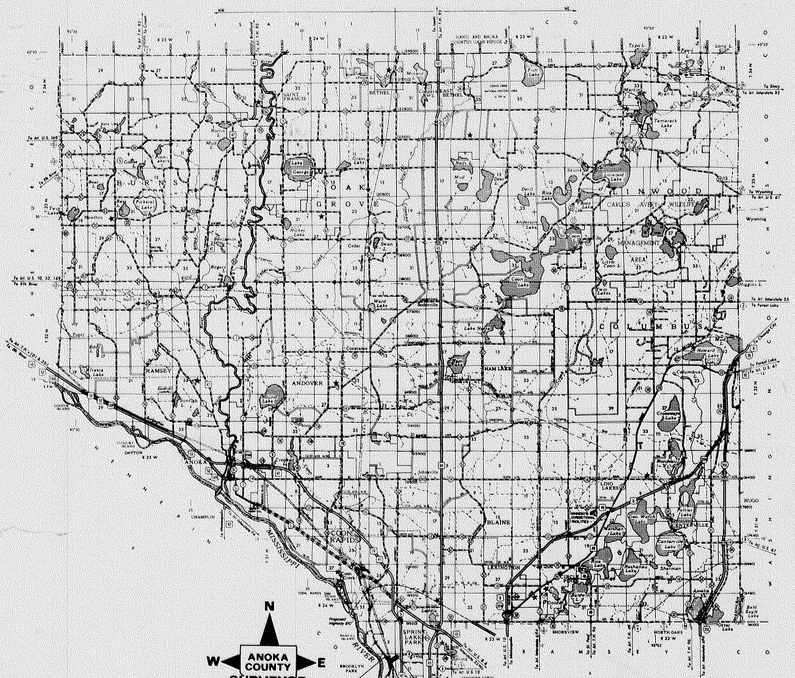
MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, BITUMINOUS, CONC. C.&G., STORM SEWER, CHANNELIZATION, & SIGNALS

LOCATED ON OSBORNE ROAD, C.S.A.H. 8 **FROM** E. RIVER ROAD, C.S.A.H. 1 **TO** COMMERCE LANE

LOCATED ON EAST RIVER ROAD, C.S.A.H. 1 **FROM** LOGAN PARKWAY **TO** CRAIG WAY N.E.

STATE PROJ. NO.	02-608-07	**STATE PROJ. NO.**	02-601-33
MINN. PROJ. NO.		**MINN. PROJ. NO.**	
GROSS LENGTH	1,675.00 FEET 0.317 MILES	GROSS LENGTH	2737.46 FEET 0.518 MILES
BRIDGES-LENGTH	FEET MILES	BRIDGES-LENGTH	FEET MILES
EXCEPTIONS-LENGTH	FEET MILES	EXCEPTIONS-LENGTH	FEET MILES
NET LENGTH	1,675.00 FEET 0.317 MILES	NET LENGTH	2,737.46 FEET 0.518 MILES
MILE POINT	N.A. TO MILE POINT N.A.	MILE POINT	N.A. TO MILE POINT N.A.



GENERAL HIGHWAY MAP

ANOKA COUNTY MINNESOTA

SCALE OF STATUTE MILES

SCALE

INDEX MAP	2.66 MI.
PLAN & PROFILE HORIZ.	50'
PLAN & PROFILE VERT.	5'
CROSS SECTIONS	10'
SIGNAL	30'

DESIGN DATA

Functional Classification	MINOR ARTERIAL	**No. of Parking Lanes**	0
No. of Traffic Lanes	= 4	9 Ton Design	Shoulder Width #1-8' #8-0'
ADT (Current Year)	= #1-25,700 #8-6,800	#1 - 50 **Design Speed** #8-35 **MPH**	
ADT (Future Year)	= #1-41,120 #8-10,880	**Based on** STOPPING **Sight Distance**	
DHV (Design Hr. Vol.)	=	**Height of eye** 3.50' **Height of object** 0.50'	
D (Directional Distr.)	= %	**Design Speed not achieved at:**	
T (Heavy Commercial)	= #1-1,100 #8-1,100	STA. TO STA. MPH	
Soil Factor	= A-3, 50%	STA. TO STA. MPH	

PROJECT LOCATION

ANOKA COUNTY

5 DISTRICT

S.P. 127-332-02 (M.S.A.S. 332)
SIGNAL SYSTEM AT
CSAH 1 AND CSAH 8

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

51057

OZALID

MINN. **PROJ. NO.** CRP 0088 (056) CRP 0088(057)

MINN. PROJ. NO. M 5110 (002) M 5007 (011)

GOVERNING SPECIFICATIONS

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR CONSTRUCTION"

INDEX

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE Feb. 18, 1988 REG. NO. 6549 ENGR. Lee K. Lund
COUNTY ENGINEER

DESIGN SQUAD

Recommended for Approval O.E.W. Eichelbaum 2/25 1988
DISTRICT STATE AID ENGINEER

Recommended for Approval Julie Skallman 6/20 1988
STATE AID PLANS & SPECIFICATIONS ENGINEER

Approved 6/20 1988 Lyndon M. Gay
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE REG. NO.

STATE AID PROJ. NO. **COUNTY PROJ. NO.**

STATE PROJ. NO. 02-608-07 02-601-33 & 127-332-02 **SHEET NO.** 1 **OF** 58 **SHEETS**

Fed. Project No. _____

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	SP 02-601-33 QUANTITIES EST.	SP 02-601-33 QUANTITIES FINAL	SP 02-608-07 QUANTITIES EST.	SP 02-608-07 QUANTITIES FINAL	NON-PARTICIPATING	STORM S. TOTAL PART.	TOTAL EST. QUAN.	TOTAL FINAL QUAN.
2021.501	MOBILIZATION	LUMP SUM	0.5		0.5				1	
2031.501	FIELD OFFICE TYPE-D	EACH	0.5		0.5				1	
19 2101.501	CLEARING	ACRE	0.8				0.1		0.9	
2101.502	CLEARING	TREE	52		10				62	
19 2101.506	GRUBBING	ACRE	0.8				0.1		0.9	
2101.507	GRUBBING	TREE	39		9				48	
2104.501	REMOVE CURB & GUTTER	LIN FT	470		45				515	
2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	528		56				584	
2104.501	REMOVE FENCE	LIN FT	306						306	
1 2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	30						30	
2104.505	REMOVE CONCRETE PAVEMENT	SQ YD	45		11				56	
2104.505	REMOVE TRENCH PAVEMENT	SQ YD			83				83	
2104.509	REMOVE MANHOLES OR CATCH BASINS	EACH	10		3				13	
2104.511	SAWING CONCRETE PAVEMENT	LIN FT			24				24	
2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	931		1263				2194	
2104.521	SALVAGE WOODEN FENCE	LIN FT	386						386	
2104.523	SALVAGE CASTINGS	EACH	6		3				9	
2104.523	SALVAGE CONCRETE APRONS	EACH	1						1	
2104.521	SALVAGE WOVEN WIRE FENCE	LIN. FT.	71						71	
15 2105.501	COMMON EXCAVATION	CU YD	20200 (P)		3310(P)		569(P)		24079(P)	
16 2105.525	TOPSOIL BORROW (LV)	CU.YD.	767		376		62		1205	
2 2130.501	WATER	M-GALLONS	50		50				100	
3 2211.503	AGGREGATE BASE PLACED CLASS 5A	CU.YD.	3459(P)		733(P)				4192(P)	
2301.501	CONCRETE PAVEMENT	SQ YD	637(P)						637(P)	
2301.511	STRUCTURAL CONCRETE	CU YD	77(P)						77(P)	
4 2301.529	REINFORCEMENT BARS	POUND	2193						2193	
5 2301.536	DOWEL BAR ASSEMBLIES	LIN FT	64						64	
6 2301.513	STRUCTURAL CONCRETE HE	CU YD	64(P)						64(P)	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	380		135				515	
6 2331.510	BINDER COURSE MIXTURE	TON	2400		1035				3435	
2331.512	LEVELING COURSE MIXTURE	TON			375				375	
7 2331.514	BASE COURSE MIXTURE	TON	4765		1132				5897	
8 2331.531	TEMPORARY LANE MARKING	RD.STA.	484		182				666	
9 0331.601	2' THICK BIT WEARING COURSE MIXTURE	SQ.YD.	252		1410				1662	
14 2231.501	BITUMINOUS PATCHING MIXTURE	TON	71		20				91	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	118		58				176	
10 2341.508	WEARING COURSE MIXTURE	TON	1820		885				2705	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	3230		1400				4630	
2503.511	60' RC PIPE SEWER CL IV	LIN.FT.	78					78	78	
2503.541	12' RC PIPE SEWER DES 3006 CL III	LIN.FT.	177		163			340	340	
2503.541	15' RC PIPE SEWER DES 3006	LIN FT	349		396			745	745	
2503.541	15' RC PIPE SEWER DES 3006 CL III	LIN FT	784		153			937	937	
2503.541	21' RC PIPE SEWER DES 3006	LIN FT	117					117	117	
2503.573	INSTALL CONCRETE APRON	EACH	1					1	1	
0504.602	RELOCATE HYDRANT	EACH	5						5	
0504.602	ADJUST VALVE BOX-WATER	EACH	8		4				12	
11 2506.506	CONSTRUCT MANHOLES DESIGN A OR F	LIN FT	9.1					9.1	9.1	
2506.506	CONSTRUCT MANHOLES DESIGN C OR G	LIN FT	5.3		4.7			10	10	
11 2506.506	CONSTRUCT MANHOLES DESIGN 84 -4019	LIN FT	13.3					13.3	13.3	
11 2506.507	CONSTRUCT CATCH BASINS DESIGN A OR F	LIN.FT.	18.9					18.9	18.9	
2506.507	CONSTRUCT CATCH BASINS DESIGN C OR G	LIN FT	81.1		29.9			111	111	
2506.507	CONSTRUCT CATCH BASINS DESIGN H	LIN FT			7.2			7.2	7.2	
2506.511	RECONSTRUCT MANHOLES	LIN FT	5.5					5.5	5.5	
2506.516	CASTING ASSEMBLIES	EACH	21		8			29	29	
2506.521	INSTALL CASTINGS	EACH	1		2			3	3	
2506.522	ADJUST FRAME AND RING CASTINGS	EACH	16		2				18	
0506.602	CONSTRUCT CONTROL STRUCTURE A	EACH					1		1	
20 2511.507	GROUTED RIPRAP	CU YD	37					37	37	
2521.501	4' CONCRETE WALK	SQ FT	1915						1915	
2521.501	6' CONCRETE WALK	SQ FT	60						60	
2531.501	CONCRETE CURB & GUTTER DESIGN B-612	LIN FT	3624		312				3936	
2531.501	CONCRETE CURB & GUTTER DESIGN B-618	LIN FT	5453		2718				8171	
12 0531.602	CONCRETE DRAINAGE FLUME	SQ YD	20						20	
2531.507	6' CONCRETE DRIVEWAY PAVEMENT	SQ YD	135		22				157	
2531.507	8' CONCRETE DRIVEWAY PAVEMENT	SQ YD	121		115				236	
0531.602	CONCRETE MEDIAN NOSE-SPECIAL	EACH	3						3	
0564.602	PAVEMENT MESSAGE (ONLY) PAINT	EACH	10		3				13	
0564.602	CONSTRUCT STONE RETAINING WALL	SQ FT	846						846	
0564.602	PAVEMENT MESSAGE (RR CROSSING) PAINT	EACH			4				4	
2557.501	WIRE FENCE DESIGN 60-9322	LIN.FT	188						188	
0557.603	INSTALL WOODEN FENCE	LIN FT	315						315	
0557.603	INSTALL WOVEN WIRE FENCE	LIN. FT.	71						71	
21 0563.601	TRAFFIC CONTROL (STAGE 1)	LUMP SUM	0.5		0.5				1	
21 0563.601	TRAFFIC CONTROL (STAGE 2)	LUMP SUM	0.5		0.5				1	
21 0563.601	TRAFFIC CONTROL (STAGE 3)	LUMP SUM	0.5		0.5				1	
21 0563.601	TRAFFIC CONTROL (STAGE 4)	LUMP SUM	0.5		0.5				1	

(21) REFERRED TO AS PHASE 1, 2, 3 & 4 IN THE PLANS.

STATEMENT OF ESTIMATED QUANTITIES (CONT.)

ITEM NO.	ITEM	UNIT	SP 02-601-33 QUANTITIES EST.	SP 02-601-33 QUANTITIES FINAL	SP 02-608-07 QUANTITIES EST.	SP 02-608-07 QUANTITIES FINAL	NON-PARTICIPATING	STORM S. TOTAL PART.	TOTAL EST. QUAN.	TOTAL FINAL QUAN.
2564.531	F & I SIGN PANELS TYPE C	SQ FT	524		154				678	
2564.513	CONCRETE FOOTING	EACH	25		5				30	
0564.602	PAVEMENT MESSAGE (LT. ARROW) PAINT	EACH	4		1				5	
0564.603	4' SOLID LINE YELLOW-PAINT	LIN FT	3600		305				3905	
0564.603	4' SOLID LINE WHITE-PAINT	LIN FT	8195		3430				11625	
0564.603	4' DOUBLE SOLID LINE YELLOW-PAINT	LIN FT	2490		1720				4210	
22 0564.603	24'STOP' LINE WHITE-PAINT	LIN FT	478		353				831	
0564.603	4' BROKEN LINE WHITE-PAINT	LIN FT	1260		550				1810	
0564.603	24' SOLID LINE YELLOW-PAINT	LIN FT	345		218				563	
0564.602	PAVEMENT MESSAGE (RT. ARROW) PAINT	EACH	5		1				6	
23 2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM	SIG SYS	1						1	
0564.602	PAVEMENT MESSAGE (THRU ARROW) PAINT	EACH			1				1	
13 2573.501	BALE CHECK	EACH	32						32	
0564.602	PAVEMENT MESSAGE (RT.-THRU ARROW) PAINT	EACH	1						1	
17 2575.505	SODDING	SQ YD	6300		4700		820		11820	
18 2575.531	COMMERCIAL FERT. ANALYSIS 10-10-10	TON	0.37		0.24		0.04		0.65	
	ALTERNATE II-1									
0531.604	SPECIAL MEDIAN (BRICK)	SQ YD	377		45				422	
2531.503	CONCRETE MEDIAN	SQ YD	875						875	
	ALTERNATE II-2									
0531.604	SPECIAL MEDIAN (BRICK)	SQ YD	1252		45				1297	
	ALTERNATE II-3									
2105.525	TOPSOIL BORROW (LV)	CU YD	146						146	
0531.604	SPECIAL MEDIAN (BRICK)	SQ YD	377		45				422	
2575.505	SODDING	SQ YD	875						875	
2575.531	COMMERCIAL FERT ANALYSIS 10-10-10	TON	.05						.05	

(1) FOR MEDIAN CONST. ON OSBORNE WAY.
(2) TO BE USED AS DIRECTED BY THE ENGINEER FOR DUST CONTROL WITHIN THE PROJECT LIMITS.
(3) INCLUDES 219 CU.YD. FOR STREET APPROACHES.
(4) FOR CONSTRUCTION OF BUS PADS.
(5) FOR PROTECTION OF 60' WATER CONDUITS.
(6) INCLUDES 160 TON FOR STREET APPROACHES.
(7) INCLUDES 310 TON FOR STREET APPROACHES
(8) INCLUDES 2341 WEARING COURSE
(9) PROVIDED FOR DRIVEWAY RESTORATION (373 SY) AND BIKEWAY CONST.(1300 SY). PAYMENT BY SQ YD INCLUDES BITUMINOUS MATERIAL FOR MIXTURE AND 3' THICK (COMPACTED THICKNESS) AGGREGATE BASE.
(10) INCLUDES 120 TON FOR STREET APPROACHES.
(11) STEPS REQUIRED.
(12) FOR SURFACE DRAINAGE OF CUL DE SAC AT 75 TH. WAY
(13) FOR TEMPORARY EROSION CONTROL LT. SB 100+00 TO 100+50.
BIT. MATERIAL SHALL BE USED FOR TEMPORARY TRENCH RESTORATION TO CARRY TRAFFIC.
(14) THICKNESS SHALL BE A MINIMUM OF 2' (COMPACTED).
(15) INCLUDES 569 CY FOR RETENTION POND CONST.
(16) INCLUDES 62 CY FOR RETENTION POND TURF ESTABLISHMENT.
(17) INCLUDES 820 SY OF SOD FOR RETENTION POND CONST.
(18) INCLUDES .04 TONS FOR RETENTION POND CONST.
(19) INCLUDES 0.10 ACRESS FOR RETENTION POND CONST.
(20) THE CONTRACTOR SHALL PLACE A FILTER MATERIAL UNDER THE RIPRAP. IT WILL BE THE CONTRACTOR'S OPTION TO USE EITHER A GRANULAR FILTER MATERIAL (PLACED TO A 1.0' DEPTH) OR A GEOTEXTILE FILTER MATERIAL. FILTER MATERIAL, OF EITHER TYPE USED, WILL BE CONSIDERED TO BE INCIDENTAL TO RIPRAP CONSTRUCTION AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.
(22) USED FOR CROSSWALK DELINATIONS ALSO.
(23) 2 LEGS OF THE SIGNAL SYSTEM ARE ON S.P. 02-601-33, 1 LEG OF THE SIGNAL SYSTEM IS ON S.P. 02-608-07 AND 1 LEG OF THE SIGNAL SYSTEM IS ON S.P. 127-332-02.

SPECIAL DETAILS

INPLACE TOPSOIL SHALL BE SALVAGED AND USED TO THE FULLEST EXTENT POSSIBLE PRIOR TO THE USE OF TOPSOIL BORROW ON AREAS DISTURBED BY CONSTRUCTION OPERATIONS. SALVAGE OF INPLACE TOPSOIL FOR USE IN TURF ESTABLISHMENT SHALL BE CONSIDERED TO BE INCIDENTAL TO COMMON EXCAVATION AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.

REMOVE BITUMINOUS PAVEMENT ITEM IS FOR REMOVAL OF BITUMINOUS IN MEDIAN CONSTRUCTION AREA ON OSBORNE WAY. ANY OTHER BITUMINOUS REMOVAL IS INCLUDED WITH COMMON EXCAVATION FOR PAYMENT.

DISPOSAL OF ANY EXCESS MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE PROVISIONS OF 2104.

HEAVY CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED TO CROSS OVER OR WORK ON THE 60' WATER CONDUITS IN AREAS THAT DO NOT HAVE 8' REINFORCED CONCRETE PAVEMENT PROTECTION. THE CONTRACTOR SHALL EMPLOY EQUIPMENT AND CONSTRUCTION METHODS INCLUDING HAND LABOR AS NECESSARY TO ACCOMPLISH THE WORK AS PLANNED OVER THE 60' WATER COMDUITS WITHOUT DAMAGE TO THE UTILITY.

BASIS OF PLANNED QUANTITIES

2331 PLANT MIXED BASE COURSE
BITUMINOUS MIXTURE 110 LBS./SQ.YD./1' THICK
BITUMINOUS MATERIAL FOR MIXTURE 5.3% BY WT.

2331 PLANT MIXED BINDER COURSE
BITUMINOUS MIXTURE 110 LBS./SQ.YD./1' THICK
BITUMINOUS MATERIAL FOR MIXTURE 5.3% BY WT.

2341 PLANT MIXED WEARING COURSE
BITUMINOUS MIXTURE 110 LBS./SQ.YD./1' THICK
BITUMINOUS MATERIAL FOR MIXTURE 6.5% BY WT.

2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER SQ.YD.

2575 COMMERCIAL FERTILIZER ANALYSIS 10-10-10, 500# PER ACRE ON ALL SOD AREAS

EARTHWORK SUMMARY

S.P. 02-601-33

EXCAVATION (CU.YD.)

20,769	COMMON	12,668	(1) EXCESS 5,178
	SUBCUT FOR COMPACTION	7,532	
	RETENTION POND	569	(1) EXCESS 324

EMBANKMENT (CU.YD.)

	REGULAR FILL (150% SHRINKAGE)	= 3,926
15,591	SUBCUT (150% SHRINKAGE)	=11,298
	RETENTION POND (150% SHRINK.)	368
767	TOPSOIL BORROW (2) (3)	

S.P. 02-608-07

EXCAVATION (CU.YD.)

3,310	COMMON	1,980	(1) EXCESS 587
	SUBCUT FOR COMPACTION	1,330	

EMBANKMENT (CU.YD.)

	REGULAR FILL (150% SHRINKAGE)	728
2,723	SUBCUT (150% SHRINKAGE)	1,995
376	TOPSOIL BORROW (2)	376

NOTE: EXISTING BITUMINOUS PAVEMENT (REGARDLESS OF THICKNESS) IS INCLUDED IN COMMON EXCAVATION QUANTITIES FOR PAYMENT AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE RECYCLED OR DISPOSED OF OUTSIDE OF THE PROJECT LIMITS.

(1) EXCESS EXCAVATION MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE OF THE PROJECT LIMITS IN ACCORDANCE WITH THE PROVISIONS OF 2104.3C.
(2) TO BE USED TO SUPPLEMENT TOPSOIL SALVAGED WITHIN THE EXCAVATION LIMITS TO PROVIDE A MINIMUM 3' TOPSOIL DRESSING OVER THE DISTURBED AREAS PRIOR TO SODDING.
(3) INCLUDES 62 C.Y. FOR TURF ESTABLISHMENT ON THE RETENTION POND CONSTRUCTION.

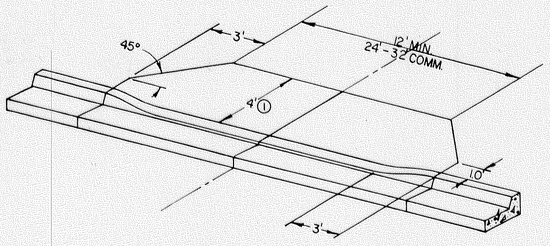
REVISIONS			
DATE	BY	DATE	BY

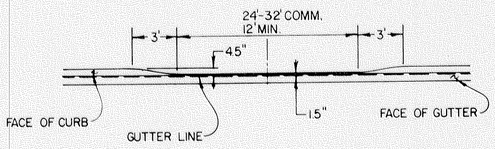
S.A.P. _____ S.P. 02-601-33 & 02-608-07 C.P. _____

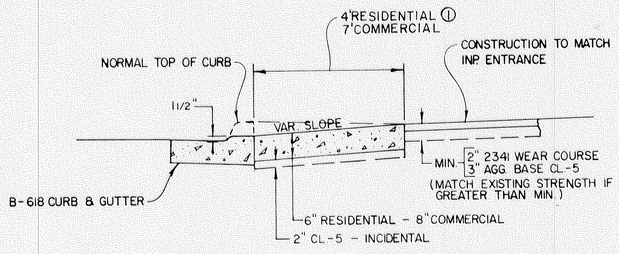
Sheet No. 2 of 58 Sheets

Fed. Project No. _____

CONCRETE APRON DETAIL







① MAY BE VARIABLE IN SIDEWALK AREAS. EXTEND CONC. APRON TO MATCH SIDEWALK.

NOTE: ALSO SEE STD. PLATE NO. 7035

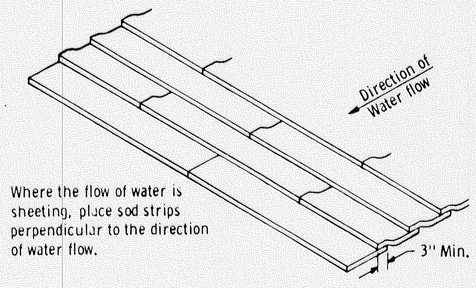
DRIVEWAY CONSTRUCTION

STATION	ADDRESS	REMARKS SP 02-601-33	REMOVE CONCRETE S.Y.	REMOVE BITUMINOUS ① S.Y.	CONCRETE DRIVEWAY PAVEMENT APRON SQ. YDS. WIDTH	APRON SQ. YDS. 6"	APRON SQ. YDS. 8"	DRIVEWAY SQ. YDS. WIDTH	DRIVEWAY SQ. YDS. REPLMT 6"	DRIVEWAY SQ. YDS. REPLMT 8"	DRIVEWAY SQ. YDS. NEW 6"	DRIVEWAY SQ. YDS. NEW 8"	BIT. PAVEMENT DRIVEWAY SQ. YDS. WIDTH	BIT. PAVEMENT DRIVEWAY SQ. YDS. REPLMT	BIT. PAVEMENT DRIVEWAY SQ. YDS. NEW
NB93+43 RT.	7315	12' BIT.			12'	7.0							12'	11	
NB94+10 RT.	7315	12' BIT.			12'	7.0							12'	17	
NB94+59 RT.	7321	10' BIT.			12'	7.0							10'	11	
NB95+99 RT.	7335	12' BIT.			12'	7.0							12'	19	
SB97+22 LT.		12' SAND			12'	7.0									
NB97+75 RT.		COMMERCIAL ENT.			32'		30.2						32'	36	
NB100+46 RT.		COMMERCIAL ENT.			32'		30.2						32'	36	
NB101+26 RT.		COMMERCIAL ENT.			32'		30.2						32'	36	
NB102+00 RT.		COMMERCIAL ENT.			32'		30.2						32'	36	
NB105+53 RT.		12' SAND			12'	7.0									
NB107+06 RT.	7501	12' SAND			12'	7.0									
NB108+12 RT.	7505	12' SAND			12'	7.0									
SB108+84 LT.		20' BIT. (REMOVE, NO ENT. REQ.)													
NB108+88 RT.	7505	10' SAND			12'	7.0									
NB109+77 RT.	7509	10' SAND			12'	7.0									
SB110+52 LT.		18' SAND (REMOVE, NO ENT. REQ.)													
NB110+81 RT.	7513	10' BIT.			12'	7.0							10'	12	
NB111+78 RT.	7517	12' SAND			12'	7.0									
NB112+84 RT.	7525	10' BIT.											10'	9	
NB113+91 RT.	7601	10' SAND			12'	7.0									
SB114+02 LT.		16' SAND													
NB114+74 RT.	7619	12' SAND			12'	7.0									
SB115+38 LT.		12' BIT.			12'	7.0							12'	8	
NB115+69 RT.	7627	10' SAND			12'	7.0									
NB115+89 RT.	7637	11' BIT.			12'	7.0							11'	7	
NB116+93 RT.	7649	16' BIT.			16'	8.8							16'	14	
NB118+40 RT.	7661	12' SAND			12'	7.0									
		TOTALS FOR SP 02-601-33				135	121							252	
		SP 02-608-07													
EB201+60 RT		COMMERCIAL ENT.			32'		30.2								
WB201+45 LT.		15' BIT.			15'	8.3							15'	15	
EB202+65 RT.		COMMERCIAL ENT.			32'		30.2						32'	39	
WB202+62 LT.		12' BIT.			12'	7.0							12'	20	
WB202+92 LT.		12' SAND			12'	7.0									
EB202+66 RT.		COMMERCIAL ENT. REMOVE CONC. TO 1ST JOINT&CONST. CONC. APRON TO MATCH	11		24'		24.0								
L 213+34 RT.		COMMERCIAL ENT.			32'		30.2						32'	36	
		TOTALS FOR SP 02-608-07	11			22	115							110	

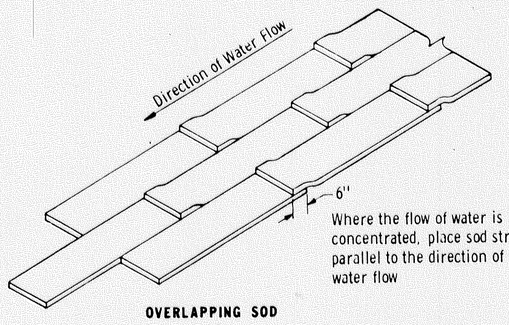
① BITUMINOUS REMOVAL INCIDENTAL TO COMMON EXCAVATION

STANDARD PLATES

PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3145 E	CONCRETE PIPE TIES
3000 K	REINFORCED CONCRETE PIPE
3006 F	GASKET JOINT FOR R.C. PIPE
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133 B	RIPRAP AT R.C.P. OUTLETS
4000 I	MANHOLE OR CATCH BASIN
4002 E	MANHOLE OR CATCH BASIN
4005 K	MANHOLE OR CATCH BASIN
4006 K	MANHOLE OR CATCH BASIN
4010 G	CONCRETE SHORT CONE & ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4019 E	MANHOLE OR CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 D	COVER CASTING FOR MANHOLE
4126 E	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7035 J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 C	PEDESTRIAN CURB RAMP
7100 F	CONCRETE CURB AND GUTTERS
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASIN
7111 G	INSTALLATION AND REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
8003 B	BREAKAWAY SIGN SUPPORT (PLASTIC)
8110 C	TRAFFIC SIGNAL BRACKETING-POLE MOUNTING
8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
8118 C	SERVICE EQUIPMENT AND POLE
8116 C	STEEL GUARD POST
8117 F	PRECAST CONCRETE HANDHOLE
8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 H	P-80 & 90 POLE FOUNDATION
8121 B	TRANSFORMER BASE WITH POLE BASE PLATE
8126 C	P-100 POLE FOUNDATION
8123 B	POLE & MAST ARM. (ALL P90 POLES)
8124 D	SIGNAL HEAD MOUNTS
8130 D	SAW CUT LOOP DETECTORS
9322 I	CHAIN LINK FENCE

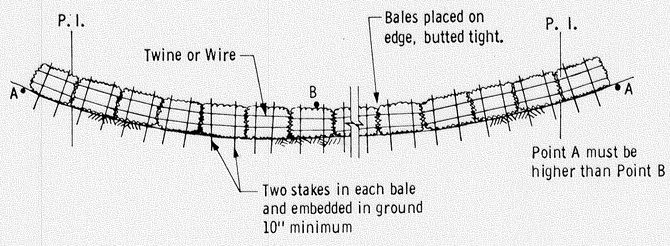


SHINGLING SOD

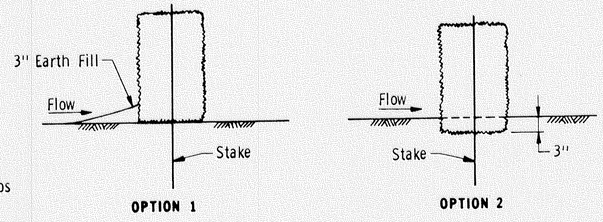


OVERLAPPING SOD

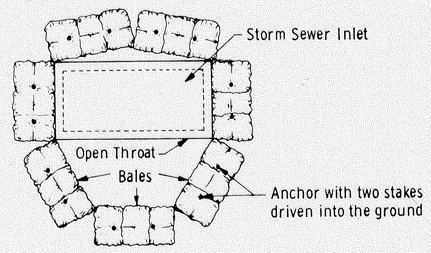
SPECIAL SOD PLACEMENT TECHNIQUES



BALE HAY OR STRAW DITCH CHECK



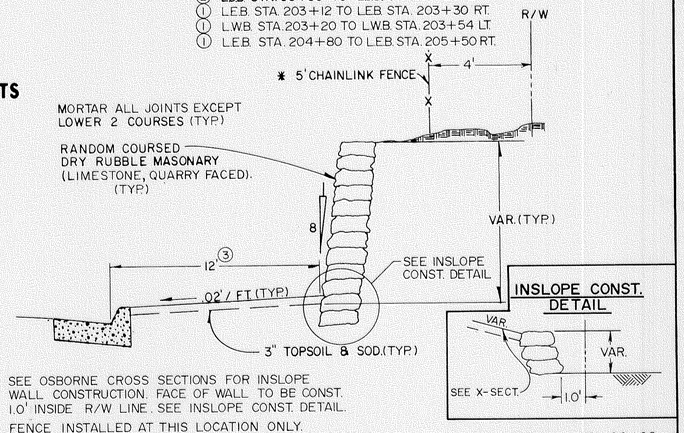
DITCH CHECK SECTIONS



BALE DIVERSION TO PROTECT STORM SEWER INLETS

RETAINING WALL DETAIL

② L.S.B. STA. 96+50 TO L.S.B. STA. 99+20 LT.
① L.E.B. STA. 203+12 TO L.E.B. STA. 203+30 RT.
① L.W.B. STA. 203+20 TO L.W.B. STA. 203+54 LT.
① L.E.B. STA. 204+80 TO L.E.B. STA. 205+50 RT.



① SEE OSBORNE CROSS SECTIONS FOR INSLOPE WALL CONSTRUCTION. FACE OF WALL TO BE CONST. 1.0' INSIDE R/W LINE. SEE INSLOPE CONST. DETAIL.
② FENCE INSTALLED AT THIS LOCATION ONLY.
③ SEE X-SECTIONS FOR DIST. IN INSLOPE CONST. AREAS.

* STA. 97+32 TO STA. 99+20, F.&I. FENCE. SEE FENCE CHART.

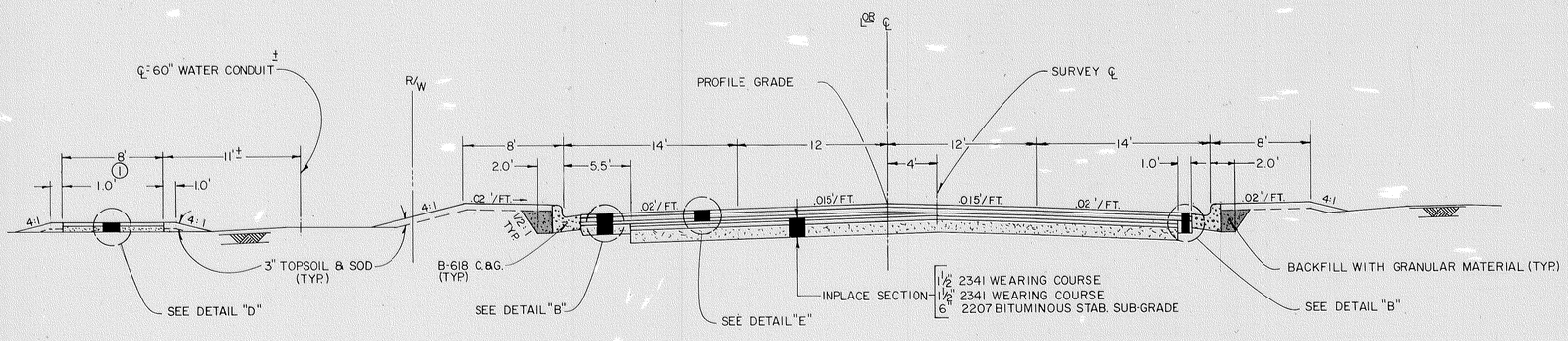
REVISIONS			
DATE	BY	DATE	BY

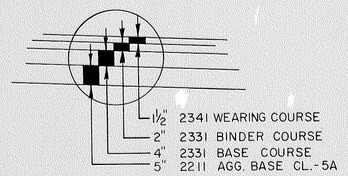
S.A.P. _____ S.P. 02-608-07 & 02-601-33 C.P. _____

Sheet No. 3 of 58 Sheets

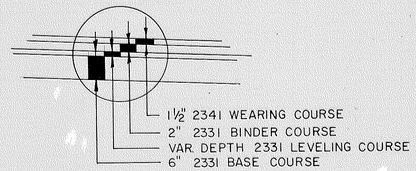
Fed. Proj. No.

C.S.A.H. 8 - OSBORNE ROAD
GRADING, BASE & BITUMINOUS SECTION
STA. 207+50.0 - STA. 215+95.0



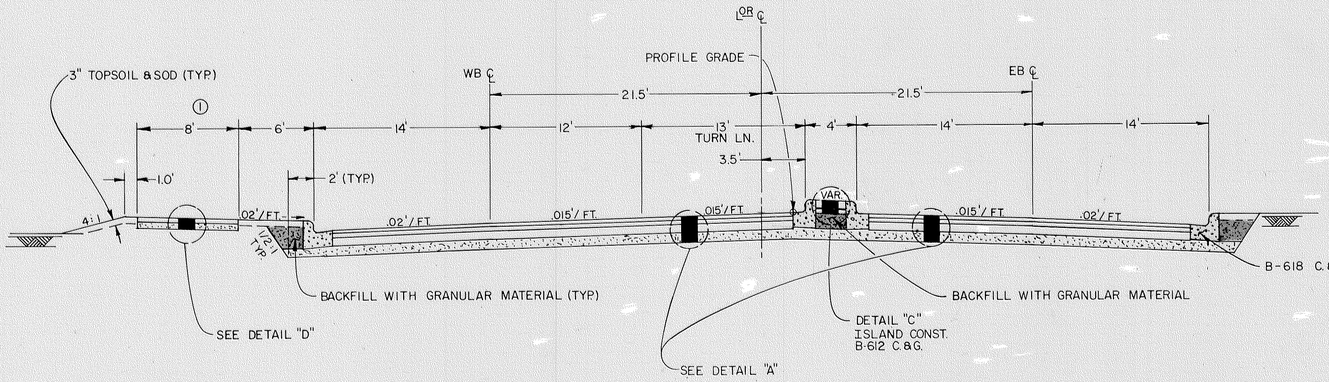


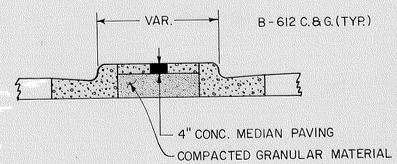
DETAIL "A"



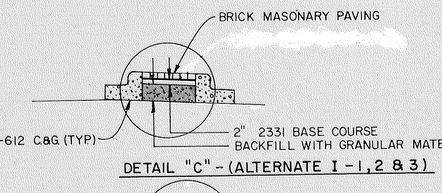
DETAIL "B"

C.S.A.H. 8 - OSBORNE ROAD
GRADING, BASE & BITUMINOUS SECTION
STA. 200+80.0 - STA. 202+40.0

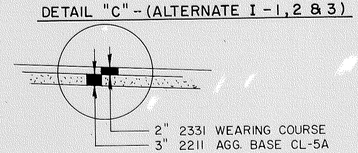




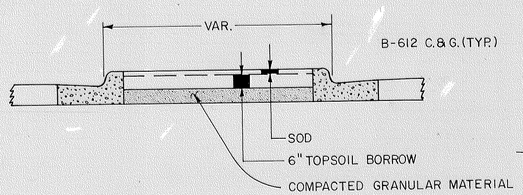
DETAIL "F" - (ALTERNATE I - 1)



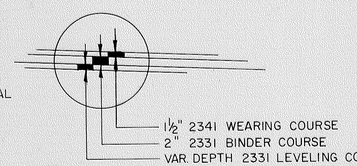
DETAIL "C" - (ALTERNATE I - 1, 2 & 3)



DETAIL "D"

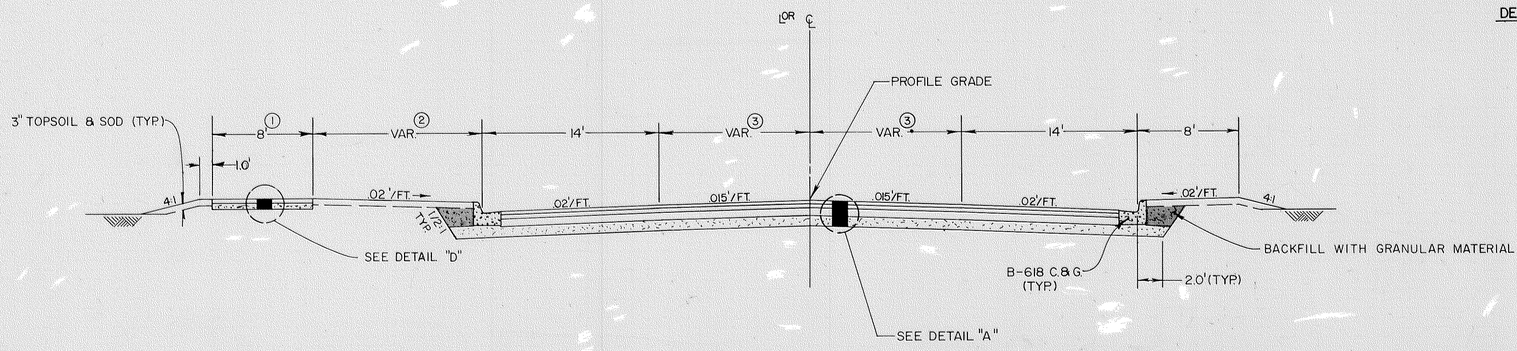


DETAIL "G" - (ALTERNATE I - 3)



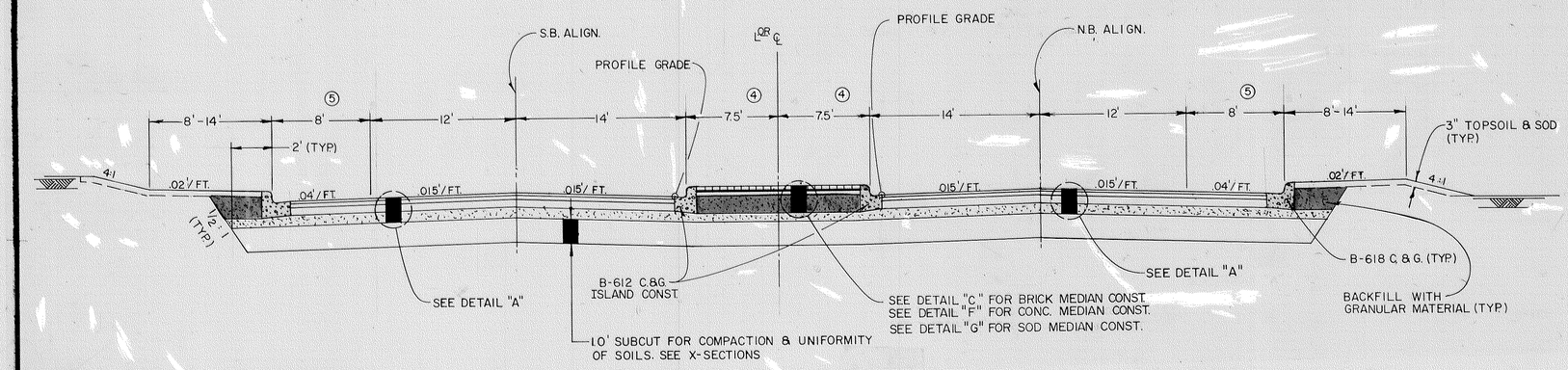
DETAIL "E"

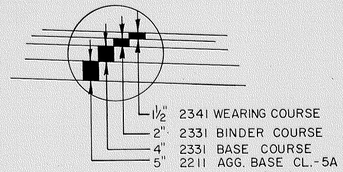
C.S.A.H. 8 - OSBORNE ROAD
GRADING, BASE & BITUMINOUS SECTION
STA. 202+400 - STA. 207+500



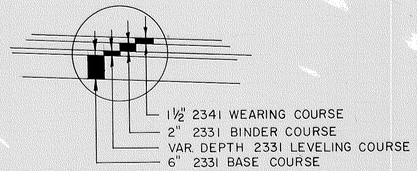
① BIKE PATH - SEE PLAN & PROFILE SHEETS FOR CONSTRUCTION LOCATIONS.
② 6' - STA. W.B. 202+40 TO STA. 203+45
③ TAPERS FROM 21.5' - 12' SEE PLAN & PROFILE SHEETS FOR GEOMETRICS.

C.S.A.H. 1- EAST RIVER ROAD
GRADING, BASE & BITUMINOUS SECTION
STA. S.B. 95+85.0 - STA. N.B. 115+31.0



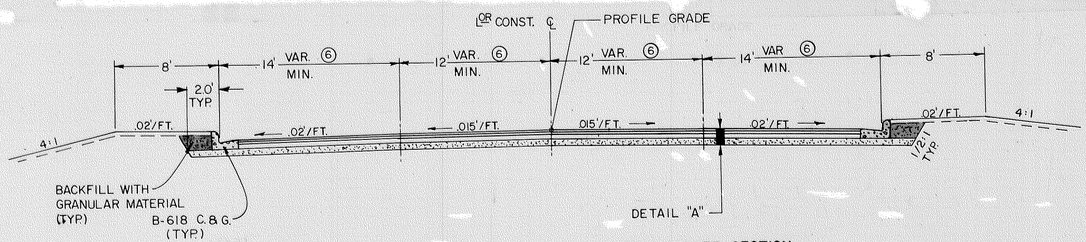


DETAIL "A"

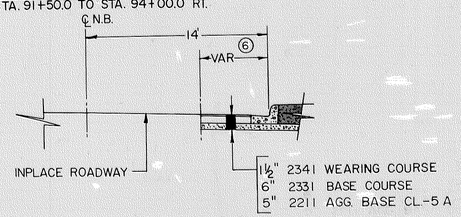


DETAIL "B"

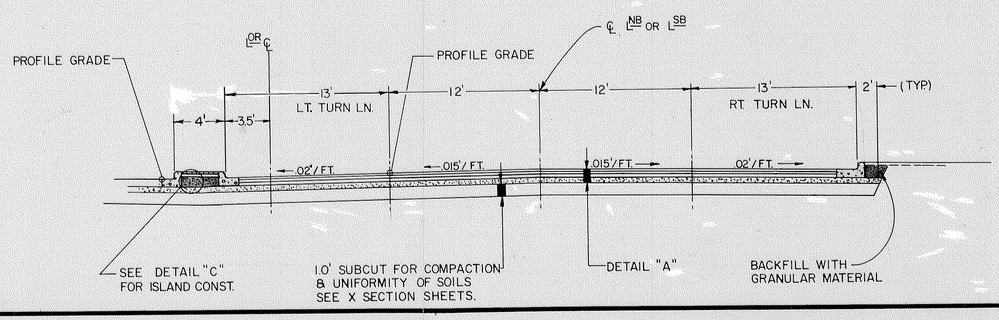
TAPER CONSTRUCTION
C.S.A.H. 1 EAST RIVER RD.
GRADING, BASE & BITUMINOUS SECTION
STA. 94+00.0 TO STA. 95+85.0
STA. 115+31.0 TO STA. 118+95.0

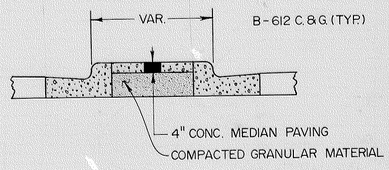


BEGIN TAPER SECTION
STA. 91+50.0 TO STA. 94+00.0 RT.

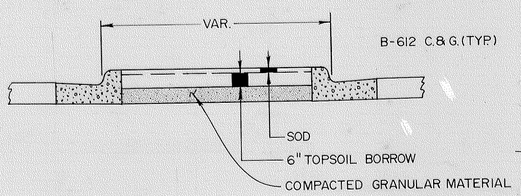


TURN LANE CONSTRUCTION
SEE PLAN SHEETS FOR LOCATIONS & TAPERS

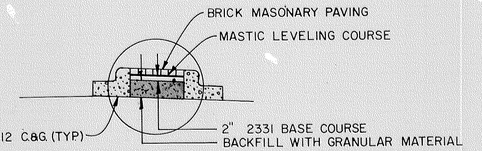




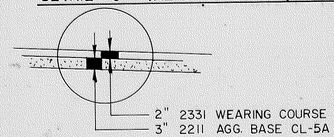
DETAIL "F" - (ALTERNATE I - 1)



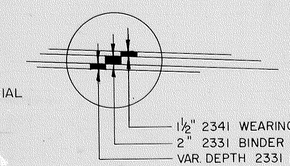
DETAIL "G" - (ALTERNATE I - 3)



DETAIL "C" - (ALTERNATE I - 1, 2 & 3)

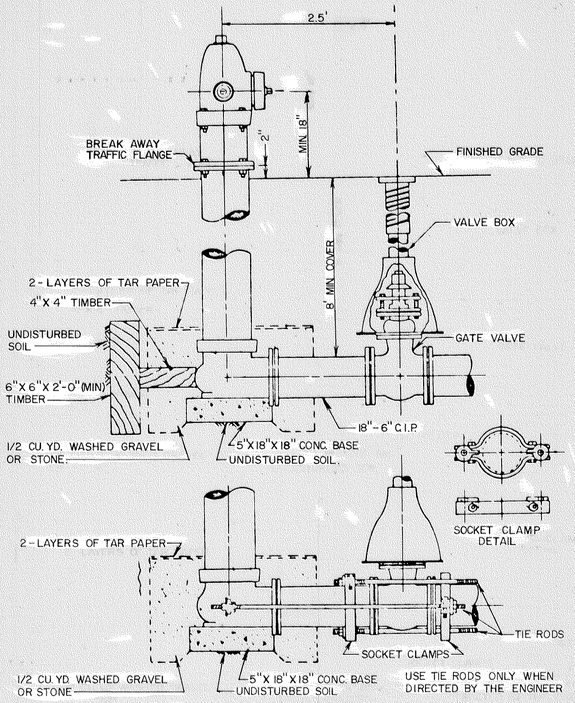


DETAIL "D"

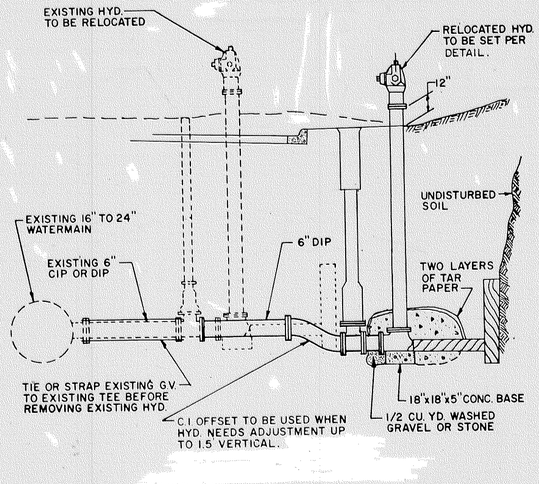


DETAIL "E"

④ VAR. IN TRANSITION CONSTRUCTION AREAS.
⑤ 13' IN BUS PAD CONSTRUCTION AREAS. VARIES FROM 2'-8' IN TRANSITION AREAS. SEE PLAN & PROFILE SHEETS GEOMETRICS.
⑥ SEE PLAN & PROFILE SHEETS FOR GEOMETRICS.



TYPICAL HYDRANT SETTING DETAIL



NOTE: HYDRANT RELOCATION SHALL INCLUDE, ALL TOOLS, MATERIALS AND LABOR TO SECURE THE EXISTING GATE VALVE TO THE EXISTING TEE, REMOVE AND RELOCATE THE EXISTING HYDRANT WITHOUT SHUTTING DOWN THE EXISTING WATERMAIN.
CONSTRUCT ACCORDING TO DETAILS AS SHOWN AND IN ACCORDANCE WITH THE CITY OF FRIDLEYS REQUIREMENTS.

HYDRANT RELOCATION DETAIL

FENCING						
STATION	LOC.	SALVAGE	INSTALL	F & I	REMOVE	REMARKS
SB 95+79 TO 97+11	16' LT.	71'	71'		113	WOVEN WIRE INSTALL FROM STA 95+79-96+50
SB 97+32 TO 99+20	39' LT.			188'		DES. 60-9322 INSTALL ALONG TOP OF RET. WALL
SB 102+73 TO 103+21	6' LT.				116'	CHAIN LINK FENCE
SB 107+80 TO 108+57	18' LT.				77'	WOOD FENCE
SB 111+16 TO 112+00	37' LT.	95'	84'			WOOD FENCE
SB 113+06 TO 113+88	38' LT.	88'	82'			WOOD FENCE
SB 114+27 TO 115+26	26' LT.	135'	101'			WOOD FENCE
SB 115+52 TO 116+00	26' LT.	68'	48'			WOOD FENCE
	TOTAL	457'	386'	188'	306'	

CLEARING AND GRUBBING					
STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
SP 02-608-07					
WB 202+08	7' LT.	1		1	
WB 202+16	31' LT.	3		1	
WB 202+36	27' LT.	1		1	
WB 202+43	14' LT.	1		1	
WB 202+54	24' LT.	1		1	
WB 202 72	14' LT.	1		1	
WB 202+76	14' LT.			1	
WB 203+45	20' LT.	1		1	
WB 203+47	28' LT.	1		1	
TOTALS		10		9	

SAWING PAVEMENT			
STATION	LOCATION	SAW BIT. PAVEMENT	SAW CONC. PAVEMENT
SP 02-601-33		LIN.FT.	LIN.FT.
NB 92+55	ENT. RT.	16	
NB 93+43	ENT. RT.	12	
94+00	LT.& RT.	52	
NB 94+10	ENT. RT.	12	
NB 94+59	ENT. RT.	10	
SB 95+55	GLEN CREEK RD. LT.	30	
NB 95+99	ENT. RT.	12	
NB 96+80TO98+00	BIT. LOT. RT.	120	
NB 100+46	ENT. RT.	35	
NB 101+10TO102+18	ENT. RT.	108	
SB 101+95	TALMAGE WAY LT.	35	
SB 104+75	OSBORNE WAY LT.	100	
SB 107+25	75TH WAY LT.	24	
NB 110+81	ENT. RT.	10	
SB 112+60	RICKARD RD. LT.	36	
NB 112+84	ENT. RT.	10	
NB 115+69	ENT. RT.	11	
SB 116+25	GRAIG WAY LT.	32	
NB 116+93	ENT. RT.	16	
NB 91+50TO94+00	RT.	250	
	TOTAL	931	
SP 02-608-07			
EB 201+25TO 201+78	ENT. RT.	53	
WB 201+45	ENT. RT	15	
EB 202+30TO203+00	BIT. LOT. RT.	70	
WB 202+62	ENT. LT.	12	
EB 206+66	ENT. RT.		24
207+50	LT. & RT.	46	
207+50TO215+85	23' RT.	835	
L OR 209+03	LT. & RT.	50	
L OR 209+18	LT. & RT.	50	
213+34	ENT. RT.	32	
215+85	LT. & RT.	100	
	TOTAL	1263	24

CLEARING AND GRUBBING					
STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
SP 02-601-33		TREE	ACRE	TREE	ACRE
94+09	37' LT.	2		1	
94+26	37' LT.	2		1	
94+36	37' LT.	1		1	
95+04	48' LT.	1		1	
SB 96+85 TO 101+66	13'-38'LT		0.70		0.70
SB 102+35	18' LT.	1		1	
SB 102+40	10' LT.	1		1	
SB 102+50	3' LT.			1	
SB 103+08	13' LT.	1		1	
SB 103+14	10' LT.	1		1	
SB 103+19	14' LT.	1		1	
SB 103+21	12' LT.	1		1	
SB 103+45 TO 104+20	20'TO40'LT		0.10		0.10
SB 105+69	28' LT.	9		1	
SB 106+17	27' LT.	1		1	
SB 106+56	25' LT.	1		1	
NB 107+44	21' RT.	1		1	
NB 107+75	21' RT.	1		1	
SB 108+11	30' LT.	1		1	
NB 110+21	10' RT.	2		1	
NB 110+28	10' RT.	1		1	
NB 110+94	18' RT.	1		1	
NB 110+94	26' RT.	1		1	
NB 111+92	8' RT.	1		1	
NB 111+92	11' RT.	1		1	
NB 111+92	17' RT.	1		1	
SB 112+15	38' LT.	1		1	
SB 113+03	35' LT.	1		1	
SB 113+08	35' LT.	1		1	
SB 113+09	37' LT.	1		1	
SB 113+38	37' LT.	1		1	
SB 113+83	29' LT.	1		1	
SB 114+42	31' LT.	1		1	
NB 115+03	14' RT.	4		1	
SB 115+13	24' LT.	1		1	
SB 115+18	25' LT.	1		1	
SB 115+50	26' LT.	1		1	
116+77	31' LT.	1		1	
95+25 TO 95+73	47' RT.	3		3	
TOTALS		52	.80	39	.80

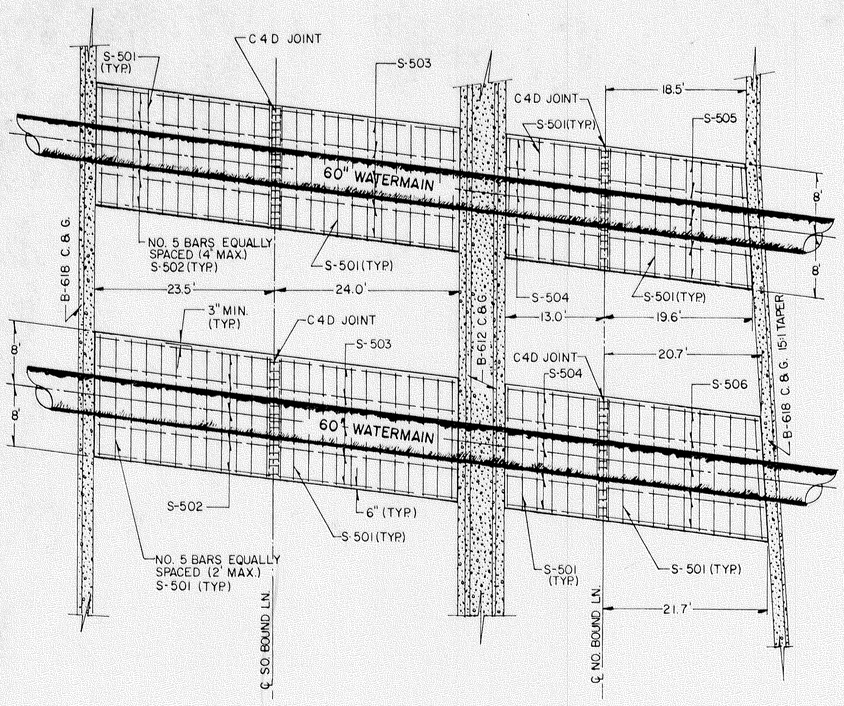
HYDRANT RELOCATION		
SP 02-601-33		
LOCATION	NEW LOCATION	REMARKS
NB 96+50 7' RT.	NB 96+50 27' RT.	
SB 101+55 3' LT.	SB 101+55 27' LT.	
SB 107+45 27'LT.	SB 107+45 30' LT.	
SB 112+40 35' LT.	SB 112+40 38' LT.	
SB 116+10 32' LT.	SB 116+10 42' LT.	

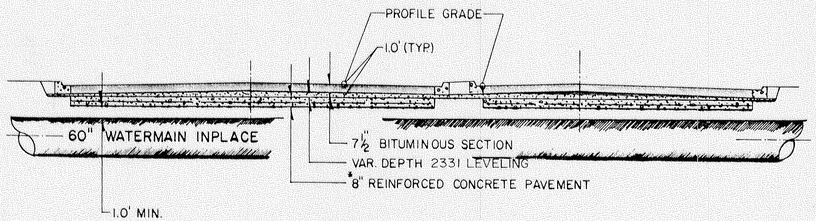
VALVE BOX - WATER		
SP 02-601-33		
STATION	LOCATION	REMARKS
SB 95+44	10' LT.	
NB 100+67	37' RT.	
NB 100+70	36' RT.	
SB 101+71	11' RT.	
NB 104+12	22' RT.	
NB 104+26	15' RT.	
SB 107+32	11' LT.	
SB 116+22	18' LT.	
SP 02-608-07		
EB 205+33	3' LT.	
L 208+13	12' RT.	
L 213+97	13' RT.	
L 214+05	12' RT.	
TOTAL 12		

MISCELLANEOUS REMOVAL							
STA. TO STA.	LOC.	DESCRIPTION	UNIT				ABANDON
			LIN FT	SQ YD	CU YD	STRUCT	
		SP 02-601-33					
NB 97+95 TO 98+15	15' RT.	CONC. CURB	20				
NB 100+28	25' RT.	CONC. CURB	10				
SB 101+73	19' LT.	CONC. CURB & GUTTER	35				
SB 102+00	9' LT.	CONC. CURB & GUTTER	55				
SB 102+15	8' LT.	CONC. PAVEMENT		45			
NB 102+20TO104+20	28' RT.	CONC. CURB & GUTTER	220				
NB 103+90TO104+20	11' RT.	CONC. CURB & GUTTER (ISLAND)	80				
SB 104+48	32' LT.	CONC. CURB & GUTTER	20				
SB 104+98	30' LT.	CONC. CURB & GUTTER	30				
		SP 02-608-07					
199+19TO199+60	LT.	REMOVE BIT. PAVEMENT FOR MEDIAN		30			
EB 202+95	13' RT.	CONC. CURB	10				
EB 206+66	13' RT.	CONC. PAVEMENT		11			
L OR 213+16	32' RT.	CONC. CURB	10				
L OR 213+54	37' RT.	CONC. CURB	5				
L OR 215+90	60' RT.	CONC. CURB & GUTTER	20				
L OR 209+10	LT.&RT.	TRENCH PAVEMENT		83			

Fed. Project No. _____

REINFORCED CONCRETE PAVEMENT FOR WATERMAIN PROTECTION
SCALE 1"=10'





*NOTE:
CONCRETE SHALL BE HIGH EARLY STRENGTH

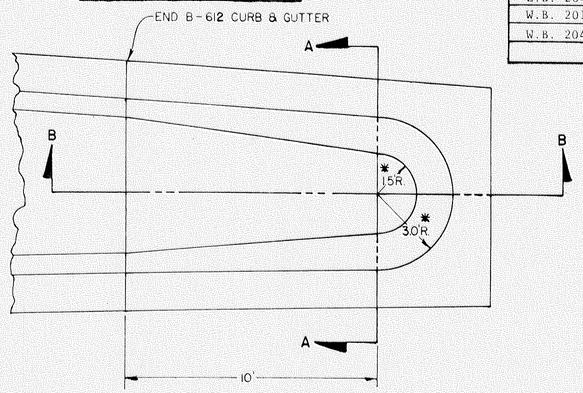
BILL OF REINFORCEMENT FOR CONCRETE PAVEMENT

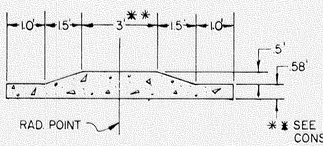
BAR	NO.	LENGTH	SHAPE
S 501	85	15'-6"	STRAIGHT
S 502	10	23'-0"	STRAIGHT
S 503	10	23'-6"	STRAIGHT
S 504	10	12'-6"	STRAIGHT
S 505	5	18'-0"TO19'-0"	STRAIGHT
S 506	5	20'-0"TO21'-0"	STRAIGHT

CURB, CURB AND GUTTER, MEDIAN, SIDEWALK, ETC.

STATION TO STATION	LOC.	CURB & GUTTER		CONC PAVEMENT		SIDEWALK			MEDIAN					
									ALT I-1		ALT I-2	ALT I-3		
					NON-	4"	6"	CONC.	BRICK	CONC.	BRICK	BRICK		
		B-612	B-618	REINF.	REINF.	WALK	WALK	NOSE	MEDIAN	MEDIAN	MEDIAN	MEDIAN	SOD	TOPSOIL
S.P. 02-601-33		LIN. FT	LIN. FT	SQ. YD.	SQ. YD.	SQ. FT.	SQ. FT.	EACH	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	CU. YD
S.B. 95+81 - 95+95	MEDIAN							1						
S.B. 95+95 - 104+13	MEDIAN	1645												
N.B. 104+30	RT.	70												
S.B. 104+75	LT.	85												
N.B. 105+45 - 112+27	MEDIAN	1364												
S.B. 112+94 - 115+21	MEDIAN	460												
N.B. 112+80 - 112+94	MEDIAN							1						
N.B. 115+21 - 115+35	MEDIAN													
N.B. 91+50 - 104+30	RT.		1305											
N.B. 105+07 - 105+70	RT.		80											
N.B. 105+70 - 106+30	RT.		60		87									
N.B. 106+30 - 112+05	RT.		575											
N.B. 112+05 - 112+65	RT.		60		87									
N.B. 112+65 - 118+85	RT.		620											
S.B. 94+05 - 95+40	LT.		164											
S.B. 95+67 - 101+80	LT.		647											
S.B. 102+10 - 103+60	LT.		165											
S.B. 103+60 - 104+20	LT.		60		87									
S.B. 104+20 - 104+55	LT.		45											
S.B. 105+00 - 111+55	LT.		655											
S.B. 111+55 - 112+15	LT.		60		87									
S.B. 112+15 - 112+47	LT.		60											
S.B. 112+80 - 116+15	LT.		370											
116+40 - 118+95	LT.		270											
CUL DE SAC (75th. WAY)	LT.		257											
S.B. 95+95 - 100+10	MEDIAN									593	593		593	99
S.B. 100+10 - 104+13	MEDIAN								153		153	153		
N.B. 105+47 - 112+25	MEDIAN								201		201	201		
N.B. 104+27 - 104+47	ISLAND								11		11	11		
N.B. 112+84 - N.B. 115+00	MEDIAN									282	282		282	47
OSBORNE WAY	MEDIAN								12		12	12		
S.B. 103+60 - 104+48	LT.					480								
N.B. 105+15 - 105+46	RT.					170								
N.B. 105+46 - 105+58	RT.						60							
N.B. 105+58 - 106+30	RT.					415								
S.B. 111+55 - 112+40	LT.					550								
N.B. 112+05 - 112+65	RT.					300								
106+68	LT. & RT			144.5										
107+01	LT. & RT			144.5										
S.P. 02-608-07														
E.B. 200+90 - 202+40	MEDIAN	312							45		45	45		
E.B. 201+20 - 203+35	RT.		215											
E.B. 204+75 - 215+85	RT.		1145											
W.B. 201+07 - 203+45	LT.		238											
W.B. 204+80 - 215+85	LT.		1120											
TOTALS =		3936	8171	289	348	1915	60	3	422	875	1297	422	875	146

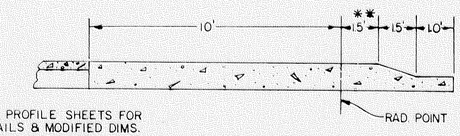
MEDIAN NOSE DETAIL





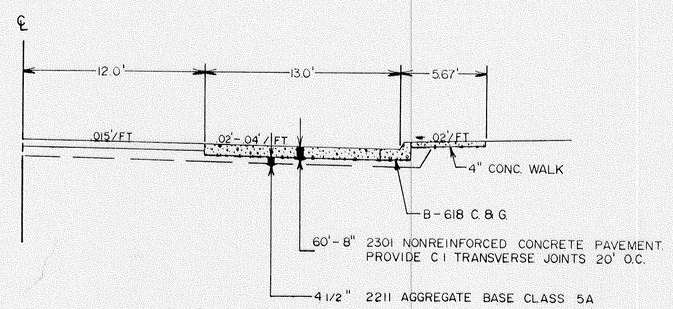
SECTION A-A

**SEE PLAN & PROFILE SHEETS FOR CONST. DETAILS & MODIFIED DIMS. LOCATIONS - STA 95+85, STA 115+31, STA 112+84



SECTION B-B

CONCRETE BUS PAD



REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. 02-601-33 & 02-608-07 C.P. _____

Sheet No. 7 of 58 Sheets

Fed. Proj. No.

STORM SEWER CONST.

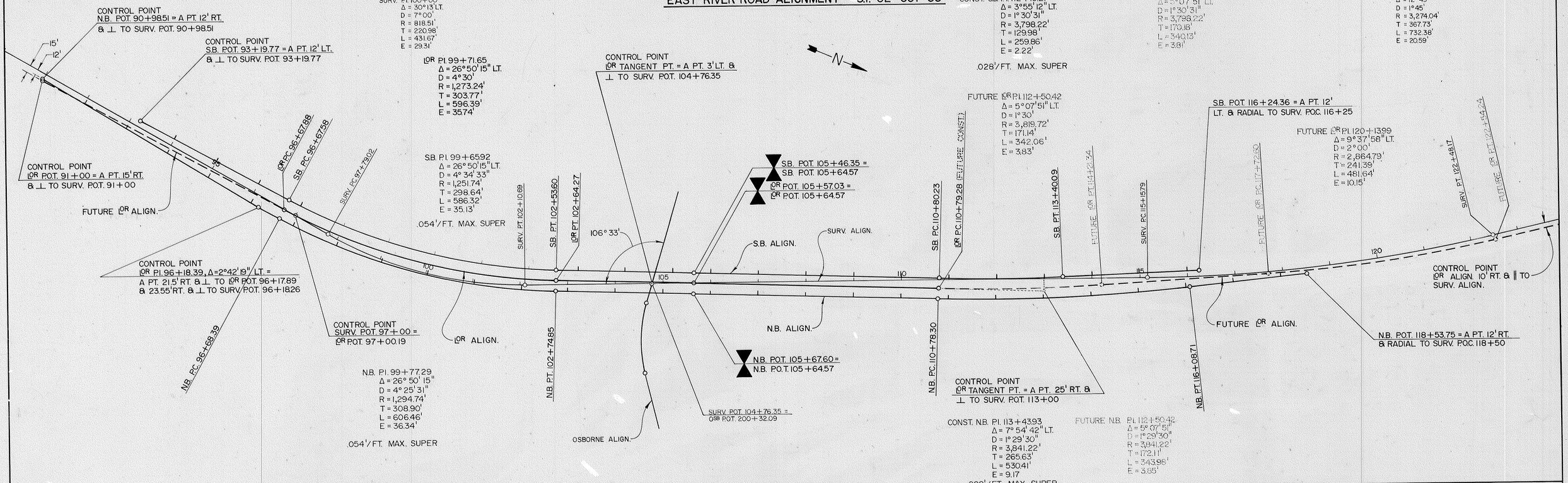
NO.	STA.	LOC.	REMARKS	TYPE	DESIGN	LIN. FT.	REMOVE SEWER PIPE	TOP	OUTLET	DRAINS TO	F&I CASTING ASSEMBLY	F. & I. R.C.P. SEWER 12" CL. III	15" CL. II	15" CL. III	21" CL. II	60" CL. III
1	NB 93+97	16.1' RT.		CB	C OR G	~~5.1~~ 5.3		856.59	851.29	CB 2	B			~~135~~ '129'		
2	SB 95+15	12.9' LT.		CB	C OR G	~~5.0~~ 5.2		855.78	850.61	CB 3	B			~~339~~ '345'		
3	SB 98+57	23.9' LT.		CB	C OR G	~~5.7~~ 5.7		852.04	846.20	CB 6	B			~~139~~ '137'		
4	NB 98+66	12.9' LT.		CB	C OR G	~~5.4~~ 5.4		854.12	848.58	CB 3	B	54'				
5	NB 98+66	18.9' RT.		CB	C OR G	~~5.6~~ 5.9		855.37	849.64	CB 4	B	32'				
6	SB 99+96	18.9' LT.		CB	A OR F	~~6.5~~ 6.6		850.94	844.25	MH 7	B			~~35~~ '32'		
7	SB100+29	29' LT.	SALVAGE & INSTALL 60" RCP APRON	MH	A OR F 84"=4019	~~9.1~~ 9.8 ~~13.3~~ 12.6		851.30	829.00	DITCH	A					~~78~~ '86'
8	SB100+84	18.9' LT.		CB	A OR F	~~6.1~~ 6.2		850.44	844.15	MH 7	B				~~55~~ '56'	
9	NB101+16	23.9' LT.		CB	A OR F	~~6.3~~ 6.9		852.05	845.58	CB 13	B	38'				
10	NB100+94	23.9' RT.		CB	C OR G	5.3		853.70	848.24	MH 10A	B	~~24~~ '25'				
10A	NB100+90	50' RT.	MH INPL. (TO REMAIN INPL.)	MH				852.73	847.38	DITCH						
11	NB100+92	26' LT.	CB INPL. REMOVE C.B. STRUCT.	CB			18"x46' CMP			DITCH						
12	SB100+75	8' RT.	MH INPL. SALVAGE CASTING, REMOVE M.H. STRUCT.	MH			15"x40' CMP			DITCH						
13	SB100+95	18.9' LT.		CB	C OR G	5.0		850.43	844.37	CB 8	B				11'	
14	SB101+55	7' RT.	CB INPL. REMOVE C.B. STRUCT.	CB			15"x80' CMP			MH 12						
15	SB101+46	18.9' LT.		CB	C OR G	5.3		850.57	845.08	CB 13	B				~~51~~ '49'	
16	SB101+70	25' LT.	CB INPL. REMOVE C.B. STRUCT.	CB			15"x37' CMP			CB 14						
17	SB101+75	35' LT.	CB INPL. REMOVE C.B. STRUCT.	CB			15"x 8' CMP			CB 16						
18	SB101+80	47' LT.		~~CB~~ MH	C OR G	~~5.1~~ 5.7		851.75	846.47	CB 15	~~B~~ A		~~44~~ '46'			
19	SB102+16	55' LT.		~~CB~~ MH	C OR G	~~5.2~~ 5.6		852.40	847.01	CB 18	~~B~~ A		~~34~~ '35'			
20	SB102+04	21' LT.	CB INPL. REMOVE C.B. STRUCT.	CB			15"x30' CMP			CB 17						
21	SB102+37	10' LT.		MH	C OR G	~~5.3~~ 5.0		852.39	847.22	CB 15	A		~~97~~ '92'			
22	SB102+46	23.9' LT.		CB	C OR G	~~4.0~~ 4.4		851.85	847.65	MH 21	B	~~15~~ '17'				
23	SB102+90	2' LT.	MH INPL. (TO REMAIN) ADJ. CASTING	MH			15"x90' RCP	853.45	848.17	MH 21				~~53~~ '56'		
24	SB104+51	15' LT.	MH INPL. (TO REMAIN) ADJ. CASTING	MH				855.40	850.45	MH 23						
25	SB105+34	23.9' LT.		CB	C OR G	~~4.7~~ 4.9		855.94	851.11	MH 24	B			~~83~~ '81'		
26	SB106+59	23.9' LT.		CB	C OR G	~~5.0~~		857.11	851.97	CB 25	B		~~107~~ '112'			
26A	SB106+60	38' LT.		CB	C OR G	~~4.8~~ 4.4		857.30	852.36	CB 26	B	14'				
27	NB103+68	20' RT.	M.H. INPL.-SALVAGE CASTING, RECONSTRUCT 5.5', INSTALL CASTING	MH				854.60	849.64	MH 10A						
28	NB104+06	37' RT.	LOCATE IN 60' RAD.	CB	C OR G	~~4.4~~ 4.3		854.54	849.96	MH 27	B		43'			
29	NB104+10	51' RT.	C.B. INPL. SALVAGE CASTING, REMOVE C.B. STRUCT.	CB			12"x38' RCP			MH 31						
30	EB201+17	23' RT.	LOCATE IN 60' RAD.	CB	C OR G	~~4.6~~ 4.4		855.00	850.18	CB 28	B		~~30~~ '34'			
31	NB104+41	28' RT.	MH INPL. SALVAGE CASTING, REMOVE MH STRUCT.	MH			15"x73' RCP			MH 27						
32	NB104+67	40' RT.	CB INPL. SALVAGE CASTING, REMOVE C.B. STRUCT.	CB			12"x29' RCP			MH 31						
33	NB104+93	6' RT.	CB INPL. SALVAGE CASTING, REMOVE C.B. STRUCT.	CB			12"x57' RCP			MH 31						
34	WB201+08	12.9' LT.		CB	C OR G	4.3		855.17	850.66	CB 30	B			80'		
35	WB201+19	12.9' LT.		CB	C OR G	~~4.1~~ 4.3		855.28	851.02	CB 34	B	11'				
36	NB105+67	23.9' RT.		CB	C OR G	4.7		856.02	851.10	CB 34	B			73'		
37	NB105+67	12.9' LT.		CB	C OR G	~~4.6~~ 4.8		856.48	851.72	CB 36	B	37'				
38	SB105+46	23.9' RT.		CB	C OR G	~~4.1~~ 4.4		856.05	851.78	CB 37	B	6'				
39	L 205+08	27' RT.	CB INPL. SALVAGE CAST. REMOVE CB STRUCT. CONST. MH	MH	C OR G	~~4.7~~ 4.5		860.79	856.16	INPL.15"RCP	A					
40	205+19	23' LT.	CB INPL. SALVAGE CAST. REMOVE CB STRUCT.	CB			15"x46' RCP			CB 39						
41	EB205+63	12.9' RT.	INSTALL CB CASTING FROM # 39	CB	C OR G	~~3.9~~ 4.1		860.41	856.36	MH 39			~~41~~ '39'			
42	WB205+40	12.9' LT.	INSTALL CB CASTING FROM # 40	CB	~~H~~ C OR G	~~3.4~~ 4.0		860.41	856.84	CB 41		~~55~~'	55'			
43	L~~OR~~ 209+05	24.9' RT.		CB	~~C OR G~~ H	~~4.2~~ 4.0		861.82	857.43	CB 41	B		~~355~~ '376'			
44	L~~OR~~ 209+25	24.9' LT.		CB	~~H~~ C OR G	~~3.8~~ 4.5		861.90	857.90	CB 43	B	54'				
45	115+76	27' RT.	CB INPL. SALVAGE CASTING, REMOVE CB STRUCT.	CB			12"x10'			MH 46						
46	115+88	25' RT.	MH INPL. (TO REMAIN) ADJUST CASTING	MH												
					TOTALS		584'				~~29~~ 30	~~340~~ '311'	~~745~~ 828'	~~937~~ 933'	~~117~~ '116'	~~78~~ '86'
19A	SB 102+30	LT.	TALMADGE WAY CUL-DE-SAC	CB	H	3.7				MH 19	B	23				

CASTING ASSEMBLIES			
ASSEMBLY	ITEM	CASTING NO.	QUANTITY
A	FRAME COVER	700-7 712	3
B	FRAME GRATE CURB BOX	801 810 821-B	26

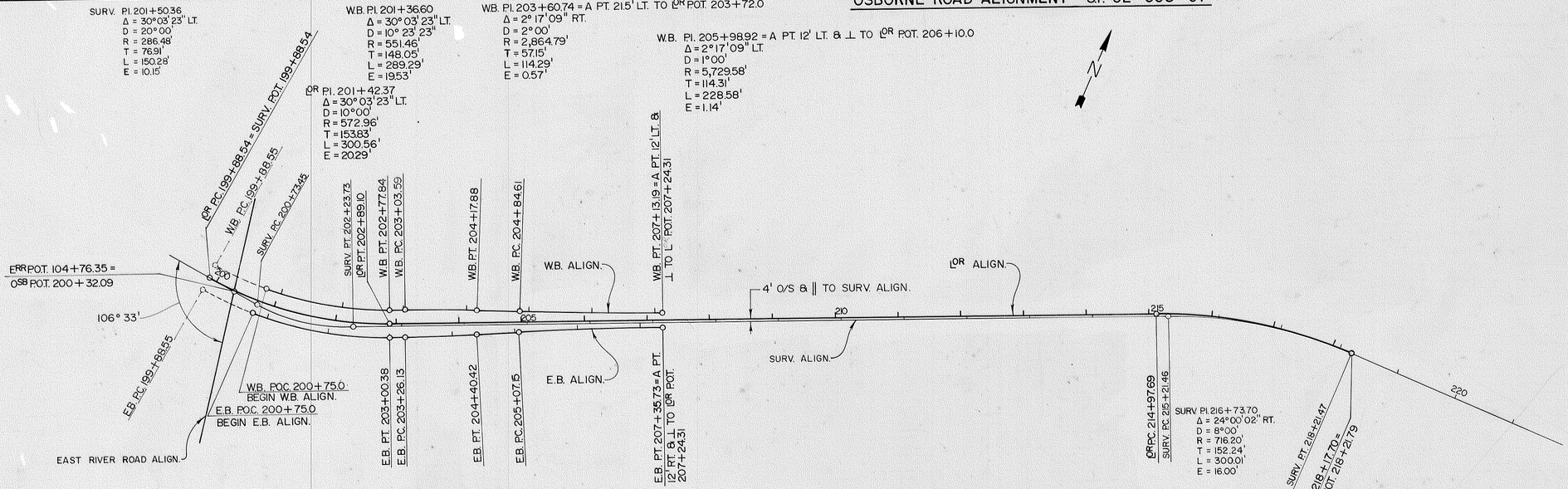
ADJ. FRAME & RING CASTINGS		
SP 02-601-33		
STATION	LOCATION	REMARKS
NB 92+92	12' RT.	SAN. SEWER
NB 92+92	20' RT.	SAN. SEWER
NB 94+18	10' RT.	SAN. SEWER
NB 95+55	6' RT.	SAN. SEWER
NB 98+52	23' RT.	SAN. SEWER
NB 100+02	32' RT.	SAN. SEWER
NB 101+75	25' RT.	SAN. SEWER
SB 101+80	7' LT.	SAN. SEWER
SB 102+90	2' LT.	STORM SEWER
NB 104+34	12' RT.	SAN. SEWER
SB 104+51	15' LT.	STORM SEWER
NB 107+35	1' RT.	SAN. SEWER
NB 110+59	11' LT.	SAN. SEWER
NB 113+82	9' LT.	SAN. SEWER
NB 116+38	9' RT.	SAN. SEWER
118+82	28' RT.	SAN. SEWER
SP 02-608-07		
WB 205+24	5' LT.	SAN. SEWER
213+70	29' RT.	N.S.P. ADJ. BY OTHERS
215+88	25' RT.	STORM SEWER
TOTAL 18		

RECORD COPY
3-21-89 ka

EAST RIVER ROAD ALIGNMENT – S.P. 02-601-33



OSBORNE ROAD ALIGNMENT – S.P. 02-608-07



CAUTION: HEAVY EQUIPMENT WILL NOT BE ALLOWED TO CROSS OR WORK OVER 60" WATER CONDUIT.

OSB PI 201+50.36
Δ = 30°03'-23" LT
D = 20° 00'
R = 286.48
T = 76.91'
L = 150.28'
E = 10.15'

BEGIN PROJECT S.P. 02-608-07
STA. 199+20

ERR POT. 104+76.35 = OSB POT. 200+32.09

DENOTES PED. RAMP LOCATIONS

BM. 1 ELEV. 859.07
TOP HYD SE COR
ERR & OSB RT.

WB. ALIGN

EB. ALIGN.

LOR ALIGN.

8' BIKEWAY

REVISED STORM SEWER LOCATION

SURVEY ALIGN.

207+50 BEGIN BITUMINOUS OVERLAY CONST.

DENOTES OVERLAY CONST. AREAS

15" R.C.P. INPLACE

I-S-STEEL

ST. PAUL

WATER

WORKS EASEMENT

NORTHERN BURLINGTON

END C & G

BEGIN C & G

VAR.

SB. ERR

NB. ERR

PROFILE GRADE

+0.93%

+3.58%

+1.83%

−0.51%

+0.54%

+0.37%

50' VC
M=0.116

70' VC
M=0.153'

+75 PVI 857.53

+60 PVI 860.57

+50 PVI 861.06

PVI 862.40

15"X55' R.C.P. SEWER CL. II, 0.50%

15"X41' R.C.P. SEWER CL. II, 0.49%

15"X55' R.C.P. SEWER CL. II, 0.20%

12"X54' R.C.P. SEWER CL. III 0.50%

12"X55' R.C.P. SEWER CL. III, 0.50%

856.16

856.36

856.84

857.43

857.57

857.63

857.86

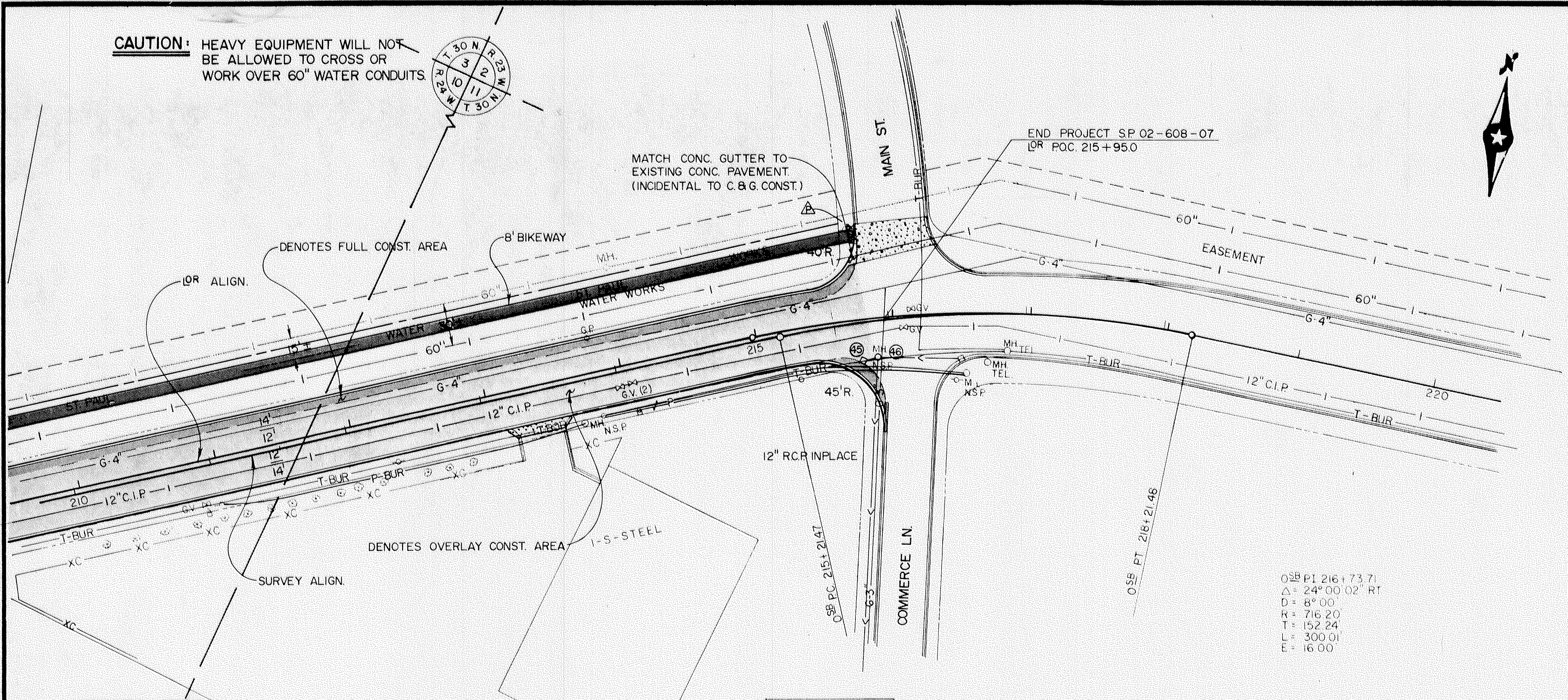
857.90

NOTE: ALL 12", 15" AND 21" R.C.P. IS DESIGN 3006

RECORD COPY
3-21-89 la

State Proj. No. 02-608-07 **Sheet No.** 10 **of** 58 **Sheets**

CAUTION: HEAVY EQUIPMENT WILL NOT BE ALLOWED TO CROSS OR WORK OVER 60" WATER CONDUITS.



DENOTES PED. RAMP LOCATIONS

P.I. 86+27.30
Δ = 17° 36'
D = 5° 00'
R = 1,145.92'
T = 117.40'
L = 352.00'
E = 13.65'

P.C. 84+49.90

P.T. 88+01.90

10' UTILITY EASEMENT

LOGAN PARKWAY

G-1 1/4

I-S-ST #29

I-S-F # 7300

UTILITY EASEMENT

5'

16'

CHESNEY WAY

10' UTILITY EASEMENT

ROAD EASEMENT 12'

GLENN CREEK RD.

I-S-F # 7356

ERR PI 100+00
Δ = 30° 13'
D = 7° 00'
R = 818.51
T = 220.98
L = 431.67
E = 29.31

ERR 97+73.02

SB. ALIGN.

CONST. STONE RETAINING WALL
37' LT., STA. 96+50 - 99+20
F.B.I. CHAIN LINK FENCE

2 S-F

I-S-F

+05 BEGIN C.&G.

+50 BEGIN C.&G.

C.&G. TAPER 7:1

45:1 TAPER

25'R.

15'R.

47'R.

18.7'

95

90

T-BUR

G-6"

8" C.I.P.

12" SAN.

8" SAN.

6" C.I.P.

MH

SB

BIT.

SURV. ALIGN.

N.B. ALIGN.

3 GUARD POST

BEGIN PROJECT SP 02-601-33
P.O.T. STA. 91+50

ASHTON AVENUE

I-S-F # 7255

I-S-F # 7271

I-S-F # 7315

2-S-F # 7321

I-S-F # 7356

NOTE:
ALL UTILITIY LOCATIONS
ARE APPROXIMATE ONLY.

BM. 8 ELEV. 857.61
TOP S.W. COR. BOT. STEP
STA. 95+40 RT. 131' # 7335

BM. 9 ELEV. 855.47
R/R SPK. IN PP
STA. 98+90 RT. 82'

PROFILE GRADE

N.B. PROFILE GRADE

-0.60%

N.B. -0.83%
S.B. -0.99%

S.B. PROFILE GRADE

15" X 135' R.C.P., CL. III, 0.50%

15" X 339' R.C.P., CL. III, 1.30%

15" X 139' R.C.P., CL. III, 1.40%

851.29

850.61

846.20

12" X 32' R.C.P., CL. III, 2.0%

12" X 54' R.C.P. CL. III, 2.0%

849.64

849.00

848.58

847.50

NOTE: ALL 12", 15" AND 21" R.C.P. IS DESIGN 3006

860.00

855.00

850.00

State Proj. No. 02-601-33

Sheet No. 12 of 58 Sheets

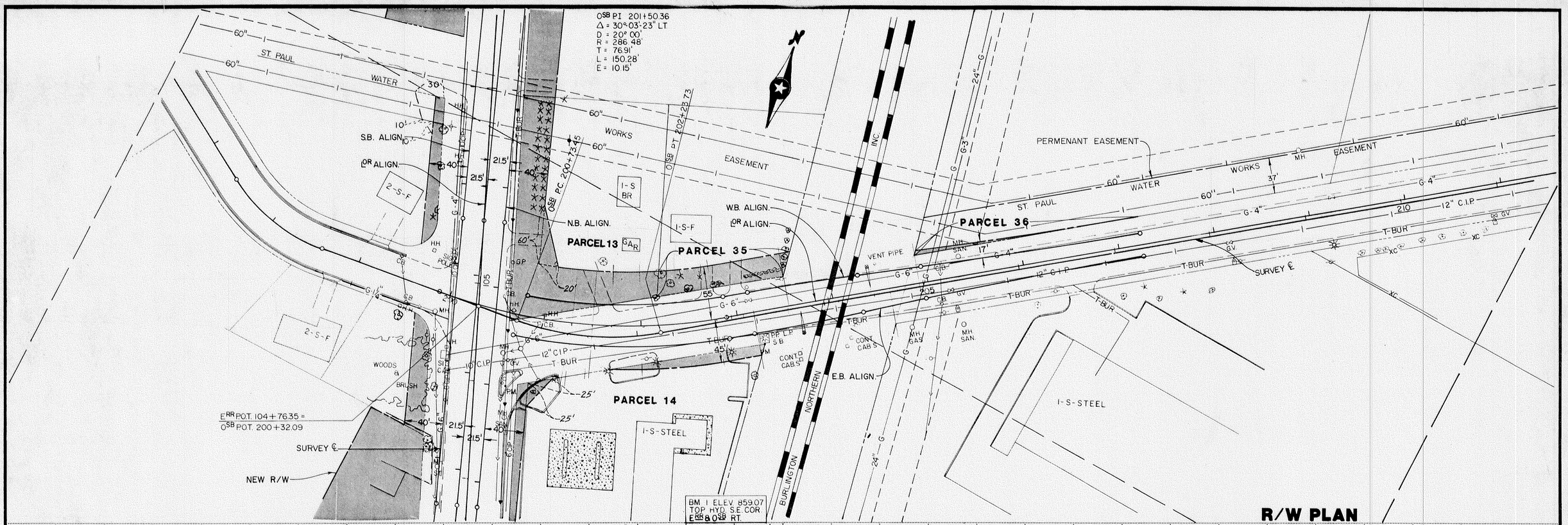
E RR P.I. 100+00
Δ = 30° 13'
D = 7° 00'
R = 818.51'
T = 220.98'
L = 431.67
E = 29.31'
TALMADGE REVISED TO INCLUDE CUL-DE-SAC & C.B. 19A
CONST. STONE RETAINING WALL 37' LT., STA 96+50 - 99+20
F & I. CHAIN LINK FENCE
SEE X-SECTIONS FOR CONST. DETAILS.
TALMADGE WAY
ADDITIONAL 112' B-618 C.&G.
ADDITIONAL 123' B-618 C.&G.
CAUTION: HEAVY EQUIPMENT WILL NOT BE ALLOWED TO CROSS OR WORK OVER 60" WATER CONDUITS PRIOR TO CONST. OF 8" REINFORCED CONCRETE PAVEMENT PROTECTION.
SEE SHEET NO. 20 FOR CUL-DE-SAC CONST.
BM 12 ELEV. 861.99
DBL. SPK IN PP
STA. 111+50 LT. 37'
RICKARD RD.
S.B. ALIGNMENT
EASEMENT
ABANDONED TEL. CABLE
GUARD POST (2)
SEE SHEET NO. 21 & 22 FOR RETENTION POND CONST. DETAILS
SPEAKERS 2 ROWS
BIT. LOT
ABANDONED TEL. CABLE
I-S-STEEL
SEE SHEET NO. 7 FOR WATER MAIN PROTECTION
N.B. ALIGNMENT
SURVEY ALIGNMENT
ST. PAUL WATER WORKS
O SB P.I. 201+50.36
Δ = 30°-03'-23" LT
D = 20°-00'
R = 286.48
T = 76.91
L = 150.28
E = 10.15'
O SB P.C. 200+73.45
O SB P.T. 202+23.73
BM. 9 ELEV. 855.47
R/R. SPK. IN PP
STA. 98+90 RT. 82'
BM 10 ELEV. 859.07
TOP HYD. S.E. COR.
ER/O SB STA. 103+93 RT 61'
BM 11 ELEV. 858.44
R/R SPK. PP
STA. 106+55 RT 82'
DENOTES PED. RAMP LOCATIONS
PROFILE GRADE
N.B. PROFILE GRADE
S.B. PROFILE GRADE
N.B. 200' V.C.
M = 0.443'
S.B. 200' V.C.
M = 0.523'
100' V.C.
M = 0.078'
-0.60%
-0.83%
-0.99%
+0.94%
+1.10%
+0.32%
NOTE: ALL 12", 15" AND 21" R.C.P. IS DESIGN 3006
15" X 139' RCP SEWER CL. III, 1.30%
15" X 139' RCP SEWER CL. III, 1.40%
15" X 35' R.C.P. SEWER CL. III, 2.0%
21" X 51' R.C.P. SEWER CL. II, 1.4%
21" X 11' R.C.P. SEWER CL. II, 2.0%
21" X 55' R.C.P. SEWER CL. II, 2.0%
15" X 91' R.C.P. SEWER CL. III 1.80%
15" X 53' R.C.P. SEWER CL. III, 1.80%
15" R.C.P. INP., 1.44%
15" X 83' R.C.P. SEWER CL. III 0.80%
15" X 107' R.C.P. SEWER CL. II 0.80%
12" X 24' R.C.P. SEWER CL. III, 1.0%
15" CMP INP.
12" X 38' R.C.P. SEWER CL. II, 1.0%
15" X 44' R.C.P. SEWER CL. II 0.50%
12" X 25' R.C.P. SEWER 1.0%
12" X 34' R.C.P. SEWER CL. II 1.0%
12" X 15' R.C.P. SEWER CL. II, 1.0%
15" R.C.P. 0.74% INP.
15" X 43' R.C.P. SEWER CL. II 0.74%
15" X 73' R.C.P. CL. II 0.60%
15" X 80' R.C.P. SEWER CL. III 0.60%
15" X 30' R.C.P. SEWER CL. II 0.74%
12" X 11' R.C.P. SEWER CL. II, 1.0%
12" X 14' R.C.P. SEWER CL. III, 1.0%
12" X 37' R.C.P. SEWER CL. III, 1.0%
12" X 6' R.C.P. SEWER CL. III, 1.0%
INV. 829.00
RECORD COPY 3-21-89

BM. 12 ELEV. 861.99
DBL. SPK. IN P.P.
STA. 111+50 LT. 37'

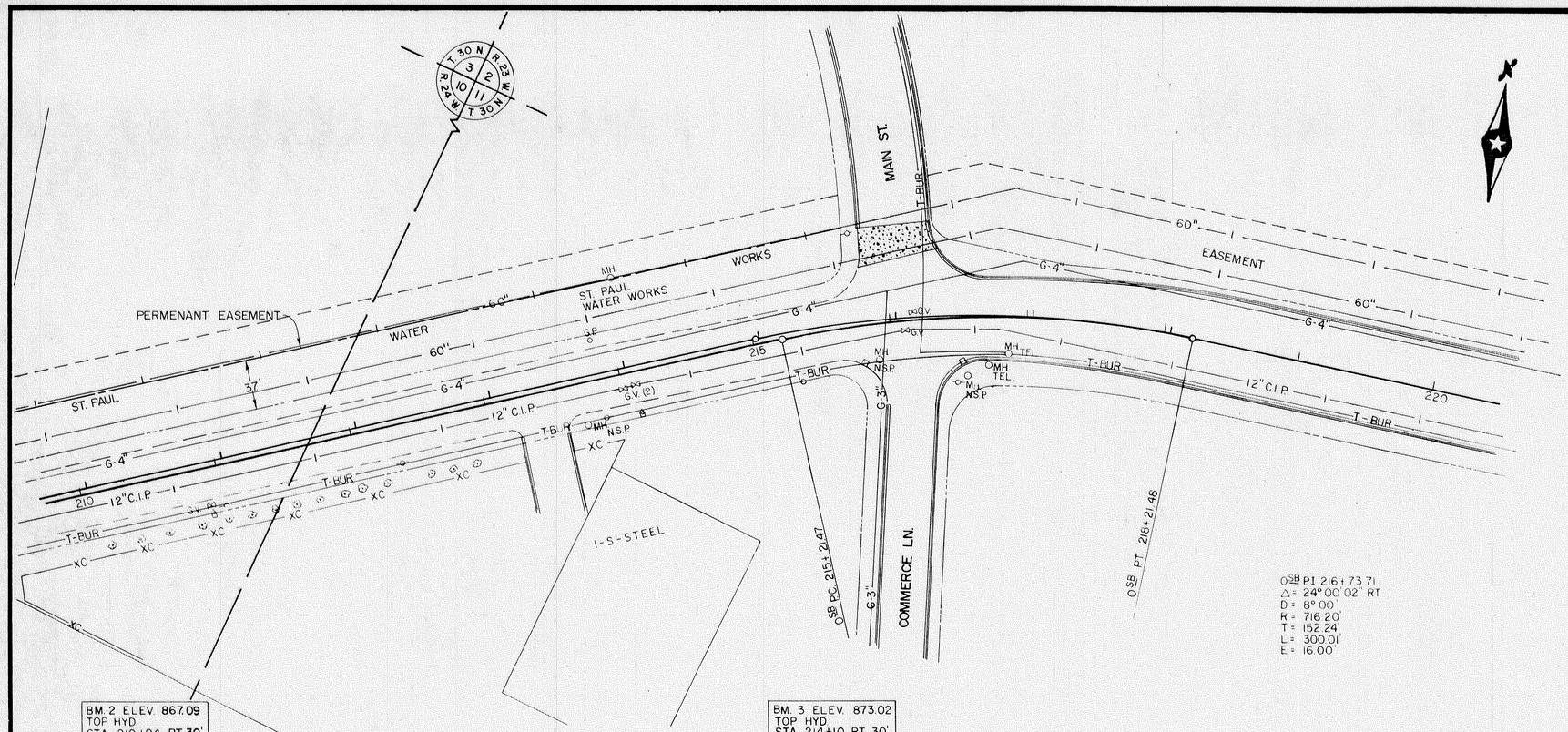
P.I. 118+84.01
Δ = 12°49' LT
D = 1°45'
R = 3,274.04'
T = 367.72'
L = 732.38'
E = 20.59'

SURVEY ALIGNMENT
S.B. ALIGNMENT
N.B. ALIGNMENT
RICKARD RD.
CRAIG WAY
CRAIG WAY N.E.
STONYBROOK WAY
77TH WAY N.E.
P.C. 115+15.79
P.T. 122+48.17
+95 END CONC. C&G.
+85 END CONC. C&G.
END PROJECT SP 02-601-33
POC. STA. 118+95
30:1 TAPER
20' N.S.P. UTILITY EASEMENT
10' UTILITY & DRAINAGE EASEMENT
⚠ DENOTES PED. RAMP
+25 PVR
+25 PVI
PVI 860.38
+032%
-024%
100' VC
M=0.074'

State Proj. No. 02-601-33 **Sheet No.** 14 **of** 58 **Sheets**



State Proj. No. 02-608-07 OSB **Sheet No.** 15 **of** 58 **Sheets**



R/W PLAN

870.00
865.00
860.00

862.84 863.28 863.61 864.05 +21 864.24 +36 864.30 864.66 865.47 +85 866.21 +92 866.29 +32 866.67 +47 866.67 +88 866.99 867.11 +50 867.52 867.97

210 215 220

State Proj. No. 02-608-07 O SB **Sheet No.** 16 **of** 58 **Sheets**

State Proj. No. 02-601-33 E.R.R. ALIGN. **Sheet No.** 17 **of** 58 **Sheets**

R/W PLAN

E RR PI. 100+00
Δ = 30° 13'
D = 7° 00'
R = 818.51'
T = 220.98'
L = 431.67'
E = 29.31'

E RR P.C. 97+79.02

E RR P.T. 102+10.69

OSB POT 200+32.09 = E RR POT 104+76.35

BM. 12 ELEV. 861.99
DBL. SPK. IN P.P.
STA. 111+50 LT. 37'

L OR ALIGN.

S.B. ALIGN.

N.B. ALIGN.

E.B. ALIGN.

W.B. ALIGN.

OSB PC. 200+73.45

OSB PT 202+23.73

OSB PI 201+50.36
Δ = 30°-03'-23" LT
D = 20°-00'
R = 286.48'
T = 76.91
L = 150.28'
E = 10.15'

PARCEL 7
PARCEL 8
PARCEL 9
PARCEL 10
PARCEL 11
PARCEL 12
PARCEL 13
PARCEL 14
PARCEL 15
PARCEL 16
PARCEL 24
PARCEL 25
PARCEL 26
PARCEL 27
PARCEL 28
PARCEL 29
PARCEL 30
PARCEL 31
PARCEL 32
PARCEL 35
PARCEL 37

WOODS & BRUSH
ROCK GARDEN
PINE SEEDLINGS
SURVEY ℄
RICKARD RD.
TALMAGE WAY
ST. PAUL WATER WORKS
75 ft. R/W-NE
EASEMENT
CONTROL BOX
GUARD POST (2)
ABANDON TELEPHONE CABLE
ABANDON TEL. CABLE
SPEAKERS 2 ROWS
I-S-STEEL

BM. 9 ELEV. 855.47
R/R. SPK. IN P.P.
STA. 98+90 RT. 82'

BM. 10 ELEV. 859.07
TOP HYD. S.E. COR
E RR/OSB STA. 103+93 RT. 61'

BM. 11 ELEV. 858.44
R/R SPK. PP
STA. 106+55 RT. 82'

865.00
860.00
855.00
850.00

H.18 85535
+73 85429
+53 85398
+77 85402
+73 85433
+80 85497
+21 85456
+27 85444
+67 85525
+38 85590
+70 85601
+25 85644
+25 85643
+48 85584
+86 858.15
+93 85623
+06 85638
+33 85797
+54 85882
+12 85936
+86 85989
+30 86015
+77 86045
+17 86061
+52 86075
+81 86080
86086
+78 86080

100 105 110

R/W PLAN

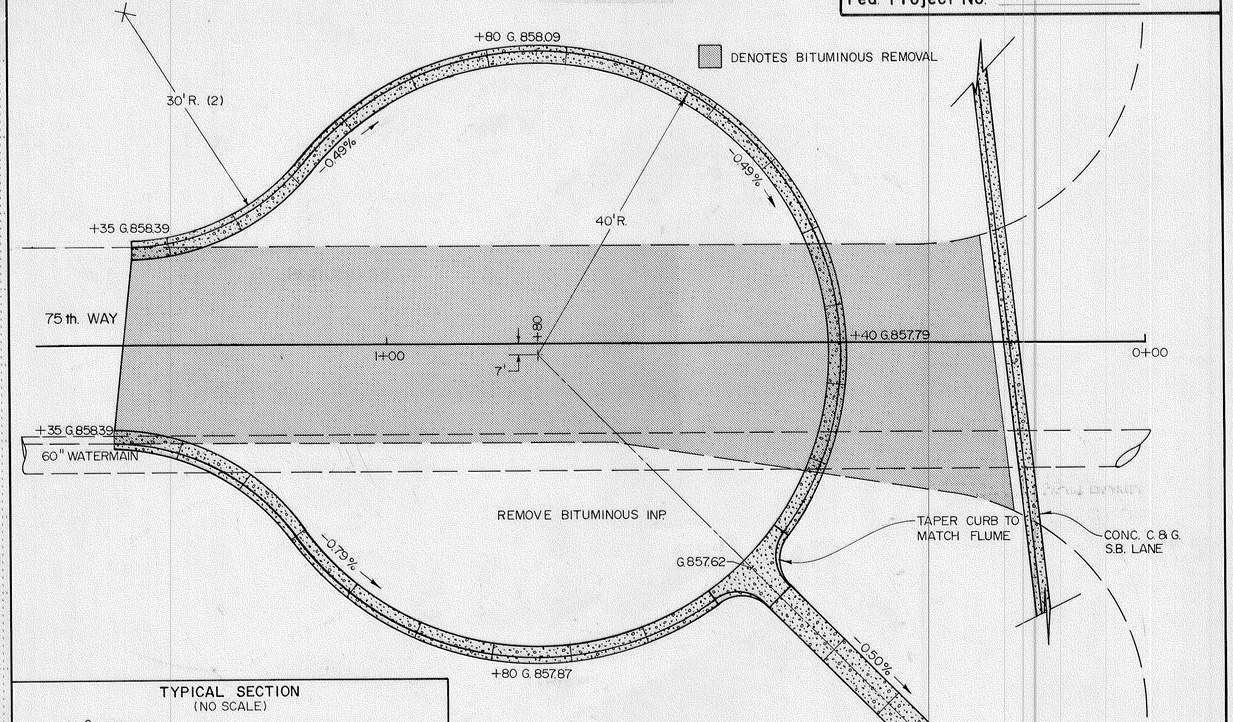
State Proj. No. 02-601-33 E^RR ALIGN **Sheet No.** 19 **of** 58 **Sheets**

	EXCAVATION SUB-TOTALS CU.YDS.	EMBANKMENT CU.YDS. SUB-TOTALS
1+40 858.67		
	1	0
1+20 858.64		
	14	0
1+04 858.58		
	45	0
0+80 858.54		
	45	0
0+64 858.46		
	41	0
0+40 858.26		
	10	0
0+20 858.03		

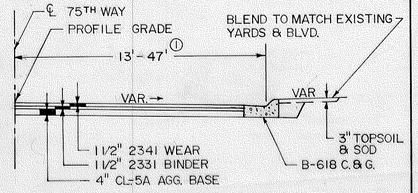
T. CURB 858.29 — -0.49% → — GUTTER 857.79

PLAN VIEW

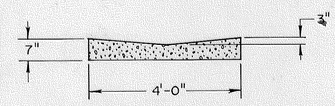
Fed. Project No. _____



TYPICAL SECTION
(NO SCALE)

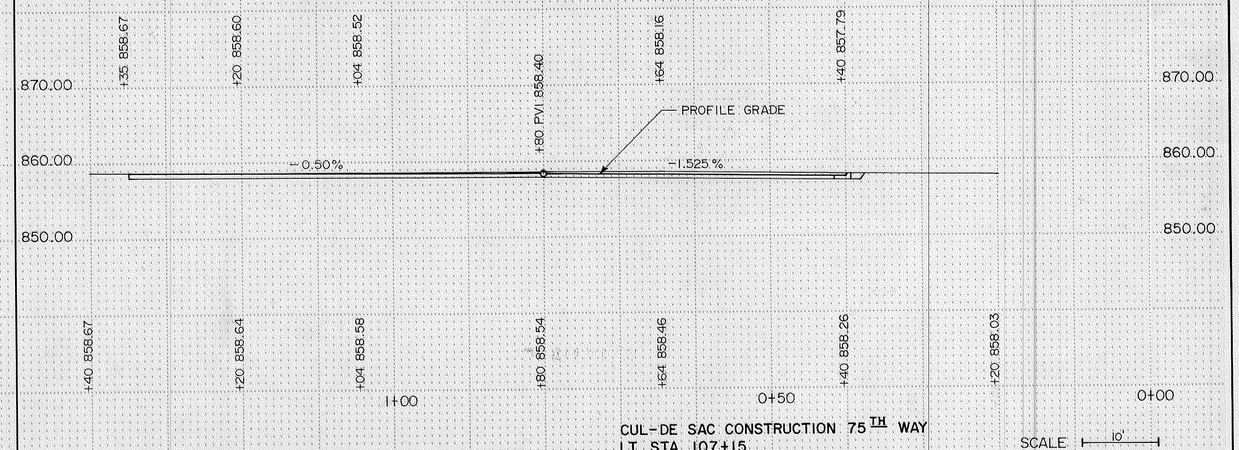


① SEE PLAN VIEW FOR WIDTHS



SECTION A-A

PROFILE VIEW



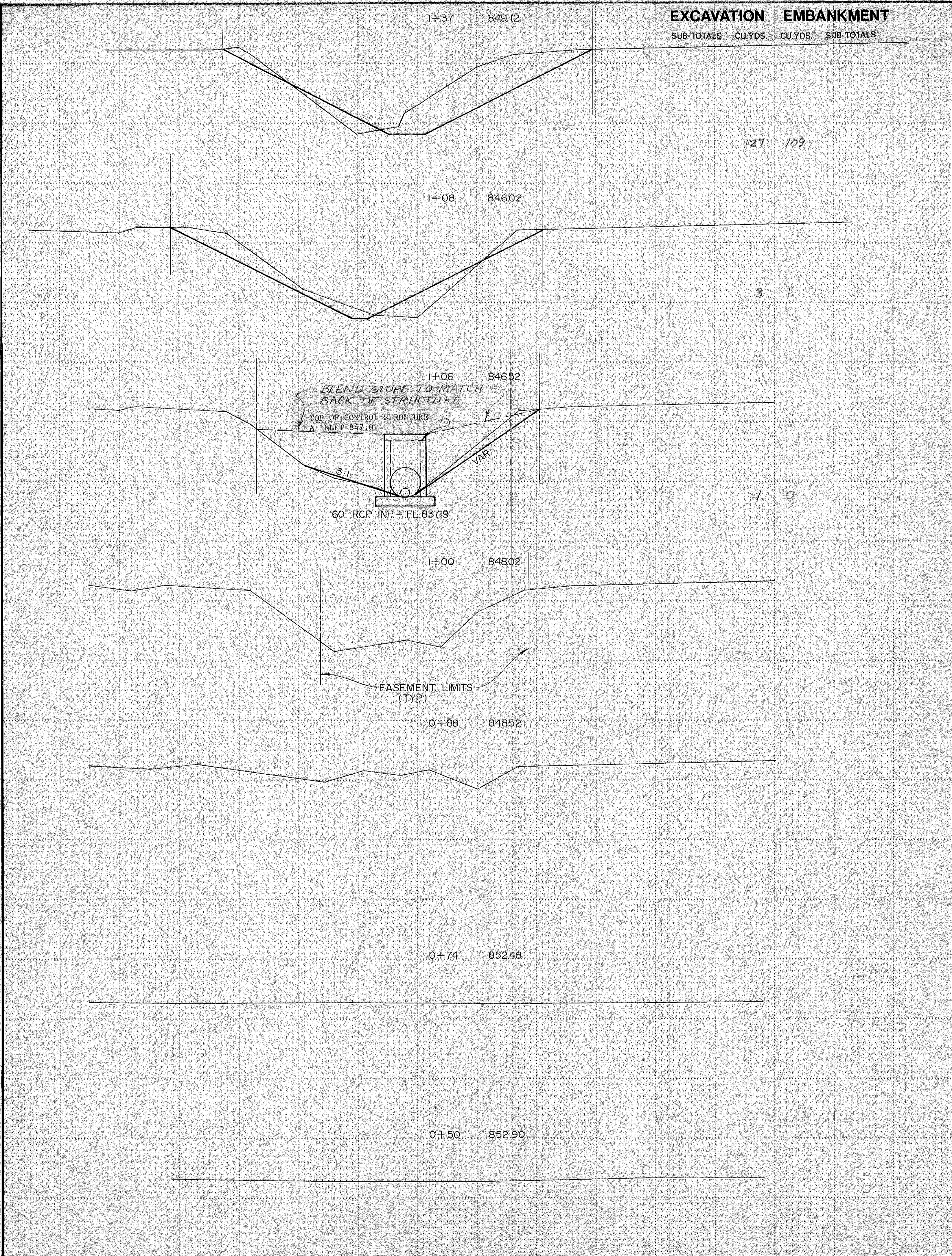
CUL-DE SAC CONSTRUCTION 75TH WAY
LT. STA. 107+15

SCALE 10'

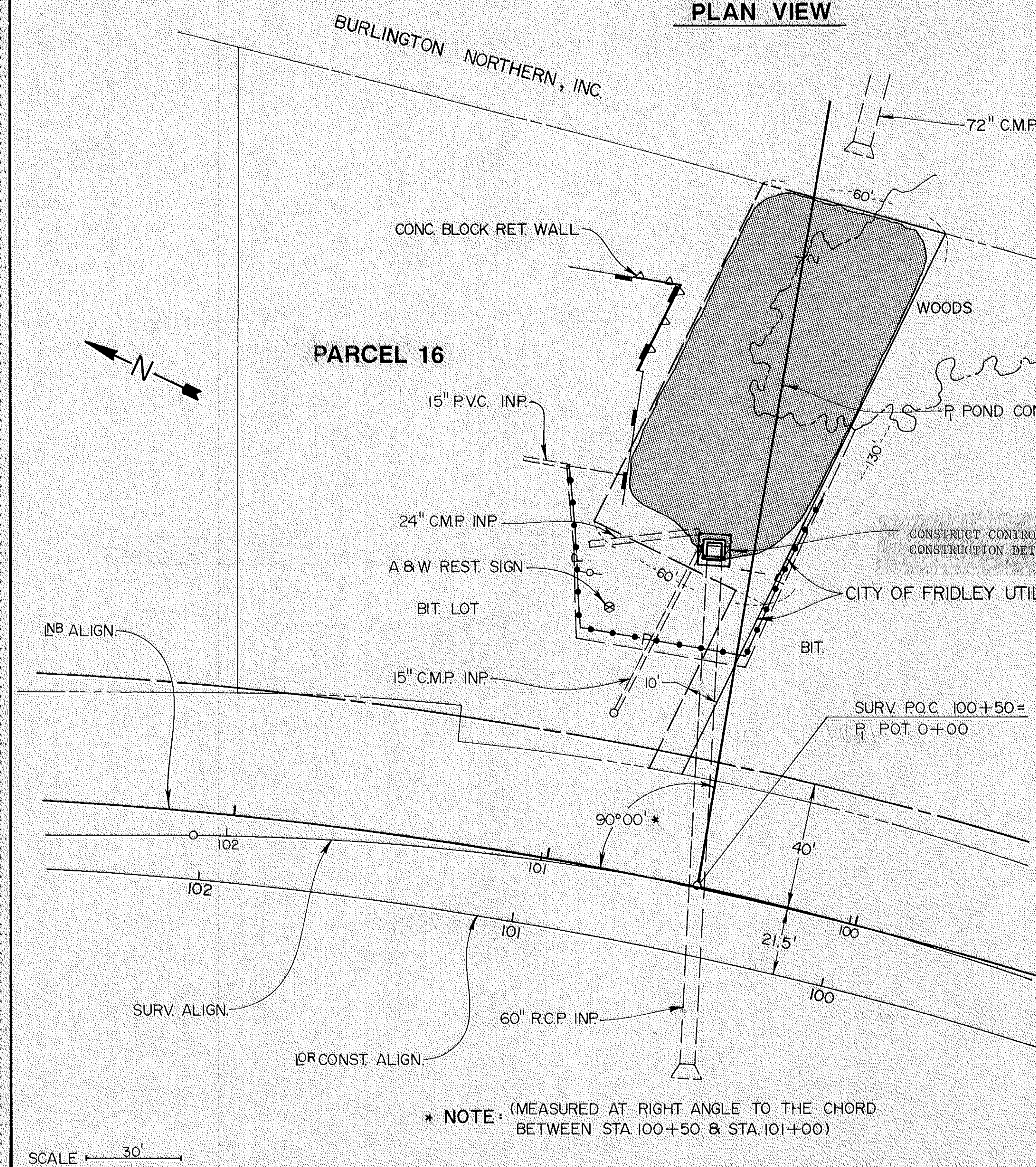
REVISIONS			
DATE	BY	DATE	BY

S.A.P. S.P 02-601-33C.P

Sheet No. 20 of 58 Sheets



EXCAVATION
EMBANKMENT
SUB-TOTALS
CU.YDS.
CU.YDS.
SUB-TOTALS
1+37 849.12
127 109
1+08 846.02
3 1
1+06 846.52
BLEND SLOPE TO MATCH BACK OF STRUCTURE
TOP OF CONTROL STRUCTURE A INLET 847.0
3:1
VAR.
60" RCP INP. - FL. 837.19
1 0
1+00 848.02
EASEMENT LIMITS (TYP.)
0+88 848.52
0+74 852.48
0+50 852.90

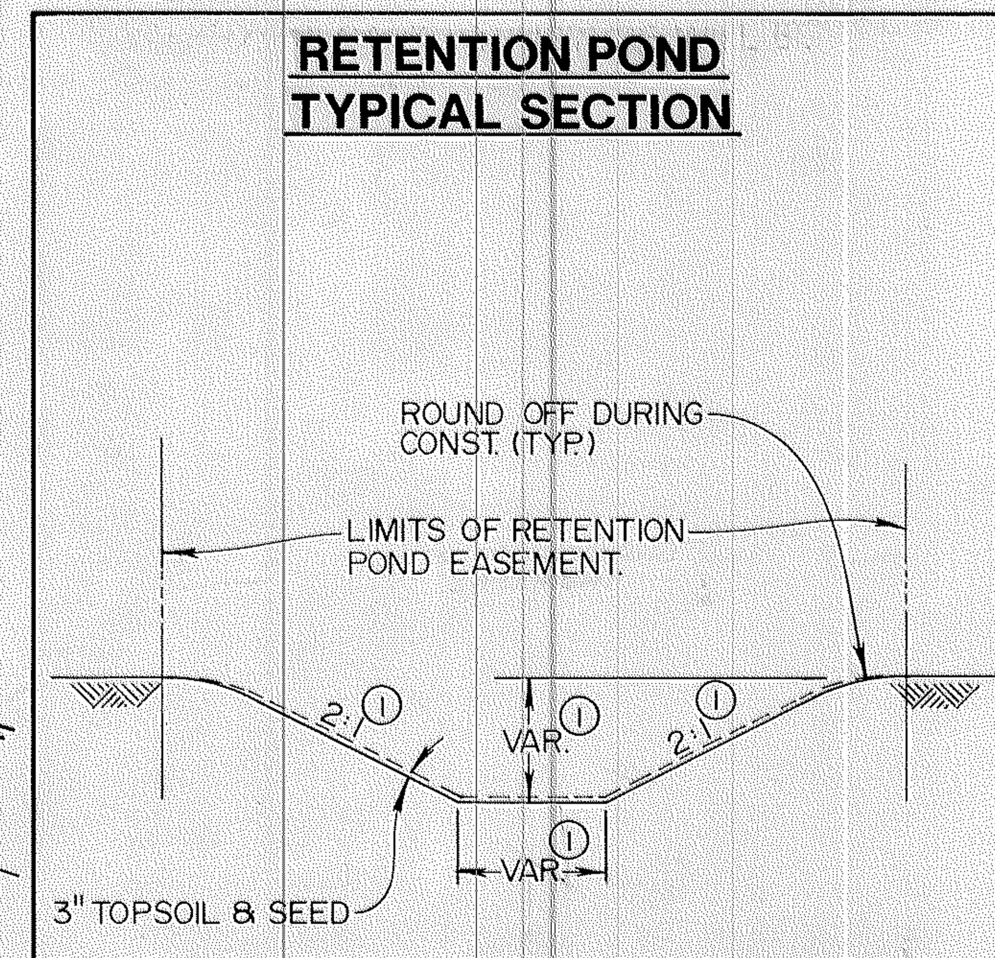


PLAN VIEW
BURLINGTON NORTHERN, INC.
72" C.M.P. INP.
60'
CONC. BLOCK RET. WALL
WOODS
PARCEL 16
N
15" P.V.C. INP.
℄ POND CONST. ALIGN.
130'
24" C.M.P. INP.
CONSTRUCT CONTROL STRUCTURE A - SEE DETAIL SHEET FOR CONSTRUCTION DETAILS (SHEET #22)
A & W REST. SIGN
60'
CITY OF FRIDLEY UTILITY EASEMENT
BIT. LOT
BIT.
℄NB ALIGN.
15" C.M.P. INP.
10'
SURV. P.O.C. 100+50= ℄ P.O.T. 0+00
90°00' *
40'
102
101
102
101
21.5'
100
100
SURV. ALIGN.
60" R.C.P. INP.
℄SB CONST. ALIGN.
* NOTE: (MEASURED AT RIGHT ANGLE TO THE CHORD BETWEEN STA. 100+50 & STA. 101+00)
SCALE 30'

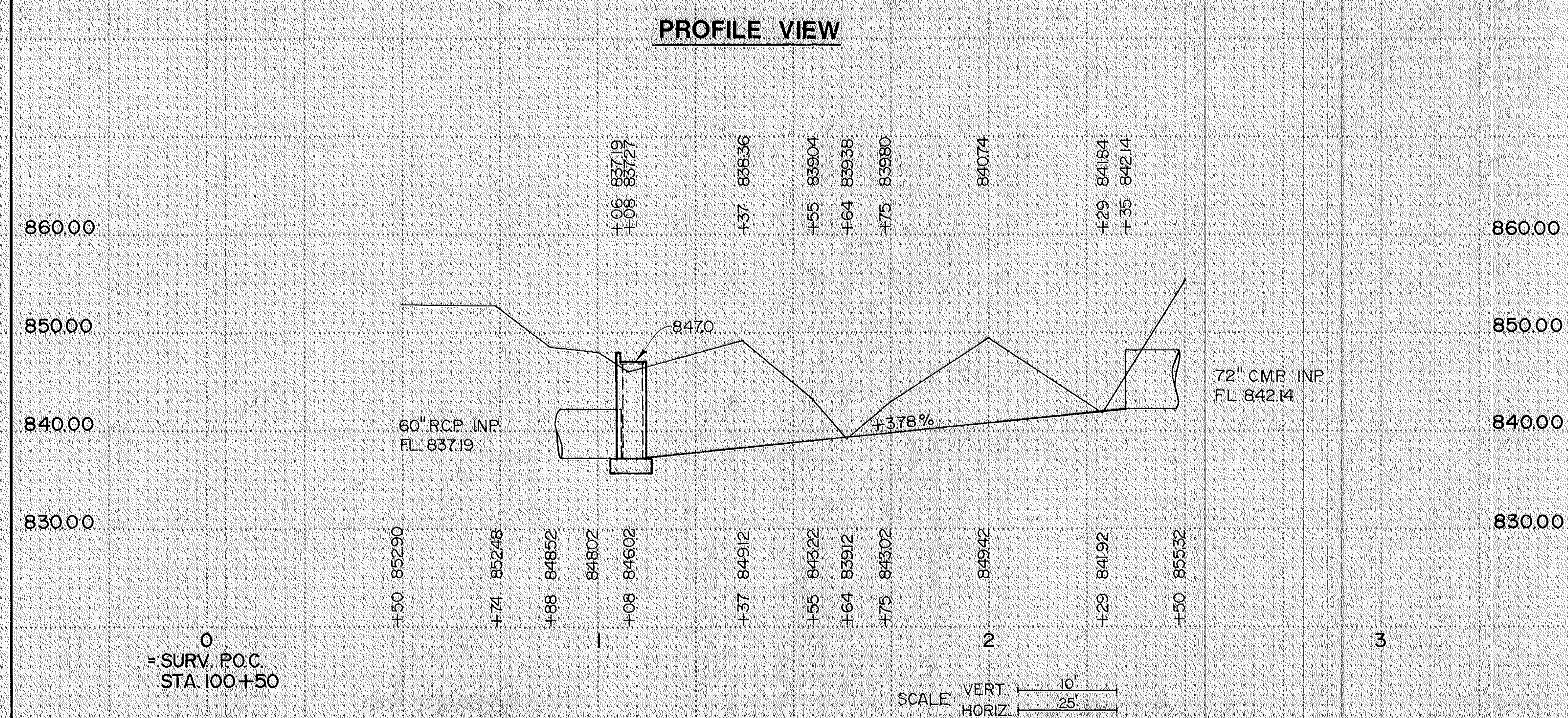
Fed. Project No. ______

DENOTES AREA & APPROX. LIMITS OF RETENTION POND CONST.

CLEAR & GRUB 0.10 ACRES



① SEE X-SECTION SHEETS & PROFILE FOR MODIFIED DITCHES, SLOPES & DITCH BOTTOMS.



PROFILE VIEW
+06 837.19
+08 837.27
+37 838.36
+55 839.04
+64 839.38
+75 839.80
840.74
+29 841.84
+35 842.14
860.00
850.00
840.00
830.00
847.0
+3.78%
60" R.C.P. INP. F.L. 837.19
72" C.M.P. INP. F.L. 842.14
+50 852.90
+74 852.48
+88 848.52
848.02
+08 846.02
+37 849.12
+55 843.22
+64 839.12
+75 843.02
849.42
+29 841.92
+50 855.32
0
1
2
3
= SURV. P.O.C. STA. 100+50
SCALE: VERT. 10' HORIZ. 25'

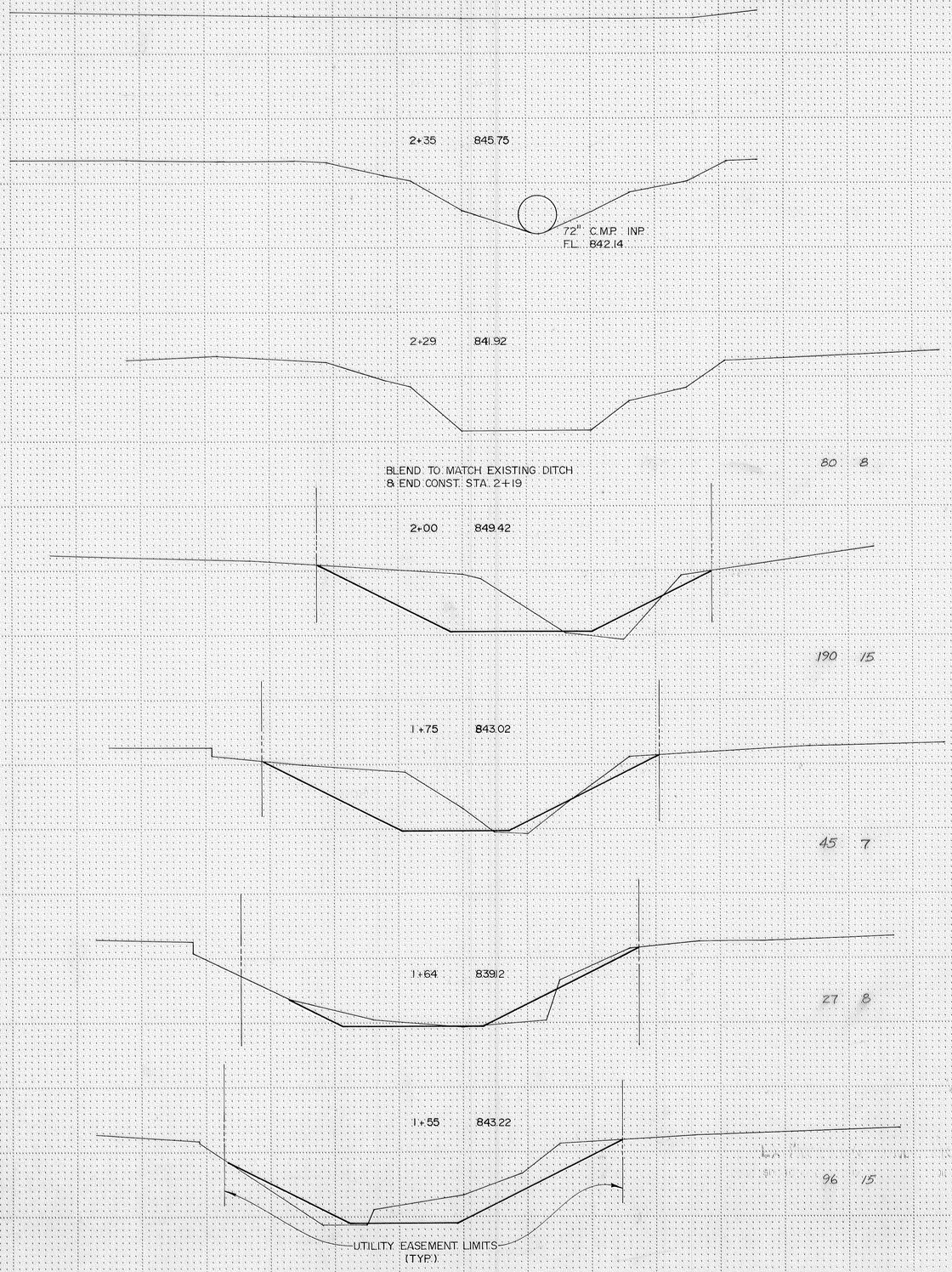
REVISIONS			
DATE	BY	DATE	BY

RETENTION POND CONSTRUCTION DETAILS

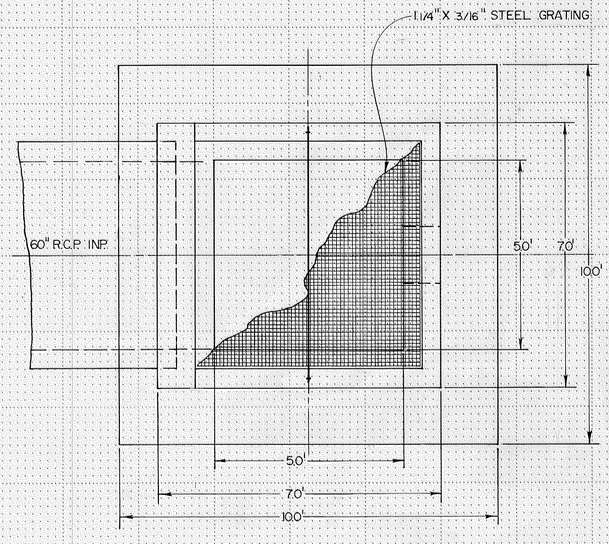
S.A.P. ______ S.P. 02-601-33 C.P. ______

Sheet No. 21 of 58 Sheets

	EXCAVATION SUB-TOTALS	EXCAVATION CU.YDS.	EMBANKMENT CU.YDS.	EMBANKMENT SUB-TOTALS
2+50		855.32		
2+35		845.75		
			80	8
2+29		841.92		
			190	15
2+00		849.42		
			45	7
1+75		843.02		
			27	8
1+64		839.12		
			96	15
1+55		843.22		



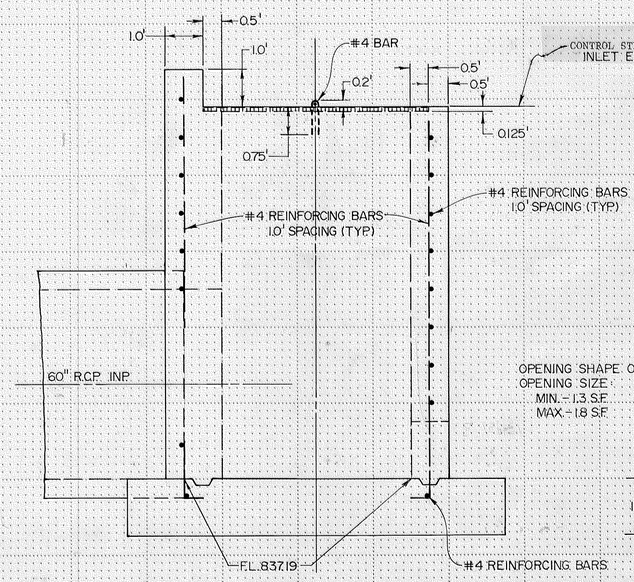
CONTROL STRUCTURE A CONSTRUCTION DETAILS



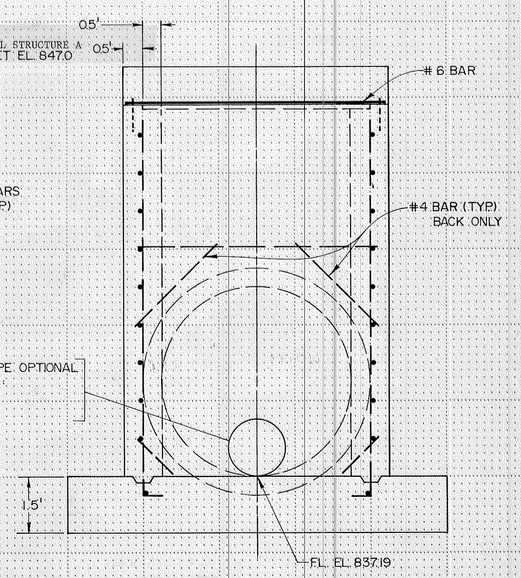
TOP VIEW

NOTE: REINFORCEMENT BARS WILL BE CONSIDERED AS INCIDENTAL TO STRUCTURE CONST. & NO ADDITIONAL COMPENSATION WILL BE MADE.

AN EQUIVALENT PRECAST STRUCTURE WILL BE CONSIDERED ACCEPTABLE.



SIDE ELEVATION

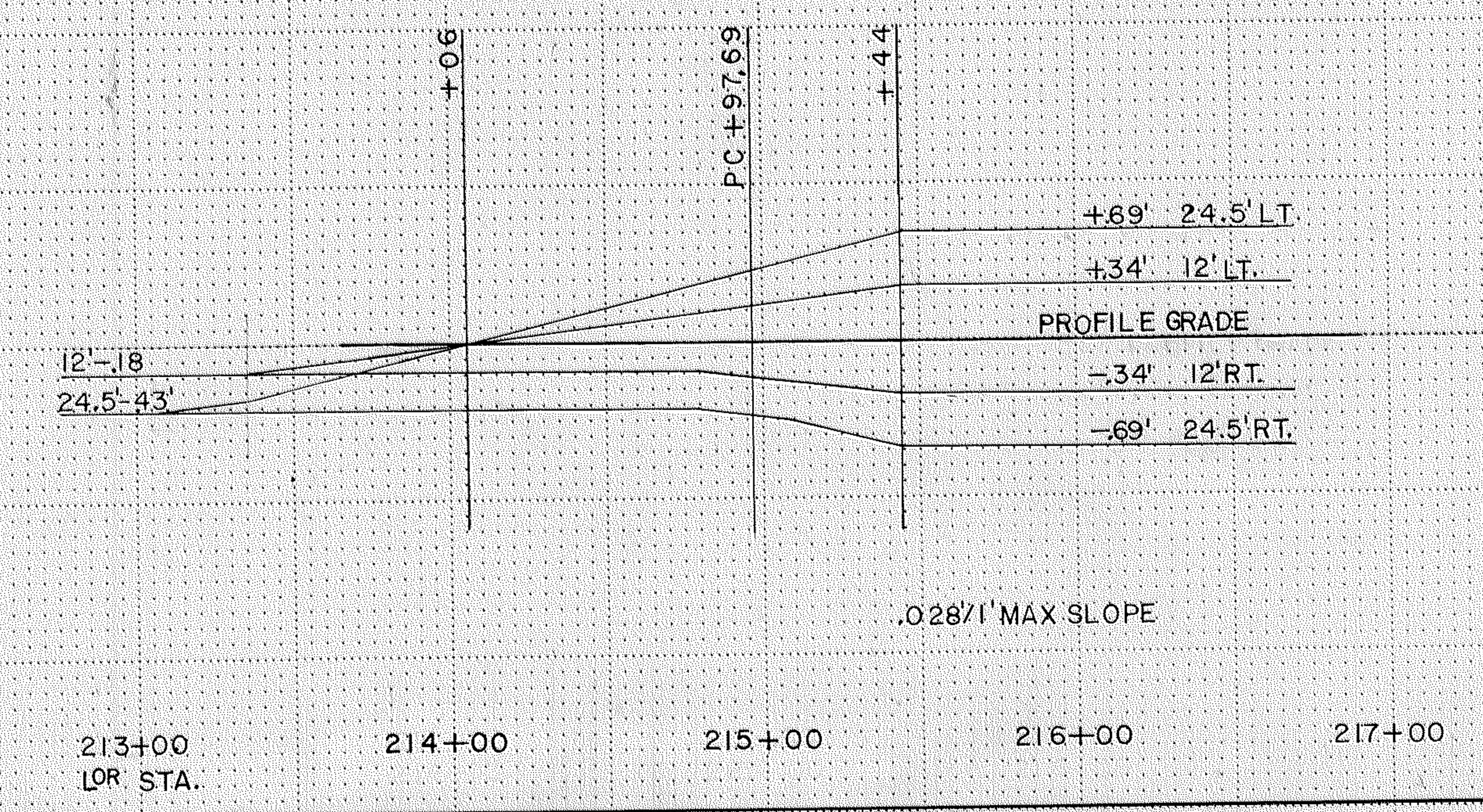


FRONT ELEVATION

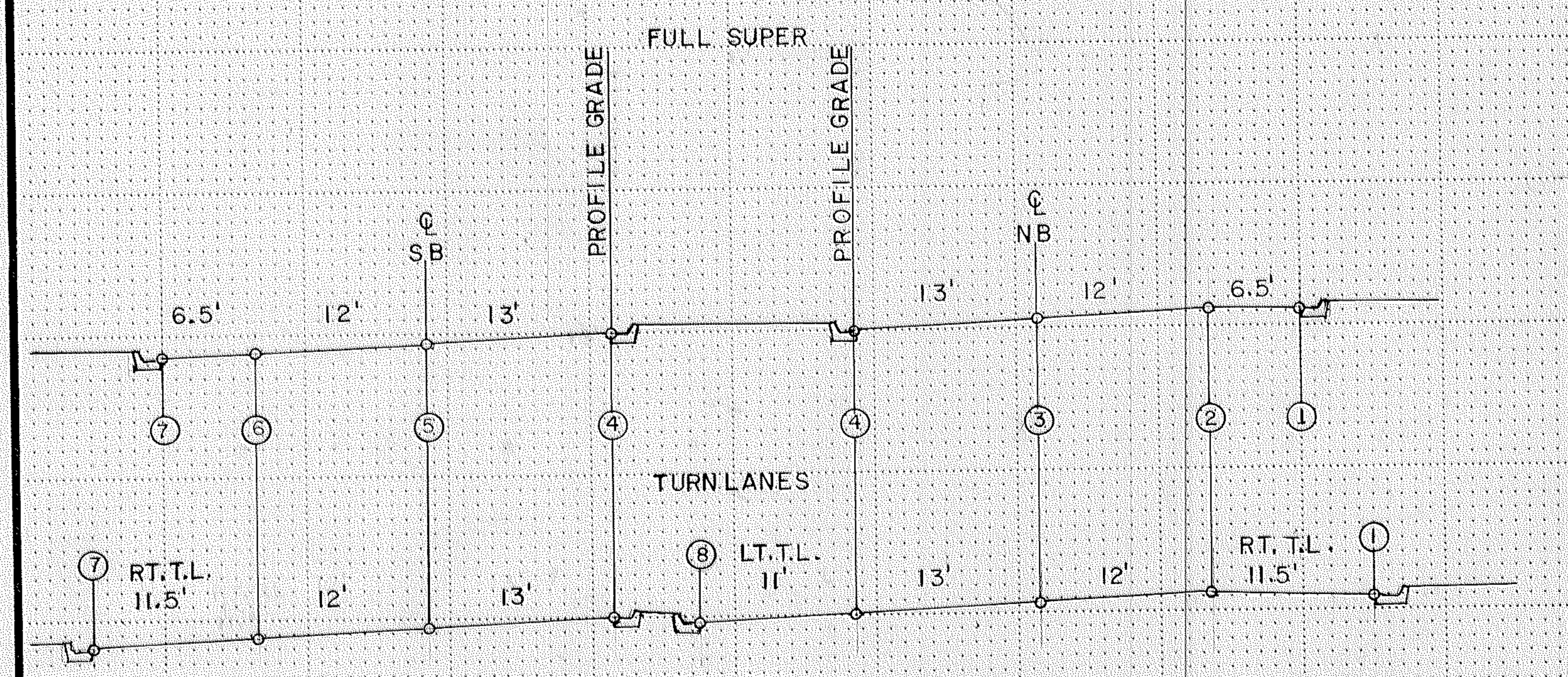
RETENTION POND CONSTRUCTION DETAILS

State Proj. No. S. P. 02 - 601 - 33 **Sheet No.** 22 **of** 58 **Sheets**

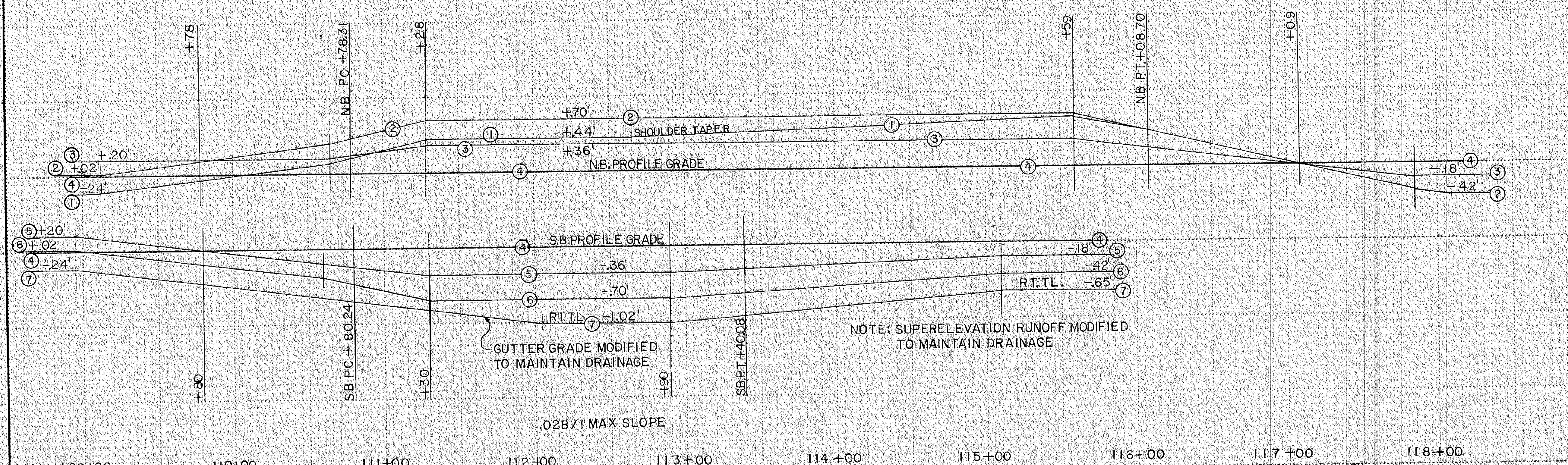
S.P. 02-608-07

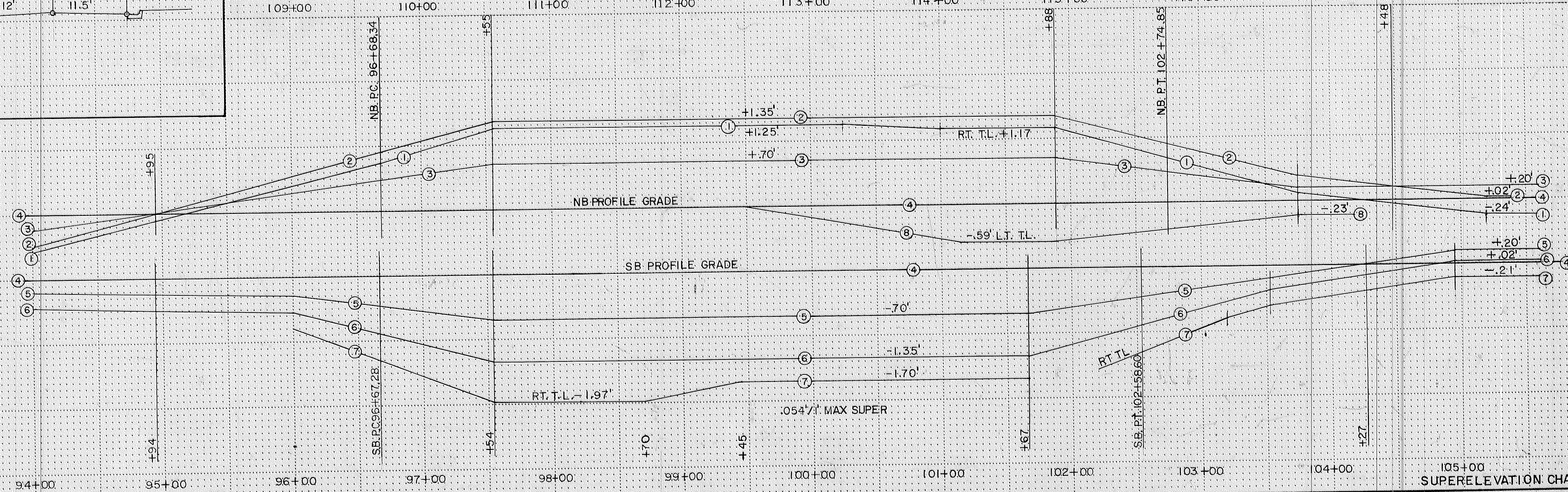


TYPICAL SECTION IN SUPERELEVATION



S.P. 02-601-33





SUPERELEVATION CHART

State Proj. No. 02-601-33 & 02-608-07 **Sheet No.** 23 **of** 58 **Sheets**

State Proj. No. S.P 02-608-07 OSBORNE RD. Sheet No. 24 of 58 Sheets

State Proj. No. S.P. 02-608-07 OSBORNE RD. **Sheet No.** 25 **of** 58 **Sheets**

EXCAVATION		EMBANKMENT	
SUB TOTALS	CU. YDS.	CU. YDS.	SUB TOTALS
	11	13 TS 9	
	35	28 TS 22	
	96	26 TS 22	
	48	19 TS 28	

EXCAVATION		EMBANKMENT	
SUB TOTALS	CU. YDS.	CU. YDS.	SUB TOTALS

STA. 213+00 TO STA. 218+00

State Proj. No. S.P. 02-608-07 OSBORNE RD. **Sheet No.** 26 **of** 58 **Sheets**

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

91+65 858.94 R/W R/W

BEGIN C.& G. CONST. STA. 91+50

90+72 859.70

90+62 859.79 N. GUTTER LOGAN A. LT. 10' BIT. ENT. RT.

90+32 860.00 S. GUTTER LOGAN A.

90+26 860.08

90+00 860.29 R/W R/W

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

93+77 857.28 ℄ CHENSEY WAY

93+62 857.39 R/W R/W N.B.L.

21 0 TS 3

93+43 857.51 ℄ 12' BIT. ENT. RT.

93+15 857.75

23 0 TS 4

92+55 858.19 ℄ 16' BIT. ENT. RT.

92+36 858.34 N.B.L. R/W

19 0 TS 4

STA. 90+00 TO STA. 93+77

State Proj. No. S.P. 02-601-33 **Sheet No.** 27 **of** 58 **Sheets**

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

95+38 856.51
SQ. GUTTER GLEN CREEK RD.

95+35 856.53

95+00 856.61

123 14
SUBCUT 95 TS 10

190 36
SUBCUT 154 TS 24

94+89 856.88
℄ 10' BIT. ENT. RT.

94+40 857.00

126 19
SUBCUT 98 TS 14

94+10 857.13
℄ 12' BIT. ENT. RT.

94+00 857.7

LNB LSB

94+00 BEGIN COMPACTION SUBCUT

69 11
SUBCUT 46 TS 8

98+18 855.35

97+79 855.55 ℄ 32' BIT. ENT. RT.

97+22 855.81
℄ 12' SAND ENT LT.

97+00 855.89

96+53 856.03

96+20 856.22

95+99 856.30
℄ 12' BIT ENT RT.

95+81 856.35

95+78 856.36
NO. GUTTER GLEN CREEK RD.

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

346 0
SUBCUT 116 TS 9

582 0
SUBCUT 237 TS 22

268 0
SUBCUT 140 TS 12

165 0
SUBCUT 101 TS 7

180 0
SUBCUT 115 TS 7

194 0
SUBCUT 128 TS 8

STA. 94+00 TO STA. 98+18

State Proj. No. S.P 02-601-33 **Sheet No.** 28 **of** 58 **Sheets**

EXCAVATION EMBANKMENT

Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals

State Proj. No.	S.P 02-601-33	Sheet No. 29 of 58 Sheets

State Proj. No. S.P. 02-601-33 **Sheet No.** 30 **of** 58 **Sheets**

EXCAVATION	EMBANKMENT		EXCAVATION	EMBANKMENT
Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals	

State Proj. No. S.P. 02-601-33 **Sheet No.** 31 **of** 58 **Sheets**

EXCAVATION EMBANKMENT
Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals
EXCAVATION EMBANKMENT
Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals
114+35 860.37
610 0
SUB CUT 413 TS 13
114+02 860.72 ℄ 16' SAND ENT. LT.
113+91 860.75 ℄ 10' SAND ENT. RT.
113+00 860.84
LNB
LSB
386 0
SUB CUT 252 TS 19
112+84 860.85 ℄ 10' BIT. ENT. RT.
112+65 860.90
115+89 860.34 ℄ 11' BIT. ENT. RT.
115+69 860.39 ℄ 10' BIT. ENT. RT.
℄ 12' BIT. ENT. LT. 115+38 860.47
115+00 860.59
286 0
SUB CUT 188 TS 16
114+74 860.62 ℄ 12' SAND ENT. RT.
STA. 112+65 TO STA. 115+89

EXCAVATION EMBANKMENT

Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

EXCAVATION EMBANKMENT

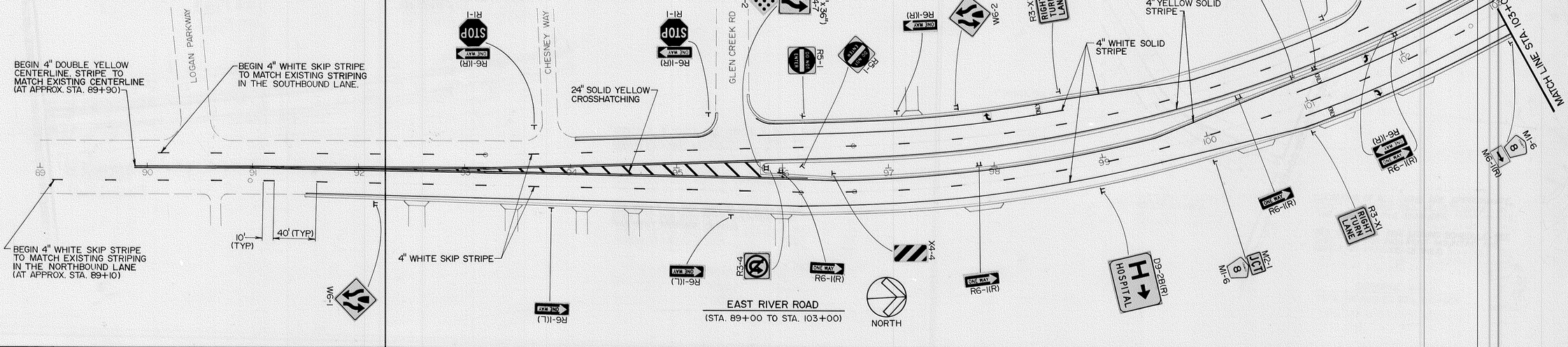
Sub-Totals Cu. Yds. Cu. Yds. Sub-Totals

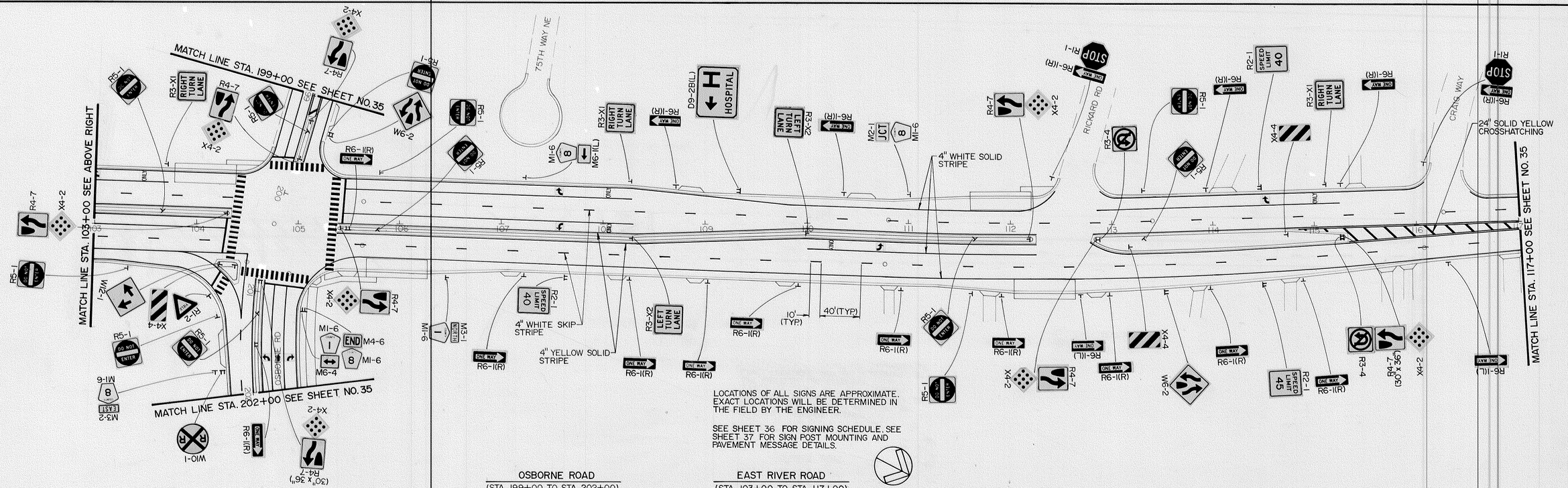
STA. 116+00 TO STA. 120+13

State Proj. No. S.P. 02-601-33 Sheet No. 33 of 58 Sheets

LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

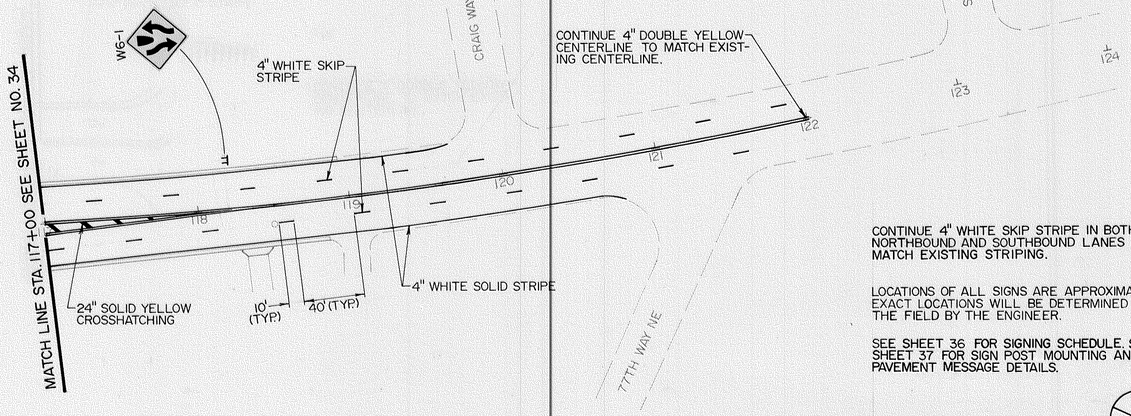
SEE SHEET 36 FOR SIGNING SCHEDULE. SEE SHEET 37 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.





LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

SEE SHEET 36 FOR SIGNING SCHEDULE. SEE SHEET 37 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.



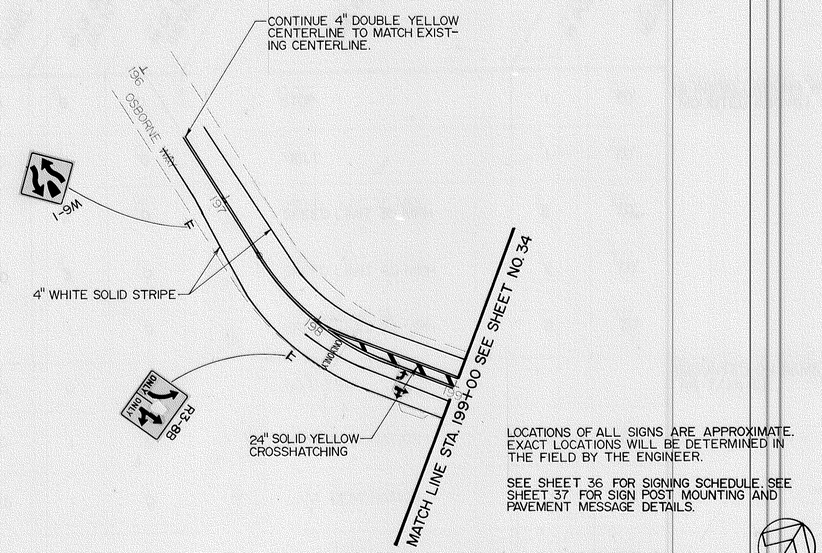
CONTINUE 4" WHITE SKIP STRIPE IN BOTH THE NORTHBOUND AND SOUTHBOUND LANES TO MATCH EXISTING STRIPING.

LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

SEE SHEET 36 FOR SIGNING SCHEDULE. SEE SHEET 37 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.

EAST RIVER ROAD
(STA. 117+00 TO STA. 124+00)

NORTH

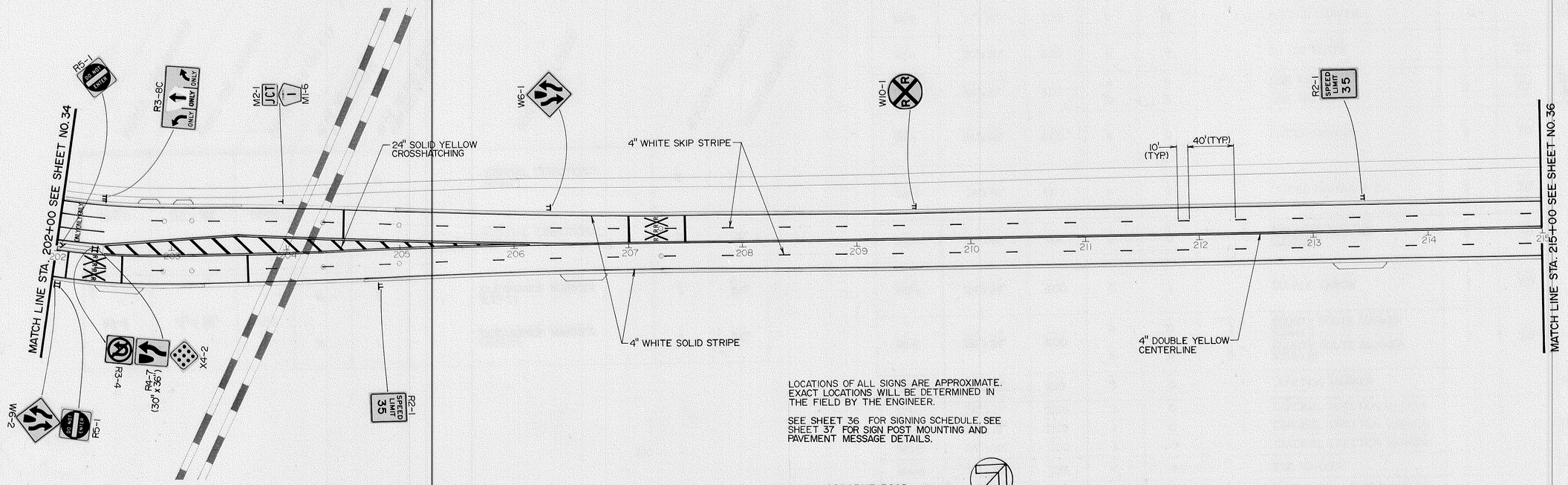


LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

SEE SHEET 36 FOR SIGNING SCHEDULE. SEE SHEET 37 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.

OSBORNE WAY
(STA. 196+00 TO STA. 199+00)

NORTH

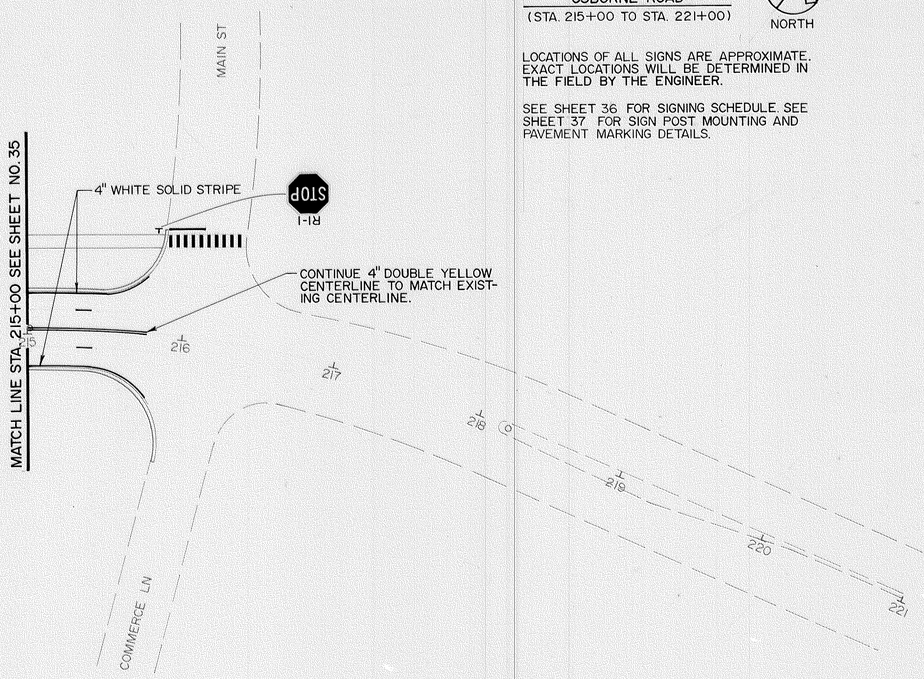


LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

SEE SHEET 36 FOR SIGNING SCHEDULE. SEE SHEET 37 FOR SIGN POST MOUNTING AND PAVEMENT MESSAGE DETAILS.

OSBORNE ROAD
(STA. 202+00 TO STA. 215+00)

NORTH



OSBORNE ROAD
(STA. 215+00 TO STA. 221+00)

NORTH

LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

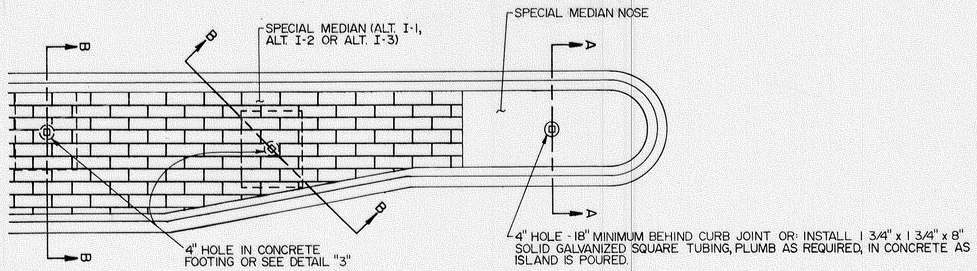
SEE SHEET 36 FOR SIGNING SCHEDULE. SEE SHEET 37 FOR SIGN POST MOUNTING AND PAVEMENT MARKING DETAILS.

M.U.T.C.D. CODE NUMBER	PANEL SIZE (INCHES)	PANEL AREA (SQ. FT.)	# OF GROUND POST MOUNT INSTALLATIONS	# OF ISLAND MOUNT INSTALLATIONS	SIGN PANEL LEGEND	# POSTS / INSTALLATION	MOUNTING HEIGHT
D9-2B	60"x 48"	20.00	1	0	HOSPITAL DIRECTIONAL (RIGHT)	2	7.0'
			1	0	HOSPITAL DIRECTIONAL (LEFT)	2	7.0'
X4-4	12" x 36"	3.00	0	3	CLEARANCE MARKER (LEFT)	1	5.0'
			0	1	CLEARANCE MARKER (RIGHT)	1	5.0'

M.U.T.C.D. CODE NUMBER	PANEL SIZE (INCHES)	PANEL AREA (SQ. FT.)	# OF GROUND POST MOUNT INSTALLATIONS	# OF ISLAND MOUNT INSTALLATIONS	SIGN PANEL LEGEND	# POSTS/INSTALLATION	MOUNTING HEIGHT	
R1-1	30" x 30"	6.25	6	0	STOP	1	7.0'	(5 INSTALLATIONS WITH R6-1(R) MOUNTED ABOVE)
R1-2	36"x 36" x 36"	3.90	1	0	YIELD	1	7.0'	
R2-1	36" x 48"	12.00	2	0	SPEED LIMIT 35 MPH	2	7.0'	
			3	0	SPEED LIMIT 40 MPH	2	7.0'	
			1	0	SPEED LIMIT 45 MPH	2	7.0'	
R3-4	24" x 24"	4.00	0	4	NO U-TURN			(MOUNTED ON SAME POST(S) AS R4-7/X4-2)
R3-8B	36"x 30"	7.50	1	0	LANE DESIGNATION	2	7.0'	
R3-8C	54"x 30"	11.25	1	0	LANE DESIGNATION	3	7.0'	
R3-X1	30"x 30"	6.25	5	0	RIGHT TURN LANE	1	7.0'	
R3-X2	30"x 30"	6.25	0	3	LEFT TURN LANE	1	7.0'	
R4-7	30"x36"	7.50	0	4	KEEP RIGHT	2	7.0'	
	24"x 30"	5.00	0	6		1	7.0'	
X4-2	18"x 18"	2.25	0	10	HAZARD MARKER			(MOUNTED BELOW R4-7)
R5-1	30"x 30"	6.25	8	8	DO NOT ENTER	1	7.0'	
R6-1	36"x 12"	3.00	4	0	ONE WAY (LEFT)	2	7.0'	(5 INSTALLATIONS OF R6-1(R) ARE MOUNTED ABOVE R1-1, 1 INSTALLATION OF BACK-TO BACK R6-1(R).)
			19	8	ONE WAY (RIGHT)			
W6-1	36"x 36"	9.00	4	0	DIVIDED HIGHWAY	2	7.0'	
W6-2	36"x 36"	9.00	4	0	DIVIDED HIGHWAY ENDS	2	7.0'	
W10-1	36" DIA.	7.06	2	0	RAILROAD ADVANCE WARNING	2	7.0'	
W12-1	24"x 24"	4.00	0	1	DOUBLE ARROW	1	5.0'	
M1-6	24" x 24"	4.00	4	0	COUNTY ROUTE MARKER (CSAH 1)	1	7.0'	
			6	0	COUNTY ROUTE MARKER (CSAH 8)			
M2-1	21" x 15"	2.19	3	0	JUNCTION MARKER			(MOUNTED ABOVE M1-6)
M3-1	24" x 12"	2.00	1	0	CARDINAL DIRECTION MARKER			
M3-2	24" x 12"	2.00	1	0	CARDINAL DIRECTION MARKER			(MOUNTED ABOVE M1-6)
M3-3	24" x 12"	2.00	1	0	CARDINAL DIRECTION MARKER			
M4-6	21" x 15"	2.19	1	0	END MARKER			(MOUNTED ABOVE M1-6)
M6-1	21" x 15"	2.19	1	0	DIRECTIONAL ARROW (RIGHT)		6.0' MIN.	
			1	0	DIRECTIONAL ARROW (LEFT)			(MOUNTED BELOW M1-6)
M6-4	21" x 15"	2.19	1	0	DIRECTIONAL ARROW (DBL. HD.)			

DETAIL "1"

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATION



NOTES: DASHED LINES REPRESENT THE APPROX. LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR EACH ISLAND MOUNT SIGN POST INSTALLATION WITHIN SPECIAL MEDIAN AREAS (ALT. I-1, ALT. I-2 OR ALT. I-3) (36" LENGTH x 48" WIDTH x 5" HEIGHT) IF THE ISLAND IS LESS THAN 48" WIDE, THE WIDTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND. IF MORE THAN ONE POST IS REQUIRED FOR AN INSTALLATION, SEE DETAIL "4."

SECTION B-B: THE SOLID GALVANIZED SQUARE TUBING FOR THE DO NOT ENTER SIGNS SHALL BE SET AT THE PROPER ANGLE. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

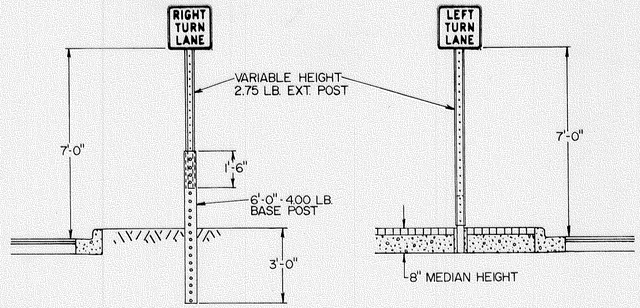
FOR PAYMENT OF CONCRETE FOOTINGS, REFER TO THE STATEMENT OF ESTIMATED QUANTITIES, ITEM 2564.513 CONCRETE FOOTINGS.

NOTE: CONCRETE FOOTINGS ARE REQUIRED IN ALL MEDIAN AREAS EXCEPT WHERE SPECIAL MEDIAN NOSES ARE CONSTRUCTED.

DETAIL "5"

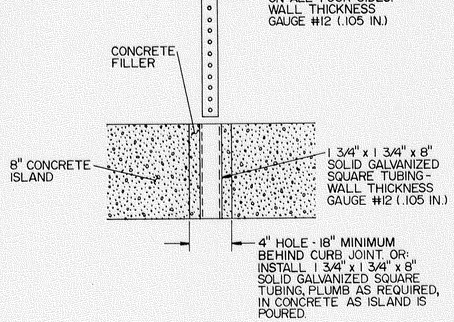
GROUND POST MOUNT SIGN INSTALLATION TYPICAL

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATION TYPICAL



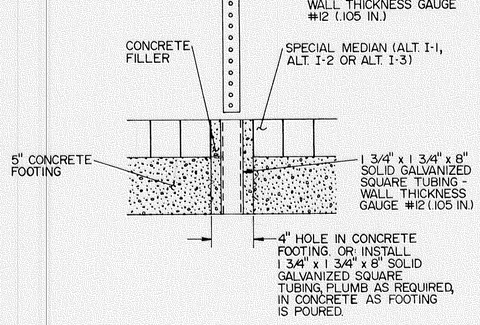
DETAIL "2"

ENLARGED SECTION A-A



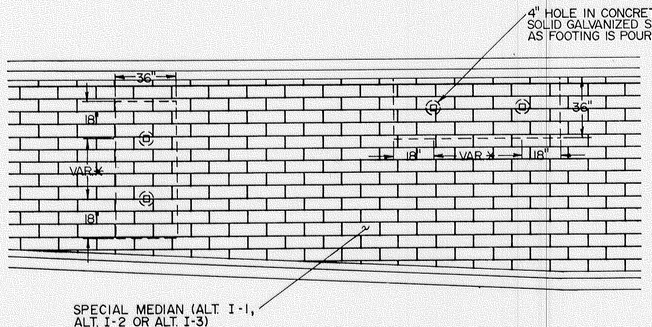
DETAIL "3"

ENLARGED SECTION B-B



DETAIL "4"

ISLAND MOUNT BREAK AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST (WITHIN AREAS OF BRICK MASONARY PAVING)



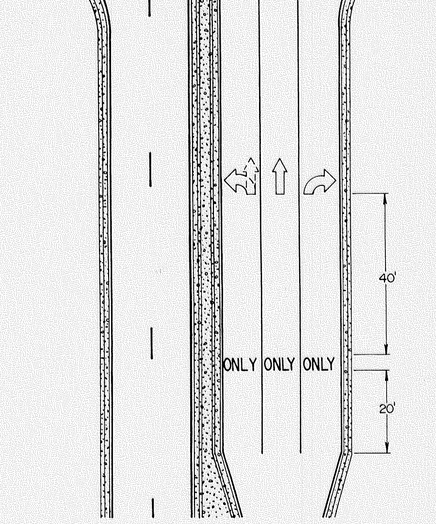
NOTES:

*: THE DISTANCE BETWEEN SIGN POSTS VARIES. REFER TO THE STANDARD SIGNS MANUAL FOR THE SPACING CHART THAT RELATES TO THE SIZE AND SHAPE OF THE INSTALLATION.

1. IF THE WIDTH OF THE ISLAND IS LESS THAN THE CONCRETE FOOTING MEASUREMENTS REQUIRED BY THIS DETAIL AND THE SPACING CHART IN THE STANDARD SIGNS MANUAL, THE LENGTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND.
2. THE DIMENSIONS OF THE CONCRETE FOOTINGS FOR ANY ISLAND MOUNT SIGN INSTALLATION REQUIRING MORE THAN ONE POST WITHIN AREAS OF BRICK MASONARY PAVING WILL BE (36" WIDTH) x (VARIABLE * LENGTH) x (5" HEIGHT).
3. DASHED LINES REPREST THE APPROX. LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST WITHIN SPECIAL MEDIAN AREAS (ALT. I-1, ALT. I-2 OR ALT. I-3)

DETAIL "6"

PAVEMENT MESSAGES - LANE DESIGNATION DETAILS



ARROWS: 6'-11" HIGH
WORDS: 8'-0" HIGH

NOTE: SEE SHEETS 34-36 FOR INDIVIDUAL PAVEMENT MESSAGE TYPES AND LOCATIONS. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR LAYOUT SPECIFICATIONS.

HARTMAN CIRCLE

LOCKE LAKE RD

69TH WAY

MATCH LINE STA. 69+60 SEE BELOW LEFT

NORTH

EAST RIVER ROAD - PHASE I TRAFFIC CONTROL
(STA. 54+00 TO STA. 69+60)

MATCH LINE STA. 69+60 SEE ABOVE RIGHT

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.

ROAD CONSTRUCTION AHEAD

71ST WAY

70TH WAY

ROAD CONSTRUCTION AHEAD

RIGHT LANE CLOSED

HICKORY DR

ROAD CONSTRUCTION AHEAD

MATCH LINE STA. 85+00 SEE SHEET NO.

NORTH

EAST RIVER ROAD - PHASE I TRAFFIC CONTROL
(STA. 69+60 TO STA. 85+00)

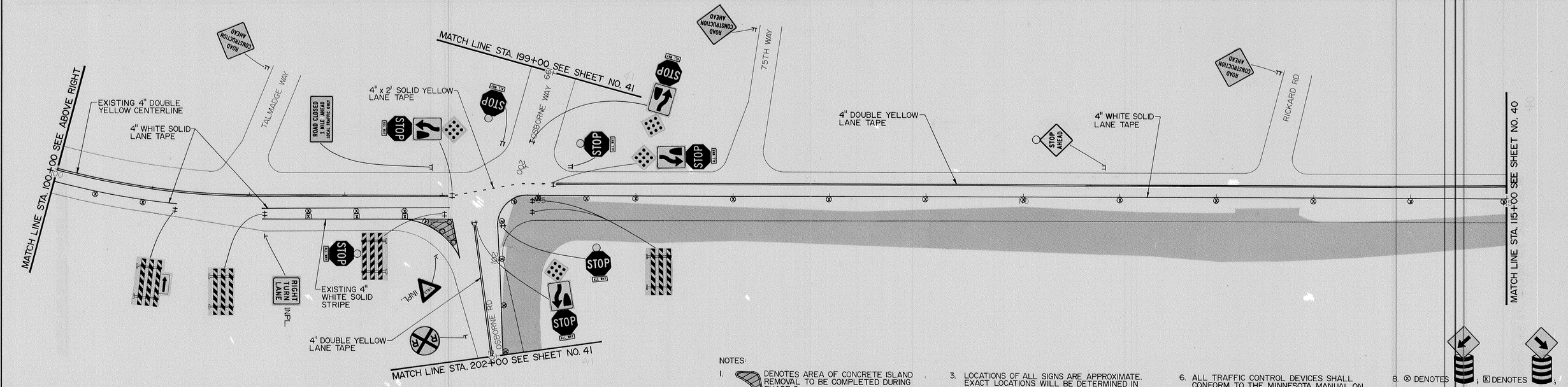
NORTH

EAST RIVER ROAD - PHASE I TRAFFIC CONTROL

(STA. 85+00 TO STA. 100+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
5. APPROXIMATELY 445 LINEAR FEET OF 4" WHITE LANE TAPE IS REQUIRED FOR THIS PORTION OF PHASE I TRAFFIC CONTROL.
6. ⊗ DENOTES TO BE USED DURING PHASE I TRAFFIC CONTROL.



NOTES:

1. DENOTES AREA OF CONCRETE ISLAND REMOVAL TO BE COMPLETED DURING PHASE I.
2. DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE I.
3. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEE SHEET 53 FOR SIGNING SCHEDULE.
5. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
6. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
7. APPROXIMATELY 1515 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 2120 LINEAR FEET OF 4" YELLOW LANE TAPE IS REQUIRED FOR THIS PORTION OF PHASE I TRAFFIC CONTROL.
8. ⊗ DENOTES ; ⊠ DENOTES ; AND ○ DENOTES DURING PHASE I TRAFFIC CONTROL.

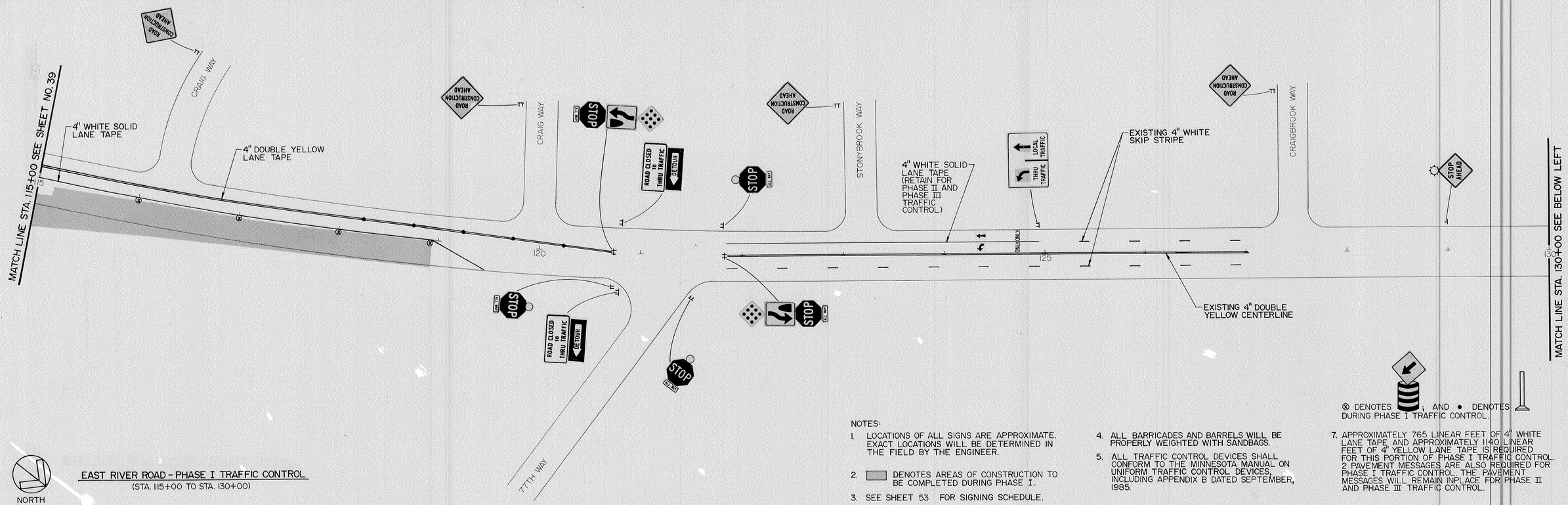
NORTH

EAST RIVER ROAD - PHASE I TRAFFIC CONTROL

(STA. 100+00 TO STA. 115+00)

OSBORNE ROAD - PHASE I TRAFFIC CONTROL

(STA. 199+00 TO STA. 202+00)

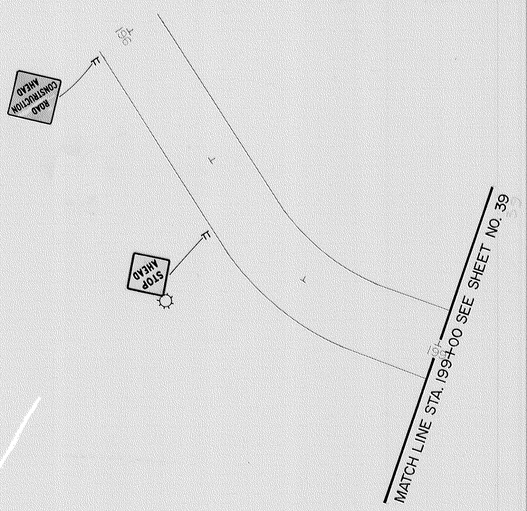

MATCH LINE STA. 115+00 SEE SHEET NO. 39
4" WHITE SOLID LANE TAPE
4" DOUBLE YELLOW LANE TAPE
CRAIG WAY
ROAD CONSTRUCTION AHEAD
STOP
ROAD CLOSED TO THRU TRAFFIC
DETOUR
STONYBROOK WAY
4" WHITE SOLID LANE TAPE (RETAIN FOR PHASE II AND PHASE III TRAFFIC CONTROL)
LOCAL TRAFFIC
THRU TRAFFIC
EXISTING 4" WHITE SKIP STRIPE
CRAIGBROOK WAY
STOP AHEAD
EXISTING 4" DOUBLE YELLOW CENTERLINE
77TH WAY
MATCH LINE STA. 130+00 SEE BELOW LEFT
NORTH
EAST RIVER ROAD - PHASE I TRAFFIC CONTROL
(STA. 115+00 TO STA. 130+00)
NOTES:
1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE I.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
⊗ DENOTES ; AND • DENOTES DURING PHASE I TRAFFIC CONTROL.
7. APPROXIMATELY 765 LINEAR FEET OF 4" WHITE LANE TAPE, AND APPROXIMATELY 1140 LINEAR FEET OF 4" YELLOW LANE TAPE IS REQUIRED FOR THIS PORTION OF PHASE I TRAFFIC CONTROL. 2 PAVEMENT MESSAGES ARE ALSO REQUIRED FOR PHASE I TRAFFIC CONTROL. THE PAVEMENT MESSAGES WILL REMAIN INPLACE FOR PHASE II AND PHASE III TRAFFIC CONTROL.
MATCH LINE STA. 130+00 SEE ABOVE RIGHT
PEARSON WAY
THRU TRAFFIC MERGE
DETOUR AHEAD
79TH WAY
LONGFELLOW ST
MATCH LINE STA. 145+00 SEE SHEET NO. 41
NORTH
EAST RIVER ROAD - PHASE I TRAFFIC CONTROL
(STA. 130+00 TO STA. 145+00)
NOTES:
1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.

NORTH

EAST RIVER ROAD - PHASE I TRAFFIC CONTROL
(STA. 145+00 TO STA. 157+00)

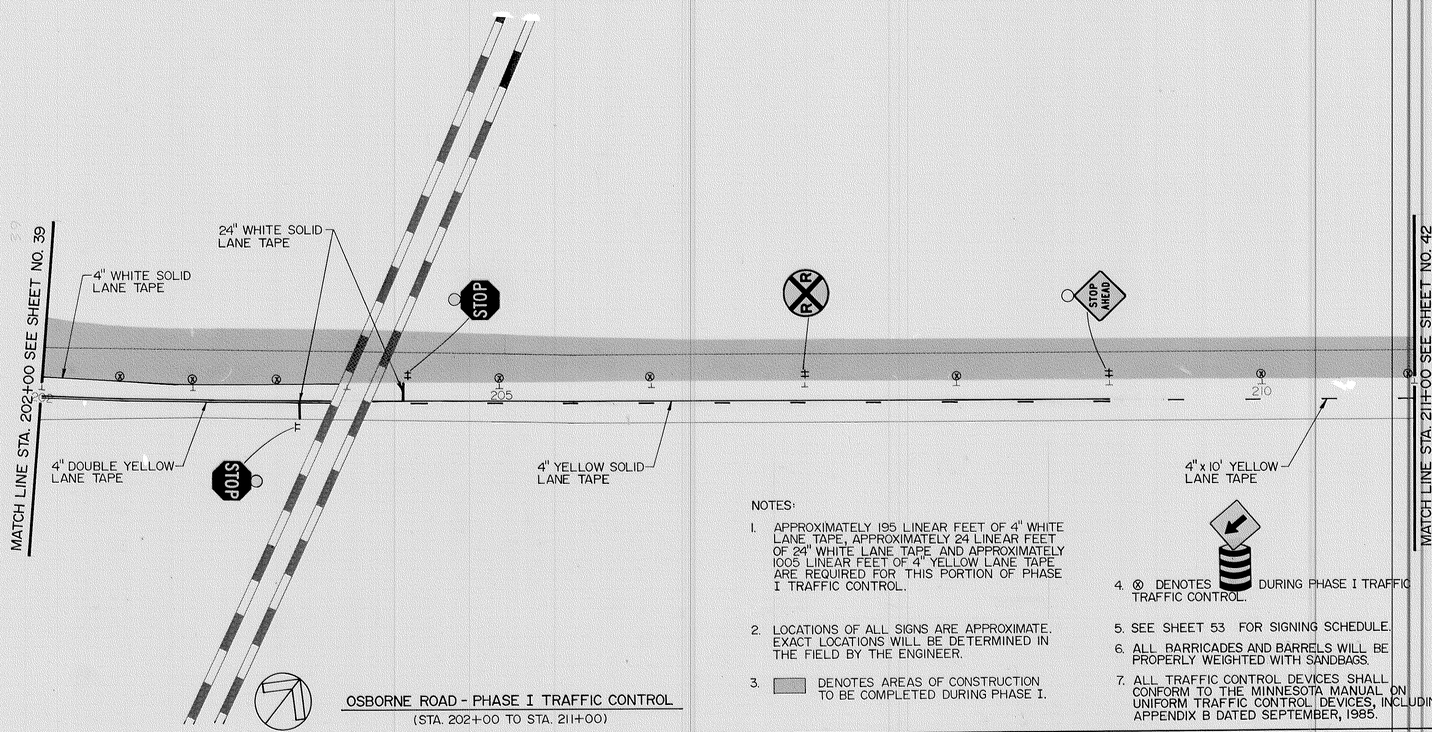
NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.



NORTH

OSBORNE WAY - PHASE I TRAFFIC CONTROL
(STA. 196+00 TO STA. 199+00)

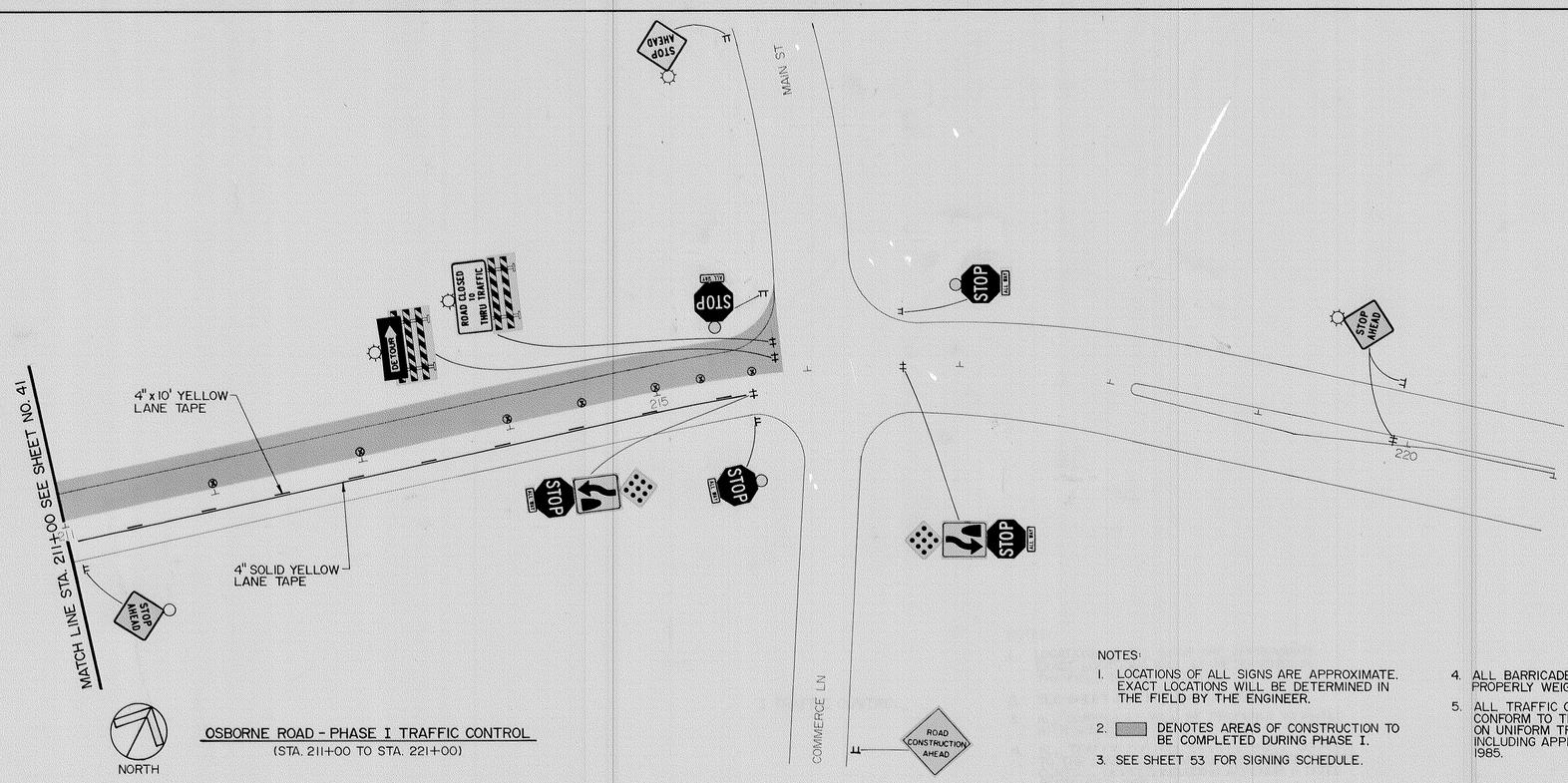


NORTH

OSBORNE ROAD - PHASE I TRAFFIC CONTROL
(STA. 202+00 TO STA. 211+00)

NOTES:

1. APPROXIMATELY 195 LINEAR FEET OF 4" WHITE LANE TAPE, APPROXIMATELY 24 LINEAR FEET OF 24" WHITE LANE TAPE AND APPROXIMATELY 1005 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE I TRAFFIC CONTROL.
2. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE I.
4. ⊗ DENOTES TRAFFIC CONTROL. DURING PHASE I TRAFFIC
5. SEE SHEET 53 FOR SIGNING SCHEDULE.
6. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
7. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.



NORTH

OSBORNE ROAD - PHASE I TRAFFIC CONTROL

(STA. 211+00 TO STA. 221+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▨ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE I.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
6. APPROXIMATELY 550 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE I TRAFFIC CONTROL.
7. ⊗ DENOTES  DURING PHASE I TRAFFIC CONTROL.

HARTMAN CIRCLE

55+

60+

LOCKE LAKE RD

69TH WAY

65+

ROAD CONSTRUCTION AHEAD

LEFT LANE CLOSED

MATCH LINE STA. 69+60 SEE BELOW LEFT

NORTH

EAST RIVER ROAD - PHASE II TRAFFIC CONTROL
(STA. 54+00 TO STA. 69+60)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.

MATCH LINE STA. 69+60 SEE ABOVE RIGHT

70+

75+

70TH WAY

ROAD CONSTRUCTION AHEAD

LEFT LANE CLOSED

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
5. APPROXIMATELY 60 LINEAR FEET OF 4" YELLOW LANE TAPE IS REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL.
6. ☒ DENOTES DURING PHASE II TRAFFIC CONTROL.

ROAD CONSTRUCTION AHEAD

71ST WAY

80+

HICKORY DR

ROAD CONSTRUCTION AHEAD

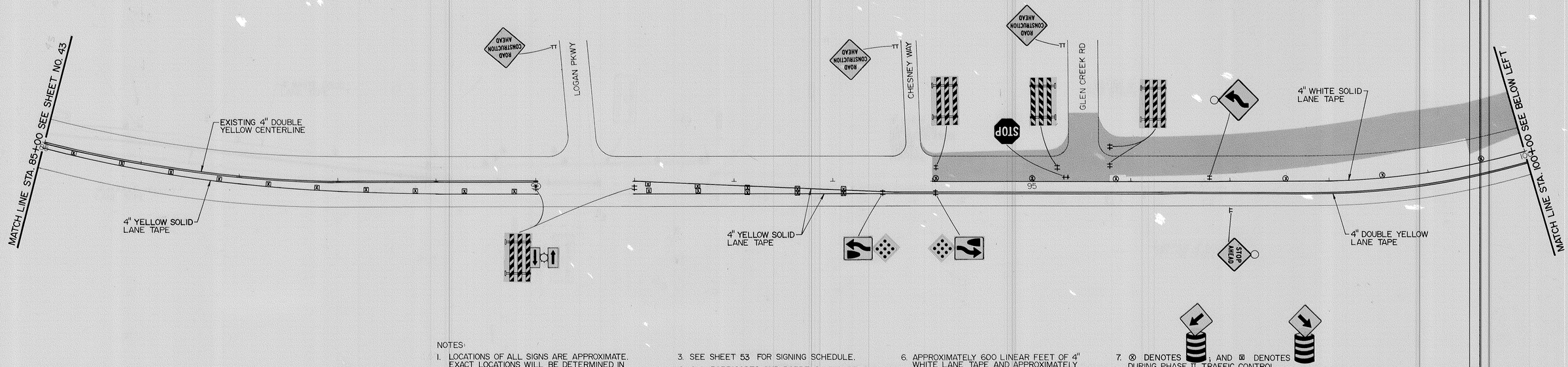
EXISTING 4" DOUBLE YELLOW CENTERLINE

4" YELLOW SOLID LANE TAPE

MATCH LINE STA. 85+00 SEE SHEET NO. 44

NORTH

EAST RIVER ROAD - PHASE II TRAFFIC CONTROL
(STA. 69+60 TO STA. 85+00)



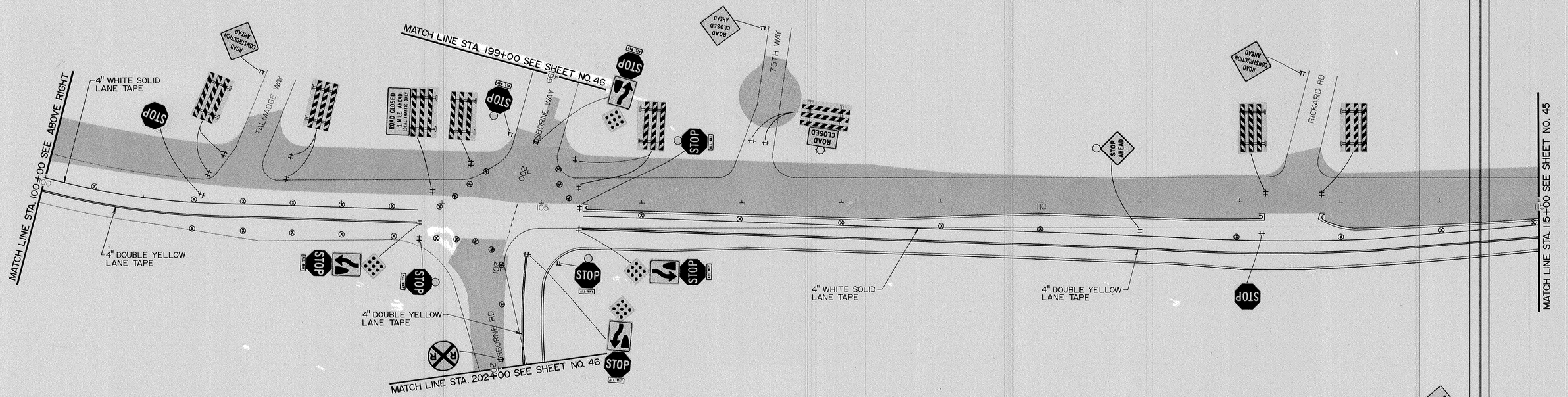
NORTH

EAST RIVER ROAD - PHASE II TRAFFIC CONTROL

(STA. 85+00 TO STA. 100+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▭ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE II.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
6. APPROXIMATELY 600 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 2300 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL.
7. ⊗ DENOTES ; AND ⊠ DENOTES DURING PHASE II TRAFFIC CONTROL.



NORTH

EAST RIVER ROAD - PHASE II TRAFFIC CONTROL

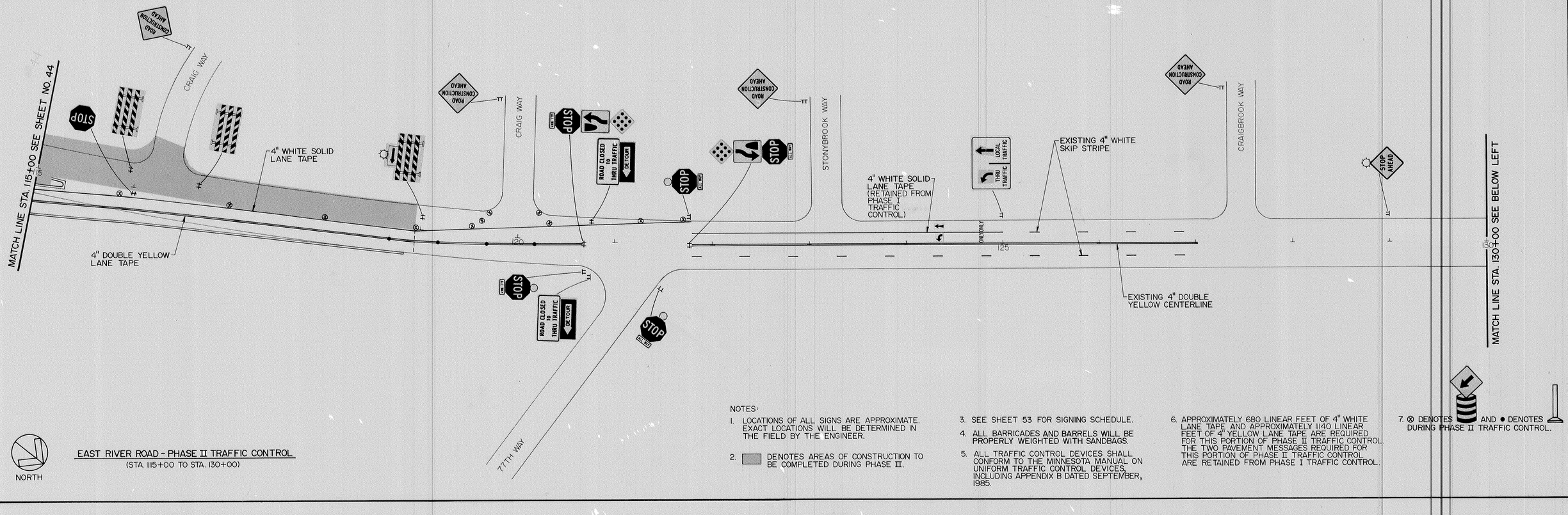
(STA. 100+00 TO STA. 115+00)

OSBORNE ROAD - PHASE II TRAFFIC CONTROL

(STA. 199+00 TO STA. 202+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▭ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE II.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
6. APPROXIMATELY 1340 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 2910 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL.
7. ⊗ DENOTES DURING PHASE II TRAFFIC CONTROL.

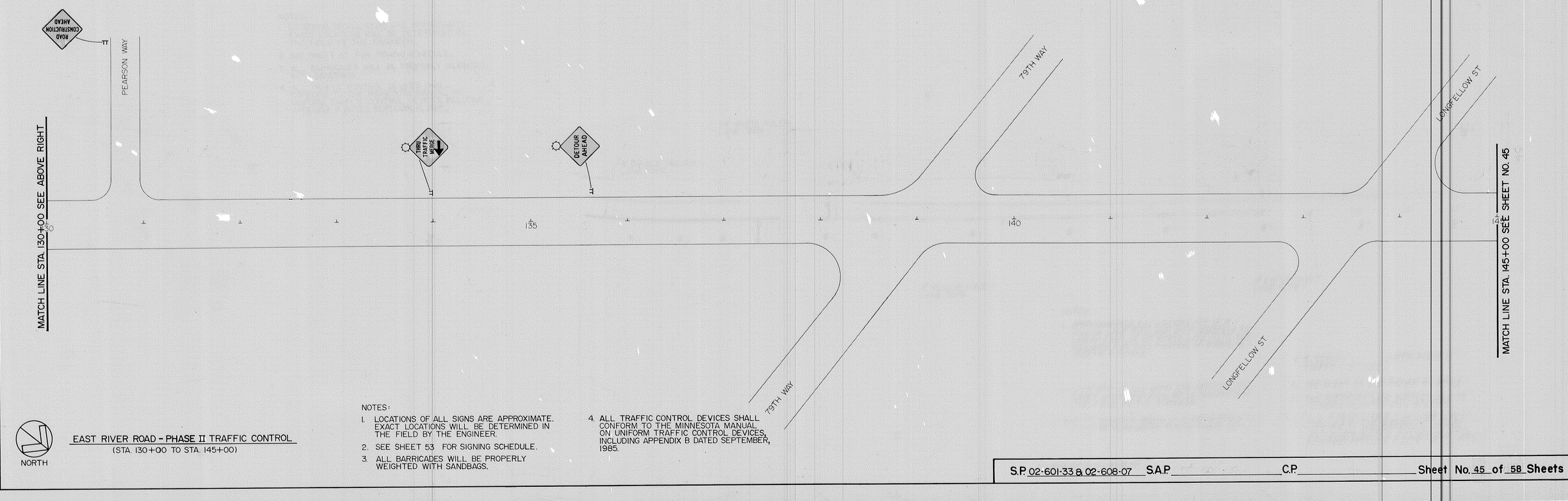


EAST RIVER ROAD - PHASE II TRAFFIC CONTROL
(STA. 115+00 TO STA. 130+00)

NORTH

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▭ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE II.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
6. APPROXIMATELY 680 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 1140 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL. THE TWO PAVEMENT MESSAGES REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL ARE RETAINED FROM PHASE I TRAFFIC CONTROL.
7. ⊗ DENOTES AND ● DENOTES DURING PHASE II TRAFFIC CONTROL.

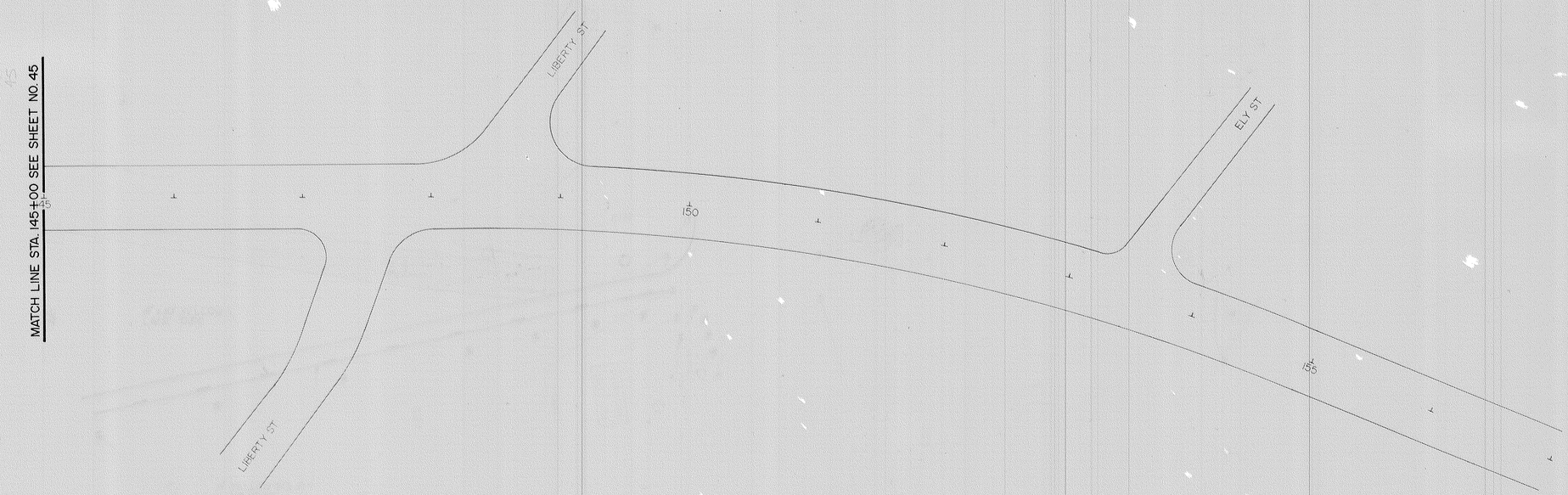


EAST RIVER ROAD - PHASE II TRAFFIC CONTROL
(STA. 130+00 TO STA. 145+00)

NORTH

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.

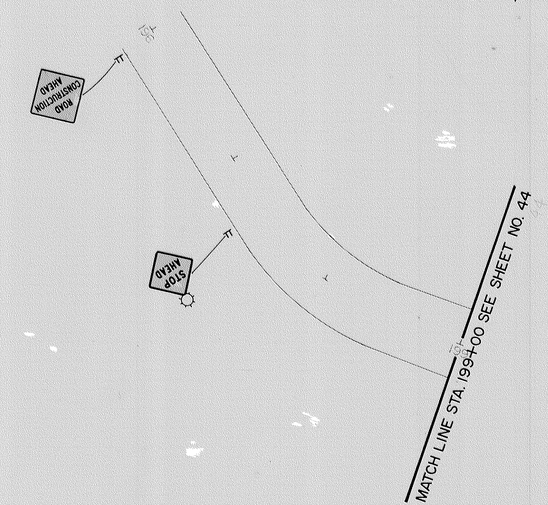


NORTH

EAST RIVER ROAD - PHASE II TRAFFIC CONTROL
(STA. 145+00 TO STA. 157+00)

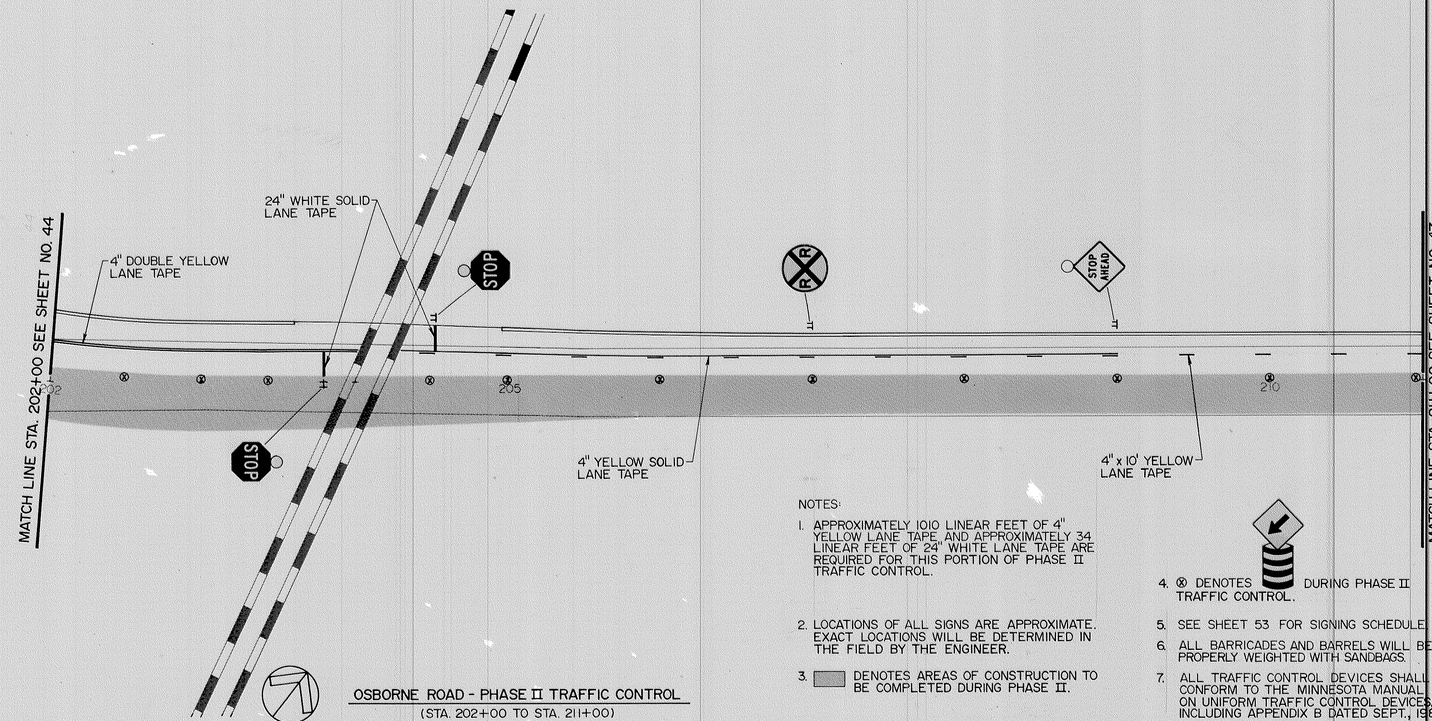
NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.



NORTH

OSBORNE WAY - PHASE II TRAFFIC CONTROL
(STA. 196+00 TO STA. 199+00)

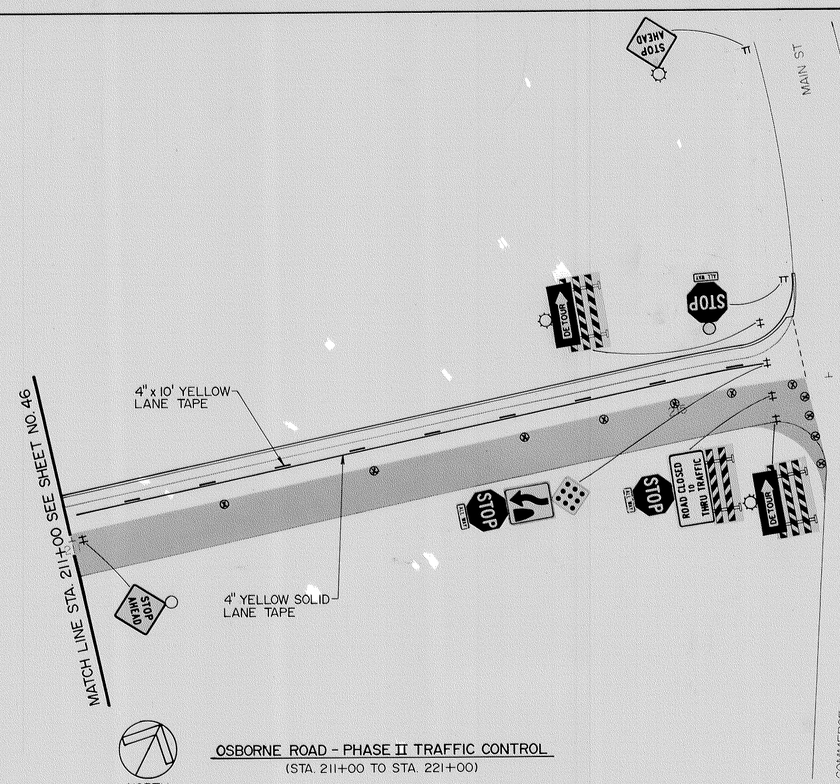


NORTH

OSBORNE ROAD - PHASE II TRAFFIC CONTROL
(STA. 202+00 TO STA. 211+00)

NOTES:

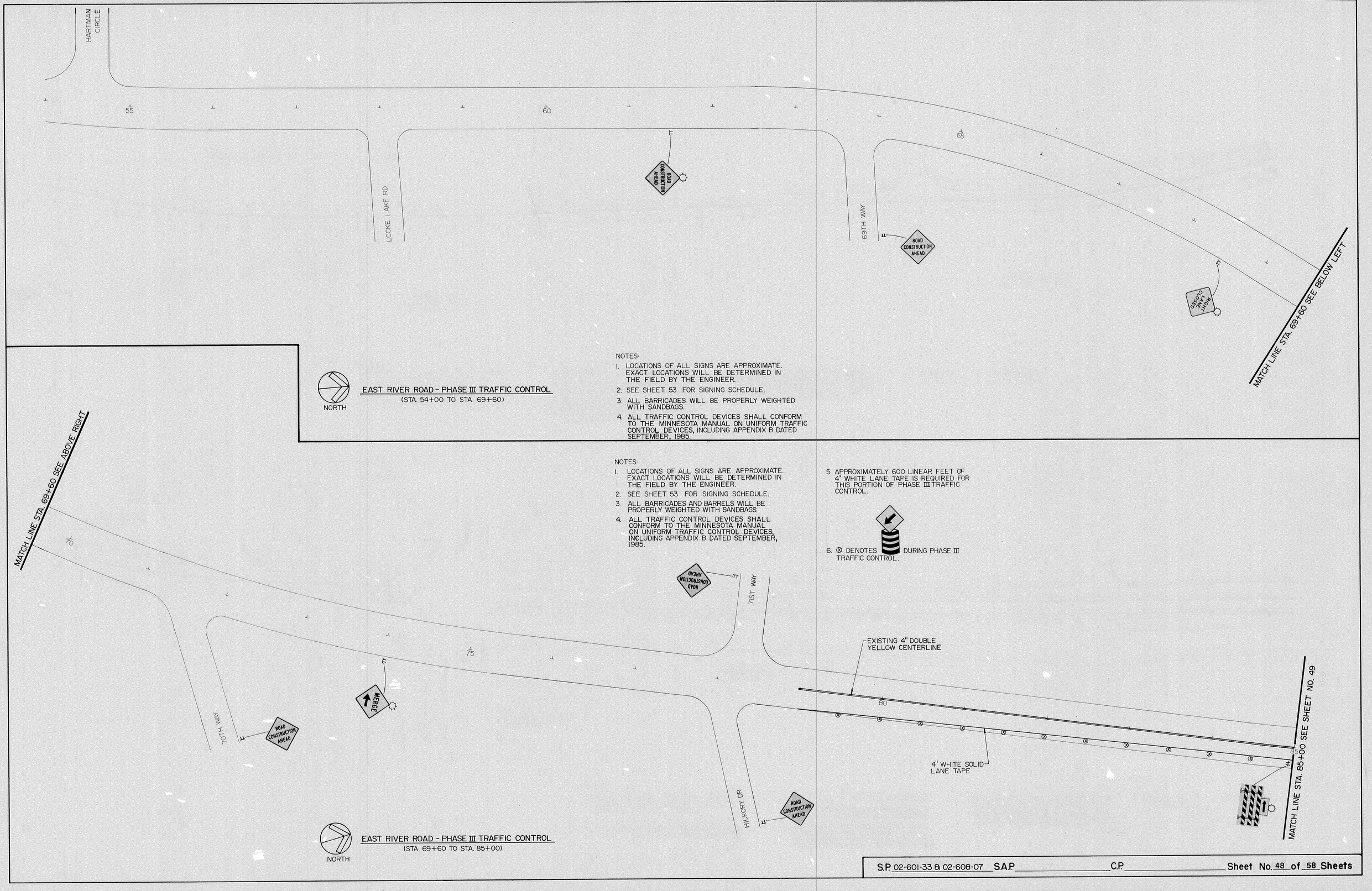
1. APPROXIMATELY 1010 LINEAR FEET OF 4" YELLOW LANE TAPE, AND APPROXIMATELY 34 LINEAR FEET OF 24" WHITE LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL.
2. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. ▒ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE II.
4. ⊗ DENOTES DURING PHASE II TRAFFIC CONTROL.
5. SEE SHEET 53 FOR SIGNING SCHEDULE.
6. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
7. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT., 1985.



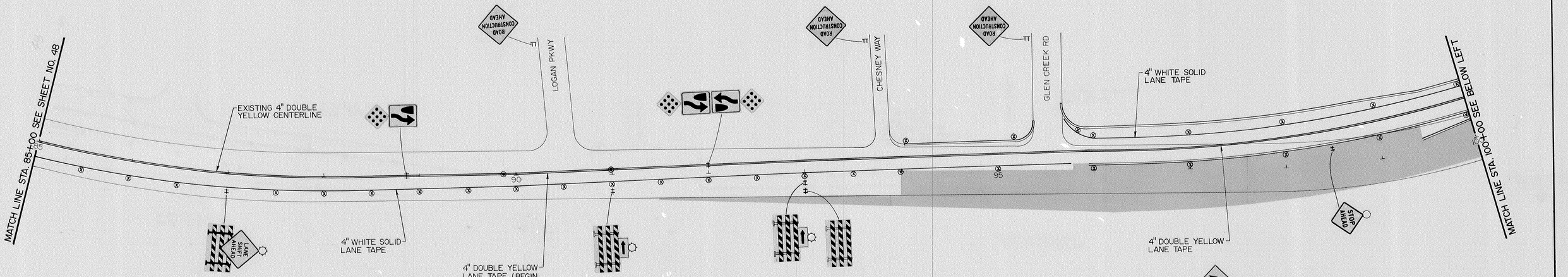
OSBORNE ROAD - PHASE II TRAFFIC CONTROL
(STA. 211+00 TO STA. 221+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▭ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE II.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT., 1985.
6. APPROXIMATELY 555 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE II TRAFFIC CONTROL.
7. ⊗ DENOTES  DURING PHASE II TRAFFIC CONTROL.



S.P. 02-601-33 & 02-608-07 S.A.P. _____ C.P. _____ Sheet No. 48 of 58 Sheets



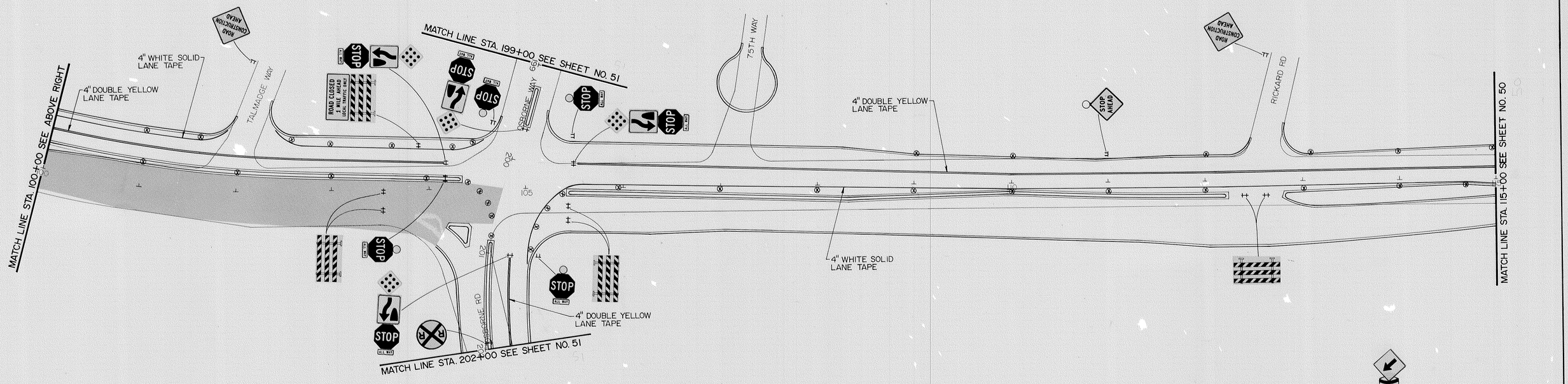
NORTH

EAST RIVER ROAD - PHASE III TRAFFIC CONTROL

(STA. 85+00 TO STA. 100+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▒ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE III.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT., 1985.
6. APPROXIMATELY 1500 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 2020 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE III TRAFFIC CONTROL.
7. ⊗ DENOTES AND ⊙ DENOTES DURING PHASE III TRAFFIC CONTROL.



NORTH

EAST RIVER ROAD - PHASE III TRAFFIC CONTROL

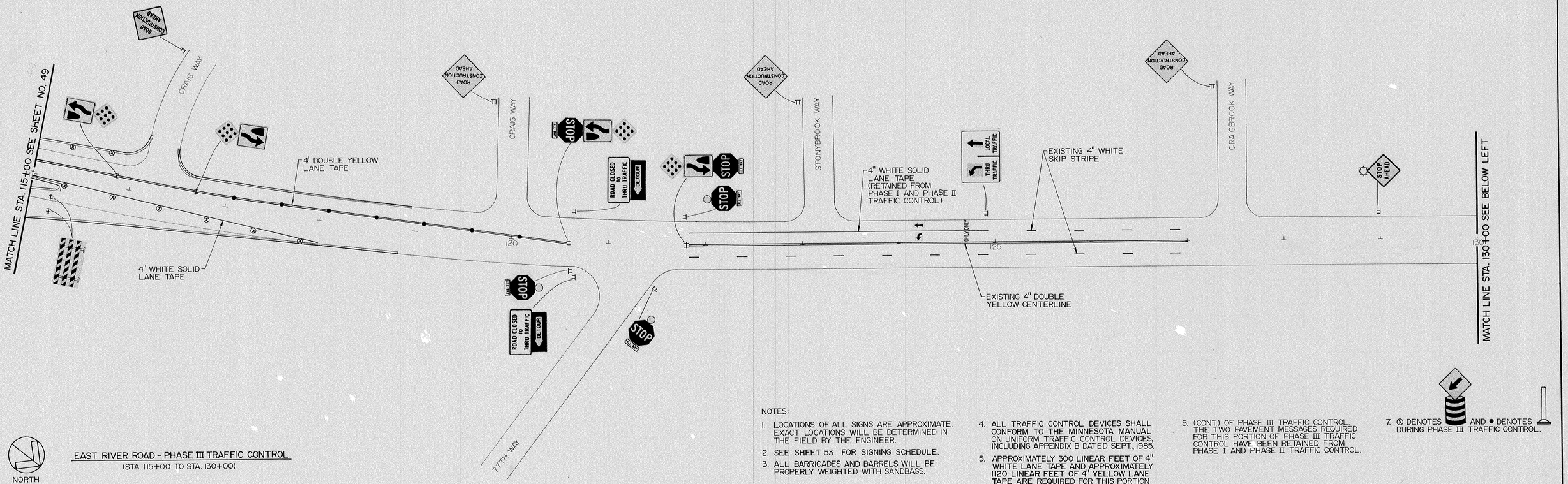
(STA. 100+00 TO STA. 115+00)

OSBORNE ROAD - PHASE III TRAFFIC CONTROL

(STA. 199+00 TO STA. 202+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ▒ DENOTES AREAS OF CONSTRUCTION TO BE COMPLETED DURING PHASE III.
3. SEE SHEET 53 FOR SIGNING SCHEDULE.
4. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT, 1985.
6. APPROXIMATELY 1450 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 2940 LINEAR FEET OF 4" YELLOW LANE TAPE IS REQUIRED FOR THIS PORTION OF PHASE III TRAFFIC CONTROL.
7. ⊗ DENOTES DURING PHASE III TRAFFIC CONTROL.

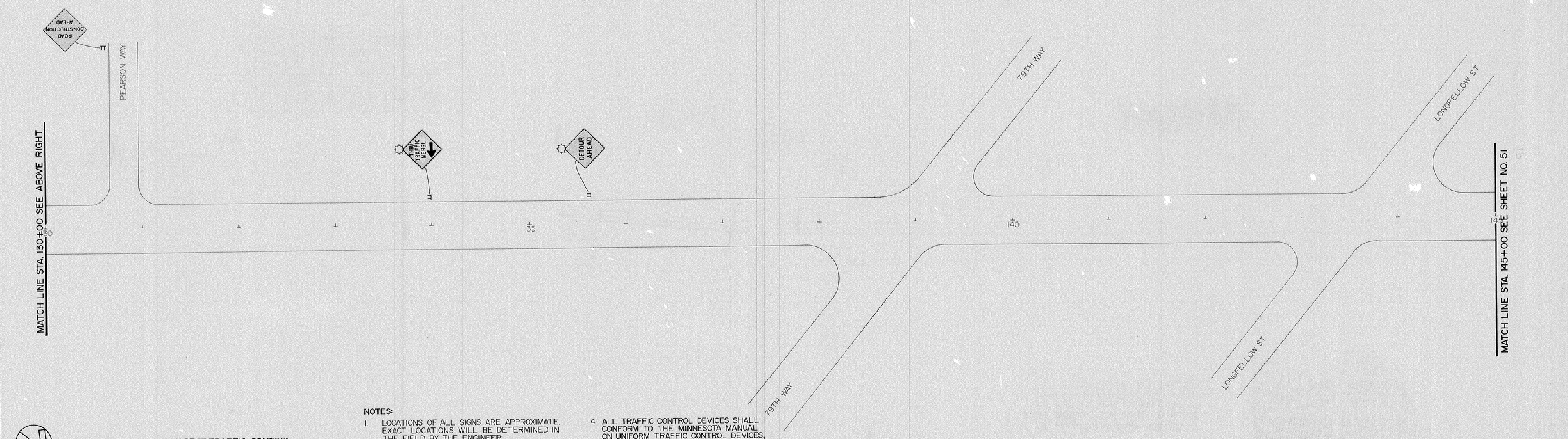


EAST RIVER ROAD - PHASE III TRAFFIC CONTROL
(STA. 115+00 TO STA. 130+00)

NORTH

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT., 1985.
5. APPROXIMATELY 300 LINEAR FEET OF 4" WHITE LANE TAPE AND APPROXIMATELY 1120 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION
5. (CONT.) OF PHASE III TRAFFIC CONTROL. THE TWO PAVEMENT MESSAGES REQUIRED FOR THIS PORTION OF PHASE III TRAFFIC CONTROL HAVE BEEN RETAINED FROM PHASE I AND PHASE II TRAFFIC CONTROL.
7. ⊗ DENOTES AND ● DENOTES DURING PHASE III TRAFFIC CONTROL.

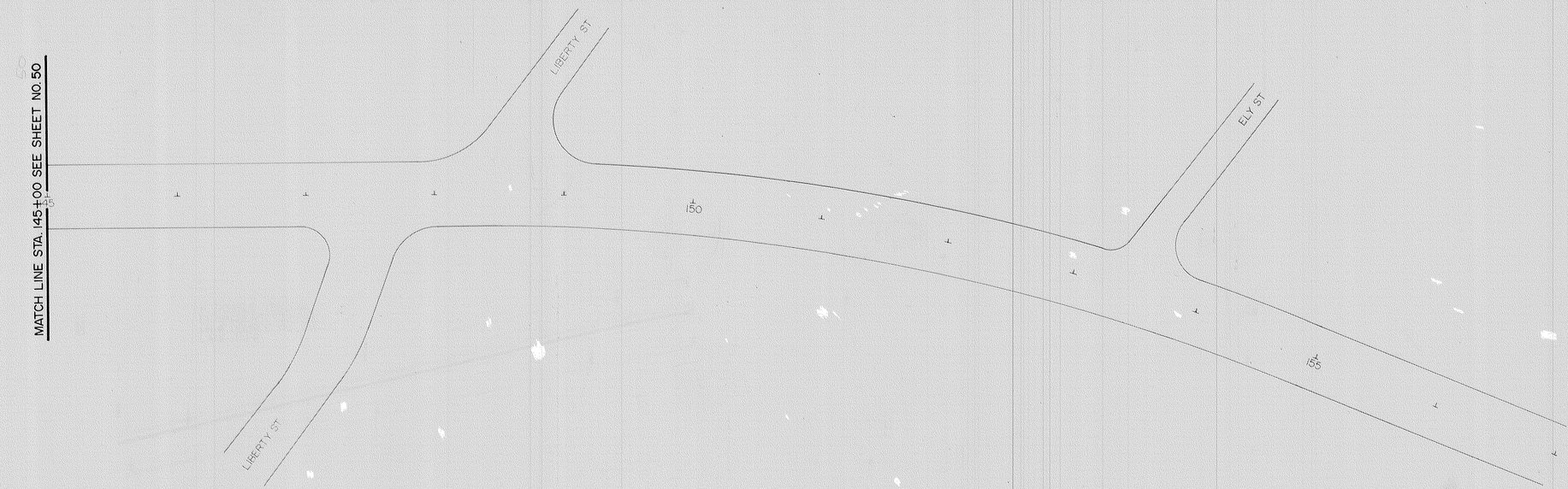


EAST RIVER ROAD - PHASE III TRAFFIC CONTROL
(STA. 130+00 TO STA. 145+00)

NORTH

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT., 1985.

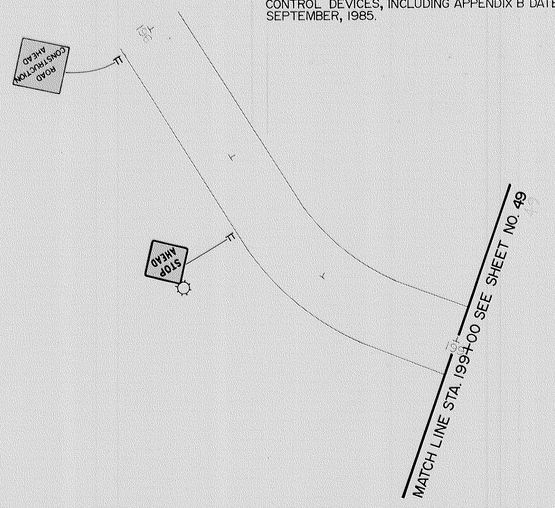


NORTH

EAST RIVER ROAD - PHASE III TRAFFIC CONTROL
(STA. 145+00 TO STA. 157+00)

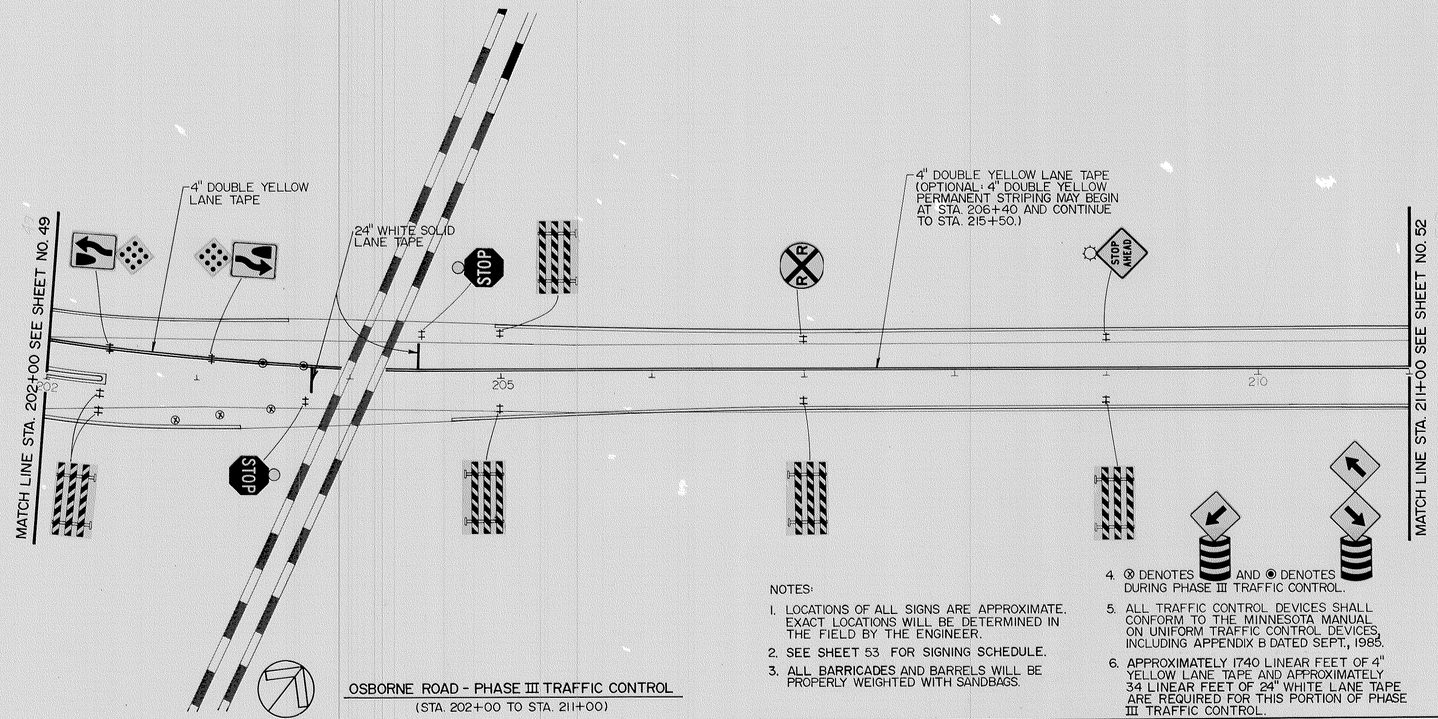
NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.



NORTH

OSBORNE WAY - PHASE III TRAFFIC CONTROL
(STA. 196+00 TO STA. 199+00)

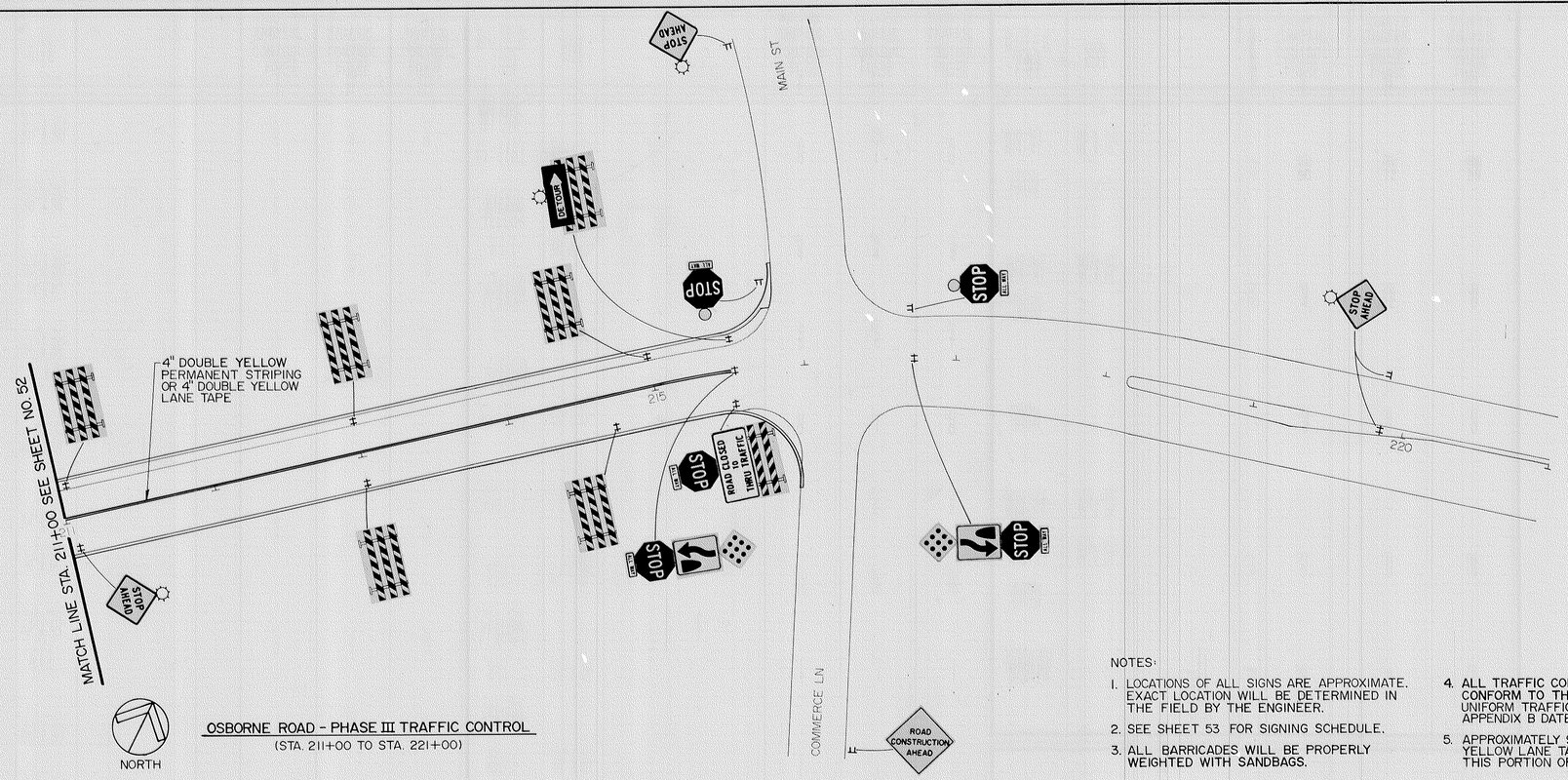


NORTH

OSBORNE ROAD - PHASE III TRAFFIC CONTROL
(STA. 202+00 TO STA. 211+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES AND BARRELS WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ⊗ DENOTES AND ◉ DENOTES DURING PHASE III TRAFFIC CONTROL.
5. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPT., 1985.
6. APPROXIMATELY 1740 LINEAR FEET OF 4" YELLOW LANE TAPE AND APPROXIMATELY 34 LINEAR FEET OF 24" WHITE LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE III TRAFFIC CONTROL.



NORTH

OSBORNE ROAD - PHASE III TRAFFIC CONTROL
(STA. 211+00 TO STA. 221+00)

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 53 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
5. APPROXIMATELY 900 LINEAR FEET OF 4" YELLOW LANE TAPE ARE REQUIRED FOR THIS PORTION OF PHASE III TRAFFIC CONTROL.

M.U.T.C.D. CODE	SIZE		TRAFFIC CONTROL PHASE I	TRAFFIC CONTROL PHASE II	TRAFFIC CONTROL PHASE III
R1-1	30" x 30"	STOP	0	4	0
STEADY RED					
R1-1	36" x 36"	STOP	2	2	2
R1-1	30" x 30"	STOP	8	9	9
R1-4	18" x 6"	ALL WAY			
STEADY RED					
R1-1	36" x 36"	STOP	10	9	9
R1-4	18" x 6"	ALL WAY			
R3-8A	60" x 48"	THRU TRAFFIC / LOCAL TRAFFIC	1	1	1
R4-7	24" x 30"		8	10	15
X4-2	18" x 18"				
YELLOW FLASHER					
R11-2	48" x 30"	ROAD CLOSED	0	2	0
TYPE III	8 FT.				
R11-3	60" x 30"	ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY	1	0	0
R11-3	60" x 30"	ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY	0	1	1
TYPE III	8 FT.				
YELLOW FLASHER					
R11-4	60" x 30"	ROAD CLOSED TO THRU TRAFFIC	2	2	2
M4-10(L)	48" x 18"	DETOUR			
YELLOW FLASHER					
R11-4	60" x 30"	ROAD CLOSED TO THRU TRAFFIC	1	1	1
TYPE III	8 FT.				
YELLOW FLASHER					
M4-10(R)	48" x 18"	DETOUR	1	2	1
TYPE III	8 FT.				
YELLOW FLASHER					
W1-6(L)	48" x 24"		1	1	3
TYPE III	8 FT.				
W1-6(R)	48" x 24"				
YELLOW	FLASHER				
W1-6(R)	48" x 24"		0	1	0
TYPE III	8 FT.				
TYPE III(L)	8 FT.		1	9	6
TYPE III(R)	8 FT.		3	6	14

M.U.T.C.D. CODE	SIZE		TRAFFIC CONTROL PHASE I	TRAFFIC CONTROL PHASE II	TRAFFIC CONTROL PHASE III
STEADY YELLOW					
W1-4(R)	36" x 36"		0	1	0
STEADY YELLOW					
W3-1	36" x 36"	STOP AHEAD	4	4	2
YELLOW FLASHER					
W3-1	36" x 36"	STOP AHEAD	5	5	7
YELLOW FLASHER					
W4-2(L)	48" x 48"		0	1	0
W10-1	36" DIA.	R R	2	2	2
W20-1	48" x 48"	ROAD CONSTRUCTION AHEAD	15	15	16
YELLOW FLASHER					
W20-1	48" x 48"	ROAD CONSTRUCTION AHEAD	1	1	1
YELLOW FLASHER					
W20-2	48" x 48"	DETOUR AHEAD	1	1	1
W20-3	48" x 48"	ROAD CLOSED AHEAD	0	1	1
YELLOW FLASHER					
W20-5	48" x 48"	RIGHT LANE CLOSED	2	0	1
YELLOW FLASHER					
W20-5	48" x 48"	LEFT LANE CLOSED	0	2	0
YELLOW FLASHER					
W20-X3	48" x 48"	MERGE	1	0	1
STEADY YELLOW					
	48" x 48"	LANE SHIFT AHEAD	1	0	0
YELLOW FLASHER					
	48" x 48"	LANE SHIFT AHEAD			
TYPE III	8 FT.		0	0	1
YELLOW FLASHER					
	48" x 48"	THRU TRAFFIC MERGE	1	1	1

M.U.T.C.D. CODE	SIZE		SYMBOL	TRAFFIC CONTROL PHASE I	TRAFFIC CONTROL PHASE II	TRAFFIC CONTROL PHASE III
W14-X7	18" x 18"		⊗	50	72	89
DRUM						
W14-X7	18" x 18"		⊠	4	22	0
DRUM						
DRUM			○	3	0	0
W14-X7	18" x 18"					
W14-X7	18" x 18"		◉	0	0	4
DRUM						
TUBULAR MARKER			●	5	4	7

NOTES:

1. THE TRAFFIC CONTROL DEVICES AND QUANTITIES SHOWN ON THIS SHEET WILL BE INSTALLED BY THE CONTRACTOR ACCORDING TO THE PHASE I, PHASE II AND PHASE III TRAFFIC CONTROL PLANS SHOWN ON SHEETS 38-52
2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.

NOTES:

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET 55 FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.
5. IF PROJECT S.P. 02-601-29 (RICE CREEK BRIDGE CONSTRUCTION) IS COMPLETED BEFORE S.P. 02-601-33 AND S.P. 02-608-07, THE DETOUR LAYOUT SHOWN ON THIS SHEET WILL BE INSTALLED BY THE CONTRACTOR.

OSBORNE ROAD / EAST RIVER ROAD

PHASE IV - DETOUR LAYOUT

APPROXIMATE SCALE:

0 250 500 1000 FT.

NORTH

S.P. 02-601-33 & 02-608-07 S.A.P. _____ C.P. _____ Sheet No. 54 of 58 Sheets

M.U.T.C.D. CODE	SIZE	QUANTITY
YELLOW FLASHER		
R11-4	60" x 30"	1
TYPE III	8 FT	
YELLOW FLASHER		
M4-10(R)	48" x 18"	1
TYPE III	8 FT	
	8 FT	2
	8 FT	2
YELLOW FLASHER		
W20-1	48" x 48"	2
YELLOW FLASHER		
W20-2	48" x 48"	2
M4-8	24" x 12"	
M3-1	24" x 12"	
M1-6	24" x 24"	4
M5-1(R)	21" x 15"	
M4-8	24" x 12"	
M3-1	24" x 12"	
M1-6	24" x 24"	5
M5-1(L)	21" x 15"	
M4-8	24" x 12"	
M3-1	24" x 12"	
M1-6	24" x 24"	2
M6-1(R)	21" x 15"	
M4-8	24" x 12"	
M3-1	24" x 12"	
M1-6	24" x 24"	3
M6-1(L)	21" x 15"	
M4-8	24" x 12"	
M3-1	24" x 12"	
M1-6	24" x 24"	6
M6-3	21" x 15"	
M4-6	24" x 12"	
M4-8	24" x 12"	1
M1-6	24" x 24"	

M.U.T.C.D. CODE	SIZE	QUANTITY
M4-8	24" x 12"	
M3-3	24" x 12"	
M1-6	24" x 24"	5
M5-1(R)	21" x 15"	
M4-8	24" x 12"	
M3-3	24" x 12"	
M1-6	24" x 24"	3
M5-1(L)	21" x 15"	
M4-8	24" x 12"	
M3-3	24" x 12"	
M1-6	24" x 24"	3
M6-1(R)	21" x 15"	
M4-8	24" x 12"	
M3-3	24" x 12"	
M1-6	24" x 24"	3
M6-1(L)	21" x 15"	
M4-8	24" x 12"	
M3-3	24" x 12"	
M1-6	24" x 24"	7
M6-3	21" x 15"	
M4-6	24" x 12"	
M4-8	24" x 12"	1
M1-6	24" x 24"	

NOTES:

1. IF PROJECT S.P. 02-601-29 (RICE CREEK BRIDGE CONSTRUCTION) IS COMPLETED BEFORE S.P. 02-601-33 AND S.P. 02-608-07, THE SIGNS AND QUANTITIES SHOWN ON THIS SHEET WILL BE INSTALLED BY THE CONTRACTOR ACCORDING TO THE OSBORNE / EAST RIVER ROAD PHASE IV - DETOUR LAYOUT SHOWN ON SHEET 54
2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX B DATED SEPTEMBER, 1985.

NOTES:

1) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR LOCATION OF UTILITIES.

2) ALL PEDESTRIAN INDICATIONS SHALL BE 12"x12".

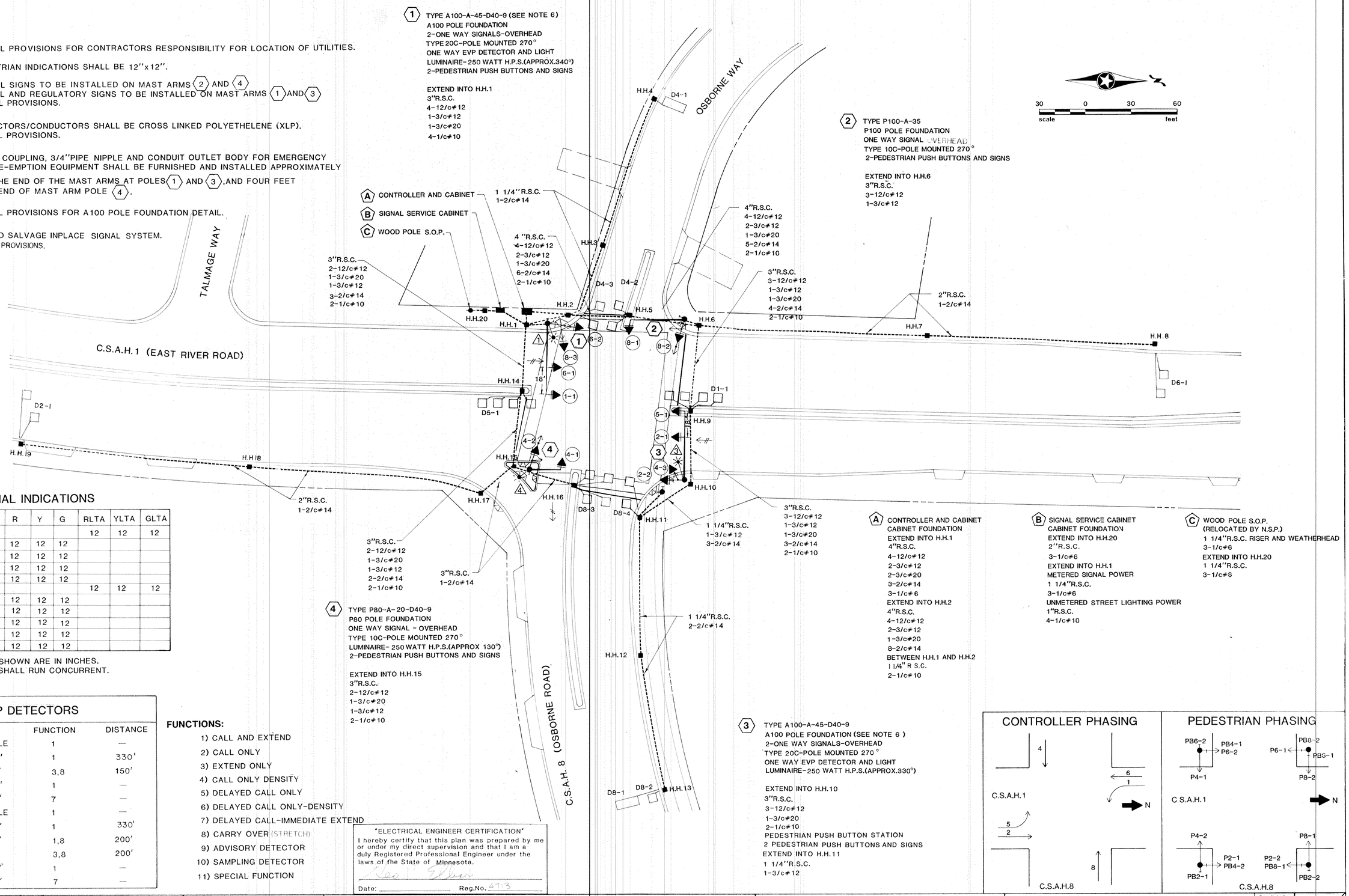
3) DIRECTIONAL SIGNS TO BE INSTALLED ON MAST ARMS (2) AND (4)
DIRECTIONAL AND REGULATORY SIGNS TO BE INSTALLED ON MAST ARMS (1) AND (3)
SEE SPECIAL PROVISIONS.

4) LOOP DETECTORS/CONDUCTORS SHALL BE CROSS LINKED POLYETHELENE (XLP).
SEE SPECIAL PROVISIONS.

5) A 3/4"HALF COUPLING, 3/4"PIPE NIPPLE AND CONDUIT OUTLET BODY FOR EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT SHALL BE FURNISHED AND INSTALLED APPROXIMATELY 20' FROM THE END OF THE MAST ARMS AT POLES (1) AND (3), AND FOUR FEET FROM THE END OF MAST ARM POLE (4).

6) SEE SPECIAL PROVISIONS FOR A100 POLE FOUNDATION DETAIL.

7) REMOVE AND SALVAGE INPLACE SIGNAL SYSTEM.
SEE SPECIAL PROVISIONS.



SIGNAL INDICATIONS

FACE	PHASE	FLASH	R	Y	G	RLTA	YLTA	GLTA
1-1	1	R				12	12	12
2-1	2	R	12	12	12			
2-2	2	R	12	12	12			
4-1	4	R	12	12	12			
4-2	4	R	12	12	12			
5-1	5	R				12	12	12
6-1	6	R	12	12	12			
6-2	6	R	12	12	12			
8-1	8	R	12	12	12			
8-2	8	R	12	12	12			
8-3	8	R	12	12	12			

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES.
PHASES 4 AND 8 SHALL RUN CONCURRENT.

LOOP DETECTORS

NUMBER	SIZE	FUNCTION	DISTANCE
D1-1	MULTIPLE	1	—
D2-1	2-6'x6'	1	330'
D4-1	6'x15'	3,8	150'
D4-2	2-6'x6'	1	—
D4-3	2-6'x6'	7	—
D5-1	MULTIPLE	1	—
D6-1	2-6'x6'	1	330'
D8-1	6'x15'	1,8	200'
D8-2	6'x6'	3,8	200'
D8-3	4-6'x6'	1	—
D8-4	2-6'x6'	7	—

FUNCTIONS:

1) CALL AND EXTEND
2) CALL ONLY
3) EXTEND ONLY
4) CALL ONLY DENSITY
5) DELAYED CALL ONLY
6) DELAYED CALL ONLY-DENSITY
7) DELAYED CALL-IMMEDIATE EXTEND
8) CARRY OVER (STRETCH)
9) ADVISORY DETECTOR
10) SAMPLING DETECTOR
11) SPECIAL FUNCTION

"ELECTRICAL ENGINEER CERTIFICATION"
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date: _____ Reg.No. 4713

CONTROLLER PHASING

PEDESTRIAN PHASING

SURVEY	CHECKED BY:	NO.	DATE	REVISIONS
DESIGN M.K.	G.V.W.		7/8	PER ANOKA COUNTY
DRAWN G.N.				

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DATE _____ REG. NO. 9089

SEH
SHORT – ELLIOTT – HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM
INTERSECTION LAYOUT
EAST RIVER ROAD (C.S.A.H. 1) AT OSBORNE ROAD (C.S.A.H. 8)

S.P. 02-608-07,
S.P. 02-601-33 & S.P. 127-332-02

FILE NO. 86138
DATE 6/26/86
56
58

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CONTROLLER CABINET

1
- R 6-2
- Y 6-2
- G 6-2
- N 6-2,P6-2
- WLK P6-2
- DWK P6-2
- SPR
- N 8-3
- R 8-3
- Y 8-3
- G 8-3
- EQG

2
- R 6-1
- Y 6-1
- G 6-1
- N 6-1, EVP LIGHT Ø6
- RLTA 1-1
- YLTA 1-1
- GLTA 1-1
- N 1-1
- EVP LIGHT Ø6
- SPR
- SPR
- EQG

3
- R 4-2
- Y 4-2
- G 4-2
- N 4-2,P4-1
- WLK P4-1
- DWK P4-1
- EVP LIGHT Ø8
- N EVP LIGHT Ø8
- SPR
- SPR
- SPR
- EQG

4
- R 4-1
- Y 4-1
- G 4-1
- N 4-1,P4-2
- WLK P4-2
- DWK P4-2
- WLK P2-1
- N P2-1
- DWK P2-1
- SPR
- SPR
- EQG

5
- R 8-1
- Y 8-1
- G 8-1
- N 8-1
- SPR
- SPR
- SPR
- N 4-3
- R 4-3
- Y 4-3
- G 4-3
- EQG

6
- R 8-2
- Y 8-2
- G 8-2
- N 8-2,P8-2
- WLK P8-2
- DWK P8-2
- WLK P6-1
- N P6-1
- DWK P6-1
- SPR
- SPR
- EQG

29
- SIGNAL SERVICE
- NEUTRAL
- FLASH SERVICE

7
- 2-1 R
- 2-1 Y
- 2-1 G
- 2-1, 2-2 N
- 2-2 R
- 2-2 Y
- 2-2 G
- Ø2 EVP LIGHT,P2-2 N
- P2-2 WLK
- P2-2 DWK
- Ø2 EVP LIGHT
- EQG

8
- 5-1 R
- 5-1 Y
- 5-1 G
- 5-1 N
- SPR
- SPR
- SPR
- P8-1 N
- P8-1 WLK
- P8-1 DWK
- SPR
- EQG

9
- PB4-1
- NEU
- PB6-2

10
- PB2-1
- NEU
- PB4-2

11
- PB6-1
- NEU
- PB8-2

12
- PB2-2
- NEU
- PB 8-1

13
- Ø2 EVP
- DETECTOR

14
- Ø6 EVP
- DETECTOR

15
- Ø8 EVP
- DETECTOR

16 D1-1
17 D2-1
18 D4-1
19 D4-2
20 D4-3
21 D5-1
22 D6-1
23 D8-1
24 D8-2
25 D8-3
26 D8-4

SIGNAL SERVICE CABINET

- 29 SIGNAL SERVICE
- 29 NEUTRAL
- 29 FLASH SERVICE
- 27 LUMINAIRE (4)
- 28 LUMINAIRE (1) (3)
- SIGNALS
- NEUTRAL
- LIGHTING
- 30 30

S.O.P. 30 — H.H.20 — 30

1,2,3,4,9,10,14,15,17,21,25,29
27,28,29
3A, 4,10,15,17,21,25,27
28A
28A

(1) 6-2 P6-2 8-3 — CHECK SWITCH — 28 — 28A — LUMINAIRE (1) — P.E.C.
1
Ø6 EVP LIGHT 6-1 1-1
2
P4-1
3A 3
Ø6 EVP DETECTOR
14
PB4-1 PB6-2
9
H.H.1

H.H.1 — 1,2,3,4,9,10,14,15,17,21,25,29 — 27,28,29 — 3A, 4,10,15,17,21,25,27 — 28A — H.H.14 — 21 — D5-1

(4) CHECK SWITCH — 27 — LUMINAIRE (4) — P.E.C.
Ø8 EVP LIGHT 4-2
4-1 P4-2 P2-1
3A 4
Ø8 EVP DETECTOR
15 10
PB2-1 PB4-2

H.H.15 — 3A,4,10,15,17,25,27 — 17 — 25 — H.H.16 — 25 — D8-3
H.H.15 — 17 — H.H.17 — 17 — H.H.18 — 17 — H.H.19 — 17 — D2-1

(2)
8-1 — 5A — 5 — 6 — 8-2 P8-2 P6-1
PB6-1 PB8-2
11

H.H.6 — 5,6,7,8,11,12,13,16,18,19,20,22,23,24,26 — 18 — 20 — H.H.2 — 5,6,7,8,11,12,13,16,19,22 23, 24,26,28A — 19 — H.H.5 — 5,6,7,8,11,12,13,16, 22,23,24,26,28A — H.H.6 — 5A,7,8,12,13,16,23,24,26,28A — 16 — H.H.9 — 5A,7,8,12,13,23,24,26,28A — H.H.10

H.H.2 — D4-3
H.H.5 — D4-2
H.H.9 — D1-1

H.H.4 — 18 — 18 — H.H.3 — D4-1
H.H.8 — 22 — 22 — H.H.7 — 22 — H.H.13 — 23 24 — 23,24 — H.H.12 — 23,24 — H.H.11 — 12,23,24,26, — 26 — D8-4
H.H.13 — D8-1 D8-2

(3) 4-3
3 LUMINAIRE — 28A — 5A
Ø2 EVP LIGHT 2-1 2-2 P2-2
7
5-1 P8-1
8
Ø2 EVP DETECTOR
13
PEDESTRIAN PUSH BUTTON STATION
PB2-2 PB8-1
12

SURVEY:	CHECKED BY:	NO.	DATE	REVISIONS
DESIGN: M.K.	G.V.W.		7/8	PER ANOKA COUNTY
DRAWN: G.N.				

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DATE: _____ REG. NO. 9089

SEH
SHORT – ELLIOTT – HENDRICKSON, INC.
Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM
FIELD WIRING DIAGRAM
EAST RIVER ROAD (C.S.A.H. 1) AT OSBORNE ROAD (C.S.A.H. 8)

S.P. 02-608-07,
S.P. 02-601-33 & S.P. 127-332-02

FILE NO.: 86138
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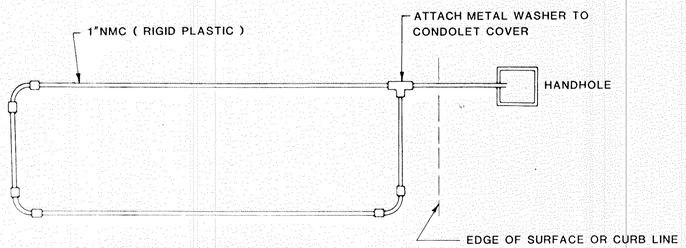
LOOP DETECTOR DETAIL "A"

PLAN VIEW

(NOT TO SCALE)



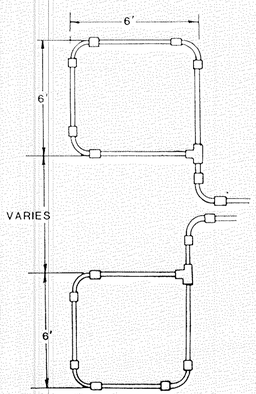
ALL CORNERS SHALL BE STANDARD 90°CONDUIT BENDS

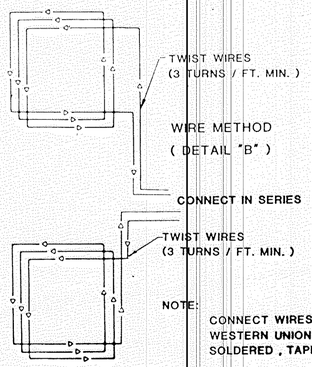
LOOP DETECTOR DETAIL "B"

PLAN VIEW

(NOT TO SCALE)

(TYPICAL)





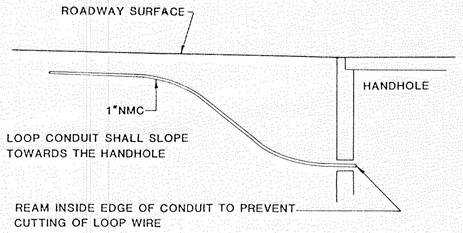
NOTE:

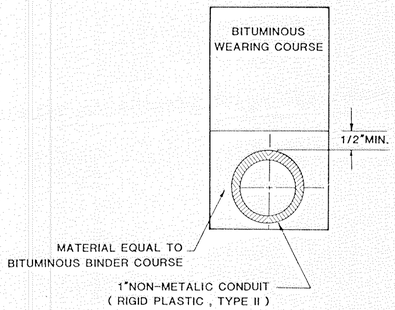
CONNECT WIRES IN HANDHOLE USING WESTERN UNION SPLICE, SOLDERED , TAPED & WATERPROOFED

NOTE:

LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.

DRAINAGE DETAILS

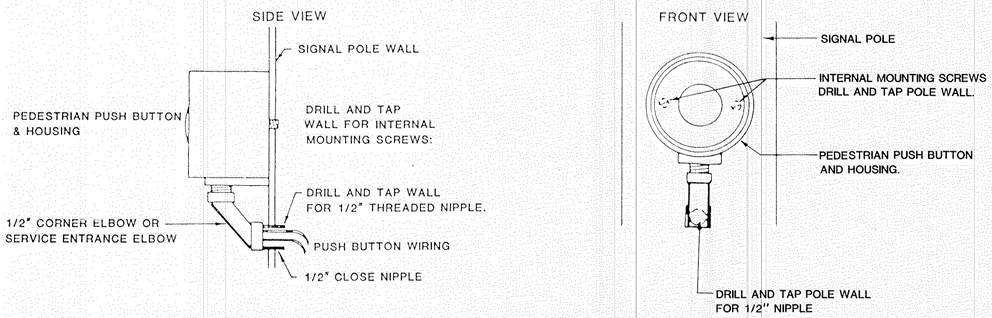




CONDUIT INSTALLATION DETAIL FOR LOOP DETECTOR

LOOP DETECTOR CONDUITS ARE TO BE INSTALLED IN 3" CUT TRENCHES AS SHOWN ON PLANS. INSTALL EACH COMPLETE DETECTOR ASSEMBLY WITH THE DETECTOR WIRE PULLED THROUGH THE COMPLETE ASSEMBLY TO HANDHOLE. WHERE APPROPRIATE , PLACE DETECTOR CONDUIT IN BITUMINOUS BINDER COURSE PRIOR TO PLACEMENT OF THE WEARING COURSE. THE DEPTH OF THE TRENCH AND THE RESULTANT PLACEMENT OF THE DETECTOR CONDUIT SHALL BE SUCH THAT THE ENTIRE DETECTOR ASSEMBLY DRAINS INTO THE HANDHOLE. BACKFILL AND COMPACT THE TRENCHES WITH MATERIAL EQUIVALENT TO THE MATERIAL REMOVED.

PEDESTRIAN PUSH BUTTON MOUNTING DETAIL



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Date: _____ Reg.No. _____

ABBREVIATIONS

EQUIPMENT AND INDICATIONS

R – RED
Y – YELLOW
G – GREEN
WLK-WALK
NEU,N – NEUTRAL
DWK DON'T WALK
LUM-LUMINAIRE
DNL-DOWNLIGHT
H.H.-HANDHOLE
EQG-EQUIPMENT GROUND
R.S.C.-RIGID STEEL CONDUIT
GLTA-GREEN LEFT TURN ARROW
YRTA-YELLOW RIGHT TURN ARROW
D2-1(eg)-DETECTOR-PHASE"2"
GR.R-GROUND ROD
SER.-SERVICE
PAI- PEDESTRIAN INDICATIONS
2-1(eg)-SIGNAL HEADS-PHASE"2"
SPR.-SPARE CONDUCTORS
N.M.C.-NON METALLIC CONDUIT
E.V.P.-EMERGENCY VEHICLE PRE-EMPTION
J.B.-JUNCTION BOX
W.P.-WOOD POLE
P.E.C.-PHOTOELECTRIC CELL
S.O.P.-SOURCE OF POWER.

CONDUCTOR COLOR CODE

R-RED
O-ORANGE
BL-BLUE
WH-WHITE
G-GREEN
BLK-BLACK
R/BLK -RED WITH BLACK TRACER
O/BLK-ORANGE WITH BLACK TRACER
BL/BLK-BLUE WITH BLACK TRACER
WH/BLK- WHITE WITH BLACK TRACER
BLK/WH BLACK WITH WHITE TRACER
G/BLK-GREEN WITH BLACK TRACER

LEGEND

CONTROLLER AND SERVICE EQUPT. NO.5 — A
SIGNAL BASE NO. — 1
SIGNAL FACE NO. — 1
LUMINAIRE NO. — 2
CONTROLLER AND CABINET
CONTROLLER AND CABINET-IN PLACE
HANDHOLE
HANDHOLE-IN PLACE
RIGID STEEL CONDUIT (R.S.C.)
RIGID STEEL CONDUIT (R.S.C.)-IN PLACE
SIGNAL FACE WITH BACKGROUND SHIELD
SIGNAL FACE W/O BACKGROUND SHIELD
SIGNAL FACE-IN PLACE
PEDESTRIAN INDICATIONS
PEDESTRIAN INDICATIONS-IN PLACE
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE
PEDESTRIAN PUSH BUTTON STATION
TRAFFIC SIGNAL PEDESTAL
TRAFFIC SIGNAL PEDESTAL-IN PLACE
TRAFFIC SIGNAL POLE AND MAST ARM
TRAFFIC SIGNAL POLE AND MAST ARM-IN PLACE
STREET LIGHT POLE AND LUMINAIRE
STREET LIGHT POLE AND LUMINAIRE-IN PLACE
MAST ARM AND LUMINAIRE
MAST ARM AND LUMINAIRE-IN PLACE
WOOD POLE
WOOD POLE-IN PLACE
SOURCE OF POWER
RAILROAD SIGNAL-IN PLACE
RIGHT OF WAY LINE
CENTER LINE — 3 1
EDGE OF ROADWAY
SHOULDER LINE
CURB LINE
STOP BAR
EVP DETECTOR

CONDUCTOR COLOR CODING

12/C#12			
R	BLK	2-1/C#6	
O	WH	2-1/C#10	
BL	R	3/C#12	
WH	W		
R/BLK	BLK		
O/BLK	BLK	2/C#14	
BL/BLK	CLEAR		
WH/BLK	R OR O	3/C#20	
BLK	WH OR YEL		
BLK/WH	BLK OR BL		
G/BLK			
G			

NOTE:

ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

NOTE:

SEE SPECIAL PROVISIONS FOR A100 POLE FOUNDATION DETAIL.

STANDARD PLATES

	PLATE NO.	DESCRIPTION
*	8110 C	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
	8111 B	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
	8112 C	PEDESTAL FOUNDATION
	8113 C	MAGNETIC VEHICLE DETECTOR INSTALLATION
*	8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
*	8116 C	STEEL GUARD POST
*	8117 F	PRECAST CONCRETE HANDHOLE
*	8118 C	SERVICE EQUIPMENT AND POLE
*	8119 C	GROUND MOUNTED CABINET FOUNDATION
*	8120 H	P-80 AND P-90 POLE FOUNDATION
*	8121 B	TRANSFORMER BASE WITH POLE BASE PLATE
	8122 C	PEDESTAL AND PEDESTAL BASE
*	8123 B	POLE AND MAST ARM
*	8124 D	SIGNAL HEAD MOUNTS
	8125 A	SWING-AWAY HINGE
*	8126 C	P-100 POLE FOUNDATION
*	8130 D	SAW CUT LOOP DETECTORS

* THESE STANDARD PLATES APPLY TO THIS PLAN

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Saint Paul, Minnesota • Chippewa Falls, Wisconsin

SIGNAL SYSTEM DETAILS

EAST RIVER ROAD (C.S.A.H. 1) AT OSBORNE ROAD (C.S.A.H. 8)

S.P. 02-608-07,

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