliver the Curb Box and Frame completely assembled to the contractor.
 The seating face of the grate and the seat for same on the frame and the curb box shall be ground so that the grate 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.

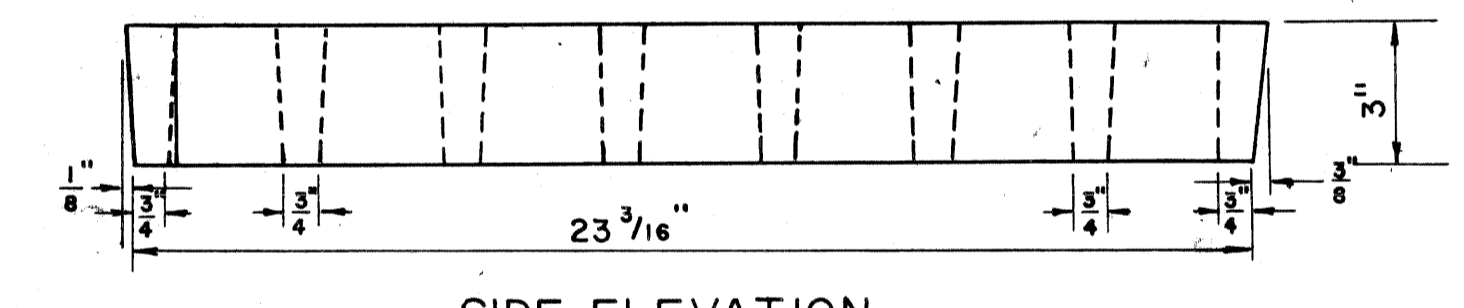
SPECIAL DETAILS FOR COVER H



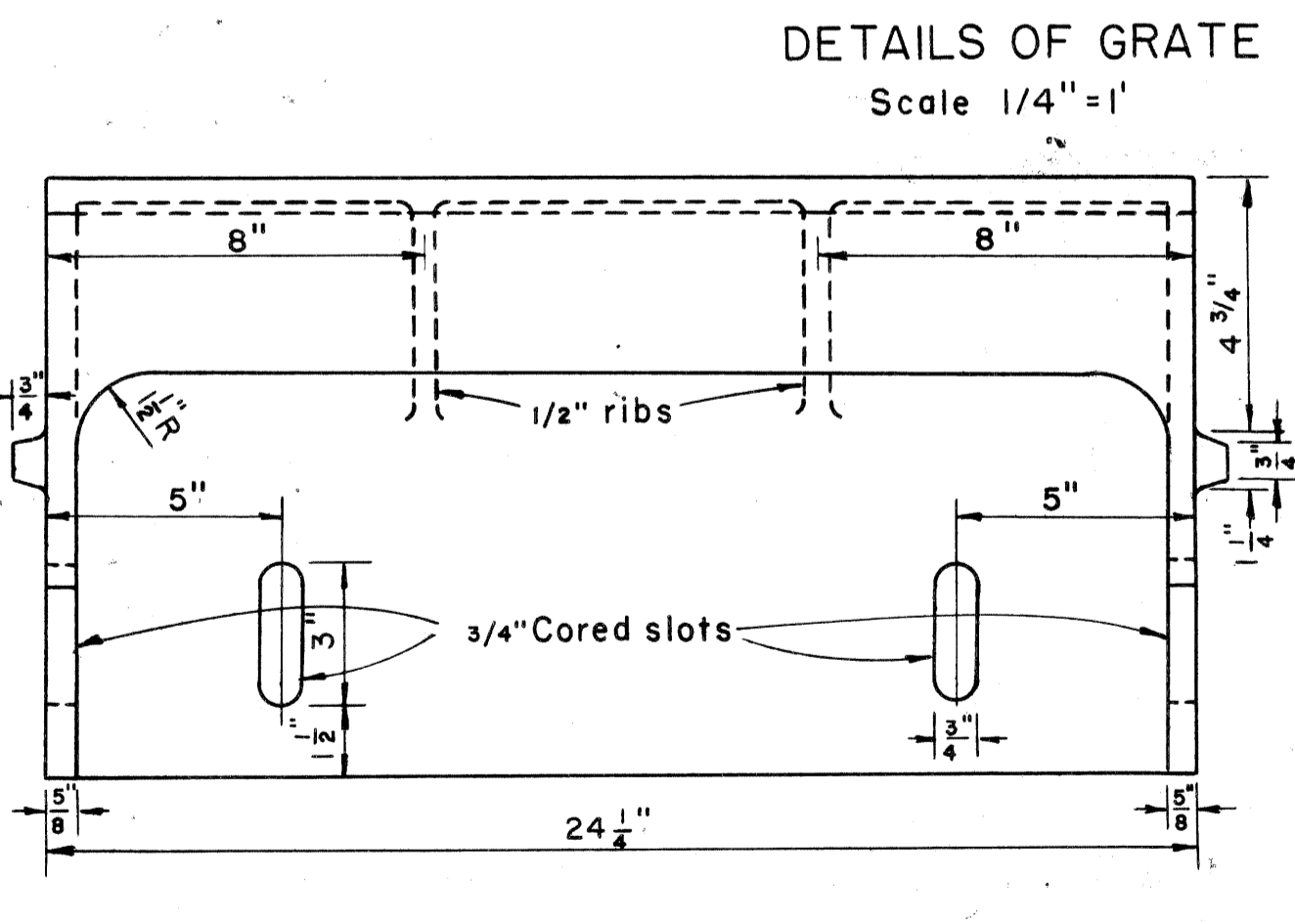
SIDE ELEVATION



SIDE ELEVATION



SIDE ELEVATION



FRONT ELEVATION

DETAILS OF FRAME
Scale 1/4" = 1"

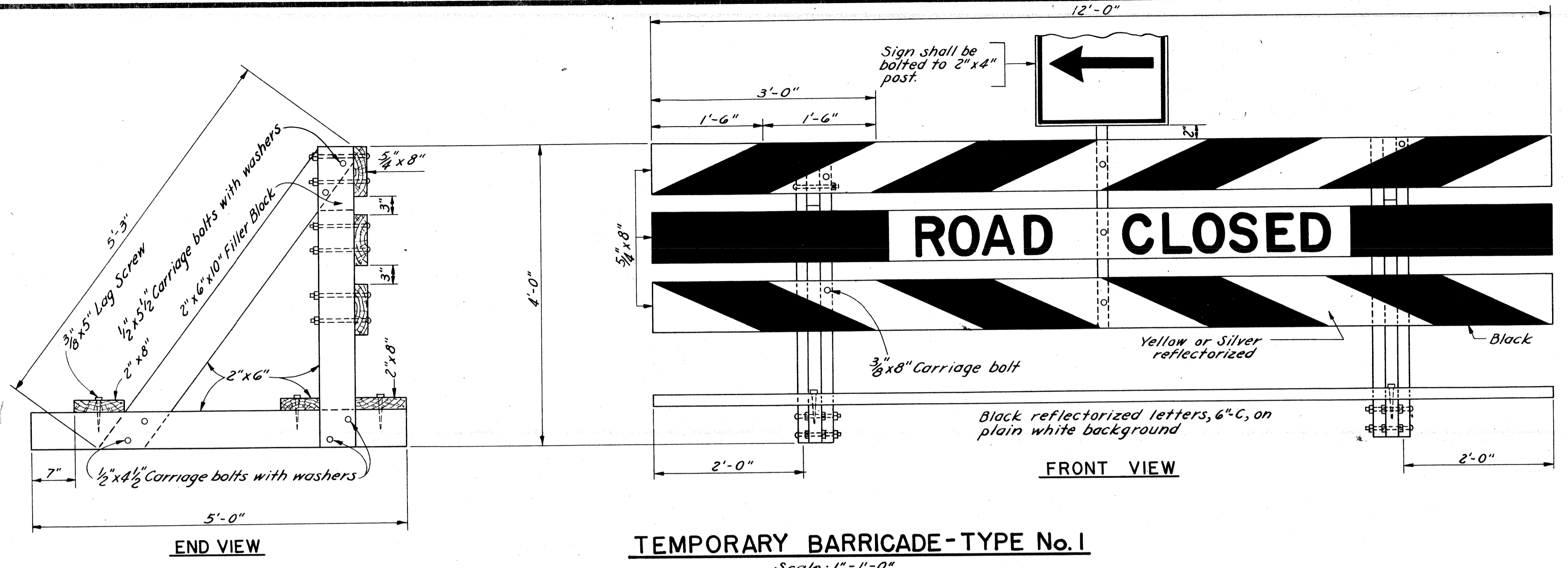
DETAILS OF CURB BOX
Scale 1/4" = 1"

Bolt curb box firmly to frame at foundry with four 5/8" x 2 1/2" Galvanized Machine bolts with washers on nut ends.
 (See general note)

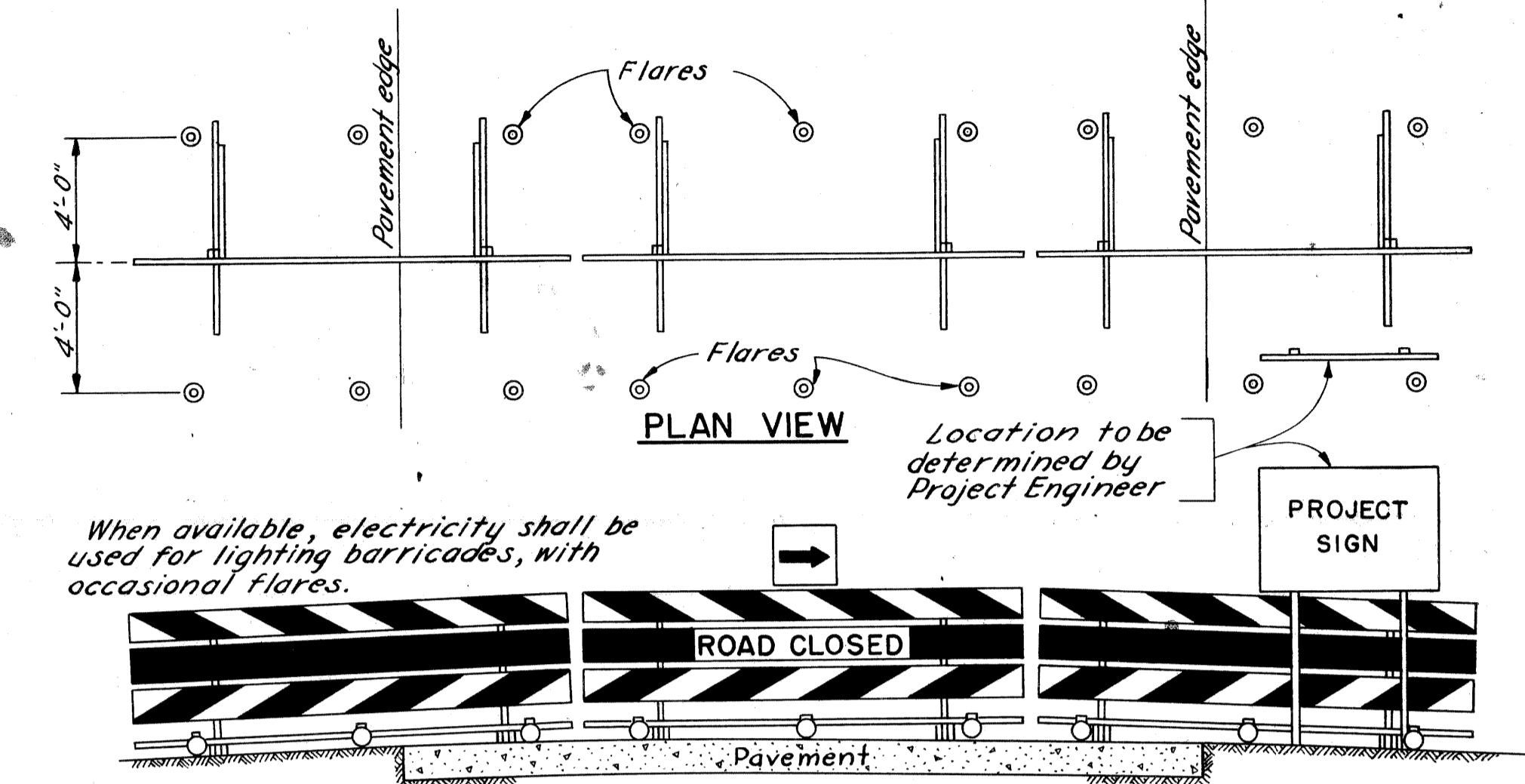
DATE	BY	REVISION

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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

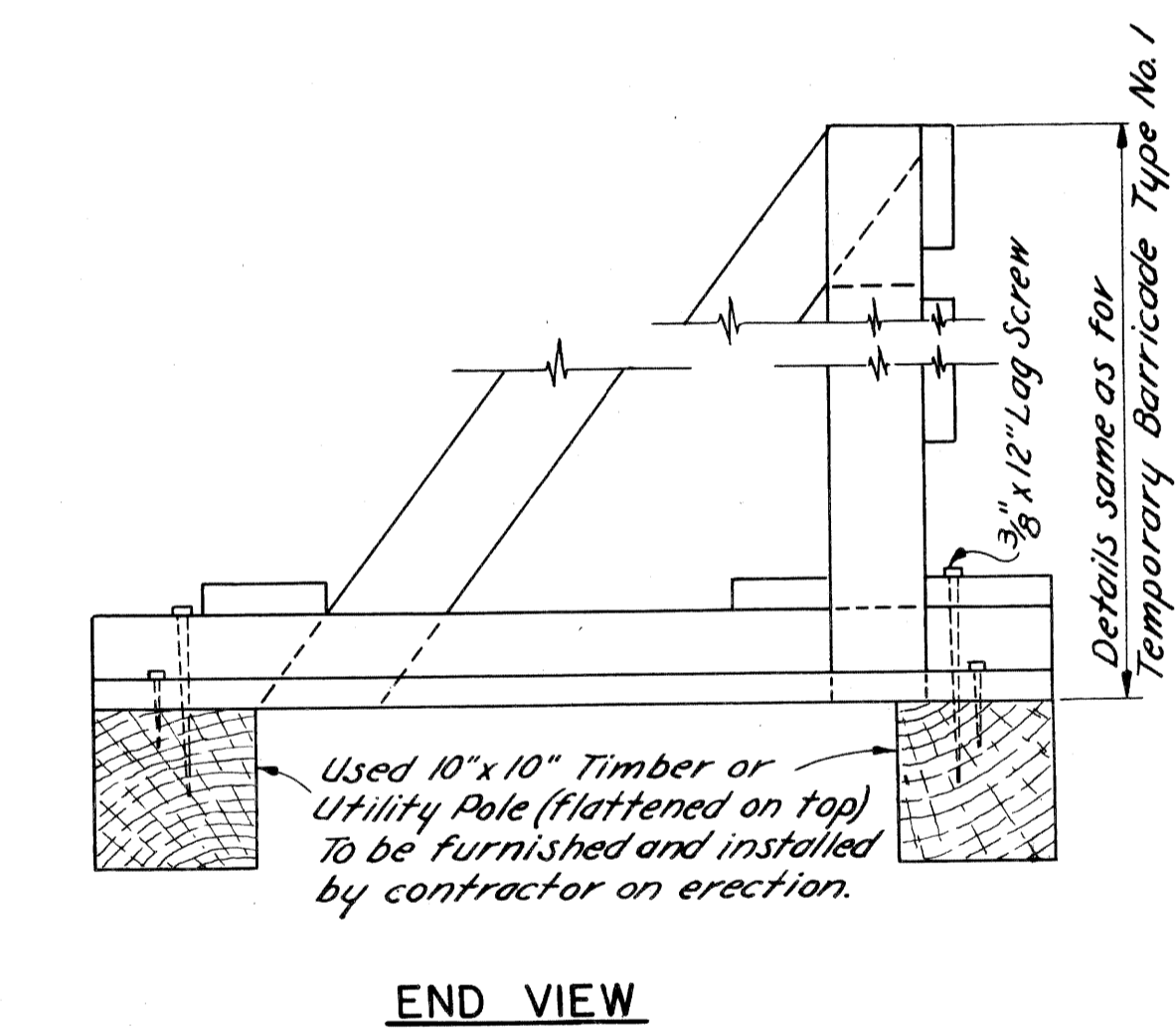
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82111	WAYNE	DETROIT	43	
S.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



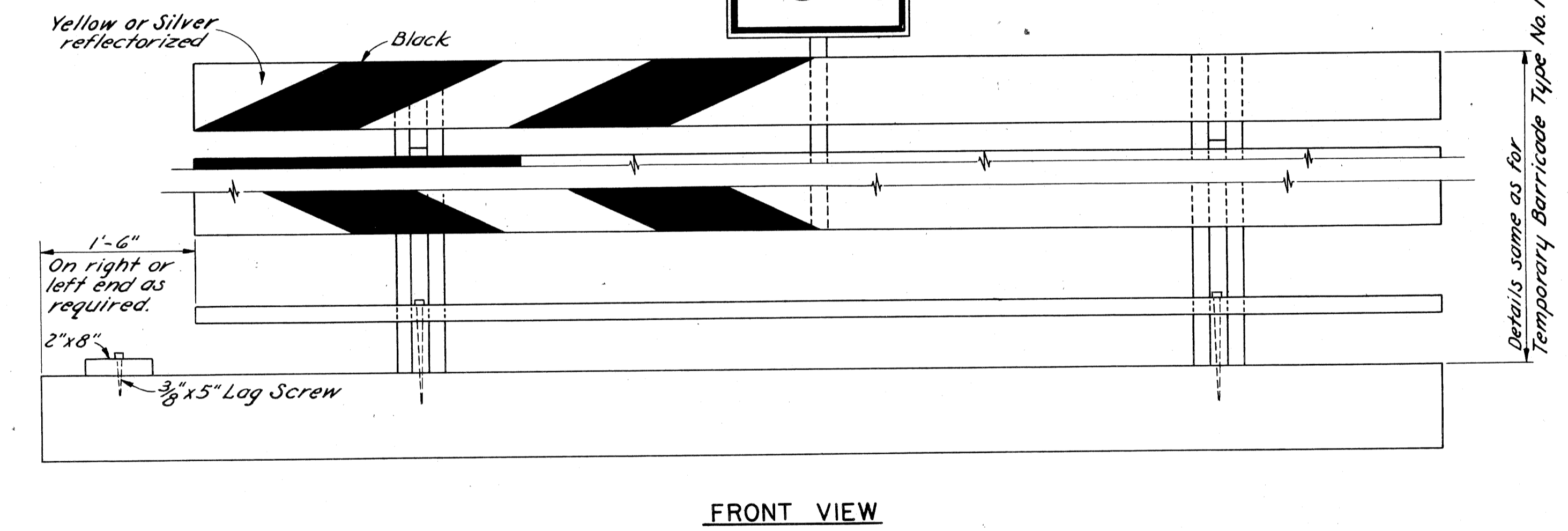
TEMPORARY BARRICADE - TYPE No. 1
Scale: 1" = 1'-0"



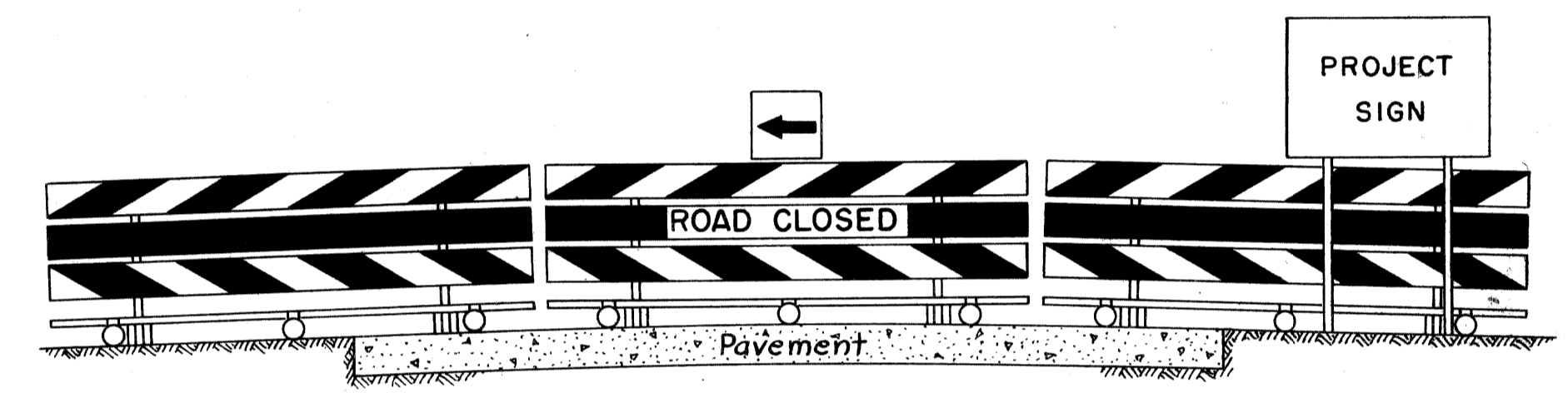
View of barricade when traffic is directed to right



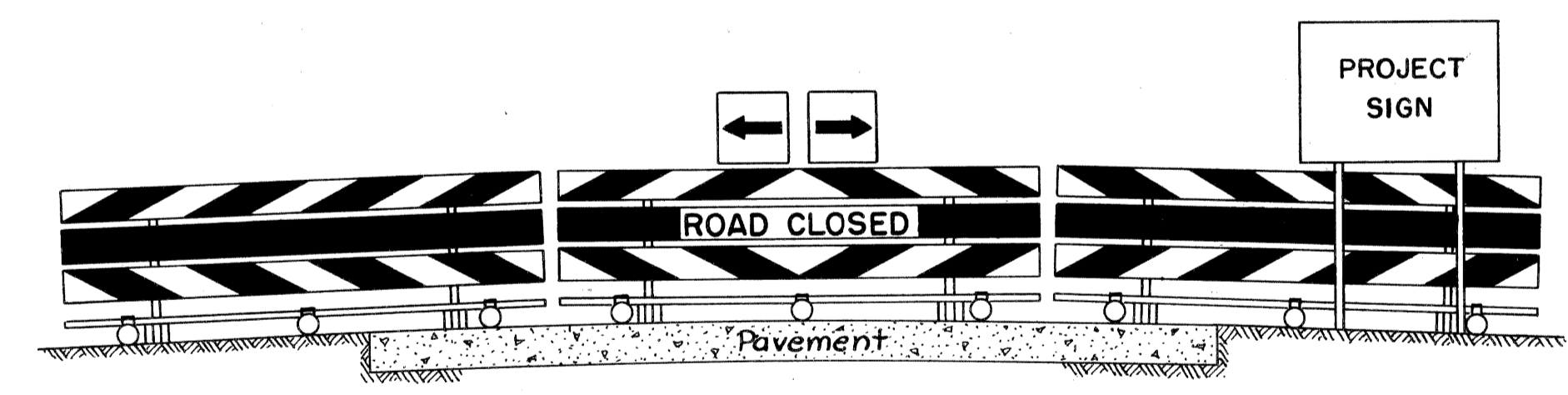
END VIEW



TEMPORARY BARRICADE - TYPE No. 2
Scale: 1" = 1'-0"



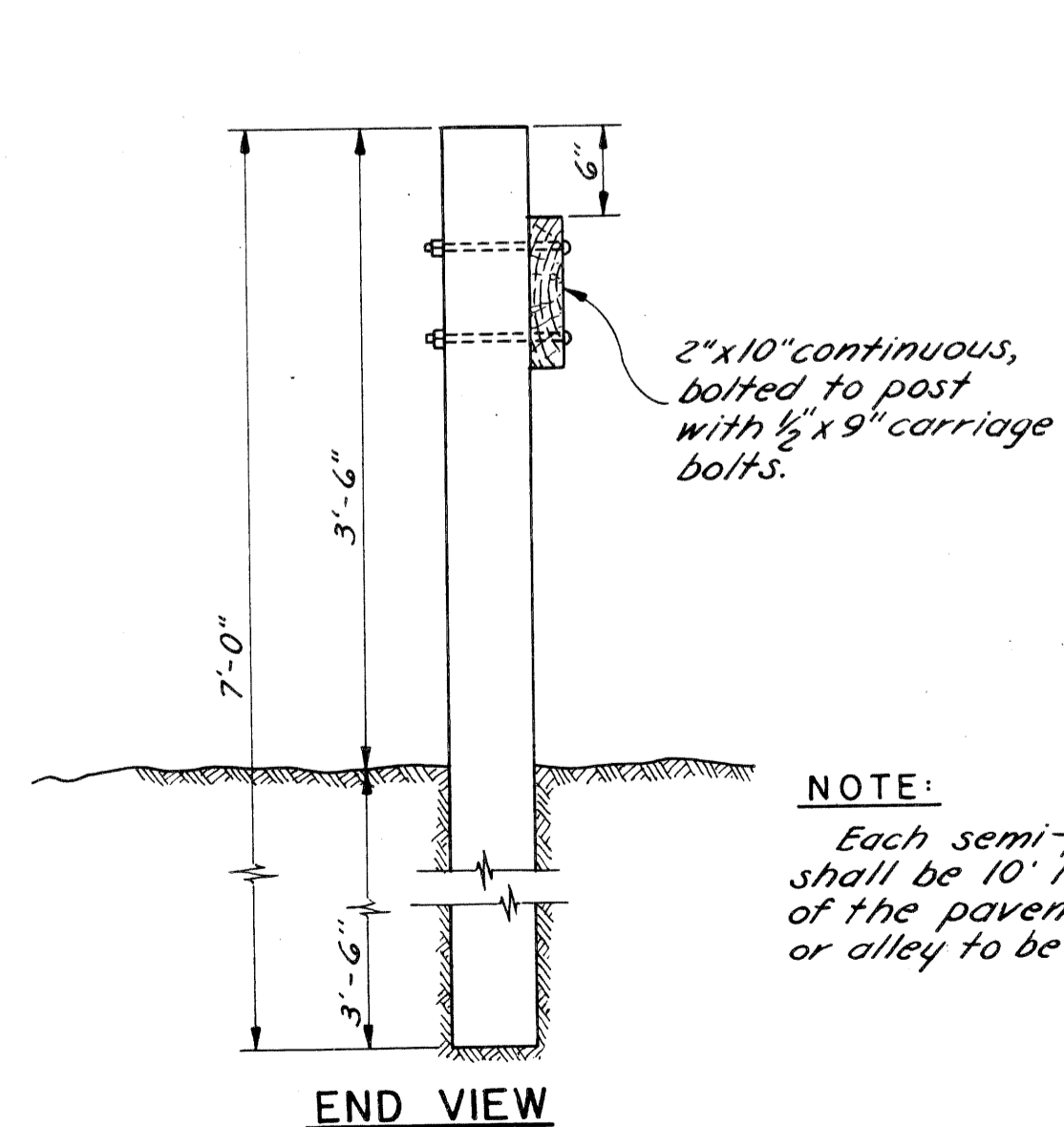
View of barricade when traffic is directed to left



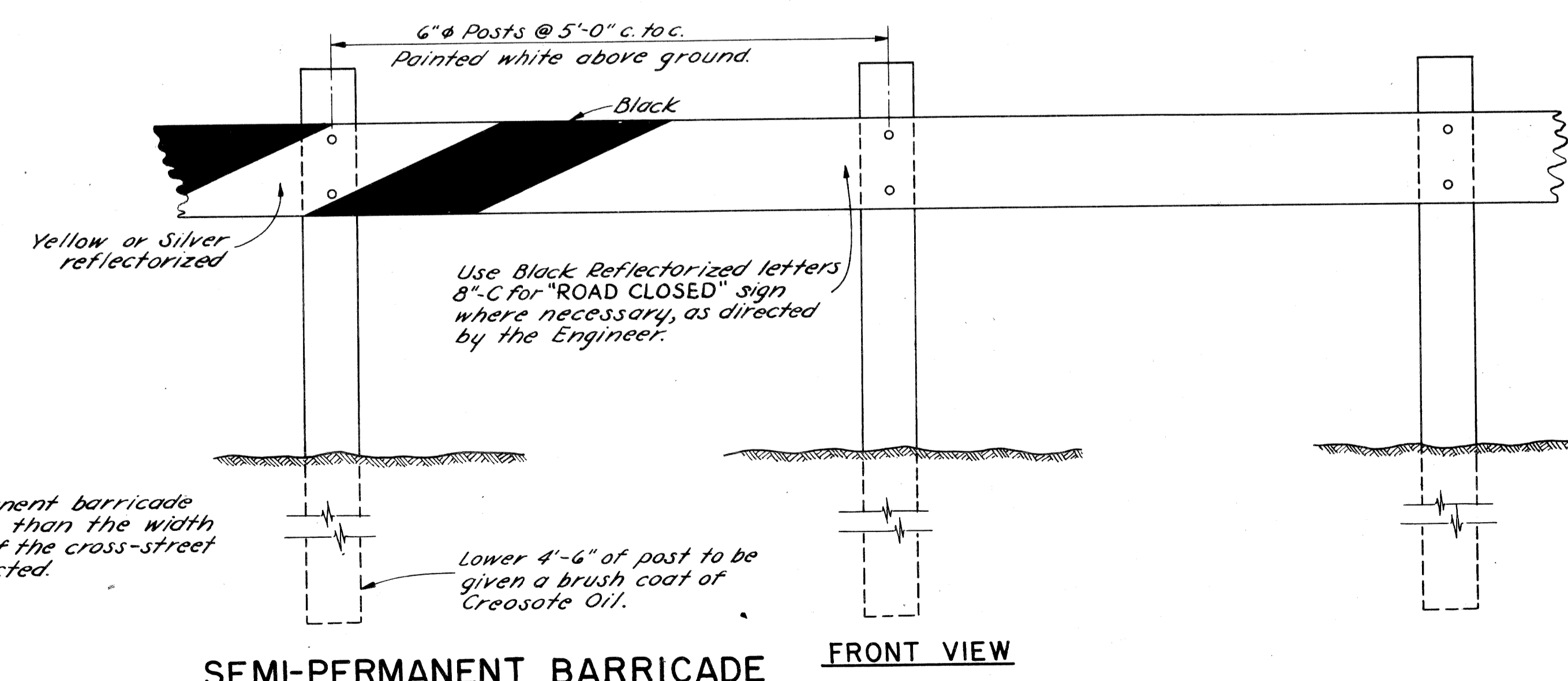
View of barricade when traffic is directed to left and right

TYPICAL BARRICADE UNITS
Scale: 1/4" = 1'-0"

NOTE:
All face boards to be Douglas Fir.
All other boards and posts to be Fir.



END VIEW



SEMI-PERMANENT BARRICADE
Scale: 1" = 1'-0"

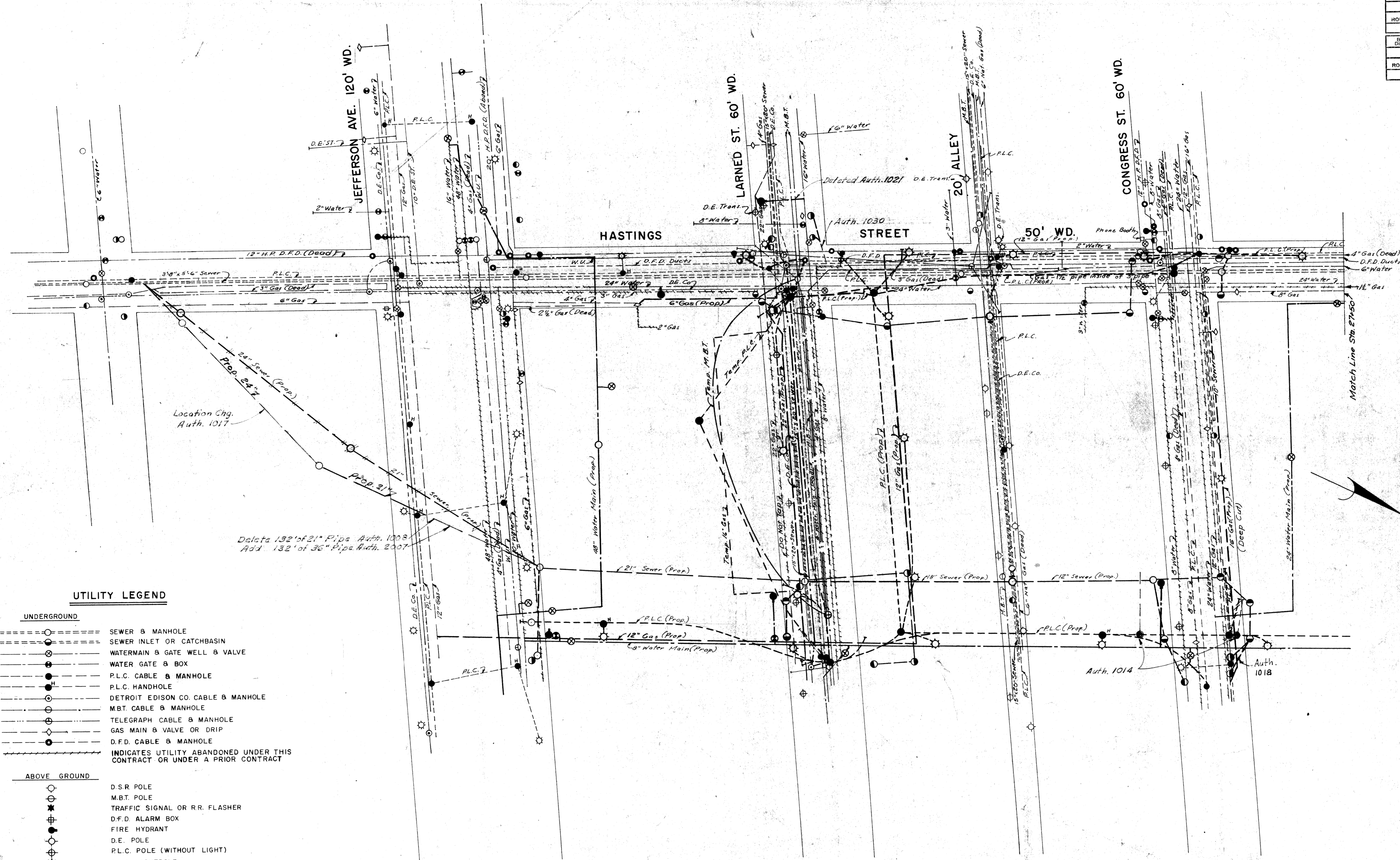
FRONT VIEW

DETAILS FOR BARRICADES

DATE	BY	CHKD	APP'D

PLANS PREPARED BY
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CITY ENGINEERS OFFICE
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S.P.D. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
8211	WAYNE	DETROIT		44	
S.P.D. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS



UTILITY LEGEND

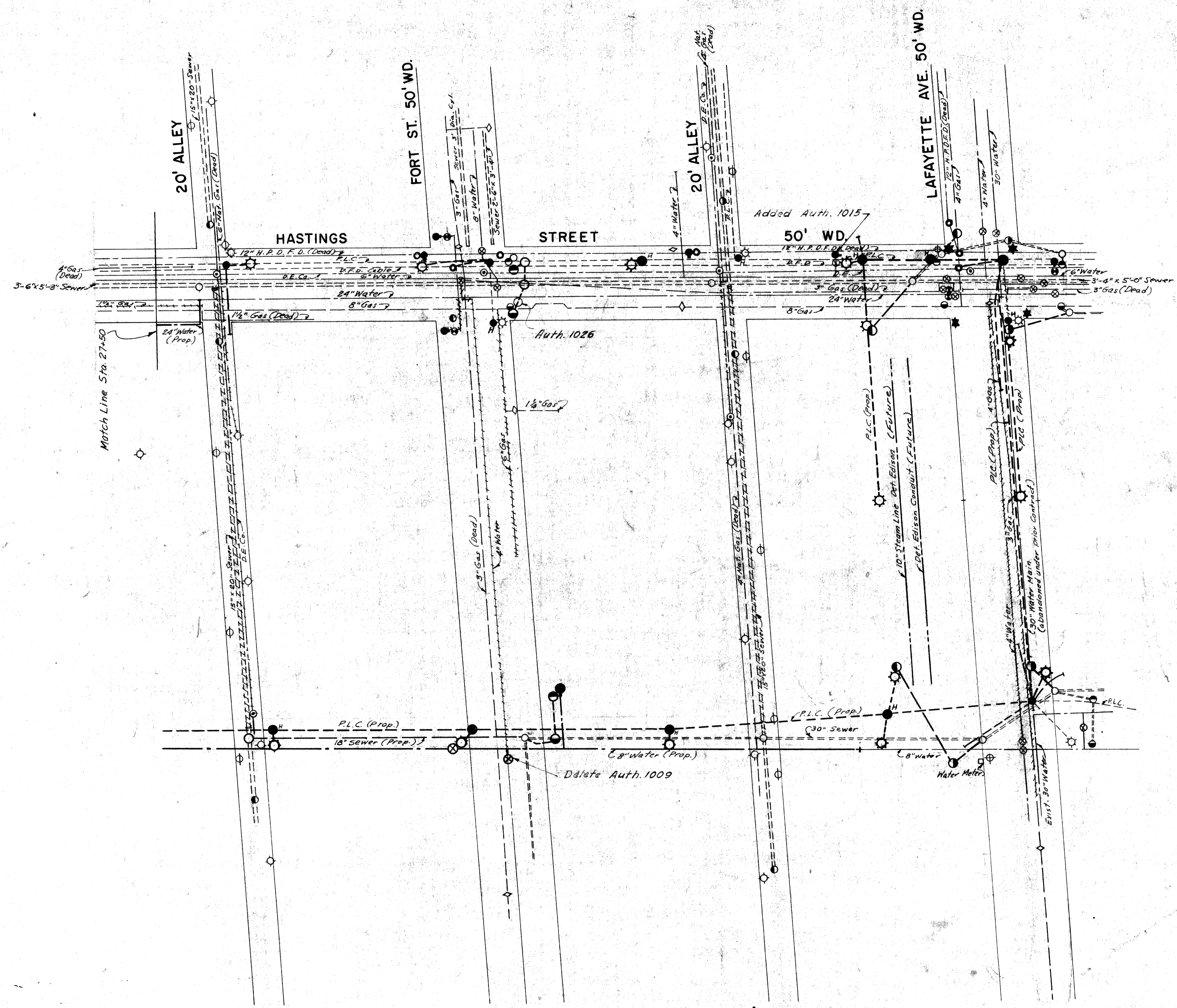
- UNDERGROUND**
- SEWER & MANHOLE
 - SEWER INLET OR CATCHBASIN
 - WATERMAIN & GATE WELL & VALVE
 - WATER GATE & BOX
 - P.L.C. CABLE & MANHOLE
 - P.L.C. HANDHOLE
 - DETROIT EDISON CO. CABLE & MANHOLE
 - M.B.T. CABLE & MANHOLE
 - TELEGRAPH CABLE & MANHOLE
 - GAS MAIN & VALVE OR DRIP
 - D.F.D. CABLE & MANHOLE
 - INDICATES UTILITY ABANDONED UNDER THIS CONTRACT OR UNDER A PRIOR CONTRACT
- ABOVE GROUND**
- D.S.R. POLE
 - M.B.T. POLE
 - TRAFFIC SIGNAL OR R.R. FLASHER
 - D.F.D. ALARM BOX
 - FIRE HYDRANT
 - D.E. POLE
 - P.L.C. POLE (WITHOUT LIGHT)
 - P.L.C. LIGHTPOLE
 - POLICE BOX
 - TRAFFIC SIGNAL BOX

PLANS PREPARED BY
 CALVIN HANSEN
 FRANK A. B.

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

GENERAL UTILITY DRAWING

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
	82111	WAYNE	DETROIT	45	
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

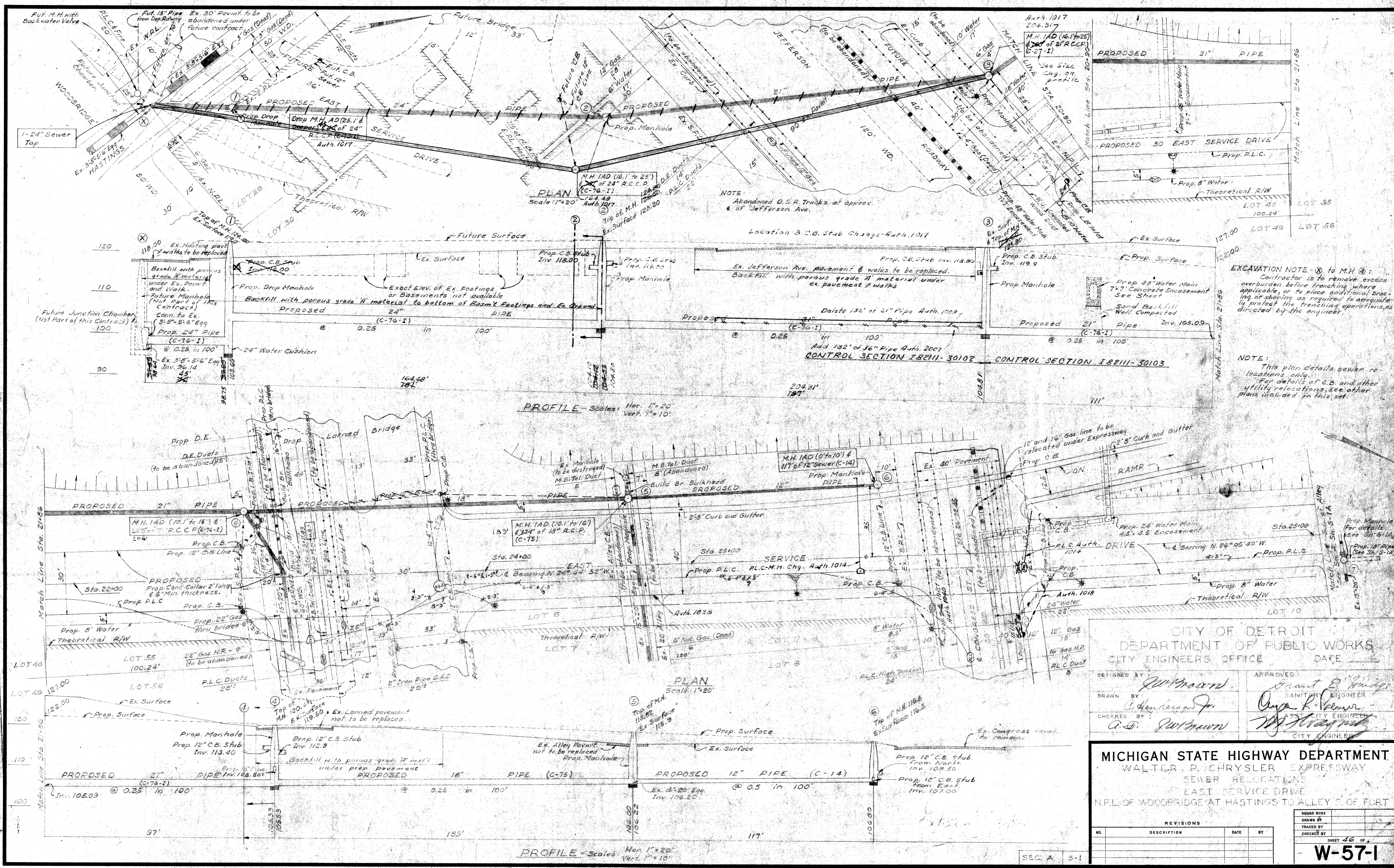


DATE	BY
10-23-50	J. W. HANCOCK
10-23-50	J. W. HANCOCK
10-23-50	J. W. HANCOCK
10-23-50	J. W. HANCOCK

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERING OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

GENERAL UTILITY DRAWING

FILE NO.	1	STATE	FEDERAL	SHEET
NO. 350	W-57-1	82111	107-1(24)	45
STENCIL				



EXCAVATION NOTE - (X) to M.H. 1C:
 Contractor is to remove excess overburden before trenching, where applicable, or to place additional bracing or shoring as required to adequately protect the trenching operations as directed by the engineer.

NOTE:
 This plan details sewer relocations only.
 For details of C.B. and other utility relocations, see other plans included in this set.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS' OFFICE

DESIGNED BY: *J.W. Howard*
 DRAWN BY: *C. Henderson Jr.*
 CHECKED BY: *A.S. Howard*

APPROVED: *Grant E. Wingo*
 SANITARY ENGINEER
Walter R. Palmer
 CITY ENGINEER

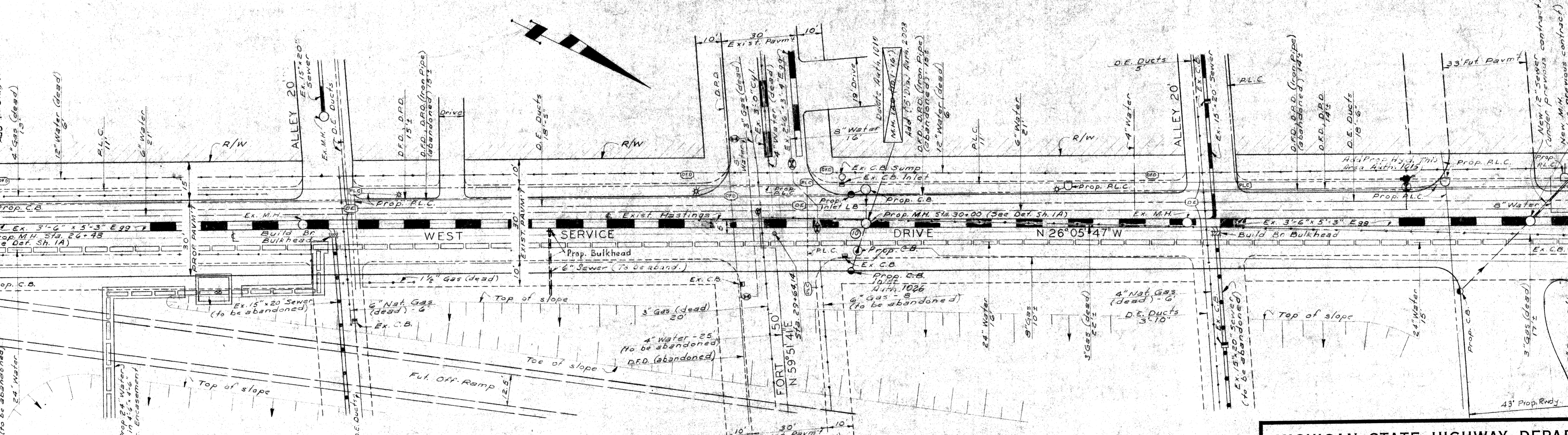
MICHIGAN STATE HIGHWAY DEPARTMENT
 WALTER P. CHRYSLER EXPRESSWAY
 SEWER RELOCATIONS
 EAST SERVICE DRIVE
 N.P.L. OF WOODBRIDGE AT HASTINGS TO ALLEY S. OF FORT

REVISIONS			
NO.	DESCRIPTION	DATE	BY

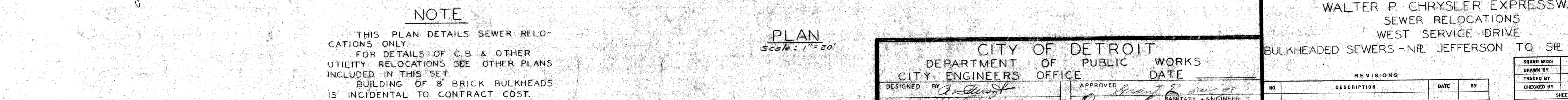
SHEET 46 OF
W-57-1

DESIGNED BY
 DRAWN BY
 CHECKED BY
 RECOMMENDED APPROVAL
 PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS' OFFICE
 RELOCATIONS OF HIGHWAYS AND EXPRESSWAYS

Match Line - N.E. of Exist. Jefferson
See S-5



PLAN
Scale: 1"=20'



PLAN
Scale: 1"=20'

NOTE
THIS PLAN DETAILS SEWER RELOCATIONS ONLY.
FOR DETAILS OF C.B. & OTHER UTILITY RELOCATIONS SEE OTHER PLANS INCLUDED IN THIS SET.
BUILDING OF 8" BRICK BULKHEADS IS INCIDENTAL TO CONTRACT COST.

MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATIONS
WEST SERVICE DRIVE
BULKHEADED SEWERS - NR. JEFFERSON TO SR. LAFAYETTE

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS' OFFICE

DESIGNED BY: *[Signature]*
DRAWN BY: *[Signature]*
CHECKED BY: *[Signature]*

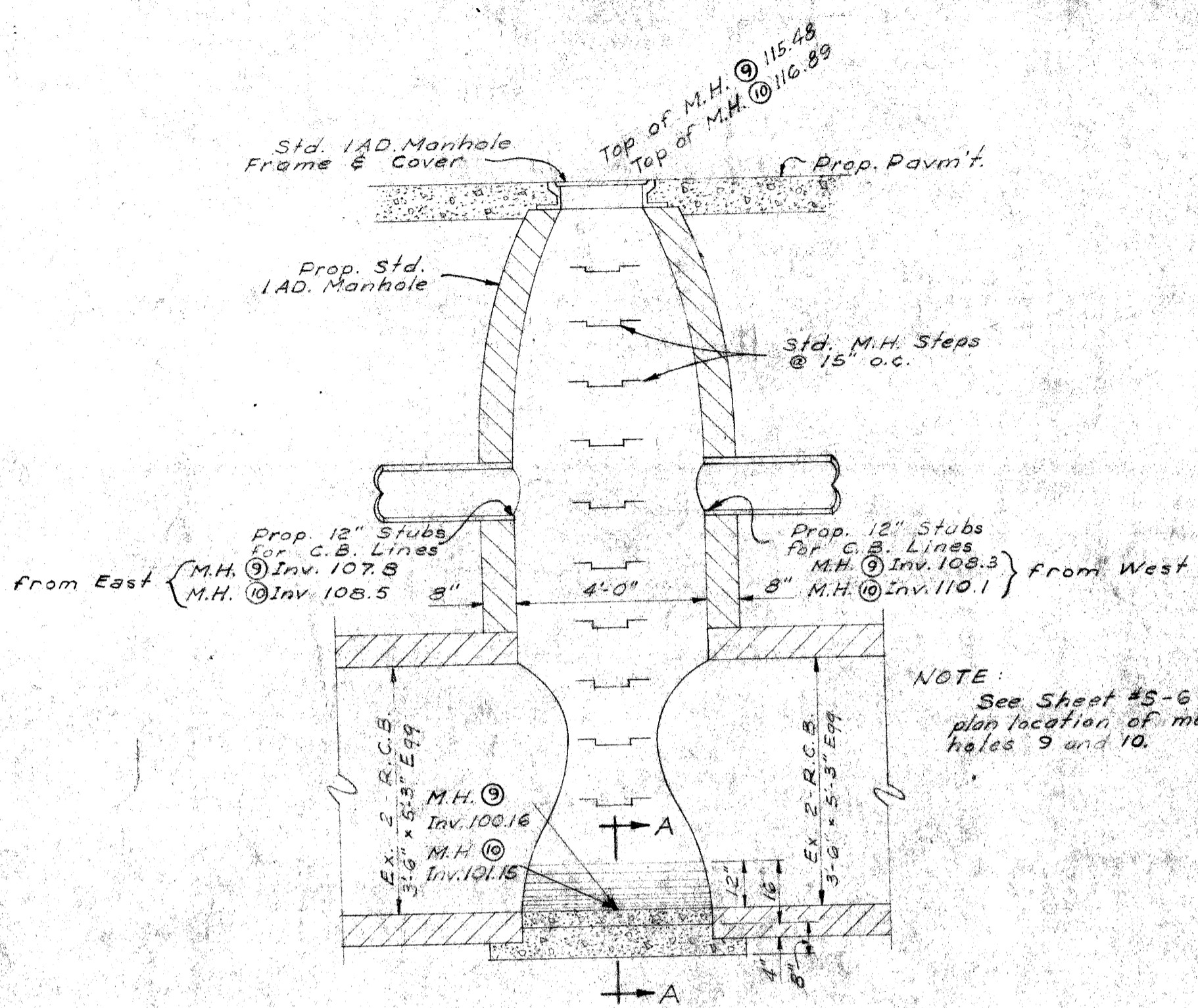
APPROVED: *[Signature]*
DATE: _____
CITY ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

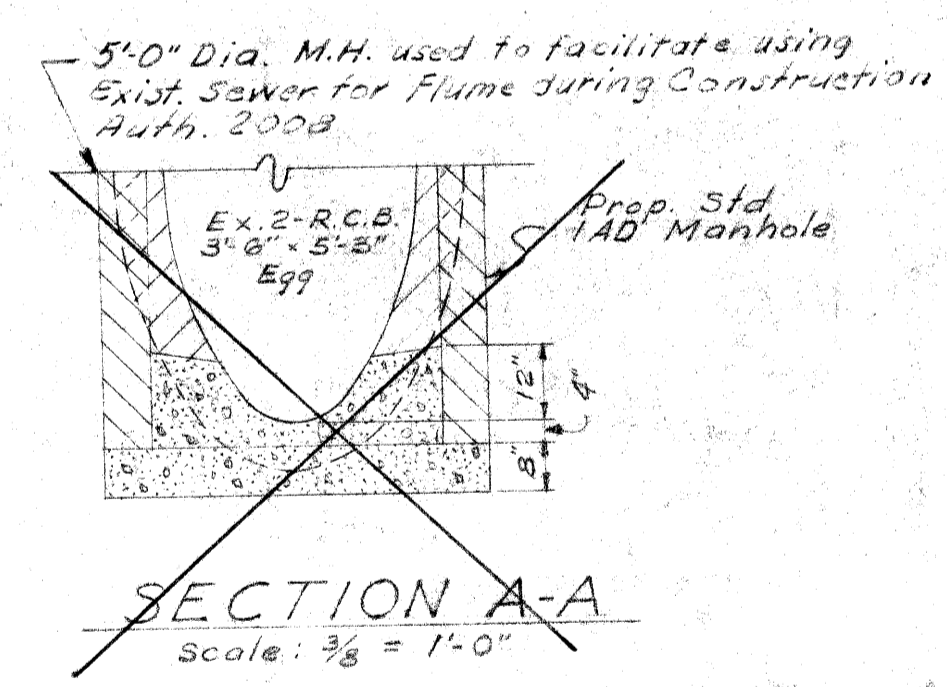
DESIGNED BY	
DRAWN BY	
CHECKED BY	
SHEET 47 OF	
W-57-1	

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS' OFFICE
PUBLISHED BY THE CITY ENGINEERS' OFFICE

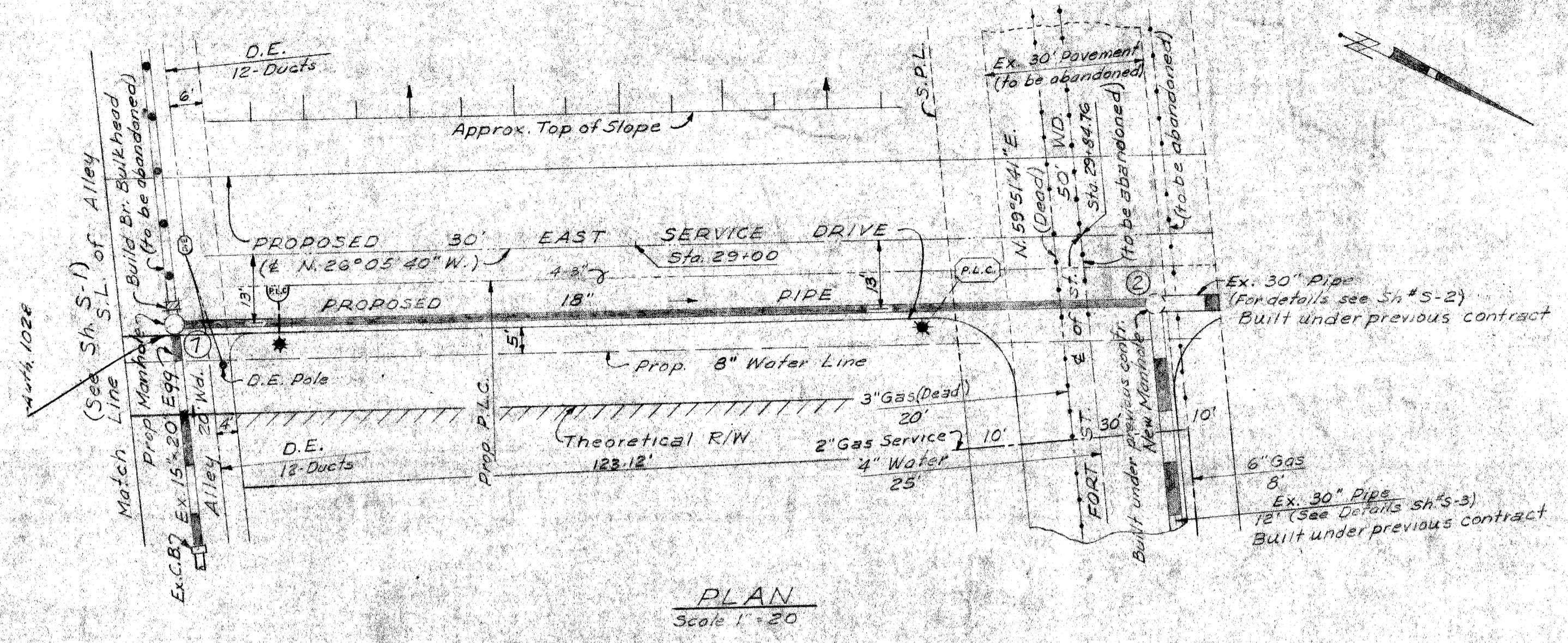
SEC. A S-6



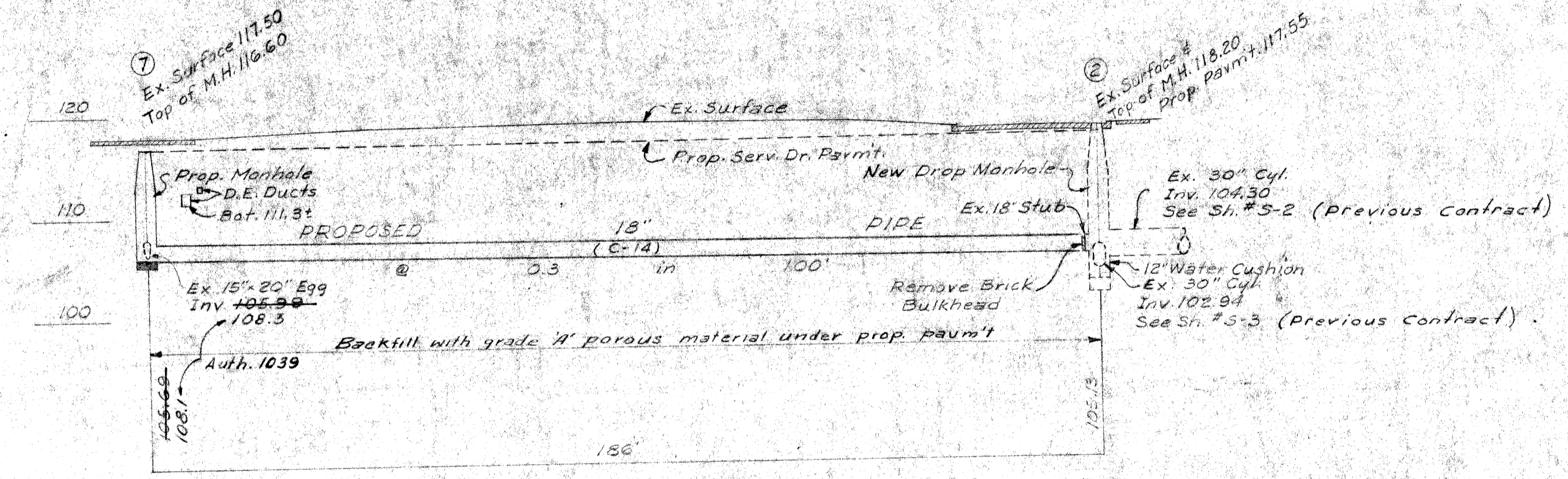
MANHOLES 9 & 10
WEST SERVICE DRIVE
Scale: 3/8" = 1'-0"



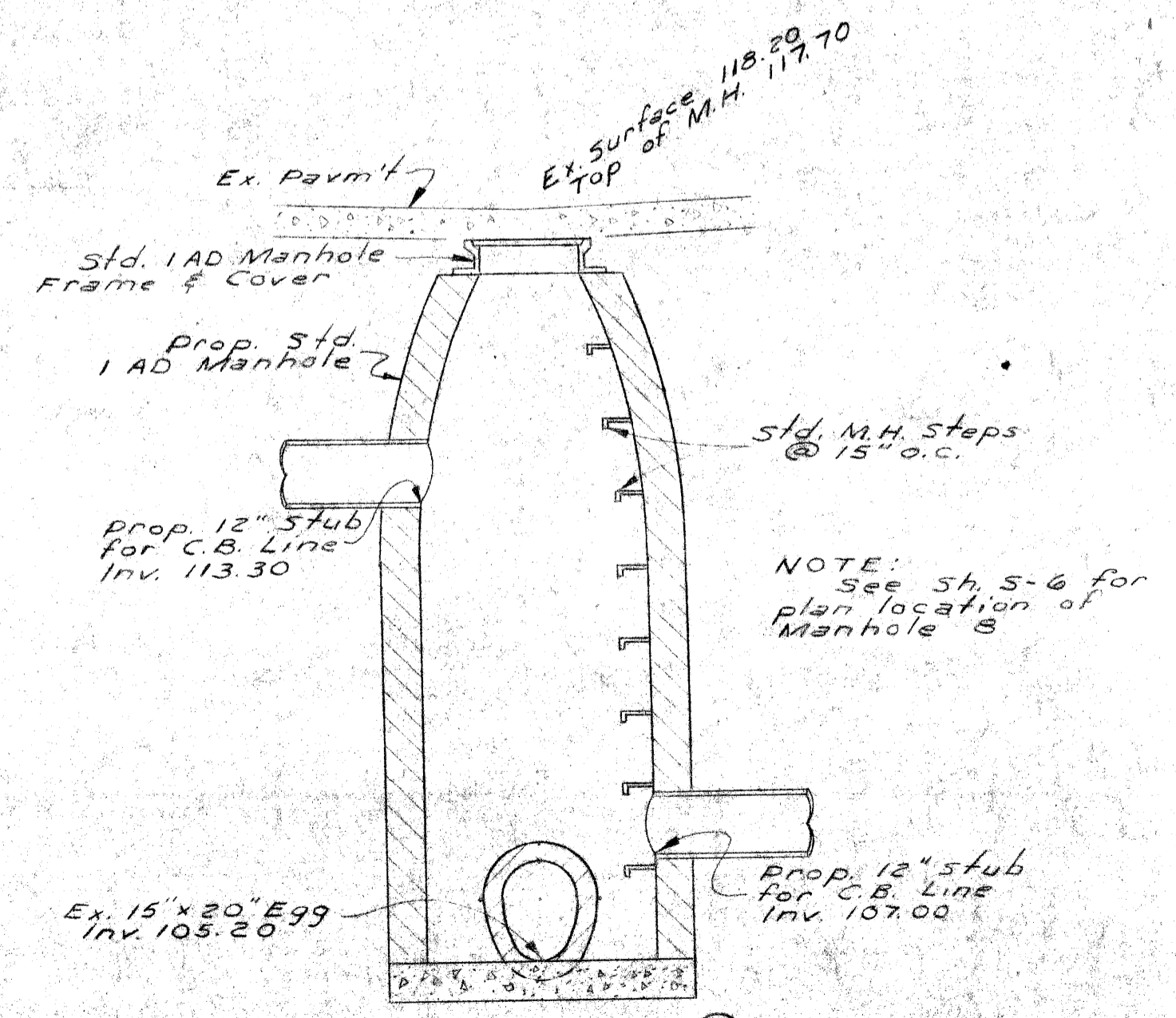
SECTION A-A
Scale: 3/8" = 1'-0"



PLAN
Scale: 1" = 20'



PROFILE
Hor. 1" = 20'
Vert. 1" = 10'



MANHOLE 8
WEST SERVICE DRIVE
Scale: 3/8" = 1'-0"

NOTE:
THIS PLAN DETAILS SEWER RELOCATIONS ONLY.
FOR DETAILS OF C.B. AND OTHER UTILITY RELOCATIONS,
SEE OTHER PLANS INCLUDED IN THIS SET.

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
APPROVED	

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE

DESIGNED BY: *W. M. Maw*
DRAWN BY: *C. Henderson Jr.*
CHECKED BY: *W. M. Maw*

APPROVED: *Grant E. Hurdell*
SANITARY ENGINEER
Cyril R. Palmer
ASST. CITY ENGINEER
W. M. Maw
CITY ENGINEER

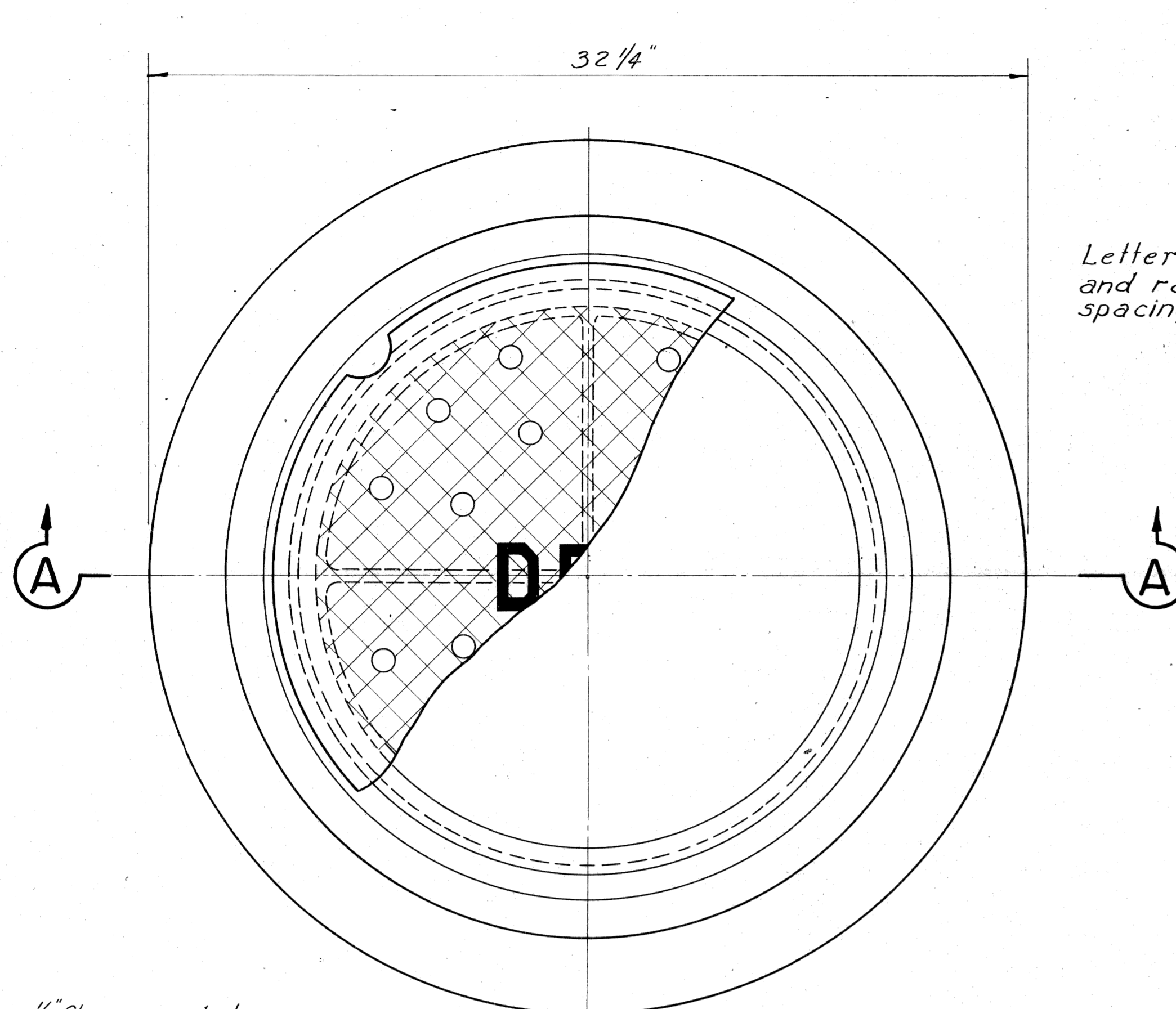
MICHIGAN STATE HIGHWAY DEPARTMENT
WALTER P. CHRYSLER EXPRESSWAY
SEWER RELOCATIONS
EAST SERVICE DR. - S.L. ALLEY S. OF FORT ST. TO FORT ST.
WEST SERVICE DR. - MISC. DETAILS JEFFERSON TO LAFAYETTE

NO.	DESCRIPTION	DATE	BY

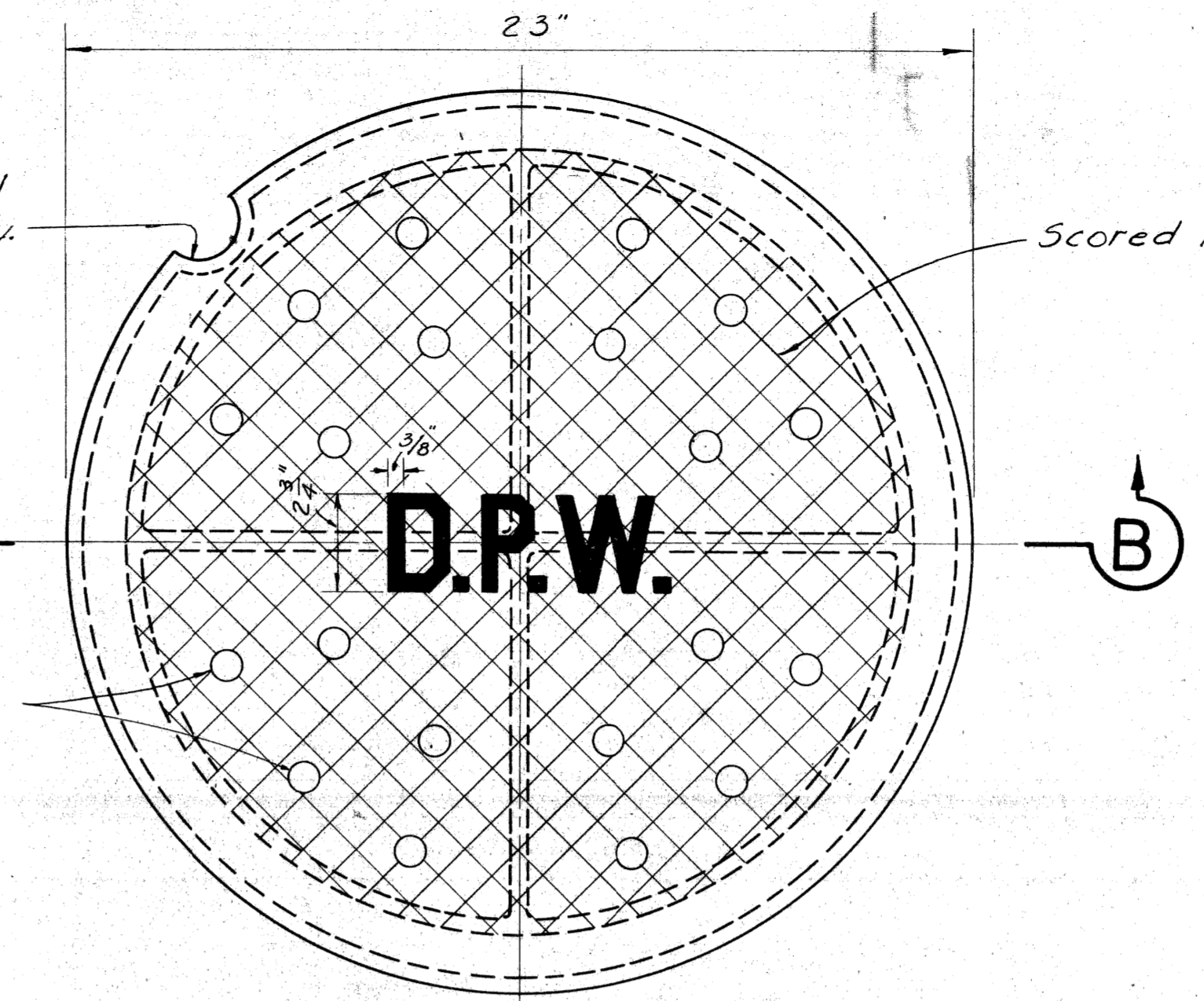
SEC. A S-1A

W-57-1

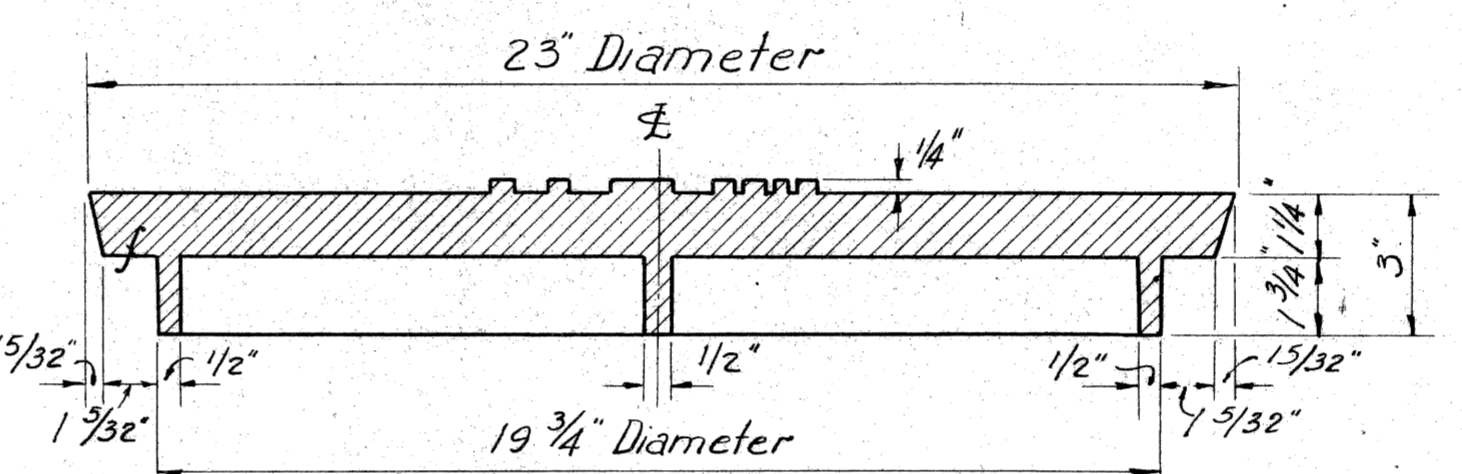
DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	107-1(24)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
		WAYNE	DETROIT	50	
DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



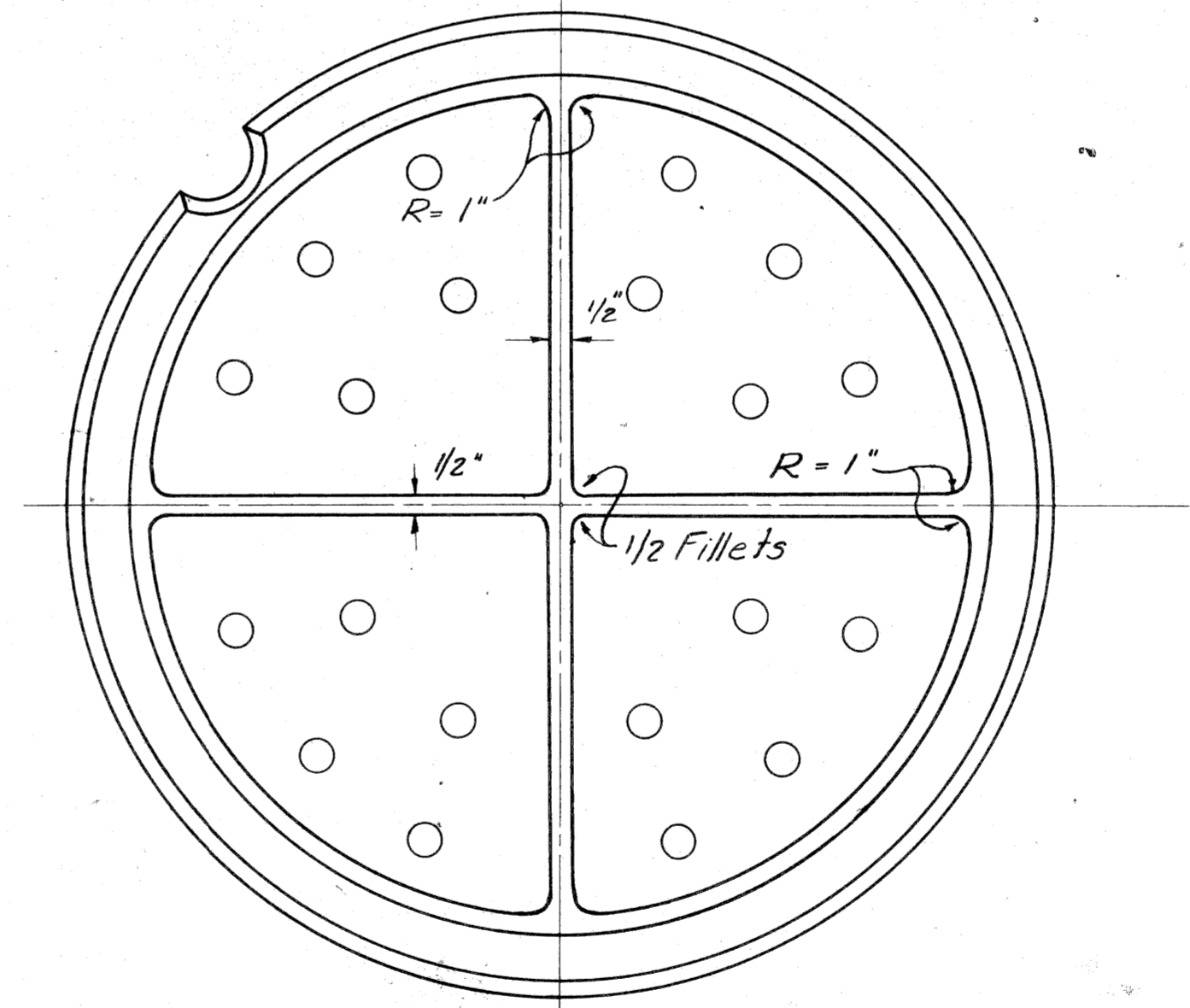
PLAN VIEW OF FRAME



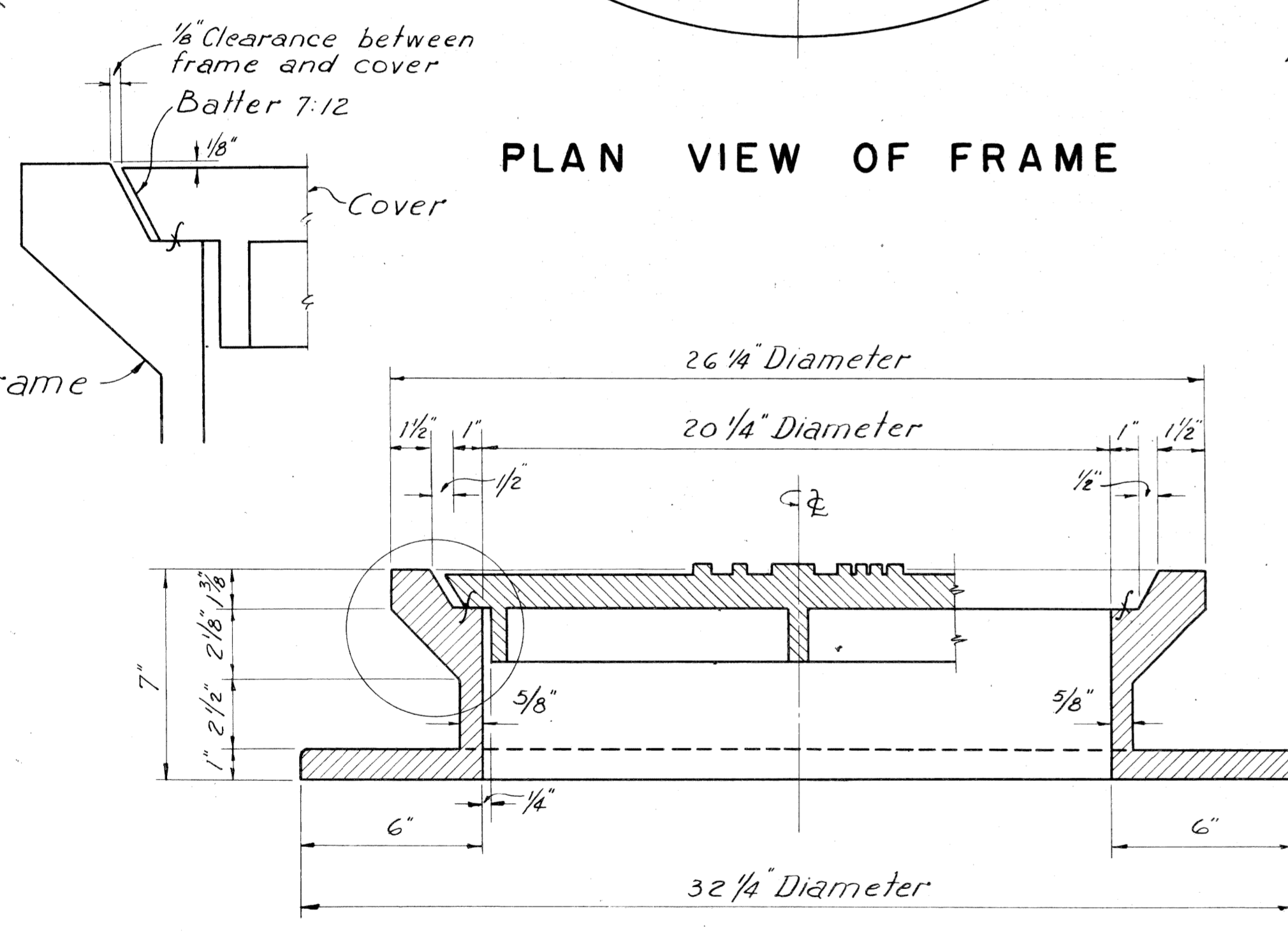
PLAN VIEW OF COVER



SECTION B-B



BOTTOM VIEW OF COVER



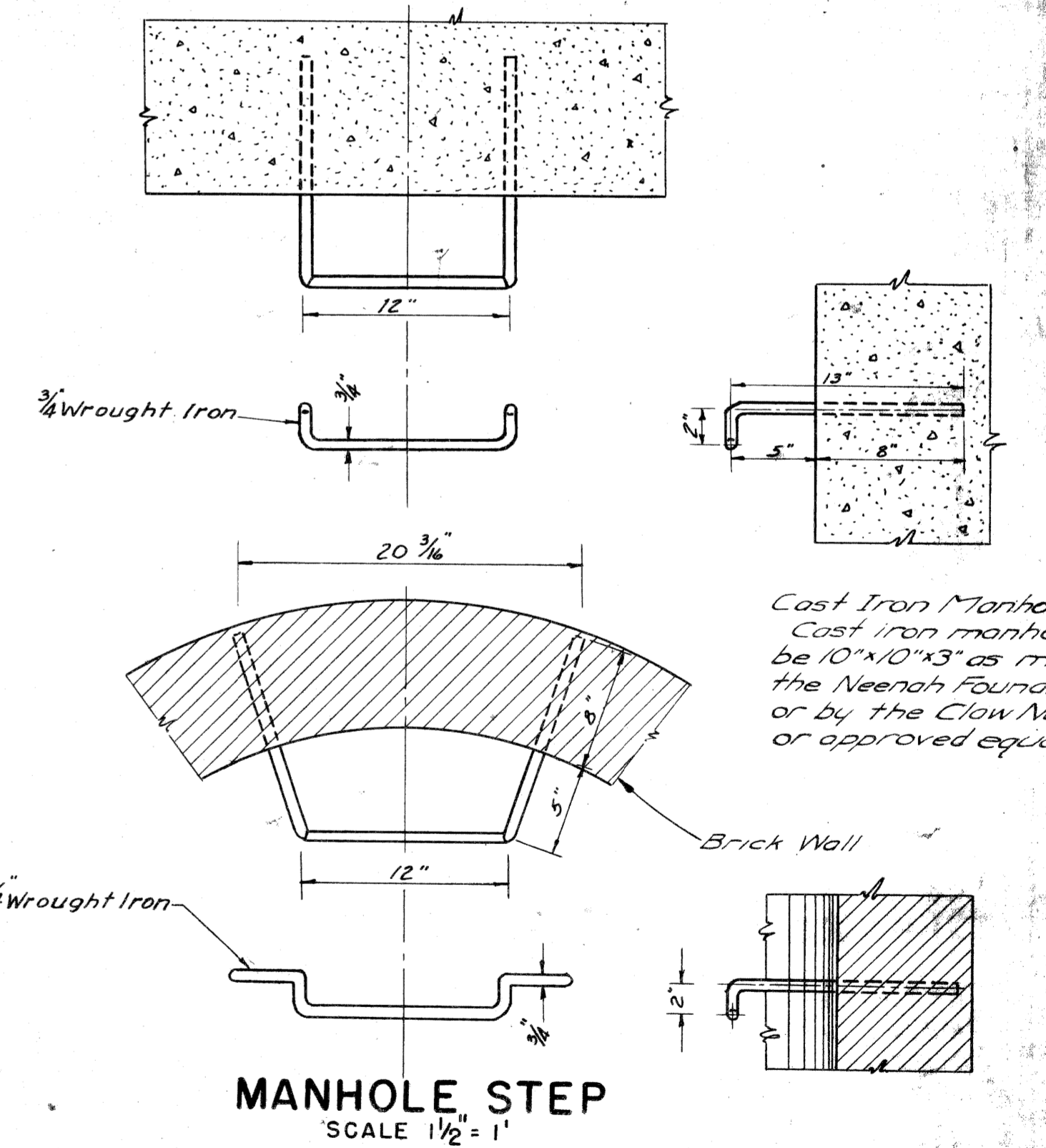
SECTION A-A

NOTES:-

Frame and cover to be gray iron castings
 Total weight = 409# (Perf cover)
 Manhole frame = 262#
 Cover (Perf) = 147#
 Cover (Blank) = 157#

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'



MANHOLE STEP
SCALE 1/2" = 1'

Cast Iron Manhole Steps:
 Cast iron manhole steps shall be 10" x 10" x 3" as manufactured by the Neenah Foundry Co. R-1980E, or by the Clow National F-3650, or approved equal.

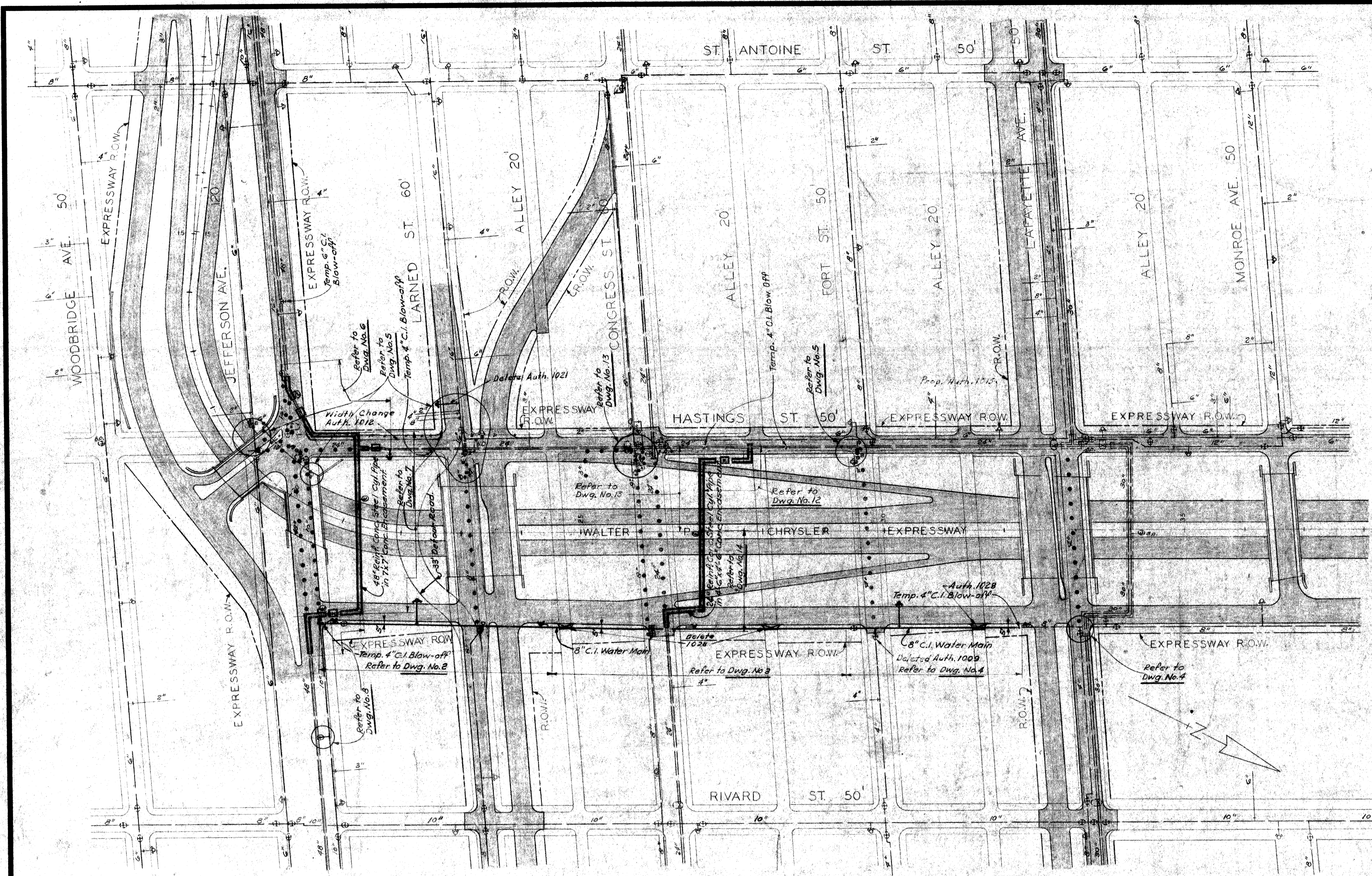
DESIGNED BY	
CHECKED BY	
APPROVED BY	

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERING OFFICE
 BUREAU OF HIGHWAYS

NO.	DESCRIPTION	DATE
B	Added Specs for C.I. Manhole Steps S.S. J.L. JNO 1-2-36	
A	Deleted "Mild Steel" from M.H. Steps S.S. J.L. JNO 1-2-36	

DROP MANHOLE AND... SPECIAL DETAIL OF MANHOLE FRAME AND COVER AD

FILE NO. W-57-1



GENERAL PLAN
Scale: 1" = 100'

NOTES

- The Contractor shall fill all gate wells with sand on the abandoned water mains to remain in place, remove the gate well frame and cover and replace the pavement.
- Existing water mains as shown indicate approximate locations only as shown by D.W.S. records and no guarantee is made either as to completeness or accuracy.
- Elevations of existing water mains are not known. Approximate elevations shown on the profiles are based on assumption of average depth. The grades of the new mains are subject to change to suit actual elevations of existing mains.
- Excavation and backfilling for the entire work shall be done by the Contractor, including excavation and backfilling for work to be done by Others.
- The Contractor shall furnish all waterworks material required for the entire work, including work indicated on the drawings to be done by Others.
- Service connections and their relocation will be made by Others. Abandoned water services on existing water mains to remain in service are to be abandoned of the existing water main by Others. Services to be abandoned on existing water mains or reconnected to new water mains are not all shown on the plans.
- Other Utilities are 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.
- Temporary bracing is incidental to pipe laying and shall be installed by the Contractor.
- Removal of existing water mains as required for clearance to construct the proposed water mains is incidental to pipe laying.
- The locations of fire hydrants, as shown, are approximate. D.F.D. will give exact locations prior to installation.

Hydrants to be removed by Contractor — 5
High Pressure Hydrants to be removed by Contractor — 6
(All High Pressure Hydrants are not shown on Plans)

LEGEND

- New water mains less than 24"
- New water mains 24" and over
- Existing water mains less than 24"
- Existing water mains 24" and over
- New water main connections by Others
- Water mains to be abandoned
- New gate valve and well
- Existing gate valve and well
- New hydrant
- Existing hydrant
- Existing sewer or drain less than 24"
- Existing sewer or drain 24" and over
- Existing gas main
- Existing telephone, telegraph conduit or underground cable
- Existing electric power conduit or underground cable
- Existing utility pole
- Existing trestle
- Existing boulevard light
- Existing catch basin
- Existing Fire or Police Call Box
- Existing traffic signal

CONTROL SECTION 8211-30103

CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHRYSLER EXPRESSWAY
WATER SYSTEM ALTERATIONS FROM JEFFERSON AVE. TO LAFAYETTE AVE.
GENERAL PLAN
CHECKED *W.A.M.* CORRECT *W.A.M.* APPROVED *W.A.M.*

DATE _____ DRAWING NO. 1 OF 21 JOB NO. D-402-6

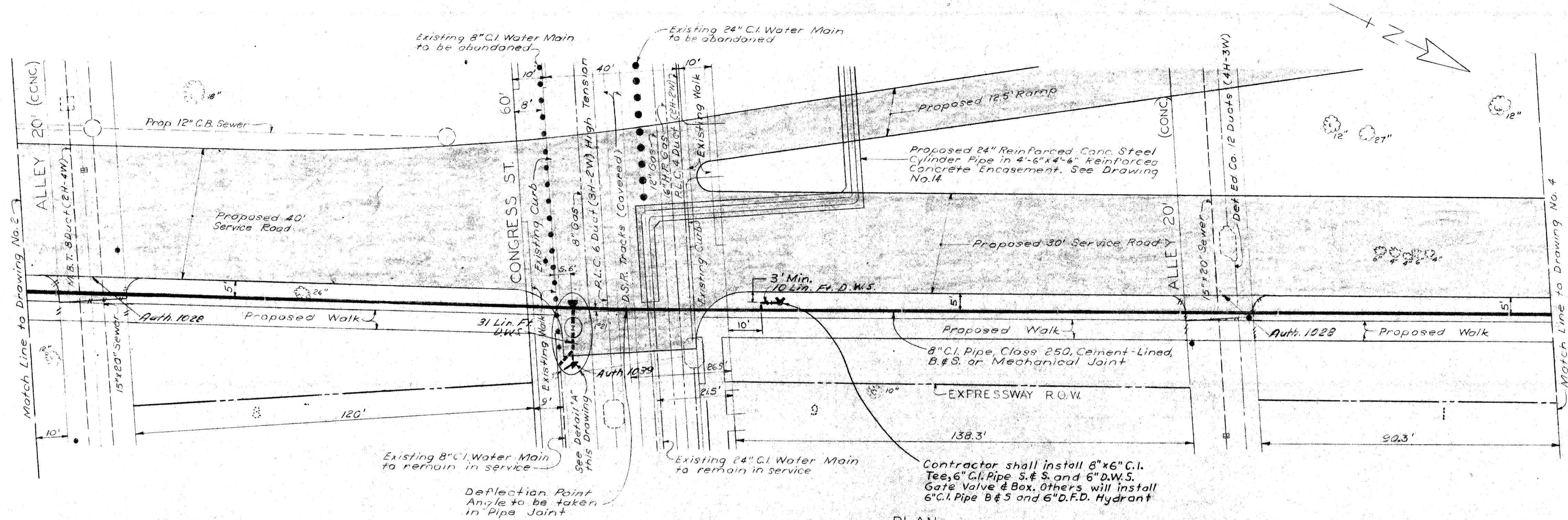
MICHIGAN STATE HIGHWAY DEPARTMENT

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONGVAN BUILDING
DETROIT 1, MICHIGAN

DRAWN BY	G.J.	DATE	11-11-58
CHECKED BY	J.E.	DATE	11-12-58

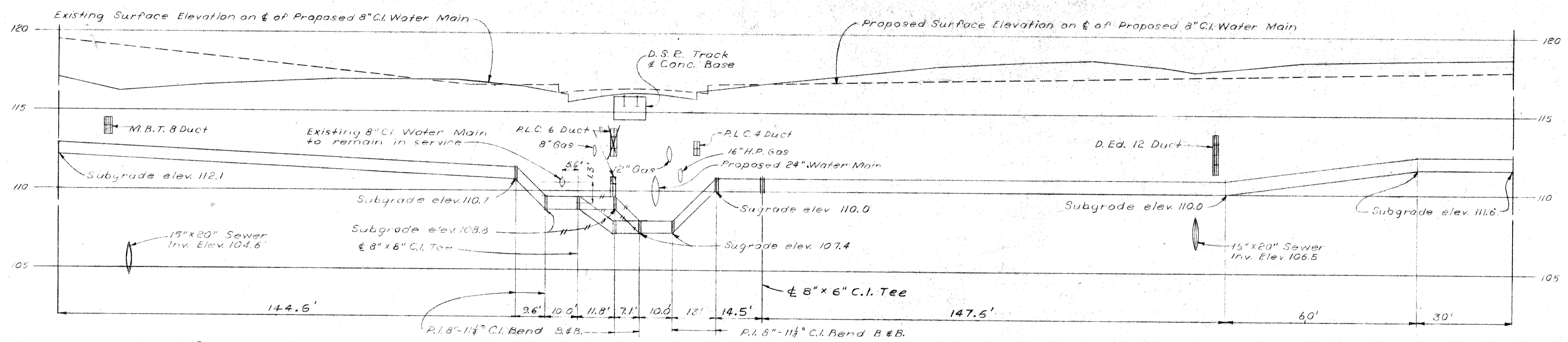
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET 51 OF	
W-57-1	

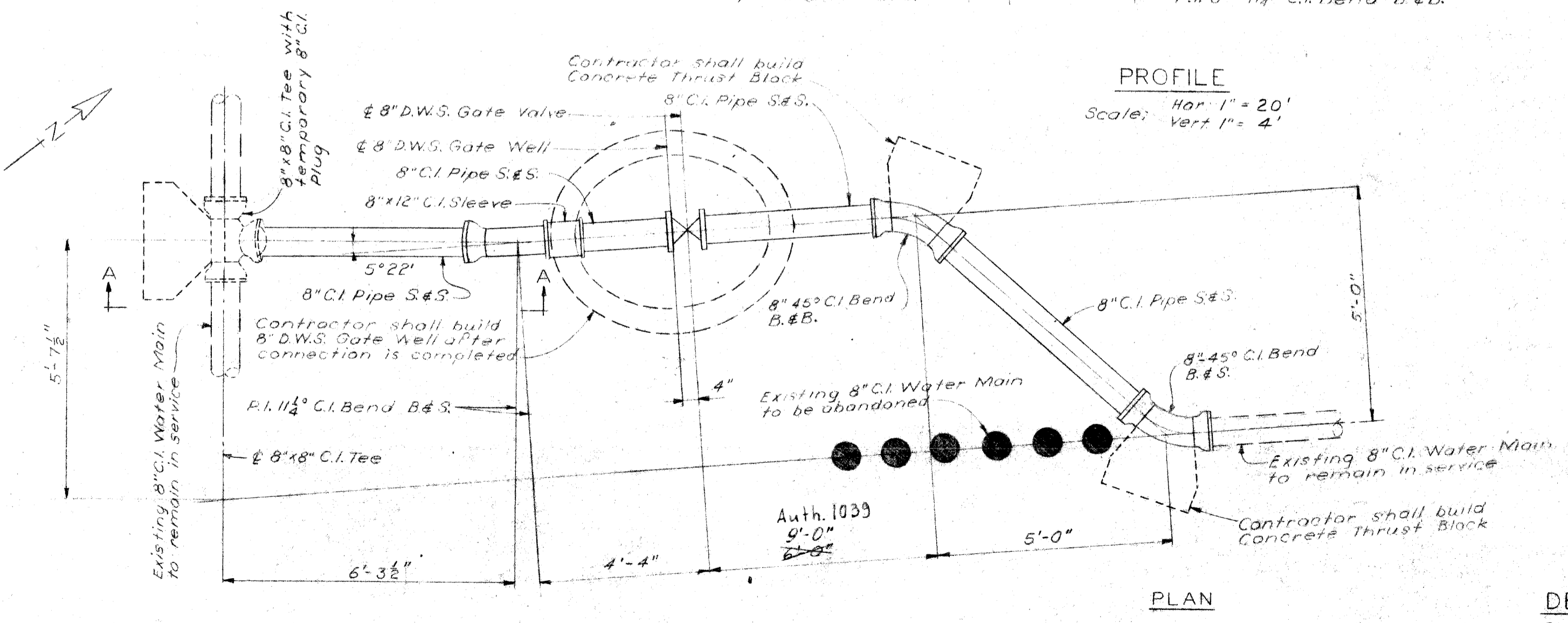


PLAN
Scale: 1"=20'

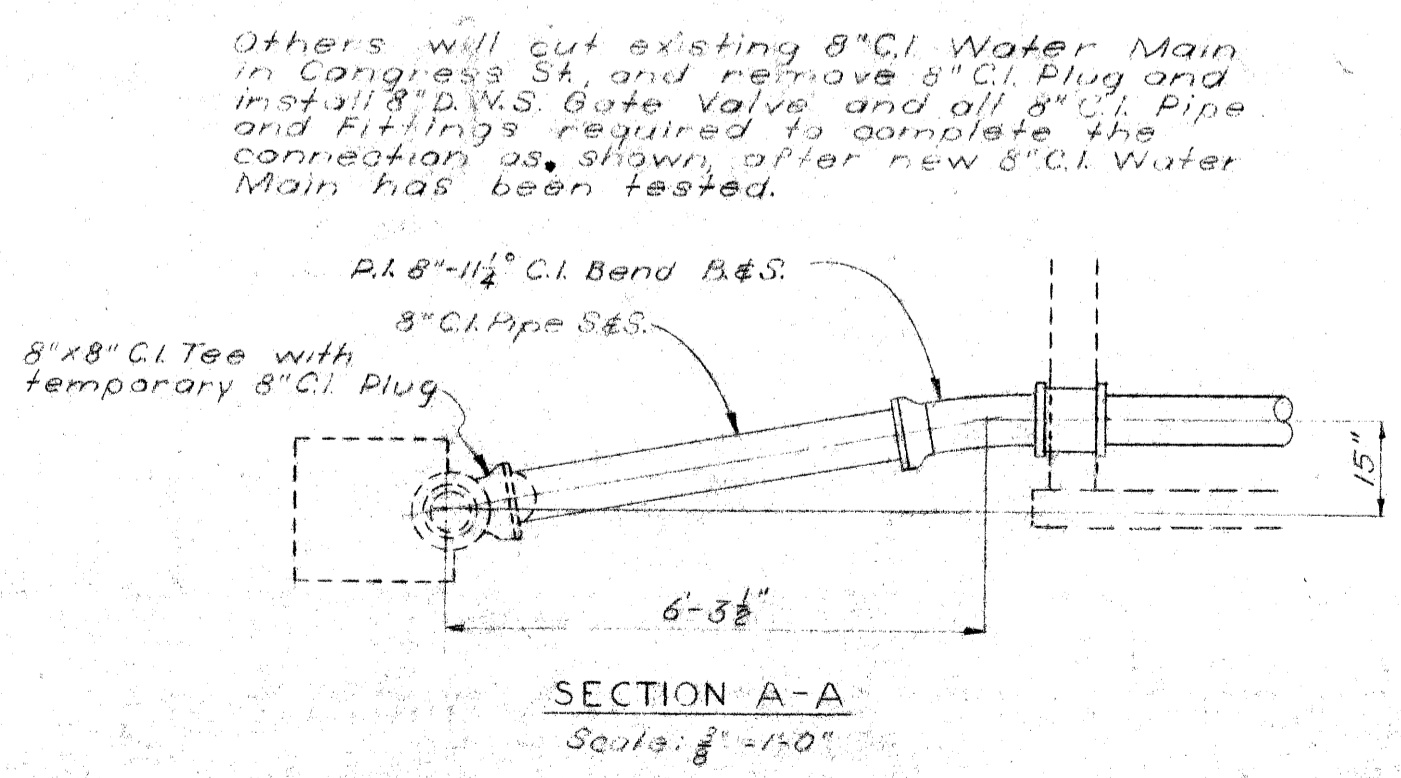
QUANTITIES	
ITEM	AMOUNT
8" C.I. Water Main, Furnished	3 Lin. Ft.
6" C.I. Water Main, Furnished & Placed	4 Lin. Ft.
8" C.I. Water Main, Furnished	30 Lin. Ft.
8" C.I. Water Main, Furnished & Placed	458 Lin. Ft.
8" Gate Wells	1 Each
8" D.W.S. Gate Valves, Furnished	1 Each
6" D.W.S. Gate Valves & Boxes, Furnished	1 Each
6" D.F.D. Fire Hydrants, Furnished	1 Each
Water Main Trench For Work done by D.W.S.	41 Lin. Ft.
Concrete Thrust Blocks	Lump Sum



PROFILE
Scale: Hor 1"=20'
Vert 1"=4'



DETAIL 'A'
Scale: 3/8"=1'-0"



SECTION A-A
Scale: 3/8"=1'-0"

REFERENCE DRAWINGS
General Plan - Drawing No. 1
Plan & Profile, 24" Water Main - Drawing No. 14
Miscellaneous Details - Drawing No. 21

CONTROL SECTION 82III-30103

CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHRYSLER EXPRESSWAY
WATER SYSTEM ALTERATION EAST SIDE OF EXPRESSWAY
110' NORTH OF LARNED ST. TO 48' SOUTH OF FORT ST.

CHECKED *W.A.H.* CORRECT *W.A.H.* APPROVED *Ed. Corbett*

DATE	DRAWING NO. 3 OF 21	JOB NO. D-402-E
------	---------------------	-----------------

MICHIGAN STATE HIGHWAY DEPARTMENT

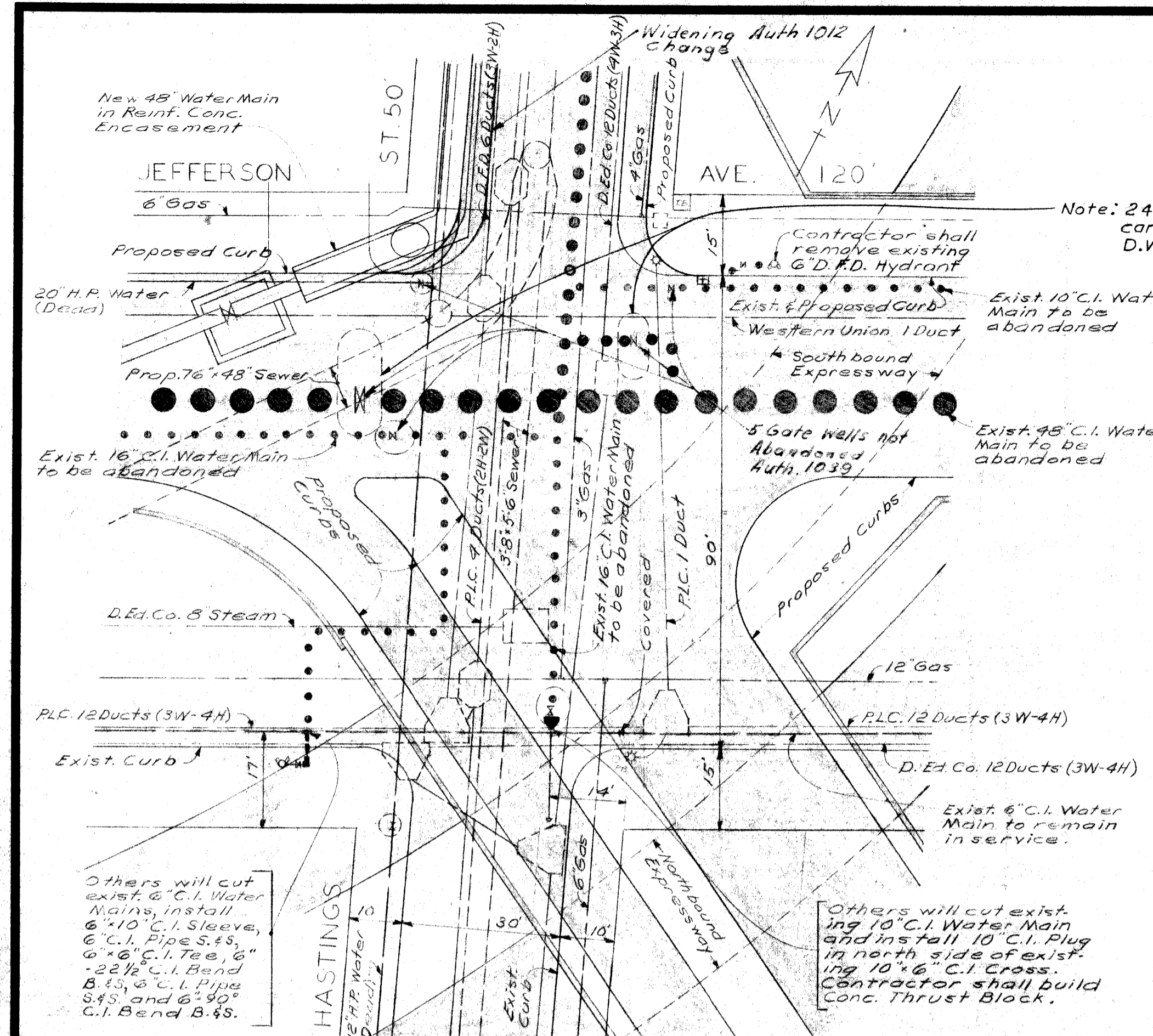
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY

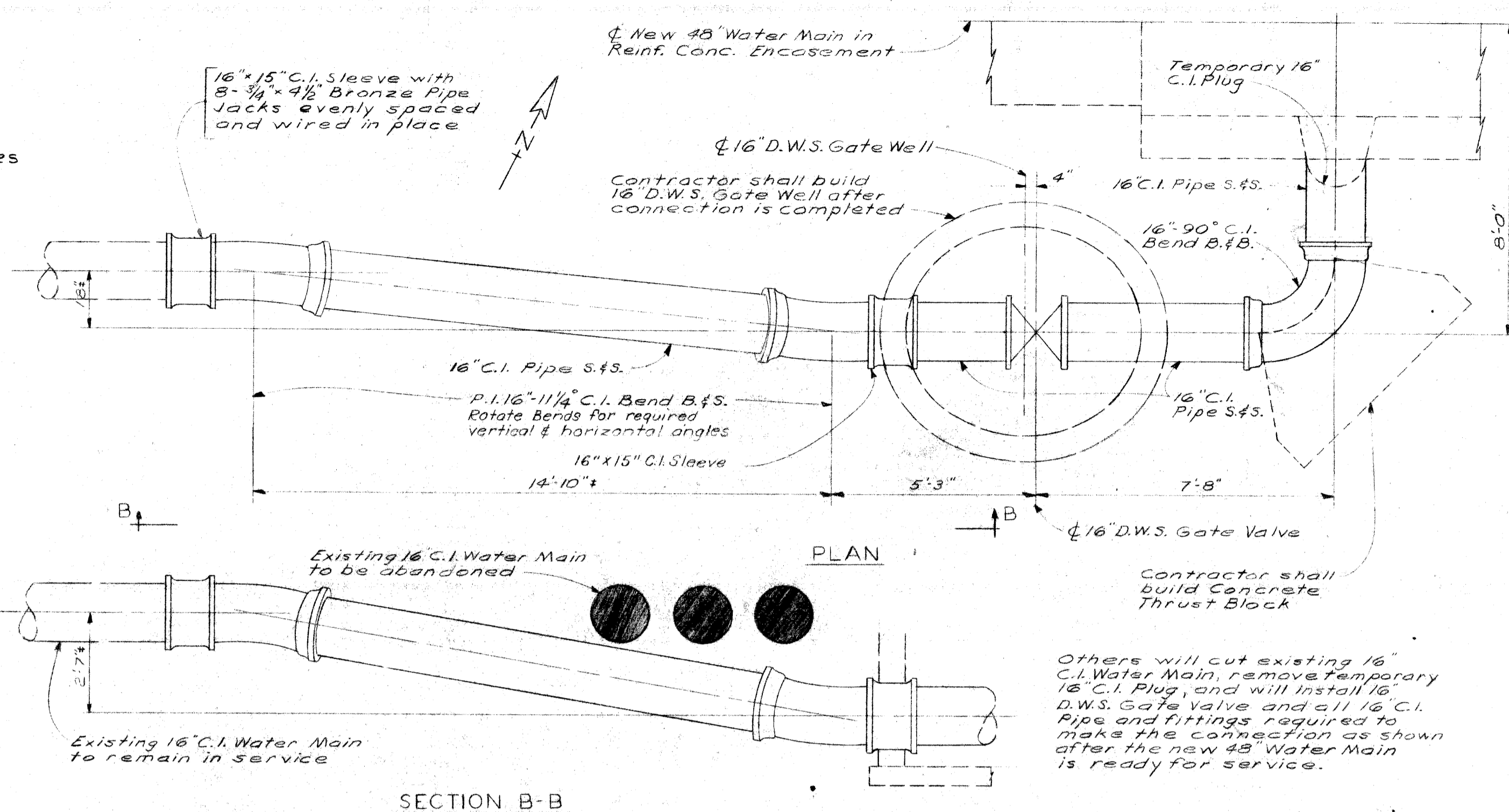
SHEET 53 OF
W-571

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONOVAN BUILDING
DETROIT 1, MICHIGAN

DRAWN BY	R.M.	DATE	10-5-58
CHECKED BY	J.K.	DATE	10-21-58

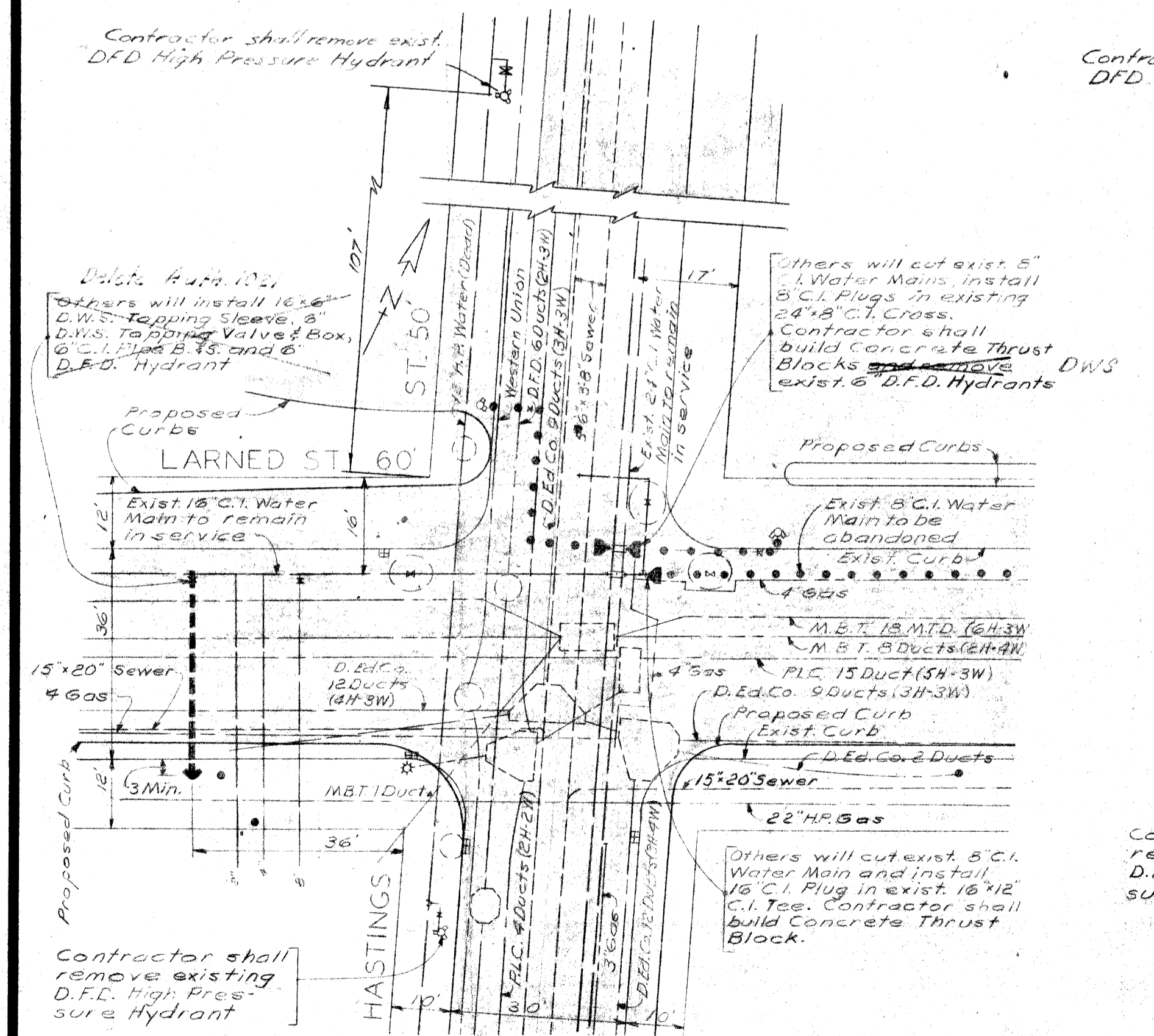


PLAN SHOWING WATER MAIN ALTERATIONS AT HASTINGS ST. & JEFFERSON AVE. Scale: 1"=20'

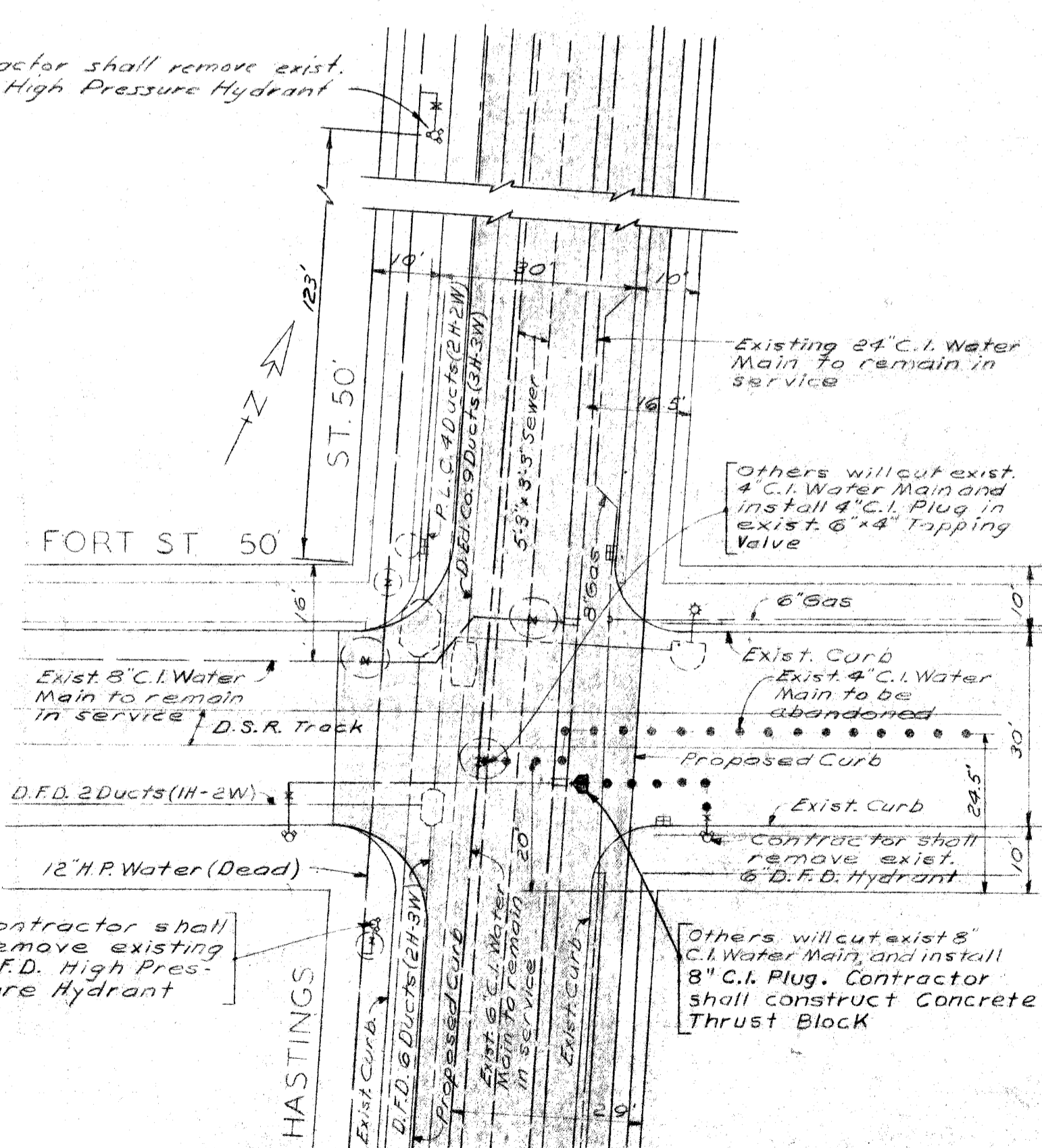


DETAIL 'E' FROM DRAWING NO. 6 Scale: 3/8"=1'-0'

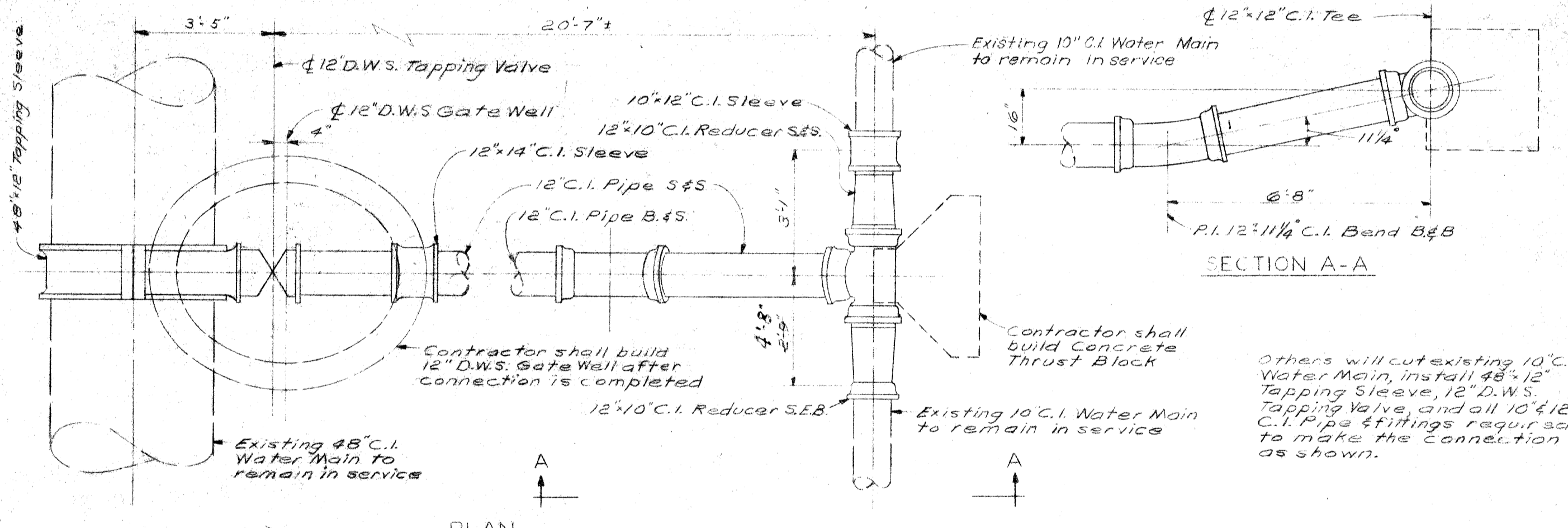
QUANTITIES		ITEMS	AMOUNT
		Removing H.P. Hydrants	4 Each
		Removing Hydrants	Auth 1021 3 -4 Each
		4" C.I. Water Main, Furnished	1 Lin. Ft.
		6" C.I. Water Main, Furnished	Auth. 1021 11 45 Lin. Ft.
		8" C.I. Water Main, Furnished	3 Lin. Ft.
		10" C.I. Water Main, Furnished	2 Lin. Ft.
		6" Tapping Valve & Box, Furnished	Auth. 1021 1 Each
		Water Main Trench for Work Done by D.W.S.	Auth. 1021 67 Lin. Ft.
		6" D.F.D. Fire Hydrants, Furnished	Auth 1021 1 Each
		Concrete Thrust Blocks	Lump Sum



PLAN SHOWING WATER MAIN ALTERATIONS AT HASTINGS ST. & LARNED ST. Scale: 1"=20'



PLAN SHOWING WATER MAIN ALTERATIONS AT HASTINGS ST. & FORT ST. Scale: 1"=20'



DETAIL 'C' FROM DRAWING NO. 8 Scale: 3/8"=1'-0'

- REFERENCE DRAWINGS
- General Plan Dwg. No. 1
 - Plan & Profile Dwg. No. 6
 - Plan & Profile Dwg. No. 8
 - Miscellaneous Details Dwg. No. 21

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONOVAN BUILDING
DETROIT 1, MICHIGAN

CONTROL SECTION 82111-30103

CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHRYSLER EXPRESSWAY
WATER SYSTEM ALTERATIONS
FROM JEFFERSON AVE TO LAFAYETTE AVE.
MISCELLANEOUS CONNECTIONS & DETAILS

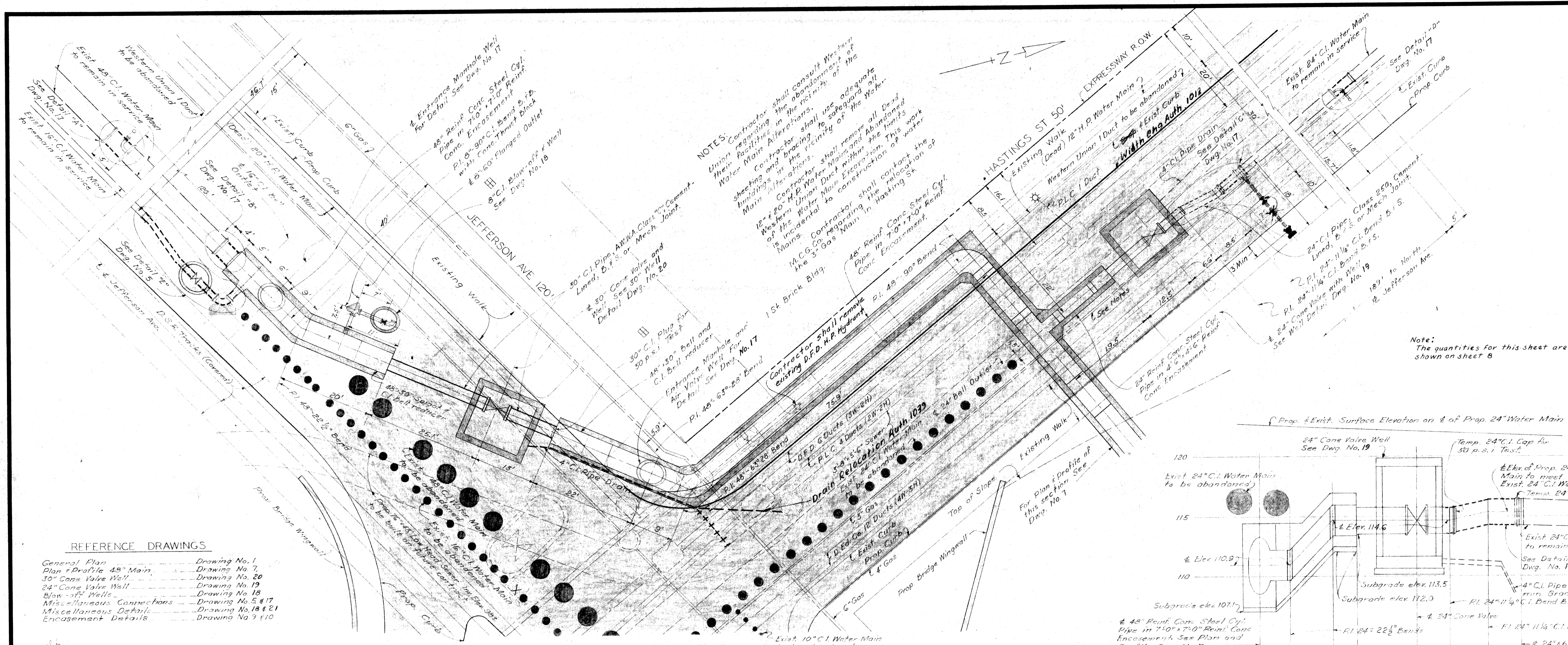
CHECKED W.A.H. CORRECT *W.A.H.* APPROVED *W.A.H.*

DATE	DRAWING NO. 5 OF 21	JOB NO. D-402-6

MICHIGAN STATE HIGHWAY DEPARTMENT

NO.	REVISIONS	DATE	BY

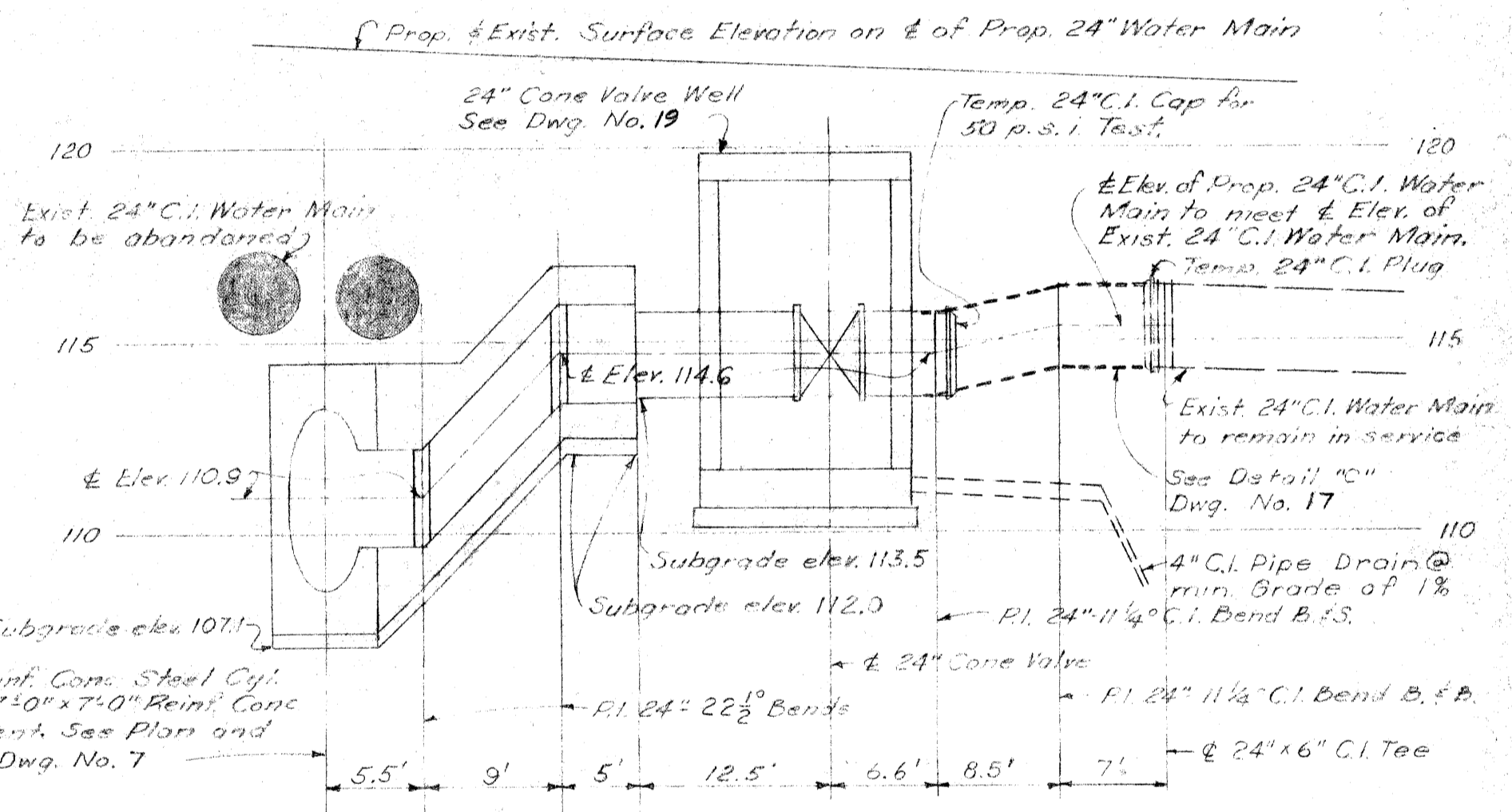
SHEET 55 OF
W-571



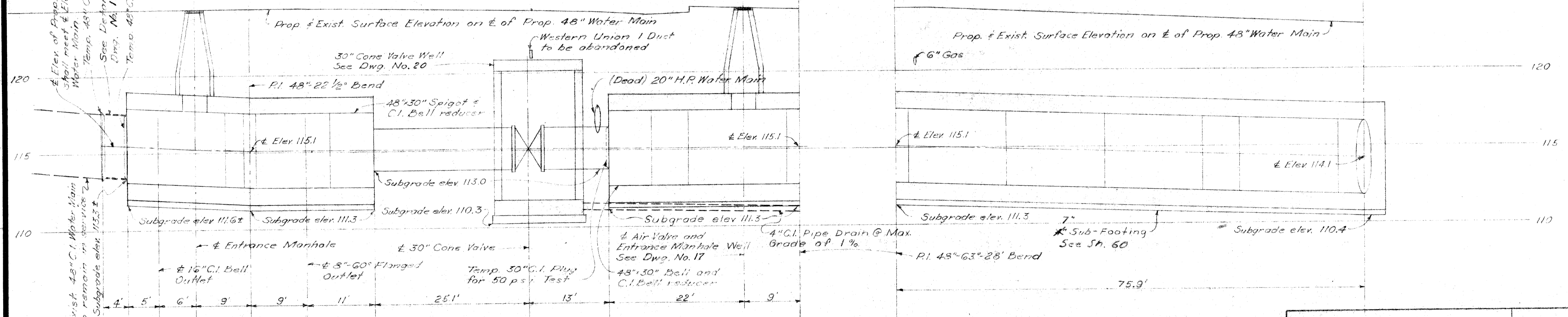
NOTES:
 Contractor shall consult Western Union facilities in the abandonment of their Main Alterations.
 Contractor shall use adequate sheeting and bracing to safeguard all buildings in the vicinity of the Water Main alterations.
 Contractor shall remove all Dead Western Union Duct within the limits of the Water Main Excavation. This work is incidental to construction of water Mains.
 Contractor shall contact the M.C.G. Co. regarding the relocation of the 3\"/>

- REFERENCE DRAWINGS**
- General Plan Drawing No. 1
 - Plan & Profile 48\"/>

PLAN
 Scale: 1"=10'



**PROFILE OF 24\"/>
 Scale: Hor. 1"=10', Vert. 1"=4'**



PROFILE
 Scale: Hor. 1"=10', Vert. 1"=4'

CONTROL SECTION 82111-30103

CITY OF DETROIT
 DEPARTMENT OF WATER SUPPLY
 WALTER P. CHRYSLER EXPRESSWAY
 WATER SYSTEM ALTERATIONS - JEFFERSON AVE. CROSSING
 48" & 24" WATER MAINS WEST SIDE OF EXPRESSWAY

CHECKED *W.A.M.* CORRECT *W.A.M.* APPROVED *W.A.M.*

DATE _____ DRAWING NO. 6 OF 21 JOB NO. D-402-6

MICHIGAN STATE HIGHWAY DEPARTMENT

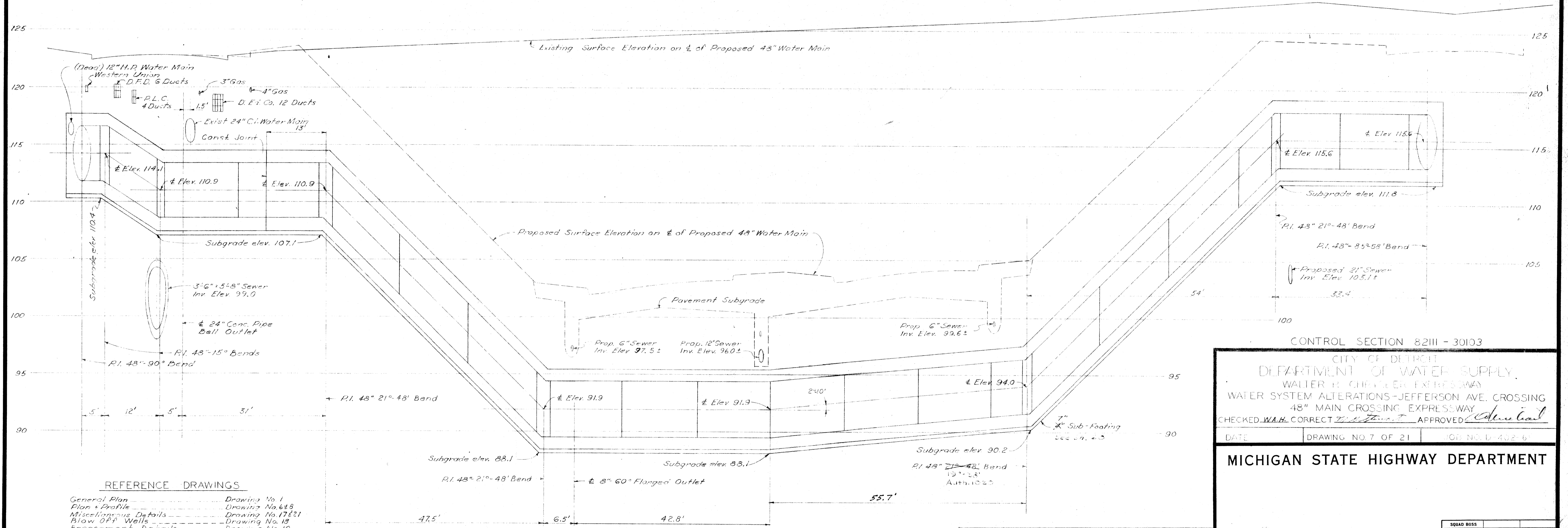
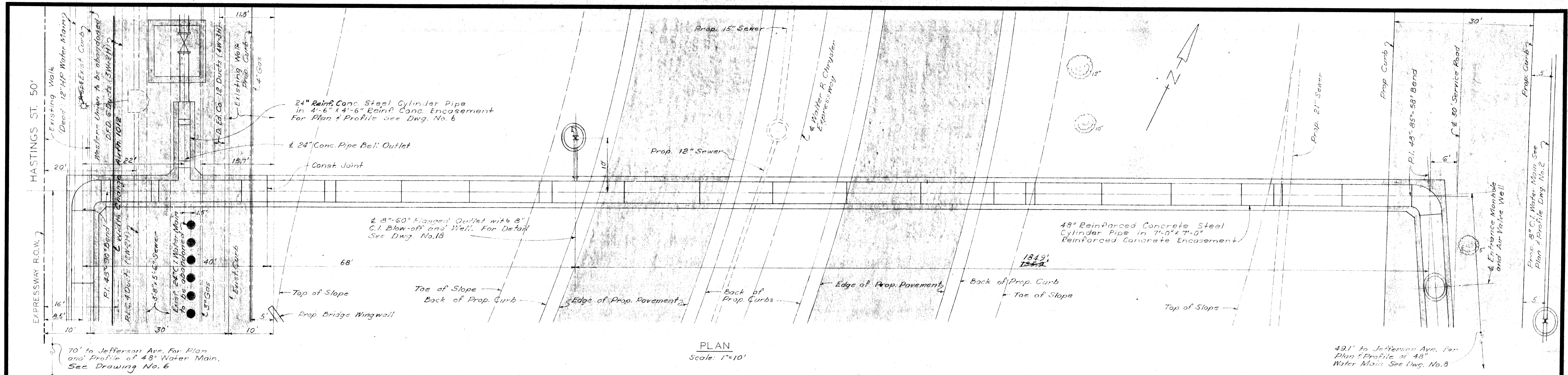
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS _____
 DRAWN BY _____
 TRACED BY _____
 CHECKED BY _____

W-57-1

PENTAD ENGINEERS, INC.
 CONSULTING ENGINEERS
 910 DONOVAN BUILDING
 DETROIT 1, MICHIGAN

DATE _____
 DRAWN BY *W.D.S.* 10/18/58
 CHECKED BY *J.A.* 10/23/58



- REFERENCE DRAWINGS**
- General Plan Drawing No. 1
 - Plan & Profile Drawing No. 6 & 8
 - Miscellaneous Details Drawing No. 17 & 21
 - Blow Off & Wells Drawing No. 18
 - Encasement Details Drawing No. 19

Note:
The quantities for this sheet are shown on sheet 8

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONOVAN BUILDING
DETROIT 1, MICHIGAN

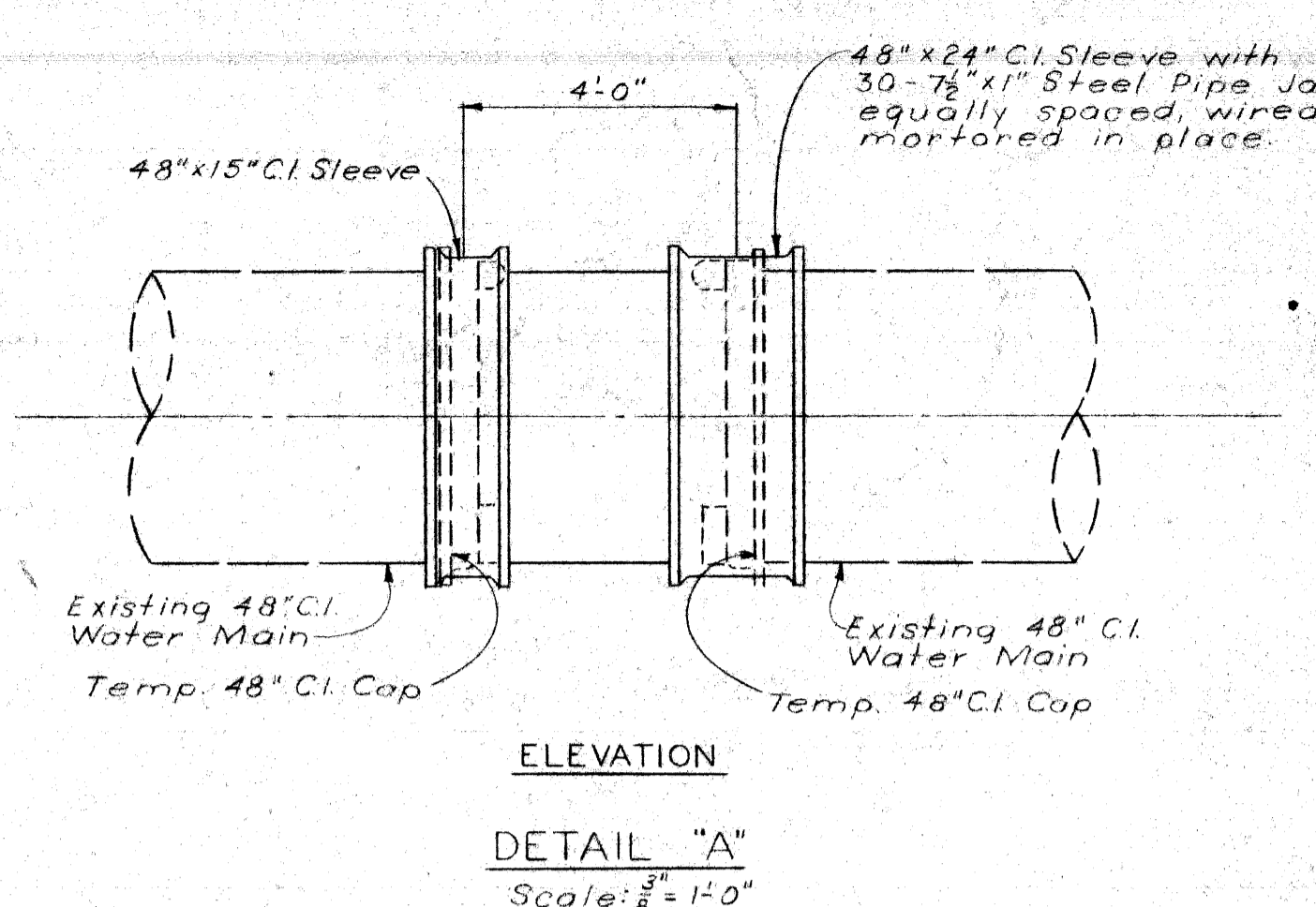
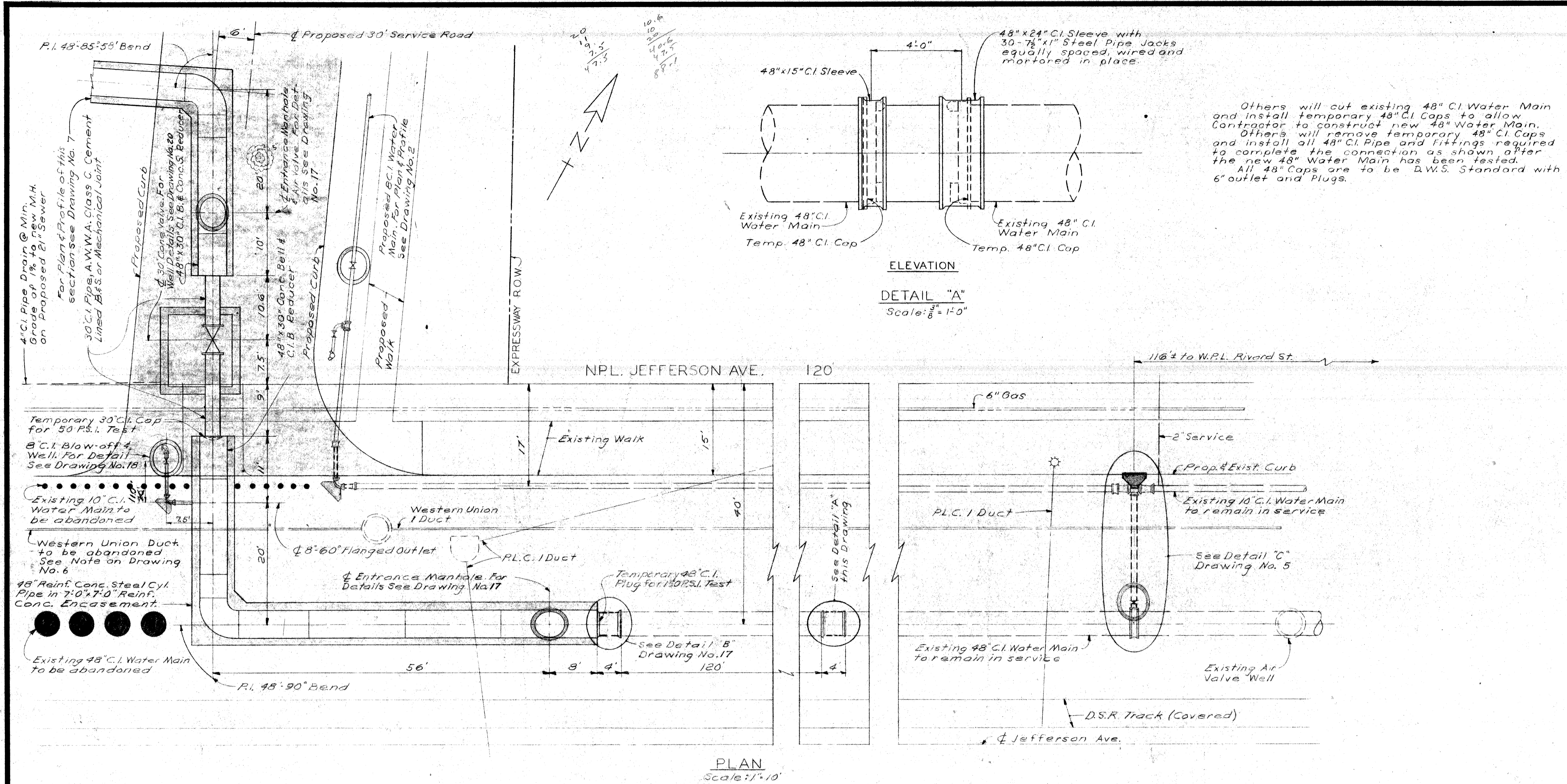
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHESTER EXPRESSWAY
WATER SYSTEM ALTERATIONS - JEFFERSON AVE. CROSSING
48" MAIN CROSSING EXPRESSWAY
CHECKED *W.A.H.* CORRECT *W.A.H.* APPROVED *Colleen Coak*

DATE _____ DRAWING NO. 7 OF 21 OF NO. L 402-6

MICHIGAN STATE HIGHWAY DEPARTMENT

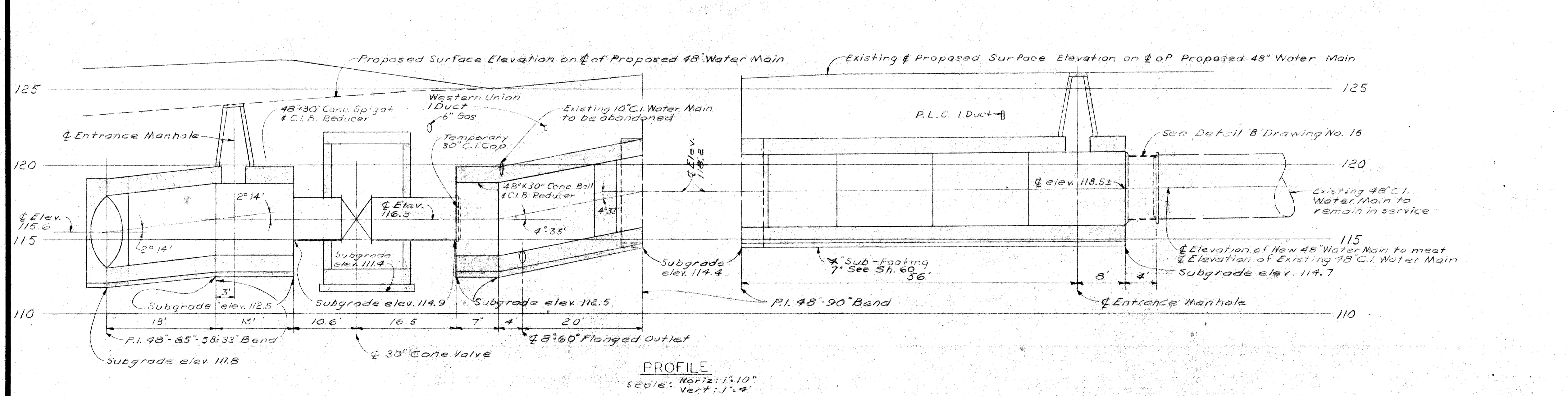
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SHEET 57 OF
W-57-1



Others will cut existing 48" CI Water Main and install temporary 48" CI Caps to allow Contractor to construct new 48" Water Main. Others will remove temporary 48" CI Caps and install all 48" CI Pipe and Fittings required to complete the connection as shown after the new 48" Water Main has been tested. All 48" Caps are to be D.W.S. Standard with 6" outlet and Plugs.

QUANTITIES		Auth.
ITEM	TOTAL	
Grade "A" Concrete (For Water Main Encasement)	782 Cu. Yds.	1020
Steel Reinforcement (For Water Main Encasement)	32,412 Lbs.	40,243
4" CI Pipe Drain, Furnished & Placed	210.39	118
6" CI Water Main, Furnished	15 Lin. Ft.	
12" CI Water Main, Furnished	28 Lin. Ft.	
16" CI Water Main, Furnished	33 Lin. Ft.	
24" CI Water Main, Furnished	25 Lin. Ft.	
24" CI Water Main, Furnished & Placed	19 Lin. Ft.	
30" CI Water Main, Furnished & Placed	65 Lin. Ft.	
48" CI Water Main, Furnished	11 Lin. Ft.	
48" CI Water Main, Furnished & Placed	8 Lin. Ft.	
24" Conc. Water Main, Furnished & Placed	17 Lin. Ft.	
48" Conc. Water Main, Furnished & Placed	574 Lin. Ft.	
12" Gate Wells	1 Each	
16" Gate Wells	1 Each	
24" Cone Valve Wells	1 Each	
30" Cone Valve Wells	2 Each	
8" Blow-off Well	3 Each	
Entrance Manhole Wells	4 Each	
8" Permanent Blow-offs, Furnished & Placed	3 Each	
12" Tapping Valve, Furnished	1 Each	
16" D.W.S. Gate Valves, Furnished	1 Each	
24" Cone Valves, Placed	1 Each	
30" Cone Valves, Placed	2 Each	
6" D.W.S. Gate Valve & Boxes, Furnished	1 Each	
6" D.F.D. Hydrants, Furnished	1 Each	
Water Main Trench for work done by D.W.S. #1039	122 Lin. Ft.	175
Concrete Thrust Blocks	Lump Sum	



- REFERENCE DRAWINGS
- General Plan - Drawing No. 1
 - Plan & Profile 30" CI Water Main - Drawing No. 2
 - Plan & Profile 48" Water Main - Drawing No. 6, 8, 7
 - 30" Cone Valve Well - Drawing No. 20
 - Blow Off Wells - Drawing No. 18
 - Miscellaneous Details - Drawing No. 17 & 21
 - Miscellaneous Connections - Drawing No. 5 & 17
 - Encasement Details - Drawing No. 11

CONTROL SECTION 82111-30103
 CITY OF DETROIT
 DEPARTMENT OF WATER SUPPLY
 WALTER P. CHRYSLER EXPRESSWAY
 WATER SYSTEM ALTERATIONS-JEFFERSON AVE. CROSSING
 48" MAIN EAST SIDE OF EXPRESSWAY
 CHECKED W.A.H. CORRECT W.A.H. APPROVED W.A.H.

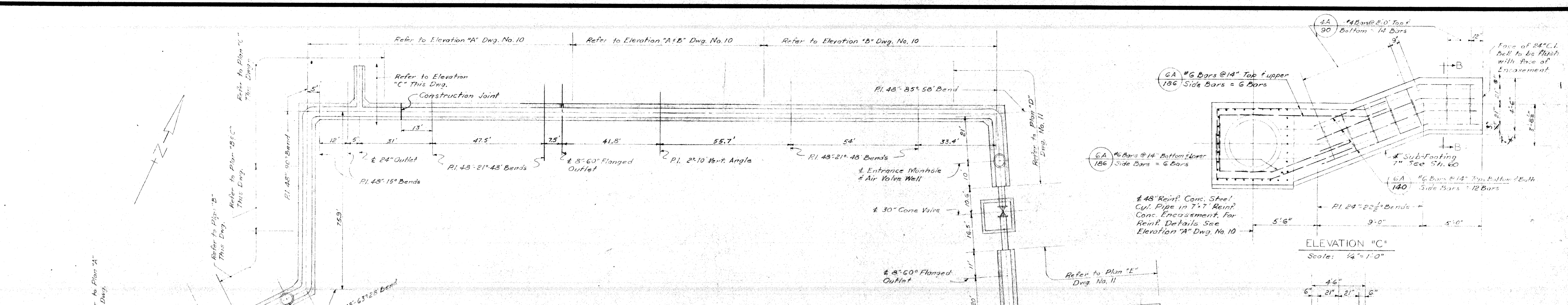
DATE _____ DRAWING NO. 8 OF 21 JOB NO. D-402-6
MICHIGAN STATE HIGHWAY DEPARTMENT

PENTAD ENGINEERS INC.
 CONSULTING ENGINEERS
 910 DONOVAN BUILDING
 DETROIT 1, MICHIGAN

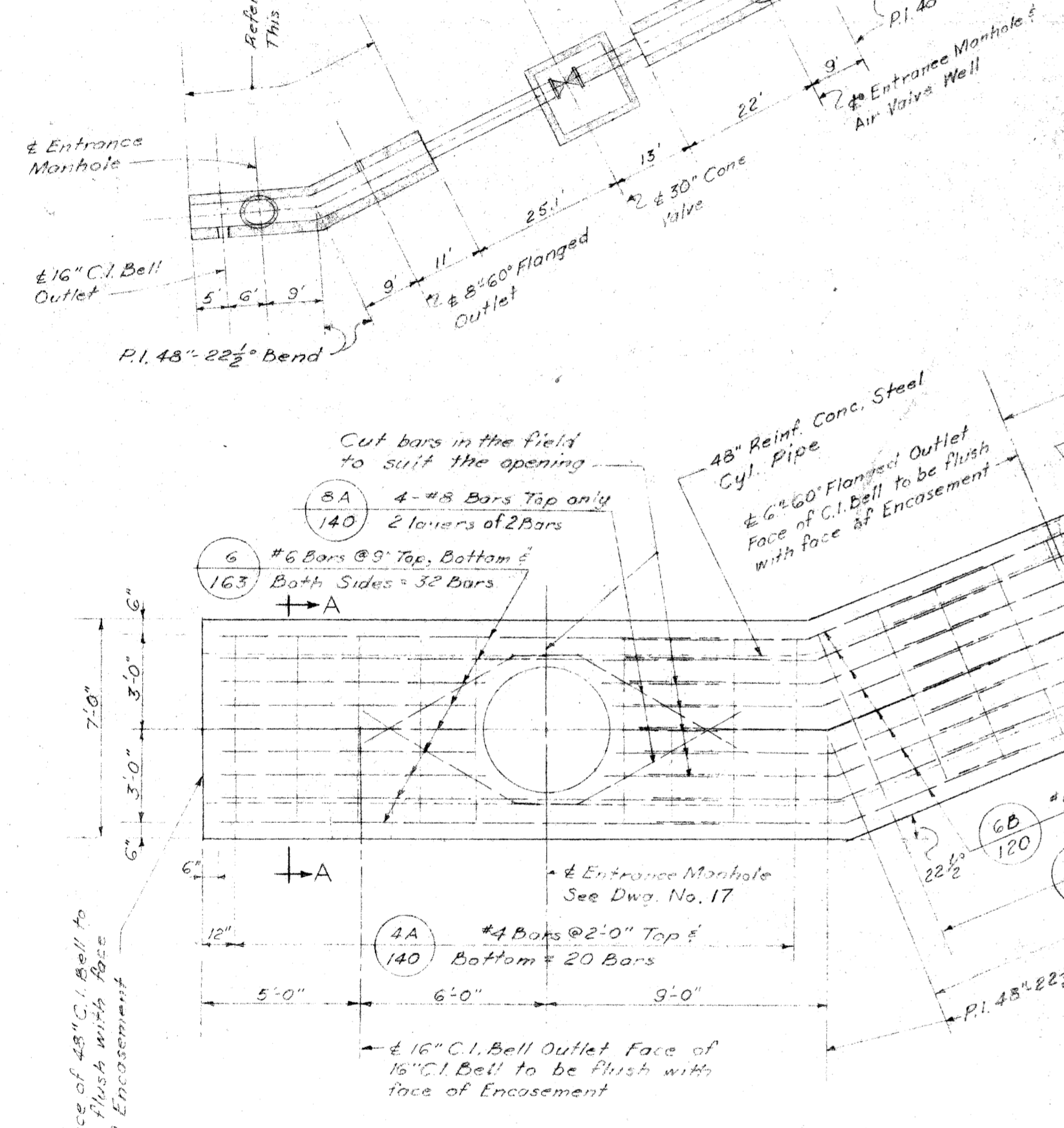
REVISIONS			
NO.	DESCRIPTION	DATE	BY

DATE: 10-27-58
 DRAWN BY: G.W.H.
 CHECKED BY: J.K.R.

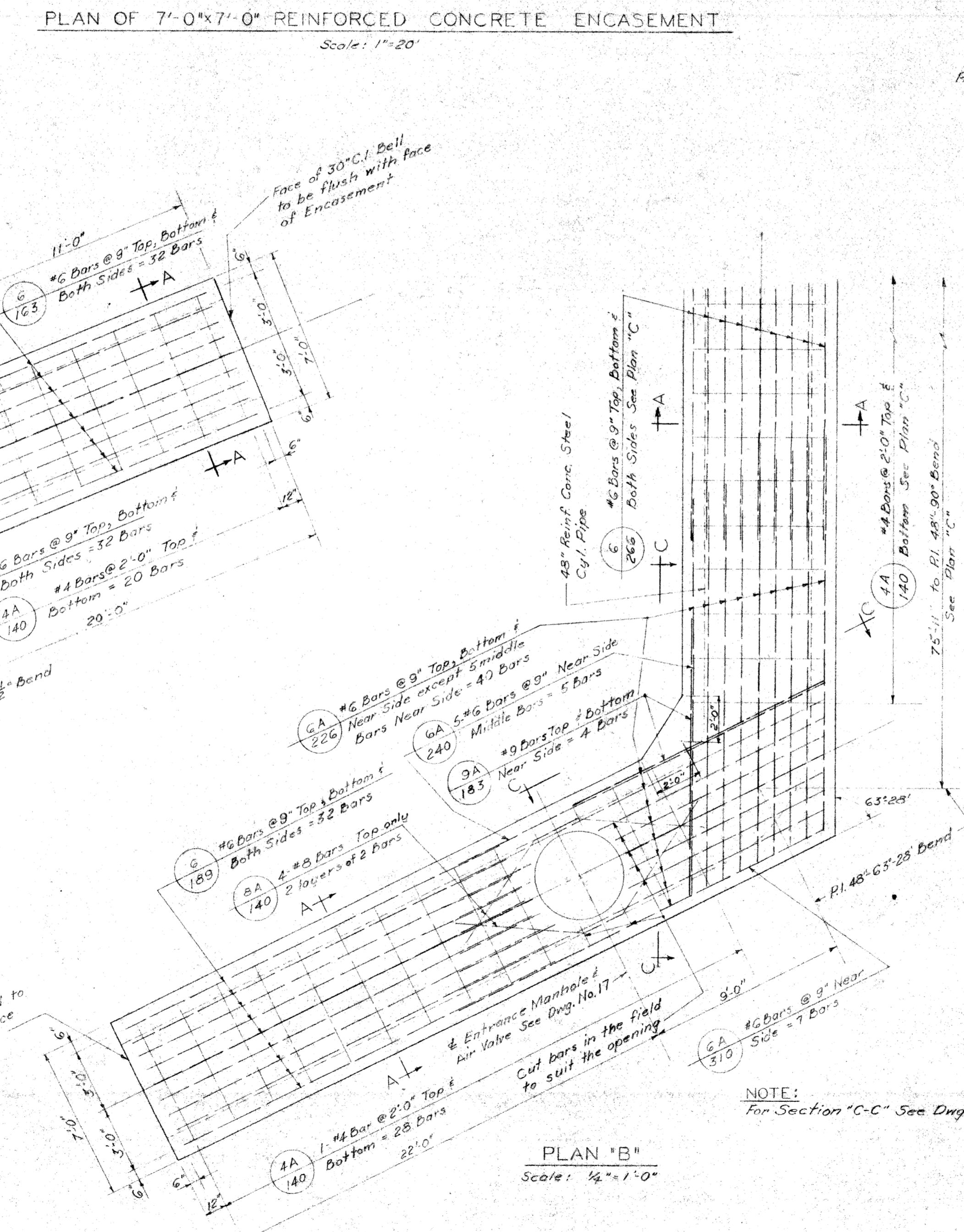
SQUAD BOSS _____
 DRAWN BY _____
 CHECKED BY _____
 SHEET 58 OF _____
W-57-1



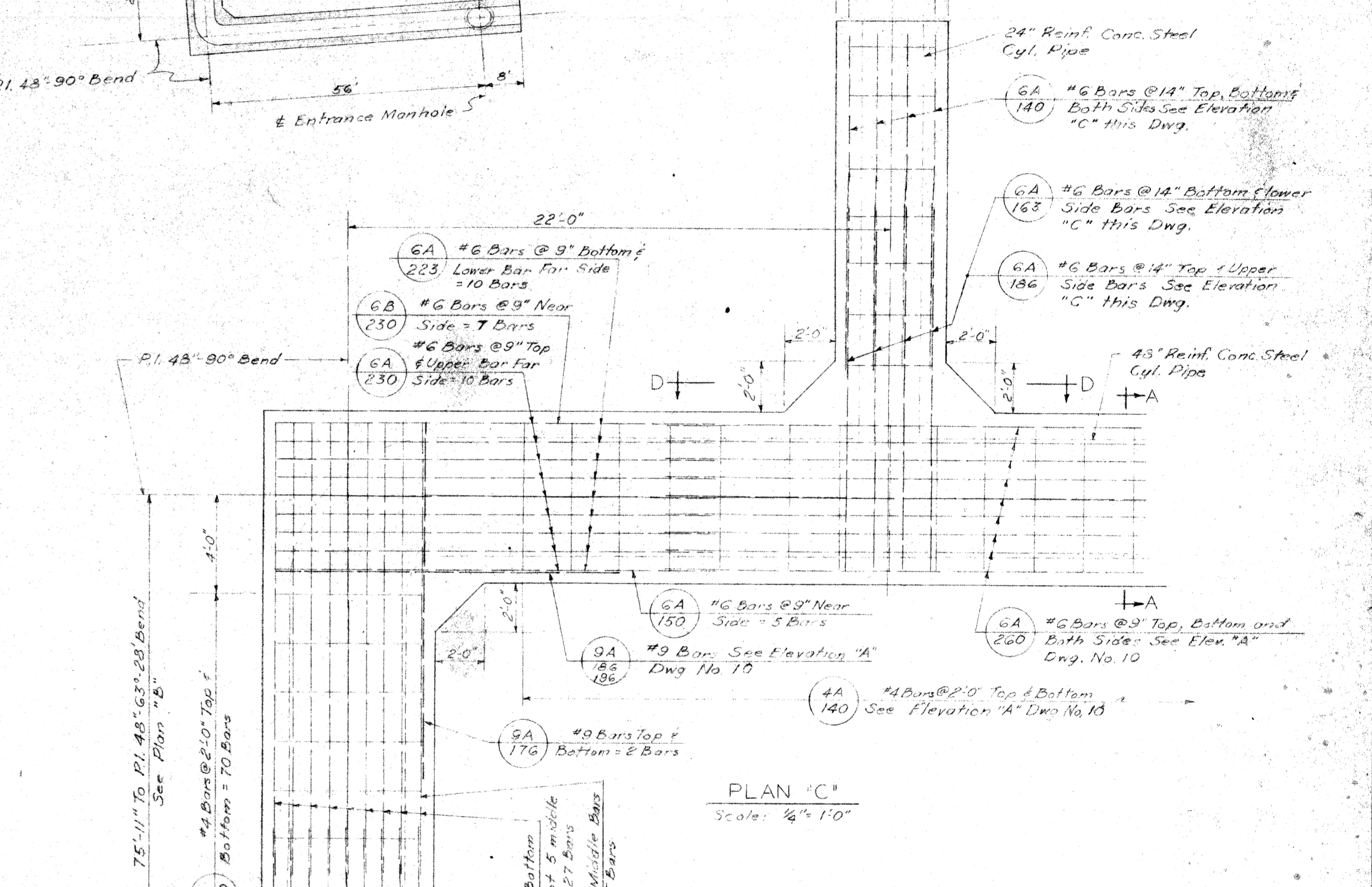
PLAN OF 7'-0" x 7'-0" REINFORCED CONCRETE ENCASEMENT
Scale: 1" = 20"



PLAN 'A'
Scale: 1/4" = 1'-0"



PLAN 'B'
Scale: 1/4" = 1'-0"



ELEVATION 'C'
Scale: 1/4" = 1'-0"

- REFERENCE DRAWINGS
- General Plan Drawing No. 1
 - Plan & Profile 48" Water Main Drawing No. 6, 7 & 8
 - Encasement Details Drawing No. 10 & 11

NOTE:
For Section 'C-C' See Dwg. No. 11

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONOVAN BUILDING
DETROIT 1, MICHIGAN

DATE
DRAWN BY: W.D.S. 11-6-58
CHECKED BY: J.K. 11-10-58

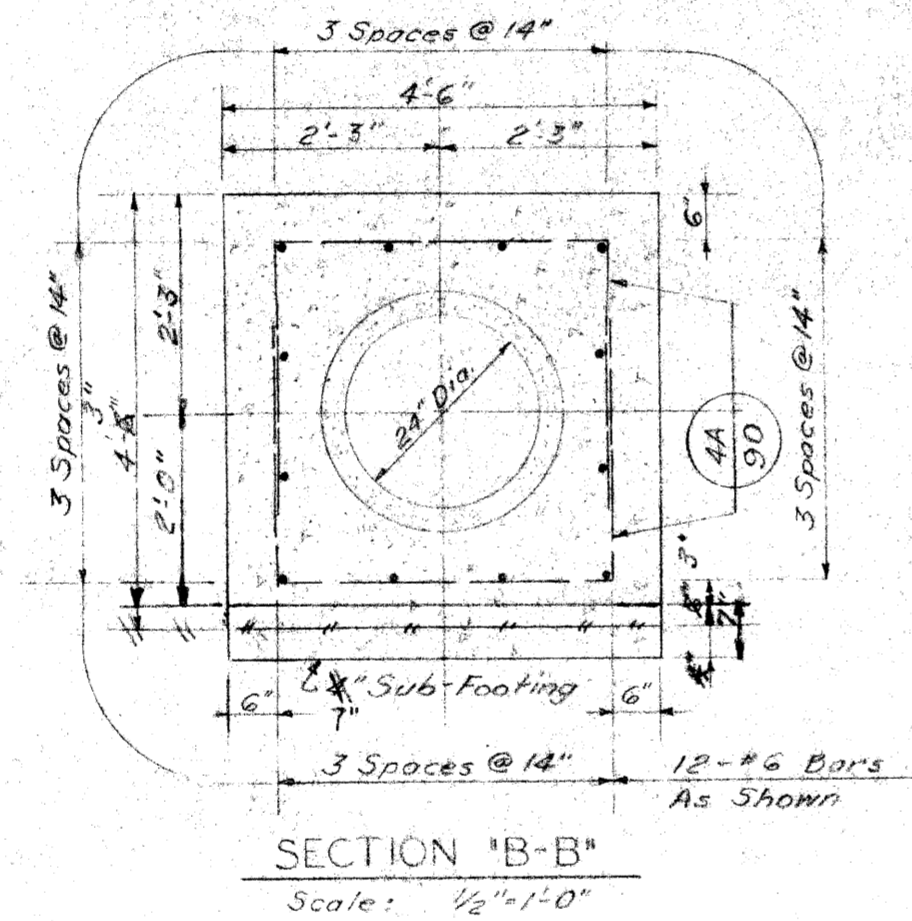
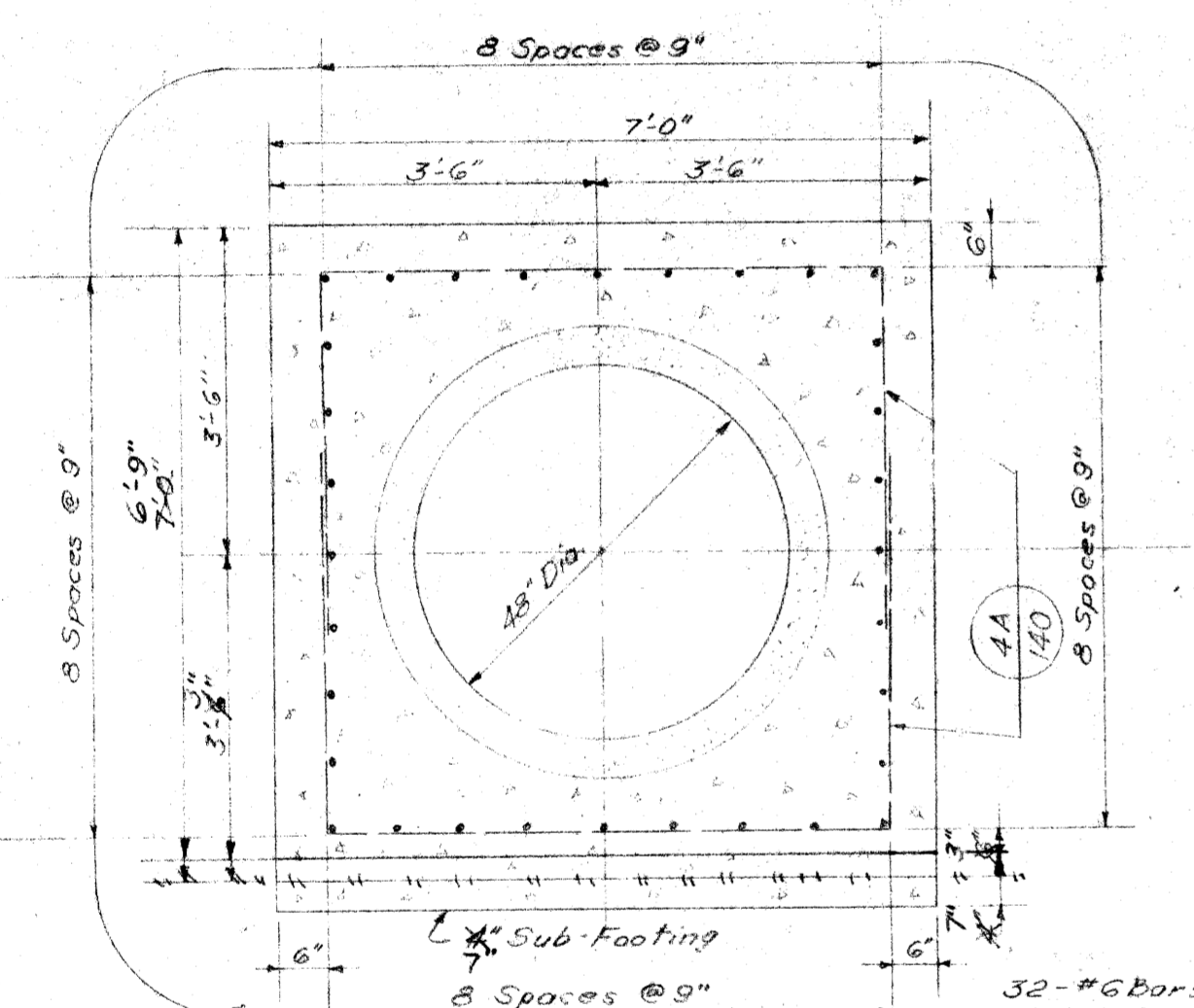
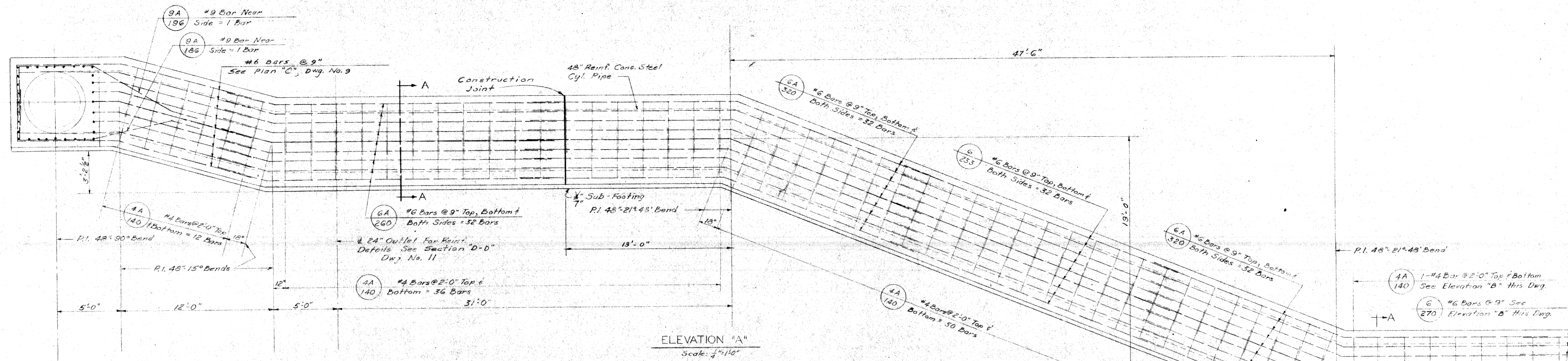
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHRYSLER EXPRESSWAY
WATER SYSTEM ALTERATIONS - JEFFERSON AVE. CROSSING
ENCASEMENT DETAILS FOR 48" MAIN WEST SIDE EXPRESSWAY
CHECKED W.A.H. CORRECT W.H. Stewart APPROVED [Signature]

DATE _____ DRAWING NO. 9 OF 21 JOB NO. D-402-6

MICHIGAN STATE HIGHWAY DEPARTMENT

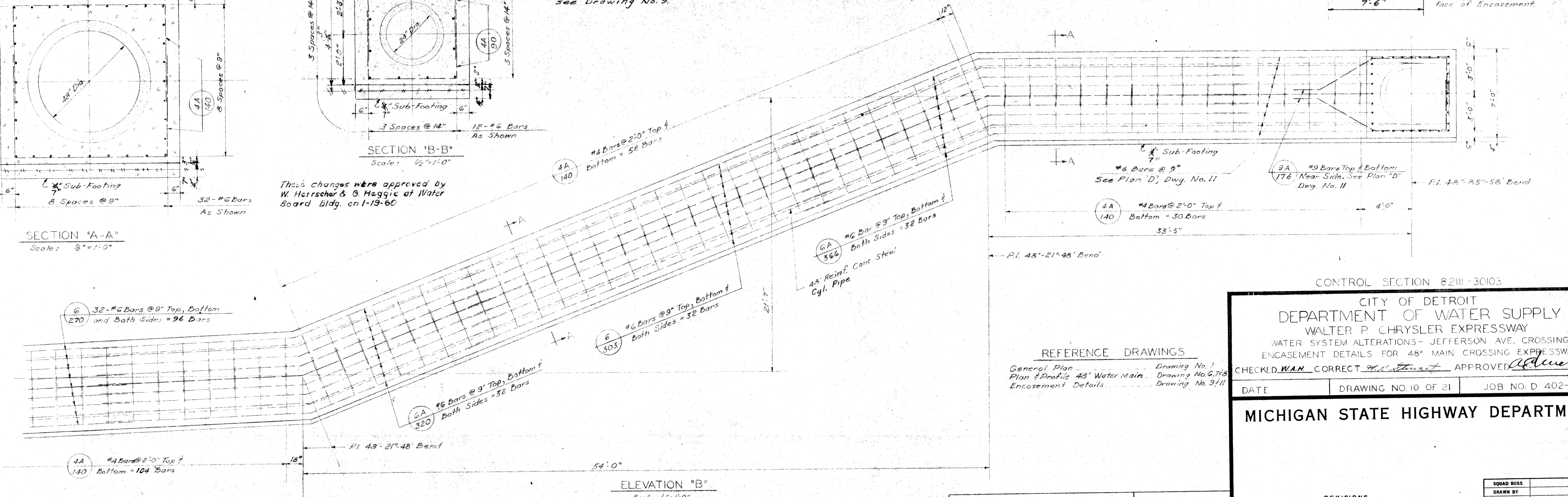
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY
CHECKED BY
SHEET 59 OF
W-57-1



NOTE:
Construction joints in the enclosure shell coincide with the concrete pipe bells and shall have a continuous keyway around the reinforcing cage 4" wide by 2" deep. For complete plan of Encasement see Drawing No. 9.

These changes were approved by W. Heirsch & G. Haggie at Water Board Bldg. on 1-19-60



REFERENCE DRAWINGS
General Plan - Drawing No. 1
Plan & Profile 48" Water Main - Drawing No. G.768
Encasement Details - Drawing No. 9/11

CONTROL SECTION 82111-30103
CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHRYSLER EXPRESSWAY
WATER SYSTEM ALTERATIONS - JEFFERSON AVE. CROSSING
ENCASEMENT DETAILS FOR 48" MAIN CROSSING EXPRESSWAY
CHECKED W.A.M. CORRECT W.A.M. APPROVED [Signature]

DATE _____ DRAWING NO. 10 OF 21 JOB NO. D 402-E

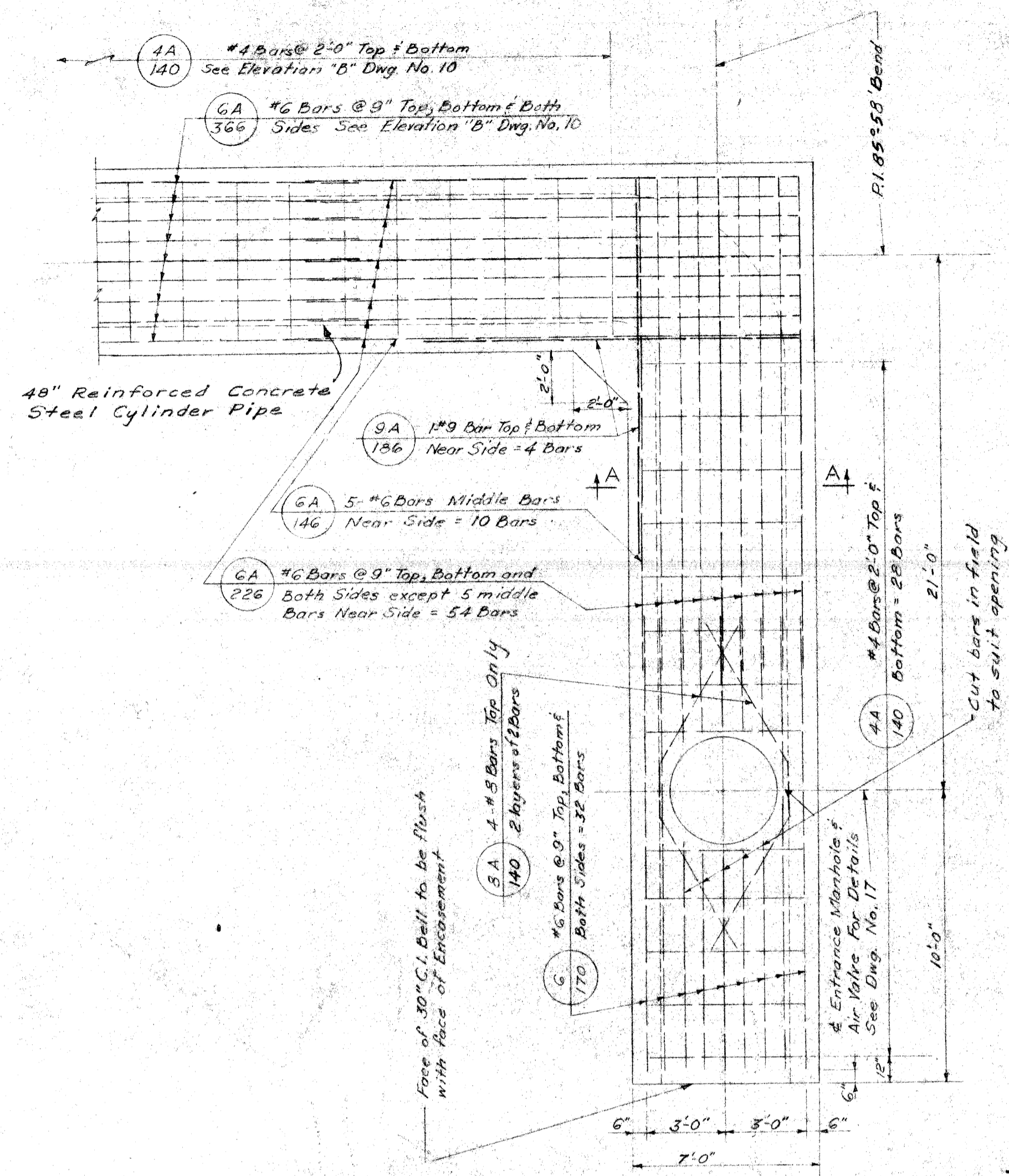
MICHIGAN STATE HIGHWAY DEPARTMENT

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONOVAN BUILDING
DETROIT 1, MICHIGAN

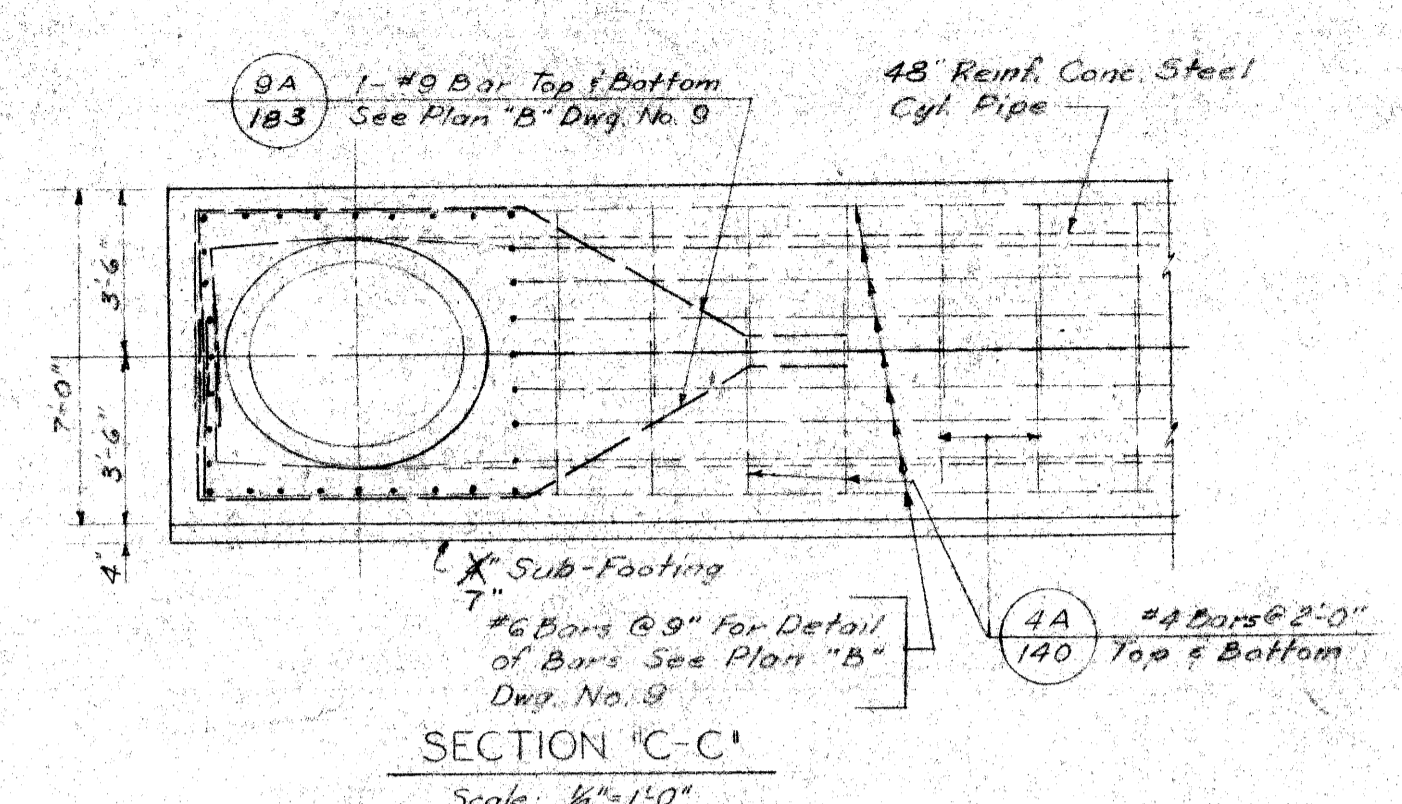
DATE _____
DRAWN BY W.D.S. 11-6-59
CHECKED BY J.K. 11-10-59

REVISIONS			
NO.	DESCRIPTION	DATE	BY

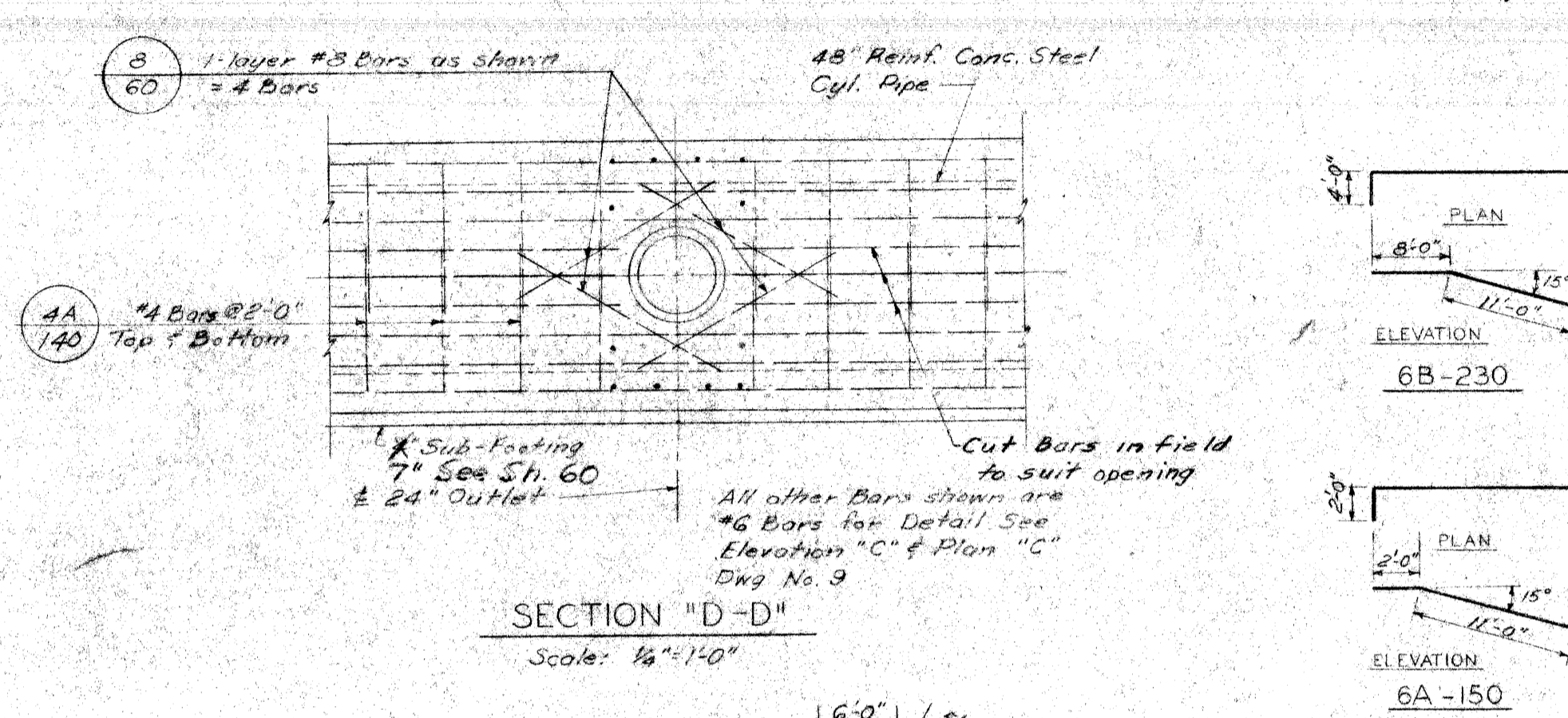
SQUAD BOSS _____
DRAWN BY _____
CHECKED BY _____
SHEET 60 OF _____
W-57-1



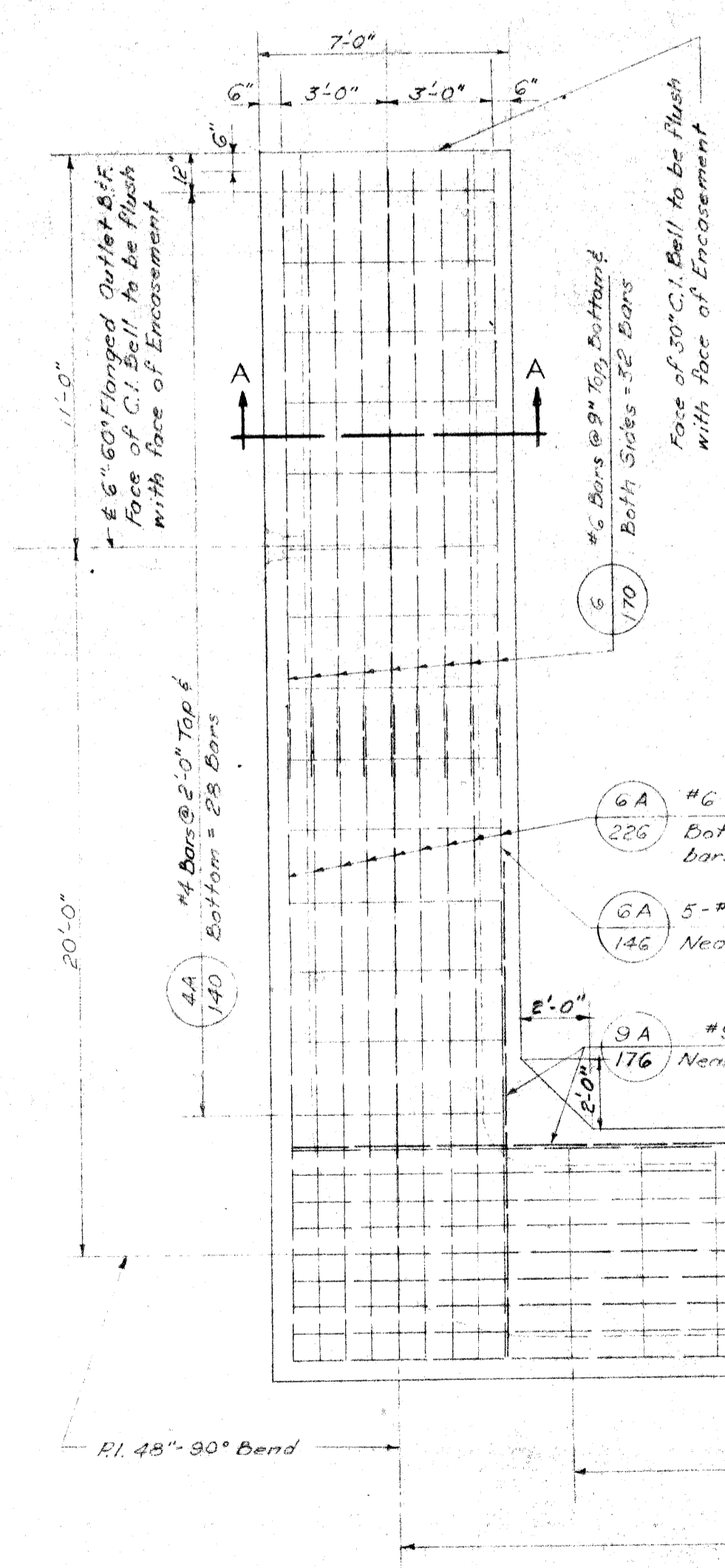
PLAN "D"
Scale: 1/4"=1'-0"



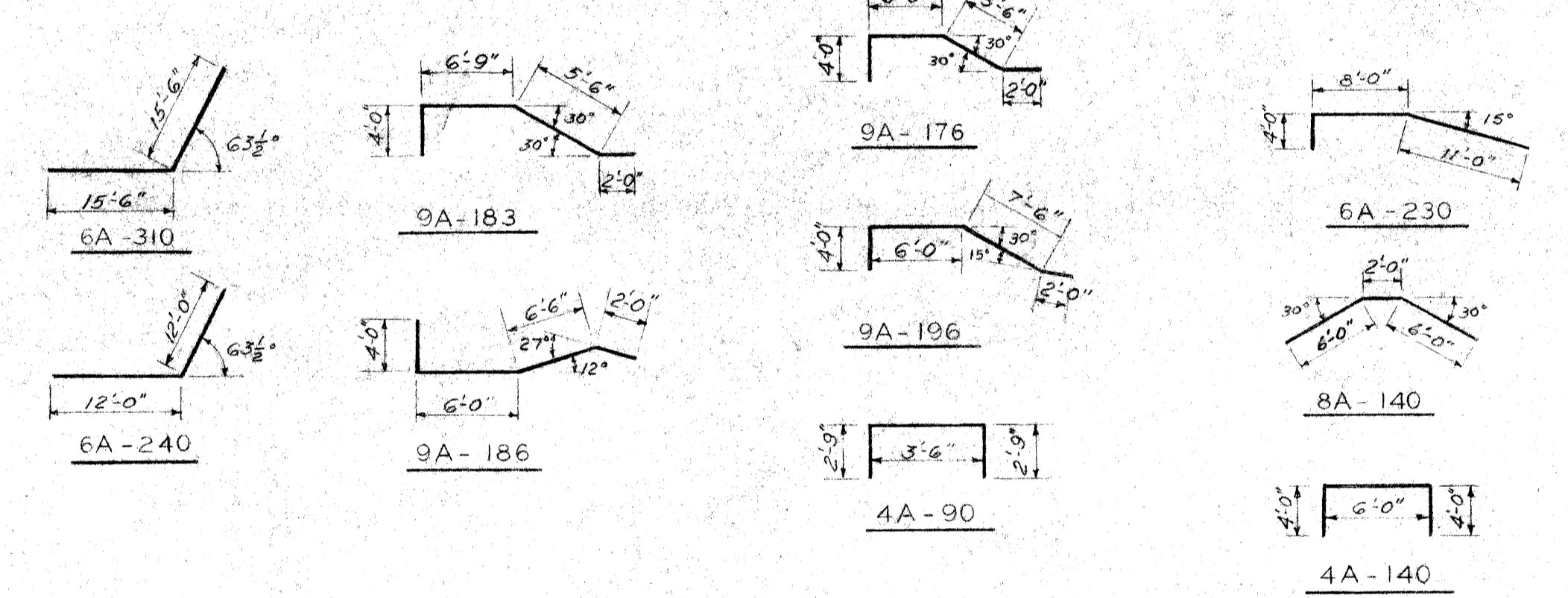
SECTION "C-C"
Scale: 1/4"=1'-0"



SECTION "D-D"
Scale: 1/4"=1'-0"



PLAN "E"
Scale: 1/4"=1'-0"



BENT BAR DETAILS
No Scale

BILL OF REINFORCING BARS					
Mark	No.	Size	Length	Remarks	Weight
B-60	4	#8	6'-0"	Straight	64
6-163	64	#6	16'-3"	"	1562
6-170	64	#6	17'-0"	"	1634
6-189	32	#6	18'-9"	"	901
6-233	32	#6	23'-3"	"	1117
6-260	64	#6	26'-0"	"	2499
6-266	64	#6	26'-6"	"	2547
6-303	32	#6	30'-3"	"	1453
6-270	96	#6	27'-0"	"	3893
9A-176	10	#9	17'-6"	Bent	595
9A-183	4	#9	18'-3"	"	248
9A-186	1	#9	18'-6"	"	63
9A-196	1	#9	19'-6"	"	66
8A-140	16	#8	14'-0"	"	599
6B-120	32	#6	12'-0"	"	376
6A-146	25	#6	14'-6"	"	544
6A-150	5	#6	15'-0"	"	113
6A-223	10	#6	22'-3"	"	334
6A-226	175	#6	22'-6"	"	5914
6A-230	10	#6	23'-0"	"	345
6B-230	7	#6	23'-0"	"	242
6A-240	5	#6	24'-0"	"	180
6A-260	32	#6	26'-0"	"	1250
6A-186	2	#6	18'-6"	"	167
6A-163	6	#6	16'-3"	"	146
6A-310	7	#6	31'-0"	"	326
6A-320	96	#6	32'-0"	"	4614
6A-366	32	#6	36'-6"	"	1754
6A-140	12	#6	14'-0"	"	252
4A-90	14	#4	9'-0"	"	84
4A-140	544	#4	14'-0"	"	5087
6A-266	27	#6	27'-0"	"	1074
Total Weight of Steel = 39,459					
Auth. 1011					40,243

REFERENCE DRAWINGS
 General Plan - Drawing No. 1
 Plan & Profile 48" Water Main - Drawing No. G, 7 & 8
 Encasement Details - Drawing No. 9 & 10

PENTAD ENGINEERS, INC.
 CONSULTING ENGINEERS
 910 DONOVAN BUILDING
 DETROIT 1, MICHIGAN

DATE 11-6-58
 DRAWN BY W.D.S.
 CHECKED BY J.K.

CONTROL SECTION 82111-30103
 CITY OF DETROIT
 DEPARTMENT OF WATER SUPPLY
 WALTER P. CHRYSLER EXPRESSWAY
 WATER SYSTEM ALTERATIONS - JEFFERSON AVE CROSSING
 ENCASUREMENT DETAILS FOR 48" MAIN EAST SIDE EXPRESSWAY
 CHECKED W.A.H. CORRECT *W.A.H.* APPROVED *W.A.H.*

DATE DRAWING NO. 11 OF 21 JOB NO-D 402-6

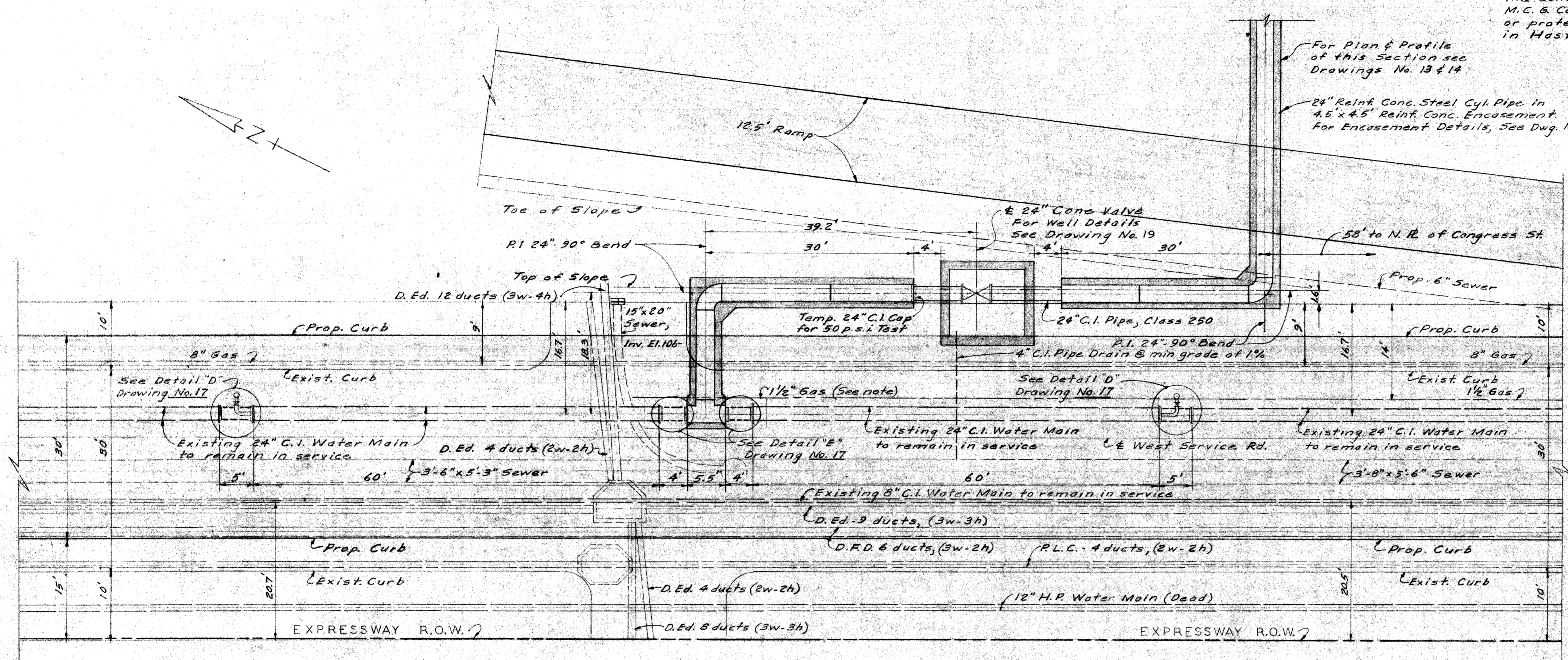
MICHIGAN STATE HIGHWAY DEPARTMENT

REVISIONS			
NO.	DESCRIPTION	DATE	BY

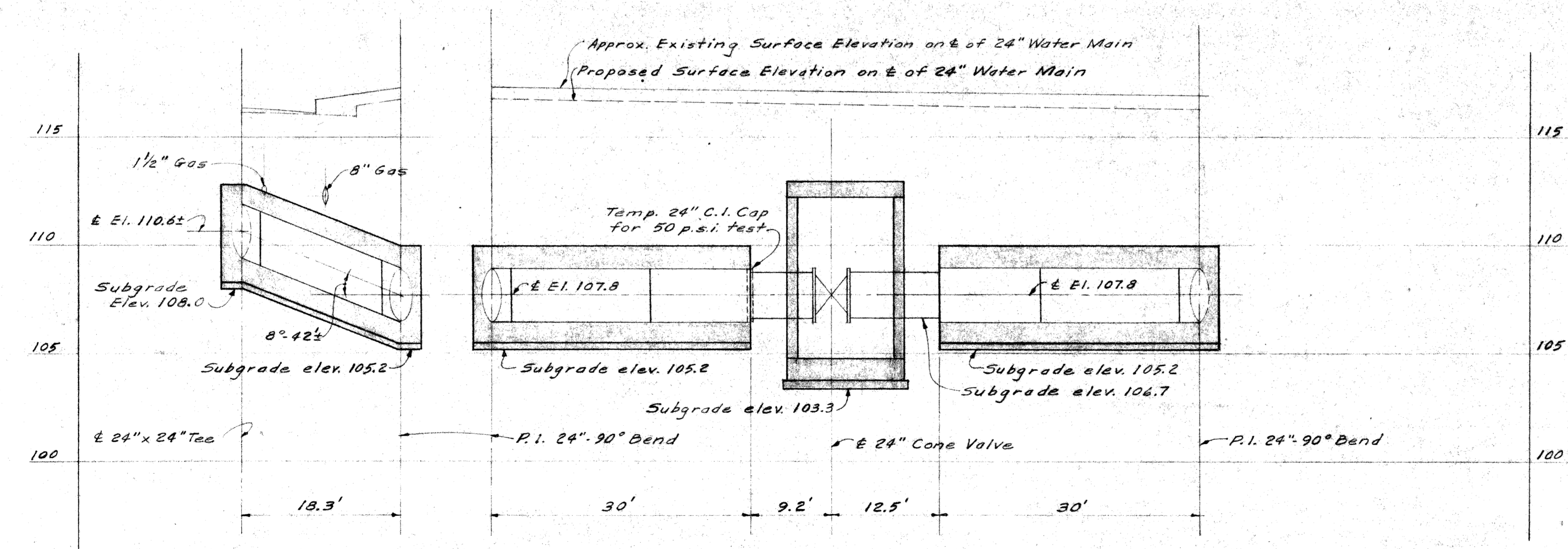
SHEET 61 OF
W-57-1

NOTE

The Contractor shall contact the M.C. & Co. regarding the relocation or protection of the 1 1/2" gas main in Hastings St.



PLAN
Scale: 1"=10'



PROFILE
Scale: Hor. 1"=10'
Vert. 1"=4'

QUANTITIES	
ITEMS	AMOUNT
Grade "A" Concrete (For Water Main Encasement)	263 Cu Yds.
Steel Reinf. (For Water Main Encasement)	11,524 Lbs.
4" C.I. Drain, Furnished & Placed	18 Lin. Ft.
Removing Hydrants	1 Each
Removing H.P. Hydrants	1 Each
8" C.I. Pipe, Furnished	4 Lin. Ft.
24" C.I. Pipe, Furnished	12 Lin. Ft.
24" C.I. Pipe, Furnished & Placed	34 Lin. Ft.
24" Conc. Water Main, Furnished & Placed	425 Lin. Ft.
24" Cone Valve, Furnished & Placed	1 Each
6" Blow-off Wells	1 Each
24" Cone Valve Well	1 Each
6" Permanent Blow-offs, Furnished & Placed	1 Each
Auth. 1039	54
Water Main Trench for work done by D.W.S.	78 Lin. Ft.
Concrete Thrust Blocks	Lump Sum

REFERENCE DRAWINGS

- General Plan - Drawing No. 1
- Plan & Profile - 24" Water Main - Drawing Nos. 13 & 14
- Miscellaneous Connections - Drawing No. 17
- 24" Cone Valve - Drawing No. 19
- Encasement Details - Drawing No. 15 & 16
- Miscellaneous Details - Drawing No. 21

CONTROL SECTION 82111 - 30103

CITY OF DETROIT
DEPARTMENT OF WATER SUPPLY
WALTER P. CHRYSLER EXPRESSWAY
WATER SYSTEM ALTERATIONS - CONGRESS ST. CROSSING
24" MAIN WEST SIDE OF EXPRESSWAY

CHECKED W.A.H. CORRECT W.D.S. APPROVED W.D.S.

DATE _____ DRAWING NO. 12 OF 21 JOB NO. D-402-6

MICHIGAN STATE HIGHWAY DEPARTMENT

PENTAD ENGINEERS, INC.
CONSULTING ENGINEERS
910 DONOVAN BUILDING
DETROIT 1, MICHIGAN

DRAWN BY	D.L.A.	DATE	11-24-58
CHECKED BY	W.D.S.	DATE	11-25-58

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET 62 OF	
W-57-1	