

SUMMARY OF QUANTITIES

90% FED.  
10% STATE  
URBAN

PAY ITEM NUMBER	DESCRIPTION	UNIT	TOTAL QUANTITY	SFTY-2A KANE COUNTY	SFTY-2A McHENRY COUNTY	Y031-1F KANE COUNTY	Y031-1F McHENRY COUNTY
20200600	EXCAVATING AND GRADING SHOULDER	UNIT	1,283	590	693		
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	43	20	23		
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	6,092	2,837	3,255		
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	20,396	9,499	10,897		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	122,380	56,997	65,383		
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	3,546	1,583	1,963		
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	3,427	1,596	1,831		
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	33,994	15,832	18,162		
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FOOT POSTS	FOOT	325	325	0		
* 63000005	STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	350	350	0		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	72	18	54		
63200310	GUARDRAIL REMOVAL	FOOT	3,189	650	2,539		
64200105	SHOULDER RUMBLE STRIP	FOOT	116,365	54,385	61,980		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	3	3		
67100100	MOBILIZATION	L SUM	1	0.5	0.5		
70100315	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	EACH	1	0.5	0.5		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5		
* 72000100	SIGN PANEL - TYPE 1	SQ FT	965	452	514		
* 72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	133	60	73		
* 72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	6	0	6		
* 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	2,290	985	1,305		
* 73000100	WOOD SIGN SUPPORT	FOOT	179	117	62		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	122,380	56,997	65,383		
* 78200405	GUARDRAIL MARKERS	EACH	2	2	0		
* 78201000	TERMINAL MARKER DIRECT APPLIED	EACH	72	18	54		
* 85000300	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	L SUM	1			1	0
* 88030012	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED	EACH	2			2	0
* 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4			4	0
* 88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2			2	0
* 88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2			2	0
* 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2			2	0
* 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2			2	0
* 88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8			8	0
* 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1			1	0
Δ X2503100	MOWING	UNIT	235	79	156		
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	1,028	514	514		
X0325917	TURF ESTABLISHMENT	SQ YD	2,454	726	1,728		
* X0325714	FLASHING BEACON, POST MOUNTED, SOLAR POWERED INSTALLATION	EACH	10			4	6
* X8803080	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED, RETROFIT	EACH	7			0	7

* B7301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	158				158
* B9502200	MODIFY EXISTING CONTROLLER	EACH	1				1
* X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	1				1
* X8140074	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	7				7
* X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	1				1
* X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	782				782

Δ Non-participating \* Specialty Items

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FILE NAME =	USER NAME = USER.	DESIGNED - EF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>US 20 - WEST UNION ROAD TO IL 47 SUMMARY OF QUANTITIES</b>			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - EF	REVISED -					2009-089 I	**	46	3	
	PLOT SCALE = 50.0000' / IN.	CHECKED - RS	REVISED -					** McHENRY & KANE	CONTRACT NO. 60J73			
	PLOT DATE = 2/18/2010	DATE - 02-08-2010	REVISED -		SCALE: NTS			SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

Δ Rev. 4-6-10

SCHEDULE OF QUANTITIES

STATION		SIGN PANEL ASSEMBLY REMOVAL (EACH)	SIGN ID #	SIZE (inches)	SIGN PANEL TYPE 1 (SQ.FT.)	TELESCOPING STEEL SIGN SUPPORT (FT.)	WOOD POST (FT.)	COMMENTS
663+79	LT	1	W14-3	36x48x48	5.5	26		
630+43	LT	1	W1-2	30x30	6.25		15	
			W13-1	18x18	2.25			
629+04	LT	1	W1-10R	30x30	9		15	
			W16-8	36x15	3.75			
579+32	LT	1	W14-3	36x48x48	5.5	26		
547+08	LT	1	W1-2L	30x30	6.25		15	
			W13-1	18x18	2.25			
543+29	LT	1	W2-1	36x36	9		15	
			W16-8	36x8	2			
			R4-1	24x30	5			
540+12	LT	1	R3-8	30x30	6.25	12.5		
535+90	LT	1	R1-1	36x36	9		14	
			W4-4	24x12	2			
520+92	LT	1	W14-3	36x48x48	5.5	26		
			W2-2	30x30	6.25			
474+46	LT	1	W16-8	30x8	1.67		14.5	
			W2-2	30x30	6.25			
456+90	LT	1	W16-8	30x8	1.67		14.5	
455+23	LT	1	W1-2	30x30	6.25	14.5		
440+94	LT	1	W11-10	30x30	6.25	14.5		
438+23	LT	1	W3-5 (45)	36x36	9		-	
			W13-1	18x18			-	
438+23	LT	-	W3-5 (45)	36x36	9	14.5	14.2	New sign to replace Speed Zone Ahead sign
431+45	LT	1	W2-2	30x30	6.25			
			W16-8	42x8	2.33	28		
429+38	LT	1	R2-1	24x30	5		12.5	
			R4-1	24x30	5			
425+44	LT	1	R3-2	24x24	4	12		
424+00	LT	1	R1-1	36x36	9	13		
422+75	LT	1	W6-1	36x36	9	14.5		
416+26	LT	1	W3-3	36x36	9	14.5		
416+50	LT	1	R1-1	30x30	6.25	13		
405+66	LT	1	R2-1	24x30	5	12.5		
394+30	LT	1	R1-1	36x36	9	15		
			W4-4	24x12	2			
391+51	LT	1	W2-2	30x30	6.25			
			W16-8	30x8	1.67	28		
388+57	LT	1	R2-1	24x30	5		13.5	
			W14-3	36x48x48	5.5			
384+47	LT	1	OM-3R	12x36	3	13		
383+99	LT	1	W1-7	48x24	8	24		
383+85	LT	1	OM-3L	12x36	3	13		
363+99	LT	1	I-2	40x24	6.67			
			R2-1	24x30	5	13.5		MOUNT 'HARMONY' ON POST
355+49	LT	1	W1-2	30x30	6.25	14.5		
354+26	LT	1	W2-1	30x30	6.25		14.5	
			W16-8	30x8	1.67			
348+75	LT	1	R1-1	36x36	9		15	
347+33	LT	1	R2-1	24x30	5	14.5		
343+88	LT		W2-1	30x30	6.25			
			W16-8	30x8	1.67	15.5		
338+79	LT	1	R2-1	24x30	5	14.5		
322+18	LT	1	R3-2	24x24	4	4		
314+56	LT	1	W2-2	30x30	6.25	28		
			W16-8	30x8	1.67			
301+45	LT	1	W2-1	30x30	6.25	28		
			W16-8	30x8	1.67			
293+60	LT	1	R1-1	30x30	6.25	13		
267+68	LT	1	W1-2	30x30	6.25	14.5		
230+90	LT	1	W2-2	30x30	6.25	28		
			W16-8	30x8	1.67			

STATION		SIGN PANEL ASSEMBLY REMOVAL (EACH)	SIGN ID #	SIZE (inches)	SIGN PANEL TYPE 1 (SQ.FT.)	TELESCOPING STEEL SIGN SUPPORT (FT.)	WOOD POST (FT.)	COMMENTS
187+99	LT	1	W2-2	30x30	6.25			REUSE EXISTING POST
			W16-8	30x8	1.67	0		
177+79	LT	1	R1-1	30x30	6.25	30		
			W4-4p	24x12	2			
177+15	LT	1	W2-1	30x30	6.25			REUSE EXISTING POST
			W16-8a	48x16	5.33	0		
173+50	LT	1	R1-1	30x30	6.25	30		
			W4-4p	24x12	2			
169+39	LT	1	W14-3	36x48x48	5.5	26		
135+61	LT	1	W3-5 (45)	36x36	9	14.5		
129+15	LT	1	I-2	40x24	6.67			
			R2-1	24x30	5	13.5		MOUNT 'CORAL' ON POST
118+36	LT	1	W2-1	30x30	6.25			REUSE EXISTING POST
			W16-8	30x8	1.67	0		
112+60	LT	1	R1-1	30x30	6.25	30		
			W4-4p	24x12	2			
110+13	LT	1	R2-1	24x30	5	13.5		
107+06	LT		W2-1	30x30	6.25			
			W16-8	30x8	1.67	14		
105+40	LT	1	W1-2	30x30	6.25	14.5		
099+01	LT	1	R2-1	24x30	5	13.5		
095+84	LT	1	R12-4	36x24	6	15		
093+61	LT	1	W1-2	30x30	6.25	14.5		
			W2-2	30x30	6.25	30		
057+80	LT	1	W16-8	30x8	1.67			
049+90	LT	1	R1-1	30x30	6.25	28		
079+93	RT	1	W1-2	30x30	6.25	14.5		
090+40	RT	1	W1-2	30x30	6.25	14.5		
092+49	RT	1	R12-4	36x24	6	15		
107+06	RT	1	W2-1	30x30	6.25			REUSE EXISTING POST
			W16-8	30x8	1.67	0		
113+40	RT	1	R1-1	30x30	6.25		15	
			W4-4p	24x12	2			
113+54	RT	1	R2-1	24x30	5			
			W14-3	36x48x48	5.5	26		
118+36	RT		W2-1	30x30	6.25			
			W16-8	30x8	1.67	17		
128+98	RT	1	R2-1	24x30	5	13.5		
140+40	RT	1	W14-3	36x48x48	5.5	26		
166+23	RT	1	W2-1	30x30	6.25			REUSE EXISTING POST
			W16-8a	30x16	3.33	0		
173+64	RT	1	R1-1	30x30	6.25			REUSE EXISTING POST
			W4-4p	24x12	2	0		
175+01	RT	1	W2-2	30x30	6.25	30		
			W16-8	30x8	1.67			
178+79	RT	1	W1-7	48x24	8	26		
218+14	RT	1	W2-2	30x30	6.25	30		
			W16-8	30x8	1.67			
221+70	RT	1	R3-5	30x36	7.5	14		
232+91	RT	1	W1-2	30x30	6.25	14.5		
251+16	RT	1	W1-2	30x30	6.25	14.5		
270+59	RT	1	W14-3	36x48x48	5.5	26		
287+06	RT	1	W2-1	30x30	6.25	30		
			W16-8	30x8	1.67			
294+10	RT	1	R1-1	30x30	6.25	28		
298+93	RT	1	W2-2	30x30	6.25	30		
			W16-8	30x8	1.67			
305+59	RT	1	R3-5	30x36	7.5	14		
308+60	RT	1	R1-1	30x30	6.25	28		
308+68	RT	1	W1-8L	12x18	1.5	12.5		
308+99	RT	1	W1-8L	12x18	1.5	12.5		
309+35	RT	1	W1-8L	12x18	1.5	12.5		
320+15	RT	1	W11-10	30x30	6.25	14.5		

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	PLOT SCALE = 50.0000' / IN.	CHECKED - RS	REVISED -
	PLOT DATE = 2/24/2010	DATE - 02-08-2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

US 20 - WEST UNION ROAD TO IL 47  
SCHEDULE OF QUANTITIES - SIGNS AND TRAFFIC SIGNALS

SCALE: NTS SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2009-089 I	**	46	4
** MCHENRY & KANE			CONTRACT NO. 60137	
• 525/ 345			ILLINOIS FED. AID PROJECT	

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SCHEDULE OF QUANTITIES

STATION		SIGN PANEL ASSEMBLY REMOVAL (EACH)	SIGN ID #	SIZE (inches)	SIGN PANEL TYPE 1 (SQ.FT.)	TELESCOPING STEEL SIGN SUPPORT (FT.)	WOOD POST (FT.)	COMMENTS
321+59	RT	1	R3-2	24x24	4	13		
332+59	RT	1	W3-5 (45)	36x36	9	14.5		
338+77	RT	1	I-2	40x24	6.67	13.5		MOUNT 'HARMONY' ON POST
340+77	RT	1	R2-1	24x30	5			
340+77	RT	1	W1-2	30x30	6.25	14.5		
343+88	RT	1	W2-1	30x30	6.25		17	
343+88	RT	1	W16-8	30x8	1.67			
345+79	RT	1	W1-8L	12x18	1.5	12.5		
345+79	RT	1	W1-8R	12x18	1.5	12.5		
346+80	RT	1	W1-8L	12x18	1.5	12.5		
346+80	RT	1	W1-8R	12x18	1.5	12.5		
347+99	RT	1	W1-8L	12x18	1.5	12.5		
347+99	RT	1	W1-8R	12x18	1.5	12.5		
349+09	RT	1	R1-1	36x36	9	14		
349+58	RT	1	W1-8L	12x18	1.5	12.5		
349+58	RT	1	W1-8R	12x18	1.5	12.5		
350+55	RT	1	W1-8L	12x18	1.5	12.5		
350+55	RT	1	W1-8R	12x18	1.5	12.5		
351+58	RT	1	W1-8L	12x18	1.5	12.5		
351+58	RT	1	W1-8R	12x18	1.5	12.5		
352+64	RT	1	R2-1	24x30	5	12.5		
353+32	RT	1	W11	30x30	6.25	14.5		
354+26	RT		W2-1	30x30	6.25	15.5		
354+26	RT		W16-8	30x8	1.67			
364+30	RT	1	R2-1	24x30	5	13.5		
374+06	RT	1	W14-3	36x48x48	5.5	26		
377+29	RT	1	W2-2	30x30	6.25	28		
377+29	RT	1	W16-8	30x8	1.67			
384+30	RT	1	R1-1	30x30	6.25	28		
384+20	RT	1	OM-3R	12x36	3	13.5		
384+47	RT	1	OM-3R	12x36	3	13.5		
386+86	RT	1	R2-1	24x30	5	12.5		
390+65	RT	1	W6-1	36x36	9	15.5		
403+16	RT	1	W11-10	30x30	6.25	15		
409+28	RT	1	W4-3	36x36	9	15.5		
413+23	RT	1	W6-2	36x36	9	15.5		
414+81	RT	1	R2-1	24x30	5	13.5		

STATION		SIGN PANEL ASSEMBLY REMOVAL (EACH)	SIGN ID #	SIZE (inches)	SIGN PANEL TYPE 1 (SQ.FT.)	TELESCOPING STEEL SIGN SUPPORT (FT.)	WOOD POST (FT.)	COMMENTS
417+53	RT	1	W2-2	30x30	6.25	30		
417+53	RT	1	W16-8	30x8	1.67			
422+77	RT	1	R8	18x24	3			
422+77	RT	1	W4-2R	30x30	6.25	15		
424+11	RT	1	R3-2	24x24	4	13		
424+11	RT	1	R3-2	24x24	4			
424+32	RT	1	W1-7	48x24	8	26		
426+19	RT	1	W1-8L	12x18	1.5	12.5		
427+15	RT	1	W1-8L	12x18	1.5	12.5		REMOVE SIGNS ON RIGHT
428+10	RT	1	W1-8L	12x18	1.5	12.5		INSTALL SIGNS ON LEFT
429+71	RT	1	R2-1	24x30	5	13.5		
433+54	RT	1	W1-2	30x30	6.25	14.5		
443+03	RT	1	W2-2	30x30	6.25	26		
443+03	RT	1	W16-8	30x8	1.67			
449+77	RT	1	R1-1	36X36	9	28		
456+86	RT	1	W2-2	30x30	6.25	26		
456+86	RT	1	W16-8	30x8	1.67			
465+96	RT	1	R1-1	36X36	9	28		
519+61	RT	1	S4-I105	24x24	4	26		
519+61	RT	1	W14-3	36x48x48	5.5			
522+43	RT	1	W1-2	30x30	6.25	16		
522+43	RT	1	W13-1	18x18	2.25			
525+97	RT	1	W2-1	30x30	6.25	26		
525+97	RT	1	W16-8	30x8	1.67			
532+25	RT	1	R3-8	30x30	6.25	13		
536+75	RT	1	R1-1	30x30	6.25	32		
536+75	RT	1	W4-4p	24x12	2			
570+85	RT	1	W14-3	36x48x48	5.5	26		
570+85	RT	1	W1-2	30x30	6.25	16.5		
611+63	RT	1	W13-1	18x18	2.25			
615+84	RT	1	W1-10R	30x30	6.25	27		
615+84	RT	1	W16-8	36x15	3.75			
619+87	RT	1	R1-1	36X36	9	26		
620+86	RT	1	R1-1	36X36	9	26		
637+64	RT	1	W14-3	36x48x48	5.5	26		
666+87	RT	1	W1-2	30x30	6.25	14.5		
687+05	RT	1	W3-3	30x30	6.25	14.5		

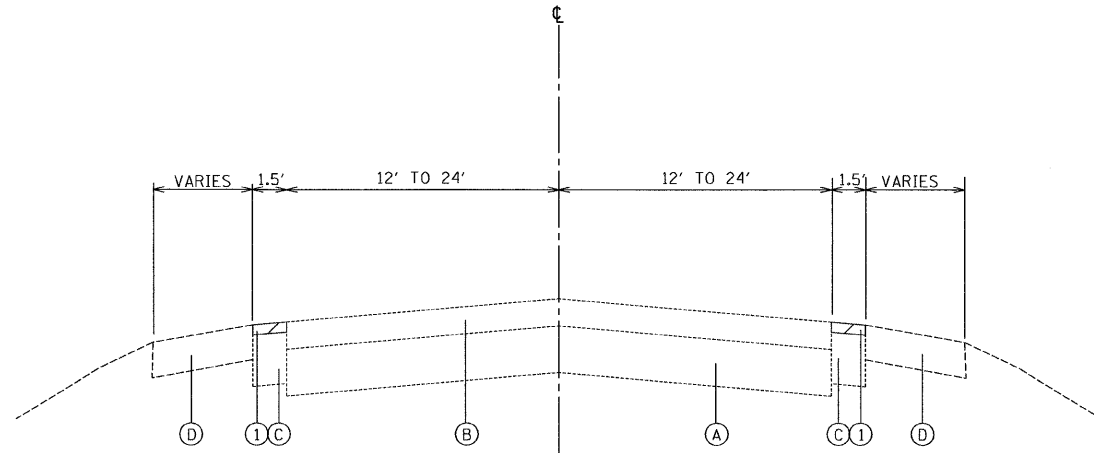
PAY ITEM NUMBER	DESCRIPTION	TOTAL QUANTITY	McHENRY COUNTY QUANTITY	CORAL ROAD QUANTITY	MARENGO/BECK/ S. UNION ROADS QUANTITY	HARMONY ROAD QUANTITY	KANE COUNTY QUANTITY	I-90 RAMPS QUANTITY	ALLEN/BRIER HILL ROADS QUANTITY
85000300	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	L SUM	1	0			1	1	
88030012	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED	EACH	2	0			2	2	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4	0			4	4	
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2	0			2	2	
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2	0			2	2	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	0			2	2	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	0			2	2	
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8	0			8	8	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	0			1	1	
X8803080	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED, RETROFIT	EACH	7	7	2	5	0		
XX003183	POST MOUNTED FLASHING BEACON INSTALLATION to FLASHING BEACON, POST MOUNTED, SOLAR POWERED INSTALLATION	EACH	10	6	2		4	4	4

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FILE NAME =	USER NAME = .USER.	DESIGNED - EF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>US 20 - WEST UNION ROAD TO IL 47 SCHEDULE OF QUANTITIES - SIGNS AND TRAFFIC SIGNALS</b>				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - EF	REVISED -		SCALE: NTS				2009-089 I	**	46	5	
		CHECKED - RS	REVISED -		SHEET NO. 2 OF 2 SHEETS				** McHENRY & KANE		CONTRACT NO. 60E37		
		DATE - 02-08-2010	REVISED -		STA. TO STA.				ILLINOIS FED. AID PROJECT				

Rev. Sheet 4-6-10

EXISTING R.O.W.

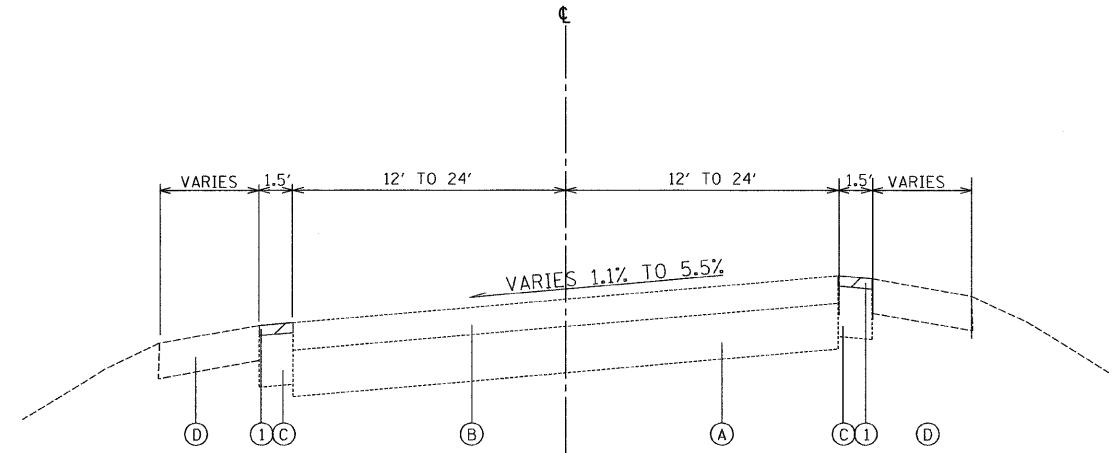


EXISTING NORMAL CROWN TYPICAL SECTION

STA. 66+37 TO STA. 85+72	STA. 313+18 TO STA. 322+62	STA. 539+52 TO STA. 546+83
STA. 89+64 TO STA. 97+30	STA. 328+84 TO STA. 346+11	STA. 554+34 TO STA. 606+53
STA. 101+84 TO STA. 110+18	STA. 350+10 TO STA. 389+90	STA. 607+78 TO STA. 617+77
STA. 115+96 TO STA. 126+81	STA. 450+92 TO STA. 457+99	STA. 622+92 TO STA. 628+11
STA. 131+57 TO STA. 231+65	STA. 468+51 TO STA. 480+24	STA. 633+32 TO STA. 637+11
STA. 323+83 TO STA. 237+09	STA. 486+77 TO STA. 493+15	STA. 641+01 TO STA. 655+08
STA. 241+92 TO STA. 255+43	STA. 504+59 TO STA. 508+39	STA. 666+35 TO STA. 670+22
STA. 261+74 TO STA. 290+49	STA. 512+26 TO STA. 528+31	STA. 683+10 TO STA. 701+35
STA. 297+06 TO STA. 304+93		

EXISTING R.O.W.

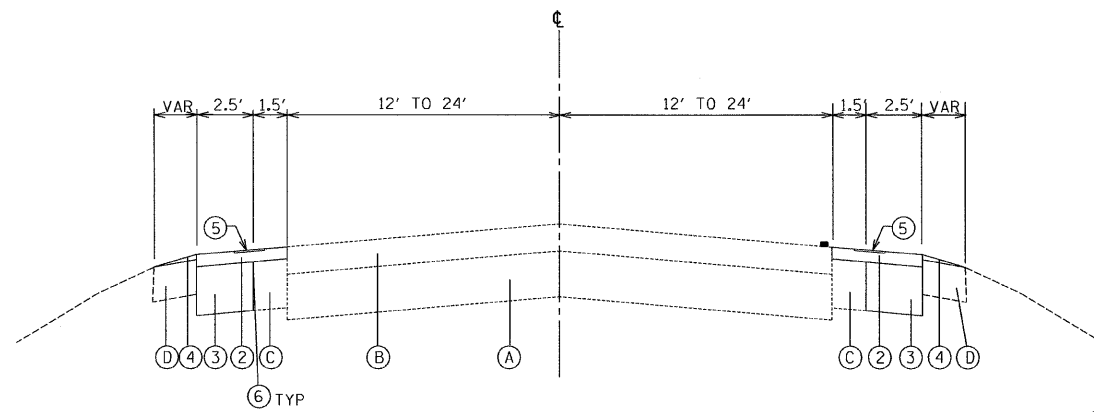
EXISTING R.O.W.



EXISTING SUPERELEVATED TYPICAL SECTION

STA. 50+00 TO STA. 66+37	STA. 304+93 TO STA. 313+18	STA. 528+31 TO STA. 539+52
STA. 85+72 TO STA. 89+64	STA. 322+62 TO STA. 328+84	STA. 546+83 TO STA. 554+34
STA. 97+30 TO STA. 101+84	STA. 346+11 TO STA. 350+10	STA. 606+53 TO STA. 607+78
STA. 110+18 TO STA. 115+96	STA. 427+92 TO STA. 433+53	STA. 617+77 TO STA. 622+92
STA. 126+81 TO STA. 131+57	STA. 436+97 TO STA. 450+92	STA. 628+11 TO STA. 633+32
STA. 231+65 TO STA. 323+83	STA. 457+99 TO STA. 468+51	STA. 637+11 TO STA. 641+01
STA. 237+09 TO STA. 241+92	STA. 480+24 TO STA. 486+77	STA. 655+08 TO STA. 666+35
STA. 255+43 TO STA. 261+74	STA. 493+15 TO STA. 504+59	STA. 670+22 TO STA. 683+10
STA. 290+49 TO STA. 297+06	STA. 508+39 TO STA. 512+26	

EXISTING R.O.W.

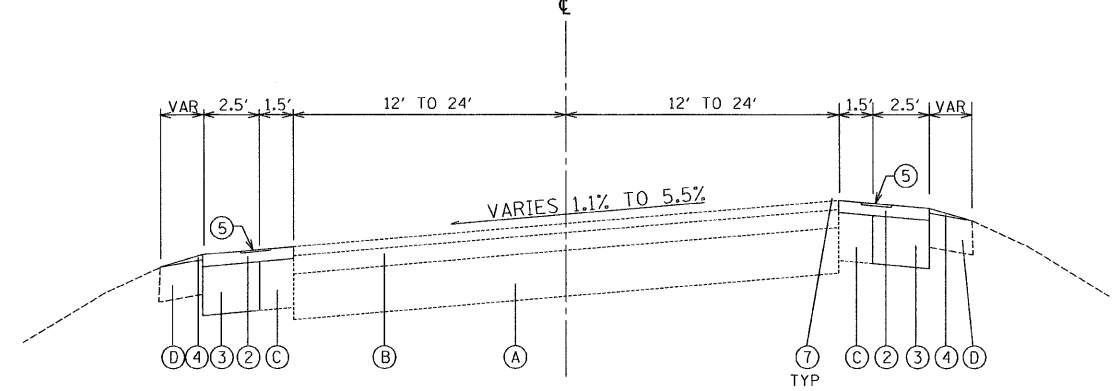


PROPOSED NORMAL CROWN TYPICAL SECTION

STA. 66+37 TO STA. 85+72	STA. 313+18 TO STA. 322+62	STA. 539+52 TO STA. 546+83
STA. 89+64 TO STA. 97+30	STA. 328+84 TO STA. 346+11	STA. 554+34 TO STA. 606+53
STA. 101+84 TO STA. 110+18	STA. 350+10 TO STA. 389+90	STA. 607+78 TO STA. 617+77
STA. 115+96 TO STA. 126+81	STA. 450+92 TO STA. 457+99	STA. 622+92 TO STA. 628+11
STA. 131+57 TO STA. 231+65	STA. 468+51 TO STA. 480+24	STA. 633+32 TO STA. 637+11
STA. 323+83 TO STA. 237+09	STA. 486+77 TO STA. 493+15	STA. 641+01 TO STA. 655+08
STA. 241+92 TO STA. 255+43	STA. 504+59 TO STA. 508+39	STA. 666+35 TO STA. 670+22
STA. 261+74 TO STA. 290+49	STA. 512+26 TO STA. 528+31	STA. 683+10 TO STA. 701+35
STA. 297+06 TO STA. 304+93		

EXISTING R.O.W.

EXISTING R.O.W.



PROPOSED SUPERELEVATED TYPICAL SECTION

STA. 50+00 TO STA. 66+37	STA. 304+93 TO STA. 313+18	STA. 528+31 TO STA. 539+52
STA. 85+72 TO STA. 89+64	STA. 322+62 TO STA. 328+84	STA. 546+83 TO STA. 554+34
STA. 97+30 TO STA. 101+84	STA. 346+11 TO STA. 350+10	STA. 606+53 TO STA. 607+78
STA. 110+18 TO STA. 115+96	STA. 427+92 TO STA. 433+53	STA. 617+77 TO STA. 622+92
STA. 126+81 TO STA. 131+57	STA. 436+97 TO STA. 450+92	STA. 628+11 TO STA. 633+32
STA. 231+65 TO STA. 323+83	STA. 457+99 TO STA. 468+51	STA. 637+11 TO STA. 641+01
STA. 237+09 TO STA. 241+92	STA. 480+24 TO STA. 486+77	STA. 655+08 TO STA. 666+35
STA. 255+43 TO STA. 261+74	STA. 493+15 TO STA. 504+59	STA. 670+22 TO STA. 683+10
STA. 290+49 TO STA. 297+06	STA. 508+39 TO STA. 512+26	

EXISTING CONDITIONS:

- (A) PCC PAVEMENT
- (B) HOT-MIX ASPHALT SURFACE
- (C) HOT-MIX ASPHALT SHOULDERS
- (D) AGGREGATE SHOULDERS

☒ ITEMS TO BE REMOVED

PROPOSED IMPROVEMENTS:

- ① HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- ② HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N70, 2"
- ③ HOT-MIX ASPHALT SHOULDERS, 6" (IN 2 LIFTS)
- ④ AGGREGATE WEDGE SHOULDER, TYPE B
- ⑤ SHOULDER RUMBLE STRIPS
- ⑥ STRIP REFLECTIVE CRACK CONTROL TREATMENT
- ⑦ THERMOPLASTIC PAVEMENT MARKING - LINE 4"

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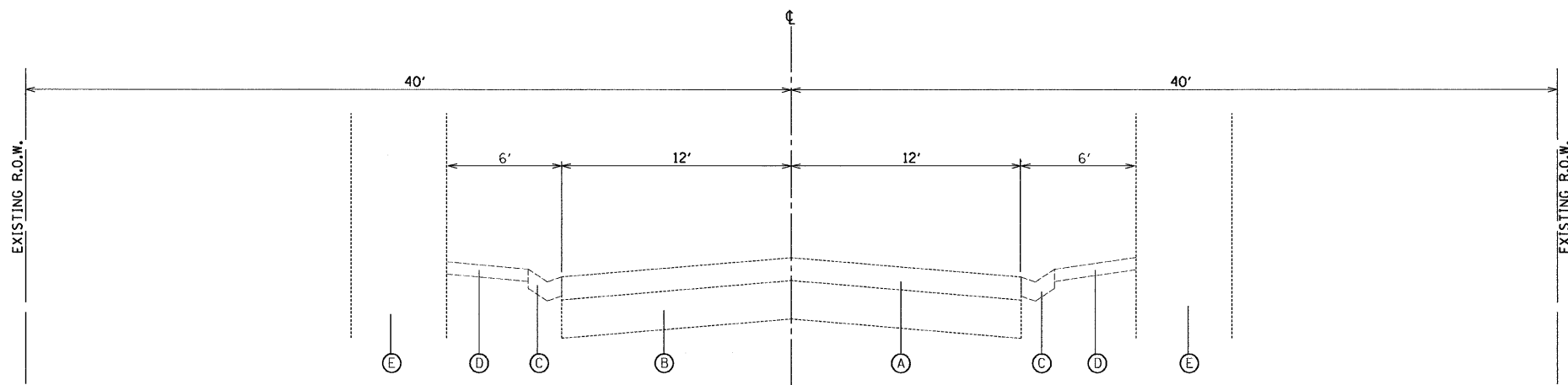
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

US 20 - WEST UNION ROAD TO IL 47  
TYPICAL SECTIONS

SCALE: NTS SHEET NO. 1 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	2009-089 I	••	46	6
•• MCHENRY & KANE			CONTRACT NO. 60237	
• 525/ 345			ILLINOIS FED. AID PROJECT	

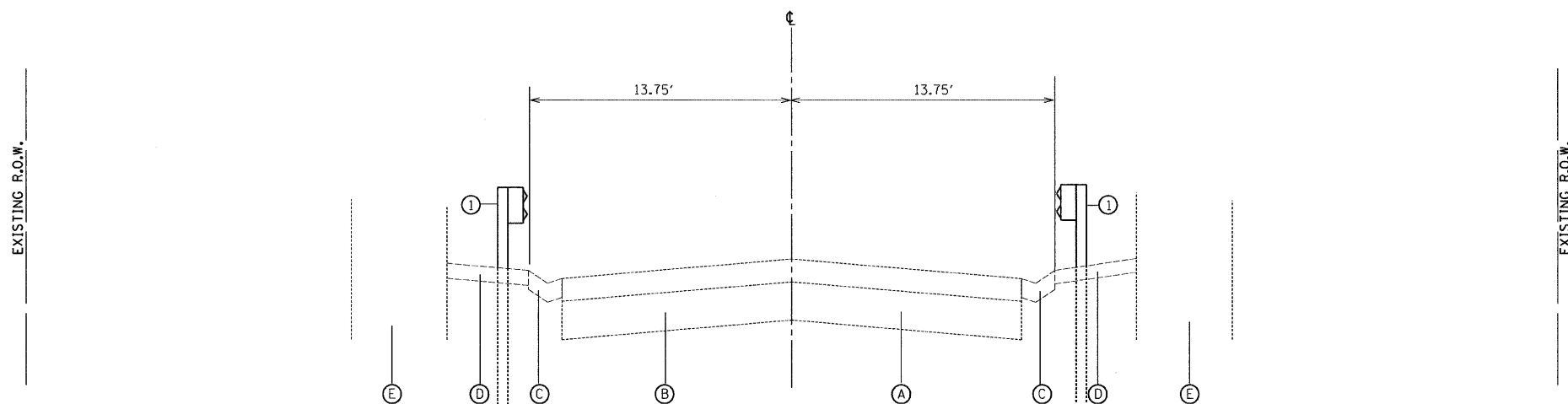
Rev. Sheet 4-6-10



EXISTING TYPICAL SECTION  
STA. 433+53 TO STA. 436+97

EXISTING CONDITIONS:

- (A) HOT-MIX ASPHALT SURFACE
- (B) P.C. CONCRETE PAVEMENT
- (C) TYPE B GUTTER
- (D) AGGREGATE SHOULDER
- (E) BRIDGE PIER



EXISTING TYPICAL SECTION  
STA. 433+53 TO STA. 436+97

PROPOSED IMPROVEMENTS

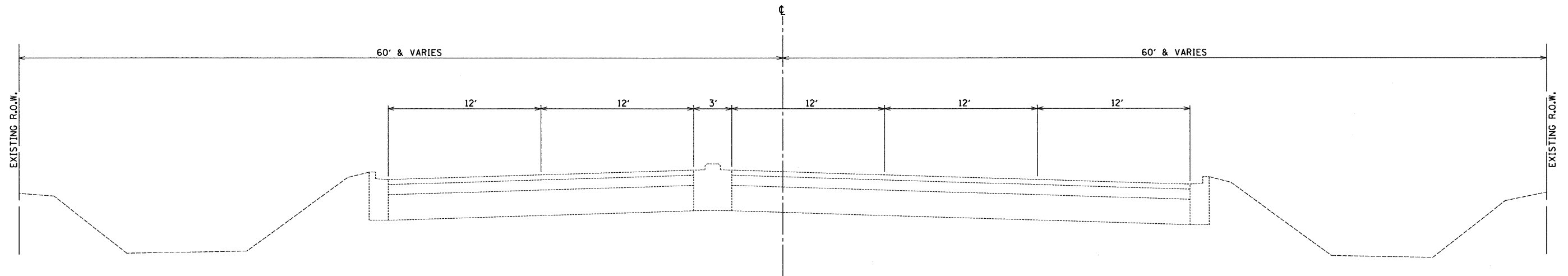
- (1) GUARDRAIL, TYPE B

3-8-10 *kg*

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PLOT DATE = 3/4/2010		DATE - 02-08-2010	REVISED -						• 525/ 345	ILLINOIS FED. AID PROJECT		

Rev. sheet 4-6-10



EXISTING TYPICAL SECTION  
 STA. 389+90 TO STA. 427+92

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

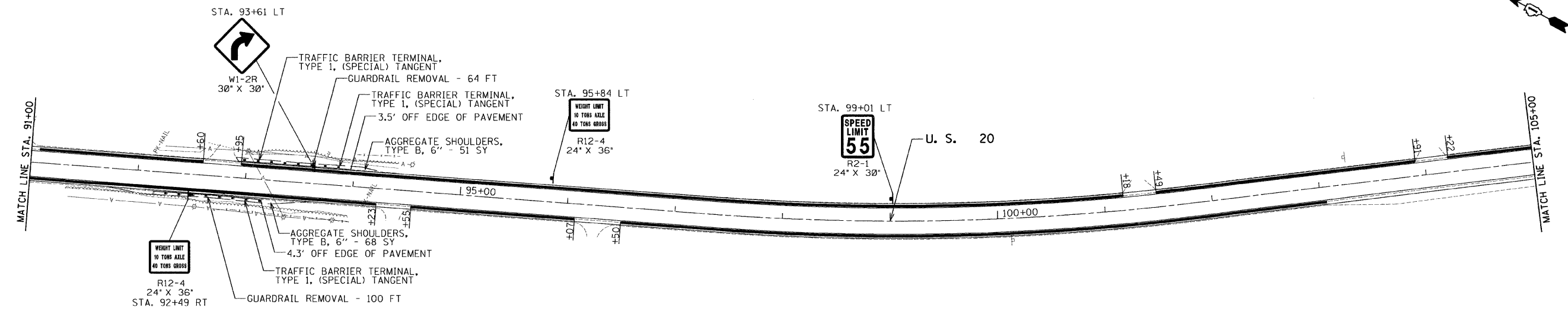
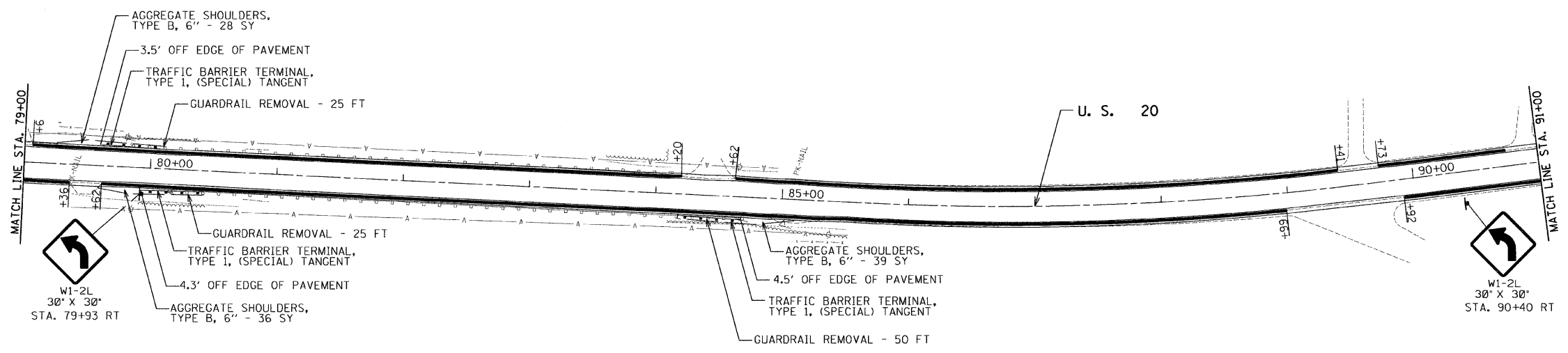
US 20 - WEST UNION ROAD TO IL 47  
 TYPICAL SECTIONS

SCALE: NTS SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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•• MCHENRY & KANE		CONTRACT NO. 60137		
• 525/ 345		ILLINOIS FED. AID PROJECT		

Rev. Sheet 4-6-10





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		DATE - 02-08-2010	REVISED -						•	525/345			

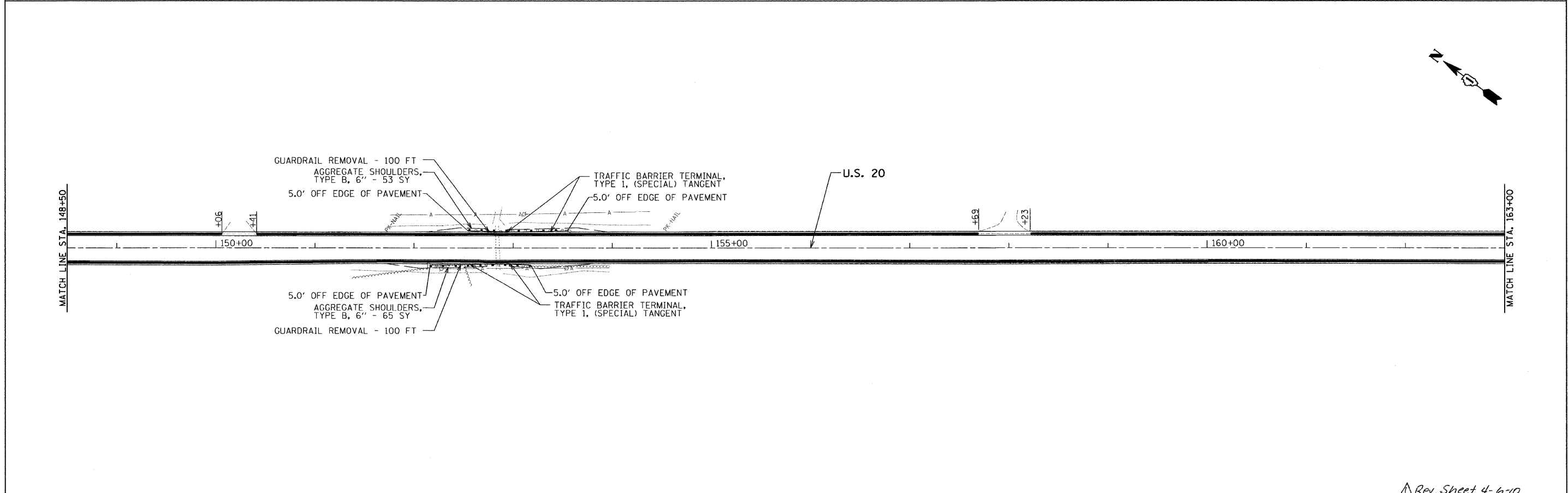
Rev. Sheet 4-6-10

CONTRACT NO. 60237

ILLINOIS FED. AID PROJECT





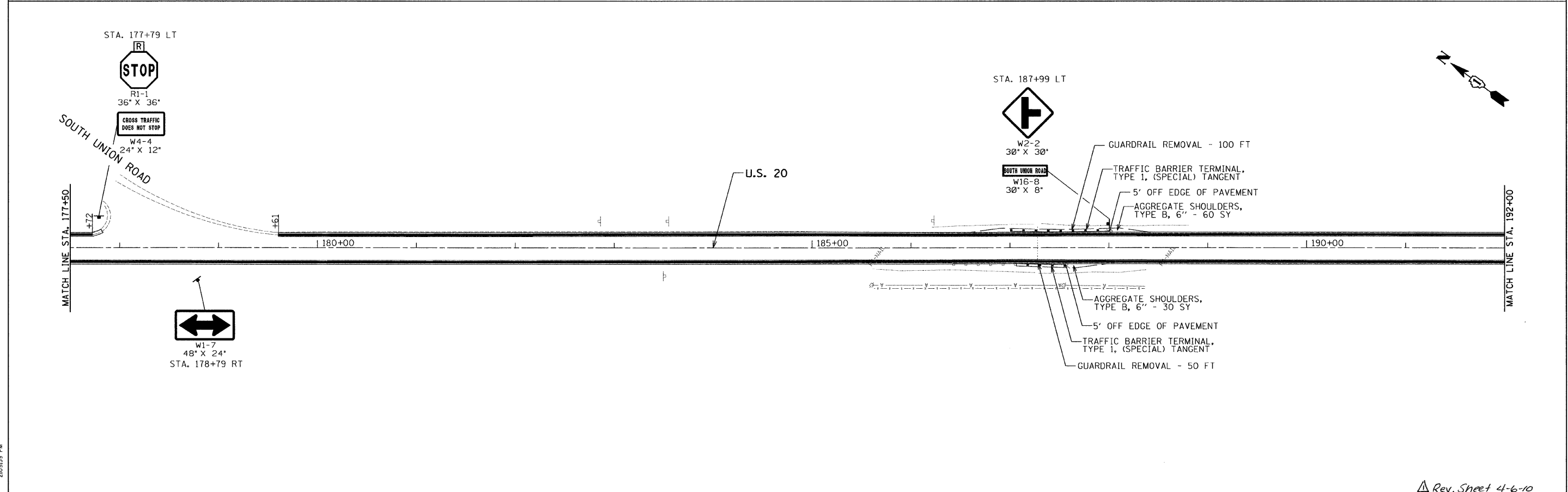
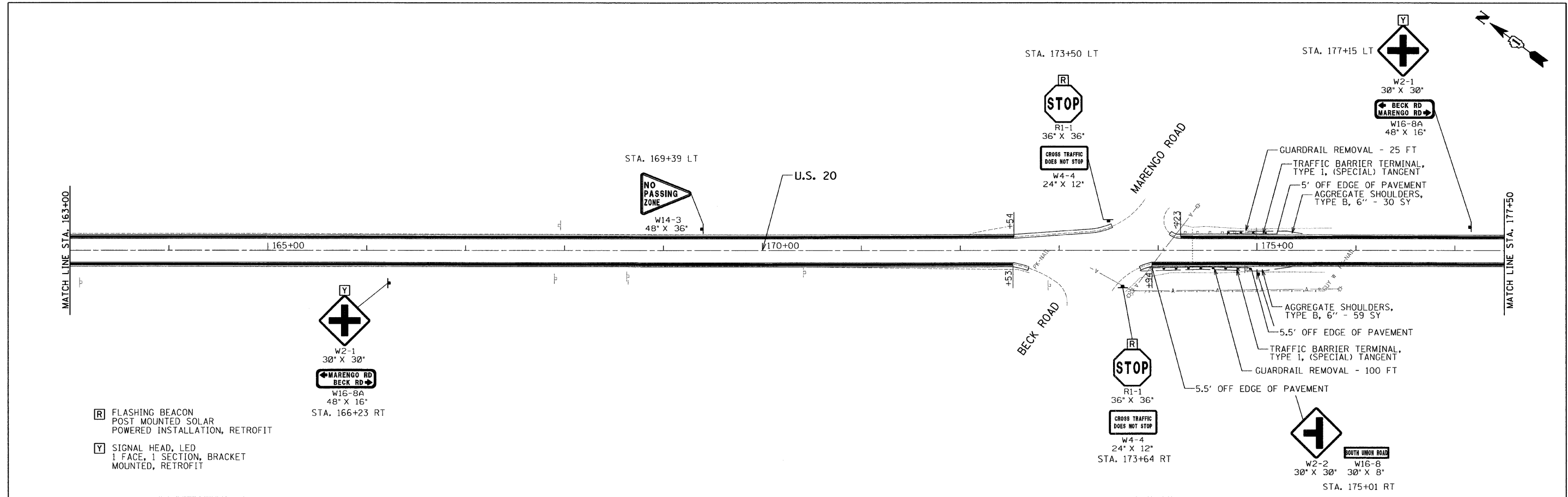


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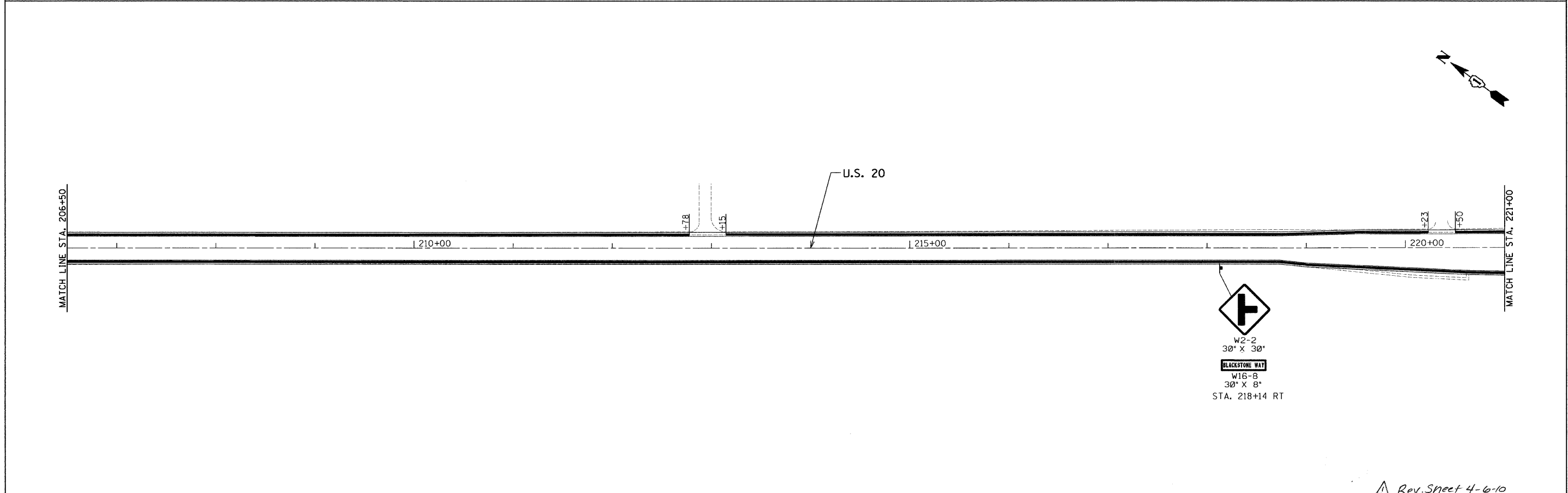
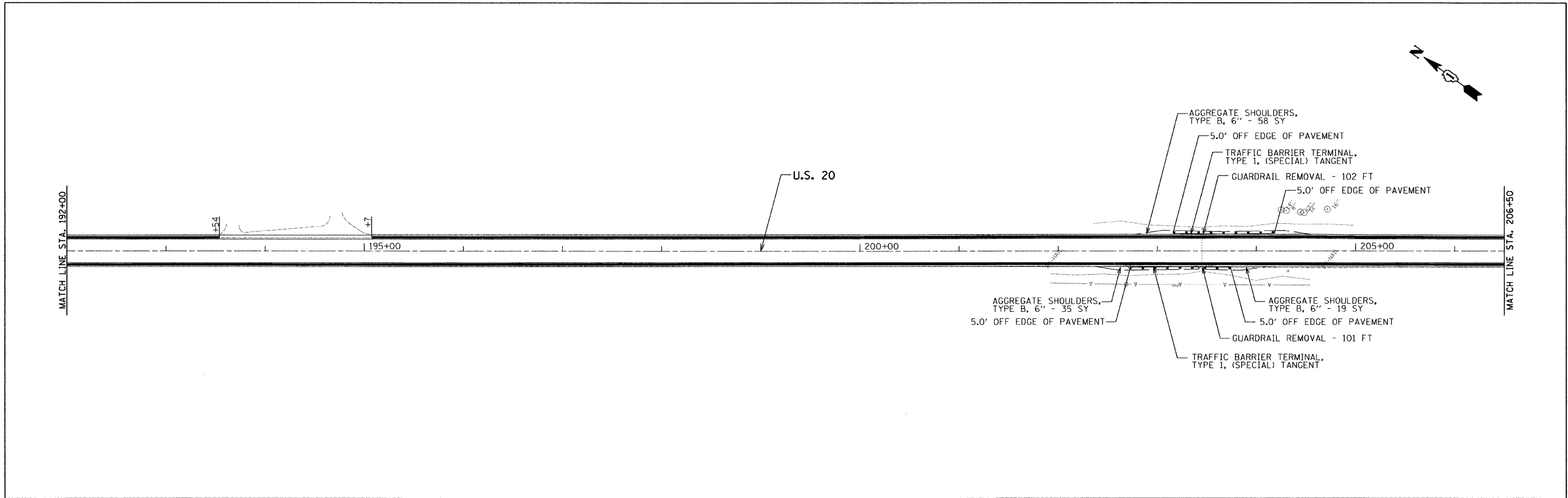
Rev. Sheet 4-6-10

SCALE: 50 SHEET NO. 4 OF 23 SHEETS STA. 134+00 TO STA. 163+00



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<i>Rev. Sheet 4-6-10</i>													

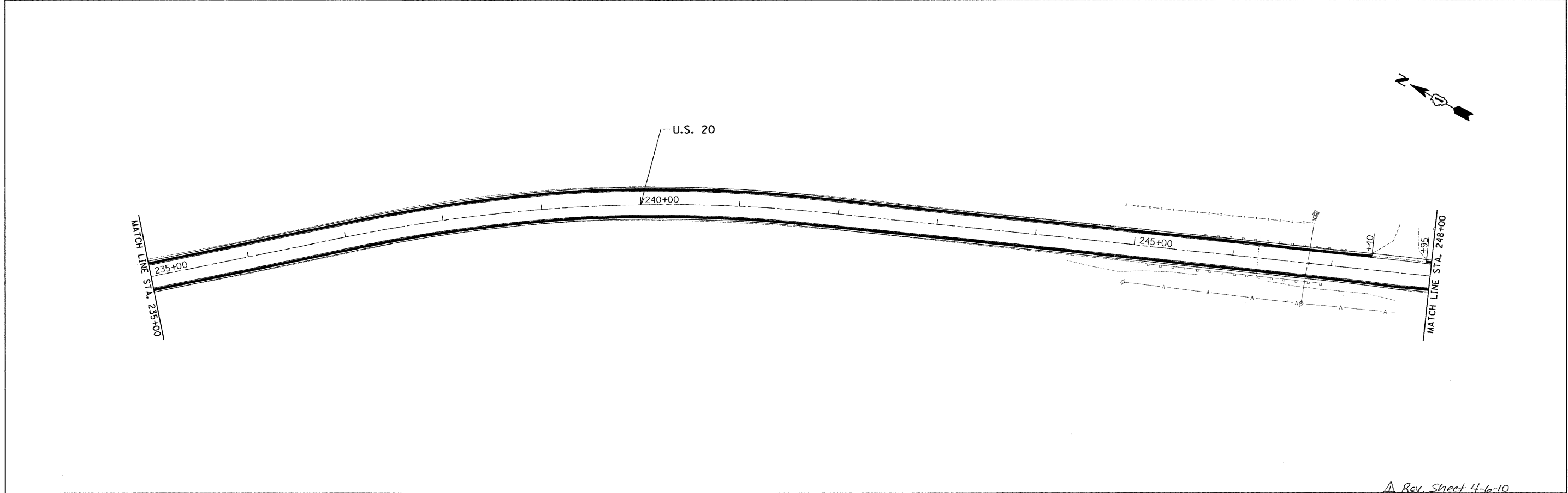
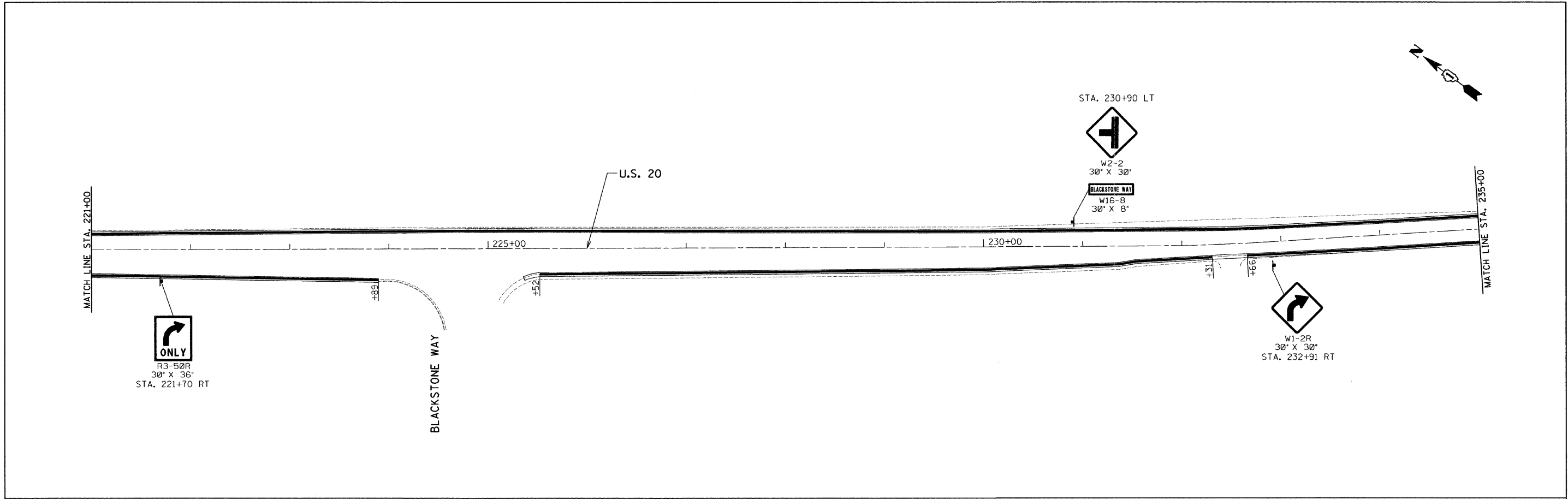
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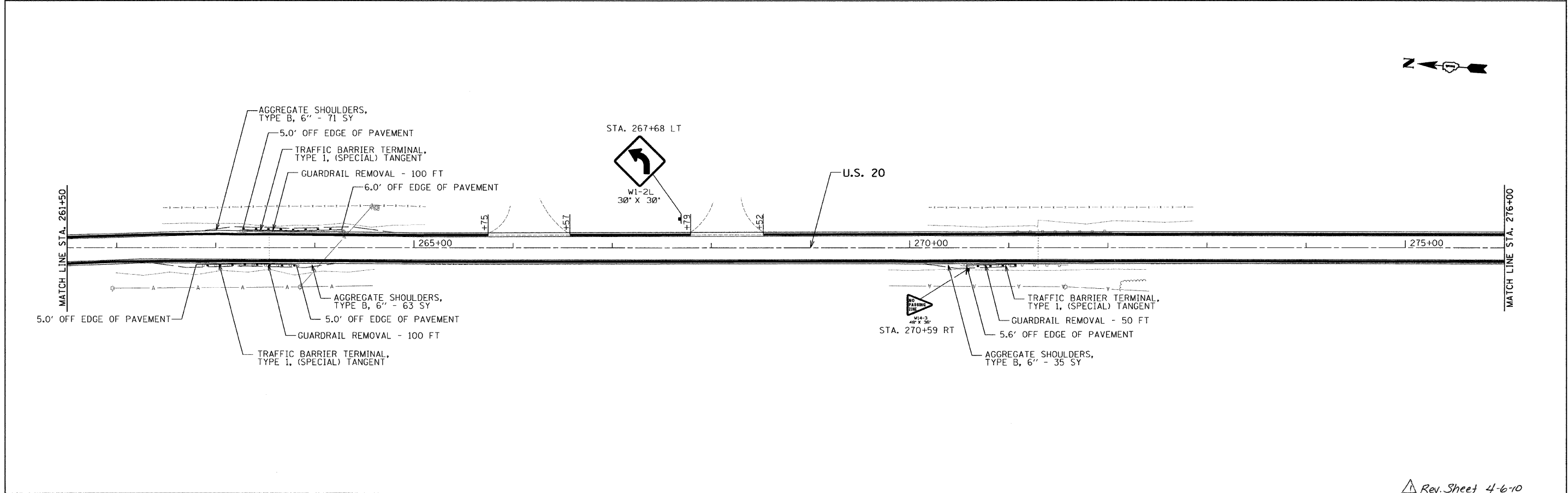
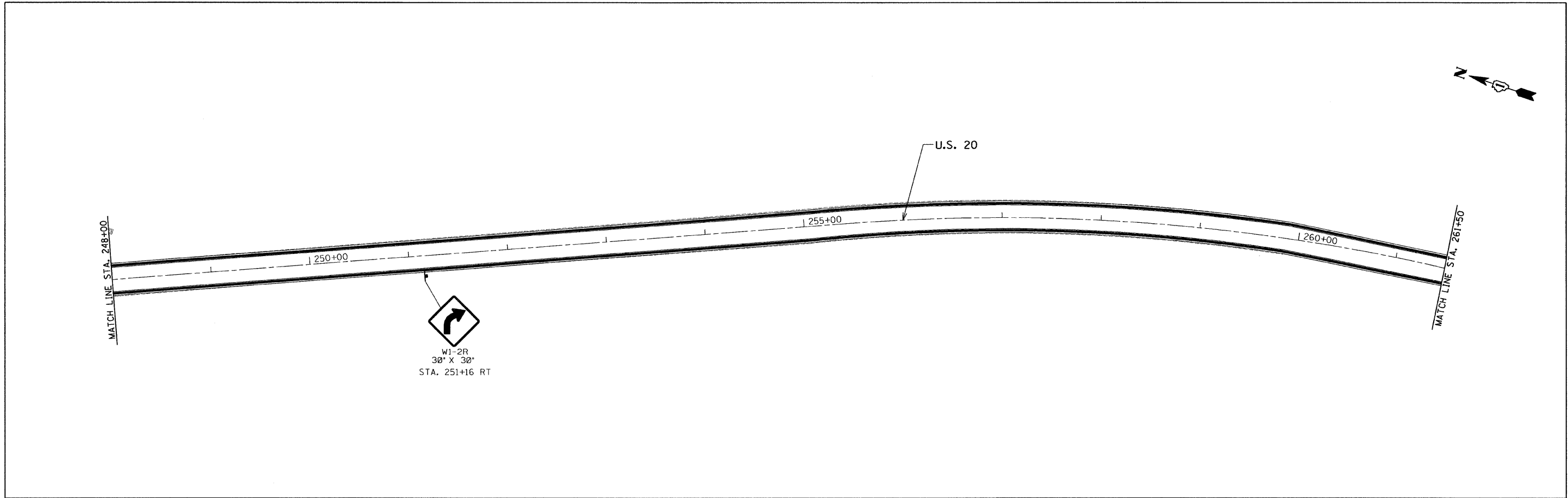
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		DATE - 02-08-2010	REVISED -					•	525/345			ILLINOIS FED. AID PROJECT

*Rev. Sheet 4-6-10*



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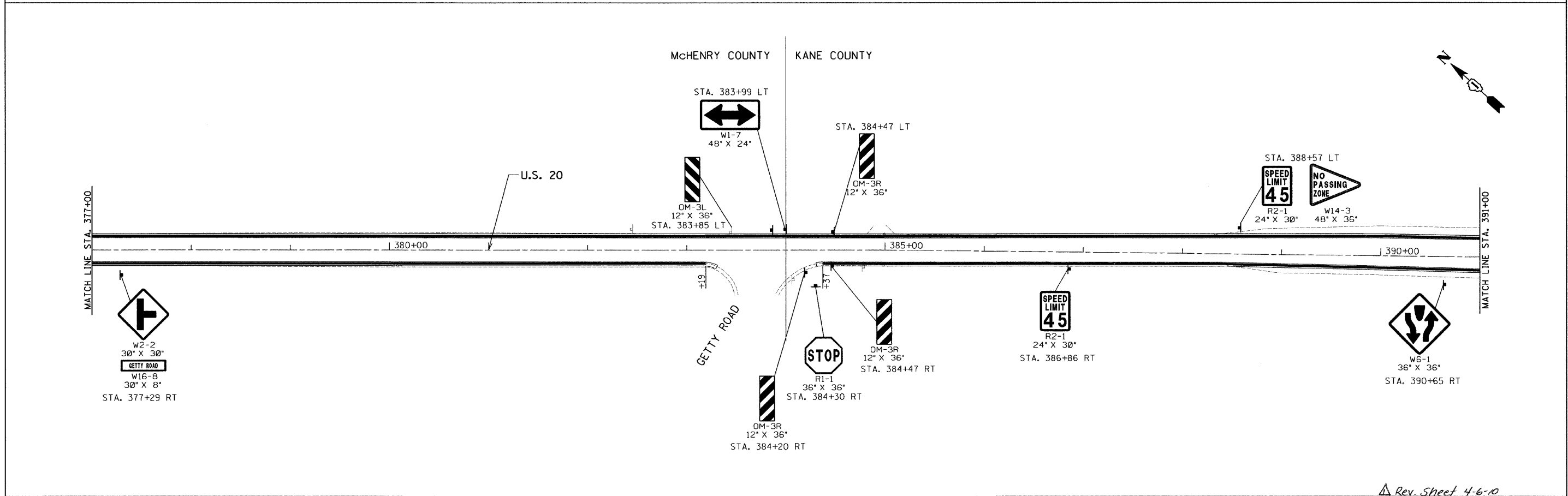
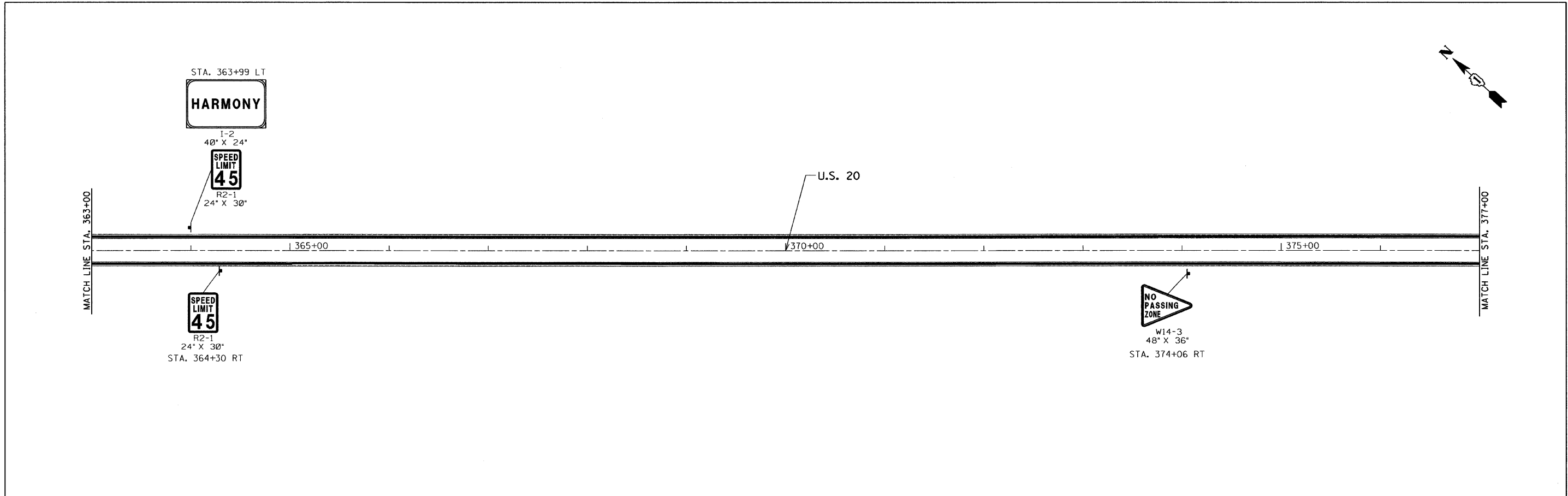
Rev. Sheet 4-6-10











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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**US 20 - WEST UNION ROAD TO IL 47**  
**ROADWAY PLANS**

SCALE: 50      SHEET NO. 12 OF 23 SHEETS      STA. 363+00 TO STA. 391+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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• 525/345	[ILLINOIS] FED. AID PROJECT			

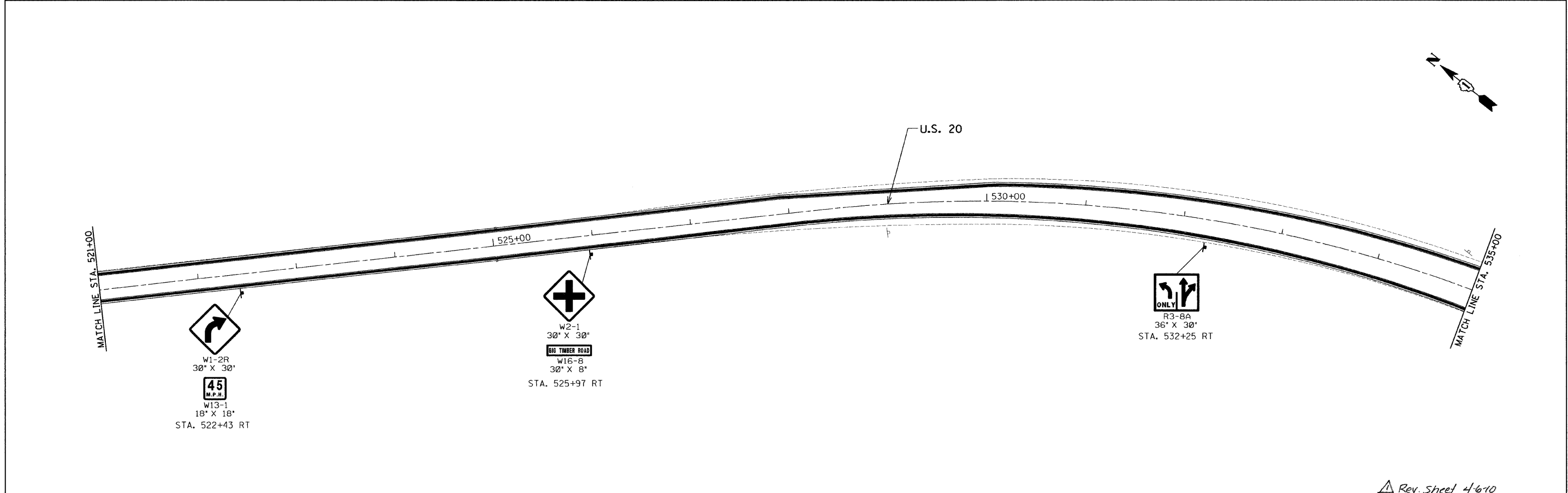
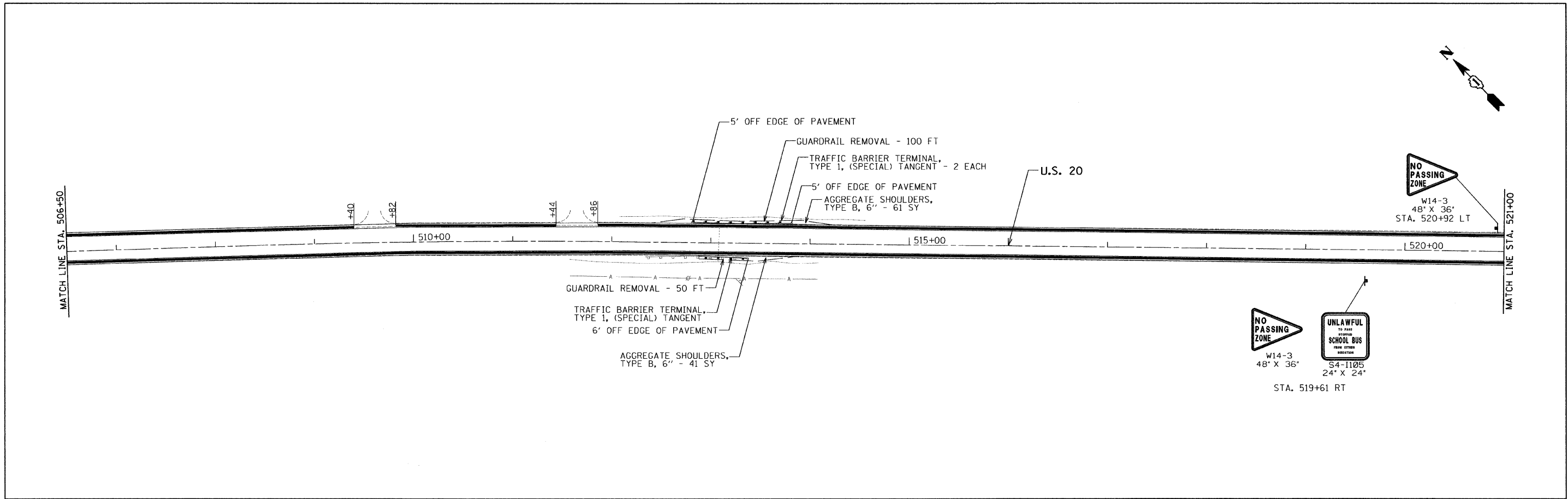
Rev. Sheet 4-6-10











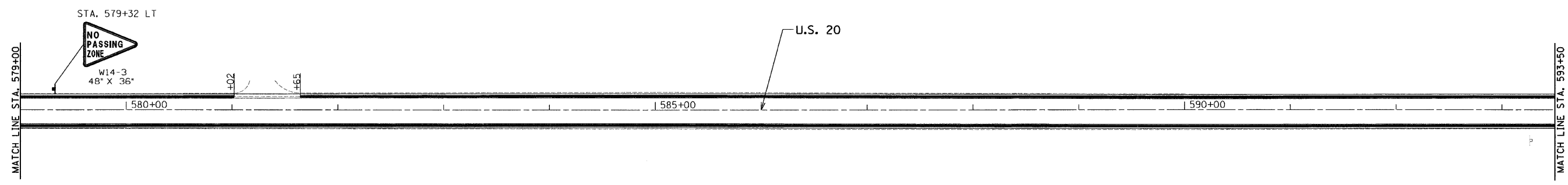
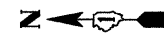
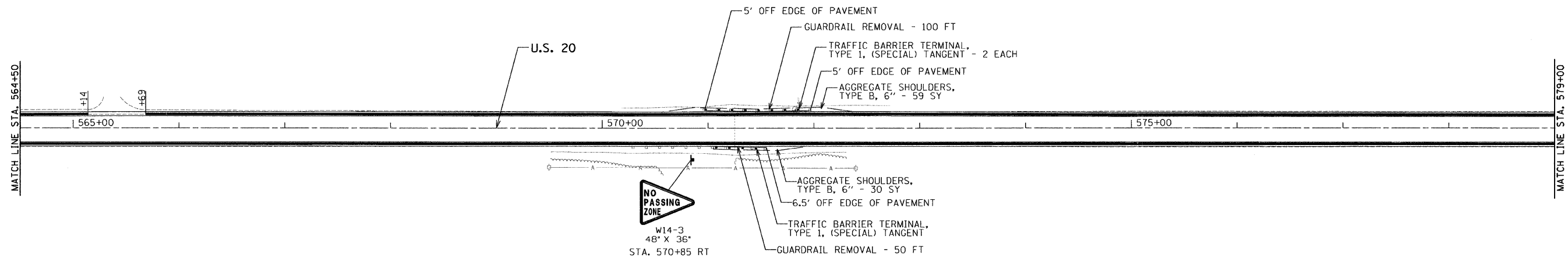
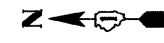
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		DATE - 02-08-2010	REVISED -					• 525/345				ILLINOIS FED. AID PROJECT

Rev. sheet 4 of 10



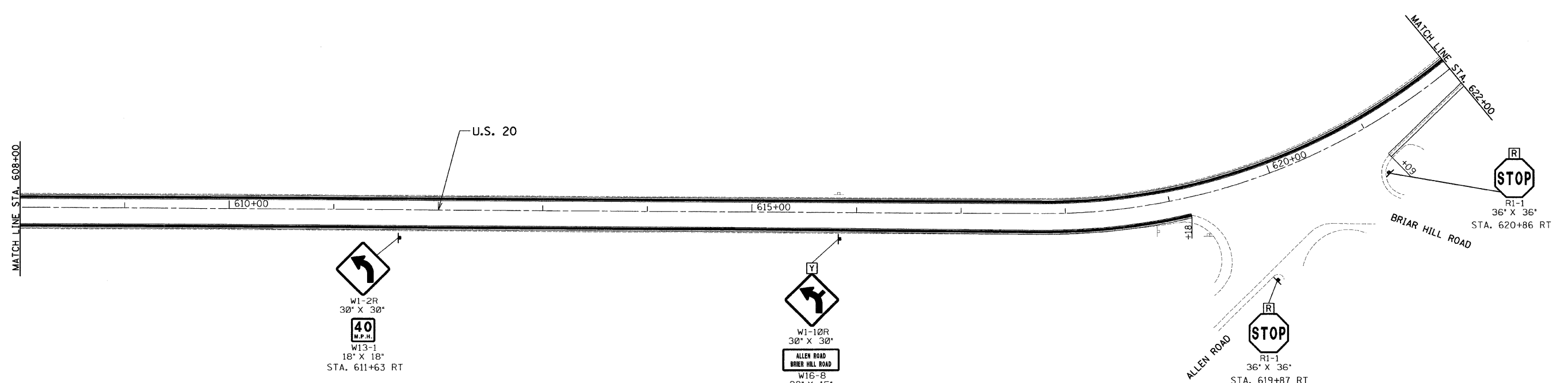
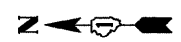
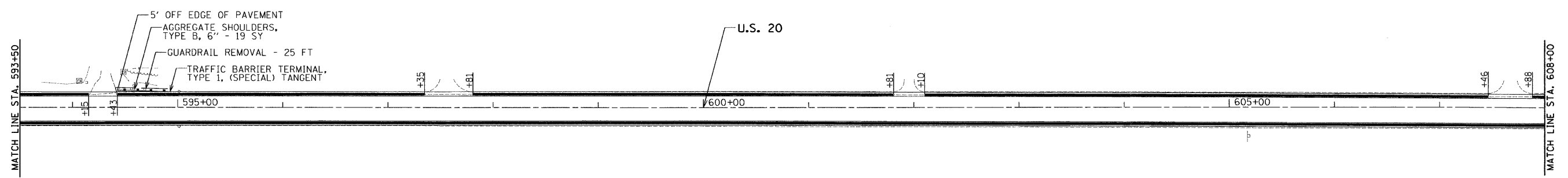




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	PLOT DATE = 2/24/2010	DATE - 02-08-2010	REVISED -						• 525/345		ILLINOIS FED. AID PROJECT		

Rev. Sheet 4-6-10

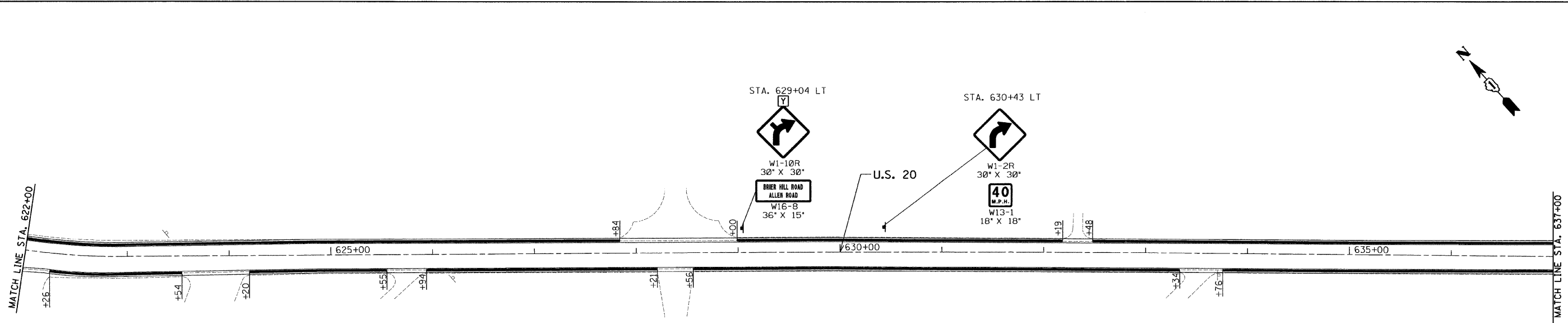


**R** **Y** FLASHING BEACON  
POST MOUNTED SOLAR  
POWERED INSTALLATION

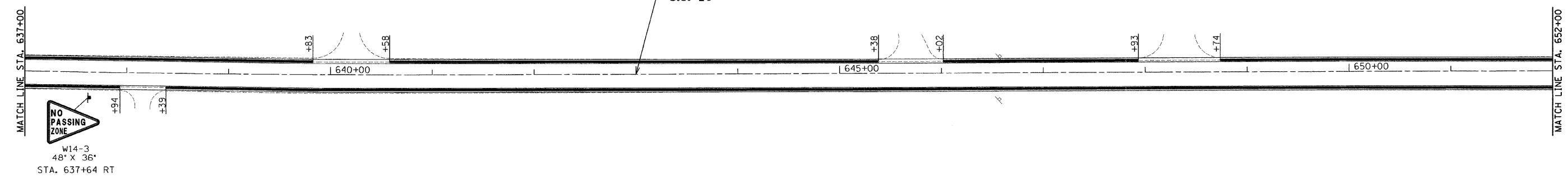
*Rev. Sheet 4-6-10*

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*FILEL*		DRAWN - JJ / EF	REVISED -		SCALE: 50	SHEET NO. 20 OF 23 SHEETS	STA. 593+50 TO STA. 622+00	•	2009-089 I	••	46	28
		PLOT SCALE = 50.0000' / IN.	CHECKED - RS		REVISED -			••	McHENRY & KANE		CONTRACT NO. 60137	
		PLOT DATE = 2/24/2010	DATE - 02-08-2010		REVISED -			•	525/345		ILLINOIS FED. AID PROJECT	



FLASHING BEACON  
POST MOUNTED SOLAR  
POWERED INSTALLATION



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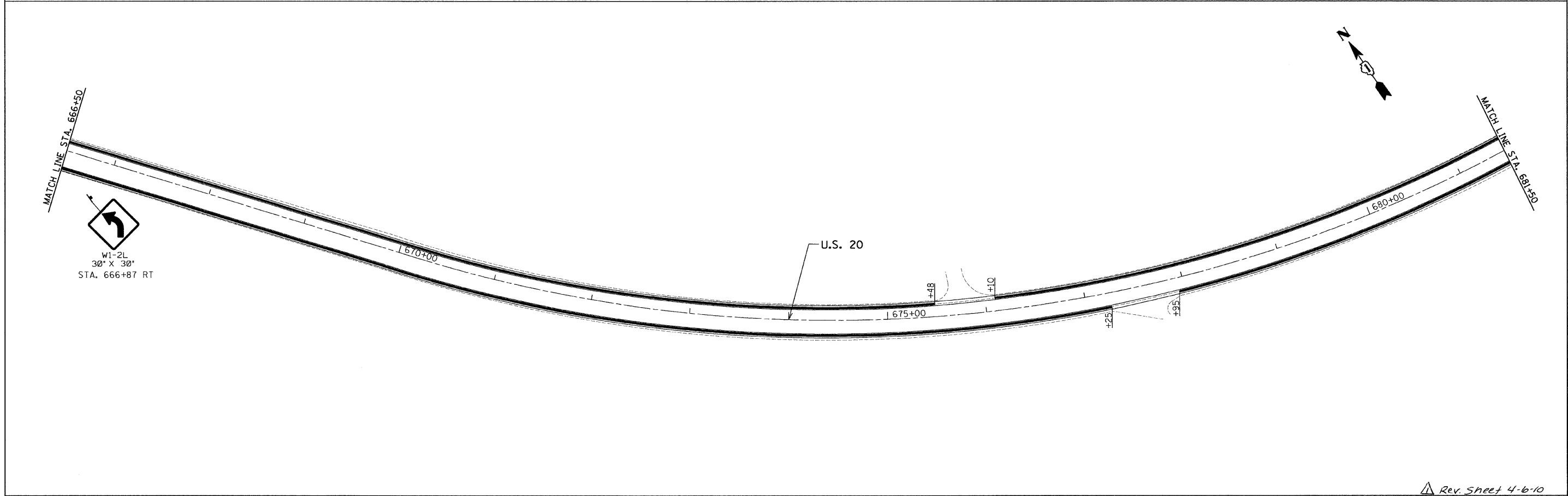
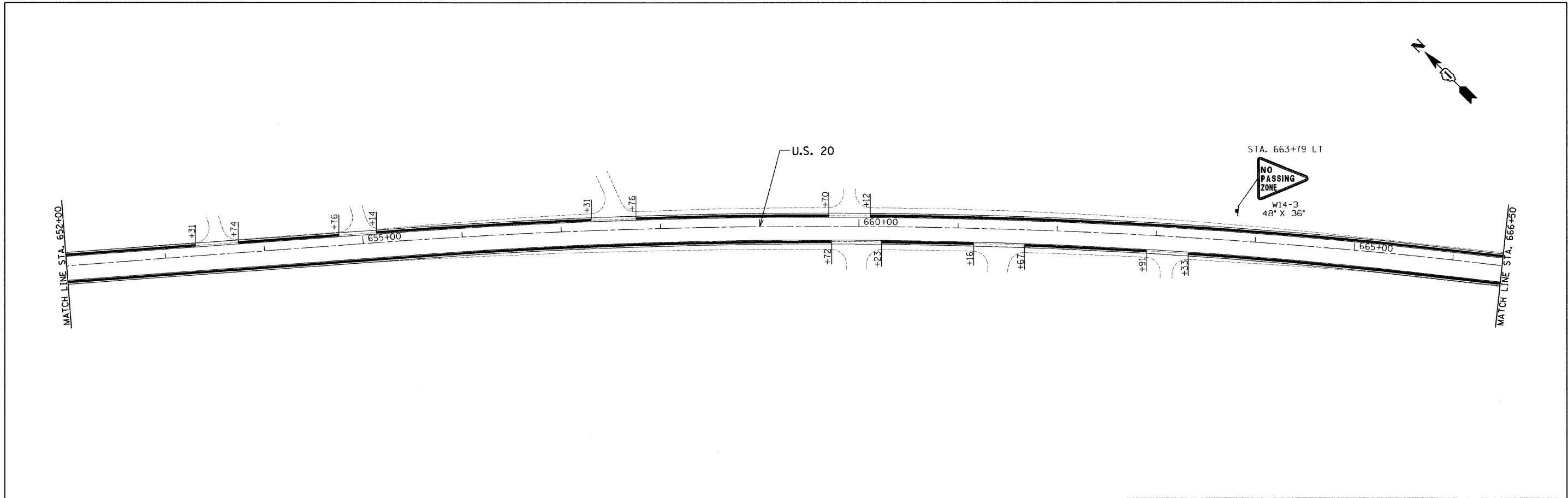
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**US 20 - WEST UNION ROAD TO IL 47**  
**ROADWAY PLANS**

SCALE: 50 SHEET NO. 21 OF 23 SHEETS STA. 622+00 TO STA. 652+00

*Rev. Sheet 4-6-10*

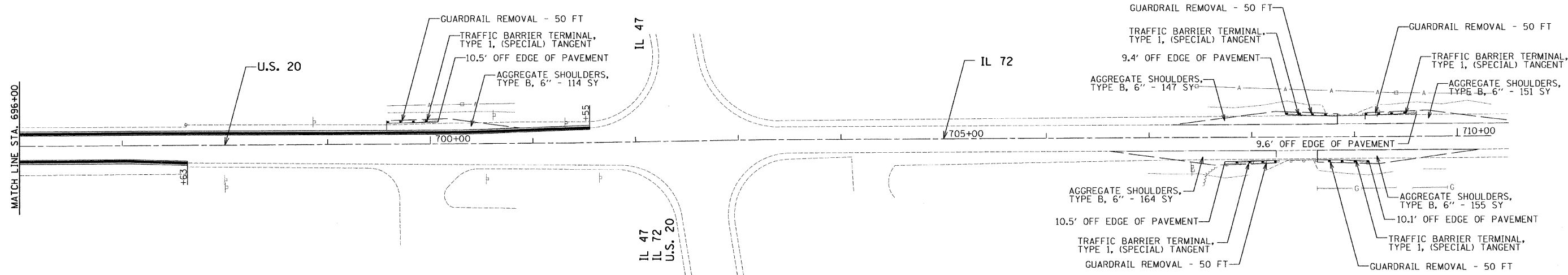
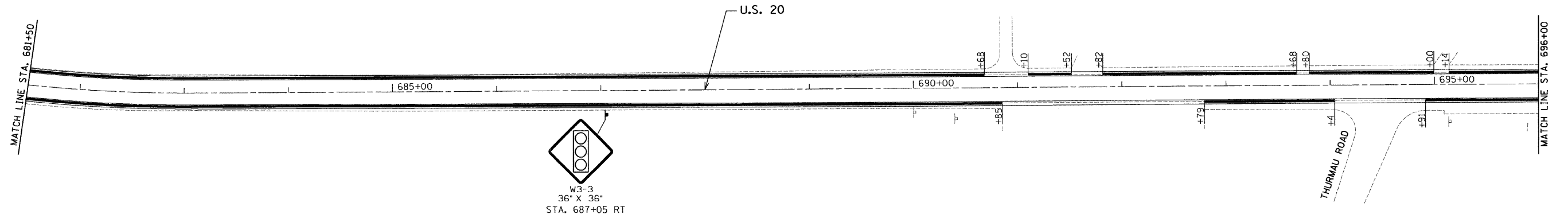
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	29
** McHENRY & KANE			CONTRACT NO. 60137	
* 525/345			ILLINOIS FED. AID PROJECT	



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		CHECKED - RS	REVISED -					•• McHENRY & KANE	CONTRACT NO. 60I37		
		DATE - 02-08-2010	REVISED -					• 525/345	ILLINOIS FED. AID PROJECT		

▲ Rev. Sheet 4-6-10



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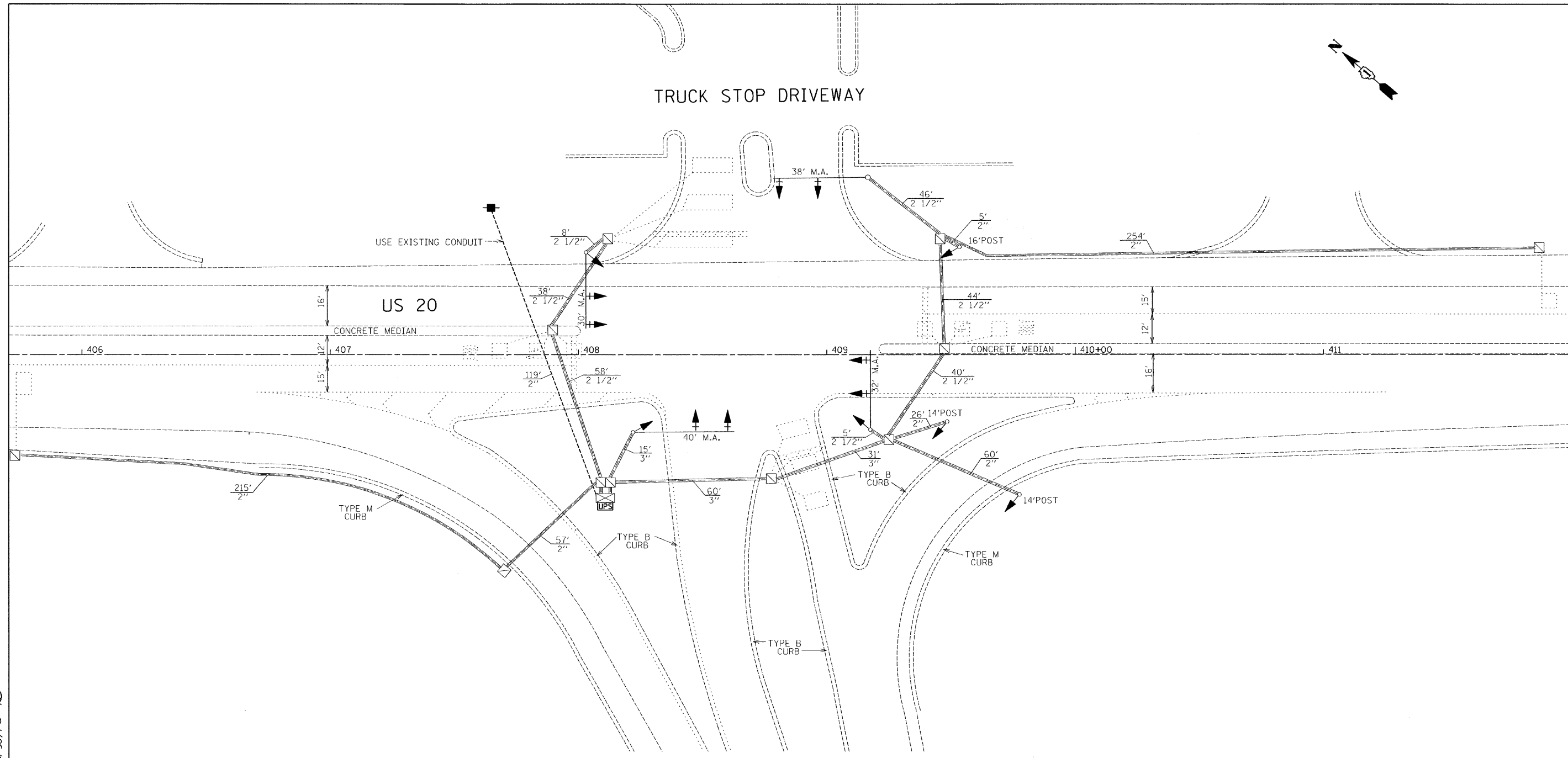
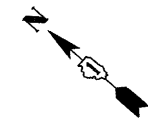
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	PLOT DATE = 2/24/2010	DATE - 02-08-2010	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>US 20 - WEST UNION ROAD TO IL 47</b>		
<b>ROADWAY PLANS</b>		
SCALE: 50	SHEET NO. 23 OF 23 SHEETS	STA. 681+50 TO STA. 710+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	2009-089 I	••	46	31
•• MCHENRY & KANE			CONTRACT NO. 60Z37	
• 525/345	ILLINOIS FED. AID PROJECT			

Rev. Sheet 4-6-10



THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 8 EACH TRAFFIC SIGNAL BACKPLATE
- 14 EACH SIGNAL HEAD, 1-FACE
- 1 EACH SERVICE INSTALLATION



- CHANGES MADE TO PLAN SHEET  
REVISION 1
1. ADDED DETECTOR LOOPS
  2. LABELED CONDUIT RUNS
  3. LABELED POST AND MAST ARM SIZES
  4. ADDED NOTE FOR REMOVAL AND REPLACEMENT OF SERVICE INSTALLATION
  5. LABELED CURB TYPES
  6. ADDED UNINTERRUPTED POWER SERVICE
  7. REMOVED LEGEND
  8. CHANGED POLE/POST TYPES TO EXISTING

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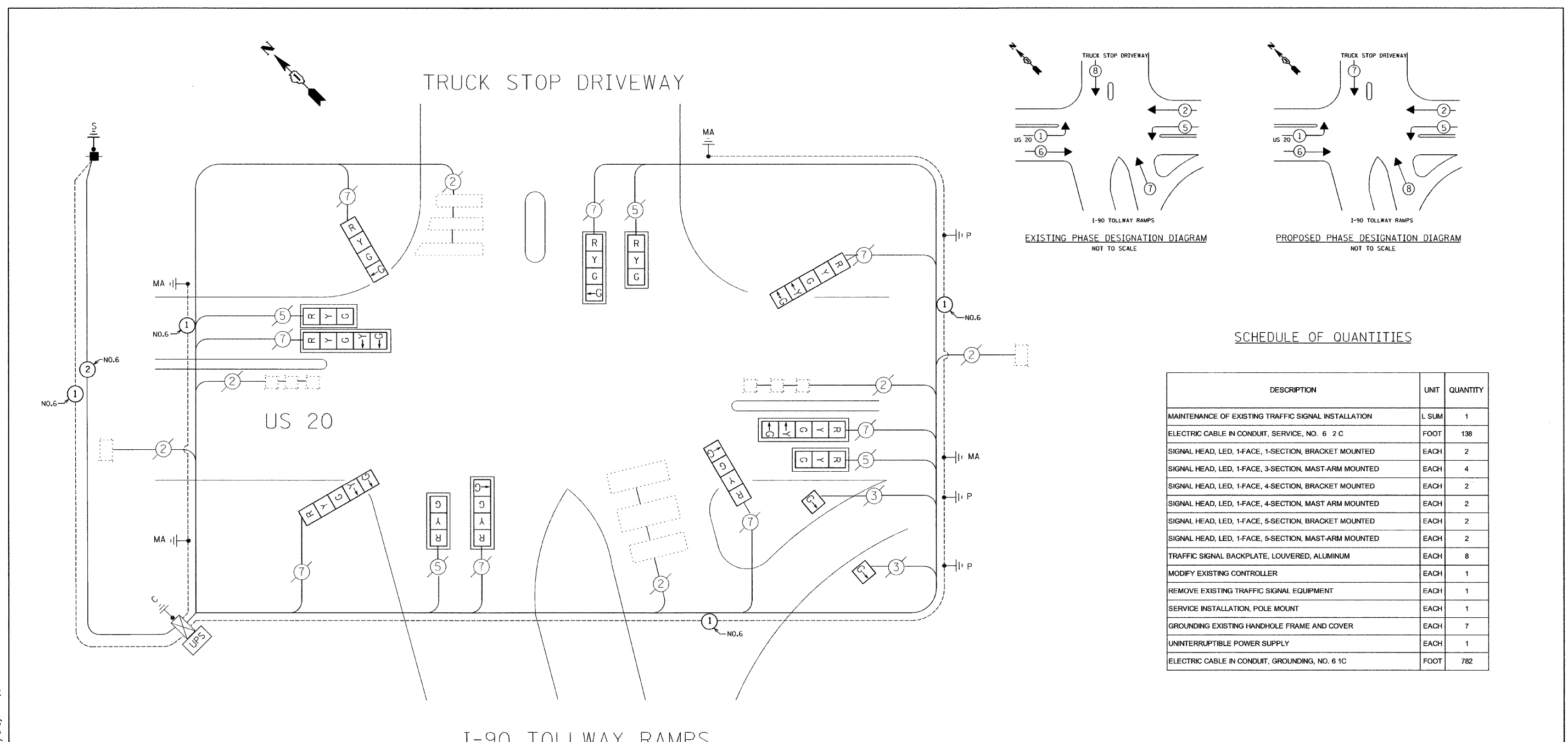
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

US 20 - WEST UNION ROAD TO IL 47  
TRAFFIC SIGNAL MODIFICATIONS US 20 & I-90 RAMPS

SCALE: 20 SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	2009-089 I	••	46	32
••	McHENRY & KANE		CONTRACT NO. 60137	
•	525/ 345	ILLINOIS	FED. AID PROJECT	



SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	L SUM	1
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	138
SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1
GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	7
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	782

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I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND	WATTAGE LED	% OPERATION	
SIGNAL (RED)	12	17		0.50	102.0
(YELLOW)	12	25		0.25	75.0
(GREEN)	12	15		0.25	45.0
ARROW	12	12		0.10	14.4
ARROW	2	12		1.00	24.0
CONTROLLER	1	100		1.00	100.0
ILLUM. SIGN		35		0.05	
FLASHER					
		135	25	0.50	
TOTAL =					360.4

ENERGY COST TO: Illinois Department of Transportation  
 Division of Highways / District 1  
 201 W Center Court/Schaumburg, Illinois 60196-1096

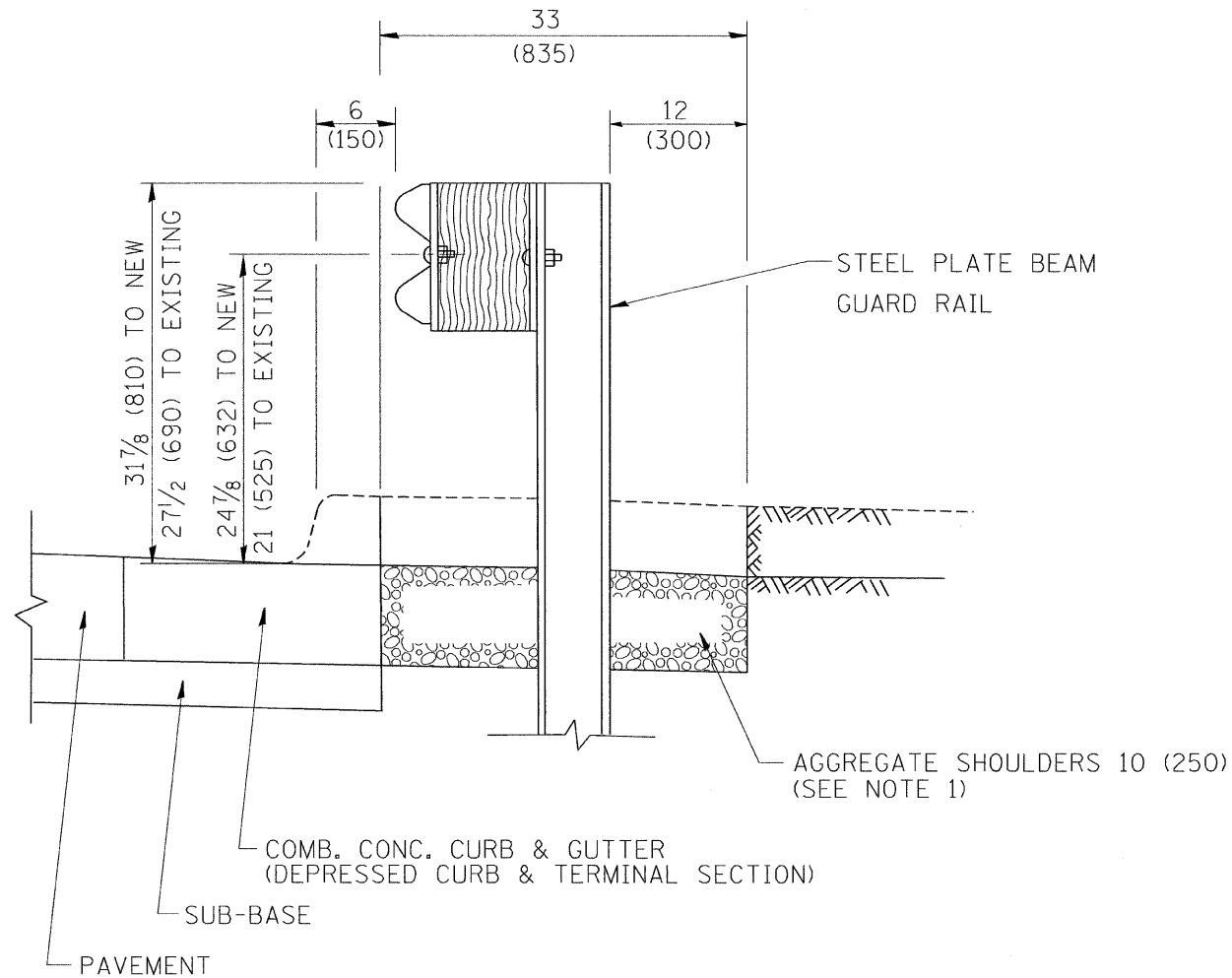
ENERGY SUPPLY: CONTACT: \_\_\_\_\_  
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 COMPANY: \_\_\_\_\_

CABLE PLAN

NOT TO SCALE

CHANGES TO PLAN SHEET  
 REVISION 1

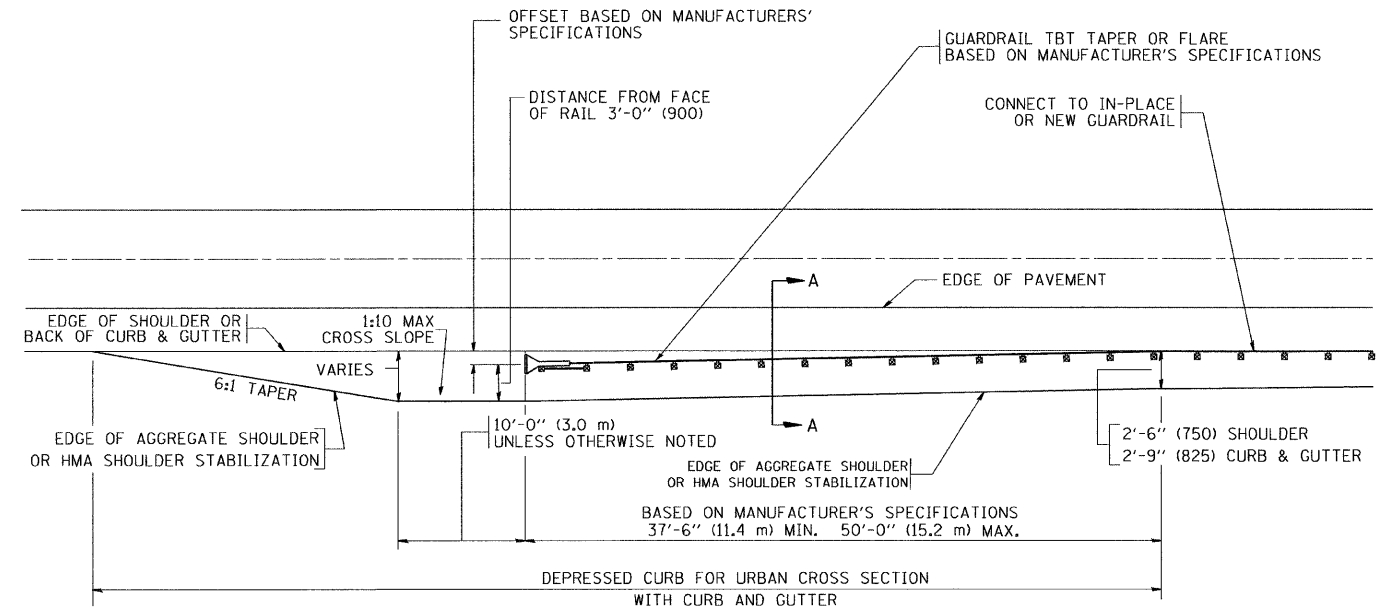
1. REMOVED LEGEND
2. REMOVED CABLE SLACK TABLE
3. REMOVED FOUNDATION TABLE
4. REVISED ELECTRICAL SERVICE REQUIREMENTS
5. ADDED DETECTOR LOOPS AND CABLES
6. REVISED PHASE DESIGNATION DIAGRAM TO EXISTING AND PROPOSED
7. ADDED 1/C NO. 6 GROUNDING CABLES
8. ADDED PROPOSED SERVICE INSTALLATION
9. REVISED SCHEDULE OF QUANTITIES



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
  2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
  3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM  
 GUARD RAIL ADJACENT TO CURB AND GUTTER  
 [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND  
 SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.  
 \* 525/345 (US 20) \*\* McHENRY & KANE

Rev. Sheet 4-6-10

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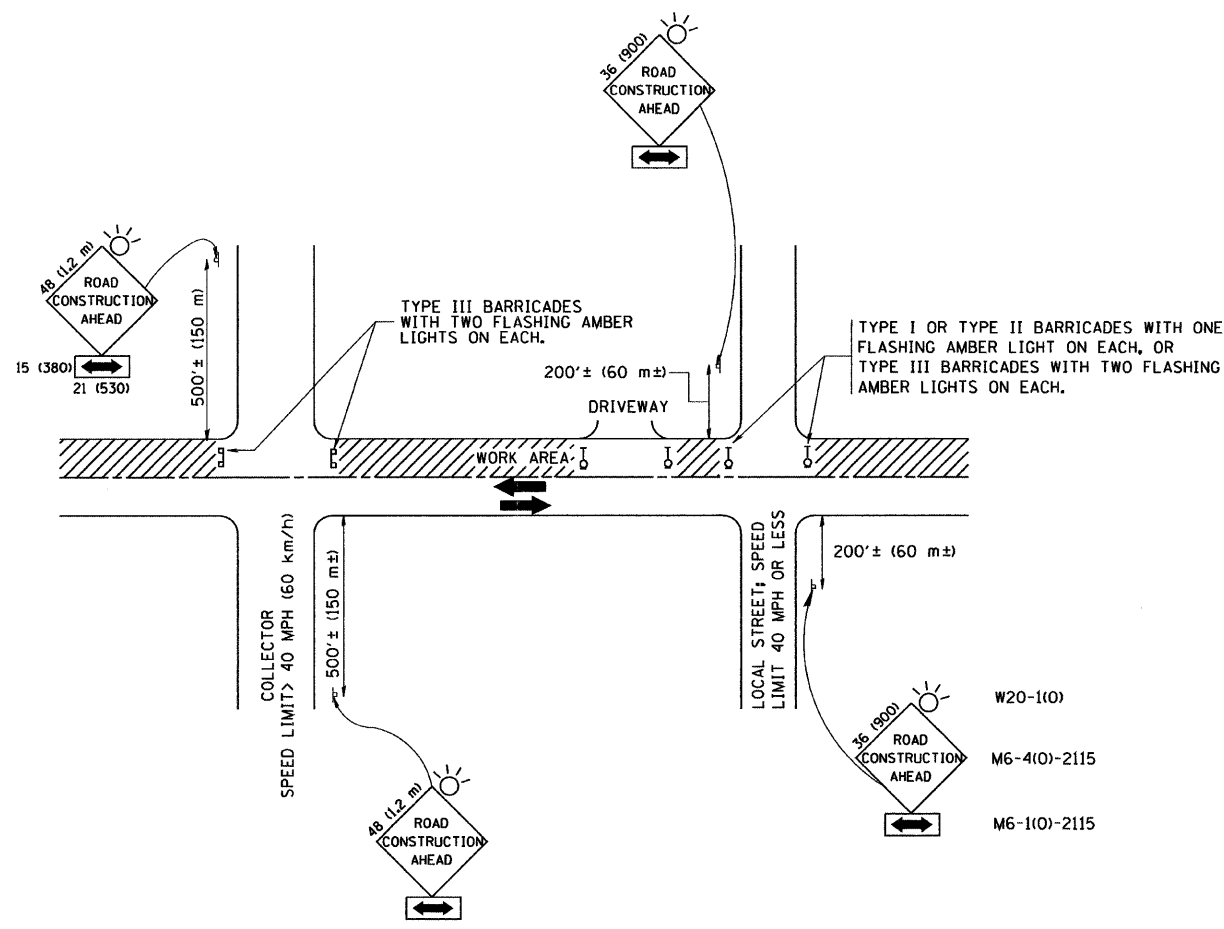
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND  
 SHOULDER TREATMENT AT TBT TY 1 SPL.

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	34
BD600-10 (BD 34)			CONTRACT NO. 60137	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

Rev. Sheet 4-6-10

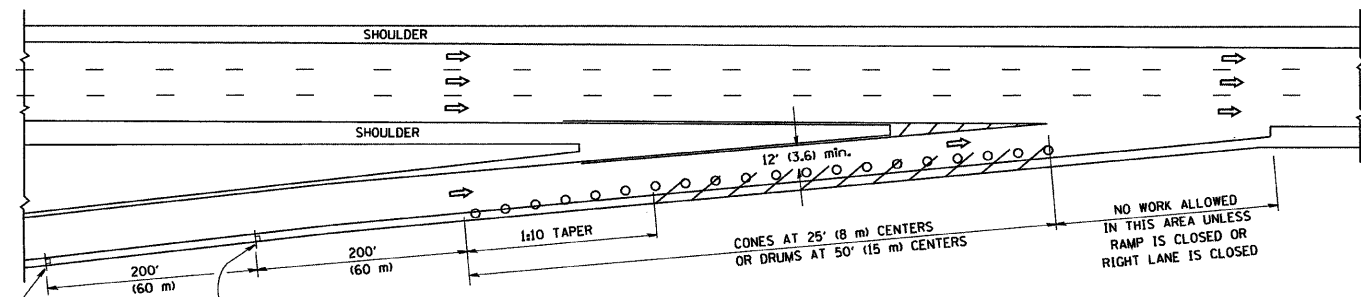
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

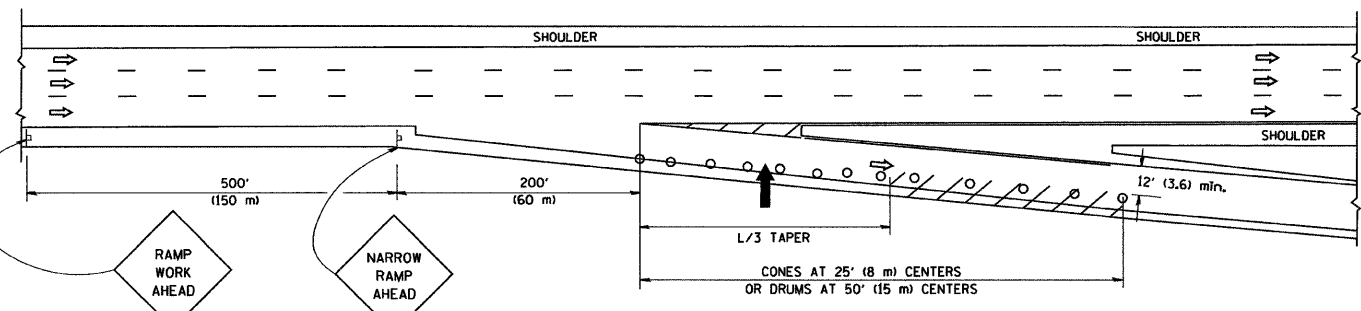
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	35
TC-10			CONTRACT NO. 60137	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

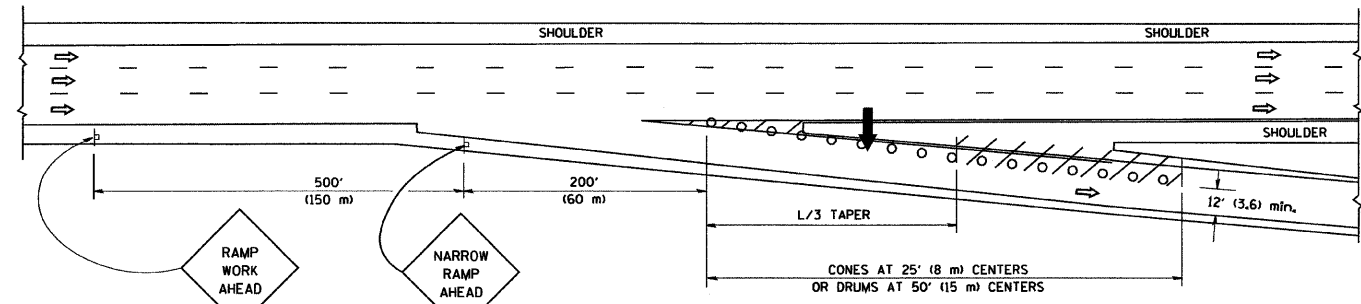
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

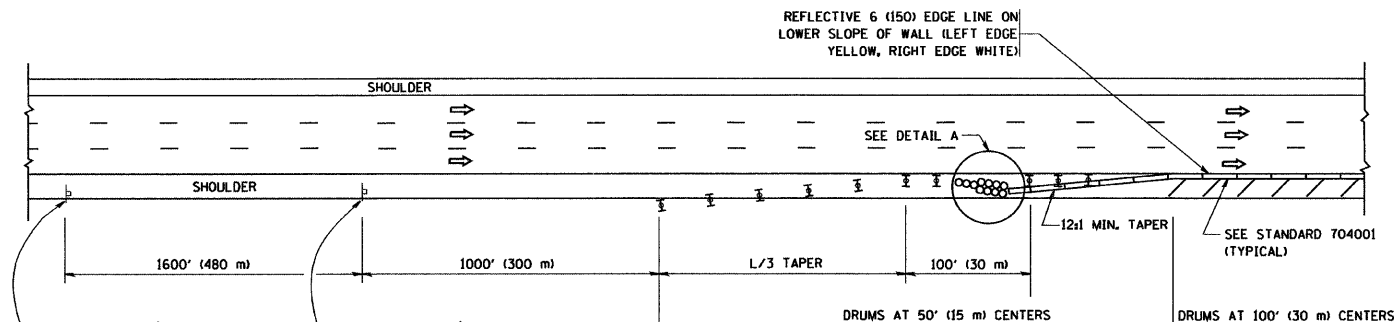
- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

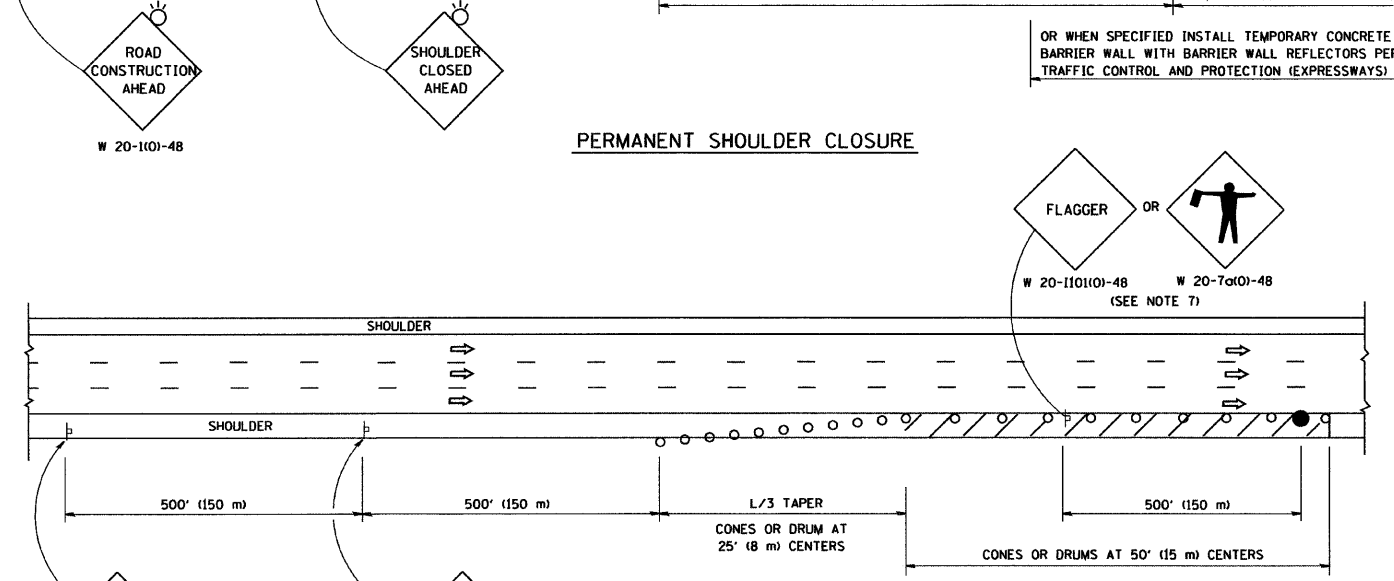
1. THE "L" DISTANCE EQUALS:
 

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH $L = 0.65(W/S)$ $L = (W \times S)$
	W = WIDTH OF OFFSET IN FEET (METERS) S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

SHOULDER CLOSURE DETAILS

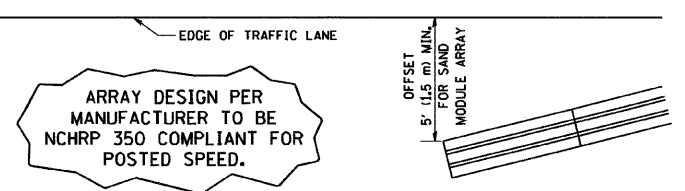


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

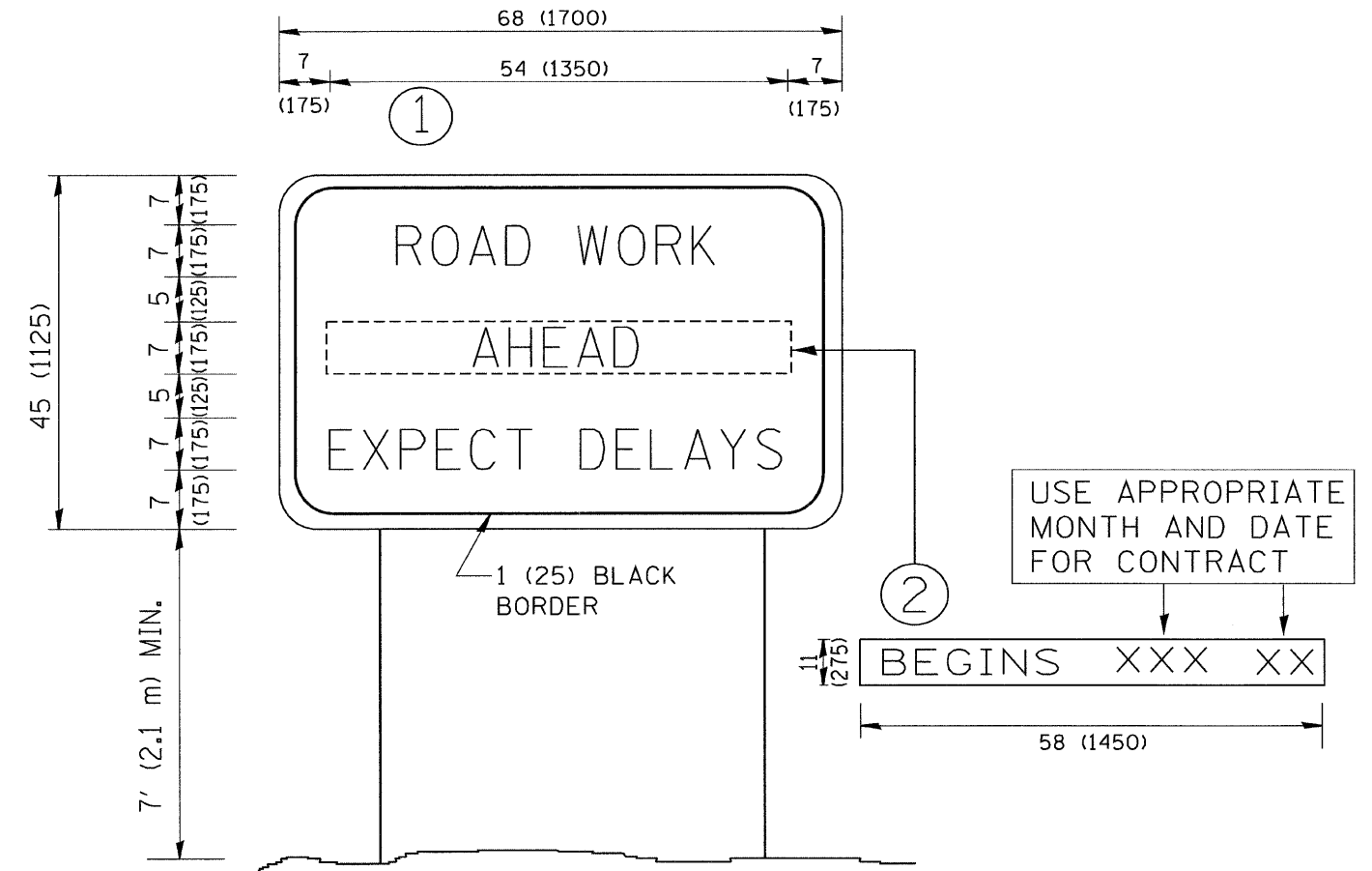
- THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"  
IMPACT ATTENUATOR, TEMPORARY  
(SEE NOTE 5)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\dist\td\22x34\tcl7.dgn	USER NAME = geglianob	DESIGNED - D.W.S.	REVISED - J.A.F. 12-02	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES</b>	F.A.P. RTE. *	SECTION 2009-089 I	COUNTY **	TOTAL SHEETS 46	SHEET NO. 36	
PLOT SCALE = 50,0000 ' / IN.					DRAWN - D.W.S.	REVISIONS	TC-17		CONTRACT NO. 60I37		
PLOT DATE = 1/4/2008					CHECKED - J.A.F. 12-06	REVISED - J.A.F. 12-06	SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		
DATE = 11-96					REVISOR - S.P.B. 01-07	REVISED - S.P.B. 01-07	STA. TO STA.		FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT		
							Rev. Sheet 4-6-10		525/345 (US 20) ** McHENRY & KANE		



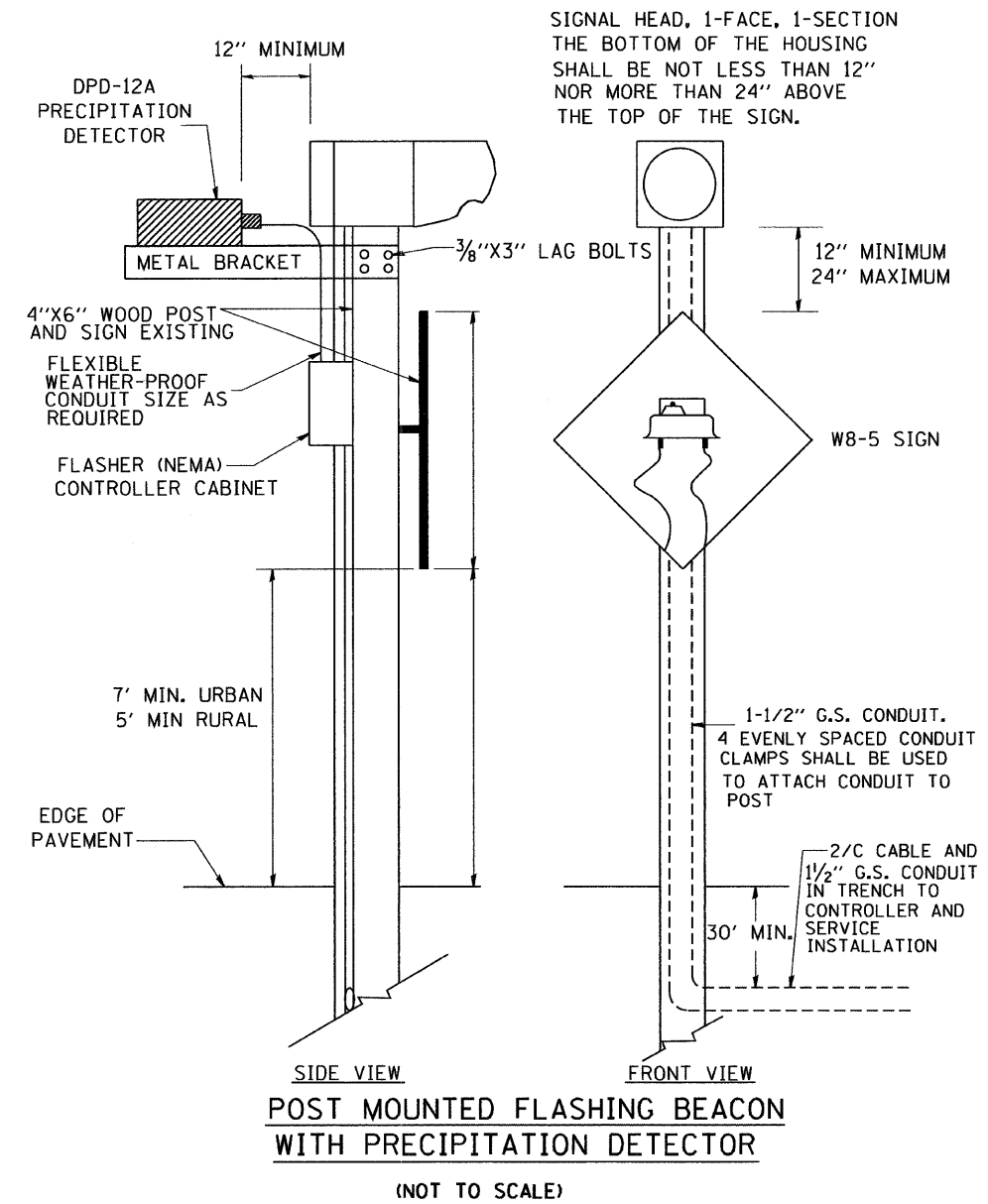
**NOTES:**

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

*Rev. Sheet 4-6-10* \* 525/345 (US 20) \*\* McHENRY & KANE

FILE NAME - W:\diststd\22x34\tc22.dgn	USER NAME - gegljenobt	DESIGNED -	REVISED - R, MIRS 09-15-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ARTERIAL ROAD INFORMATION SIGN</b>			F.A.B. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000' / IN.	DRAWN -	REVISED - R, MIRS 12-11-97		* 2009-089 I	**	46	37				
	PLOT DATE = 1/4/2008	CHECKED -	REVISED - T, RAMMACHER 02-02-99		TC-22		CONTRACT NO. 60137					
		DATE -	REVISED - C, JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



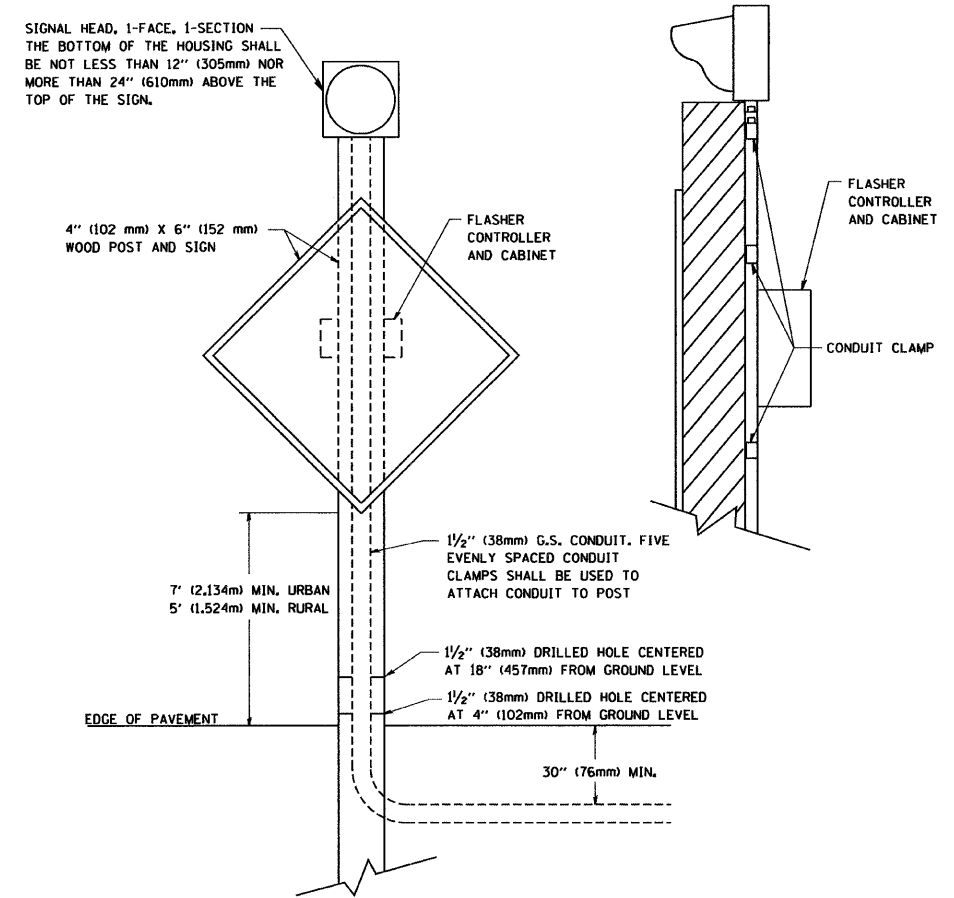
Rev. Sheet 4-6-10 \* 525/345 (US 20) \*\* McHENRY & KANE

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>POST MOUNTED FLASHING BEACON WITH PRECIPITATION DETECTOR</b>			
SCALE: NONE	SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	38
<b>TS-04</b>		CONTRACT NO. 60137		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



POST MOUNTED FLASHING BEACON  
WITH CONTROLLER AND CABINET

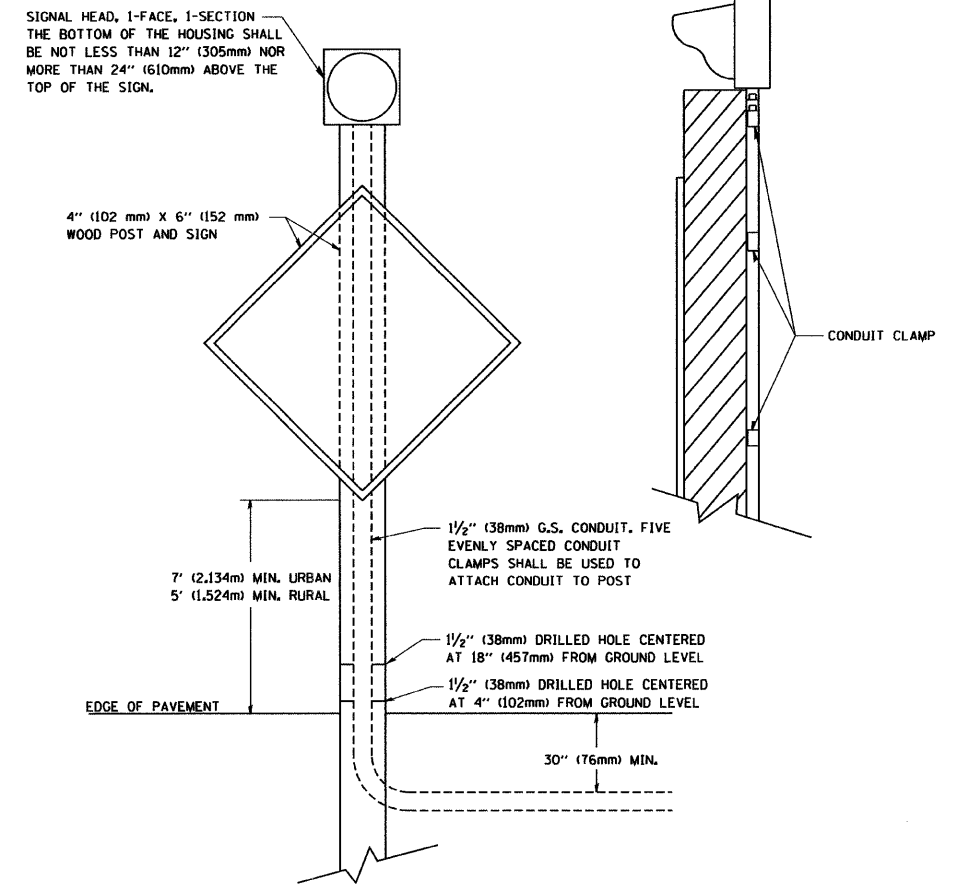
Rev. Sheet 4-6-10 \* 525/345 (US 20) \*\* McHENRY & KANE

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	PLOT SCALE = 50,0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

POST MOUNTED FLASHING BEACON WITH CONTROLLER AND CABINET			
SCALE: NONE	SHEET NO. 2 OF 3 SHEETS	STA.	TO STA.

F.A.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	39
TS-04		CONTRACT NO. 60E37		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



POST MOUNTED FLASHING BEACON

Rev. Sheet 4-6-10

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	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

POST MOUNTED FLASHING BEACON			
SCALE: NONE	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.

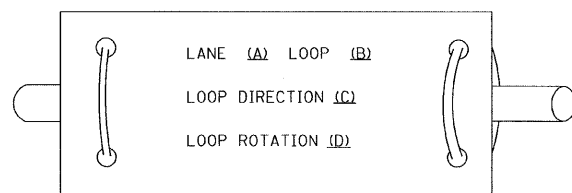
F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	40
TS-04		CONTRACT NO. 60537		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

\* 525/345 (US 20) \*\* McHENRY & KANE

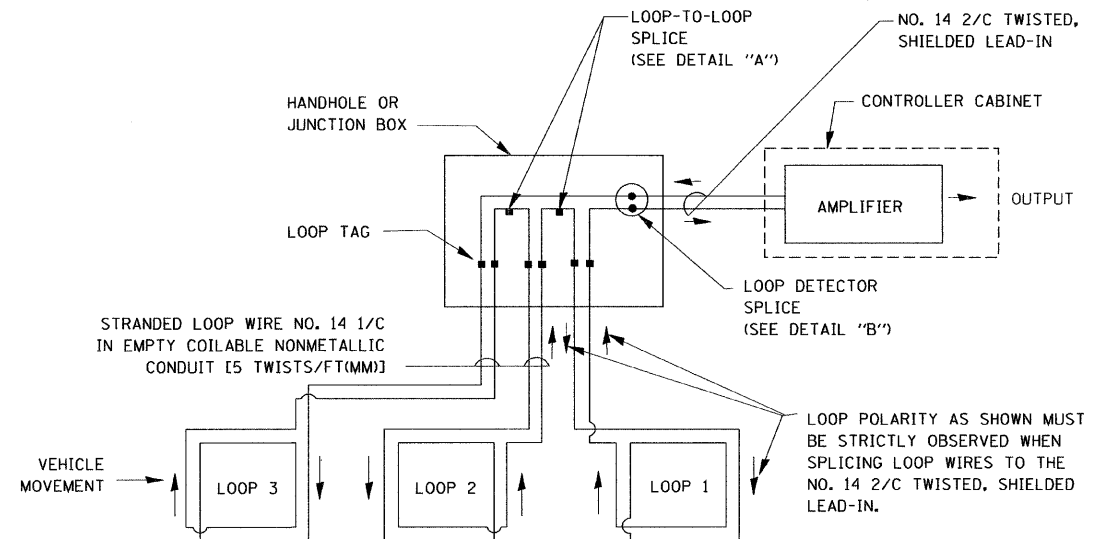
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

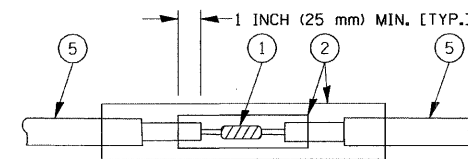


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

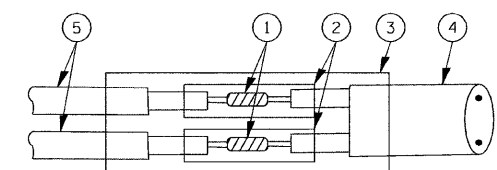


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

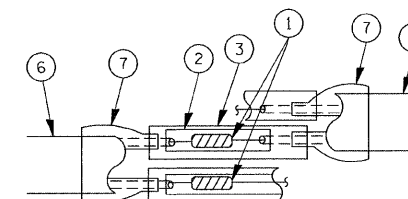


**DETAIL "A"  
LOOP-TO-LOOP SPLICE**

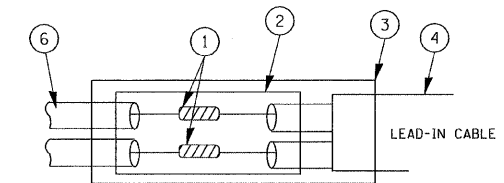


**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**TYPE I LOOP**



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**LOOP DETECTOR SPLICE**

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

*Rev. Sheet 4-6-10*

\* 525/345 (US 20) \*\* McHENRY & KANE

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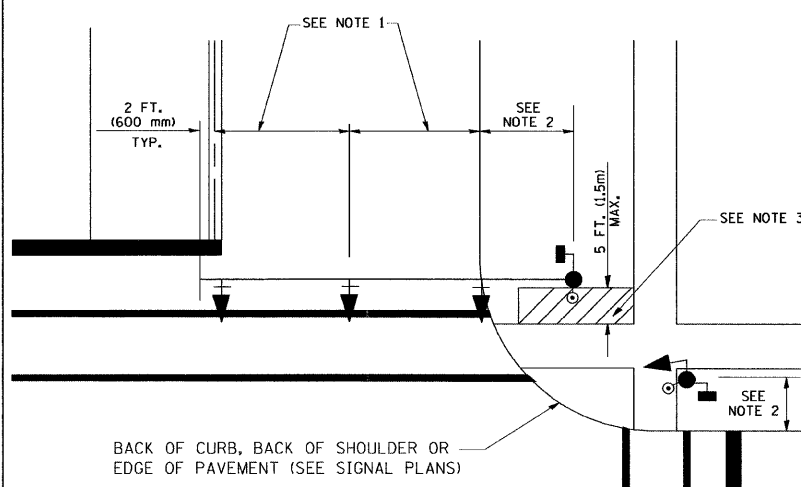
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 1 OF 6 SHEETS STA. TO STA.

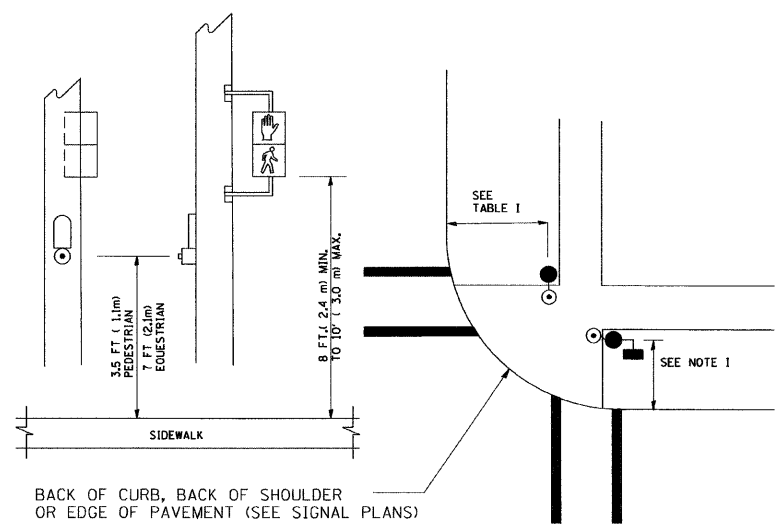
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	41
TS-05			CONTRACT NO. 60137	
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**  
 MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



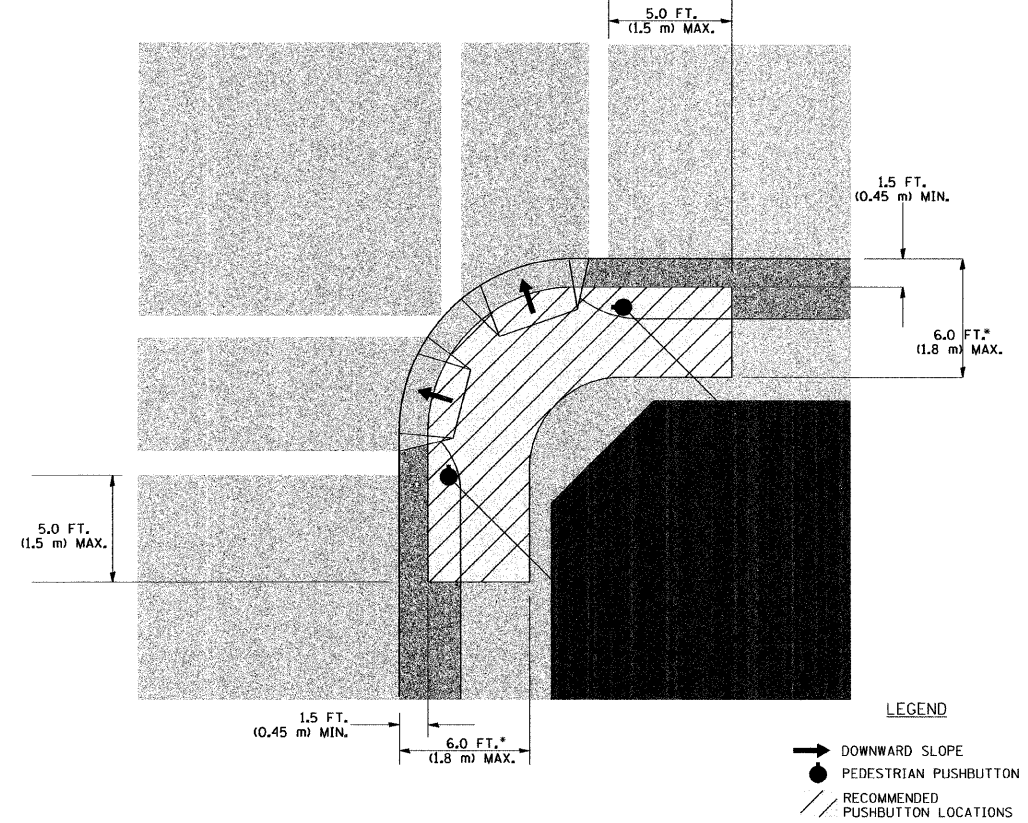
- NOTES:**
1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
  2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
  3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
  4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
  5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



- NOTES:**
1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
  2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
  3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
  4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

- NOTES:**
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
  2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
  3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
  4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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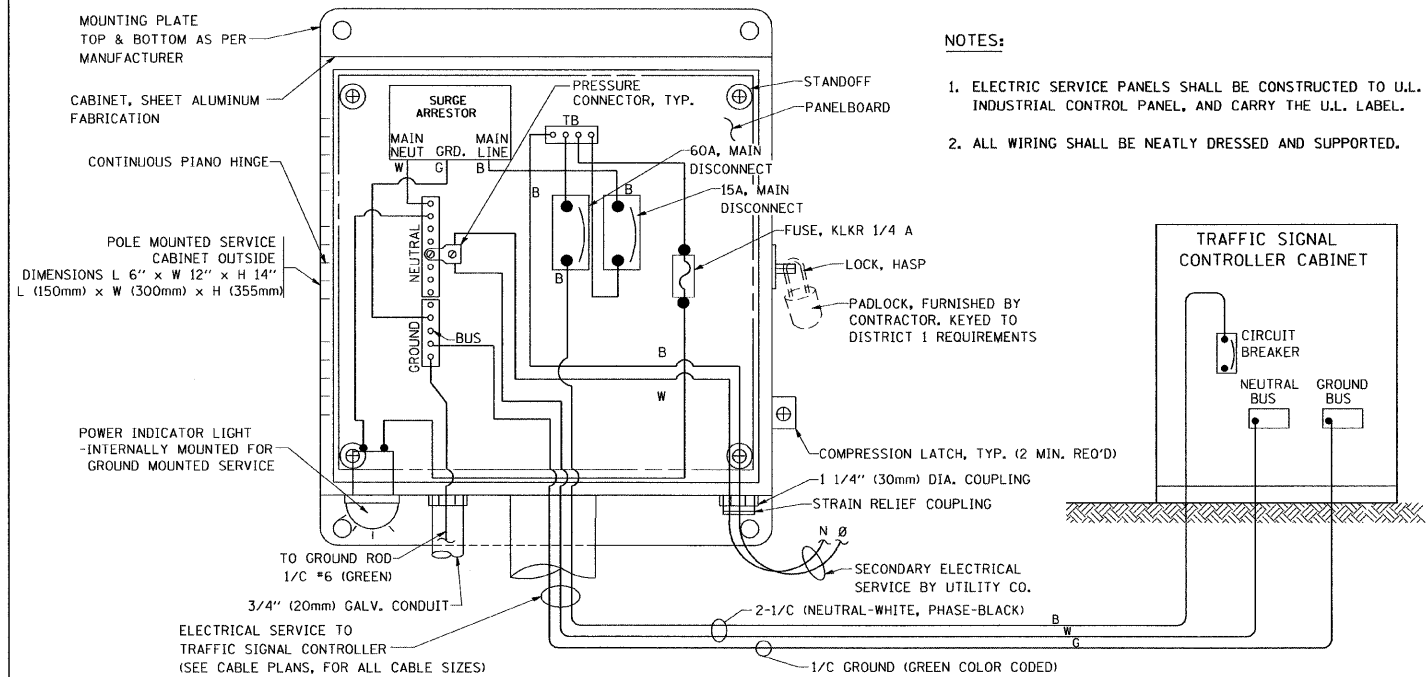
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**  
 SCALE: NONE SHEET NO. 2 OF 6 SHEETS STA. TO STA.

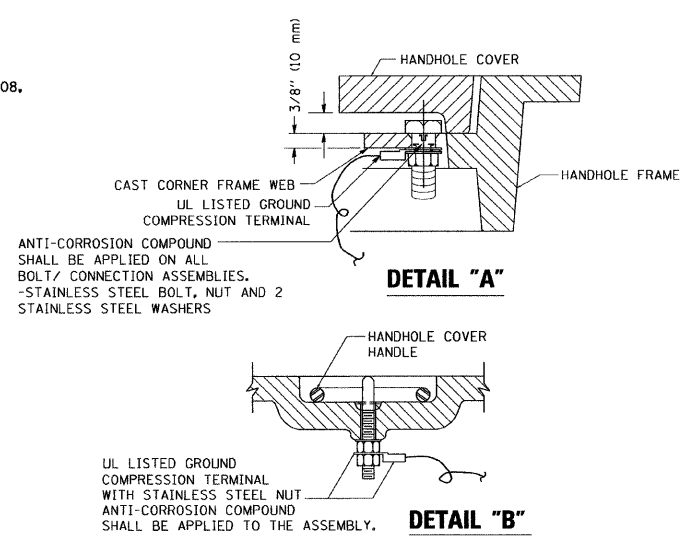
F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	42
TS-05			CONTRACT NO. 60137	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

Rev. Sheet 4-6-10 \* 525/345 (US 20) \*\* McHENRY & KANE





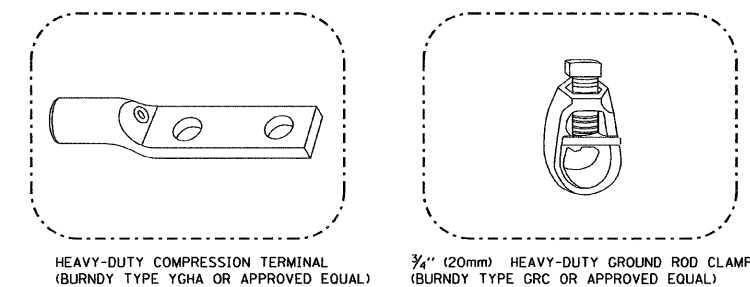
**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



**NOTES:**

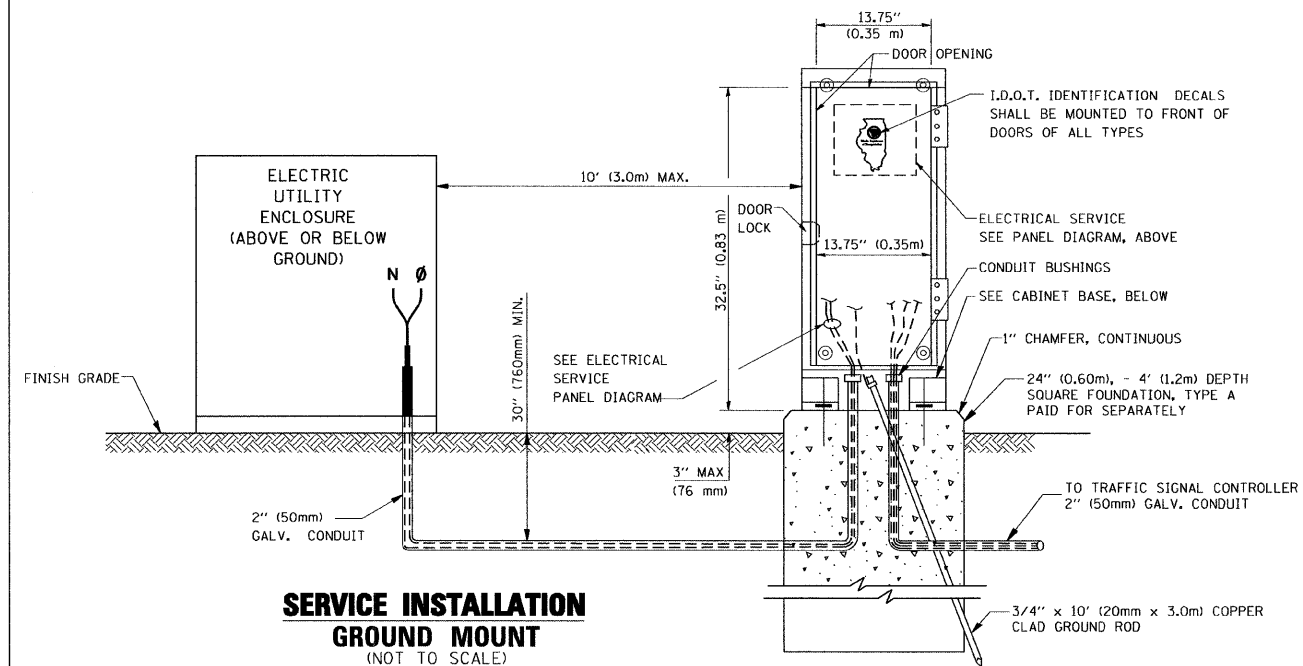
**GROUNDING SYSTEM**

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD, ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



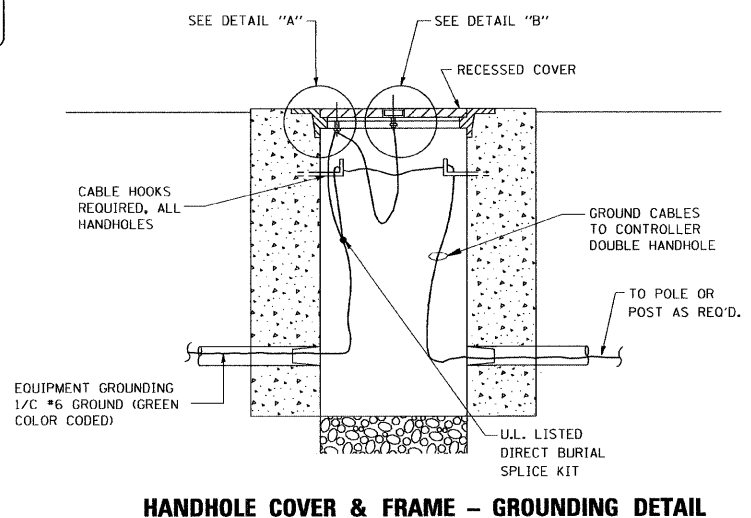
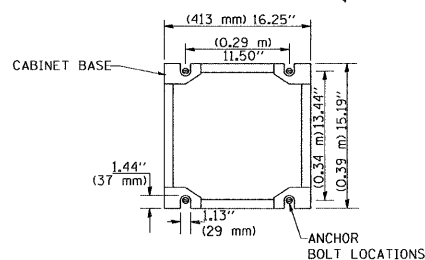
**NOTES:**

- ALL CLAMPS SHALL BE BRONZE OR COPPER, U.L. APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

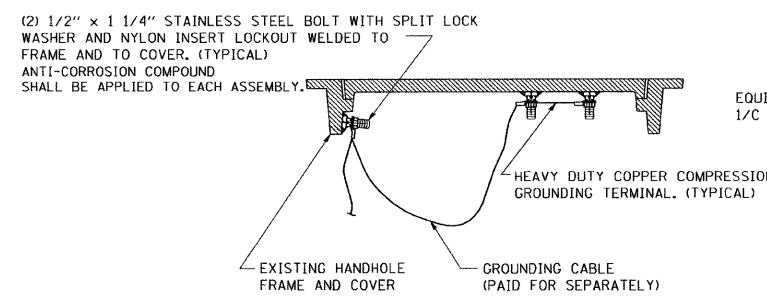


**SERVICE INSTALLATION GROUND MOUNT**  
 (NOT TO SCALE)

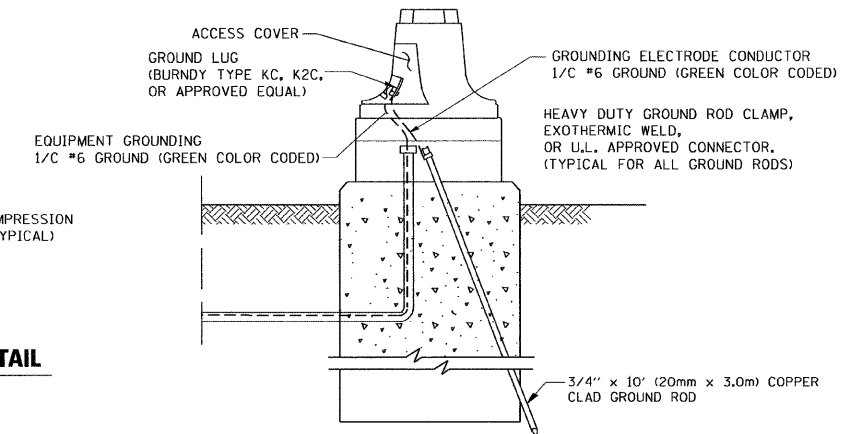
**CABINET – BASE BOLT PATTERN**  
 (NOT TO SCALE)



**HANDHOLE COVER & FRAME – GROUNDING DETAIL**  
 (NOT TO SCALE)



**EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL**  
 (NOT TO SCALE)



**MAST ARM POLE / POST-GROUNDING DETAIL**  
 (NOT TO SCALE)

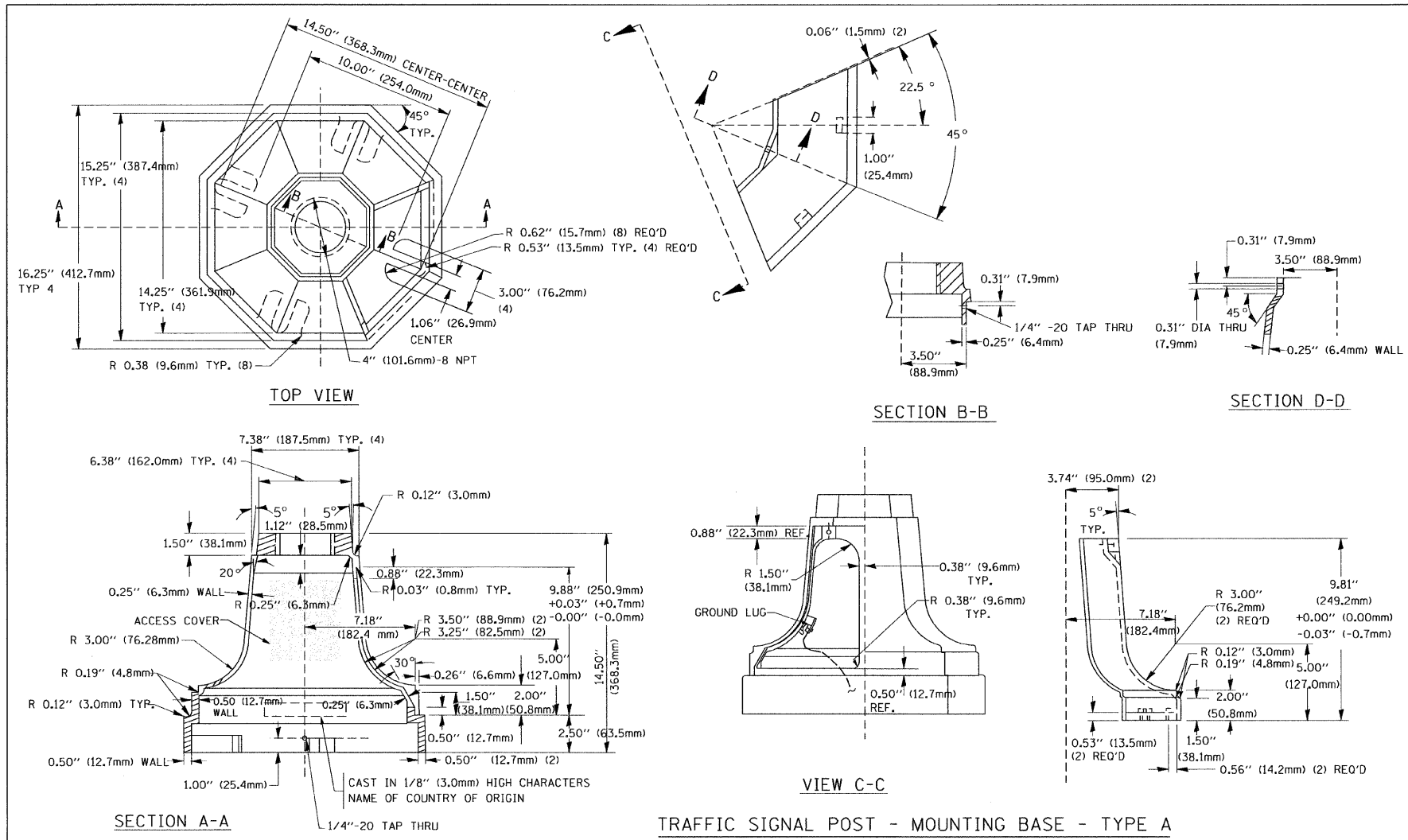
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PLOT DATE = 11/4/2009		DATE = 10-28-09	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

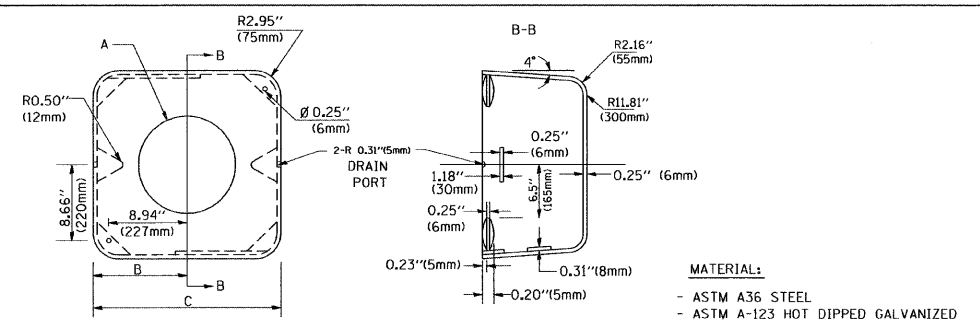
**DISTRICT ONE**  
**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**  
 SCALE: NONE SHEET NO. 3 OF 6 SHEETS STA. TO STA.

Rev. Sheet 4-6-10

* 525/345 (US 20)	** McHENRY & KANE			
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2009-089 I	**	46	43
TS-05		CONTRACT NO. 60137		
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				



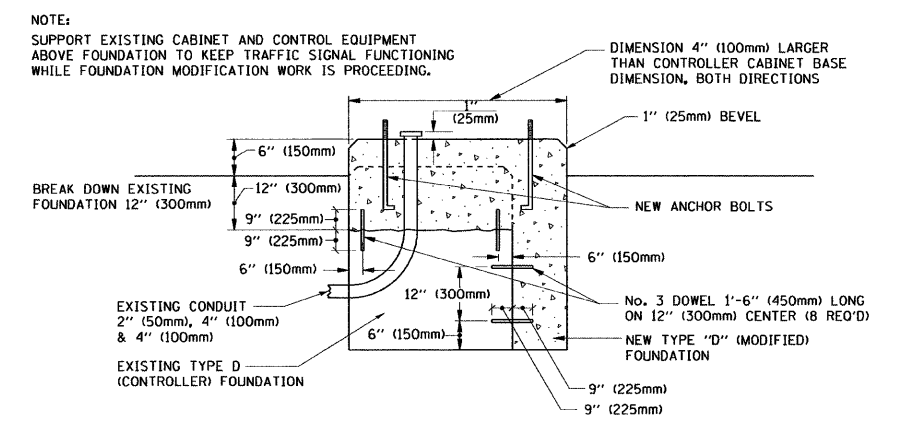
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



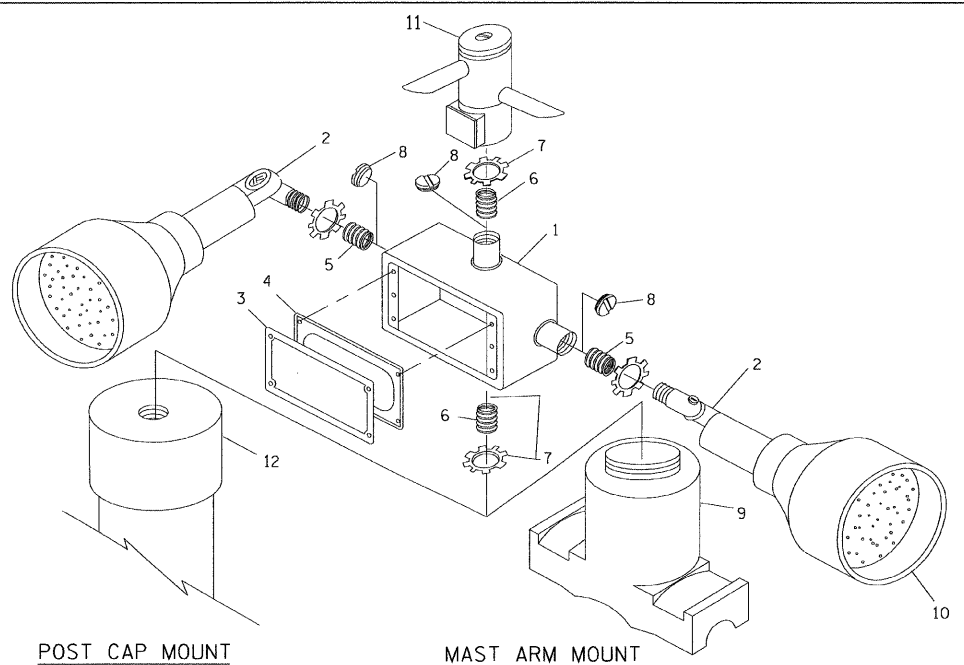
A	B	C	HEIGHT	WEIGHT
VARIES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126 lbs (57 kg)

SHROUD

- NOTES:
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
  - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
  - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



MODIFY EXISTING TYPE "D" FOUNDATION

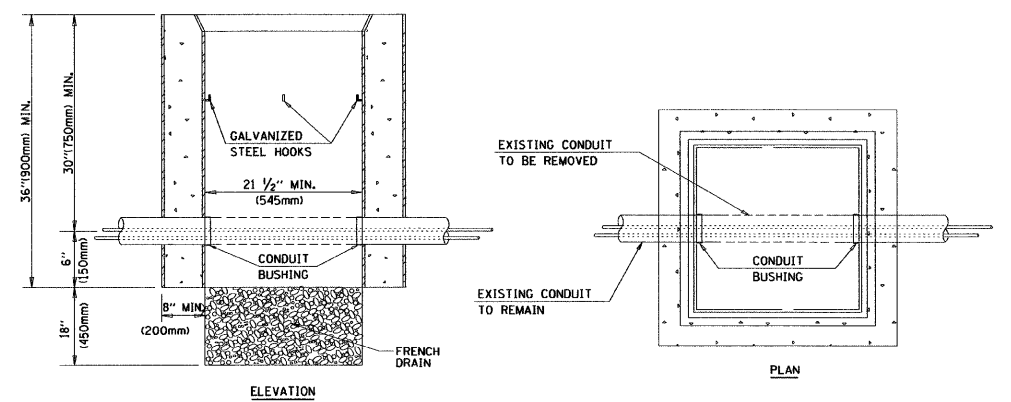


POST CAP MOUNT MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

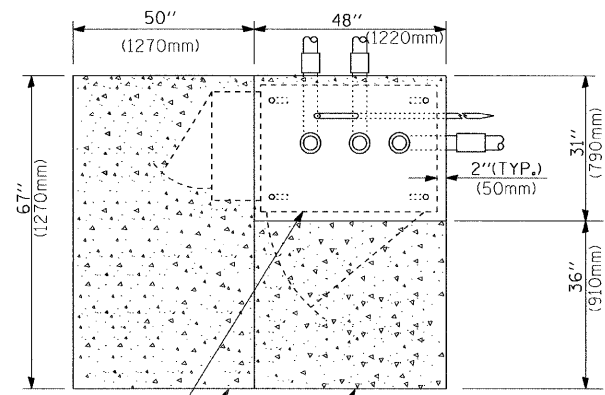
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU. IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

- NOTES:
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
  - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
  - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

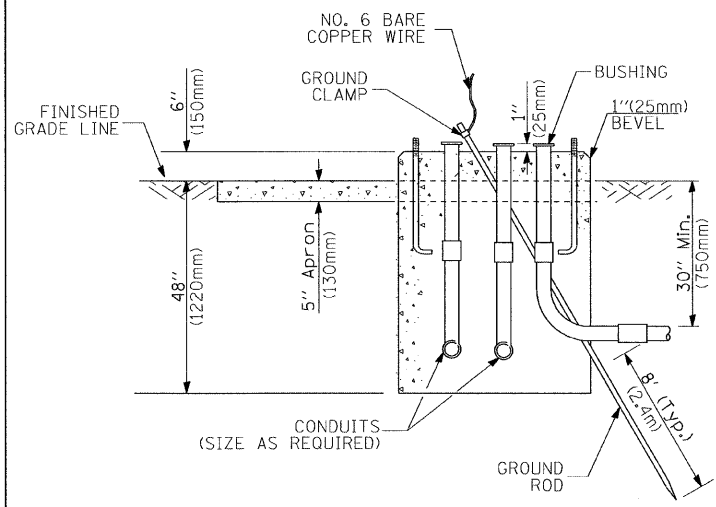


- NOTES:
- HANDHOLE CONSTRUCTED PER STATE STANDARD 81400L
  - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

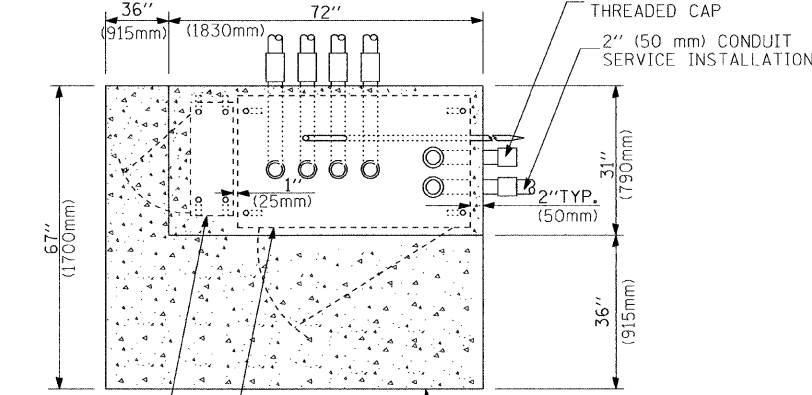
HANDHOLE TO INTERCEPT EXISTING CONDUIT



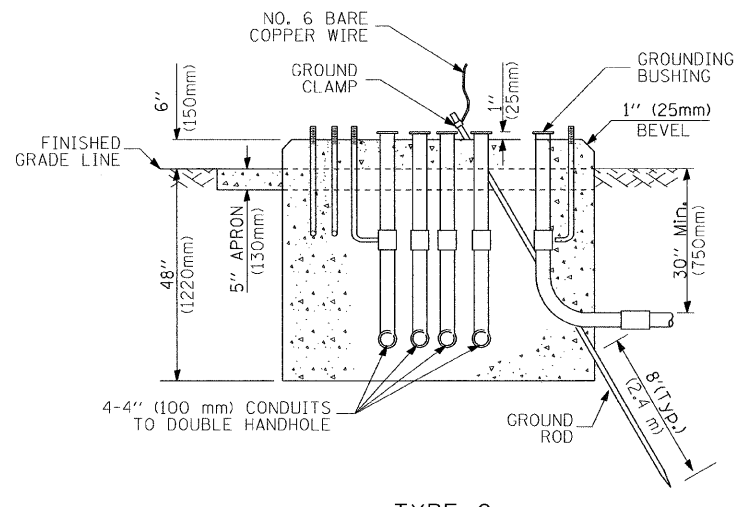
TOP VIEW



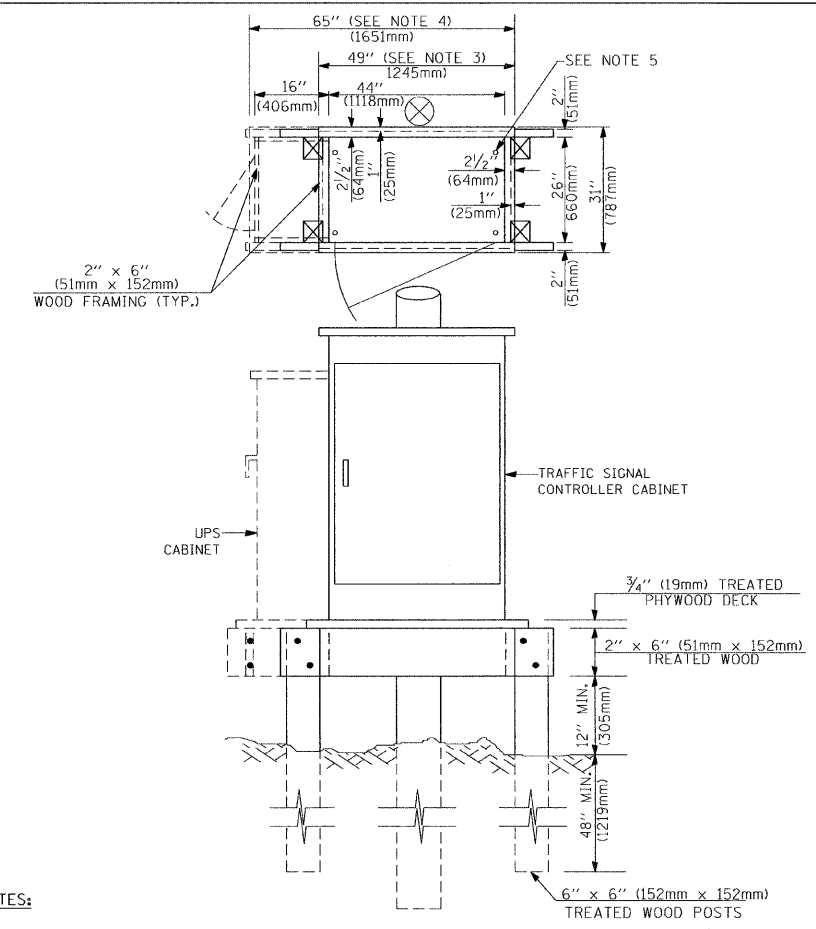
TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET



TOP VIEW



TYPE C  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E \* 525/345 (US 20) \*\* MCHENRY & KANE

# TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				<b>RAILROAD SYMBOLS</b>			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				EXISTING		PROPOSED	
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				RAILROAD CONTROL CABINET			
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT				RAILROAD CANTILEVER MAST ARM			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER				FLASHING SIGNAL			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED				CROSSING GATE			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)				CROSSBUCK			
MICROWAVE VEHICLE SENSOR				<b>Rev. Sheet 4-6-10</b>							
VIDEO DETECTION CAMERA				<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>							
VIDEO DETECTION ZONE				<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>							
PAN, TILT, ZOOM CAMERA				SCALE: NONE SHEET NO. 6 OF 6 SHEETS STA. TO STA.							
WIRELESS DETECTOR SENSOR				F.A.R. SECTION COUNTY TOTAL SHEETS SHEET NO. * 2009-089 I ** 46 46							
WIRELESS ACCESS POINT				FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT							