INTERSECTION DETAIL
US 33 MAINLINE & CR 16

ATH-33-30.981

CALCULATED SAW
CHECKED TAL

SCALE 1:200
0 4 8
HORIZONTAL SCALE IN METERS

STA 37+468.333 ℄ US33, 34.200m LT=
STA 50+560.001 ℄ CR 16, 21.300m LT
Δ = 80°24'49"
R = 18.000m
L = 25.262m

PC STA 50+565.213

STA 37+513.166 ℄ US33, 37.800m LT=
STA 50+572.648 ℄ CR 16, 21.300m RT
Δ = 104°16'41"
R = 32.759m
L = 32.781m

BEGIN TAPER
STA 37+425.000
5.400m LT.

END TAPER
STA 37+440.000
1.800 LT.

BEGIN TAPER
37+535.000
19.800 LT.

END TAPER
37+550.000
16.200 LT.

STA 37+459.884 ℄ US33, 16.200m RT=
STA 50+508.903 ℄ CR 16, 21.300m LT
Δ = 99°22'17"
R = 18.000m
L = 31.218m

STA 37+484.168 ℄ US 33 =
STA 50+528.970 ℄ CR 16

STA 37+503.483 ℄ US33, 12.600m RT=
STA 50+520.013 ℄ CR 16, 21.300m RT
Δ = 79°31'06"
R = 18.000m
L = 24.981m

℄ US 33 MAINLINE

PT STA 50+496.091

99° 59' 23"
80° 00' 37"
N 76° 31' 08" E

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PAVEMENT JOINT DETAIL
ALBANY RD - RAMP A / RAMP C

ATH-33-30.981

701
956

CALCULATED SAW
CHECKED PRS

SCALE 1:200
HORIZONTAL
SCALE IN METERS
0 4 8

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STA 0+174.208 ℄ ALBANY RD. =
PC STA 2+555.639, 7.2m RT
℄ SLIP RAMP C

PI STA 0+208.711
PC STA 0+208.711
0.914 m LT

PGL

℄ SLIP RAMP C

℄ RAMP A

℄ RAMP C

℄ ALBANY RD.

7 JOINTS AT 4.75m

EB US 33

WB US 33

+639.808

LEGEND

(E) EXPANSION JOINT AS PER BP-2.2M

(W) EXPANSION JOINT AS PER BP-2.2M, WITHOUT TIE BARS

(L) LONGITUDINAL JOINT AS PER BP-2.1M

(S) LONGITUDINAL JOINT AS PER BP-2.1M, WITHOUT TIE BARS

(C) CONTRACTION JOINT AS PER BP-2.1M

LEGEND

- (E) EXPANSION JOINT AS PER BP-2.2M
- (W) EXPANSION JOINT AS PER BP-2.2M, WITHOUT TIE BARS
- (L) LONGITUDINAL JOINT AS PER BP-2.1M
- (S) LONGITUDINAL JOINT AS PER BP-2.1M, WITHOUT TIE BARS
- (C) CONTRACTION JOINT AS PER BP-2.1M

PT STA 0+404.688 BK =
PI STA 0+404.688
3.353 m LT

℄ POMEROY RD

+020

0+400

+420

℄ RICHLAND AVE

2 JOINTS
AT 4.365m

3.6m
4.5m
2.84m
3.862m
5.0m TYP.
4.1m
+380
+360
8.20m
+340
0.6m MIN. TYP.
4.4m
+980
+960
+940
1.8m
4.8m
0.9m
US 33 WB
(RAMP B)

℄ RAMP D

+560
+540
+520
+500
5.19m
4.3m
2.58m
3.86m
PCC STA 0+336.179
5 JOINTS
AT 4.9m ON PGL
+320
℄ ALBANY ROAD

+580
+560
+540
+520
+500
+480
+460
+440
℄ WB US 33
0+300

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SCALE 1:200
HORIZONTAL
SCALE IN METERS

CALCULATED SAW
CHECKED PRS

PAVEMENT JOINT DETAIL
ALBANY RD - POMEROY RD - RAMP D - RAMP B

ATH-33-30.981

PAVEMENT JOINT DETAIL
US 33 MAINLINE & CR 21

ATH-33-30.981

CALCULATED SAW
CHECKED PRS

SCALE H200
HORIZONTAL
SCALE IN METERS

703
956

LEGEND

- (E) EXPANSION JOINT AS PER BP-2.2M
- (W) EXPANSION JOINT AS PER BP-2.2M, WITHOUT TIE BARS
- (L) LONGITUDINAL JOINT AS PER BP-2.1M
- (S) LONGITUDINAL JOINT AS PER BP-2.1M, WITHOUT TIE BARS
- (C) CONTRACTION JOINT AS PER BP-2.1M

℄ CR 21
℄ US 33 MAINLINE
ASPHALT PAVEMENT
CONC PAVEMENT
+291.051
+229.993
33+200
3+300
+220
+240
+260
+280
+300
+320
+340
+360
5.0m MAX. (TYP)
0.6m (MIN) (TYP)
3.0m
3.6m
9.0m
1.75m
3.3m

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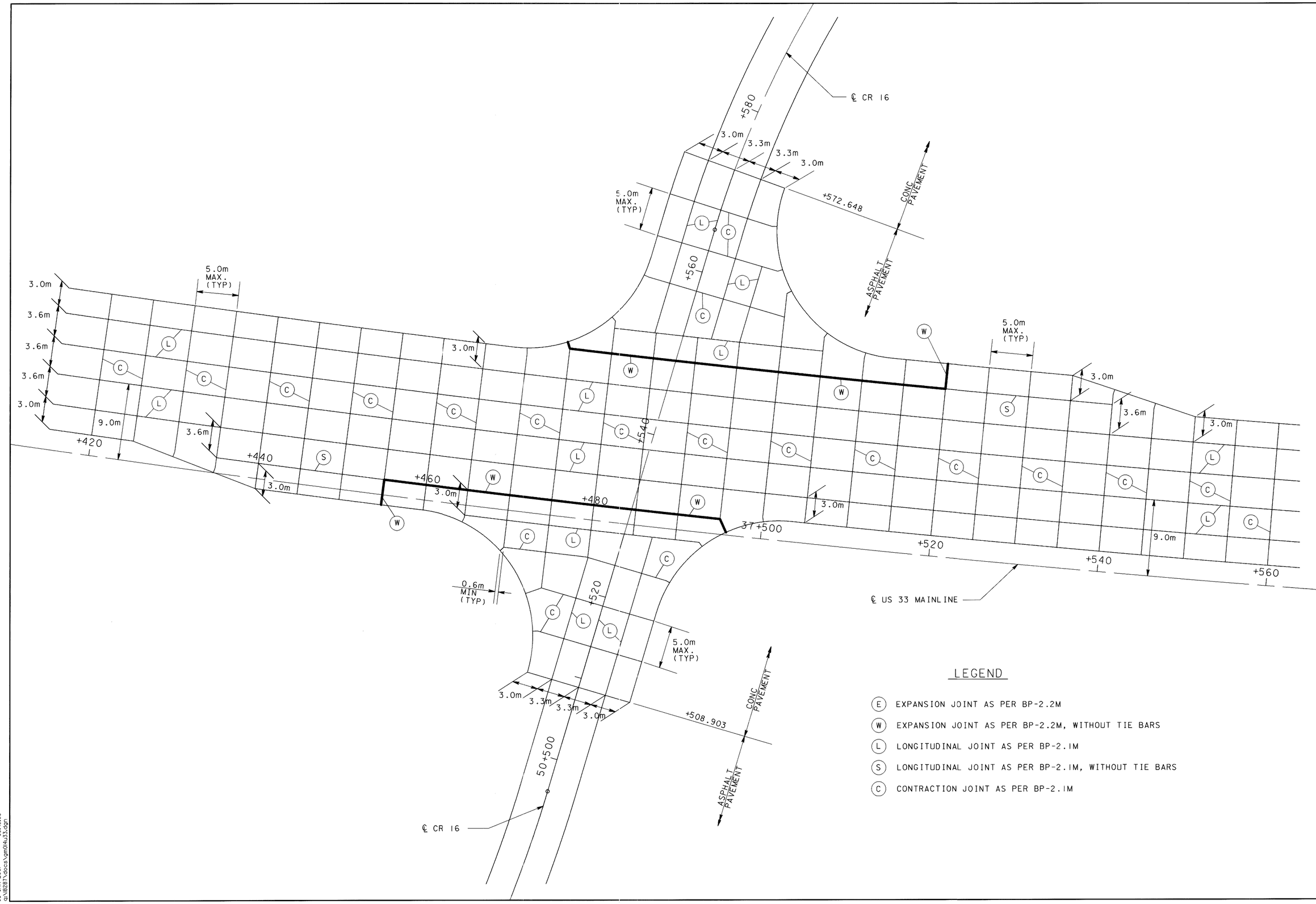

SCALE 1:200
HORIZONTAL
SCALE IN METERS

CALCULATED SAW
CHECKED PRS

PAVEMENT JOINT DETAIL
US 33 MAINLINE & CR 16

ATH-33-30.981

704
956

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SHEET NUMBER												ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
706	707	708	709	710	711	711A	712	712C	712D	712E	712F						
																TRAFFIC CONTROL	
29	36	20										620	10300	85	EACH	DELINEATOR, TYPE C, POST MOUNTED	
27												620	11000	27	EACH	DELINEATOR, TYPE C, BRACKET MOUNTED	
193	260	133	137	150								621	00100	873	EACH	RAISED PAVEMENT MARKER	
							109.3	253.2	122.5		77.4	630	03100	562.4	METER	GROUND MOUNTED SUPPORT, NO. 3 POST	
							12.4		19.8			630	06400	32.2	METER	GROUND MOUNTED SUPPORT, S100 x 11.5 BEAM	
							7.8					630	06500	7.8	METER	GROUND MOUNTED SUPPORT, W150 x 13.5 BEAM	
							26.8					630	07600	26.8	METER	GROUND MOUNTED SUPPORT, W250 x 17.9 BEAM	
										2.2		630	08004	2.2	METER	ONE WAY SUPPORT, NO. 3 POST	
							8		4			630	09000	12	EACH	BREAKAWAY BEAM CONNECTION	
									1			630	20400	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30M, DESIGN 4	
							1					630	20600	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30M, DESIGN 6	
							2					630	21000	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30M, DESIGN 10	
							2					630	21200	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30M, DESIGN 12	
									3			630	31200	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-9.10M, DESIGN 2	
							3					630	35500	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65M, DESIGN 6	
7.20	8.64	3.78	7.12	4.63	4.35	0.09						828	10000	35.81	KM	EDGE LINE	
2.65	6.71	1.01			0.44	0.33						828	10100	11.14	KM	LANE LINE	
		1.64	3.04	3.02	1.94	0.43						828	10200	10.07	KM	CENTERLINE	
300	307	191		109	300	73						828	10300	1280	METER	CHANNELIZING LINE	
10					24	42						828	10400	76	METER	STOP LINE	
46	54	335	4	144	300	110						828	10600	993	METER	TRANSVERSE LINE	
		7		6		2						828	20300	15	EACH	LANE ARROW	
		4		4		2						828	20410	10	EACH	WORD ON PAVEMENT, 2500mm	

CALCULATED AJP
CHECKED RM

CONTROL GENERAL SUMMARY

TRAFFIC CONTROL

ATH-33-30.981

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13 JUN 2001
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SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
712A	712B	712C	712D	712E	712F										
	19			3						625	32000	22	EACH	GROUND ROD	
58			8							630	75000	66	EACH	SIGN ATTACHMENT ASSEMBLY	
43			4							630	75104	47	EACH	LUMINAIRE SUPPORT ASSEMBLY, TYPE TC-31.20M	
23.2		35.7	18.6		15.4					630	80102	92.9	SQ. M	SIGN, FLAT SHEET TYPE G	
294.1		3.0	33.5		1.6					630	80204	332.2	SQ. M	SIGN, EXTRUSHEET, TYPE G	
	12			4						630	84500	16	EACH	GROUND MOUNTED BEAM SUPPORT FOUNDATION	
	11			3						630	84510	14	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
				5	12					630	86002	17	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	10									630	86310	10	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
				5	19					630	84900	24	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
	1									630	89702	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
	16			3						631	84300	19	EACH	SIGN WIRED	
	6			3						631	85500	9	EACH	SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY	
	5			1						631	87102	6	EACH	BALLAST, TYPE CMRI-100-480 INTEGRAL	
	22			2						631	87202	24	EACH	BALLAST, TYPE CMRI-175-480 INTEGRAL	
	18									631	87302	18	EACH	BALLAST, TYPE CMRI-250-480 INTEGRAL	
	5			1						631	88100	6	EACH	MERCURY VAPOR LUMINAIRE TYPE TC-31.20M WITH 100 WATT LAMP	
	22			2						631	88200	24	EACH	MERCURY VAPOR LUMINAIRE TYPE TC-31.20M WITH 175 WATT LAMP	
	18									631	88300	18	EACH	MERCURY VAPOR LUMINAIRE TYPE TC-31.20M WITH 250 WATT LAMP	

CALCULATED AJP
CHECKED RM

TRAFFIC CONTROL GENERAL SUMMARY

ATH-33-30.981

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SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS									ITEM 620 DELINEATOR		ITEM 621 RAISED PAVEMENT MARKER					
						EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	TRANSVERSE LINE		LANE ARROW	WORD ON PAVEMENT 2500 mm	DELINEATOR, TYPE C, POST MOUNTED	DELINEATOR, TYPE C, BRACKET M'NTED	RAISED PAVEMENT MARKER, 2-WAY WHITE-RED	RAISED PAVEMENT MARKER, 2-WAY YELLOW-RED				
			FROM	TO		km	km	km	METER	METER	METER		EACH	EACH	EACH	EACH	EACH	EACH				
715	YE	US 33 WB	29+234	29+290	WB	0.056									3		28					
715	LL	US 33 WB	29+234	29+290	WB		0.056															
715	WE	US 33 WB	29+234	29+290	WB	0.056																
715	YE	US 33 EB	29+013	29+290	EB	0.277																
715	LL	US 33 EB	29+013	29+290	EB		0.277															
715	WE	US 33 EB	29+013	29+290	EB	0.277																
716	YE	US 33 WB	29+263	29+600	WB	0.337									7	4	34	10				
716	LL	US 33 WB	29+263	29+600	WB		0.337															
716	WE	US 33 WB	29+263	29+600	WB	0.337																
716	YE	US 33 EB	29+290	29+600	EB	0.310																
716	LL	US 33 EB	29+290	29+600	EB		0.310															
716	WE	US 33 EB	29+383	29+600	EB	0.217																
716	CH	RAMP A GORE	29+290	29+383	EB				93													
716	TL-W	RAMP A GORE	29+290	29+283	EB						46											
716	CH	RAMP A GORE	A 1+292	A 1+384	EB				92													
716	WE	RAMP A	A 1+292	A 1+537	RT	0.245																
716	YE	RAMP A	A 1+384	A 1+540	LT	0.156																
716	YE	RAMP D	D 4+500	D 4+580	RT	0.080																
716	WE	RAMP D	D 4+500	D 4+580	RT	0.080																
716	SL	RAMP D	D 4+523							7												
716	WE	RAMP C	C 3+580	C 3+640	RT	0.060																
716	YE	RAMP C	C 3+580	C 3+640	LT	0.060																
716	WE	RAMP C SLIP	C 0+190		RT	0.054																
716	YE	RAMP C SLIP	C 0+190		RT	0.054																
716	CH	RAMP C SLIP	C 0+190		RT				10													
716	SL	RAMP A	A 1+521		LT					3												
717	YE	US 33 WB	29+600	29+930	WB	0.330									11	11	24	26				
717	LL	US 33 WB	29+600	29+930	WB		0.330															
717	WE	US 33 WB	29+600	29+930	WB	0.330																
717	YE	US 33 EB	29+600	29+930	EB	0.330																
717	LL	US 33 EB	29+600	29+930	EB		0.330															
717	WE	US 33 EB	29+600	29+930	EB	0.330																
717	WE	RAMP D	A 4+580	A 4+920	LT	0.340																
717	YE	RAMP D	A 4+580	A 4+920	LT	0.340																
717	YE	RAMP C	C 3+640	C 3+940	RT	0.300																
717	WE	RAMP C	C 3+640	C 3+940	RT	0.300																
717	LL	RAMP C	C 3+640	C 3+940	RT		0.300															
717	CH	RAMP C	C 3+640	3+665					25													
718	YE	US 33 WB	29+930	30+270	WB	0.340									8	12	48	23				
718	LL	US 33 WB	29+930	30+270	WB		0.365															
718	WE	US 33 WB	29+930	30+270	WB	0.240																
718	CH	US 33 WB	30+170	30+246.04	WB				80													
718	YE	US 33 EB	29+930	30+270	EB	0.340																
718	LL	US 33 EB	29+930	30+270	EB		0.340															
718	WE	US 33 EB	29+930	30+270	EB	0.340																
718	YE	RAMP D	D 4+915	D 5+170	LT	0.255																
718	WE	RAMP D	D 4+915	D 5+270	LT	0.355																
718	CH	RAMP D	D 5+130	D 5+249	LT	0.079																
TOTALS CARRIED TO GENERAL SUMMARY						7.20	2.65		300	10	46				29	27	193					

CALCULATED AJP
CHECKED RM

TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

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956

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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS: EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	TRANSVERSE LINE		LANE ARROW	WORD ON PAVEMENT 2500 mm	ITEM 620 DELINEATOR: DELINEATOR, TYPE C, POST MOUNTED	DELINEATOR, TYPE C, BRACKET M'NTED	ITEM 621 RAISED PAVEMENT MARKER: RAISED PAVEMENT MARKER, 2-WAY WHITE-RED	RAISED PAVEMENT MARKER, 2-WAY YELLOW-RED				
						km	km	km	METER	METER	METER		EACH	EACH	EACH	EACH	EACH	EACH				
718	YT	RAMP D	D 5+170	D 5+249	LT						54											
718	YE	RAMP C	C 3+935	C 4+203	RT	0.268																
718	LL	RAMP C	C 3+935	C 4+270	RT		0.335															
718	WE	RAMP C	C 3+935	C 4+270	RT	0.335																
718	CH	RAMP C	C 4+203	C 4+270	RT				67													
719	YE	US 33 WB	30+270	30+600	WB	0.330									10		44					
719	LL	US 33 WB	30+270	30+600	WB		0.330															
719	WE	US 33 WB	30+410	30+600	WB	0.190																
719	YE	US 33 EB	30+270	30+600	EB	0.330																
719	LL	US 33 EB	30+270	30+600	EB		0.626															
719	WE	US 33 EB	30+270	30+600	EB	0.148																
719	WE	RAMP D	D 30+270	D 30+410	LT	0.140																
719	LL	RAMP D	D 30+270	D 30+353	LT		0.083															
719	WE	RAMP C	C 30+270	C 30+450	RT	0.180																
719	LL	RAMP C	C 30+270	C 30+450	RT		0.180															
719	CH	RAMP C	C 30+270	C 30+510	RT				240													
720	YE	US 33 WB	30+600	30+930	WB	0.330									4		56					
720	LL	US 33 WB	30+600	30+930	WB		0.330															
720	WE	US 33 WB	30+600	30+930	WB	0.330																
720	YE	US 33 EB	30+600	30+930	EB	0.330																
720	LL	US 33 EB	30+600	30+930	EB		0.990															
720	WE	US 33 EB	30+600	30+930	EB	0.330																
721	YE	US 33 WB	30+930	31+260	WB	0.330									6		48					
721	LL	US 33 WB	30+930	31+260	WB		0.330															
721	WE	US 33 WB	30+930	31+260	WB	0.330																
721	YE	US 33 EB	30+930	31+260	EB	0.330																
721	LL	US 33 EB	30+930	31+260	EB		0.810															
721	WE	US 33 EB	30+930	31+260	EB	0.330																
722	YE	US 33 WB	31+260	31+600	WB	0.340									6		42					
722	LL	US 33 WB	31+260	31+600	WB		0.340															
722	WE	US 33 WB	31+260	31+600	WB	0.340																
722	YE	US 33 EB	31+260	31+600	EB	0.340																
722	LL	US 33 EB	31+260	31+600	EB		0.680															
722	WE	US 33 EB	31+260	31+600	EB	0.340																
723	YE	US 33 WB	31+600	31+940	WB	0.340									6		42					
723	LL	US 33 WB	31+600	31+940	WB		0.340															
723	WE	US 33 WB	31+600	31+940	WB	0.340																
723	YE	US 33 EB	31+600	31+940	EB	0.340																
723	LL	US 33 EB	31+600	31+940	EB		0.653															
723	WE	US 33 EB	31+600	31+940	EB	0.340																
724	YE	US 33 WB	31+940	32+280	WB	0.340									4		28					
724	LL	US 33 WB	31+940	32+280	WB		0.340															
724	WE	US 33 WB	31+940	32+280	WB	0.340																
724	YE	US 33 EB	31+940	32+280	EB	0.340																
724	LL	US 33 EB	31+940	32+280	EB		0.340															
724	WE	US 33 EB	31+940	32+280	EB	0.340																
TOTALS CARRIED TO GENERAL SUMMARY						8.64	6.71		307		54				36		260					

CALCULATED AJP
CHECKED RM

TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS: EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	TRANSVERSE LINE		LANE ARROW	WORD ON PAVEMENT 2500 mm	ITEM 620 DELINEATOR: DELINEATOR, TYPE C, POST MOUNTED	DELINEATOR, TYPE C, BRACKET M'NTED	ITEM 621 RAISED PAVEMENT MARKER: RAISED PAVEMENT MARKER, 2-WAY WHITE-RED	RAISED PAVEMENT MARKER, 2-WAY YELLOW-RED	RAISED PAVEMENT MARKER, 2-WAY YELLOW-YELLOW			
						km	km	km	METER	METER	METER		EACH	EACH	EACH	EACH	EACH	EACH	EACH			
725	YE	US 33 WB	32+280	32+600	WB	0.320									6		28					
725	LL	US 33 WB	32+280	32+600	WB		0.310															
725	WE	US 33 WB	32+280	32+600	WB	0.320																
725	YE	US 33 EB	32+280	32+600	EB	0.320																
725	LL	US 33 EB	32+280	32+600	EB		0.320															
725	WE	US 33 EB	32+280	32+600	EB	0.320																
726	YE	US 33 WB	32+600	32+875	WB	0.275									6		17		11			
726	LL	US 33 WB	32+600	32+910	WB		0.310															
726	WE	US 33 WB	32+600	32+910	WB	0.310																
726	DY	US 33 WB	32+875	32+910	WB			0.035														
726	YE	US 33 EB	32+600	32+875	EB	0.275																
726	LL	US 33 EB	32+600	32+910	EB		0.072															
726	WE	US 33 EB	32+600	32+910	EB	0.310																
726	DY	US 33 EB	32+672	32+910	EB			0.238														
726	YT	US 33 EB	32+672	32+910	EB						75											
727	WE	US 33 WB	32+910	33+230	WB	0.320									4				23			
727	DY	US 33 WB	32+910	33+230	WB			0.313														
727	WE	US 33 EB	32+910	33+230	EB	0.320																
727	DY	US 33 EB	32+910	33+230	EB			0.320														
727	YT	US 33 EB	32+910	33+155	EB						175											
727	CH	US 33 EB	33+170	33+230	EB				75													
727	A	US 33 EB	33+189		EB								1									
727	WP	US 33 EB	33+216.5		EB									1								
728	WE	US 33 WB	33+230	3+291CR21	WB	0.061									4		16		29			
728	DY	US 33	33+230	33+268	EB			0.038														
728	CH	US 33 EB	33+230	33+268	EB				38													
728	CH	US 33 EB	33+240	33+268	EB				28													
728	A	US 33 EB	33+243		EB								2									
728	WP	US 33 EB	33+254		EB									1								
728	WE	US 33 EB	33+230	3+242CR21	EB	0.070																
728	WE	US 33 WB	3+287CR21	33+550	WB	0.285																
728	CH	US 33 WB	33+297	33+325	WB				27													
728	CH	US 33 WB	33+297	33+320	WB				23													
728	A	US 33 WB	33+299		WB								2									
728	WP	US 33 WB	33+310		WB									1								
728	WP	US 33 WB	33+310		WB									1								
728	A	US 33 EB	33+267		EB								1									
728	A	US 33 WB	33+322		WB								1									
728	DY	US 33	33+297	33+330				0.033														
728	DY	US 33 WB	33+330	33+550	WB			0.220														
728	DY	US 33	33+330	33+550				0.220														
728	YT	US 33	33+330	33+550							85											
728	WE	US 33 EB	3+242CR21	33+550	EB	0.275																
729	DY	US 33 EB	33+550	33+645	EB			0.095											9			
729	DY	US 33 WB	33+550	33+645	WB			0.095														
729	CSD	US 33	33+645	33+680				0.035														
TOTALS CARRIED TO GENERAL SUMMARY						3.78	1.01	1.64	191		335		7	4	20		133					

CALCULATED AJP
CHECKED RM

TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS									ITEM 620 DELINEATOR		ITEM 621 RAISED PAVEMENT MARKER					
						EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	TRANSVERSE LINE		LANE ARROW	WORD ON PAVEMENT 2500 mm	DELINEATOR, TYPE C, POST MOUNTED	DELINEATOR, TYPE C, BRACKET M'NTED	RAISED PAVEMENT MARKER, 2-WAY WHITE-RED	RAISED PAVEMENT MARKER, 2-WAY YELLOW-RED	RAISED PAVEMENT MARKER, 2-WAY YELLOW-YELLOW			
			FROM	TO		km	km	km	METER	METER	METER		EACH	EACH	EACH	EACH	EACH	EACH	EACH			
729	CD	US 33	33+680	33+880				0.200														
729	YT	US 33	33+550	33+615							4											
729	WE	US 33 WB	33+550	33+880	WB	0.330																
729	WE	US 33 EB	33+550	33+880	EB	0.330																
730	CD	US 33	33+940	34+200				0.260											11			
730	WE	US 33 WB	33+880	34+200	WB	0.320																
730	WE	US 33 EB	33+880	34+200	EB	0.320																
731	CD	US 33	34+200	34+530															14			
731	WE	US 33 WB	34+200	34+530	WB	0.330																
731	WE	US 33 EB	34+200	34+530	EB	0.330																
732	CD	US 33	34+530	34+740				0.210											14			
732	CSD	US 33	34+740	34+870				0.130														
732	WE	US 33 WB	34+530	34+870	WB	0.340																
732	WE	US 33 EB	34+530	34+870	EB	0.340																
733	CSD	US 33	34+870	35+200				0.330											14			
733	WE	US 33 WB	34+870	35+200	WB	0.330																
733	WE	US 33 EB	34+870	35+200	EB	0.330																
734	CSD	US 33	35+200	35+480				0.280											14			
734	DY	US 33	35+480	35+520				0.040														
734	WE	US 33 WB	35+200	35+520	WB	0.320																
734	WE	US 33 EB	35+200	35+200	EB	0.320																
735	DY	US 33	35+520	35+640				0.120											14			
735	CSD	US 33	35+640	35+840				0.200														
735	WE	US 33 WB	35+520	35+840	WB	0.320																
735	WE	US 33 WB	35+520	35+840	EB	0.320																
736	CSD	US 33	35+840	36+160				0.320											14			
736	WE	US 33 WB	35+840	36+160	WB	0.320																
736	WE	US 33 EB	35+840	36+160	EB	0.320																
737	CSD	US 33	36+160	36+340				0.180											14			
737	CD	US 33	36+340	36+480				0.140														
737	WE	US 33 WB	36+160	36+480	WB	0.320																
737	WE	US 33 EB	36+160	36+480	EB	0.320																
738	CD	US 33	36+480	36+800				0.320											14			
738	WE	US 33 WB	36+480	36+800	WB	0.320																
738	WE	US 33 EB	36+480	36+800	EB	0.320																
739	CD	US 33	36+800	36+920				0.120											14			
739	CSD	US 33	36+920	37+095				0.175														
739	DY	US 33	37+095	37+110				0.015														
739	WE	US 33 WB	36+800	37+110	WB	0.310																
739	WE	US 33 WB	36+800	37+110	EB	0.310																
TOTALS CARRIED TO GENERAL SUMMARY						7.12		3.04			4						137					

CALCULATED AJP
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TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS: EDGE LINE km	LANE LINE km	CENTER LINE km	CHANNELIZING LINE METER	STOP LINE METER	TRANSVERSE LINE METER		LANE ARROW EACH	WORD ON PAVEMENT 2500 mm EACH	ITEM 620 DELINEATOR: DELINEATOR, TYPE C, POST MOUNTED EACH	DELINEATOR, TYPE C, BRACKET M'NTED EACH	ITEM 621 RAISED PAVEMENT MARKER: RAISED PAVEMENT MARKER, 2-WAY WHITE-RED INSTALLATION ONLY EACH	RAISED PAVEMENT MARKER, 2-WAY YELLOW-RED INSTALLATION ONLY EACH	RAISED PAVEMENT MARKER, 2-WAY YELLOW-YELLOW INSTALLATION ONLY EACH			
740	DY	US 33 WB	37+110	37+390	WB			0.280											23			
740	DY	US 33 EB	37+110	37+390	EB			0.280														
740	YT	US 33	37+125	37+390							75											
740	WE	US 33 WB	37+110	37+390	WB	0.280																
740	WE	US 33 EB	37+110	37+390	EB	0.280																
741	A	US 33 WB	37+506		WB								1									
741	DY	US 33	37+390	37+465				0.075									25		29			
741	DY	US 33 EB	37+505	37+690	EB			0.185														
741	DY	US 33 WB	37+565	37+690	WB			0.125														
741	CH	US 33 EB	37+423	37+465	EB				42													
741	CH	US 33 EB	37+448	37+465	EB				17													
741	WE	US 33 WB	37+390	50+544CR16	WB	0.099																
741	WE	US 33 EB	37+390	50+509CR16	EB	0.090																
741	A	US 33 EB	37+451		EB								1									
741	WP	US 33 EB	37+428		EB									1								
741	A	US 33 EB	37+455		EB								1									
741	CH	US 33 WB	37+505	37+525	WB				20													
741	CH	US 33 WB	37+505	37+535	WB				30													
741	YT	US 33	37+565	37+690							45											
741	WE	US 33 EB	50+525CR16	37+690		0.207																
741	WE	US 33 WB	50+570CR16	37+690	WB	0.185																
741	A	US 33 WB	37+515		WB								1									
741	WP	US 33 WB	37+538		WB									1								
741	A	US 33 WB	37+525		WB								1									
741	A	US 33 EB	37+464		EB								1									
741	WP	US 33 EB	37+457		EB									1								
741	WP	US 33 EB	37+513		EB									1								
742	DY	US 33 WB	37+690	37+880	WB			0.190											6			
742	DY	US 33 EB	37+690	37+850	EB			0.160														
742	CSD	US 33 EB	37+880	37+990	EB			0.110														
742	WE	US 33 WB	37+690	37+990	WB	0.300																
742	WE	US 33 EB	37+690	37+990	EB	0.300																
742	YT	US 33	37+690	37+850							24											
743	CSD	US 33	37+990	38+310	LT			0.320											13			
743	WE	US 33 WB	37+990	38+310	LT	0.320																
743	WE	US 33 EB	37+990	38+310	LT	0.320																
744	CSD	US 33	38+310	38+340	LT			0.030											13			
744	DY	US 33	38+340	38+630	LT			0.290														
744	WE	US 33 WB	38+310	38+630	LT	0.320																
744	WE	US 33 EB	38+310	38+630	LT	0.320																
745	DY	US 33	38+630	38+950	LT			0.320											14			
745	WE	US 33 WB	38+630	38+950	LT	0.320																
745	WE	US 33 EB	38+630	38+950	LT	0.320																
746	DY	US 33	38+950	39+040	LT			0.090											13			
746	CD	US 33	39+040	39+270	LT			0.230														
746	WE	US 33 WB	38+950	39+270	LT	0.320																
746	WE	US 33 EB	38+950	39+270	LT	0.320																
747	CD	US 33	39+270	39+600	LT			0.330											14			
747	WE	US 33 WB	39+270	39+600	LT	0.330																
TOTALS CARRIED TO GENERAL SUMMARY						4.63		3.01	109		144		6	4			150					

CALCULATED AJP
CHECKED RM

TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS: EDGE LINE km	LANE LINE km	CENTER LINE km	CHANNELIZING LINE METER	STOP LINE METER	TRANSVERSE LINE METER		LANE ARROW EACH	WORD ON PAVEMENT 2500 mm EACH	ITEM 620 DELINEATOR: DELINEATOR, TYPE C, POST MOUNTED EACH	DELINEATOR, TYPE C, BRACKET M'NTED EACH
747	WE	US 33 EB	39+270	39+600	LT	0.330										
750	DY	TR 1271	3+023	3+080	℄			0.057								
750	WE	TR 1271	3+023	3+080	L & R	0.157										
751	DY	TR 55	47+988	48+280	℄			0.292								
751	WE	TR 55	47+988	48+280	L & R	0.584										
752	DY	TR 55	48+280	48+400	℄			0.120								
752	WE	TR 55	48+280	48+400	L & R	0.240										
753	DY	CR 21	3+005	3+242	℄			0.237								
753	WE	CR 21	3+005	33+267 US33	LT	0.262										
753	WE	CR 21	3+005	33+311 US33	RT	0.261										
753	DY	CR 21	3+279	3+300	℄			0.021								
753	WE	CR 21	33+254 US33	3+300	LT	0.049										
753	WE	CR 21	33+300 US33	3+300	RT	0.041										
753	SL	CR 21	3+242		RT					8						
753	SL	CR 21	3+279		LT					8						
754	DY	CR 21	3+300	3+440	℄			0.140								
754	WE	CR 21	3+300	3+440	L & R	0.280										
755	DY	TR 64	49+020	49+300	℄			0.280								
755	WE	TR 64	49+020	49+280	LT	0.260										
755	WE	TR 64	49+020	49+300	RT	0.280										
756	DY	TR 64	49+300	49+490	℄			0.190								
756	WE	TR 64	49+300	49+490	L & R	0.380										
757	DY	CR 16	50+100	50+220	℄			0.120								
757	WE	CR 16	50+100	50+220	L & R	0.240										
758	DY	CR 16	50+220	50+510	℄			0.290								
758	WE	CR 16	50+220	50+510	L & R	0.580										
759	DY	CR 16	50+510	50+525	℄			0.015								
759	DY	CR 16	50+554	50+730	℄			0.176								
759	WE	CR 16	50+510	37+460 US33	LT	0.032										
759	WE	CR 16	50+510	50+525	RT	0.015										
759	WE	CR 16	50+554	50+730	LT	0.176										
759	WE	CR 16	37+540 US33	50+730	RT	0.183										
759	SL	CR 16	50+525		RT					4						
759	SL	CR 16	50+554		LT					4						
714		US 33 EB	645+00	640+09	RT		0.150		300		300					
715	LL	US 33 EB	28+728	29+013	RT		0.285									
TOTALS CARRIED TO GENERAL SUMMARY						4.35	0.44	1.94	300	24	300					

CALCULATED A.J.P
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TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	ITEM 828 - EPOXY PAVEMENT MARKINGS: EDGE LINE km	LANE LINE km	CENTER LINE km	CHANNELIZING LINE METER	STOP LINE METER	TRANSVERSE LINE METER		LANE ARROW EACH	WORD ON PAVEMENT 2500 mm EACH								
749	TL	ALBANY RD	0+103	0+126	RT						6											
749	WE	ALBANY RD	0+103	0+126	RT	0.024																
749	DY	ALBANY RD	0+120	0+190	RT			0.07														
749	DY	ALBANY RD	0+120	0+190	LT			0.07														
749	YT	ALBANY RD	0+120	0+190							30											
749	LL	ALBANY RD	0+120	0+190	LT		0.07															
749	LL	ALBANY RD	0+140	0+190	RT		0.05															
749	WE	ALBANY RD	0+120	0+190	RT	0.07																
749A	DY	ALBANY RD	0+190	0+231	RT			0.041														
749A	DY	ALBANY RD	0+190	0+231	LT			0.041														
749A	YT	ALBANY RD	0+190	0+231							18											
749A	LL	ALBANY RD	0+190	0+231	LT		0.041															
749A	LL	ALBANY RD	0+190	0+231	RT		0.041															
749A	SL	ALBANY RD	0+231		RT					8												
749A	SL	ALBANY RD	0+267		LT					8												
749A	LL	ALBANY RD	0+267	0+318	RT		0.051															
749A	LL	ALBANY RD	0+267	0+318	LT		0.051															
749A	DY	ALBANY RD	0+267	0+318	℄			0.051														
749A	DY	ALBANY RD	0+267	0+318	RT			0.051														
749A	YT	ALBANY RD	0+267	0+318	RT						21											
749A	LL	ALBANY RD	0+342	0+367	LT		0.025															
749A	DY	ALBANY RD	0+342	0+367	℄			0.025														
749A	DY	ALBANY RD	0+342	0+367	RT			0.025														
749A	YT	ALBANY RD	0+342	0+367	RT						8											
749A	WP	ALBANY RD	0+343		RT									1								
749A	A	ALBANY RD	0+357		RT								1									
749A	SL	ALBANY RD	0+367		RT					9												
749A	CH	ALBANY RD	0+343	0+367	RT				24													
749A	SL	ALBANY RD	0+318		RT					8												
749A	SL	RICHLAND AVE	0+392		RT						7											
749A	CH	RICHLAND AVE	0+392	0+400					22													
749A	TL	RICHLAND AVE	0+392	0+400							20											
749A	A	RICHLAND AVE	0+402		RT								1									
749A	WP	RICHLAND AVE	0+419		RT									1								
749A	CH	RICHLAND AVE	0+392	0+419	RT				27													
749A	DY	RICHLAND AVE	0+392	0+419	RT			0.027														
749A	DL	RICHLAND/ALBANY INT	0+367	0+392	℄			0.025														
749A	SL	RAMP A	A 1+521		LT					3												
749A	SL	POMEROY RD	0+380		RT					3												
749A	SL	RAMP D	4+523		RT					3												
TOTALS CARRIED TO GENERAL SUMMARY						0.09	0.33	0.43	73	42	110		2	2								

CALCULATED AJP
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TRAFFIC CONTROL SUBSUMMARY

ATH-33-30.981

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SIGNING SUBSUMMARY

CALCULATED AJP | CHECKED RM

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630 - TRAFFIC SIGNS & SUPPORTS														
							GROUND MOUNTED SUPPORT NO.3 POST		GROUND MOUNTED SUPPORT S100 X 11.5 BEAM	GROUND MOUNTED SUPPORT W150 X 13.5 BEAM	GROUND MOUNTED SUPPORT W250 X 17.9 BEAM	GROUND MOUNTED SUPPORT W310 X 44.5 BEAM	ONE WAY SUPPORT NO 3 POST	BREAKAWAY BEAM CONNECTION	OVERHEAD SIGN SUPPORT TC-12.30M, DES 4	OVERHEAD SIGN SUPPORT TC-12.30M, DES 6	OVERHEAD SIGN SUPPORT TC-12.30M, DES 10	OVERHEAD SIGN SUPPORT TC-12.30M, DES 12	OVERHEAD SIGN SUPPORT TC-7.65M, DES 6	COMBINATION OVERHEAD SIGN SUPPORT TC-9.30M DES 2
							METER		METER	METER	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
713	86-S	US 33	698+00 EB	LT/RT	GDG	8077x2438														1	
714	88-S	US 33	670+00 EB	LT	GB	5182x1829											1				
715	1-S	US 33	29+120 EB	LT/RT	GG	4724x3810														1	
716	94-S	US 33	29+275 WB	LT	W-50R-48	1219x1219	7.7														
716	93-S	US 33	29+400 EB	RT	N-12A-72	1829x1524				7.8				2							
716	3-S	RAMP A	1+458 RAMP A	LT	D-4D-102	2591x610			5.3					2							
716	6-S	RAMP C	3+622 RAMP C	RT	W-50R-48	1219x1219	9.4														
716	4-S	RAMP A	1+458 RAMP A	LT	R-41A-36	914X610	3.9														
717	7-S	RAMP D	4+617	RT	R-41A-36	914x610	4.1														
717	11-S	RAMP D	4+617	LT	D-4B-60	4114x1829					5.8			2							
717	11-S	RAMP D	4+617	LT	M-40-30	762x381 (2)	5.0														
717	12-S	RAMP C	3+680	RT	R-15A-36	914x914	3.8														
717	13-S	US 33	29+820 WB	LT	GN	2438x1067					10.8										
718	14-S	US 33	30+160 WB	LT	N-12A-72	1829x1524			7.1					2							
718	15-S	US 33	30+180 EB	RT	W-50R-48	1219x1219	9.8														
719	99-S	US 33	30+400 EB	RT	M-39-36	914x457	4.7														
719	99-S	US 33	30+400 EB	RT	M-1-36-2	914x914															
719	16-S	US 33	30+420 WB	LT	GE	6400x3200												1			
719	17-S	US 33	30+520 WB	LT	R-10-48	1219x1524	10.3														
719	18-S	US 33	30+500 EB	RT	R-10-48	1219x1524	10.2														
720	19-S	US 33	30+680 EB	RT	GJ	3505x1219					10.2										
721	20-S	US 33	30+940 EB	RT	GG	4724x3810														1	
721	20A-S	US 33	30+940 EB	RT	SPECIAL	2896x2743															
721	21-S	US 33	31+200 WB	LT	GB	6096x3962													1		
722	301-S	US 33	31+313 EB	RT	W-55-288	7315x2438												1			
723	22-S	US 33	31+654 EB	RT	W-60R-48	1219x1219	8.4														
723	22-S	US 33	31+654 EB	RT	SPECIAL	610x305															
724	23-S	US 33	31+958 EB	RT	W-86-48	1219x1219	8.0														
724	23A-S	US 33	31+958 EB	RT	W-86-48	1219x1219	8.0														
724	24-S	US 33	32+200 WB	LT	GB	6096x3962													1		
724	25-S	US 33	32+196 EB	RT	W-52L-48	1219x1219	8.0														
724	25A-S	US 33	32+196 EB	RT	W-52L-48	1219x1219	8.0														
TOTALS CARRIED TO GENERAL SUMMARY							109.3		12.4	7.8	26.8			8		1	2	2	3		

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630 - TRAFFIC SIGNS & SUPPORTS													
							SIGN ATTACHMENT ASSEMBLY	LUMINARIE SUPPORT ASSEMBLY TYPE TC-31.20 M	SIGN, FLAT SHEET TYPE G	SIGN, EXTRUSHEET TYPE G										
							EACH	EACH	SQ. METER	SQ. METER										
713	86-S	US 33	698+00 EB	LT/RT	GDG	8077x2438	4	4		19.7										
714	87-S	US 33	678+87 EB	LT/RT	GDG	8077x2438	4	4		19.7										
714	88-S	US 33	670+00 EB	LT	GB	5182x1829	3	2		9.5										
714	89-S	US 33	642+57 EB (a)	LT/RT	GG	4267x3962	3	2		16.9										
714	89-S	US 33	642+57 EB (b)	LT/RT	GG	4267x3962	3	2		16.9										
714	89-S	US 33	642+57 EB (c)	LT/RT	GB	5182x1524	3	2		7.9										
714	91-S	ALBANY ROAD	595+00 EB (a)	LT/RT	GE	3505x2591	3	2		9.1										
714	91-S	ALBANY ROAD	595+00 EB (b)	LT/RT	GE	3505x2743	3	2		9.1										
714	90-S	ALBANY ROAD	575+00 EB	LT/RT	GDG	7772x2896	4	3		22.5										
715	1-S	US 33	29+120 EB	LT/RT	GG	4724x3810	3	2		18.0										
715	2-S	US 33	29+120 EB	LT/RT	GE	6248x1676	4	3		10.5										
716	94-S	US 33	29+275 WB	LT	W-50R-48	1219x1219			1.5											
716	93-S	US 33	29+400 EB	RT	N-12A-72	1829x1524				2.8										
716	3-S	RAMP A	1+458	LT	D-4D-102	2591x610				1.6										
716	4-S	RAMP A	1+458	LT	R-41A-36	914x610			0.6											
716	6-S	RAMP C	3+622	RT	W-50R-48	1219x1219			1.5											
716	5-S	RAMP A	1+458	LT	R-41A-36	914X610			0.6											
717	7-S	RAMP D	4+617	RT	R-41A-36	914x610			0.6											
717	8-S	RAMP D	4+617	LT	R-41A-36	914x610			0.6											
717	11-S	RAMP D	4+617	LT	D-4B-60	4114x1829				7.6										
717	11-S	RAMP D	4+617	LT	M-40-30	762x381 (2)			0.6											
717	11-S	RAMP D	4+617	LT	M-2-30	762x762			0.6											
717	11-S	RAMP D	4+617	LT	M-1-30	762x762			0.6											
717	11-S	RAMP D	4+617	LT	M-21-24	610x457 (2)			0.6											
717	12-S	RAMP C	3+680	RT	R-15A-36	914x914			0.8											
717	13-S	US 33	29+820 WB	LT	GN	2438x1067				2.6										
718	14-S	US 33	30+160 WB	LT	N-12A-72	1829x1524				2.8										
718	15-S	US 33	30+180 EB	RT	W-50R-48	1219x1219			1.5											
719	99-S	US 33	30+400 EB	RT	M-39-36	914x457			0.4											
719	99-S	US 33	30+400 EB	RT	M-1-36-2	914x914			0.8											
719	16-S	US 33	30+420 WB	LT	GE	6400x3200	4	3		20.5										
719	17-S	US 33	30+520 WB	LT	R-10-48	1219x1524			1.9											
719	18-S	US 33	30+500 EB	RT	R-10-48	1219x1524			1.9											
720	19-S	US 33	30+680 EB	RT	GJ	3505x1219				4.3										
721	20-S	US 33	30+940 EB	RT	GG	4724x3810	3	2		18.0										
721	20A-S	US 33	30+940 EB	RT	SPECIAL	2896x2743	2	1		7.9										
721	21-S	US 33	31+200 WB	LT	GB	6096x3962	4	3		24.2										
722	301-S	US 33	31+313 EB	RT	W-55-288	7315x2438	4	3		17.8										
723	22-S	US 33	31+654 EB	RT	W-60R-48	1219x1219			1.5											
723	22A-S	US 33	31+654 EB	RT	SPECIAL	610x305			0.6											
724	23-S	US 33	31+958 EB	RT	W-86-48	1219x1219			1.5											
724	23A-S	US 33	31+958 EB	RT	W-86-48	1219x1219			1.5											
724	24-S	US 33	32+200 WB	LT	GB	6096x3962	4	3		24.2										
724	25-S	US 33	32+196 EB	RT	W-52L-48	1219x1219			1.5											
724	25A-S	US 33	32+196 EB	RT	W-52L-48	1219x1219			1.5											
TOTALS CARRIED TO GENERAL SUMMARY							58	43	23.2	294.1										

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630							ITEM 631								625	
								GROUND MOUNTED BEAM SUPPORT FOUNDATION	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST AND DISPOSAL	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	SIGN WIRED	SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY	BALLAST, TYPE CMRI-100-480 INTEGRAL	BALLAST, TYPE CMRI-175-480 INTEGRAL	BALLAST, TYPE CMRI-250-480 INTEGRAL	MERCURY VAPOR LUMINARIES TYPE TC-31.20M WITH 100 WATT LAMP	MECURY VAPOR LUMINARIES TYPE TC-31.20M WITH 175 WATT LAMP	MECURY VAPOR LUMINARIES TYPE TC-31.20M WITH 250 WATT LAMP	GROUND ROD	
							EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
713	98-S	US 33	735+93 EB	LT		REMOVAL							1										
713	86-S	US 33	698+00 EB	LT/RT	GDG	8077x2438			2					1	1		4			4		2	
714	87-S	US 33	678+87 EB	LT/RT	GDG	8077x2438							2	1	1		4			4		2	
714	88-S	US 33	670+00 EB	LT	GB	5182x1829			1								2			2		1	
714	92-S	US 33	653+25 EB	LT		REMOVAL				1			1										
714	89-S	US 33	642+57 EB(a)	LT/RT	GG	4267x3962							2	1	1			2			2	2	
714	89-S	US 33	642+57 EB(b)	LT/RT	GG	4267x3962								1				2			2		
714	89-S	US 33	642+57 EB(c)	LT/RT	GB	5182x1524								1		2			2				
714	91-S	ALBANY ROAD	595+00 EB(a)	LT/RT	GE	3505x2591							2	1	1		2			2		2	
714	91-S	ALBANY ROAD	595+00 EB(b)	LT/RT	GE	3505x2743								1			2			2			
714	90-S	ALBANY ROAD	575+00 EB	LT/RT	GDG	7772x2896							2	1	1		3			3		2	
715	1-S	US 33	29+120 EB	LT/RT	GG	4724x3810			2					1	1			2			2	2	
715	2-S	US 33	29+120 EB	LT/RT	GE	6248x1676								1		3			3				
716	94-S	US 33	29+275 WB	LT	W-50R-4	1219x1219																	
716	93-S	US 33	29+400 EB	RT	N-12A-72	1829x1524		2															
716	3-S	RAMP A	1+458	LT	D-4D-102	2591x610		2															
716	6-S	RAMP C	3+622	LT	W-50R-48	1219x1219																	
717	7-S	RAMP D	4+617	RT	R-41A-36	914x610																	
717	11-S	RAMP D	4+617	LT	D-48-60	4114x1829		2															
717	12-S	RAMP C	3+680	RT	R-15A-36	914x914																	
717	13-S	US 33	29+820 WB	LT	D-48-60	2438x1067		2															
718	14-S	US 33	30+160 WB	LT	N-12A-72	1829x1524		2															
718	15-S	US 33	30+180 EB	RT	W-50R-48	1219x1219																	
719	99-S	US 33	30+400 EB	RT	M-39-36	914x457																	
719	99-S	US 33	30+400 EB	RT	M-1-36-2	914x914																	
719	16-S	US 33	30+420 WB	LT	GE	6400x3200			1					1			3			3		1	
719	17-S	US 33	30+520 WB	LT	R-10-48	1219x1524																	
719	18-S	US 33	30+500 EB	RT	R-10-48	1219x1524																	
720	19-S	US 33	30+680 EB	RT	GJ	3505x1219		2						1				3			3	1	
721	20-S	US 33	30+940 EB	RT	GG	4724x3810			2					1				3			3	2	
721	20A-S	US 33	30+940 EB	RT	SPECIAL	2896x2743								1			2			2			
721	21-S	US 33	31+200 WB	LT	GB	6096x3962			1					1				3			3	1	
722	301-S	US 33	31+313 EB	RT	W-55-288	7315x2438			1														
724	24-S	US 33	32+200 WB	LT	GB	6096x3962			1					1				3			3	1	
TOTALS CARRIED TO GENERAL SUMMARY								12	11	1			10	16	6	5	22	18	5	22	18	19	

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630 - TRAFFIC SIGNS & SUPPORTS												
							GROUND MOUNTED SUPPORT NO. 3 POST	SIGN, FLAT SHEET TYPE G	SIGN, EXTRUSHEET TYPE G										
							METER	SQ. METER	SQ. METER										
725	26-S	US 33	32+434 EB	RT	W-60L-48	1219x1219	9.1	1.5											
725	27A-S	US 33	32+434 EB	RT	W-60L-48	1219x1219	9.0	1.5											
726	31-S	US 33	32+836 SB	LT	W-24-48	1219x1219	9.9	1.5											
726	29-S	US 33	32+860 WB	LT	R-28R-36	914x1219	4.6	1.2											
727	30-S	US 33	32+919 EB	RT	R-33-30	762x914	4.6	0.7											
727	200-S	US 33	32+986 EB	LT	D-7-96	2438x457	7.6	1.1											
727	32-S	US 33	33+050 EB	LT	W-71-48	1219x1219	9.3	1.5											
727	33-S	US 33	33+140 EB	LT	R-31M-48	1219x762	9.0	1.0											
727	34-S	US 33	33+235 EB	RT	R-31M-48	1219x762	9.0	1.0											
728	35-S	US 33	33+232 WB	LT	M-40-36	914x457	5.7	0.5											
728	35-S	US 33	33+232 WB	LT	M-1-36-2	914x914		0.8											
728	36-S	CR 21	3+291	LT	R-1-36	914x914	4.8	0.8											
728	37-S	US 33	33+253 WB	LT	D-7-96	2438x457	8.6	1.1											
728	38-S	CR 21	3+283	RT	M-50-66	1676x610	7.9		1.0										
728	39-S	US 33	33+297 WB	LT	R-31M-48	1219x762	9.2	1.0											
728	40-S	US 33	33+330 WB	LT	R-31M-48	1219x762	8.8	1.0											
728	41-S	US 33	33+268 EB	LT	R-31M-48	1219x762	9.0	1.0											
728	42-S	CR 21	3+240	LT	M-50-66	1676x610	7.9		1.0										
728	43-S	CR 21	3+233	RT	R-1-36	914x914	4.3	0.8											
728	44-S	US 33	33+312 EB	LT	D-7-96	2438x457	9.0	1.1											
728	45-S	US 33	33+339 EB	LT	M-39-36	914x457	4.9	0.5											
728	45-S	US 33	33+339 EB	LT	M-1-36-2	914x914		0.8											
728	201-S	US 33	33+452 EB	LT	D-7-96	2438x457	7.6	1.1											
729	46-S	US 33	33+586 WB	LT	W-24-48	1219x1219	10.1	1.5											
734	47-S	US 33	35+300 EB	LT	IM-31-36	914x457	4.8	0.5											
734	47-S	US 33	35+300 EB	LT	M-1C-36-2	914x914		0.8											
734	48-S	US 33	35+380 WB	LT	M-40-36	914x457	5.0	0.5											
734	48-S	US 33	35+380 WB	LT	M-1C-36-2	914x914		0.8											
739	49-S	US 33	37+065 EB	LT	W-24-48	1219x1219	9.5	1.5											
740	50-S	US 33	37+365 EB	LT	R-31M-48	1219x762	9.0	1.0											
740	51-S	US 33	37+384 WB	LT	R-10-36	914x1219	4.8	1.1											
740	202-S	US 33	37+215 WB	LT	D-7-96	2438x457	7.6	1.1											
741	52-S	US 33	37+447 WB	LT	M-40-36	914x457	4.4	0.5											
741	52-S	US 33	37+447 WB	LT	M-1-36-2	914x914		0.8											
741	53-S	US 33	37+468 WB	LT	D-7-96	2438x457	7.9	1.1											
741	54-S	CR 16	50+565	LT	R-1-36	914x914	4.3	0.8											
741	55-S	CR 16	50+572	RT	M-50-66	1676x610	7.9		1.0										
741	56-S	US 33	37+513 WB	LT	R-31M-48	1219x762	9.0	1.0											
741	57-S	US 33	37+610 WB	LT	R-31M-48	914x1219	9.1	1.2											
TOTALS CARRIED TO GENERAL SUMMARY							253.2	35.7	3.0										

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630 - TRAFFIC SIGNS & SUPPORTS													
							GROUND MOUNTED SUPPORT NO.3 POST	GROUND MOUNTED SUPPORT S100 X 11.5 BEAM	GROUND MOUNTED SUPPORT S4 X 7.7 BEAM	GROUND MOUNTED SUPPORT W6 X 9 BEAM	GROUND MOUNTED SUPPORT W10 X 12 BEAM	GROUND MOUNTED SUPPORT W12 X 30 BEAM	ONE WAY SUPPORT NO 3 POST	BREAKAWAY BEAM CONNECTION	OVERHEAD SIGN SUPPORT TC-12.30M, DES 4	OVERHEAD SIGN SUPPORT TC-9.10M DES 2	SIGN ATTACHMENT ASSEMBLY	LUMINARIE SUPPORT ASSEMBLY TYPE TC-31.20 M	SIGN, FLAT SHEET TYPE G	SIGN, EXTRUSHEET TYPE G
							METER	METER	METER	METER	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	SQ. METER	SQ. METER
741	58-S	US 33	37+465 EB	LT	R-31M-48	1219x762	8.8												1.0	
741	59-S	CR 16	50+509	LT	M-50-66	1676x610	7.9													1.0
741	60-S	CR 16	50+520	RT	R-1-36	914x914	4.4												0.8	
741	61-S	US 33	37+503 EB	LT	D-7-96	2438x457	7.8												1.1	
741	62-S	US 33	37+531 EB	LT	M-40-36	914x457	5.1												0.5	
741	62-S	US 33	37+531 EB	LT	M-1-36-2	914x914													0.8	
741	63-S	US 33	37+584 EB	RT	R-10-36	914x1219	4.8												1.2	
742	64-S	US 33	37+784 WB	LT	W-24-48	1219x1219	9.5												1.1	
742	203-S	US 33	37+760 WB	LT	D-7-96	2438x457	7.6												1.1	
748A	65-S	ALBANY ROAD	0+320	LT	GH-1	3048x1676									1		2	1		5.1
748A	66-S	ALBANY ROAD	0+365	LT	M-50-66	1676x610 (3)		9.9						2						3.1
748A	67-S	RAMP B	0+976	RT	M-50-66	1676x610 (3)		9.9						2						3.1
748A	68-S	ALBANY ROAD	0+406	LT	GH-1	2286x2286										1	2	1		5.2
748A	93-S	ALBANY ROAD	0+381		REMOVAL															
748A	94-S	ALBANY ROAD	0+389		REMOVAL															
748A	95-S	ALBANY ROAD	0+400		REMOVAL															
748A	96-S	RAMP B	0+983		REMOVAL															
748A	97-S	RAMP B	0+957		REMOVAL															
748A	70-S	RAMP A	1+533	RT	R-41B-36	914x914	4.4												0.8	
748A	71-S	RAMP A	1+528	LT	R-41B-36	914x914	4.9												0.8	
748A	71-S	RAMP A	1+528	LT	R-43R-48	1219x457													0.6	
748A	71-S	RAMP A	1+528	LT	R-43L-48	1219x457													0.6	
748A	72-S	ALBANY ROAD	0+264	LT	GH-1	2438x1981										1	2	1		4.8
748A	73-S	ALBANY ROAD	0+210	RT	GH-1	2438x2591														5.6
748A	74-S	ALBANY ROAD	0+232	RT	GH	2438x2286										1	2	1		5.6
750	75-S	TR 1271	3+022	RT	X-4-18	457x457	4.0												0.2	
750	76-S	TR 1271	3+022	LT	X-4-18	457x457	4.0												0.2	
750	100-S	TR 1271	3+049	RT	X-4-18	457x457	4.0												0.2	
750	101-S	TR 1271	3+055	RT	X-4-18	457x457	4.0												0.2	
750	77-S	TR 1271	3+207	LT	SPECIAL	914x914	5.0												0.8	
750	77-S	TR 1271	3+207	LT	W-145B-24	762x406													0.3	
750	78-S	TR 1271	3+357	LT	SPECIAL	914x914	5.0												0.8	
750	78-S	TR 1271	3+357	LT	W-145B-24	762x406													0.3	
750	79-S	TR 1271	SEE SHEET 750	LT	W-48P-36	914x305	4.4												**0.3**	
750	79-S	TR 1271	SEE SHEET 750	LT	D-14-36	914x203													0.3	
753	80-S	CR 21	3+030	RT	W-45A-36	914x914	4.4												0.8	
754	81-S	CR 21	3+491	LT	W-45A-36	914x914	4.4												0.8	
756	82-S	TR 64	0+006 (DRIVE)	RT	W-48-30	762x762	4.4												0.6	
756	83-S	TR 64	49+671	LT	W-5-30	762x762	4.9												0.6	
756	83-S	TR 64	49+671	LT	W-143-18	457x457													0.2	
758	84-S	CR 16	50+320	RT	W-45A-36	914x914	4.4												0.8	
760	85-S	CR 16	50+792	LT	W-45A-36	914x914	4.4												0.8	
TOTALS CARRIED TO GENERAL SUMMARY							122.5	19.8						4	1	3	8	4	18.6	33.5

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630							ITEM 631								625	
							ONE WAY SUPPORT NO.3 POST	GROUND MOUNTED BEAM SUPPORT FOUNDATION	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	SIGN WIRED	SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY	BALLAST, TYPE CMRI-100-480 INTEGRAL	BALLAST, TYPE CMRI-175-480 INTEGRAL	BALLAST, TYPE CMRI-250-480 INTEGRAL	MERCURY VAPOR LUMINARIES TYPE TC-31.20M WITH 100 WATT LAMP	MECURY VAPOR LUMINARIES TYPE TC-31.20M WITH 175 WATT LAMP	MECURY VAPOR LUMINARIES TYPE TC-31.20M WITH 250 WATT LAMP	GROUND ROD	
							METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
741	58-S	US 33	37+465 EB	LT	R-31M-48	1219x762																	
741	59-S	CR 16	50+509	LT	M-1-36-2	914x914																	
741	59-S	CR 16	50+509	LT	M-25-30	762x610																	
741	60-S	CR 16	50+520	RT	R-1-36	914x914																	
741	61-S	US 33	37+503 EB	LT	D-7-72	1829X305																	
741	62-S	US 33	37+531 EB	LT	M-40-36	914x457																	
741	62-S	US 33	37+531 EB	LT	M-1-36-2	914x914																	
741	63-S	US 33	37+584 EB	RT	R-10-36	914x1219																	
742	64-S	US 33	37+784 WB	LT	W-24-48	1219x1219																	
742	203-S	US 33	37+760 WB	LT	D-7-96	2438x457																	
748A	65-S	ALBANY ROAD	0+320	LT	GH-1	3048x1676			1					1	1	1			1			1	
748A	66-S	ALBANY ROAD	0+365	LT	M-50-66	1676x610(3)		2															
748A	67-S	RAMP B	0+976	RT	M-50-66	1676x610(3)		2															
748A	68-S	ALBANY ROAD	0+406	LT	GH-1	2286x2286								1	1		1			1		1	
748A	93-S	ALBANY ROAD	0+381	RT	REMOVAL						1	1											
748A	94-S	ALBANY ROAD	0+389	RT	REMOVAL						1	1											
748A	95-S	ALBANY ROAD	0+400	LT	REMOVAL						1	1											
748A	96-S	RAMP B	0+983	RT	REMOVAL						1	1											
748A	97-S	RAMP B	0+957	RT	REMOVAL						1	1											
748A	70-S	RAMP A	1+533	RT	R-41B-36	914x914																	
748A	71-S	RAMP A	1+527	LT	R-41B-36	914x914	1.2																
748A	71-S	RAMP A	1+527	LT	R-43R-48	1219x457																	
748A	71-S	RAMP A	1+527	LT	R-43L-48	1219x457																	
748A	72-S	ALBANY ROAD	0+264	LT	GH-1	2438x1981			1					1	1		1			1		1	
748A	73-S	ALBANY ROAD	0+210	RT	GH-1	2438x2591																	
748A	74-S	ALBANY ROAD	0+232	RT	GH	2438x2286			1														
750	75-S	TR 1271	3+022	RT	X-4-18	457x457																	
750	76-S	TR 1271	3+022	LT	X-4-18	457x457																	
750	100-S	TR 1271	3+049	RT	X-4-18	457x457																	
750	101-S	TR 1271	3+055	RT	X-4-18	457x457																	
750	77-S	TR 1271	3+207	LT	SPECIAL	914x914																	
750	77-S	TR 1271	3+207	LT	W-145B-24	762x406																	
750	78-S	TR 1271	3+357	LT	SPECIAL	914x914																	
750	78-S	TR 1271	3+357	LT	W-145B-24	762x406																	
750	79-S	TR 1271	SEE SHEET 750	LT	W-48P-36	914x305	1																
750	79-S	TR 1271	SEE SHEET 750	LT	D-14-36	914x205																	
753	80-S	CR 21	3+030	RT	W-45A-36	914x914																	
754	81-S	CR 21	3+491	LT	W-45A-36	914x914																	
756	82-S	TR 64	0+006(DRIVE)	RT	W-48-30	762x762																	
756	83-S	TR 64	49+671	LT	W-5-30	762x762																	
756	83-S	TR 64	49+671	LT	W-143-18	457x457																	
758	84-S	CR 16	50+320	RT	W-45A-36	914x914																	
760	85-S	CR 16	50+792	LT	W-45A-36	914x914																	
TOTALS CARRIED TO GENERAL SUMMARY							2.2	4	3		5	5		3	3	1	2		1	2		3	

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (mm)	ITEM 630 - TRAFFIC SIGNS & SUPPORTS												
							GROUND MOUNTED SUPPORT NO. 3 POST	SIGN, FLAT SHEET TYPE G	SIGN, EXTRUSHEET TYPE G	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL								
							METER	SQ. METER	SQ. METER	EACH	EACH								
716	307-S	US 33	29+413 WB	RT	REMOVAL					2	1								
717	306-S	RAMP C	3+920 EB	RT	R-181-48	1219x1524	8.6	1.9											
718	305-S	US 33	30+000 EB	RT	R-184-MOD	1219x1524	8.6	1.9											
719	304-S	US 33	30+560 EB	RT	W-56L-48	1219x1219	8.6	1.5											
719	304-S	US 33	30+560 EB	RT	W-145A-30	762x406		0.3											
720	303-S	US 33	30+819 EB	RT	W-60R-48	1219x1219	8.6	1.5											
720	303-S	US 33	30+819 EB	RT	W-145B-30	762x610		0.5											
721	302-S	US 33	31+020 EB	RT	R-181-48	1219x1524	8.0	1.9											
722	300-S	US 33	31+395 EB	RT	W-56L-48	1219x1219	8.6	1.5											
722	300-S	US 33	31+395 EB	RT	W-145A-30	762x406		0.3											
748	104-S	ALBANY ROAD	0+080	LT	R-33-24	610x762	4.0	0.5											
748	105-S	ALBANY ROAD	1+048	RT	REMOVAL					3	1								
748	105-S	ALBANY ROAD	1+048	RT	W-47-36	914x914	4.0	0.8											
748	106-S	ALBANY ROAD	0+091	RT	REMOVAL					3	1								
748	106-S	ALBANY ROAD	0+091	RT	M-45-10	1067x1524	9.8		1.6										
748A	102-S	ALBANY ROAD	2+059	RT	REMOVAL					1	1								
748A	103-S	ALBANY ROAD	2+035	LT	REMOVAL					1	1								
748A	107-S	RAMP D	4+506	LT	R-41B-36	914x914	4.3	0.8											
748A	108-S	RAMP D	4+515	RT	R-41B-36	914x914	4.3	0.8											
748A	108-S	RAMP D	4+515	RT	R-43R-48	1219x457		0.6											
748A	108-S	RAMP D	4+515	RT	R-43L-48	1219x457		0.6											
750	109-S	TR 1271	2+075	LT	REMOVAL					1	1								
750	110-S	TR 1271	2+345	LT	REMOVAL					1	1								
750	111-S	TR 1271	2+410	LT	REMOVAL					1	1								
750	112-S	TR 1271	2+460	RT	REMOVAL					2	1								
750	113-S	TR 1271	2+680	LT	REMOVAL					2	1								
750	114-S	TR 1271	2+729	RT	REMOVAL					1	1								
750	115-S	TR 1271	SEE SHEET 750	LT	REMOVAL					1	1								
TOTALS CARRIED TO GENERAL SUMMARY							77.4	15.4	1.6	19	12								

CALCULATED AJP
CHECKED RM

SIGNING SUBSUMMARY

ATH-33-30.981

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NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

FOR SIGNING QUANTITIES, SEE SHEETS 712, 712A, & 712B
FOR OVERHEAD SIGN DETAILS, SEE SHEETS 777 AND 783

SCALE: 1:5000
0 10,000
HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

MAJOR GUIDE SIGN PLAN
LEAD-IN SIGNING

ATH-33-30.981

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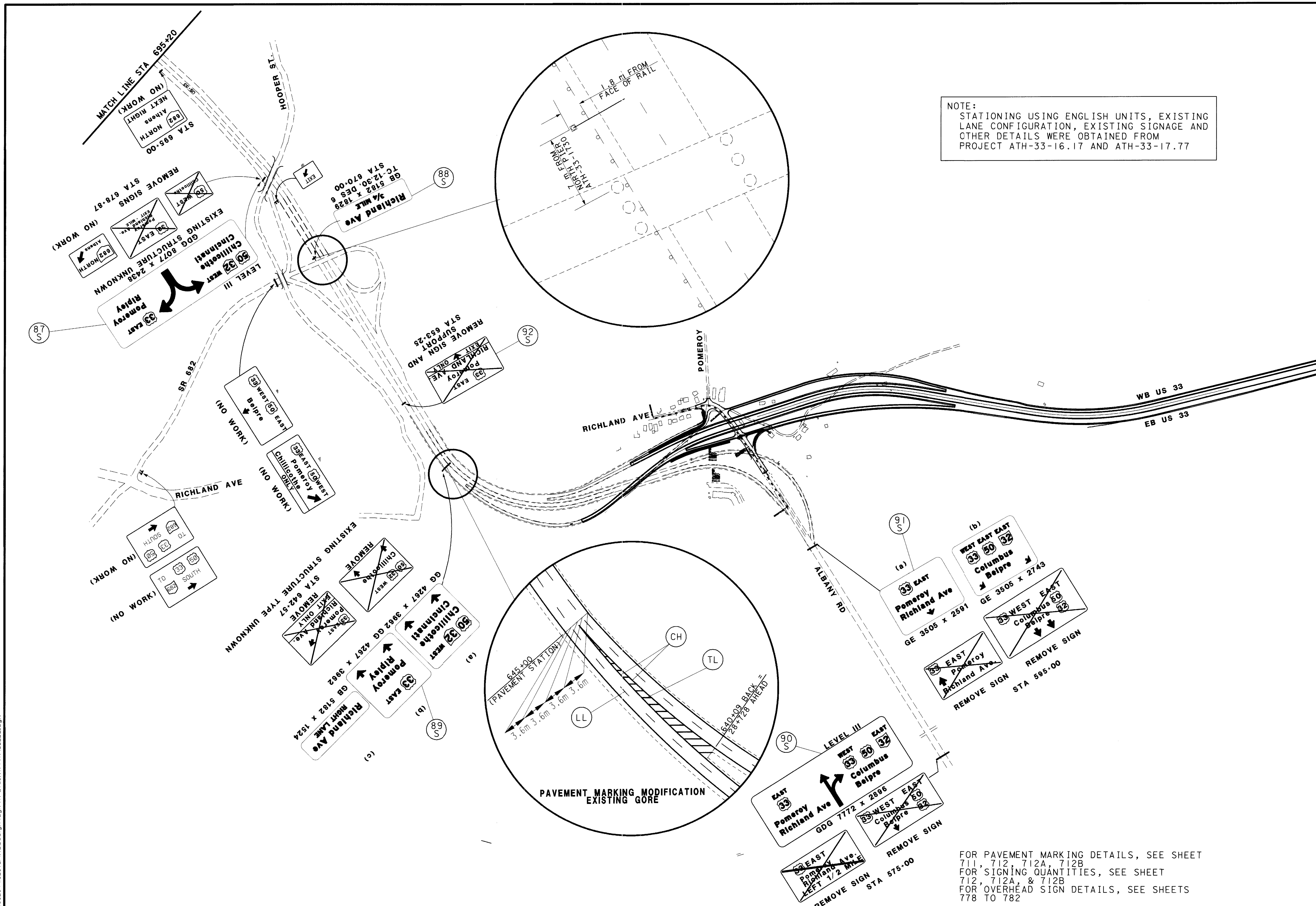

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

FOR PAVEMENT MARKING DETAILS, SEE SHEET 711, 712, 712A, 712B
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, & 712B
FOR OVERHEAD SIGN DETAILS, SEE SHEETS 778 TO 782

SCALE 1:5000
HORIZONTAL
SCALE IN METERS

CALCULATED EC
CHECKED RM

MAJOR GUIDE SIGN PLAN
LEAD-IN SIGNING

ATH-33-30.981

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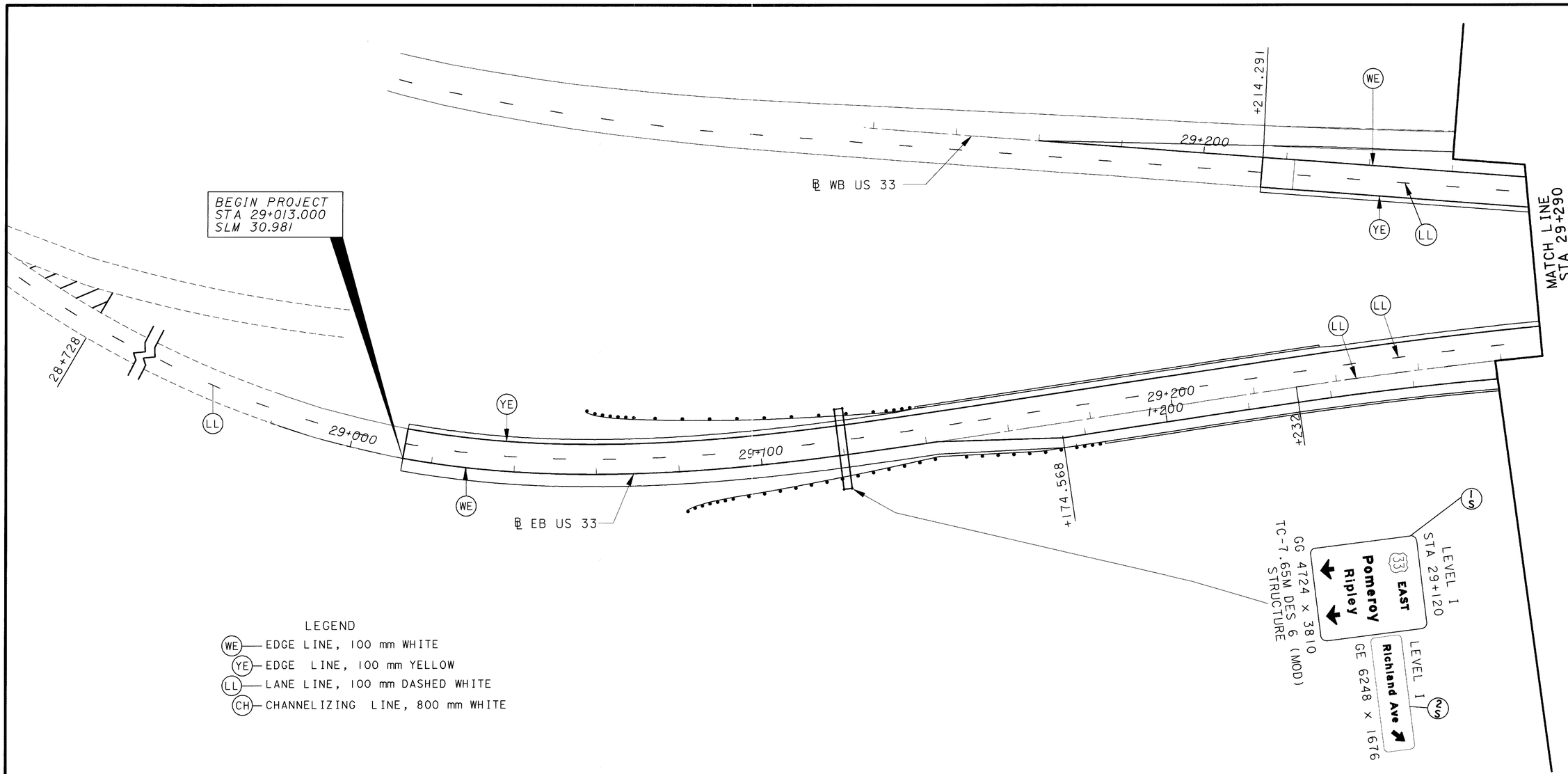

LEGEND

- WE — EDGE LINE, 100 mm WHITE
- YE — EDGE LINE, 100 mm YELLOW
- LL — LANE LINE, 100 mm DASHED WHITE
- CH — CHANNELIZING LINE, 800 mm WHITE

ITEM 620 - DELINEATOR

STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE D POST MT'D. (EA.)
29+180 TO 29+290	RT	3	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		3	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED

STATION TO STATION	SPACING (METER)	NUMBER
28+728 TO 29+013 (CL)	24	12
29+000 TO 29+290 (RT)	24	13
29+213 TO 29+290 (LT)	24	3
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		28

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 706
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, & 712B
FOR OVERHEAD SIGN DETAILS, SEE SHEET 761

HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 28+980 TO STA 29+290

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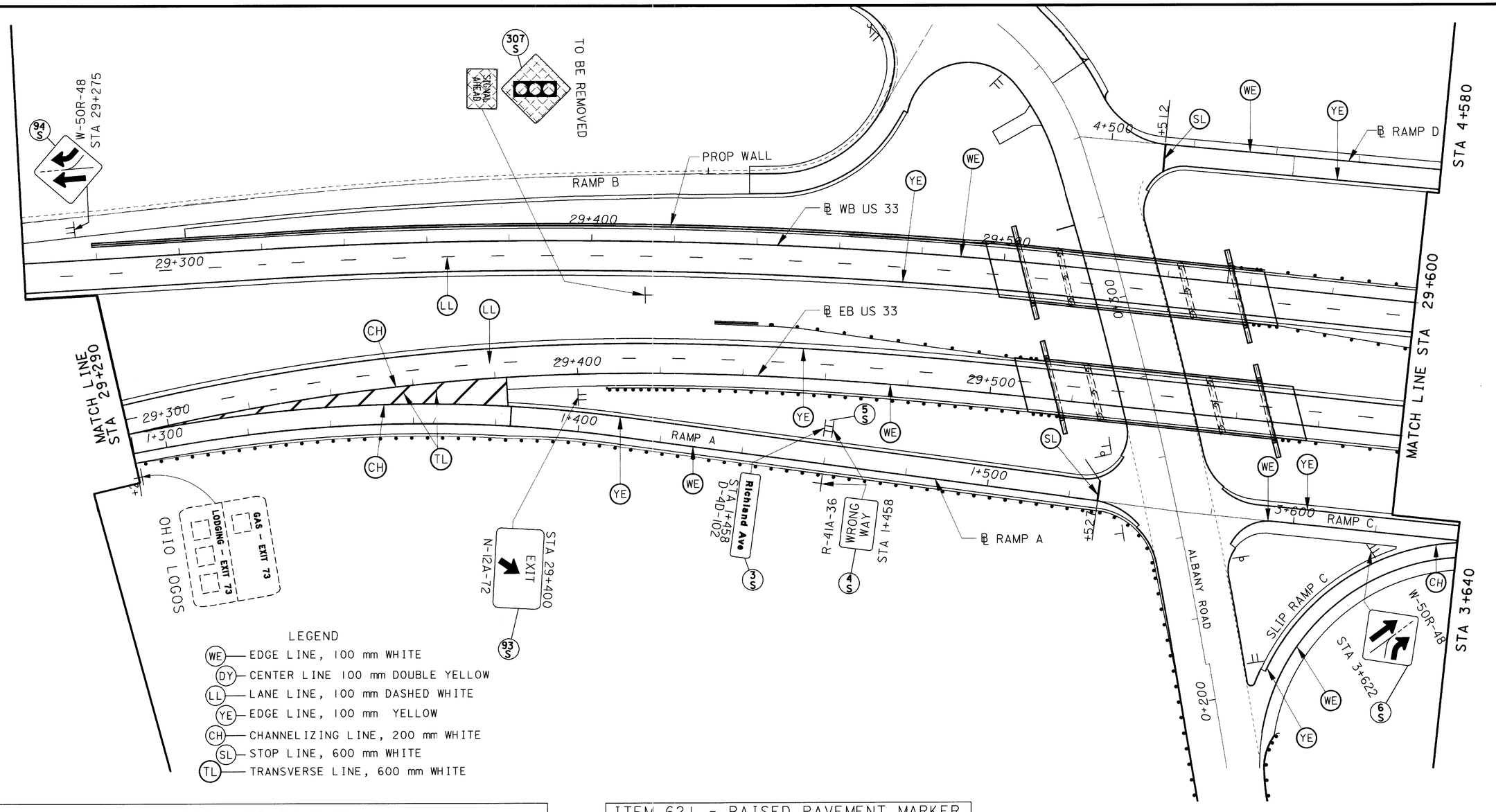

LEGEND

- (WE) — EDGE LINE, 100 mm WHITE
- (DY) — CENTER LINE 100 mm DOUBLE YELLOW
- (LL) — LANE LINE, 100 mm DASHED WHITE
- (YE) — EDGE LINE, 100 mm YELLOW
- (CH) — CHANNELIZING LINE, 200 mm WHITE
- (SL) — STOP LINE, 600 mm WHITE
- (TL) — TRANSVERSE LINE, 600 mm WHITE

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE D BRACKET MT'D. (EA.)
29+290 TO 29+400	RT	2	
RAMP A			
1+300 TO 1+520	RT	3	
1+383.6 TO 1+520	LT		3
RAMP C			
3+600 TO 3+640	LT		1
3+600 TO 3+640	RT	1	
RAMP D			
4+500 TO 4+580	LT	1	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		7	4

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
29+290 TO 29+600 (LT & RT)	24	26
29+290 TO 29+383.62 (GORE)	24	8
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		34

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/RED		
STATION TO STATION	SPACING (METER)	NUMBER
RAMP A 1+383 TO 1+520 (LT)	24	7
RAMP D 4+512 TO 4+580 (RT)		3
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		10

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 706
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR BEAM SIGN DETAILS, SEE SHEETS 762 & 765
FOR ALBANY ROAD SIGNS SEE SHEETS 748 & 749

1:500 HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 29+290 TO STA 29+600

ATH-33-30.981

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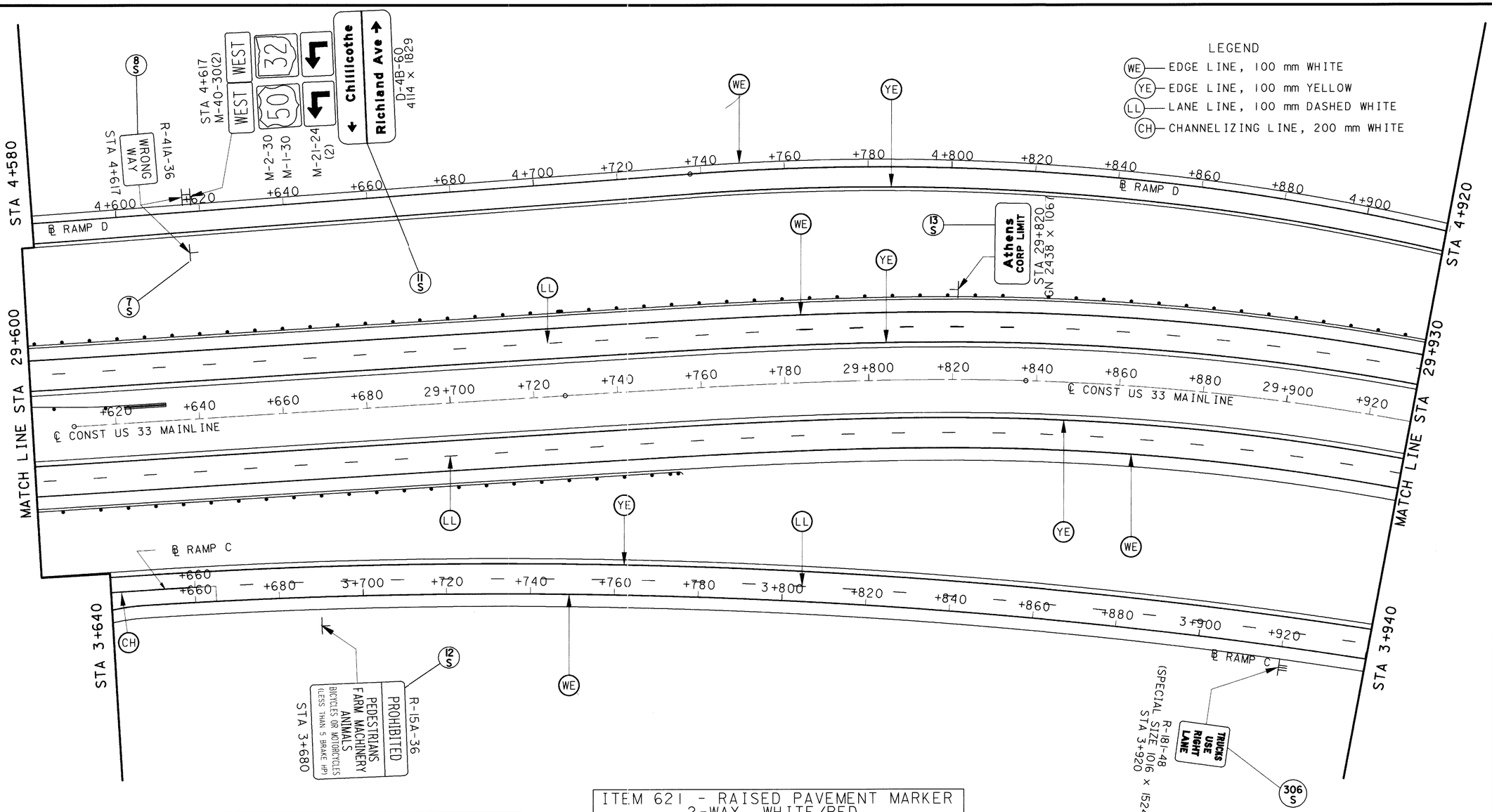

ITEM 620 - DELINEATOR

STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE D POST MT'D. (EA.)
RAMP C			
3+640 TO 3+940	LT		5
3+640 TO 3+940	RT	5	
RAMP D			
4+580 TO 4+920	LT		6
4+580 TO 4+920	RT	6	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		11	11

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED

STATION TO STATION	SPACING (METER)	NUMBER
29+600 TO 29+930 (LT & RT)	24	24
TOTAL CARRIED TO TRAF SUBSUMMARY		24

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/RED

STATION TO STATION	SPACING (METER)	NUMBER
RAMP D 4+580 TO 4+920 (RT)	24	14
RAMP C 3+640 TO 3+940 (LT)	24	12
TOTAL CARRIED TO TRAF SUBSUMMARY		26

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 706
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR BEAM SIGN DETAILS, SEE SHEETS 763 & 764

HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 29+600 TO STA 29+930

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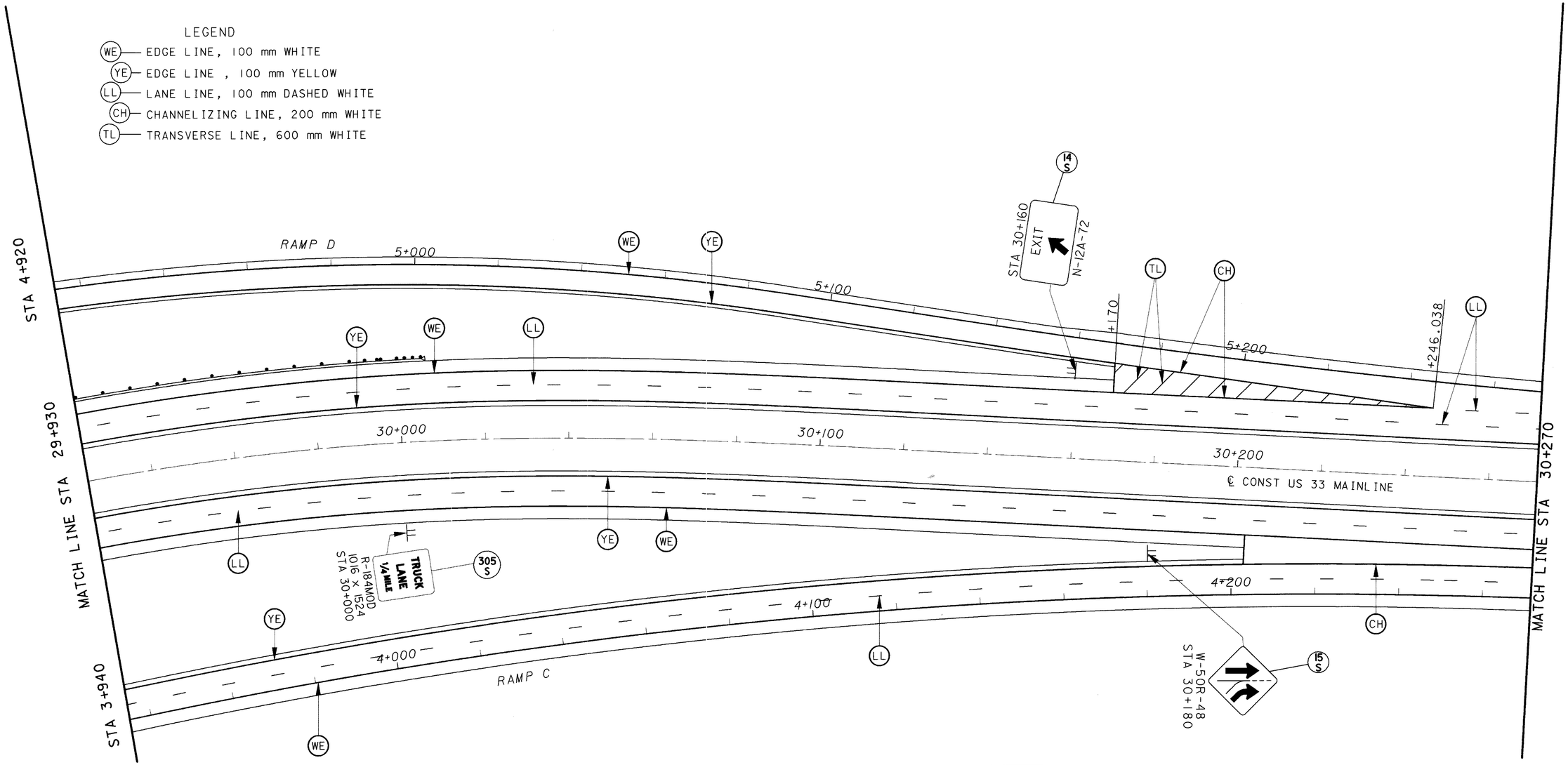
LEGEND

WE — EDGE LINE, 100 mm WHITE
YE — EDGE LINE , 100 mm YELLOW
LL — LANE LINE, 100 mm DASHED WHITE
CH — CHANNELIZING LINE, 200 mm WHITE
TL — TRANSVERSE LINE, 600 mm WHITE



ITEM 620 - DELINEATOR

STATION TO STATION		SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
RAMP C	3+940 TO 4+270	LT		4
	3+940 TO 4+270	RT	4	4
RAMP D	5+920 TO 5+270	LT		4
	5+920 TO 5+270	RT	4	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY			8	12

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED

STATION TO STATION	SPACING (METER)	NUMBER
29+930 TO 30+270 (LT & RT)	24	29
RAMP D 30+170 TO 30+246 (GORE)	12	13
RAMP C 4+200 TO 4+270 (GORE)	12	6
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		48

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/RED

STATION TO STATION	SPACING (METER)	NUMBER
RAMP D 4+920 TO 5+160 (RT)	24	11
RAMP C 3+940 TO 4+200 (LT)	24	12
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		23

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 706 & 707
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR BEAM SIGN DETAIL, SEE SHEET 765

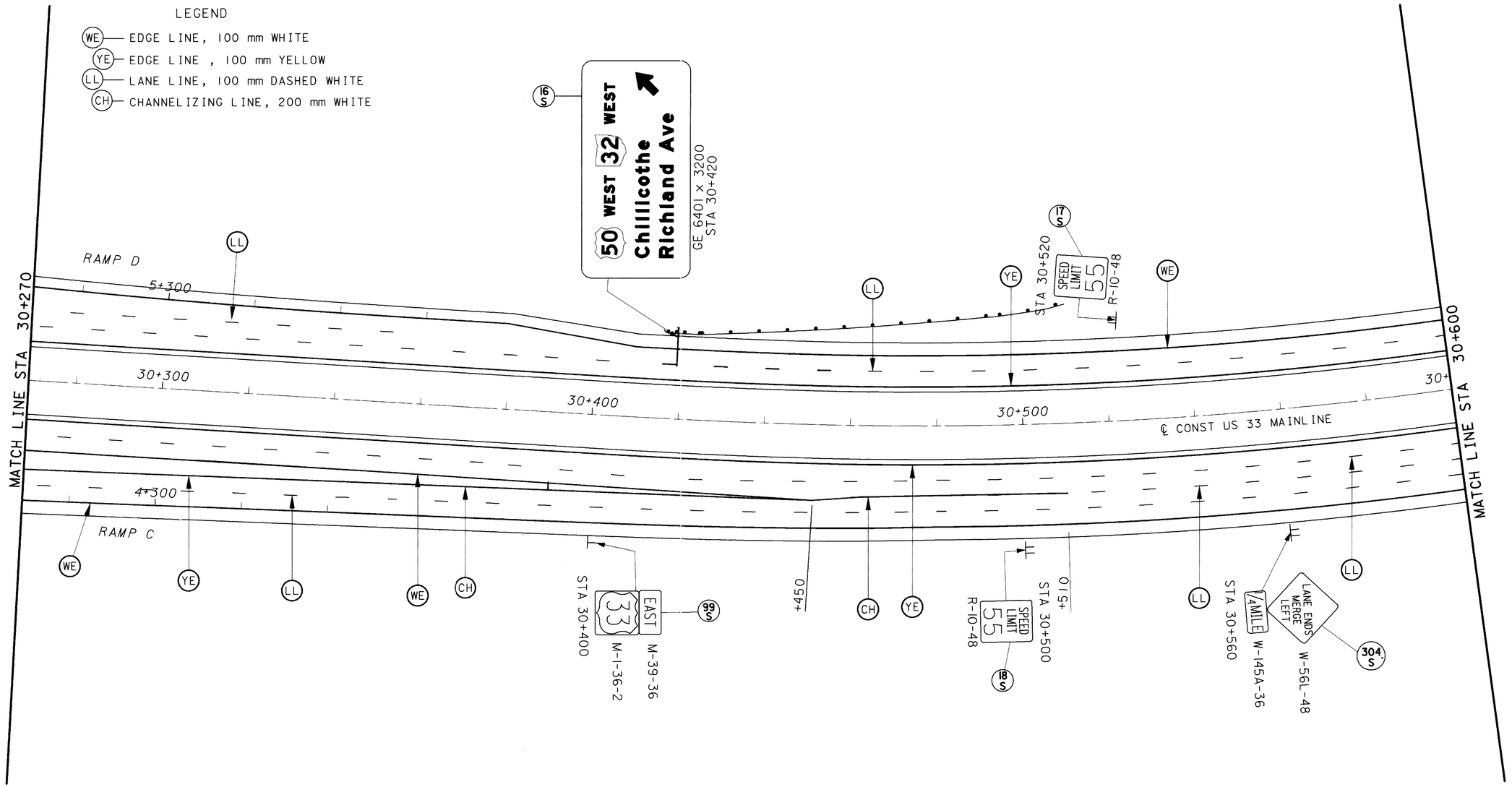
HORIZONTAL SCALE IN METERS
0 1:500 20
CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 29+930 TO STA 30+270

ATH-33-30.981

LEGEND

(WE) — EDGE LINE, 100 mm WHITE
(YE) — EDGE LINE , 100 mm YELLOW
(LL) — LANE LINE, 100 mm DASHED WHITE
(CH) — CHANNELIZING LINE, 200 mm WHITE



ITEM 620 - DELINEATOR

STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
30+500 TO 30+600	LT,RT	4	
RAMP C 4+270 TO 4+450	RT	3	
RAMP D 5+270 TO 5+410	RT	3	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		10	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED

STATION TO STATION	SPACING (METER)	NUMBER
30+270 TO 30+600 (LT & RT)	24	28
(INCLUDES RAMP D		
RAMP C		
4+260 TO 4+450 (GORE)	12	16
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		44

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 707
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR OVERHEAD SIGN DETAILS, SEE SHEET 766

1:500 HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 30+270 TO STA 30+600

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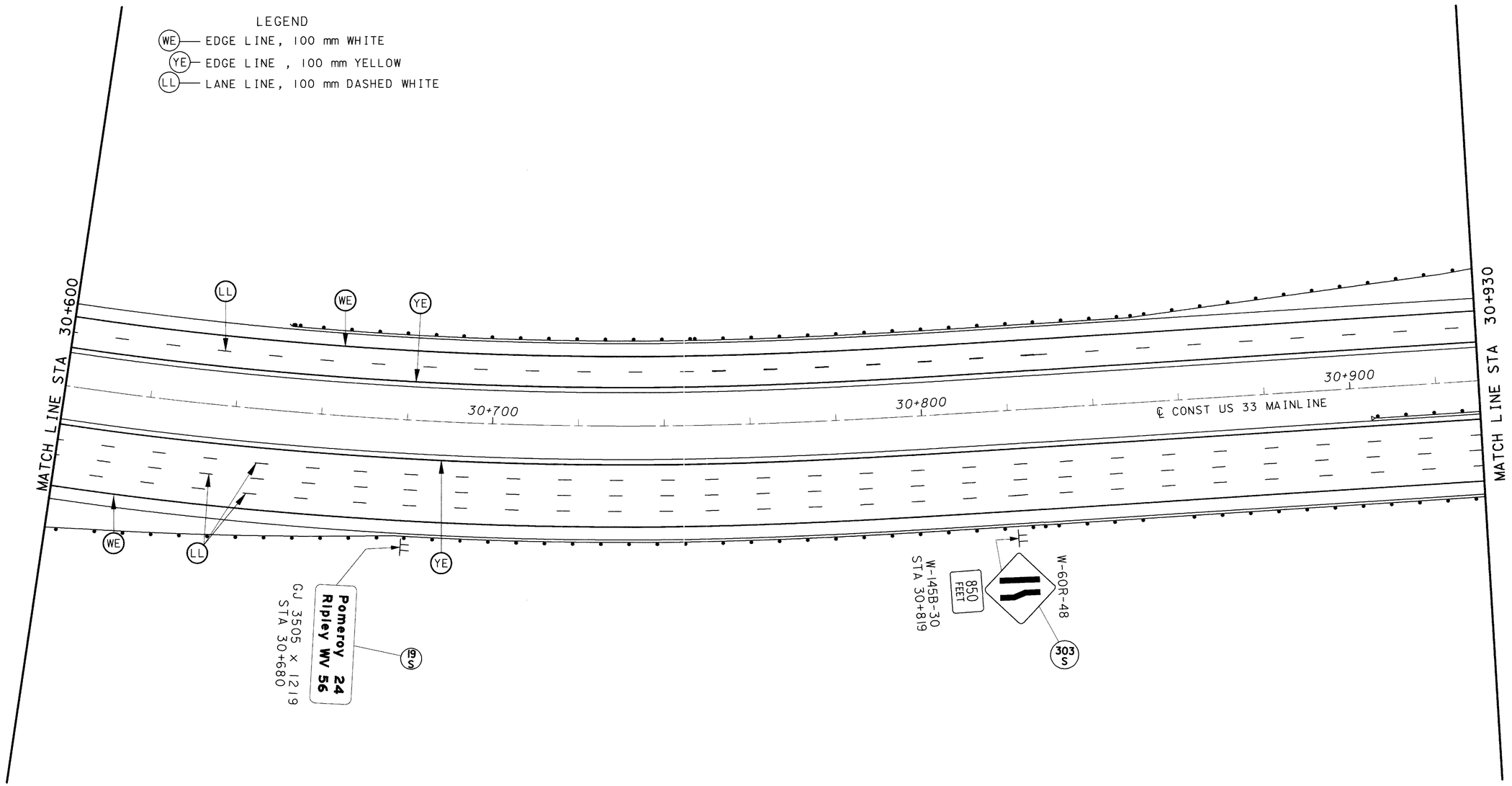
LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(YE) — EDGE LINE , 100 mm YELLOW

(LL) — LANE LINE, 100 mm DASHED WHITE



ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
30+600 TO 30+930	LT,RT	4	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		4	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
30+600 TO 31+930 (LT & RT)	24	56
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		56

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 707
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR SIGN DETAIL, SEE SHEET 767

HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 30+600 TO STA 30+930

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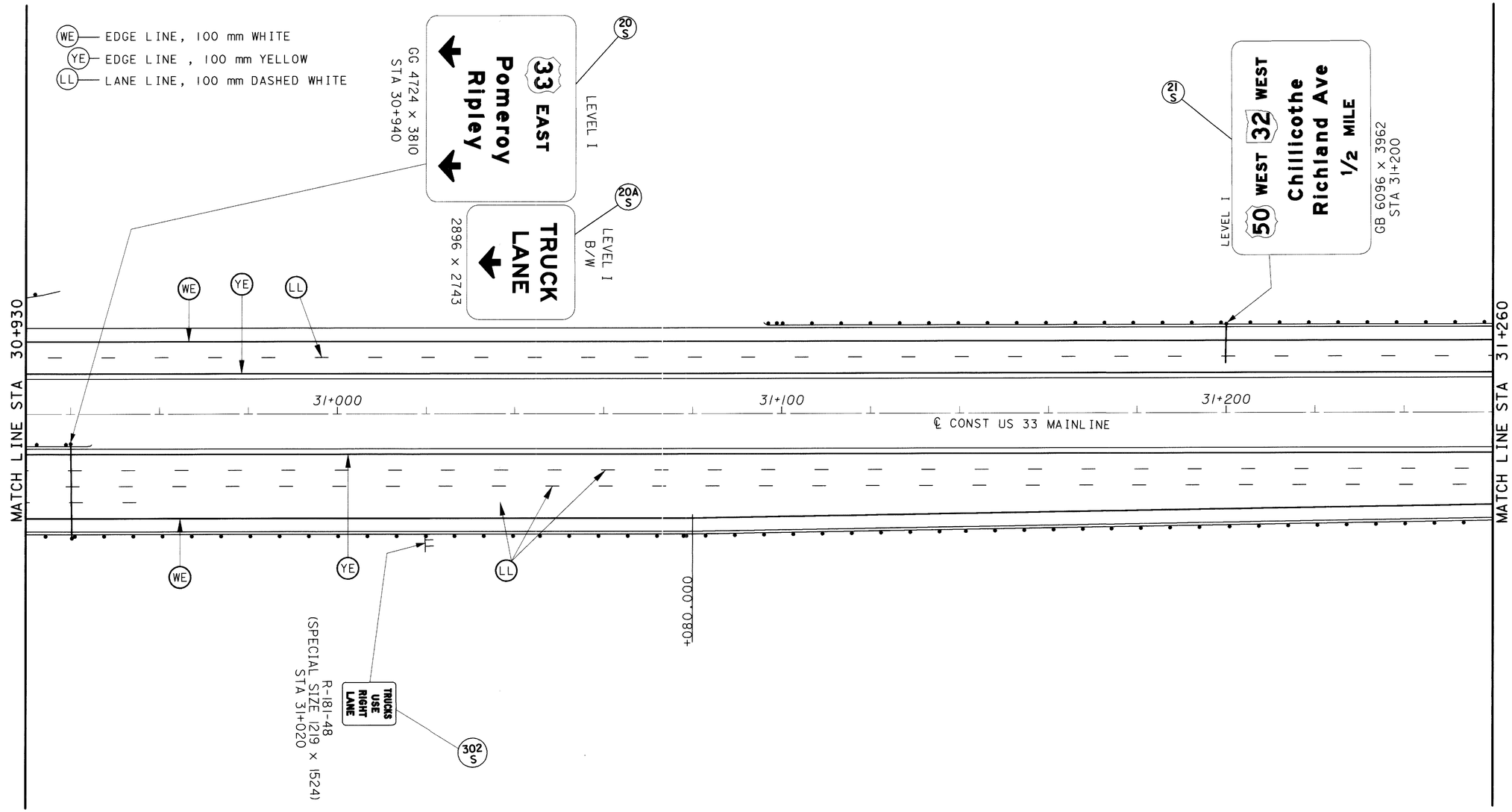

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
30+930 TO 31+260	LT,RT	6	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		6	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
30+930 TO 31+260 (LT & RT)	24	48
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		48

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 707
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR OVERHEAD SIGN DETAIL, SEE SHEETS 768 & 769

N

0 20
1:500
HORIZONTAL
SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 30+930 TO STA 31+260

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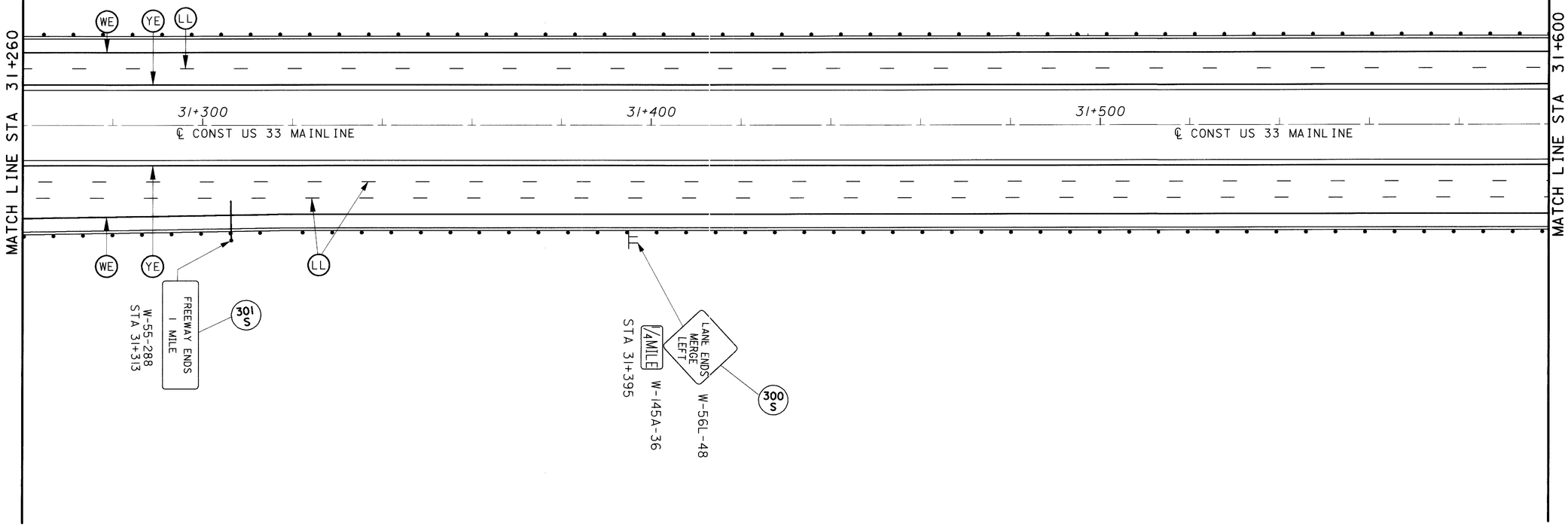
LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(YE) — EDGE LINE, 100 mm YELLOW

(LL) — LANE LINE, 100 mm DASHED WHITE



ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
31+260 TO 31+600	LT,RT	6	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		6	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
31+260 TO 31+600 (LT & RT)	24	42
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		42

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 707
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, 712B, & 712F
FOR OVERHEAD SIGN DETAILS, SEE SHEET 771

1:500 HORIZONTAL SCALE IN METERS (0, 20)

CALCULATED EC CHECKED RM

TRAFFIC CONTROL PLAN
STA 31+260 TO STA 31+600

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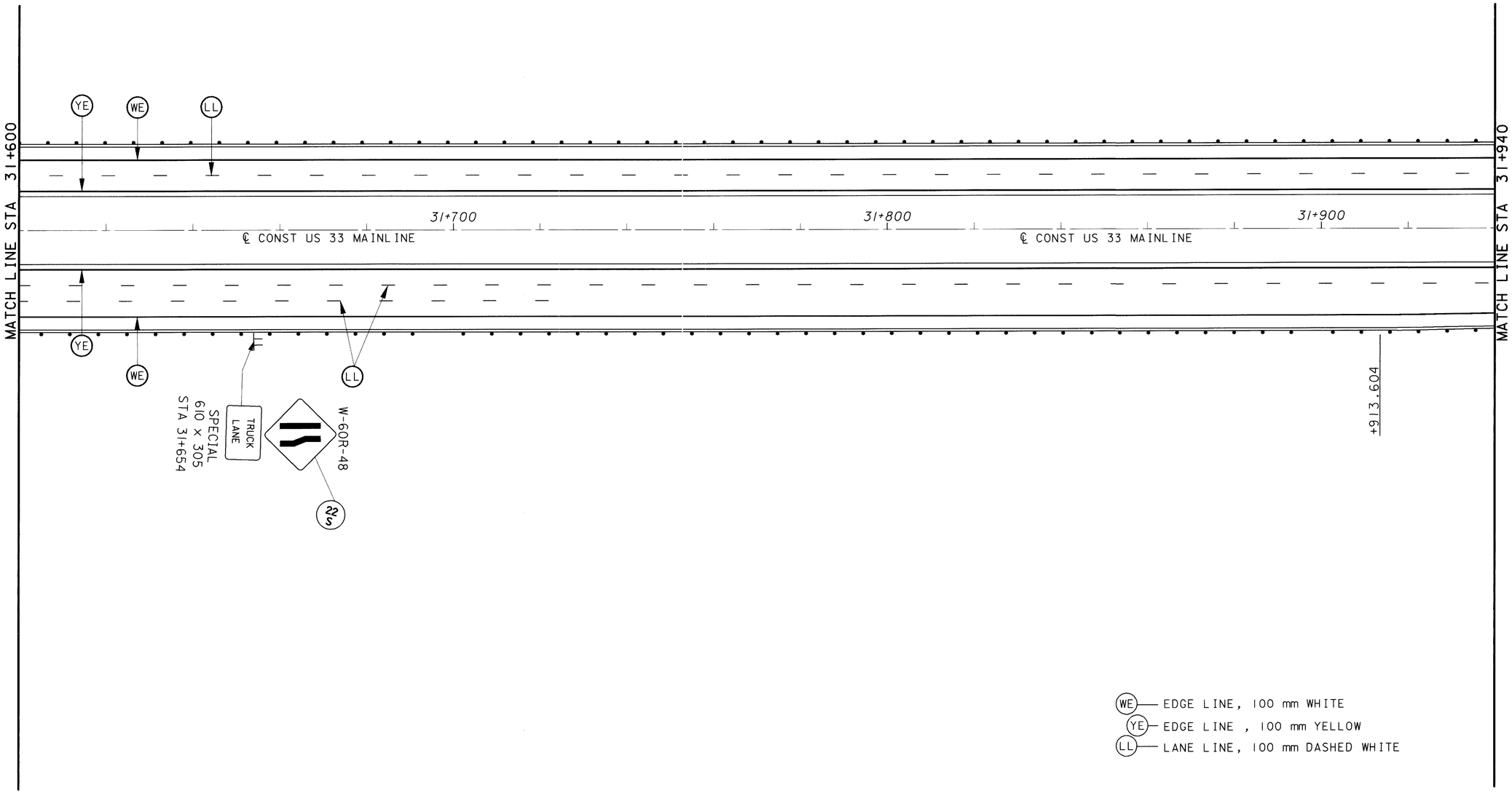

(WE) — EDGE LINE, 100 mm WHITE
(YE) — EDGE LINE , 100 mm YELLOW
(LL) — LANE LINE, 100 mm DASHED WHITE

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
31+600 TO 31+940	LT,RT	6	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		6	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
31+600 TO 31+940 (LT & RT)	24	42
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		42

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 707
FOR SIGNING QUANTITIES, SEE SHEET 712 & 712A

HORIZONTAL SCALE IN METERS
1:500
0 20
CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 31+600 TO STA 31+940

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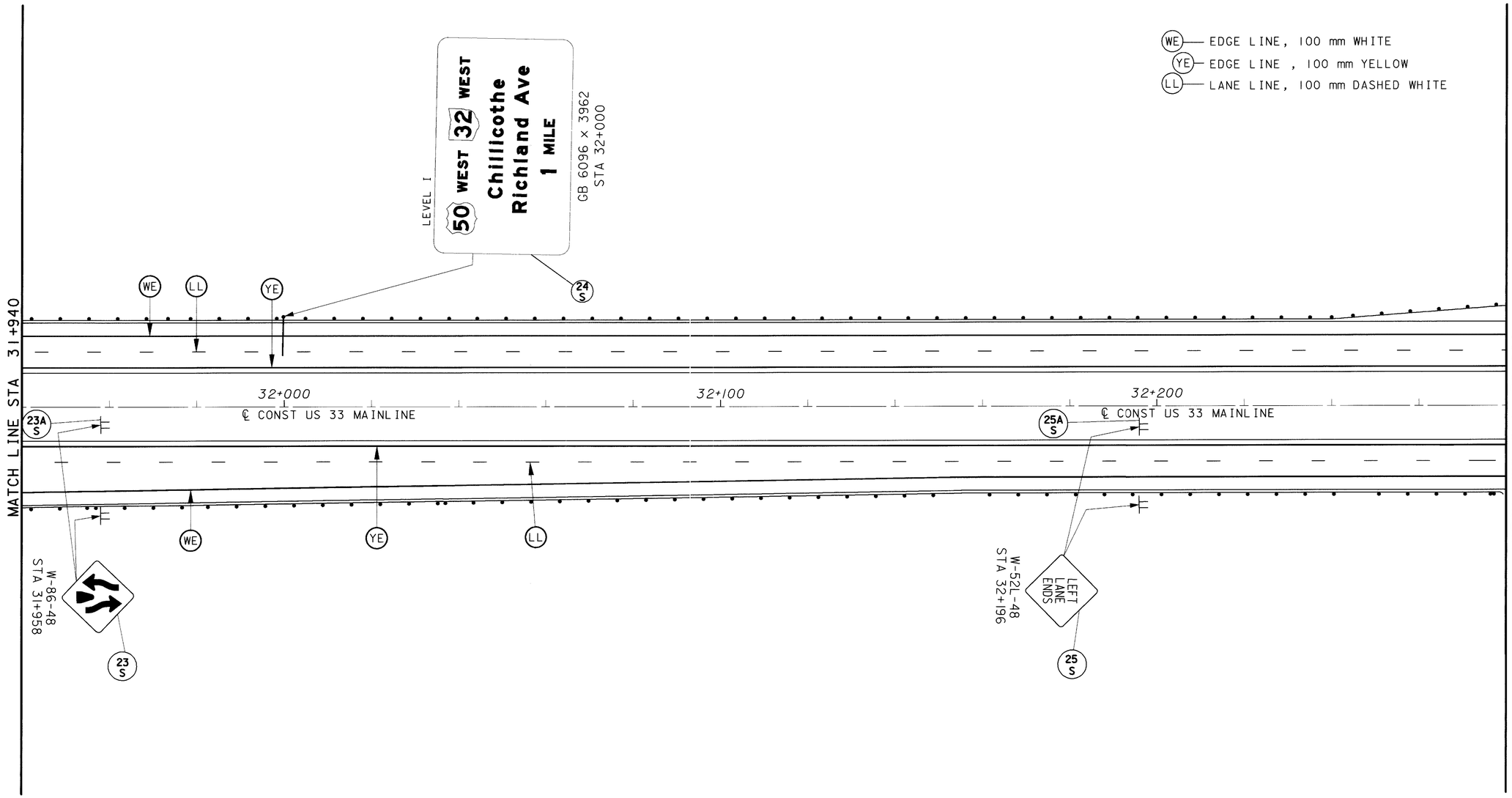

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
31+940 TO 32+280	LT,RT	4	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		4	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
31+940 TO 32+280 (LT & RT)	24	28
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		28

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 707
FOR SIGNING QUANTITIES, SEE SHEET 712, 712A, & 712B
FOR OVERHEAD SIGN DETAILS, SEE SHEET 770

HORIZONTAL SCALE IN METERS
0 1:500 20
CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 31+940 TO STA 32+280

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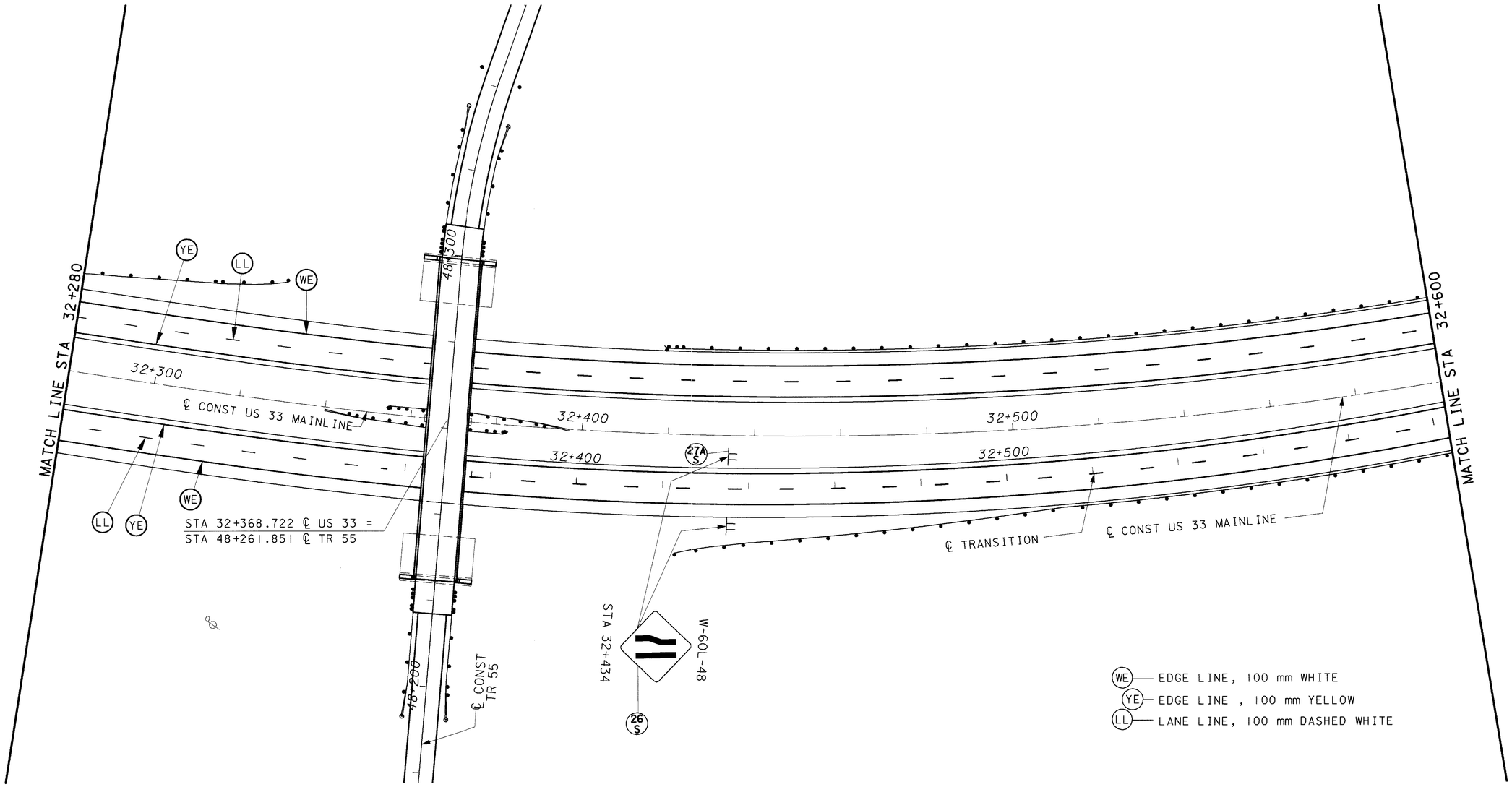

WE — EDGE LINE, 100 mm WHITE
YE — EDGE LINE , 100 mm YELLOW
LL — LANE LINE, 100 mm DASHED WHITE

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
32+280 TO 32+600	LT,RT	6	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		6	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
32+280 TO 32+600 (LT & RT)	24	28
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		28

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 708
FOR SIGNING QUANTITIES, SEE SHEET 712C
FOR TWP RD 55 SIGNS AND PAVEMENT MARKING,
SEE SHEETS 751 & 752

HORIZONTAL SCALE IN METERS
1:500
0 20
CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 32+280 TO STA 32+600

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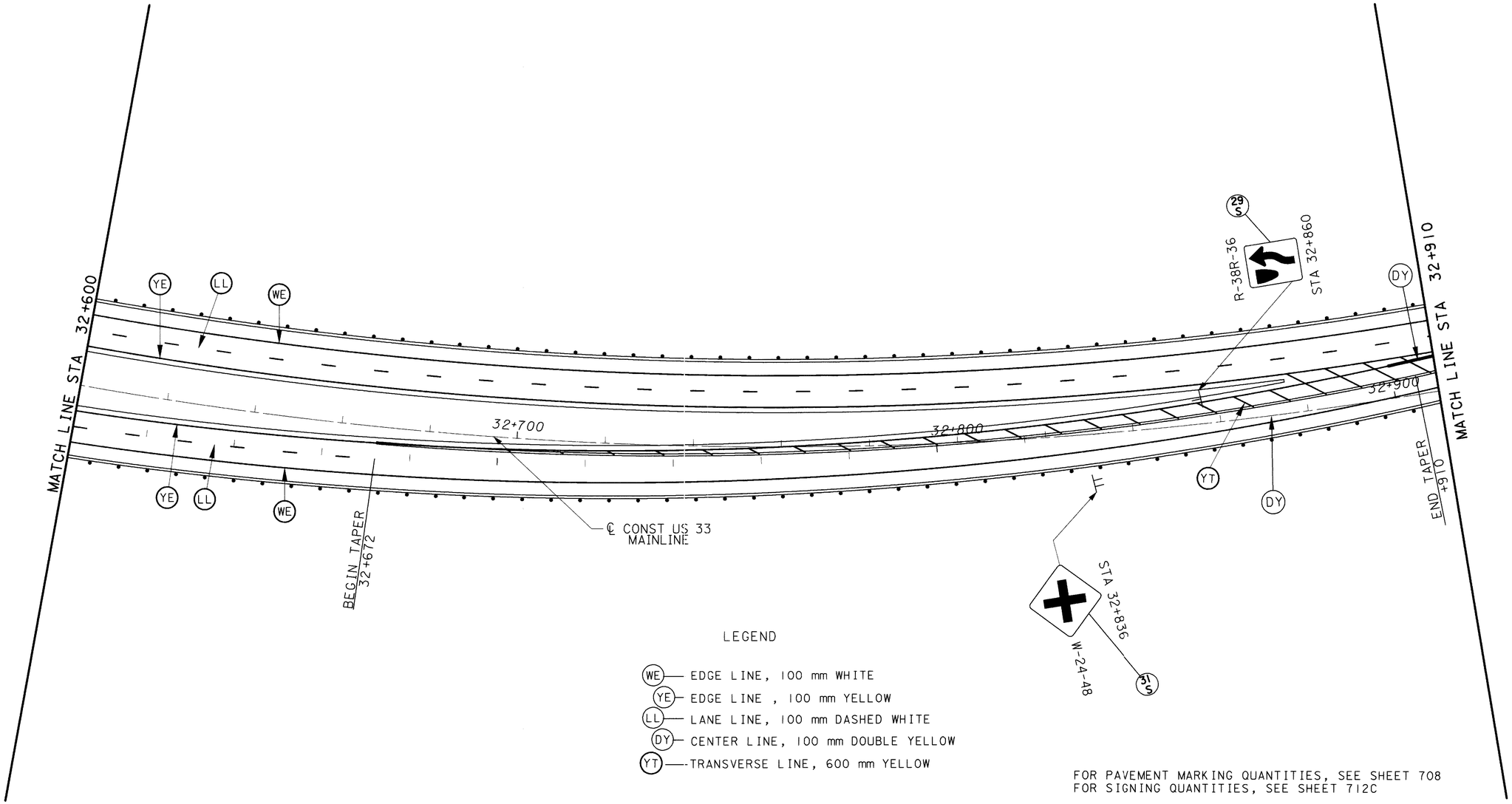

LEGEND

- (WE) — EDGE LINE, 100 mm WHITE
- (YE) — EDGE LINE , 100 mm YELLOW
- (LL) — LANE LINE, 100 mm DASHED WHITE
- (DY) — CENTER LINE, 100 mm DOUBLE YELLOW
- (YT) — TRANSVERSE LINE, 600 mm YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 708
FOR SIGNING QUANTITIES, SEE SHEET 712C

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
32+600 TO 32+910	LT,RT	6	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		6	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
32+600 TO 32+910 (LT & RT)	24	17
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		17

ITEM 621 - RAISED PAVEMENT MARKER YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
32+699 TO 32+910 (LT & RT)	24	11
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		11

CALCULATED EC
CHECKED RM

1:500 HORIZONTAL SCALE IN METERS
0 20

TRAFFIC CONTROL PLAN
STA 32+600 TO STA 32+910

ATH-33-30.981

726
956

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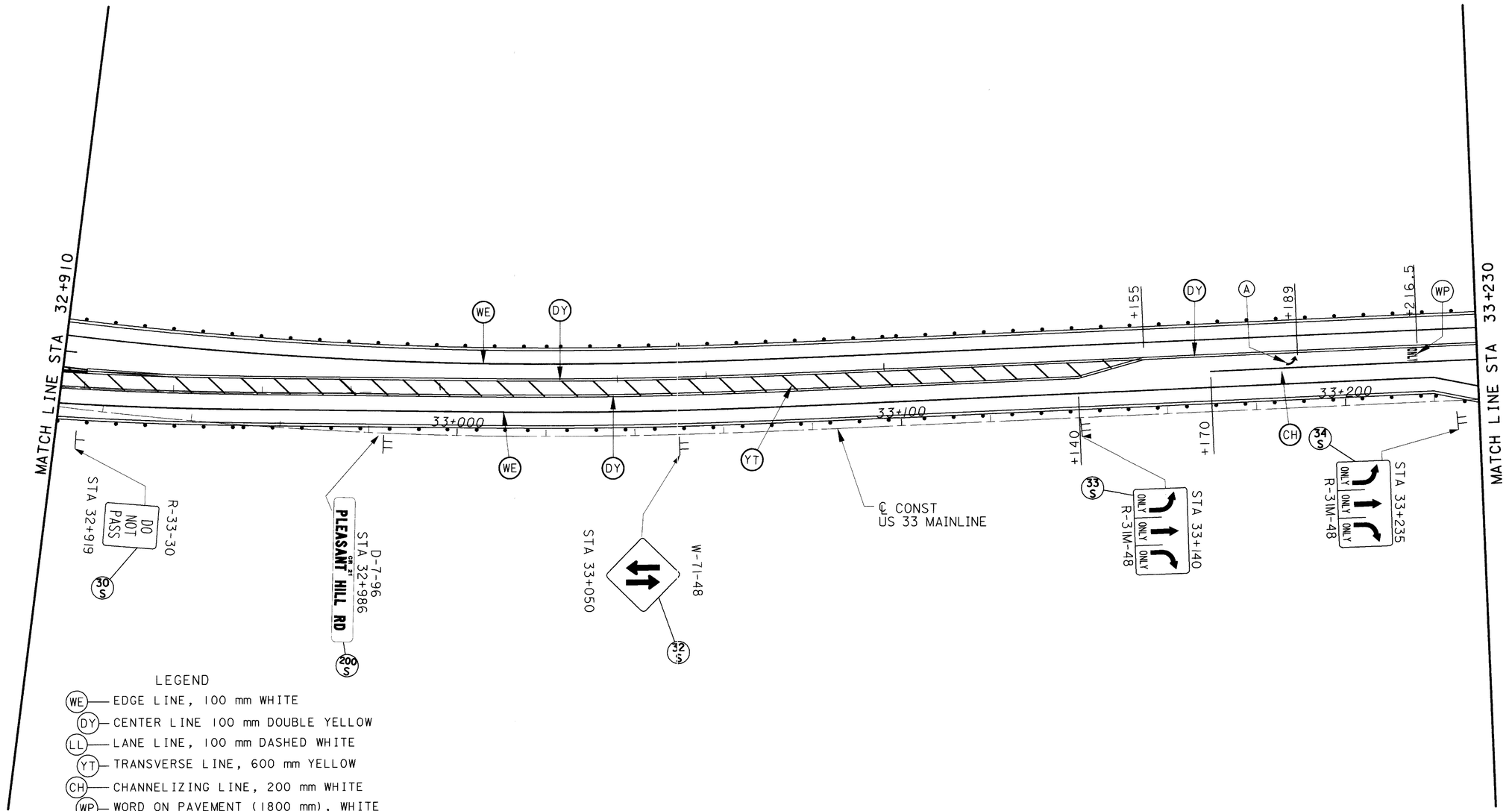

LEGEND

- WE — EDGE LINE, 100 mm WHITE
- DY — CENTER LINE 100 mm DOUBLE YELLOW
- LL — LANE LINE, 100 mm DASHED WHITE
- YT — TRANSVERSE LINE, 600 mm YELLOW
- CH — CHANNELIZING LINE, 200 mm WHITE
- WP — WORD ON PAVEMENT (1800 mm), WHITE
- A — LANE ARROW, WHITE

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
32+910 TO 33+230	LT,RT	4	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		4	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
32+910 TO 33+230 (LT)	24	23
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		23

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 708
FOR SIGNING QUANTITIES, SEE SHEET 712C

D-7-2438
2438x457

HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 32+910 TO STA 33+230

ATH-33-30.981

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956

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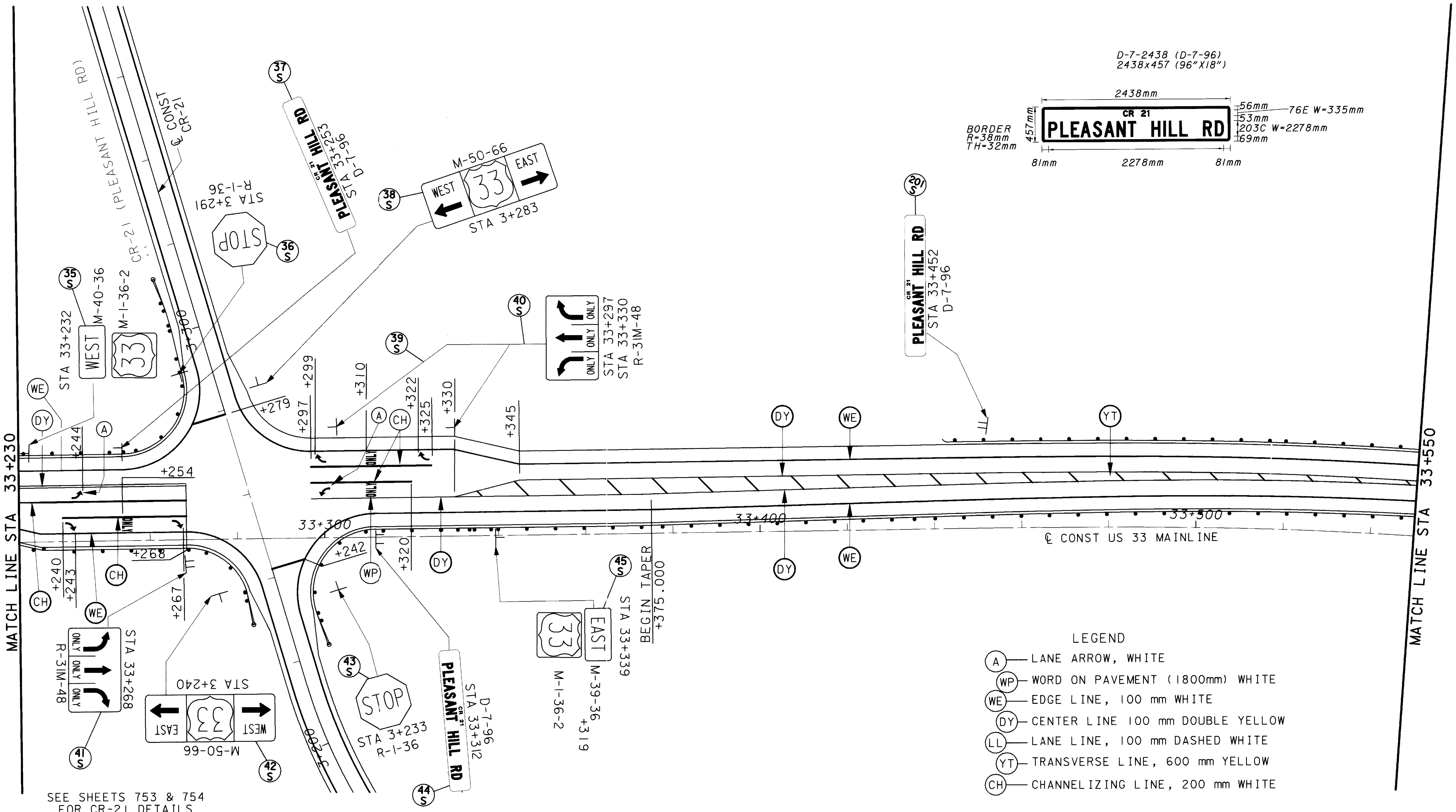

ITEM 620 - DELINEATOR			
STATION TO STATION	SIDE	DELINEATOR, TYPE C POST MT'D. (EA.)	DELINEATOR, TYPE C BRACKET MT'D. (EA.)
33+230 TO 33+550	LT,RT	4	
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		4	

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
33+170 TO 33+268 (LT)	12	8
33+240 TO 33+268 (LT)	12	2
33+297 TO 33+225 (LT)	12	2
33+297 TO 33+346 (LT)	12	4
TOTAL CARRIED TO TRAFFIC SUMMARY		16

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
33+230 TO 33+267 (LT)	24	2
33+297 TO 33+680 (LT)	24	27
TOTAL CARRIED TO TRAFFIC SUMMARY		29

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 708
FOR SIGNING QUANTITIES, SEE SHEET 712C
FOR COUNTY RD 21 SIGNS AND PAVEMENT MARKING, SEE SHEET 753 & 754

HORIZONTAL SCALE IN METERS 1:500

CALCULATED EC CHECKED RM

TRAFFIC CONTROL PLAN STA 33+230 TO STA 33+550

ATH-33-30.981

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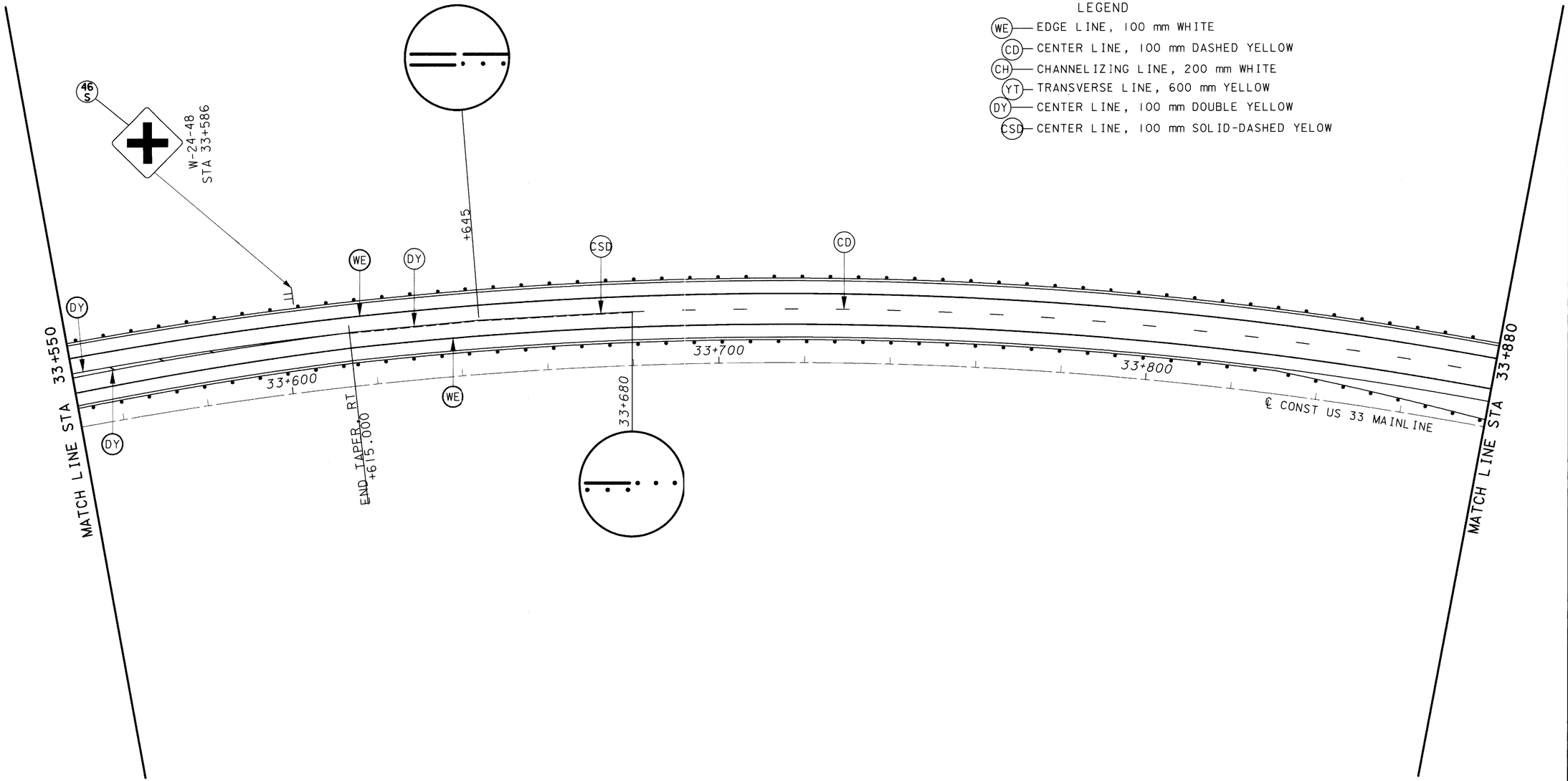

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
33+680 TO 33+880 (LT)	24	9
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		9

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 708 & 709
FOR SIGNING QUANTITIES, SEE SHEET 712C

HSSD
0 20
HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 33+550 TO STA 33+880

ATH-33-30.981

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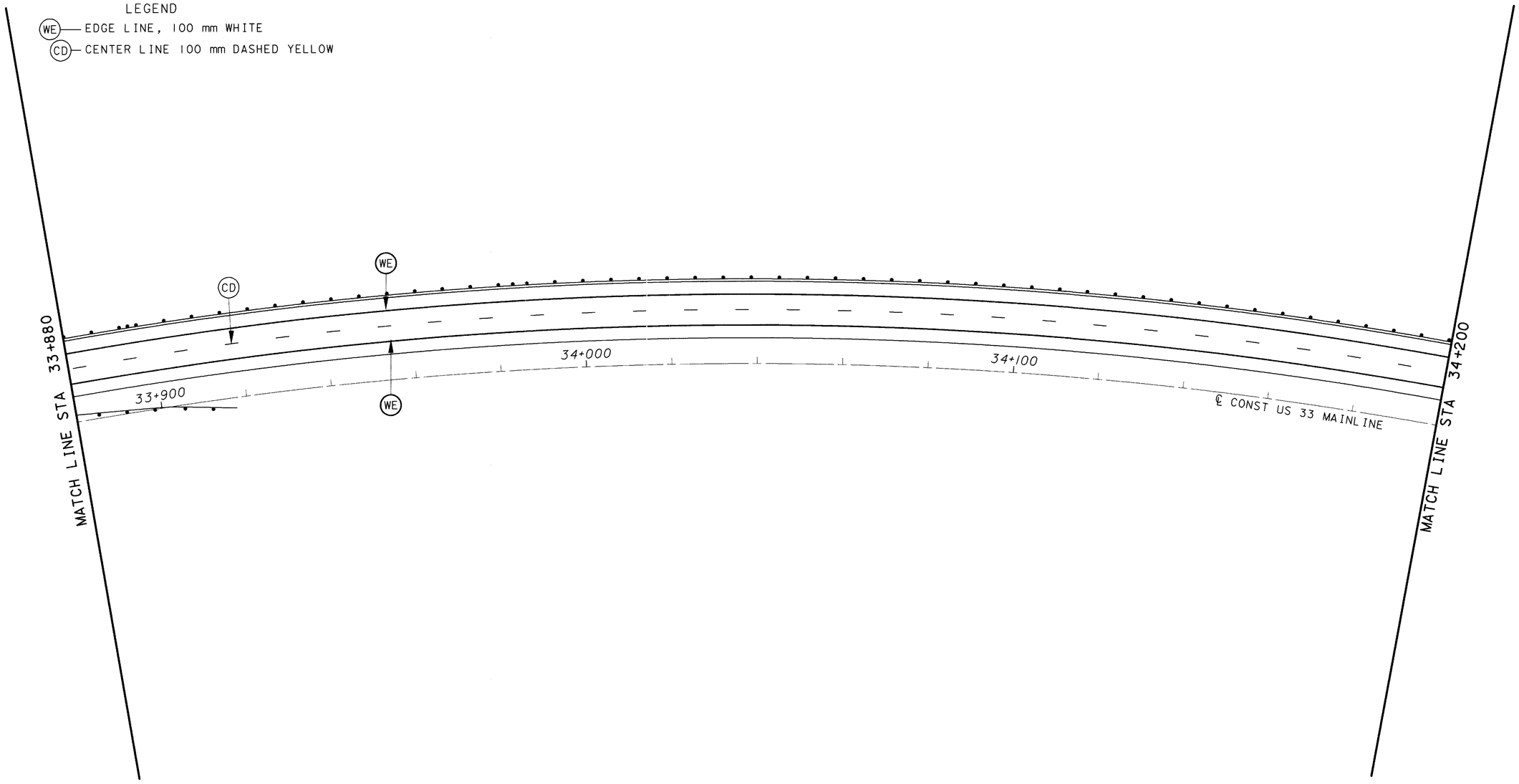
LEGEND

WE — EDGE LINE, 100 mm WHITE

CD — CENTER LINE 100 mm DASHED YELLOW



ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
33+940 TO 34+200 (LT)	24	11
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		11

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

HORIZONTAL SCALE IN METERS 0 1:500 20

CALCULATED EC CHECKED RM

TRAFFIC CONTROL PLAN
STA 33+880 TO STA 34+200

ATH-33-30.981

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956

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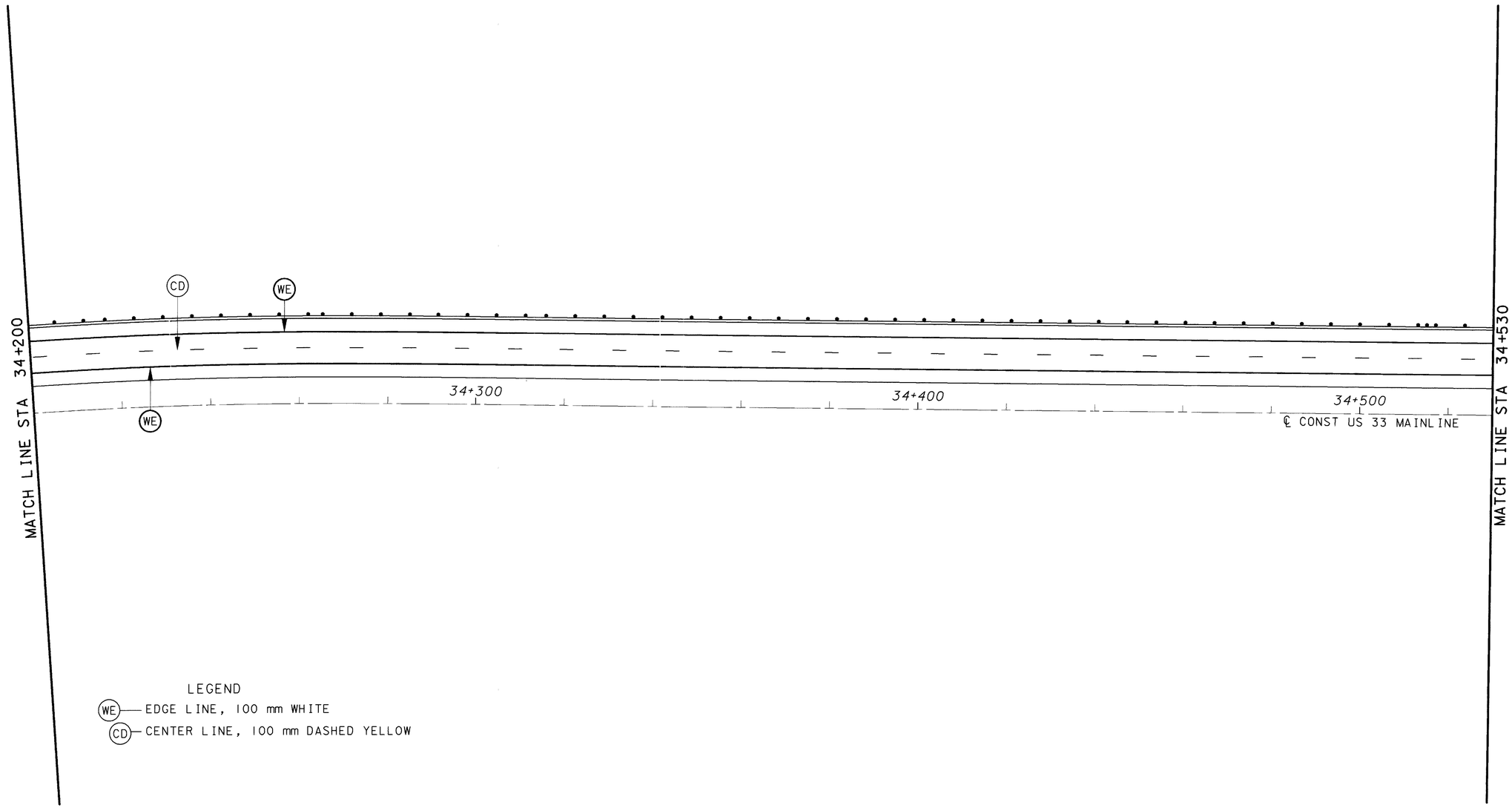

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(CD) — CENTER LINE, 100 mm DASHED YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
34+200 TO 34+530 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

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1:500
HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 34+200 TO STA 34+530

ATH-33-30.981

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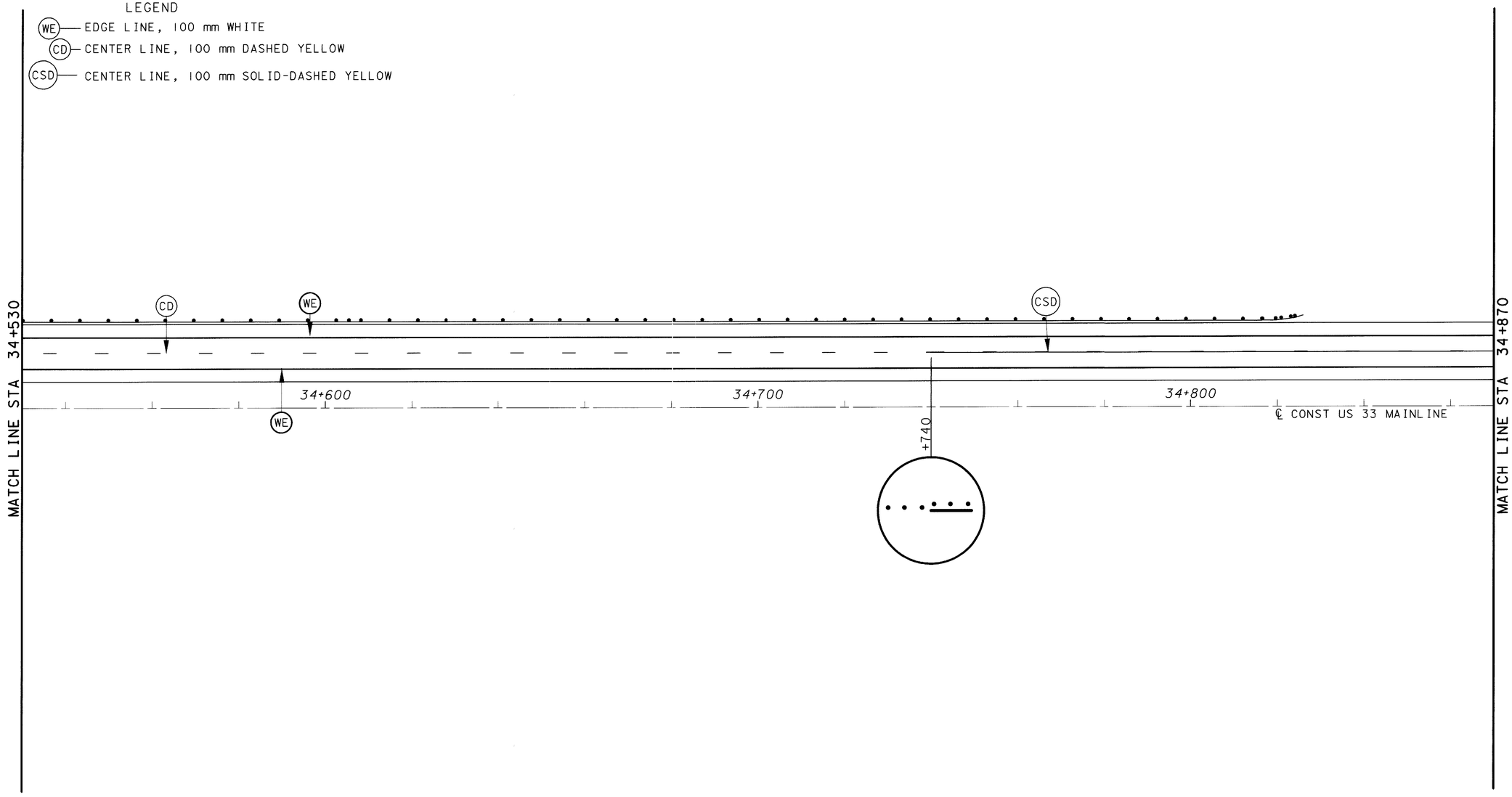
LEGEND

WE — EDGE LINE, 100 mm WHITE

CD — CENTER LINE, 100 mm DASHED YELLOW

CSD — CENTER LINE, 100 mm SOLID-DASHED YELLOW



ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
34+530 TO 34+870 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

N

0 20
1:500
HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 34+530 TO STA 34+870

ATH-33-30.981

732
956

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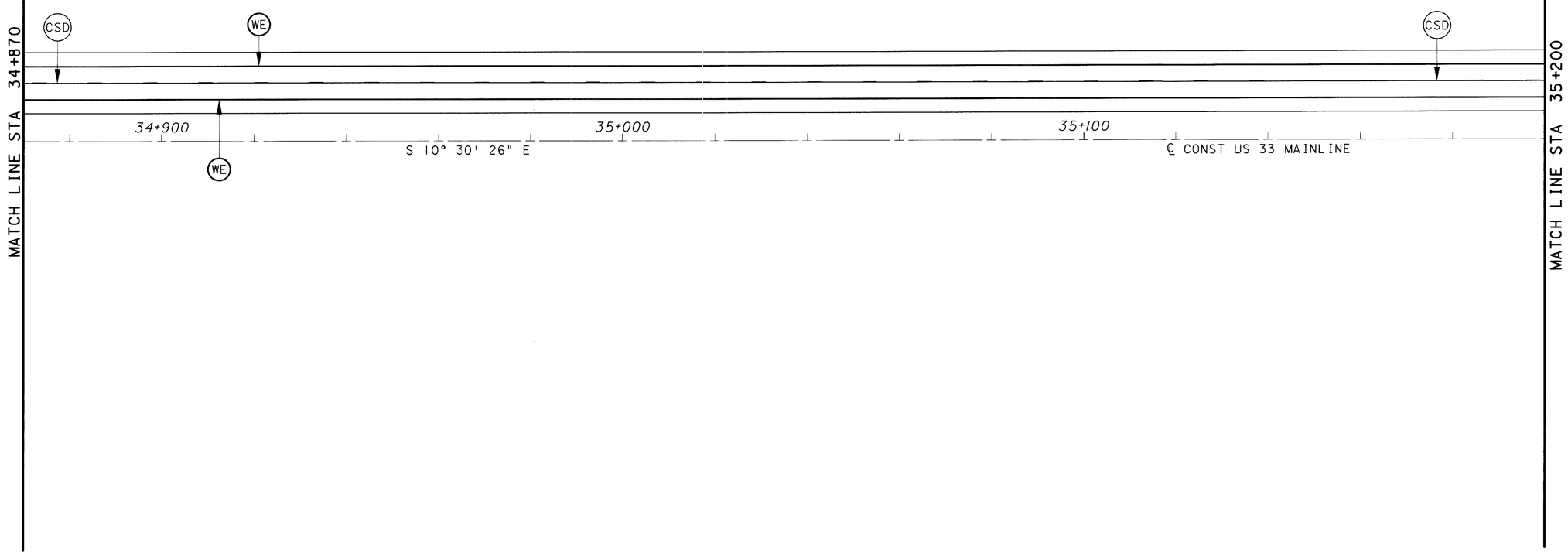
LEGEND

WE — EDGE LINE, 100 mm WHITE

CSD — CENTER LINE, 100 mm SOLID-DASHED YELLOW



ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
34+870 TO 35+200 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

HORIZONTAL SCALE IN METERS
0 1:500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 34+870 TO STA 35+200

ATH-33-30.981

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956

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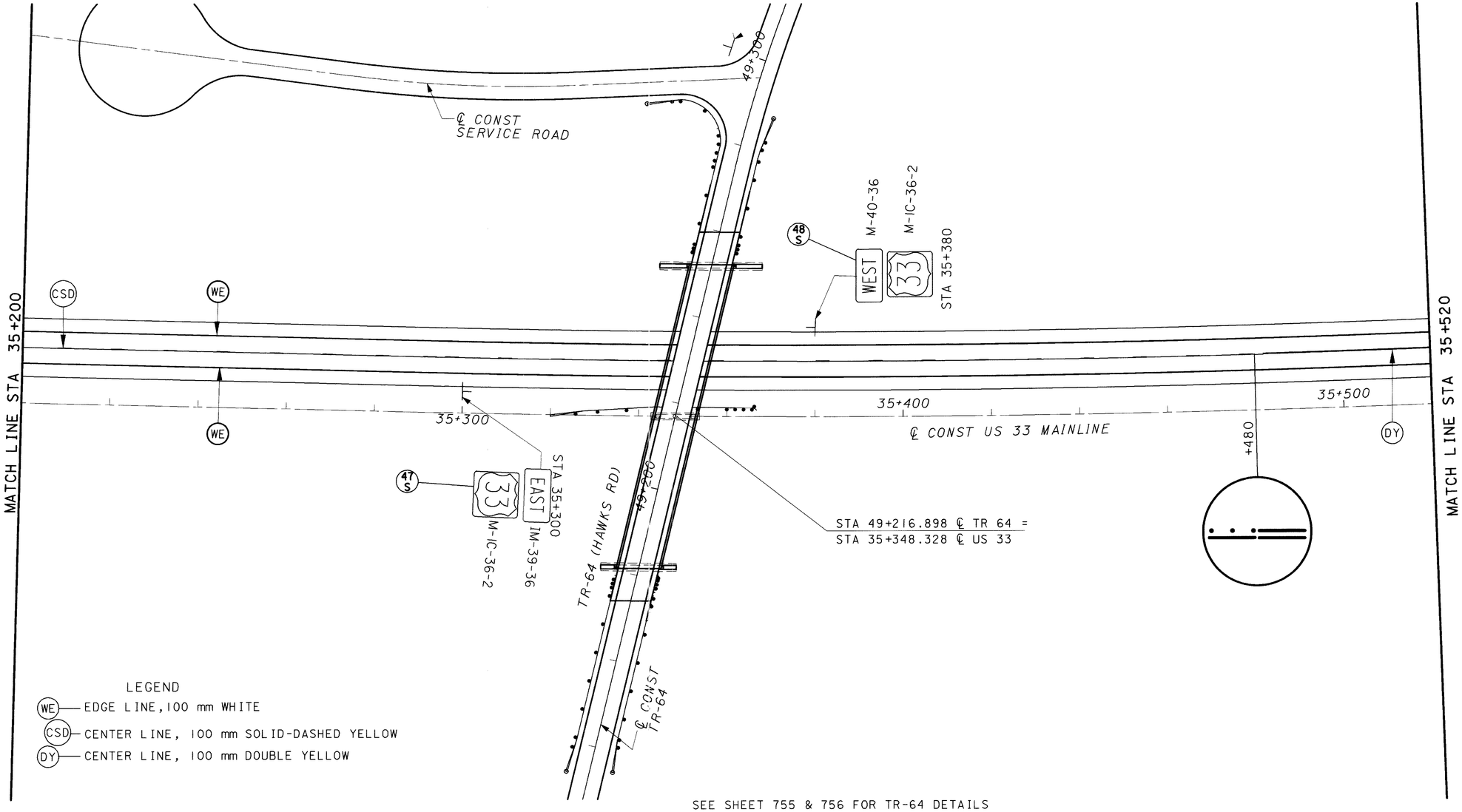

LEGEND

WE — EDGE LINE, 100 mm WHITE

CSD — CENTER LINE, 100 mm SOLID-DASHED YELLOW

DY — CENTER LINE, 100 mm DOUBLE YELLOW

SEE SHEET 755 & 756 FOR TR-64 DETAILS

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
35+200 TO 35+520 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709
FOR SIGNING QUANTITIES, SEE SHEET 712C
FOR TWP RD 64 SIGNS AND PAVEMENT MARKING,
SEE SHEETS 755 & 756

1:500 HORIZONTAL SCALE IN METERS (0, 20)

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 35+200 TO STA 35+520

ATH-33-30.981

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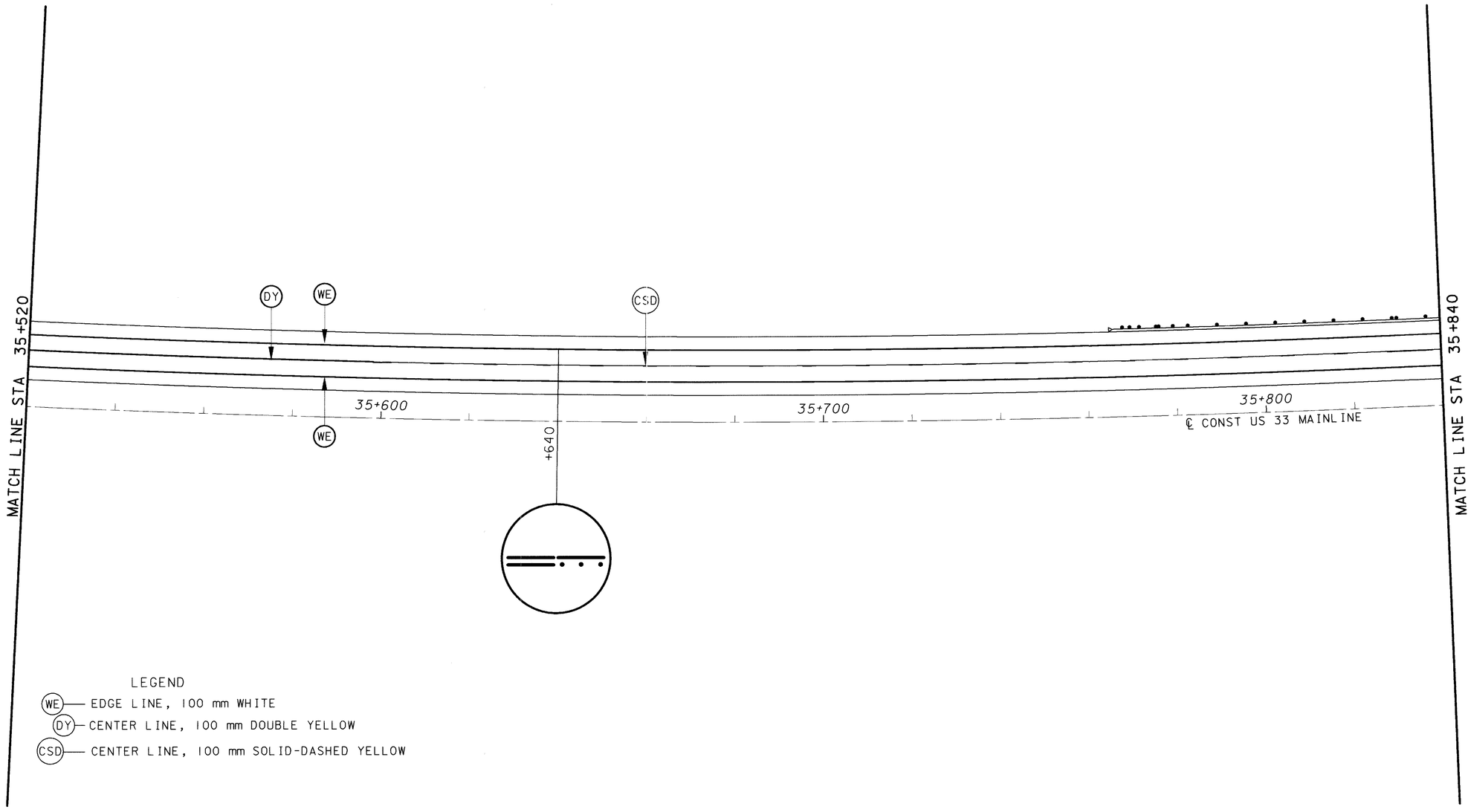


LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

(CSD) — CENTER LINE, 100 mm SOLID-DASHED YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
35+520 TO 35+840 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

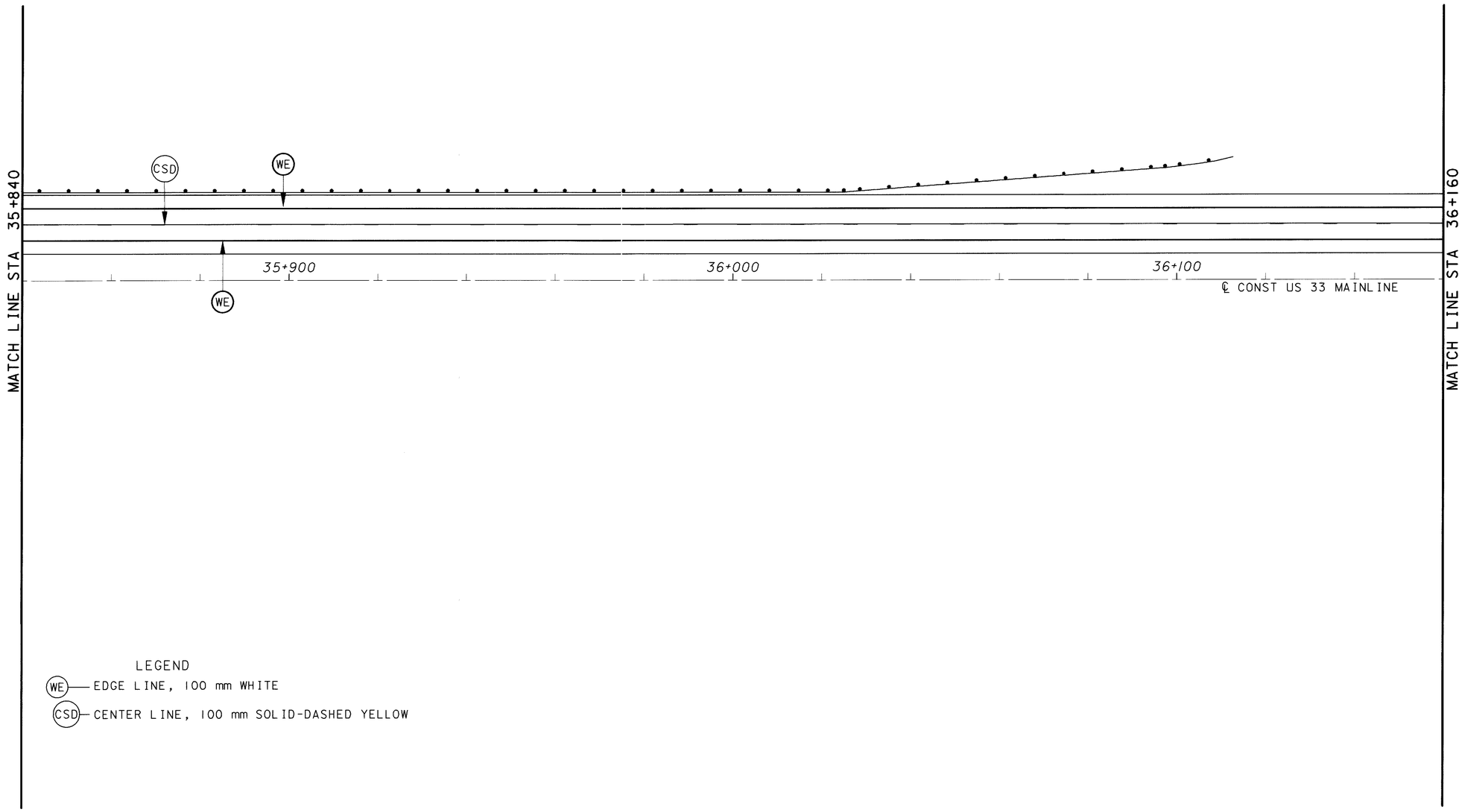
HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 35+520 TO STA 35+840

ATH-33-30.981

735
956



LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(CSD) — CENTER LINE, 100 mm SOLID-DASHED YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
35+840 TO 36+160 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

N

0 20
1:500
HORIZONTAL
SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 35+840 TO STA 36+160

ATH-33-30.981

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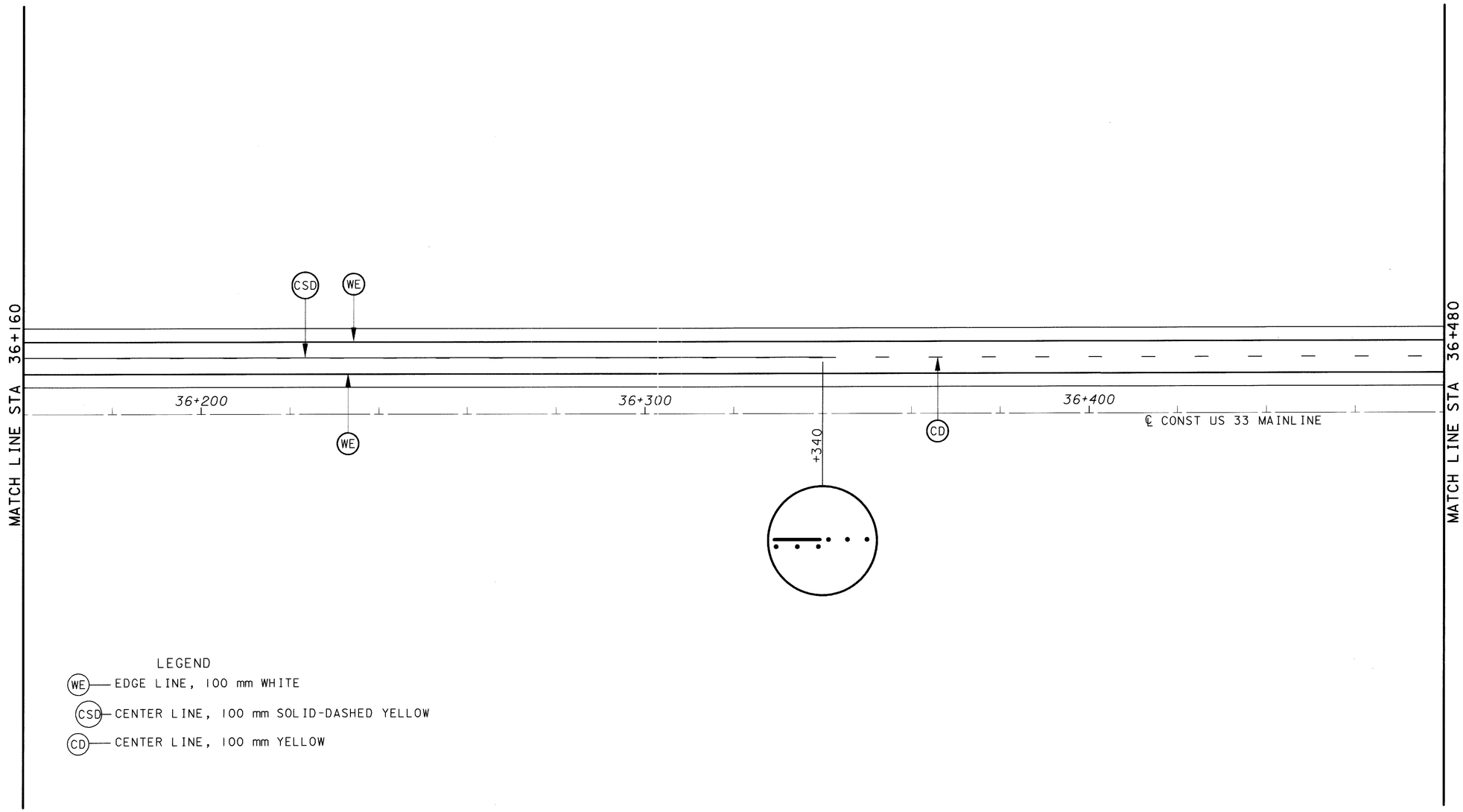

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(CSD) — CENTER LINE, 100 mm SOLID-DASHED YELLOW

(CD) — CENTER LINE, 100 mm YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
36+160 TO 36+480 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

HORIZONTAL SCALE IN METERS
0 1:500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 36+160 TO STA 36+480

ATH-33-30.981

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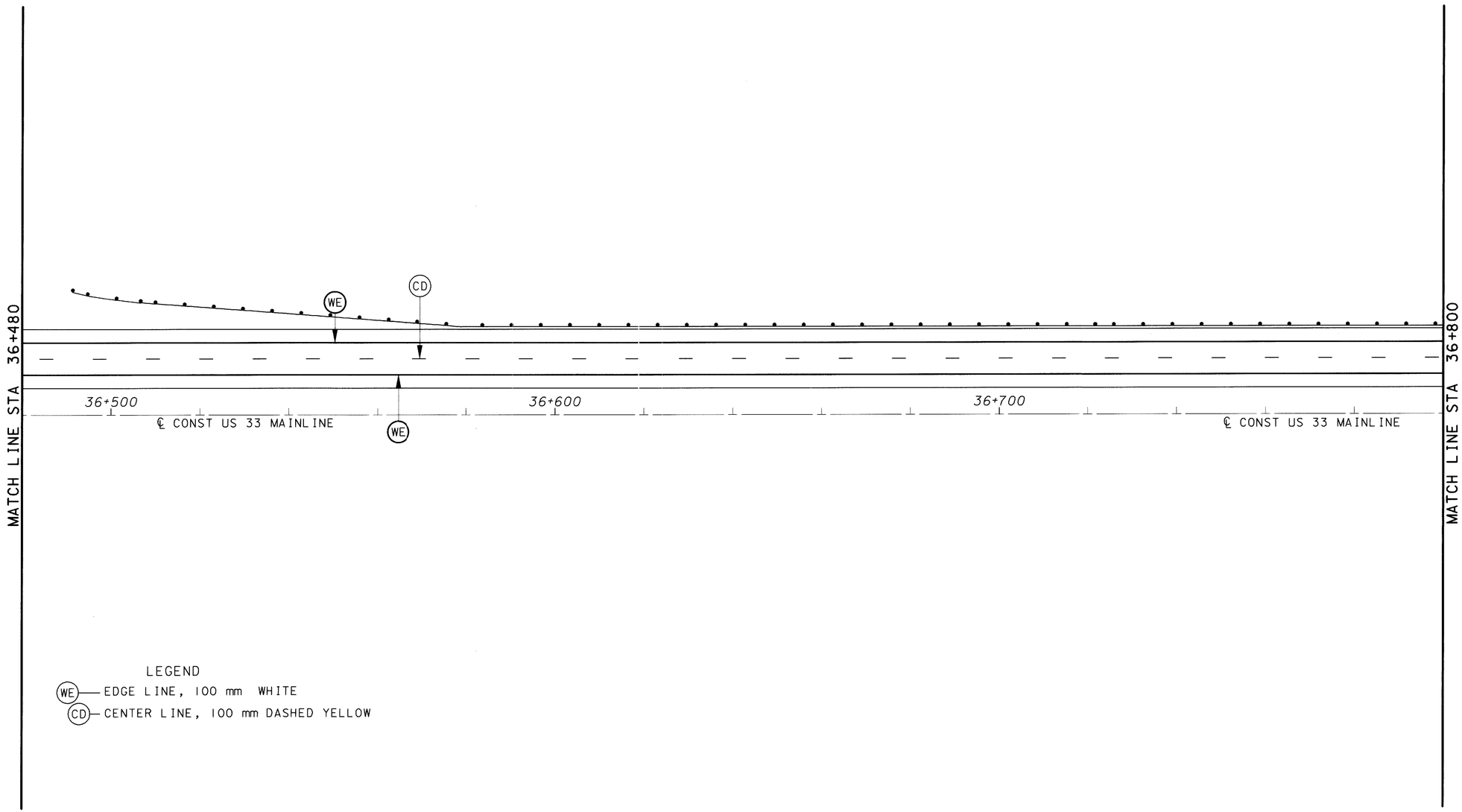

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(CD) — CENTER LINE, 100 mm DASHED YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
36+480 TO 36+800 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709

HORIZONTAL SCALE IN METERS
0 1:500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 36+480 TO STA 36+800

ATH-33-30.981

738
956

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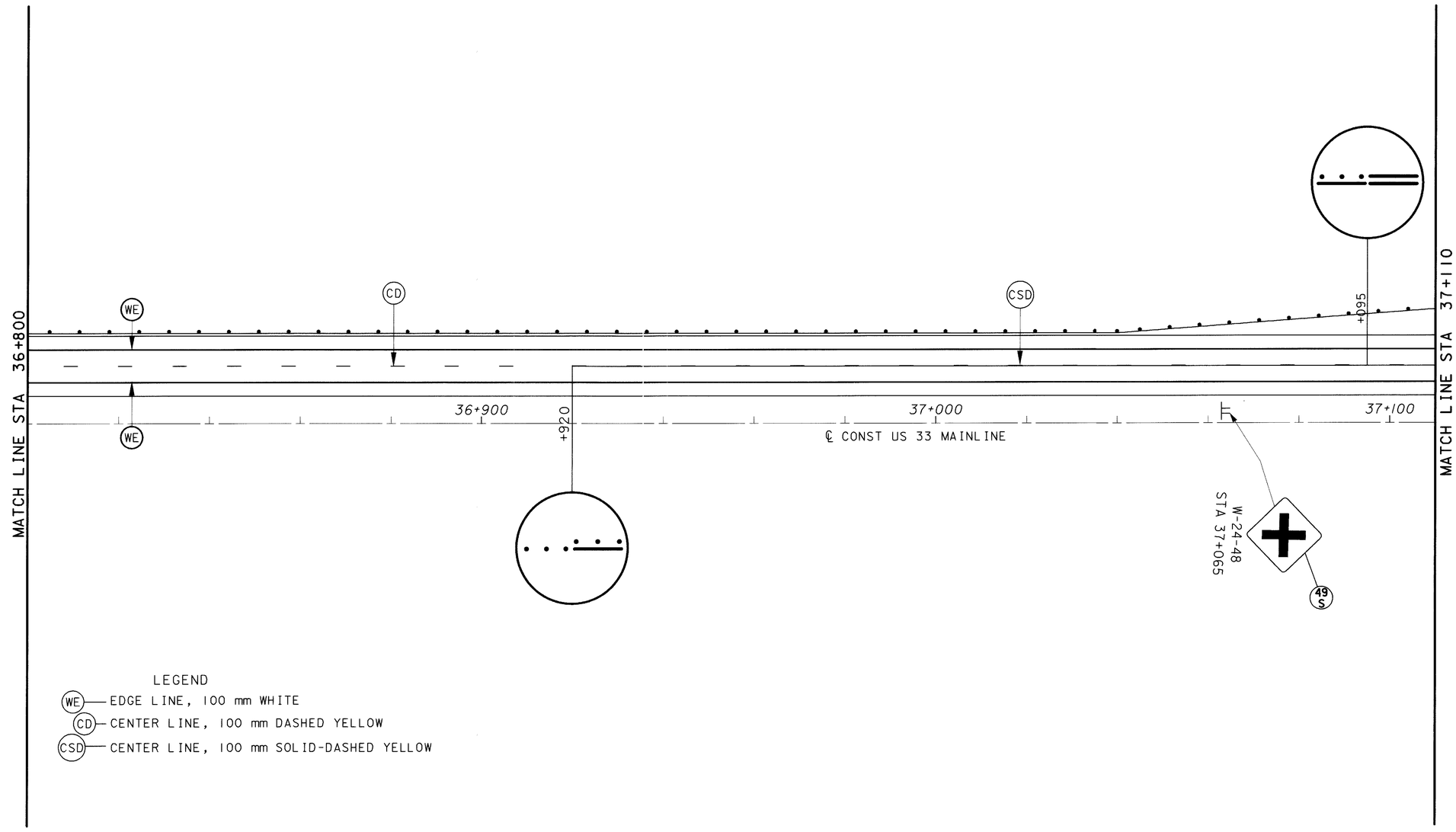

LEGEND

WE — EDGE LINE, 100 mm WHITE

CD — CENTER LINE, 100 mm DASHED YELLOW

CSD — CENTER LINE, 100 mm SOLID-DASHED YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
36+800 TO 37+110 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 709
FOR SIGNING QUANTITIES, SEE SHEET 712C

1:500 HORIZONTAL SCALE IN METERS (0, 20)

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN STA 36+800 TO STA 37+110

ATH-33-30.981

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956

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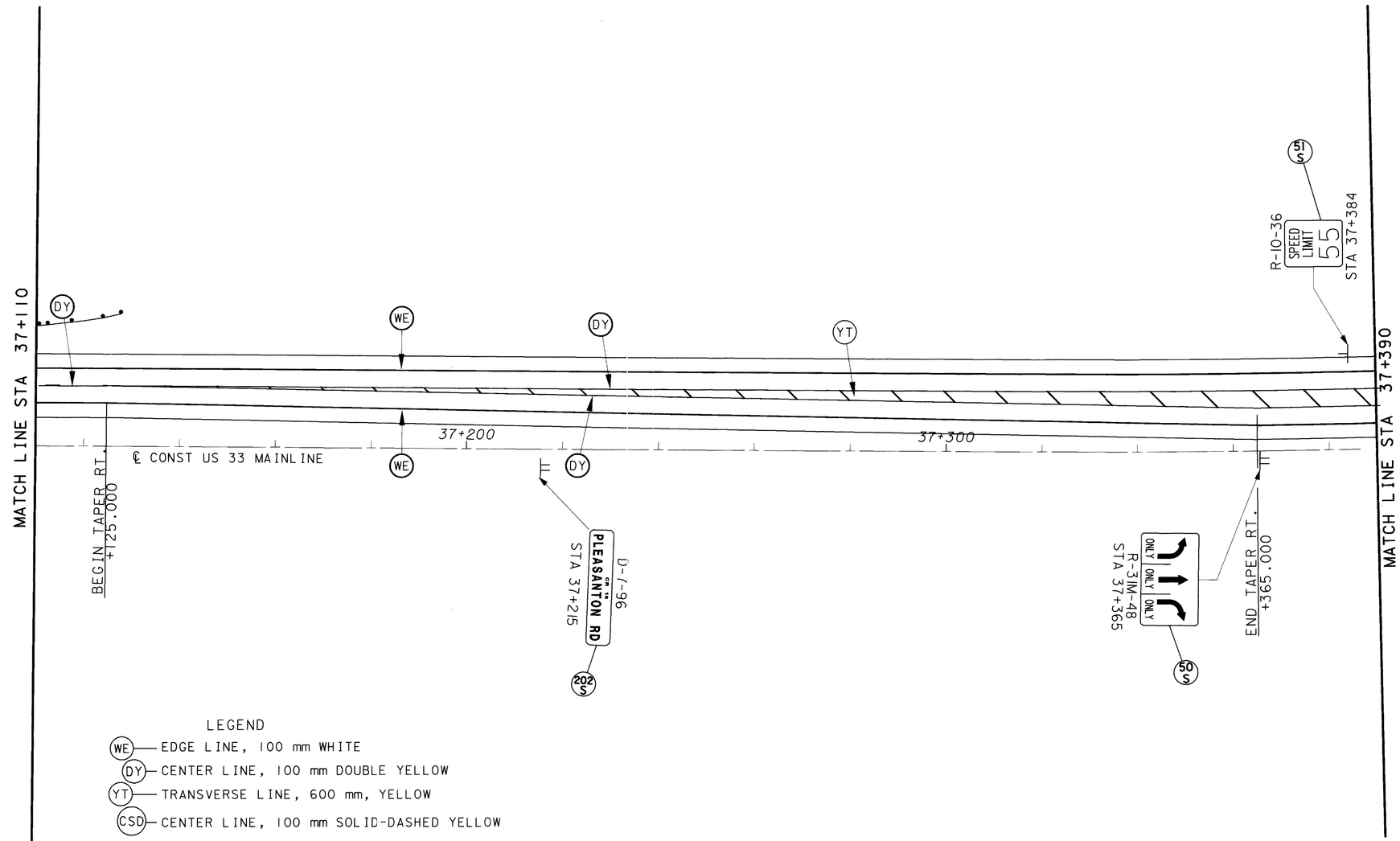


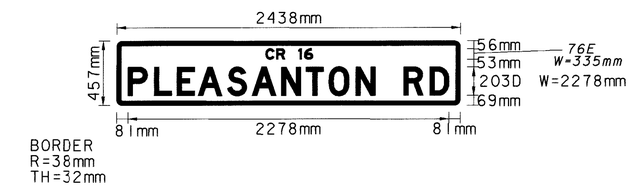
LEGEND

- (WE) — EDGE LINE, 100 mm WHITE
- (DY) — CENTER LINE, 100 mm DOUBLE YELLOW
- (YT) — TRANSVERSE LINE, 600 mm, YELLOW
- (CSD) — CENTER LINE, 100 mm SOLID-DASHED YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710
FOR SIGNING QUANTITIES, SEE SHEET 712C

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
37+110 TO 37+390 (LT)	24	23
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		23

D-7-2438 (D-7-96)
2438mmx457mm (96"X18")



HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 37+110 TO STA 37+390

ATH-33-30.981

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956

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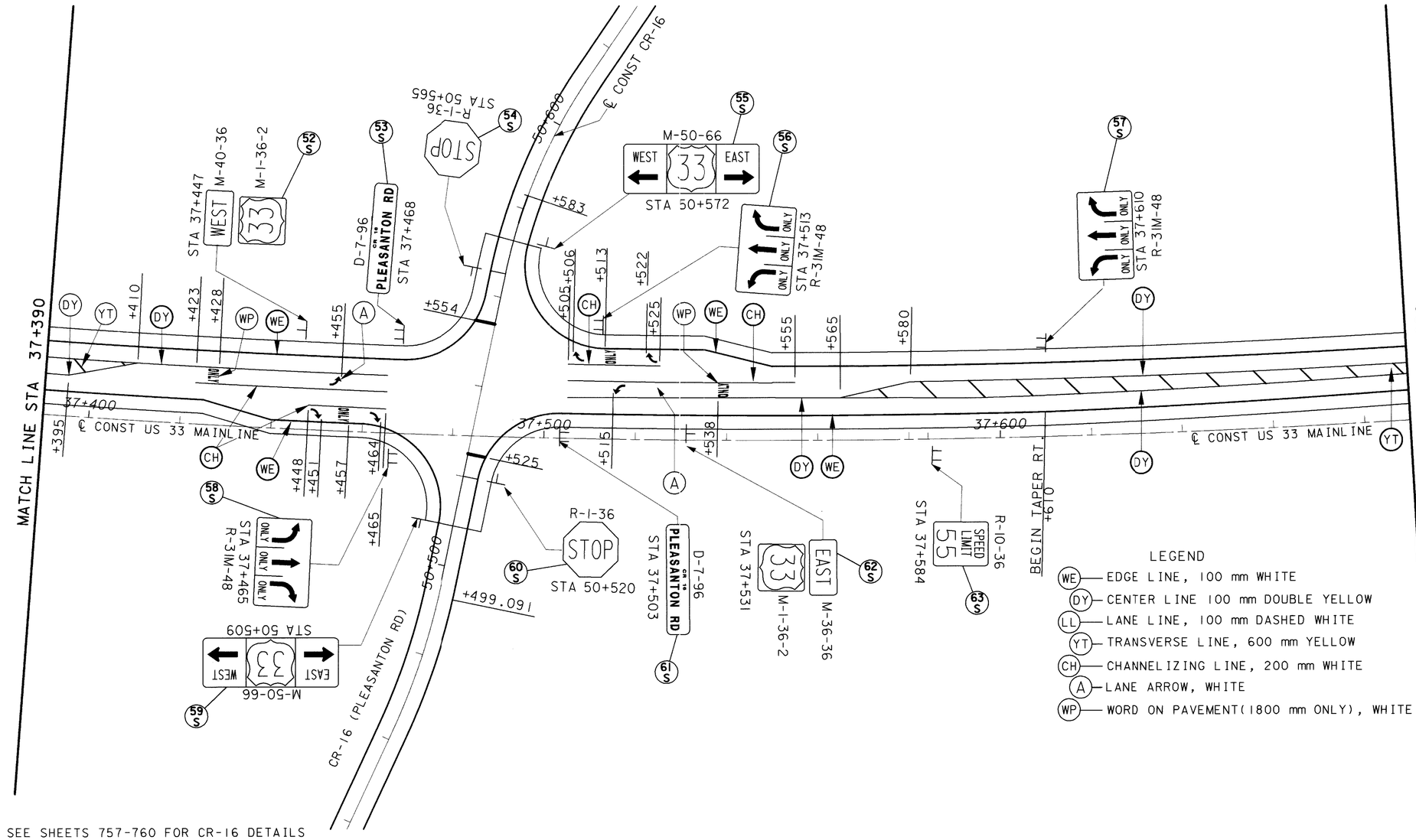

SEE SHEETS 757-760 FOR CR-16 DETAILS

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, WHITE/RED		
STATION TO STATION	SPACING (METER)	NUMBER
37+395 TO 37+465 (LT)	12	5
37+448 TO 37+465 (LT)	12	7
37+505 TO 37+525 (LT)	12	7
37+505 TO 37+580 (LT)	12	6
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		25

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
37+390 TO 37+465 (LT)	24	3
37+505 TO 37+850 (LT)	24	26
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		29

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710
FOR SIGNING QUANTITIES, SEE SHEET 712C & 712D

FOR COUNTY RD 16 SIGNS AND PAVEMENT MARKINGS, SEE SHEETS 757-760

D-7-2438 (D-7-96)
2438mm×457mm (96"X18")

BORDER
R=38mm
TH=32mm

TRAFFIC CONTROL PLAN
STA 37+390 TO STA 37+690

ATH-33-30.981

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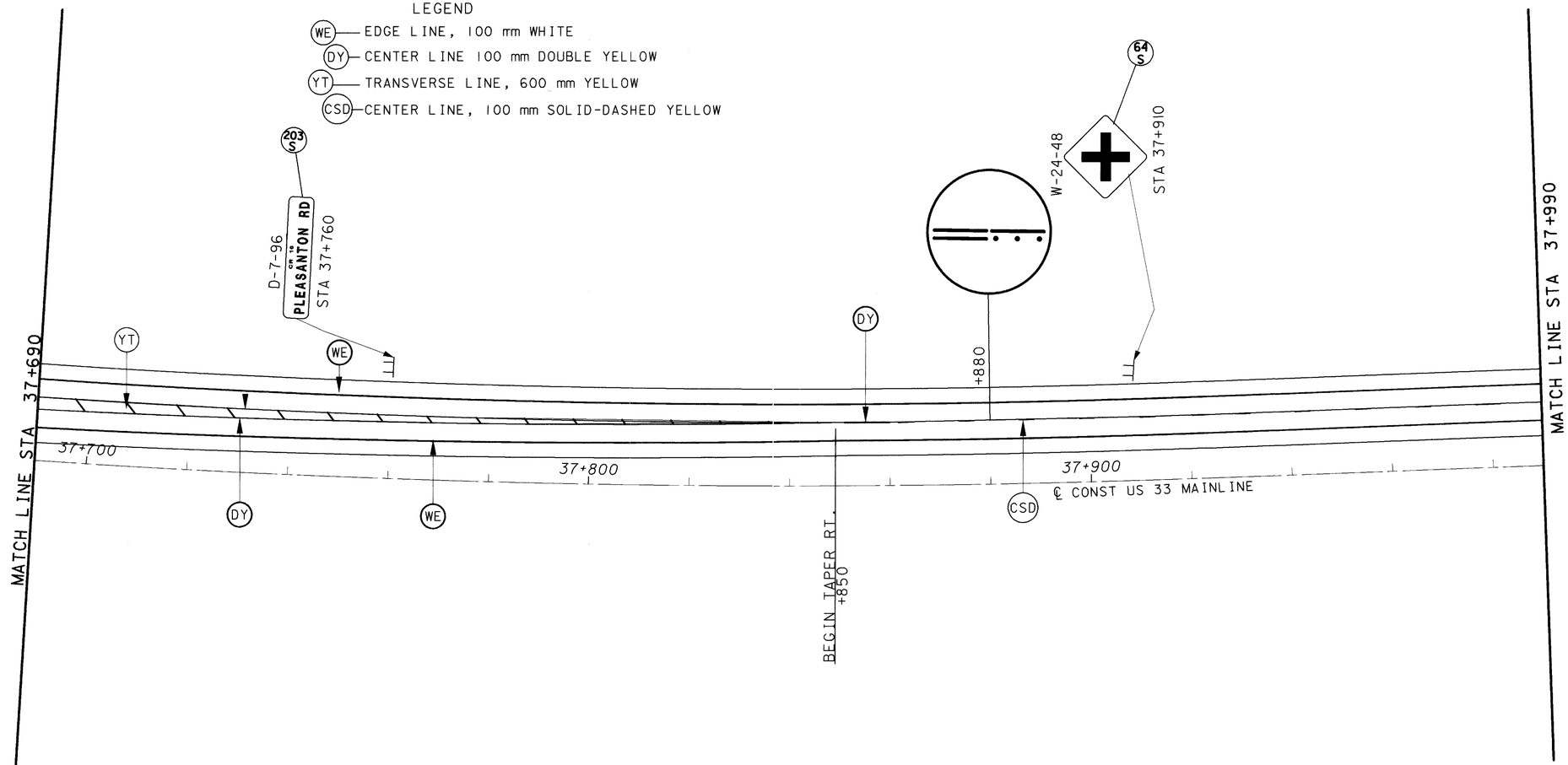
LEGEND

WE — EDGE LINE, 100 mm WHITE

DY — CENTER LINE 100 mm DOUBLE YELLOW

YT — TRANSVERSE LINE, 600 mm YELLOW

CSD — CENTER LINE, 100 mm SOLID-DASHED YELLOW



ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
37+850 TO 37+990 (LT)	24	6
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		6

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710
FOR SIGNING QUANTITIES, SEE SHEET 712D

D-7-2438 (D-7-96)
2438mmx457mm (96"X18")

BORDER
R=38mm
TH=32mm

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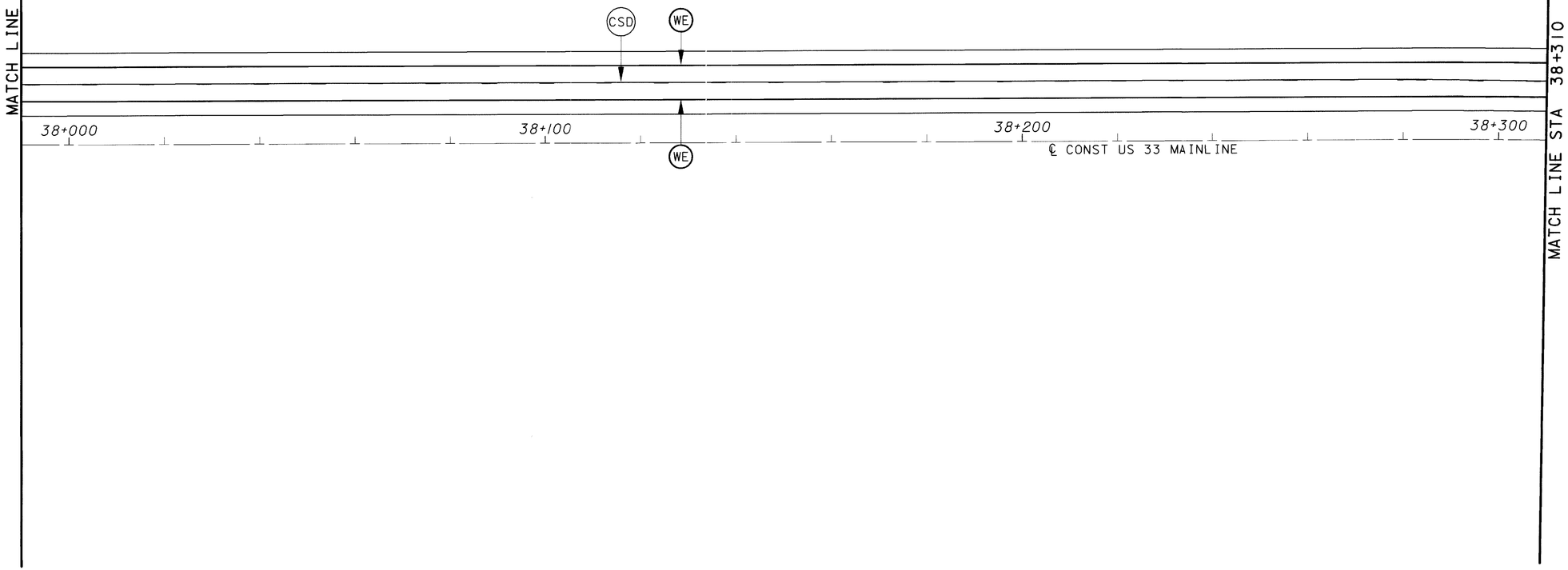
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED EC
CHECKED RM

LEGEND

WE — EDGE LINE, 100 mm WHITE

CSD — CENTER LINE, 100 mm SOLID-DASHED YELLOW



ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
37+990 to 38+310 (LT)	24	13
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		13

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710

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HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 37+990 TO STA 38+310

ATH-33-30.981

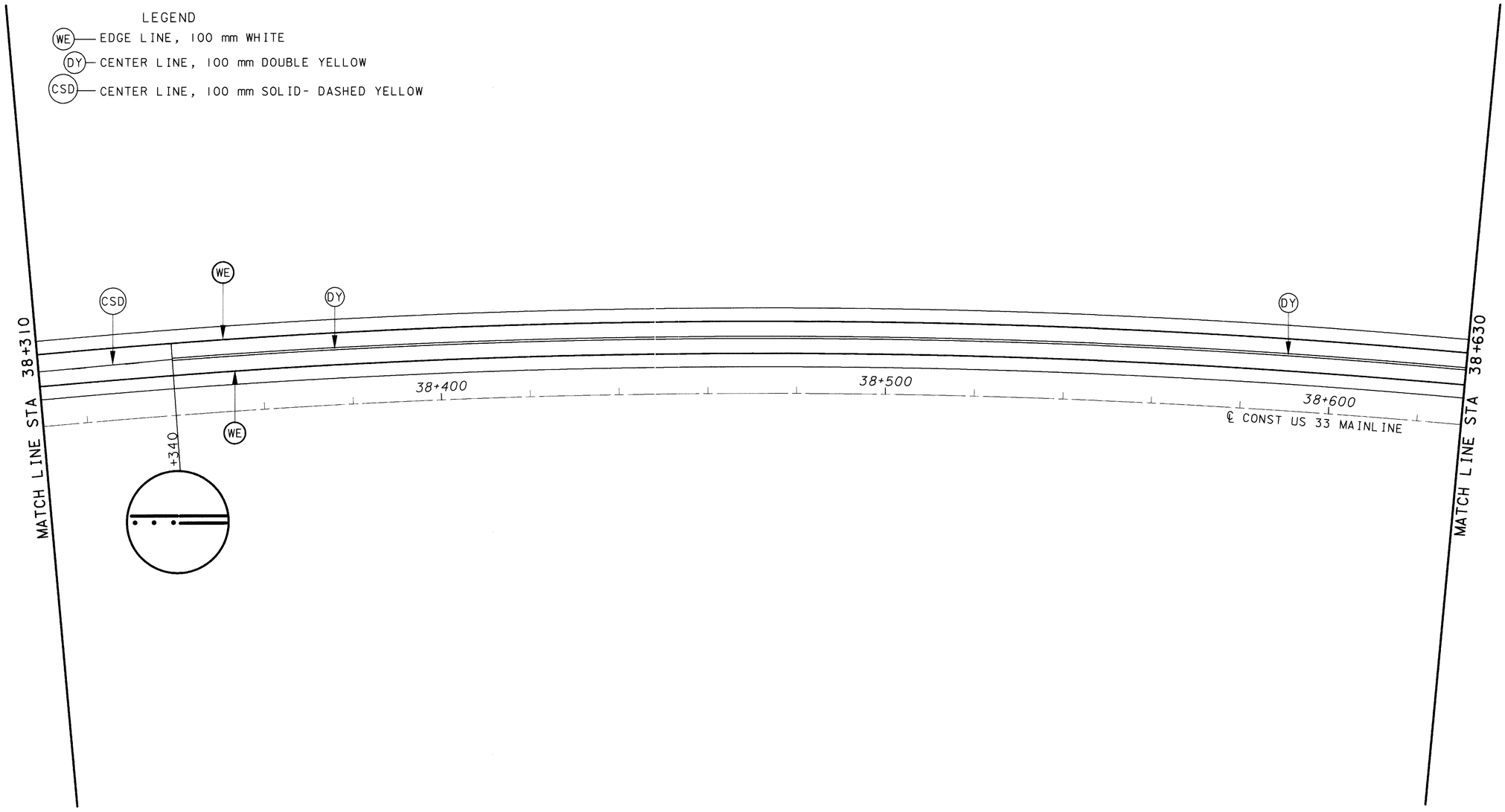
743
956

LEGEND

WE — EDGE LINE, 100 mm WHITE

DY — CENTER LINE, 100 mm DOUBLE YELLOW

CSD — CENTER LINE, 100 mm SOLID- DASHED YELLOW



ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
38+310 to 38+630 (LT)	24	13
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		13

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710

1:500 HORIZONTAL SCALE IN METERS (0, 20)

CALCULATED EC

CHECKED RM

TRAFFIC CONTROL PLAN STA 38+310 TO STA 38+630

ATH-33-30.981

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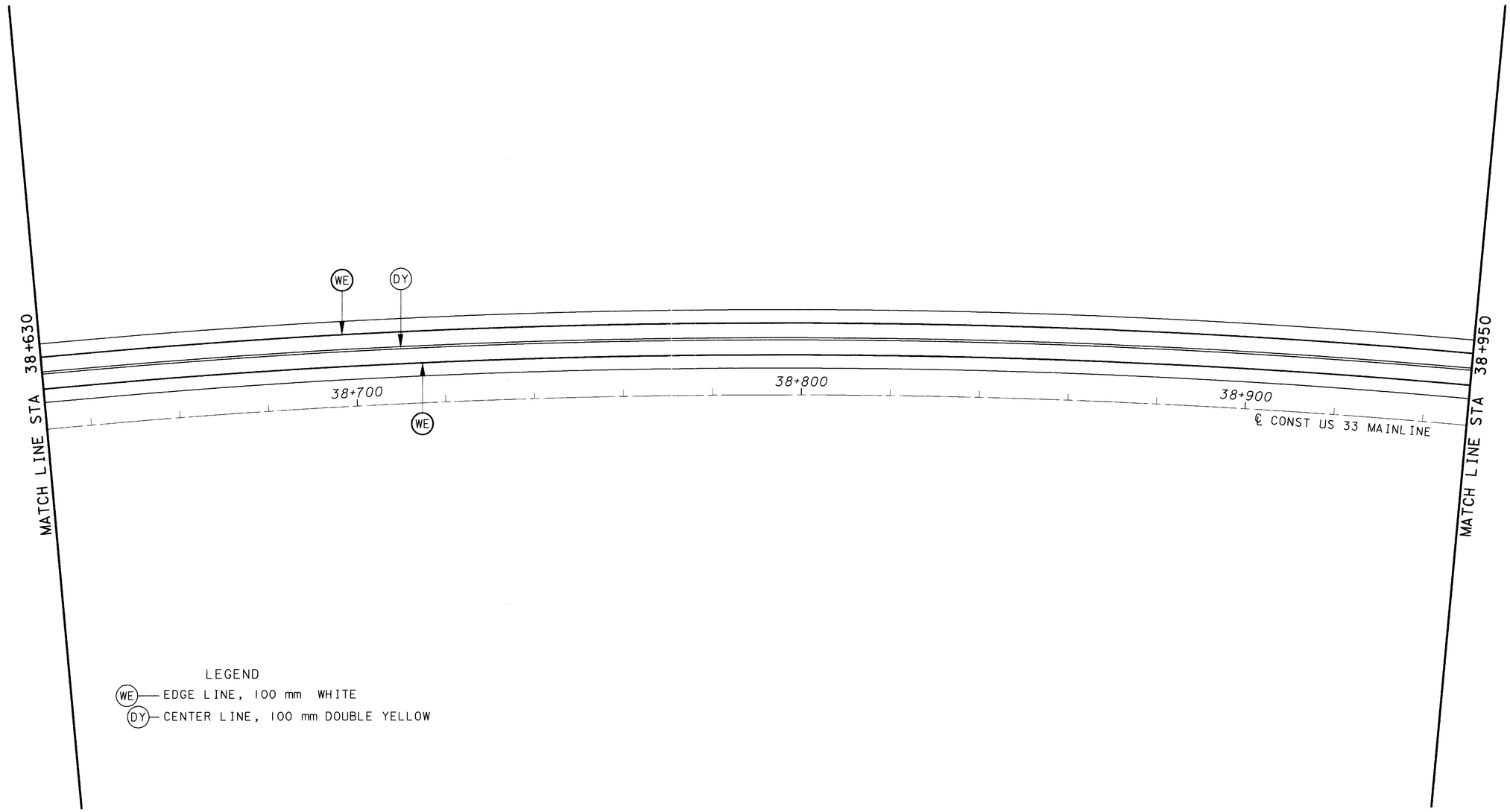


LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
38+630 to 38+950 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710

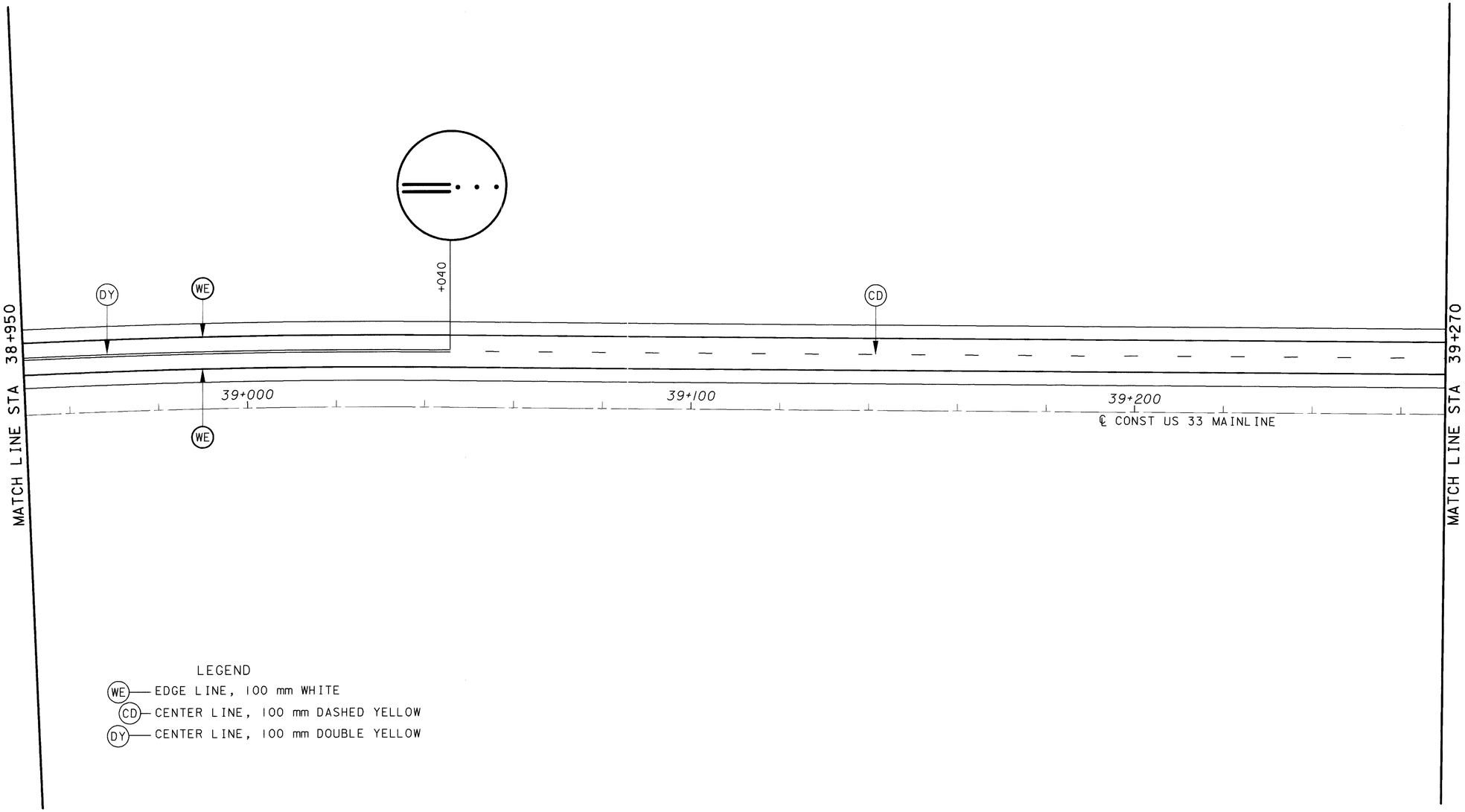
N

0 20
1:500
HORIZONTAL
SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 38+630 TO STA 38+950

ATH-33-30.981



LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(CD) — CENTER LINE, 100 mm DASHED YELLOW

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW/YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
38+969 TO 39+270 (LT)	24	13
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		13

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710

HORIZONTAL SCALE IN METERS
0 1:500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 38+950 TO STA 39+270

ATH-33-30.981

746
956

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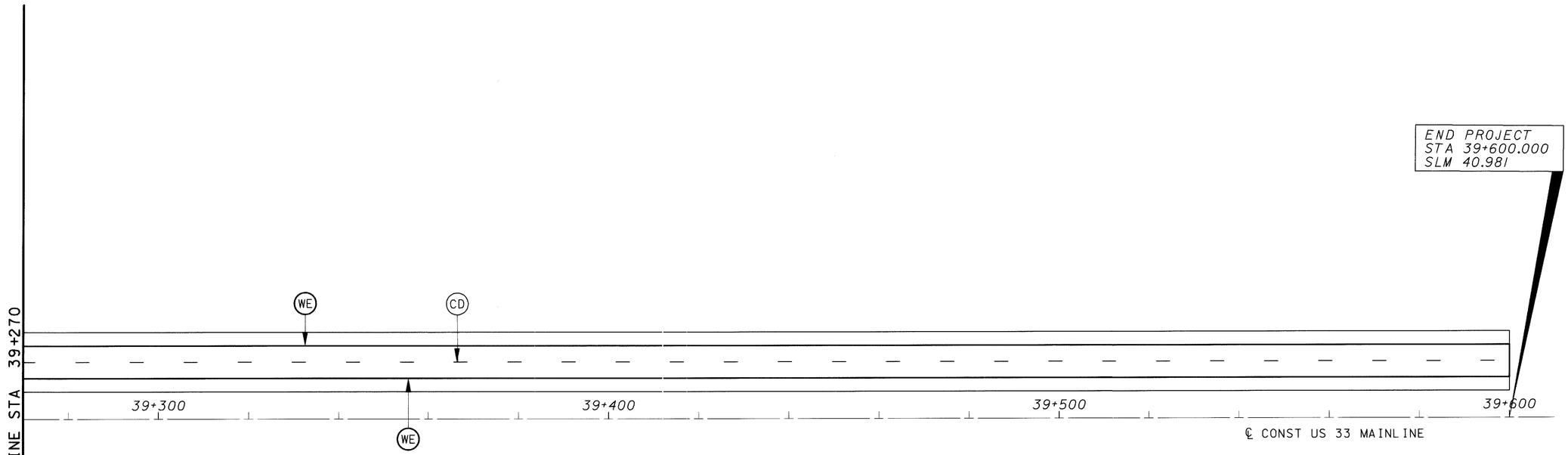

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(CD) — CENTER LINE, 100 mm DASHED YELLOW

ITEM 621 - RAISED PAVEMENT MARKER 2-WAY, YELLOW		
STATION TO STATION	SPACING (METER)	NUMBER
39+270 TO 39+600 (LT)	24	14
TOTAL CARRIED TO TRAFFIC SUBSUMMARY		14

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 710 & 711

HORIZONTAL SCALE IN METERS
0 1:500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
STA 39+270 TO STA 39+600

ATH-33-30.981

747
956

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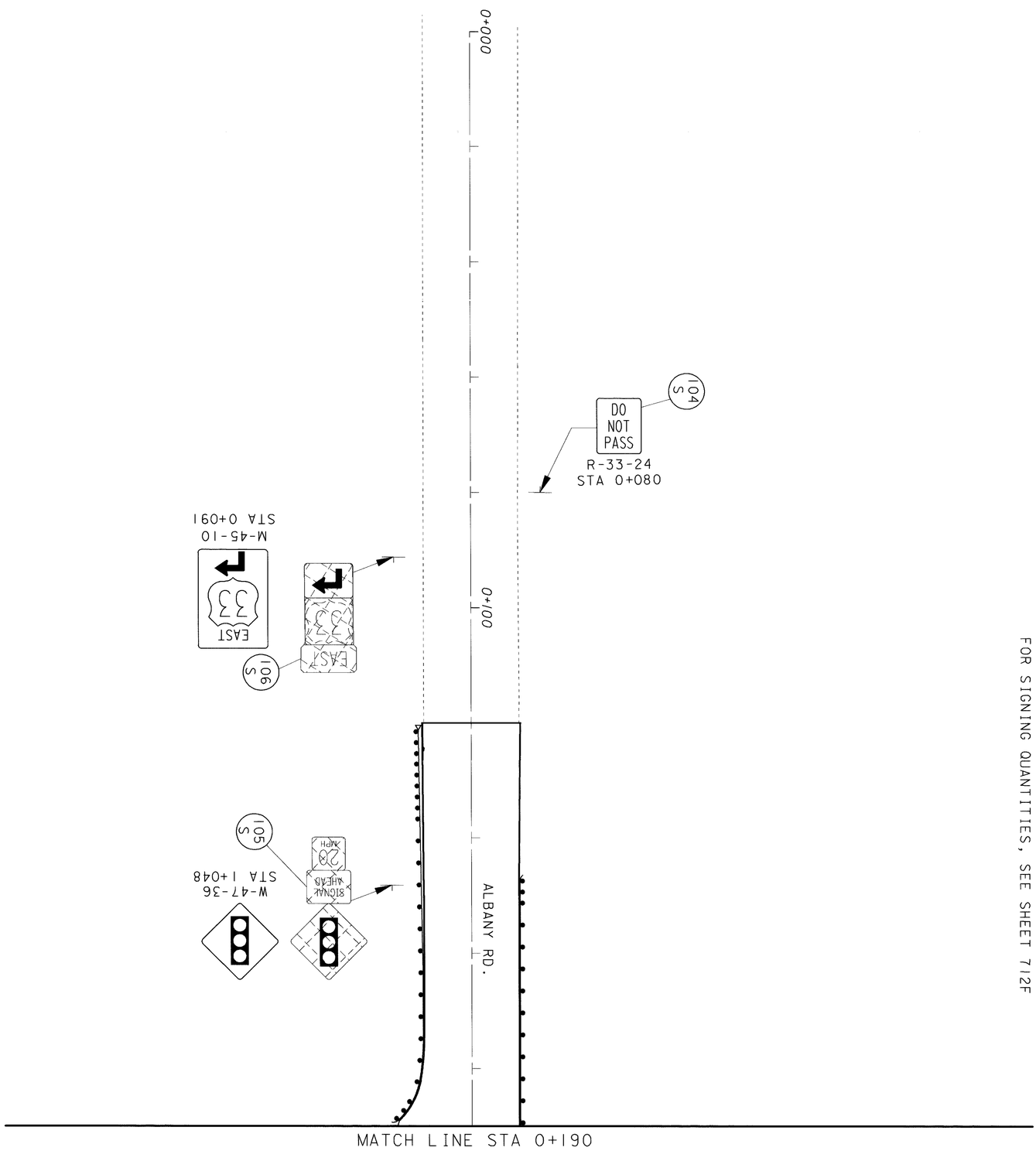

FOR SIGNING QUANTITIES, SEE SHEET 7/2F

748 / 956	ATH-33-30.981	TRAFFIC CONTROL PLAN ALBANY ROAD SIGNAGE DETAILS	CALCULATED EC CHECKED RM	0 8 16 SCALE 1:400 HORIZONTAL SCALE IN METERS	N

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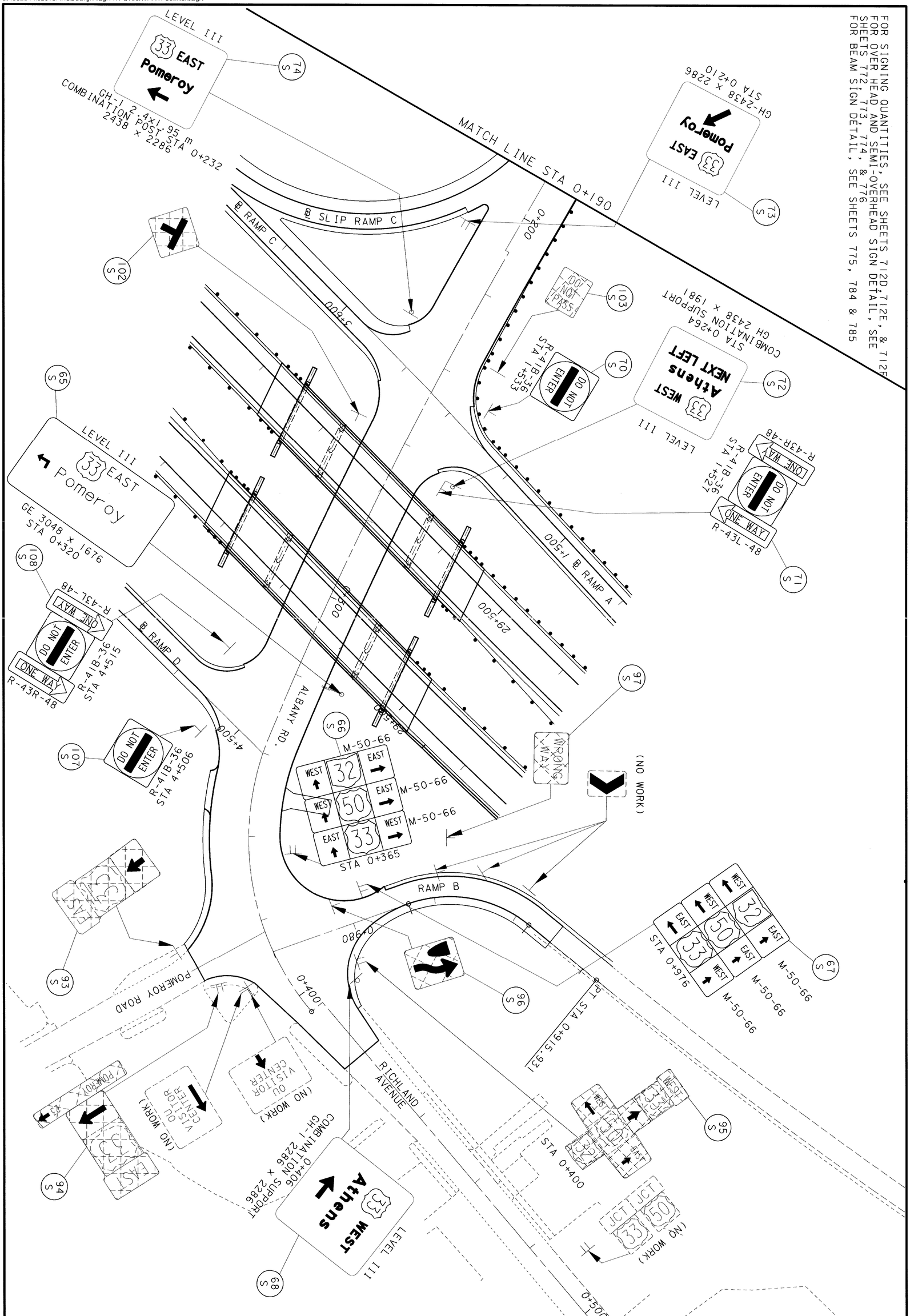
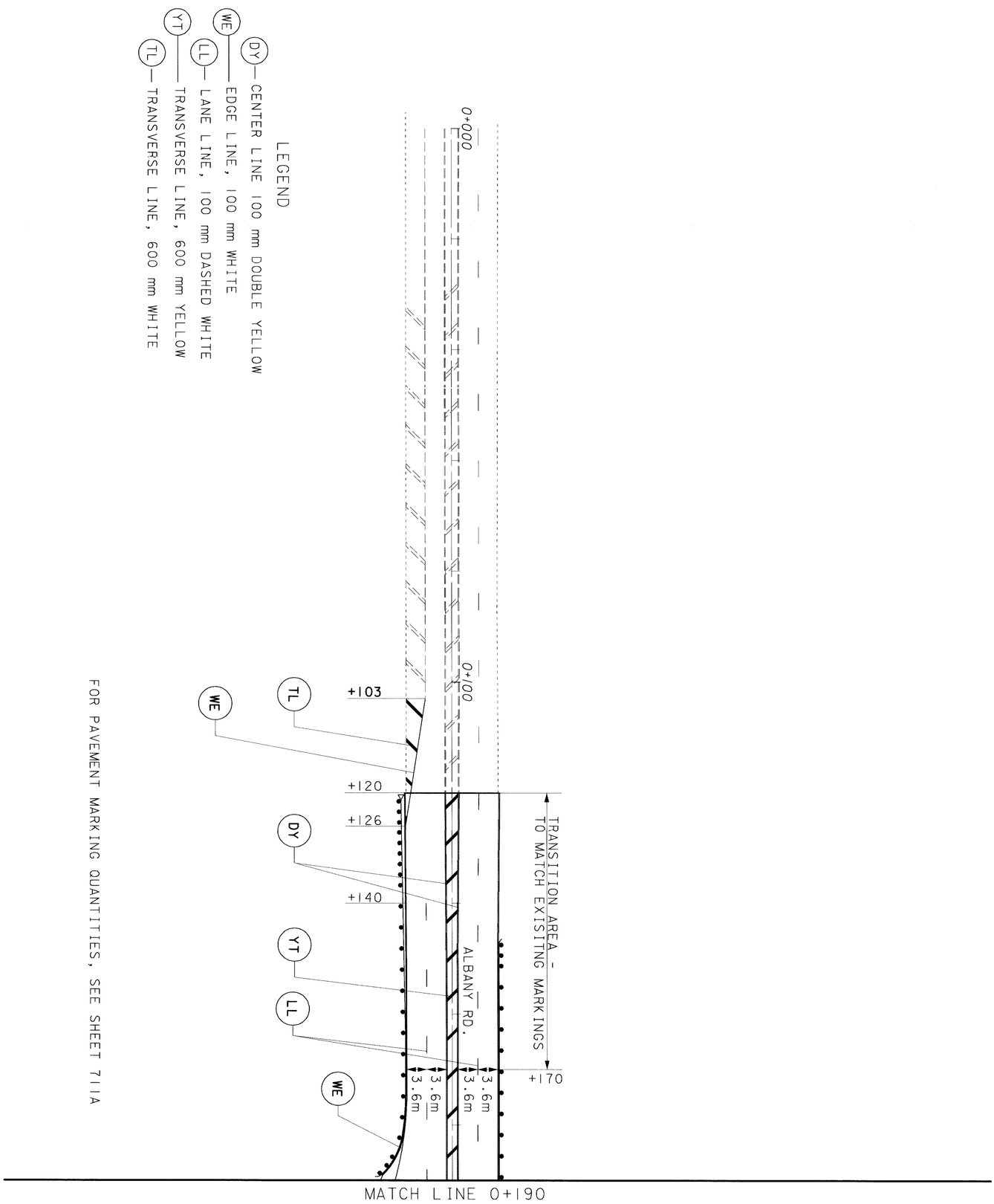


748A 956	ATH-33-30.981	TRAFFIC CONTROL PLAN ALBANY ROAD SIGNAGE DETAILS	CALCULATED EC CHECKED RM	0 8 16 SCALE 1:400 HORIZONTAL SCALE IN METERS	N



FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711A

749
956

ATH-33-30.981

TRAFFIC CONTROL PLAN
ALBANY ROAD PAVEMENT MARKING DETAILS

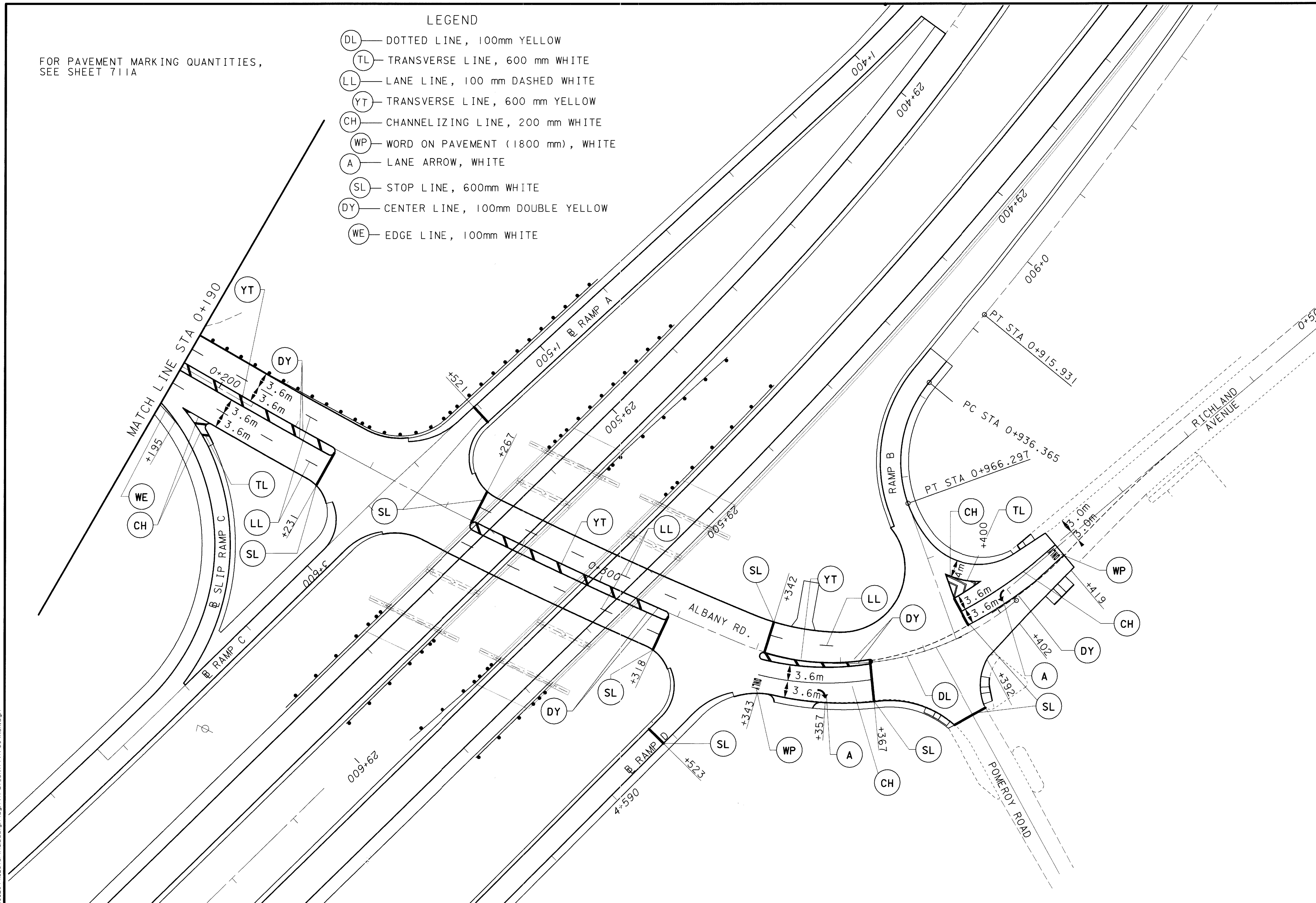
CALCULATED EC
CHECKED RM

SCALE 1:400
HORIZONTAL SCALE IN METERS

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711A

LEGEND

- (DL) DOTTED LINE, 100mm YELLOW
- (TL) TRANSVERSE LINE, 600 mm WHITE
- (LL) LANE LINE, 100 mm DASHED WHITE
- (YT) TRANSVERSE LINE, 600 mm YELLOW
- (CH) CHANNELIZING LINE, 200 mm WHITE
- (WP) WORD ON PAVEMENT (1800 mm), WHITE
- (A) LANE ARROW, WHITE
- (SL) STOP LINE, 600mm WHITE
- (DY) CENTER LINE, 100mm DOUBLE YELLOW
- (WE) EDGE LINE, 100mm WHITE



TRAFFIC CONTROL PLAN
ALBANY ROAD PAVEMENT MARKING DETAILS

ATH-33-30.981

SCALE 1:400
HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

749A
956

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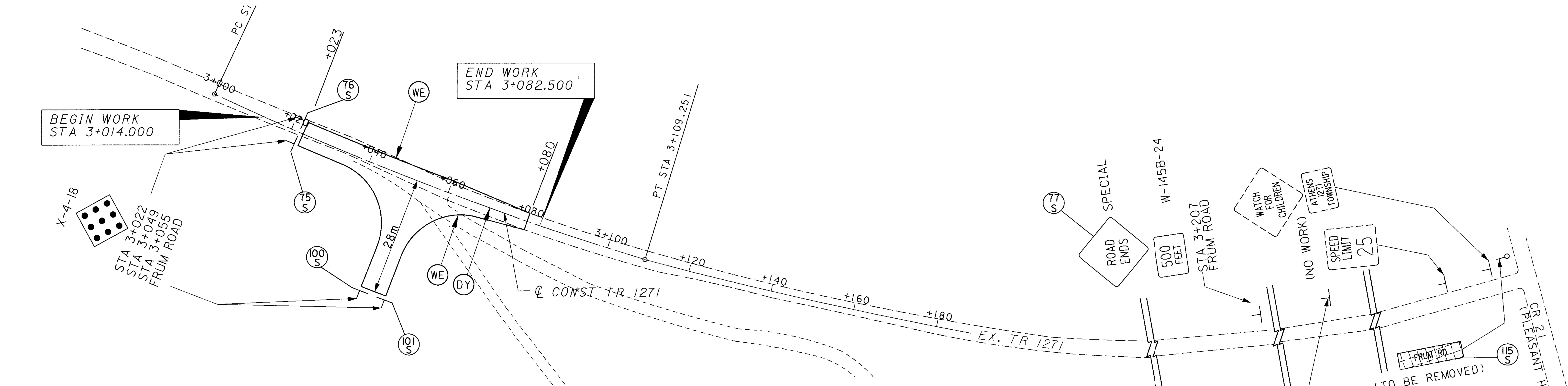


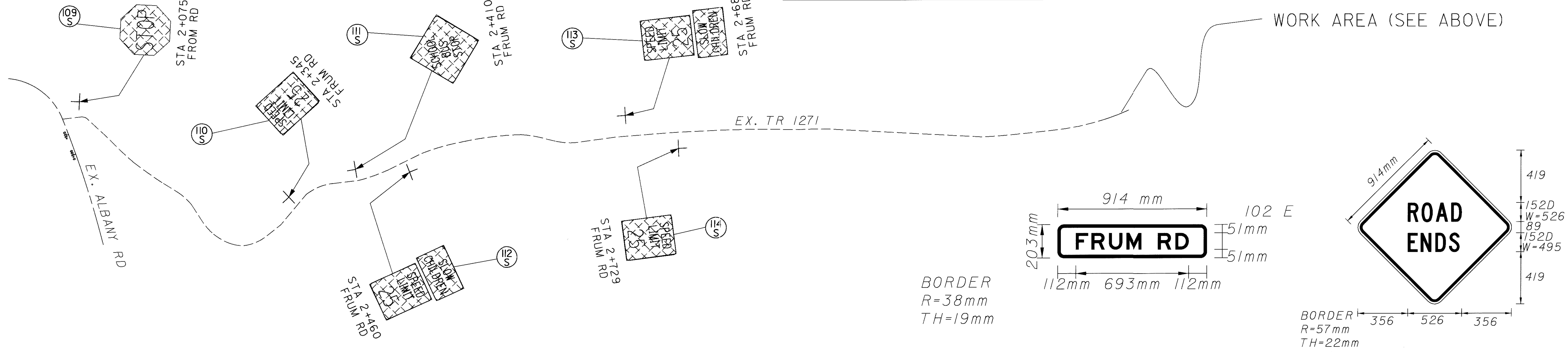
LEGEND

WE — EDGE LINE, 100 mm WHITE

DY — CENTER LINE 100 mm DOUBLE YELLOW

SIGN REMOVAL TABLE

STATION	SIDE	SIGN REMOVAL	GROUND MOUNTED POST REMOVAL
		EACH	EACH
2+075	LT	1	1
2+345	LT	1	1
2+410	LT	1	1
2+460	RT	2	1
2+680	LT	2	1
2+729	RT	1	1
6m from CR21 EOP	LT	1	1
TOTALS		9	7



FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
FOR SIGNING QUANTITIES, SEE SHEET 712D, 712E, & 712F

0 1:500 20
HORIZONTAL SCALE IN METERS

CALCULATED EC | CHECKED RM

TRAFFIC CONTROL PLAN
TR 1271 - STA 3+000 TO STA 3+100.555

ATH-33-30.981

15:52:42
6 APR 2001
q:\18287\m-e\Traf_Cntrl\TP400127.dgn

BEGIN WORK
STA 48+000.000

SAT DISH D

+988

+808

℄ PROP
DRIVE NO 2

EX. TR 55

℄ CONST TR 55

WE

DY

WE

℄ PROP
DRIVE NO 3

℄ CONST TR 55

SB US 33

℄ CONST US 33 MAINLINE

NB US 33

MATCH LINE STA 48+280

STA 48+261.851 ℄ TR 55 =
STA 32+368.722 ℄ US 33

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
SEE SHEET 725 FOR US 33

1:500
HORIZONTAL
SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
TR 55 - STA 47+980 TO STA 48+280

ATH-33-30.981

751
956

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02/03/01
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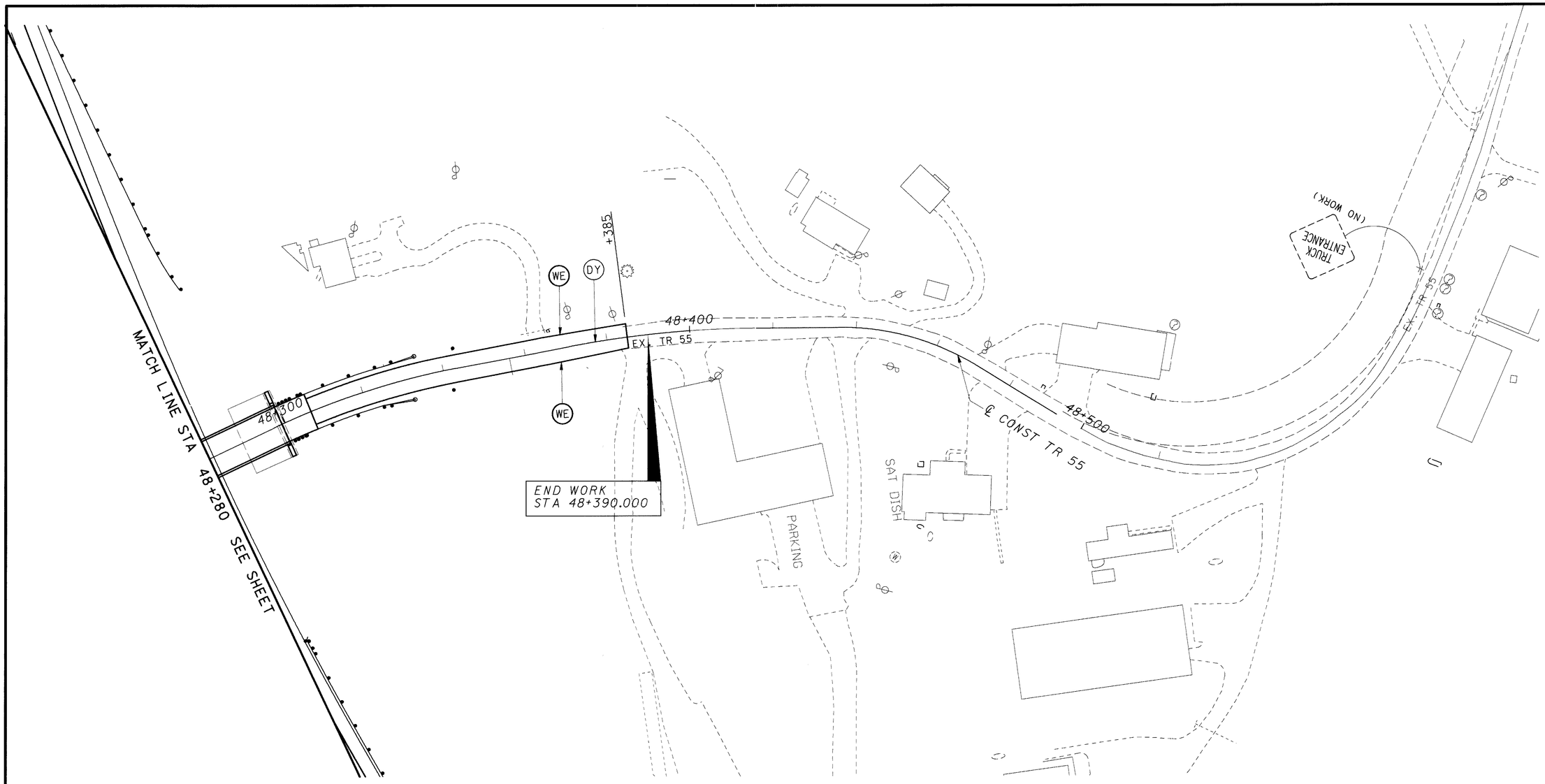

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
SEE SHEET 725 FOR US 33

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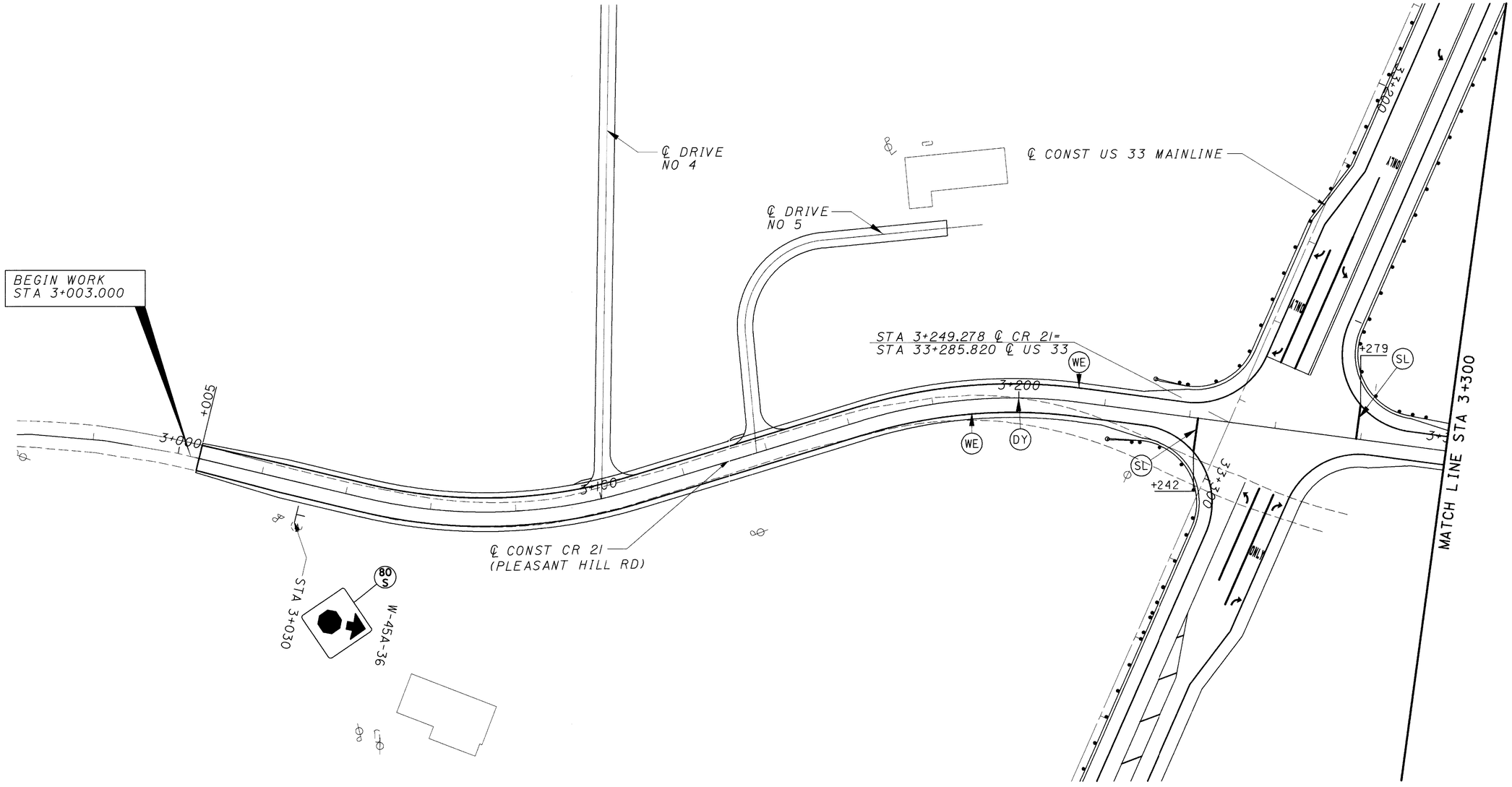
HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
TR 55 - STA 48+280 TO STA 48+530.470

ATH-33-30.981

752
956



SEE SHEET 728 FOR US-33

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
FOR SIGNING QUANTITIES, SEE SHEET 712D

1:500 HORIZONTAL SCALE IN METERS

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
CR 21 - STA 3+000 TO STA 3+300

ATH-33-30.981

753
956

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02/05/01
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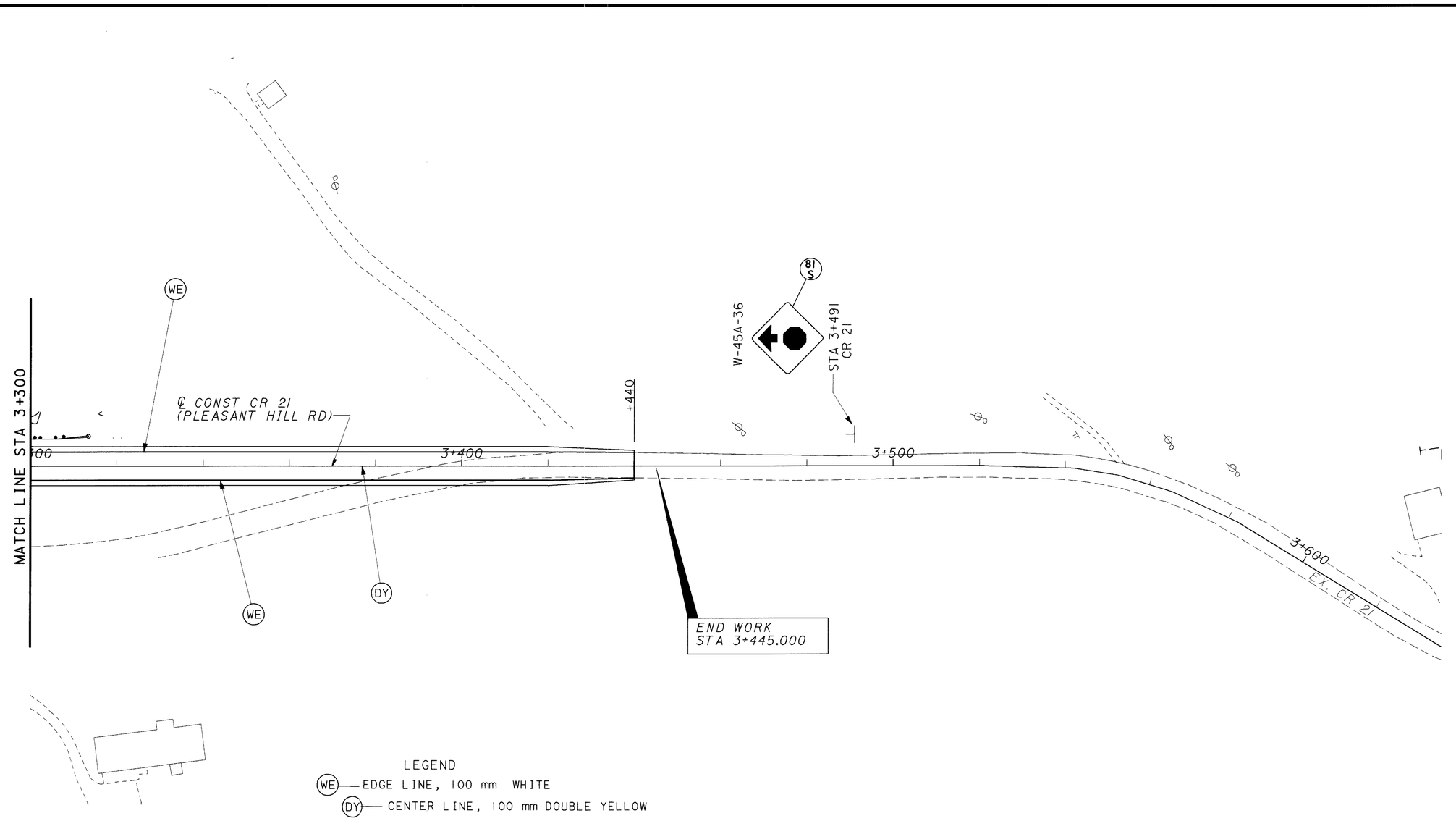

LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
FOR SIGNING QUANTITIES, SEE SHEET 712D

HORIZONTAL SCALE IN METERS
0 1500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
CR 21 - STA 3+300 TO STA 3+520.000

ATH-33-30.981

754
956

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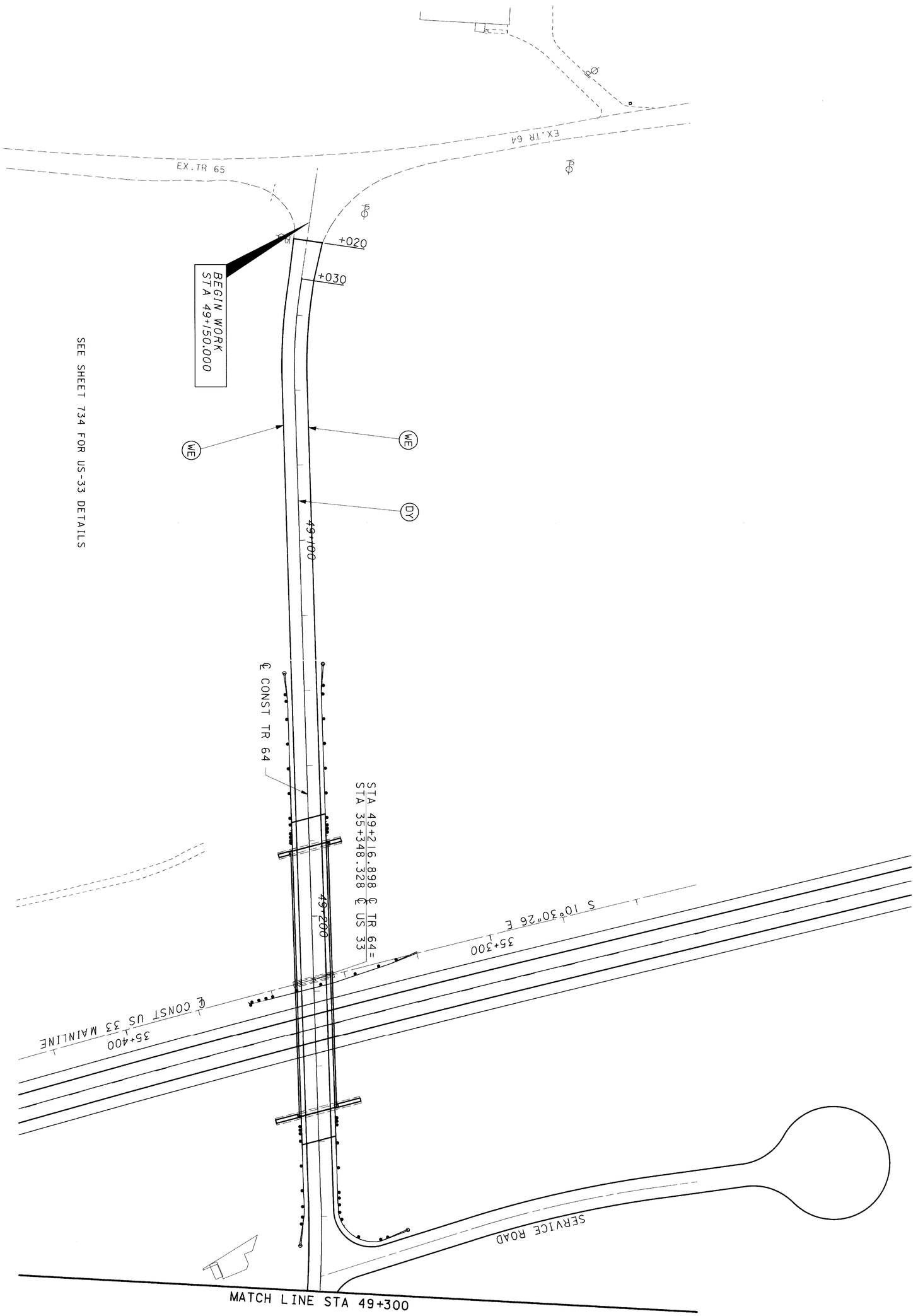
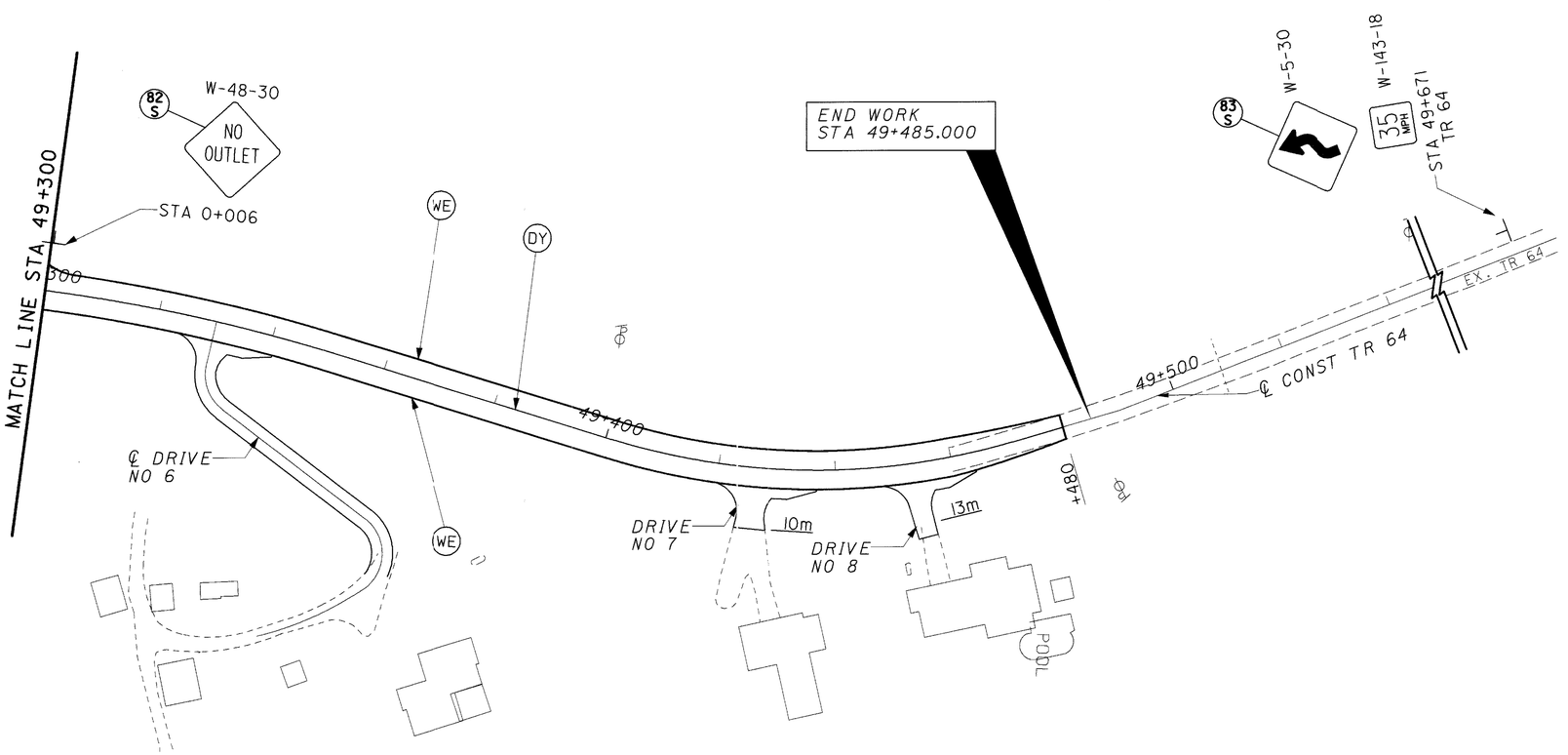


755 956	ATH-33-30.981	TRAFFIC CONTROL PLAN TR 64 - STA 49+000 TO STA 49+300	CALCULATED EC CHECKED RM	0 20 1:500 HORIZONTAL SCALE IN METERS



LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
FOR SIGNING QUANTITIES, SEE SHEET 712D

HORIZONTAL SCALE IN METERS
0 20
1:500

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
TR 64 - STA 49+300 TO STA 49+549.046

ATH-33-30.981

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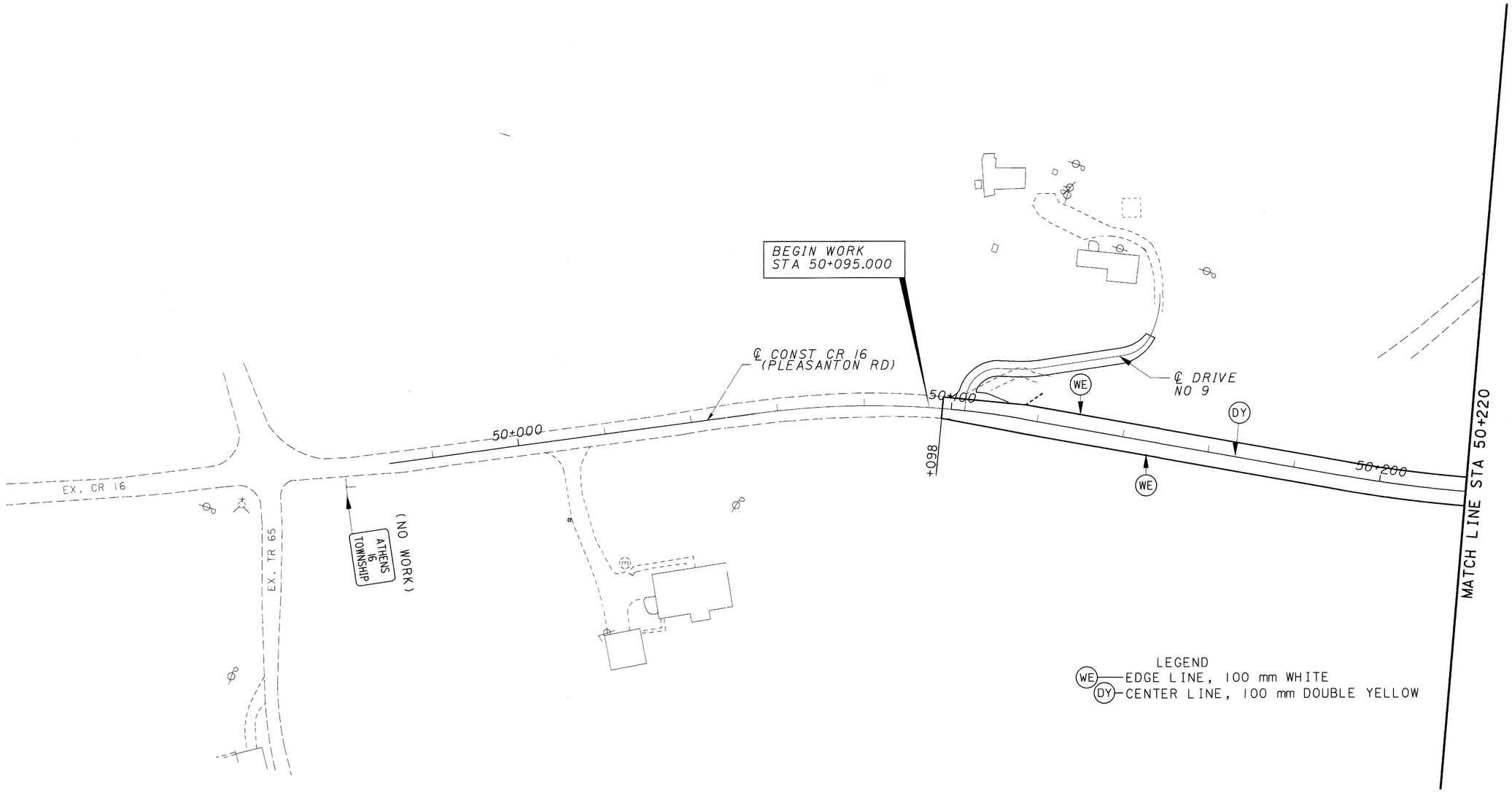

LEGEND
(WE) EDGE LINE, 100 mm WHITE
(DY) CENTER LINE, 100 mm DOUBLE YELLOW

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711

HORIZONTAL SCALE IN METERS
0 1:500 20

CALCULATED EC
CHECKED RM

TRAFFIC CONTROL PLAN
CR 16 - STA 49+970 TO STA 50+220

ATH-33-30.981

757
956

07:53:09 AM
02/05/01
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LEGEND

(WE) — EDGE LINE, 100 mm WHITE

(DY) — CENTER LINE, 100 mm DOUBLE YELLOW

MATCH LINE STA 50+220

℄ DRIVE NO 10

50+300

50+400

50+500

+499.090

MATCH LINE STA 50+510

PROP. ℄ CR 16 (PLEASANTON RD)

STA 50+320 CR 16

W-45A-36

84 S

STA 50+431 CR 16

SCHOOL BUS STOP AHEAD

W-79-30

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711
FOR SIGNING QUANTITIES, SEE SHEET 712D

CALCULATED EC

CHECKED RM

0 20

HSOD

HORIZONTAL SCALE IN METERS

TRAFFIC CONTROL PLAN
CR 16 - STA 50+220 TO STA 50+510

ATH-33-30.981

758
956

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02/03/01
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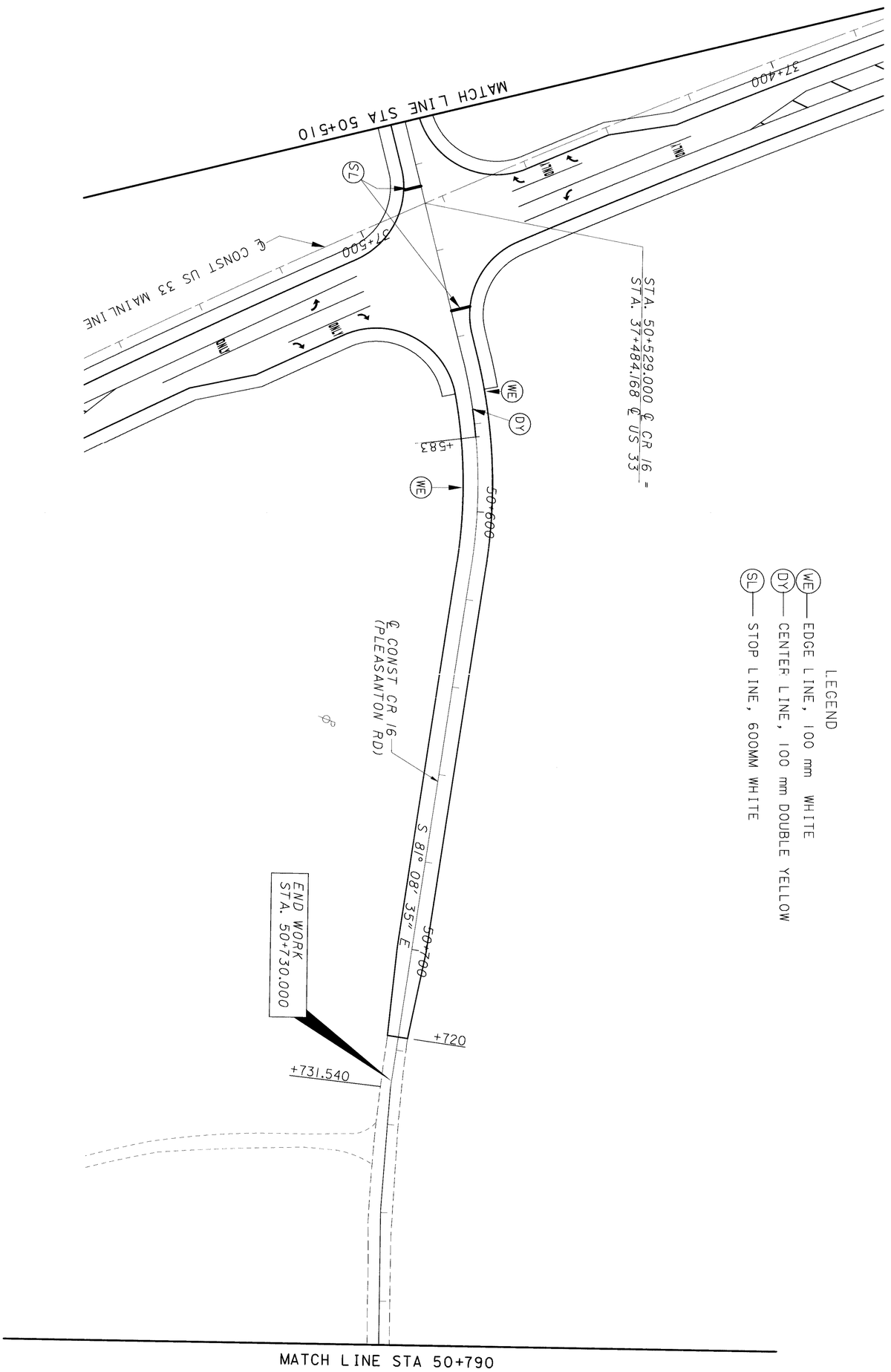

SEE SHEET 741 FOR US-33

FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 711

759
956

ATH-33-30.981

TRAFFIC CONTROL PLAN
CR 16 - STA 50+510 TO STA 50+790

CALCULATED EC
CHECKED RM

0 20
1:500
HORIZONTAL SCALE IN METERS

N

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02/05/01
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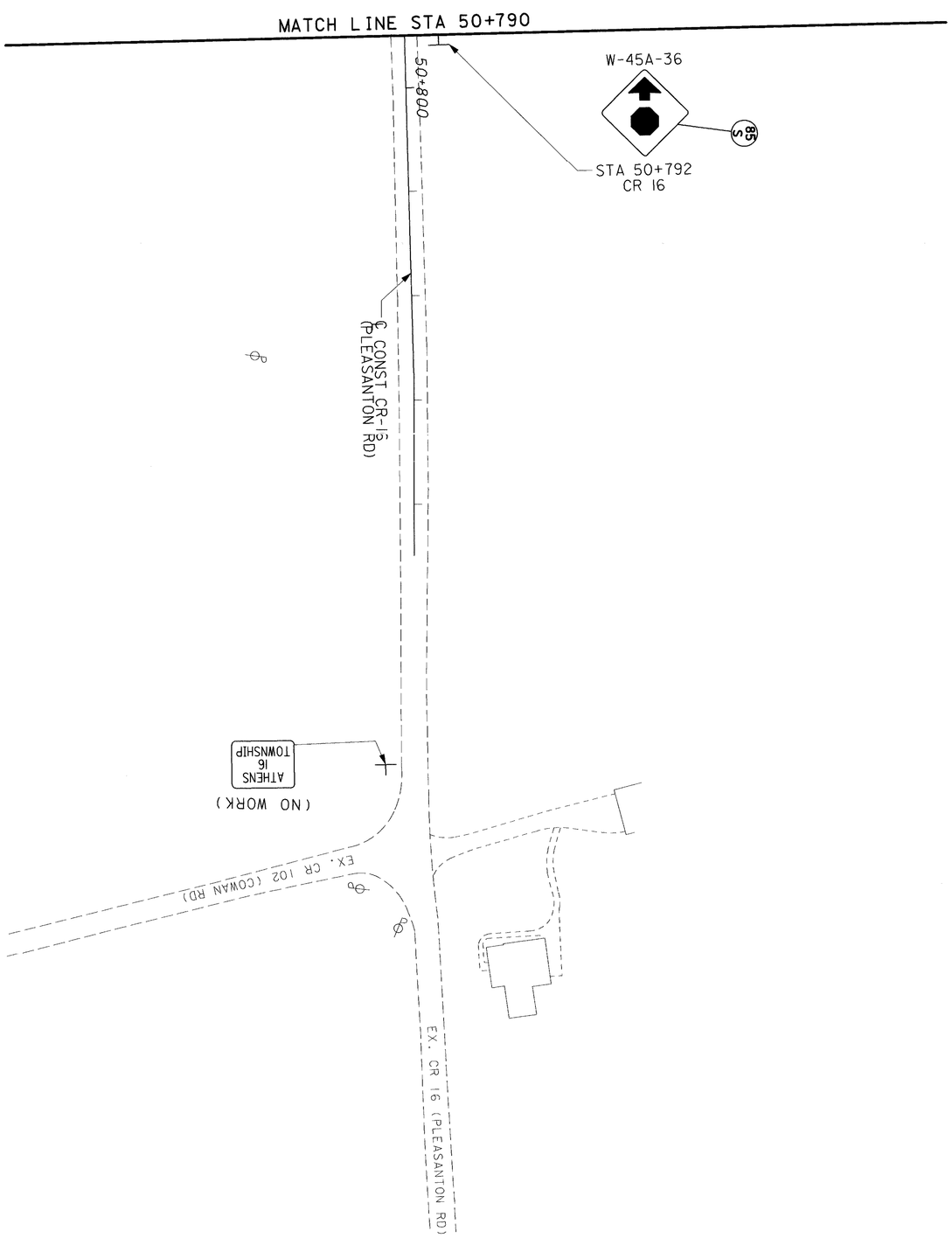
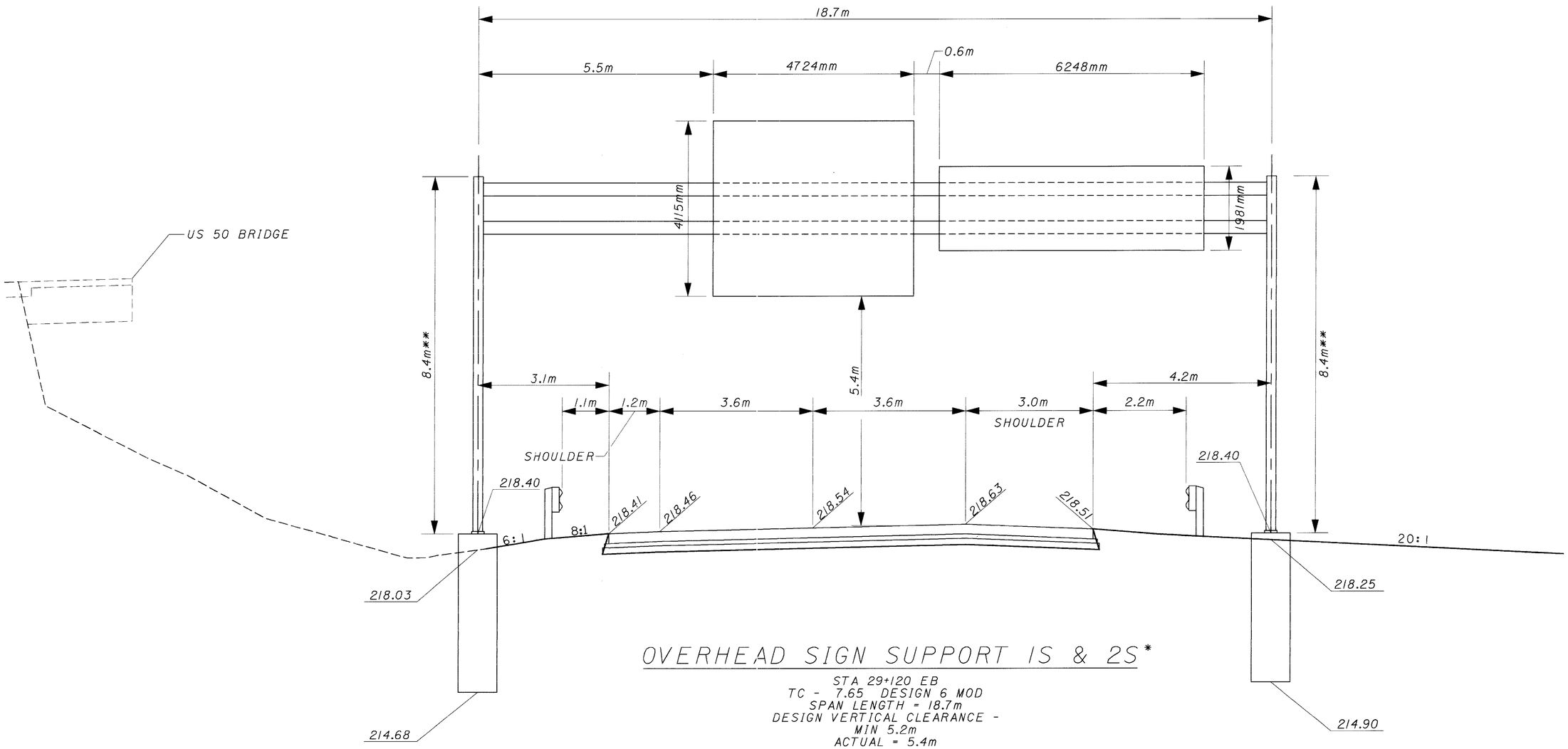


FOR SIGNING QUANTITIES, SEE SHEET 7/2D

956 / 760	ATH-33-30.981	TRAFFIC CONTROL PLAN CR 16 - STA 50+790 TO STA 50+889.889	CALCULATED EC CHECKED RM	0 20 1:500 HORIZONTAL SCALE IN METERS



OVERHEAD SIGN SUPPORT IS & 2S*

STA 29+120 EB
TC - 7.65 DESIGN 6 MOD
SPAN LENGTH = 18.7m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.4m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** USE 8.4m END FRAMES POLES FOR PROPER VERTICAL CLEARANCE

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 29+120 EB US 33

ATH-33-30.981

761
956

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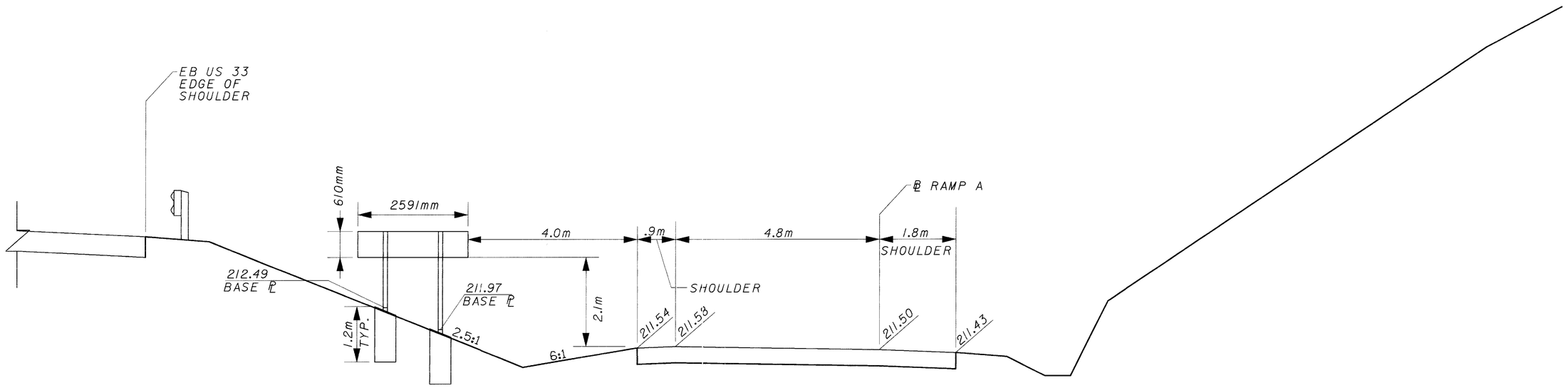

BEAM SIGN SUPPORT 3-S*

STA 1+458 RAMP A
TC - 41.10
BEAM SIZE = S100x11.5

LT BEAM: BEAM CUT TO BASE PLATE = 1.122m
RT BEAM: BEAM CUT TO BASE PLATE = 1.640m

NOTE:

* VIEW FOR ALL SIGNS ARE FROM FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 1+458 RAMP A

ATH-33-30.981

762
956

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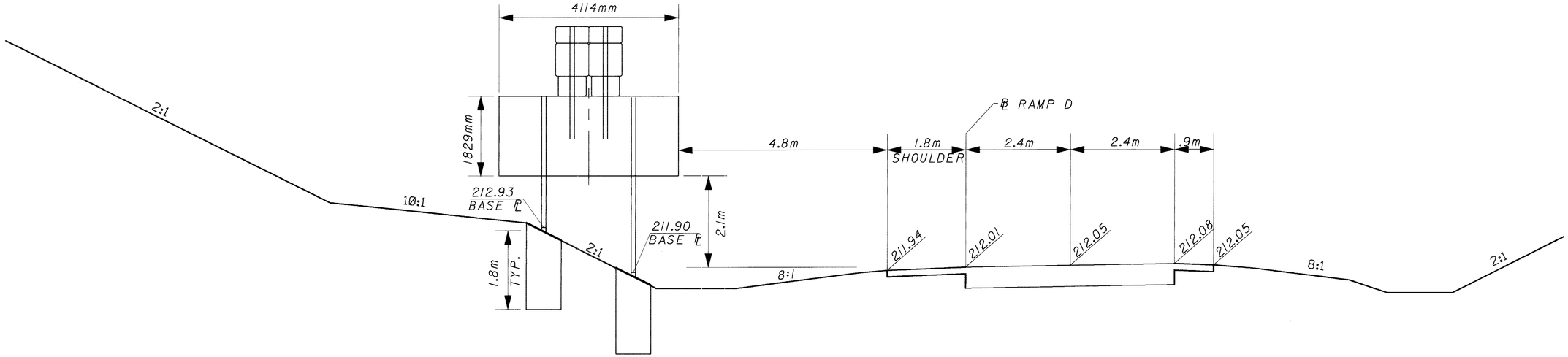

BEAM SIGN SUPPORT 11-S*

STA 4+617 RAMP D
TC - 41.10
BEAM SIZE = W250x17.9

LT BEAM: BEAM CUT TO BASE PLATE = 1.094m
RT BEAM: BEAM CUT TO BASE PLATE = 2.122m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 4+617 RAMP D

ATH-33-30.981

763
956

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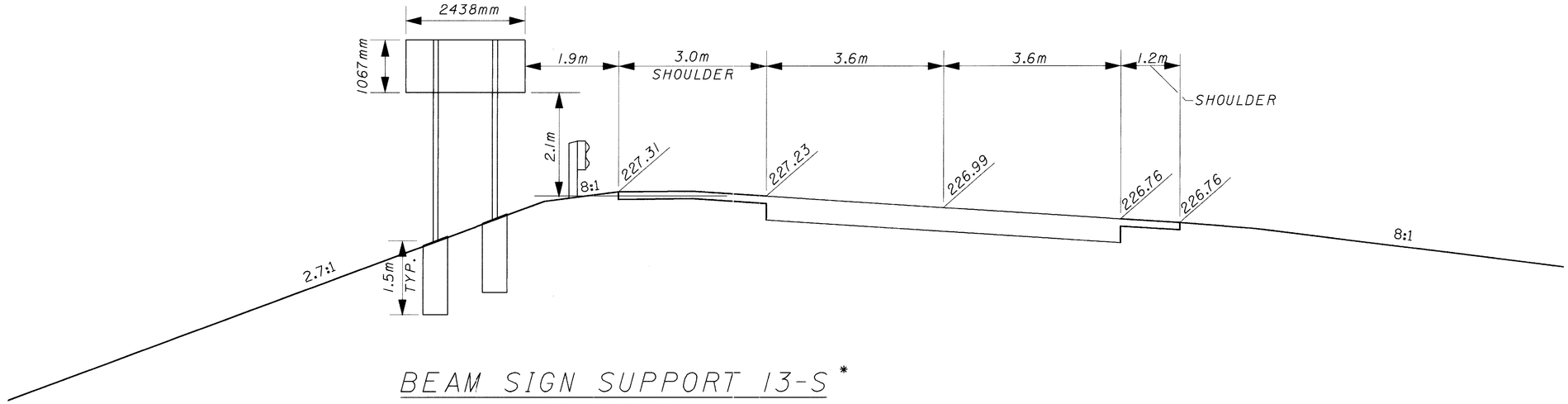

BEAM SIGN SUPPORT 13-S *

STA 29+820 WB
TC - 41.10
BEAM SIZE - W250x17.9

LT BEAM: BEAM CUT TO SUPPORT BASE BOTTOM = 4.336m
RT BEAM: BEAM CUT TO SUPPORT BASE BOTTOM = 3.886m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 29+820 WB US 33

ATH-33-30.981

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956

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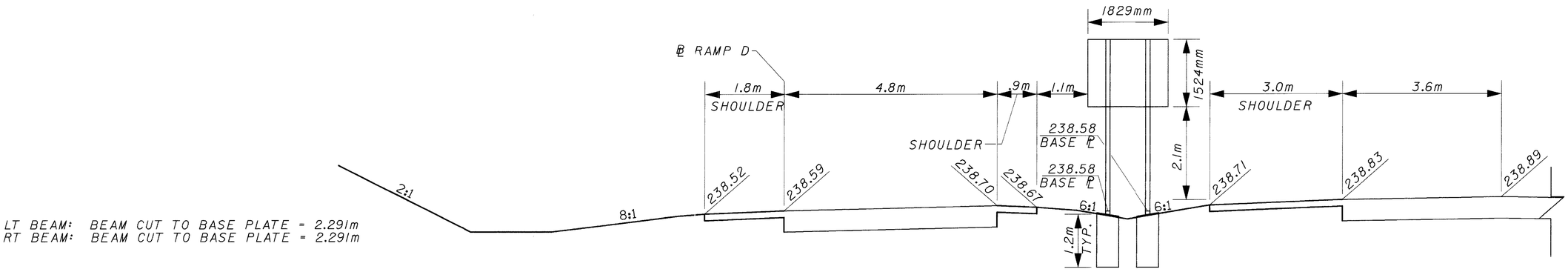


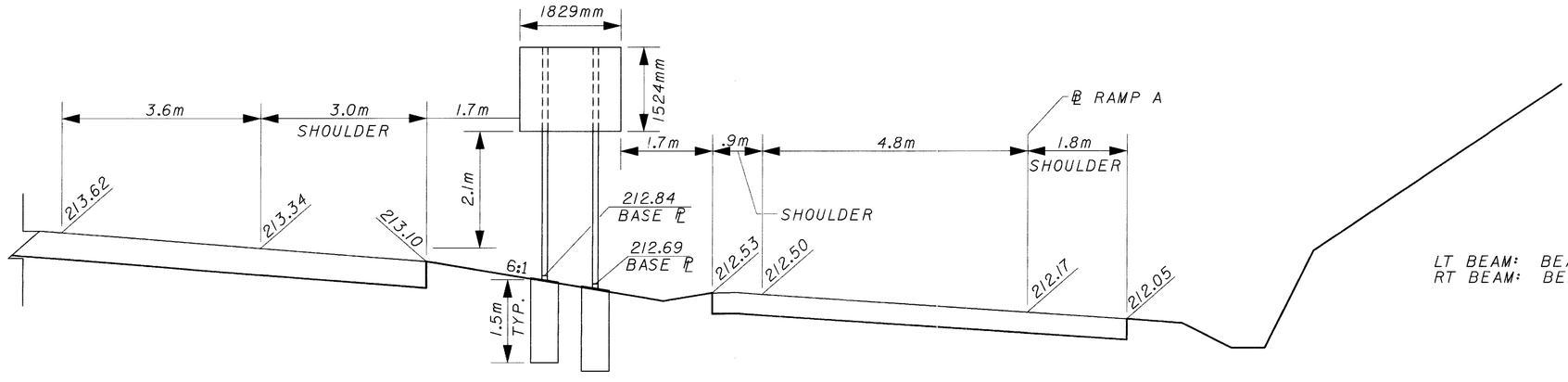
LT BEAM: BEAM CUT TO BASE PLATE = 2.291m
RT BEAM: BEAM CUT TO BASE PLATE = 2.291m

BEAM SIGN SUPPORT 14-S *

STA 30+160 WB
TC - 41.10
BEAM SIZE = S100x11.5

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION



LT BEAM: BEAM CUT TO BASE PLATE = 2.533m
RT BEAM: BEAM CUT TO BASE PLATE = 2.685m

BEAM SIGN SUPPORT 93-S *

STA 29+400 EB
TC - 41.10
BEAM SIZE = W150x13.5

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 29+400 EB AND STA 30+160 WB US 33

ATH-33-30.981

765
956

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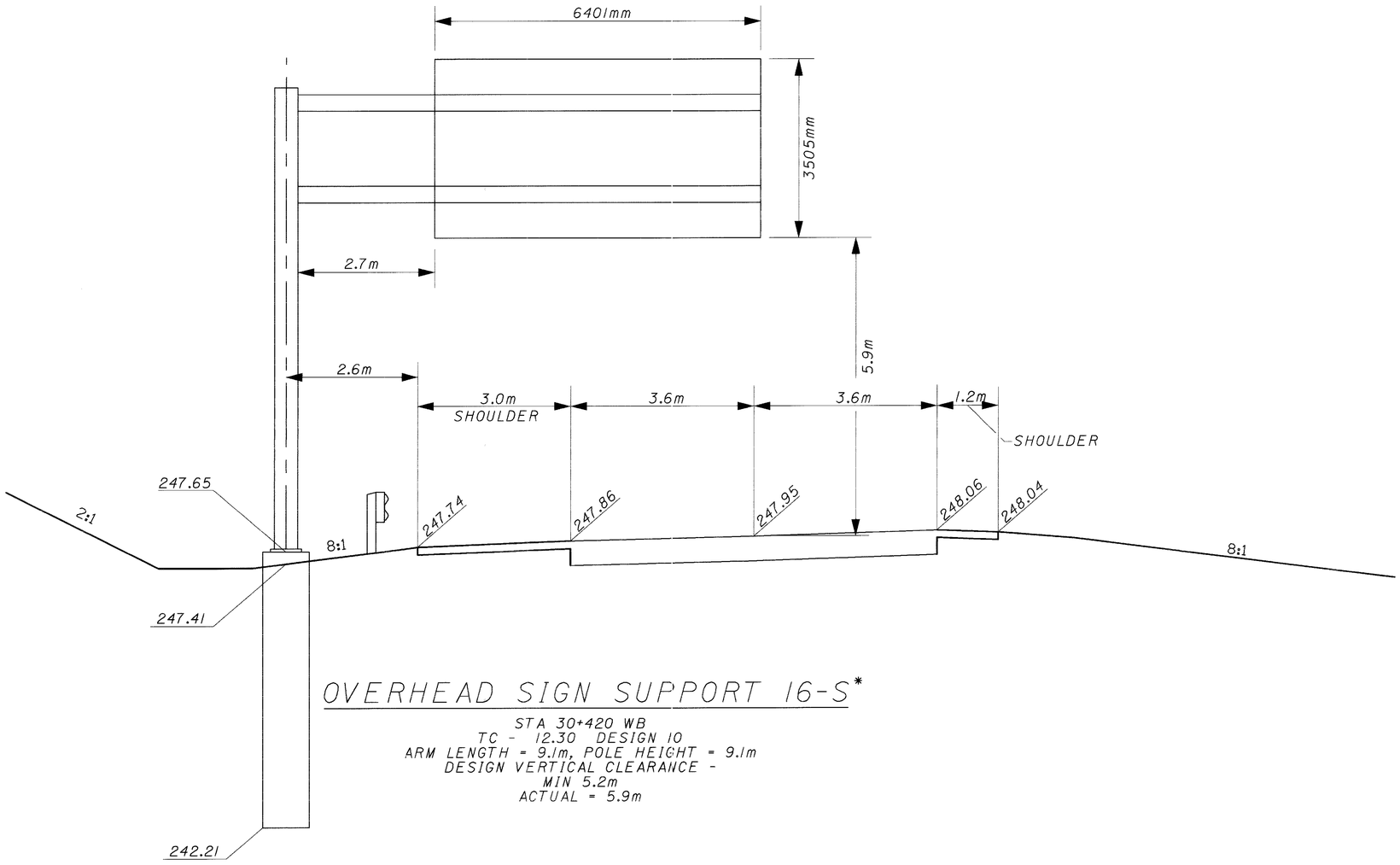

OVERHEAD SIGN SUPPORT 16-S*

STA 30+420 WB
TC - 12.30 DESIGN 10
ARM LENGTH = 9.1m, POLE HEIGHT = 9.1m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.9m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 30+420 WB US 33

ATH-33-30.981

766
956

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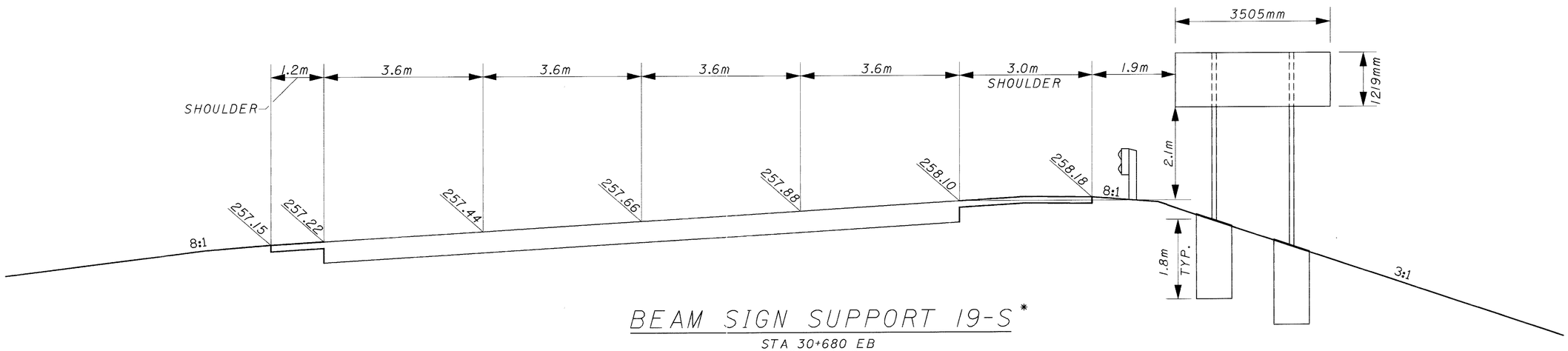

BEAM SIGN SUPPORT 19-S*

STA 30+680 EB
TC - 41.10
BEAM SIZE = W250x17.9

LT BEAM: BEAM CUT TO SUPPORT BASE BOTTOM = 4.204m
RT BEAM: BEAM CUT TO SUPPORT BASE BOTTOM = 4.788m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 30+680 EB US 33

ATH-33-30.981

767
956

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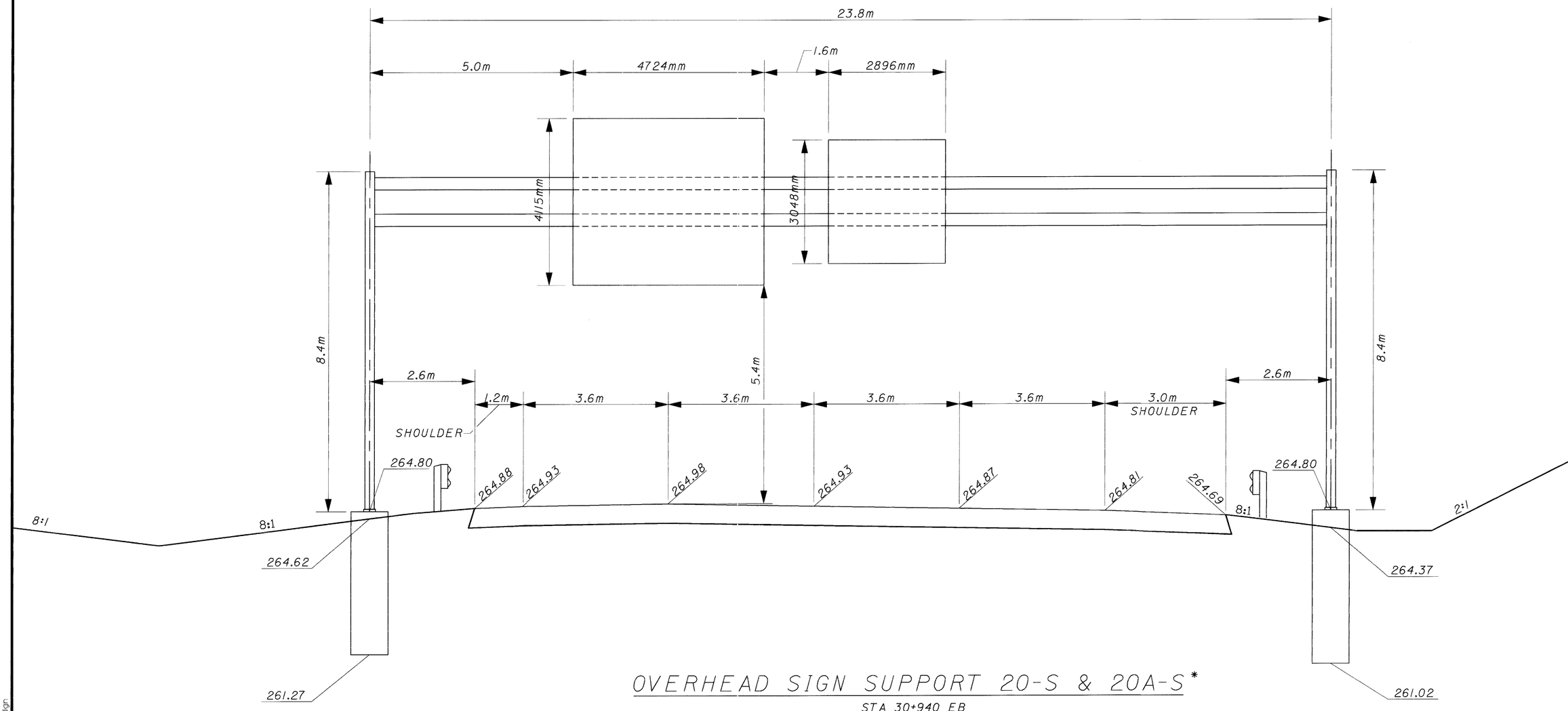

OVERHEAD SIGN SUPPORT 20-S & 20A-S*

STA 30+940 EB
TC - 7.65 DESIGN 8
SPAN LENGTH = 23.8m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.4m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 30+940 EB US 33

ATH-33-30.981

768
956

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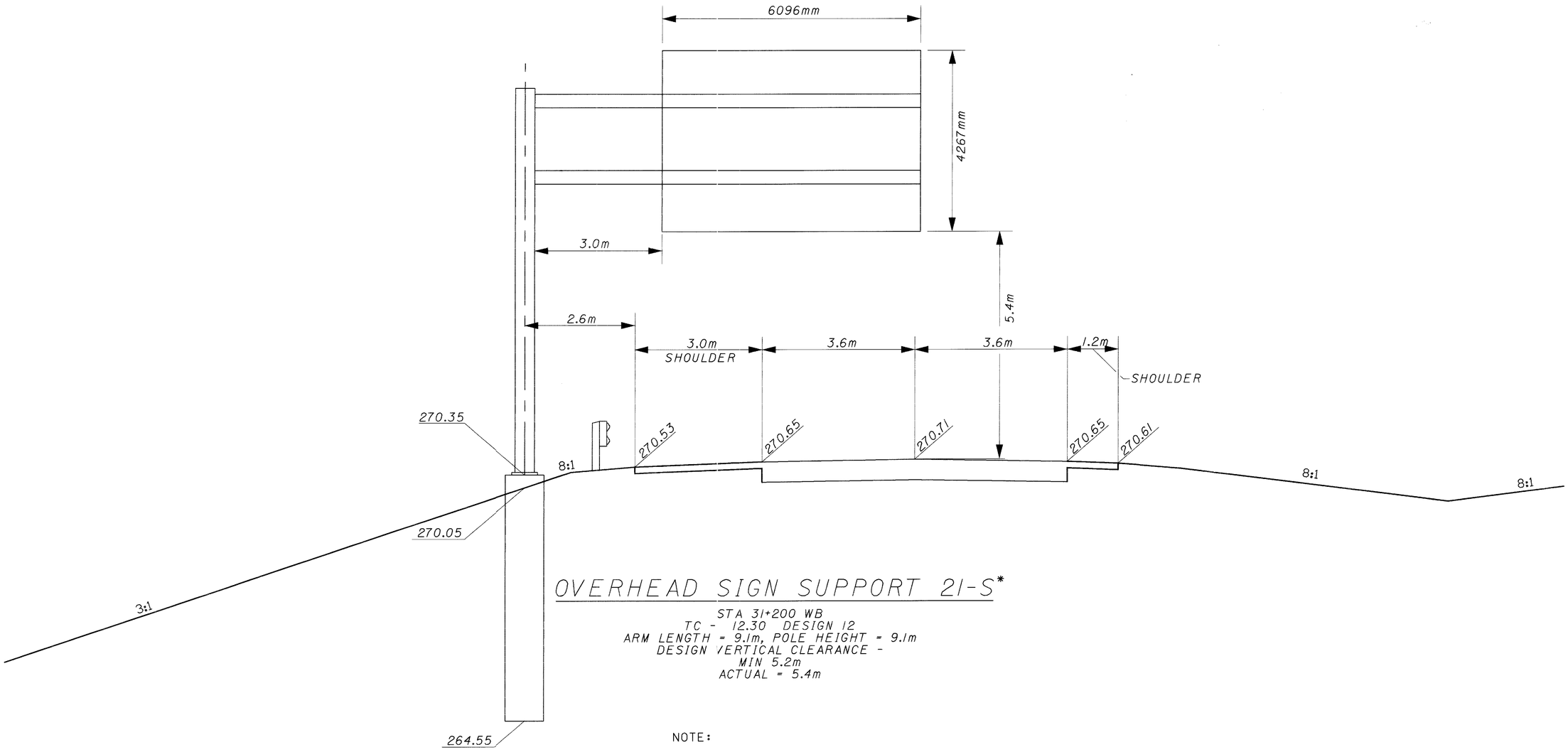

OVERHEAD SIGN SUPPORT 21-S*

STA 31+200 WB
TC - 12.30 DESIGN 12
ARM LENGTH = 9.1m, POLE HEIGHT = 9.1m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.4m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 31+200 WB US 33

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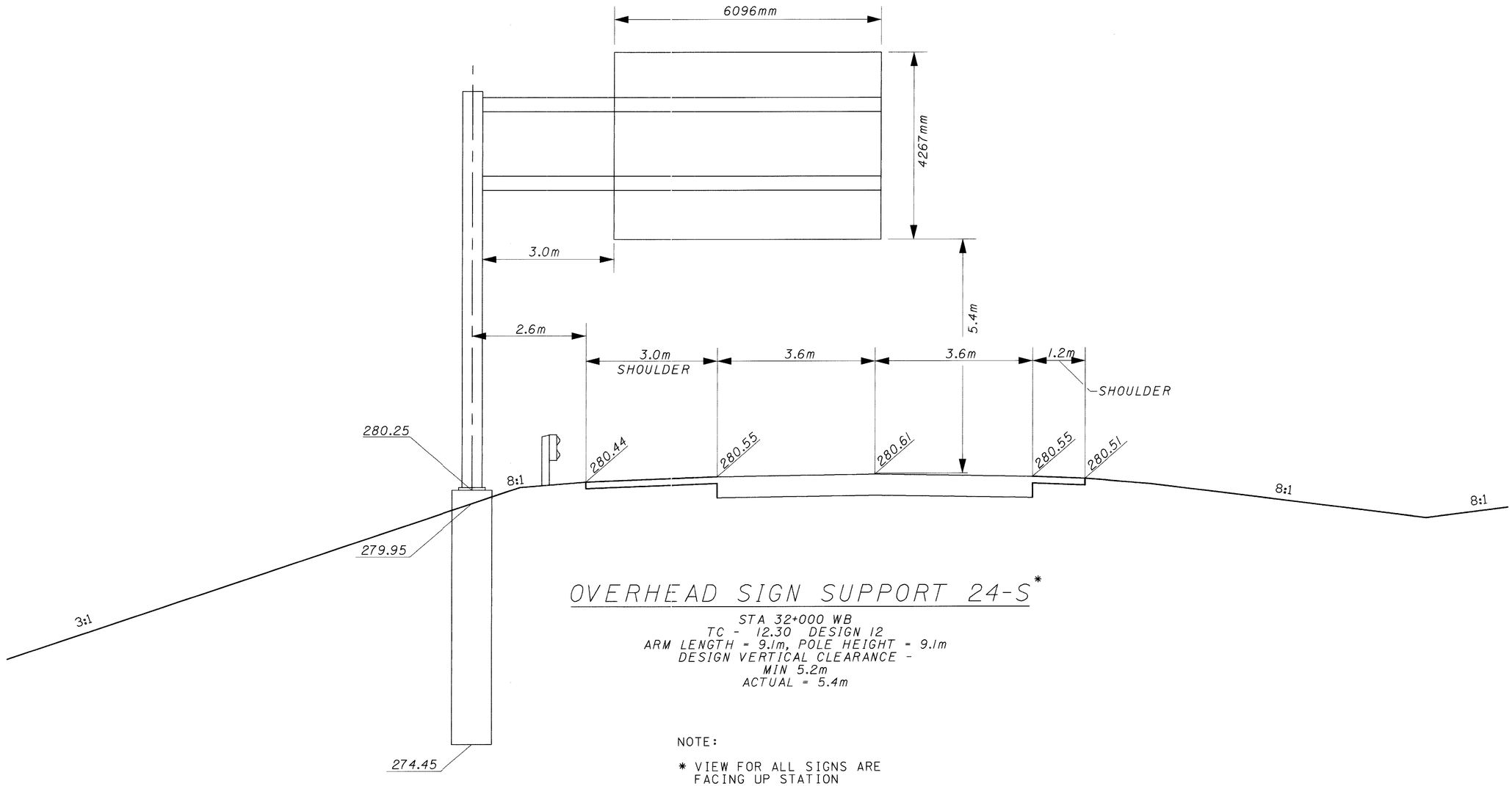

OVERHEAD SIGN SUPPORT 24-S*

STA 32+000 WB
TC - 12.30 DESIGN 12
ARM LENGTH = 9.1m, POLE HEIGHT = 9.1m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.4m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 32+000 WB US 33

ATH-33-30.981

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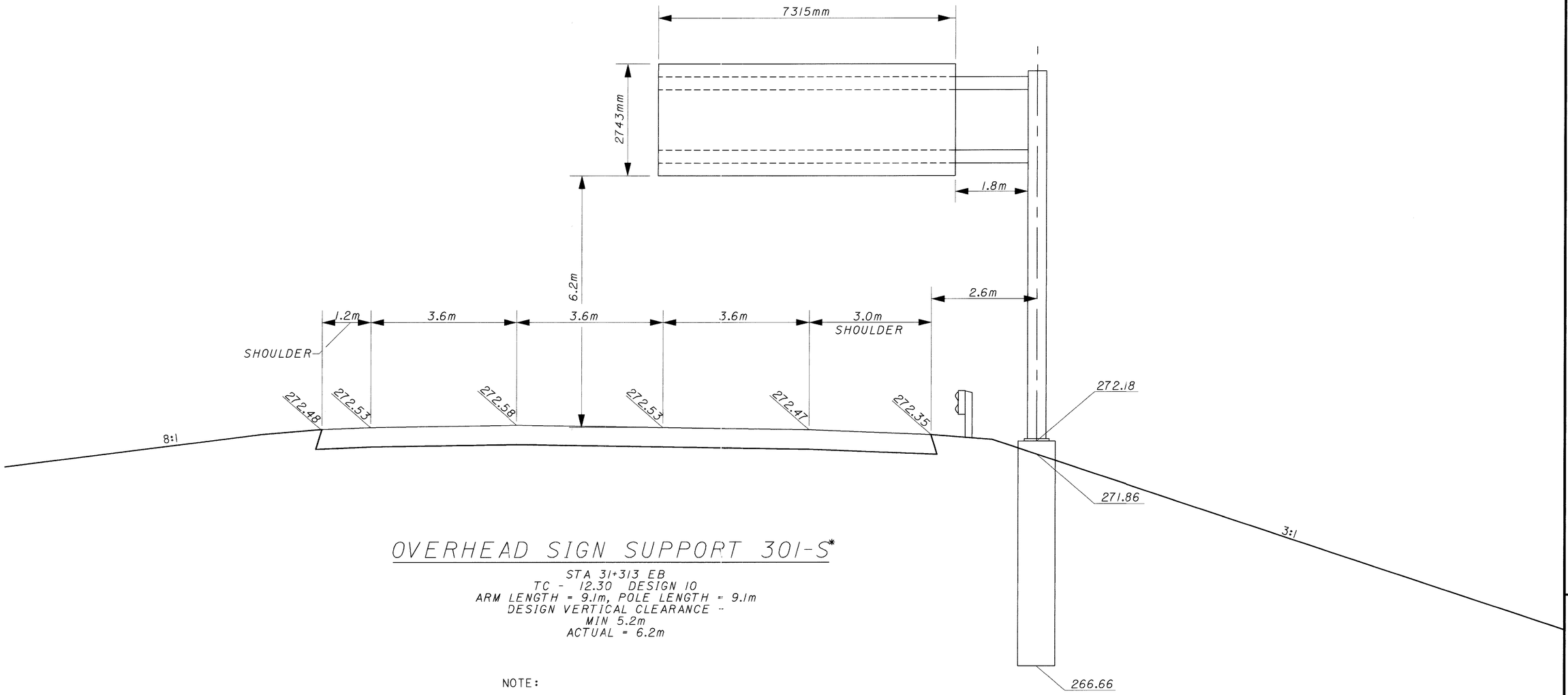

OVERHEAD SIGN SUPPORT 301-S*

STA 31+313 EB
TC - 12.30 DESIGN 10
ARM LENGTH = 9.1m, POLE LENGTH = 9.1m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 6.2m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 31+313 EB US 33

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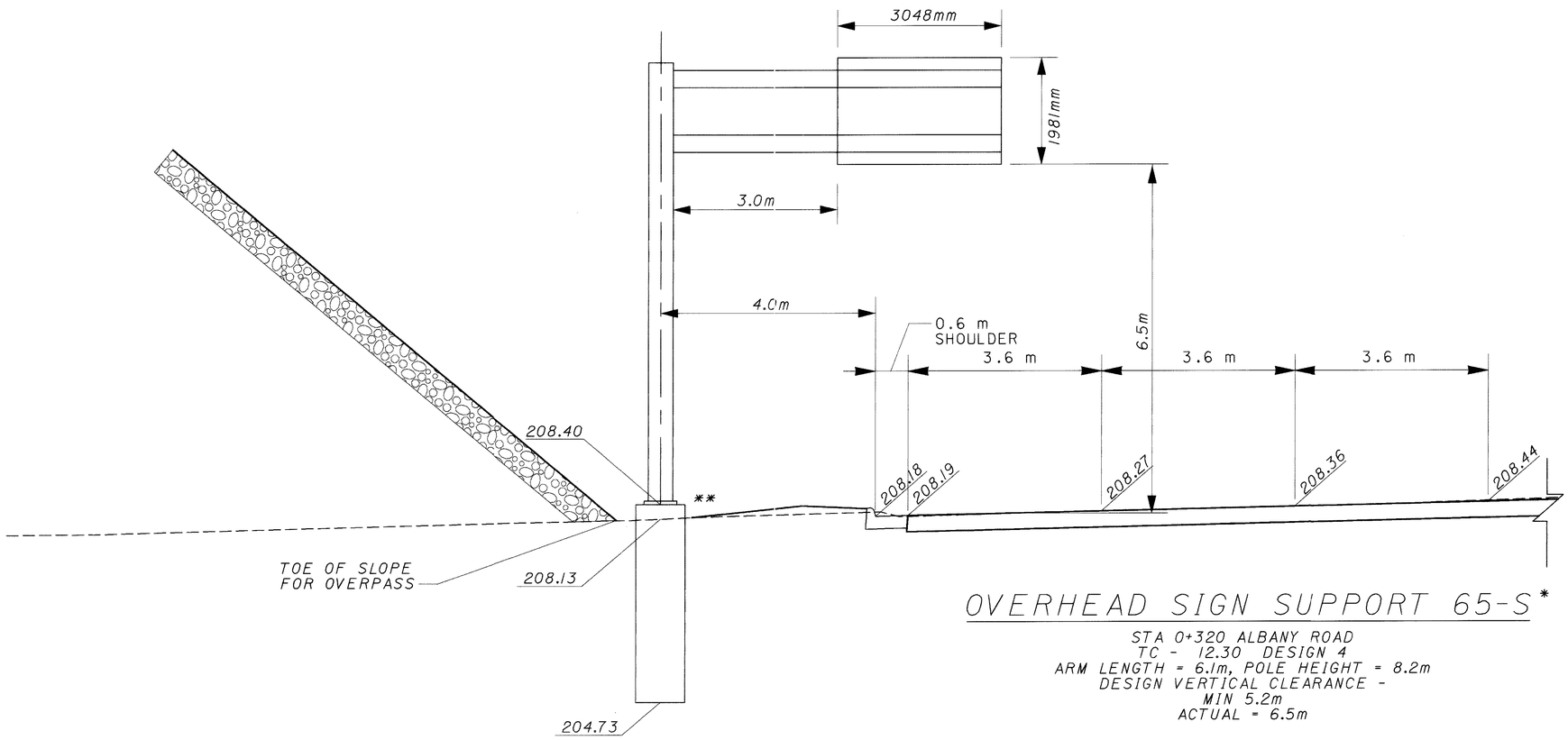

OVERHEAD SIGN SUPPORT 65-S*

STA 0+320 ALBANY ROAD
TC - 12.30 DESIGN 4
ARM LENGTH = 6.1m, POLE HEIGHT = 8.2m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 6.5m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 150mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 0+320 ALBANY ROAD

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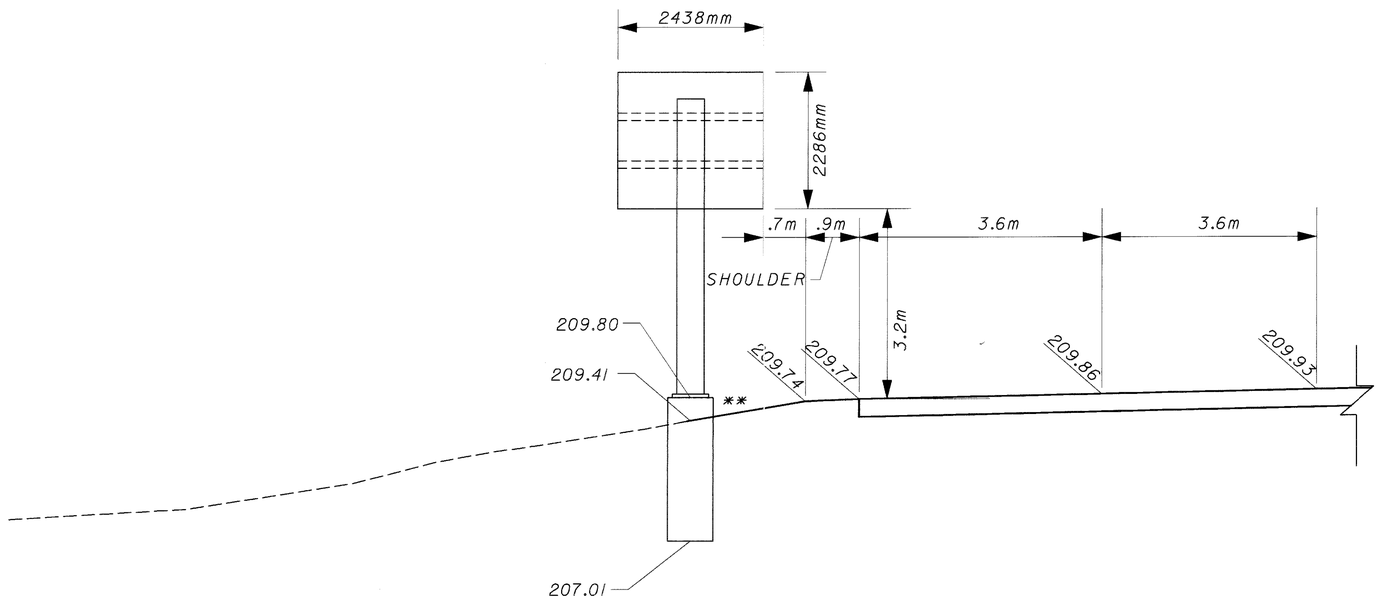

SEMI-OVERHEAD SIGN SUPPORT 72-S*

STA 0+264 ALBANY ROAD
TC - 9.10 DESIGN 2
ARM LENGTH = 2.44m, POLE HEIGHT = 5.0m
DESIGN VERTICAL CLEARANCE -
MIN 3.0m
ACTUAL = 3.2m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 150mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 0+264 ALBANY ROAD

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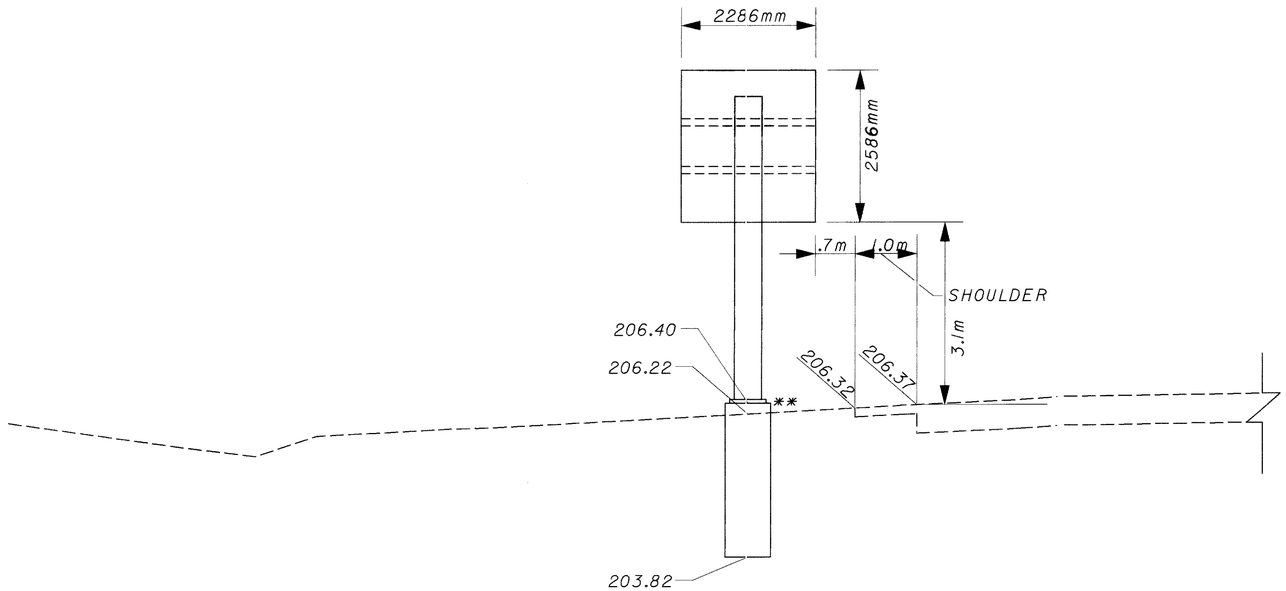

SEMI-OVERHEAD SIGN SUPPORT 68-S*

STA 0+406 ALBANY ROAD
TC - 9.10 DESIGN 2
ARM LENGTH = 2.25m, POLE HEIGHT = 5.0m
DESIGN VERTICAL CLEARANCE -
MIN 3.0m
ACTUAL = 3.1m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 150mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 0+406 ALBANY ROAD

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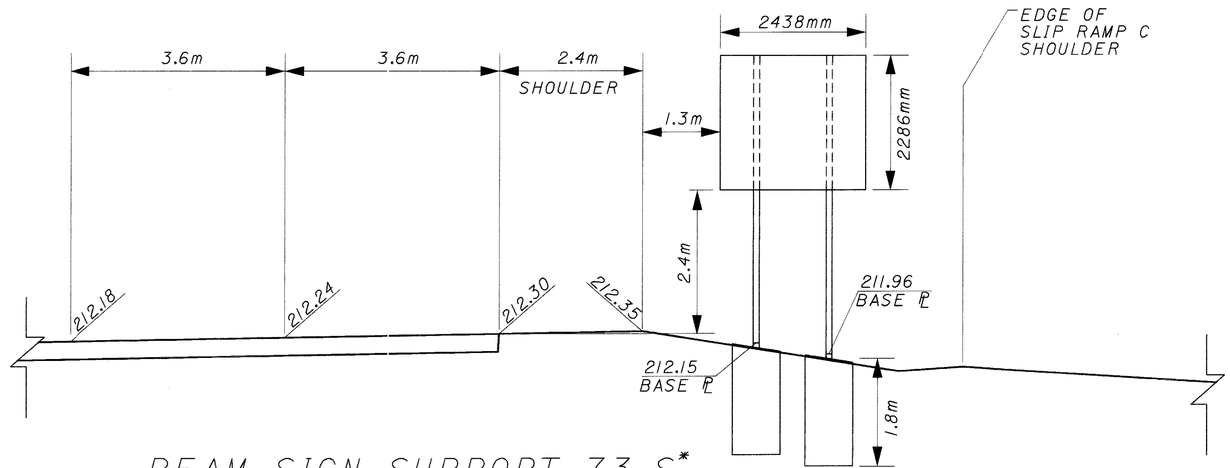
NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION



BEAM SIGN SUPPORT 73-S*

STA 0+210 ALBANY ROAD
TC = 41.10
BEAM SIZE = W250x17.9

LT BEAM: BEAM CUT TO BASE PLATE = 2.467m
RT BEAM: BEAM CUT TO BASE PLATE = 2.657m

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 0+210 ALBANY ROAD

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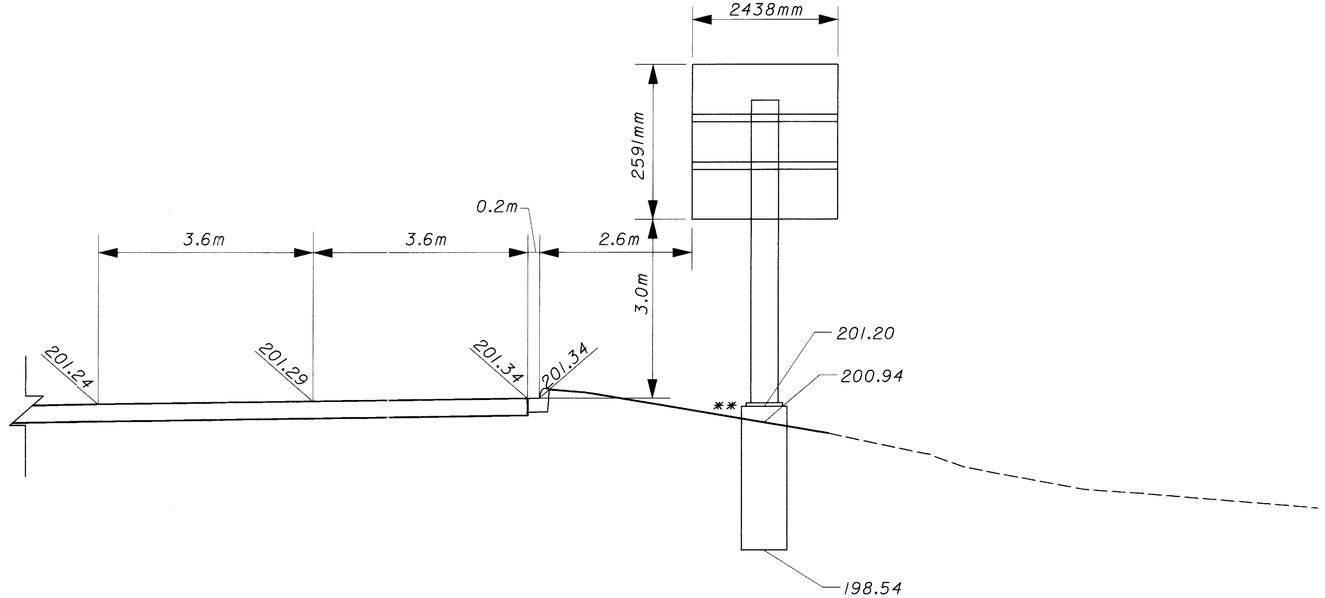
NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 150mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE



SEMI-OVERHEAD SIGN SUPPORT 74-S*

STA 0+232 ALBANY ROAD
TC - 9.10 DESIGN 2
ARM LENGTH = 2.40m, POLE HEIGHT = 5.0m
DESIGN VERTICAL CLEARANCE -
MIN 3.0m
ACTUAL = 3.0m

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 0+232 ALBANY ROAD

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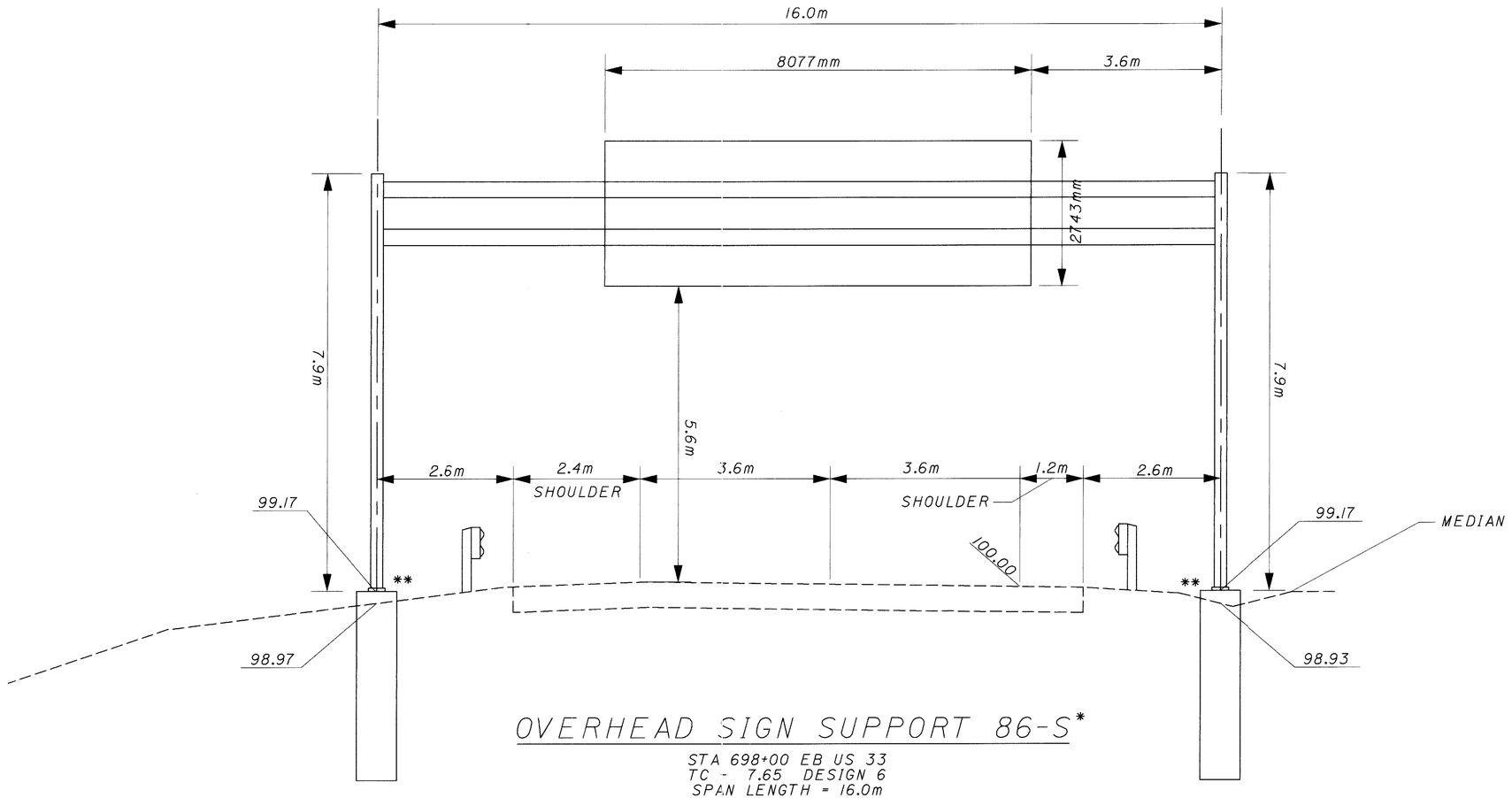

OVERHEAD SIGN SUPPORT 86-S*

STA 698+00 EB US 33
TC - 7.65 DESIGN 6
SPAN LENGTH = 16.0m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.6m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING JP STATION

** AT FINAL PLACEMENT A MINIMUM CLEARANCE OF 150 mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

ELEVATION REFERENCE: 100.00 m (ASSUMED)
LEFT EDGE OF EB PAVEMENT

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 698+00 EB US 33

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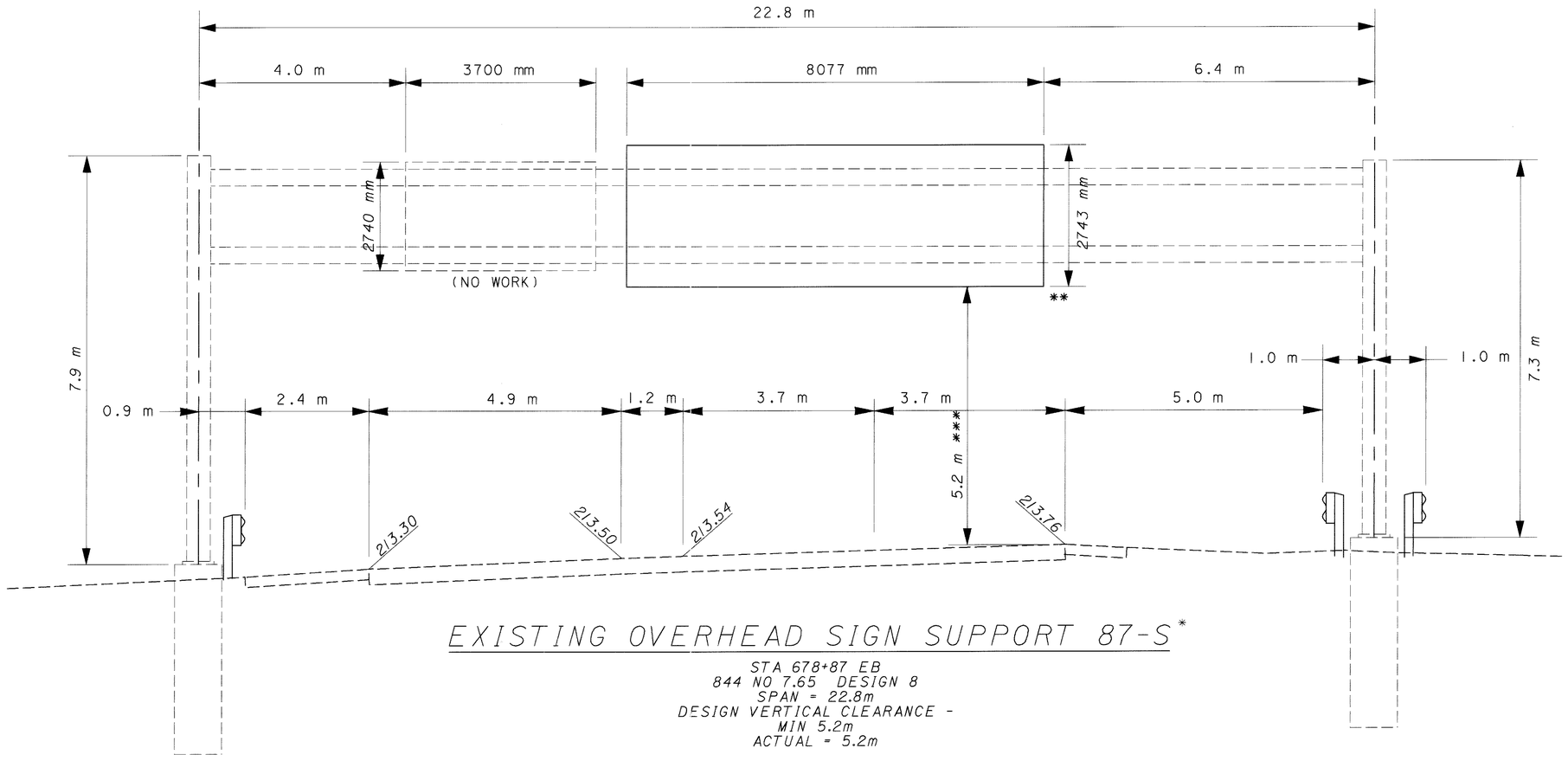


EXISTING OVERHEAD SIGN SUPPORT 87-S*

STA 678+87 EB
844 NO 7.65 DESIGN 8
SPAN = 22.8m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.2m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** 2 EXISTING SIGNS TO BE REMOVED

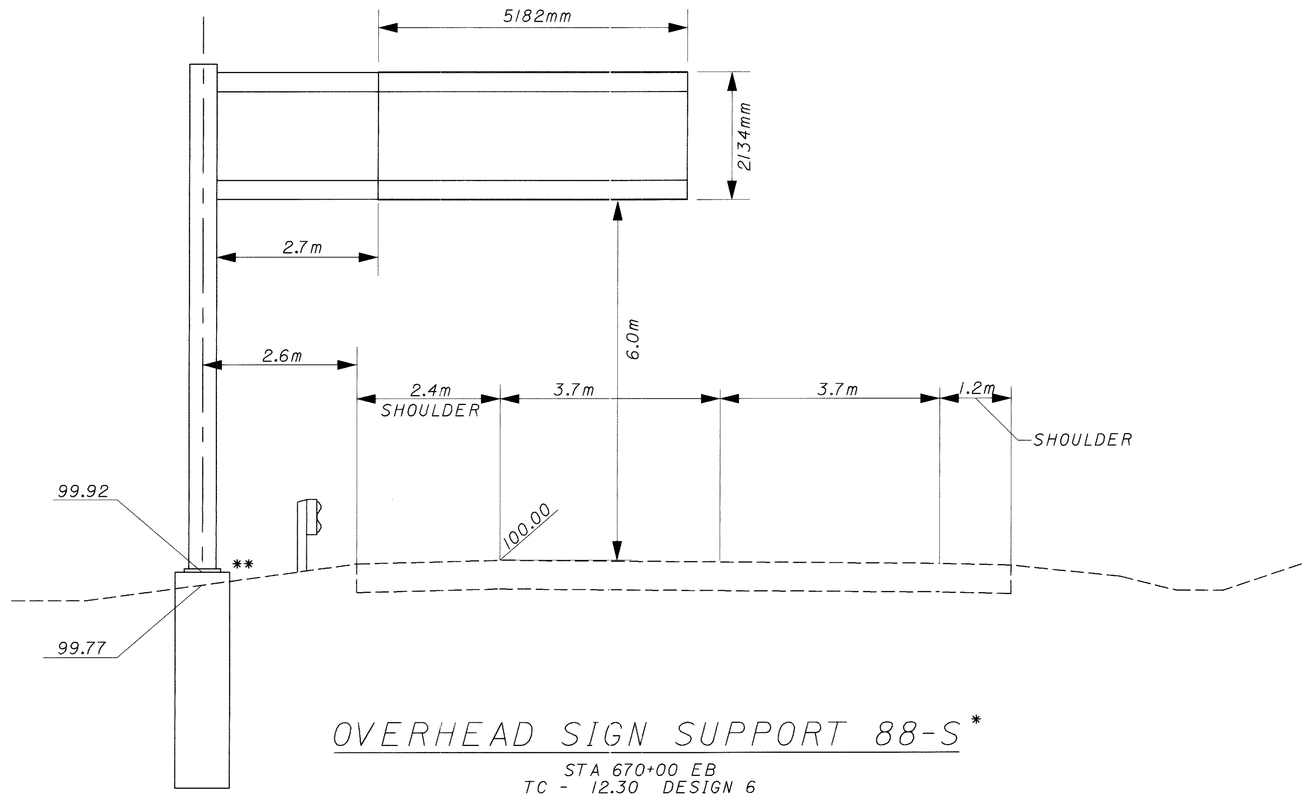
*** MAINTAIN 5.2m CLEARANCE

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

CALCULATED: AJP
CHECKED: RM

SIGN ELEVATION STA 678+87 EB US 33, EXISTING

ATH-33-30.981



OVERHEAD SIGN SUPPORT 88-S*

STA 670+00 EB
TC - 12.30 DESIGN 6
ARM LENGTH = 8.5m, POLE HEIGHT = 7.9m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 6.0m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 150 mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

ELEVATION REFERENCE: 100.00 m (ASSUMED)
LEFT EDGE OF EB PAVEMENT

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 670+00 EB US 33

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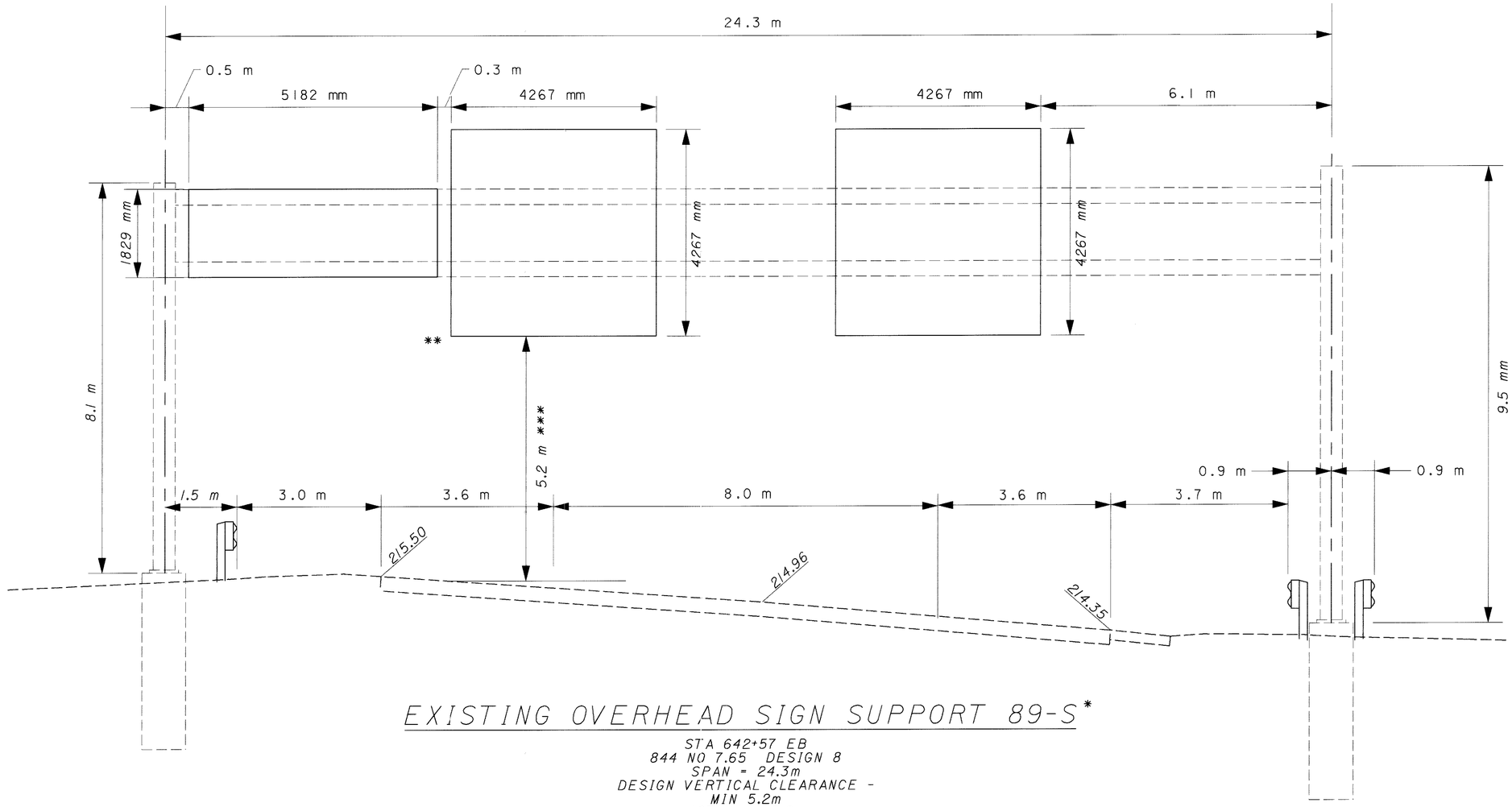

EXISTING OVERHEAD SIGN SUPPORT 89-S*

STA 642+57 EB
844 NO 7.65 DESIGN 8
SPAN = 24.3m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.2m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** 2 EXISTING SIGNS TO BE REMOVED

*** MAINTAIN 5.2m CLEARANCE

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

CALCULATED CHC
CHECKED RM

SIGN ELEVATION STA 642+57 EB US 33, EXISTING

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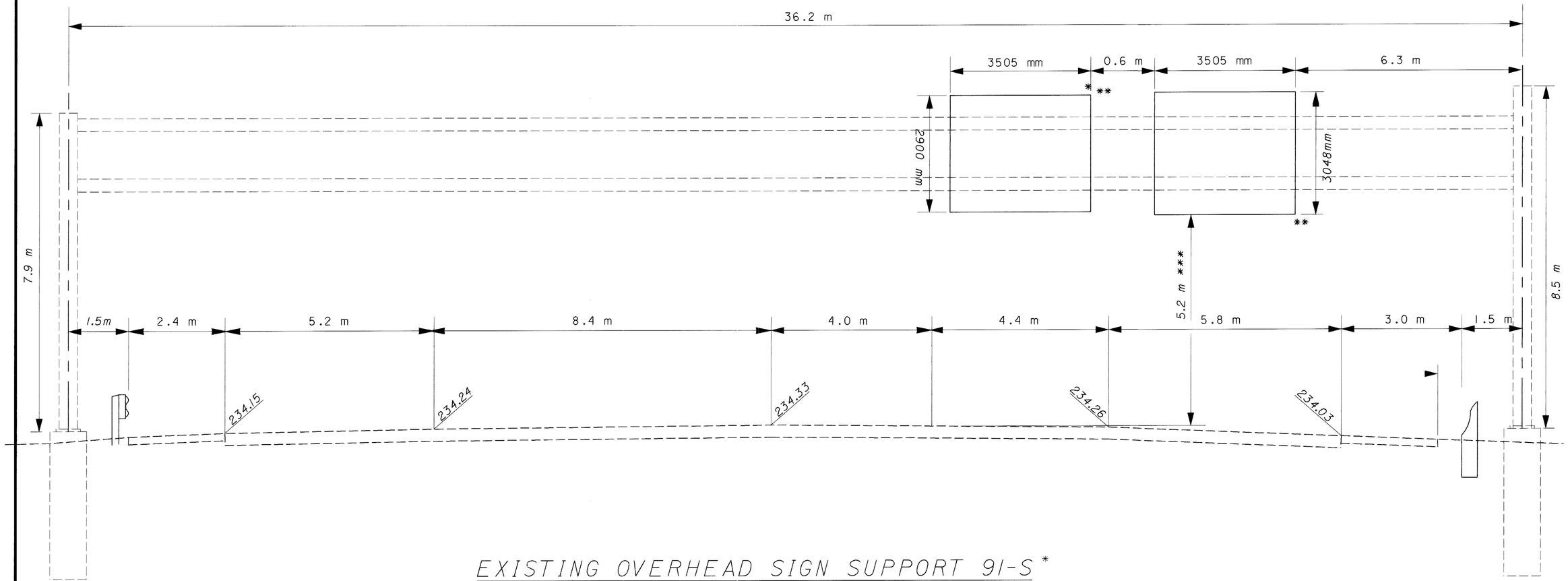

EXISTING OVERHEAD SIGN SUPPORT 91-S *

STA 595+00 ALBANY ROAD
844 NO 7.65 DESIGN 8
SPAN LENGTH = 36.2m
DESIGN VERTICAL CLEARANCE -
MIN 5.2m
ACTUAL = 5.2m

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** EXISTING SIGNS TO BE REMOVED

*** MAINTAIN 5.2m CLEARANCE

CALCULATED CHC
CHECKED RM

SIGN ELEVATION STA 595+00, ALBANY ROAD, EXISTING

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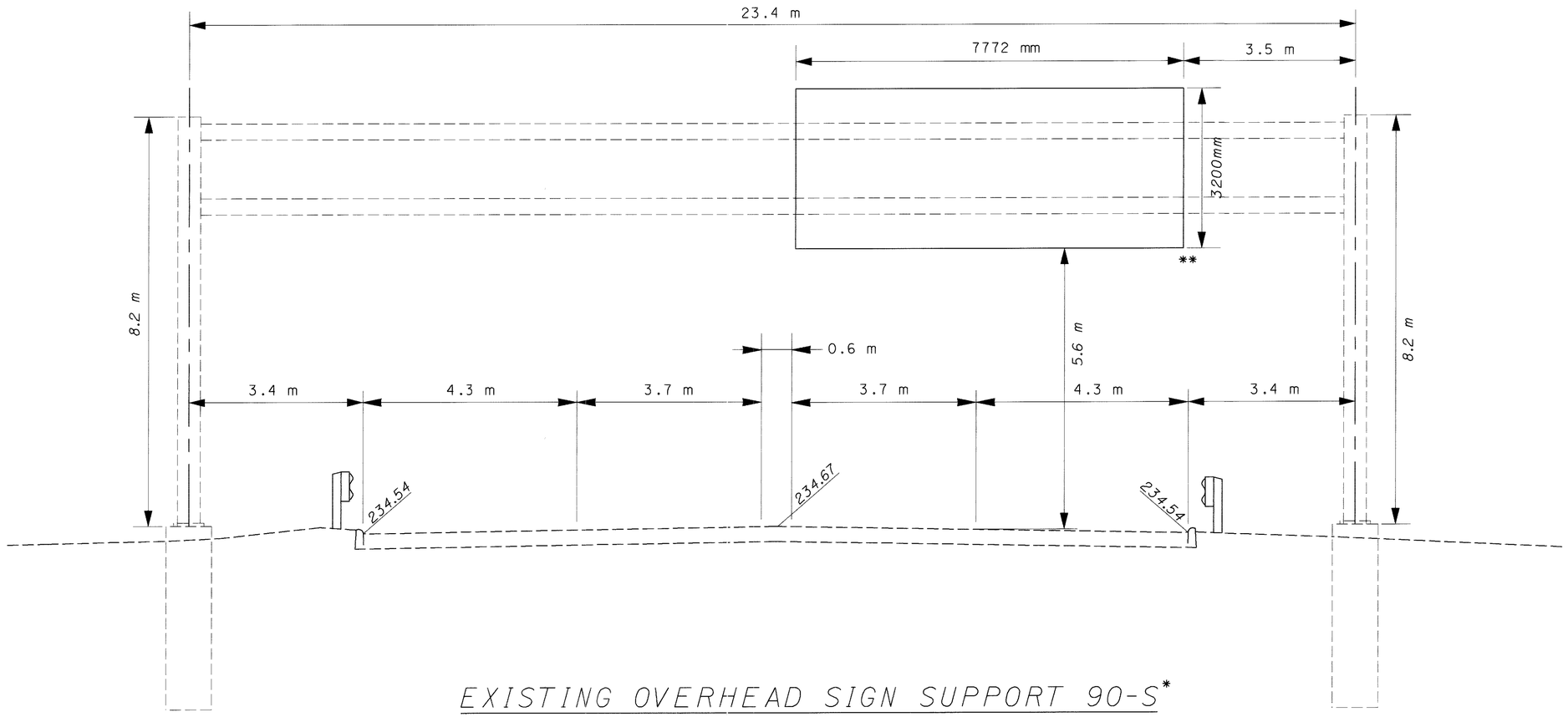

EXISTING OVERHEAD SIGN SUPPORT 90-S*

STA 575+00 ALBANY ROAD
844 No 7.65 DESIGN 8
SPAN LENGTH = 23.4 m
DESIGN VERTICAL CLEARANCE -
MIN 5.2 m
ACTUAL = 5.6m

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** EXISTING SIGNS TO BE REMOVED

CALCULATED CHC
CHECKED RM

SIGN ELEVATION STA 575+00, ALBANY ROAD, EXISTING

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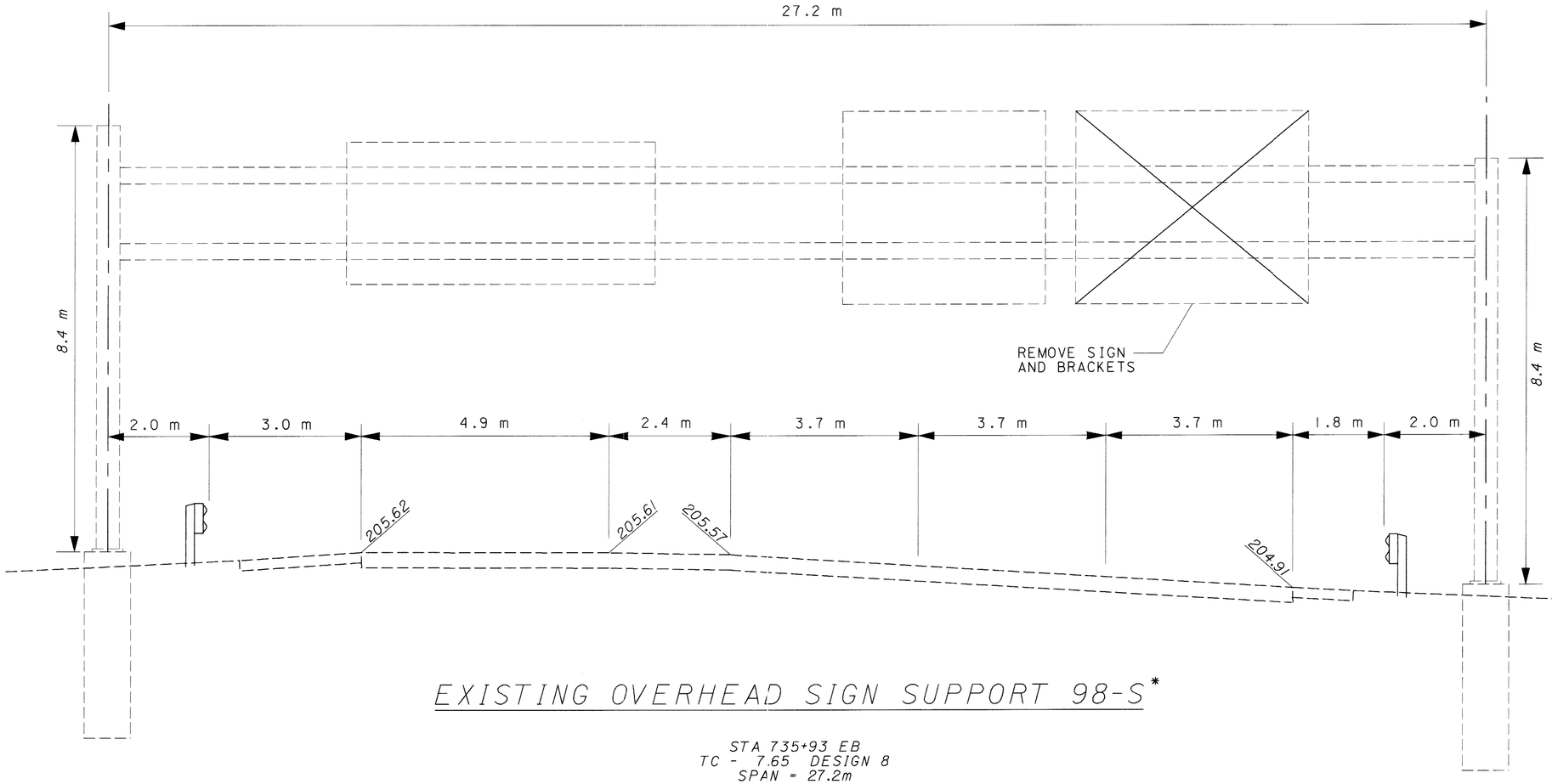

EXISTING OVERHEAD SIGN SUPPORT 98-S*

STA 735+93 EB
TC - 7.65 DESIGN 8
SPAN = 27.2m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

NOTE:
STATIONING USING ENGLISH UNITS, EXISTING LANE CONFIGURATION, EXISTING SIGNAGE AND OTHER DETAILS WERE OBTAINED FROM PROJECT ATH-33-16.17 AND ATH-33-17.77

CALCULATED CHC
CHECKED RM

SIGN ELEVATION STA 735+93 EB US 33, EXISTING

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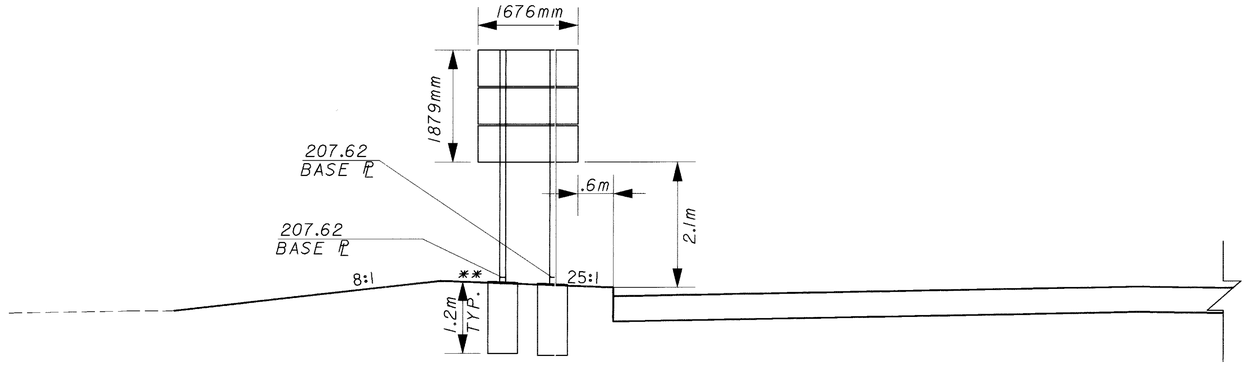

BEAM SIGN SUPPORT 66-S*

STA 0+365 ALBANY ROAD
TC - 41.10
BEAM SIZE = S100x11.5

LT BEAM: BEAM CUT TO BASE PLATE = 1.862m
RT BEAM: BEAM CUT TO BASE PLATE = 1.862m

NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 25mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE

CALCULATED AJP
CHECKED RM

SIGN ELEVATION STA 0+365 ALBANY RD

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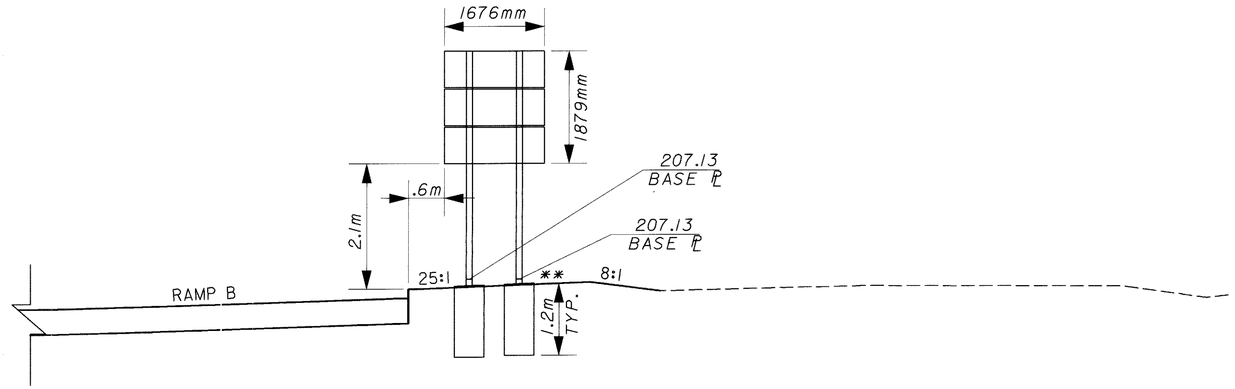
NOTE:

* VIEW FOR ALL SIGNS ARE FACING UP STATION

** AT FINAL GRADING A MINIMUM CLEARANCE OF 25mm SHOULD BE MAINTAINED BETWEEN THE GRADE AND THE TOP OF THE POLE BASE



BEAM SIGN SUPPORT 67-S*

STA 0+976 RAMP B
TC - 41.10
BEAM SIZE = S100x11.5

LT BEAM: BEAM CUT TO BASE PLATE = 1.870m
RT BEAM: BEAM CUT TO BASE PLATE = 1.870m

CALCULATED A.V.P.
CHECKED R.M.

SIGN ELEVATION STA 0+976 RAMP B

ATH-33-30.981

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ACCEPTANCE OF TRAFFIC SIGNAL

ALL SIGNALS SHALL BE INSPECTED BY THE OFFICE OF TRAFFIC ENGINEERING. THE SIGNAL SHALL BE INSPECTED JUST PRIOR TO THE TEN DAY PERFORMANCE TEST SPECIFIED IN CMS 632.27(6). ALL OTHER CONSTRUCTION PAY ITEMS SHALL BE COMPLETED INCLUDING THE ELECTRICAL TESTS SPECIFIED IN 632.27(1)-(4) AND FUNCTIONAL TEST SPECIFIED IN 632.27(5). ITEMS IDENTIFIED DURING THE INSPECTION AS DEFICIENT SHALL BE CORRECTED AND THE SIGNAL REINSPECTED PRIOR TO INITIATION OF THE TEN DAY BURN TEST.

AT THE INSPECTION, ALL DEFICIENCIES SHALL BE AVAILABLE TO ANYONE UPON REQUEST. THE OFFICE OF TRAFFIC ENGINEERING SHALL PREPARE THE FORMAL REPORT. INITIATION OF THE TEN DAY PERFORMANCE TEST SHALL NOT PROCEED UNTIL ALL DEFICIENCIES OF AN OPERATIONALLY CRITICAL NATURE ARE CORRECTED. UPON SUCCESSFUL COMPLETION OF THE BURN TEST, THE CONSTRUCTION FIELD ENGINEER SHALL NOTIFY THE MAINTAINING AGENCY OR DEPARTMENT IN WRITING THAT IT IS NOW RESPONSIBLE FOR MAINTENANCE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DEFECTS IN WORKMANSHIP AND MATERIALS BEYOND NORMAL MAINTENANCE UNTIL THE PROJECT IS ACCEPTED.

THE CITY OF ATHENS SHALL ASSUME RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF A CONTRACT-INSTALLED TRAFFIC SIGNAL UPON WRITTEN NOTIFICATION OF TRANSFER OF MAINTENANCE RESPONSIBILITIES BY THE DISTRICT CONSTRUCTION ENGINEER.

TRAFFIC CONTROL SYSTEM GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-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. EQUIPMENT, MATERIAL, AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER AND ASSOCIATED EQUIPMENT, AND DETECTOR UNITS.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), TWO UNIFORMED LAW ENFORCEMENT OFFICERS AND TWO OFFICIAL PATROL CARS WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC DURING THE HANGING OF THE MESSENGER WIRE PORTION OF THE TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CARS SHALL BE PUBLIC SAFETY VEHICLES AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

OHIO STATE HIGHWAY PATROL
COLUMBUS ROAD
ATHENS, OHIO 45701
PHONE 740-593-6611

OR

ATHENS POLICE DEPARTMENT
11 NORTH COLLEGE STREET
ATHENS, OHIO 45701
PHONE 740-592-3313

LAW ENFORCEMENT OFFICERS WITH PATROL CARS REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR - 8 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL GENERAL NOTES

ATH-33-30.981

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER WILL BE OBTAINED FROM AMERICAN ELECTRIC POWER CO. AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED WILL BE 120 VOLTS.

CONTINGENCY QUANTITIES

THE CONTRACTOR WILL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

DEPARTMENT OF INDUSTRIAL RELATIONS, INSPECTION

THERE IS A RULE THAT ALL NEW OR RELOCATED ELECTRIC SERVICE ENCLOSURES ARE TO BE INSPECTED BY A LICENSED STATE INSPECTOR PRIOR TO CONNECTION TO A UTILITY DISTRIBUTION LINE. THIS RULE IS NOW BEING ENFORCED BY THE UTILITY COMPANIES AND THE OHIO DEPARTMENT OF INDUSTRIAL RELATIONS. THIS IS A NEW SITUATION FOR ODOT BECAUSE STATE INSPECTIONS ARE NOW BEING REQUIRED FOR TRAFFIC CONTROL DEVICES AND LIGHTING INSTALLATIONS.

THE CONTRACTOR SHALL APPLY FOR THE INDUSTRIAL RELATION INSPECTION(S); PAY THE APPROPRIATE FEE(S) TO THE INDUSTRIAL RELATIONS DEPARTMENT, AND ADVISE ROADWAY SERVICES ENGINEER, DON JOHNSON, TELEPHONE (740)-373-0212 OF THE TIME OF THE INSPECTION(S) SO THAT HE MAY HAVE A REPRESENTATIVE IN ATTENDANCE. IT IS TO BE NOTED THAT THE INDUSTRIAL RELATIONS INSPECTION DOES NOT SUBSTITUTE FOR ODOT'S FINAL INSPECTION, NOR DOES IT SUPERSEDE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

THE COST OF THE INDUSTRIAL RELATIONS INSPECTIONS (APPROXIMATELY $100.00) SHALL BE CONSIDERED AS INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE TRAFFIC CONTROL DEVICES.

DOCUMENTATION

THE CONTRACTOR SHALL PROVIDE AN "AS BUILT" DRAWING INDICATING ANY REVISIONS TO THE ORIGINAL OPERATION PLAN OR QUANTITIES. THE DRAWING SHALL BE SUBMITTED TO TOM CAMDEN WITHIN TWO (2) WEEKS FOLLOWING THE ENERGIZING OF THE TRAFFIC SIGNAL. SUBMIT DRAWINGS TO ODOT DISTRICT 10, 338 MUSKINGUM DRIVE, MARIETTA, OHIO 45750.

A COPY OF THE "AS BUILT" DRAWING SHALL BE SUBMITTED TO ROGER BAIL, CITY OF ATHENS, 387 W. STATE ST, ATHENS, OH 45701

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

A) NEW SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

B) THE EXISTING SIGNAGE AT POMEROY RD SEE MAINTENANCE OF TRAFFIC NOTES, SHEET 41 FOR DETAILS

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT THE NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT WILL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURES AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE FOR POLICE SERVICES AND MAINTENANCE SERVICES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICES ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE INSTALLATION OF THE NEW SIGNAL SYSTEM.

ANY VEHICULAR TRAFFIC SIGNAL HEAD WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COSTS RESULTING FROM THE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

UTILITY OWNERSHIP

THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764 TWO WORKING DAYS BEFORE DIGGING.

THE UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT: CAN BE FOUND IN THE GENERAL NOTES.

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL GENERAL NOTES

ATH-33-30.981

ITEM 625 PULL BOX, AS PER PLAN

THE PULL BOX ASSEMBLY SHALL BE AN ODOT STANDARD 713.08 EXCEPT THAT ONLY CAP SCREWS, WITHOUT COUNTERSINKING, SHALL BE USED TO HOLD THE LID IN PLACE.

ITEM 632 VEHICULAR SIGNAL HEAD, 3 & 5 SECTION, 300 mm LENS, 1 WAY, AS PER PLAN

ALL VEHICULAR SIGNAL HEADS SHALL BE SUPPLIED WITH GLASS LENSES AND A FIVE PAIR (FOR 3 OR 4 SECTION HEADS) OR SIX PAIR (FOR 5 SECTION HEADS), BARRIER TYPE TERMINAL BLOCK (NO QUICK-DISCONNECT SLIP-ON CONNECTORS ACCEPTABLE) THAT IS SCREW MOUNTED AT EACH END AND LOCATED IN THE RED SECTION. THE TERMINAL BLOCK SHALL MEET UL E62622, CSA LR15364, BE IEC COMPLIANT, BE RATED FOR 30 AMPS, AND SHALL HAVE A BREAKDOWN VOLTAGE OF 7500V RMS (SIMILAR TO BUSSMAN CIRCUIT COMPONENT SERIES TB345). THE LAMP SOCKET SHALL BE MADE FROM A HEAT RESISTANT MATERIAL AND SHALL HAVE A BRASS LAMP SOCKET SHELL. THE ALZAK REFLECTOR SHALL BE HELD IN PLACE BY A METAL HOUSING. NO PLASTIC HOUSING IS PERMITTED. ALL BOLTS AND WASHERS FOR SECURING SECTIONS TOGETHER, ALL MOUNTING HARDWARE FOR THE LENS, ALL DOOR LATCHING BOLTS, AND ALL HINGE PINS SHALL BE STAINLESS STEEL. DOOR LATCHING BOLTS SHALL FIT THROUGH A SLOT IN THE DOOR PER CITY OF COLUMBUS, TRAFFIC ENGINEERING DIVISION, SPECIFICATIONS. CONTACT THE DIVISION'S SIGNAL MANAGEMENT SECTION FOR SPECIFICATION DETAILS.

AN ALUMINUM, WEATHERPROOF TRI-STUD SINGLE WIRE ENTRANCE WITH THREE (3) 8mm X 36mm (5/16" x 1-7/16") STAINLESS STEEL STUDS, LOCK WASHERS, AND HEX NUTS SHALL BE PROVIDED WITH EACH SIGNAL HEAD. THE WEATHER HEAD ENTRANCE SHALL HAVE A MINIMUM INSIDE DIAMETER OPENING OF 38mm (1-1/2"), INCLUDING ANY RUBBER OR PLASTIC GROMMET THAT PROTECTS THE CABLE. THE OPENING AT THE TRI-STUD END MAY BE IRREGULARLY SHAPED, BUT IT MUST HAVE A MINIMUM OPENING OF 38mm (1-1/2") AT ITS WIDEST POINT AND A MINIMUM OPENING OF 17mm (11/16") AT ITS NARROWEST POINT. THE TRI-STUD WASHER MUST HAVE THE SAME OPENING AT THE ENTRANCE. THE TOP OF THE ENTRANCE SHALL HAVE ONLY ONE (1) CLEVIS HOLE AND IT MUST ACCOMMODATE A 16mm (5/8") STAINLESS STEEL CLEVIS PIN. THE CLEVIS ATTACHMENT, MEASURED AT THE CENTER OF THE CLEVIS HOLE, SHALL BE NO GREATER THAN 16mm (5/8") THICK OR GREATER THAN 45mm (1-3/4") IN WIDTH. (SIMILAR TO ENGINEERED CASTINGS MODEL # 2084-T1)

A RIGID SIGNAL HEAD MOUNTING SYSTEM UTILIZING A CLAMP MOUNT, SIMILAR TO PELCO PART AB-0137L SHALL BE USED TO ATTACH THE SIGNAL HEAD TO THE MAST ARM. THE HANGER FINISH SHALL BE GALVANIZED FOR STEEL OR IRON MATERIALS AND NATURAL FOR ALUMINUM MATERIALS.

ITEM 632 DETECTOR LOOP, AS PER PLAN

IF AN EXISTING PAVED SHOULDER IS 76mm (3") THICK OR MORE, THEN THE LOOP WIRE MAY BE INSTALLED IN A SAW SLOT CUT ACROSS THE SHOULDER. LOOP WIRE SHALL BE INSTALLED AS PER STANDARD DRAWING TC-82.10 WHERE SHOULDERS ARE LESS THAN 76mm (3") THICK. THE CONTRACTOR SHALL TAKE CARE IN THE PLACEMENT OF LOOP SEALANT SO THAT ALL SEALANT IS PLACED IN THE SAW SLOT. THE LOOP WIRE SHALL BE TWISTED THREE (3) TO FIVE (5) TURNS PER FOOT FROM THE EXITING LOOP SPOT TO THE HOMERUN CABLE SPLICE. ONE 19mm (6/6") TO 25mm (1") RIGID CONDUIT RACEWAY SHALL BE USED FOR EACH LOOP LEAD-IN. RACEWAYS AND LOOP WIRE LEAD-INS SHALL BE SPACED 305mm (ONE FOOT) APART.

ITEM 632 COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN,

ALL SIGNAL HEADS THAT ARE INSTALLED PRIOR TO BEING USED TO CONTROL TRAFFIC SHALL BE COVERED. IF PLASTIC BAGS ARE USED, ONLY HEAVY DUTY PLASTIC BAGS SHALL BE PERMITTED. TWO BAGS PER HEAD SHALL BE USED. THE BAGS SHALL BE SECURELY LASHED DOWN SO THE WIND DOES NOT RIP THEM FROM THE SIGNAL HEAD. ALL SIGNAL HEADS WHILE COVERED SHALL BE DARK EITHER BY REMOVING, UNSCREWING, OR DISCONNECTING THE POWER TO THE BULBS. NO COVERED HEAD SHALL BLOCK THE VIEW OF AN OPERATING HEAD. ANY EXISTING VEHICULAR HEAD THAT IS NOT FUNCTIONAL SHALL BE REMOVED IMMEDIATELY OR COVERED.

ITEM 633 CONCRETE FOR CABINET FOUNDATION, AS PER PLAN

THE 12 INCH FOUNDATION HEIGHT AS SHOWN ON TC-83.20, CONTROLLER FOUNDATION, SHALL BE 4 INCHES. THE OVERALL DIMENSIONS SHALL BE 48"W x 30"D x 40"H. THE COST AND INSTALLATION OF THE ANCHOR BOLTS AND CONDUIT ELLS SHALL BE INCIDENTAL TO THE COST OF THIS ITEM.

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL GENERAL NOTES

ATH-33-30.981

UNDER DRAIN FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11M FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 6M.

AN ESTIMATED QUANTITY OF 70M OF ITEM 603, 100 MM CONDUIT, TYPE E IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION FOR STORAGE, AS PER PLAN

THE EXISTING TRAFFIC SIGNAL INSTALLATION, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH 632.25. THE FOLLOWING ITEMS SHALL BE SALVAGED IN GOOD CONDITION AND DELIVERED TO THE CITY OF ATHENS, SERVICE GARAGE: 387 W. STATE ST, ATHENS, OH. CONTACT ROGER BAIL AT (740)-592-3343

4 SIGNAL STRAIN POLES
8 VEHICULAR SIGNAL HEADS
THE CONTROLLER, CABINET AND ALL CABINET EQUIPMENT

POLE FOUNDATIONS ARE TO BE REMOVED TO A DEPTH OF 300MM BELOW FINISHED GROUND LEVEL. THE CONTROLLER WORK PAD SHALL BE REMOVED. THE EXISTING SIGNAL IS TO BE RETAINED IN OPERATION UNTIL CHANGE OVER TO THE NEW SYSTEM AT WHICH TIME THE EXISTING SIGNAL HEADS ARE TO BE COVERED OR REMOVED. ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION FOR STORAGE, AS PER PLAN", EACH.

ITEM 632 - LOOP DETECTOR UNITS, DELAY AND EXTENSION TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732.07 AND 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACTS SHALL BE INCLUDED IN THE WIRING HARNESS.

THE UNIT SHALL BE SELF TUNING.

THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WIRING SHALL ALLOW READY REPLACEMENT WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN THE FINAL PARAGRAPH OF 732.07.

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TRAFFIC SIGNAL GENERAL NOTES

ATH-33-30.981

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ITEM 633 8 PHASE CABINET, AS PER PLAN

IN ADDITION TO THE OTHER REQUIREMENTS OF ODOT 633 & 733, THE CABINET ASSEMBLY SHALL BE COMPLETELY WIRED (INCLUDES ALL PANELS & HARNESSES) FOR 8 PHASE OPERATION. THE CABINET ASSEMBLY SHALL MEET ALL THE REQUIRMENTS OF NEMA TS-1. THE CABINENT SHALL BE BASE MOUNTED.

ITEM 633 4 PHASE CABINET, AS PER PLAN

IN ADDITION TO THE OTHER REQUIREMENTS OF ODOT 633 & 733, THE CABINET ASSEMBLY SHALL BE COMPLETELY WIRED (INCLUDES ALL PANELS & HARNESSES) FOR 4 PHASE OPERATION. THE CABINET ASSEMBLY SHALL MEET ALL THE REQUIRMENTS OF NEMA TS-1. THE CABINENT SHALL BE BASE MOUNTED.

SYSTEM DETECTORS "A1" THROUGH "D2" CAN BE HARDWIRED DIRECTLY TO THE SCREW TERMINALS ON THE T10 BOARD. ALL "D" HARNESS WIRES SHALL BE ROUTED THROUGH A LABELLED TERMINAL STRIP WHICH IS MOUNTED ON THE LEFT SIDE OF THE CABINET.

REQUIREMENTS COMMON TO BOTH CABINETS

IN ADDITION TO THE ABOVE SPECIFICATIONS, AND OTHER SPECIFICATION DOCUMENTS, THE CABINET ASSEMBLY SHALL MEET THE FOLLOWING SPECIFICATIONS.

(A) ALL LABELS SHALL BE PERMANENTLY SECURED TO THE CABINET. PLASTIC LABEL MAKER TAPE IS NOT CONSIDERED TO BE PERMANENT. CROY TYPE LABELS ARE ACCEPTABLE.

(B) TO ILLUMINATE THE BACK PANEL THE 120 VAC CONVENIENCE OUTLET/LAMP ASSEMBLY SHALL BE MOUNTED ON THE RIGHT SIDE OF THE CABINET BELOW THE BOTTOM SHELF NEAR THE UPPER PART OF THE BACK PANEL. THE OUTLET/LAMP ASSEMBLY SHALL NOT INTERFERE WITH THE REMOVAL OR INSTALLATION OF ANY EQUIPMENT. A DOOR MOUNTED FLEX LIGHT THAT ILLUMINATES THE ENTIRE BACK PANEL MAY BE USED IN LIEU OF A LAMP ASSEMBLY. (ALSO SEE ODOT 733.04(9))

(C) LOAD SWITCHES SHALL BE EDI MODEL 510 WITH LIGHTS PERMANENTLY LABELLED AS R, Y, G OR A, B, C. A LOAD SWITCH SHALL BE PROVIDED FOR EACH BACK PANEL LOAD SWITCH SOCKET POSITION WHETHER USED OR UNUSED. ALL LOAD SWITCHES SHALL REST IN A SUPPORT RACK. LOAD SWITCH POSITIONS 9-12 SHALL BE USED FOR EITHER A PEDESTRIAN OR OVERLAP LOAD SWITCH UNLESS SPECIFIED OTHERWISE. (ALSO SEE ODOT 733.04(2))

(D) LIGHTNING PROTECTION DEVICES SUCH AS ITT, SURRESTOR, GENERAL ELECTRIC, OR APPROVED EQUAL SHALL BE PROVIDED. (ALSO SEE ODOT 733.04(6))

(E) THE MAIN CABINET DOOR LOCK SHALL HAVE A LOCK COVER AND SHALL BE KEYED TO CORBIN KEY NO. 2 (IR 6380). THE POLICE PANEL DOOR LOCK SHALL HAVE A LOCK COVER AND SHALL BE KEYED TO BRASS CORBIN POLICE PANEL KEY NO. 0357SG. (ALSO SEE ODOT 733.03 PARAGRAPH #8)

(F) HENNESSEY P-44, ECONOLITE P-55,OR EQUAL CABINET WITH 8 PHASE BACK PANEL SHALL BE SUPPLIED FOR THE POMEROY ROAD & RICHLAND AVENUE INTERSECTION. A 4 PHASE, BASE MOUNTED "M" CABINET SHALL BE SUPPLIED FOR THE RAMP "A". INTERSECTION. THE CABINET MATERIAL SHALL BE 5052 MARINE GRADE, .125 INCH THICK ALUMINUM SHEETING WITH A 32 HARDNESS IN ITS NATURAL COLOR AND SHALL BE PAINTED WHITE ON THE INSIDE. THE INSIDE OF THE CABINET SHALL BE TREATED WITH A THREE (3) STAGE IRON PHOSPHATE COATING AND A ZINC CHROMATE PRIMER COATING. A BAKED WHITE ALKALI ENAMEL FINISH SHALL THEN BE APPLIED. ALL COATINGS SHALL BE PROPERLY DRIED AND APPLIED SUCH THAT THE INSIDE WHITE PAINT WILL NOT PEEL FOR A GUARANTEED PERIOD OF TWO (2) YEARS. ALL EXTERIOR SEAMS SHALL BE EITHER CONTINUOUSLY WELDED, TACK WELDED, SEALED WITH A 15 TO 20 YEAR SILICONE SEALER, AND/OR OVERLAPPED SUCH THAT WATER DOES NOT ENTER THE CABINET. ALL CABINET EDGES SHALL BE SMOOTH (FREE OF ANY SHARP EDGES). THE CABINET DOOR SHALL BE HINGED USING A HEAVY GAUGE CONTINUOUS HINGE THAT HAS A STAINLESS STEEL HINGE PIN. THE HINGE SHALL BE BOLTED TO THE CABINET SO THE DOOR CAN BE REMOVED. THE BOLTS AND NUTS SHALL BE MADE OF STAINLESS STEEL AND SECURELY FASTENED TO PREVENT VIBRATIONS FROM LOOSENING THE NUTS. THE DOOR, SEALED WITH A NEOPRENE GASKET, SHALL BE EQUIPPED WITH A THREE (3) POINT LATCHING MECHANISM AND A HANDLE WHICHCAN BE PADLOCKED. THE DOOR SHALL BE DESIGNED SUCH THAT THEDOOR CAN BE LOCKED IN AN OPEN POSITION AT 90, 135, AND 180 DEGREES TO THE CABINET FACE (NOMINAL VALUES). THE POLICE DOOR AND MAIN CABINET DOOR SHALL HAVE A KEYHOLE COVER. (ALSO SEE ODOT 733.03 PARAGRAPH #3 AND #4)

(G) A THYRECTOR SURGE PROTECTOR WITH A RMS INPUT OF 150 VOLTS AND INPUT PEAK OF 210 VOLTS SHALL BE PROVIDED IN ADDITION TO ITEM D. THE THYRECTOR SHALL BE PLACED ACROSS THE INPUT AC POWER LINE.

(H) A 35 AMP LINE FILTER SHALL BE SUPPLIED AND SHALL BE MOUNTED ON THE POWER DISTRIBUTION PANEL. (ALSO SEE ODOT 733.04(8))

(I) TWO (2) CIRCUIT SOLID STATE FLASHER, EDI MODEL 810, RATED AT 15 AMPS PER CIRCUIT SHALL BE PROVIDED (NEMA TYPE III). CIRCUIT 1 SHALL CONTROL THE MAINLINE FLASHING SIGNAL INDICATIONS. CIRCUIT 2 SHALL CONTROL THE SIDE STREET FLASHING SIGNAL INDICATIONS. (ALSO SEE ODOT 733.04(4))

(J) ONE (1) 30 AMP CIRCUIT BREAKER, LABELLED AS "MAIN", SHALL BE WIRED AS THE MAIN POWER DISTRIBUTION BREAKER. A SECOND CIRCUIT BREAKER, LABELLED AS "PED" AND RATED AT 10 AMPS, SHALL BE SUPPLIED FOR THE PEDESTRIAN SIGNAL LOAD ONLY. THE PEDESTRIAN SIGNAL BREAKER SHALL BE WIRED IN SERIES WITH BUT AFTER THE MAIN POWER BREAKER. A THIRD CIRCUIT BREAKER, LABELLED AS "AUX" AND RATED AT 15 AMPS, SHALL SUPPLY A SEPARATE BRANCH OF AC+ POWER TO THE VENTILATING FAN, CONVENIENCE 'GFI' OUTLET AND LIGHT SO THAT THEY MAY OPERATE INDEPENDENTLY OF THE MAIN POWER BREAKER. THE POWER TO THE FAN AND LIGHT SHALL ALSO BE INTERRUPTED BY THE 'GFI' OUTLET. ALL BREAKERS SHALL BE MOUNTED SIDE-BY-SIDE ON THE POWER DISTRIBUTION PANEL. (ALSO SEE ODOT 733.04(7))

(K) ALL CONTROLLER MS CONNECTOR HARNESSES SHALL HAVE A CONDUCTOR FOR EACH PLUG PIN EXCEPT THE REMOTE RESET FUNCTION FOR THE CONFLICT MONITOR. THE CONTROLLER AND CONFLICT MONITOR MS HARNESS CONDUCTORS SHALL BE CONNECTED TO A BACK PANEL TERMINAL STRIP WHICH IS ACCESSIBLE FROM THE FRONT OF THE PANEL. DETECTOR UNIT HARNESS CONDUCTORS SHALL BE CONNECTED TO A LEFT SIDE CABINET MOUNTED TERMINAL STRIP. OTHER EQUIPMENT SHALL BE CONNECTED AS APPROPRIATE. (ALSO SEE ODOT 733.04 (15))

(L) THE CABINET ASSEMBLY SHALL CONTAIN ALL PEDESTRIAN SIGNAL CIRCUITRY FOR EACH NEMA DEFINED THROUGH PHASE.

(M) A POLICE DOOR MOUNTED SIGNAL SHUTDOWN SWITCH WITH SWITCH POSITIONS LABELLED AS "SIG ON" AND "SIG OFF" SHALL BE INSTALLED. (ALSO SEE ODOT 733.04 (11.a))

(N) A POLICE DOOR MOUNTED SIGNAL FLASH SWITCH WITH SWITCH POSITIONS LABELLED AS "ON SIG" AND "ON FLASH" SHALL NOT ONLY PLACE THE SIGNALS ON FLASH BUT ALSO STOP-TIME THE CONTROLLER UNIT. A RUN/STOP-TIME SWITCH WITH SWITCH POSITIONS LABELLED AS "CONT. RUN" AND "STOP-TIME" SHALL BE INSTALLED ON THE INSIDE OF THE CABINET DOOR. THE RUN/STOP-TIME SWITCH SHALL ALLOW THE CONTROLLER UNIT TO TIME NORMALLY BUT KEEP THE SIGNALS ON FLASH. THE SIGNAL FLASH SWITCH SHALL NOT RETURN THE SIGNALS TO NORMAL OPERATION UNLESS THE RUN/STOP-TIME SWITCH IS RESET TO THE STOP-TIME POSITION SO THE SIGNAL FLASH SWITCH CAN AGAIN STOP-TIME THE CONTROLLER UNIT. THE SIGNAL FLASH SWITCH SHALL NOT REMOVE POWER TO THE CONTROLLER UNIT OR ITS AUXILIARY EQUIPMENT. (ALSO SEE ODOT 733.04 (11.b AND 11.d))

(O) A POLICE DOOR MOUNTED AUTO MANUAL TRANSFER SWITCH WITH SWITCH POSITIONS LABELLED AS "AUTO" AND "MANUAL" SHALL BE INSTALLED. A MANUAL PUSH BUTTON CONTROL SHALL NOT BE INSTALLED UNLESS SPECIFIED, BUT WIRING FOR A PUSH BUTTON CONTROL SHALL BE PROVIDED UP TO THE POINT WHERE THE PUSH BUTTON WOULD HAVE BEEN CONNECTED. (ALSO SEE ODOT 733.04 (11c))

(P) A CONTROLLER SHUTDOWN SWITCH WITH SWITCH POSITIONS LABELLED AS "CONT ON" AND "CONT OFF" AND A COORDINATED/FREE SWITCH WITH SWITCH POSITIONS LABELLED AS "COORD" AND "FREE" SHALL BE INSTALLED INSIDE THE CABINET NEXT TO THE RUN/STOP-TIME SWITCH. A COORDINATED/FREE SWITCH SHALL NOT BE REQUIRED IF THE CONTROLLER HAS A BUILT-IN COORD/FREE SWITCH. (ALSO SEE ODOT 733.04 (11.e AND 11.f))

(Q) AFTER A NEMA DEFINED POWER INTERRUPTION THE CONFLICT MONITOR SHALL CAUSE THE INTERSECTION SIGNALS TO FLASH AS PER PLAN FOR 10 SECONDS BEFORE THE INITIALIZED CONTROLLER UNIT TAKES CONTROL OF THE INTERSECTION SIGNALS. THE CONFLICT MONITOR SHALL BE EDI MODEL SERIES SSM LE AND SHALL CONTAIN SUFFICIENT CHANNELS AS CALLED FOR IN THESE PLANS.

(R) THE CONFLICT MONITOR SHALL BE CONNECTED DIRECTLY TO THE FIELD TERMINALS. USING JUMPERS OR LINKS ON THE BACK PANEL TO FORM A CIRCUIT FOR THE CONFLICT MONITOR SHALL NOT BE ACCEPTABLE.

(S) THE CONFLICT MONITOR SETTINGS FOR MINIMUM YELLOW TIMING ON ALL CHANNELS SHALL BE SET AT THREE AND ONE HALF (3.5) SECONDS.

(T) THE WATCH DOG TIMER SHALL CAUSE THE CONTROLLER TO GO INTO A FLASH OPERATION IF A MICROPROCESSOR FAILURE IS DETECTED.

(U) ALL BACK PANEL HARDWARE SHALL BE MOUNTED WITH SCREWS. ALL SCREWS SHALL BE COMPLETELY SCREWED DOWN. RIVETS OR OTHER NON REMOVABLE FASTENERS ARE NOT ACCEPTABLE.

(V) WIRE CONNECTIONS ON THE BACK PANEL SHALL BE MADE WITH CRIMP TERMINALS AND THREADED FASTENERS. TELEPHONE TYPE KNIFE CONNECTORS (SOLDERED OR OTHERWISE) ARE NOT ACCEPTABLE.

(W) ALL WIRES FASTENED TO THE LOAD SWITCH AND FLASHER PLUGS SHALL BE SOLDERED IN PLACE.

(X) THE BACK PANEL AND POWER DISTRIBUTION PANEL SHALL HAVE SILK SCREENED TERMINAL/SOCKET FUNCTION IDENTIFICATION LABELS SUCH AS AC COM, PHASE 3 GREEN, 115 VAC, SIGNAL BUS, ETC. REFERENCE NUMBERS SHALL NOT BE ACCEPTABLE IN LIEU OF FUNCTION LABELS BUT THEY CAN SUPPLEMENT THEM. ADDITIONAL TERMINAL BLOCKS AND AUXILIARY PANELS SHALL USE SILK SCREENED REFERENCE NUMBERS TO IDENTIFY TERMINAL CONNECTIONS.

(Y) ALL TERMINAL STRIPS IN CLOSE PROXIMITY OF SHELF MOUNTED CONTROL DEVICE EQUIPMENT SHALL BE COVERED WITH NON-CONDUCTIVE MATERIAL TO PREVENT ACCIDENTAL CONTACT WITH THE DEVICES. ALL TERMINAL STRIPS SHALL BE READILY ACCESSIBLE WITHOUT REMOVAL OF ANY EQUIPMENT.

(Z) THE CABINET SHALL HAVE TWO (2) NON VENTED (SOLID) SHELVES SPACED AT LEAST 9" APART. BOTH SHELVES SHALL HAVE A WIDTH OF 13" AND THE BACK EDGE OF THE SHELF SHALL BE LIPPED WITH THE LIP POINTING UP. THE FRONT EDGE OF THE SHELF SHALL BE LIPPED WITH THE LIP POINTING DOWN. ALL LIP EDGES SHALL BE ROUNDED. THE SHELVES SHALL BE ATTACHED TO THE CABINET SIDE PANELS. THE SHELF ARRANGEMENT SHALL BE DESIGNED SO ALL SHELF DEVICES FIT ON THEM.

(AA) THERE SHALL BE A MINIMUM OF ONE (1) INCH EMPTY SPACE BETWEEN ALL ITEMS ATTACHED TO THE DOOR AND ALL SHELF-MOUNTED DEVICES INCLUDING ITS CONNECTING HARNESS(ES), ALL LOAD SWITCHES, FLASHER AND ALL SIDE-PANEL-MOUNTED ITEMS.

(BB) "P" AND "M" SIZED CABINETS SHALL HAVE TWO VENTILATION FANS. THE THERMOSTAT CONTROLLING THE VENTILATING FAN CIRCUIT SHALL BE SET AT 95 DEGREES FAHRENHEIT. (ALSO SEE ODOT 733.04 (1))

(CC) ALL FLASH TRANSFER RELAYS SHALL BE WIRED FOR FAIL SAFE OPERATION (ENERGIZED DURING NORMAL OPERATION) AND WIRED WITH A MAXIMUM OF TWO PHASES PER RELAY.

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL GENERAL NOTES

ATH-33-30.981

(DD) THE CONTROLLER ASSEMBLY, WHEN PLACED IN OR COMING OUT OF AN AUTOMATIC FLASHING MODE, SHALL CONFORM TO THE AUTOMATIC FLASHING CRITERIA SET FORTH IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, SECTION 6B 18, INCLUDING THE FOLLOWING ADDITIONS.

1) A VEHICULAR CALL SHALL BE PLACED ON ALL PHASES IMMEDIATELY PRIOR TO ENTERING THE "FLASH" MODE SO THE CONTROLLER WILL CYCLE TO THE "FLASH" POINT. IT IS OPTIONAL TO HAVE ONE EXTERNAL VEHICULAR CALL PLACED IMMEDIATELY ON ALL PHASES WHEN THE "FLASH" MODE TERMINATES. THE CONTROLLER SHALL OPERATE NORMALLY ONCE THE "FLASH" MODE SEQUENCE IS TERMINATED.

2) THE CONTROLLER SHALL ENTER THE "FLASH" MODE AT THE END OF THE THROUGH SIDE STREET PHASE(S) YELLOW (OR DURING THE SIDESTREET PHASE(S) RED CLEARANCE INTERVAL) BUT JUST PRIOR TO ANY MAIN STREET GREEN.

THE FLASH TRANSFER LOGIC DEVICE SHALL TRIGGER THE "FLASH" OPERATION, SHALL BE SOLID STATE, SHALL BE EXTERNAL TO THE CONTROLLER (A CABINET ASSEMBLY DEVICE), AND SHALL FUNCTION WITH ANY NEMA CONTROLLER. THIS CIRCUITRY SHALL BE SUPPLIED IN ADDITION TO ANY INTERNAL CONTROLLER FLASH LOGIC PROVIDED BY THE CONTROLLER.

(EE) THE POWER CABLE SHALL BE CONNECTED TO AN ACCESSIBLE TERMINAL STRIP WHICH SHALL BE LOCATED NEAR THE BOTTOM OF THE CABINET AND SHALL BE OF SUFFICIENT SIZE TO ACCEPT A SUPPLIED #8 WIRE LUG. THE TERMINAL STRIP SHALL BE COVERED OR SHIELDED TO MINIMIZE ACCIDENTAL CONTACT DURING NORMAL SERVICING OPERATIONS. THE COVER SHALL BE SNAPPED ON/OFF OR SECURED BY STANDARD SCREWS. THE POWER CABLE LUG TERMINAL CONNECTION SHALL BE LOCATED IMMEDIATELY BELOW THE MAIN POWER DISTRIBUTION BREAKER. POWER SHALL BE JUMPERED TO THE MAIN POWER DISTRIBUTION BREAKER. THE POWER DISTRIBUTION PANEL SHALL BE LOCATED IN THE BOTTOM RIGHT SIDE OF THE CABINET OR IT SHALL BE AN INTEGRAL PART OF THE RIGHT SIDE OF THE BACK PANEL. THERE SHALL BE A MINIMUM OF TWO (2) INCHES CLEARANCE BETWEEN THE POWER TERMINAL AND THE BOTTOM OF THE CABINET.

(FF) A #4 WIRE LUG SHALL BE PROVIDED FOR ATTACHING A GROUNDING WIRE FROM A GROUND ROD. THE GROUNDING WIRE LUG SHALL BE ATTACHED TO THE POWER DISTRIBUTION PANEL (LOWER LEFT CORNER), OR IF NONE, TO THE BACK PANEL (BOTTOM MIDDLE).

(GG) A SINGLE POLE MERCURY PLUNGER RELAY SHALL BE INSTALLED WHICH WILL ALLOW POWER TO BE REMOVED FROM THE VEHICULAR AND PEDESTRIAN POWER BUSES. THE MERCURY RELAY SHALL BE RATED AT 35 AMPS AND THE RELAY COIL WIRED WITH A NOISE SUPPRESSION DEVICE.

(HH) ALL EXTERNAL RELAY COILS SHALL HAVE NOISE SUPPRESSION DEVICES.

(II) THE DOOR FILTER (U.L. LISTED CLASS 2, STANDARD 900) SHALL CONSIST OF THREE DISTINCT LAYERS OF FILTERING MEDIA. THE FIRST AIR ENTERING LAYER SHALL BE COMPOSED OF A DUAL FIBER BLEND OF 100% NON-WOVEN POLYESTER TO TRAP LARGER SIZED PARTICLES. THE NEXT LAYER SHALL BE A DUAL PLY, DUAL DENIER, 100% NON-WOVEN POLYESTER OF SMALLER SIZE TO TRAP FINER PARTICLES PASSING THROUGH THE FIRST LAYER. A NON-TOXIC, NON-MIGRATORY, ODORLESS TACKIFIER SHALL BE APPLIED TO THESE LAYERS. ADHESIVES SPRAYED ON THE LAYERS ARE NOT ACCEPTABLE. THE TACKIFIER SHALL BE INCORPORATED INTO THE LAYER MEDIA DURING THE MANUFACTURING PROCESS OF THE RAW MATERIAL. A 10 GAUGE MESH SHALL BE INCORPORATED IN THE FILTER DESIGN FOR RIGIDITY. SUFFICIENT MEDIA OVERLAP SHALL BE PRESENT ABOUT THE WIRE PERIMETER TO INSURE POSITIVE SELF SEAL. THE DOOR FILTER HOLDER SHALL BE DESIGNED SO THE FILTER MAKES POSITIVE CONTACT WITH THE CABINET DOOR AT ALL TIMES AND UNDER ALL CONDITIONS AND SITUATIONS.

FOUR (4) SETS OF CABINET WIRING SCHEMATICS, TWO (2) SERVICE MANUAL AND TWO (2) INSTRUCTIONAL MANUAL SHALL BE PROVIDED PER CABINET. DELIVERY OF THESE DIAGRAMS & MANUALS SHALL ACCOMPANY THE CABINET. THE CONTRACTOR SHALL CLEARLY NOTE ANY DEVIATIONS, CHANGES, ADDITIONS OR OTHER MODIFICATIONS ON THE DIAGRAMS AND MANUALS THAT ARE APPROPRIATE TO REFLECT THE EXACT EQUIPMENT TO BE PROVIDED.

THE COST FOR THIS MATERIAL SHALL BE INCIDENTAL TO THE COST OF THE SIGNAL EQUIPMENT. THE COPIES OF DIAGRAMS AND MANUALS SHALL BE STORED IN A PLASTIC ENVELOPE MOUNTED HORIZONTALLY AND SECURELY FASTENED TO THE INSIDE OF THE MAIN CABINET DOOR. THE ENVELOPE OPENING SHALL BE TO THE RIGHT OR LEFT. THE ENVELOPE SHALL NOT BLOCK ANY PART OF THE AIR FILTER OR THE AIR INTAKE LOCATED IN THE DOOR.

SERVICE & INSTRUCTIONAL MANUALS SHALL INCLUDE SECTIONS COVERING THE GENERAL DESCRIPTION OF EQUIPMENT, EQUIPMENT INSTALLATION PROCEDURES, EQUIPMENT PROGRAMMING PROCEDURES, THEORY OF OPERATION WITH SYSTEM DESCRIPTION INCLUDING BLOCK DIAGRAMS AND DETAILED CIRCUIT DIAGRAMS, PREVENTIVE MAINTENANCE, FIELD TROUBLE ANALYSIS, BENCH TROUBLE ANALYSIS, TROUBLESHOOTING ANALYSIS CHART, WAVE FORMS, VOLTAGE MEASUREMENTS, VOLTAGE MEASUREMENT CHARTS, PARTS LIST, ELECTRICAL INTERCONNECTION DRAWINGS, SCHEMATIC AND LOGIC DIAGRAMS, ASSEMBLY DRAWINGS WITH PICTORIAL DIAGRAMS SHOWING PHYSICAL LOCATIONS AND IDENTIFICATION OF EACH COMPONENT.

633 CONTROLLER UNIT, TYPE 2070LCN

CONTROLLER UNITS SHALL BE EQUIPMENT MANUFACTURED IN CONFORMANCE WITH THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) SPECIFICATIONS TITLED. "TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATIONS", NOVEMBER 19, 1999 INCLUDING ALL ADDENDA. THE CONTROLLER UNIT SHALL BE LISTED ON THE CALTRANS QUALIFIED PRODUCTS LIST (QPL).

The 2070LCN UNIT VERSION TOGETHER WITH ITS ASSOCIATED COMPOSITION SHALL BE DELIVERED ASSEMBLED AS FOLLOWS:

NO.	ITEM DESCRIPTION
MODEL 2070	UNIT CHASSIS
MODEL 2070-1A OR 1B	CPU MODULE
MODEL 2070-2B	FIELD I/O MODULE (ITS AND TS-2 CABINENT)
MODEL 2070-3B	FRONT PANEL MODULE (FP), DISPLAY B (8 LINES OF 40 CHAR.)
MODEL 2070-4A OR 4B	POWER SUPPLY MODULE
MODEL 2070-8	NEMA INTERFACE MODULE
MODEL 2070-9	2070N BACKCOVER

IF A TELEPHONE DROP IS SHOWN IN THE PLANS, ALL NECESSARY COMMUNICATION MODULES, MODEM, LIGHTNING PROTECTION AND CABLES FOR AUTO DIAL/ANSWER TELEPHONE CONNECTION SHALL BE PROVIDED.

THE CONTROLLER SHALL BE SUPPLIED WITH THE APPROPRIATE COMMUNICATION PORT, CABLES AND CONNECTORS FOR COMMUNICATING WITH A LAPTOP COMPUTER. A LAPTOP COMPUTER EQUIPPED WITH THE APPROPRIATE SOFTWARE FOR MAKING AND MODIFYING CONTROLLER SETTINGS AND MAKING CONTROLLER DIAGNOSTICS SHALL BE FURNISHED, ALL SOFTWARE SHALL BE FURNISHED WITH APPROPRIATE LICENSES AND DOCUMENTATION. A CARRYING CASE AND BATTERY CHARGER SHALL BE FURNISHED.

IF THE CONTROLLER IS PART OF AN INTERCONNECTED SIGNAL SYSTEM, THE CONTROLLER SHALL INCLUDE MODEMS, PORTS AND CABLES FOR SYSTEM COMMUNICATION.

2 SETS OF CONTROLLER SCHEMATICS AND SERVICE MANUALS SHALL BE SUPPLIED WITH EACH CONTROLLER.

CONTROLLERS SHALL BE SUPPLIED WITH SOFTWARE. THE CONTROLLER UNIT SOFTWARE SHALL PROVIDE THE FOLLOWING FEATURES EVEN IF NOT USED BY THE SIGNAL PHASING OPERATION SHOWN IN THE PLANS:

A. NEMA EIGHT (8) PHASE, DUAL RING CAPABILITY WITH FOUR PEDESTRIAN MOVEMENTS, FOUR OVERLAPS, AND THE ABILITY TO PROGRAM AN EXCLUSIVE PEDESTRIAN MOVEMENT. THE CONTROLLER SHALL BE CAPABLE OF BEING PROGRAMMED FOR SEQUENTIAL PHASING OPERATION.

B. VOLUME DENSITY FUNCTIONS.

C. SECONDARY COORDINATION PLANS.

D. TIME OF DAY/DAY OF WEEK SELECTION OF COORDINATION PLANS.

E. TIME BASED COORDINATION, MINIMUM 3 DIALS, 3 OFFSETS, 3 SPLITS.

F. INTERNAL PREEMPTION FOR RAILROAD (1) AND EMERGENCY VEHICLES (4).

G. OPERATOR SELECTABLE SINGLE OR DUAL ENTRY IN DUAL RING USE.

H. DETECTOR FEATURES INCLUDING DELAY TIMING, CARRYOVER (EXTENSION) TIMING AND DETECTOR SWITCHING.

I. SIMULTANEOUS GAP OUT FEATURE.

J. IF OPERATED IN A SYSTEM, COMMUNICATION CAPABILITIES TO INTERFACE WITH HARDWIRED MASTERS OR DIAL UP MODEMS.

633 - "CONTROLLER UNIT, TYPE 2070LCN" WILL BE MEASURED FOR EACH CONTROLLER UNIT WITH SOFTWARE INCLUDING ANY SIGNAL TIMING PROGRAMMING OR INSTALLATION

GENERATOR POWER PANEL:

THE CABINET SHALL HAVE AN ADD-ON GENERATOR PANEL, WITH ENCLOSURE. (SEE DETAIL SHEET 791A)
THIS ITEM SHALL ALLOW SIGNAL ELECTRICIANS TO OPERATE THE TRAFFIC SIGNAL DURING POWER OUTAGES WITHOUT OPENING THE CABINET DOOR OR CONNECTING OR DISCONNECTING PERMANENT POWER CABLES. THE ENCLOSURE SHALL BE INSTALLED ON THE POWER PANEL SIDE OF THE CONTROLLER CABINET. DESIGN AND LAYOUT OF THE CONTROLLER CABINET SHALL DETERMINE EXACT PLACEMENT OF THE ENCLOSURE BUT IT SHOULD BE PLACED NEAR THE TOP OF THE GROUND MOUNTED CABINETS AND ABOUT 5 FEET FROM THE GROUND ON POLE MOUNTED CABINETS. THE ENCLOSURE SHALL BE SEALED WITH A HIGH QUALITY SILICON CAULK AND ALL HOLES DRILLED INTO THE SIDE OF THE CONTROLLER CABINET SHALL BE CAULKED AND SEALED AFTER THE ELECTRICAL EQUIPMENT IS INSTALLED. ALL ELECTRICAL CONNECTIONS, SOLDERED OR SCREW TYPE TERMINALS, SHALL BE COVERED WITH A CLEAR SILICON CAULK.

THE GENERATOR INLET SHALL BE 30 AMP, LOCKING, FOUR WIRE GROUNDING AND MEET THE NEMA L14-30-P 30A 125/250V SPECIFICATION. THE INLET SHALL BE A HUBBLE CATALOG #2715.

THE LINE VOLTAGE GENERATOR SWITCH SHALL BE 30 AMP, 125/250V AC, TWO (2) POLE, THREE (3) POSITION, (ON, OFF, ON HUBBLE #1388).

THE LINE VOLTAGE INDICATOR LIGHT SHALL BE 125V AC LIGHT EMITTING DIODE WITH RED LENS.

THE LINE VOLTAGE CIRCUIT BREAKER SHALL BE SINGLE POLE SINGLE THROW AND A MINIMUM OF 30 AMPS. THE AMPERAGE SHALL BE INCREASED TO ACCOMMODATE GREATER LOADS, IF NECESSARY. THE GAUGE OF THE POWER CABLE SHALL BE OF PROPER SIZE PER THE NATIONAL ELECTRICAL CODE (NEC).

PAYMENT:
COST FOR ALL OF THE ABOVE INCLUDING LABOR, MATERIAL, TOOLS AND EQUIPMENT TO PROVIDE AND INSTALL A COMPLETELY OPERATIONAL CABINET AND CONTROLLER SHALL BE INCLUDED IN THE BID ITEM PRICE FOR:
ITEM 633, CONTROLLER UNIT, TYPE 2070 LCN, AS PER PLAN;
ITEM 633, 8 PHASE CABINET, AS PER PLAN;
ITEM 633, 4 PHASE CABINET, AS PER PLAN

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL GENERAL NOTES

ATH-33-30.981

MATERIAL SPECIFICATIONS FOR GENERATOR POWER PANEL EQUIPMENT

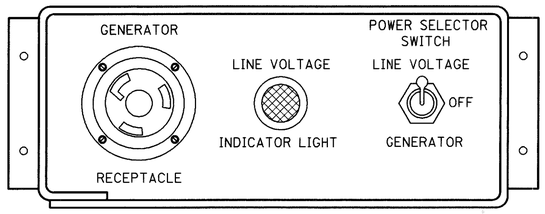
GENERATOR POWER PANEL ENCLOSURE - THIS ITEM CAN BE FABRICATED TO MEET THE ATTACHED SPECIFICATIONS, OR IT CAN BE PURCHASED THROUGH GAMMATRONIX AT 6279 SHIER RINGS ROAD, DUBLIN, OHIO 43017. PHONE (614) 889-2511.

GENERATOR RECEPTACLE - THE RECEPTABLE SHALL BE 15 amp. 125/250V, LOCKING, THREE (3) WIRE GROUNDING AND MEET THE NEMA CONFIGURATION NUMBER ---------- 125/250 SPECIFICATIONS. THE RECEPTLE SHALL BE A HUBBELL CATALOG # 4715C

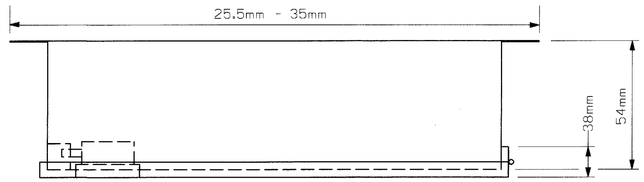
LINE VOLTAGE GENERATOR SWITCH - THE SWITCH SHALL BE 15 amp, 125/250V AC, TWO (2) POLE, THREE (3) POSITION (ON, OFF, ON, HUBBELL 1388).

LINE VOLTAGE INDICATOR LIGHT - THE INDICATOR LIGHT SHALL BE 125V AC LIGHT EMITTING DIODE WITH A RED LENS.

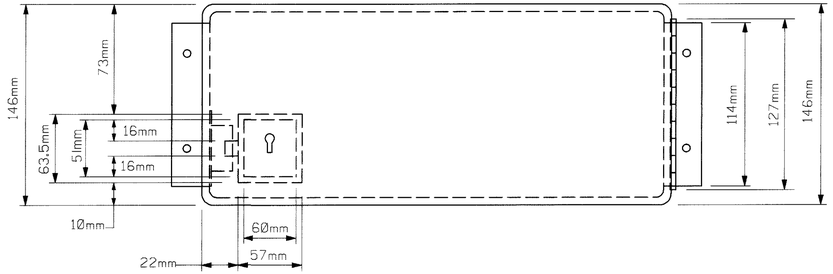
LINE VOLTAGE CIRCUIT BREAKER - THE CIRCUIT BREAKER SHALL BE SINGLE POLE SINGLE THROW AND A MINIMUM OF 30 amps. THE AMPERAGE SHALL BE INCREASED TO ACCOMMODATE GREATER LOADS, IF NECESSARY. THE GAUGE OF THE POWER CABLE SHALL BE OF PROPER SIZE PER THE N.E.C.



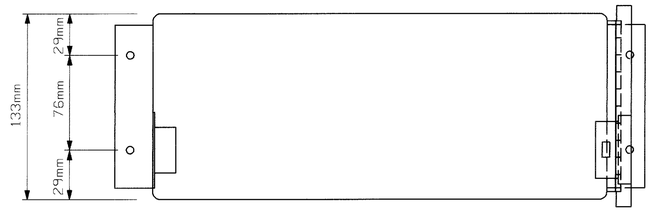
FRONT VIEW OF GENERATOR POWER PANEL



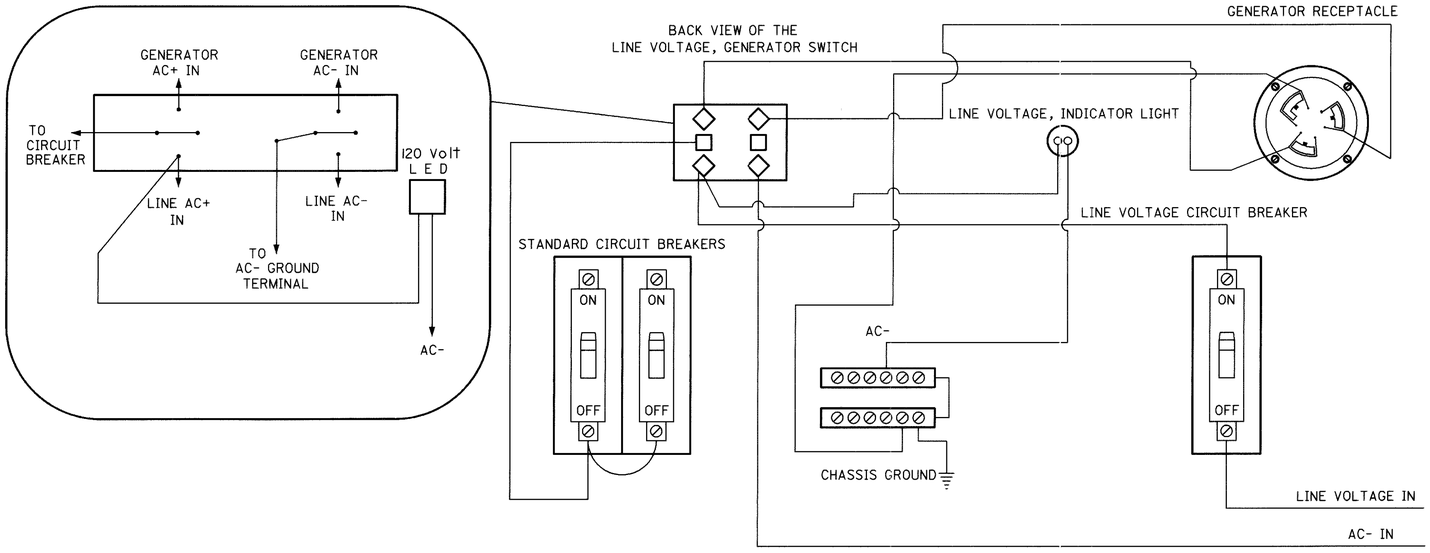
TOP VIEW



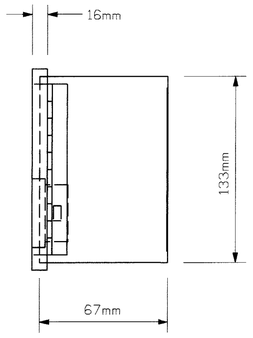
FRONT VIEW - CLOSED DOOR



FRONT VIEW - OPEN DOOR



ELECTRICAL HOOK UP DETAIL FOR THE GENERATOR POWER PANEL



RIGHT SIDE VIEW
CLOSED DOOR

GENERATOR POWER PANEL ENCLOSURE

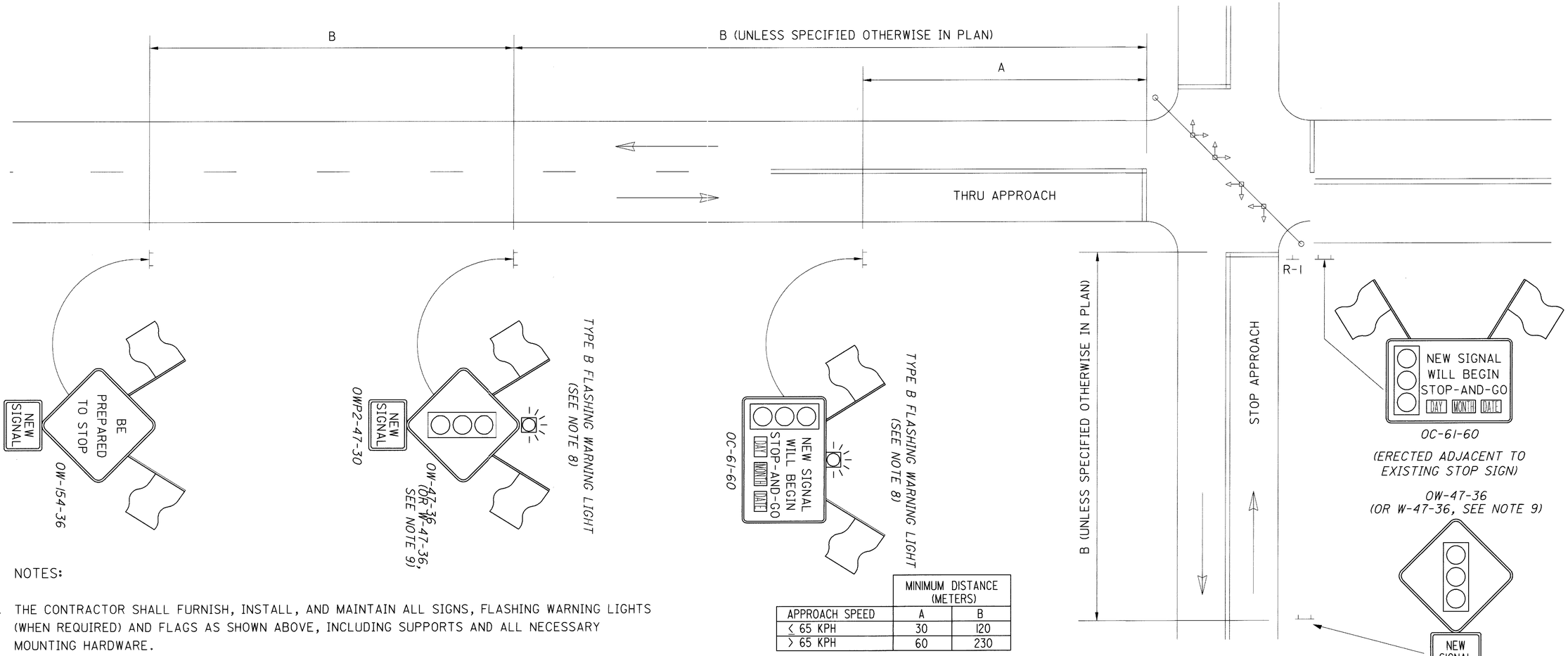
NOTES

1. THE ENCLOSURE SHALL BE CONSTRUCTED OF 3mm THICK ALUMINUM.
2. THE LOCK SHALL BE THE STANDARD POLICE DOOR TYPE, KEYED WITH THE STANDARD FLASHER DOOR SKELETON KEY.
3. THE DOOR SHALL BE SEALED WITH A FOAM RUBBER GASKET TO PREVENT MOISTURE FROM ENTERING THE ENCLOSURE.
4. THE ENCLOSURE SHALL BE MOUNTED ONTO THE OUTSIDE OF THE CONTROLLER CABINET WITH NON-ACCESSIBLE BOLTS AND SEALED WITH A HIGH QUALITY SILICON CAULK AT ALL SURFACES TOUCHING THE CABINET.
5. THE HINGE SHALL BE OF STAINLESS STEEL OF EQUIVALENT CORROSIVE-RESISTANT MATERIAL.

GENERATOR POWER PANEL

ATH-33-30.981

791A
956



	MINIMUM DISTANCE (METERS)	
APPROACH SPEED	A	B
≤ 65 KPH	30	120
> 65 KPH	60	230

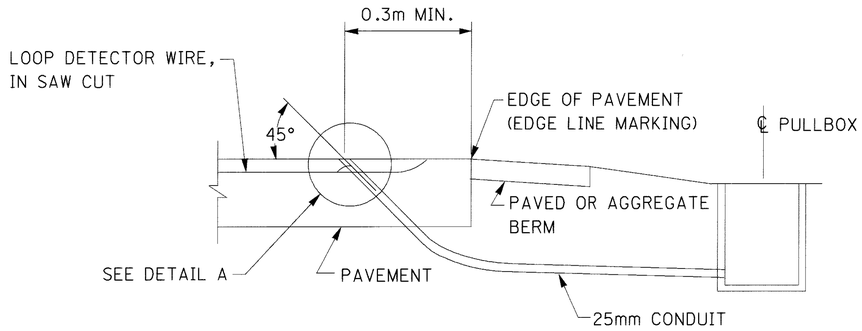
NOTES:

1. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN ALL SIGNS, FLASHING WARNING LIGHTS (WHEN REQUIRED) AND FLAGS AS SHOWN ABOVE, INCLUDING SUPPORTS AND ALL NECESSARY MOUNTING HARDWARE.
2. AFTER RECEIVING APPROVAL FROM THE ENGINEER TO ACTIVATE THE SIGNAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TEN (10) DAYS PRIOR TO PLACING SIGNAL IN STOP-AND-GO MODE TO ALLOW THE ENGINEER TIME TO NOTIFY LOCAL MEDIA AND LAW ENFORCEMENT OF THE SCHEDULED SIGNAL ACTIVATION.
3. A PERMANENT NEW SIGNAL OR SIGNAL UPGRADE FROM A FLASHER, SHALL OPERATE IN FLASH MODE FOR THREE (3) TO TEN (10) CONSECUTIVE DAYS BEFORE BEING PLACED IN A STOP-AND-GO MODE FOR THE TEN (10) DAY BURN TEST, AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL ERECT THE OC-61-60 (WITH ACTIVATION DAY, MONTH, AND DATE; E.G. MON AUG 12) SIGNS EQUIPPED WITH ORANGE FLAGS AND FLASHING WARNING LIGHTS (WHEN REQUIRED) AS SHOWN ABOVE ON EACH APPROACH OF THE INTERSECTION AT THE TIME THE SIGNAL IS PLACED IN FLASH MODE.
5. IMMEDIATELY BEFORE PLACING THE NEW SIGNAL INSTALLATION IN STOP-AND-GO MODE, THE CONTRACTOR SHALL REMOVE THE OC-61-60 SIGNS AND INSTALL OR UNCOVER THE OW-47 AND OW-154 SIGN ASSEMBLIES AS SHOWN ABOVE.
6. IMMEDIATELY AFTER CHANGING THE SIGNAL TO STOP-AND-GO OPERATION, THE CONTRACTOR SHALL REMOVE THE EXISTING STOP SIGNS AND POST SUPPORTS.
7. THE CONTRACTOR SHALL REMOVE THE FLASHING WARNING LIGHTS, FLAGS, BRACKETS, OWP2-47, OW-47, AND OW-154 SIGNS 21-30 DAYS AFTER THE SIGNAL IS PLACED IN STOP-AND-GO MODE.
8. FLAGS SHALL BE ERECTED AS SHOWN ABOVE. THE FLAGS SHALL BE 600 mm X 600 mm IN SIZE, MADE OF ORANGE VINYL MATERIAL, AND SECURELY FASTENED TO THE SIGN OR SIGN SUPPORT. WHEN REQUIRED BY PLAN NOTE, TYPE B FLASHING WARNING LIGHTS SHALL BE INSTALLED AS SHOWN ABOVE.
9. THE OW-154 SIGN INSTALLATION (INCLUDING THE OWP2-47 SIGN AND FLAGS) ON THE THRU APPROACH SHALL BE OMITTED WHEN A PERMANENT "PREPARE TO STOP WHEN FLASHING" (W-44) SIGN IS ERECTED. WHEN SPECIFIED IN THE PLAN, A W-47 SIGN SHALL BE USED IN PLACE OF THE OW-47 SIGN ON THE THRU APPROACH. THE "NEW SIGNAL" (OWP2-47) SIGN, FLAGS, AND FLASHING WARNING LIGHT, WHEN REQUIRED, SHALL BE INSTALLED WITH THE W-47 SIGN AS SHOWN. WHEN SPECIFIED IN THE PLAN, A W-47 SIGN SHALL BE USED IN PLACE OF THE OW-47 SIGN ON THE STOP APPROACH. THE "NEW SIGNAL" (OWP2-47) SHALL BE INSTALLED WITH THE (O)W-47 SIGN AS SHOWN.
10. ON MULTILANE THRU APPROACHES, REPLACE THE OW-154-36 SIGN WITH AN OW-154-48 SIGN, AND REPLACE THE OW-47-36 SIGN WITH AN OW-47-48 SIGN. ON MULTILANE DIVIDED THRU APPROACHES, ERECT SIGNS IN MEDIAN IDENTICAL TO THOSE ON RIGHT TO CREATE DUAL INSTALLATIONS, INCLUDING SUPPLEMENTAL SIGNS AND FLAGS, AND, WHEN REQUIRED BY PLAN NOTE, FLASHING WARNING LIGHTS.
11. FOR MULTI-WAY STOP APPROACHES, EACH APPROACH CONTROLLED BY A STOP SIGN SHALL BE TREATED AS SHOWN ABOVE FOR THE STOP APPROACH.
12. THE SIGNAL SHALL NOT BE ACTIVATED TO STOP-AND-GO OPERATION ON A FRIDAY, SATURDAY OR SUNDAY, OR THE DAY PRECEDING OR DURING A NATIONAL HOLIDAY, (NEW YEARS, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, OR CHRISTMAS).
13. PERMANENT SUPPORTS, PERMANENT SIGNS (W-44 AND W-47), AND TYPE B FLASHING WARNING LIGHTS SHALL BE PAID FOR UNDER SEPARATE PAY ITEM IN THE PLAN. PAYMENT FOR ALL OTHER LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR 614 MAINTAINING TRAFFIC.

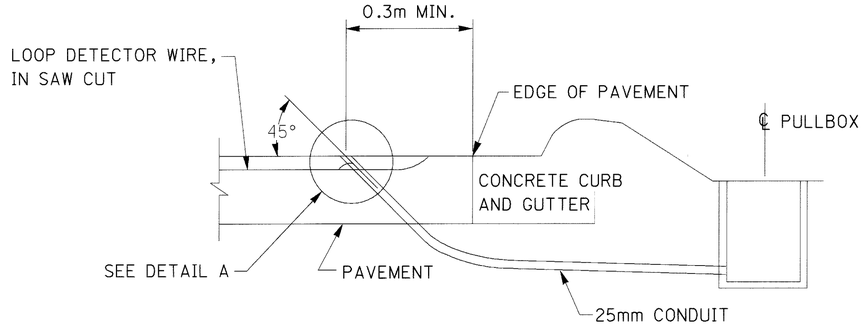
CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL DETAILS
NEW SIGNAL ACTIVATION

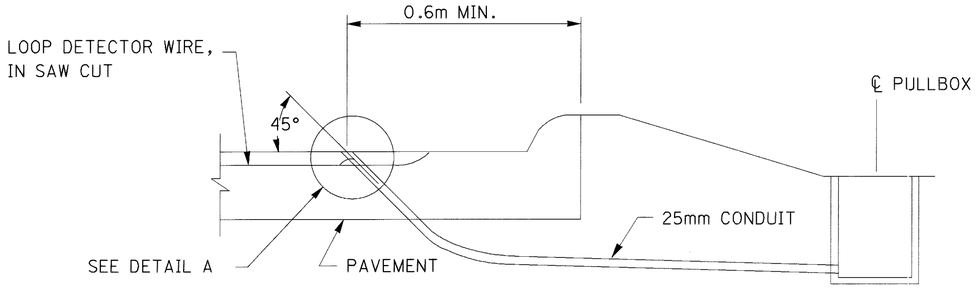
ATH-33-30.981



DRILLED HOLE LOCATION DETAIL
WITH PAVED OR AGGREGATE BERM

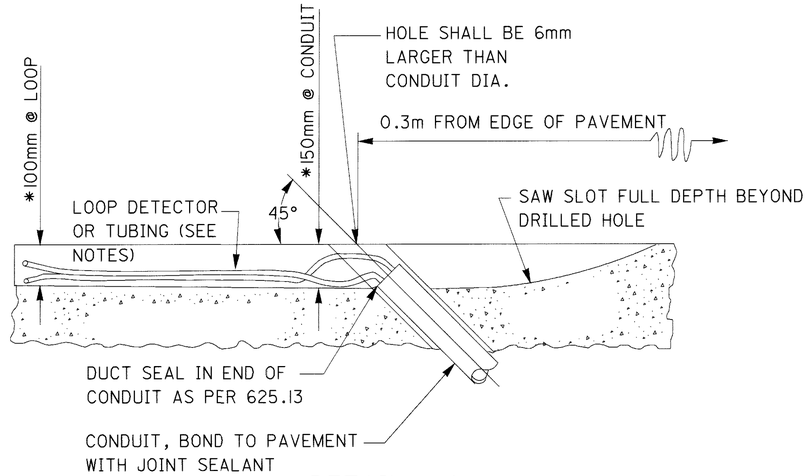


DRILLED HOLE LOCATION DETAIL
WITH CONCRETE CURB AND GUTTER



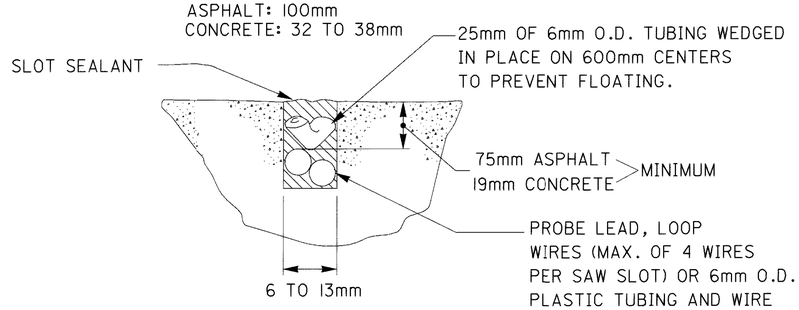
DRILLED HOLE LOCATION DETAIL
WITH INTEGRAL CONCRETE CURB

*SAW CUT SHALL SLOPE FROM
100mm AT LOOP TO 150mm AT CONDUIT

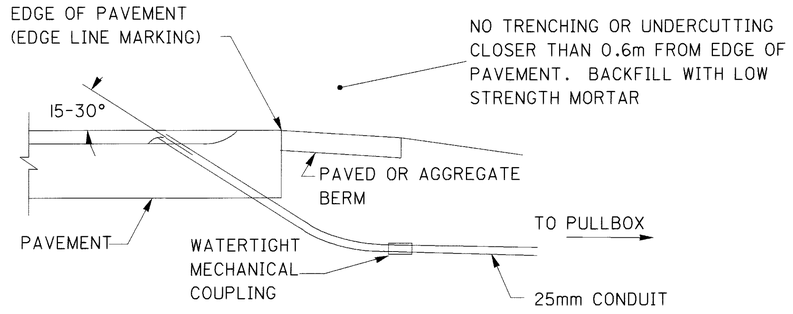


DETAIL A

MINIMUM DEPTH OF SAWSLOT
ASPHALT: 100mm
CONCRETE: 32 TO 38mm



SLOT DETAIL



ALTERNATE METHOD OF
CONDUIT INSTALLATION

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL DETAILS
LOOP DETECTOR INSTALLATION DETAILS

ATH-33-30.981

793
956

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SHEET NUMBER								ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
794A		794B		794C		794D							
		381						625	25402	381	METER	CONDUIT, 713.07, 51 mm	
		231						625	25500	231	METER	CONDUIT, 713.04, 76 mm	
		301						625	25502	301	METER	CONDUIT, 713.07, 76 mm	
		684						625	29000	684	METER	TRENCH	
19								625	30701	19	EACH	PULL BOX, 713.08, 450 mm, AS PER PLAN	
2								625	30707	2	EACH	PULL BOX, 713.08, 600 mm, AS PER PLAN	
				11				625	32000	11	EACH	GROUND ROD	
						24		630	03100	24	METER	GROUND MOUNDED SUPPORT, #3 POST	
						1.68		630	80102	1.68	SQ. METER	SIGN, FLAT SHEET, TYPE G	
22								632	00301	22	EACH	VEHICULAR SIG HEAD, 3 SECTION, 300 mm LENS, 1 WAY, APP	
2								632	00501	2	EACH	VEHICULAR SIG HEAD, 5 SECTION, 300 mm LENS, 1 WAY, APP	
24								632	25001	24	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	
				6				632	26000	6	EACH	PED. PUSHBUTTON	
						15		632	26501	16	EACH	DETECTOR LOOP, AS PER PLAN	
		16						632	27009	16	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, APP	
1045								632	40700	1045	METER	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
		94						632	53300	94	METER	INTERCONNECT CABLE, 12 PAIR, NO. 19 AWG, SOLID, REA (PE-39)	
				7				632	64010	7	EACH	SIGNAL SUPPORT FOUNDATION	
				2				632	64020	2	EACH	PEDESTAL FOUNDATION	
		1351				226		632	65200	1351	METER	LOOP DETECTOR LEAD-IN-CABLE	
		180						632	68300	180	METER	POWER CABLE, 3 CONDUCTOR, #6 AWG	
		1						632	70000	1	EACH	POWER SERVICE	
				2				632	80200	2	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 2	
				2				632	80700	2	EACH	SIGNAL SUPPORT MISC.: TYPE TC-12.30M, DESIGN 7 W/ARMS TC-82.10 DESIGN 3 & 12	
				2				632	80500	2	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 11	
				1				632	80600	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12	
				1				632	89900	1	EACH	PEDESTAL, 2.4M TRANSFORMER BASE	
				1				632	90000	1	EACH	PEDESTAL, 3.4M TRANSFORMER BASE	
				1				632	90102	1	EACH	REMOVAL OF TRAFFIC SIGNAL, INSTALLATION FOR STORAGE	
				2				633	40100	2	EACH	CONTROLLER, MISC.: CONTROLLER MODEL 2070L W/OUT CABINET	
				1				633	65001	1	EACH	CABINET WITHOUT CONTROLLER: 4 PHASE CABINET, AS PER PLAN	
				1				633	65001	1	EACH	CABINET WITHOUT CONTROLLER: 8 PHASE CABINET, AS PER PLAN	
				2.80				633	70001	2.80	CU. M.	CONCRETE FOR CABINET FOUNDATION, AS PER PLAN	
				2.08				633	70500	2.08	SQ. M.	CONTROLLER WORK PAD	

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL GENERAL SUMMARY

ATH-33-30.981

REF NO.	SHEET NO.	LOCATION	SIDE	625		632					
				PULL BOX, 713.08 600 MM, AS PER PLAN	PULL BOX, 713.08 450 MM, AS PER PLAN	VEHICULAR SIGNAL HEAD 5 SECTION, 300 MM LENS, 1-WAY, A.P.P.	VEHICULAR SIGNAL HEAD 3 SECTION, 300 MM LENS, 1-WAY, A.P.P.	SIGNAL CABLE, 7 CONDUCTOR, NO.14 AWG.	COVERING OF VEHICULAR SIGNAL HEAD, APP		
				EACH	EACH	EACH	EACH	METER	EACH		
	801	PB-1 0+155			1						
	801	PB-2 0+193			1						
	800	PB-3 0+221			1						
	800	PB-4 0+247			1						
	800	PB-5 0+261			1						
	800	PB-6 1+436 RAMP A			1						
	796	PB-7 4+523			1						
	800	PB-8 0+276		1							
	800	PB-9 0+293		1							
	796	PB-10 0+324			1						
	796	PB-11 0+337			1						
	795	PB-12 0+364			1						
	795	PB-13 0+408			1						
	795	PB-14 0+479			1						
	795	PB-15 0+388			1						
	795	PB-16 0+371			1						
	796	PB-17 4+595 RAMP D			1						
	796	PB-18 0+336			1						
	800	PB-19 0+293			1						
	800	PB-20 0+261			1						
	800	PB-21 0+155			1						
	795&796	SIGNAL 2,5				2			2		
	795&796	SIGNAL 1,3,4, 6-15					13		13		
	800	SIGNAL 1-9					9		9		
	795	SIGNAL 1 TO SIGNAL 2						6			
	795	SIGNAL 2 TO CONTROLLER						94			
	795	SIGNAL 3 TO CONTROLLER						50			
	795	SIGNAL 4 TO CONTROLLER						50			
	795	SIGNAL 5 TO SIGNAL 6						6			
	795	SIGNAL 6 TO CONTROLLER						36			
	795	SIGNAL 8 TO SIGNAL 7						6			
	795	SIGNAL 7 TO CONTROLLER						31			
	796	SIGNAL 9 TO SIGNAL 10						6			
	796	SIGNAL 10 TO CONTROLLER						80			
	796	SIGNAL 11 TO CONTROLLER						70			
	796	SIGNAL 12 TO SIGNAL 13						7			
	796	SIGNAL 13 TO CONTROLLER						57			
	796	SIGNAL 15 TO SIGNAL 14						7			
	796	SIGNAL 14 TO CONTROLLER						34			
	800	SIGNAL 1 TO SIGNAL 2						5			
	800	SIGNAL 2 TO CONTROLLER						102			
	800	SIGNAL 3 TO CONTROLLER						99			
	800	SIGNAL 4 TO CONTROLLER						99			
	800	SIGNAL 5 TO SIGNAL 6						5			
	800	SIGNAL 6 TO CONTROLLER						44			
	800	SIGNAL 7 TO CONTROLLER						35			
	800	SIGNAL 9 TO SIGNAL 8						7			
	800	SIGNAL 8 TO CONTROLLER						109			
TOTALS CARRIED TO GENERAL SUMMARY				2	19	2	22	1045	24		

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL SUBSUMMARY

ATH-33-30.981

794A
956

REF NO.	SHEET NO.	LOCATION	SIDE	625 CONDUIT, 51 MM, 713.07	625 CONDUIT, 76 MM, 713.07	625 TRENCH		632 POWER SERVICE	632 LOOP DETECTOR UNIT DELAY AND EXTENSION TYPE, AS PER PLAN	632 LOOP DETECTOR LEAD-IN-CABLE	625 POWER CABLE 3 CONDUCTOR, #6 AWG.	625 CONDUIT, 76 MM, 713.04	632 INTERCONNECT CABLE, 12 PAIR, NO. 19 AWG, SOLID, REA (PE-39)								
				METER	METER	METER		EACH	EACH	METER	METER	METER	METER								
	800	PB-1 TO CONTROLLER	LT							236											
	800	PB-4 TO CONTROLLER	LT						1	23											
	800	PB-5 TO CONTROLLER	LT						1	10											
	800	PB-6 TO CONTROLLER	LT						1	96											
	796	PB-7 TO CONTROLLER	RT						2	132											
	800	PB-8 TO CONTROLLER	LT						1	13											
	800	PB-9 TO CONTROLLER	LT						1	31											
	795	PB-13 TO CONTROLLER	LT						1	41											
	795	PB-14 TO CONTROLLER	LT						1	109											
	795	PB-15 TO CONTROLLER	RT						1	60											
	795	PB-16 TO CONTROLLER	RT						1	40											
	796	PB-17 TO CONTROLLER	RT						1	137											
	796	PB-18 TO CONTROLLER	LT							53											
	800	PB-19 TO CONTROLLER	RT						2	110											
	800	PB-21 TO CONTROLLER	~~RT~~ LT						2	260											
	801	PB-1 TO PB-2	LT	38		38															
	801	PB-2 TO PB-3	LT	28		28															
	800	PB-3 TO PB-4	LT	26		26															
	800	PB-4 TO P-2	LT	2		2															
	800	PB-4 TO PB-5	LT			6							14								
	800	PB-5 TO PB-6	LT	87		87															
	800	PB-5 TO CONTROLLER	LT		5	5															
	796	PB-8 TO CONTROLLER	LT		30	10						13		13							
	800	PB-1 TO PB-21	LT			21							21								
	800	PB-8 TO PB-9	LT		51	17						17		17							
	800	PB-9 TO PB-10	LT		93	31						31		31							
	796	PB-10 TO P-3	LT	1		1															
	796	PB-10 TO PB-11	LT		39	13						13		13							
	796	PB-11 TO CONTROLLER	LT		55	17						20		20							
	795	CONTROLLER TO PB-12	LT		13	5						10									
	795	PB-12 TO P-4	LT	2		2															
	795	PB-12 TO PB-13	LT			31						31	62								
	795	PB-13 TO P-5	LT	2		2															
	795	PB-13 TO PB-14	LT	73		71															
	795	PB-12 TO PB-16	LT-RT			30							30								
	795	PB-16 TO P-7	RT	1		1															
	795	PB-16 TO PB-15	RT			19							19								
	795	PB-15 TO P-6	RT	9		9															
	800	PB-9 TO PB-19	RT-LT			22							22								
	800	PB-19 TO PB-20	RT	32		32															
	800	PB-20 TO P-1	RT		4	4															
	796	PB-17 TO PB-18	LT-RT	75		75															
	796	PB-18 TO PB-7	RT		11	11															
	796	PB-18 TO PB-11	RT-LT			32							32								
	796	PB-11 TO P-9	LT	2		2															
	796	PB-10 TO P-3	LT	1		1															
	800	PB-4 TO P-2	LT	2		2															
	795	POWER SERVICE TO PB-13	LT			31		1				45	31								
TOTALS CARRIED TO GENERAL SUMMARY				381	301	684		1	16	1351	180	231	94								

CALCULATED DLW
CHECKED RM

TRAFFIC SIGNAL SUBSUMMARY

ATH-33-30.981

794B
956

REF NO.	SHEET NO.	LOCATION	SIDE	625	632										633						
				GROUND ROD	SIGNAL SUPPORT FOUNDATION	PEDESTAL FOUNDATION	PEDESTAL, 2.4 M, TRANSFORMER BASE,	PEDESTAL, 3.4 M, TRANSFORMER BASE,	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 2	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 11	SIGNAL SUPPORT, TYPE TC-81.20, DESIGN 12	PED. PUSHBUTTON	REMOVAL OF TRAFFIC SIGNAL, INSTALLATION, AS PER PLAN	SIGNAL SUPPORT, TYPE TC-12-30, DESIGN 7 WITH MAST ARMS TC-81.20, DESIGN 3 & DESIGN 12	CONTROLLER MISC.: CONTROLLER MODEL 2070L W/OUT CABINET	4 PHASE CABINET, APP	8 PHASE CABINET, APP	CONTROLLER WORK PAD	CONCRETE FOR CABINET FOUNDATION, APP	REMOVAL OF EXISTING TRAFFIC SIGNALS	
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ.M	CU.M	EACH	
	800	P-1 0+257	RT	1	1							1		1							
	800	P-2 0+246	LT	1	1						1										
	796	P-3 0+323	LT	1	1					1											
	795	P-4 0+370	LT	1	1							1		1							
	795	P-6 0+391	RT	1	1				1												
	795	P-7 0+374	RT	1		1		1				1									
	796	P-8 0+339	RT	1	1					1		1									
	796	P-9 0+337	LT	1	1				1			1									
	800	P-10 0+261	LT	1		1	1					1									
	800	CONTROLLER 0+270	RT	1											1	1		1.04	1.40		
	795	CONTROLLER 0+362	RT	1											1		1	1.04	1.40		
		REM. OF EXIST. TRAFFIC SIGNALS	LT-RT																	1	
													1								
		TOTALS CARRIED TO GENERAL SUMMARY		11	7	2	1	1	2	2	1	6	1	2	2	1	1	2.08	2.80	1	

CALCULATED DL W
CHECKED RM

TRAFFIC SIGANL SUBSUMMARY

ATH-33-30.981

794C
956

TRAFFIC SIGNAL SUBSUMMARY

CALCULATED DLW | CHECKED RM

ATH-33-30.981

794D 956

REF NO.	SHEET NO.	LOCATION	SIDE	632 DETECTOR LOOP, APP	LOOP DETECTOR LEAD-IN CABLE	SIGN - FLAT SHEET TYPE G	GROUND MOUNTED SUPPORT, #3 POST
				EACH	METER	SQ. M	METER
L-1	795	RICHLAND	LT	1			
L-2	795	RICHLAND	LT	1			
L-3	795	POMEROY	-				
L-4	795	RICHLAND	RT				
L-5	796	RAMP D	RT	1			
L-6	796	RAMP D	RT				
L-7	796	RAMP D	RT				
L-8	800	RICHLAND	LT	1			
L-9	800	RICHLAND	RT	1			
L-10	800	RICHLAND	RT				
L-12	800	RAMP A	LT	1			
L-13	800	RAMP A	LT	1			
L-14	800	RAMP A	LT	1			
L-15	801	RICHLAND	RT	1			
L-16	801	RICHLAND	RT	1			
H	795	PUSHBUTTON CABLE	LT&RT		39		
E	795	PUSHBUTTON CABLE	LT		10		
D	796	PUSHBUTTON CABLE	LT		58		
C	796	PUSHBUTTON CABLE	RT		21		
A	800	PUSHBUTTON CABLE	LT		9		
B	800	PUSHBUTTON CABLE	RT		89		
S-1	796	R-72E-18	LT			0.21	4.0
S-2	796	R-72E-18	RT			0.21	4.0
S-3	795	R-72E-18	LT-RT			0.21	4.0
S-4	795	R-72E-18	LT-RT			0.21	4.0
S-5	800	R-72E-18	LT-RT			0.21	4.0
S-6	800	R-72E-18	LT-RT			0.21	4.0
H	795	R-73A-9	LT-RT			0.07	
E	795	R-73A-9	LT			0.07	
D	796	R-73A-9	LT			0.07	
C	796	R-73A-9	RT			0.07	
A	800	R-73A-9	LT			0.07	
B	800	R-73A-9	RT			0.07	
TOTALS CARRIED TO GENERAL SUMMARY				15	226	1.68	24

PB-15 450 mm 713.08
STA 0+388, 16.8 m RT

9 m - 51 mm CONDUIT, 713.07
P-6 TC-81.20M DES# 2
STA 0+391, 16.2 m RT

PB-16 450 mm 713.08
STA 0+371, 13.7 m RT

1 m - 51 mm
CONDUIT, 713.07

P-7 PEDESTAL 3.4m
STA 0+374, 14.5 m RT

19 m-76mm
CONDUIT, 713.04

POMEROY RD.

RICHLAND AVE.

0+500

L - 1

PB-14 450 mm 713.08
STA 0+479, 6.2 m LT

71 m - 51 mm CONDUIT, 713.07

R-72E-18

R-72E-18

ONLY

0+400

L - 2

L - 3

S-4

S-3

PB-13 450 mm 713.08
STA 0+408, 7.6 m LT

POWER SOURCE
POLE ID NUMBER
X=2112174
Y=475306

31 m-76 mm CONDUIT, 713.04

2 m - 51 mm
CONDUIT, 713.07

30 m - 76 mm
CONDUIT, 713.04

(2) 5 m - 76 mm
CONDUIT, 713.07

(2) 31 m - 76 mm
CONDUIT, 713.04

RAMP B

P-4 TC-12.30, DES# 7
STA 0+370, 16.9 m LT

2 m - 51 mm
CONDUIT, 713.07

PB-12 400 mm x 625 mm 713.081
STA 0+364, 10.0 m LT

CONTROLLER
STA 0+362, 17.9 m LT

MATCHLINE STA 0+360

0+900

RAMP B

TRAFFIC SIGNAL DETECTORS									
LOOP NO.	SIZE (METERS)	TURNS	MODE	DELAY (SEC.)	FILE	SLOT	CHANNEL TERMINAL	PHASE	COUNT LOG NO.
L-1	1.8 x 1.8	4	PULSE	-				1	
L-2	1.8 x 10	3	PRESENCE	3				2	
L-3	1.8 x 10	3	PRESENCE	10				4	
L-4	1.8 x 10	3	PRESENCE	3				6	

LEGEND

SIGNAL HEAD
STRAIN POLE
PULL BOX
CURB RAMP
(X) PED PUSH BUTTON
CONTROLLER

SCALE 1:200
HORIZONTAL
SCALE IN METERS

CALCULATED DLW
CHECKED RM

SIGNAL PLAN
RAMP B/ POMEROY ROAD

ATH-33-30.981

795
956

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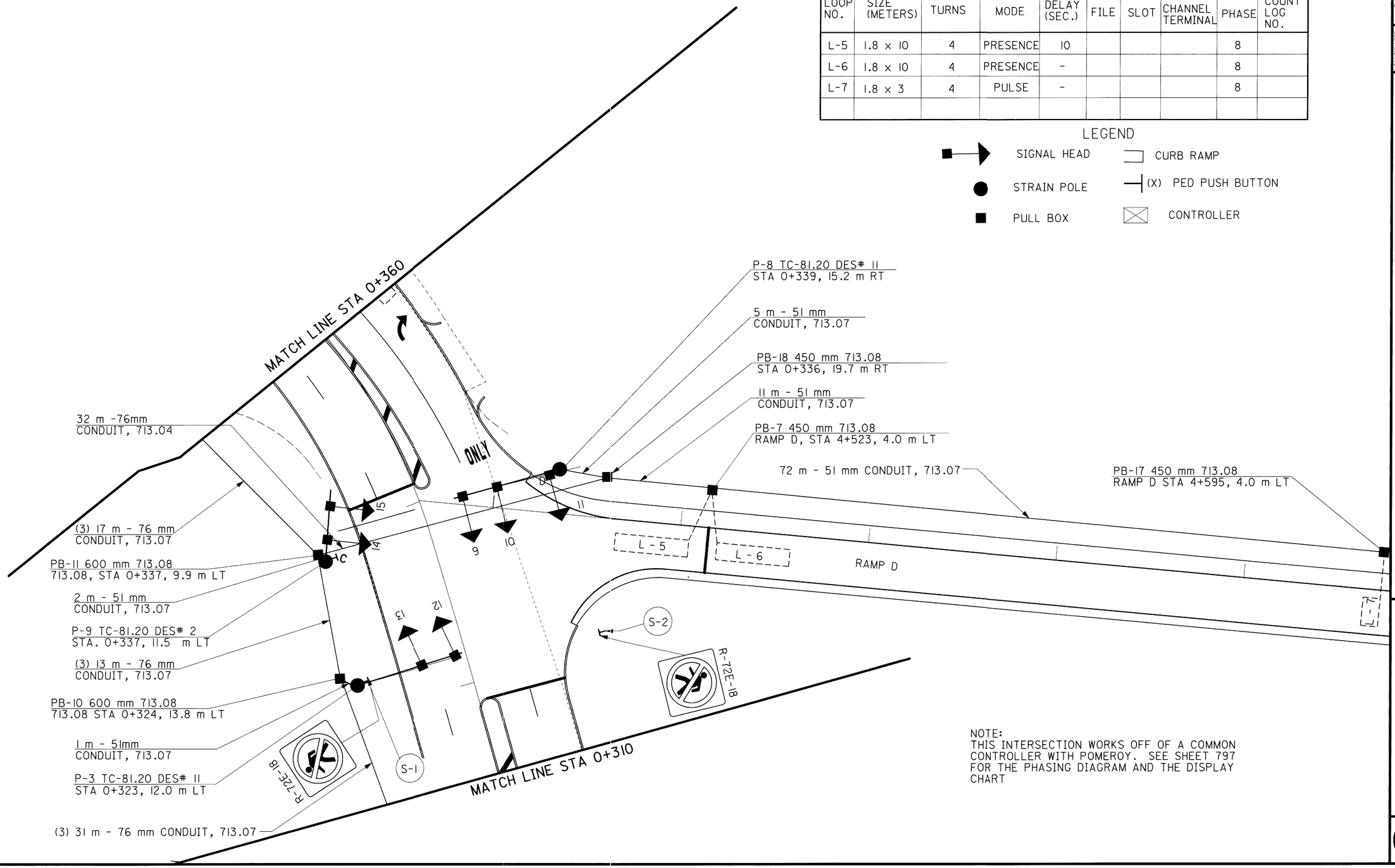
TRAFFIC SIGNAL DETECTORS									
LOOP NO.	SIZE (METERS)	TURNS	MODE	DELAY (SEC.)	FILE	SLOT	CHANNEL TERMINAL	PHASE	COUNT LOG NO.
L-5	1.8 x 10	4	PRESENCE	10				8	
L-6	1.8 x 10	4	PRESENCE	-				8	
L-7	1.8 x 3	4	PULSE	-				8	

LEGEND

- SIGNAL HEAD
- STRAIN POLE
- PULL BOX
- CURB RAMP
- (X) PED PUSH BUTTON
- CONTROLLER



NOTE:
THIS INTERSECTION WORKS OFF OF A COMMON CONTROLLER WITH POMEROY. SEE SHEET 797 FOR THE PHASING DIAGRAM AND THE DISPLAY CHART

SCALE H200 HORIZONTAL SCALE IN METERS

CALCULATED DLW
CHECKED RM

SIGNAL PLAN RAMP D

ATH-33-30.981

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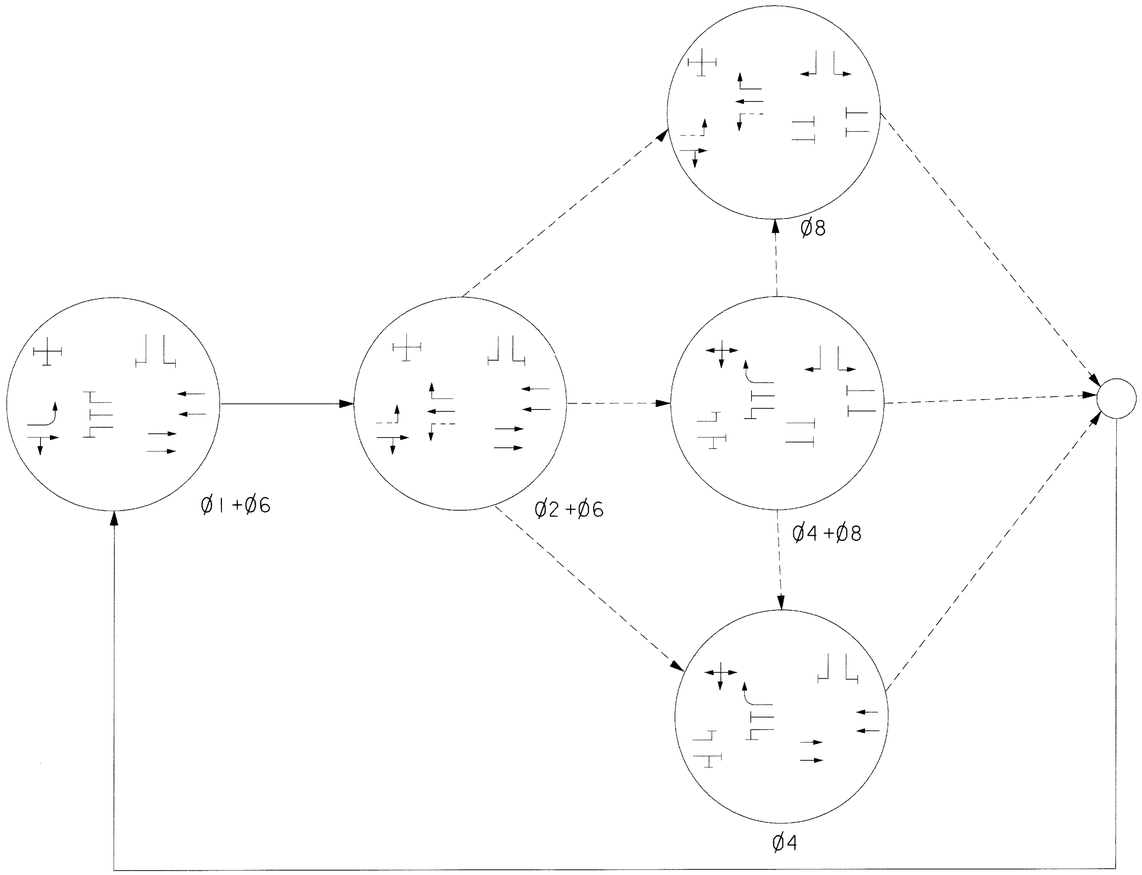
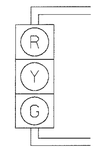
SIGNAL NO.

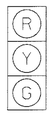
PHASE	MOVEMENT	INTERVAL	1	2	NO HEAD	4	5	6	7	8	9	10	11	12	13	14	15
			SIGNAL NO.														
Ø1 + Ø6		RW	R	R		G	~~G~~	G	R	R	G	G	G	G	G	R	R
		C1	R	R		G	~~Y~~	G	R	R	G	G	G	G	G	R	R
		C2	R	R		G	R	G	R	R	G	G	G	G	G	R	R
		C3															
Ø2 + Ø6		RW	G	G		G	G	G	R	R	G	G	G	G	G	R	R
		C1	G	G		G	G	G	R	R	G	G	G	G	G	R	R
		C2	Y	Y		Y	Y	Y	R	R	Y	Y	Y	Y	Y	R	R
		C3	R	R		R	R	R	R	R	R	R	R	R	R	R	R
Ø8		RW	G	G		G	G	G	R	R	R	R	R	R	R	G	G
		C1	Y	~~Y~~		Y	Y	Y	R	R	R	R	R	R	R	Y	Y
		C2	R	R		R	R	R	R	R	R	R	R	R	R	R	R
		C3															
Ø4		RW	R	R		R	R	R	G	G	G	G	G	G	G	R	R
		C1	R	R		R	R	R	Y	Y	Y	Y	Y	Y	Y	R	R
		C2	R	R		R	R	R	R	R	R	R	R	R	R	R	R
		C3															
Ø4 + Ø8		RW	R	~~G~~		R	R	R	G	G	R	R	R	R	R	G	G
		C1	R	~~Y~~		R	R	R	Y	Y	R	R	R	R	R	Y	Y
		C2	R	R		R	R	R	R	R	R	R	R	R	R	R	R
		C3															
FLASH			Y	Y		Y	Y	Y	R	R	Y	Y	Y	Y	Y	R	R



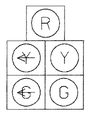
PHASING DIAGRAM
RAMP B/POMEROY RD.
RAMP D



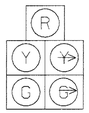
SIGNAL HEAD
(POLE MOUNTED)
300 mm LENS
3,4,11



SIGNAL HEAD
300 mm LENS
6,7,8,9,10,12,
13,14,15



SIGNAL HEAD
300 mm LENS
5



SIGNAL HEAD
300 mm LENS
2

R-73A-9

PEDESTRIAN PUSH BUTTON SIGN
LOCATED ABOVE PED PUSH BUTTON
EACH POLE OPPOSITE HANDHOLE

CALCULATED DLW
CHECKED RM

SIGNAL DETAILS
RAMP B/ POMEROY ROAD AND RAMP D

RAMP B/

ATH-33-30.981

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CONTROLLER

2L 2L 7 7 2L 7 2L 2L 2L 7

PB-12

8 7

PB-16

PB-15

7

P - 6

1

TO L-4

TO L-3

2

1

4

P-7

P_H

PB-13

1

TO L-2

5

6

P_E

P-4

PB-14

1

TO L-1

3 2L 7 7 2L 7 2L 2L 2L 3

D/S

TO POWER SOURCE

PB-11

PB-18

P-8

15

P_C

14 9 10

P_D

P-9

PB-7

PB-10

13 12

11

P-3

1

1

TO L-5 TO L-6

PB-9

PB-17

1

TO L-7

1

TO L-8

PB-8

INTERCONNECT CABLE
TO CONTROLLER @
STA. 0+268, 17.8 m LT
OF ALBANY ROAD

WIRING DIAGRAM LEGEND

(1) LOOP DECTOR WIRE "TYPE E"

(3) POWER CABLE, 3 CONDUCTOR, #8 AWG

(2L) LOOP DECTOR LEAD-IN-CABLE

(7) 7 CONDUCTOR, #14 AWG, SIGNAL CABLE

[D/S] DISCONNECT SWITCH

(Pa) PEDISTRAN PUSH BUTTON

● SPLICE LOCATION

(6) 6 PAIR, #19 AWG SOLID REA (PE-39), INTERCONNECT CABLE

CALCULATED D L W
CHECKED R M

SIGNAL DETAILS
POMEROY ROAD AND RAMP D

RAMP B/ P

ATH-33-30.981

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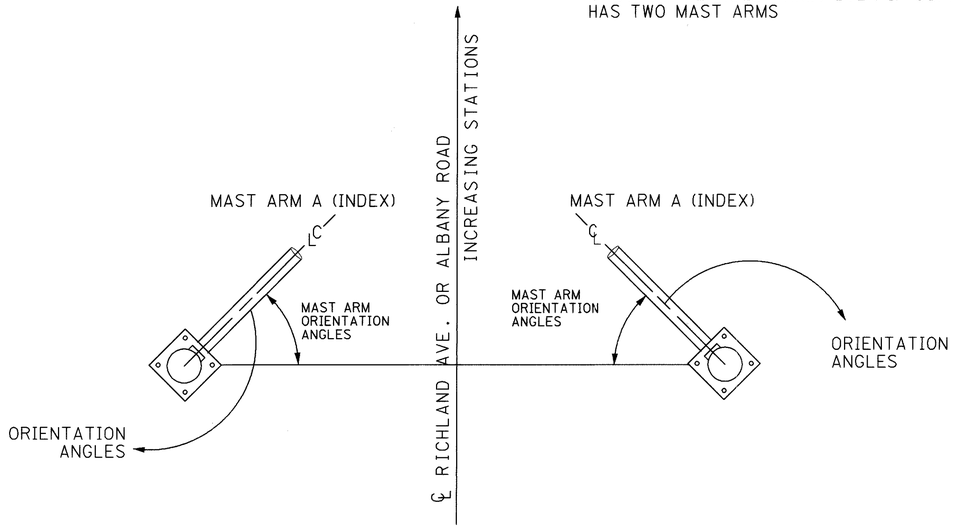
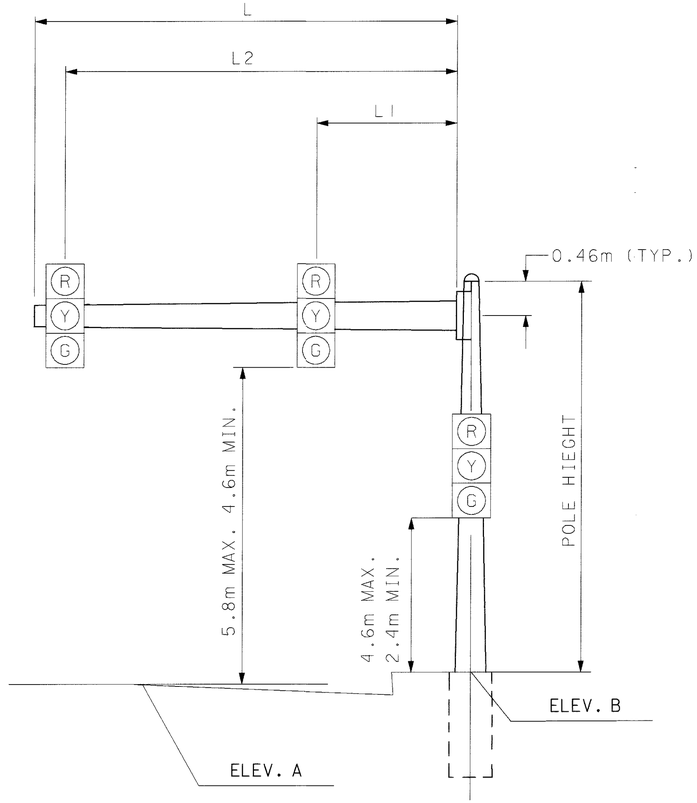
SIGNAL SUPPORT TC-81.20							ELEVATION		ORIENTATION ANGLES (DEG.) FROM MAST ARM A								
SUPORT NO.	SUPPORT DESIGN NO.	STATION & OFFSET	MAST ARM DESIGN #	L	L1	L2	A	B	PED. SIGNALS	PED. BUTTONS	POWER SERVICE (76mm BHC)	CONTROLLER	LUMINAIRE BRACKET	HANDHOLE	CABLE ENTRANCE (76mm BHC)	MAST ARM ORIENTATION ANGLE	
P-1	7	0+257,12.1 RT	3	9.8	4.8	8.4	210.24	210.29	-	45			-	180		0	
			12	14.6	9.1	14.3			-	-			-	-		270	
P-2	12	0+246,15.6 LT	-	14.6	10.7	14.3	210.60	209.60	-	-			-	162		18	
P-3	11	0+323,12.0 LT	-	11.6	7.25	10.9	208.28	208.50	-	-			-	180		0	
P-4	7	0+370,16.9 LT	12	14.6	10.7	14.3	207.35	207.10	-	327			-	180		327	
			3	9.8	5.9	9.5			-	-			-	-		113	
P-6	2	0+393,8.7 RT	-	7.6	1.8	5.4	206.78	207.07	-	-			-	180		2	
P-7		0+374,16.2 RT	-	-	-	-			-	0			-	0		-	
P-8	11	0+339,15.2 RT	-	11.6	6.9	10.7	208.00	208.05	-	352			-	117		8	
P-9	2	0+337,11.5 LT	-	7.6	4.3	7.3	N/A	207.70	-	0			-	250		290	

* TC-12.30 DESIGN #5
W/TC-81.20

** PEDESTAL TC-85.10
5m HGT.

NOTES:
1. ALL ANGLES MEASURES CLOCKWISE
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS





CALCULATED D L W
CHECKED R M

SIGNAL DETAILS

ATH-33-30.981

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