

NOTIFICATION AND INSPECTION

THE CONTRACTOR SHALL GIVE THE CITY OF YOUNGSTOWN, 330-742-8788, TEN (10) WORKING DAYS NOTICE PRIOR TO REPLACED SIGNAL BEING PLACED IN OPERATION AND NEW SIGNALS BEING PLACED IN THE "FLASH" MODE.

ALL SIGNAL INSTALLATIONS SHALL BE INSPECTED BY CITY PERSONNEL PRIOR TO BEING PLACED IN THE "STOP-AND-GO" MODE. ALL DEFICIENCIES OF AN OPERATIONALLY CRITICAL NATURE SHALL BE CORRECTED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ENGINEER BEFORE PLACING THE SIGNAL IN THE "STOP-AND-GO" MODE.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE ELECTRICAL SYSTEMS INSTALLED, IN WHOLE OR IN PART SHALL OPERATE SATISFACTORILY FOR A PERIOD OF NINETY (90) DAYS FOLLOWING COMPLETION OF THE TEN-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. MATERIAL AND LABOR COSTS INCURRED IN CORRECTING UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR. THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, LOOP DETECTOR UNITS, MONITORS AND ASSOCIATED EQUIPMENT. ANY MANUFACTURERS GUARANTEE FOR EQUIPMENT SHALL BE PROVIDED TO THE CITY OF YOUNGSTOWN. THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

MATERIALS

ALL MATERIALS FURNISHED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) DATED AS SHOWN ON SHEET 1. FURNISH NEW MATERIALS AND EQUIPMENT OF FIRST QUALITY, OF CURRENT DESIGN AND FREE FROM DEFECTS. NO USED MATERIAL WILL BE PERMITTED.

CONTRACTOR SHALL SUPPLY A PAPER COPY AND AN ELECTRONIC COPY IN .PDF FORMAT TO THE PROJECT ENGINEER AND CITY OF YOUNGSTOWN FOR APPROVAL.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00PM AND 7:00AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS.

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR THIS PROJECT:

COUNTY: MAH ROUTE: SOUTH AVENUE
PID# 87408
SURVEY DATE: 12/2011

VERTICAL POSITIONING:

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 09

HORIZONTAL POSITIONING:

REFERENCE FRAME: NAD 83 (CORS96) 2002.0 EPOCH
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 1.000000000000
ORIGIN OF COORDINATE
SYSTEM: EASTING (X): 600,000, NORTHING (Y): 0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

ITEM 608 - CURB RAMP, AS PER PLAN

THIS WORK CONSISTS OF REPLACING EXISTING CONCRETE WALK WITH NEW CURB RAMPS WITH TRUNCATED DOMES. NEW CURB RAMPS SHALL FOLLOW THE EXISTING ROADWAY PROFILE AND CURB GEOMETRY. THE WALKABLE CONCRETE SURFACE OF EACH CURB RAMP IS PAID FOR SEPARATELY UNDER ITEM 608 - 4" CONCRETE WALK. ITEM 608 - CURB RAMP, AS PER PLAN, EACH INCLUDES ALL OTHER INCIDENTAL CONSTRUCTION AND MATERIALS SUCH THAT THE CURB RAMP MEETS THE REQUIREMENTS AS DETAILED ON STANDARD CONSTRUCTION DRAWING BP-7.1.

TRUNCATED DOMES SHALL BE BRICK RED COLOR, MATERIALS SHALL BE FROM AN ODOT APPROVED PROVIDER, AS PER THE ODOT APPROVED LIST REFERENCED ON STANDARD CONSTRUCTION DRAWING BP-7.1.

CONCRETE WALK FOR TRENCH CONSTRUCTION

IN ADDITION TO THE LOCATIONS OF CONCRETE WALK REPLACEMENT SHOWN IN THE PLAN, A QUANTITY OF ITEM 608 - 4" CONCRETE WALK, AS PER PLAN IS INCLUDED TO REPLACE EXISTING WALK THAT IS IMPACTED BY TRENCH CONSTRUCTION FOR INSTALLATION OF THE NEW TRAFFIC SIGNAL EQUIPMENT. THIS ITEM INCLUDES SAW CUTTING A CLEAN JOINT AT THE REPLACEMENT LIMITS, REMOVAL OF EXISTING WALK NOT COVERED BY THE APPLICABLE TRENCH PAY ITEM, AND RESTORATION/COMPACTION OF THE SUBGRADE UNDER THE NEW WALK. THE REPLACEMENT WALK WILL BE CONSTRUCTED TO MATCH THE EXISTING WALK WIDTH. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO ACCOUNT FOR THIS WORK:

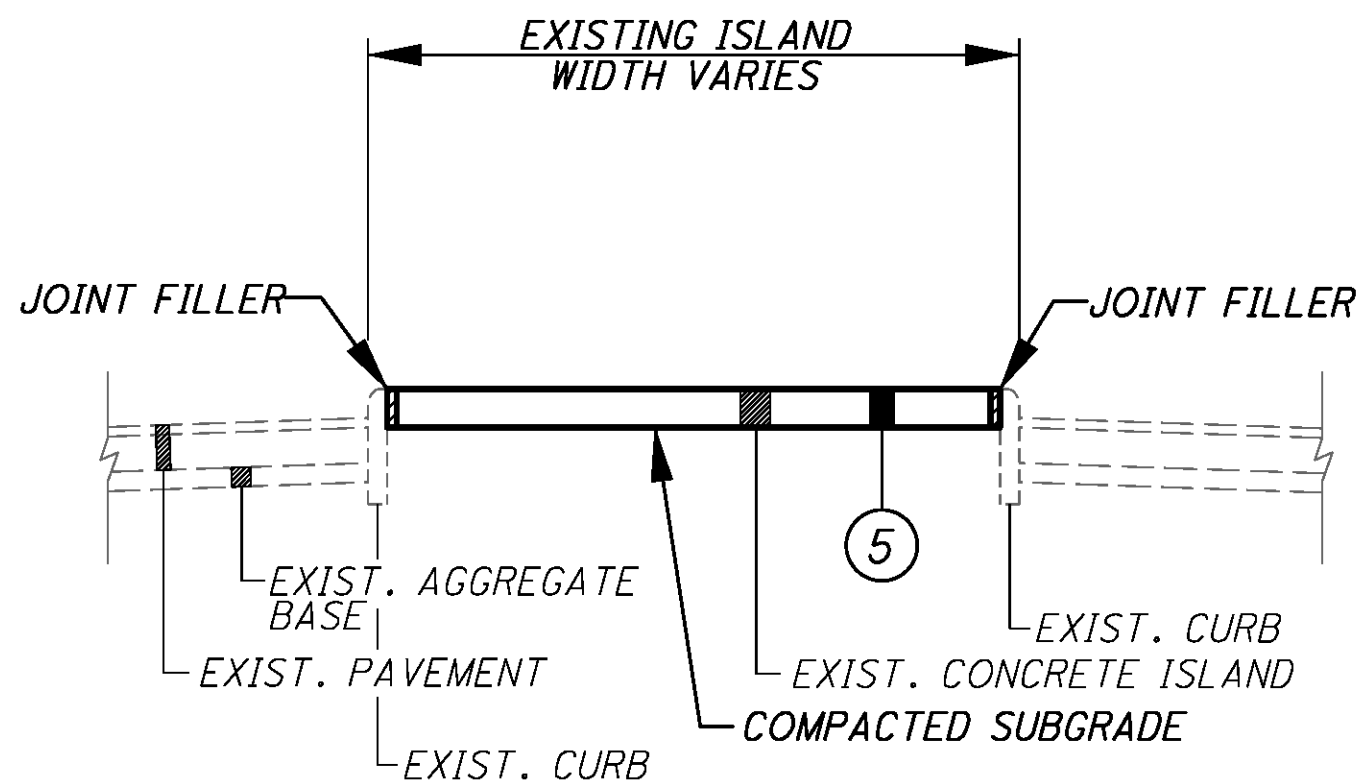
ITEM 608 - 4" CONCRETE WALK, AS PER PLAN 2400 SF

ITEM 304 - AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTION 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

ITEM 609 - 6" CONCRETE ISLAND, AS PER PLAN

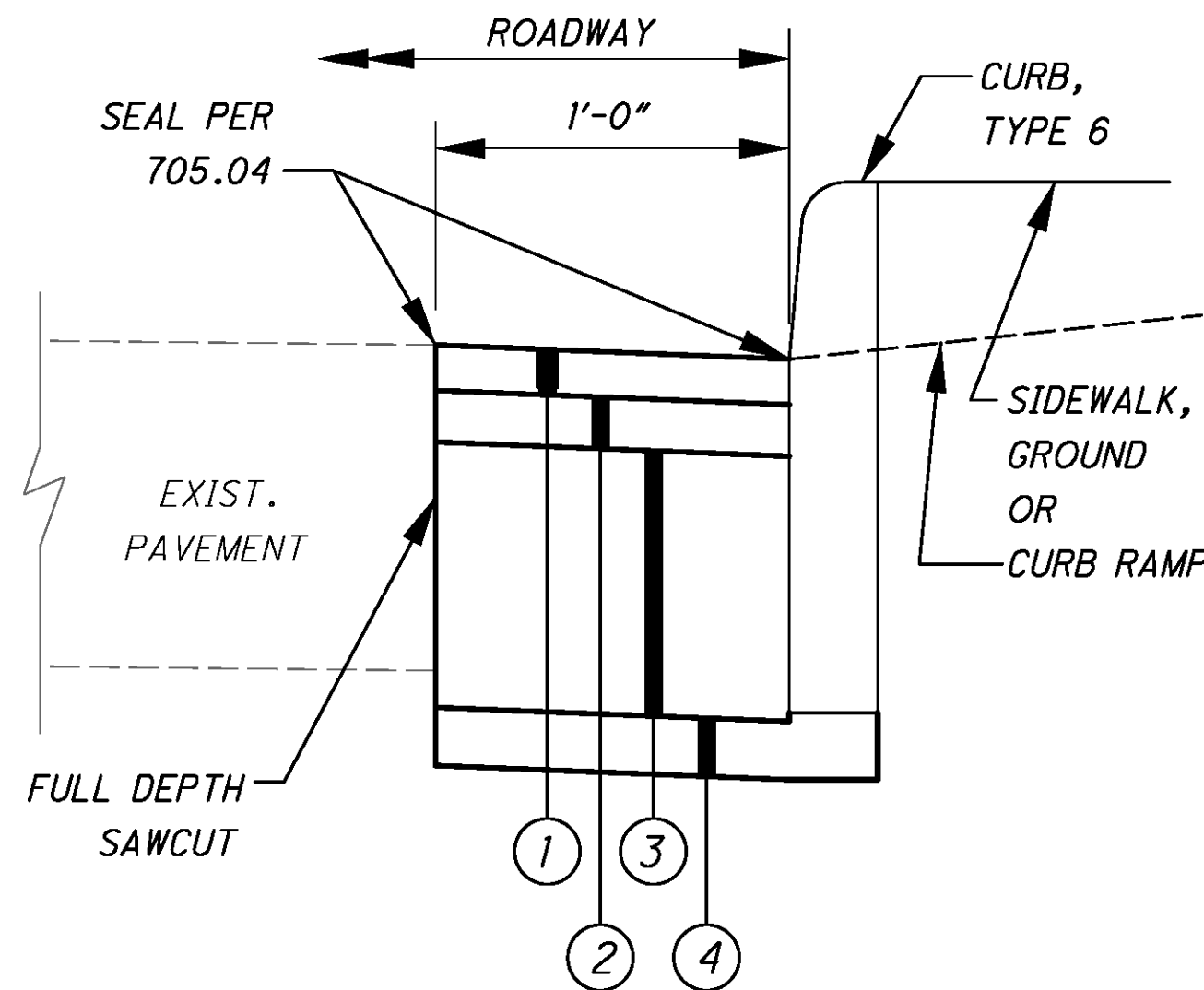
THIS ITEM INCLUDES REMOVING AND/OR GRADING OF THE EXISTING SUBGRADE MATERIAL, OR THE ADDITION OF SUBGRADE MATERIAL MEETING 304.02, TO ADJUST THE EXISTING SUBGRADE TO THE REQUIRED ELEVATION. UNIFORMLY COMPACT THE SUBGRADE AFTER OBTAINING THE REQUIRED ELEVATION. THE EXISTING CURB IS TO REMAIN EXCEPT WHERE REPLACEMENT IS SHOWN IN THE PLAN. PAYMENT FOR CURB SHOWN TO BE REPLACED IN THE PLAN IS INCLUDED IN THE APPLICABLE ITEM 608 - CURB RAMP OR ITEM 609 - CURB TYPE 6 PAY ITEM. EXISTING CURB DAMAGED AS A RESULT OF REMOVAL OF THE EXISTING CONCRETE ISLAND SURFACE OR INSTALLATION OF THE NEW CONCRETE ISLAND SURFACE SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR. UTILIZE JOINT FILLER PER 705.03 BETWEEN THE EXISTING CURB AND THE NEW 6" CONCRETE ISLAND PAVEMENT.



ISLAND SURFACE REPLACEMENT DETAIL

SOUTH AVENUE AT MIDLOTHIAN BOULEVARD

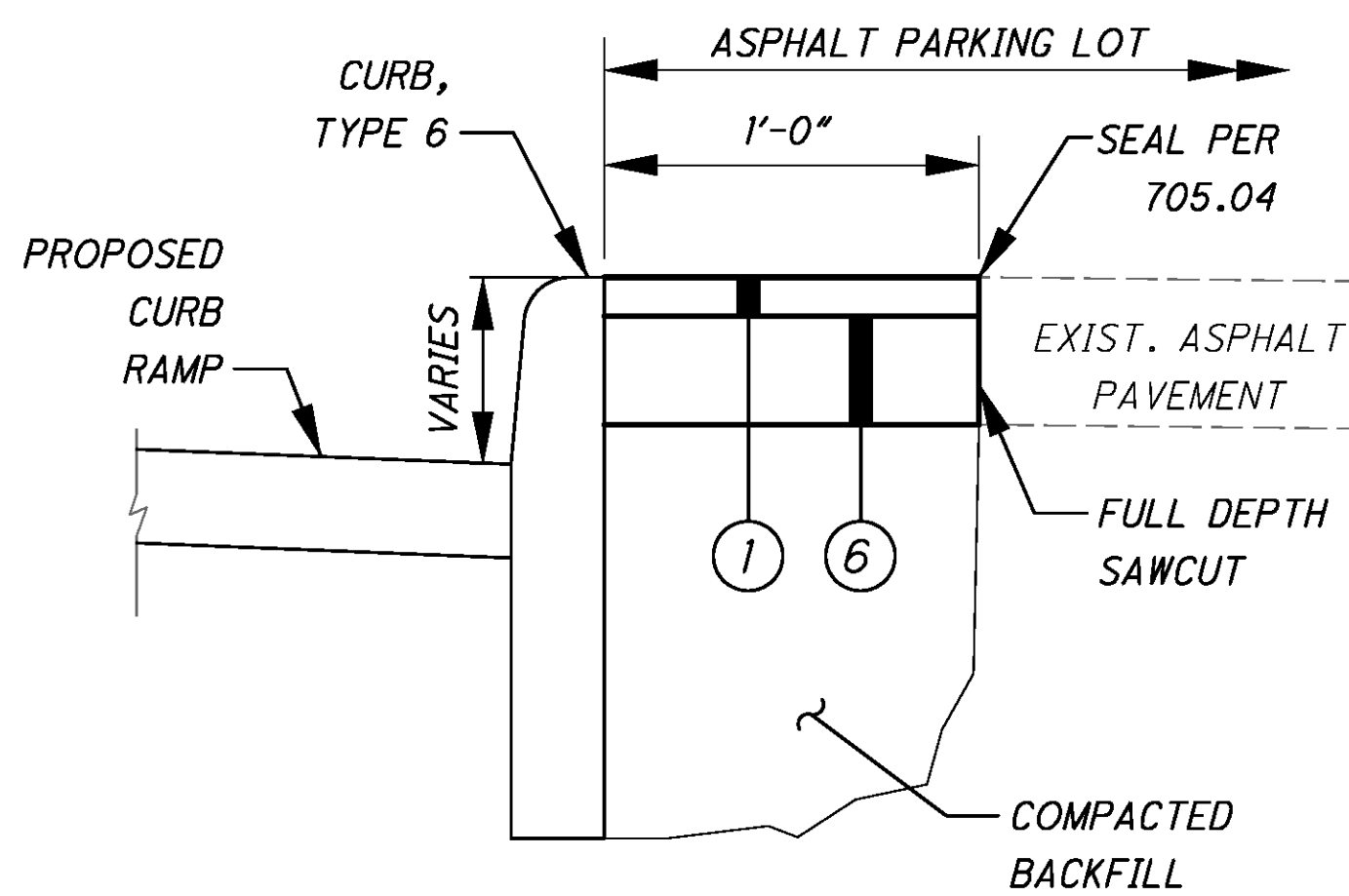
NOT TO SCALE



ROADWAY PAVEMENT REPLACEMENT AT CURB

TYPICAL SECTION

NOT TO SCALE



PARKING LOT PAVEMENT REPLACEMENT

AT CURB RAMP TYPICAL SECTION

NOT TO SCALE

PROPOSED LEGEND

- ① ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (T= 1½")
- ② ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446), PG64-22 (T= 1¾")
- ③ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (T=9")
- ④ ITEM 304 - AGGREGATE BASE, AS PER PLAN (T= 9")
- ⑤ ITEM 609 - 6" CONCRETE TRAFFIC ISLAND, AS PER PLAN
- ⑥ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (T=5")

CALCULATED
SUR
CHECKED
SWG

GENERAL NOTES & DETAILS

MAH-SOUTH
AVENUE SIGNALS

3
82

SHEET NUMBER									PARTICIPATION				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	2	3	5		11		12	15		01/CQMT /OT								
																	ROADWAY	
					165					165			202	23010	165	SY	PAVEMENT REMOVED, ASPHALT	
					7538					7538			202	30000	7538	SF	WALK REMOVED	
					58					58			202	30900	58	SY	PORTION OF TRAFFIC ISLAND REMOVED	
					1009					1009			202	32000	1009	FT	CURB REMOVED	
					12					12			202	32500	12	FT	CURB AND GUTTER REMOVED	
					43					43			203	10000	43	CY	EXCAVATION	
					9064					9064			608	10000	9064	SF	4" CONCRETE WALK	
		2400			56					2400			608	10001	2400	SF	4" CONCRETE WALK, AS PER PLAN	3
					56					56			608	49001	56	EACH	CURB RAMP, AS PER PLAN	3
					5					5			653	10000	5	CY	TOPSOIL FURNISHED AND PLACED	
																	EROSION CONTROL	
					186					186			659	00500	186	SY	SEEDING AND MULCHING, CLASS 1	
																	PAVEMENT	
					41					41			301	46000	41	CY	ASPHALT CONCRETE BASE, PG64-22	
					21					21			304	20001	21	CY	AGGREGATE BASE, AS PER PLAN	3
					7					7			441	10200	7	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	
					8					8			441	50000	8	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
					245					245			609	26000	245	FT	CURB, TYPE 6	
					58					58			609	54001	58	SY	6" CONCRETE TRAFFIC ISLAND, AS PER PLAN	3
	20									20			SPECIAL	69065016	20	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	2
																	MAINTENANCE OF TRAFFIC	
			120							120			614	11110	120	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
																	TRAFFIC CONTROL	
								2		2			625	32000	2	EACH	GROUND ROD	
								186		186			630	03100	186	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
								6		6			630	08600	6	EACH	SIGN POST REFLECTOR	
								2		2			630	20300	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 3	
								56		56			630	79100	56	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
								4		4			630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
								246.7		246.7			630	80100	246.7	SF	SIGN, FLAT SHEET	
								12		12			630	85200	12	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DELIVERY	
								7		7			630	86050	7	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DELIVERY	
								3		3			630	87100	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
								1		1			630	87520	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
								19		19			630	87550	19	EACH	REMOVAL OF POLE MOUNTED SIGN AND DELIVERY	
								36		36			630	97700	36	EACH	SIGNING, MISC.:SIGN, DOUBLE FACED, STREET NAME, OVERHEAD MOUNTED	5
								12		12			630	97700	12	EACH	SIGNING, MISC.:SIGN, DOUBLE FACED, STREET NAME, GROUND MOUNTED	5
								924		924			644	00500	924	FT	STOP LINE	
								1100		1100			644	00600	1100	FT	CROSSWALK LINE	
								2548		2548			644	30000	2548	FT	REMOVAL OF PAVEMENT MARKING	

SHEET NUMBER											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	36	38	40	42	44	46	48	50	52	55		01/CQMT /OT						
																	TRAFFIC SIGNALS	
	175	135	58	45	103	44	65	149	50	215		1039	625	25400	1039	FT	CONDUIT, 2", 725.04	
	214	181	166	149	198	174	192	330	223	251		2078	625	25500	2078	FT	CONDUIT, 3", 725.04	
	107	166	73	80	152	88	120	125	109	65		1085	625	29000	1085	FT	TRENCH	
	123	26	23		46	12	4	41	22	204		501	625	29500	501	FT	TRENCH IN PAVED AREA, TYPE A	
	159	142	128	111	158	125	137	120	164	190		1434	625	29600	1434	FT	TRENCH IN PAVED AREA, TYPE B	
	7	4	4	4	3	3	2	6	3	10		46	625	30700	46	EACH	PULL BOX, 725.08, 18"	
	1	1	1	1	1	1	1	1	1	3		12	625	30706	12	EACH	PULL BOX, 725.08, 24"	
	4	5	4	4	8	5	4	3	5	6		48	625	32000	48	EACH	GROUND ROD	
	8	6	8	8	8	8	8	8	8	12		82	632	04911	82	EACH	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	6
		4								4		8	632	03201	8	EACH	VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN	6
				4	4				4			12	632	20720	12	EACH	PEDESTRIAN SIGNAL HEAD (LED) , TYPE D2	
	8	10	8	8	8	8	8	8	8	16		90	632	25001	90	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	7
				4	4				4			12	632	25010	12	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
	4	4	4	4	4	4	2	2	4	4		36	632	26000	36	EACH	PEDESTRIAN PUSHBUTTON	
	4	3	2	2	4	4	2	3	3	6		33	632	26500	33	EACH	DETECTOR LOOP	
				427	540				578			1545	632	40500	1545	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
	1122	853	648	613	691	631	665	945	732	1571		8471	632	40700	8471	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
	4	3	4	4	4	4	3	3	4	5		38	632	64010	38	EACH	SIGNAL SUPPORT FOUNDATION	
	1	2			4	1	1		1	1		11	632	64020	11	EACH	PEDESTAL FOUNDATION	
	1947	639	613	594	912	834	380	809	811	1891		9430	632	65200	9430	FT	LOOP DETECTOR LEAD-IN CABLE	
	18	18	18	18	18	18	18	18	18	18		180	632	68200	180	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
	39	40	89	40	97	40	40	301	93	40		819	632	68300	819	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
	1	1	1	1	1	1	1	1	1	1		10	632	70001	10	EACH	POWER SERVICE, AS PER PLAN	6
			1					1	1			3	632	70400	3	EACH	CONDUIT RISER, 2" DIAMETER	
		1										1	632	75052	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 4 POLE, WITH MAST ARMS TC-81.21 DESIGN 3 AND DESIGN 3	
										1		1	632	75132	1	EACH	SIGNAL SUPPORT, TYPE TC-12.30 DESIGN 5 POLE, WITH MAST ARMS TC-81.21 DESIGN 11 AND DESIGN 4	
										1		1	632	75162	1	EACH	SIGNAL SUPPORT, TYPE TC-12.30 DESIGN 5 POLE, WITH MAST ARMS TC-81.21 DESIGN 12 AND DESIGN 3	
								1				1	632	75206	1	EACH	SIGNAL SUPPORT, TYPE TC-12.30 DESIGN 7 POLE, WITH MAST ARMS TC-81.21 DESIGN 13 AND DESIGN 2	
		1			1	1			1			4	632	80102	4	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1	
			2	3	1	2			1			9	632	80202	9	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2	
			1	1		1	1	1	1	2		8	632	80302	8	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	
			1									1	632	80402	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4	
	2	1			1		1	1	1			7	632	80502	7	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11	
	2				1							3	632	80602	3	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12	
							1			1		2	632	80620	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 13	
	1	2				1	1			1		6	632	89806	6	EACH	PEDESTAL, 6', TRANSFORMER BASE	
					4				1			5	632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE	
4	1	1	1	1	1	1	1	1	1	1		14	632	90101	14	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	6
	1	1	1	1	1	1	1	1	1	1		10	633	01581	10	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	6
	1	1	1	1	1	1	1	1	1			9	805	00100	9	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY	
										1		1	819	10000	1	EACH	RAILROAD PREEMPTION INTERFACE, MIDLOTHIAN AVE. AND SOUTHERN AVE.	
												LS	614	11000	LS		MAINTAINING TRAFFIC	
												8	619	16010	8	MNTH	FIELD OFFICE, TYPE B	
												LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS	624	10000	LS		MOBILIZATION	

REF. NO.	SHEET NO.	STATION TO STATION	SIDE	202					203		301		304	441					608		609		653	659	CALCULATED SUBJ CHECKED SWG	ROADWAY SUBSUMMARY	MAH-SOUTH AVENUE SIGNALS
				PAVEMENT REMOVED, ASPHALT	WALK REMOVED	PORTION OF TRAFFIC ISLAND REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	EXCAVATION (FOR CURB RAMP)	EXCAVATION (FOR ROADWAY)	ASPHALT CONCRETE BASE, PG64-22 (PARKING LOT, 5" DEPTH)	ASPHALT CONCRETE BASE, PG64-22 (ROADWAY, 9" DEPTH)	AGGREGATE BASE, AS PER PLAN (6" DEPTH)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) , PG64-22 (PARKING LOT)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (ROADWAY)	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	4" CONCRETE WALK		CURB RAMP, AS PER PLAN	CURB, TYPE 6	6" CONCRETE TRAFFIC ISLAND, AS PER PLAN	TOPSOIL FURNISHED AND PLACED	SEEDING AND MULCHING, CLASS 1				
																								SY			
		FROM TO SOUTH AVE. & MIDLOTHIAN BLVD.																									
		SOUTH AVE.																									
CR1	20	14+31.55	LT	1	58		6			0.17		0.17	0.11		0.03	0.04		99	1						2		
R2	20	14+46.40 14+70.05	LT		126													137							3		
		MIDLOTHIAN BLVD.																									
CR2	20	116+89.81	LT	2	381		17			0.47		0.47	0.31		0.08	0.10		375	1						12		
CR3	20	117+42.35	RT	2			16			0.45		0.45	0.30		0.08	0.09		91	1						10		
CR4	20	117+25.21	RT	2			15			0.41		0.41	0.28		0.07	0.09		41	1								
R1	20	116+91.43 117+30.47	RT			58															58						
CR5	20	117+06.06	RT	2			15			0.42		0.42	0.28		0.07	0.09		50	1								
CR6	20	116+99.01	RT	2			15		3.33	0.42		0.42	0.28		0.07	0.09		41	1								
		SOUTH AVE. & JUDSON AVE																									
CR1	21	21+19.20	LT	3			23			0.65		0.65	0.43		0.11	0.13		63	1						3		
CR1 & CR2	21	21+19.20 & 21+36.71	LT		220													209		8							
CR2	21	21+36.71	LT	1			7			0.20		0.20	0.13		0.04	0.04		42	1						6		
CR3	21	21+58.20	LT	1			7			0.20		0.20	0.13		0.04	0.04		41	1						4		
CR3 & CR4	21	21+58.20 & 21+69.10	LT		238													170									
CR4	21	21+69.10	LT	2			15			0.42		0.42	0.28		0.08	0.09		72	1						7		
CR5	21	21+61.06	RT															118	1						12		
CR5 & CR6	21	21+61.06 & 21+41.13	RT	5	303		40			1.12		1.12	0.75		0.19	0.22		161		12							
CR6	21	21+41.13	RT															61	1						4		
CR7	21	21+05.08	RT															62	1								
CR7 & CR8	21	21+05.08 & 20+94.75	RT	7	348		31			1.54	0.37	1.54	0.58	0.10	0.15	0.18		261		1							
CR8	21	20+94.75	RT															63	1								
		SOUTH AVE. & LUCIUS AVE.																									
CR1	22	35+36.26	LT	2	234		17			0.47		0.47	0.32		0.08	0.10		245	1								
CR2	22	35+78.44	LT	3	143		19			0.63		0.63	0.42		0.11	0.13		154	1	9					6		
CR3	22	35+76.21	RT	3	148		15			0.89	0.18	0.89	0.37	0.05	0.10	0.11		200	1	5							
CR4	22	35+37.15	RT	2	160		15			0.43		0.43	0.28		0.08	0.09		167	1								
		SOUTH AVE. & BOSTON AVE.																									
CR1	23	43+66.01	LT	4	151		28		2.00	0.77		0.77	0.51		0.13	0.15		188	1	13					4		
CR2	23	44+09.10	LT	2	140		18			0.49		0.49	0.33		0.09	0.10		151	1	6					5		
CR3	23	43+95.07	RT	3	136		25			0.68		0.68	0.46		0.12	0.14		218	1	10					4		
CR4	23	43+58.75	RT	4	247		22			0.90	0.16	0.90	0.37	0.05	0.10	0.11		269	1	7							
		SOUTH AVE. & INDIANOLA																									
CR1	24	58+70.31	LT															134	1								
CR1 & CR2	24	58+70.31 & 58+94.28	LT	10	300		46			2.34	0.59	2.34	0.85	0.15	0.22	0.25		195		12							
CR2	24	58+94.28	LT															131	1								
CR3	24	59+31.51	LT															113	1								
CR3 & CR4	24	59+31.50 & 59+41.76	LT	5	228		36			1.22		1.22	0.81		0.21	0.24		57		6					7		
CR4	24	59+41.76	LT															94	1								
CR5	24	59+40.55	RT															121	1								
CR5 & CR6	24	59+40.55 & 59+30.95	RT	9	265		41			2.11	0.54	2.11	0.76	0.14	0.20	0.23		32		6							
CR6	24	59+30.95	RT															131	1								
CR7	24	58+97.85	RT															263	1								
CR7 & CR8	24	58+97.85 & 58+76.20	RT	13	448		64			3.17	0.77	3.17	1.19	0.20	0.30	0.35		51		7							
CR8	24	58+76.20	RT															184	1								
		SOUTH AVE. & DEWEY AVE.																									
CR1 & CR2	25	71+52.85 & 71+64.83	LT	5	200		26			1.05	0.18	1.05	0.49	0.05	0.13	0.15		246	2	3							
CR3 & CR4	25	72+01.25 & 72+14.09	LT	5	180		33			1.16	0.14	1.16	0.61	0.04	0.16	0.18		204	2	19			1		6		
CR5 & CR6	25	72+12.88 & 71+99.13	RT	6	421		29			1.38	0.32	1.38	0.54	0.08	0.14	0.16		230	2	11			4		21		
CR7 & CR8	25	71+65.70 & 71+51.13	RT	4	272		32			0.88		0.88	0.59		0.15	0.18		337	2	13					6		
COLUMN TOTALS				110	5347	58	673		5.33	25.04	3.25	25.04	12.76	0.86	3.33	3.87		6272	38	148	58	5		122			
SUBTOTALS CARRIED TO SHEET 11				110	5347	58	673		31		29		13	5	4			6272	38	148	58	5		122			

SHEET NO.	STATION	SIDE	644									
			(SL)	(XW)								
	FROM TO		STOP LINE FT	CROSSWALK LINE FT	REMOVAL OF PAVEMENT MARKING FT							
20	SOUTH AVE.											
	14+17	LT/RT	28									
	14+17 14+47	LT/RT			60							
	15+56 15+73	LT/RT			34							
	15+73	LT/RT	23									
	MIDLOTHIAN BLVD.											
	115+86 RT		33		33							
	117+05 LT/RT				35							
	17+05 17+17 LT/RT				51							
	17+17 LT/RT		35									
21	SOUTH AVE.											
	20+24 LT		14									
	20+49 RT		23									
	20+49 20+62 CL				13							
	20+49 20+85 RT				36							
	21+22 21+35 RT		13									
	21+37 21+49 LT		12									
	21+60 21+72 LT				12							
	21+66 21+72 LT				6							
	21+72 LT		24									
22	SOUTH AVE.											
	35+27 RT		24									
	35+44 35+57 LT		13									
	35+57 35+69 RT		12									
	35+88 LT		23									
23	SOUTH AVE.											
	43+50 RT		23									
	43+50 43+59 CL				9							
	43+59 LT/RT			51	52							
	43+67 LT/RT			49	56							
	43+77 RT			57								
	43+77 RT		11									
	43+88 LT		15									
	43+88 LT			69	79							
	43+98 LT/RT			52								
	44+06 LT/RT			54								
	44+18 LT		24									
	44+12 44+18 CL				6							
24	SOUTH AVE.											
	58+63 LT/RT		32									
	58+63 58+77 LT/RT				74							
	58+70 LT/RT			55								
	58+77 LT/RT			60								
	58+87 LT/RT				71							
	58+94 LT/RT				69							
	59+12 RT		19		47							
	59+14 LT			75	90							
	59+15 RT			65	92							
	59+20 LT		22		28							
	59+21 RT				24							

SHEET NO.	STATION		SIDE	644											
				(SL)	(XW)										
				STOP LINE	CROSSWALK LINE		REMOVAL OF PAVEMENT MARKING								
	FROM	TO		FT	FT		FT								
25	SOUTH AVE.														
	71+44	71+44	LT/RT	32											
	71+44	71+55	LT/RT				34								
		71+55	LT/RT				32								
		71+61	LT/RT				55								
	71+67	72+00	RT				63								
		71+68	LT/RT				54								
		71+78	RT	20			26								
		71+89	LT	22			21								
		72+00	LT/RT				56								
		72+06	LT/RT				54								
		72+11	LT/RT				32								
	72+11	72+22	LT/RT				33								
		72+22	LT/RT	32											
26	SOUTH AVE.														
		79+66	LT/RT				32								
		79+77	LT/RT				57								
		79+84	LT/RT				56								
		80+41	LT/RT				32								
27	SOUTH AVE.														
		89+70	RT	34											
	89+70	89+97	LT/RT				108								
		89+97	RT				35								
	90+21	90+55	LT				34								
		90+33	LT	19											
		90+83	LT/RT	32											
28	SOUTH AVE.														
		95+14	RT	25											
	95+14	95+34	LT/RT				40								
		95+34	RT				24								
		95+65	RT	29											
		96+34	LT/RT	32											
29	SOUTH AVE.														
		108+92	LT/RT	32											
	108+92	109+02	LT/RT				43								
		109+03	LT/RT			67									
		109+10	LT/RT			63									
		109+28	LT	22			128								
		109+34	RT	16			16								
		109+36	RT			76	76								
		109+55	LT/RT			62	62								
		109+62	LT/RT			64	64								
		109+68	LT/RT	33			33								
30	SOUTH AVE.														
		118+51	LT/RT				32								
		119+23	LT/RT				31								
31	MIDLOTHIAN BLVD.														
		80+29	RT	23											
	80+29	80+55	LT/RT				52								
		80+99	RT	13											
		81+02	LT	21											
		81+74	RT	22											
		81+88	LT	18											
		82+28	LT	24											

ms consultants, inc.

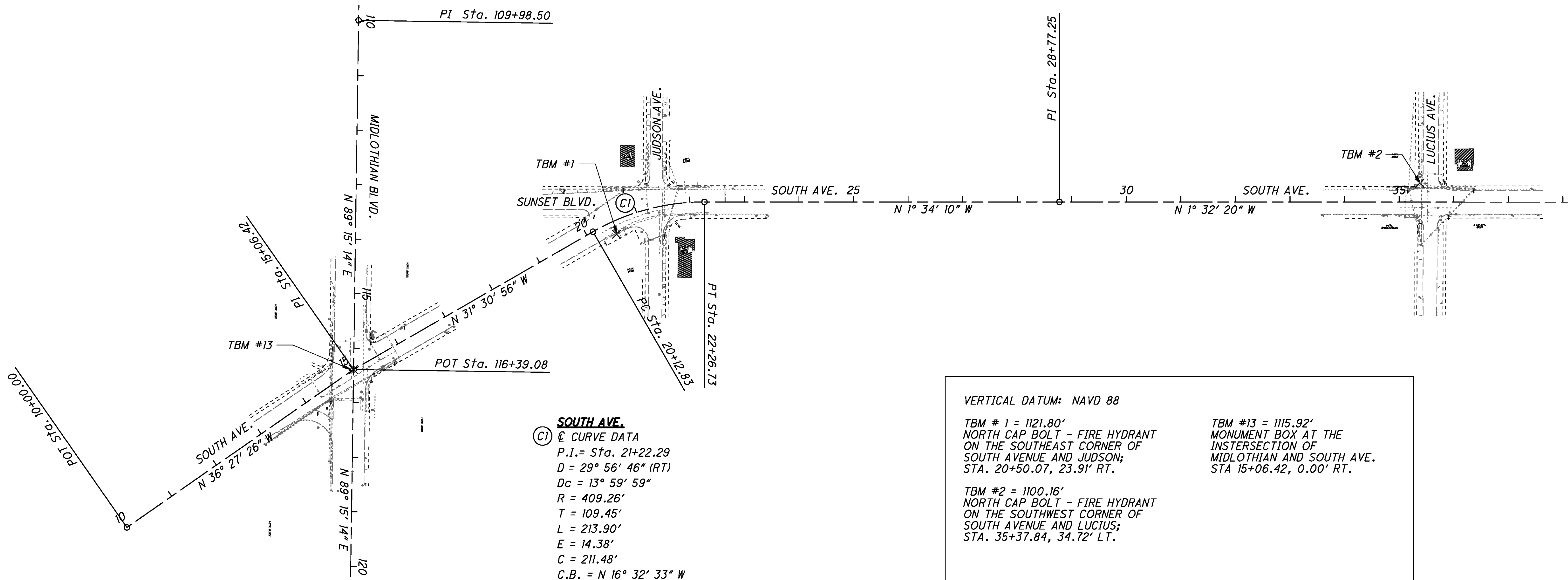
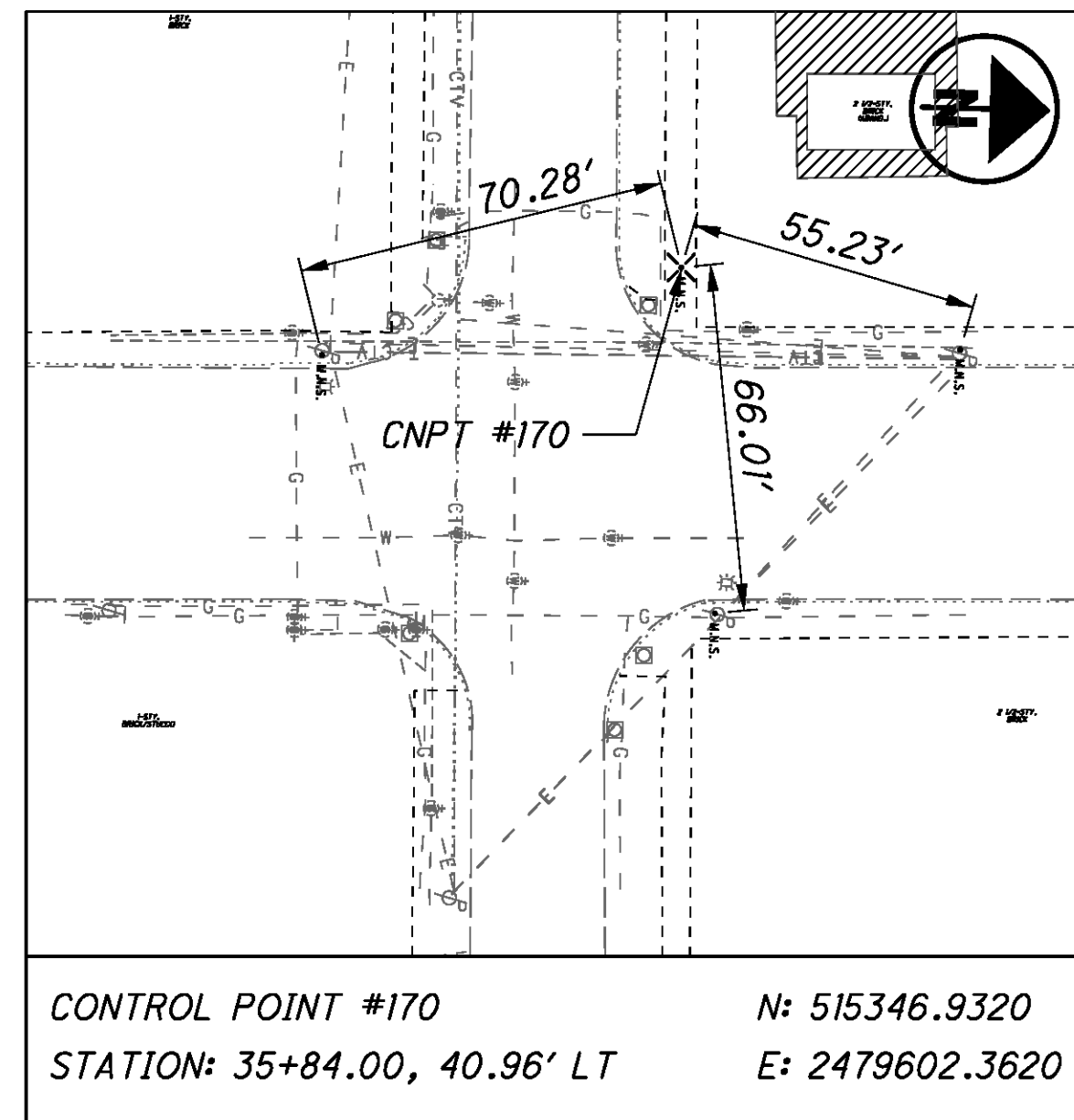
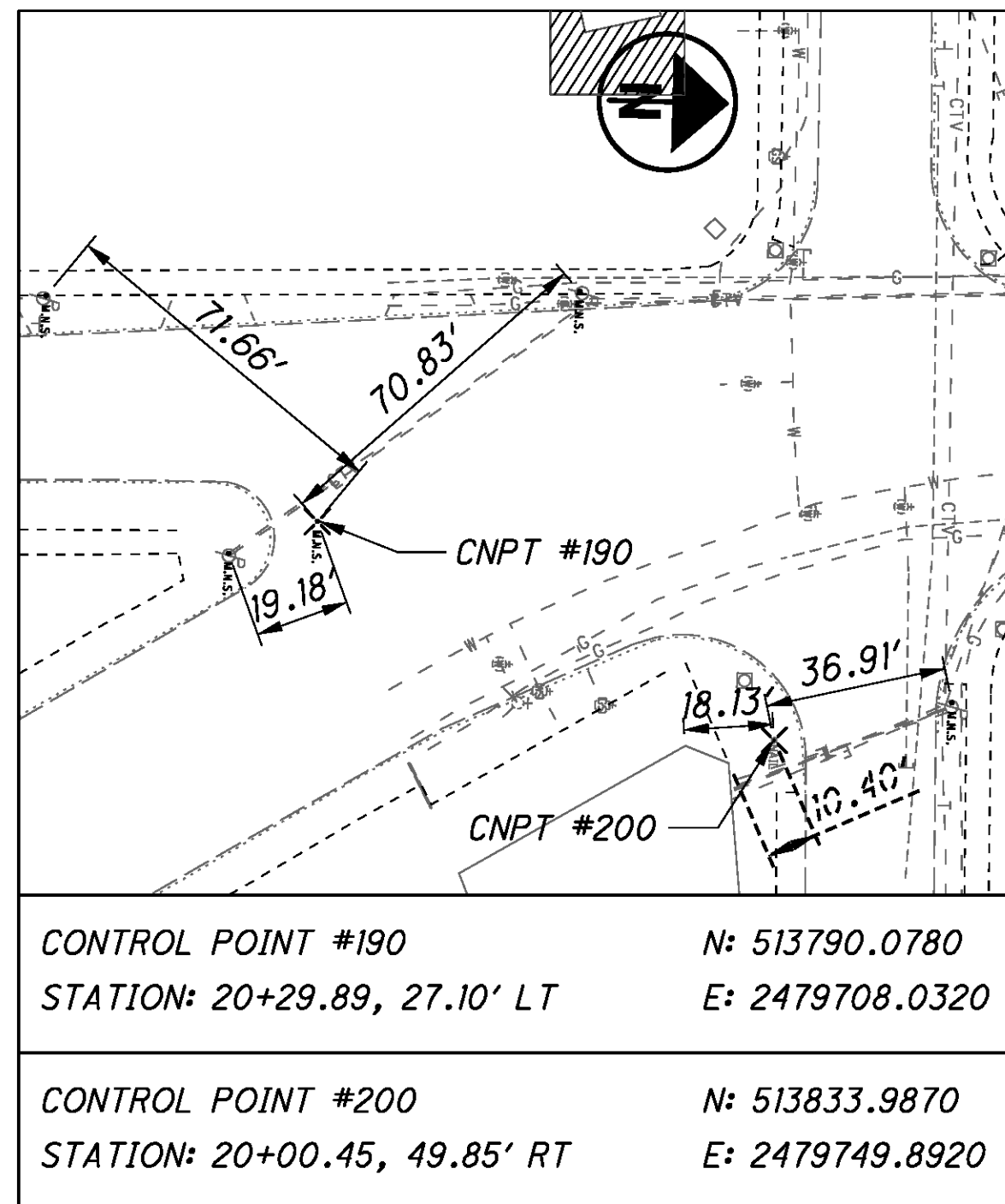
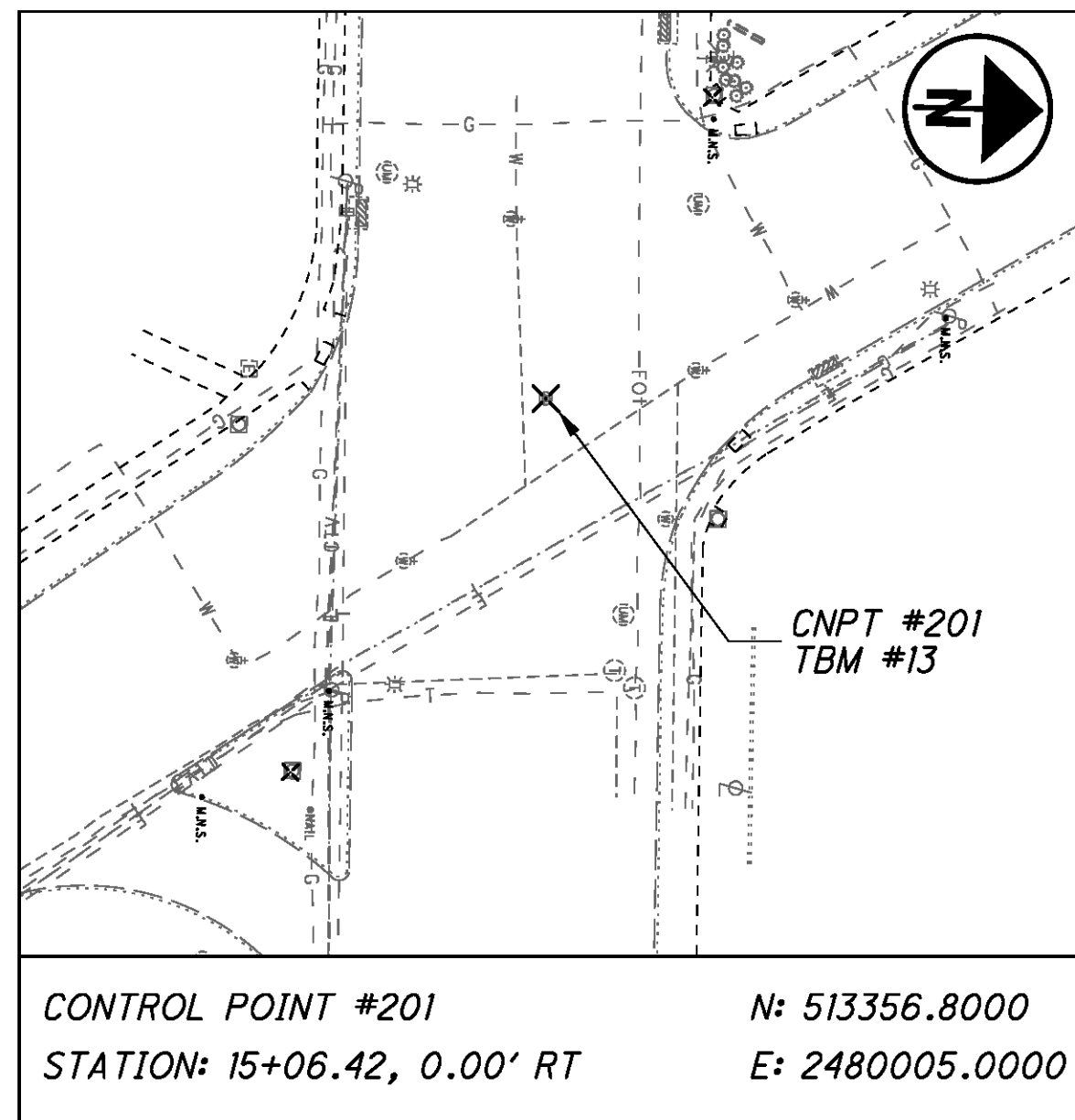
SHEET NO.	REFERENCE NO.	NOTE: POST LENGTHS REFLECT URBAN DESIGN OF 7 FT. VERTICAL CLEARANCE TO BOTTOM OF SIGN EXCEPT AS NOTED ON PLAN SHEETS					630														625					
		LOCATION	STATION	SIDE	CODE	SIGN SIZE (INCHES)	GROUND MOUNTED SUPPORT, NO. 3 POST FT	SIGN POST REFLECTOR EA	SIGN, FLAT SHEET SQ FT	SIGNING, MISC.: SIGN, DOUBLE FACED, STREET NAME,OVERHEAD MOUNTED EA	SIGNING, MISC.: SIGN, DOUBLE FACED, STREET NAME, GROUND MOUNTED EA	SIGN HANGER ASSEMBLY, MAST ARM EA	SIGN SUPPORT ASSEMBLY, POLE MOUNTED EA	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 3 EA	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EA	REMOVAL OF GROUND MOUNTED SIGN AND DELIVERY EA	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DELIVERY EA	REMOVAL OF POLE MOUNTED SIGN AND DELIVERY EA	REMOVAL OF POLE MOUNTED SIGN AND REERECTION EA		GROUND ROD EA					
24	S31	SOUTH AVE.		58+32	LT	D3-1	96" X 24"				1		1													
	S32			58+89	LT	D3-1	120" X 24"				1		1													
	S33			58+93	RT	D3-1	96" X 24"				1		1													
	S34			59+56	RT	D3-1	120" X 24"				1		1													
	R5			EXIST.														2								
	R6			EXIST.														2								
25	S35			72+00	LT	D3-1	96" X 24"				1		1													
	S36			71+53	LT	D3-1	96" X 24"				1		1													
	S37			72+07	RT	D3-1	96" X 24"				1		1													
	S38			71+61	RT	D3-1	96" X 24"				1		1													
	R7			EXIST.														2								
26	S39A			79+81	LT	D3-1	48" X 12"	15.0	1			1														
	S39B					D3-1	48" X 12"				1															
	S39C					R1-1-30	30" X 30"				6.25															
	R8			EXIST.												1	1									
	R9			EXIST.												2	1									
	R10			EXIST.													1									
	R18			EXIST.												2	1									
27	S40			90+65	LT	R9-3-18	18" X 18"	12.0		2.25																
	S41			90+80	RT								1						1							
	S42			90+61	RT	R9-3-18	18" X 18"			2.25			1													
	S43			90+30	RT	D3-1	96" X 24"				1		1													
	S44			90+00	RT									1	2							1				
28	S45			95+59	LT	D3-1	96" X 24"				1		1													
	S74			95+64	RT	R10-SPE-24	24" X 30"			5.00			1													
	S75			95+68	LT	R10-SPE-24	24" X 30"			5.00			1													
	S46			95+88	LT	R10-11C-30	30" X 42"			8.80			1													
	S47			96+19	LT	R9-3-18	18" X 18"	12.0		2.25																
	S48			96+19	RT	R9-3-18	18" X 18"	12.0		2.25																
	S49			95+18	RT									1	1							1				
29	S50			109+00	LT	D3-1	132" X 24"				1		1													
	S51			109+52	LT	D3-1	96" X 24"				1		1													
	S52			109+70	RT	D3-1	132" X 24"				1		1													
	S53			109+15	RT	D3-1	96" X 24"				1		1													
30	S54A			118+75	LT	D3-1	48" X 12"	15.0	1			1														
	S54B					D3-1	48" X 12"				1															
	S54C					R1-1-30	30" X 30"				6.25															
	S55			119+02	LT	R7-1-12	12" X 18"	12.0		1.50																
	R11			EXIST.														1								
TOTAL CARRIED TO SHEET 15								78	2	41.80	14	4	17	2	2	3	5	3	8	1		2				

SUBSUMMARY

SIGNALS

14
82

$$\frac{15}{82}$$

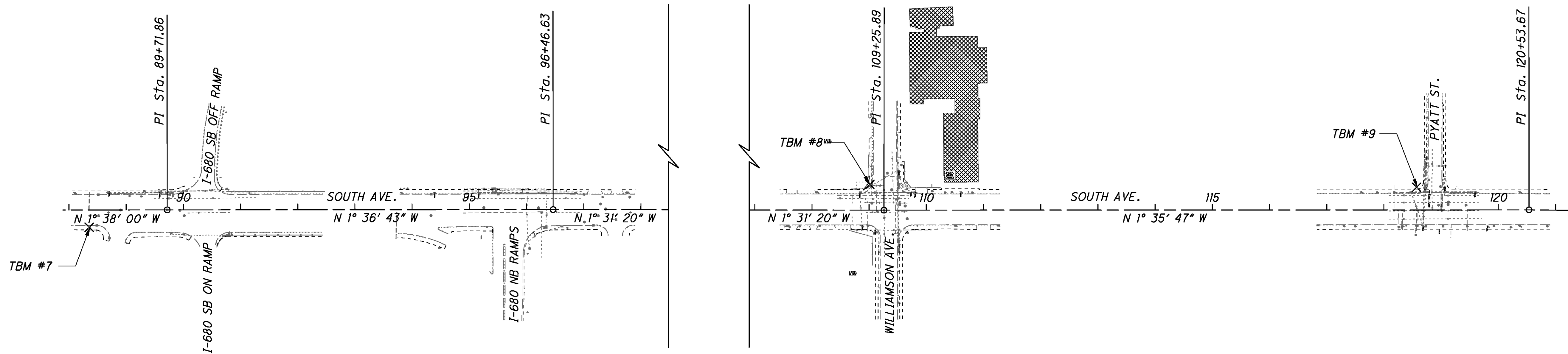
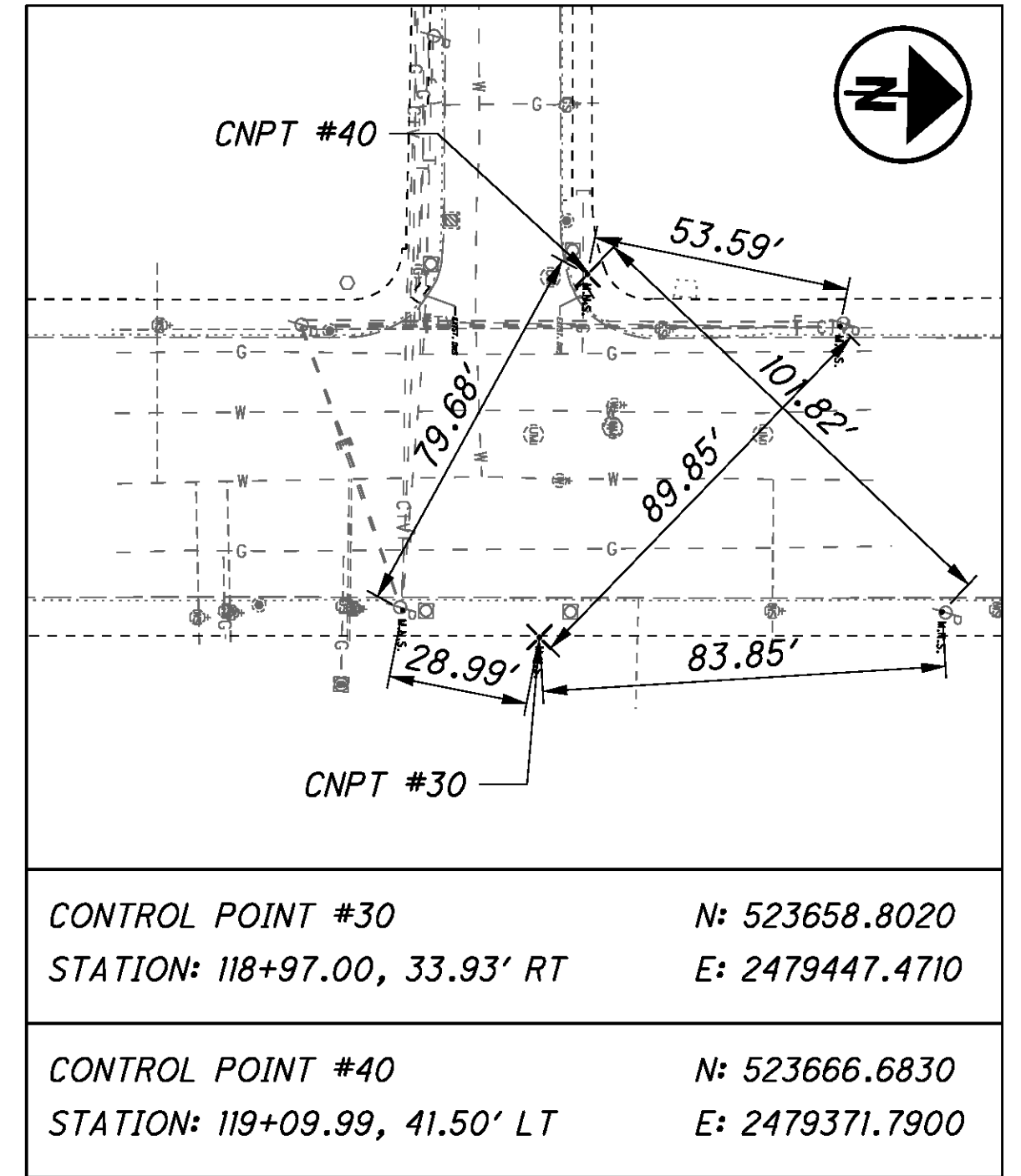
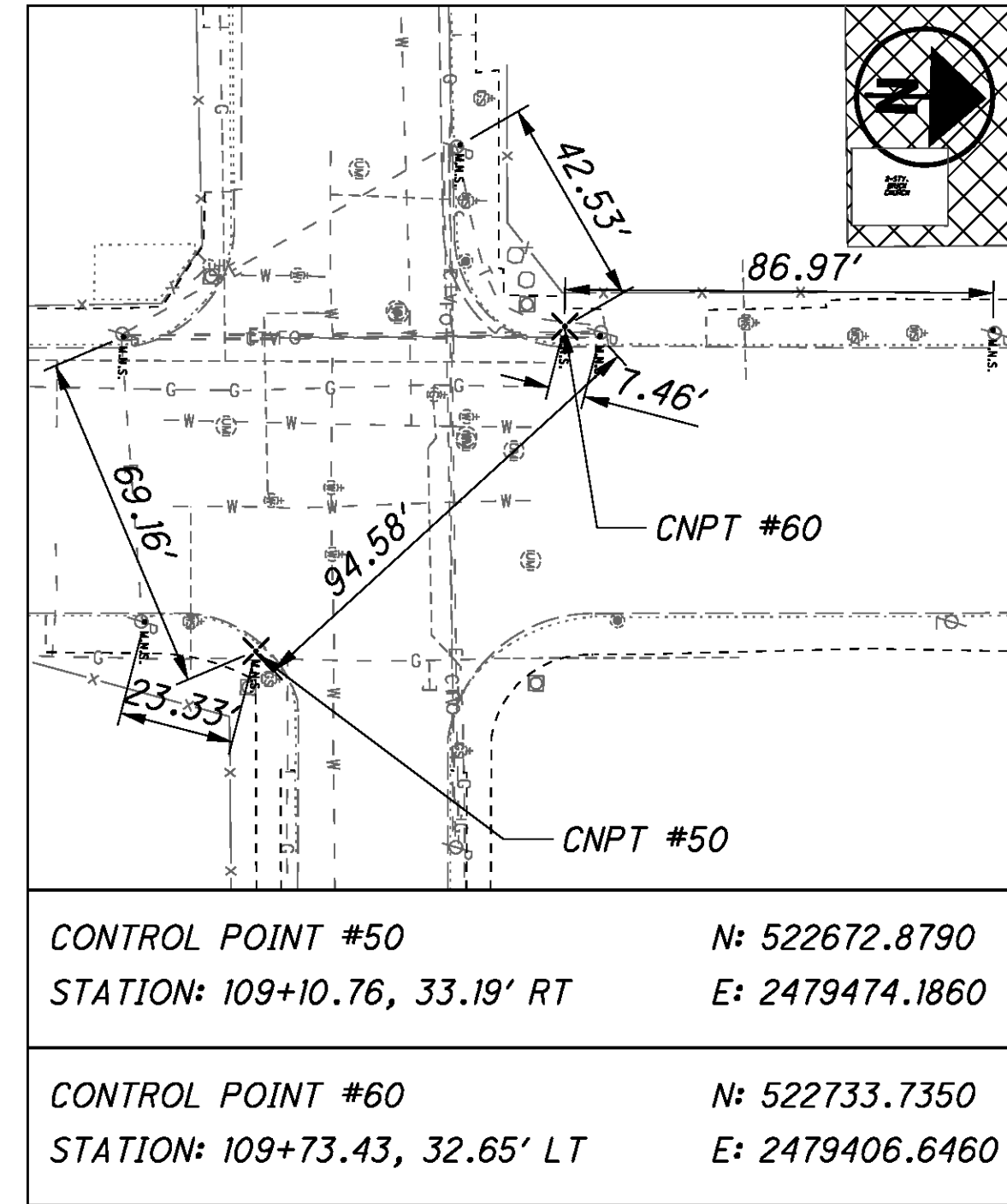
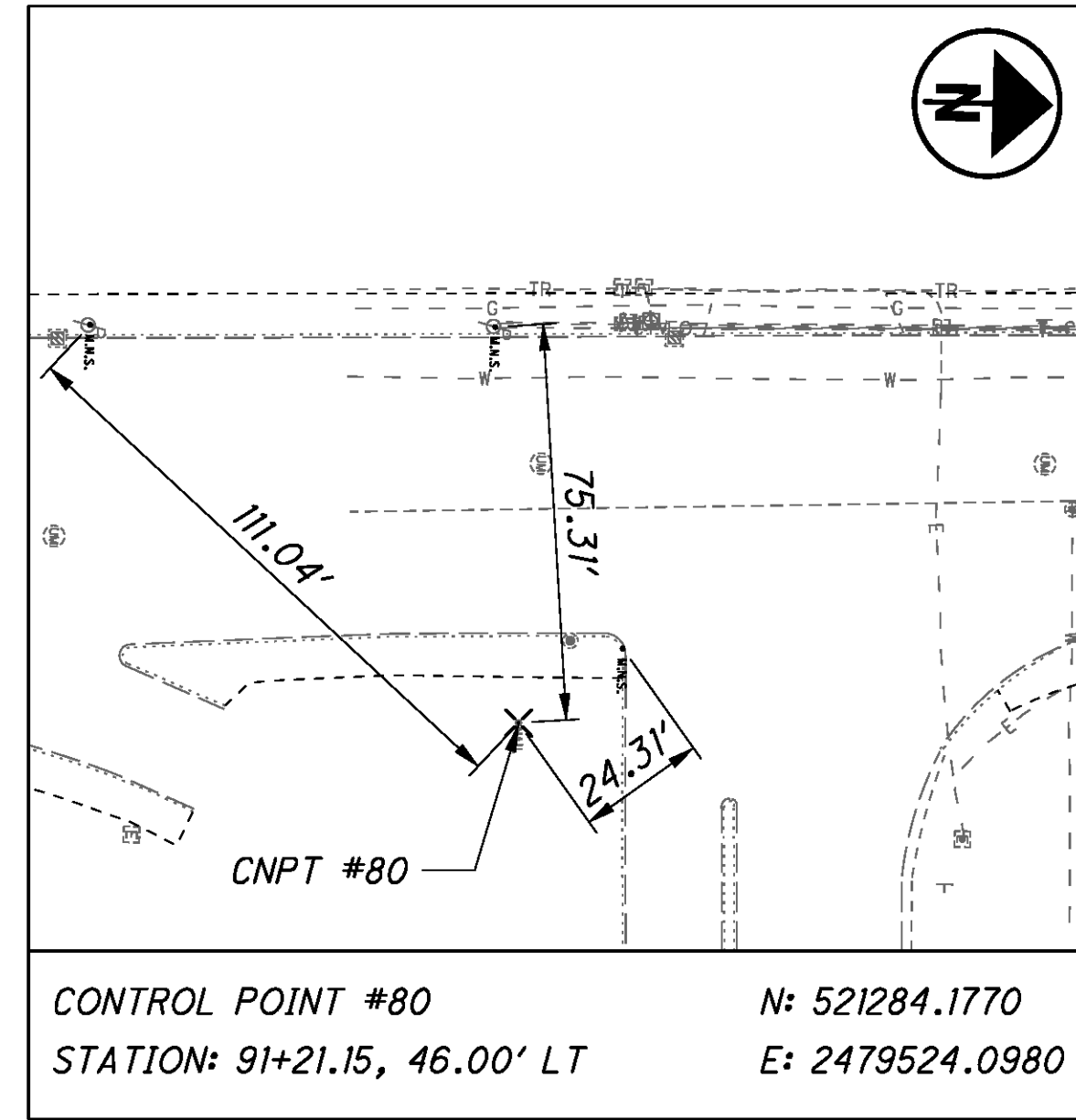
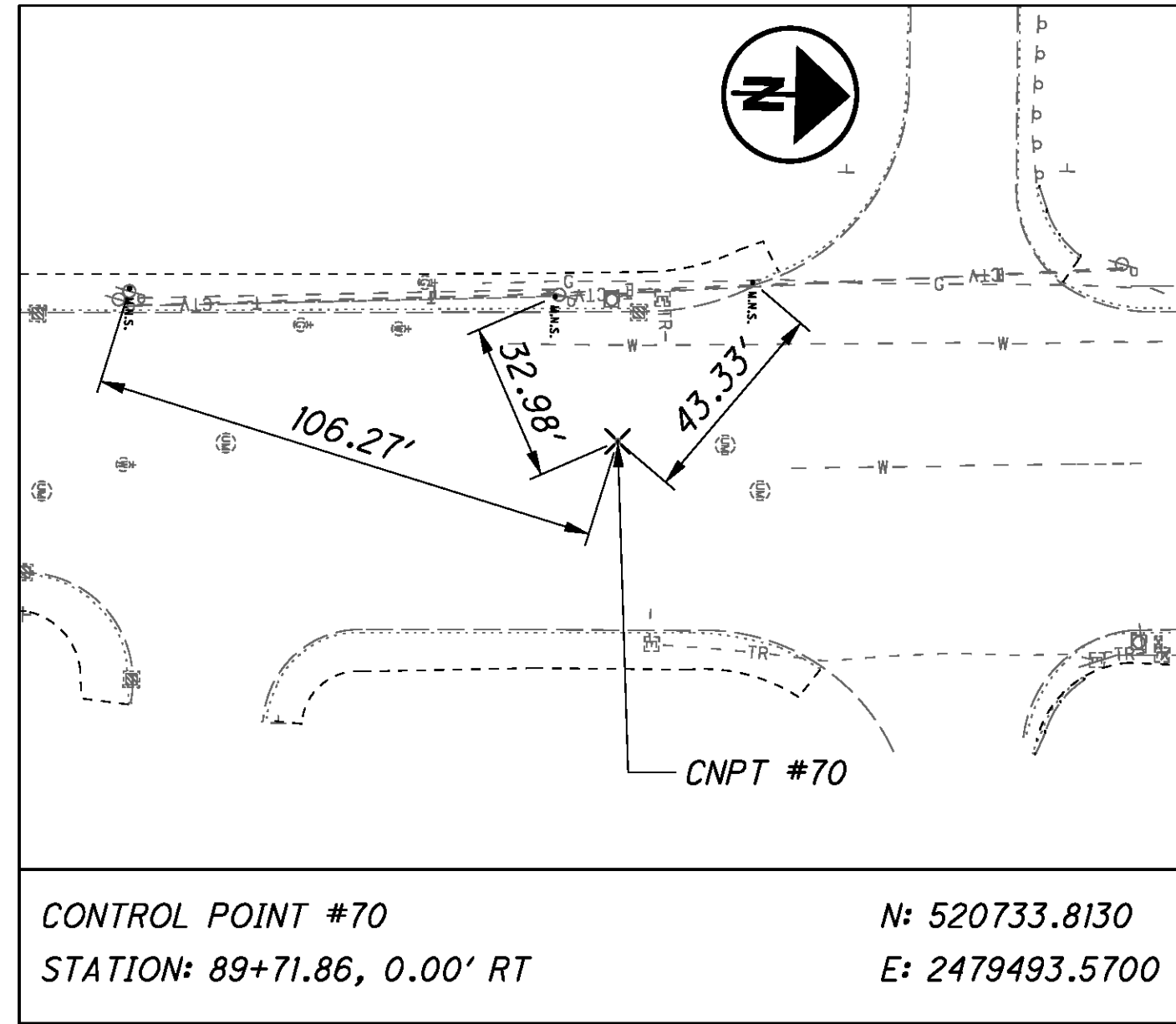


VERTICAL DATUM: NAVD 88

TBM # 1 = 1121.80'
NORTH CAP BOLT - FIRE HYDRANT
ON THE SOUTHEAST CORNER OF
SOUTH AVENUE AND JUDSON;
STA. 20+50.07, 23.91' RT.

TBM #2 = 1100.16'
NORTH CAP BOLT - FIRE HYDRANT
ON THE SOUTHWEST CORNER OF
SOUTH AVENUE AND LUCIUS;
STA. 35+37.84, 34.72' LT.

TBM #13 = 1115.92'
MONUMENT BOX AT THE
INTERSECTION OF
MIDLOTHIAN AND SOUTH AVE.
STA 15+06.42, 0.00' RT.



VERTICAL DATUM: NAVD 88

TBM #7 = 994.44'
NORTH CAP BOLT - FIRE HYDRANT
SOUTH OF DICKSON AND EAST OF
SOUTH AVENUE;
STA. 88+35.51, 30.37' RT.

TBM #8 = 960.57'
NORTH CAP BOLT - FIRE HYDRANT
ON SOUTHWEST CORNER OF
WILLIAMSON AND SOUTH AVENUE;
STA. 109+01.19, 45.04' LT.

TBM #9 = 942.35'
NORTHWEST ANCHOR BOLT OF
WARE'S AUTOMOTIVE SIGN
ON SOUTHWEST CORNER OF
PYATT ST. AND SOUTH AVENUE;
STA. 118+57.64, 39.71' LT



CURB RAMP DATA

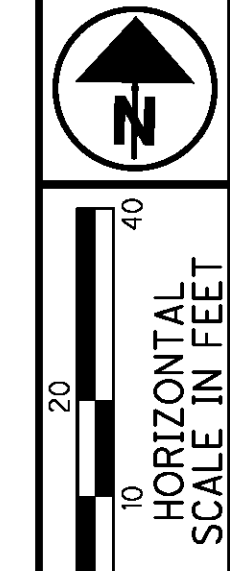
NOTE: STATION AND OFFSET PROVIDED AT CENTER OF RAMP/BACK OF CURB

- (CR1) CURB RAMP COMB. TYPE C2
STA. 14+31.55, 24.33' LT
- (CR2) CURB RAMP TYPE B2
STA. 116+89.81, 22.67' LT
- (CR3) CURB RAMP TYPE B2
STA. 117+42.35, 57.44' RT
- (CR4) CURB RAMP TYPE C1
STA. 117+25.21, 45.40' RT
- (CR5) CURB RAMP TYPE C1
STA. 117+06.06, 36.60' RT
- (CR6) CURB RAMP TYPE C1
STA. 116+99.01, 48.93' RT

SOUTH AVENUE B CONST.
P.I. STA. 15+06.42
 $\Delta = 4^{\circ}56'30''$
NO CURVE

NOTES:

1. REMOVAL OF EXISTING SPAN WIRE MOUNTED AND STRAIN POLE MOUNTED SIGNS SHALL BE PAID FOR AS PART OF THE SIGNAL REMOVAL.
2. SEE SHEET 35 FOR TRAFFIC SIGNAL PLAN.
3. ALL STATIONING IS REFERENCED FROM SOUTH AVENUE UNLESS OTHERWISE NOTED.

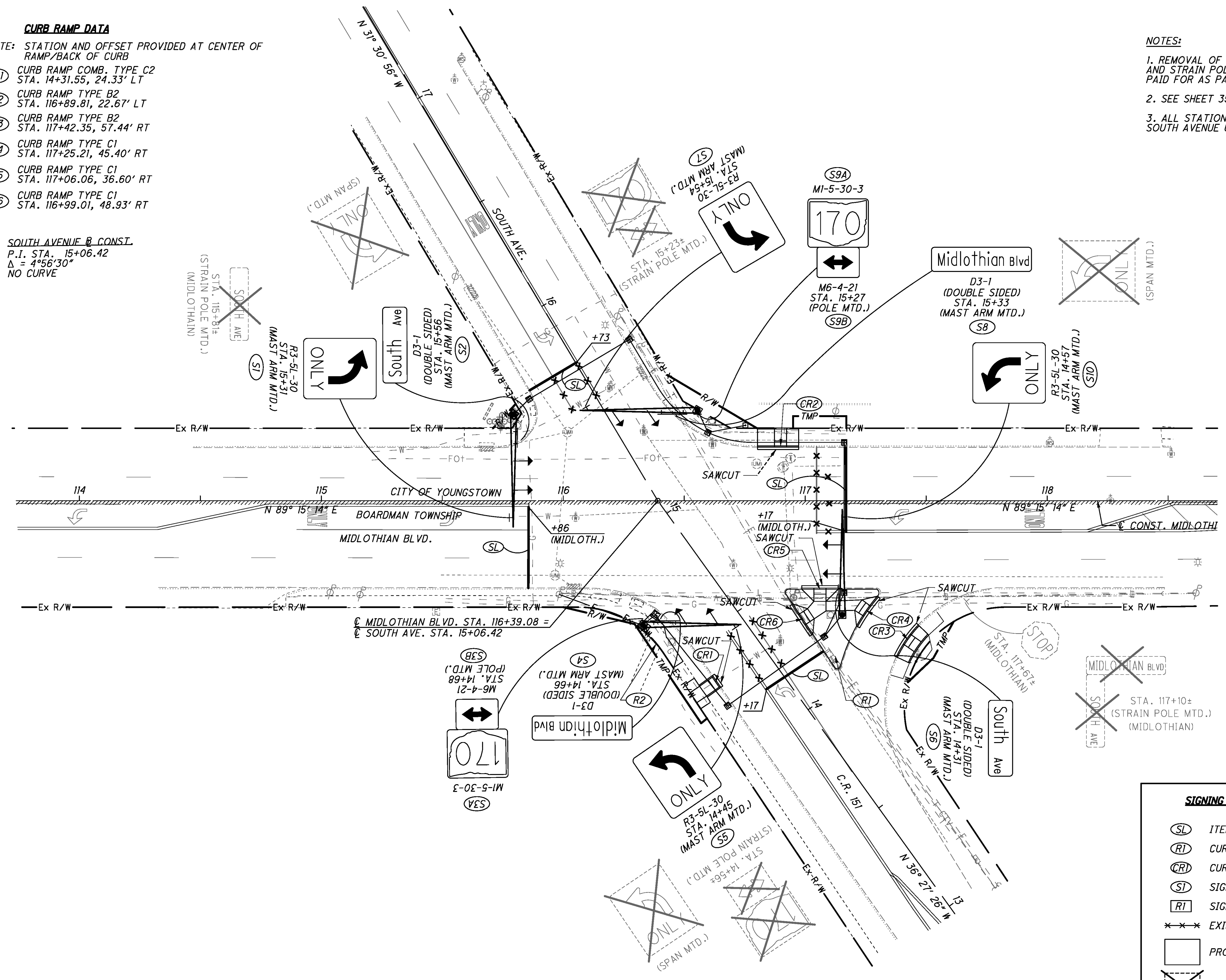


**SIGNING AND PAVEMENT MARKING PLAN
SOUTH AVE. & MIDLOTHIAN BLVD.**

**MAH-SOUTH
AVENUE SIGNALS**

Batchplot Spec: \0330share\0330share\standards\batchplot\batchplot.spc
Pen Table: S:\std\batchplot\usn\VB\pen\VB\ms_std.tbl
Plot Driver: S:\std\batchplot\usn\VB\PDF\pdfcig

Model: Sheet
Printed: 1/20/2015 3:36:26 PM By: ikasek
File: \0330share\0330share\Traffic\Sheets\87408TP001.dgn



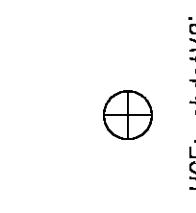
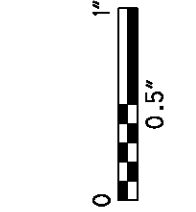
SIGNING AND PAVEMENT MARKING LEGEND

- (SL) ITEM 644 - STOP LINE, 24"
- (RI) CURB/SIDEWALK REMOVAL DESIGNATION
- (CR1) CURB RAMP DESIGNATION
- (S1) SIGN DESIGNATION
- (R1) SIGN REMOVAL DESIGNATION
- EXISTING PAVEMENT MARKING REMOVED
- [] PROPOSED SIGN
- [X] EXISTING SIGN TO BE REMOVED

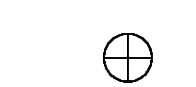


ms consultants, inc.
msconsultants.com

UCF: oha01VBI
PCF: 60-10586_Columbus_No_AScale_South Avenue Signals
www.msconsultants.com



Batchplot Spec: \\0330share\160\10586\standards\plotdrv\batchplot.spc
Pen Table: S:\std\plotting\ustn\VB\pen\VB1.ms_std.tbl
Plot Driver: S:\std\plotting\ustn\VB\PDF\plc1g



3.4" x 22"

View: FENCE_VEW1
By: lkausek

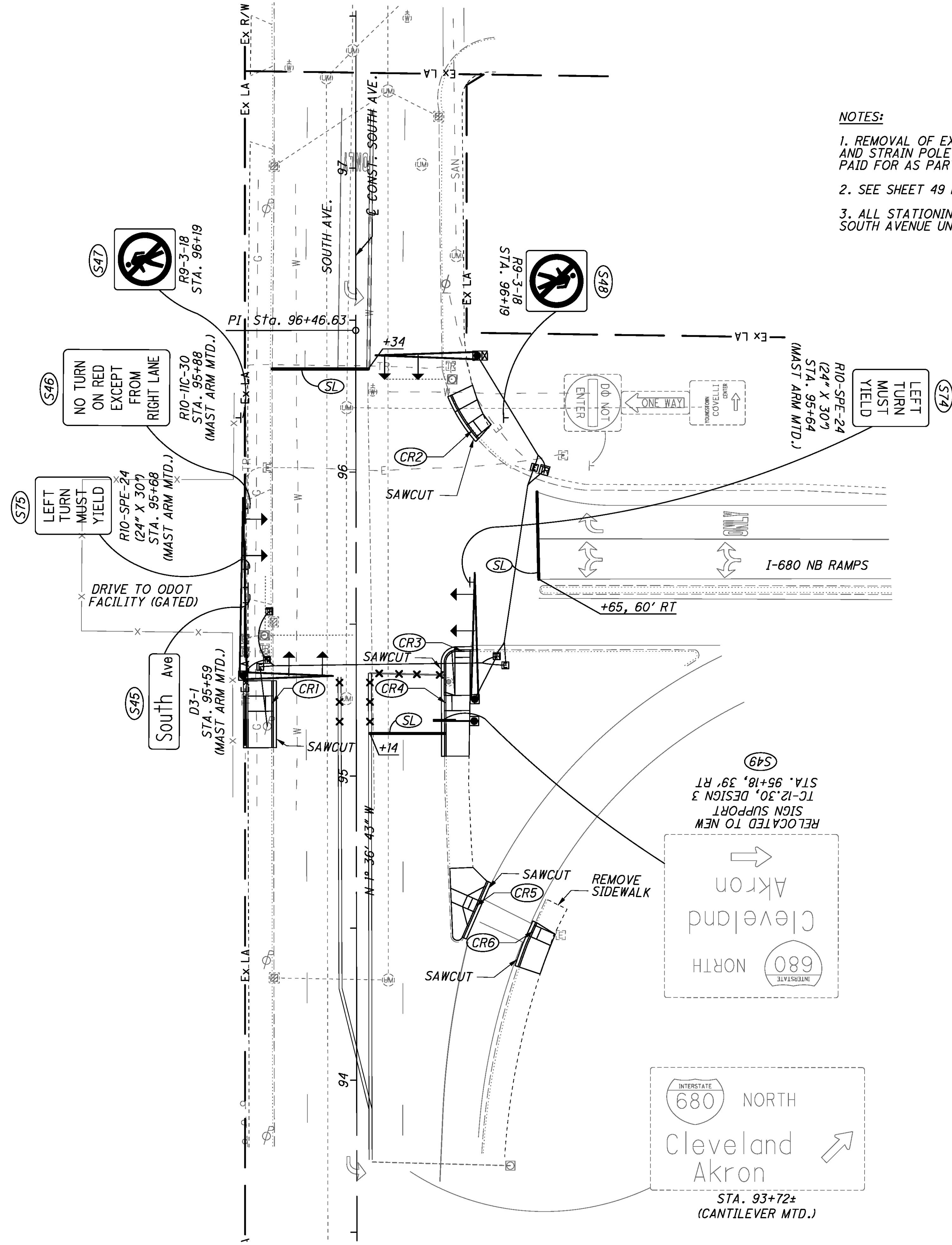
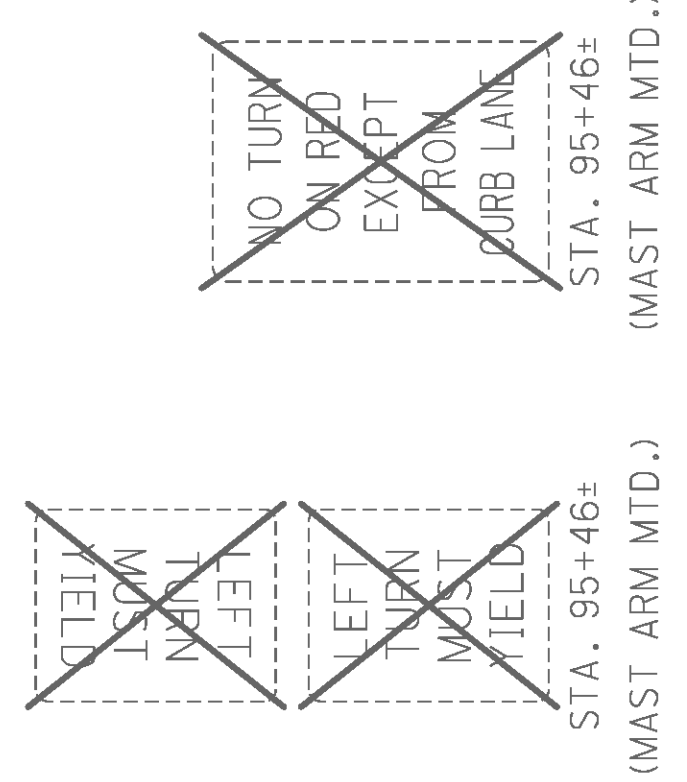
Model: Sheet
Printed: 1/20/2015 3:36:35 PM
File: \\0330share\160\10586\Traffic\Sheets\874081P009.dgn

CURB RAMP DATA

NOTE: STATION AND OFFSET PROVIDED AT CENTER OF RAMP/BACK OF CURB

- (CR1) CURB RAMP TYPE B2
STA. 95+23.91 27.77' LT
- (CR2) CURB RAMP TYPE B1
STA. 96+13.69, 38.33' RT
- (CR3) CURB RAMP TYPE C2
STA. 95+41.00, 34.96' RT
- (CR4) CURB RAMP TYPE B2
STA. 95+24.00, 29.50' RT
- (CR5) CURB RAMP TYPE C1
STA. 94+57.24, 39.28' RT
- (CR6) CURB RAMP TYPE B1
STA. 94+48.92, 58.15' RT

SOUTH AVENUE B CONST.
P.I. STA. 96+46.63
 $\Delta = 0^\circ 05' 23''$
NO CURVE



NOTES:

1. REMOVAL OF EXISTING MAST ARM MOUNTED AND STRAIN POLE MOUNTED SIGNS SHALL BE PAID FOR AS PART OF THE SIGNAL REMOVAL.
2. SEE SHEET 49 FOR TRAFFIC SIGNAL PLAN.
3. ALL STATIONING IS REFERENCED FROM SOUTH AVENUE UNLESS OTHERWISE NOTED.

SIGNING AND PAVEMENT MARKING LEGEND

- (SL) ITEM 644 - STOP LINE, 24"
- (RI) CURB/SIDEWALK REMOVAL DESIGNATION
- (CR) CURB RAMP DESIGNATION
- (SI) SIGN DESIGNATION
- [RI] SIGN REMOVAL DESIGNATION
- EXISTING PAVEMENT MARKING REMOVED
- [] PROPOSED SIGN
- [X] EXISTING SIGN TO BE REMOVED



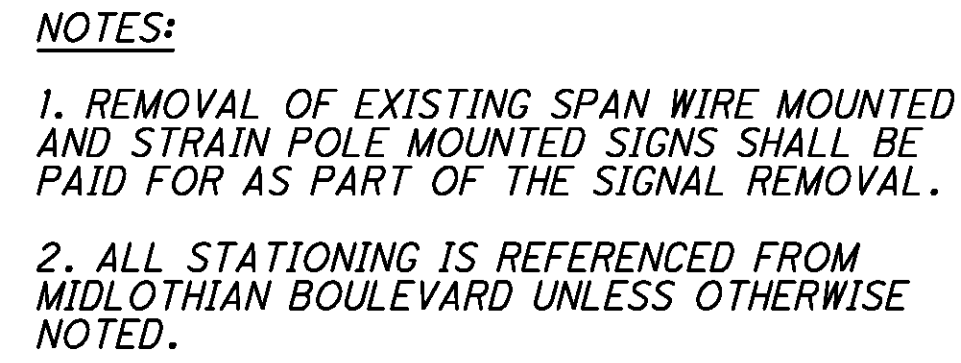
0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

**SIGNING AND PAVEMENT MARKING PLAN
SOUTH AVE. & NB I-680 RAMPs**

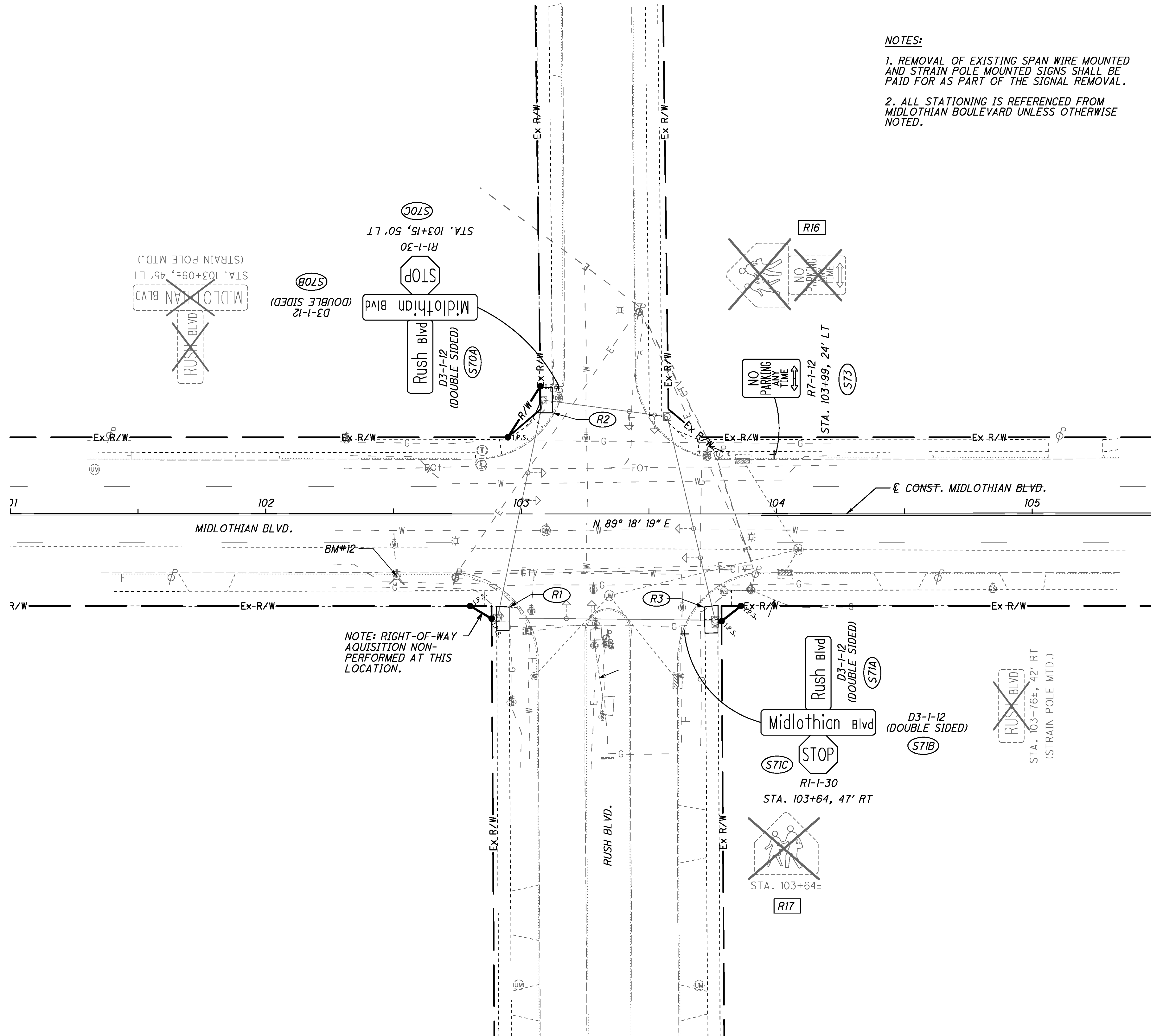
MAH-SOUTH AVENUE SIGNALS

- | | |
|---|-----------------------------------|
|  | ITEM 644 - STOP LINE, 24" |
|  | CURB/SIDEWALK REMOVAL DESIGNATION |
|  | CURB RAMP DESIGNATION |
|  | SIGN DESIGNATION |
|  | SIGN REMOVAL DESIGNATION |
|  | EXISTING PAVEMENT MARKING REMOVED |
|  | PROPOSED SIGN |
|  | EXISTING SIGN TO BE REMOVED |



**MAH-SOUTH
AVENUE SIGNALS**

$$\frac{32}{82}$$



NOTES:

1. REMOVAL OF EXISTING SPAN WIRE MOUNTED AND STRAIN POLE MOUNTED SIGNS SHALL BE PAID FOR AS PART OF THE SIGNAL REMOVAL.
2. ALL STATIONING IS REFERENCED FROM MIDLOTHIAN BOULEVARD UNLESS OTHERWISE NOTED.

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION			
DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	REMOVE & REERECT	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE			X
(1) POLE MOUNTED CONTROLLER & CABINET	X		
(8) 3-SECTION VEHICULAR SIGNAL HEADS	X		
(4) ANCHOR BASE FOUNDATIONS			X
(3) STRAIN POLE MOUNTED STREET NAME SIGNS	X		
(4) STRAIN POLES	X		

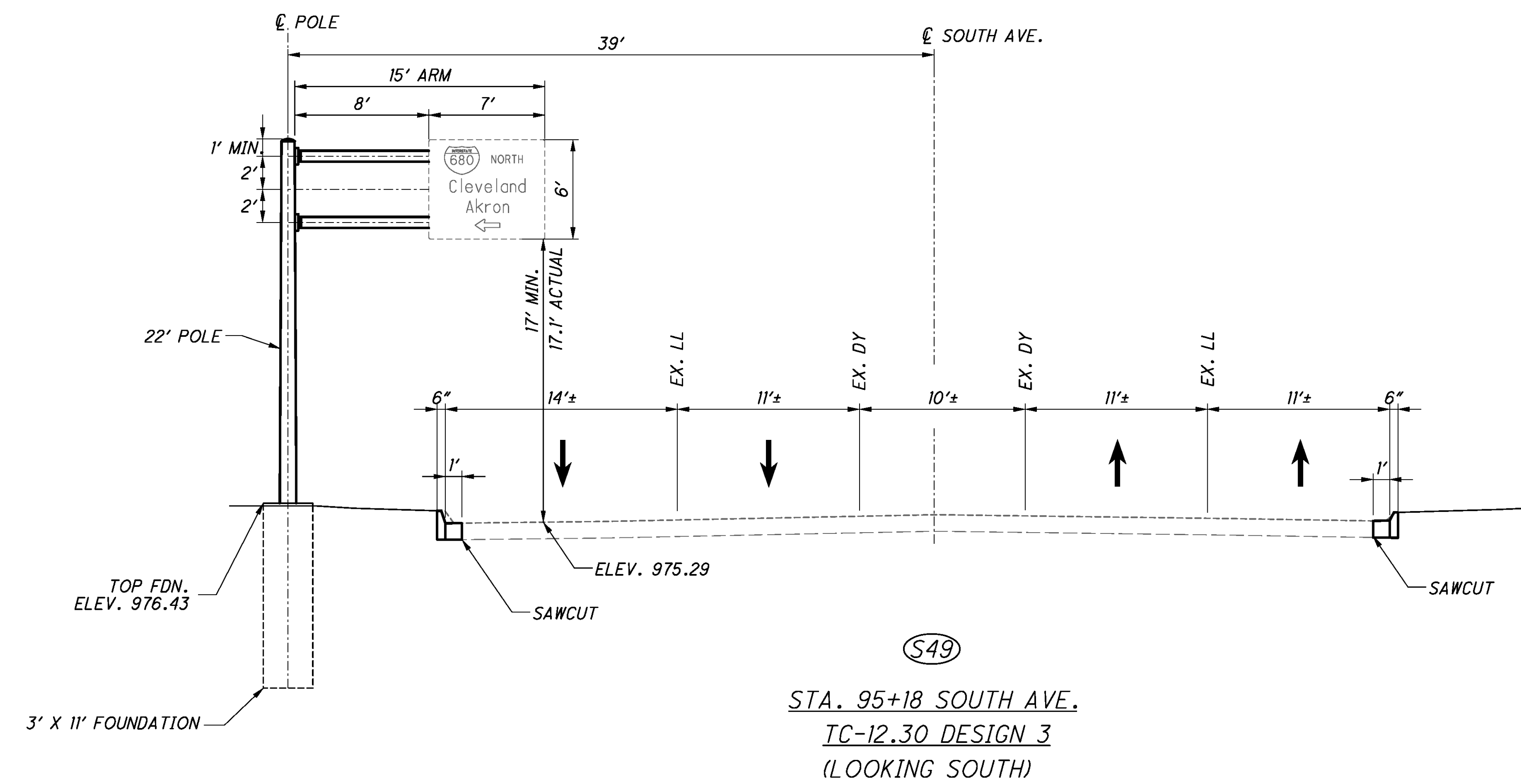
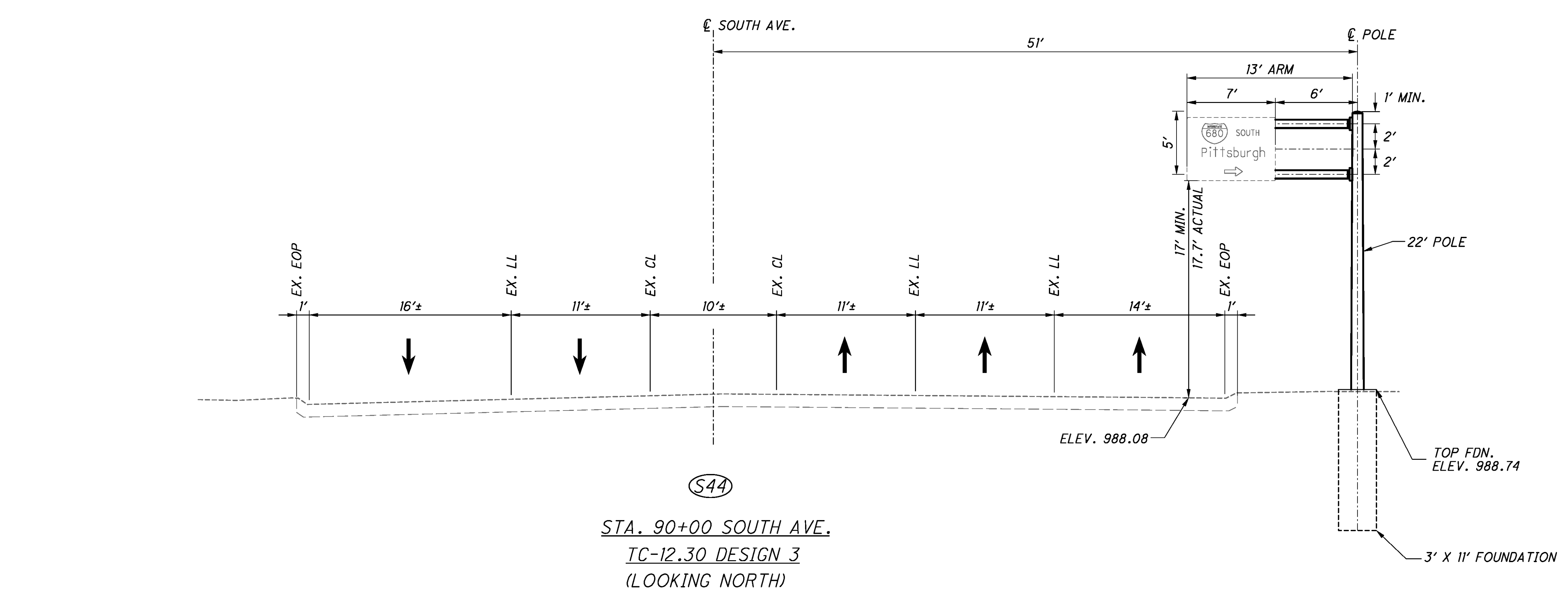
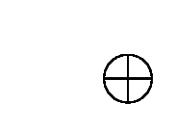
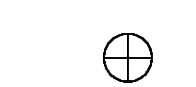
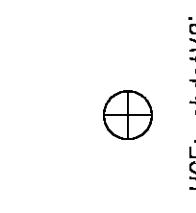
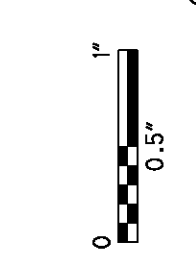
CALCULATED

CHECKED

SIGNING AND PAVEMENT MARKING PLAN
MIDLOTHIAN BLVD. & RUSH BLVD.

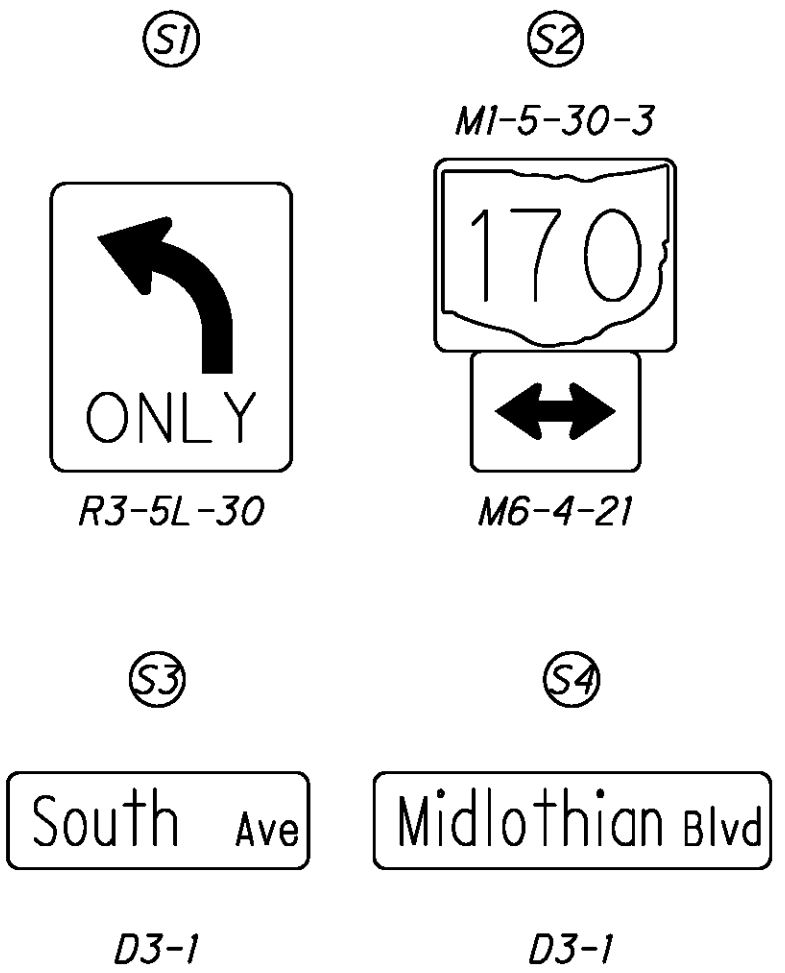
**MAH-SOUTH
AVENUE SIGNALS**

$$\frac{33}{82}$$





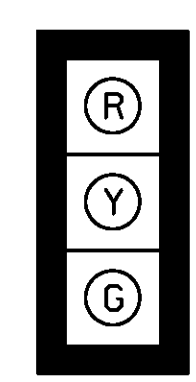
SIGNS



D3-1 SIGNS SHALL BE
DOUBLE-FACED AND
SUSPENDED DIRECTLY
BELOW THE MAST ARM

SIGNAL HEADS

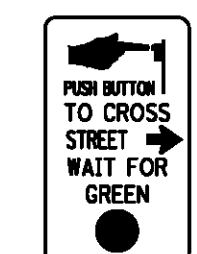
12" LED LENSES
W/REFLECTIVE
BACKPLATES



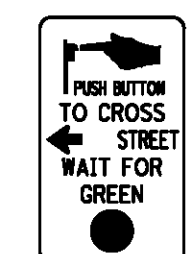
1-8

RIGID MOUNTED PER
TC-85.20 WITH YELLOW
SECTION CENTERED
ON MAST ARM

**PEDESTRIAN
PUSHBUTTON
SIGNS**



R10-4AR-9
POLES A,C,E



R10-4AL-9
POLES B,D

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE		X
(1) POLE MOUNTED CONTROLLER & CABINET	X	
MESSENGER WIRE		X
(3) SPAN MOUNTED SIGNS	X	
(7) POLE MOUNTED SIGNS	X	
(4) STRAIN POLES	X	
(4) ANCHOR BASE FOUNDATIONS		X
(3) 5-SECTION VEHICULAR SIGNAL HEADS	X	
(5) 3-SECTION VEHICULAR SIGNAL HEADS	X	

NOTES:

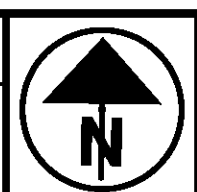
1. AERIAL POWER SERVICE CONNECTION TO
BE MADE BY OHIO EDISON.
2. SEE SHEET 20 FOR SIGNING AND
PAVEMENT MARKING PLAN.
3. ALL STATIONING IS REFERENCED FROM
SOUTH AVENUE UNLESS OTHERWISE NOTED.

CAUTION: UNDERGROUND UTILITIES

CONTRACTOR SHALL HAND EXCAVATE, WHERE
NECESSARY, POLE AND PEDESTAL
FOUNDATIONS, PULL BOXES, AND CONDUIT
TRENCH TO ENSURE CLEARANCE FROM
UNDERGROUND GAS, COMMUNICATION,
FIBER-OPTIC, ELECTRICAL, AND WATER LINES.

TRAFFIC SIGNAL LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD
- ☒ POLE MOUNTED CONTROLLER CABINET
- ☐ PULL BOX (BY SIZE)
- ☒ PROPOSED SIGNAL SUPPORT
- ☒ EXISTING STRAIN POLE/PEDESTAL
- ☐ LX// POWERHEAD LOOP DETECTOR
- ☐ PEDESTRIAN PEDESTAL



0 10 20 30 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

**TRAFFIC SIGNAL PLAN
SOUTH AVE. & MIDLOTHIAN BLVD.**

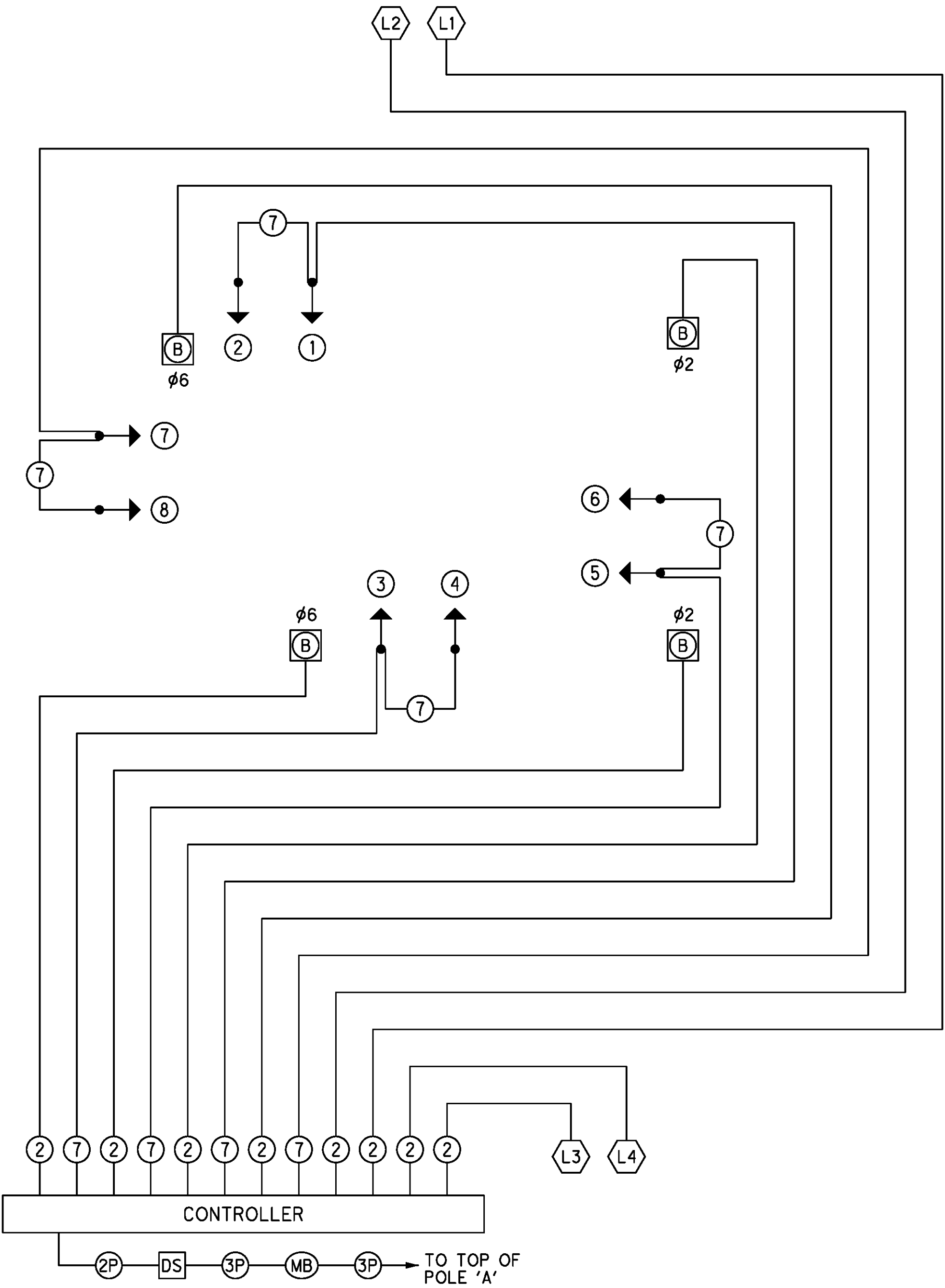
**MAH-SOUTH
AVENUE SIGNALS**

35
82

LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	6' X 25'	PRESENCE	3	4	ø6	1	1	ø6	SBLL
L2	POWERHEAD	6' X 25'	PRESENCE	5	4	ø6	1	2	ø6	SBRL
L3	POWERHEAD	6' X 25'	PRESENCE	3	4	ø2	2	1	ø2	NBLL
L4	POWERHEAD	6' X 25'	PRESENCE	5	4	ø2	2	2	ø2	NBRL

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	-	NB	-	EB	-	SB	-	WB
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
MIN. GREEN		10		20		10		20
VEH. EXTENSION		4				4		
MAX. GREEN I		25		25		25		25
MAX. GREEN II								
YELLOW CLEAR		4.3		4.2		4.3		4.2
RED CLEAR		2.0		2.0		2.0		2.0
WALK		7		7		7		7
PED CLEAR (FDW)		11		7		11		7
RECALL		NONE		MAX		NONE		MAX
LOCK/NON-LOCK		NON-LOCK		LOCK		NON-LOCK		LOCK

FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	Ø2 R	R
	Y	Ø2 Y	
	G	Ø2 G	
3,4 (SB)	R	Ø6 R	R
	Y	Ø6 Y	
	G	Ø6 G	
5,6 (EB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	
7,8 (WB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	

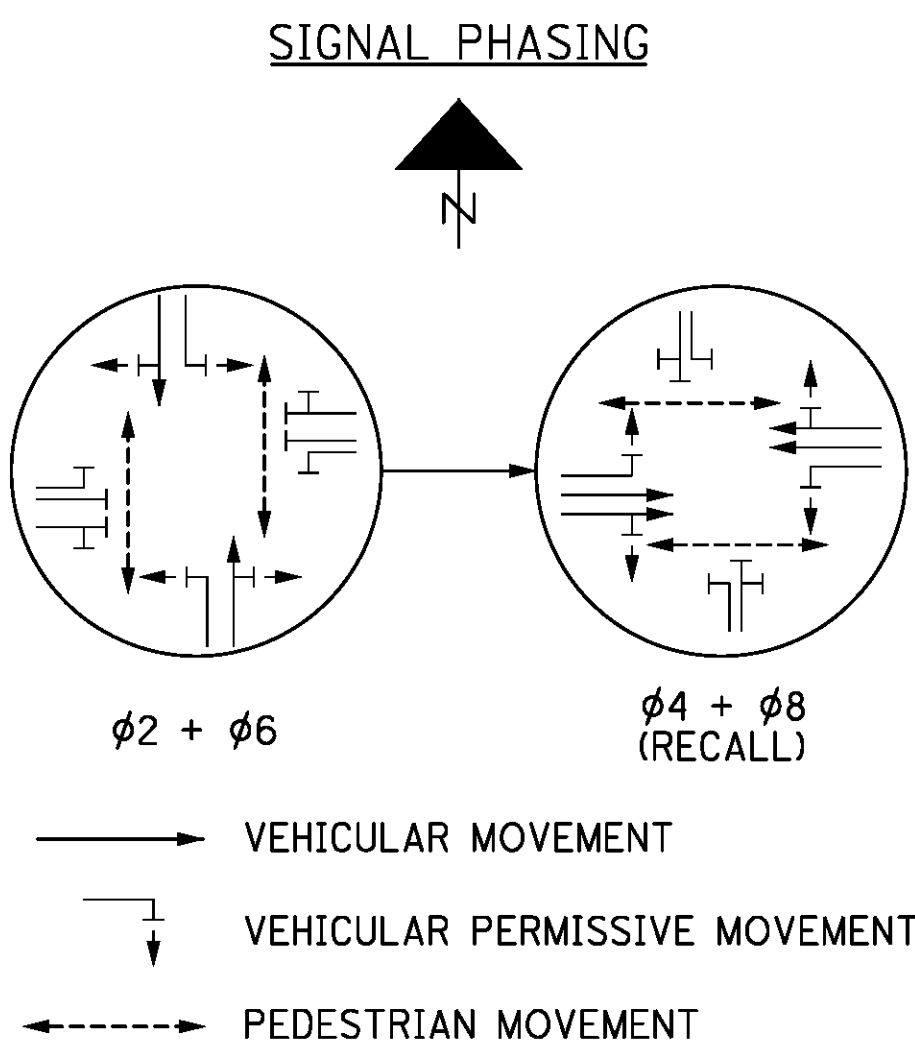


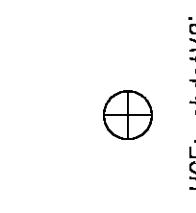
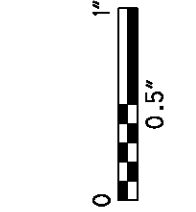
LEGEND

- | | |
|---|--------------------------------|
|  | VEHICLE LOOP DETECTOR |
|  | PEDESTRIAN PUSHBUTTON |
|  | VEHICULAR SIGNAL HEAD (3 SEC.) |
|  | 2/C #6 AWG. (POWER) |
|  | 3/C #6 AWG. (POWER) |
|  | 2/C #14 AWG (LEAD-IN CABLE) |
|  | 7/C #14 AWG |
|  | DISCONNECT SWITCH |
|  | METER BASE |

NOTES:

1. SEE SHEET 57 FOR SIGNAL
SUPPORT ORIENTATION TABLE.
2. SEE SHEET 56 FOR SIGNAL
COORDINATION TIMING TABLE.

[illegible]



SIGNS

(S1)



R10-11B-24

(S2)

South Ave

(S3)

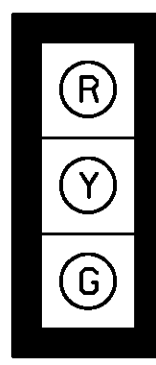
Judson Ave

D3-1

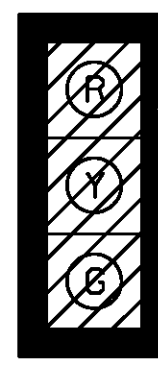
D3-1

D3-1 SIGNS SHALL BE
DOUBLE-FACED AND
SUSPENDED DIRECTLY
BELOW THE MAST ARM

SIGNAL HEADS
12" LED LENSES
W/REFLECTIVE
BACKPLATES



3-8



1,2,9,10
OPTICALLY
PROGRAMMED

RIGID MOUNTED PER
TC-85.20 WITH YELLOW
SECTION CENTERED
ON MAST ARM

**PEDESTRIAN
PUSHBUTTON
SIGNS**



R10-4AR-9
POLES B,C,E



R10-4AL-9
POLE D

POLE A SIGNAL SUPPORT
W/1) POLE MOUNTED CONTROLLER,
METER BASE & DISCONNECT SWITCH
STA. 21+72, 55' LT

3" CONDUIT = 37'
W/2) 7/C & 2) 2/C
(TRENCH = 10')
(TYPE 'B' = 27')

2" CONDUIT
W/1) 2/C
(TRENCH = 12')

AERIAL POWER SERVICE
BY OTHERS

24" PULL BOX
STA. 21+69, 45' LT

3" CONDUIT
(1) W/4) 7/C, (7) 2/C
(TRENCH = 10')

POLE D PED PEDESTAL
W/1) PED PUSHBUTTON W/SIGN
STA. 21+72, 40' LT

POLE C SIGNAL SUPPORT
W/1) PED PUSHBUTTON W/SIGN
STA. 21+24, 45' LT

2" CONDUIT = 92'
W/1) 2/C
(TRENCH = 84')
(TYPE 'A' = 26')

18" PULL BOX
STA. 21+34, 50' LT

2" CONDUIT
W/2) 7/C & 1) 2/C
(TRENCH = 10')

18" PULL BOX
STA. 20+43 68' LT

EXISTING POWER SOURCE
STA. 21+81, 27' LT±

3" CONDUIT = 87'
W/2) 7/C, (3) 2/C
(TRENCH = 11')
(TYPE 'B' = 76')
CAUTION: GAS LINE

POLE E PED PEDESTAL
W/1) PED PUSHBUTTON W/SIGN
STA. 21+61, 35' RT

2" CONDUIT
W/1) 2/C
(TRENCH = 14')
CAUTION: GAS LINE

18" PULL BOX
STA. 21+43, 40' RT

3" CONDUIT = 47'
W/2) 7/C, (1) 2/C
(TRENCH = 8')
(TYPE 'B' = 39')

POLE B SIGNAL SUPPORT
W/DUAL MAST ARMS &
(1) PED PUSHBUTTON W/SIGN
STA. 20+89, 35' RT

18" PULL BOX
STA. 20+93, 33' RT

2" CONDUIT
W/2) 7/C, (1) 2/C
(TRENCH = 7')

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

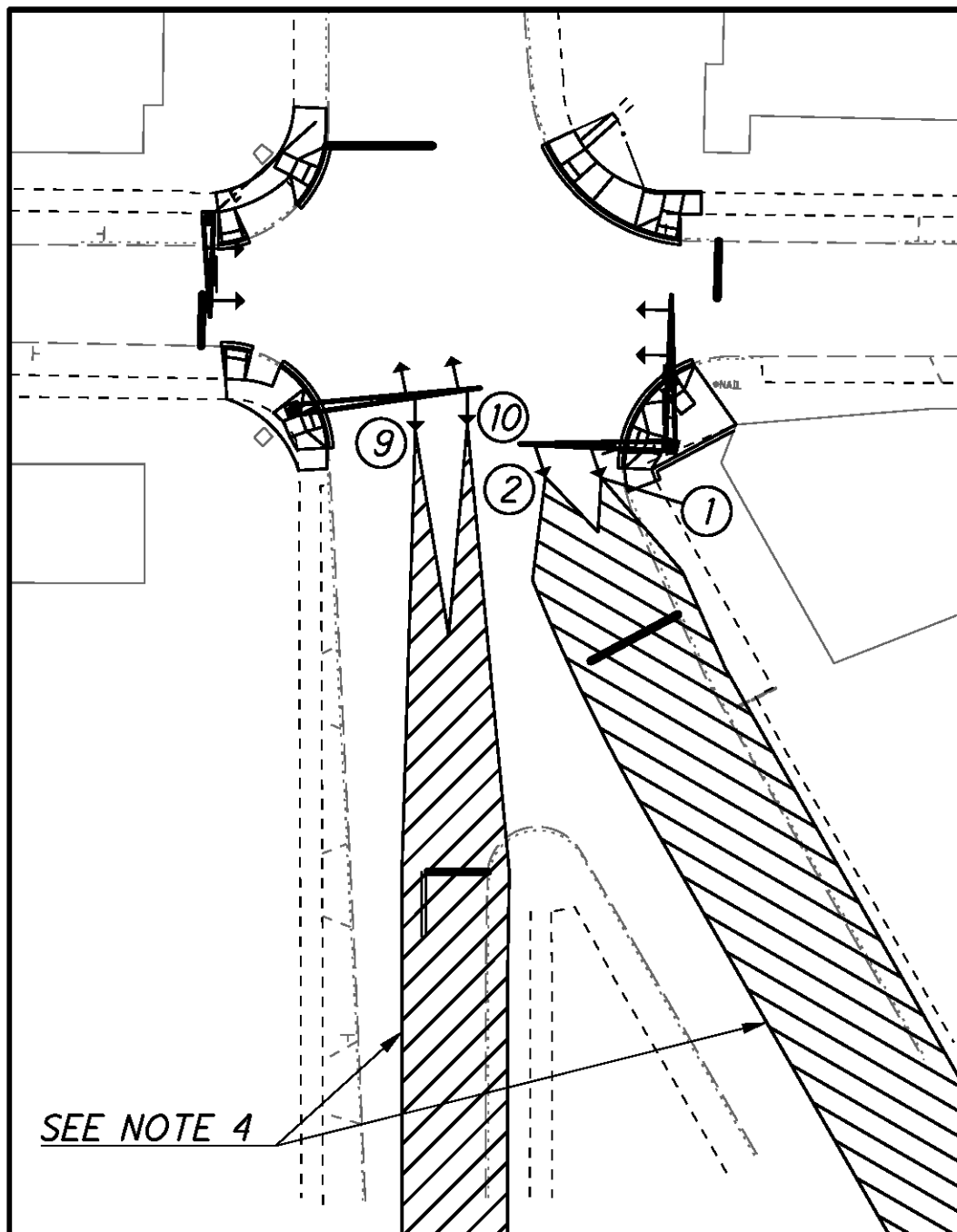
DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE		X
(1) POLE MOUNTED CONTROLLER & CABINET	X	
(10) 3-SECTION VEHICULAR SIGNAL HEADS	X	
MESSENGER WIRE		X
(1) SPAN MOUNTED SIGN	X	
(2) POLE MOUNTED SIGNS	X	
(4) STRAIN POLES	X	
(4) ANCHOR BASE FOUNDATIONS		X

NOTES:

1. AERIAL POWER SERVICE CONNECTION TO
BE MADE BY OHIO EDISON.
2. SEE SHEET 21 FOR SIGNING AND PAVEMENT
MARKING PLAN.
3. ALL STATIONING IS REFERENCED FROM
SOUTH AVENUE UNLESS OTHERWISE NOTED.
4. VISIBILITY LIMITS SHALL MAINTAIN
MINIMUM SIGHT DISTANCE OF 325 FEET IN
ADVANCE OF THE STOP BAR.

CAUTION: UNDERGROUND UTILITIES

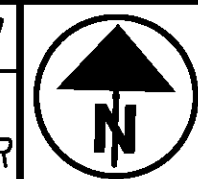
CONTRACTOR SHALL HAND EXCAVATE, WHERE
NECESSARY, POLE AND PEDESTAL
FOUNDATIONS, PULL BOXES, AND CONDUIT
TRENCH TO ENSURE CLEARANCE FROM
UNDERGROUND GAS, COMMUNICATION,
FIBER-OPTIC, ELECTRICAL, AND WATER LINES.



VISIBILITY LIMITS FOR OPTICALLY
PROGRAMMED HEADS 1, 2, 9 AND 10

TRAFFIC SIGNAL LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD
- ☒ POLE MOUNTED CONTROLLER CABINET
- ☐ PULL BOX (BY SIZE)
- ☒ PROPOSED SIGNAL SUPPORT
- ☐ EXISTING STRAIN POLE/PEDESTAL
- ☐ LX// POWERHEAD LOOP DETECTOR
- ☐ PEDESTRIAN PEDESTAL



0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

TRAFFIC SIGNAL PLAN
SOUTH AVE. & JUDSON AVE./ SUNSET BLVD.

MAH-SOUTH
AVENUE SIGNALS

37
82

VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	6' X 25'	PRESENCE	5	4	ø4	1	1	ø4	EB
L2	POWERHEAD	6' X 25'	PRESENCE	5	4	ø8	2	1	ø8	WB
L3	POWERHEAD	6' X 25'	PRESENCE	5	4	ø7	3	1	ø7	NB

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	-	NW	-	EB	-	SB	NB	WB
	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MIN. GREEN		20		7		20	7	7
VEH. EXTENSION				4			4	4
MAX. GREEN I		25		21		25	20	21
MAX. GREEN II								
YELLOW CLEAR		4.0		3.8		4.0	3.8	3.8
RED CLEAR		2.0		2.0		2.0	3.5	2.0
WALK		7		7		7	-	7
PED CLEAR (FDW)		10		14		10	-	14
RECALL		MAX		NONE		MAX	NONE	NONE
LOCK/NON-LOCK		LOCK		NON-LOCK		LOCK	NON-LOCK	NON-LOCK

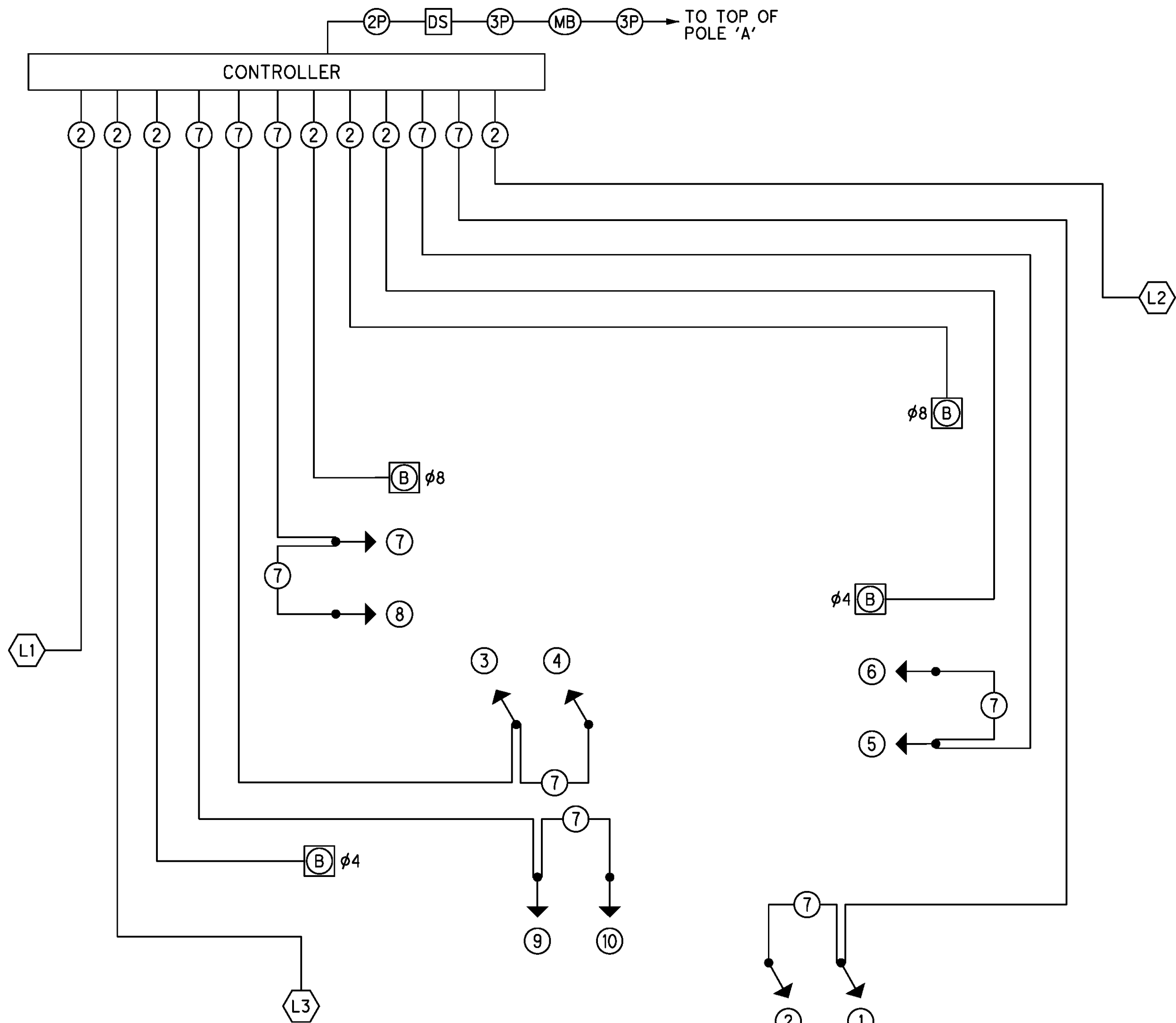
FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NW)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
3,4 (SB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
5,6 (EB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
7,8 (WB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
9,10 (NB)	R	ø7 R	R
	Y	ø7 Y	
	G	ø7 G	

LEGEND

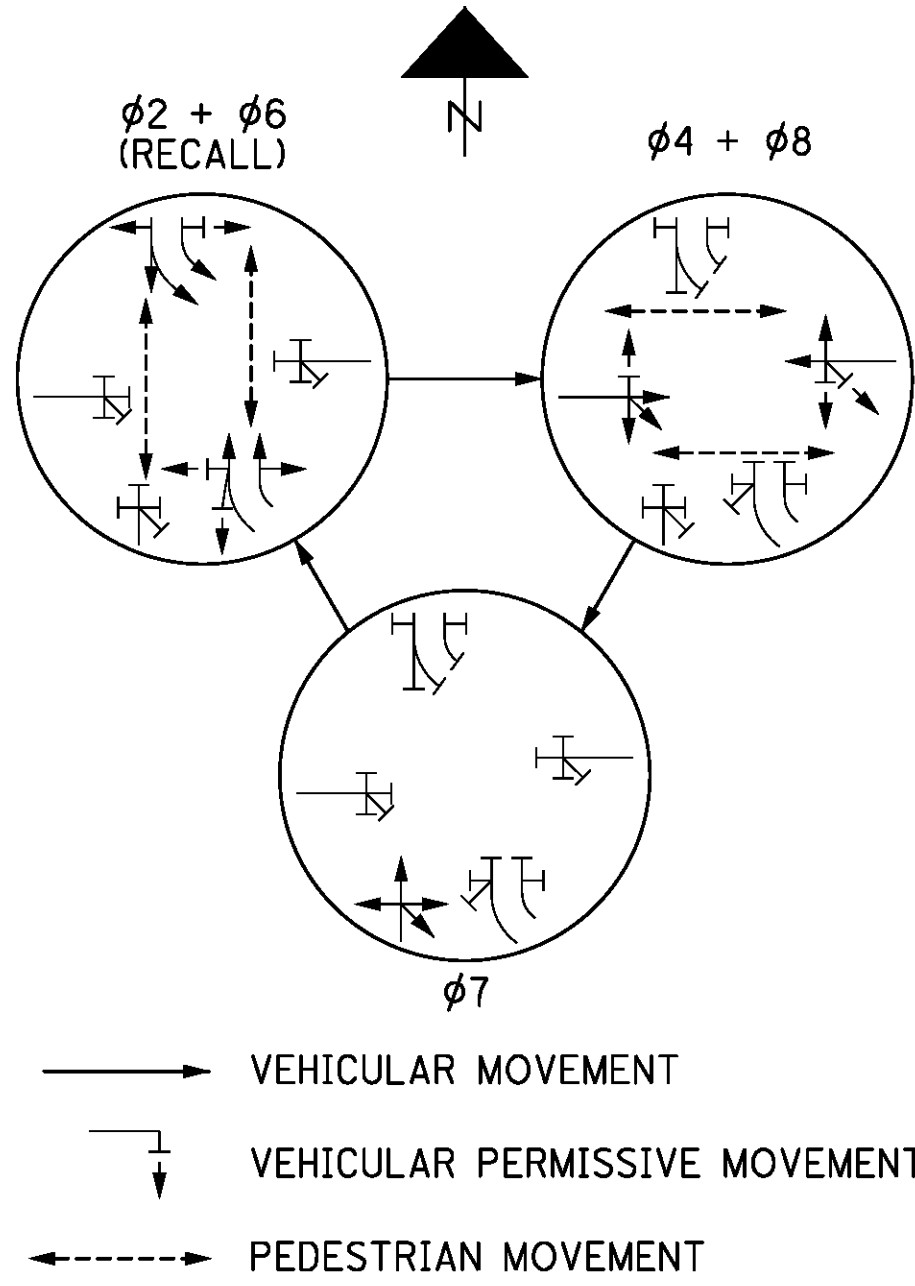
- L1 VEHICLE LOOP DETECTOR
- B PEDESTRIAN PUSHBUTTON
- VEHICULAR SIGNAL HEAD (3 SEC.)
- 2P 2/C #6 AWG. (POWER)
- 3P 3/C #6 AWG. (POWER)
- 2 2/C #14 AWG (LEAD-IN CABLE)
- 7 7/C #14 AWG
- DS DISCONNECT SWITCH
- MB METER BASE

NOTES:

- SEE SHEET 57 FOR SIGNAL SUPPORT ORIENTATION TABLE.
- SEE SHEET 56 FOR SIGNAL COORDINATION TIMING TABLE.

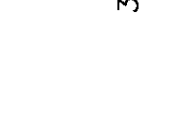
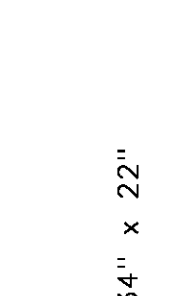
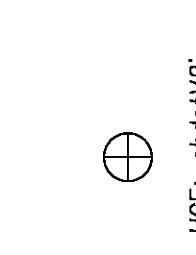
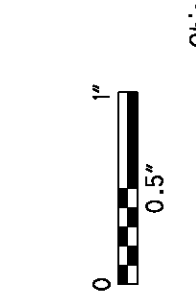


SIGNAL PHASING

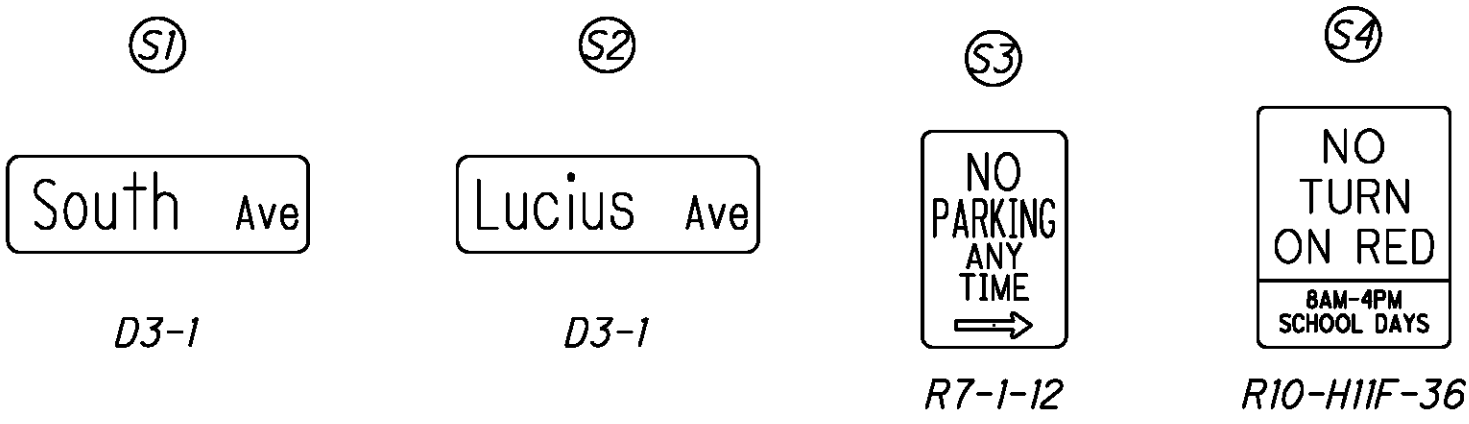


SUBSUMMARY OF TRAFFIC SIGNAL ITEMS

ITEM	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE
625	135	FT	CONDUIT, 2", 725.04	
625	181	FT	CONDUIT, 3", 725.04	
625	166	FT	TRENCH	
625	26	FT	TRENCH IN PAVED AREA, TYPE A	
625	142	FT	TRENCH IN PAVED AREA, TYPE B	
625	4	EACH	PULL BOX, 725.08, 18"	
625	1	EACH	PULL BOX, 725.08, 24"	
625	5	EACH	GROUND ROD	
632	6	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3 SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	
632	4	EACH	VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED, 3-SECTION, 12" LENS, 1-WAY, AS PER PLAN	
632	10	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	
632	4	EACH	PEDESTRIAN PUSHBUTTON	
632	3	EACH	DETECTOR LOOP	
632	853	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	3	EACH	SIGNAL SUPPORT FOUNDATION	
632	2	EACH	PEDESTAL FOUNDATION	
632	639	FT	LOOP DETECTOR LEAD-IN CABLE	
632	18	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
632	40	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	1	EACH	POWER SERVICE, AS PER PLAN	
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 4 POLE, WITH MAST ARMS TC-81.21 DESIGN 3 AND DESIGN 3	B
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1	A
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11	C
632	2	EACH	PEDESTAL, 6", TRANSFORMER BASE	
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	
805	1	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY	

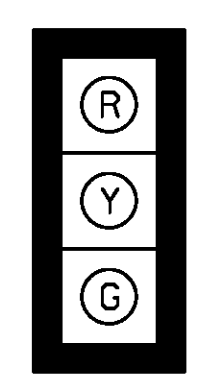


SIGNS



D3-1 SIGNS SHALL BE DOUBLE-FACED AND SUSPENDED DIRECTLY BELOW THE MAST ARM

SIGNAL HEADS
12" LED LENSES
W/REFLECTIVE BACKPLATES



I-8

RIGID MOUNTED PER TC-85.20 WITH YELLOW SECTION CENTERED ON MAST ARM

PEDESTRIAN PUSHBUTTON SIGNS



R10-4AR-9
POLES B,D



R10-4AL-9
POLES A,C

POLE B SIGNAL SUPPORT
W/1) PED PUSHBUTTON W/SIGN
STA. 35+86, 39' LT

2" CONDUIT = 9'
W/1)-7/C,(1)-2/C
(TRENCH = 9')
CAUTION: GAS LINE

18" PULL BOX
STA. 35+78, 41' LT

3" CONDUIT = 37'
W/1)-7/C,(1)-2/C
(TRENCH = 7')
(TYPE 'B' = 30')

EXISTING PEDESTAL/CAPPED
PIPE TO BE REMOVED
STA. 35+37, 46' LT

24" PULL BOX
STA. 35+41, 40' LT

3" CONDUIT
(1)-W/3)-7/C,(5)-2/C
(TRENCH = 12')
CAUTION: GAS LINE

POLE A SIGNAL SUPPORT
W/1) POLE MOUNTED CONTROLLER,
METER BASE, DISCONNECT SWITCH &
(1) PED PUSHBUTTON W/SIGN
STA. 35+29, 39' LT

2" CONDUIT = 20'
W/1)-3/C POWER
(TRENCH = 18')
CAUTION: GAS LINE

18" PULL BOX
STA. 35+21, 25' LT

2" CONDUIT
W/1)-3/C POWER
(TRENCH = 5')

EXISTING POWER SERVICE
STA. 35+15, 25' LT±
CONTRACTOR SHALL INSTALL 2" CONDUIT RISER AND PULL 3/C POWER CABLE TO THE TOP OF EXISTING POWER POLE. A SLACK OF 10 FEET SHALL BE PROVIDED AT THE TOP. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO MAKE THE CONNECTION.

POLE C SIGNAL SUPPORT
W/1) PED PUSHBUTTON W/SIGN
STA. 35+85, 35' RT

2" CONDUIT
W/1)-7/C,(1)-2/C
(TRENCH = 9')
(TYPE 'A' = 4')

18" PULL BOX
STA. 35+75, 44' RT

L2

18" PULL BOX
STA. 35+43, 45' RT

2" CONDUIT
W/1)-7/C,(1)-2/C
(TYPE 'A' = 11')
CAUTION: GAS LINE

POLE D SIGNAL SUPPORT
W/1) PED PUSHBUTTON W/SIGN
SEE NOTE 4
STA. 35+33, 39' RT
CAUTION: GAS LINE

3" CONDUIT = 84'
W/2)-7/C,(3)-2/C
(TRENCH = 13')
(TYPE 'B' = 73')
CAUTION: GAS LINE

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	REMOVE & REERECT	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE			X
(1) POLE MOUNTED CONTROLLER & CABINET	X		
(8) 3-SECTION VEHICULAR SIGNAL HEADS	X		
MESSANGER WIRE			X
(2) SPAN MOUNTED SIGNS	X		
(5) POLE MOUNTED SIGNS	X		
(4) STRAIN POLES	X		
(4) ANCHOR BASE FOUNDATIONS			X
(1) PEDESTAL/CAPPED PIPE			X
(2) POLE MOUNTED STREET NAME SIGNS	X		
(5) POLE/PEDESTAL MOUNTED SIGNS	X		

NOTES:

1. AERIAL POWER SERVICE CONNECTION TO BE MADE BY OHIO EDISON.
2. SEE SHEET 22 FOR SIGNING AND PAVEMENT MARKING PLAN.
3. ALL STATIONING IS REFERENCED FROM SOUTH AVENUE UNLESS OTHERWISE NOTED.
4. IN THE SOUTHEAST QUADRANT, THE CONTRACTOR SHALL ENSURE THAT A MINIMUM OF 4' CLEARANCE IS MAINTAINED BETWEEN THE EDGE OF THE PROPOSED SIGNAL POLE (POLE D) FOUNDATION AND THE WALL FACE OF THE EXISTING BUILDING.

CAUTION: UNDERGROUND UTILITIES

CONTRACTOR SHALL HAND EXCAVATE, WHERE NECESSARY, POLE AND PEDESTAL FOUNDATIONS, PULL BOXES, AND CONDUIT TRENCH TO ENSURE CLEARANCE FROM UNDERGROUND GAS, COMMUNICATION, FIBER-OPTIC, ELECTRICAL, AND WATER LINES.

TRAFFIC SIGNAL LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD
- ☒ POLE MOUNTED CONTROLLER CABINET
- ☐ PULL BOX (BY SIZE)
- ☐ EXISTING STRAIN POLE/PEDESTAL
- PROPOSED SIGNAL SUPPORT
- LX POWERHEAD LOOP DETECTOR

TRAFFIC SIGNAL PLAN
SOUTH AVE. & LUCIUS AVE.

MAH-SOUTH
AVENUE SIGNALS

VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC.)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	5' X 25'	PRESENCE	5	4	ø4	1	1	ø4	EB
L2	POWERHEAD	5' X 25'	PRESENCE	5	4	ø8	2	1	ø8	WB

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	-	NB	-	EB	-	SB	-	WB
	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MIN. GREEN		20		7		20		7
VEH. EXTENSION				4				4
MAX. GREEN I		25		20		25		20
MAX. GREEN II								
YELLOW CLEAR		3.6		3.3		3.6		3.3
RED CLEAR		1.2		2.0		1.2		2.0
WALK		7		7		7		7
PED CLEAR (FDW)		7		12		7		12
RECALL		MAX		NONE		MAX		NONE
LOCK/NON-LOCK		LOCK		NON-LOCK		LOCK		NON-LOCK

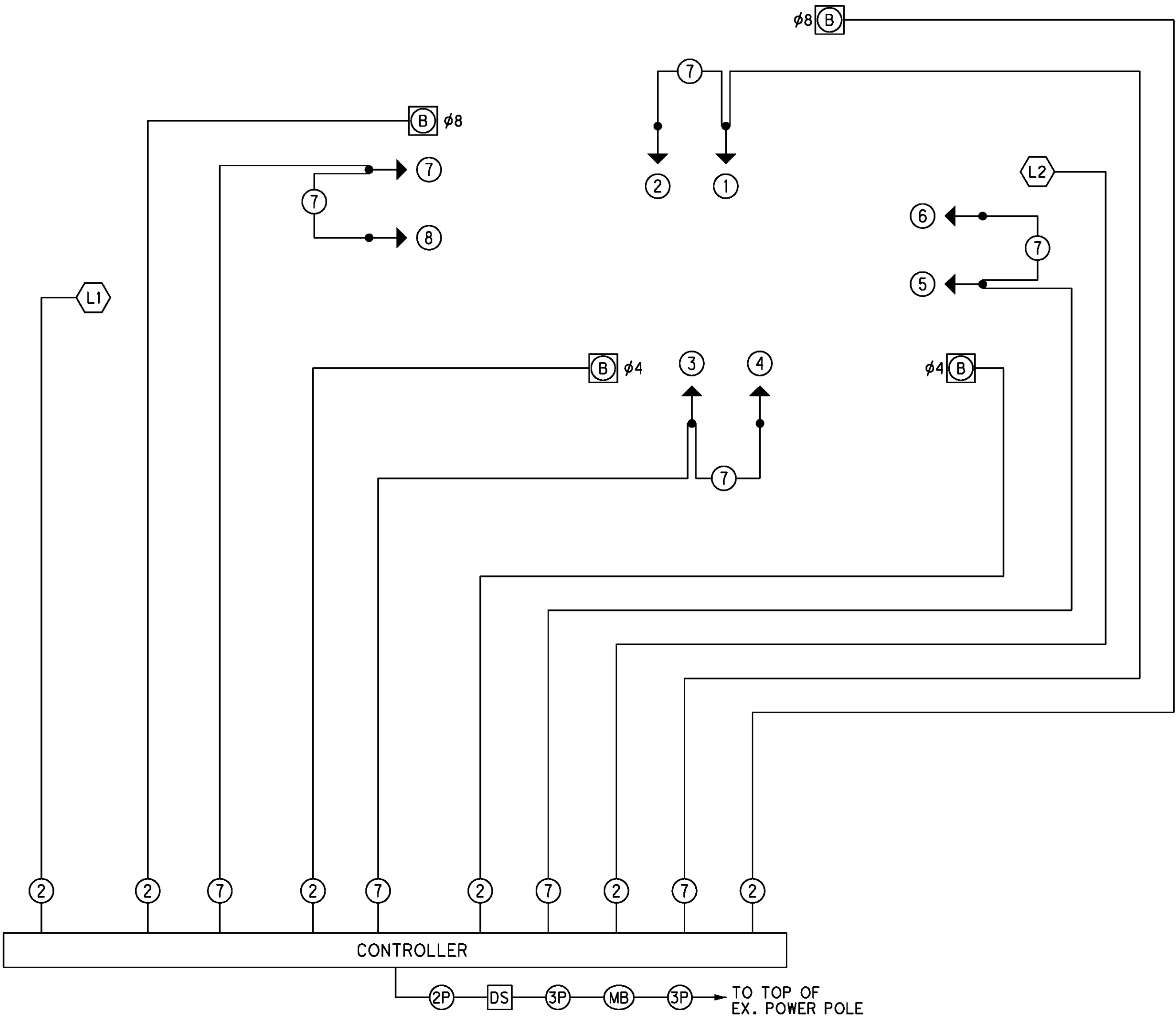
FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
3,4 (SB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
5,6 (EB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
7,8 (WB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	

LEGEND

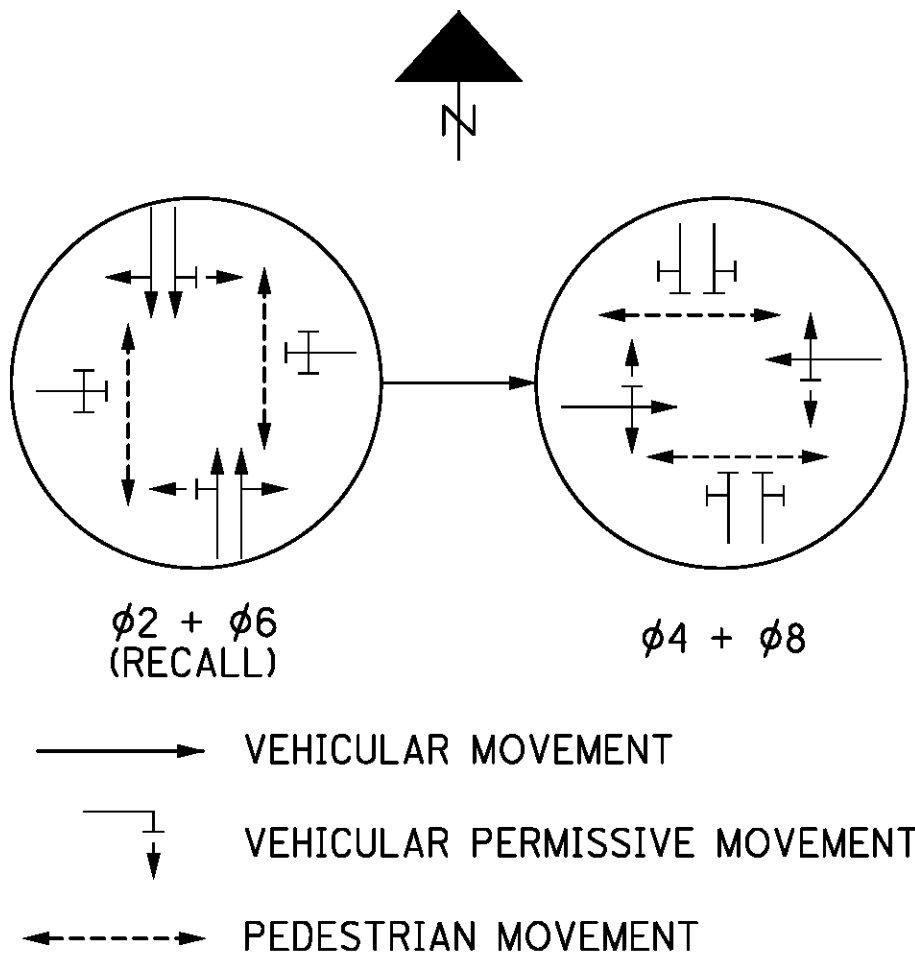
- ⬡ L1 VEHICLE LOOP DETECTOR
- ⬡ B PEDESTRIAN PUSHBUTTON
- ➡ VEHICULAR SIGNAL HEAD (3 SEC.)
- Ⓟ 2P 2/C #6 AWG. (POWER)
- Ⓟ 3P 3/C #6 AWG. (POWER)
- Ⓜ 2 2/C #14 AWG (LEAD-IN CABLE)
- Ⓜ 7 7/C #14 AWG
- Ⓜ DS DISCONNECT SWITCH
- Ⓜ MB METER BASE

NOTES:

- SEE SHEET 57 FOR SIGNAL SUPPORT ORIENTATION TABLE.
- SEE SHEET 56 FOR SIGNAL COORDINATION TIMING TABLE.



SIGNAL PHASING

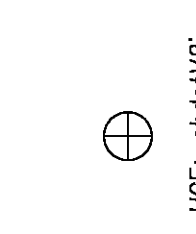
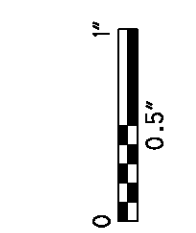


SUBSUMMARY OF TRAFFIC SIGNAL ITEMS					
ITEM	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE	
625	58	FT	CONDUIT, 2", 725.04		
625	166	FT	CONDUIT, 3", 725.04		
625	73	FT	TRENCH		
625	23	FT	TRENCH IN PAVED AREA, TYPE A		
625	128	FT	TRENCH IN PAVED AREA, TYPE B		
625	4	EACH	PULL BOX, 725.08, 18"		
625	1	EACH	PULL BOX, 725.08, 24"		
625	4	EACH	GROUND ROD		
632	8	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3 SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN		
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN		
632	4	EACH	PEDESTRIAN PUSHBUTTON		
632	2	EACH	DETECTOR LOOP		
632	648	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		
632	4	EACH	SIGNAL SUPPORT FOUNDATION		
632	613	FT	LOOP DETECTOR LEAD-IN CABLE		
632	18	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG		
632	89	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG		
632	1	EACH	POWER SERVICE, AS PER PLAN		
632	1	EACH	CONDUIT RISER, 2" DIAMETER		
632	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2	B,D	
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	A	
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4	C	
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN		
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN		
805	1	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY		

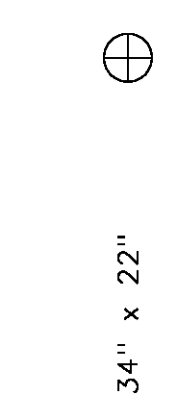


ms consultants, inc.
msconsultants.com

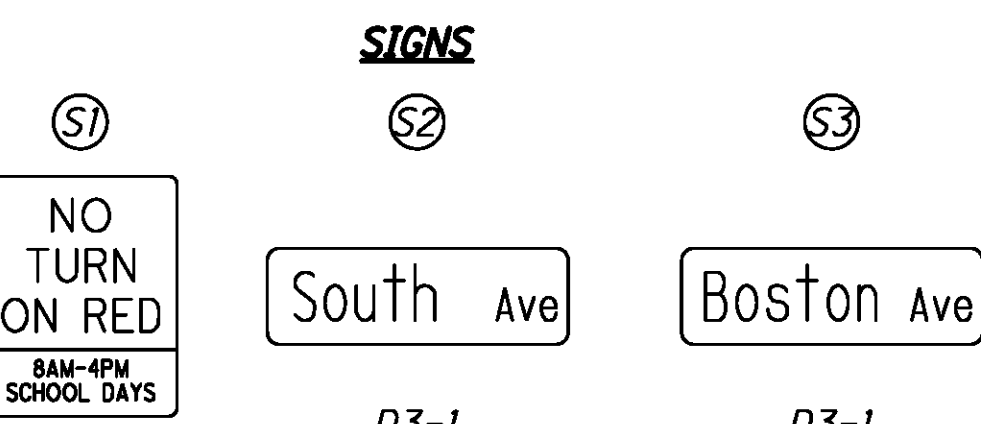
Ohio DOT Workspace
UCF: ohioVBI
PCF: 60-10586_Columbus_No_AScale_South Avenue Signals



Batchplot Spec: \\0330share\16010586\standards\plotdrv\batchplot.spc
Pen Table: S:\std\plotting\ustn\VB\pen\VB1.ms_std.tbl
Plot Driver: S:\std\plotting\ustn\VB\PDF\pdf.plt



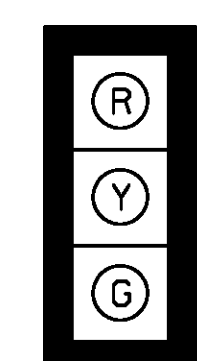
Model: Sheet
Printed: 1/20/2015 @ 3:37:05 PM By: ikausek
File: \\0330share\16010586\signals\sheet\87408CP04.dgn



R10-H11F-36

D3-1 SIGNS SHALL BE DOUBLE-FACED AND SUSPENDED DIRECTLY BELOW THE MAST ARM

SIGNAL HEADS
12" LED LENSES
W/REFLECTIVE BACKPLATES



1-8

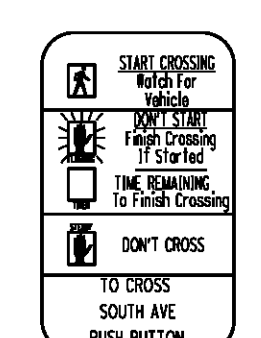
RIGID MOUNTED PER TC-85.20 WITH YELLOW SECTION CENTERED ON MAST ARM

TYPE D2 PEDESTRIAN SIGNAL HEAD (L.E.D.) (COUNTDOWN)

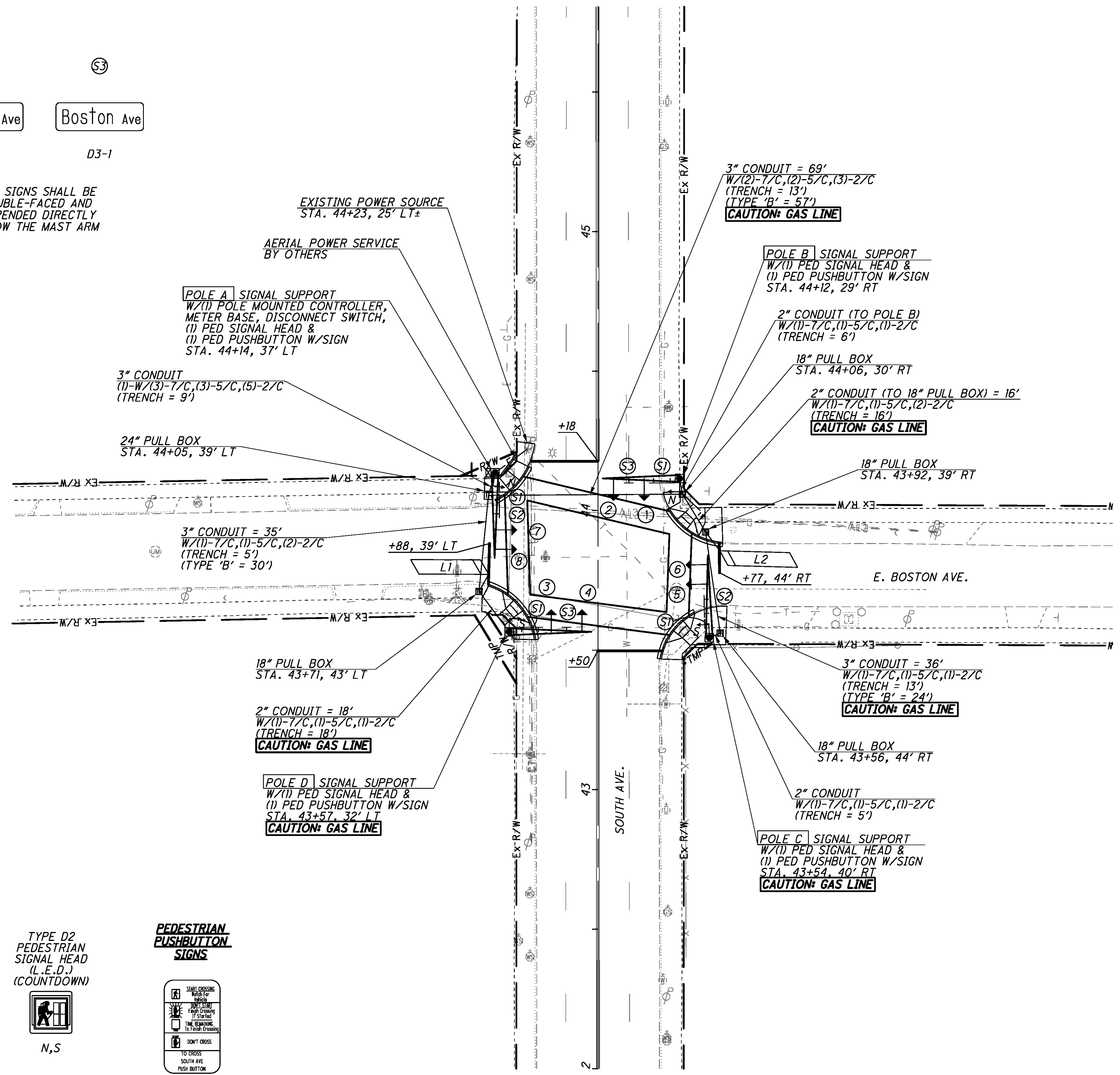


N,S

PEDESTRIAN PUSHBUTTON SIGNS



R10-3E-9
POLES A,B,C,D



632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE		X
(1) POLE MOUNTED CONTROLLER & CABINET	X	
(8) 3-SECTION VEHICULAR SIGNAL HEADS	X	
MESSENGER WIRE		X
(2) SPAN MOUNTED SIGNS	X	
(2) POLE MOUNTED SIGNS	X	
(4) STRAIN POLES	X	
(4) ANCHOR BASE FOUNDATIONS		X
(4) PEDESTRIAN SIGNAL HEADS	X	
(2) POLE MOUNTED STREET NAME SIGNS	X	

NOTES:

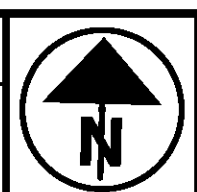
1. AERIAL POWER SERVICE CONNECTION TO BE MADE BY OHIO EDISON.
2. SEE SHEET 23 FOR SIGNING AND PAVEMENT MARKING PLAN.
3. ALL STATIONING IS REFERENCED FROM SOUTH AVENUE UNLESS OTHERWISE NOTED.

CAUTION: UNDERGROUND UTILITIES

CONTRACTOR SHALL HAND EXCAVATE, WHERE NECESSARY, POLE AND PEDESTAL FOUNDATIONS, PULL BOXES, AND CONDUIT TRENCH TO ENSURE CLEARANCE FROM UNDERGROUND GAS, COMMUNICATION, FIBER-OPTIC, ELECTRICAL, AND WATER LINES.

TRAFFIC SIGNAL LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD
- ⊠ POLE MOUNTED CONTROLLER CABINET
- PULL BOX, (BY SIZE)
- EXISTING STRAIN POLE/PEDESTAL
- PROPOSED SIGNAL SUPPORT
- LX// POWERHEAD LOOP DETECTOR
- E. PEDESTRIAN SIGNAL HEAD



0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

TRAFFIC SIGNAL PLAN
SOUTH AVE. & BOSTON AVE.

MAH-SOUTH
AVENUE SIGNALS

41
82

VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC.)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	6' X 25'	PRESENCE	5	4	ø4	1	1	ø4	EB
L2	POWERHEAD	6' X 25'	PRESENCE	5	4	ø8	2	1	ø8	WB

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	- ø1	- NB ø2	- ø3	- EB ø4	- ø5	- SB ø6	- ø7	- WB ø8
	MIN. GREEN	20		7		20		7
VEH. EXTENSION				4				4
MAX. GREEN I		25		20		25		20
MAX. GREEN II								
YELLOW CLEAR		3.6		3.5		3.6		3.5
RED CLEAR		1.3		2.0		1.3		2.0
WALK		7		7		7		7
PED CLEAR (FDW)		8		13		8		13
RECALL		MAX		NONE		MAX		NONE
LOCK/NON-LOCK		LOCK		NON-LOCK		LOCK		NON-LOCK

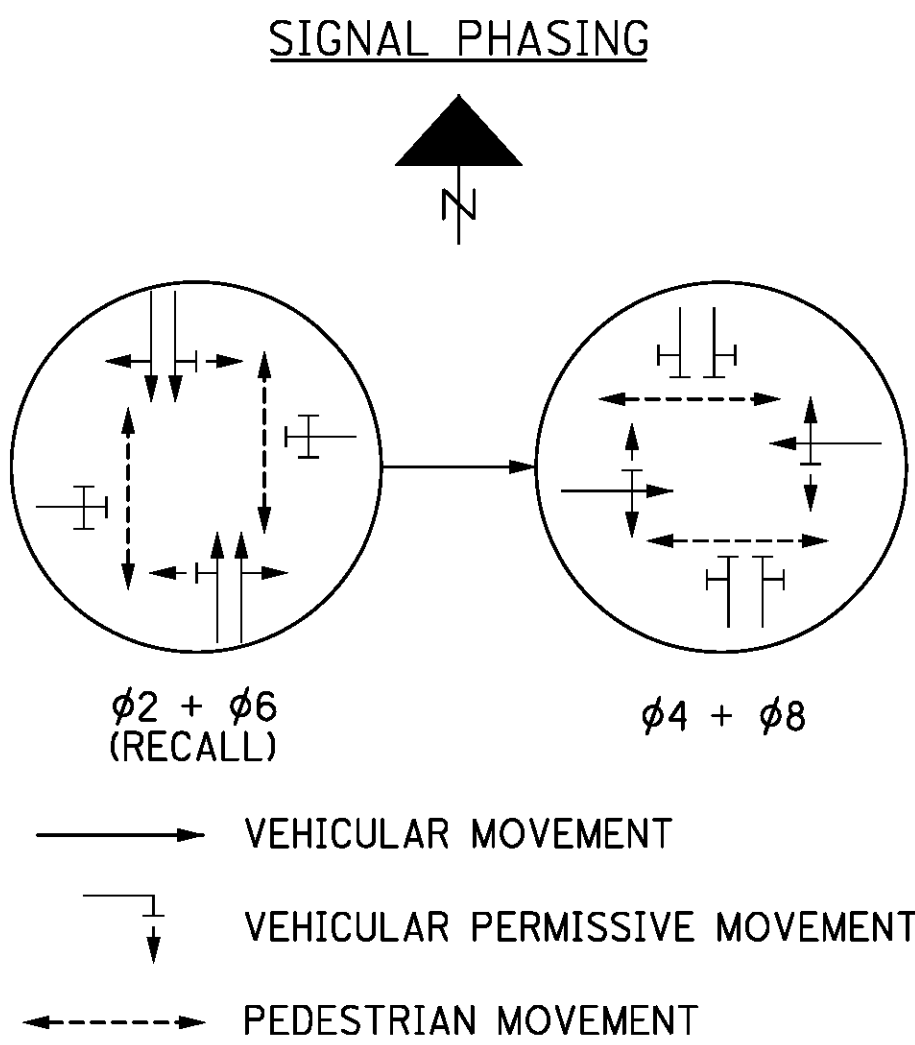
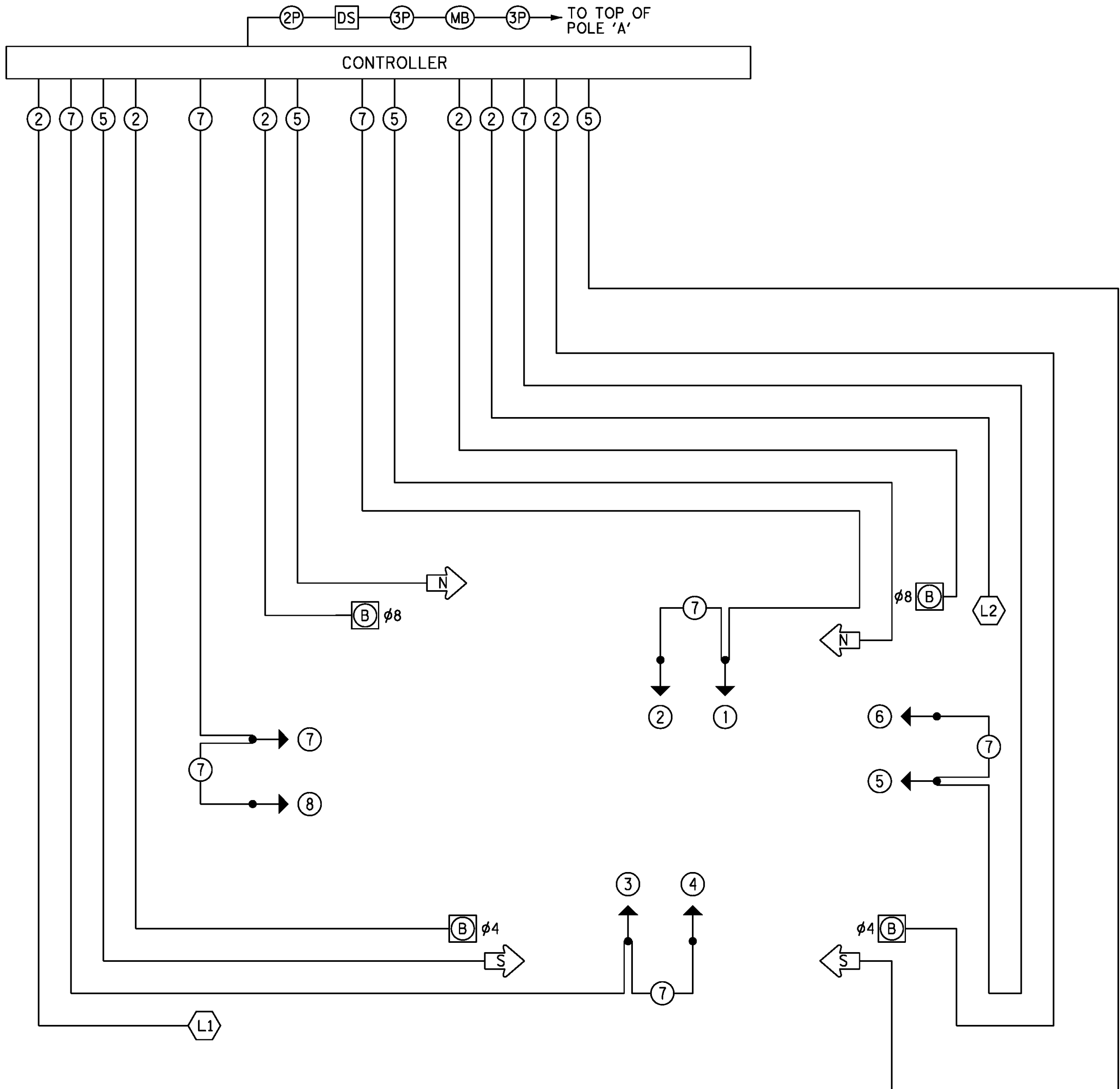
FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
3,4 (SB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
5,6 (EB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
7,8 (WB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
NN	W	ø8P G	OFF
	DW	ø8P R	
SS	W	ø4P G	OFF
	DW	ø4P R	

- LEGEND
- L1 VEHICLE LOOP DETECTOR
 - E PED SIGNAL HEAD
 - B PEDESTRIAN PUSHBUTTON
 - VEHICULAR SIGNAL HEAD (3 SEC.)
 - 2P 2/C #6 AWG. (POWER)
 - 3P 3/C #6 AWG. (POWER)
 - 2 2/C #14 AWG (LEAD-IN CABLE)
 - 7 7/C #14 AWG
 - DS DISCONNECT SWITCH
 - MB METER BASE

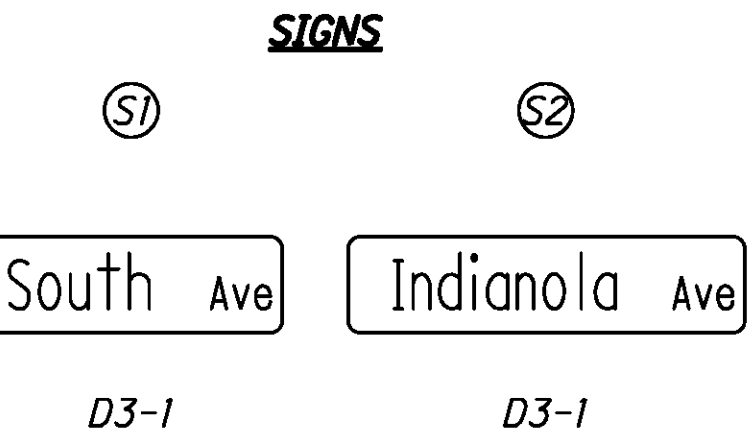
NOTES:

1. SEE SHEET 58 FOR SIGNAL SUPPORT ORIENTATION TABLE.

2. SEE SHEET 56 FOR SIGNAL COORDINATION TIMING TABLE.

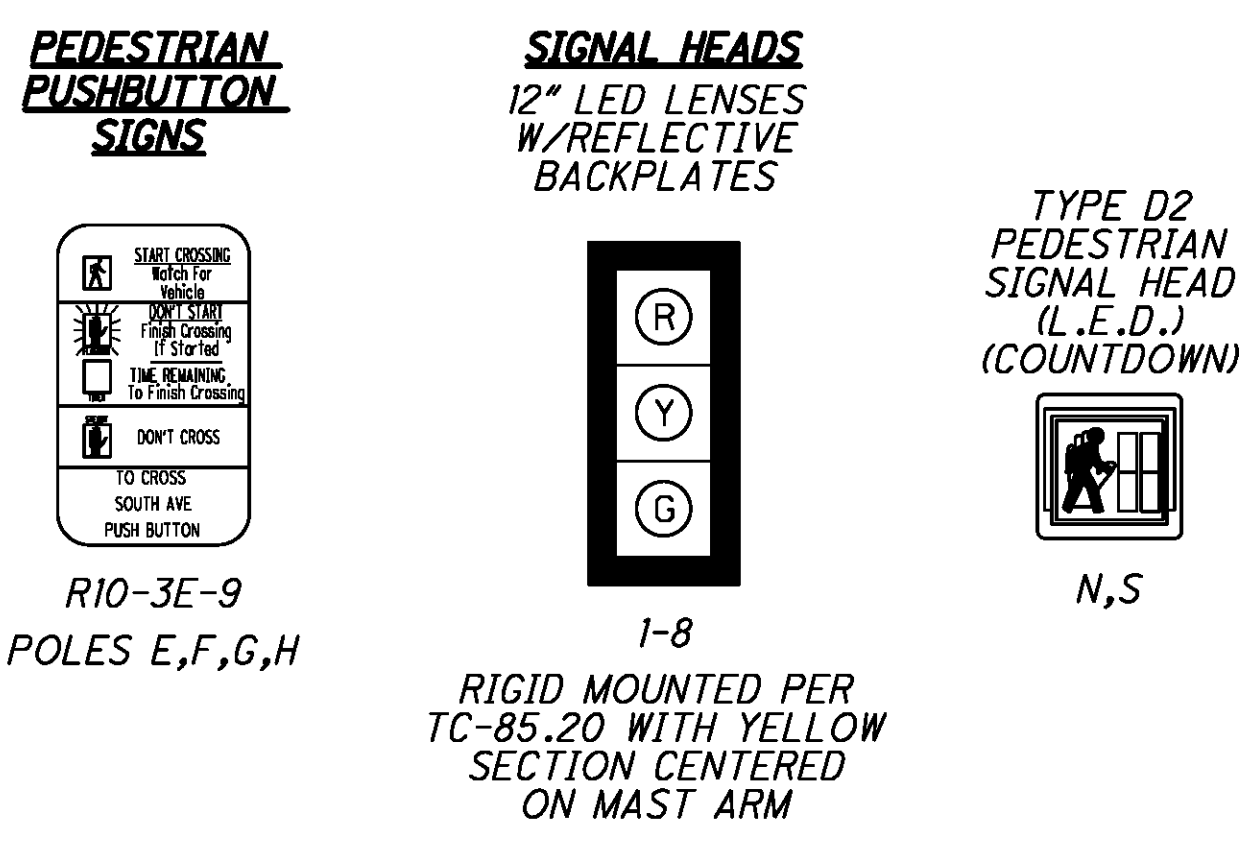
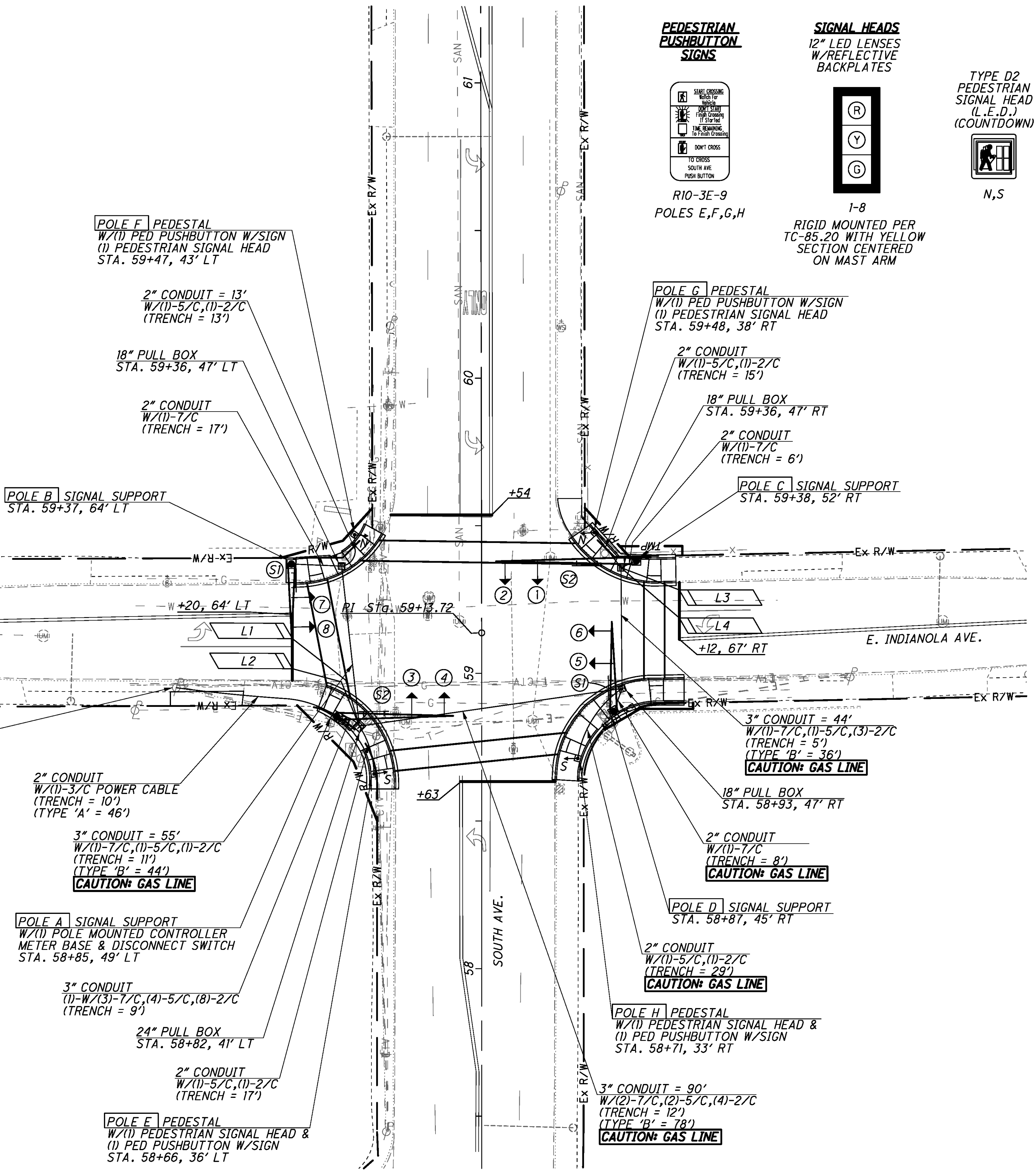


SUBSUMMARY OF TRAFFIC SIGNAL ITEMS				
ITEM	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE
625	45	FT	CONDUIT, 2", 725.04	
625	149	FT	CONDUIT, 3", 725.04	
625	80	FT	TRENCH	
625	111	FT	TRENCH IN PAVED AREA, TYPE B	
625	4	EACH	PULL BOX, 725.08, 18"	
625	1	EACH	PULL BOX, 725.08, 24"	
625	4	EACH	GROUND ROD	
632	8	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3 SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	
632	4	EACH	PEDESTRIAN SIGNAL HEAD (LED) , (COUNTDOWN), TYPE D2	
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	
632	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
632	4	EACH	PEDESTRIAN PUSHBUTTON	
632	2	EACH	DETECTOR LOOP	
632	427	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
632	613	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	4	EACH	SIGNAL SUPPORT FOUNDATION	
632	594	FT	LOOP DETECTOR LEAD-IN CABLE	
632	18	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
632	40	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	1	EACH	POWER SERVICE, AS PER PLAN	
632	3	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2	A,B,C
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	D
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	
805	1	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY	



D3-1 SIGNS SHALL BE DOUBLE-FACED AND SUSPENDED DIRECTLY BELOW THE MAST ARM

EXISTING POWER SERVICE
STA. 58+95, 104' LT±
CONTRACTOR SHALL INSTALL 2" CONDUIT RISER AND PULL 3/C POWER CABLE TO THE TOP OF EXISTING POWER POLE. A SLACK OF 10 FEET SHALL BE PROVIDED AT THE TOP. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO MAKE THE CONNECTION.

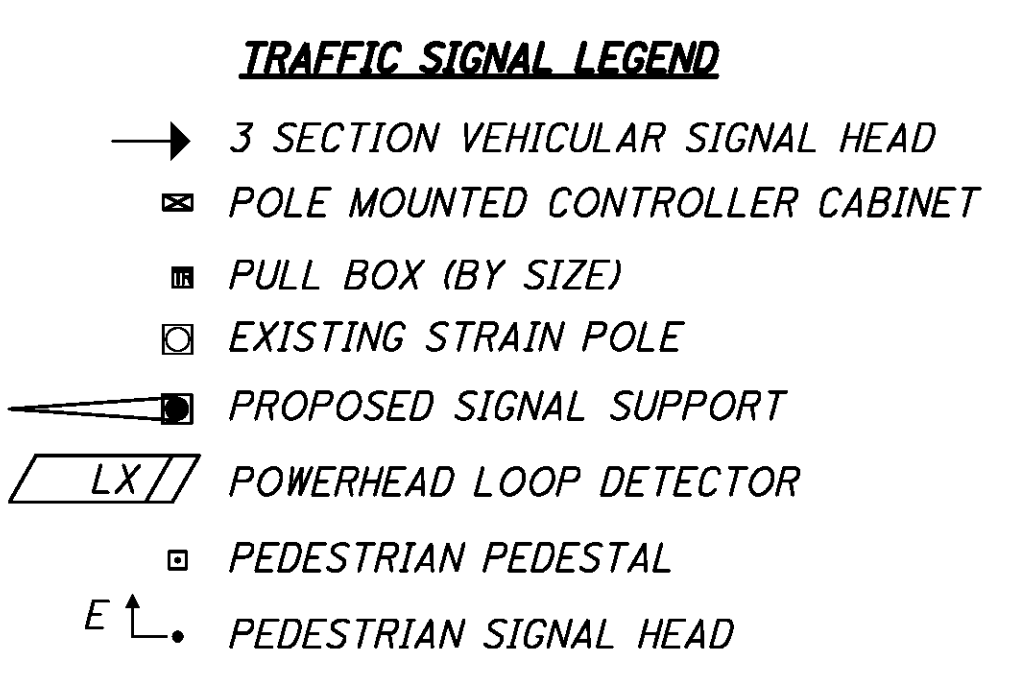


632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE		X
(1) POLE MOUNTED CONTROLLER & CABINET	X	
(8) 3-SECTION VEHICULAR SIGNAL HEADS	X	
MESSENGER WIRE		X
(4) POLE MOUNTED SIGNS	X	
(4) STRAIN POLES	X	
(4) ANCHOR BASE FOUNDATIONS		X
(2) POLE MOUNTED STREET NAME SIGNS	X	

- NOTES:**
1. POWER SERVICE CONNECTION TO BE MADE BY OHIO EDISON.
 2. SEE SHEET 24 FOR SIGNING AND PAVEMENT MARKING PLAN.
 3. ALL STATIONING IS REFERENCED FROM SOUTH AVENUE UNLESS OTHERWISE NOTED.

CAUTION: UNDERGROUND UTILITIES

CONTRACTOR SHALL HAND EXCAVATE, WHERE NECESSARY, POLE AND PEDESTAL FOUNDATIONS, PULL BOXES, AND CONDUIT TRENCH TO ENSURE CLEARANCE FROM UNDERGROUND GAS, COMMUNICATION, FIBER-OPTIC, ELECTRICAL, AND WATER LINES.



VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC.)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	5' X 25'	PRESENCE	3	4	ø4	1	1	ø4	EBLT
L2	POWERHEAD	5' X 25'	PRESENCE	5	4	ø4	1	2	ø4	EB
L3	POWERHEAD	5' X 25'	PRESENCE	5	4	ø8	2	1	ø8	WB
L4	POWERHEAD	5' X 25'	PRESENCE	3	4	ø8	2	2	ø8	WBLT

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	-	NB	-	EB	-	SB	-	WB
	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MIN. GREEN		20		7		20		7
VEH. EXTENSION				4				4
MAX. GREEN I		25		22		25		22
MAX. GREEN II								
YELLOW CLEAR		3.6		3.9		3.6		3.9
RED CLEAR		1.7		2.0		1.7		2.0
WALK		7		7		7		7
PED CLEAR (FDW)		5		15		5		15
RECALL		MAX		NONE		MAX		NONE
LOCK/NON-LOCK		LOCK		NON-LOCK		LOCK		NON-LOCK

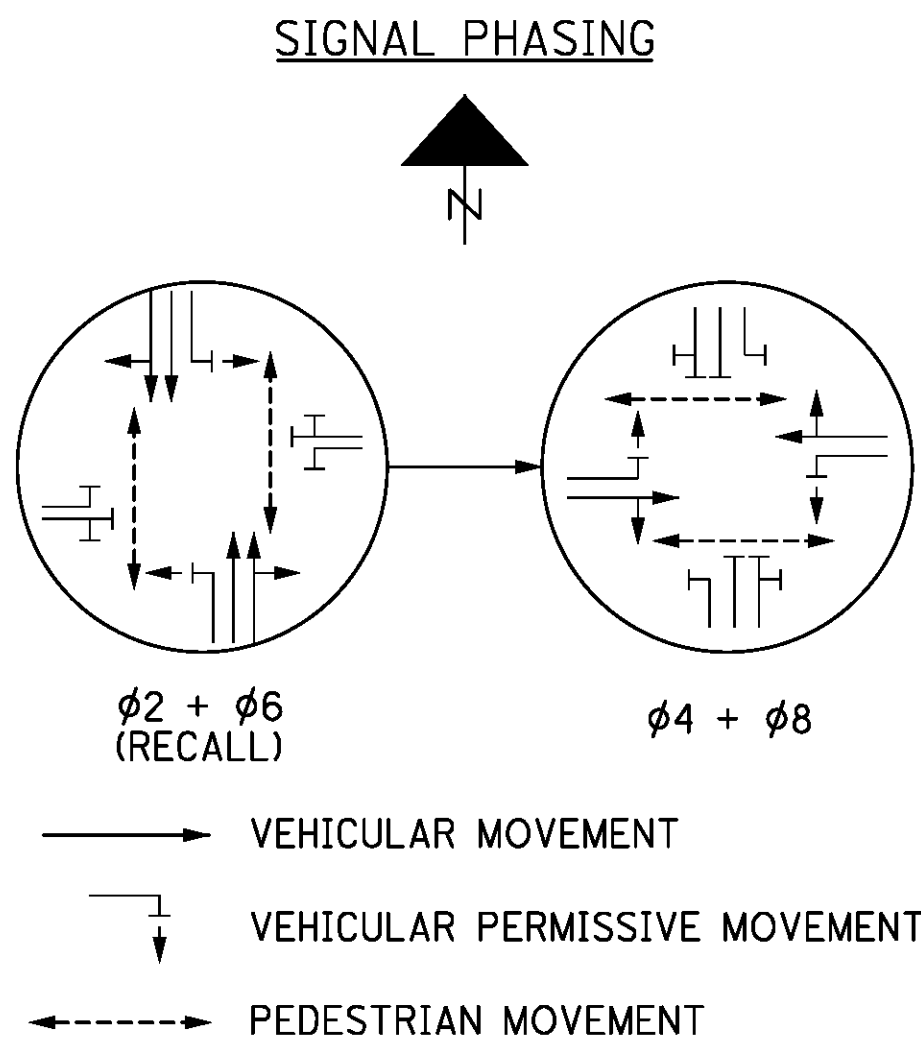
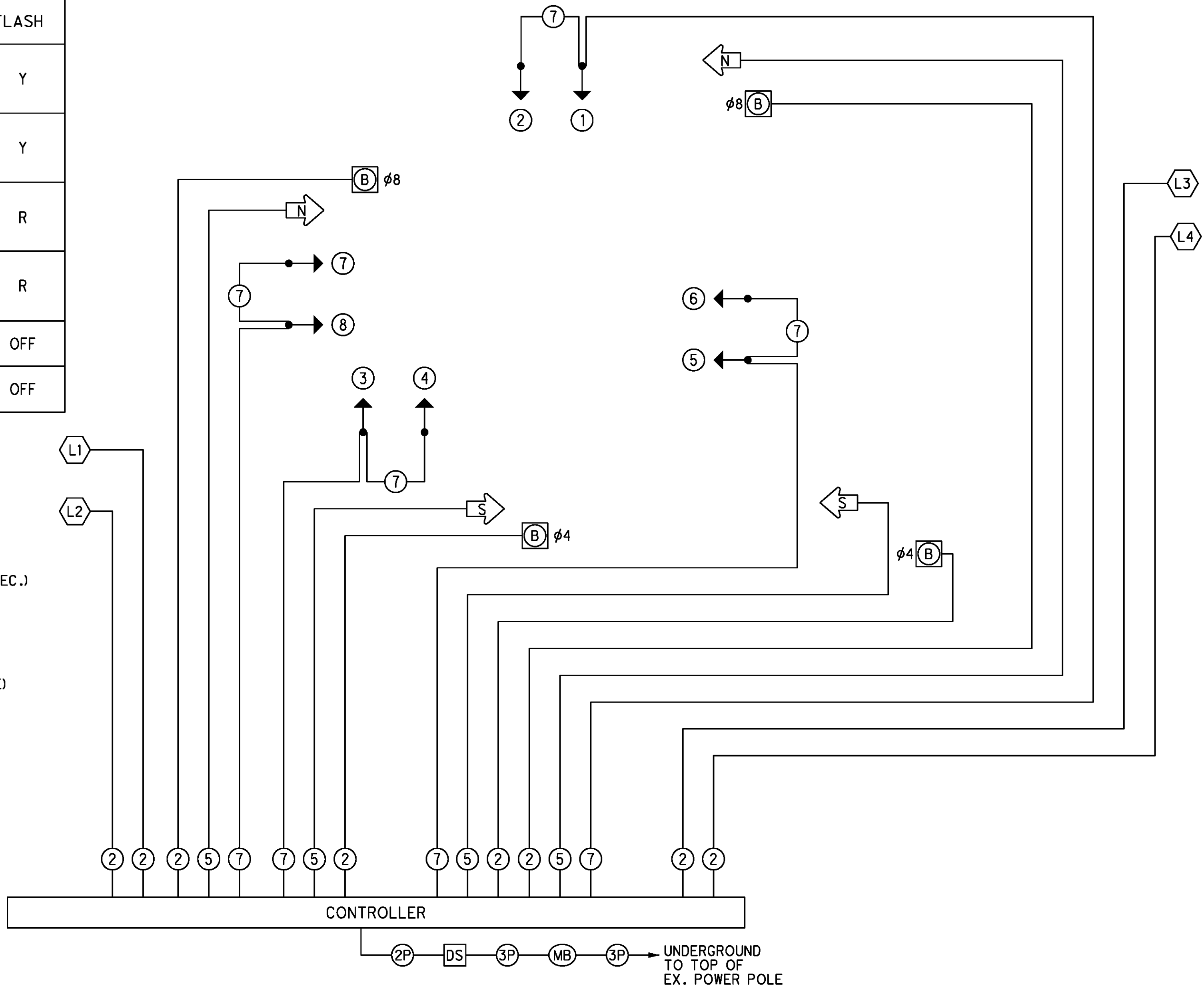
FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
3,4 (SB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
5,6 (EB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
7,8 (WB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
NN	W	ø8P G	OFF
	DW	ø8P R	
SS	W	ø4P G	OFF
	DW	ø4P R	

LEGEND	
	VEHICLE LOOP DETECTOR
	PED SIGNAL HEAD
	PEDESTRIAN PUSHBUTTON
	VEHICULAR SIGNAL HEAD (3 SEC.)
	2/C #6 AWG. (POWER)
	3/C #6 AWG. (POWER)
	2/C #14 AWG (LEAD-IN CABLE)
	7/C #14 AWG
	DISCONNECT SWITCH
	METER BASE

NOTES:

1. SEE SHEET 59 FOR SIGNAL SUPPORT ORIENTATION TABLE.

2. SEE SHEET 56 FOR SIGNAL COORDINATION TIMING TABLE.

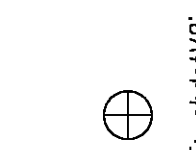
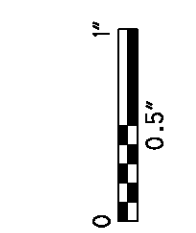


SUBSUMMARY OF TRAFFIC SIGNAL ITEMS				
ITEM	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE
625	103	FT	CONDUIT, 2", 725.04	
625	198	FT	CONDUIT, 3", 725.04	
625	152	FT	TRENCH	
625	46	FT	TRENCH IN PAVED AREA, TYPE A	
625	158	FT	TRENCH IN PAVED AREA, TYPE B	
625	3	EACH	PULL BOX, 725.08, 18"	
625	1	EACH	PULL BOX, 725.08, 24"	
625	8	EACH	GROUND ROD	
632	8	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3 SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	
632	4	EACH	PEDESTRIAN SIGNAL HEAD (LED) , (COUNTDOWN), TYPE D2	
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	
632	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
632	4	EACH	PEDESTRIAN PUSHBUTTON	
632	4	EACH	DETECTOR LOOP	
632	540	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
632	691	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	4	EACH	SIGNAL SUPPORT FOUNDATION	
632	4	EACH	PEDESTAL FOUNDATION	
632	912	FT	LOOP DETECTOR LEAD-IN CABLE	
632	18	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
632	97	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	1	EACH	POWER SERVICE, AS PER PLAN	
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1	B
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2	D
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11	A
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12	C
632	4	EACH	PEDESTAL, 8", TRANSFORMER BASE	
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	
805	1	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY	

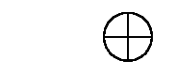


ms consultants, inc.
msconsultants.com

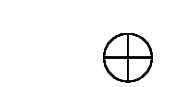
Ohio DOT Workspace
UCF: oha01VBI
PCF: 60-10586_Columbus_No_ASale_South Avenue Signals



Batchplot Spec: \\0330share\160\10586\standards\pltdrv\batchplot.spc
Pen Table: S:\std\pltdrv\usn\VB1\pen\VB1.ms_std.tbl
Plot Driver: S:\std\pltdrv\usn\VB1\PDF.plt

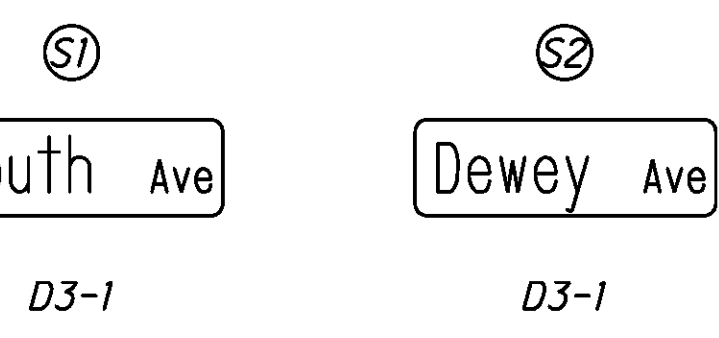


3.4" x 22"



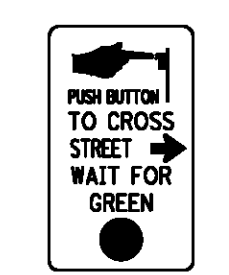
Model: Sheet
Printed: 1/20/2015 @ 3:37:20 PM By: lkausek
File: \\0330share\160\10586\signals\sheet\87408CP06.dgn

SIGNS



D3-1
D3-1 SIGNS SHALL BE
DOUBLE-FACED AND SUSPENDED
DIRECTLY BELOW THE MAST ARM

PEDESTRIAN PUSHBUTTON SIGNS

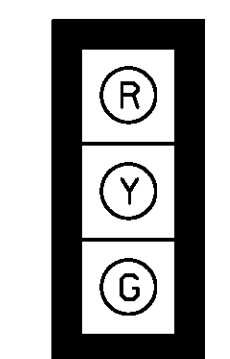


R10-4AR-9
POLES D



R10-4AL-9
POLES A,B,E

SIGNAL HEADS 12" LED LENSES W/REFLECTIVE BACKPLATES



1-8
RIGID MOUNTED PER
TC-85.20 WITH YELLOW
SECTION CENTERED
ON MAST ARM

EXISTING POWER SOURCE
STA. 72+11, 30' LT±

AERIAL POWER SERVICE
BY OTHERS

POLE A SIGNAL SUPPORT
W/1) POLE MOUNTED CONTROLLER,
METER BASE, DISCONNECT SWITCH, &
1) PED PUSHBUTTON W/SIGN
STA. 72+09, 42' LT
CAUTION: GAS LINE

3" CONDUIT
W/3)-7/C,(1)-2/C
(TRENCH = 7')

24" PULL BOX
STA. 72+03, 45' LT

3" CONDUIT = 49'
W/1)-7/C,(3)-2/C
(TRENCH = 7')
(TYPE 'A' = 12')
(TYPE 'B' = 31')

18" PULL BOX
STA. 71+53, 48' LT

2" CONDUIT
W/1)-7/C,(1)-2/C
(TRENCH = 5')

POLE D SIGNAL SUPPORT
W/1) PED PUSHBUTTON W/SIGN
STA. 71+56, 43.5' LT

3" CONDUIT = 88'
W/2)-7/C,(4)-2/C
(TRENCH = 23')
(TYPE 'B' = 64')

POLE B SIGNAL SUPPORT
W/1) PED PUSHBUTTON W/SIGN
STA. 72+20, 32' RT
CAUTION: GAS LINE

2" CONDUIT
W/1)-7/C,(1)-2/C
(TRENCH = 23')

18" PULL BOX
STA. 72+01, 42' RT

3" CONDUIT = 37'
W/1)-7/C,(1)-2/C
(TRENCH = 7')
(TYPE 'B' = 30')

18" PULL BOX
STA. 71+64, 45' RT

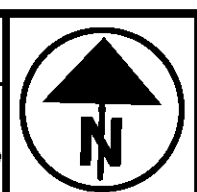
2" CONDUIT
W/1)-7/C
(TRENCH = 4')

POLE C SIGNAL SUPPORT
STA. 71+60, 43' RT

2" CONDUIT
W/1)-2/C
(TRENCH = 12')

POLE E PEDESTAL
W/1) PED PUSHBUTTON W/SIGN
STA. 71+56, 40' RT

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE		X
1) POLE MOUNTED CONTROLLER & CABINET	X	
8) 3-SECTION VEHICULAR SIGNAL HEADS	X	
MESSANGER WIRE		X
4) STRAIN POLES	X	
4) ANCHOR BASE FOUNDATIONS		X
1) EMBEDDED PIPE/ BOLLARD (SW CORNER)		X
2) POLE MOUNTED STREET NAME SIGNS	X	



0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

NOTES:

1. AERIAL POWER SERVICE CONNECTION TO BE MADE BY OHIO EDISON.
2. SEE SHEET 25 FOR SIGNING AND PAVEMENT MARKING PLAN.
3. ALL STATIONING IS REFERENCED FROM SOUTH AVENUE UNLESS OTHERWISE NOTED.

CAUTION: UNDERGROUND UTILITIES

CONTRACTOR SHALL HAND EXCAVATE, WHERE NECESSARY, POLE AND PEDESTAL FOUNDATIONS, PULL BOXES, AND CONDUIT TRENCH TO ENSURE CLEARANCE FROM UNDERGROUND GAS, COMMUNICATION, FIBER-OPTIC, ELECTRICAL, AND WATER LINES.

TRAFFIC SIGNAL LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD
- ☒ POLE MOUNTED CONTROLLER CABINET
- ☐ PULL BOX, (BY SIZE)
- ☒ EXISTING STRAIN POLE
- ☒ PROPOSED SIGNAL SUPPORT
- ☒ LX// POWERHEAD LOOP DETECTOR
- ☒ PEDESTRIAN PEDESTAL

TRAFFIC SIGNAL PLAN
SOUTH AVE. & DEWEY AVE.

MAH-SOUTH
AVENUE SIGNALS

45
82

VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	5' X 25'	PRESENCE	3	4	ø4	1	1	ø4	EBLL
L2	POWERHEAD	5' X 25'	PRESENCE	5	4	ø4	2	1	ø4	EB
L3	POWERHEAD	5' X 25'	PRESENCE	5	4	ø8	3	1	ø8	WB
L4	POWERHEAD	5' X 25'	PRESENCE	3	4	ø8	4	1	ø8	WBLL

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	-	NB	-	EB	-	SB	-	WB
	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MIN. GREEN		20		7		20		7
VEH. EXTENSION				4				4
MAX. GREEN I		25		20		25		20
MAX. GREEN II								
YELLOW CLEAR		3.6		3.3		3.6		3.3
RED CLEAR		1.4		2.0		1.4		2.0
WALK		7		7		7		7
PED CLEAR (FDW)		5		11		5		11
RECALL		MAX		NONE		MAX		NONE
LOCK/NON-LOCK		LOCK		NON-LOCK		LOCK		NON-LOCK

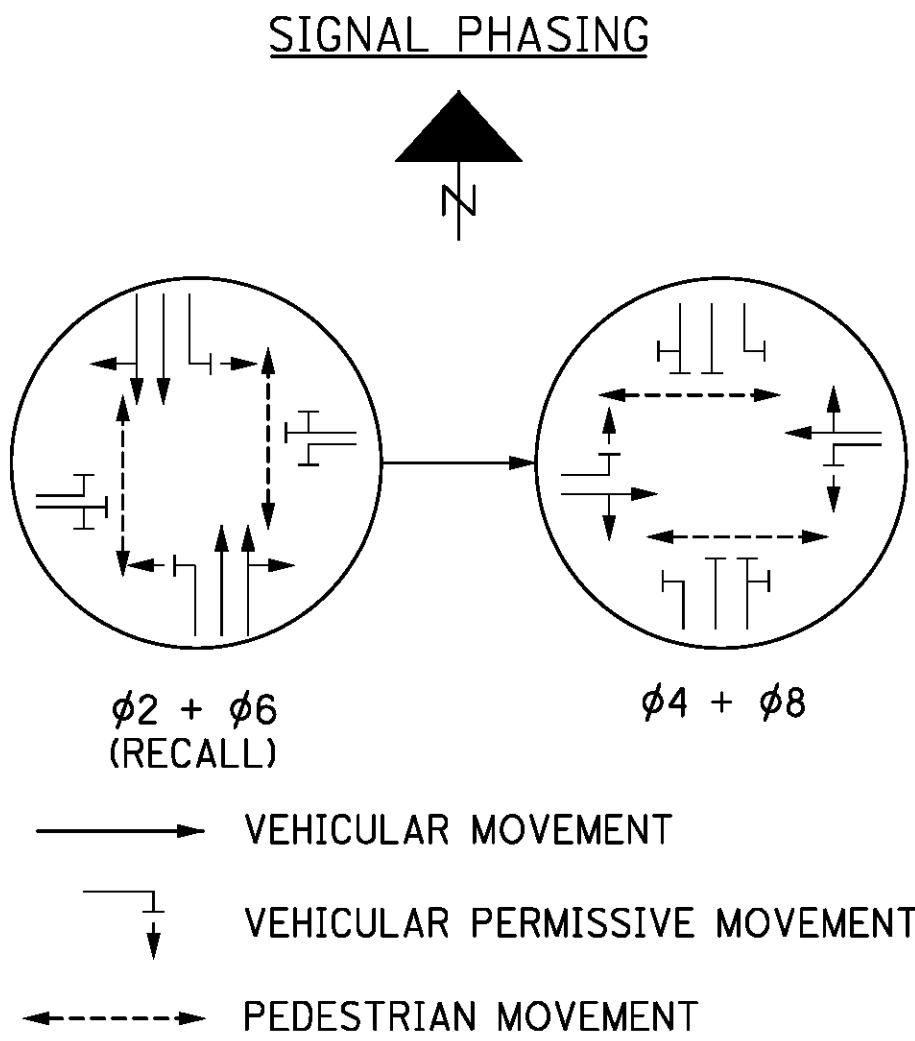
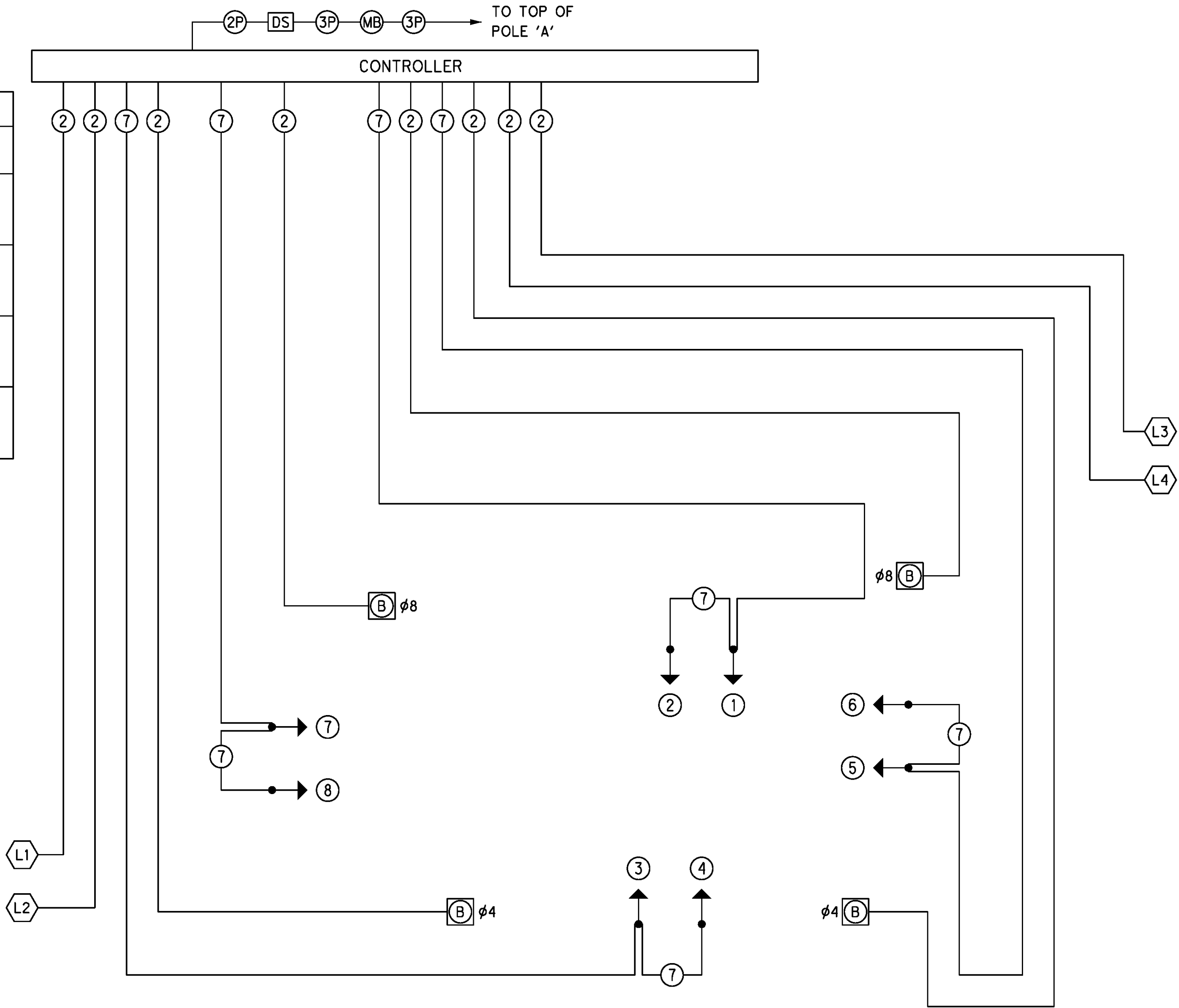
FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
3,4 (SB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
5,6 (EB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
7,8 (WB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	

- LEGEND
- L1 VEHICLE LOOP DETECTOR
 - B PEDESTRIAN PUSHBUTTON
 - VEHICULAR SIGNAL HEAD (3 SEC.)
 - 2P 2/C #6 AWG (POWER)
 - 3P 3/C #6 AWG (POWER)
 - DS DISCONNECT SWITCH
 - MB METER BASE
 - 2 2/C #14 AWG (LEAD-IN CABLE)
 - 7 7/C #14 AWG

NOTES:

1. SEE SHEET 59 FOR SIGNAL SUPPORT ORIENTATION TABLE.

2. SEE SHEET 56 FOR SIGNAL COORDINATION TIMING TABLE.



SUBSUMMARY OF TRAFFIC SIGNAL ITEMS				
ITEM	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE
625	44	FT	CONDUIT, 2", 725.04	
625	174	FT	CONDUIT, 3", 725.04	
625	88	FT	TRENCH	
625	12	FT	TRENCH IN PAVED AREA, TYPE A	
625	125	FT	TRENCH IN PAVED AREA, TYPE B	
625	3	EACH	PULL BOX, 725.08, 18"	
625	1	EACH	PULL BOX, 725.08, 24"	
625	5	EACH	GROUND ROD	
632	8	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3 SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	
632	4	EACH	PEDESTRIAN PUSHBUTTON	
632	4	EACH	DETECTOR LOOP	
632	631	FT	SIGNAL CABLE, 7-CONDUCTOR, No. 14 AWG	
632	4	EACH	SIGNAL SUPPORT FOUNDATION	
632	1	EACH	PEDESTAL FOUNDATION	
632	834	FT	LOOP DETECTOR LEAD-IN CABLE	
632	18	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
632	40	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	1	EACH	POWER SERVICE, AS PER PLAN	
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1	C
632	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2	A,B
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	D
632	1	EACH	PEDESTAL, 6', TRANSFORMER BASE	
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	
805	1	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY	

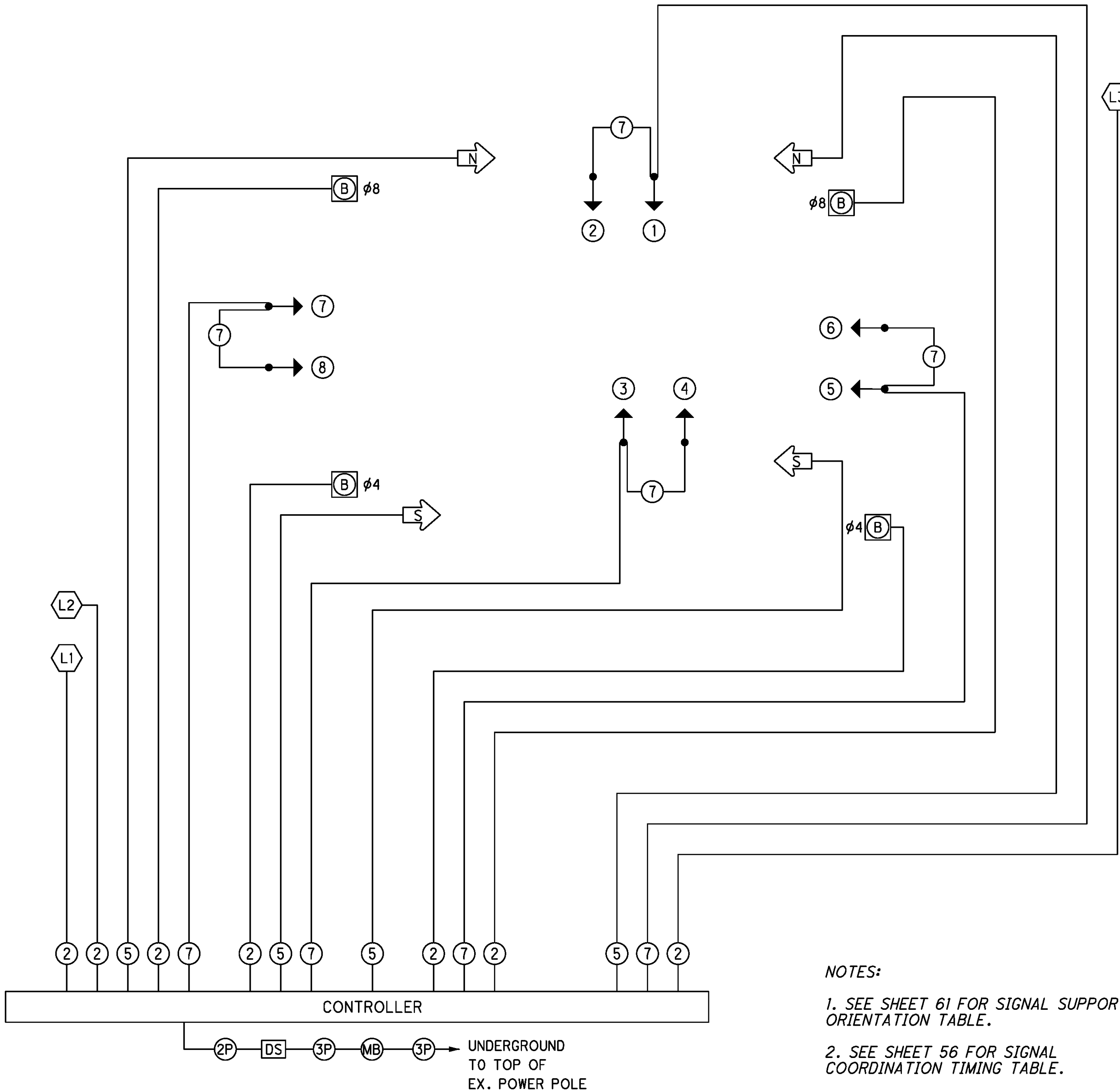
VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	5' X 25'	PRESENCE	5	4	ø8	1	1	ø8	WB
L2	POWERHEAD	5' X 25'	PRESENCE	3	4	ø4	2	1	ø4	EB
L3	POWERHEAD	6' X 25'	PRESENCE	12	4	ø4	3	1	ø4	EBRT

SIGNAL TIMING IN SECONDS								
TIMING INTERVAL	-	NB	-	EB	-	SB	-	WB
	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MIN. GREEN		20		7		20		7
VEH. EXTENSION				4				4
MAX. GREEN I		25		22		25		22
MAX. GREEN II								
YELLOW CLEAR		3.6		3.6		3.6		3.6
RED CLEAR		1.5		2.0		1.5		2.0
WALK		7		7		7		7
PED CLEAR (FDW)		13		15		13		15
RECALL		MAX		NONE		MAX		NONE
LOCK/NON-LOCK		LOCK		NON-LOCK		LOCK		NON-LOCK

FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
3,4 (SB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
5,6 (EB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
7,8 (WB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
NN	W	ø8P G	OFF
	DW	ø8P R	
SS	W	ø4P G	OFF
	DW	ø4P R	

LEGEND

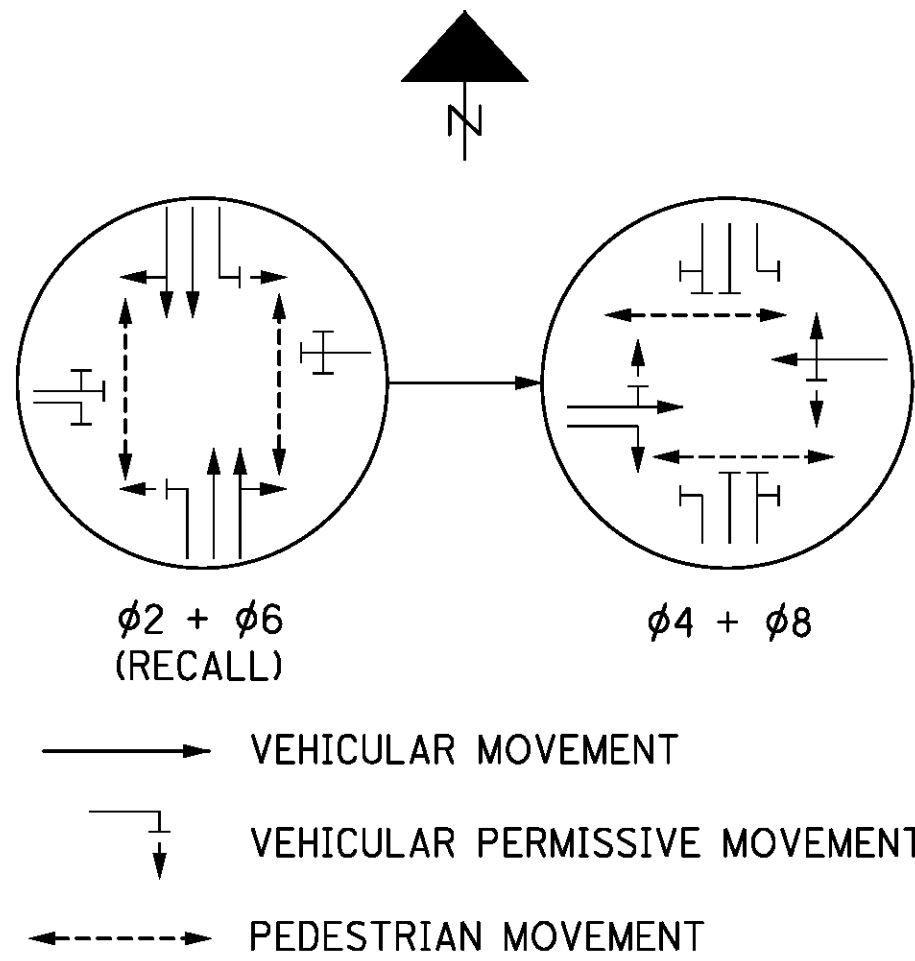
- L1 VEHICLE LOOP DETECTOR
- E PED SIGNAL HEAD
- B PEDESTRIAN PUSHBUTTON
- VEHICULAR SIGNAL HEAD (3 SEC.)
- 2P 2/C #6 AWG. (POWER)
- 3P 3/C #6 AWG (POWER)
- DS DISCONNECT SWITCH
- MB METER BASE
- 2 2/C #14 AWG (LEAD-IN CABLE)
- 5 5/C #14 AWG
- 7 7/C #14 AWG



NOTES:

- SEE SHEET 61 FOR SIGNAL SUPPORT ORIENTATION TABLE.
- SEE SHEET 56 FOR SIGNAL COORDINATION TIMING TABLE.

SIGNAL PHASING



SUBSUMMARY OF TRAFFIC SIGNAL ITEMS

ITEM	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE
625	50	FT	CONDUIT, 2", 725.04	
625	223	FT	CONDUIT, 3", 725.04	
625	109	FT	TRENCH	
625	22	FT	TRENCH IN PAVED AREA, TYPE A	
625	164	FT	TRENCH IN PAVED AREA, TYPE B	
625	3	EACH	PULL BOX, 725.08, 18"	
625	1	EACH	PULL BOX, 725.08, 24"	
625	5	EACH	GROUND ROD	
632	8	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3 SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	
632	4	EACH	PEDESTRIAN SIGNAL HEAD, (LED), TYPE D2	
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	
632	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
632	4	EACH	PEDESTRIAN PUSHBUTTON	
632	3	EACH	DETECTOR LOOP	
632	578	FT	SIGNAL CABLE, 5-CONDUCTOR, No. 14 AWG	
632	732	FT	SIGNAL CABLE, 7-CONDUCTOR, No. 14 AWG	
632	4	EACH	SIGNAL SUPPORT FOUNDATION	
632	1	EACH	PEDESTAL FOUNDATION	
632	811	FT	LOOP DETECTOR LEAD-IN CABLE	
632	18	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
632	93	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	1	EACH	POWER SERVICE, AS PER PLAN	
632	1	EACH	CONDUIT RISER, 2" DIAMETER	
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1	D
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2	C
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	B
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11	A
632	1	EACH	PEDESTAL, 8', TRANSFORMER BASE	
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
633	1	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS1, AS PER PLAN	
805	1	EACH	GLOBAL POSITIONING SYSTEM CLOCK ASSEMBLY	



ms consultants, inc.
msconsultants.com

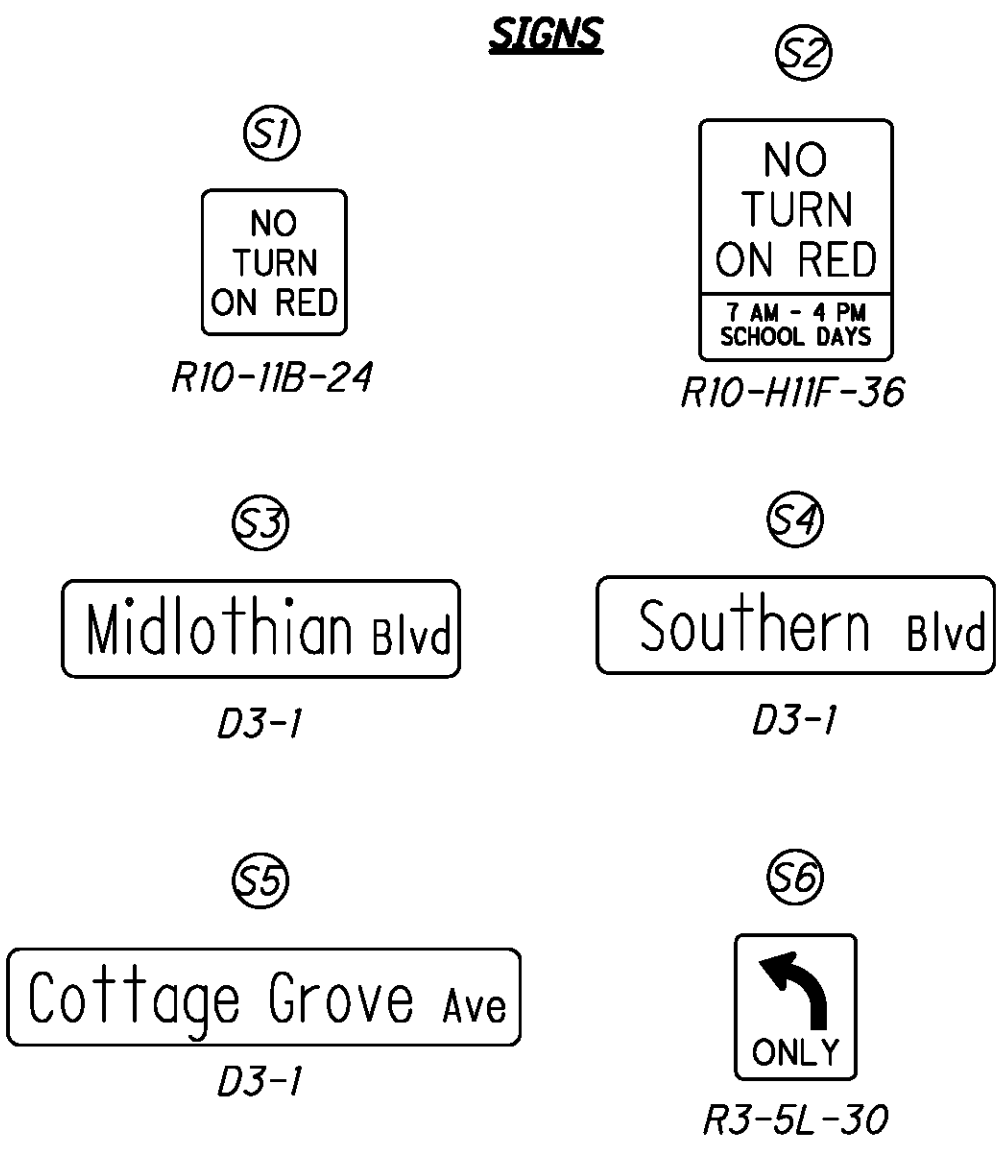
Ohio DOT Workspace
UCF: oha01VBI
PCF: 60-10586_Columbus_Nb_AScale_South Avenue Signals
www.msconsultants.com

Batchplot Spec: \\0330share\\n\\60\\10586\\standards\\pltdrv\\batchplf.spc
Pen Table: S\\std\\pltdrv\\std\\pen\\VBI.ms_std.tbl
Plot Driver: S\\std\\pltdrv\\std\\VBI\\PDF.plt

Model: Sheet
Printed: 1/20/2015 @ 3:37:48 PM By: lkausek
File: \\0330share\\n\\60\\10586\\signals\\sheets\\87408CP012.dgn

3.4" x 22"

SIGNS



D3-1 SIGNS SHALL BE DOUBLE-FACED AND SUSPENDED DIRECTLY BELOW THE MAST ARM

POLE E SIGNAL SUPPORT
W/ (1) PED PUSHBUTTON W/ SIGN
STA. 80+69, 32' LT
CAUTION: GAS LINE

2" CONDUIT
W/ (1)-7/C, (2)-2/C
(TYPE 'A' = 26')

18" PULL BOX
STA. 80+56, 25' LT

18" PULL BOX
STA. 80+76, 39' LT

2" CONDUIT
W/ (1)-7/C, (1)-2/C
(TYPE 'A' = 10')

POLE A SIGNAL SUPPORT
W/ POLE MOUNTED CONTROLLER,
METER BASE, & DISCONNECT SWITCH
STA. 81+21, 45' LT

3" CONDUIT
W/ (3)-7/C, (5)-2/C
(TRENCH = 11')

18" PULL BOX
STA. 81+21, 35' LT

3" CONDUIT = 48'
W/ (3)-7/C, (5)-2/C
(TRENCH = 5')
(TYPE 'A' = 7')
(TYPE 'B' = 36')

3" CONDUIT
W/ (1)-7/C, (2)-2/C
(TYPE 'A' = 5')
(TYPE 'B' = 44')

18" PULL BOX
STA. 80+54, 24' RT

2" CONDUIT
W/ (1)-7/C, (2)-2/C
(TYPE 'A' = 33')

POLE D SIGNAL SUPPORT
W/ (1) PED PUSHBUTTON W/ SIGN
STA. 80+75, 41' RT
CAUTION: GAS LINE

2" CONDUIT
W/ (1)-7/C, (1)-2/C
(TYPE 'A' = 5')

18" PULL BOX
STA. 80+81, 41' RT
CAUTION: GAS LINE

3" CONDUIT
W/ (1)-2/C
(TRENCH = 3')
(TYPE 'A' = 2')
(TYPE 'B' = 31')

REMOVE AND REPLACE EX.
PULL BOX W/ 18" PULL BOX
STA. 81+16, 35' RT

2-3" CONDUITS
(1) W/ (1)-7/C
(1) W/ (10)-2/C & (1)-RR
(TRENCH = 6')

REMOVE AND REPLACE
EX. PULL BOX W/
24" PULL BOX
STA. 81+27, 44' LT

EXISTING CONDUIT
W/ (4)-7/C, (5)-2/C,
& (1)-RR

REMOVE AND REPLACE
EX. PULL BOX W/
24" PULL BOX
STA. 81+69, 64' LT

EXISTING RAILROAD
BUNGALOW

EXISTING
CONDUIT W/
(1)-RR

2" CONDUIT
W/ (1)-2/C
(TRENCH = 23')

POLE B SIGNAL SUPPORT
W/ DUAL MAST ARMS
STA. 81+66, 46' LT
CAUTION: GAS LINE

2" CONDUIT
W/ (2)-7/C
(TRENCH = 4')

REMOVE AND REPLACE
EX. PULL BOX W/
24" PULL BOX
STA. 81+64, 43' LT

3" CONDUIT = 48'
W/ (2)-7/C, (4)-2/C
(TRENCH = 6')
(TYPE 'A' = 5')
(TYPE 'B' = 35')

18" PULL BOX
STA. 82+11, 47' LT

2" CONDUIT = 37'
W/ (2)-7/C, (4)-2/C
(TYPE 'A' = 37')

POLE F PEDESTAL
W/ (1) PED PUSHBUTTON W/ SIGN
STA. 82+31, 26' LT

2" CONDUIT
W/ (1)-2/C
(TYPE 'A' = 10')

NOTES:

1. AERIAL POWER SERVICE CONNECTION TO BE MADE BY OHIO EDISON.
2. SEE SHEET 31 FOR SIGNING AND PAVEMENT MARKING PLAN.
3. ALL STATIONING IS REFERENCED FROM MIDLOTHIAN BOULEVARD UNLESS OTHERWISE NOTED.
4. RAILROAD PREEMPTION INTERCONNECT CABLE IS ABBREVIATED RR.

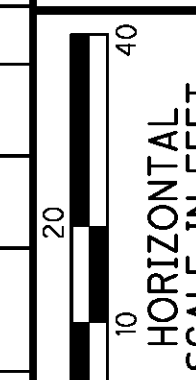
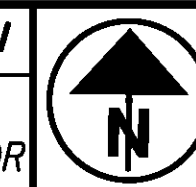
CAUTION: UNDERGROUND UTILITIES

CONTRACTOR SHALL HAND EXCAVATE, WHERE NECESSARY, POLE AND PEDESTAL FOUNDATIONS, PULL BOXES, AND CONDUIT TRENCH TO ENSURE CLEARANCE FROM UNDERGROUND GAS, COMMUNICATION, FIBER-OPTIC, ELECTRICAL, AND WATER LINES.

TRAFFIC SIGNAL LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD
- ☒ POLE MOUNTED CONTROLLER CABINET
- PULL BOX (BY SIZE)
- ☐ EXISTING STRAIN POLE
- PROPOSED SIGNAL SUPPORT
- ▭ LX// POWERHEAD LOOP DETECTOR
- ▣ PEDESTRIAN PEDESTAL

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
DESCRIPTION OF ITEM TO BE REMOVED BY CONTRACTOR	STORED FOR CITY	DISPOSED OF BY CONTRACTOR
SIGNAL CABLE		X
(1) GROUND MOUNTED CONTROLLER & CABINET	X	
(12) 3-SECTION VEHICULAR SIGNAL HEADS	X	
(4) 3-SECTION OPTICALLY PROGRAMMED VEH. SIG. HEADS	X	
(12) PED SIGNAL HEADS	X	
(4) PED PUSHBUTTONS	X	
MESSENGER WIRE		X
(6) STRAIN POLES	X	
(2) SIGNAL SUPPORTS W/ MAST ARMS	X	
(8) ANCHOR BASE FOUNDATIONS		X
(4) SPAN MOUNTED SIGNS	X	
(4) STRAIN POLE MOUNTED SIGNS	X	

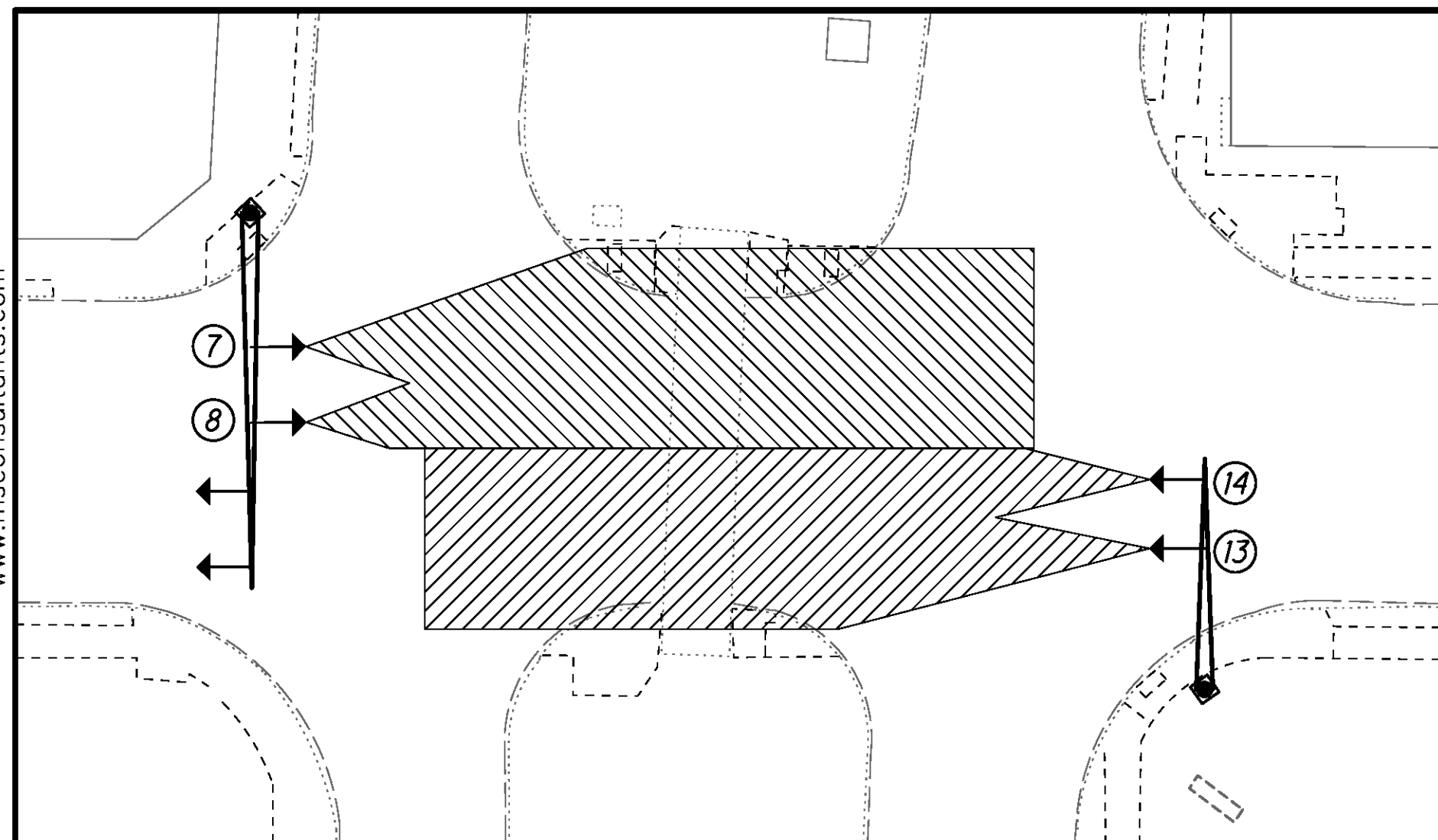


CALCULATED
CHECKED

**TRAFFIC SIGNAL PLAN
MIDLOTHIAN BLVD. & SOUTHERN BLVD.**

**MAH-SOUTH
AVENUE SIGNALS**

53
82



VISIBILITY LIMITS FOR OPTICALLY PROGRAMMED HEADS 7, 8, 13 AND 14

NOTES:

1. SEE SHEET 58 FOR SIGNAL SUPPORT ORIENTATION TABLE.
2. THIS INTERSECTION IS NOT PART OF A COORDINATED SIGNAL SYSTEM.
3. A RAILROAD PREEMPTION CALL DURING ANY PHASE SHALL IMMEDIATELY CAUSE ALL GREEN DISPLAYS NOT CLEARED IN $\phi 2TG + \phi 6TG$ TO GO TO YELLOW AND RED CLEAR AND THEN TIME $\phi 2TG + \phi 6TG$ BEFORE GOING TO THE RAILROAD PREEMPT DWELL PHASE.
4. AFTER PREEMPTION THE CONTROLLER SHALL BEGIN REGULAR TIMING WITH $\phi 2 + \phi 6$.
5. $\phi 2TG + \phi 6TG$ SHALL ALWAYS BE CALLED AFTER $\phi 2 + \phi 6$.
6. $\phi 4TG$ SHALL ALWAYS BE CALLED AFTER $\phi 4$ WHEN $\phi 8$ IS CALLED.
7. $\phi 2 + \phi 6$ SHALL ALWAYS BE CALLED AFTER $\phi 8$, EXCEPT DURING A RAILROAD PREEMPTION CALL.

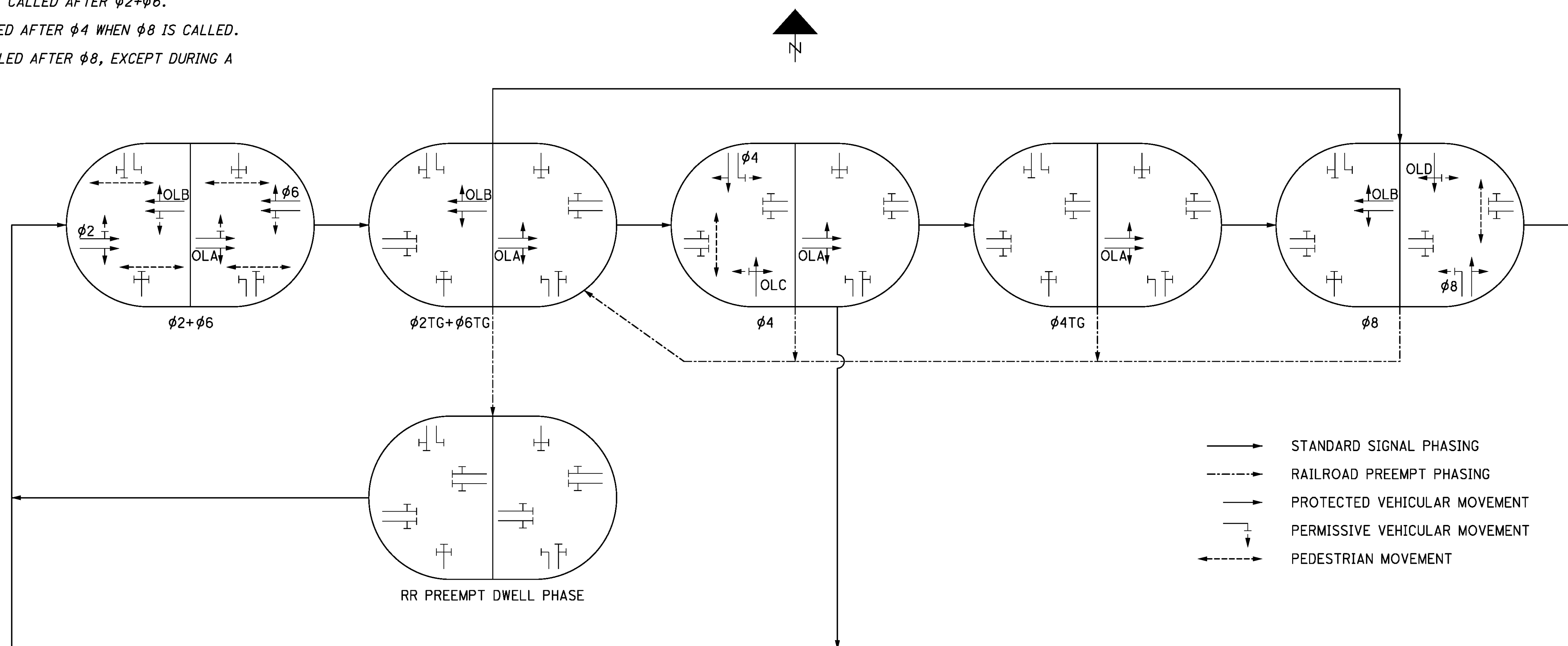
VEHICULAR LOOP DETECTORS										
LOOP	LOOP CONFIG.	SIZE (W X L)	TYPE	DELAY (SEC.)	EXT. (SEC)	DELAY INHIBITED DURING	LOOP		ASSOC. PHASE	LABEL
							UNIT	CHANNEL		
L1	POWERHEAD	5' X 25'	PRESENCE	3	4	Ø4	1	1	Ø4	SBLL(WEST)
L2	POWERHEAD	5' X 25'	PRESENCE	5	4	Ø4	2	1	Ø4	SBRL(WEST)
L3	POWERHEAD	6' X 25'	PRESENCE	3	4	Ø4	3	1	Ø4	NB(WEST)
L4	POWERHEAD	6' X 25'	PRESENCE	3	4	Ø8	4	1	Ø8	SB(EAST)
L5	POWERHEAD	5' X 25'	PRESENCE	3	4	Ø8	5	1	Ø8	NBLL(EAST)
L6	POWERHEAD	5' X 25'	PRESENCE	5	4	Ø8	6	1	Ø8	NBRL(EAST)

SIGNAL TIMING IN SECONDS												
TIMING INTERVAL	- Ø1	EB Ø2	- Ø3	SB Ø4	- Ø5	WB Ø6	- Ø7	NB Ø8	WB OLA	EB OLB	NB OLC	SB OLD
MIN. GREEN		20		7		20		7				
VEH. EXTENSION				4				4				
MAX. GREEN I		30		20		30		20	2	2		
MAX. GREEN II												
YELLOW CLEAR		3.6		3.6		3.6		3.6	3.6	3.6		
RED CLEAR		2.0		2.0		2.0		2.0	2.0	2.0		
WALK		7		7		7		6				
PED CLEAR (FDW)		8		12		9		14				
RECALL		MAX		NONE		MAX		NONE	MAX	MAX		
LOCK/NO-LOCK		LOCK		NON-LOCK		LOCK		NON-LOCK	LOCK	LOCK		

OVERLAP A = TRAILING GREEN OF 2 SECONDS.
OVERLAP B = TRAILING GREEN OF 2 SECONDS.

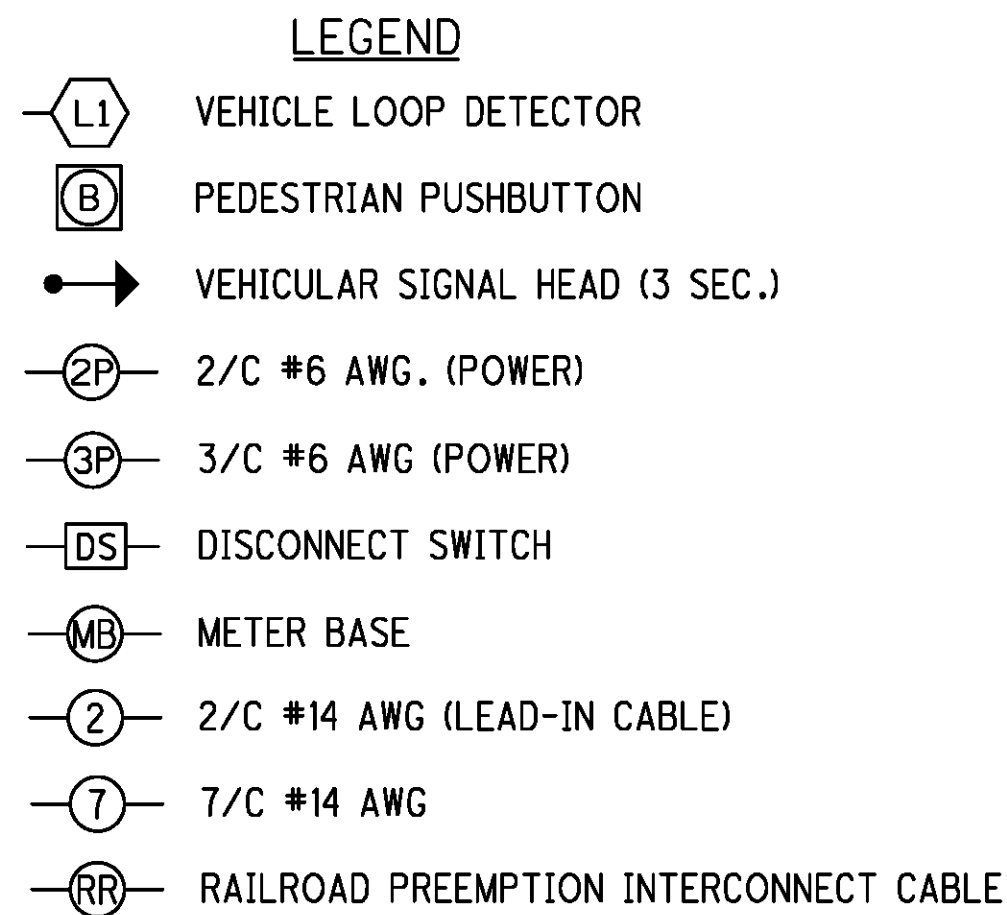
FIELD WIRING HOOK-UP CHART			
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1,2 (NB)	R	OLC R	R
	Y	OLC Y	
	G	OLC G	
3,4 (SB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	
5,6 (EB)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
7,8 (WB)	R	OLB R	Y
	Y	OLB Y	
	G	OLB G	
9,10 (NB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	
11,12 (SB)	R	OLD R	R
	Y	OLD Y	
	G	OLD G	
13,14 (EB)	R	OLA R	Y
	Y	OLA Y	
	G	OLA G	
15,16 (WB)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	

SIGNAL PHASING



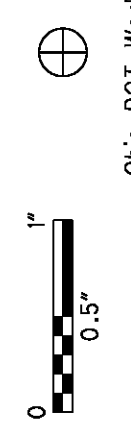
SIGNAL DETAILS			
MIDLOTHIAN BLVD. & SOUTHERN BLVD.			

**MAH-SOUTH
AVENUE SIGNALS**



2. THIS INTERSECTION IS NOT PART OF A COORDINATED SIGNAL SYSTEM.

ms consultants, inc.

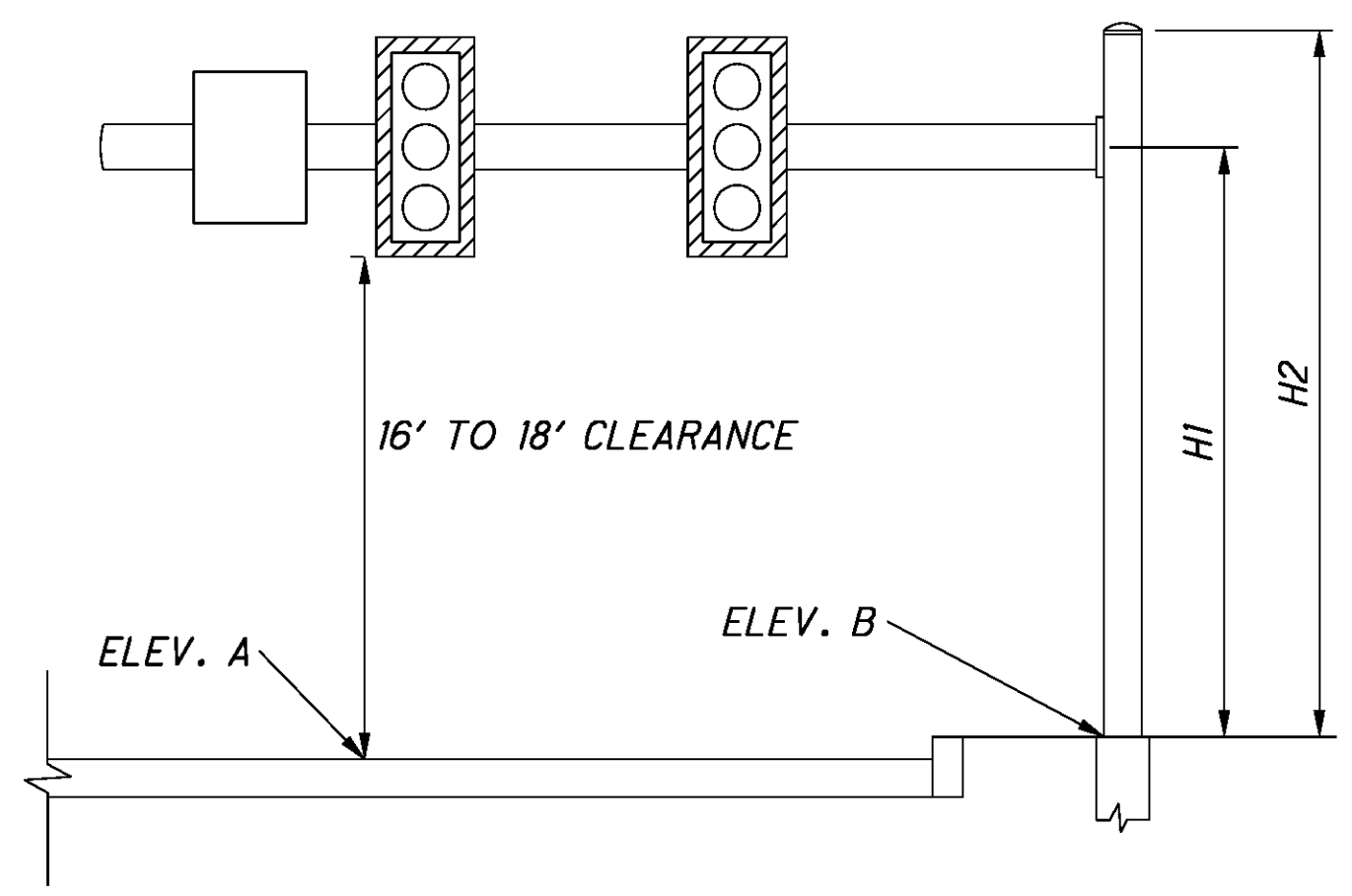


3/4" x 22"

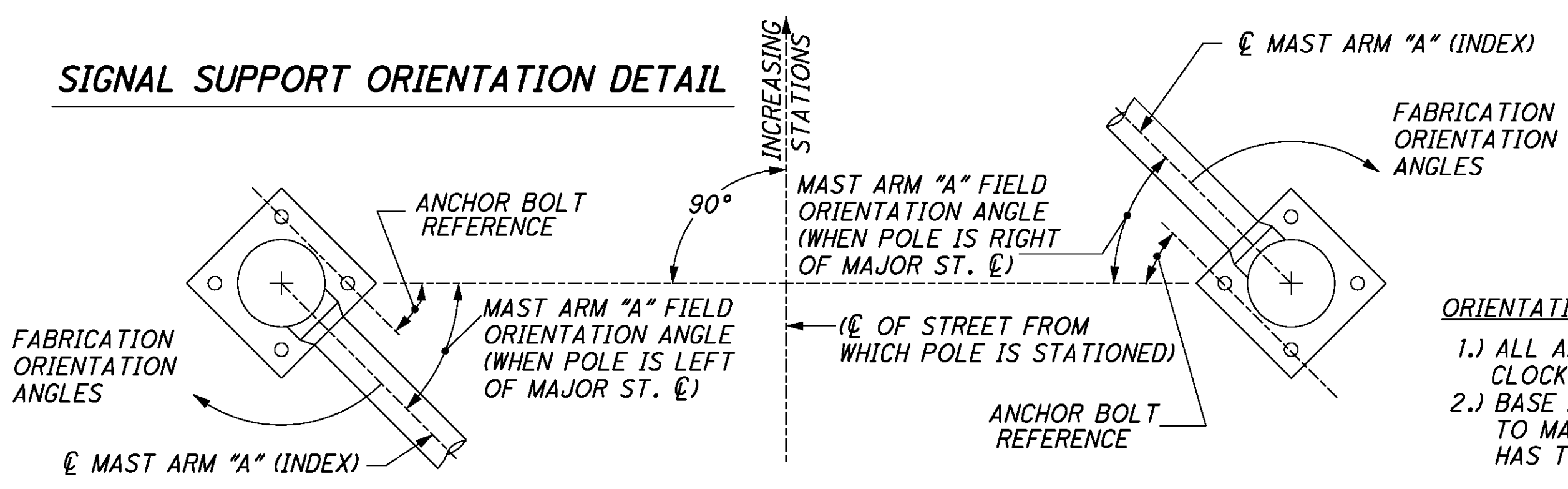
SUPPORT LOCATION					SUPPORT DATA						MAST ARM "A" DATA						POLE FABRICATION ACCESSORY LOCATIONS - CLOCKWISE FROM MAST ARM "A"						FIELD ORIENTATION			
INTERSECTION	SHEET NO.	SUPPORT	STATION	OFFSET (FEET) & SIDE	TC-81.21 DESIGN NO.	TC-12.30 DESIGN NO.	H1 ARM ATTACHMENT HEIGHT (FEET)	H2 TOTAL HEIGHT (FEET)	ELEVATION ③		OVERALL LENGTH (FEET)	SIGNAL NUMBER	SIGN CODE	SIGNING SUBSUMMARY REFERENCE NO.	DISTANCE FROM ARM BUTT TO CENTER OF HEAD OR SIGN (FEET) ①		HANDHOLE	PEDESTRIAN SIGNAL 1 1/2" B-H.C. 8' FROM BASE	PEDESTRIAN PUSHBUTTON WITH SIGN	POLE MOUNTED CONTROLLER	SIGNAL DISC. SWITCH & METER		MAST ARM "A" OR "B" ORIENTATION ANGLE	ANCHOR BOLT REFERENCE ②		
									A	B																
SOUTH AVE.	35	A	14+68	35' LT	11		18.5	20	1115.12	1115.75	40		D3-1	S4	8.5		130°		ø6 - 310°	40°	220°		35°	125°		
												3			17.5											
												4			30.5											
													R3-5L	S5	37											
		B	15+68	33' LT	12		18.5	20	1116.14	1117.08	46		D3-1	S2	9		130°		ø6 - 310°				120°	30°		
												7			19											
												8			31											
													R3-5L	S1	42											
		C	15+30	33' RT	12		19.5	21	1116.66	1116.27	48		D3-1	S8	10		120°						30°	120°		
												1			20.5											
MIDLOTHIAN BLVD.												2			35											
													R3-5L	S7	44.5											
		D	14+24	34' RT	11		19.5	21	1114.61	1114.72	43		D3-1	S6	8		180°		ø2 - 270°				125°	35°		
												5			16.5											
												6			28.5											
													R3-5L	S10	40											
	37	A	21+72	55' LT	1		19.5	21	1118.74	1118.78	22	7			6.5		180°			90°	180°		100°	10°		
												8	D3-1	S11	12.5											
															18.5											
SOUTH AVE.		B	20+89	35' RT	4			21									195°		ø8 - 15°					110°		
		MAST ARM "A" TC-81.21 DESIGN 3					19.5		1119.61	1119.22	34		D3-1	S12	6.5								20°			
												1	R10-11B	S13	14											
												2			30.5											
		MAST ARM "B" TC-81.21 DESIGN 3					19.5		1118.40	1119.22	34		D3-1	S14	8.5								110°			
													R10-11B	S15	16.5											
												5			20.5											
												6			30.5											
		C	21+24	45' LT	11		19.5	21	1119.52	1119.22	43	3			26		165°		ø8 - 75°				10°	100°		
												9			28											
												4			38											
												10			40											

NOTES:

- ① VEHICULAR SIGNAL HEADS SHALL BE RIGID MOUNTED AS PER TC-85.20 WITH THE YELLOW SECTION CENTERED VERTICALLY ON THE MAST ARM.
- ② THE FORMED TOPS OF THE PROPOSED FOUNDATIONS SHALL BE SQUARE TO THE ADJACENT SIDEWALKS OR CURB RAMP LANDINGS. THE ANCHOR BOLTS ARE NOT REQUIRED TO BE SQUARE TO THE FOUNDATIONS.
- ③ ELEVATIONS ARE APPROXIMATE AND BASED UPON BEST AVAILABLE DATA. TOPS OF FOUNDATIONS SHALL BE CONSTRUCTED AS PER SCD TC-21.20.



SIGNAL SUPPORT ORIENTATION DETAIL

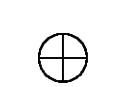
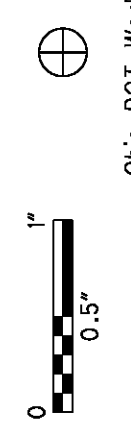


ORIENTATION DETAIL NOTES:

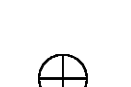
- 1.) ALL ANGLES MEASURED CLOCKWISE.
- 2.) BASE PLATE IS ORIENTED SQUARE TO MAST ARM "A" EVEN IF SUPPORT HAS TWO MAST ARMS.

- 1.) ALL ANGLES MEASURED
CLOCKWISE.
- 2.) BASE PLATE IS ORIENTED SQUARE
TO MAST ARM "A" EVEN IF SUPPORT
HAS TWO MAST ARMS.

UCF: oha\VB\PCF: 60-10586_Columbus_No_AScale_South Avenue Signals
Batchplot Spec: \0330shore\160\10586_standards\batchpl\batchplf.spc
Pen Table: S:\std\batchpl\usn\VB\pen\VB\ms_std.tbl
Plot Driver: S:\std\batchpl\usn\VB\PDF\plcfig
Model: Sheet
Printed: 1/20/2015 @ 3:37:59 PM By: lkausek
File: \0330shore\160\10586_signals\sheet\87408C0016.dgn



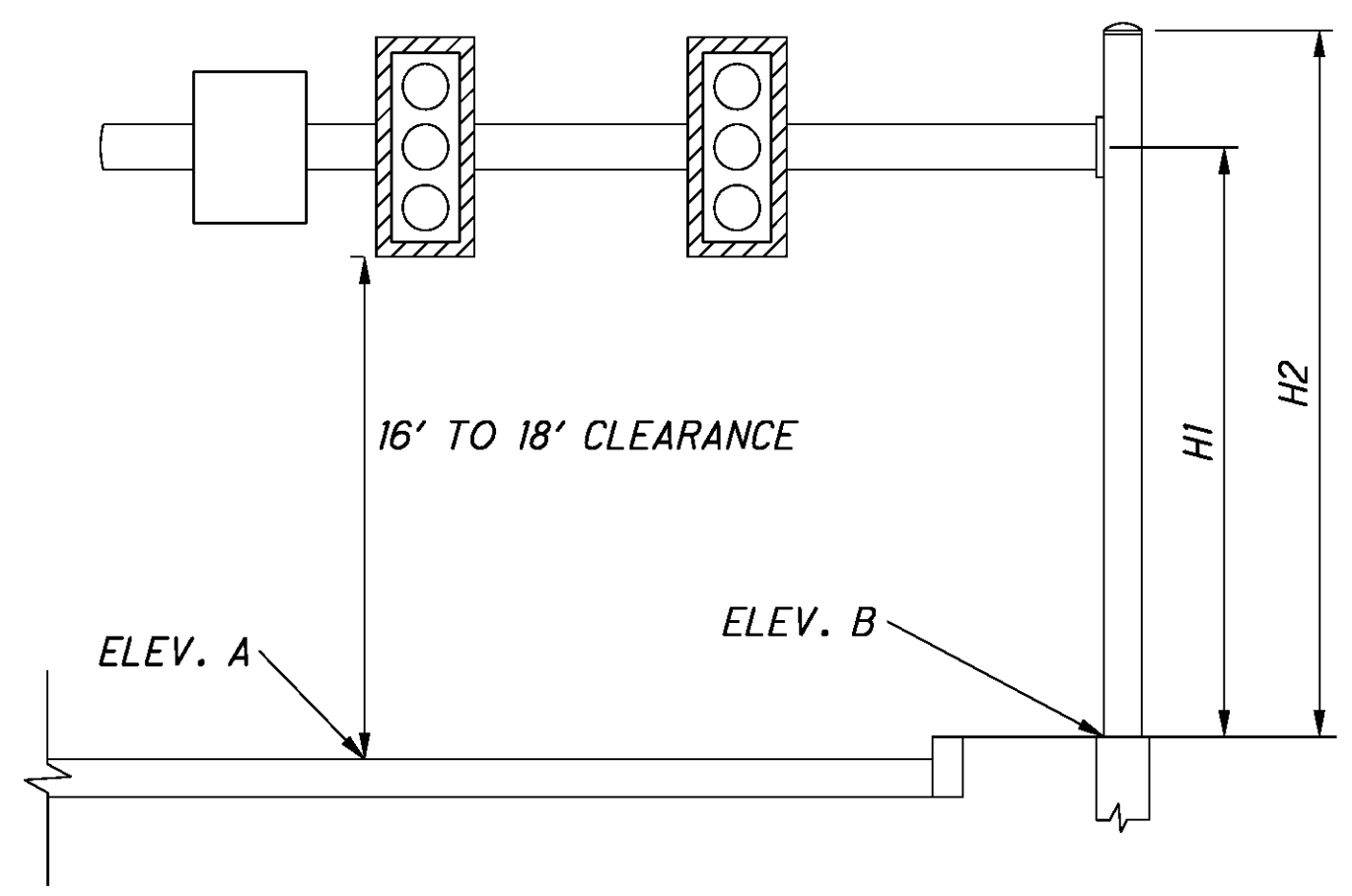
3/4" x 22"



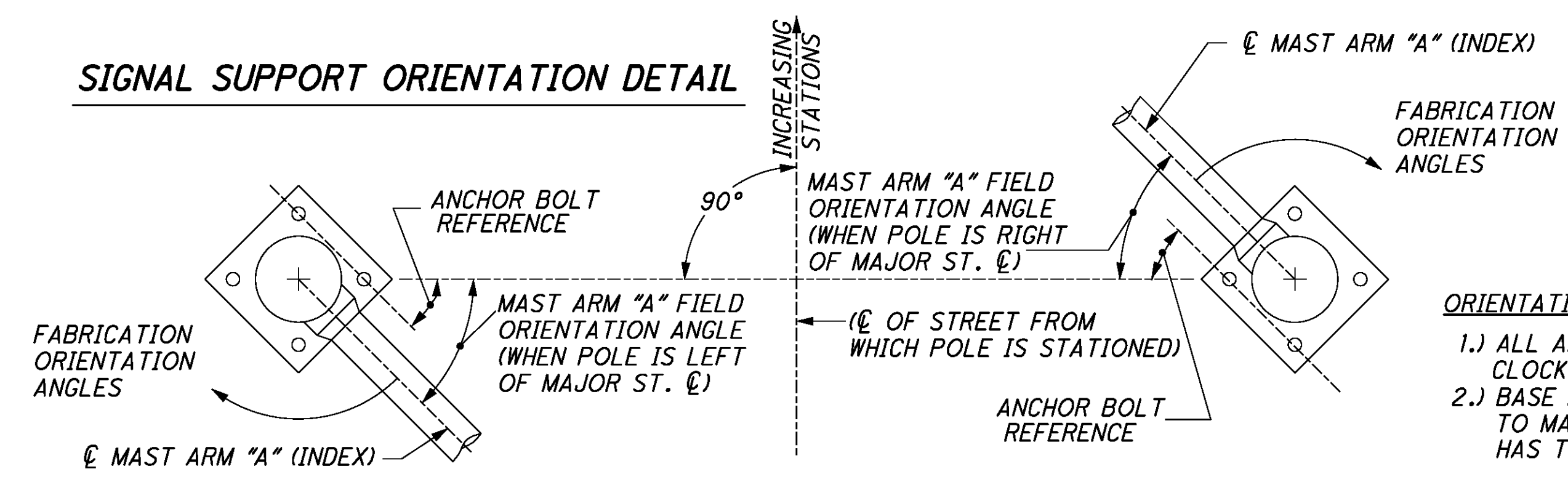
SUPPORT LOCATION					SUPPORT DATA					MAST ARM "A" DATA						POLE FABRICATION ACCESSORY LOCATIONS - CLOCKWISE FROM MAST ARM "A"							FIELD ORIENTATION			
INTERSECTION	SHEET NO.	SUPPORT	STATION	OFFSET (FEET) & SIDE	TC-81.21 DESIGN NO.	TC-12.30 DESIGN NO.	H1 ARM ATTACHMENT HEIGHT (FEET)	H2 TOTAL HEIGHT (FEET)	ELEVATION ③		OVERALL LENGTH (FEET)	SIGNAL NUMBER	SIGN CODE	SIGNING SUBSUMMARY REFERENCE NO.	DISTANCE FROM ARM BUTT TO CENTER OF HEAD OR SIGN (FEET) ①		HANDHOLE	PEDESTRIAN SIGNAL 1 1/2" B-H.C. 8' FROM BASE	PEDESTRIAN PUSHBUTTON WITH SIGN	POLE MOUNTED CONTROLLER	SIGNAL DISC. SWITCH & METER		MAST ARM "A" OR "B" ORIENTATION ANGLE	ANCHOR BOLT REFERENCE ②		
									A	B																
SOUTH AVE.	47	A	89+84	37' LT	11		19.5	21	988.77	988.74	41	4			17		0°		φ4 - 80°	170°	260°		0°	90°		
												5			28											
												6			38											
		B	90+62	65' RT	13		20.5	22	986.90	986.50	57	1			31.5		180°						0°	90°		
												2			43.5											
I-680 SB												3			54											
		C	90+13	57' RT	3		18.5	20	986.81	987.80	35		D3-1	S43	13		125°						90°	0°		
												7			23											
												8			32											
SOUTH AVE.	49	A	96+38	40' RT	3		18.5	20	970.62	971.29	33	1			19		270°			180°	90°		0°	90°		
												2			30											
		B	95+25	39' RT	11		17.5	19	973.82	976.10	41	5			22		90°		φ4 - 180°				90°	0°		
												6			34											
													R10-SPE	S74	38											
I-680 NB																										
		C	95+33	37' LT		7		21									90°		φ4 - 90°					90°		
MAST ARM "A" TC-81.21 DESIGN 2							19.5		974.24	975.64	29	3			14.5								0°			
												4			25.5											
MAST ARM "B" TC-81.21 DESIGN 13							18.5		975.09	975.64	58		D3-1	S45	26								270°			
													R10-SPE	S75	34.5											
												7			39											
												8			51											
													R10-IIC	S46	54.5											

NOTES:

- ① VEHICULAR SIGNAL HEADS SHALL BE RIGID MOUNTED AS PER TC-85.20 WITH THE YELLOW SECTION CENTERED VERTICALLY ON THE MAST ARM.
- ② THE FORMED TOPS OF THE PROPOSED FOUNDATIONS SHALL BE SQUARE TO THE ADJACENT SIDEWALKS OR CURB RAMP LANDINGS. THE ANCHOR BOLTS ARE NOT REQUIRED TO BE SQUARE TO THE FOUNDATIONS.
- ③ ELEVATIONS ARE APPROXIMATE AND BASED UPON BEST AVAILABLE DATA. TOPS OF FOUNDATIONS SHALL BE CONSTRUCTED AS PER SCD TC-21.20.



SIGNAL SUPPORT ORIENTATION DETAIL



ORIENTATION DETAIL NOTES:

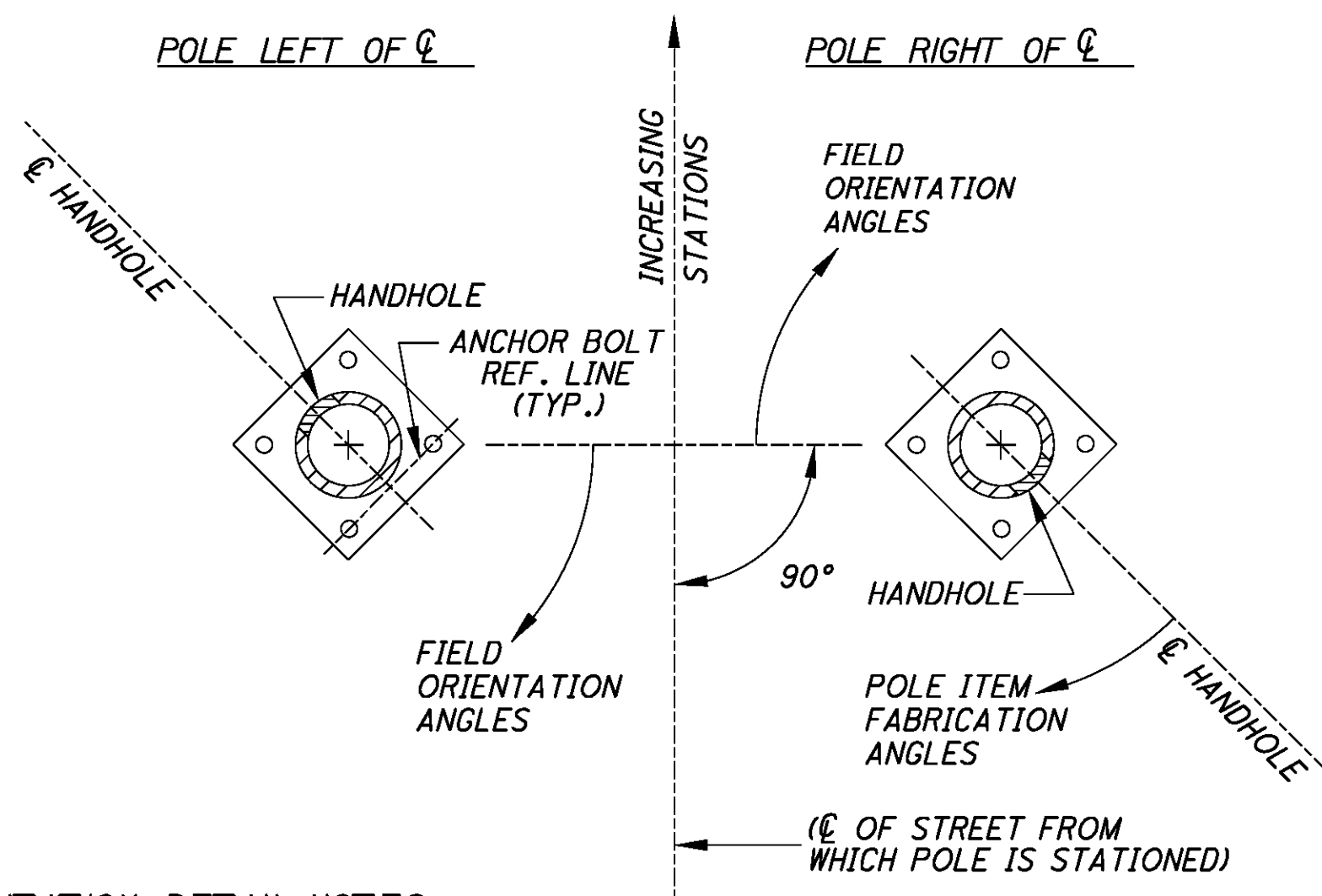
- 1.) ALL ANGLES MEASURED CLOCKWISE.
- 2.) BASE PLATE IS ORIENTED SQUARE TO MAST ARM "A" EVEN IF SUPPORT HAS TWO MAST ARMS.

PEDESTRIAN PEDESTAL LOCATION				POLE SIZES			FIELD ORIENTATION ②			
INTERSECTION	SHT. NO.	STATION	OFFSET/SIDE	PEDESTAL DESIGNATION	POLE DESIGN NO.	POLE HT. (FT.)	PED. SIGNALS ①	PED. PUSH BUTTON	HANDHOLE	ANCHOR BOLT REF. LINE ③
SOUTH AVE. & MIDLOTHIAN BLVD.	35	15+11	47' RT	E	PED	6		φ2 - 30°	300°	210°
SOUTH AVE. & JUDSON AVE.	37	21+72	40' LT	D	PED	6		φ8 - 330°	150°	60°
		21+61	35' RT	E	PED	6		φ8 - 60°	150°	60°
SOUTH AVE. & INDIANOLA AVE.	43	58+66	36' LT	E	PED	8	S - 350°	φ4 - 260°	170°	80°
		59+47	43' LT	F	PED	8	N - 5°	φ8 - 35°	215°	35°
		59+48	38' RT	G	PED	8	N - 355°	φ8 - 230°	230°	50°
		58+71	33' RT	H	PED	8	S - 0°	φ4 - 105°	285°	15°
SOUTH AVE. & DEWEY AVE.	45	71+56	40' RT	E	PED	6		φ4 - 270°	180°	0°
SOUTH AVE. & I-680 SB	47	89+82	48' RT	D	PED	6		φ4 - 270°	180°	0°
SOUTH AVE. & WILLIAMSON AVE.	51	108+92	40' LT	E	PED	8	S - 340°	φ4 - 270°	140°	50°
MIDLOTHIAN BLVD. & SOUTHERN BLVD.	53	82+31	26' LT	F	PED	6		φ8 - 90°	180°	0°

NOTES:

- PEDESTRIAN SIGNALS SHALL BE POST-TOP MOUNTED WITH THE FACE OF THE PED SIGNAL ORIENTED AS NOTED.
- ALL PEDESTAL ANGLES ARE MEASURED BY FIELD ORIENTATION.
- THE FORMED TOPS OF THE PROPOSED FOUNDATIONS SHALL BE SQUARE TO THE ADJACENT SIDEWALKS OR CURB RAMP LANDINGS. THE ANCHOR BOLTS ARE NOT REQUIRED TO BE SQUARE TO THE FOUNDATIONS.

PEDESTRIAN PEDESTAL ORIENTATION DETAIL



ORIENTATION DETAIL NOTES:

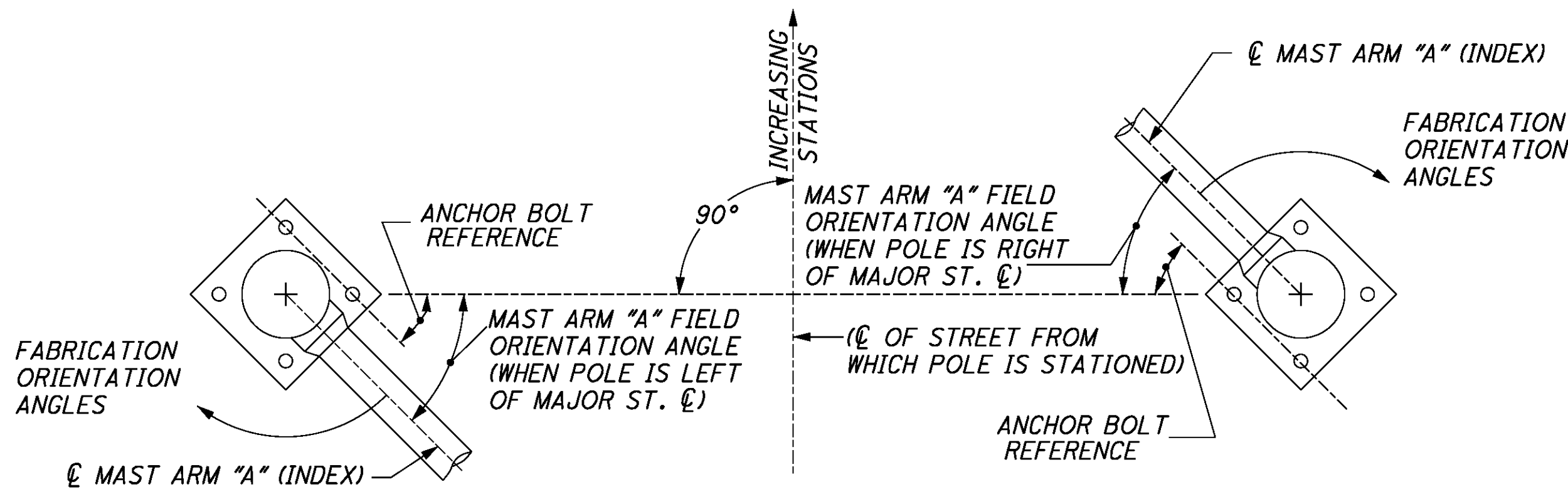
- ALL ANGLES MEASURED CLOCKWISE.
- INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

SUPPORT LOCATION				SUPPORT DATA			MAST ARM "A" DATA			POLE FABRICATION ACCESSORY LOCATIONS - CLOCKWISE FROM MAST ARM "A"			FIELD ORIENTATION		
INTERSECTION	SHEET NO.	SUPPORT	STATION	OFFSET (FEET) & SIDE	TC-12.30 DESIGN NO.	TOTAL HEIGHT (FEET)	OVERALL LENGTH (FEET)	SIGN CODE ①	DISTANCE FROM ARM BUTT TO CENTER OF SIGN (FEET)	HANDHOLE			MAST ARM "A" ORIENTATION ANGLE	ANCHOR BOLT REFERENCE ②	
SOUTH AVE. & I-680 SB	27		90+00	51' RT	3	22	13	M2-H6 (S44)	9.5		180°		0°	90°	
SOUTH AVE. & I-680 NB	28		95+18	39' RT	3	22	15	M2-H6 (S49)	11.5		180°		0°	90°	

NOTES:

- SIGNS SHALL BE RIGID MOUNTED AS PER TC-12.30 OR AN ALTERNATIVE RIGID SIGN BRACKET APPROVED BY THE ENGINEER.
- THE FORMED TOPS OF THE PROPOSED FOUNDATIONS SHALL BE SQUARE TO THE ADJACENT SIDEWALKS OR CURB RAMP LANDINGS. THE ANCHOR BOLTS ARE NOT REQUIRED TO BE SQUARE TO THE FOUNDATIONS.

SIGN SUPPORT ORIENTATION DETAIL



ORIENTATION DETAIL NOTES:

- ALL ANGLES MEASURED CLOCKWISE.
- BASE PLATE IS ORIENTED SQUARE TO MAST ARM "A" EVEN IF SUPPORT HAS TWO MAST ARMS.

**CITY OF YOUNGSTOWN
TWP. 2, RANGE 2
BOARDMAN TOWNSHIP
TWP. 1, RANGE 2
MAHONING COUNTY
CONNECTICUT WESTERN RESERVE**

FOR CONTINUATION SEE SHEET 3



—FOR SOUTH AVE. &
E. LUCIUS AVE. INTERSECTION
SEE SHEETS 8.9

—FOR SOUTH AVE. &
E. JUDSON AVE. INTERSECTION
SEE SHEETS 8,9

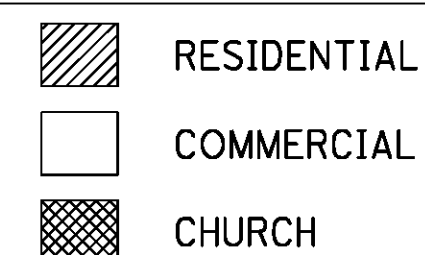
**BEGIN ACQUISITION
SOUTH AVE.
STA. 20+80.79**

END ACQUISITION
MIDLOTHIAN BLVD.
STA. 117+61.32

→ FOR MIDLOTHIAN BLVD. &
SOUTH AVE. INTERSECTION
SEE SHEETS 6,7

CITY OF YOUNGSTOWN
— BOARDMAN TOWNSHIP

STRUCTURE KEY



REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

**SOUTH AVE.
SIGNALIZATION**

PROPERTY MAP

PID NO.
87408



Horizontal resolution test chart. The scale ranges from 100 to 400. The label 'HORIZONTAL' is oriented vertically next to the scale.

2 / 19

$$\frac{65}{82}$$

ms consultants, inc.

UCF: ohdotv8i Ohio DOT Workspace
PCF: 60-10586_Columbus_(No_AScale) South Avenue Signals

Batchplot Spec: \\0330share\n\6010586\standards\plotdrv\batchplt.spc
Pen Table: S:\std\plotting\ustn\V81\pen\V81_ms_std.tbl
Plot Driver: S:\std\plotting\ustn\V81\PDF.pltcf

Model: Sheet
Printed: 1/20/2015 @ 3:38:04 PM By: lkausek
File: \\0330share\\n\\60\\10586\\row\\sheets\\10586RM001.dgn
View: FENCE_VIEW1

34" x 22" $\oplus$

A horizontal scale bar with alternating black and white segments, marked with 0, 100, 200, and 400 feet. To the right of the scale is a north arrow pointing upwards, with the letter 'N' inside a circle.

R/W DESIGNER	MSN	R/W REVIEWER	RJSSR
--------------	-----	--------------	-------

**SOUTH AVE.
SIGNALIZATION**

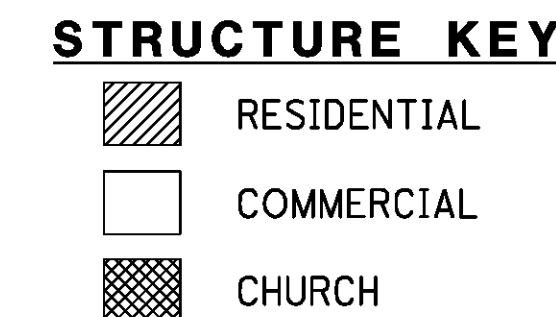


UCF: ohdotv8i
PCF: 60-10586_Columbus_(No_AScale) South Avenue Signals

Batchplot Spec: \\0330share\\n16010586\\standards\\plotdrv\\batchplot.spc
Pen Table: S:\\std\\plotting\\u8m\\pen\\V81.ms_std.tbl
Plot Driver: S:\\std\\plotting\\u8m\\V81\\PDF.pltcfg

34" x 22"

Model: Sheet
Printed: 1/20/2015 @ 3:38:04 PM
View: FENCE_VIEW1
By: lkausek
File: \\0330share\16010586\row\sheet1\0586R002.dgn



- | | | | |
|----|---|----|--|
| 17 | JAMES M. CHRISTENSEN
PARCEL 531160648000 | 25 | EDWARD J. MOORE
PARCEL 531140276000 |
| 18 | RACHID AJAL & MOHD MOHD
PARCEL 531160646000 | 26 | VALLEY AWNING & TENT INC., AN
OHIO LIMITED LIABILITY COMPANY
PARCEL 531140198000 |
| 19 | GARY M. CRIM
PARCEL 531150076000 | 27 | LARRY MYERS
PARCEL 530470490000 |
| 20 | INDIANOLA 518, LLC
PARCEL 531150069000 | 28 | SJM PROPERTIES, INC.
PARCEL 530370026000 |
| 21 | FAISAL ALHAMID
PARCEL 531150145000 | 29 | THE MOST REVEREND THOMAS J. TOBIN,
BISHOP OF THE DIOCESE
OF YOUNGSTOWN, TRUSTEE
PARCEL 530470532000 |
| 22 | WILLIAM S. FERRARO,
TRUSTEE OF THE MANUEL J.
& JUNE L. FERRARO TRUST
PARCEL 531140066000 | 30 | S. J. M. PROPERTIES INC.
PARCEL 530370024000 |
| 23 | SULEITMAN AWADALLAH, TRUSTEE
PARCEL 531140033000 | | |
| 24 | SIMRAN & SUNNY, INC.
PARCEL 531140044000 | | |

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

Model: Design
Printed: 1/20/2015 @ 3:38:05 PM By: lkousek
File: \\0330share\\n60\\0586\\Vow\\sheets\\0586R001.dgn
View: FENCE - NEW!
3.4" x 22"
Batchplot Spec: \\0330share\\n60\\0586\\standards\\pltdrv\\batchplt.spc
Pen Table: S\\std\\pltdrv\\ustn\\V8\\pen\\V8_ms_.std.tbl
Plot Driver: S\\std\\pltdrv\\ustn\\V8\\PDF\\pltdrv

UCF: ohda\\V8
PCF: 60-10586_Columbus_No_AScale_South Avenue Signs
Ohio DOT Workspace

TOTAL NUMBER OF . . .
37 PARCELS
31 OWNERSHIPS
0 TOTAL TAKES
0 OWNERSHIPS WITH STRUCTURES INVOLVED

RECORD AREA - TOTAL PRO - NET TAKE = NET RESIDUE
GROSS TAKE - PRO IN TAKE = NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE CITY OF YOUNGSTOWN UNLESS OTHERWISE SHOWN.
* DENOTES RIGHT OF WAY ENCROACHMENT

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS BOOK	RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
												LEFT	RIGHT			BOOK	PAGE
1-WD	TRUE NORTH ENERGY, LLC, A DELAWARE LIMITED LIABILITY COMPANY	6,7	OR 4410	150	531170665000	0.422		0.001		0.001		0.421			REMOVE (5) BUSHES, FLWR. BED		
2-WD	525 MIDLOTHIAN BLVD. LLC, AN OHIO LIMITED LIABILTY COMPANY	6,7	OR 5501	369	290110003000	1.672		0.001		0.001			1.671				
2-T		6,7						0.003		0.003					CONSTR. CURB RAMP, GRADING		
3-WD	540 YOUNGSTOWN OH LLC	6,7	OR 5832	950	531170652000 531170653000	0.364 0.311		0.004		0.004		0.360					
3-T		6,7						0.002		0.002					GRADING		
4-T	ARCHLAND PROPERTY I, LLC, A DELAWARE LIMITED LIABILITY COMPANY	6,7	OR 5453	1607	290110001000	0.430		0.002		0.002					CONSTR. CURB RAMP, WALK, GRADING		
5	BRIAN BROCK & MICHAEL L. NICKELSON	8,9	OR 5319	2682	531170671000	0.179									NO TAKE		
6-WD	RAMSEY ESMail & HILLAL ESMail, BROTHERS	8,9	OR 5902	34	531170642000	0.121		0.005		0.005			0.116				
7	YOUNGSTOWN SECURITY PATROL INC.	8,9	OR 242	58	531170672000	0.179									NO TAKE		
8-T	ROSY 7 LLC	8,9	OR 5848	1043	531170641000	0.149		0.003		0.003					CONSTR. WALK, GRADING		
9	PHYLLIS T. THOMAS	8,9	OR 3211	98	531170704000	0.149									NO TAKE		
10	NIKITAS GRILLIS & SAHARA GRILLIS	8,9	OR 4568	61	531170482000	0.134									NO TAKE		
11	SAMUEL M. MOFFIE	8,9	OR 5815	654	531170426000	0.149									NO TAKE		
12	BRAMS BEVERAGE, INC., AN OHIO CORPORATION	8,9	OR 4359	79	531170433000	0.119									NO TAKE		
13-WD	PATRICIA KANE	10,11	OR 5039	220	531160048000	0.119		0.002		0.002		0.117					
13-T		10,11						0.002		0.002					GRADING		
14-T	JOHN J. GORDULIC	10,11	OR 4611	189	531160050000	0.119		0.001		0.001					CONSTR. WALK, GRADING		
15-WD	ROSEMARI PANNO	10,11	OR 5463	2402	531160184000	0.149		0.002		0.002		0.147					
16	THE CITY OF YOUNGSTOWN	10,11	656	480	531160197000	0.134									NO TAKE		
17-WD	JAMES M. CHRISTENSEN	10,11	1514	619	531160648000	0.117		0.006		0.006		0.111			REMOVE (1) PAY TELEPHONE		
18-T	RACHID AJAL & MOHD MOHD	10,11	OR 5970	1196	531160646000	0.368		0.002		0.002					REMOVE (1) PAY TELEPHONE, CONSTR. CURB RAMP		
19-WD	GARY M. CRIM, INC.	10,11	OR 335	92	531150076000	0.119		0.003		0.003		0.116					
20-WD	INDIANOLA 518, LLC	10,11	OR 6022	687	531150069000	0.740		0.002		0.002			0.738		REMOVE 16 FT. OF CHAIN LINK FENCE		
20-T		10,11						0.002		0.002					CONSTR. CURB RAMP		
21-T	FAISAL ALHAMID	12,13	OR 5609	817	531150145000	0.162		0.0002		0.0002					CONSTR. CURB RAMP, REMOVE (1) *POST, (1) *SIGN		
22-T	WILLIAM S. FERRARO, TRUSTEE OF THE MANUEL J. & JUNE L. FERRARO TRUST	12,13	OR 5789	2176	531140066000	1.138		0.0006		0.0006					CONSTR. CURB RAMP, WALK		

NOTE: ALL PERMANENT PARCELS WILL BE IN THE NAME OF THE CITY OF YOUNGSTOWN.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION, UNLESS OTHERWISE NOTED.

LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
BS = BILL OF SALE
PRW = PROPERTY RIGHT FEE SIMPLE
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
SL = SLOPE EASEMENT
S = SEWER EASEMENT
CH = CHANNEL EASEMENT
FL = FLOW EASEMENT
U = UTILITY EASEMENT
A = AERIAL EASEMENT
PRE = PROPERTY RIGHT
SC = SCENIC EASEMENT
V = IN NAME OF ANOTHER STATE AGENCY, LPA, ETC.
R = SPECIAL RESERVATION
WA = WORK AGREEMENT
SA = SPECIAL AGREEMENT AND WAIVER OF DAMAGES

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

FEDERAL PROJECT NO.

PID NO. 87408

STATE JOB NO. N / A

R/W DESIGNER MSN R/W REVIEWER RJSSR

SUMMARY OF ADDITIONAL RIGHT OF WAY

SOUTH AVE. SIGNALIZATION

4 / 19

67 82

UCF: ohio\VB
PCF: 60-10586_Columbus_No_AScale_South Avenue Signals

Batchplot Spec: \\0330share\06010586standards\pltdrv\batchplf.spc
Pen Table: S:\std\pltdrv\ustn\VB\pen\VB_lms_std.tbl
Plot Driver: S:\std\pltdrv\ustn\VB\PDF\pltdrv

Model: Design
Printed: 1/20/2015 @ 3:36:06 PM
File: \\0330share\06010586\Draw\Sheets\10586R002.dgn

View: FENCE - MEWT
By: lkausek

3/4" x 22"



RECORD AREA - TOTAL PRO - NET TAKE = NET RESIDUE
GROSS TAKE - PRO IN TAKE = NET TAKE

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE CITY OF YOUNGSTOWN UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

* DENOTES RIGHT OF WAY ENCROACHMENT

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
23-T	SULEIMAN AWADALLAH, TRUSTEE	12,13	OR 1624	280	531140033000	0.162		0.0003		0.0003					CONSTR. CURB RAMP, WALK		
24-T	SIMRAN & SUNNY, INC.	12,13	OR 5844	1518	531140044000	0.162		0.001		0.001					CONSTR. CURB RAMP, WALK, REMOVE (1) *SIGN		
25-WD	EDWARD J. MOORE	12,13	OR 3226	120	531140276000	0.145		0.0008		0.0008		0.144					
26	VALLEY AWNING & TENT INC., AN OHIO LIMITED LIABILTY COMPANY	12,13	OR 5976	2347	531140198000	0.145									NO TAKE		
27	LARRY MYERS	14,15	OR 5841	292	530470490000	0.201									NO TAKE		
28-WD	SJM PROPERTIES, INC.	14,15	OR 5971	20	530370026000	0.024		0.001		0.001			0.023				
29-WD	THE MOST REVEREND THOMAS J. TOBIN, BISHOP OF THE DIOCESE OF YOUNGSTOWN, TRUSTEE	14,15	OR 5165	2340	530470532000	0.158		0.002		0.002		0.156			REMOVE (2) ROCKS, STONES		
30-WD	S. J. M. PROPERTIES INC.	14,15	OR 5483	2552	530370024000	0.218		0.003		0.003			0.215				
31-T	DONALD A. PARKER & SANDRA L. PARKER	16,17	OR 2691	44	531180274000	0.131		0.0007		0.0007					CONSTR. CURB RAMP		
32-WD	JEFF ZEBRASKY	16,17	OR 2355	246	531900232000	0.112		0.001		0.001			0.111		REMOVE (2) WOOD POSTS, (1) *WOOD POST		
33-WD	WESLEY BURLEY	16,17	OR 5877	2311	531180490000	0.124		0.003		0.003		0.121					
33-T		16,17						0.003		0.003					CONSTR. CURB RAMP, WALK		
34-WD	THE PLEASANT GROVE UNITED PRESBYTERIAN CHURCH OF YOUNGSTOWN, OHIO	16,17	449	261	531900033000	0.803		0.002		0.002			0.801				
			488	255	531900033000												
			855	185	531900032000												
			644	462	531900034000												
			641	76	531900038000												
35	TRALA BRUNER-ALLEN AND RAYMOND D. ALLEN III AND JALON J. ALLEN	18,19	OR 3910	153	531180528000	0.194									NO TAKE		
36-WD	SANK TURNER, JR. & BLONDIE TURNER	18,19	1430	471	531900010000	0.230		0.0004		0.0004			0.229				
36-T		18,19						0.001		0.001					CONSTR. WALK		
37-T	NICOLETTE M. PAPPADA & RICHARD E. PIPAK	18,19	OR 62	241	531170016000	0.352		0.0005		0.0005					REMOVE EX. SIGNAL POLE, GRADING		
38-T	FELICIA L. KACHELRIES	18,19	OR 4826	98	531900008000	0.224		0.002		0.002					REMOVE EX. SIGNAL POLE, CONSTR. WALK, GRADING		
39-WD	JOSEPH E. CANATELLI	18,19	OR4275	122	531170025000	0.417		0.001		0.001		0.416					
40-WD	JANINE A. HOOKS	18,19	OR 5783	535	531960169000	0.227		0.0005		0.0005			0.226				
41	MYRON FELDEN & DOROTHY FELDEN & RUTH FELDSTEIN	18,19	OR 5491	1301	531170026000	0.424									NO TAKE		
42-WD	ANNIE C. MARTIN	18,19	OR 5905	2408	531960073000	0.224		0.0005		0.0005			0.223				

NOTE: ALL PERMANENT PARCELS WILL BE IN THE NAME OF THE CITY OF YOUNGSTOWN.

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION, UNLESS OTHERWISE NOTED.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

LEGEND:

WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
BS = BILL OF SALE
PRW = PROPERTY RIGHT FEE SIMPLE
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
SL = SLOPE EASEMENT
S = SEWER EASEMENT
CH = CHANNEL EASEMENT

FL = FLOW EASEMENT
U = UTILITY EASEMENT
A = AERIAL EASEMENT
PRE = PROPERTY RIGHT
SC = SCENIC EASEMENT
V = IN NAME OF ANOTHER STATE AGENCY, LPA, ETC.
R = SPECIAL RESERVATION
WA = WORK AGREEMENT
SA = SPECIAL AGREEMENT AND WAIVER OF DAMAGES

REV. BY	DATE	DESCRIPTION
		DATE COMPLETED

FEDERAL PROJECT NO.

PID NO.

STATE JOB NO.

R/W DESIGNER

MSN

R/W REVIEWER

RJSSR

SUMMARY
OF ADDITIONAL RIGHT OF WAY

SOUTH AVE.
SIGNALIZATION

5 / 19

68
82

s consultants, inc.

REPLAT
BOOK 23 PAGE 232

**TRUE NORTH ENERGY, LLC, A DELAWARE
LIMITED LIABILITY COMPANY
PARCEL #531170665000
COMMERCIAL**

LOT 42176

COCHRAN PARK
EAST SUBDIVISION
PLAT BOOK 19 PAGE 25

**540 YOUNGSTOWN OH LLC
PARCEL #531170652000
COMMERCIAL**

LOT 35085

PARCEL #531170653000
LOT 35086

**END ACQUISITION
MIDLOTHIAN BLVD.
STA. 117+61.32**

**525 MIDLOTHIAN BLVD. LLC, AN
OHIO LIMITED LIABILITY COMPANY
PARCEL #290110003000
COMMERCIAL**

LOT 1

JULIA BARGER PLAT 1
PLAT BOOK 39 PAGE 52

**BOARDMAN TOWNSHIP
MAHONING COUNTY
TWP. 1, RANGE 2
CONNECTICUT WESTERN RESERVE**


 $\Delta = 33^{\circ}33'26''$
 $R = 42'$
 $T = 12.66'$
 $L = 24.60'$
 $CH = 24.25'$
 $CH. BR. = S73^{\circ}58'02"E$


 $\Delta = 22^{\circ}44'15''$
 $R = 42'$
 $T = 8.44'$
 $L = 16.67'$
 $CH = 16.56'$
 $CH. BR. = S45^{\circ}49'12''E$


 $\Delta = 43^{\circ}46'42''$
 $R = 42'$
 $T = 16.87'$
 $L = 32.09'$
 $CH = 31.32'$
 $CH. BR. = N36^{\circ}17'07''E$



A horizontal scale bar with markings at 10 and 20 feet. The bar is divided into segments by vertical lines. The segment from 0 to 10 is black, and the segment from 10 to 20 is white. The number 10 is centered under the first segment, and the number 20 is centered under the second segment.

CALCULATED	MSN
CHECKED	RJSSR

PID NO.
87408

BOUNDARY SHEET
SOUTH AVE. & MIDLOTHIAN BLVD.

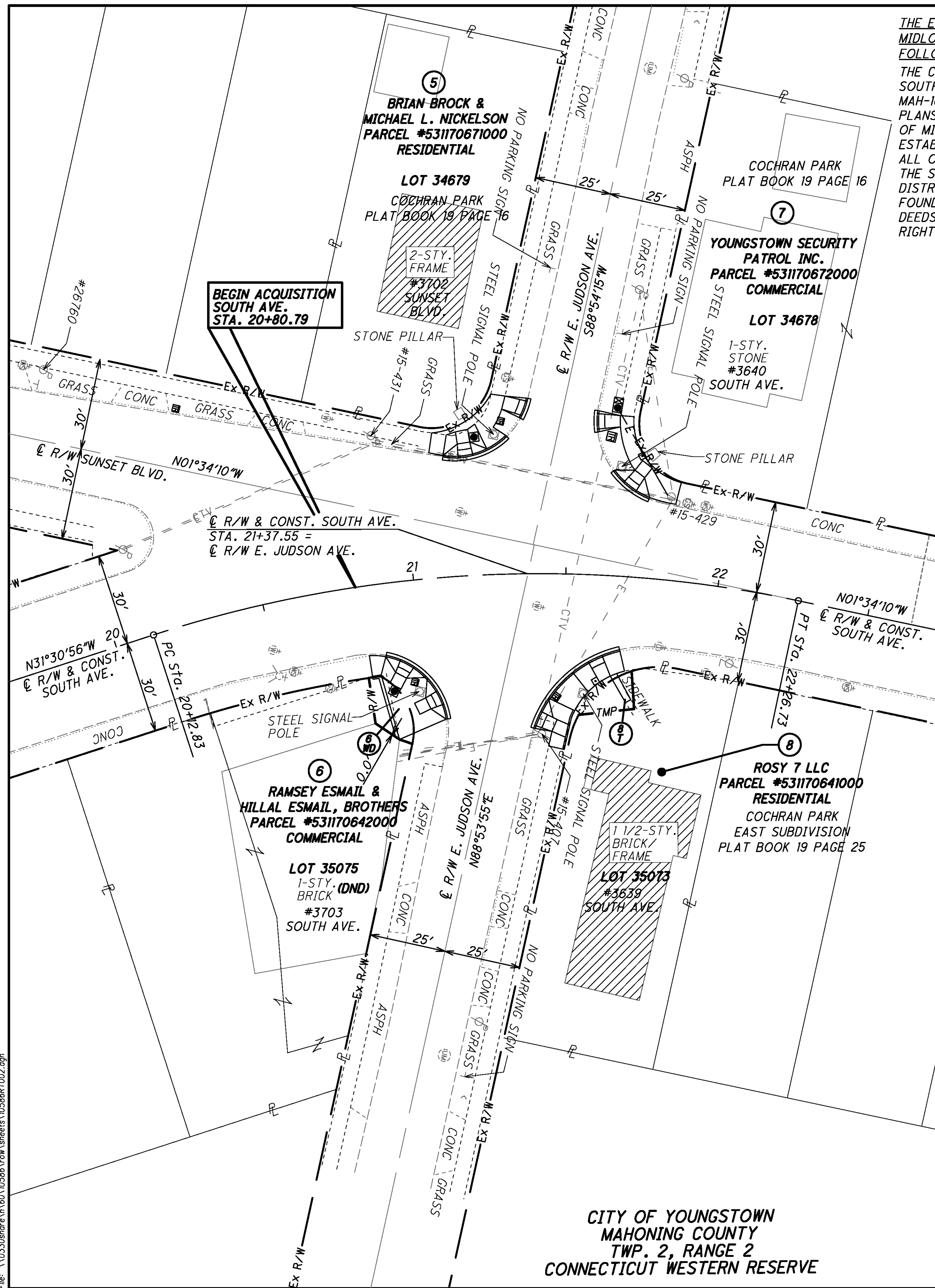
**SOUTH AVE.
SIGNALIZATION**

7 / 19

$$\frac{70}{82}$$

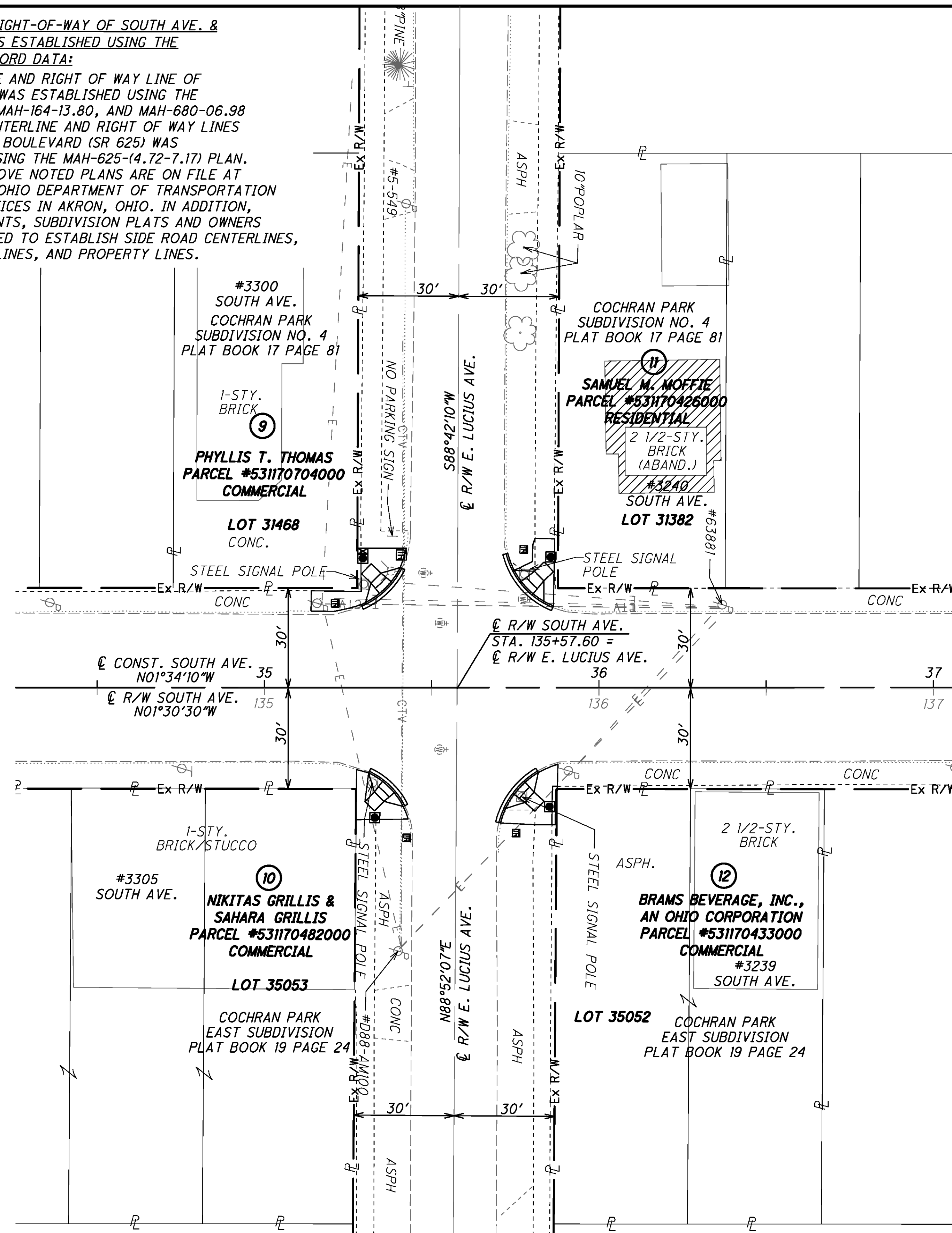
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

Model: Model
Printed: 1/20/2015 @ 3:38:10 PM By: lkausek
File: \\0330share\\n60\\10586\\row\\sheets\\10586RT002.dgn



THE EXISTING RIGHT-OF-WAY OF SOUTH AVE. &
MIDLOTHIAN WAS ESTABLISHED USING THE
FOLLOWING RECORD DATA:

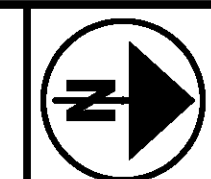
THE CENTERLINE AND RIGHT OF WAY LINE OF SOUTH AVENUE WAS ESTABLISHED USING THE MAH-164-12.51, MAH-164-13.80, AND MAH-680-06.98 PLANS. THE CENTERLINE AND RIGHT OF WAY LINES OF MIDLOTHIAN BOULEVARD (SR 625) WAS ESTABLISHED USING THE MAH-625-(4.72-7.17) PLAN. ALL OF THE ABOVE NOTED PLANS ARE ON FILE AT THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 OFFICES IN AKRON, OHIO. IN ADDITION, FOUND MONUMENTS, SUBDIVISION PLATS AND OWNERS DEEDS WERE USED TO ESTABLISH SIDE ROAD CENTERLINES, RIGHT OF WAY LINES, AND PROPERTY LINES.



STRUCTURE KEY

- | | |
|---|-------------|
|  | RESIDENTIAL |
|  | COMMERCIAL |
|  | CHURCH |

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		



CALCULATED	CHECKED
MSN	RJSSR

PID NO.
87408

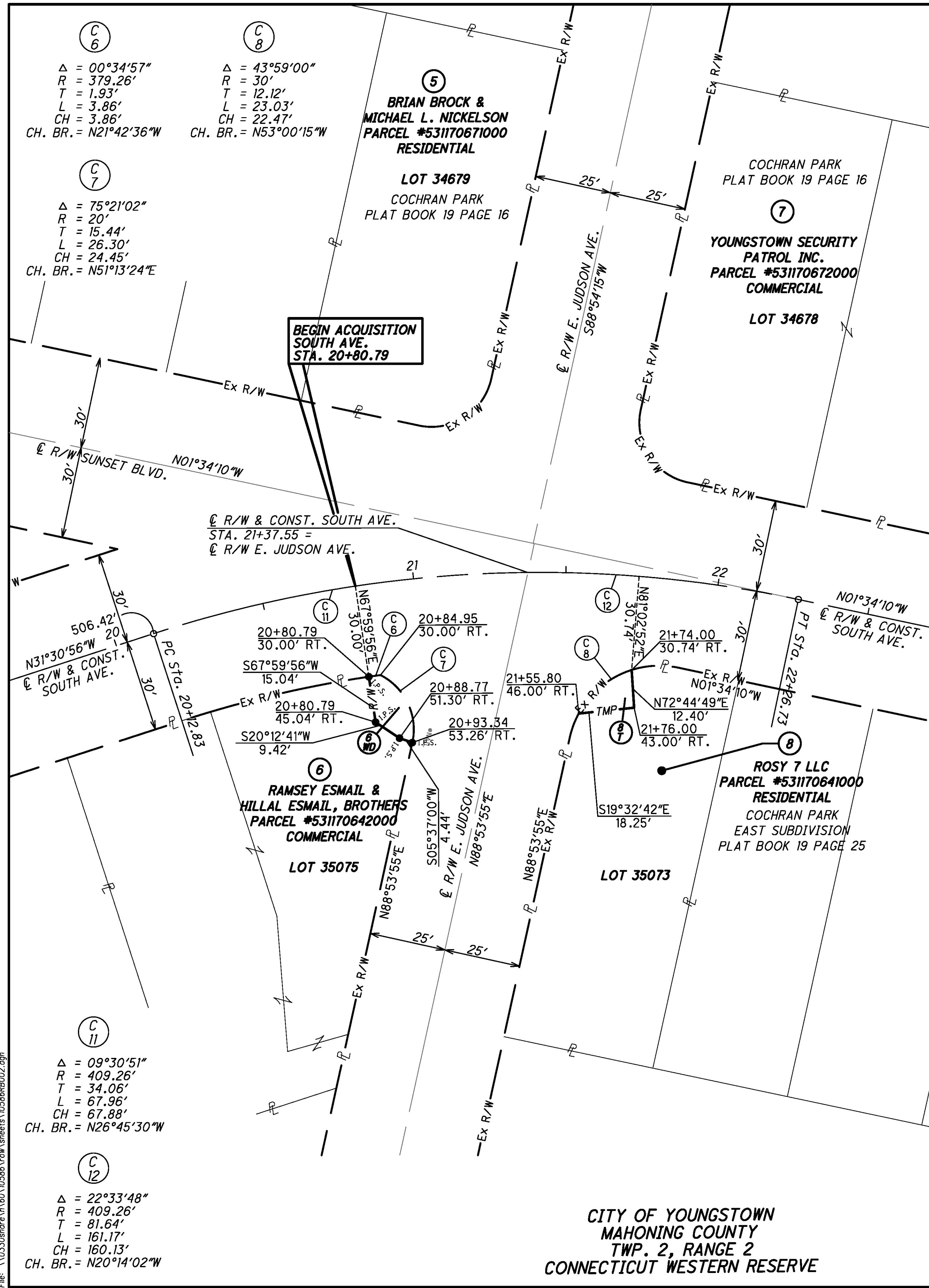
TOPO SHEET
SOUTH AVE. & E. JUDSON AVE./ SUNSET BLVD.
SOUTH AVE. & E. LUCIUS AVE.

**SOUTH AVE.
SIGNALIZATION**

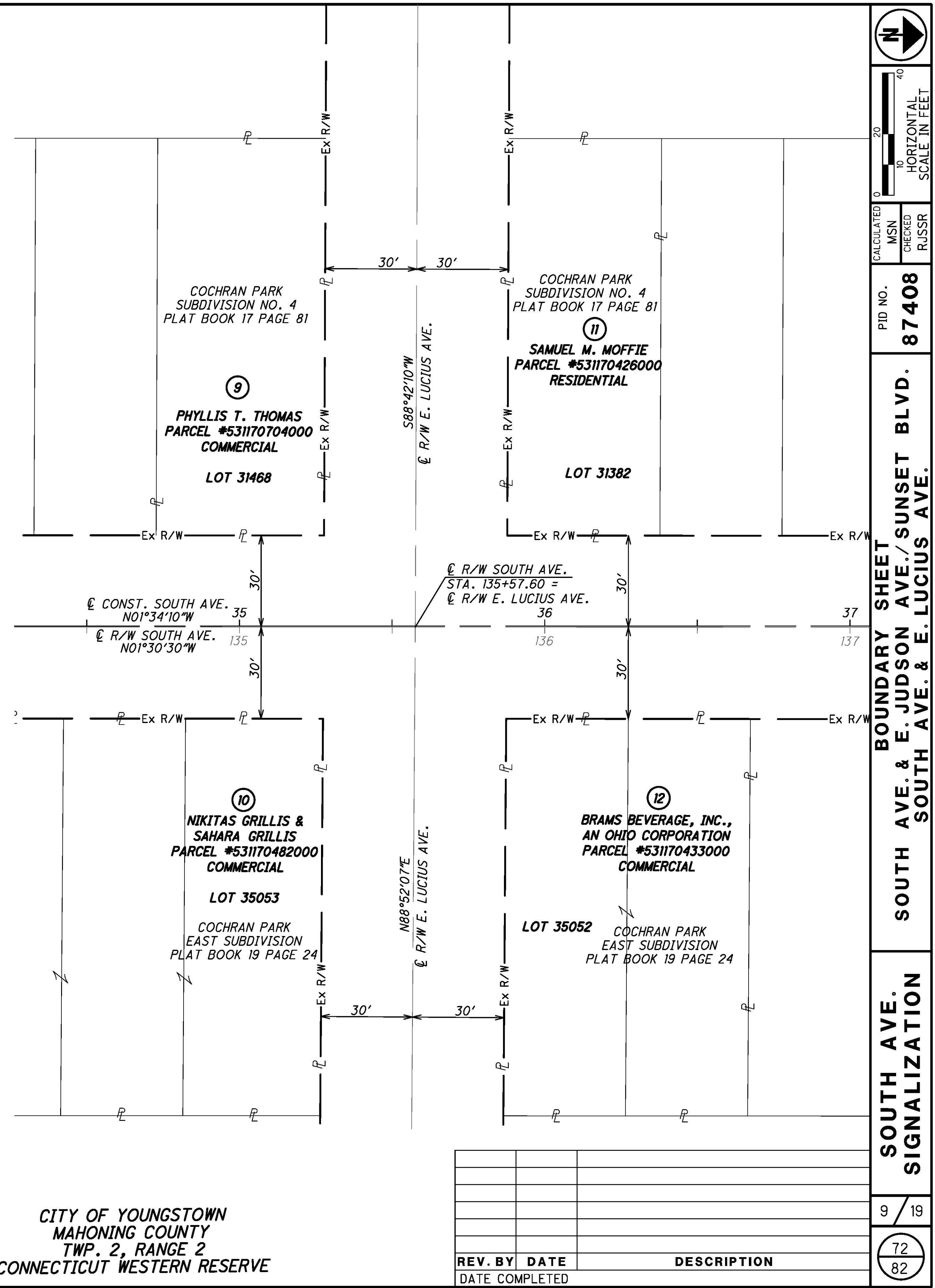
8 / 19

71
82

Model: Model
View: FENCE_VIEW1
Printed: 1/20/2015 @ 3:38:11 PM
By: Kausik
File: \\0330share\h\601\0366\Yow\Sheets\05866R02.dgn



**CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE**



**CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE**

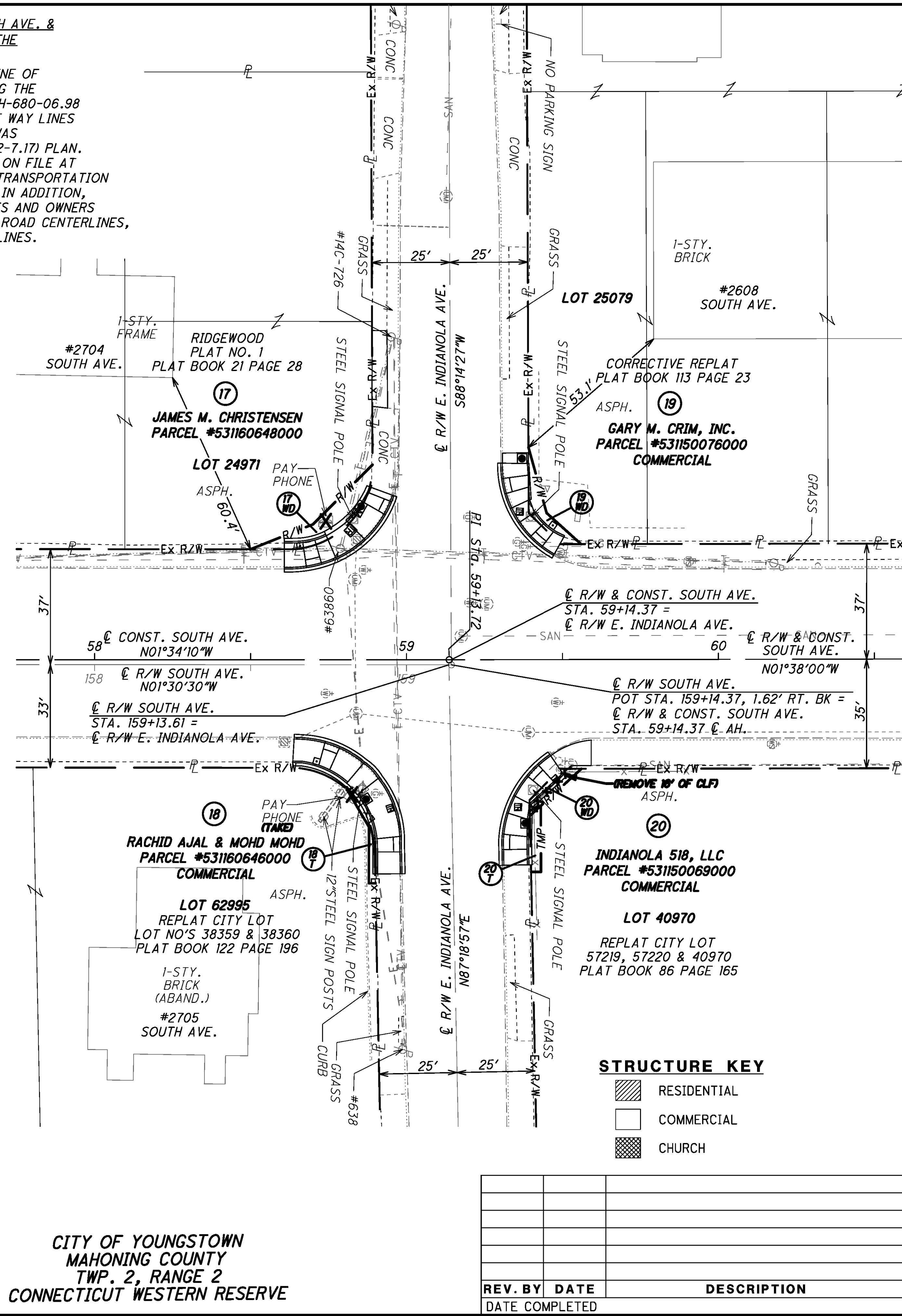
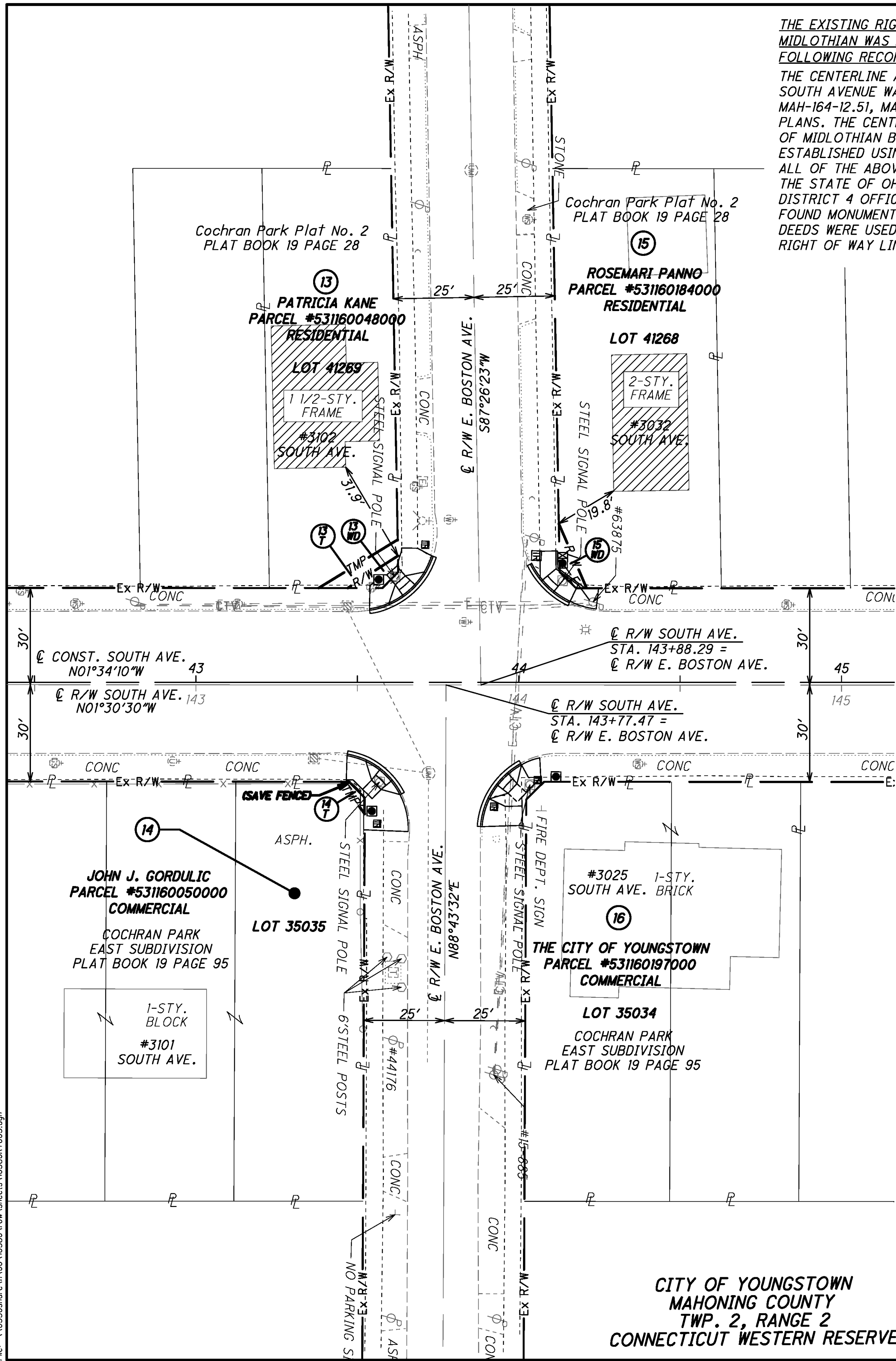
REV.	BY	DATE
DATE COMPLETED		DESCRIPTION

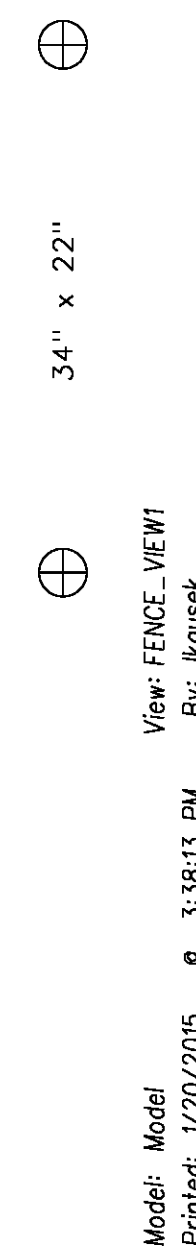
UCF: ohd\VB: Ohio DOT Workspace
PCF: 60-10586_Columbus_Nb_AScale_South Avenue Signals

Batchplot Spec: \\0330share\0330\10586\standards\plott\batchplot.spc
Pen Table: S:\std\plott\usn\VB\pen\VB\ms_std.tbl
Plot Driver: S:\std\plott\usn\VB\PDF\plc1g

3.4" x 22"

Model: Model
Printed: 1/20/2015 @ 3:36:12 PM By: lkousek
File: \\0330share\0330\10586\Yow\Sheets\10586RT003.dgn

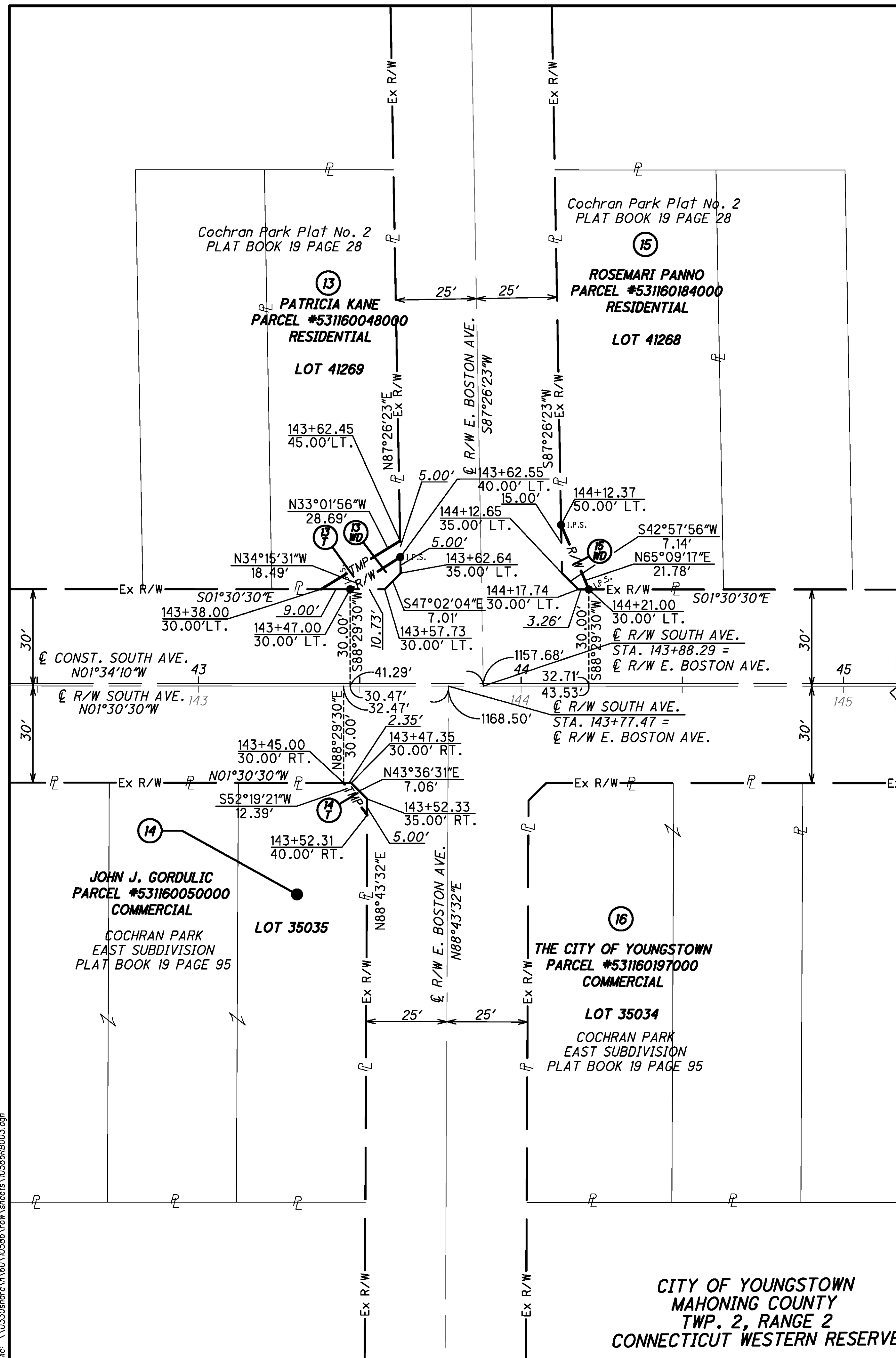




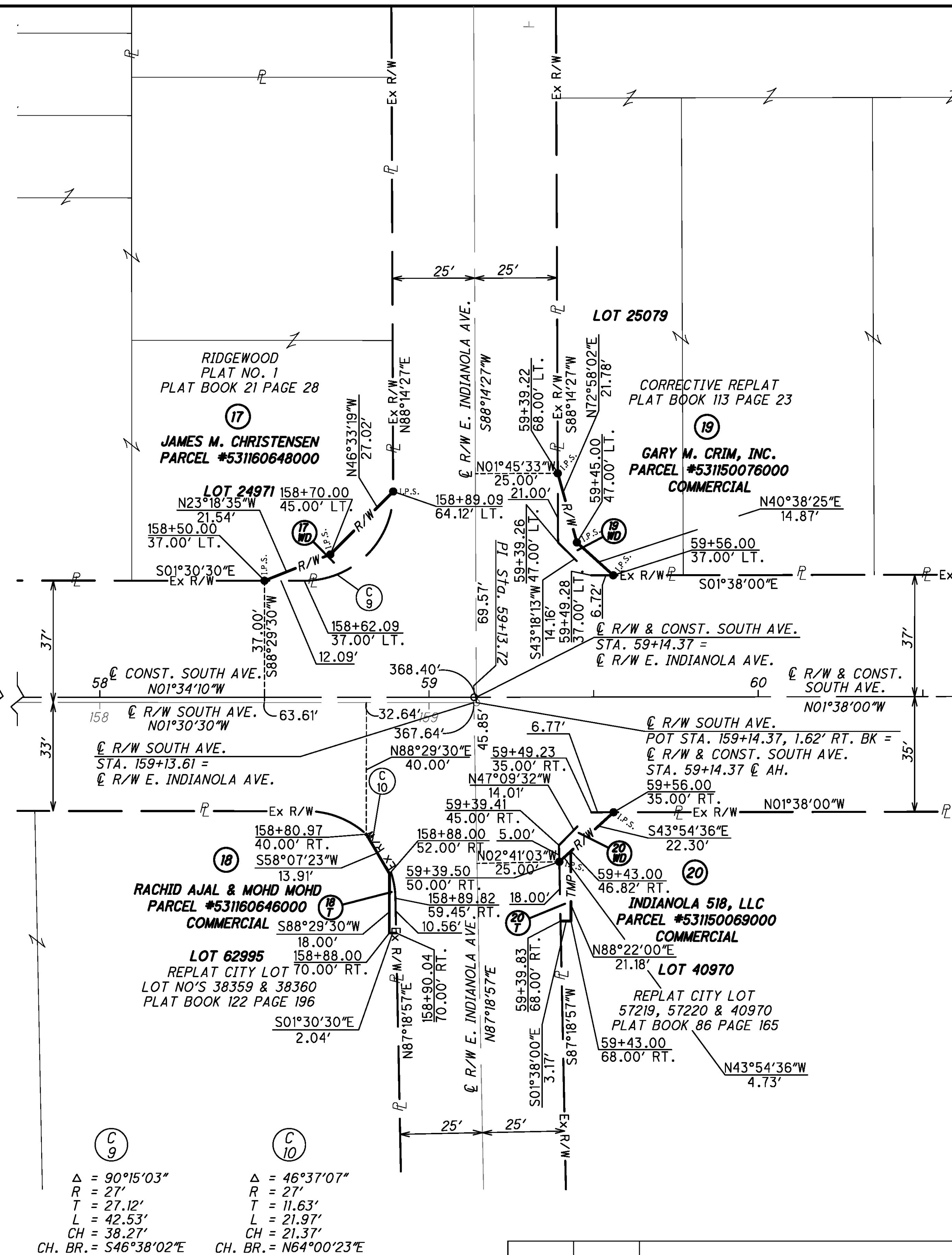
UCF: ohdatV8i
PCF: 60-10586_Columbus_(No_AScale) South Avenue Signals

Batchplot Spec: \\0330share\n6010586\standards\plotdrv\batchplt.spc
Pen Table: S:\std\plotting\ustn\V81\pen\V81_ms_std.tbl
Plot Driver: S:\std\plotting\ustn\V81\PDF.pltcf

View: FENCE_VIEW1
 Model: Model
 Printed: 1/20/2015 3:18:13 PM
 Rev: lkoussek

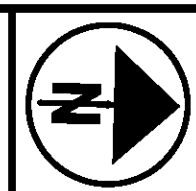


CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE



**CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE**

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		



HORIZONTAL
SCALE IN FEET

CALCULATED	CHECKED
MSN	RJSSR

PID NO.
87408

BOUNDARY SHEET
SOUTH AVE. & E. BOSTON AVE.
SOUTH AVE. & E. INDIANOLA AVE.

**SOUTH AVE.
SIGNALIZATION**

11	19
----	----

74
82

ms consultants, inc.

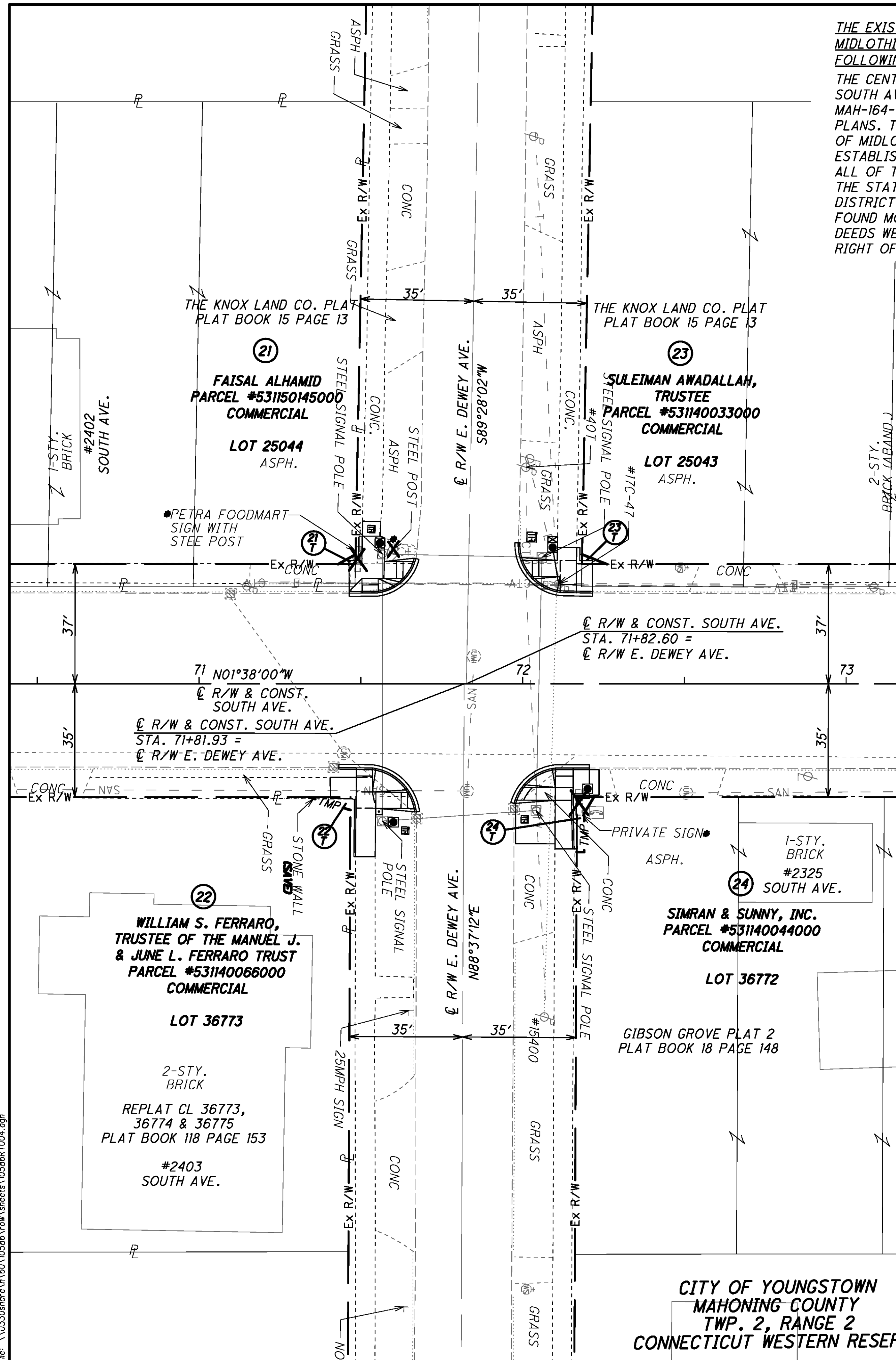
Batchplot Spec: \\0330share\n\6010586\standards\plotdrv\batchplt.spc
Pen Table: S:\std\plotting\ustn\V81\pen\V81_ms_std.tbl
Plot Driver: S:\std\plotting\ustn\V81\PDF.pltcf

34" x 22"

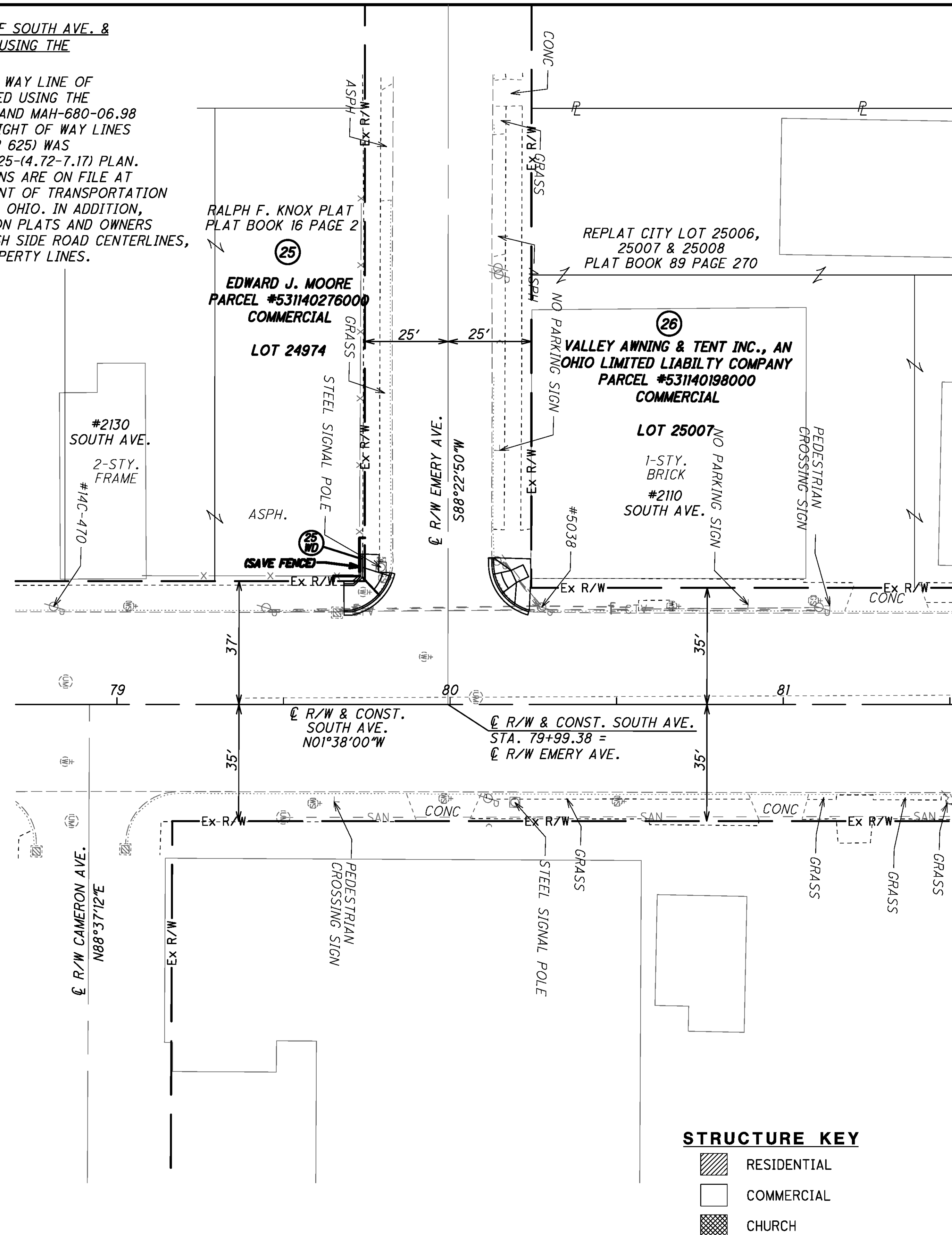
Model: Model
 Printed: 1/20/2015 @ 3:38:13 PM
 By: kausek
 File: \\0330share\160\10586\row\sheet\Y0586RT1004.dgn

THE EXISTING RIGHT-OF-WAY OF SOUTH AVE. &
MIDLOTHIAN WAS ESTABLISHED USING THE
FOLLOWING RECORD DATA:

THE CENTERLINE AND RIGHT OF WAY LINE OF SOUTH AVENUE WAS ESTABLISHED USING THE MAH-164-12.51, MAH-164-13.80, AND MAH-680-06.98 PLANS. THE CENTERLINE AND RIGHT OF WAY LINES OF MIDLOTHIAN BOULEVARD (SR 625) WAS ESTABLISHED USING THE MAH-625-(4.72-7.17) PLAN. ALL OF THE ABOVE NOTED PLANS ARE ON FILE AT THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 OFFICES IN AKRON, OHIO. IN ADDITION, FOUND MONUMENTS, SUBDIVISION PLATS AND OWNERS DEEDS WERE USED TO ESTABLISH SIDE ROAD CENTERLINES, RIGHT OF WAY LINES, AND PROPERTY LINES.



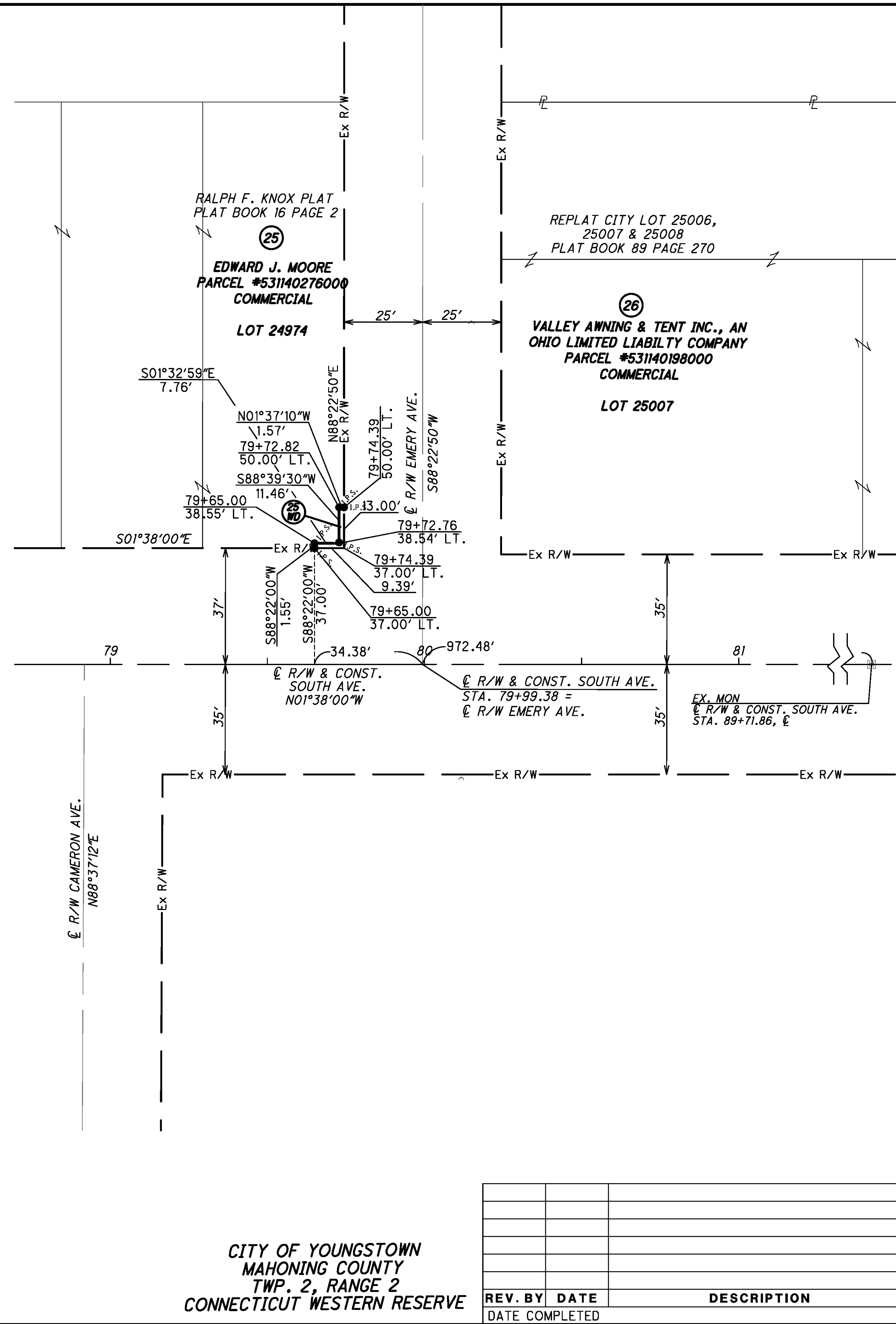
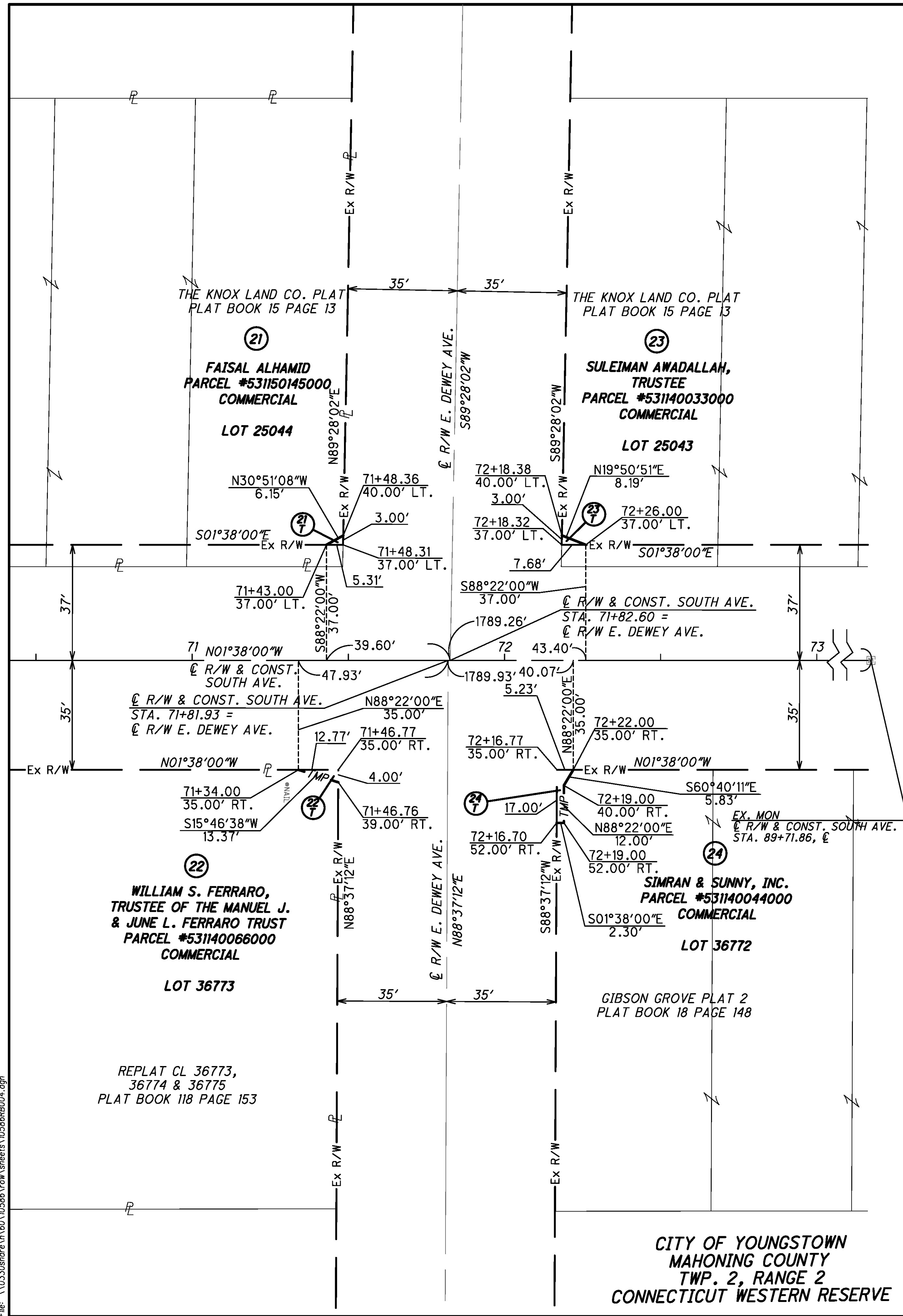
CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE



CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE

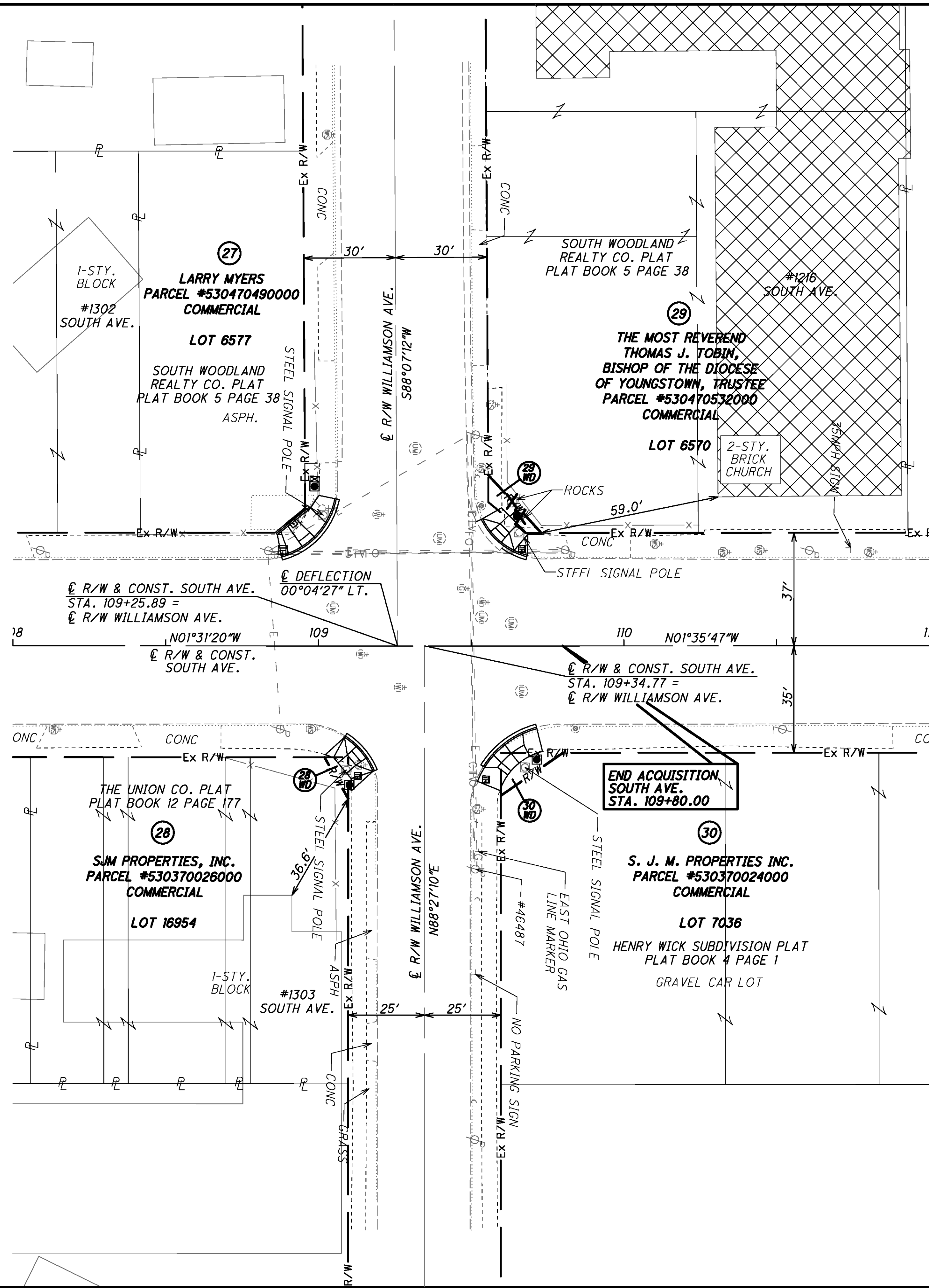
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

Model: Model
View: FENCE_VIEW1
Printed: 1/20/2015 @ 3:38:14 PM
By: Kausik
File: \\0330share\h1601\03566\Yow\Sheets\05866B04.dgn



REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

**CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
CONNECTICUT WESTERN RESERVE**



THE EXISTING RIGHT-OF-WAY OF SOUTH AVE. & MIDLOTHIAN WAS ESTABLISHED USING THE FOLLOWING RECORD DATA:

THE CENTERLINE AND RIGHT OF WAY LINE OF SOUTH AVENUE WAS ESTABLISHED USING THE MAH-164-12.51, MAH-164-13.80, AND MAH-680-06.98 PLANS. THE CENTERLINE AND RIGHT OF WAY LINES OF MIDLOTHIAN BOULEVARD (SR 625) WAS ESTABLISHED USING THE MAH-625-(4.72-7.17) PLAN. ALL OF THE ABOVE NOTED PLANS ARE ON FILE AT THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 OFFICES IN AKRON, OHIO. IN ADDITION, FOUND MONUMENTS, SUBDIVISION PLATS AND OWNERS DEEDS WERE USED TO ESTABLISH SIDE ROAD CENTERLINES, RIGHT OF WAY LINES, AND PROPERTY LINES.

REV.	BY	DATE
DATE COMPLETED		DESCRIPTION

Model: Model
 Printed: 1/20/2015 @ 3:38:16 PM
 View: FENCE_VIEW1
 Bv: kkausk

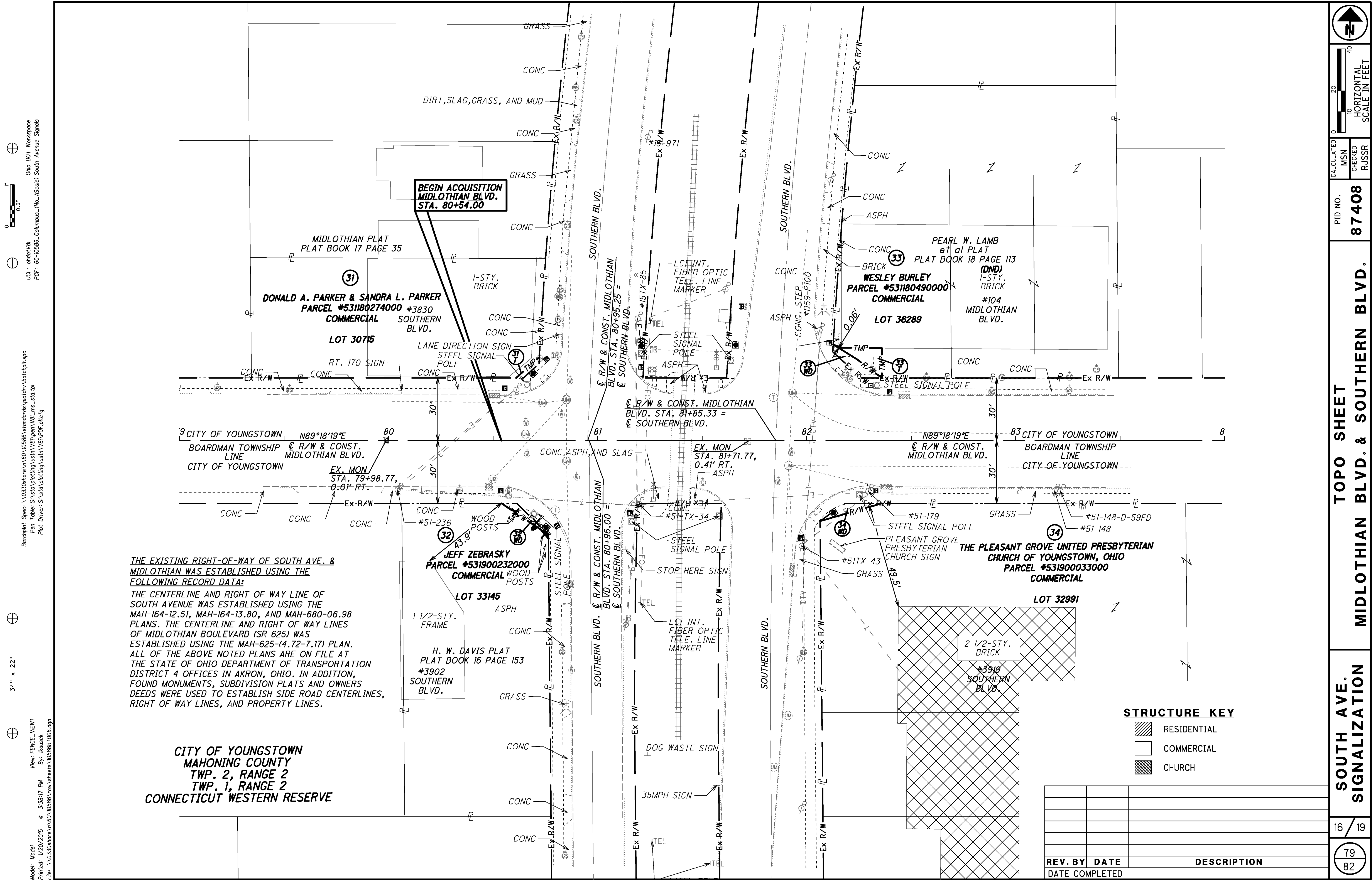
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

78
82

UCF: ohdovbi
PCF: 60-10586_Columbus_No_AScale_South Avenue Signals

Batchplot Spec: \\0330share\0330\10586\standards\platt\batchplot.spc
Pen Table: S:\std\platt\usn\VB\pen\VB\ms_std.tbl
Plot Driver: S:\std\platt\usn\VB\PDF\pdfcig

Model: Model
Printed: 1/20/2015 3:36:17 PM
File: \\0330share\0330\10586\Draw\Sheets\10586RT006.dgn
View: FENCE_VEW1
By: lkousek



UCF: ohd\VB
PCF: 60-10586_Columbus_No_AScale_South Avenue Signals

Batchplot Spec: \\0330share\0330\10586\standards\batchplot.spc
Pen Table: S:\std\batchplot\ustn\VB\pen\VB\lms_std.tbl
Plot Driver: S:\std\batchplot\ustn\VB\PDF\pdfcig

3.4" x 22"

Model: Model
Printed: 1/20/2015 3:36:18 PM By: lkausek
File: \\0330share\0330\10586\Draw\Draw\10586R006.dgn

CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
TWP. 1, RANGE 2
CONNECTICUT WESTERN RESERVE

MIDLOTHIAN PLAT
PLAT BOOK 17 PAGE 35

DONALD A. PARKER & SANDRA L. PARKER
PARCEL #531180274000
COMMERCIAL

LOT 30715

BEGIN ACQUISITION
MIDLOTHIAN BLVD.
STA. 80+54.00

JEFF ZEBRASKY
PARCEL #531900232000
COMMERCIAL

LOT 33145

H. W. DAVIS PLAT
PLAT BOOK 16 PAGE 153

SOUTHERN BLVD.

R/W & CONST. MIDLOTHIAN
BLVD. STA. 80+95.25 =
SOUTHERN BLVD.

SOUTHERN BLVD. R/W & CONST. MIDLOTHIAN
BLVD. STA. 80+96.00 =
SOUTHERN BLVD.

SOUTHERN BLVD.

SOUTHERN BLVD.

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

Ex R/W

THE CENTERLINE AND RIGHT OF WAY LINE OF SOUTH AVENUE WAS ESTABLISHED USING THE MAH-164-12.51, MAH-164-13.80, AND MAH-680-06.98 PLANS. THE CENTERLINE AND RIGHT OF WAY LINES OF MIDLOTHIAN BOULEVARD (SR 625) WAS ESTABLISHED USING THE MAH-625-(4.72-7.17) PLAN. ALL OF THE ABOVE NOTED PLANS ARE ON FILE AT THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 OFFICES IN AKRON, OHIO. IN ADDITION, FOUND MONUMENTS, SUBDIVISION PLATS AND OWNERS DEEDS WERE USED TO ESTABLISH SIDE ROAD CENTERLINES, RIGHT OF WAY LINES, AND PROPERTY LINES.

LOT 42150

REPLAT LOT 35024 &
W. PT. 35023
PLAT BOOK 75 PAGE 30

ALICE M. PETTIGREW
et al PLAT
PLAT BOOK 18
PAGE 96

2 1/2-STY.
BRICK/FRAME

#190 MIDLOTHIAN BLVD.

TRALA BRUNER-ALLEN &
RAYMOND D. ALLEN III
& JALON J. ALLEN
PARCEL #531180528000
RESIDENTIAL

LOT 35022

C R/W & CONST.
 MIDLOTHIAN BLVD.
 --- N89°18'19"E ---

@ R/W & CONST. MIDLOTHIAN
 BLVD. STA. 95+03.29 =
 @ R/W FRIE ST.

STEEL SIGNAL PC

NO TRUCKS—
25MPH SIGN
GRASS—
3'

**SANK TURNER, JR.
& BLONDIE TURNER
PARCEL #53190001000
RESIDENTIAL**

LOT 33360

S.P. & J.C.
SONGER PLAT
PLAT BOOK 15
PAGE 46

**CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
TWP. 1, RANGE 2
NECTICUT WESTERN RESERVE**

 RESIDENTIAL
 COMMERCIAL
 CHURCH

**CITY OF YOUNGSTOWN
MAHONING COUNTY
TWP. 2, RANGE 2
TWP. 1, RANGE 2
CONNECTICUT WESTERN RESERVE**

COCHRAN PARK PLAT #9
PLAT BOOK 20 PAGE 216

**MYRON FELDEN &
DOROTHY FELDEN &
RUTH FELDSTEIN
PARCEL #531170026000
RESIDENTIAL**

LOT 42160

@ R/W & CONST. MIDLOTHIAN
 BLVD. STA. 103+33.16 =
 @ R/W RUSH BLVD.
 CITY OF YOUNGSTOWN 104

INGSTOWN

FETTER

ANNIE C. MARTIN
PARCEL #531960073000
RESIDENTIAL

LOT 4246

#307
MIDLOTHIAN
BLVD.

BRACKMAN WILLIAMSON
KNOTT CO. PLAT
FIRST ADDITION
PLAT BOOK 21 PAGE 39

[illegible]

PID NO.
87408

TOPO SHEET
MIDLOTHIAN BLVD. & ERIE ST.
MIDLOTHIAN BLVD. & BUSH BLVD.

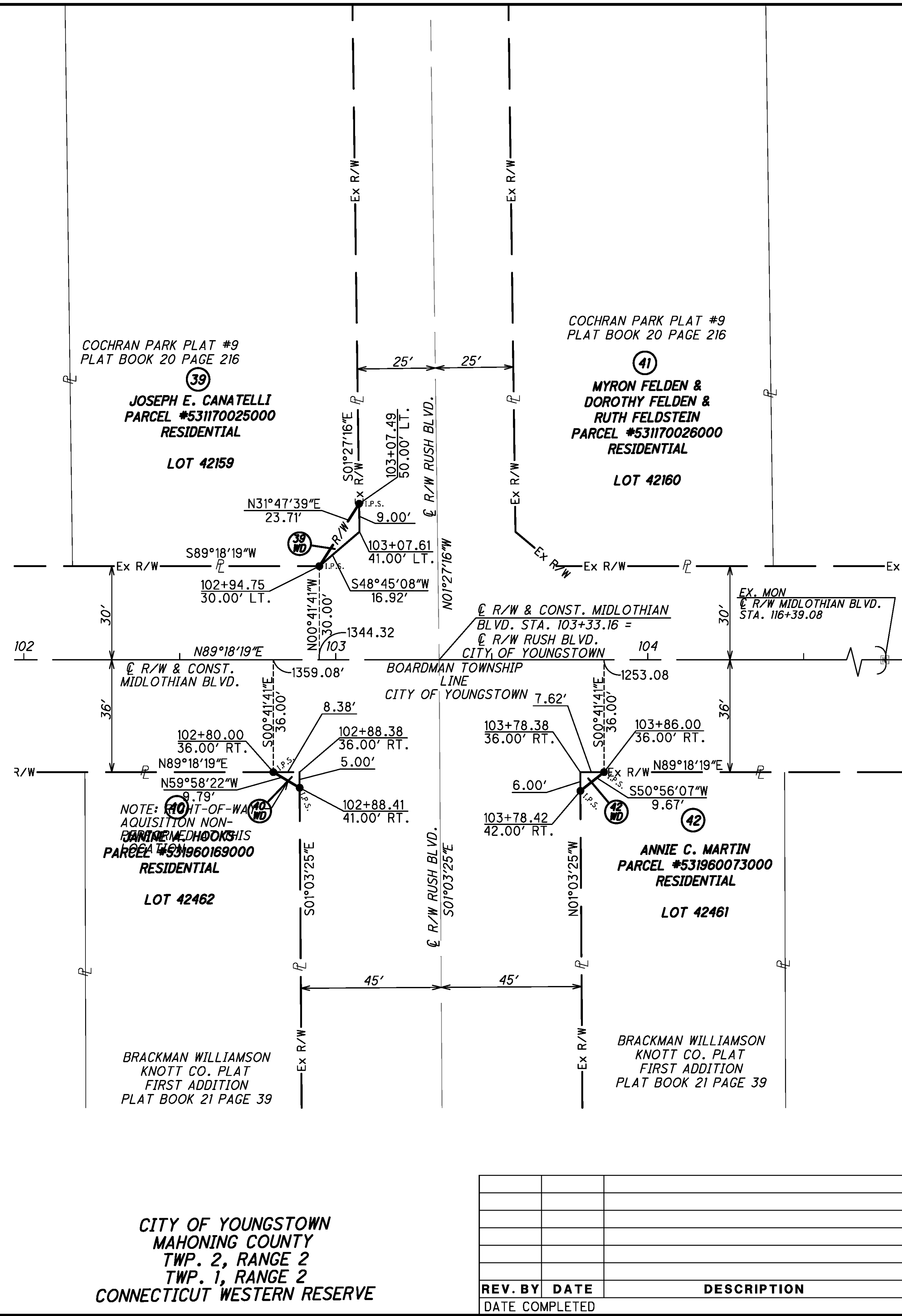
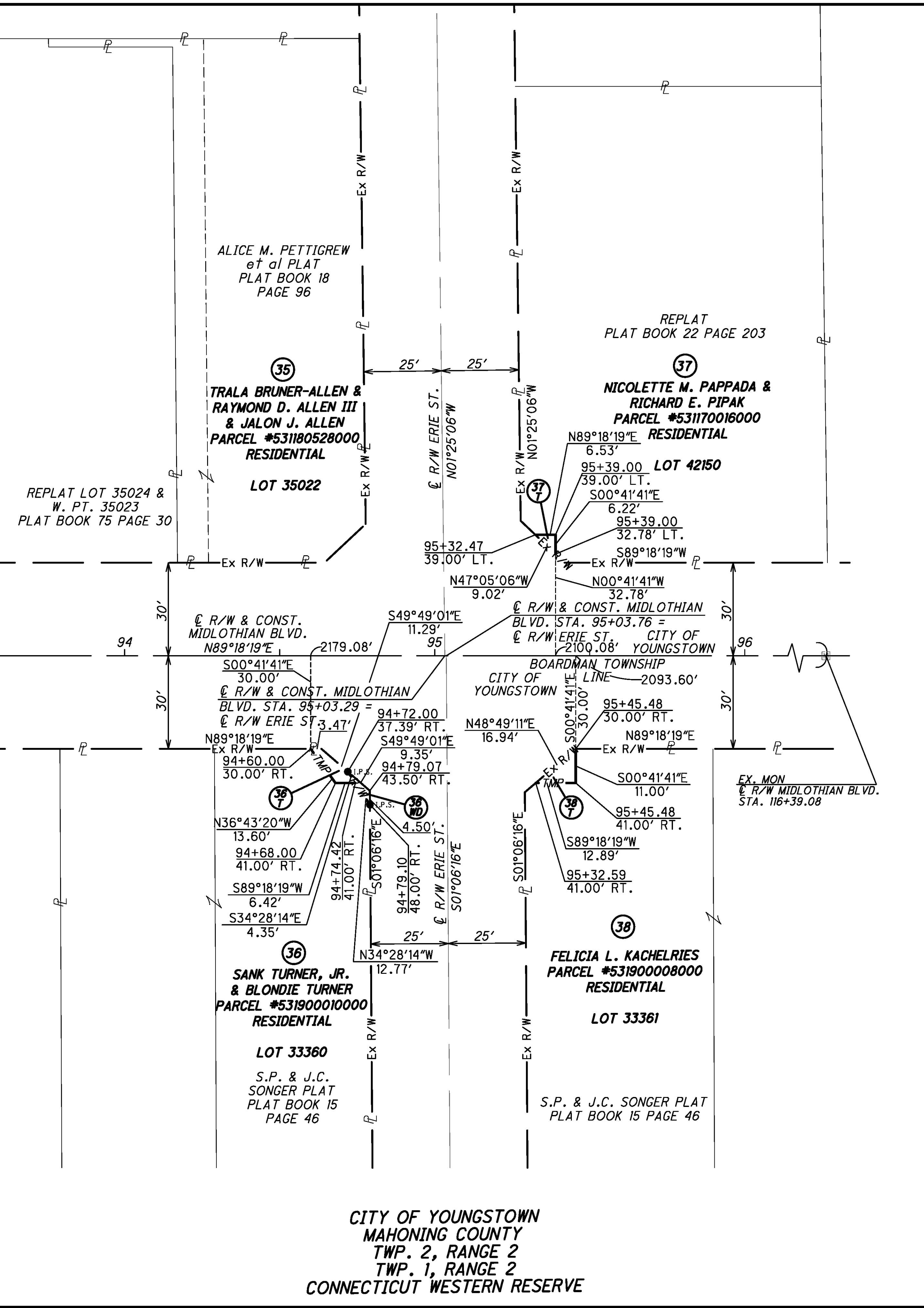
**SOUTH AVE.
SIGNALIZATION**

18 / 19

	81
	82

ms consultants, inc

Model: Model
Printed: 1/20/2015 @ 3:36:19 PM
File: \\0330share\\n\\60\\10586\\Vow\\Sheets\\10586R007.dgn
View: FENCE_VEW1
By: lkausek
Batchplot Spec: \\0330share\\n\\60\\10586\\standards\\batchplf.sp
Pen Table: S:\\std\\plotting\\ustn\\V8\\pen\\V8_ms_.std.tbl
Plot Driver: S:\\std\\plotting\\ustn\\V8\\PDF\\plcfig
UCF: ohd\\VBI
PCF: 60-10586_Columbus_No_AScale_South Avenue Signals
Ohio DOT Workspace



REV. BY	DATE	DESCRIPTION